

Major Weather Report: Burlington Hydro October 2, 2019

RRR 2.1.4.2.10 Major Event Response Reporting

When a distributor determines an outage was caused by a Major Event, it shall file a report with the OEB that outlines the distributor's response to the Major Event, including answers to all of the questions set out below. Distributor responses are identified in the text boxes below.

A distributor shall file this report with the OEB within 60 days of the end of the Major Event unless there are exceptional circumstances, in which case the report can be filed within 90 days of the end of the Major Event.

Prior to the Major Event

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

There was a minor alert from Environment Canada of mild thunderstorms with the potential to cause limited power outages across Southern Ontario. The previous day's storm had weakened trees that subsequently fell.

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

Existing Burlington Hydro on call crew was available. Additional Burlington Hydro crews and third party contractors (K-Line and Beswick) were notified and used in restoration activities after the severity of outages was realized.

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? If so, through what channels?

No media announcements were issued. This was not expected to be a major event. Outages were mainly due to weakened trees as a result of the previous day's storm. Burlington Hydro continued to issue updates to customers via Twitter.

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4. 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. Burlington Hydro works safely to restore power to the largest areas first and then works its way down to single outages. Fire, police and wires down take priority.

5. 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, Burlington Hydro has mutual aid agreements with 12 other LDCs as part of the Grid Smart City Cooperative, agreements with Hydro One and an alliance agreement with a third-party contractor.

During the Major Event

1. Please explain why this event was considered by the distributor to be a Major Event.

A total of 7,669 customers were affected by the outage representing 11% of Burlington Hydro's customers. The event was beyond Burlington Hydro's control and exceeded Burlington Hydro's daily SAIDI threshold used to identify a Major Event.

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

Yes. Burlington Hydro used the IEEE Standard 1366 used to identify the scope of the Major Event.

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

3. Tree Contacts - Customer interruptions caused by faults resulting from tree contact with energized circuits.

6. Adverse Weather - Customer interruptions resulting from rain, ice storms, snow, winds, extreme temperatures, freezing rain, frost, or other extreme weather conditions.

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

No.

5. When did the Major Event begin?

Date: October 2, 2019

Time (For Example HH:MM AM): 14:04 PM

6. 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 staff were available at the start of the Major Event and utilized during the Major Event.

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

Yes, via Twitter (see attached Twitter record) and on the website outage map. ETRs would have also been communicated to customers calling in by telephone.

8. 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 issued at 8:55 am on Burlington Hydro's outage map. 8 ETRs were issued on Twitter in addition to those reported on the website outage map.

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

Yes, Burlington Hydro issued two updated ETRs at 5 pm and 6 pm.

10. 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. Numbers to call and outage protocols are located on Burlington Hydro's website via a direct Outage Portal – links to this information were also included in tweets.

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11. Did the distributor issue press releases, hold press conferences or send information to customers through social media notification? If so, how many times and what was the general content?

No press releases were issued. 15 tweets were issued to update customers on restoration efforts (see attached Twitter record).

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

Burlington Hydro received 178 customer calls related to outages. 43% of the outage calls were dealt with through the IVR and 55% of the calls were transferred to a live representative.

13. 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?

1. The Outage Map on the BHI website included information on the cause / # of customers affected / ETR / and updates as required. Burlington Hydro did not track the number of times the website was updated.
2. Customers could also access a live twitter feed from the homepage of the website's outage portal. Similar information was conveyed directly via Twitter.

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

No. The Outage Map on the BHI website was always accessible. However, the Outage Map on the website was not updated for approximately 60% of the outage time (first 3 hours of event) due to volume of calls and outages overloading Burlington Hydro's Outage Management System.

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

A total of 7,669 customers were affected by the outage representing 11% of Burlington Hydro's customer base.

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

It took 5 hours and 34 minutes to restore 90% of the customers affected. Customers were restored at 20:38.

17. Was any distributed generation used to supply load during the Major Event? (Yes/No)

No

18. 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.

No.

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

Yes. Contractors K-Line and Beswick Tree Service were used.

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

No.

After the Major Event

1. 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)?

Burlington Hydro is reviewing the hardware which supports its Outage Management System to mitigate technical issues in the future. This will ensure the public is notified in a timely manner on outages and ETRs.

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

Operational issues with Burlington Hydro's Outage Management System and Outage Map can significantly impact the ability to update customers in a timely fashion. Burlington Hydro will investigate improvements to its outage map.

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3. 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.

No. Incoming questions/accolades/complaints during the outage on social media or via customer service were handled at the time.

Additional Information


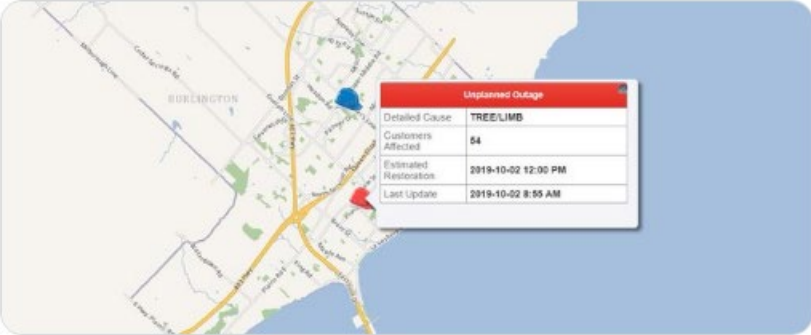
In addition to responding the questions above, distributors may provide supplemental information to the OEB in an attachment.

Attachment provided (Yes/No): Yes – Twitter record

Twitter Activity – Major Outage – October 2, 2019 (from last to first tweet)

 Burlington Hydro @BurlingtonHydro · Oct 2 If you are still experiencing a power outage please call 1-877-310-4937 to report it.	1 1 1
 Burlington Hydro @BurlingtonHydro · Oct 2 Thank you again for your patience. Power has now been restored for the downtown power outage!	53 5 37
 Burlington Hydro @BurlingtonHydro · Oct 2 We apologize for the delay and ETR estimation for the down town outage. The crews have identified the problem and they are working as quickly as possible keeping safe at the same time. If all goes well power should be back on shortly.	13 12
 Burlington Hydro @BurlingtonHydro · Oct 2 Correction. ETR is 7:20. Thank you.	28 16
 Burlington Hydro @BurlingtonHydro · Oct 2 The ETR is expected very shortly for the downtown outage. The problem has been fixed and we are switching power on now. Process takes about 20-30 minutes. Thanks for your patience.	9 12
 Burlington Hydro @BurlingtonHydro · Oct 2 The ETR has been revised for the downtown outage. For those customers affected, power is expected to be restored by 6 pm. Thank you for your ongoing patience. For the latest information please refer to our outage map: outagemaps.burlingtonhydro.com/OutageMap/Outa...	9 1 3
 Burlington Hydro @BurlingtonHydro · Oct 2 Power outage east of Guelph Line and south of Prospect. Updated customer count is 1204. ETR is 5:40 pm. outagemaps.burlingtonhydro.com/OutageMap/Outa...	16 4 5
 Burlington Hydro @BurlingtonHydro · Oct 2 Downtown outage affecting customers east of Guelph Line and south of Prospect, a blown transformer has been confirmed as the cause of the outage. ETR is 4:45 pm. Crews are working as quickly and as safely as possible to restore power. Thank you for your patience.	1 2 4

-  **Burlington Hydro** @BurlingtonHydro · Oct 2
- A second outage in the downtown core is east of Guelph Line and south of Prospect. Crews have been dispatched to assess the damage - it's suspected to be a blown transformer. Approximately 600 customers in the area are affected by the outage. ETR to follow shortly.
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-  **Burlington Hydro** @BurlingtonHydro · Oct 2
- Two outages in progress in downtown. The first, west of Guelph Ln, south of Prospect, has crews on site. As reported earlier a tree came down on a primary powerline & damaged equipment. ETR is expected over the next hour or so - 4:30. Approximately 600 customers affected.
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-  **Burlington Hydro** @BurlingtonHydro · Oct 2
- A tree has brought down powerlines and damaged equipment, outage affects approx 600 customers in an area bounded by Drury Lane, north of New to Guelph Ln thru portion of Fairview/Maple in south central Burlington. Crews dispatched and assessing the damage. ETR is currently 3:45.
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-  **Burlington Hydro** @BurlingtonHydro · Oct 2
- Power has been fully restored to 356 customers affected by the outage in Birdland/Aldershot.
- 19 5

- Burlington Hydro** @BurlingtonHydro · Oct 2
- 356 customers in the Birdland/Aldershot neighbourhood are currently without power. A tree branch has fallen on powerlines in the area and caught on fire. Crews have been dispatched. ETR is 1:15 pm.
outagemaps.burlingtonhydro.com/OutageMap/Outa...
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- Power has been restored to the 54 customers affected by the outage in the Barclay/Prospect neighbourhood.
- A tree limb has come down on powerlines in the Barclay/Prospect neighbourhood. ETR is approximately 12 noon. Follow on our outage map at: outagemaps.burlingtonhydro.com/OutageMap/Outa...
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- | Unplanned Outage | |
|-----------------------|---------------------|
| Detailed Cause | TREE/LMB |
| Customers Affected | 54 |
| Estimated Restoration | 2019-10-02 12:00 PM |
| Last Update | 2019-10-02 8:55 AM |