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Ontario Automatic Under-Frequency Load Shedding (UFLS) Program

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What is the UFLS Program?

The UFLS program is intended to protect the system from collapse in the event of a significant generation-load imbalance by arming Ontario load feeders with the capability to trip when signaled by declining frequencies.

MR Ch. 5, Sec. 10.4.6 requires at least 30% of Ontario load to be connected to automatic UFLS relaying for this purpose.

To ensure Ontario meets this UFLS target, the IESO conducts an annual survey of Market Participants on criteria stipulated in Market Manual 7.1 'IESO Controlled Grid Operating Procedures'.

Who Participates in the Program?

- Transmission Owners;
- Distributors (LDCs) with a peak load of 25MW or greater; and
- Connected Wholesale Customers with a peak load of 25MW or greater.

Significant Dates

- April 1 - Revised Form 1719 and newly created Form 113 are submitted to the IESO documentation baseline;
- April 21 - UFLS Engagement opportunity for Market Participants to communicate their questions and concerns to the IESO with respect to program revisions;
- June 30 – Survey is issued to applicable Market Participants;
- July 19 – 2022 UFLS Survey date (all measurements included in submissions will be taken on this day, the third Tuesday in July); and
- September 16 – UFLS survey due date

What Do We Hope to Achieve by Revising the Program?

- Reduced compliance and administrative burden on LDCs;
- Clearer guidance on compliance obligations for all applicable Market Participants; and
- Improved reliability risk and compliance posture for the IESO.

Current Program Challenges and their Impact

Challenge	Impact
Ambiguous reporting obligations for LDCs when the Transmitter provides UFLS tripping for their load.	Unnecessary burden on some Market Participants who need not be surveyed.
Disorganized and ambiguous survey form (Form 1719) that is difficult for Market Participants to complete as per the IESO's expectation.	Excessive follow-up by the IESO.
Inadequate controls to provide assurance of minimal overlap between manual and automatic load shedding programs.	Unmitigated reliability risk that the automatic UFLS program may be degraded by manual load shedding actions.

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Proposed Enhancements

Several Ontario LDCs who received the survey in the past have limited visibility and control over their UFLS relays based on legacy agreements with the province's largest Transmitter. As such, **these LDC's will not be required to receive and submit Form 1719 going forward**. The necessary UFLS data will be provided by the Transmitter on their behalf.

The LDCs in question may receive the new Form 113, a much shorter and simpler survey form. Form 113 would allow the IESO to identify overlap between feeders connected to UFLS relays and ones that are included in recipients' Manual Load Shedding plans.

Proposed Enhancements

Form 1719 has been edited to be more organized and clear with its directions. Market Participants should find it easier to determine which parts of the form they are required to complete and how they are expected to do so. To provide additional aid, the IESO will be including a comprehensive Form User Guide alongside the issued survey form.

In addition to the formatting edits made to Form 1719, an additional field has been added to the UFLS Data Table for Market Participants to specify whether or not any UFLS feeders are included in the organization's Manual Load Shedding plans.

Questions?

Thank You

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