



Major Event Response Reporting – April 15, 2018



1 PRIORITY TO THE MAJOR EVENT

1.0 Did the distributor have any prior warning that the Major Event would occur?

Yes. From April 11, 2018 to April 15, 2018, Toronto Hydro received various weather statements and notifications of a potentially extreme weather event from the Provincial Emergency Operations Centre (PEOC), Environment Canada, and the Independent Electricity System Operator (IESO).

1.1 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? If so, please give a brief description of arrangements.

Yes. Toronto Hydro had additional field and operations resources on shift at the predicted time of the event. The Toronto Hydro Incident Management Team was activated prior to the event and regular calls were held throughout the weekend of April 14 and April 15.

Toronto Hydro has a standby schedule requiring senior management, supervisory and operational staff to be available on a 24/7 basis to support with event restorations. Due to the expected potential severity of the event, Toronto Hydro also engaged additional crews and contractors to be available on standby.

1.2 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? If so, through what channels?

Yes. The public was advised of possible outages through Twitter, media interviews and communications, and email bulletins to City of Toronto Councillors and staff.



1.3 Did the distributor train its staff on the response plans for a Major Event? If so, please give a brief description of the training process.

Yes. Toronto Hydro has an established training program for the management of major events with relevant training being executed throughout the year. Toronto Hydro has adopted the Ontario Incident Management System, the provincial recommended practice for incident management, which forms the basis for the Toronto Hydro's training curriculum for emergency management. Toronto Hydro's command and general staff are trained on incident management system (IMS 100, IMS 200 and IMS 300) in addition to exercising emergency plans.

1.4 Did the distributor have third party mutual assistance agreements in place prior to the Major Event? If so, who were the third parties (i.e., other distributors, private contractors)?

Yes. Toronto Hydro is an active and participating member of two mutual assistance groups: the Canadian Mutual Assistance Group (CANMAG) and the North Atlantic Mutual Assistance Group (NAMAG).



2 DURING THE MAJOR EVENT

2.0 Please explain why this event was considered by the distributor to be a Major Event?

The weather event of April 15 was consistent with the OEB definition of “Major Event” (as set out in Section 2.1.4.2 of OEB’s Electricity Reporting and Record Keeping Requirements) as an event that “is beyond the control of the distributor and is unforeseeable; unpredictable; unpreventable; or unavoidable”.

Toronto Hydro received a significantly higher volume of calls from the public relative to a typical day. The impact of the weather event on the distribution system was unavoidable and practically unpredictable from a planning perspective.

The reliability impact of the weather event met the Institute of Electrical and Electronics Engineers (IEEE) Standard 1366 definition of a Major Event Day (MED) as “a day in which the daily System Average Interruption Duration Index (SAIDI) exceeds a Major Event Day threshold value”.

SAIDI for the weather event was 12.03, exceeding Toronto Hydro’s threshold of 7.18.

2.1 Was the IEEE Standard 1366 used to identify the scope of the Major Event? If not, why not?

Yes. The IEEE Standard 1366 was used to identify the scope of the Major Event.

2.2 Please identify the Cause of Interruption for the Major Event as per the table in section 2.1.4.2.5.

The cause of interruption for the Major Event on April 15, was Adverse Weather (i.e., cause code 6 in Table 2.1.4.2.5 in OEB’s Electricity Reporting and Record Keeping Requirements requirements). More specifically, high winds, freezing rain and ice accumulation.



2.3 Were there any declarations by government authorities, regulators or the grid operator of an emergency state of operation in relation to the Major Event?

Yes. The IESO issued an Extreme Conditions Alert, at 09:28 hrs on April 14 which remained in effect until April 16.

2.4 When did the Major Event begin (date and time)?

The Major Event began on April 15, 2018 at approximately 14:00 hrs.

2.5 What percentage of on-call distributor staff was available at the start of the Major Event and utilized during the Major Event?

100% of on-call distributor staff were available and utilized at the start of the Major Event.

2.6 Did the distributor issue any estimated times of restoration (ETR) to the public during the Major Event? If so, through what channels?

Yes. Toronto Hydro issued ETRs to the public via:

1. General Media Updates (i.e., Toronto Hydro's dedicated phone line for all media enquiries).
2. Social Media (i.e., Twitter).
3. Email updates to the Mayor's Office.
4. Toronto Hydro's Interactive Voice Response (IVR) phone system.
5. Updates to the outage map on Toronto Hydro's website.

2.7 If the distributor did issue ETRs, at what date and time did the distributor issue its first ETR to the public?

The first ETR was communicated to the public on April 17 at 08:30 hrs.



2.8 Did the distributor issue any updated ETRs to the public? If so, how many and at what dates and times were they issued?

Yes. Toronto Hydro's website (outage map) is automatically updated every 15 minutes with the most recent available event specific information and the IVR was updated on an hourly basis.

2.9 Did the distributor inform customers about the options for contacting the distributor to receive more details about outage/restoration efforts? If so, please describe how this was achieved.

Yes. Toronto Hydro updated customers through the media on a regular basis. During these updates the public were provided with a phone number to report outages and receive the latest information via the IVR system. Through media updates, customers were also reminded about Toronto Hydro's online outage map on the Toronto Hydro website. Toronto Hydro also shared call centre contact information via Twitter.



2.10 Did the distributor issue press releases, hold press conferences or send information to customers through social media notifications? If so, how many times did the distributor issue press releases, hold press conferences or send information to customers through social media notifications? What was the general content of this information?

Toronto Hydro did not hold any press conferences during the event. However, the organization did issue a press release, provided media updates, delivered media interviews, communicated with the Mayor's Office, and provided updates via Twitter. The general content of the updates included public safety information, crew updates and ETRs (where possible), contact information, and information about the restoration process.

Throughout the event there were:

- 1 Press Release
- 55 media interviews conducted
- 54 tweets were posted on Twitter; including both outage updates and safety messaging
- 15 Media Bulletins emailed to keep media updated on the status
- 5 email bulletins were sent to City officials and Councillors

2.11 What percentage of customer calls were dealt with by the distributor's IVR system (if available) versus a live representative?

65% of customer calls were dealt with by the distributor's IVR system versus a live representative.

2.12 Did the distributor provide information about the Major Event on its website? If so, how many times during the Major Event was the website updated?

Yes. The outage map on Toronto Hydro's website was updated every 15 minutes throughout the event.



2.13 Was there any point in time when the website was inaccessible? If so, what percentage of the total outage time was the website inaccessible?

There was no point in time when Toronto Hydro's website was inaccessible.

2.14 How many customers were interrupted during the Major Event? What percentage of the distributor's total customer base did the interrupted customers represent?

83,125 customers were affected at some point during the Major Event. This represents approximately 11% of Toronto Hydro's total customer base.

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

It took approximately 12.5 hours to restore 90% of the affected customers.

2.16 Was any distributed generation used to supply load during the Major Event?

No. Distributed generation was not utilized.

2.17 Were there any outages associated with Loss of Supply during the Major Event? If so, please report on the duration and frequency of Loss of Supply outages.

There were no outages associated with Loss of Supply during the Major Event.

2.18 In responding to the Major Event, did the distributor utilize assistance through a third party mutual assistance agreement?

No.



2.19 Did the distributor run out of any needed equipment or materials during the Major Event? If so, please describe the shortages.

Toronto Hydro did not run out of any needed equipment or materials during the Major Event.

3 AFTER THE MAJOR EVENT

3.0 What steps, if any, are being taken to be prepared for or mitigate such Major Events in the future (i.e., staff training, process improvements, system upgrades)?

Through its Disaster Preparedness Management (DPM) program, Toronto Hydro develops, implements and sustains a state of emergency readiness and response proficiency. Toronto Hydro is also an active and participating member of two mutual assistance groups: the Canadian Mutual Assistance Group (CANMAG) and the North Atlantic Mutual Assistance Group (NAMAG).

In addition, Toronto Hydro routinely reviews design and construction standards and practices that support distribution system resiliency to help mitigate risks associated with Major Events.

3.1 What lessons did the distributor learn in responding to the Major Event that will be useful in responding to the next Major Event?

The Major Event reinforced the importance of Toronto Hydro's training and preparedness for Major Events.

3.2 Did the distributor survey its customers after the Major Event to determine the customers' opinions of how effective the distributor was in responding to the Major Event? If so, please describe the results.

Toronto Hydro did not survey its customers after the Major Event.