

# Alberta's Power Reform: Implications for Electricity Providers and Consumers

By [Kyle Taylor](#) and [Christine Yick](#)

A fundamental shift in the structure of Alberta's electricity market is underway. The provincial government has promised to phase out the current energy-only market (EOM) and replace it with a capacity market system (CMS), to be fully implemented by 2021. The transition was recommended by the Alberta Electric System Operator (AESO) in its report, *Alberta's Wholesale Electricity Market Transition Recommendation* (AESO Report). The change will significantly impact Alberta's electricity providers and consumers. Here are some implications, from the AESO Report, of implementing a CMS in Alberta.

## 1 ■ Shift to a Less Carbon-Intensive Electricity Grid



Under the current EOM, power generators sell electricity into an Alberta-wide pool and are only paid for the power that they produce. While the EOM has historically met its objective of delivering reliable and competitively priced power, the AESO has expressed concern that the EOM may be unable to meet the additional objective of supporting a less carbon-intensive electricity grid, as is the goal of Alberta's Climate Leadership Plan (CLP) (see our April 2016 *Blakes Bulletin: Alberta Budget 2016: Climate Leadership Plan Implementation* and June 2016 *Blakes Whitepaper: Predictions for Alberta's Renewable Electricity Program*).

The EOM does not incentivize the back-up generation that, due to the intermittency of renewables, will be essential. The coal plants that the CLP intends to retire by 2030 will need to be replaced by alternative non-renewable facilities capable of providing firm reserve generation, and such facilities will not attract investment under an EOM that only enables them to generate income when environmental conditions have resulted in a shortage.

## 2 ■ Multiple Revenue Streams for Electricity Generators



Under a CMS, two separate markets exist: one for the provision of capacity (i.e., the ability to produce energy) and another for the actual production of energy. Therefore, two separate revenue streams are available to electricity generators. The CMS is meant to increase the number of potential investors by providing more revenue certainty. Capital markets have already expressed interest in investing in a CMS, indicating that it is superior to the EOM structure from a capital availability and cost-of-capital perspective. Further, the AESO Report states that a CMS retains the market-driven competitive elements of an EOM, but reduces the price volatility, so it is better in terms of ensuring a reasonable cost to the regular consumer.

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### Potential for Forecasting Errors



There is a downside to a CMS in that higher than necessary volumes of capacity market may be purchased due to forecasting error; the base auction is held several years prior to the delivery period, based on the central authority's forecast of what the supply requirements will be during that period. However, there are ways to mitigate the implications of this forecast being inaccurate. Certain American markets hold "rebalancing auctions" between the base auction and the delivery period, whereby the capacity commitments made in the base auction can be adjusted. Another method of mitigating risk is to limit the length of contract periods; typically, capacity contracts are between one and five years in length, but other durations are possible. Although these are the mitigation methods cited in the AESO Report, others also exist and will need to be fully considered by the AESO before Alberta's CMS is implemented.

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### Potential Cost Increases



The AESO did concede that a CMS may be less preferable for some industrial consumers. It can result in overall cost increases due to an inability to hedge or avoid capacity payment surcharges. Industrial consumers could potentially be permitted to manage their own obligations in an attempt to alleviate this, but that would have the drawback of adding a new layer of complexity to the CMS. Consequently, the design decision in this regard will be subject to stakeholder consultation.

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### Negative Impact on Select Existing Renewable Generators



The AESO also warned that a CMS would not be welcomed by all categories of electricity generators. For instance, existing renewable generators would oppose a CMS because it would reduce energy prices. The impact on renewable generators party to the Renewable Electricity Program contracts would depend on the payment mechanism chosen for each competition; those with an indexed renewable energy credit (REC) would be insulated, while those with fixed REC payment mechanisms would be negatively impacted. Overall though, the AESO predicts that the majority of electricity generators would view the move to a CMS as positive because of the additional revenue stability that the system will provide.

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### Marrying Alberta's Electricity Needs with CLP's Goals



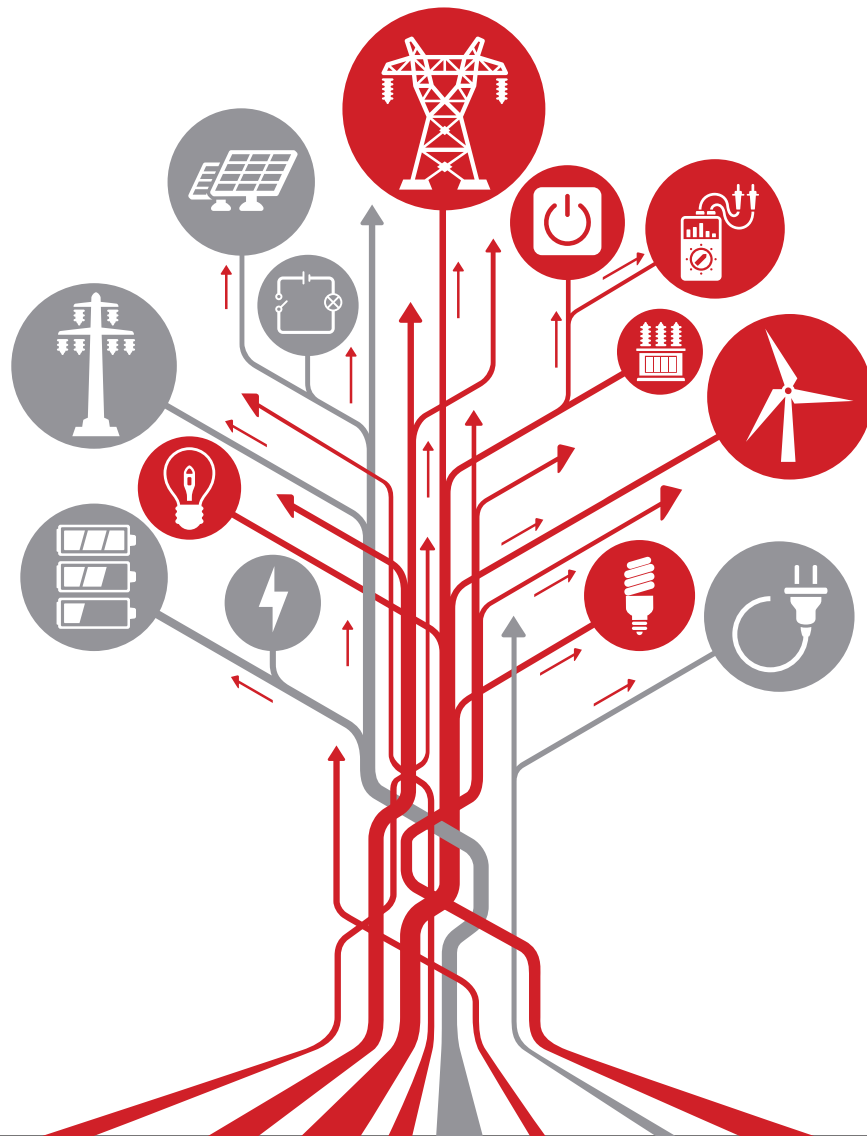
Despite these implications, the AESO concluded that a CMS is the only electricity market framework that will achieve all of the following:

- Ensure reliability and specifically compensate for firm generation
- Provide suppliers with revenue sufficiency and stability
- Implement key areas of the CLP and accommodate potential future policy evolution
- Maintain market incentives to preserve efficiency and flexibility
- Be compatible with the existing transmission policy or future changes
- Allow a manageable amount of change with a high probability of success

## What's Next?

The AESO has recognized the importance of engaging industry stakeholders when designing Alberta's CMS, stating that "earning their support through robust engagement will be critical to the success of this endeavour". The AESO also identified jurisdictions that have already implemented a CMS, such as PJM (which serves the eastern U.S.) and NEPOOL (which serves New England). It will be imperative that Alberta learns from such regions when designing its own CMS.

The process of reforming Alberta's electricity market should be followed closely by electricity generators, investors and consumers alike as it will significantly impact the industry.



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