IPCAA
INDUSTRIAL POWER CONSUMERS ASSOCIATION OF ALBERTA

RESPONSE TO AESO BUDGET

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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.

AESO BUDGET: KEY COMMENTS

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1. AESO Demand and Capacity Forecast
2. Wires Costs: Competitiveness
3. AESO TRIP Model
4. Energy and Ancillary Services Pricing
5. AESO Own Costs: Value Proposition
6. Optimizing Use of Existing Transmission

AESO DEMAND & CAPACITY FORECAST

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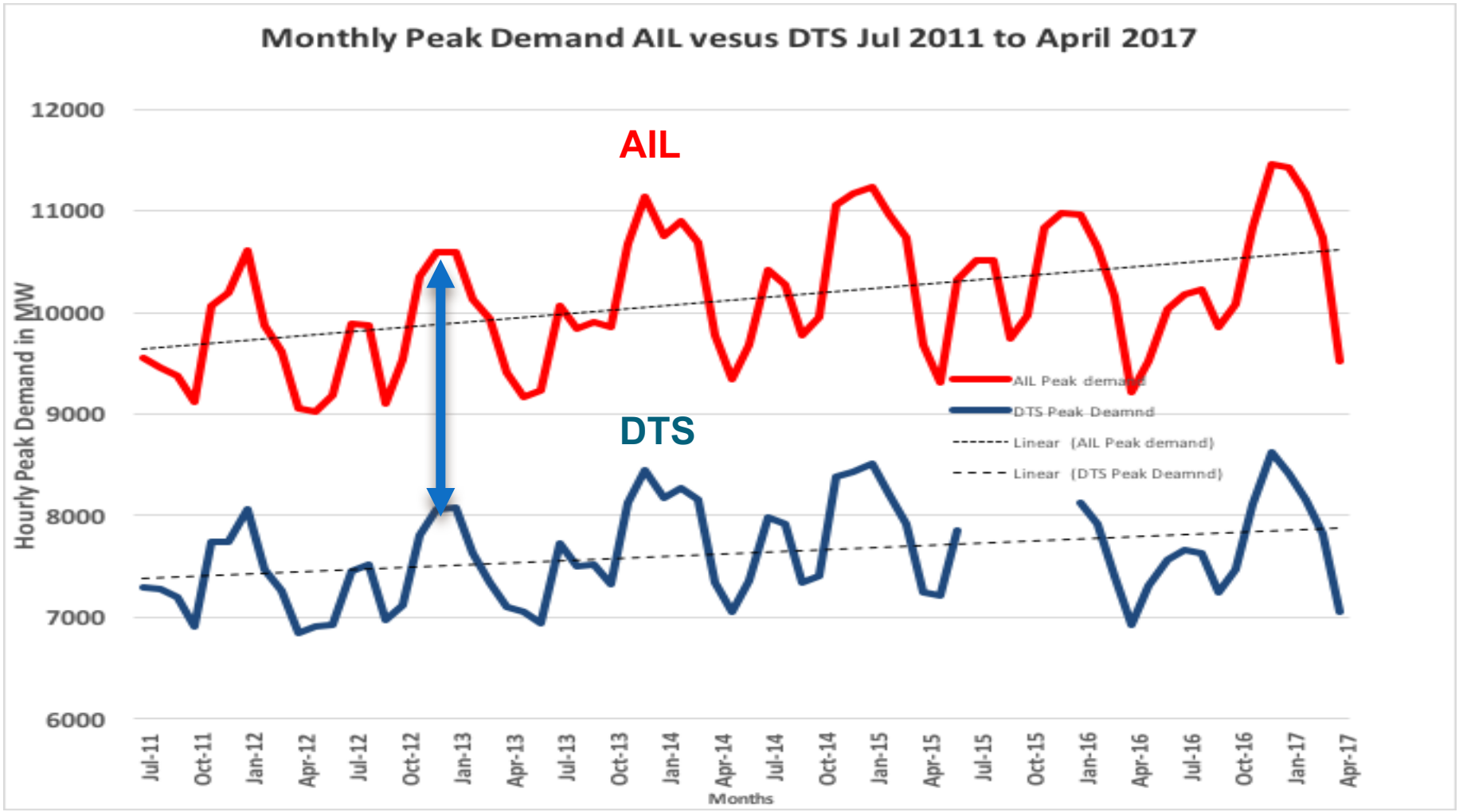
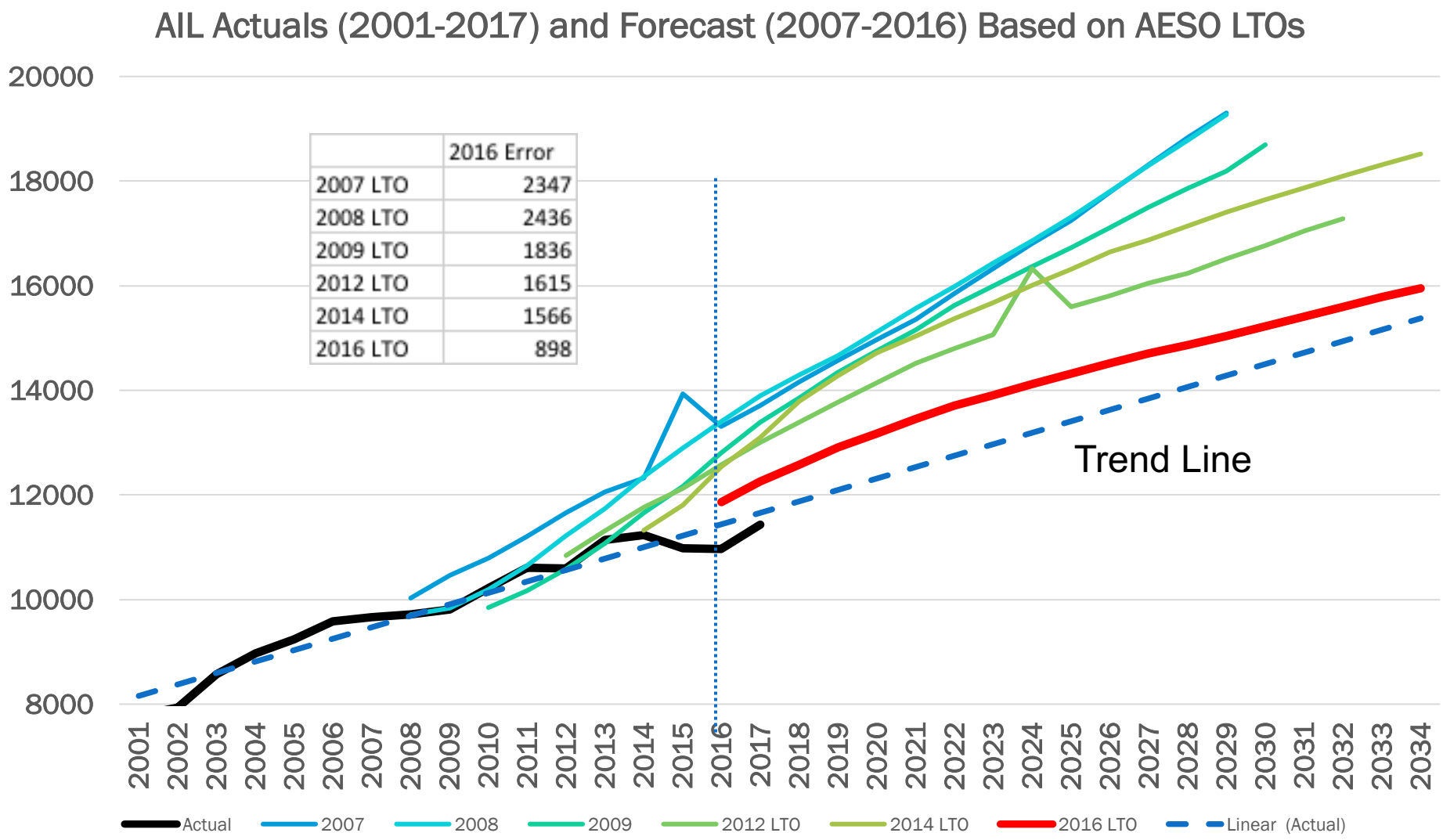
- Over-forecasting is an issue in Alberta
- Over-forecasting causes future transmission costs to appear lower
- Recently, AESO forecasts have been improving; however, over-forecasting continues to occur.
- Historically, this practice has led to an overbuild in transmission.
- **Key Question:** will AESO's forecasting of generation capacity requirements result in an over-supply of capacity and corresponding extra costs to customers?

AIL VERSUS DTS PEAK DEMAND

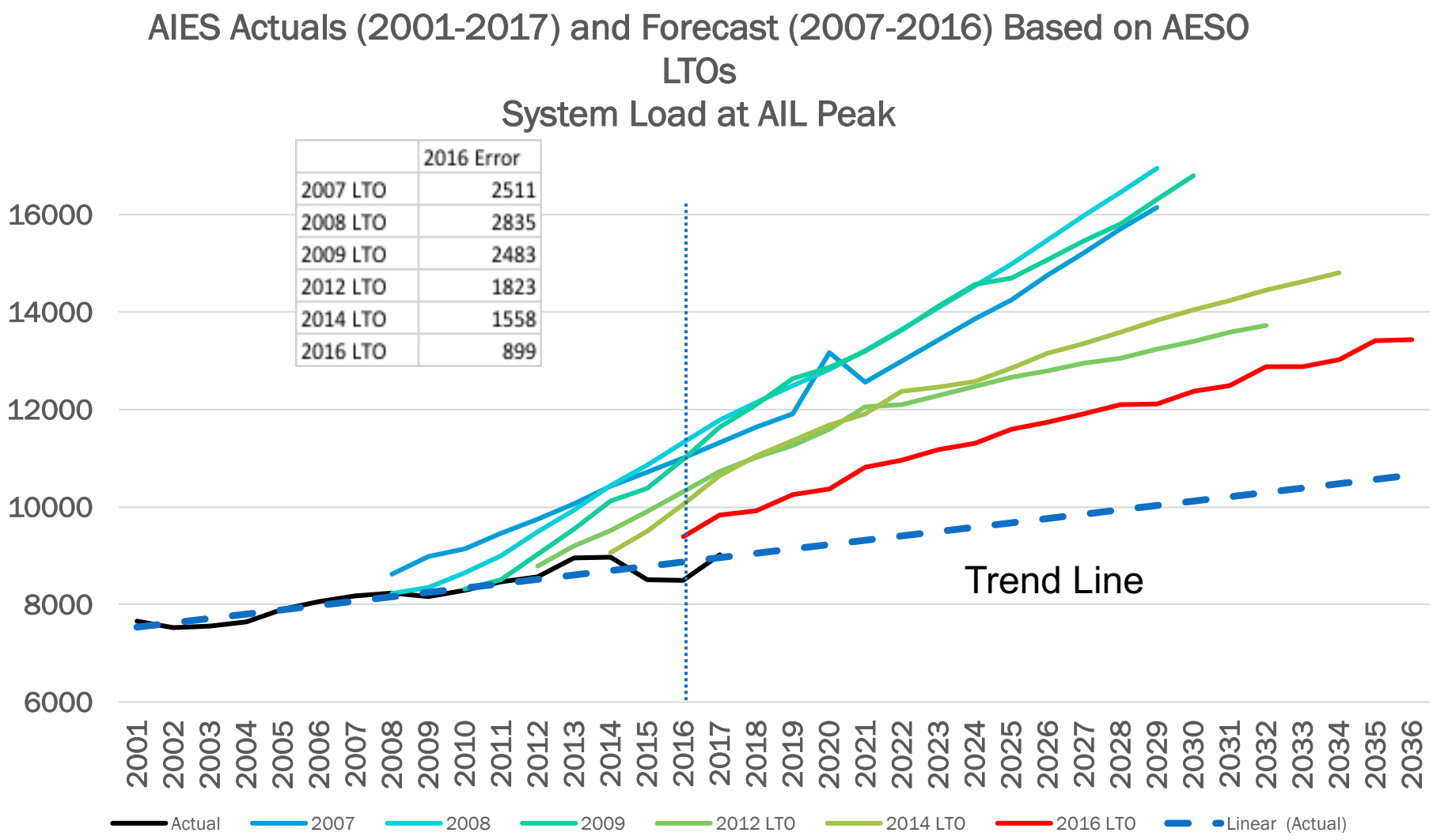


AIL PEAK DEMAND: FORECAST VS. ACTUAL



	2016 Error
2007 LTO	2347
2008 LTO	2436
2009 LTO	1836
2012 LTO	1615
2014 LTO	1566
2016 LTO	898

AIES PEAK DEMAND: FORECAST VS. ACTUAL



IMPROVING FORECAST ACCURACY

- The Transmission Rate Projection (TRP) has an average 2.4% demand increase and
- In other jurisdictions such as NYISO, they are projecting a **0.75% decrease** from 2016 due to energy efficiency and the growth of distributed BTF generation
- Given the current interest in Alberta inenergy efficiency and BTF generation, a low growth scenario would be a more reasonable rate projection

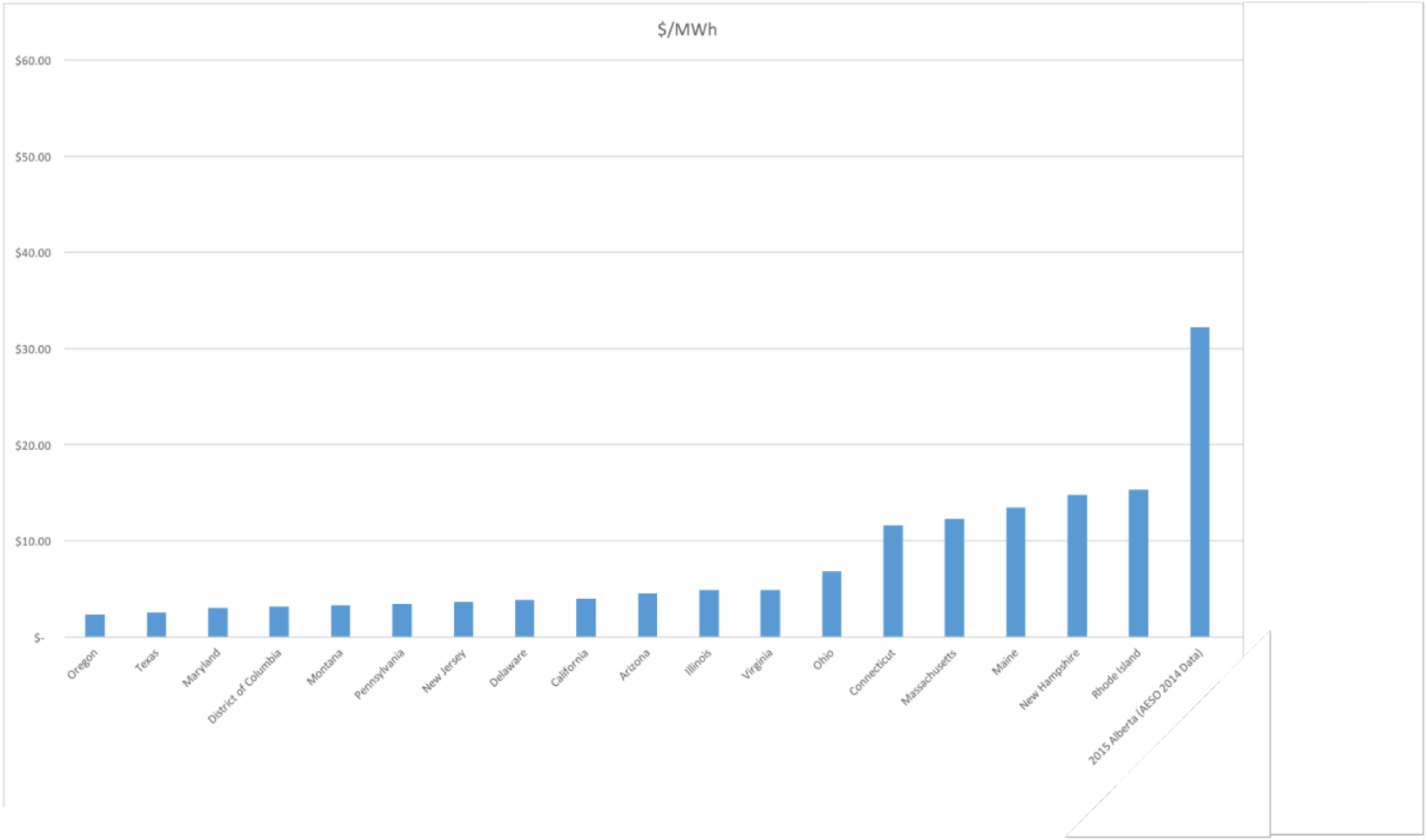
The AESO should put more emphasis on the DTS load forecast

WIRES COSTS: COMPETITIVENESS

- A review of transmission rates in various jurisdictions is provided (see next slide):
  - Alberta: approximately $31/MWh
  - Montana: approximately $4/MWh
- ATCO Residential Rate for transmission and distribution in 2016 was **$174/MWh** plus the commodity etc.
- High rates make all consumers examine the benefit of energy efficiency and distributed BTF generation

The AESO should prioritize controlling transmission costs, as unchecked rate increases lead customers towards other energy options.

TRANSMISSION CHARGES: 2014/15



AESO TRIP Model

- The AESO Transmission Rate Impact Projection (TRIP) model has been very helpful to IPCAA members in forecasting their internal budgets.
- The AESO's TRIP model has not been publicly updated since June 2014.
- An updated TRIP model along with yearly updates has great value to IPCAA members.
- The present Transmission Rate Projection (TRP) provides insufficient detail.

The AESO should re-publish the TRIP model along with annual updates.

ENERGY & ANCILLARY SERVICES PRICING

- IPCAA has advocated for an updated energy price that uses a much smaller time increment, i.e. 5 minutes, instead of hourly average pricing.
- Discussions are in the Straw-Man working groups
- 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.

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

AESO OWN COSTS: VALUE PROPOSITION

- The AESO G&A costs are reaching $100M per year. At this level they should be reviewed by the AUC as part of the AESO tariff application.
- As part of the BRP the AESO should consider bench-marking the AESO own costs to other ISOs in order to establish the value for money proposition for Alberta. For example:
  - The AESO's G&A costs for 2017: $98.5 M or about $1.62/MWh (roughly $1.20/MWh US)
  - The Ontario IESO for 2017 has:
    - Costs of $191.4 M or $1.2187/MWh (roughly $0.915 / MWh)
    - 687 Core FTEs and 25 Incremental FTEs (contract)

AESO OWN COSTS: VALUE PROPOSITION

($ in millions)					
	REVENUE REQUIREMENT *			**OTHER INFORMATION ***	
ISO/ RTO	**2017 Revenue Req. (in $$)**	**Estimated 2017 MWh Throughput (in millions of MWh)**	**2017 Revenue Req. (in $/MWh)**	**Debt Outstanding at 12/31/17**	**Authorized FTEs at 12/31/17**
MISO	**$296.0M**	**756.0**	**$0.392/MWH**	**$167.0M**	**939**
PJM	**$287.0M**	**855.0**	**$0.336/MWH**	**$21.0M**	**695**
ERCOT	**$223.1M**	**355.9**	**$0.626/MWH**	**$114.0M**	**749**
ISO-NE	**$192.7M**	**128.4**	**$1.500/MWH**	**$105.8M**	**586**
CAISO	**$173.6M**	**241.5**	**$0.719/MWH**	**$320.0M**	**593**
NYISO	**$148.2M**	**158.3**	**$0.936/MWH**	**$116.9M**	**574**
***All amounts are DRAFT, and may be subject to change as each ISO/RTO completes its 2017 approval process**					

http://www.nyiso.com/public/webdocs/markets_operations/committees/mc_bpwg/meeting_materials/2016-09-12/NYISO%202017%20BUDGET%20OVERVIEW.pdf

AESO OWN COSTS: VALUE PROPOSITION

- While scale is an issue, these other ISOs provide:
  - Capacity markets;
  - Security constrained Day-ahead markets for energy and ancillary services;
  - Unit commitment;
  - Security constrained Real-time markets for energy and ancillary services; and
  - Settlement day-ahead and real-time

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

USE OF EXISTING TRANSMISSION LINES

- As part of the Renewable Electricity Program, the AESO opted to proponents to make use of the existing transmission system.
- Effective utilization of the existing transmission system helps to reduce costs.

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

QUESTIONS?

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