

Alberta Electric System Operator 2023 ISO Tariff Application

Date: November 14, 2022

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Appendices

Appendix A – 2023 Business Plan and Budget Proposal *filed separately*

Appendix B – 2023 Rate Calculations *filed separately*

Appendix C – 2023 Escalation Factor and Investment Levels *filed separately*

Appendix D:

- Clean Rate DOS *filed separately*
- Clean Rate DTS *filed separately*
- Clean Rate FTS *filed separately*
- Clean Rate PSC *filed separately*
- Clean Rate XOM *filed separately*
- Clean Rate XOS *filed separately*
- Clean Rider J *filed separately*
- Clean Section 4 *filed separately*
- Clean Section 7 *filed separately*

Appendix E:

- Blackline Rate DOS *filed separately*
- Blackline Rate DTS *filed separately*
- Blackline Rate FTS *filed separately*
- Blackline Rate PSC *filed separately*
- Blackline Rate XOM *filed separately*
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1 Introduction

- 1 Pursuant to sections 30 and 119 of the *Electric Utilities Act*, S.A. 2003, c. E-5.1 (Act), the Alberta Electricity System Operator (AESO) applies to the Alberta Utilities Commission (Commission) for approval of its 2023 update to the Independent System Operator (ISO) tariff (the “Application”).
- 2 As detailed further below, this Application seeks approval of changes to the rates to be charged by the AESO in 2023 for system access service.
- 3 If approved, this Application would change only the levels (that is, the dollar-based and percentage of pool price amounts) included in the rates and local investment amounts¹ of the ISO tariff, based on costs and billing determinants forecast by the AESO for the 2023 calendar year.
- 4 This Application is consistent with the tariff rates update methodology accepted by the Commission in Decision 2010-606² and the GUOC methodology approved by the Commission in Decision 22942-D02-2019.³

1.1 Organization of Application

- 5 This Application is organized into the following sections:
- 1 **Introduction** - Provides background on the Application and specifies the relief requested.
 - 2 **2023 Forecast Revenue Requirement** - Summarizes the AESO’s forecast revenue requirement for 2023, including costs that have either been approved by the Commission (for transmission facility owner (TFO) tariffs) or proposed for approval by the AESO Board (for ancillary services, transmission line losses, and the AESO’s own administration).
 - 3 **2023 Tariff Update** - Discusses the calculation of rate levels based on the 2023 forecast revenue requirement, 2020 classification and functionalization values approved by the Commission in Decision 22942-D02-2019, and the 2023 forecast billing determinants.
 - 4 **2023 ISO Maximum Investment Levels Update** - Discusses the calculation of 2023 maximum investment levels using the 2023 escalation factor.
 - 5 **Generating Unit Owner’s Contribution Rates** - Discusses the methodology, process, and determination of 2023 generating unit owner’s contribution rates.
 - 6 **Conclusion** - Reiterates the relief requested.
- 6 This Application also includes the following appendices:
- A **AESO 2023 Business Plan and Budget Proposal** - Document prepared by AESO management in consultation with stakeholders, as proposed on October 31, 2022, containing the AESO’s proposed 2023 business initiatives and proposed 2023 budgets and forecasts for ancillary services costs, transmission line losses costs, and administrative costs.

¹ Set out in subsection 4.7(2)(b) of the ISO tariff approved in Decision 25175-D02-2020.

² Decision 2010-606, *Alberta Electric System Operator 2010 ISO Tariff* (December 22, 2010), paras. 536-545.

³ Decision 22942-D02-2019, AESO 2018 ISO Tariff, paragraph 323.

- B 2023 Rate Calculations** - Microsoft Excel workbook which calculates the updated dollar and percentage of pool price amounts for the 2023 rates, based on the same methodology used for the AESO's currently approved rates.
- C 2023 Escalation Factor and Investment Levels** - Microsoft Excel workbook which calculates the composite inflation index and escalation factor used to update maximum investment levels.
- D 2023 Rates, Riders of the ISO Tariff** - The proposed 2023 rates, and riders that incorporate the 2023 updated amounts included as Appendix B to this Application.
- E 2023 Rates, Riders of the ISO Tariff (blackline)** - The blackline version of the proposed 2023 rates, and riders that incorporate the 2023 updated amounts included as Appendix B to this Application.

1.2 Relief Requested

- 7 For the reasons outlined below, the AESO submits that the tariff updates proposed in this Application are just and reasonable, and respectfully requests that the Commission approve this Application, including (i) the updated amounts included as Appendix B to this Application (ii) the proposed 2023 ISO tariff Rate DTS, Rate FTS, Rate DOS, Rate XOS, Rate XOM, Rate PSC, Rate STS, Rider J, and generating unit owner's contribution (GUOC) Rates.
- 8 The AESO respectfully requests that this Application be approved effective January 1, 2023. The AESO further requests that the Commission issue its approval on or before December 23, 2022 as this is the last approval date that will allow the AESO to implement the proposed tariff updates effective January 1, 2023 on a prospective basis and inform market participants in advance of rate changes. If the timing of this Application does not permit the granting of final approval on or before December 23, 2022, the AESO also requests that the Commission issue its approval on an interim refundable basis.
- 9 For additional clarity, the AESO requests that the updated rates and riders proposed in this Application apply on a go-forward basis only, commencing from the effective date approved by the Commission. Consistent with the Commission's statements in Decision 2014-242,⁴ the AESO submits that currently-approved deferral account rider and reconciliation mechanisms should continue to be used to address any variances between costs and revenues occurring prior to the approval of the applied-for rates. The AESO is not seeking any retroactive adjustments with respect to the rates proposed for approval in this Application.

2 AESO 2023 Forecast Revenue Requirement

- 10 The AESO's revenue requirement consists of costs related to wires, ancillary services, transmission line losses, and the AESO's own administration (which includes other industry costs and general and administrative costs). The AESO's forecast costs for 2023 are detailed in Table B-1 of Appendix B to this Application.
- 11 The total revenue requirement forecast for 2023 of \$2,548.6 million represents an increase of \$203.2 million (or 8.7%) over the 2022 total revenue requirement forecast of \$2,345.5 million included in

⁴ Decision 2014-242, *Alberta Electric System Operator 2014 ISO Tariff Application and 2013 ISO Tariff Update* (August 21, 2014), para 617.

the 2022 ISO tariff Application. The increase primarily results from a forecast increase in 2023 of \$65.5 million (or 3.5%) in wires costs, an increase of \$92.9 million (or 44.2%) in 2023 ancillary services costs and an increase of \$40.5 million (or 28.3%) in 2023 losses costs.

2.1 AESO Board Approval of Costs

12 The AESO is not seeking approval of its 2023 forecast revenue requirement in this Application. The AESO's forecast costs are approved through other processes provided for in relevant legislation, described below. These costs, as provided in column A of Table B-1 of Appendix B, were addressed in the AESO *2023 Business Plan and Budget Proposal*, dated October 31, 2022 and included as Appendix A to this Application.

13 With respect to the AESO's costs, including their approval processes:

- (a) Wires costs reflect the amounts paid by the AESO to TFOs in the TFO tariffs approved by the Commission under section 37 of the Act. The wires costs forecast included in the AESO *2023 Business Plan and Budget Proposal* reflected TFO tariffs applied for or approved by the Commission at the time the AESO budget was prepared.
- (b) Ancillary services costs reflect recovery of the prudent costs incurred by the AESO related to the provision of ancillary services acquired from market participants under subsection 30(4) of the Act.
- (c) Losses costs reflect recovery of the prudent costs of transmission line losses under subsection 30(4) of the Act.
- (d) Administrative costs reflect the transmission-related costs and expenses incurred by the AESO and described under subsection 1(1)(g) of the *Transmission Regulation*.

14 The ancillary services costs, losses costs, and administrative costs described above are approved by the AESO Board (consisting of the "ISO members" appointed under section 8 of the Act) in accordance with the *Transmission Regulation*. Section 3 of the *Transmission Regulation* requires that the AESO consult with market participants with respect to proposed costs to be approved by the AESO Board. Subsection 48(1) of the *Transmission Regulation* provides that a reference to "prudent" or "appropriate" in the Act in relation to the costs of ancillary services and losses means the amounts of those costs that have been approved by the AESO Board. In addition, subsection 46(1) of the *Transmission Regulation* provides that the AESO's administrative costs, once approved by the AESO Board, must be considered as "prudent" by the Commission unless an interested person satisfies the Commission otherwise.

15 The AESO has been consulting stakeholders on its budget through the budget review process (BRP) for a number of years. Following feedback received on the 2022 BRP, and the results of an internal review, the AESO identified benefits to both stakeholders and the AESO if the budget review process was restructured. As a result, the AESO implemented a revised consultation process for the 2023 budget the Budget Development Process (BDP) that will replace the former BRP.

16 The most significant change in the new BDP is the addition of strategically focused consultations that take place well in advance of the budget development cycle. Specifically, senior executive stakeholders met one-on-one with a subset of board and executive members to share their perspectives on what they believed the AESO should be focusing on in the near term. For the current budget cycle, these sessions

occurred June 1-3, 2022, where the majority of stakeholders outlined four themes of strategic importance that strongly aligned with the AESO's 2022 Strategic Plan⁵ and recognized the integrated challenges the industry faces as Alberta's power system transforms. The AESO incorporated stakeholders' insights and expertise to inform its corporate focus areas and associated priorities for 2023. The AESO's 2023 forecast ancillary services, losses and administrative costs have not, as of the date of filing this Application, been approved by the AESO Board. The BDP moved through the first round of consultation with stakeholders in June 2022 as described above. The AESO will file a letter to advise the Commission of AESO Board approval once it has been received. The AESO Board approval is expected in January 2023.

- 17 Additional information on the AESO's business priorities and budget for 2023 is available on the AESO website at www.aeso.ca by following the path AESO ► Business Planning.

2.2 Wires Costs

- 18 As shown in column A of Table B-1 of Appendix B, the 2023 forecast costs for wires are \$1,947.9 million and represent approximately 76.4% of the AESO's transmission revenue requirement. Wires costs include primarily wires-related costs of TFOs as well as two small non-wires costs.

- 19 The AESO has determined the 2023 wires costs for TFOs using the following approach, which was described in section 2.2.1 of the AESO's 2014 ISO tariff application and 2013 ISO tariff update,⁶ approved in Decision 2010-606, referred to in Decision 2014-242⁷ and updated in Decision 22093-D02-2017⁸:

- (a) If a transmission facility owner has received final Commission approval for its applicable tariff, the AESO includes the approved costs for that transmission facility owner tariff.
- (b) If a transmission facility owner has applied for its tariff, the Commission has issued an initial decision on the application, and the transmission facility owner has submitted a refiling in compliance with the decision, the AESO includes the transmission facility owner tariff costs included in the refiling.
- (c) If a transmission facility owner has applied for its tariff but the Commission has not yet issued an initial decision on the application or an initial decision has been issued but the transmission facility owner has not yet submitted its compliance refiling, the AESO includes the most recent of the following: (i) the transmission facility owner tariff costs last approved by the Commission on a final basis for the transmission facility owner plus 72% of any increase or decrease included in the transmission facility owner's tariff application above or below the prior approved costs, and (ii) the transmission facility owner tariff costs last applied-for by the transmission facility owner in a compliance refiling plus 72% of any increase or decrease included in the transmission facility owner's tariff application above or below the prior approved costs.
- (d) If a transmission facility owner has not yet applied for its tariff, the AESO includes the most recent of the following: (i) the transmission facility owner tariff costs last approved by the Commission on either a final or interim basis, and (ii) the

⁵ AESO's 2022 Strategic Plan: https://www.aeso.ca/assets/2022-Strategic-Plan_Final.pdf

⁶ Exhibit 0026.00.AESO-2718, paras. 53-57.

⁷ Decision 2014-242, para. 43.

⁸ Decision 22093-D02-2017, *Alberta Electric System Operator 2017 ISO Tariff Update*, para. 37.

transmission facility owner tariff costs last applied-for by the transmission facility owner in a compliance refiling.

20 As noted in the 2014 ISO tariff application, “the inclusion of 72% of an applied-for increase or decrease in (c) above was determined from the percentages of applied-for changes which had received final approval in recent transmission facility owner tariff applications, and is not meant to indicate any predetermination of the result of a transmission facility owner tariff proceeding, nor be interpreted as AESO support for any specific components of a transmission facility owner tariff application.”⁹

21 The majority of the TFO tariff applications applicable to this Application have been filed and a number have been final approved or interim approved by the Commission. The TFO tariff costs are included as Table B-2 of Appendix B to this Application.

2.3 Ancillary Services Costs

22 As shown in column A of Table B-1 of Appendix B, the forecast 2023 costs for ancillary services are \$303.0 million and represent approximately 11.9% of the AESO’s transmission revenue requirement. Ancillary services, as defined in subsection 1(1)(b) of the Act, are services required to ensure that the interconnected electric system is operated in a manner that provides a satisfactory level of service with acceptable levels of voltage and frequency. The largest component of ancillary services costs is operating reserve, which represents the real power capability above system demand required to provide for regulation, forced outages and unplanned outages.

23 Ancillary service costs are primarily a function of volume forecasts and market-based commodity pricing forecasts. The 2023 forecast costs for ancillary services were based on a forecast average pool price of \$94.34/MWh.

2.4 Losses Costs

24 As shown in column A of Table B-1 of Appendix B, the 2022 forecast costs for transmission line losses are \$183.8 million and represent approximately 7.2% of the AESO’s transmission revenue requirement. Losses are the energy lost on the transmission system when power is transmitted from suppliers to loads. Losses are the residual of the metered generation plus scheduled imports less metered loads and less scheduled exports.

25 Losses costs are a function of volume forecasts and market-based commodity pricing forecasts. The 2023 forecast costs for losses were based on a forecast average pool price of \$94.34/MWh.

2.5 Administrative Costs

26 As shown in column A of Table B-1 of Appendix B, the 2023 general and administrative costs are \$113.9 million and represent approximately 4.5% of the AESO’s transmission revenue requirement.

27 Administrative costs are defined in paragraph 1(1)(g) of the *Transmission Regulation* as follows:

1(1)(g) “ISO’s own administrative costs” means

- (i) the transmission-related costs and expenses of the ISO respecting the administration, operation and management of the ISO,

⁹ Exhibit 0026.00.AESO-2718, para. 58.

- (ii) the transmission-related costs and expenses of the ISO respecting reliability standards and reliability management systems, and
- (iii) the transmission-related costs and expenses required to be paid, or otherwise appropriately paid, by the ISO, except for the following:
 - (A) costs for the provision of ancillary services;
 - (B) costs of transmission line losses;
 - (C) amounts payable under TFO transmission tariffs.

28 The AESO Board approves the AESO’s administrative costs in their entirety. However, only the transmission-related portions of those costs (as defined in subsection 1(1)(g) of the *Transmission Regulation*) are recovered through the ISO tariff. Further, the AESO *2023 Business Plan and Budget Proposal* allocates administrative costs among the four functions of the AESO; namely, transmission, energy market, renewables (the Renewable Electricity Program) and load settlement.

3 2023 Rates Update

29 The 2023 rate calculations are included as Appendix B to this Application, in Tables B-1 through B-16.

30 The rate calculations use the following inputs:

- (a) the 2023 forecast revenue requirement discussed in section 2 of this Application;
- (b) the functionalization and classification of wires costs and the point-of delivery cost function approved for 2020 in Decision 22942-D02-2019;¹⁰ and
- (c) the 2023 forecast billing determinants prepared by the AESO.

3.1 Specific Rate Changes

31 Where applicable, rates in the ISO tariff have been updated to reflect the 2023 forecast revenue requirement, 2020 classification and functionalization values, and 2023 forecast billing determinants. Specifically, levels of dollar-based and percentage of pool price amounts have been updated in the following rates:

- Rate DTS, *Demand Transmission Service*;
- Rate FTS, *Fort Nelson Demand Transmission Service*;
- Rate DOS, *Demand Opportunity Service*;
- Rate XOS, *Export Opportunity Service*; and
- Rate XOM, *Export Opportunity Merchant Service*.

32 The levels for each of the above rates have been calculated in accordance with Appendix B to this Application. The updated rate sheets themselves are provided in the proposed 2023 ISO tariff included as Appendix D to this Application.

3.1.1 Rate PSC, Primary Service Credit

33 The 2023 primary service credit is calculated as¹¹:

¹⁰ Exhibit 22942-X0025, Appendix D, Transmission System Cost Causation Study 2018 Update dated September 14, 2017, page 5, Table D-5. At the time of writing this application the 2020 classification and functionalization values were the most recently approved values available.

¹¹ AUC Decision 2010-606, Table 2

- 79% of the substation fraction (\$/month) tier of the Rate DTS point of delivery charge;
- 79% of the first three capacity (7.5 MW, 9.5 MW, and 23 MW) tiers of the Rate DTS point of delivery charge; and
- 100% of the fourth capacity (remaining capacity above 40 MW) tier of the Rate DTS point of delivery charge.

34 As the Rate DTS point of delivery charge has been updated in this Application, the AESO has correspondingly updated the primary service credit as provided in Table B-8 of Appendix B to this Application.

3.2 Rider J, Wind and Solar Forecasting Service Cost Recovery Rider

35 As the AESO explained in its 2014 ISO tariff application, charges under Rider J recover both costs associated with the AESO's contracted wind forecasting service as well as variances from forecasts of costs and energy initially used to determine the values of the rider.¹² In Commission Decision 26980-D01-2021 the Commission approved amendments to Rider J to include the additional recovery of forecasting service costs for solar-powered generating units. In 2023, Rider J is expected to recover all costs of the contracted wind and solar forecasting service that have been incurred since it was initially implemented in 2011.

36 On a cumulative forecast basis, the AESO is forecast to over-collect \$74,435 through Rider J by the end of 2022. The wind and solar annual forecasting service cost for 2022 is forecast to be \$65,400, representing an increase of \$10,800 from the annual forecasting service cost of the actual cost of \$54,600 in 2022. Given that the cumulative balance by the end of 2022 is expected to be an overcollection of \$74,435, which exceeds the forecast contracted wind and solar forecasting service cost of \$65,400 for 2023, the AESO proposes to set the Rider J charge at \$0.00/MWh.

37 The proposed 2023 Rider J charge will decrease by \$0.01/MWh from the charge of \$0.01/MWh in the current ISO tariff. This decrease results from the previous year's surplus being applied to the 2023 year. Table 3-1 below illustrates the changes from year to year to achieve as close to a zero balance as possible at the end of 2023. Table 3-1 only includes forecast solar costs, volumes and revenues starting in 2022.

Table 3-1 – Wind and Solar Forecasting Service Cumulative Balance

| Line No. | Description | Actual 2010 – 2020 | Actual 2021 | Forecast 2022 | Forecast 2023 |
|----------|--|--------------------|---------------|---------------|---------------|
| 1 | Contracted wind and solar forecasting service* (\$000) | \$3,197.5 | \$54.6 | \$54.6 | \$65.4 |
| 2 | Volumes (GWh) | 38,143.4 | 6,226.1 | 9,204.7 | 12,880.4 |
| 3 | Rider J Charge (\$/MWh) | - | 0.00 | 0.00 | 0.00 |
| 4 | Revenue (\$000) | 3,294.8 | 0.0 | 86.3 | 0.0 |
| 5 | Annual (undercollection) / overcollection (\$000) | 97.3 | (54.6) | 31.7 | (65.4) |
| 6 | Cumulative Balance (undercollection) / overcollection (\$000) | \$97.3 | \$42.7 | \$74.4 | \$9.0 |

* Assumes solar forecasting begins in 2022

¹² Exhibit 0026.00.AESO-2718, paras. 124-126.

3.3 2023 Forecast Billing Determinants

38 The rate calculations for the 2023 rates update are based on the AESO’s forecast of billing determinants for 2023. The 2023 billing determinants are estimated using a combination of historical analysis and a DTS energy forecast that is described below. The updated DTS energy forecast, developed using a methodology similar to that applied to create the AESO’s 2021 Long-Term Outlook with the most up to date actual load data and economic outlook, was used to estimate the billing determinants. The DTS energy forecast is generated from historic trends and economic growth (gross domestic product, population and employment) information and oilsands production forecasts. The AESO 2021 Long-term Outlook, including its data file, is available on the AESO website at www.aeso.ca by following the path Grid ► Forecasting. A comparison of the billing determinants used in the 2023 and 2022 rate calculations are provided in Table B-12 of Appendix B to this Application.

39 To further examine the reasonableness of the 2023 forecast billing determinants, Table 3-2 below provides a comparison of the forecast billing determinants in this Application as well as the forecast used in 2022 ISO tariff update application to the 2019, 2020 and 2021 recorded billing determinants. Based on the economic modelling described above the AESO expects relatively flat load growth in 2023. This is shown in Table 3-2 below, where the 2023 billing determinant forecast only shows a slight increase over the 2022 forecast used in the 2022 ISO tariff update and the 2021 recorded billing determinants.

Table 3-2 – 2023 and 2022 Forecast and 2021, 2020 and 2019 Recorded Billing Determinants

| Rate DTS Billing Determinants | Units | 2023 Forecast | 2022 Forecast | 2021 Recorded | 2020 Recorded | 2019 Recorded |
|----------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| Coincident Metered Demand | MW-months | 93,526.1 | 93,328.4 | 93,140.5 | 91,292.0 | 93,436.3 |
| Billing Capacity (Total) | MW-months | 162,444.7 | 160,927.5 | 161,564.6 | 159,632.9 | 159,312.7 |
| Highest Metered Demand | MW-months | 120,804.4 | 120,841.6 | 120,540.1 | 117,711.8 | 120,522.7 |
| Metered Energy (All Hours) | GWh | 60,112.9 | 59,966.4 | 59,014.4 | 58,118.2 | 59,652.3 |
| Market Participants (Total) | customer-months | 5,364.8 | 5,373.6 | 5,365.2 | 5,384.6 | 5,407.4 |

40 Overall, the AESO considers that the 2023 forecast provides the best estimate, given the information available, of billing determinants for the rate calculations in this Application.

3.4 Bill Impacts

41 As noted in sections 2 and 3.3 of this Application, the AESO’s 2023 forecast revenue requirement has increased and the AESO’s 2023 forecast of billing determinants has increased. As a result, the connection charge under the AESO’s 2023 updated rate DTS will increase by 2.6%. When all DTS charges are considered, the AESO’s 2023 updated rates represent an overall increase of 4.2% from the 2022 rates, with charges for operating reserves making up the majority of the additional 1.6% increase to Rate DTS. While the AESO includes an estimate of the operating reserve charge, operating reserve costs are settled monthly based on the actual costs incurred and therefore the estimate of operating reserve costs do not impact the calculation for the proposed Rate DTS within this Application. Rate STS is

forecast to decrease by 1.4% in 2023 relative to 2022, resulting in and overall increase of 3.8% to the 2022 rates currently in place when considering changes to both DTS and STS.

- 42 Deferral accounts provide certainty that the AESO's costs will be exactly recovered by revenue, either through base rates or through the deferral account rider and reconciliations. Adjustments to costs paid by the AESO will therefore flow to and impact market participants through deferral accounts if rates are not adjusted. The changes in rates summarized above improve the timeliness and accompanying accuracy of the recovery of costs from market participants.
- 43 The increases to the different components of Rate DTS are provided in Table B-13 of Appendix B to this Application. The Rate DTS increase of 4.2% represents a revenue-weighted average increase over all components of Rate DTS.
- 44 Individual bill impacts experienced by market participants will vary, depending on the specific characteristics of a market participant's service including peak demand coincidence, billing capacity, load factor, and hourly pool price and transmission constraint rebalancing charge at the time of usage.
- 45 To allow individual market participants to estimate the impact of the 2023 rates on their own Rate DTS bills, the AESO has included a bill impact estimator as Table B-16 in the rate calculations included as Appendix B to this Application. The bill impact estimator calculates bills for a given set of billing inputs under both the current 2022 Rate DTS and the updated 2023 Rate DTS, to allow the impact of the rates update on an individual service to be estimated.
- 46 The changes to the different components of Rate STS are provided in Table B-13 of Appendix B to this Application. The Rate STS decrease of 1.4% represents a revenue-weighted average decrease over all components of the rate.
- 47 Individual bill impacts experienced by market participants will vary, depending on the specific characteristics of a market participant's system access service.
- 48 In particular, the AESO notes that the loss factors provided in Table B-13 of Appendix B to this Application are representative average loss factors only. The actual losses charge applicable to an individual market participant will be based on a location-specific loss factor determined in accordance with section 501.10 of the ISO rules, *Transmission Loss Factors* (Section 501.10), as specified in the ISO tariff Rate STS, *Supply Transmission Service*. Section 501.10 was approved by the Commission in Decision 790-D05-2016¹³ in Proceeding 790, although the AESO notes that the losses charge remains as approved on an interim basis in Commission Decision 2014-242.¹⁴

4 Maximum Investment Levels Update

- 49 This Application includes updated investment amounts approved in Decision 22942-D02-2019¹⁵ to revise the existing point-of-delivery cost curve to Option 2¹⁶ and reflect an escalation factor based on a composite of specified recent inflation indices.
- 50 The AESO has accordingly updated the composite inflation index used for developing the point of delivery cost function to 2023, using additional Statistics Canada cost index values and the most recent

¹³ Decision 790-D05-2016, *Milner Power Inc. and ATCO Power Ltd. Complaints Regarding the ISO Transmission Loss Factor Rule and Loss Factor Methodology* (November 30, 2016), para. 1.

¹⁴ Decision 2014-242, para. 730.

¹⁵ Decision 22942-D02-2019, para 201.

¹⁶ Exhibit 22942-0018.03, Appendix G – Options for POD Cost Function Workbook, Tab 'Option 2 Investment Proposed', Cells C11 to G11.

Conference Board of Canada forecast of the Alberta consumer price index. Appendix C included in this Application provides the composite inflation index values for 2018 to 2023 on the Escalation Factor sheet, and the 2023 investment levels on the 2023 Investment sheet.

- 51 The resulting escalation factor for updating the 2023 maximum investment levels in section 4 of the ISO tariff, *Classification and Allocation of Connection Projects Costs* (Section 4), is 1.0979, which represents an increase to the 2018 maximum investment levels. The increase reflects increases in the latest underlying indices used for the composite index. The detailed calculation of the composite inflation index is included in Appendix C of this Application.
- 52 The AESO has applied the resulting 1.0979 escalation factor to the 2018 Rate DTS maximum investment levels to determine the 2023 Rate DTS maximum investment levels, as summarized in the 2023 Investment sheet included in Appendix C to this Application. The 2022 escalation factor of 1.0640 used in the 2022 ISO Tariff Update Application¹⁷ was lower than the 2023 escalation factor of 1.0979, resulting in an increase to the 2023 investment levels.

¹⁷ Exhibit 26980-0005, Appendix C - 2022 Escalation Factor and Investment Levels, Tab 'Escalation Factor', Cell E14

5 Generating Unit Owner's Contribution Rates

53 As part of the AESO's 2018 comprehensive ISO tariff application (the "2018 Application"),¹⁸ the AESO proposed to include the rates for the GUOC as part of the ISO Tariff (rather than as part of a separate document posted to the AESO's website, which had been the practice to that point, and to develop a process for updating GUOC rates. The GUOC rate calculation methodology and subsequent rates proposed by the AESO in the 2018 Application were approved by the Commission in Decision 22942-D02-2019.¹⁹

54 In AUC proceeding 22942 the AESO proposed to use a qualitative assessment to determine GUOC Rates based on engineering studies (including long-term planning, system connection and Needs Identification Document studies). The AESO considered these engineering studies to provide a much more robust approximation of generation flows compared to the AESO's previous methodology. The AESO's proposal was approved by the Commission in Decision 22942-D02-2019 and is being applied in this Application to determine the GUOC rates as described below.

55 For 2023, the AESO has determined GUOC rates using a qualitative assessment based on engineering studies, in accordance with the methodology approved in Decision 22942-D02-2019. The AESO has developed the following proposed 2023 GUOC rates, differentiated by region:

\$10,000/MW, payable by all Generation Facility Owners (GFOs) regardless of location in the province for upgrades to existing transmission facilities; plus

A charge of not more than \$40,000/MW payable by all GFOs based on the location of the GFO considering the following:

- a. \$0/MW: generation development in the region can help defer load driven transmission development
- b. \$10,000/MW: the region has significant existing or near-term generation integration capability²⁰
- c. \$20,000/MW: the region has limited existing or near-term generation integration capability and limited development interest
- d. \$30,000/MW: the region has limited existing or near-term generation integration capability and significant development interest
- e. \$40,000/MW: the region does not have existing or near-term generation integration capability.

56 The proposed 2023 GUOC rates, which the AESO is requesting to be made effective January 1, 2023 are set out in section 7.3(1) of the ISO tariff, as follows:

¹⁸ Exhibit 22942-X0163, para. 299.

¹⁹ Decision 22942-D02-2019, AESO 2018 ISO Tariff, paragraph 323.

²⁰ Generation integration capability is strongly related to the total generation and load in the region. Typically, generation integration capability is higher in regions where load is higher. Therefore, there is an implicit relationship between generation integration capability and proximity to load. As a result, setting GUOC rates based on existing and near-term generation integration will incent generation to locate in areas of the transmission system where load exceeds generation.

Table 5-1 – 2023 Generating Unit Owner’s Contribution Rates

| Planning Region | Current Rate (\$/MW) |
|------------------------|-----------------------------|
| Northwest | \$10,000 |
| Northeast | \$30,000 |
| Edmonton | \$20,000 |
| Central | \$20,000 |
| Calgary | \$30,000 |
| South | \$50,000 |

57 Additionally, the AESO developed a process for updating GUOC rates in order to provide market participants with clarity, as part of the AESO’s Connection Process, regarding the updated GUOC Rates that will apply to generation projects.

58 Specifically, for the proposed 2023 GUOC rates, the AESO followed the following process:

- the AESO made an initial determination of the proposed 2023 GUOC rates, in accordance with the *Transmission Regulation* and any applicable AUC Decisions and approvals, to be brought into effect on January 1, 2023;
- On June 7, 2022, by way of a posting in the AESO’s stakeholder newsletter, the AESO provided stakeholders with details on the AESO’s engagement process for the proposed 2023 GUOC rates; On July 7, 2022, the AESO posted the proposed 2023 GUOC rates on the AESO website to give market participants advance notice of the proposed 2023 GUOC rates; and
- the AESO included the proposed 2023 GUOC rates within this Application.

6 Conclusion

59 Based on all of the foregoing, the AESO submits that the tariff updates proposed in this Application are just and reasonable, and comply with the update methodology approved by the Commission for the ISO tariff in Decision 2010-606²¹ and Commission Decision 22942-D02-2019.²² The AESO respectfully requests that the Commission approve this Application effective January 1, 2023, including:

- (i) the updated amounts included as Appendix B to this Application,
- (ii) the proposed 2023 ISO tariff Rate DTS, Rate FTS, Rate DOS, Rate XOS, Rate XOM, Rate PSC, Rate STS, and Rider J, and GUOC Rates.

60 The AESO further requests that the Commission issue its approval on or before December 23, 2022, as this is the last approval date that will allow the proposed tariff updates to be implemented by the AESO effective January 1, 2023 on a prospective basis. If the timing of this application does not permit the granting of final approval on or before December 23, 2022, the AESO requests that the Commission approve this application on an interim refundable basis.

²¹ Decision 2010-606, *Alberta Electric System Operator 2010 ISO Tariff* (December 22, 2010), paras. 536-545.

²² Decision 22942-D02-2019, AESO 2018 ISO Tariff, paragraph 323.

61 All of which is respectfully submitted this 14th day of November 2022.

Alberta Electric System Operator

Per: "Nicole LeBlanc"

Nicole LeBlanc
Director, Markets and Tariff