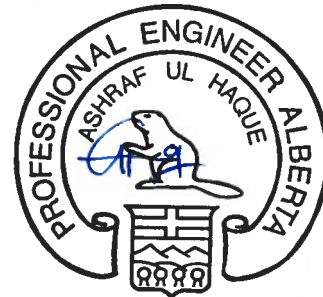


Prepared For: Alberta Electric System Operator

Rider E Calibration Factor Calculation for the Fourth Quarter of 2018

Prepared by:

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September 27, 2018

2018 September 27

PERMIT TO PRACTICE TESHMONT CONSULTANTS LP	
Signature	<u>ASHRAF UL HAQUE</u>
Date	<u>2018 SEPT 27</u>
PERMIT NUMBER: P 03012	
The Association of Professional Engineers, Geologists and Geophysicists of Alberta	



CURRENT YEAR MONTHLY DETAIL

$$\text{2018 Fourth Quarter Calibration Factor \%} = \frac{\text{Carryforward}_{\text{Dec 31, 2017}} + [(\text{Cost of Losses} - \text{Loss Revenues}) - \text{Rider E Revenues}]_{\text{Jan 1 - Dec 31, 2018}}}{[\text{Hourly Loss Factor Customer Volumes} \times \text{Hourly Pool Price}]_{\text{Oct 1 - Dec 31, 2018}}}$$

The following table provides a summary of the AESO's projected year-end losses account balance for Rider E for January to December 2018.

		Calibration Factor Calculation Inputs					Other Information			
		Numerator Values				Denominator Value				
Period	Data Source	Cost of Losses	Revenues Collected	Costs Less Revenue (Over Collected) / Under Collected	Rider E Refunded/ (Collected)	Outstanding Variance (Over Collected) / Under Collected	Monthly Loss Factor Customer Volumes x Pool Price	Average Monthly Pool Price	Monthly Loss Factor Customer Volumes	Monthly Loss Volumes
		\$ millions	\$ millions	\$ millions	\$ millions	\$ millions	\$ millions	\$/MWh	millions MWh	millions MWh
Carryforward Dec 31, 2017						1.4				
January 2018	Actual	7.4	8.2	(0.9)	(0.1)	(1.0)	N/A	40.83	5.72	0.18
February 2018	Actual	4.9	5.6	(0.7)	(0.1)	(0.7)	N/A	31.32	5.24	0.15
March 2018	Actual	5.2	6.0	(0.8)	(0.1)	(0.9)	N/A	32.27	5.43	0.16
April 2018	Actual	6.6	7.2	(0.7)	(0.1)	(0.8)	N/A	40.55	5.04	0.16
May 2018	Actual	10.8	11.9	(1.1)	(0.2)	(1.3)	N/A	63.77	5.06	0.15
June 2018	Actual	10.4	11.0	(0.6)	(0.2)	(0.8)	N/A	63.44	4.97	0.15
July 2018	Actual	9.6	10.6	(1.0)	0.3	(0.7)	N/A	58.45	5.32	0.14
August 2018	Forecast	12.6	13.9	(1.3)	0.4	(0.9)	N/A	68.80	5.57	0.17
September 2018	Forecast	12.4	12.5	(0.1)	0.4	0.3	N/A	69.41	5.32	0.17
October 2018	Forecast	5.7	6.0	(0.3)	0.0	(0.3)	175.91	32.76	5.31	0.17
November 2018	Forecast	10.4	10.9	(0.5)	0.0	(0.5)	300.13	53.38	5.49	0.19
December 2018	Forecast	13.5	14.6	(1.1)	0.0	(1.1)	415.82	69.60	5.84	0.19
Annual 2018		109.3	118.4	(9.1)	0.2	(8.9)	891.85	52.05	64.31	1.99
Total Balance						(7.5)	891.85			
Calibration Factor Calculation Outputs: Rider E Calibration Factor Q4 2018							(0.84%)	(Refund)/Charge		

Notes:

- The Rider E Calibration Factor will apply to all loss factor customers receiving service under Rates STS, DOS, XOS, and IOS as provided on the Rider E rate sheet.
- If the Rider E Calibration Factor for Q4 remained in place during Q4, it would collect the variance between cost of losses and revenues by the end of 2018, as currently forecasted.
- Forecast amounts in the above table and calculation reflect the AESO's best estimates at the time of preparation. The values represent forecasts and estimates only, and final values will differ.
- Actual amounts in the above table are subject to revision in future periods due to interim and final settlement and to other adjustments.
- The calibration factor calculation itself is based on summing hourly costs, revenues, and loss factor customer volumes x pool price, and the same result will not be obtained by using the monthly values presented.
- Numbers may not add due to rounding.
- "NA" means "not applicable".
- The revenue, cost and Rider E amounts are shown on a production month basis.

PRIOR YEARS MONTHLY DETAIL

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For the Fourth Quarter of 2018
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The following table provides a summary of the AESO's losses account balance for Rider E for the period 2006 to 2017.

		Calibration Factor Calculation Inputs					Other Information			
		Numerator Values				Denominator Value				
Period	Data Source	Cost of Losses	Revenues Collected Loss Factors	Costs Less Revenue (Over Collected) / Under Collected	Rider E Refunded/ (Collected)	Outstanding Variance (Over Collected) / Under Collected	Monthly Loss Factor Customer Volumes x Pool Price	Average Monthly Pool Price	Monthly Loss Factor Customer Volumes	Monthly Loss Volumes
		\$ millions	\$ millions	\$ millions	\$ millions	\$ millions	\$ millions	\$/MWh	millions MWh	millions MWh
Annual 2006 to 2014		1,530.0	1,584.4	(54.4)	60.7	6.3	NA	67.42	523.77	22.91
January 2015	Actual	7.5	7.5	(0.1)	0.0	(0.1)	NA	33.95	5.67	0.21
February 2015	Actual	6.4	6.2	0.1	0.0	0.2	NA	32.83	4.97	0.19
March 2015	Actual	4.1	4.1	0.0	0.0	0.0	NA	20.65	5.26	0.20
April 2015	Actual	3.7	3.7	0.0	0.0	0.0	NA	20.52	4.87	0.18
May 2015	Actual	8.1	9.2	(1.1)	0.1	(1.0)	NA	53.93	4.86	0.16
June 2015	Actual	16.6	17.7	(1.2)	0.1	(1.1)	NA	97.31	4.95	0.18
July 2015	Actual	4.6	4.6	0.0	(0.2)	(0.2)	NA	23.15	5.20	0.20
August 2015	Actual	6.5	6.8	(0.3)	(0.3)	(0.6)	NA	34.11	5.13	0.18
September 2015	Actual	4.3	4.2	0.1	(0.2)	(0.0)	NA	20.85	5.13	0.20
October 2015	Actual	4.6	4.5	0.2	0.1	0.3	NA	21.47	5.42	0.21
November 2015	Actual	4.4	4.3	0.1	0.1	0.3	NA	21.17	5.93	0.20
December 2015	Actual	5.0	4.5	0.5	0.1	0.6	NA	20.93	6.20	0.24
Annual 2015		75.8	77.4	(1.6)	(0.1)	(1.6)	NA	33.41	63.61	2.36
January 2016	Actual	5.0	4.7	0.3	(0.1)	0.2	NA	22.25	5.63	0.21
February 2016	Actual	3.2	3.3	(0.1)	(0.1)	(0.1)	NA	17.22	5.03	0.18
March 2016	Actual	2.6	2.7	(0.1)	(0.1)	(0.1)	NA	14.79	5.11	0.17
April 2016	Actual	2.3	2.3	(0.1)	(0.3)	(0.3)	NA	13.63	4.65	0.16
May 2016	Actual	2.7	2.7	(0.0)	(0.3)	(0.4)	NA	15.89	4.70	0.16
June 2016	Actual	2.7	2.8	(0.1)	(0.3)	(0.4)	NA	15.44	4.80	0.17
July 2016	Actual	3.4	3.6	(0.2)	(0.5)	(0.7)	NA	18.21	5.24	0.18
August 2016	Actual	3.4	3.6	(0.2)	(0.5)	(0.8)	NA	17.90	5.45	0.18
September 2016	Actual	3.3	3.4	(0.2)	(0.5)	(0.7)	NA	17.70	5.17	0.17
October 2016	Actual	4.6	5.0	(0.4)	(0.4)	(0.8)	NA	25.37	5.26	0.16
November 2016	Actual	3.2	3.4	(0.2)	(0.2)	(0.4)	NA	16.32	5.27	0.19
December 2016	Actual	5.0	5.3	(0.3)	(0.4)	(0.7)	NA	24.33	5.90	0.20
Annual 2016		41.3	42.8	(1.5)	(3.7)	(5.2)	NA	18.26	62.21	2.13
January 2017	Actual	5.2	4.8	0.4	0.1	0.5	NA	23.96	5.83	0.21
February 2017	Actual	4.0	4.0	0.1	0.1	0.2	NA	22.18	5.11	0.18
March 2017	Actual	4.2	4.1	0.2	0.1	0.3	NA	21.01	5.44	0.20
April 2017	Actual	3.7	3.4	0.3	0.1	0.4	NA	19.10	4.92	0.19
May 2017	Actual	4.4	4.0	0.5	0.1	0.6	NA	21.90	5.04	0.20
June 2017	Actual	3.3	3.0	0.2	0.1	0.3	NA	16.78	4.91	0.18
July 2017	Actual	4.8	4.9	(0.1)	0.0	(0.1)	NA	26.96	5.43	0.17
August 2017	Actual	4.3	4.5	(0.2)	0.0	(0.2)	NA	24.57	5.47	0.17
September 2017	Actual	3.7	3.8	(0.0)	0.0	(0.0)	NA	22.11	5.23	0.16
October 2017	Actual	3.7	3.6	0.1	0.1	0.2	NA	20.45	5.24	0.17
November 2017	Actual	5.0	4.9	0.1	0.1	0.2	NA	25.03	5.49	0.20
December 2017	Actual	4.0	4.4	(0.3)	0.1	(0.3)	NA	21.99	5.84	0.18
Annual 2017		50.4	49.3	1.1	0.8	2.0	NA	22.17	63.96	2.21