

MRP - Single Schedule Market | High Level Design

Stakeholder Feedback Form

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| <p>Date Submitted: 2018/11/22</p> <p>Feedback Due: November 22, 2018</p> | <p>Feedback provided by:</p> <p>Company Name: <u>Ontario Power Generation</u></p> <p>Contact Name: <u>Herman Mo</u></p> <p>Phone: <u>[REDACTED]</u></p> <p>Email: <u>[REDACTED]</u></p> |
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The Market Renewal Project (MRP) released a draft of the High Level Design (HLD) for the Single Schedule Market (SSM) on **September 27, 2018**. In order to allow interested parties an opportunity to provide meaningful feedback on the HLD, the IESO has provided an eight week review period which concludes on **November 22, 2018**.

The SSM HLD first draft can be accessed [here](#).

This feedback form is intended to help organize stakeholder feedback in two key areas of interest to the IESO. If stakeholders have additional input, they are encouraged to provide those thoughts in the “Other Feedback/Considerations” section of the form.

Stakeholder feedback is due by Thursday November 22, 2018 to IESO Engagement at: engagement@ieso.ca

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| | | Request for Clarification/Education | Considerations for Detailed Design |
| Price Formation | 8-32 | <p>2.3.2 Energy Price – Loss Component “The IESO has also determined that dynamic loss factors will be used, where technically feasible, to more accurately calculate losses.”</p> <ul style="list-style-type: none"> • In general, OPG does not support dynamic loss factors updated more frequently than one hour, due to experienced dispatch volatility issues experienced when it was last implemented at market open (2002). The IESO acknowledges these issues and states quasi-dynamic loss factors will be considered if using dynamic loss factors is not technically feasible. <ul style="list-style-type: none"> ○ Is the IESO suggesting possible different loss factor frequency updates by node? ○ In OPG’s experience, it is not possible to accurately determine whether dispatch volatility will be an issue until the the system is live. How does the IESO intend to determine if dispatch volatility will be an issue and if so, how quickly will it be able to adjust its methodology if needed? ○ It is important for OPG to always have the most updated penalty factors. If penalty factors are updated more frequently than | <ul style="list-style-type: none"> • In the interest of openness and transparency, OPG expects that penalty factors (dynamic or quasi-dynamic) will be |

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| | | <p>hourly, it will be challenging to optimize dispatch at energy limited resources to benefit the customer.</p> | <p>published publically at the same frequency by which they are determined.</p> <p>2.5 Intertie Congestion Pricing</p> <ul style="list-style-type: none"> • As stated in numerous previous comments OPG supports the IESO’s approach for Export Congestion pricing but does not agree with the IESO’s pricing approach under the Import Congestion scenario. • OPG does not agree with the rationale that interties should be settled consistently with internal constrained resources as interties are not 5-minute dispatchable. • The IESO’s concern that the status quo would result in increased costs due to interactions between the DAM and RT where ‘loads may end up guaranteeing the same import MW twice’, could be easily addressed through coding that would prevent the applicability of a RT-IOG on any MW less than or equal to a DAM scheduled MW quantity. • The combination of the IESO’s proposal for settlement of import congestion and the IESO’s indication that implied wheels will continue in the future also exposes marketers to further risk in a situation where RT price increases relative to PD. |

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| | | <p>2.6 Supplier Pricing</p> <p>2.6.3 Detailed Design Considerations</p> <ul style="list-style-type: none"> The IESO states “negative offer prices that are not reflective of the short-run marginal costs of suppliers can result in distorted price signals in the market. If negative pricing is determined to be an issue, the IESO will assess appropriate options to address it.” <p>Where the IESO has used a -MMCP of -\$50 in pricing analyses presented at SE meetings, OPG would appreciate understanding what other options (if any) the IESO would consider to address negative pricing.</p> | <ul style="list-style-type: none"> OPG believes there is technically based merit for negatively priced offers and welcomes further discussion on this topic. Should changing the value of the negative MMCP be considered, it will be important to have a means for distinguishing dispatch order if there is insufficient price separation between supplier offers; in particular, energy limited renewable facilities. <p>2.9 Constraint Violations</p> <p>2.9.2 Decisions</p> <ul style="list-style-type: none"> “the IESO has determined that market prices will be capped at the current maximum market clearing price (\$2,000/MWh).” Fundamentally, OPG believes the market should be allowed to solve transparently exhibiting the true cost to the market. This minimizes uplift costs which are not transparent and is in line with the methodology used in neighbouring markets (e.g. NYISO). |

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| | | | <p>2.9 Constraint Violations</p> <p>2.9.3 Detailed Design Considerations</p> <ul style="list-style-type: none"> OPG expects stakeholders will be involved in the process of creating a new set of penalty prices and methodologies for setting price. Could the IESO please confirm this to be the case? <p>2.10.3 Detailed Design Considerations</p> <ul style="list-style-type: none"> OPG would like the IESO to consult with stakeholders on determining whether control actions taken to address local reliability issues need to be prevented from impacting prices. <p>2.11 Multi-Interval Optimization</p> <ul style="list-style-type: none"> OPG supports the continued use of MIO for dispatch and allowing MIO to set LMP but believes it should be modified to respect hydroelectric resource start and dispatch limitations to optimize their use to the benefit of the customer. |

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| Market Power Mitigation | 33-42 | | <p>3.3 Reference Levels</p> <ul style="list-style-type: none"> The determination of reference levels will be more straight forward for some resources and will be more complex for others, such as energy limited resources. In particular, it is important to understand individual and river aggregate characteristics of hydro resources in recognizing opportunity costs. <p>3.3.3 Secondary Decisions</p> <ul style="list-style-type: none"> “After the market renewal program has been implemented, cost-based reference levels will be used to calibrate the process. Following the calibration period, cost-based reference levels will be applicable only when resources are infrequently scheduled. Reference levels will more frequently be determined by recent offers or LMPs at specific resources. Such information provides useful proxies for competitive outcomes.” <p>OPG does not agree with departing from cost-based reference prices as recent offers may not account for dynamic changes or seasonal variations that river systems experience.</p> |

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| Load Pricing | 43-52 | | |
| Settlement Topics | 53-56 | | |

Other Feedback / Considerations

OPG believes that the High Level Design should be a complete report and stand alone. Linkages used in the report may disappear over time. These references along with the “Issues and Action Log” and the “SSM Design Tracker” should be included in the Appendix. A great deal of work went into developing the High Level Design and the SSM Design Tracker is a summary of some of related discussions. These serve as a reference for options and rationale considered.

Additionally, due to the interdependent nature of SSM, DAM and ERUC, high level decisions made in any of the energy streams may have positive or negative impacts on other streams. As the IESO proceeds into the detailed design phase, it should be expected that ‘issues’ may be uncovered that warrant the revisiting of previous decisions. OPG believes there needs to be the flexibility to revisit high level design decisions where significant issues are discovered.