















- OPG continues to have significant concerns with the IESO committing units based on inferred data due to the number of variables that can affect unit temperature/start up status. Unit status is tied to the safety of operations and should only be informed by the controlling authority at the station. Following desynchronization, a unit's rate of temperature change is a function of ambient temperature, shutdown procedures, as well as manual intervention (e.g. steam can be injected into the boiler to advance a unit's start condition). Preventing participants to modify lead times following the 20:00 ERUC run is too restrictive and may lead to infeasible commitments and/or loss of flexibility to the market.
- Further clarification on how MDT is inferred and a market participant's ability to revise the unit status is requested prior to discussions on reference levels for NQS units.



November 8, 2019

Via Email: [engagement@ieso.ca](mailto:engagement@ieso.ca)

Independent Electricity System Operator  
1600-120 Adelaide Street W  
Toronto, Ontario  
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**Attention:** Darren Matsugu

Dear Mr. Matsugu,

**Re: Independent Electric System Operator (“IESO”) – Market Renewal Program (“MRP”) Detailed Energy Market Design: Non-Quick Start (“NQS”) Resource Lead Time and Offer Price Changes**

Capital Power appreciates the IESO’s ongoing engagement efforts as part of the MRP to reform the existing energy market. The technical sessions to date have provided a forum for constructive and informed discussion early in the design phase. Capital Power encourages the IESO to continue holding these sessions ahead of making key detailed design decisions.

On November 1, 2019, the IESO hosted a session to discuss proposed changes to NQS lead time in the pre-dispatch (“PD”) scheduling process and offer price increase restrictions. Unlike today where market participants initiate NQS commitments, the IESO is proposing to generate NQS dispatch schedules and commitments in the renewed market through its proposed PD process. The IESO described the process as being intended to “address deviations between day-ahead and real-time in order to reliably meet real-time demand at the lowest possible cost.” Further, the IESO is proposing to increase restrictions on market participants’ ability to change offer prices.

These changes, though they may provide the IESO with greater operational certainty, are not likely to result in the lowest possible cost. Removing market participants’ ability to initiate commitment for their resources while also increasing offer change limitations introduces additional risk for suppliers and, therefore, costs. With the Real Time Generation Cost Guarantee (“RT-GCG”) program expected to cease, efficient price signals and revenue sufficiency must be considered in the IESO’s detailed design decisions. A well-functioning market requires, among other things, that resources can reflect their underlying economics. This further ensures the fidelity of the price signal. Capital Power’s comments in these respects follow.

**1. Proposed PD Approach Could be Improved by Adding “Full Speed No Load” Profile**

On its own, Capital Power has no concerns with the proposed PD approach. In addition to the new Hot, Warm and Cold lead time profiles however, the IESO should consider an additional profile to reflect Full Speed No Load (“FSNL”) operations. This is a common operating state

for many resources. Including this profile in the PD scheduling process offers the system greater flexibility and could materially reduce the down time between commitments leading to significant savings in start-up costs.

**2. Proposed Offer Change Restrictions May Unnecessarily Add Supplier Risk Leading to Increased Consumer Costs**

The current market structure only limits NQS generators from increasing their offers during the Minimum Generation Block Run Time period up to the generator's Minimum Loading Point ("MLP"). By contrast, the IESO's recent proposal would extend restrictions beyond the MLP to a generator's maximum output and for all hours included in a binding PD advisory schedule. The restrictions also include offer changes on operating reserves. Despite including conditions for relaxing the restrictions, the proposed change nevertheless reduces a market participant's flexibility to reflect its resource's underlying costs particularly on offer volumes not included as part of the binding PD schedule.

To support its proposed offer change restrictions, the IESO outlines competitive concerns where committed NQS resources may have an advantage over non-committed ones and would be incented to raise their offer price. It should be noted that NQS generators without a day-ahead market ("DAM") schedule do not compete only among themselves. Generators with partial DAM schedules such as flexible Hydro and imports are meaningful sources of competition. These and other competing resources can act to discipline committed NQS resources reducing the incentive to increase offers as the risk of not being dispatched. It was also suggested that a real-time process could be used to revise reference level changes. Capital Power submits that this will be unnecessarily onerous on both the supplier's operations and the IESO. Instead, concerns with changes in offer price are more appropriately addressed in the IESO's design of a market power mitigation framework.

Capital Power recognizes the benefits of competition and appreciates that under-mitigation of market power may not result in competitive market outcomes. However, it is equally important to recognize the potential impacts of over-mitigation which may result in an unsustainable market framework. Existing and new assets must have a reasonable opportunity to recover costs, manage risks and earn a fair return on and of capital. Otherwise, the overall market framework may prompt early retirements and will be incapable of attracting required investment, all of which negatively impact reliability. Therefore, the IESO must not rely too heavily on administrative mechanisms in reforming the existing energy market. Increasing constraints on market participation would, *ceteris paribus*, lead to greater supplier risk and, ultimately, additional costs to consumers.

Capital Power appreciates the opportunity to participate in the IESO's detailed MRP design process. We would be pleased to respond to any questions or comments the IESO may have regarding our feedback. Please feel free to contact me at (403) 717- 4639.

Sincerely,



Santi Churphongphun  
Regulatory Manager, Canada

cc: Jason Comandante, Capital Power  
Kelly Lail, Capital Power  
Emma Coyle, Capital Power  
Anthony Zlahtic, Capital Power



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Chris Codd  
Senior Regulatory Advisor



November 12, 2019

Independent Electricity System Operator  
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**Attention: Darren Matsugu, Senior Manager – Market Design and Integration**

Dear Darren:

**RE: Market Renewal Program – Detailed Design for Energy Stream  
Non-Quick Start (Lead Time and Offer Changes)  
TransAlta's Comments**

Thank you for opportunity to participate in the IESO's session on the detailed design for the NQS unit commitment relating to lead time and offer changes. TransAlta appreciates the IESO's efforts to engage with stakeholders on these issues within the Market Renewal Program Detailed Design for the Energy Workstream. TransAlta is submitting these comments to highlight issues that were raised at the November 1<sup>st</sup> session and propose potential solutions to these issues for the IESO's consideration.

TransAlta is supportive of the IESO's proposals for lead time and offer changes in the day-ahead and enhanced real-time unit commitment processes. The proposals provide NQS resources with operational flexibility that will allow these resources to manage their operational risk.

The IESO's proposal is dependent on related processes for participation and reference level changes. It is critical that these processes function as currently envisioned. Significant deviations from the processes currently contemplated have the potential to increase operational risk, which would deter NQS resources from participating in the day-ahead market and pre-dispatch in certain situations.

The High-Level Designs envision that participation in day-ahead, pre-dispatch and real-time would not be mandatory but instead participation would be encouraged by the market design. This discretion provides market participants with operational flexibility to manage their resources. The NQS commitment process may need to be changed if, for example, participation becomes compulsory.

The process for submitting reference levels must be administratively efficient in order to be viable for intra-day changes. An administratively complex process would discourage such resources

from participating in day-ahead and pre-dispatch if there is the potential to be required to maintain offers that are less than a resource's short-run marginal cost.

TransAlta provides more detailed comments on four specific issues and potential solutions in the sections that follow:

- Operator discretion to enter a “very cold” thermal state
- Full speed no load (“FSNL”) thermal state
- Changes to offer parameters that increase availability
- Participation of resources that have multiple operating modes

### **Operator discretion to enter a “very cold” state**

Some NQS resources can be placed into a very cold state that has a longer lead time than the resource's typical cold state. A resource enters this state through the deliberate action of an operator who intends to reduce the wear and tear on a resource during extended periods where the resource is not expected to be dispatched. It is important that this state be incorporated into the design of the commitment processes to allow resource owners to minimize a resource's costs.

TransAlta believes that a very cold state could be incorporated within the three proposed thermal states by allowing a resource to have a larger range of lead time parameters for the cold thermal state. This would allow a resource to maintain its cold state lead time parameters under normal operations and change those parameters to reflect the very cold state if the resource has been transitioned to that state. The IESO's day-ahead and pre-dispatch engines would automatically use cold state parameters that reflect the very cold state when the resource has been placed in that state.

Consider an example where a resource has a cold state with a lead time of 4 hours and a very cold state with a lead time of 20 hours. The resource would have a reference level for its cold state lead time equal to 20 hours. Under normal operations, the resource would submit dispatch data for its cold state lead time equal to 4 hours. When the resource is placed into a very cold state, the resource would submit dispatch data for its cold state lead time equal to 20 hours. Similar changes could be made to other dispatch parameters.

This approach would be strongly preferred to an alternative that creates a fourth thermal state. The very cold state is different from the other thermal states because a resource enters this state due to manual actions instead of automatically entering the state based on elapsed time. A separate very cold state would require a flag or other mechanism to prevent the resource from automatically entering the very cold state. This would add unneeded complexity to the commitment process.

### **Full speed no load (“FSNL”) thermal state**

Some NQS resources can be held at full speed no load where the resource is running, has not yet synchronized, and is not loaded. This FSNL state would have a shorter lead time than the hot state and could avoid a resource entering a minimum generation block down time. Allowing the pre-dispatch to consider a FSNL state could lead to lower costs because it would avoid

running an NQS resource at its minimum loading point while maintaining the resource's availability. This would also help mitigate overnight surplus baseload generation conditions.

The FSNL state would require a fourth thermal state because it would need to be considered by the pre-dispatch engine simultaneously with the other three thermal states. This thermal state would require including the FSNL costs in the financial commitment because there are costs to maintain a resource in the FSNL state.

TransAlta recommends that the IESO consider the viability of adding a fourth thermal state for FSNL operation, and if so, to explore how the FSNL state could be implemented with affected resource owners.

### **Changes to offer parameters that increase availability**

The High-Level Design focused on offer price increase restrictions because the IESO was concerned that a pre-dispatch financial commitment provides competitive advantages which could be used inappropriately by a market participant. There are no concerns with offer price reductions because these would not be an inappropriate use of that competitive advantages.

There are analogous situations relating to non-financial parameters where a resource could increase its availability, and this would lead to lower costs if the resource was dispatched. An example would be a reduction to the minimum generation block down time. A resource could have a typical down time of 48 hours but in certain situations could reduce its down time. This would make the resource available sooner and allow it to compete against other resources.

TransAlta recommends that the IESO clarify in the detailed design whether changes to non-financial parameters that increase availability would be allowed in the renewed markets.

### **Participation of resources that have multiple operating modes**

Some NQS resources are combined cycle facilities with the capability to bypass their steam turbines and operate as in a simple cycle mode. Simple cycle operation typically has a shorter lead time and a faster ramp rate but a lower maximum capacity. Today, these resources choose their operating mode. It appears that these resources would continue to choose their operational mode in the renewed markets.

The complexity in the renewed market is that the combined cycle mode of operation would likely be a default option considered by the pre-dispatch engine and the resource could receive a commitment. Once the resource has a commitment it would be discouraged from switching to simple cycle operation during its lead time because it may not be permitted to increase its offers during subsequent hours to reflect the changed mode of operation. This would prevent these resources from responding to short-term scarcity in the energy and/or operating reserve markets by switching from combined cycle to simple cycle operation.

One mechanism to provide these NQS resources with operational flexibility is to recognize high market prices during as an opportunity cost to the combined cycle mode of operation. Such opportunity costs would permit an intraday reference level change. This would ensure that the change to the reference level would only be permitted in circumstances where pre-dispatch prices are expected to be high and the resource is making itself available in those high-priced hours when it wouldn't otherwise be available.

TransAlta recommends that the IESO consider allowing reference level changes for these resources to permit a change in operating mode.

Please contact me if you have any questions about the foregoing.

Yours truly,

**TRANSALTA CORPORATION**

A handwritten signature in blue ink, appearing to read "Chris Codd".

CHRIS CODD  
Senior Regulatory Advisor