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.

The 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. The distributor shall also post this report on its website at the same time it is filed with the OEB.

Major Event Date **May 4th, 2018 Wind Storm**

Prior to the Major Event

1. *Did the distributor have any prior warning that the Major Event would occur?*

   Yes, Environment Canada issued a wind warning and severe thunderstorm watch the morning of May 4th.

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.*

   Regular on-call operational resources were in place prior to the event. This included Distribution department employees (2 Powerline Technician's and 1 Foreman), 24/7 Control Room and 1 Supervisory/Emergency Management person. The event occurred toward the end of regular office hours, so Kitchener-Wilmot Hydro Inc.'s (KWHI) call centre was already staffed and personnel stayed afterhours to maintain the call centre response through the 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? If so, through what channels*

   KWHI began issuing storm-readiness tweets on Twitter in advance of the storm. Twitter was chosen as the medium because local media follow KWHI and consider information provided on the channel as official statement without the need for a media release.

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.*

   KWHI Operations staff are provided job-related training and are on-call or on standby as part of their regular employment. This ensures that staff are available 24/7 and are prepared to respond quickly to address outages of varying magnitude.

   Applicable staff are trained on the Outage Management System (OMS), customer call handling and routine website and social media updating. Outage response processes are in

place to notify Senior Management and Communications to ensure escalation of response and ensure information is made available to customers calling in, and through social media (Twitter) and a website outage map.

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 – KWHI is one of nineteen Local Distribution Companies (LDC) who participate in the South Central Ontario LDC Mutual Assistance Plan, through our membership in the GridSmartCity Cooperative. KWHI also has the ability to call upon Distribution and Forestry contractors as necessary depending on the type of event.

During the Major Event

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

   The wind storm of May 4th meets the definition of a Major Event as defined by the Ontario Energy Board (OEB) in Section 2.1.4.2 of the OEB's Electricity Reporting and Filing Requirements. That is, the event is "beyond the control of the distributor and is unforeseeable; unpredictable; unpreventable; or unavoidable."

   The impact to the distribution system as a result of the storm was unavoidable. Wind speed increased from 57 km/h up to 122 km/h resulting in a number of fallen trees and broken limbs which took down power lines and caused widespread power outages.

   Using the Institute of Electrical and Electronics Engineers (IEEE) Standard 1366, the calculated KWHI threshold for a major event (TMED) for 2018 is 5.36 minutes/customer. The impact of this event was 33.16 minutes/customer which exceeds the TMED. The primary cause for the outages during the day was the adverse weather. Approximately 97% of outage time on May 4th was caused by adverse weather.

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

   Yes

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

   Cause Code 6 – Adverse Weather

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 and time)?*

   The first feeder outage caused by the wind storm on May 4th occurred at 2:53 PM. The number of customers impacted by outages continued to increase until approximately 8:00 PM when the winds began to diminish.

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

   All on-call Distribution department staff were available and responded to the event. In addition, approximately 50% of the remaining Distribution department staff responded to emergency response call-ins.

Call centre staff continued to work afterhours until call volumes decreased in the early morning hours. It was necessary to re-staff the call centre the following day for a period of time as call volumes increased during the daylight hours.

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

   Yes, when available, ETRs were issued on KWHI's outage map and shared publicly using Twitter. In addition, customers who called in to the call centre were informed of ETRs.

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

   ETRs are issued as soon they are available and posted real-time on our outage map. Customers who follow KWHI on Twitter were referred to the outage map and ETRs were provided directly to customers who enquired about a specific area.

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

   Crews were able to restore power close to or within the original ETRs issued. There were no updates to the ETRs issued.

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, tweets regularly provided customers with links to the outage map for the most current updates about restoration efforts. Communications staff were also responding real time to any tweets received during the event, providing more detail where requested. Call centre phone calls were directed to KWHI's outage map and Twitter for further information.

11. *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?*

    No press releases or press conferences were held. KWHI sent approximately 80 tweets to customers during the event, publicly and directly, providing updates on the status of restoration, cause of the outages, ETRs, safety messages, and where they could find updated information and/or expect updates.

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

    KWHI does not have an IVR system. Calls were handled by KWHI Customer Service Representative (CSR).

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?*

    Yes, KWHI's outage map is available on its website and provides real-time updates. In addition, a banner alert was placed on KWHI's website to notify customers of the event.

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?*

    At no time during the event was KWHI's website inaccessible.

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

    14,804 customers were affected by this event. This represents 15% of the customer base for KWHI.

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

    The power was restored to 90% of the customers in approximately 7 hours.

17. *Was any distributed generation used to supply load during the Major Event?*

    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.*

    There were no Loss of Supply outages associated with this event.

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

    Additional resources through our Mutual Assistance Plan or by Contractor were not required for this event.

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

    No, there was no shortage of equipment or materials during this event.

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)?*

   This was the second Major Event in 2018 for KWHI and the company's response to the event was timely and successful. However, the organization continues to explore options to improve response to future Major Events. The following steps are being taken:

   - Commenced discussion to design "door hangers" with instruction to customers, who are not at home, about the process required for making repairs to customer-owned equipment before their supply can be re-connected.
   - Commenced investigation into having KWHI's CSRs available throughout the entire duration of a storm (including overnight) or utilizing a third party service provider
   - Continue with investigation of an automated crew call out application to improve the process of crew call out.
   - Continue to train CSRs in use of the OMS for logging of customer calls.
   - Continue to have debriefing sessions with relevant staff members after each storm and/or major event.
   - Investigating process changes to communication practices during Major Events.

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

   The following are the lessons learned from responding to this event include:

   - Customers are not aware of their obligation to repair their own equipment if damaged during a storm.
   - The manual process of calling out crews still takes a long time. That is, having to dial at least two telephone numbers for each crew member and wait for a response.

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