

Engagement Plan

Updates to IESO Monitoring Requirements: Phasor Data

Introduction

Today, Ontario's power system is continuously monitored in real-time by the IESO using a traditional technology called Supervisory Control and Data Acquisition (SCADA). This technology utilizes power system measurements ("data") from all facilities connected to the IESO-controlled grid across the province every 2-10 seconds. Receiving data at this frequency, and in this manner, presents two challenges:

1. Data for certain system events is not obtained. This was evident on January 2019 when an event occurred in Florida that grew and propagated across the eastern interconnection, causing oscillations, including in Ontario, but was uncaptured by the SCADA.
2. Data received is not synchronized. Without precise time stamps on each piece of data, it is not always possible to have a precise picture of the impact of system events.

Phasor technology is much more advanced than the traditional SCADA technology or conventional Digital Fault Recorders in its ability to provide real-time and/or after the fact data with greater granularity (30 samples in 1 second), accuracy and detail ("phasor data"). This aids in providing an early warning of potential system events and consistent information about actual power system conditions. In addition, it replaces traditionally used time-consuming methods to benchmark power system models and also helps to perform after-the-fact forensic work on system events more effectively. Additionally, phasor data enables implementation of a non-diverging state estimator called Linear State Estimator. Further, phasor data can provide assistance to operators in restoration of system equipment from outages or islands, and improves IESO's ability to comply with several NERC reliability standards.

Many entities in North America have already begun implementing phasor technology as part of their system monitoring and are in the process of determining how to integrate the use of phasor data in their operation and planning activities to different degrees. The IESO proposes to update Market Rule Appendices 4.15 and 4.16 to clarify requirements for generators and transmitters to install phasor technology infrastructure and provide phasor data to the IESO. The proposed changes are intended to align with requirements in other North American ISOs and RTOs.

This engagement plan outlines the objectives, approach, timeline and considerations for engaging with stakeholders during the development of Market Rule amendments to reflect the updated requirements. This plan may be subject to review and updates as the process evolves. All comments and enquiries on this engagement can be directed to engagement@ieso.ca.

Stakeholders and Communities

The IESO encourages all interested parties to participate in this engagement through the public engagement activities described in the Approach section below. The IESO anticipates that this initiative will be of particular interest to transmitters ≥ 50 kV and all aggregated generators of generation facility ≥ 100 MVA or a single generator unit ≥ 100 MVA.

Engagement Objectives

The IESO is seeking feedback from stakeholders on the proposed updates to Market Rule Appendices 4.15 and 4.16.

The objectives of this engagement are to:

- ensure that stakeholders understand the purpose of this initiative;
- better understand how the proposed amendments will impact stakeholders;
- obtain stakeholder feedback on the proposed implementation timeline;
- obtain stakeholder feedback on proposed Market Rule and Market Manual amendment language;
- incorporate suggested changes, where possible, into the process of updating the monitoring requirements.

Approach

The implementation of this engagement plan will be in accordance with the IESO's [engagement principles](#).

This process is a public engagement process. All materials will be posted on the dedicated IESO engagement webpage for this initiative. In addition, any information/input supplied by interested parties will also be posted, with their consent.

The approach for this engagement includes opportunities to provide input through various channels such as webinars, information sessions, meetings, and written feedback. The project team will consider all relevant input and illustrate how feedback was considered to shape the stated objectives.

Proposed Engagement Schedule

The anticipated timing for this engagement is presented below.

Timing	Engagement Activity
June 24, 2020	Engagement meeting: <ul style="list-style-type: none">• discuss and seek stakeholder feedback on proposed changes to Market Rules 4.15 & 4.16 to reflect upcoming changes to monitoring requirements to add Phasor Data for certain generators and transmitters
November 19, 2020	Engagement meeting: <ul style="list-style-type: none">• update to stakeholders on the revised implementation schedule for the updated monitoring requirements• seek feedback on the proposed Rules amendments• present and discuss the list of areas addressed by a proposed newly drafted Market Manual
Q3, 2021	Engagement meeting: <ul style="list-style-type: none">• present updates to the draft Market Rule amendments and associated Market Manual revision
Q3-Q4, 2021	Presentation of proposed Market Rule and Market Manual amendments to Technical Panel
Q1, 2022	Anticipated effective date of Market Rule and Market Manual amendments