

Capital Power Corporation  
1200 – 10423 101 Street NW  
Edmonton, AB T5H 0E9  
www.capitalpower.com

---

April 13, 2018

**FILED ELECTRONICALLY**

Independent Electric System Operator  
1600, 120 Adelaide Street West  
Toronto, Ontario  
M5H 1T1

**Attention:** Stakeholder Engagement

Dear IESO Staff,

**Re: Independent Electric System Operator (“IESO”) – Market Renewal Program - Incremental Capacity Auction (“ICA”) Stakeholder Engagement Phase 2 – Options Request for comment on March 7, 2018 ICA presentation and materials**

Capital Power Corporation (“Capital Power” or “CPC”) appreciates the opportunity to provide feedback to the IESO on the materials that were presented and discussed at the March 7, 2018 meeting of the ICA workgroup. The following submission includes comments and recommendations which address design elements considered at the session. Additional comments are included that address overarching issues that relate to the broader strategy of capacity market implementation, including principles that should be considered in the detailed design of competitive markets. Capital Power hereby submits the following comments for consideration.

**Capacity Market Transition**

In establishing the reasons for change in Ontario’s market design, the IESO considers the Market Renewal Program (“MRP”) to be about “*doing things better*”. In pursuing changes to market design, there is a fundamental belief that there are better ways to price, schedule, and procure energy to reliably, transparently, and efficiently meet the needs of the Province. Capital Power supports efforts by the IESO to make these enhancements, and provides feedback in an effort to help the IESO achieve these objectives. Capital Power believes these objectives can be achieved while ensuring the Province continues to attract investment that will be needed over the coming decades.

The IESO’s MRP includes design elements that will improve the way resources are procured to meet long-term supply needs. As the key element of this renewed approach to procurement, the IESO will implement an ICA - a forward market for capacity resources that will replace long-term contracting. Capital Power supports the introduction of ICAs, however, to fully realize the benefits, it is essential that the design be completed in a way that is tailored to the specific circumstances in Ontario.

---

<sup>1</sup> IESO Overview of Market Renewal: <http://www.ieso.ca/en/sector-participants/market-renewal/overview-of-market-renewal>

Capacity markets across North America have evolved significantly over the past decade and continue to evolve, helping to maintain a reliable source of power in markets experiencing significant transition. While Ontario has seen significant changes, concurrent with those experienced in other markets, it is essential to recognize the market structures in neighboring jurisdictions have each evolved incrementally to adapt to their specific circumstances. While there are aspects of each market which can be adapted to the Ontario context, it is Capital Power's view that the capacity market, as currently envisioned by the IESO in their consultation documents, is being designed with a level of complexity that far exceeds what is currently necessary in Ontario. This complexity creates significant risks which could jeopardize a successful implementation and ultimately the broad objectives of the MRP.

At the outset of Ontario's proposed market, there are certain considerations that the IESO must take into account to successfully implement the new market. With the expectation that participation in the capacity market will be limited due to the incremental nature of the design (excluding contracted and rate-regulated assets), Capital Power submits that the design should be simplified, focusing on creating a market that encourages efficient price formation. A critical element in price formation is ensuring the market attracts sufficient participation so that market liquidity is not a concern. In the alternative, competition within the fragmented market will be harmed through mitigation which suppresses nascent price signals.

Due to the capacity needs that are forecasted at the time the new market would be introduced, successful implementation is critical. In a simplified form, the new market will provide incremental benefits to generators and loads, which will encourage greater participation. As the market depth increases over time, the IESO can adjust the design and adapt the market to changing circumstances.

## **Principles**

Underlying the detailed design of all successful markets, there are fundamental principles to which the IESO should adhere in the MRP. These principles encompass broad concepts of efficiency and equity – fundamental aspects to competitive market outcomes. With a genuine desire to see improvements in the way energy and capacity is priced and procured, Capital Power submits that the following principles are essential for the IESO to consider in the MRP.

In the context of the incremental capacity market, these principles will support price formation and will encourage market participation. These elements are critical to the long-term success of the capacity market as an effective means of procuring energy.

### *Efficiency*

It is Capital Power's belief that the most efficient means of allocating resources is through competitive markets that provide transparent price signals. In establishing these price signals, it is critical that they are reflective of underlying fundamentals of supply and demand.

As the IESO transitions the energy and capacity markets to locational prices, it is essential that the supporting market design encourages and fosters competition. A successful market design will allow competition to drive behavior in response to transparent price signals, minimizing the intervention contemplated through the mitigation framework.

The IESO design of the capacity market should consider how a transition period could be incorporated to the design. Allowing for the refinement of market design over time will ensure outcomes are efficient and supportive of price formation.

The market design should correct for distortions created by objectives that are outside the capacity market. Social and environmental objectives should be incentivized through other means in order to avoid undermining confidence in the market.

### *Equity*

Instrumental in the successful design of competitive markets is recognition of the principles of equity. Market design that creates a level playing field among assets, companies, and resources types is critical to investor confidence and long-term success of the market.

The treatment of resources should not favour investments in new generation at the expense of existing assets. All assets should have an equal opportunity to participate in the market, with a reasonable expectation of earning a return on and of the capital invested in the Province.

Further, the market redesign should proceed on the basis of technology neutrality. Design which explicitly favours specific technologies should be strongly opposed, focusing instead on the technical capability of all resources and their ability to meet system needs.

### *Governance*

An essential part of a well-functioning capacity market is a strong governance framework that ensures the market operates as intended. With key parameters having significant impacts on market outcomes, it is incumbent on all regulators to recognize and codify a framework that allows the market to operate predictably and free of biases and special interests.

Capital Power submits that discussion of governance is particularly necessary in the technical aspects of the capacity market. Ensuring proper accountability for defining and administering each aspect of the demand curve is important to ensure proper functioning of the market. Further, the clarification and confirmation of the governance process will improve investor confidence and encourage investment. The process should have an adequate balance between the review of technical parameters in the short and long-term.

### **Key Design Elements**

While there are practical limitations in any approach to stakeholder engagement, it is necessary to consider all aspects of market design in a holistic manner. Capital Power submits the following comments in respect of key design elements, including those which are beyond the scope of the March 7<sup>th</sup> session.

#### *Term & Multi-Year Commitments*

Capital Power supports a contract term of 1 year. With shorter contract durations, the market is better able to respond to underlying fundamentals. The shorter duration provides greater efficiency and price discovery from year-to-year. Further, shorter terms decrease the risk to consumers of holding long-term positions and transfers it to the producers, consistent with the MRP's objectives.

To maintain equity in the market design, it is also necessary to apply a similar treatment to all resource types. There should be no differentiation or carve-outs that would qualify a resource for a differentiated product, either in length or any other contractual terms. Efficiency requires the same price for the same product. Paying a new entrant a different price for the same capacity product violates the principle of efficiency, and results in price discrimination. The Federal Energy Regulatory Commission ("FERC") has recognized that effective capacity markets should encourage both investment in new capacity (when needed) and retention of existing capacity, including avoiding premature retirement and export to other markets. Without a level playing field, the risk is substantial that compensation to new capacity is prioritized, driving otherwise economic capacity out of the market.

Multi-year commitments will have detrimental effects on liquidity and price discovery in capacity markets. While it is necessary to recognize that new investments require some level of certainty, Capital Power submits that this certainty can be achieved through proper design of the demand curve and net-CONE, and must be balanced with the detrimental impacts to competition. This impact could be particularly acute in early stages of the capacity market, which could be negative for long-term sustainability of the market.

While introducing long-term multi-year commitments in the capacity auction, the IESO would be required to accurately assess and forecast capacity needs at a zonal level. The need to reflect in net-CONE calculations the long-term changing market dynamics, constraints, energy and ancillary service revenues will severely jeopardize the likelihood of accurately forecasting capacity needs. Miscalculation of these variables will invariably lead to suboptimal procurement levels and higher risks to consumers who will be charged for these errors.

### *Demand Curve and Net-Cost of New Entry ("Net-CONE")*

Setting parameters of the demand curve and net-CONE are critical elements that will underlie proper price formation in the capacity market.

At inception of the market, Capital Power is concerned that attempts to refine the parameters for locational capacity auctions will be challenging. Initial design should establish a limited number of zones. A clear transition should be established that prescribes how zonal capacity markets will be adapted and refined over time. This schedule should include consideration for transition mechanisms which may be required to properly adapt auction parameters given locational energy prices, local reliability, and existing transmission constraints.

In establishing a demand curve for the capacity auction, Capital Power supports a shape which ensures revenue sufficiency for reference technologies. Longer term, prices should reflect net-CONE, with shorter term variability influenced by supply and demand. At minimum levels of reliability, Capital Power supports prices which are set as multiples of net-CONE and/or gross-CONE. Decisions on target level, shape, and curvature should endeavor to avoid over procurement, a scenario that will ultimately lead to revenue sufficiency issues for all generators and reliability concerns.

Given the importance of net-CONE parameters, it is necessary to reflect Ontario-specific circumstances. To avoid biases and follow best practices, a third-party independent consultant should be retained by the IESO to calculate the net-CONE parameters in an open and transparent process that includes stakeholder engagement. Capital cost inputs should reflect accurate estimates of new builds in the Province. Similarly, gas cost estimates should reflect true supply costs with consideration for variability which can substantially impact net-CONE. Finally, energy and ancillary service revenue assumptions that serve as a key input to the net-CONE should be calculated and available to stakeholders through a consistent and transparent process.

### *Load Forecasting and Adequacy Modeling*

The IESO's load forecasting and reliability modeling methodologies that will underlie capacity procurement targets should be reviewed prior to implementation. With the forecasts having a greater influence over procurement outcomes, the review should provide stakeholders with a transparent view of the methodologies and opportunity to provide input. Given the direct influence on outcomes and the risk of under and over procurement, the accuracy of the load and reliability forecasts will be impactful. Of particular importance will be transparency of assumptions relating to energy efficiency, electrification, demand response, and distributed resources. The contribution of these resources, and other programs which seek to advance investments in non-conventional generation, must be clearly articulated and subject to scrutiny by stakeholders.

### *Forward Period*

Capital Power supports a forward period of 3.5 years. This provides resources with an adequate amount of time to plan and prepare for future operating commitments. Similarly, it provides resources that are in development a sufficient timeline to advance construction and reach commercial operations allowing for an adequate long-term supply curve.

### *Seasonality*

Introduction of seasonal capacity products is an unnecessary complexity that should not be pursued in the current market design. The incremental complexity that will be required to introduce differentiated seasonal products will provide limited value at inception of the market. Capital Power submits that this design element should only be considered in ongoing discussions after successful implementation of an initial capacity market.

### *Rebalancing*


Rebalancing auctions form an important part of capacity market design which allows generators and load participants the ability to adjust and manage their exposure to capacity obligations. However, with the preparatory work required before a rebalancing auction can be held, the IESO must consider the administrative burden that will be placed on the organization with the frequency of base auctions and rebalancing auctions. The incremental benefits that will result from each additional auction must be weighed against the additional commitments required by the IESO. Capital Power would support two rebalancing auctions, with one occurring near to the start of the delivery period.

*Forward Period Obligations*

Capital Power supports measures which seek to provide adequate assurances that participants will deliver on their capacity obligations. Security requirements should be set at levels which appropriately balance the assurances required by the IESO, and the cost borne by market participants. Design of the security requirements should consider time-to-delivery and could be adjusted as project milestones are achieved. In designing security requirements and other assurance mechanisms, consideration should be given to the timing and frequency of rebalancing auctions, as these provide a market-based mechanism to mitigate some of these development risks.

Capital Power appreciates the opportunity to provide feedback in respect of the design for the Incremental Capacity Auction. The positions contained herein represent Capital Power's views on market design at the time of writing. Due to the strong interconnection between energy, ancillary services and capacity markets, positions are subject to change as greater detail becomes available on the holistic market design. Should you have questions on the material submitted, please contact me at (780) 392-5169 or at [cmrobb@capitalpower.com](mailto:cmrobb@capitalpower.com).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Colin Robb". The signature is written in a cursive, slightly slanted style.

Colin Robb  
Senior Advisor, Regulatory & Environmental Policy  
Capital Power Corporation

Cc: Jason Comandante, Vice President, Regulatory & Environmental Policy  
Anthony Zlahtic, Director, Commercial Services