

Alberta Electric System Operator 2018 ISO Tariff Application — Appendix L Examination of Rider C and Deferral Account Reconciliation Methodology Report

Date: September 14, 2017
Prepared by: Alberta Electric System Operator
Prepared for: Alberta Utilities Commission
Classification: Public

Table of Contents

Appendix L: Examination of Rider C and Deferral Account Reconciliation Methodology Report 3

L.1	Background.....	3
L.2	Stakeholder Consultation	5
L.3	Investigation of Rider C and Deferral Account Reconciliation	6
L.4	Early Tariff Updates	6
L.5	Changes to Rider C Structure	9
L.6	Change to Production Year Basis	13
L.7	Net Revenue Basis for Rider C and Deferral Account Reconciliations.....	16
L.8	Implementation.....	19

Figures

Figure L-1	– Wires Cost Shortfalls Resulting From Tariff Lag During 2011 to 2015.....	7
Figure L-2	– Allocations for Deferral Account Reconciliation per Existing Approach	8
Figure L-3	– Allocations With Early Tariff Updates.....	9
Figure L-4	– Allocations With Early Tariff Updates Stratified in 2% Intervals	10
Figure L-5	– Allocations With Rider C as Percentage of Connection Charge Revenue	11
Figure L-6	– Allocations With Rider C as \$/MW of Billing Capacity.....	12
Figure L-7	– Allocations With Rider C as \$/MW of Coincident Metered Demand.....	13
Figure L-8	– Monthly Revenue and Costs as Percentage of Annual Totals	14
Figure L-9	– Allocations With Rider C as \$/MW of Coincident Metered Demand.....	15

Appendix L: Examination of Rider C and Deferral Account Reconciliation Methodology Report

1 In response to a direction from the Alberta Utilities Commission (“Commission”) in Decision 2014-242 regarding the 2014 ISO Tariff Application and 2013 ISO Tariff Update of the Alberta Electric System Operator (“AESO”), issued on August 21, 2014, the AESO has:

- (a) examined the structure of Rider C, *Deferral Account Adjustment Rider*, with an eye to minimizing imbalances among customers; and
- (b) discussed the related matters of annual tariff updates, deferral account reconciliation (“DAR”) processes and Rider C design with stakeholders.

2 This appendix provides a report to the Commission on the outcome of the discussions with stakeholders, included recommended changes to Rider C and to the DAR methodology used by the AESO.

L.1 Background

3 In accordance with section 29 of the *Electric Utilities Act*, S.A. 2003, c. E-5.1 (“Act”), the AESO provides system access service to market participants, including access to exchange electric energy and ancillary services. In accordance with sections 30 and 119 of the Act, rates charged for system access service provided by the AESO are set out in the Independent System Operator (“ISO”) tariff approved by the Commission, which includes Rider C. The methodology used to reconcile deferral accounts and allocate balances to market participants is applied for in AESO DAR applications and approved by the Commission in resulting proceedings.

4 The AESO uses deferral accounts to ensure that, in accordance with section 14 of the Act, the AESO is managed so that, on an annual basis, no profit or loss results from the AESO’s operation. Deferral accounts allow the AESO to address differences between actual costs and revenue incurred in providing system access service to market participants, and are specifically provided for in subsections 122(2) and 122(3) of the Act.

5 As required by the ISO tariff, the AESO uses Rider C to “recover or refund ... accumulated deferral account balances” and “restore the deferral account balance to zero (0) over the following calendar quarter, or such longer period as determined by the ISO to minimize rate impact.” Rider C is currently implemented as an additional \$/MWh charge or credit that applies to each of Rate DTS and Rate FTS.

6 Rider C allows the AESO to manage its deferral account balances by collecting or refunding amounts to market participants throughout the year. The AESO’s deferral accounts are also subject to later reconciliation, including approval of such reconciliation by the Commission. Under the deferral account methodology most recently approved by the Commission, the AESO reconciles, on a retrospective basis, the actual costs it has incurred in providing system access service to the revenues recovered relating to provision of that service. For each reconciliation, costs and revenues are attributed to the time period during which system access service was provided, which is referred to as reconciliation on a “production” basis.

7 Once deferral account balances are calculated in a reconciliation, they are allocated to individual market participants based on each market participant’s percentage of revenue collected based on Rate DTS and Rate FTS that were in place during the period, by production period and by rate component. Additional revenue already settled through Rider C or in prior DARs with each market participant is then subtracted or added by rate and rate component. The remaining balance is the amount of the deferral account

charge or refund attributed to the market participant on a production basis, by rate and rate component, through the DAR process.

- 8 The deferral account balances allocated to a market participant (after Rider C and prior reconciliation amounts have been subtracted or added) sometimes represent a material adjustment to the annual revenue provided by that market participant. The magnitude of refunds and charges to individual market participants was most recently discussed during the AESO's 2014 ISO tariff application proceeding, which resulted in the Commission directing the AESO as follows in Decision 2014-242:

The Commission acknowledges the view expressed by both the ADC [Alberta Direct Connect Consumers Association] and the DUC [Dual Use Coalition] that the AESO should be directed to examine further the structure of Rider C with an eye to minimizing imbalances among customers. Therefore, the Commission directs the AESO to discuss the related matters of annual tariff updates, deferral account reconciliation processes and Rider C design with stakeholders prior to filing its next comprehensive GTA [general tariff application], and to provide a report on the outcome of any such discussions, including any recommended changes (if any) within its next comprehensive GTA.¹

- 9 The AESO notes that, prior to the 2014 ISO tariff application, the AESO had investigated changes to the design of Rider C through a recalculation of its 2011 DAR. The recalculation was completed at the market participant level, and the results suggested that a change to Rider C would not materially reduce the magnitude of charges and refunds to individual market participants that resulted from the year-end DAR, although different market participants would be affected compared to the existing Rider C approach. In particular, the change to Rider C did not significantly reduce the magnitude of charges and refunds arising from reconciliation of the connection charge rate component.
- 10 To allow more detailed investigation of the effect of changes to the structure of Rider C and other aspects of DARs, during 2015 and 2016 the AESO built and used a model that simulated monthly Rider C charges and annual DARs in Microsoft Excel for the production years 2011 through 2015.
- 11 In the model, the AESO replicated Rider C amounts and DARs at individual points of delivery, but only for the connection charge component of the AESO's deferral accounts. The connection charge component is the largest component of deferral account balances and therefore warranted more detailed examination.
- 12 The AESO considers the model sufficiently simulated the deferral account methodology to allow an accurate assessment of changes that affect the outcomes of that methodology. However, the model differs from the annual DARs filed by the AESO in three respects.
- 13 (1) The model treats five years of production data as if each year was being fully reconciled in a single initial reconciliation, rather than through multiple reconciliations in sequential deferral account applications. For example, the production year 2011 has been reconciled four times to date: in the DARs for 2010-2011, for 2012, for 2013-2014, and for 2015. In the model, all known amounts for production year 2011 have been dealt with in a single reconciliation. This means that the model's results most closely reflect the 2011 reconciliation included in the 2015 DAR. However, allocations of 2015 amounts included in the model treat all allocations as if they happen in a single production year, even though the allocation would have happened in four individual years in accordance with amounts in the four applications that included amounts related to 2011.

¹ Decision 2014-242, *AESO 2014 ISO Tariff Application and 2013 ISO Tariff Update*, issued August 27, 2014, at paragraph 704.

- 14 (2) The model uses current billing data that reflects all metering volumes as of November 2016. In generally, the billing data closely matched amounts reported in DAR applications except for the 2015 production year included in the 2015 DAR. The 2015 DAR as filed included final settlement data for January through August, interim settlement data for September and October, and initial settlement data for November and December. The model includes final settlement data for all months of the 2015 production year. There is therefore a larger difference between billing amounts simulated for 2015 and the 2015 DAR, than for any other production year.
- 15 (3) During 2012 and in the first quarter of 2013, Rider C was “frozen” at the level set for the first quarter of 2012 consistent with Commission Bulletin 2012-03 (issued on March 13, 2012) that set out the Commission’s approach to the Alberta Minister of Energy’s request to maintain electricity rates at that time. In Bulletin 2012-03, the Commission explained that it would process and complete the record for currently pending and new applications but would not issue decisions that result in rate increases. The Commission further explained that its approach would remain in effect until the Government of Alberta responded to the Retail Market Review Committee’s recommendations, which occurred on January 29, 2013. Rider C therefore remained at its Q1 2012 level until the end of Q1 2013. In contrast, the DAR model calculates Rider C as if it was not constrained by Bulletin 2012-03 during that time. The AESO considers that the unconstrained calculation of Rider C during 2012 and Q1 2013 will allow a more complete investigation of the effect of changes to the structure of Rider C and other aspects of DARs.
- 16 The AESO does not consider that either of these limitations materially reduces the validity of the results of the AESO’s examination of Rider C and DAR matters. The AESO has confirmed that the model simulates deferral account balance allocations over all system access services within $\pm 2\%$ of actual allocations. The AESO accordingly used the model to evaluate potential changes to tariff updates, Rider C, and DAR methodology, and discussed the outcome of the modelling with stakeholders.
- 17 The AESO has not made the DAR model public and has not provided it to stakeholders. The AESO does not intend to file the model in the regulatory proceeding that considers proposed changes to Rider C and the DAR methodology. The model contains extensive information on system access services provided to individual market participants that the AESO consistently treats as confidential.
- 18 This report summarizes the AESO’s conclusions from its investigation and the outcomes of discussions with stakeholders, and fully responds to the Commission’s direction in Decision 2014-242 as quoted above.

L.2 Stakeholder Consultation

- 19 The AESO consulted with stakeholder on Rider C and DAR matters through three consultation meetings, each of which included a written comment process. The dates and topics of the three consultation meeting were:
- December 14, 2015, on potential impacts of early filing of tariff updated and potential changes to Rider C;
 - December 5, 2016, on the AESO’s evaluation of potential changes to Rider C and DARs; and
 - January 30, 2017, on the AESO’s proposal to apply for changes to Rider C and DARs.

In the January 30, 2017, consultation meeting, the AESO proposed to apply for interim approval of changes to Rider C and DARs, which would be followed by a request for final approval as part of the 2018 ISO tariff application. However, changes to priorities and allocation of resources resulted in the request for interim approval being incorporated into the 2018 ISO tariff application.

In general, stakeholders supported the AESO's conclusions and proposed changes to Rider C and DARs. Some stakeholders raised specific questions, which have been addressed as much as possible in this report.

Stakeholders specifically supported prompt application for changes to Rider C and DARs to address the concerns that prompted the Commission direction. The AESO considers that, having regard for its priorities in other areas, including a request for interim approval in the 2018 ISO tariff application can achieve reasonably prompt implementation of the proposed changes.

L.3 Investigation of Rider C and Deferral Account Reconciliation

20 The AESO's investigation and modelling addressed four separate components of the AESO's activities that relate to deferral accounts:

- (a) early tariff updates;
- (b) changes to Rider C structure;
- (c) changes to production year basis for Rider C and DARs; and
- (d) net revenue basis for Rider C and DARs.

21 Each of those aspects will be discussed separately in the following sections of this report.

L.4 Early Tariff Updates

22 The AESO began its investigation of Rider C and deferral account matters by examining the causes of deferral account balances. The AESO found that a lag in tariff applications and approvals has resulting in an inherent shortfall, primarily in wires costs recovered through the connection charge or Rate DTS and Rate FTS. Wires cost comprise over 80% of the total Rate DTS revenue requirement and are the biggest contributor to deferral account balances.

23 Figure L-1 below illustrates the pattern that has resulted from tariff applications for each year during the 2011 to 2015 period. For example, Figure L-1 illustrates the following for 2011:

- (a) Rates in the 2009 ISO tariff were based on a wires cost of \$523.7 million. Rates in the 2011 ISO tariff were based on a wires cost of \$786.2 million.
- (b) The 2009 ISO tariff was in effect from January to June of 2011. The 2011 ISO tariff was in effect from July to December of 2011.
- (c) Since each set of rates was in place for six months, the wires cost basis for rates over the entirety of 2011 was about \$654.9 million (the average of \$523.7 million for 2009 and \$786.2 million for 2011).
- (d) The AESO's forecast of wires cost for 2011 was \$786.2 million.
- (e) Therefore, based on the rates in place during 2011, the rates as approved would result in an "inherent shortfall" of \$131.3 million or 17 per cent of the forecast costs.

24 A similar pattern repeats in each of 2012, 2013, 2014, and 2015. The inherent shortfall arises because revenue in a year results from, at least in part, rates that were designed to recover wires cost from a previous year. The inherent shortfalls in revenue range from 10 per cent in 2015 to 22 per cent in 2013. The AESO recovered such shortfalls through Rider C and through DARs.

25 The AESO considers that the concerns expressed by stakeholders with respect to imbalances among market participants result, in part, from the magnitude of the inherent shortfalls experienced in recent years. Reducing the inherent shortfalls should address at least some of the imbalances that result from DARs.

Figure L-1 – Wires Cost Shortfalls Resulting From Tariff Lag During 2011 to 2015

Test Year	2009	2010	2011	2012	2013	2014
Wires Cost	\$523.7		\$786.2		\$1,113.4	\$1,371.7
Effective Dates	Oct 2009 – Jun 2011		Jul 2011 – Sep 2013		Oct 2013 – Jun 2015	
						J-D 15

Wires Cost Shortfall

Cost Basis for Rates ¹
 Forecast Costs for Year ²
 Inherent Shortfall (\$)
 Inherent Shortfall (%)

	2011	2012	2013	2014	2015
Cost Basis for Rates ¹	\$654.9	\$786.2	\$868.0	\$1,113.4	\$1,242.56
Forecast Costs for Year ²	\$786.2	\$973.5	\$1,113.4	\$1,371.7	\$1,373.7
Inherent Shortfall (\$)	(\$131.3)	(\$187.3)	(\$245.4)	(\$258.3)	(\$131.2)
Inherent Shortfall (%)	(17%)	(19%)	(22%)	(19%)	(10%)

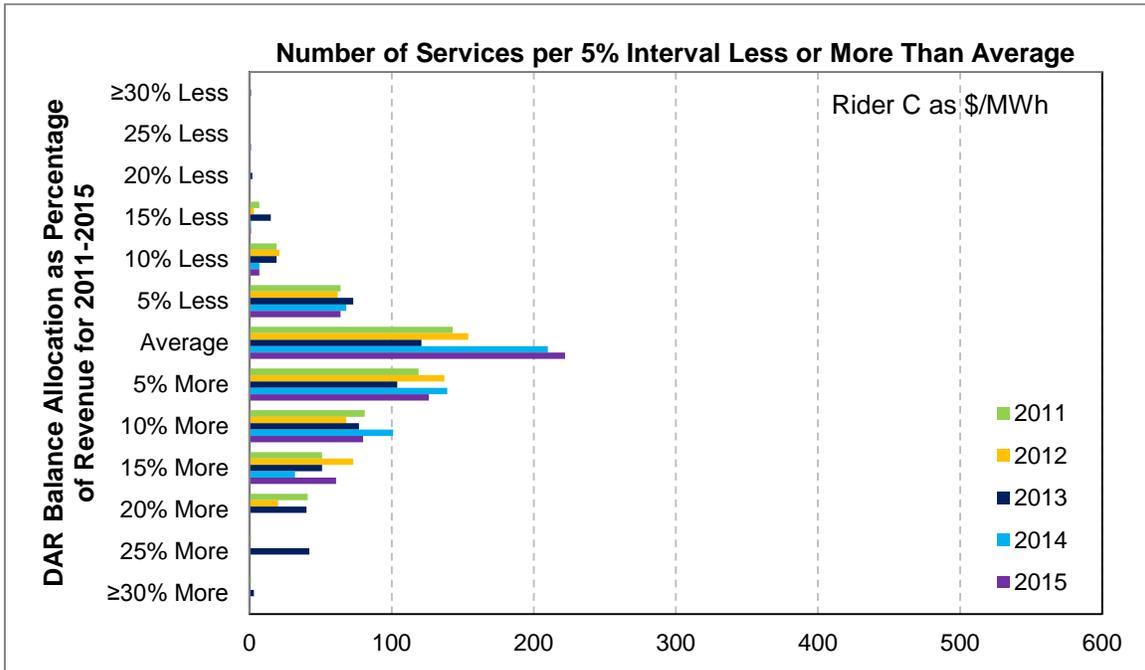
Notes:

- ¹ Based on rates in effect during year
- ² Forecast typically prepared in third quarter of prior year

26 Figure L-2 below illustrates the imbalances resulting from DARs from 2011 to 2015 as simulated in the DAR model. In that figure, bars represent the number of individual system access services that received a DAR (“DAR”) balance allocation for each year. Allocations are normalized as percentage of annual revenue for a service and bars are stratified in intervals of 5 per cent. For example, a bar in the interval labelled “5% More” includes all services in that year that were allocated, as a percentage of annual revenue, between 2.5 per cent and 7.5 per cent more than the average allocation for all services in that year. For additional clarity, in 2015 each service was allocated a DAR charge that was, on average, 1.3 per cent of the annual revenue for that service. The “5% More” bar therefore includes all services that received charges from 3.8 per cent to 8.8 per cent of annual revenue, which represents the interval between 2.5 per cent and 7 per cent more than the average. The horizontal axes represents the total number of Rate DTS and Rate FTS services in a year, which grew from about 520 to about 570 from 2011 to 2015.

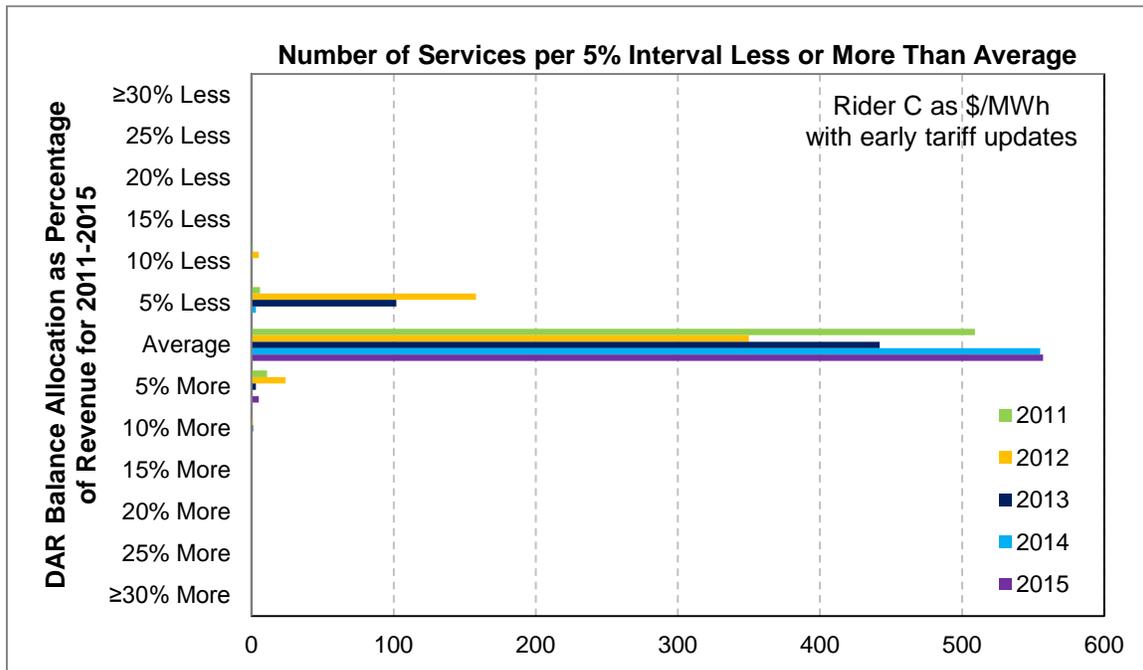
27 The length of a bar indicates the number of services included in an interval. For example, in the “10% Less” interval, the bars indicate that 19 to 20 services received deferral account allocations in the range of 7.5 per cent to 12.5 per cent less than the average, based on allocation as a percentage of annual revenue. In comparison, in the “10% More” interval, the bars indicate that 68 to 81 services received deferral account allocations in a similar range more than the average. Figure L-2 shows that there is wide dispersion around the average, reflecting the concern that material balances transfer between services in DARs. The AESO notes that the dispersion around the average is not symmetrical, reflecting that services receiving less-than-average allocation tend to be larger, with higher annual revenue, than services receiving more-than-average allocation.

Figure L-2 – Allocations for Deferral Account Reconciliation per Existing Approach



- 28 Figure L-3 below illustrates the impact of early tariff update on the imbalances resulting from DARs from 2011 to 2015. The dispersion of imbalances around the average is materially reduced. However, eight services continue to receive allocations of about 10 per cent of annual revenue less or more than the average, which may represent a significant amount. As well, over the five-year period, about 300 services receive allocations of about 5 per cent of annual revenue less or more than the average.
- 29 Based on these results, the AESO concluded that the most practical approach to reduce the imbalances that have resulted from recent DARs would be to accelerate its filing of tariff update applications. Early filing of tariff updates should reduce the inherent shortfalls that have existing in recent years by improving the correlation between cost basis for revenue and forecast current year costs. The AESO accordingly filed 2015, 2016, and 2017 tariff update application such that rates were updated on January 1, 2016; April 1, 2016; and January 1, 2017, respectively. As a result of this acceleration, rates in effect during 2017 have been based on costs forecast for 2017, which should minimize the inherent shortfall for 2017 as much as possible.
- 30 The AESO notes that early filing of tariff updates may reduce the accuracy of the wires cost forecast included in the tariff update. However, the forecast error is expected to be significantly less than the inherent shortfall that has occurred due to the tariff lag discussed above. Regardless of the potential increase in forecast error, the AESO considers that the reduction in dispersion is substantial enough to warrant its adoption of a practice of early tariff update applications.
- 31 Based on results from its modelling of early tariff updates, the AESO observes that the years with greatest dispersion (2012 and 2013) were the years with the largest amounts collected or refunded through Rider C (namely, \$70 million refunded through Rider C in 2012 and \$45 million refunded through Rider C in 2013). Although early tariff updates can be expected to reduce DAR imbalances, if relatively large amounts are collected or refunded through Rider C due to forecast error or other reasons, there may still be material imbalances resulting from DARs.

Figure L-3 – Allocations With Early Tariff Updates



32 No specific applications or approval were required to implement early tariff updates. The AESO simply accelerated the pace of tariff update applications. The AESO intends to continue to file tariff update applications in Q3 of each year, regardless of whether a comprehensive tariff application is planned or in progress. Part of the tariff lag illustrated in Figure L-1 is attributed to skipping tariff updates in years when comprehensive tariff applications were filed, with the lag resulting from the longer regulatory process required to review and approve a comprehensive tariff application compared to a tariff update application.

L.5 Changes to Rider C Structure

33 The AESO next investigated potential changes to the structure of Rider C to further reduce imbalances resulting from DARs.

34 Since December 1, 2003, Rider C has been approved in the ISO tariff as an additional \$/MWh charge or credit that is required to restore deferral account balances to zero over the following calendar quarter, or over a longer period to minimize rate impact. The structure of Rider C was addressed in Decision 2003-099 of the Alberta Energy and Utilities Board (“Board”), issued on December 16, 2003 regarding the AESO’s DAR application for years 2000, 2001 and 2002. At that time the Board considered it “an unnecessary degree of refinement to attempt to design Rider C to reflect the underlying rate design ... for the Interconnection, Operating Reserve, Ancillary Services and Transmission Losses revenue categories. The Rider C amounts for the revenue categories should be collected or refunded on a simple \$/MWh basis”²

35 The ISO tariff has changed substantially since the Board issued Decision 2003-099. In particular:

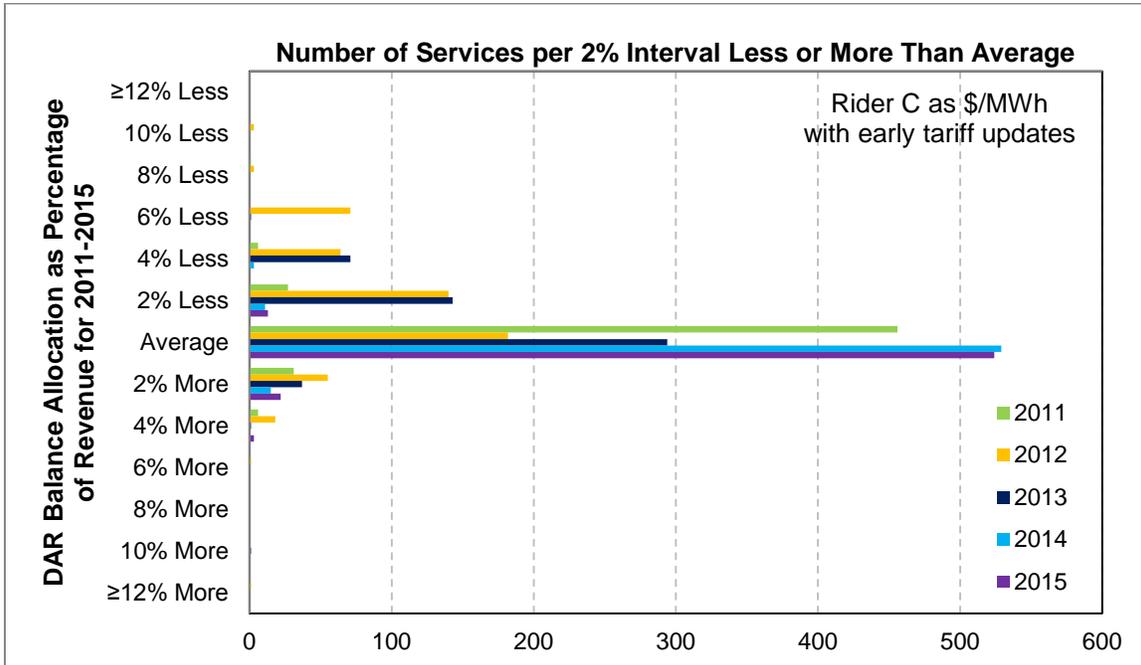
² Decision 2003-099, *AESO Deferral Account Reconciliation for Years 2000, 2001 and 2002*, issued December 16, 2003, at pages 38-39.

- (a) since January 1, 2006, transmission system losses are no longer subject to retrospective DAR as was the case for 2005 and prior years;
- (b) since July 1, 2011, total operating reserve costs in an hour are allocated to market participants in that hour under Rates DTS and FTS, significantly reducing deferral account balances for operating reserve that are collected or refunded through Rider C; and
- (c) the connection charge rate component has increased to account for more than 80 per cent of the costs recovered through Rates DTS and FTS, while at the same time the proportion of connection charges recovered on a \$/MW (rather than \$/MWh) basis has increased to more than 90 per cent of total connection charge costs.

36 These changes, and especially the last one, suggest that charging or refunding Rider C on a \$/MWh basis may result in misalignment between the structure of charges under Rate DTS and the structure of Rider C. Any such misalignment due to the structure of Rider C would have an interim impact on charges to market participants, which could potentially result in imbalances between market participants in a DARs following the end of a production year.

37 During a year, Rider C allocates deferral account balances to market participants as a quarterly \$/MWh charge or credit based on each market participant’s metered energy. In a DAR, deferral account balances are re-allocated to individual market participants based on each market participant’s percentage of base rate revenue collected by month and by rate component. If the amounts resulting from the two allocations are different, imbalances between market participants will result.

Figure L-4 – Allocations With Early Tariff Updates Stratified in 2% Intervals



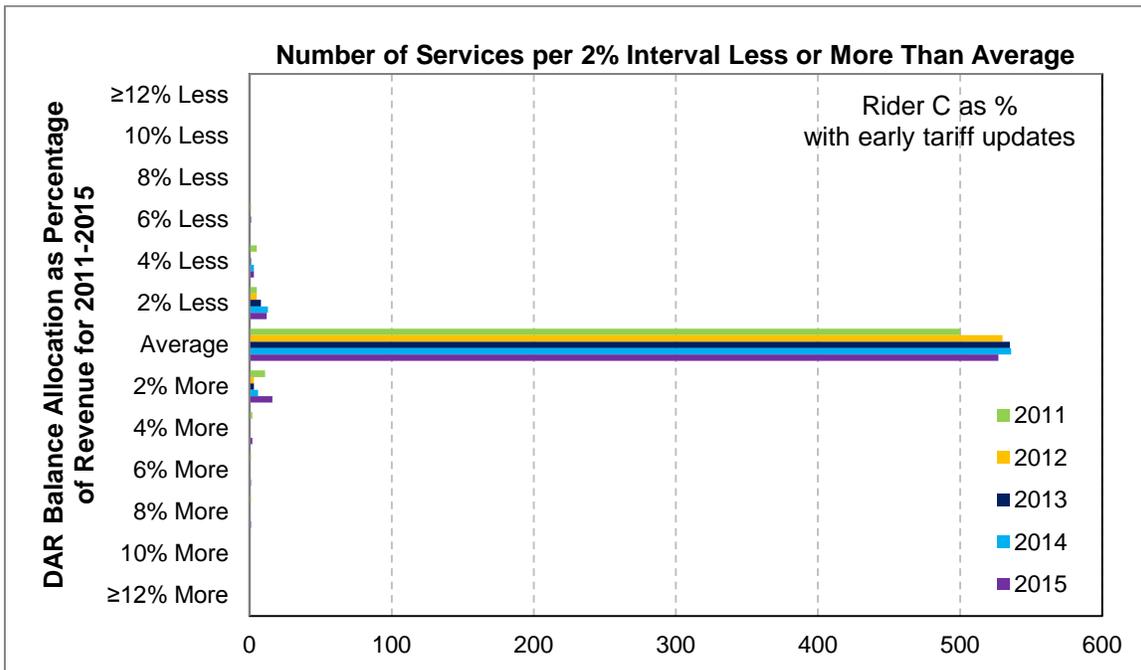
38 The AESO investigated the impact on imbalances between market participants assuming early tariff updates are implemented as discussed in section L.4 above. Figure L-4 above presents the same information as Figure L-4 with greater granularity, by stratified the balance allocations in intervals of 2 per cent rather than five per cent.

39 The AESO then converted Rider C to a percentage of connection charge revenue within the DAR model.
 The resulting balance allocations are presented in Figure L-5 below.

40 Compared to Figure L-4 with Rider C as \$/MWh, Figure L-5 with Rider C as percentage results in two
 material impacts.

- 41 (1) The dispersion less and more than the average deferral account balance allocation is significantly
 reduced.
- Rider C as \$/MWh resulted in more than 200 services receiving allocations less than the average (± 1 per cent) in two years and 75 services receives allocations more than the average in one year.
 - Rider C as percentage reduced the dispersion to no more than 20 services receiving allocations less than the average (± 1 per cent) and no more than 20 services receiving allocations more than the average in any year.
- 42 (2) Dispersion is more consistent between years, regardless of the magnitude of amounts collected
 or refunded through Rider C.
- Rider C as \$/MWh resulted in from 34% to 95% of services receiving deferral account balance allocation within ± 1 per cent of the average allocation in a year.
 - Rider C as percentage resulted in over 93% of all services receiving a deferral account balance allocation within ± 1 per cent of the average allocation in each year.

Figure L-5 – Allocations With Rider C as Percentage of Connection Charge Revenue



43 Based on these results, the AESO concluded that changing the structure of Rider C to a percentage
 charge or credit will significantly reduce the imbalances that have resulted from recent DARs.

44 The AESO further examined the impact of other changes to the structure of Rider C. The results are
 presented below in Figure L-6 and Figure L-7.

45 From Figures L-6 and L-7, the AESO concluded that neither structuring Rider C as a \$/MW of billing capacity nor structuring it as a \$/MW of coincident metered demand reduced deferral account imbalances to the extent provided by Rider C as a percentage. The AESO observes that, during the modelling period, about 50 per cent of connection charges were recovered on a \$/MW of billing capacity basis while about 35 per cent of connection charges were recovered on a \$/MW of coincident metered demand basis. Given the varied structure of the connection charge rate components, it is not surprising that aligning Rider C with one single component reduces imbalances less than structuring Rider C as a percentage, which would reflect the overall component basis of connection charge recovery in Rate DTS.

46 The AESO concluded that changing the structure of Rider C to a percentage charge or credit will reduce the imbalances that have resulted from recent DARs, compared to Rider C as a \$/MWh or \$/MW (of either billing capacity or coincident metered demand) charge or credit.

Figure L-6 – Allocations With Rider C as \$/MW of Billing Capacity

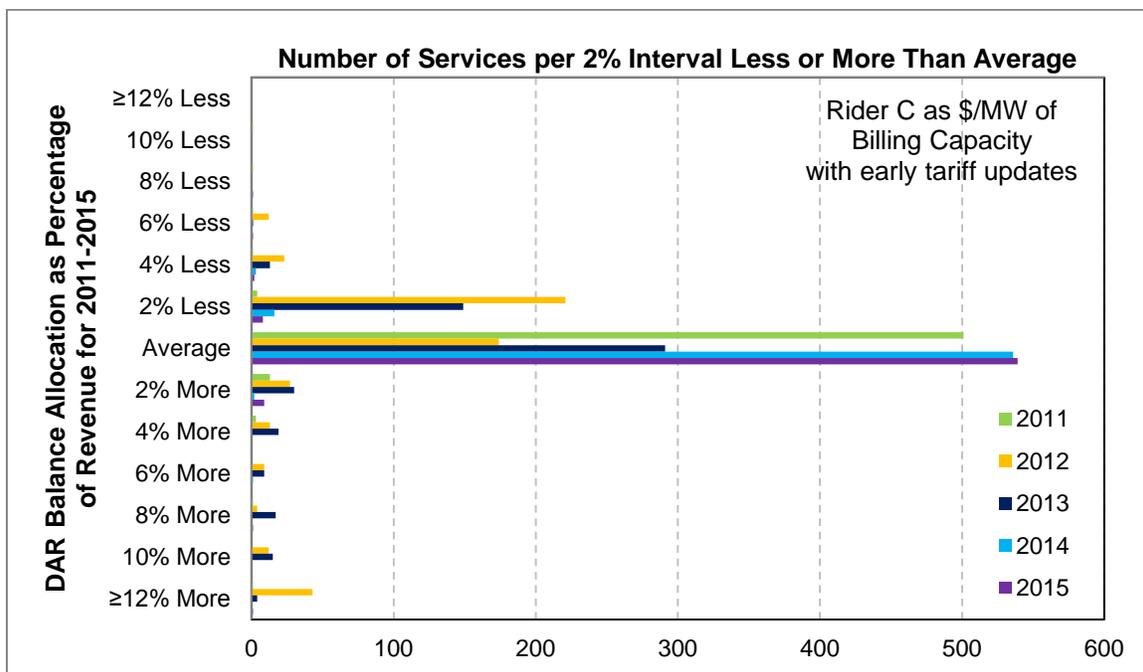
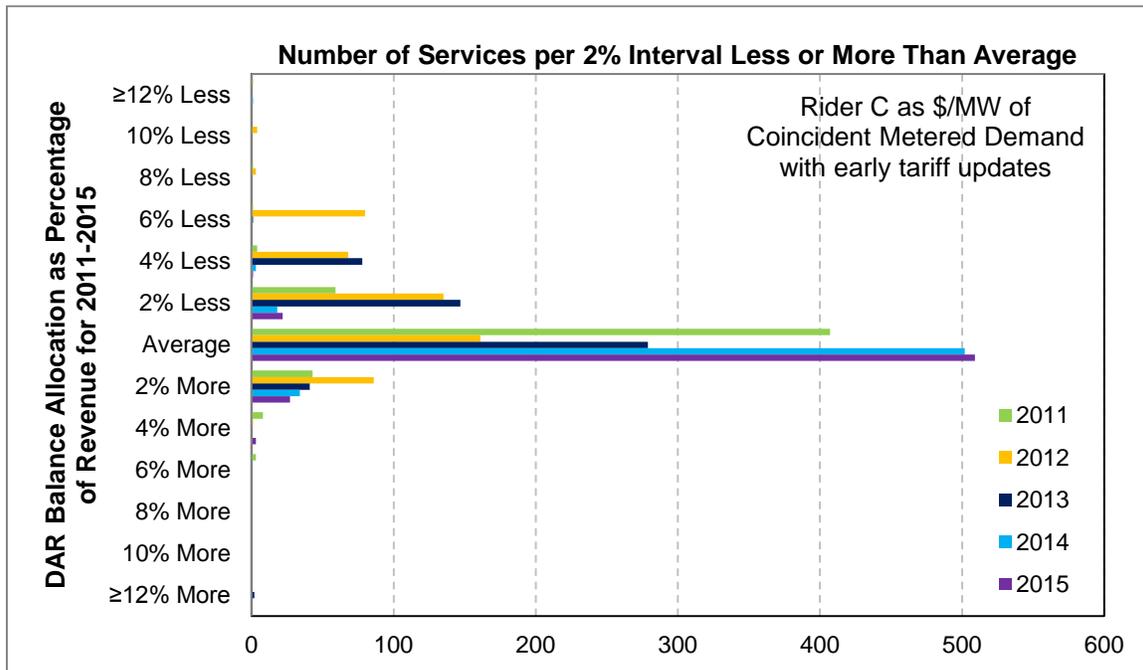


Figure L-7 – Allocations With Rider C as \$/MW of Coincident Metered Demand



L.6 Change to Production Year Basis

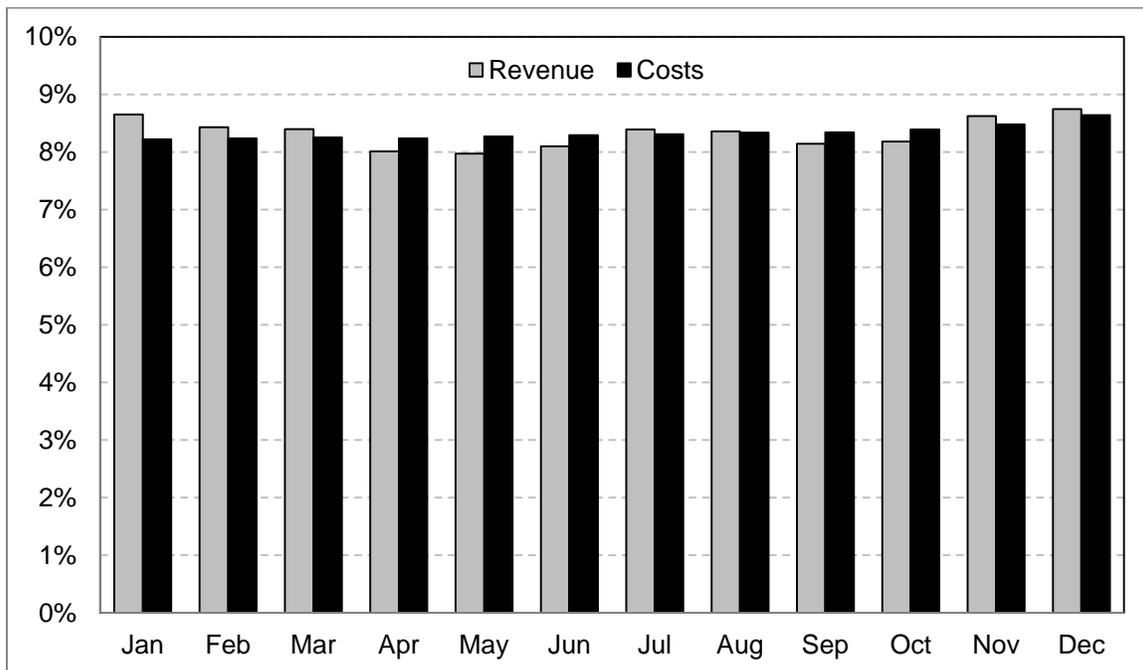
- 47 As illustrated in Figure L-5, changing Rider C to a percentage charge or credit is expected to reduce, but not eliminate, the imbalances between market participants that result after a DAR. The AESO used its DAR model to investigate whether the remaining imbalances can be addressed. The AESO found the remaining imbalances relate to differences between costs and revenues being reconciled on a production basis during a year.
- 48 As background, connection charges recover costs of the tariffs of transmission facility owners as well as costs of administration, which include the AESO’s own costs and other industry costs. These costs are generally constant amounts incurred in each month of a year. However, costs of transmission facility owners may increase during a year to reflect tariff or DAR decisions, and administration costs exhibit a tendency to increase somewhat in the final months of a year.
- 49 These costs are recovered through the connection charge components of Rate DTS, which are calculated on a forecast annual basis. That is, for each connection charge component, the forecast annual costs attributed to that component are divided by the applicable forecast annual billing determinant to determine a rate that is intended to apply throughout the year (or such other period as may result from the Commission’s approval of the ISO tariff).
- 50 Although the same rate applies in each month of the year, the aggregate connection charge revenue from market participants will vary from month to month as the volumes on which revenue is based vary from month to month. Billing volumes tend to be highest in the winter months and lowest in the spring and fall months, with summer months typically between the two. During the period 2011 to 2015, revenue was higher than costs on average in seven months (January, February, March, June, July, November, and December) and lower than costs on average in five months (April, May, August, September, and October).

51 Figure L-8 below illustrates the average differences between costs and revenue in each month, assuming
 early tariff updates were implemented for each year. (That is, Figure L-8 is based on the same data as
 Figure L-4.)

52 In the AESO’s DARs filed to date, costs and revenue are reconciled on a production month basis. In a
 month in which revenue is higher than costs, the surplus is refunded to market participants. In a month in
 which revenue is lower than costs, the shortfall is collected from market participants. These refunds and
 collections effectively create a rate which varies month by month during a year, inversely with billing
 volumes. (That is, the higher the billing volume, the lower the effective rate, as the rate is calculated as
 cost divided by billing volume.) The AESO considers that a connection charge rate which varies from
 month by month is not the intended outcome of the DAR process or the intent of the ISO tariff.

53 The production month basis for DARs was directed in Decision 2003-009 regarding the DAR application
 for years 2000, 2001 and 2002, primarily to address “significant adjustments to cost information for
 transmission system losses [that] occurred throughout the year 2002 as well as into 2003.”³ As noted in
 section L.5 above, transmission system losses are no longer subject to retrospective DAR.

Figure L-8 – Monthly Revenue and Costs as Percentage of Annual Totals



54 More generally, the AESO understands the production month basis was developed to address month-to-
 month variations in costs, especially where billing determinants directly related to those costs being
 incurred, as is the case for transmission system losses as mentioned above. For the connection charge,
 month-to-month variations in billing volumes do not impact the amounts paid to transmission facility

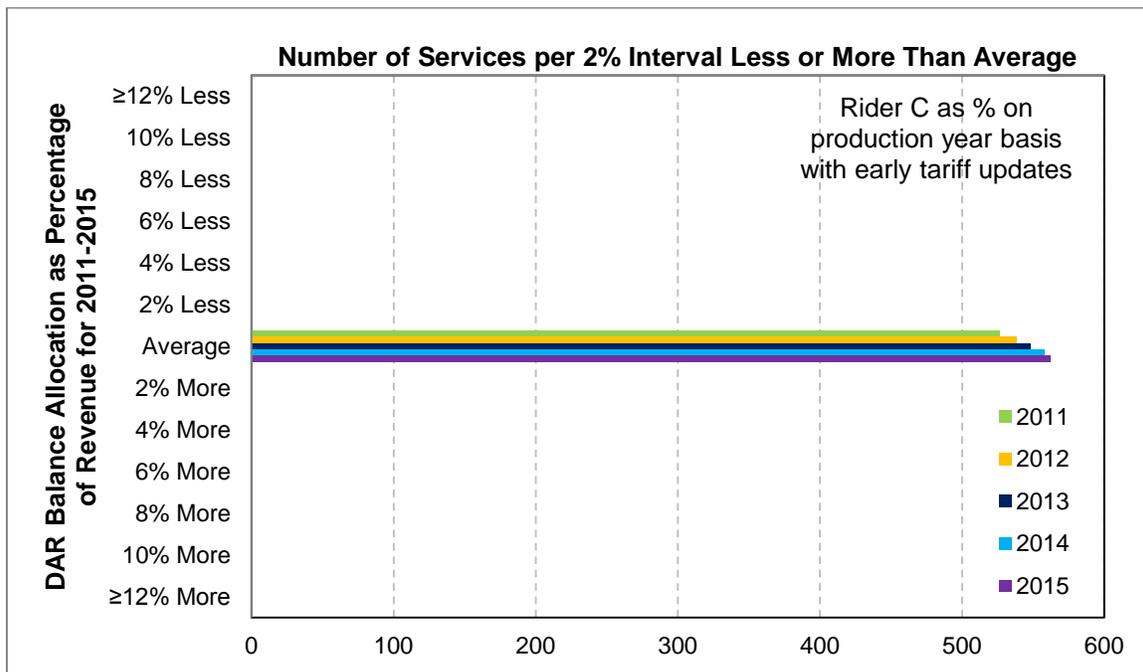
³ Decision 2003-099, *AESO Deferral Account Reconciliation for Years 2000, 2001 and 2002*, issued December 16, 2003, at page 23.

owners in a month. Allowing variations in billing volumes to effectively create month-to-month variations in the connection charge rate seems an unintended, and inappropriate, consequence of the production month approach.

55 Beyond the connection charge, the AESO observes that the Rate DTS components that are expected to potentially vary significantly from month to month are those for the operating reserve charge and the transmission constraint rebalancing charge. For both of these rate components, hourly costs are allocated to market participants based on each market participant's hourly metered energy. As a result, deferral account balances are small for these rate components. For example, the undercollection of \$2.8 million for operating reserve in 2015 was less than 2 per cent of recorded costs of \$146.9 million for operating reserve in 2015⁴.

56 As a connection charge rate which varies from month by month does not appear to be an intentional result of the production month basis for DARs, the AESO examined the impact of implementing a production year basis for both Rider C calculations and DARs. Figure L-9 below provides the results of that simulation.

Figure L-9 – Allocations With Rider C as \$/MW of Coincident Metered Demand



57 The AESO found that, in conjunction with early tariff updates and converting Rider C to a percentage charge or credit, implementing Rider C and DARs on a production year basis eliminated all imbalances between market participants that result after a DAR.

58 The AESO further considers that implementing Rider C and DARs on a production year basis is consistent with the determination of rates on an annual basis in an ISO tariff application, and in particular

⁴ Exhibit 21725-X0037, AESO 2015 Deferral Account Reconciliation Application dated June 17, 2016, at line 2 of Table 3-4, page 35.

for the connection charge component of Rate DTS. The AESO accordingly proposes that Rider C and DARs be implemented on an annual basis going forward.

59 The AESO also cautions that the results of its modelling are likely somewhat optimistic. The AESO expects that some events will result in costs being recovered through Rider C in one period that are ultimately attributed to a different period during a year.

60 For example, if a transmission facility owner tariff for a year is approved midway through a year, any shortfall resulting from that approval would be recovered through Rider C over the remaining months in that year. In the subsequent DAR following year-end, that shortfall would then be more appropriately recovered over the whole year. The change in recovery period from a partial year through Rider C to a full year through a DAR could result in imbalances between market participants.

61 As well, deferral account shortfalls or surpluses sometimes result from metered data adjustments, corrections, or restatements; post-final adjustment mechanism (“PFAM”) data restatements; vendor invoice corrections; or other prior period adjustments. Such adjustments would also result in a change to the costs recovered during a year and those recovered through a DAR, and could also result in imbalances between market participants.

62 The AESO was unable to identify any approach that would address imbalances that result from such timing and prior period events, while maintaining a retrospective approach to DARs. The AESO suggests the impact of timing and prior period events could be reviewed after a few years’ experience is gained following implementation of the changes to Rider C and DARs that are proposed in this application.

L.7 Net Revenue Basis for Rider C and Deferral Account Reconciliations

63 The final matter that the AESO considered in this examination of deferral account matters was the potential for changing to a net revenue basis for allocation of deferral account amounts to market participants through Rider C and DARs. The basis for allocation of deferral account amounts was raised in Proceeding 21735 regarding the 2015 DAR. Decision 21735-D02-2017⁵ in that proceeding found “that matters regarding the allocation methodology to be employed for deferral account balances are best dealt with in a comprehensive tariff application to allow the Commission and parties the opportunity to coordinate the design of deferral account applications, tariff updates and the design of Rider C.”

64 Furthermore, in Decision 21735-D02-2017 the Commission directed the AESO as follows:

Nonetheless, the Commission expects the AESO to follow through on its commitment to further consult with stakeholders on this issue and directs the AESO to address whether changes to the deferral account allocation methodology and to Rider C are warranted given the concerns raised by the PS Group, as part of its next ISO tariff application.⁶

65 The AESO accordingly included potential changes to the allocation basis for Rider C and DARs in its examination of Rider C and consultation with stakeholders as described in sections L.1, L.2, and L.3 above.

66 The AESO agrees with what it understands to be the primary concern raised during Proceeding 21735 regarding its 2015 DAR: namely, that the deferral account allocation methodology should “uphold the rate

⁵ Decision 21735-D02-2017, *AESO 2015 Deferral Account Reconciliation*, at paragraph 107.

⁶ *Ibid.*, at paragraph 108.

design principle of cost causation, which is an integral part of ISO tariff design.”⁷ The AESO further considers that an examination of the principle of cost causation in the context of Rider C and deferral account allocation is warranted at this time due to some of the substantial tariff changes discussed in section L.5 above, including the reduction of the operating reserve deferral account balances and cost increases in the connection charge rate component.

67 In the context of Rider C and deferral account allocation, cost causation should promote horizontal equity, which would result in market participants with similar costs of service receiving similar allocations of Rider C and deferral account balances. The AESO therefore began its review by examining what charges or credits may accrue to market participants receiving service under Rate DTS that would result in them causing similar or different costs on the transmission system.

68 The AESO has identified the following charges or credits that may apply in conjunction with service provided under Rate DTS and Rate FTS:

- (a) Rate UFLS, *Demand Under-Frequency Load Shedding Credit*;
- (b) Rate PSC, *Primary Service Credit*;
- (c) Riders A1-A4, *Transmission Duplication Avoidance Adjustments*; and
- (d) Payments in lieu of notice (“PILON”) for reductions or terminations of contract capacity under section 9 of the current ISO tariff, *Changes to System Access Service After Energization*.

69 The cost causation consideration for each of these charges or credits is discussed in the following sections.

L.7.1 Rate UFLS, Demand Under-Frequency Load Shedding Credit

70 Rate UFLS provides a credit when a market participant installs and activates, as required by the AESO, an under-frequency load shedding relay and accordingly faces a higher risk of forced outage. Market participants who receive Rate UFLS credits are required to install additional equipment and are subject to a higher risk of forced outage, compared to market participants who do not receive the credits. Rate UFLS credits offset the cost of the additional equipment and the higher risk of forced outage rather than reflecting a change to the cost of providing system access service to the market participant under Rate DTS.

71 The costs incurred by a transmission facility owner in providing system access service under Rate DTS are not materially different for market participants who receive Rate UFLS credits and those who do not. As Rate UFLS credits do not impact the costs caused in providing service under Rate DTS, Rate UFLS credits should not impact the allocation of deferral account amounts to a market participant.

L.7.2 Rate PSC, Primary Service Credit

72 Rate PSC provides a credit when a market participant does not utilize transformation facilities owned by a transmission facility owner. The transformation facilities are generally purchased, owned, and operated by the market participant instead of by a transmission facility owner. Rate UFLS credits are based on, and are intended to reflect, the reduced costs of the transmission facility owner. Although Rate UFLS credits

⁷ *Ibid.*, at paragraph 47.

would also offset the additional costs incurred by the market participant, they are not specifically based on those costs.

73 The costs incurred by a transmission facility owner in providing system access service under Rate DTS would be reduced for market participants who receive Rate PSC credits compared to those who do not. As Rate PSC credits reduce the costs caused in providing service under Rate DTS, Rate PSC credits should reduce the allocation of deferral account amounts to a market participant.

L.7.3 Riders A1-A4, Transmission Duplication Avoidance Adjustments

74 Each of Riders A1-A4 provides additional charges and implements totalization of points of delivery and points of supply at a specified industrial system, resulting from an application by the AESO (or a predecessor) to avoid the construction of duplicate transmission facilities proposed by a market participant. The duplicate transmission facilities, if constructed, would have been purchased, owned, and operated by the market participant. The facilities owned by the transmission facility owner would have remained materially the same whether the market participant built the duplicate facilities or not. Each of Riders A1-A4 are based on, and are intended to reflect, the additional costs that would have been incurred by the market participant if the duplicate facilities had been constructed.

75 The costs incurred by a transmission facility owner in providing system access service under Rate DTS are not materially different for a market participant who pays Rider A1-A4 charges and one who, instead, constructs proposed duplicate facilities and does not pay Rider A1-A4 charges. As Rider A1-A4 charges do not impact the costs caused in providing service under Rate DTS, Rider A1-A4 charges should not impact the allocation of deferral account amounts to a market participant.

L.7.4 Payment in Lieu of Notice (“PILON”) for Reduction or Termination of Contract Capacity

76 A PILON is a lump sum payment payable by a market participant in lieu of all or a portion of the five-year notice period required for a reduction or termination of contract capacity. PILONs represent a share of system costs potentially incurred to reasonably accommodate the contract capacity of a market participant over the 5-year planning horizon of the transmission system. A PILON does not change the cost of providing system access service to the market participant under Rate DTS.

77 The costs incurred by a transmission facility owner in providing system access service under Rate DTS are not materially different for market participants who pay PILONs and those who do not. As a PILON payment does not impact the costs caused in providing service under Rate DTS, the PILON payment should not impact the allocation of deferral account amounts to a market participant.

78 Based on its examination of the principle of cost causation for each of the charges or credits that may apply in conjunction with service provided under Rate DTS and Rate FTS, as summarized above, the AESO concludes that Rate PSC credits should impact Rider C and deferral account allocation, while Rate UFLS, Riders A1-A4, and PILONs should not. Incorporating Rate PSC credits in the Rider C and deferral account allocation methodologies should promote horizontal equity, which would result in market participants with similar costs of service receiving similar allocations of Rider C and deferral account balances and those with different costs of service receiving different allocations.

79 The AESO accordingly proposes that Rider C include Rate PSC as an additional component on which it is calculated and that deferral account balances be allocated to market participants based on Rate DTS revenue net of Rate PSC credits, where applicable. Changes to the Rate PSC and Rider C sections have been included in the proposed ISO tariff provided as Appendix Q of this application.

L.8 Implementation

- 80 The AESO proposes that the changes discussed in the preceding sections of this appendix be implemented on a go-forward basis, with interim approval for the proposed changes to Rider C as soon as practical and final approval for the allocation of deferral account balances in the AESO's DAR application for production year 2017.
- 81 In Decision 21735-D02-2017 regarding the 2015 DAR, the Commission found that "[a] final decision on the deferral account methodology was made in Decision 2009-010"⁸ regarding the AESO 2004-2007 DAR. The Commission found that "its approval of the deferral account methodology in its previous decisions approved both the allocation and the methodology on a final basis"⁹ and that, based on those approvals, market participants "could not reasonably have known that the AESO's deferral account would be used to change anything other than a revenue or cost item."¹⁰
- 82 The Commission accordingly determined that the allocation of deferral account balances should be completed on a basis consistent with prior DAR applications and approved the 2015 DAR application as filed.¹¹
- 83 The AESO submits that the same considerations apply to 2016 and, therefore, the DAR and allocation for production year 2016 should be completed consistent with prior DAR applications and approvals. Although the Primary Service Group publicly raised the matter of a net revenue basis for Rider C and DARs in June 2016 in its letter¹² in Proceeding 21735 regarding the 2015 DAR, the AESO considers that market participants would not have reasonably expected the allocation methodology to be potentially subject to change until the AESO's stakeholder consultation meetings in December 2016 and January 2017, as discussed in section L.2 of this appendix. Even then, those meetings were generally limited to stakeholders who followed the AESO's DAR applications, rather than the broader audience who followed the AESO's tariff applications. The AESO considers that throughout 2016, market participants would generally have been unaware of the potential for a to the deferral account allocation methodology and would therefore have based any decisions regarding their system access services on their knowledge of prior deferral account allocations.
- 84 The AESO notes that none of the changes to Rider C discussed in this appendix were in effect during 2016. Furthermore, the AESO proposes, for the reasons discussed above, that none of the changes proposed in this appendix be implemented in the DAR application for production year 2016. The AESO considers that this approach would be consistent with the Commission's prior decisions and with the reasonable knowledge of market participants during 2016.
- 85 As discussed in the AESO's stakeholder consultation meetings in January 2017, the AESO initially anticipated filing a separate interim tariff amendment application to implement the changes proposed in this appendix. However, to accommodate work priorities and resource availability at the AESO during 2017, the AESO decided to include the tariff amendments into this 2018 ISO tariff application.

⁸ Decision 21735-D02-2017, *AESO 2015 Deferral Account Reconciliation*, at paragraph 103.

⁹ *Ibid.*, at paragraph 92.

¹⁰ *Ibid.*, at paragraph 98.

¹¹ *Ibid.*, at paragraph 111.

¹² Exhibit 21735-X0052, *Request to adjust deferral account reconciliation methodology to achieve a fair and reasonable allocation of deferral balances to DTS customers that receive the primary service credit under Rate PSC*, dated June 30, 2016.

- 86 The main concern with including the Rider C and DAR methodology amendments in the 2018 ISO tariff application was the length of time typically required to receive approval of changes included in a comprehensive tariff application. The AESO accordingly requests that the Rider C and DAR methodology amendments be considered for interim approval on an expedited basis.
- 87 More specifically, the AESO requests that:
- (a) the changes to the DAR methodology proposed in this appendix be approved on an interim basis for production year 2017; and
 - (b) the changes to Rider C and Rate PSC proposed in this appendix be approved on an interim basis to be effective for the calendar quarter beginning at least 60 days after the Commission issues its decision granting interim approval.
- 88 The AESO considers that changing the DAR allocation on an interim basis for 2017 is reasonable as a broader representation of market participants has become aware of the proposed changes during stakeholder consultation on the 2018 ISO tariff application during 2017. As well, filing of the proposed changes as part of the ISO tariff application provides stakeholders the opportunity to participate in the Commission's proceeding to review the proposed changes, on both an interim and final basis.
- 89 The changes to Rider C and Rate PSC proposed on an interim basis are provided in the proposed ISO tariff (Appendix Q) of this application, in both clean and blackline versions (Appendix R).
- 90 A summary of the specific relief requested with respect to this appendix is included in section 1.3 of the application.