

Major Events RESPONSE REPORT



Issue: May 21st to June 1st, 2022 §2.1.4.2 Major Events Response Report

Date Issued:

Prepared for: Publication and Electronic Filing with the Ontario Energy Board (“OEB”)

Summary:

On the morning of Saturday, May 21st, 2022, a historic severe weather system “Derecho” (pronounced “deh-REY-cho”), which is a downburst storm characterized by lines of intense, widespread, and fast-moving systems swept across the Central, Southern and Eastern regions of Ontario with torrential rainfalls, hail, frequent lightning, tornados and wind gusts of up to 130km/h that downed large volume of trees and caused significant damage to both Hydro One’s Transmission and Distribution assets. This Major Event caused significant power outages across the province and impacted a total of ~890,100 (or 60%) Hydro One Customers. Due to the severity and extensive damage to both Transmission and Distribution assets, Hydro One mobilized its crews and activated Emergency Operations Centers (EOC) to restore power for customers over the next 12+ days.

This is the second Major Event in 2022.

A. Prior to the Major Event

1. Did the distributor have any prior warning that the Major Event would occur?
 Yes No

Additional Comments:

The IBM Prediction Software and Weather Monitoring tool did not produce warning about a storm of this size. As such, no early warning was issued, with the exception of a warning from Environment Canada shortly before the storm impacted the system.

2. If the distributor did have prior warning, did the distributor arrange to have extra employees on duty or on standby prior to the Major Event beginning?
 Yes No

Brief description of arrangements, or explain why extra employees were not arranged:

Despite no prior warning of an event of this magnitude, in short order, Hydro One activated the Emergency Operations Center and mobilized crews to respond to this significant event.

3. If the distributor did have prior warning, did the distributor issue any media announcements to the public warning of possible outages resulting from the pending Major Event?
 Yes No

4. Did the distributor train its staff on the response plans to prepare for this type of Major Event?
 Yes No

B. During the Major Event

1. Please identify the main contributing Cause of the Major Event as per the table in section 2.1.4.2.5 of the Electricity Reporting and Record Keeping Requirements.
 Loss of Supply
 Lightning
 Adverse Weather-Wind
 Adverse Weather-Snow
 Adverse Weather-Freezing rain/Ice storm
 Adverse Environment-Fire
 Adverse Environment-Flooding
 Others

Please provide a brief description of the event (i.e. what happened?). If selected "Other", please explain: _____

The main contributing causes of the Major Event were equipment failures and tree contacts.

2. Was the IEEE Standard 1366 used to derive the threshold for the Major Event?
 Yes, used IEEE Standard 1366*
 No, used IEEE Standard 1366 2-day rolling average
 No, used fixed percentage (i.e., 10% of customers affected)
*The OEB preferred option

3. When did the Major Event begin (date and time)?
The level 2 emergency was declared at 3:07 PM on 5/21/2022.

4. Did the distributor issue any information about this Major Event, such as estimated times of restoration, to the public during the Major Event?

Yes No

If yes, please provide a brief description of the information. If no, please explain:

During this event, restoration priority was provided to the crews. Once damage was assessed, each incident ticket was updated to include cause code and Estimated Time Restoration (ETR). For those incidents where crews were not available, Damage Assessors were used to assess the damage and provide updates. All ETR updates could be viewed by our customers on the Hydro One Outage Map and were also available on our automatic notification system via the Interactive Voice Response (IVR) system.

5. How many customers were interrupted during the Major Event?
Approximately 890,100 customers.¹

What percentage of the distributor's total customer base did the interrupted customers represent?

Approximately 60%

6. How many hours did it take to restore 90% of the customers who were interrupted?

It took 250 hours and 46 minutes from the onset of the Major Event.

7. Were there any outages associated with Loss of Supply during the Major Event?

Yes No

If yes, please report on the duration and frequency of the Loss of Supply outages: _____

PRIMARY CAUSE	NUM INT	CUST INT	CUST HRS INT
Loss of Supply	26	110,131	667,135 hours

8. In responding to the Major Event, did the distributor utilize assistance through a third party mutual assistance agreement with other utilities?

Yes

No

Do not have third party mutual assistance agreements with other utilities

If yes, please provide the name of the utilities who provided the assistance?

Aecon/Ainsworth	Bird Electric	Bluewater Power
Black & Macdonald	Devries Electric Inc.	Dundas Power Line
Durham High Voltage	ERTH Power	EPCOR Utilities Inc.

¹ Including loss of supply events and impacted acquired local distribution company customers

Enwin Utilities	EPTCON	Forbes Contracting
Festival Hydro	Fortis Ontario Group of Companies	Holland Power Services
Hyline Utility	Iconic Power Systems Inc.	K&M Contracting Inc.
K-Line Maintenance & Construction Ltd.	K –Line New Brunswick	K Reid Inc.
Lakeland Power Distribution Ltd.	Niagara Peninsula Energy Inc.	North Bay Hydro
Renfrew Hydro Inc.	Spark Electric Spark Electric (US Contractor)	Sudbury Hydro
T&T Line Construction	Tillsonburg Hydro Inc.	Tri-Line Electric Ltd

9. Did the distributor run out of any needed equipment or materials during the Major Event?
- Yes No
- If yes, please describe the shortages: _____

C. After the Major Event

1. What actions, if any, will be taken to be prepared for, or mitigate, such Major Events in the future?
- No further action is required at this time
- Additional staff training
- Process improvements
- System upgrades
- Other

Additional Comments:

A storm debrief meeting was scheduled and held on June 13th, 2022 to identify lessons learned and develop recommendations.