

Update to IESO Monitoring Requirements

Phasor Data Feedback Form

June 24, 2020

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Feedback Provided By:

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Following the June 24, 2020 webinar to discuss the synchro phasor technology needs and related Market Rules changes being proposed, the IESO is seeking feedback from participants on the proposed rules, requirements and implementation schedule. The IESO will work to consider feedback and incorporate comments as appropriate and post responses on the engagement webpage.

The referenced presentation can be found under the June 24, 2020 entry on the [Updates to IESO Monitoring Requirements: Phasor Data webpage](#).

Please provide feedback by July 15, 2020 to engagement@ieso.ca. Please use subject: *Feedback: Phasor Data*. To promote transparency, this feedback will be posted on the [Updates to IESO Monitoring Requirements: Phasor Data webpage](#) unless otherwise requested by the sender.

Stakeholder Feedback:

General Comments/Feedback:

Ontario Power Generation (OPG) appreciates the opportunity to provide feedback on the recent 'Implementation of Synchro Phasor Technology' webinar, which was presented by the IESO on June 24, 2020.

The IESO did a good job explaining Synchro Phasor Data and Phasor Measurement Units (PMU) technology to participants during the webinar. OPG understands and supports the need to continue

to be innovative, advance technology and enhance current systems to improve monitoring and detection as well as improve data and analysis capability to ensure safe and reliable operation of the IESO-Controlled Grid (ICG).

However, OPG has significant concerns with the planning and costs associated with this project. It is important for the IESO to provide clarity and transparency to Market Participants (MPs) regarding both IESO and MP costs required to complete this project. The IESO highlighted they are still working on a Cost/Benefit analysis, and it would be difficult to quantify the benefits. OPG appreciates and understand the difficulty in providing an exact Cost/Benefit analysis, but participants need to know the estimated costs before the IESO proceeds with Market Rule changes, and potential implementation. The IESO stated during the webinar they have not yet consulted any vendors and the costs of PMU's are highly varied. The estimated costs stated during the webinar only included the cost of the PMU itself, there are many additional costs that need to be considered, such as labour, engineering, project management, communication channels and processors. Accurate estimated costs for this project need to be clearly defined and made available to MPs before this project can progress.

There are still many steps to be completed in this project before it can proceed to proposing and implementing Market Rule/Manual Changes. OPG believes MPs do not fully understand the technical details, cyber security implications, or costs associated with this project, and it would be prudent for the IESO to clarify the requirements before setting timelines for implementation. OPG has requested technical specifications for proposed PMUs on the ICG, without this documentation it would be difficult for the IESO and MPs to keep moving forward on this initiative.

Topic:

Proposed Rules

Feedback:

OPG has concerns with the proposed changes to the Market Rules, as it is unclear from the webinar what the exact changes will be in Appendix 4.15 & 4.16. There is also no mention of the expected changes to Market Manual documentation. OPG believes the information on slide 17 requires more clarity on actual generator requirements, as it only states that generation units and aggregated generation units $\geq 100\text{MVA}$ will require PMUs. The IESO also needs to acknowledge the complexity required to have PMUs on aggregated facilities and define why this would be a requirement.

Aggregated facilities would require updated Instrument Transformers (ITs) for each generator unit, data summation devices, as well as many generator outages for installation. OPG encourages the IESO to provide rationale and explanation as to how the criteria was formulated, as it would help justify some of these requirements.

Topic:

Requirements

Feedback:

The IESO should work with individual market participants to discuss their requirements and fully understand the implications before proceeding towards implementation. The IESO should also provide technical specification documents to participants in order for them to fully understand the expectations, e.g., communication channels, cyber security etc... The IESO webinar highlighted some of the technical requirements at a high level, however significantly more detail is required, for example:

- Will IESO require the phasor information to be transmitted in a particular protocol format as well as impose the choice of communication media?
- Will there be communication security implementation requirements?
- How much visibility (via PMU) does IESO need to achieve its goals regarding secure/reliable operation of the ICG?

OPG is also unclear if PMUs will need dedicated communication circuits. Some existing facilities have leased lines, and these paths will not be able to provide the speeds or bandwidth required by the PMU.

Topic:

Implementation Schedule

Feedback:

OPG has already addressed concerns with understanding the costs associated with this project prior to implementation. MPs need advance notice to budget resources and develop business plans prior to implementation of the Market Rules, without considering these factors the overall project plan may not be successfully achieved. The IESO has stated MPs with more than one facility will be provided a *'mutually agreed staged implementation plan'*—these proposed plans would indicate prioritization, requirements and timelines that would need to be reviewed and agreed upon with MPs ahead of any actual implementation. Therefore, expecting draft redline Market Rules by August and Presentations to TP by Q4 is most likely an unreasonable timeline.

OPG would also encourage the IESO to co-ordinate efforts between generators and transmitters with regards to PMU staged implementation plans. Sites where there can be shared PMUs should be highlighted to MPs to avoid any overlap.