



RESPONSE TO AESO BUDGET

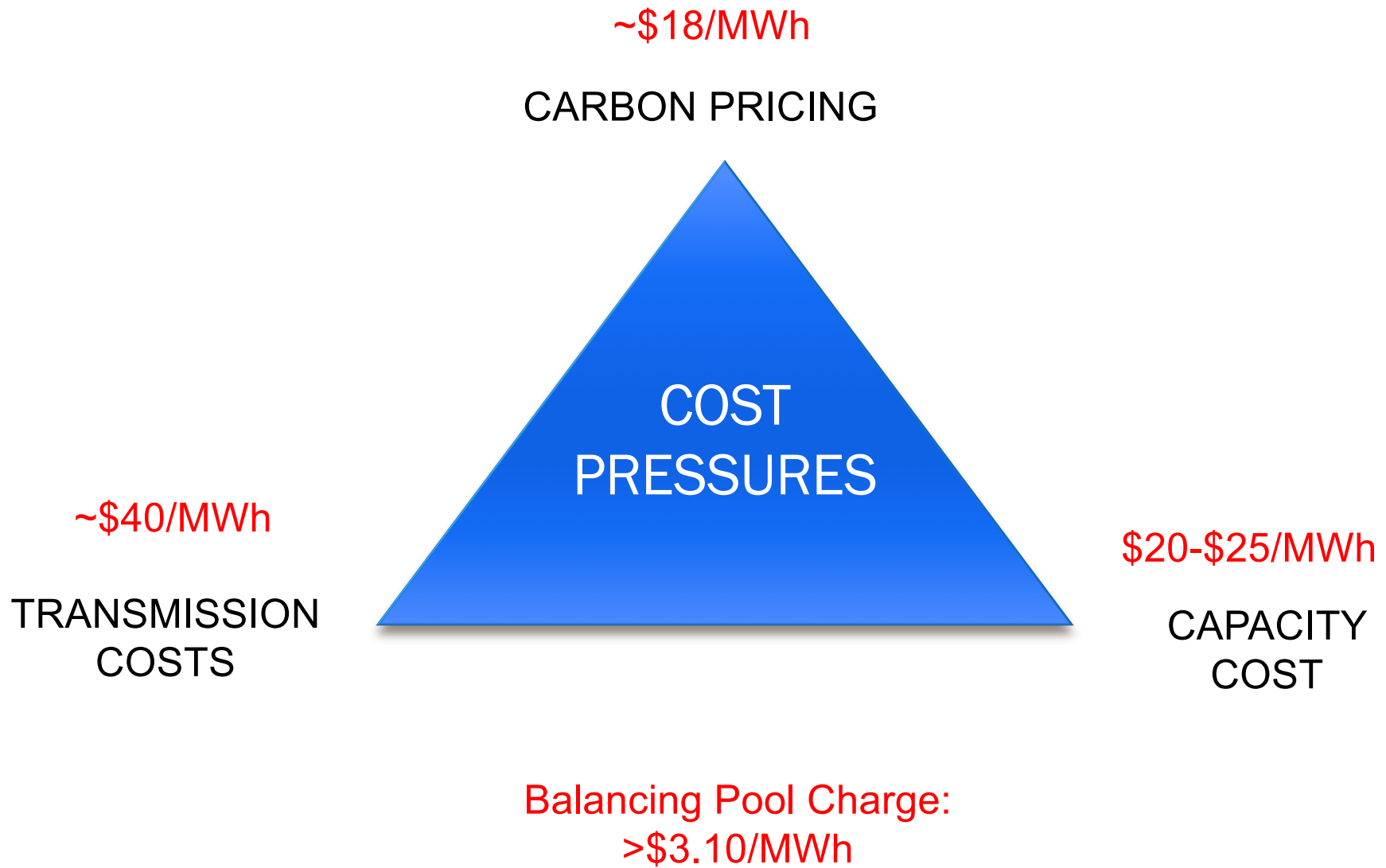
Michelle Dawson
Vittoria Bellissimo
Richard Penn
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ABOUT IPCAA



- IPCAA was formed in 1983 as a membership-based society representing Alberta's large industrial electricity consumers.
- Our members are involved in key Alberta industries, including Oil & Gas, Pipelines, Petrochemicals, Agriculture and Steel.
- Our mission is to take a leadership role in ensuring that a competitive marketplace exists for electrical services.

INDUSTRIAL COST PRESSURES



AESO BUDGET: KEY COMMENTS

1. AESO Own Costs
2. AESO Settlement
3. Distribution Cost Concerns
4. AESO Settlement Audit
5. Use of Existing Transmission Infrastructure

AESO OWN COSTS

- The AESO's Own Costs are \$134.6M in 2019, with G&A at \$109.7M
- The AESO should benchmark its own costs to other ISOs in order to establish the value for money proposition for Alberta.
- For example:
 - The AESO's 2019 costs: \$134.6 M on a DTS load of approximately 61 TWh or about \$2.19/MWh (roughly \$1.67/MWh US)
 - The Ontario IESO for 2019 has:
 - Costs of \$190.8 M or \$1.42/MWh on a load of 134 TWh (roughly \$1.10/ MWh US)
 - 695 Core FTEs and 86 Incremental FTEs

AESO OWN COSTS

ISO/RTO	2019 Revenue Req. in (US\$)	Est'd 2019 Demand in TWh	2018 Revenue Requirement	Debt Outstanding at 12/31/2018	Authorised FTE's at 12/31/18
AESO	\$102.7 M	61	\$1.668/MWh	N/A	538**
ISO-NE	\$190.0M	143.8	\$1.320/MWh	\$99.5 M	608
IESO	\$145.6 M	134	\$1.087/MWh	N/A	783
NYISO	\$168.2M	157.1	\$1.071/MWh	\$108.5M	594
CAISO	\$195.0 M	241	\$0.810/MWh	\$170.0M	643
ERCOT	\$207.4 M	373.3	\$0.555/MWh	\$51.0M	749
MISO	\$296.0M	756	\$0.392/MWh	\$167.0M	939
PJM	\$294.0M	866	\$0.339/MWh	\$20.0M	705
	2017 data				
	2018 data				
**	assuming \$204,000/FTE				

Source:

http://www.nyiso.com/public/webdocs/markets_operations/committees/mc_bpwg/meeting_materials/2018-09-07/09-07-2018%20BPWG%202019%20DRAFT%20Budget%20Presentation%20FINAL.pdf

AESO OWN COSTS

- Scale is an issue; however, many of these other ISOs provide additional services, including:
 - Capacity markets
 - Security constrained day-ahead markets for energy and ancillary services
 - Unit commitment
 - Security constrained real-time markets for energy and ancillary services
 - Interties that can settle at a 15 minutes or 5 minute granularity
 - Settlement day-ahead and real-time

The AESO should benchmark its own costs and submit them to additional regulatory scrutiny since G&A costs exceed \$100M annually

AESO SETTLEMENT

- IPCAA has advocated for an updated energy price that uses a much smaller time increment, i.e. 5 minutes, instead of hourly average pricing.
- This issue has been voiced both by loads and generators.
- An October 22, 2009 report by the AESO stated: *“The concept has benefits both for load participants in the energy market and supply participants, and there is no principle that suggests the settlement interval cannot be changed”*
- The recent FERC Order 825 (June 16, 2016) stipulates ISOs must settle:
 - *Energy transactions in real-time markets at the same time interval it dispatches energy,*
 - *Operating reserves transactions in real-time markets at the same time interval it prices operating reserves, and*
 - *Intertie transactions at the same time interval it schedules intertie transactions.*
- As they have learned in the US, the energy and AS markets send the signals for the type of flexible capacity needed.

AESO SETTLEMENT

- It has been over ten years since this discussion initially occurred
- In a recent ADC/IPCAA-commissioned report, Susan Pope of FTI stated:
 - *“Moving to 5-minute settlements should be a top priority for Alberta as the quantity of intermittent supply increases and there is an increasing need for flexible generation to adjust to changes in net load.”*
- As part of the capacity market discussions, the AESO has placed this element on the “Roadmap” for future discussion.

The AESO should update the energy and ancillary services markets as a part of the capacity market implementation.

DISTRIBUTION COST CONCERNS



- For several years, IPCAA members have been concerned over increasing distribution costs
- As an example, ATCO estimated that a residential consumer in 2017 was paying \$182/MWh for transmission and distribution costs - this does not include the commodity cost
- In 2018, IPCAA commissioned a report by BECL and Associates to review distribution costs in Alberta. Key results as follows. Note: these are average annual changes for the 2009 to 2017 time period.

DISTRIBUTION COST CONCERNS



Annual Change in Revenue Requirements for each DFO

Distribution Facility Operator (DFO)	Estimated Increase per Year in Total Revenue Requirement	Estimated Increase in Total DFO Load per Year	Ratio of Revenue Requirement Increase to Load Increase	Estimate Increase in DFO Customers Connected	Ratio of Revenue Requirement Increase to Customer Increase
FortisAlberta	10.7%	0.5%	23.0	1.9%	5.5
ATCO Electric	9.0%	1.8%	5.1	1.1%	7.9
ENMAX	10.8%	0.7%	16.0	2.0%	3.4
EPCOR	15.0%	0.8%	18.6	2.3%	3.1

Annual Change Revenue Requirements for each DFO, excluding Transmission Access Fees

Distribution Facility Operator (DFO)	Estimated Increase per Year in Distribution Revenue Requirement	Estimated Increase in DFO Distribution Load per Year	Ratio of Revenue Requirement Increase to Load Increase	Estimate Increase in DFO Customers Connected	Ratio of Revenue Requirement Increase to Customer Increase
FortisAlberta	7.8%	0.9%	8.6	1.9%	4.0
ATCO Electric	7.1%	0.8%	8.5	1.1%	6.2
ENMAX	6.6%	0.7%	9.8	2.0%	5.5
EPCOR	7.0%	0.8%	9.2	2.3%	6.6

DISTRIBUTION COST CONCERNS

- In AUC Proceeding 21973 in 2017, the AESO submitted that with respect to requests for system access service by Distributors:
 - The AESO “invariably relies on information received by the market participant”.
 - The AESO argued that it was inappropriate for it to second-guess the distribution facility owners planning decisions and forecasts.
- There are no checks and balances on distribution costs. DFOs submit them and the AESO recommends them to the AUC via a Needs Identification Document (NID).

The AESO should work with the AUC and the DOE to develop a process that provides the correct checks and balances on distribution costs in Alberta.

AESO SETTLEMENT AUDIT

- With the upcoming inclusion of the capacity market as part of the AESO settlements, the AESO should undertake settlement audits.
- For example, these are the types of complete settlement audits that are conducted in other ISOs, including examination of the controls, processes and procedures:
 - PJM: <http://insidelines.pjm.com/pjm-successfully-passes-ssae-16-audit/>
 - IESO: <http://www.ieso.ca/en/sector-participants/ieso-news/2017/09/ieso-receives-clean-audit-for-settlement-operations>

The AESO should undertake audits of its settlement systems, both before and after the implementation of the capacity market.

USE OF EXISTING TRANSMISSION LINES

- IPCAA would like to thank the AESO for its efforts to maximize the use of the existing transmission system for the Renewable Electricity Program (REP).
- Effective utilization of the existing transmission system helps to reduce costs.

The AESO should continue to promote effective utilization of existing transmission infrastructure prior to requiring new transmission to be constructed.

QUESTIONS?



Please feel free to contact us:

- Vittoria Bellissimo, *Executive Director*
(403) 966-2700
Vittoria.Bellissimo@IPCAA.ca

- Richard Penn, *Senior Policy and Regulatory Analyst*
(403) 903-7693
Richard.Penn@IPCAA.ca