



# **2006 Calibration Factor Rider E Information Session**

**Robert Baker, P.Eng.  
Operations Forecasting  
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# 2006 Transmission Calibration Factor Methodology

The purpose of this Information Session:

- A recap – why is the calibration factor being developed and what are the principles in the development of the calibration factor?
  - 2004 *Transmission Regulation*
  - 2006 AESO GTA
- How the calibration factor process may affect you
- An implementation plan for the new calibration factor methodology
- Appendix on the Calibration Factor



# Why Develop the Calibration Factor? (1/4)

- Refer to section 19 (1) (e) and 21 (1) & (2) of the 2004 *Transmission Regulation*:
  - 19 (1) (e) subject to section 21, provides a means through the application of a calibration factor to adjust the amounts paid by the application of the loss factor described in clause (c) so that the owners of generating units pay the actual transmission line losses or receive a credit for overpayment.
  - 21 (1) In accordance with the rules, loss factors may be adjusted by a calibration factor to ensure that the actual cost of losses is reasonably recovered through charges and credits under the ISO tariff on an annual basis.
  - 21 (2) If the actual cost of losses is over or under recovered in one year, the over or under recovery must be collected or refunded in the next year or subsequent years.



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# Why Develop the Calibration Factor? (2/4)

- The 2006 AESO General Tariff Application (Filed Q1, 2005, approved December 20, 2005) outlined AESO's proposed treatment of the calibration factor (CF)
- The CF will be used on a prospective and ongoing basis to true-up actual revenues and costs
- The CF and Rider E can be considered as interchangeable terms



# Why Develop the Calibration Factor? (3/4)

- The CF is not the 'shift factor'.
- The shift factor adjusts the raw loss factor by 'normalizing' it to cover the loss from the SPRDA accumulation, the power to energy conversion in the base cases, and the forecasted losses error
- The CF reconciles the difference between revenue collected from the losses based on loss factors and the costs paid based on the actual loss



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# Why Develop the Calibration Factor? (4/4), 2006 GTA Submission

Table 4.12.1 Process for Determining Rider E calibration factor

Rider Calculated	Forecast Year-End Balance Includes	Calibration Factor Based on	Rider Effective
February	<ul style="list-style-type: none"> <li>Any actual balance from prior year</li> <li>Actual losses costs and revenue for Jan</li> <li>Forecast losses costs and revenue for Feb-Dec</li> </ul>	<ul style="list-style-type: none"> <li>Forecast year-end balance</li> <li>Forecast volumes for Apr-Dec</li> <li>Forecast pool price for Apr-Dec</li> </ul>	Apr 1
May	<ul style="list-style-type: none"> <li>Actual losses costs and revenue for Jan-Apr</li> <li>Forecast losses costs and revenue for May-Dec</li> </ul>	<ul style="list-style-type: none"> <li>Forecast year-end balance</li> <li>Forecast volumes for Jul-Dec</li> <li>Forecast pool price for Jul-Dec</li> </ul>	Jul 1
August	<ul style="list-style-type: none"> <li>Actual losses costs and revenue for Jan-Jul</li> <li>Forecast losses costs and revenue for Aug-Dec</li> </ul>	<ul style="list-style-type: none"> <li>Forecast year-end balance</li> <li>Forecast volumes for Oct-Dec</li> <li>Forecast pool price for Oct-Dec</li> </ul>	Oct 1
November	<ul style="list-style-type: none"> <li>Actual losses costs and revenue for Jan-Oct</li> <li>Forecast losses costs and revenue for Nov-Dec</li> </ul>	<ul style="list-style-type: none"> <li>Forecast year-end balance</li> <li>Forecast volumes for next year</li> <li>Forecast pool price for next year</li> </ul>	Jan 1 of following year





## Calibration Factor, More Detail (1/2)

- 2006 loss transactions [and forward] are not included in 'Rider C'
- 'Rider E' came into effect on January 1 2006. The initial estimate is 0.00%.
- 'Rider E' will be calculated quarterly on a 'go forward' basis
- An initial CF process was provided in 2005 and it has been updated



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## Calibration Factor, More Detail (2/2)

- The CF will be posted quarterly on the AESO web site
- More detail on the CF is in the Appendix
- Subject to AEUB approval of changes



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# Calibration Factor - Concept

$$\text{Quarterly Calibration Factor \%} = \frac{(\text{Loss Revenue} + \text{Quarterly Rider E Revenue}) - \text{Cost of Losses}}{\text{Hourly Loss Customer Volumes} \times \text{Hourly Pool Price}}$$

**Loss Factor Revenue** = (Σ hourly Loss customer volumes x normalized loss factor x hourly pool price) + quarterly Rider E

**Cost of Losses** = (POS + imports + ISDs – POD – exports – DOS + prior period adjustments <sup>1</sup>) hourly volumes x hourly pool price

The total revenue and cost variance is reviewed each quarter and the CF is reset to recover the new total variance over the recovery period indicated.

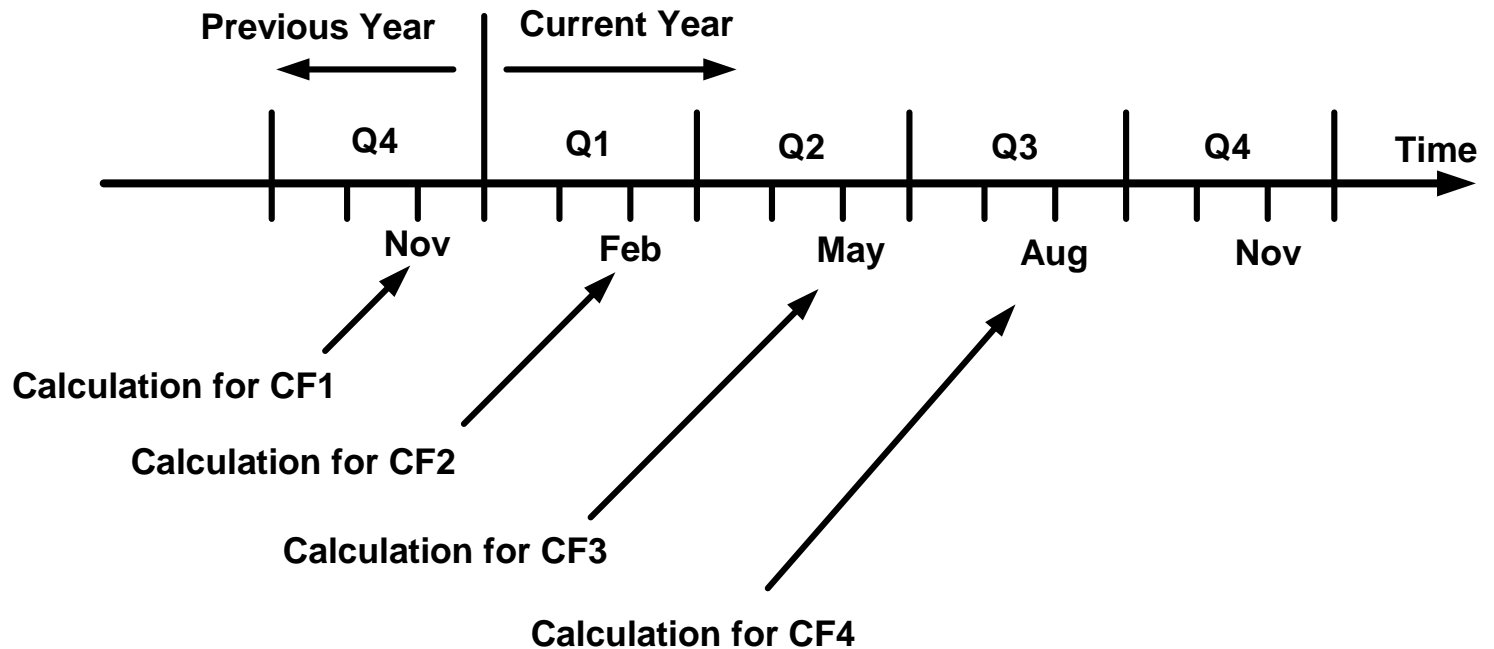
		Numerator		Denominator	
Rider E	Proposed Web Posting Date	Loss Factor + Rider E Revenues <sup>1, 2</sup>	Cost of Losses <sup>1, 2</sup>	Volumes x Pool Price	Variance Allocation Period
Quarter 1 2006	Dec 15/05	Jan to Dec – forecast	Jan to Dec – forecast	Jan to Dec 2006 - forecast	Jan to Dec 2006
Quarter 2 2006	Mar 15/06	Jan - actual Feb - projection Mar - projection Apr to Dec – forecast	Jan - actual Feb - projection Mar - projection Apr to Dec – forecast	Apr to Dec 2006 - forecast	Apr to Dec 2006
Quarter 3 2006	June 15/06	Jan to Apr - actual May – projection June – projection July to Dec – forecast	Jan to Apr - actual May – projection June – projection July to Dec – forecast	July to Dec 2006 - forecast	July to Dec 2006
Quarter 4 2006	Sept 15/06	Jan to July - actual Aug – projection Sept – projection Oct to Dec – forecast	Jan to July - actual Aug – projection Sept – projection Oct to Dec – forecast	Oct to Dec 2006 - forecast	Oct to Dec 2006
Quarter 1 2007	Dec 15/06	Jan to Oct 2006 - actual Nov – projection Dec – projection Jan to Dec 2007 – forecast	Jan to Oct 2006 - actual Nov – projection Dec – projection Jan to Dec 2007 – forecast	Jan to Dec 2007 - forecast	Jan to Dec 2007
Quarter 2 2007	Mar 15/07	Jan to Dec 2006 - actual Jan 2007 – actual Feb 2007 - projection Mar 2007 - projection Apr to Dec 2007 – forecast	Jan to Dec 2006 - actual Jan 2007 – actual Feb 2007 - projection Mar 2007 - projection Apr to Dec 2007 – forecast	Apr to Dec 2007 - forecast	Apr to Dec 2007

<sup>1</sup> All revenue and cost transactions related to the production periods prior to January 1, 2006 will continue to be addressed through the retrospective deferral account reconciliation process applicable to 2005 and prior years. This means that an adjustment that occurs in 2006 or later years that relates to pre-2006 production will continue to be associated with STS and DTS customers in accordance with the tariff in those years and will be included in the retrospective deferral account reconciliation.

<sup>2</sup> Projections are updated forecast amounts.

# Calibration Factor, Annual Milestones

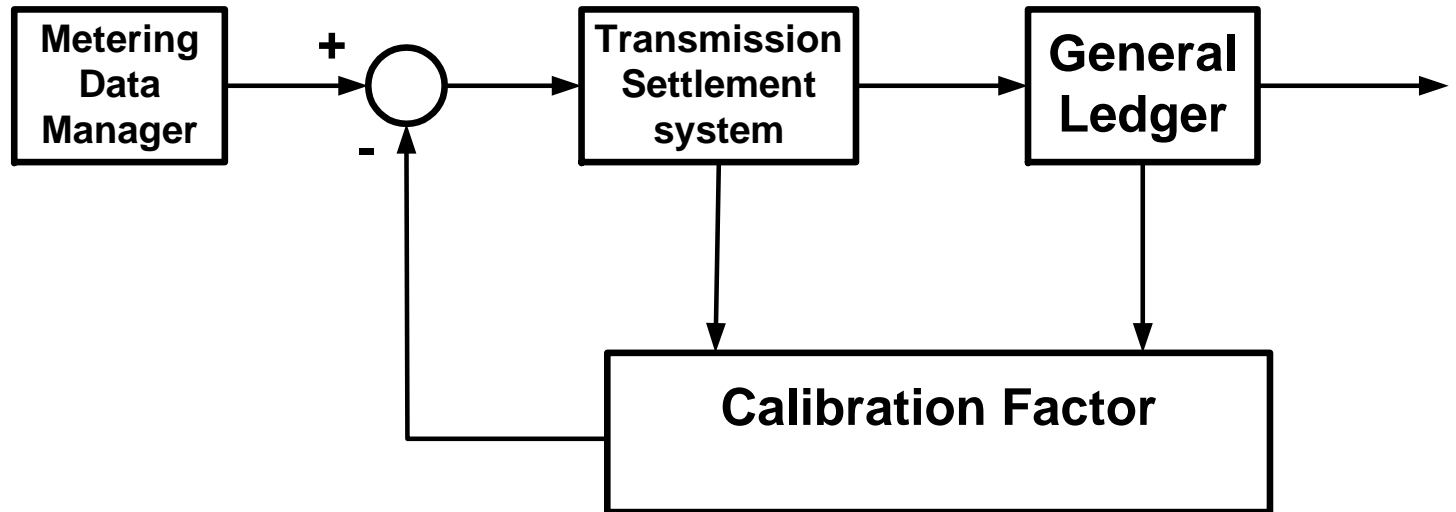
## Calibration Factor, Annual Milestones



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# Calibration Factor Data Flow Chart



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# Calibration Factor Implementation Plan

- Q1 2006 – CF/Rider E is set to 0.00% for first quarter
- January 17 2006 – CF Information Session with Stakeholders
- January 31 2006 – receive responses on CF details from Stakeholders.
- February 15 2006 – start run for Q2 CF
- AESO to consider audit/review by an external third party by March 1 2006 of Q2 CF results



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# Rider E Posting Example

**Rider E Quarterly Rider For 2006:** The following table provides a summary of the AESO's projected Losses account balance for Rider E for Q3 2006. The actual and projected/forecasted losses for January - December 2006 are summarized as follows:

(\$ millions)	Revenues Collected	(Costs Paid)	Estimated Variance
January 2006 Actual	10.6	(11.0)	(0.4)
February 2006 Actual	9.2	(10.5)	(1.3)
March 2006 Actual	10.0	(9.0)	1.0
April 2006 Actual	10.3	(12.0)	(1.7)
<b>Total Jan-April 2006 Actuals</b>	40.0	(42.5)	(2.5)
May - June 2006 Projection	20.7	(21.0)	(0.3)
July - December 2006 Forecast	68.3	(69.6)	(1.3)
<b>Total Estimated 2006 Losses Balance</b>	129.0	(133.1)	(4.1)

*Numbers may not add due to rounding*

	Rider E	Rider E % applied	Estimated Variance Refund/ (Charge)	Variance Allocation Period
<b>EXAMPLE</b>	Q1 2006 Rider E	0.00%	(\$0.8)	Jan-Dec 2006
	Q2 2006 Rider E	0.25%	(\$2.8)	Apr-Dec 2006
	Q3 2006 Rider E	0.70%	(\$4.1)	July-Dec 2006 ← <b>Current Rider E</b>

Non-shaded areas represent current quarter information)



# Stakeholder Feedback

- Stakeholders can provide feedback to AESO on CF
- Comments to be written and sent to [rob.baker@aeso.ca](mailto:rob.baker@aeso.ca) prior to January 31 2006
- All written comments will be responded to on AESO web site



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# Questions or Comments

- How else can we assist?

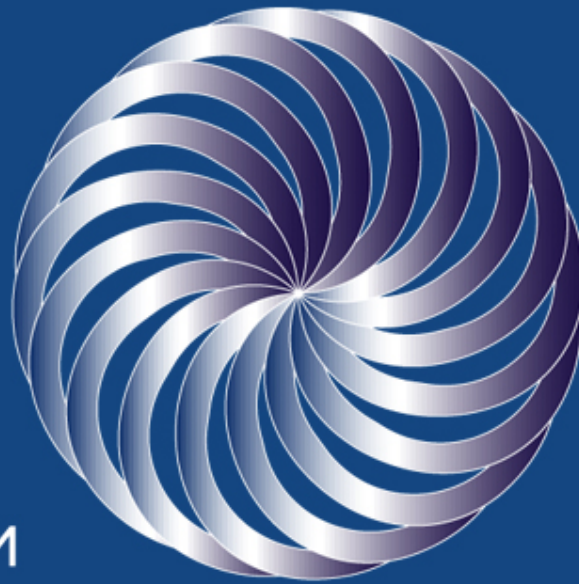


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# Appendix 1: Calibration Factor Detail (1/6)

- Loss revenues calculated using hourly loss customer volume, loss factors & hourly pool price.
- Loss Customer Revenue (R) = Sum of (Individual loss customer volume X Normalized Loss Factor X Hourly Pool Price) + Quarterly Rider E Revenue
- Total Loss Cost (C) = (POS – POD + Prior Period Adjustments) x Hourly Pool Price
  - POS = STS + Import + ISD's
  - POD = DTS + Export + DOS



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# Appendix 1: Calibration Factor Detail (2/6)

- The CF recovers the difference between loss revenue and loss cost or, in general, can be shown as:
- $CF = (R - C)/G$ 
  - $G = \text{Loss Customer Amount} = \text{sum of (Each Loss Customer Volume X Hourly Pool Price)}$
- So, in general:
  - $CF = [(R-C)^A + (R-C)^P + (R-C)^F] / G^F,$ 
    - A = Actual, P = Projected, F = Forecasted



# Appendix 1: Calibration Factor Detail (3/6)

- There will be 4 CF calculations in a year
- The CF will be applied to all loss customers during the next quarter
- It is assumed the under- and over-recovered carry forward will be recovered in the next year.



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# Appendix 1: Calibration Factor Detail (4/6)

## Assumptions:

- Projection of revenue and cost is a hybrid treatment of previous periods actual and forecasted revenue and cost
- On occasion, unusually large adjustments may be discovered and require special consideration.
- AESO will communicate with customers in cases of appreciable variance to determine an appropriate course of action.





# Appendix 1: Calibration Factor Detail (5/6)

## Data Input

- Point of Supply actual metered volume
- Point of Supply forecasted volume
- Point of Demand actual metered volume
- Point of Demand forecasted volume
- Actual pool price
- Forecasted pool price
- Loss factors for generators/ISD's, import, export and DOS



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# Appendix 1: Calibration Factor Detail (6/6)

## Data Output

- AESO will calculate the calibration factor quarterly
- Post the quarterly calibration factor on the AESO website.



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