



MRP Energy – Detailed Design Engagement

Design Section: Pseudo Units

Meeting Summary

Background:

The IESO hosted a technical session on the Pseudo Units section of the Energy detailed design within the Market Renewal Program (MRP) on February 27, 2020 in downtown Toronto (IESO Offices) from 9:30 a.m. to 12 p.m.

The focus of the discussion was a proposal that included using the Pseudo Unit model from Day-Ahead through to Real-Time as a part of the renewed Energy market. [Required reading material](#) on these design topics was shared two weeks in advance to support the discussion on February 27.

The purpose of the in-person session was to answer stakeholder questions and understand their perspectives on the design based on the reading material provided in advance. Stakeholder perspectives will help to inform the upcoming release of the draft detailed design sections. The design sections when fully released will be open to additional engagement, feedback and discussion with stakeholders.

Attendance:

The following organizations participated in the session:

Association of Power Producers of Ontario
Ontario Energy Association
Bruce Power
Ontario Power Generation
Capital Power
TC Energy
Greater Toronto Airports Authority
TransAlta
Northland Power
Workbench

Discussion Topics:

Overall, the discussion with stakeholders focussed on the challenges and opportunities through use of the Pseudo Unit model throughout the IESO market. The following themes emerged from stakeholder questions and comments during the session:

- The IESO discussed that while this is a focussed session on Pseudo Units (PSUs), throughout all timeframes, the detailed design documents will have PSUs through a number of sections, including: Facility Registration, Offers Bids and Data Inputs, Grid and Market Operations Integration, Market Settlements, and the three Calculation Engine documents.
- Stakeholders discussed some of the issues with the use of PSUs in the current market, and the need for flexibility in managing an economic schedule and converting it to optimize physical units.
- Stakeholders discussed how today they are able to adjust day-ahead schedules leading up to real-time. These adjustments improve the feasibility of the schedule in terms of physical operations.
 - Stakeholders questioned how the approach used today would interact with the future market power mitigation framework.
- Stakeholders noted that operating capabilities (e.g. MLP) and costs can vary based on the configuration they are scheduled for (e.g. 1x1, 2x1, 3x1), and discussed how to best reflect those differences in their PSU offers.
- There was considerable discussion on the complexities associated with co-optimizing energy and operating reserve (OR). Stakeholders asked for consideration that there may be a difference in the maximum capabilities for energy and OR on the combustion and steam turbines, as well as the types of OR that can be offered.
- Stakeholders requested to be able to switch between PSU and physical unit scheduling more frequently than via registration, and to be able to switch between combined cycle and simple cycle operations intra-day.
- Stakeholders provided comments on the practical complexities of pseudo unit operations regarding ramp rates and navigating mid-hour dispatch instructions.
- There was discussion on how start-up costs get assessed for the potential for one or multiple pseudo units receiving dispatch instructions, and how to convert outages and de-ratings of equipment from physical to pseudo units.
- Stakeholders also asked about failure charges are assessed, if it is on the physical unit basis, or if there is possibility to be assessed on a resource basis.

Next Steps:

The feedback and discussion with stakeholders at these sessions is being used to inform the detailed design sections which will be released, and subject to stakeholder comment and discussion in the upcoming few months.