

## Major Weather Report: Burlington Hydro October 1, 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 limited warning from Environment Canada of strong winds and thunderstorms with the potential to cause widespread power outages across Southern Ontario. Thunderstorm and winds were more serious than forecasted.

##### 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 the storm 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?

Yes, Burlington Hydro issued 2 warnings of approaching severe weather on Twitter 3 hrs before the storm hit (see attached Twitter record).

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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 21,260 customers were affected by the outage representing 31% 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.

2. Loss of Supply - Customer interruptions due to problems associated with assets owned and/or operated by another party, and/or in the bulk electricity supply system. For this purpose, the bulk electricity supply system is distinguished from the distributor's system based on ownership demarcation.

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 1, 2019

**Time (For Example HH:MM AM):** 16:17 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?**

Although multiple updates were issued (via Twitter), it was difficult to determine specific ETRs. ETRs on the website outage map had to be updated on numerous occasions. In addition, Burlington Hydro was dependent on Hydro One to make repairs to the Cumberland Transformer Station, servicing the downtown core, and delays occurred as crews waited for Hydro One to arrive and make necessary repairs. Delays to repairs were reported via twitter and updated on the outage map.

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

See response to #7

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

See response to #7

**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. The latest outage information was communicated in real time through each of these options.

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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. 17 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 2,789 customer calls related to outages. 44% of the outage calls were dealt with through the IVR and 45% 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 75% of the outage time (first seven 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 21,260 customers were affected by the outage representing 31% of Burlington Hydro's customer base.

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

It took 9 hours and 33 minutes to restore 90% of the customers affected. Customers were restored at 1:50am on October 2nd.

**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.**

Yes, there was Loss of Supply from Hydro One to Burlington Hydro's customers in Northwest Burlington (Milborough Line south of Britannia Rd). A total of 202 customers downstream of fuse F4363 were interrupted from 17:28 to 20:50 (202 minutes).

**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 1, 2019 (from last to first tweet)




**Burlington Hydro** @BurlingtonHydro · 11h ▼

In addition to the mid-town outage, an additional 150 customers remain without power due to storm damage. Please refer to our outage map for more information. If you are not represented on the map please call 1-877-310-4937.

[outagemaps.burlingtonhydro.com/OutageMap/Outa...](https://outagemaps.burlingtonhydro.com/OutageMap/Outa...)


9 4 12



**Burlington Hydro** @BurlingtonHydro · 11h ▼

We apologize for the earlier terminology choice and subsequent confusion - picking up customers refers to restoring power to those customers.


2 14



**Burlington Hydro** @BurlingtonHydro · 11h ▼

Ongoing issues related to bringing Cumberland Station back online continue to impede our progress to restore power. Our current ETR is expected between 11 pm & 1 am for those customers affected in midtown.

10 1 5

-  **Burlington Hydro** @BurlingtonHydro · 11h ▼  
Outage Update: Hydro One repairs at the Cumberland Transformer Station, in addition to a tree that has fallen on a primary line in the area has proved to complicate restoration efforts this evening. We are now beginning to pick up customers affected. A further update to follow.  
16 6
-  **Burlington Hydro** @BurlingtonHydro · 13h ▼  
A tree is down on a primary line on Walkers Line, N of Upper Middle. Once cleared we hope to re-connect the feeder from Cumberland Transformer Station. This will restore power to affected customers in the area .  
51 6 28
-  **Burlington Hydro** @BurlingtonHydro · 13h ▼  
Hydro one Cumberland transformer station update - customers south of the qew now have power. We are now focussed on our customers that were affected north of qew to Dundas between Walkers and Guelph line.  
23 4 26
-  **Burlington Hydro** @BurlingtonHydro · 13h ▼  
We thank you for your patience while we work with hydro one in restoring this outage. Updates to follow.  
13 27
-  **Burlington Hydro** @BurlingtonHydro · 13h ▼  
The outage problem from the hydro one Cumberland transformer station affects 8200 customers. It covers a widespread area of Burlington from south of the qew thru to the north end of Dundas between walkers and Guelph line  
8 4 17
-  **Burlington Hydro** @BurlingtonHydro · 13h ▼  
Hydro one crews are now on site at the Cumberland Transformer Station. Once issues at the station are rectified customers in the Dundas to Upper Middle corridor will have power restored.  
25 2 26
-  **Burlington Hydro** @BurlingtonHydro · 15h ▼  
We are aware of outages in Tyandaga and Elizabeth Gardens. Extra crews are in the field working to restore power to all neighbourhoods affected by the storm. Thanking customers for their patience as we respond to the situation.  
34 5 19



**Burlington Hydro** @BurlingtonHydro · 15h

There have been issues at our Cumberland Transformer station due to the storm. A number of breakers have been tripped. We are working with Hydro One to address the issues and restore power to affected customers as quickly as possible.

15 8 22

You Retweeted



**Andrew Collins** @ACollinsPhoto · 16h

.@cityburlington, @BurlingtonFire & @BurlingtonHydro crews continue to be inundated with calls for service for downed trees and hydro wires. Numerous streets blocked & several large limbs have struck homes and vehicles #BurlION #ONStorm



3 13 17

[Show this thread](#)



**Burlington Hydro** @BurlingtonHydro · 16h

We are working as quickly and as safely as possible to identify and restore power in areas of mid and north Burlington between Dundas and Upper Middle, Brant to Guelph Ln & Headon Rd. We appreciate your patience. Updates to follow as our crews report.

40 13 38



**Burlington Hydro** @BurlingtonHydro · 16h

There are 4 outages areas in the city due to the severe storm that is passing through, including areas in the downtown and in mid to north sections of the city. Waiting for field confirmation from our trouble crews. Updates to follow.

22 11 34



**Burlington Hydro** @BurlingtonHydro · 17h

Due to the severe weather, power is out in a number of pockets in Burlington, including sections of mid to north parts of the City. No ETR at this time. Updates to follow.

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**Burlington Hydro** @BurlingtonHydro · 20h

Severe Thunderstorm Watch warns of damaging winds and torrential rain late this afternoon for southern Ontario. Stay safe and stay back at least 10 metres from any downed powerlines. [burlingtonhydro.com/outageportal.h...](http://burlingtonhydro.com/outageportal.h...)

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**Burlington Hydro** @BurlingtonHydro · 22h

Risk of severe thunderstorms in the Burlington area, late this afternoon, early this evening. Be prepared for the possibility of power outages: [burlingtonhydro.com/outageportal.h...](http://burlingtonhydro.com/outageportal.h...)

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