Major Event Report

Waterloo North Hydro Inc.

May 14, 2022

Lightning

Filed: May 25, 2022

Contents

Major Event Description

A Lightning Storm on the north side of Waterloo North Hydro's caused outages throughout Woolwich Township. There were 3,384 Customer Interruptions for 254,301 Customer Minutes of Interruption. This event is classified as a Major Event using the IEEE 1366 2.5 Beta method.

Prior to the Major Event

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

Yes or No?

Response: No.

Waterloo North Hydro (WNH) has set up an automated email to be generated as soon as The Weather Network or Environment Canada issues weather alerts, warnings, or watches affecting any part of its service territory. If an alert is issued, WNH will begin posting outage warnings and safety alerts through social media and prepare staff for the possibility of an outage occurring. In this case, there were no weather warnings issued, so the utility had no prior warning that inclement weather or other factors could cause a major outage.

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 or No?

Response: N/A

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 or No?

Response: N/A - As WNH did not have prior warning of this outage, a media announcement or release was not issued.

4. **Did the distributor train its staff on the response plans for a Major Event?**

Yes or No?

Response: Yes

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.**

   Response: Lightning

Please provide a brief description of the event (i.e. what happened?). if selected, "other" please explain.

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

   Response: Yes.

3. **When did the Major Event begin:**

   Date: May 14, 2022
   Time (For Example HH:MM AM): 18:24 PM - EST

4. **Did the distributor issue any information about this major event, such as estimated times of restoration (ETR) to the public during the Major Event?**

   Yes or no?

   Response: Yes.

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

   Response: Yes, WNH's customer outage map displayed the number of customers initially out of power, the geographical area of the outage, the cause, and the customers remaining out of power. Once available, WNH also included ETRs on the outage map.

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

   Response: See the chart below:

Cause Code	Customer Affected	Total Customers	Percentage	SAIFI
10 - Major Event	3,384	58,837	5.75%	0.0575

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

   Response: WNH restored 90% of interrupted customers within 2.0 hours.

7. **Were there any outages associated with loss of supply during the major event?**

   Yes or No?

   Response: No

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

   Yes or No?

   Response: No

9. **Did the distributor run out of any needed equipment or materials during the Major Event?**

   Yes or No?

   Response: 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)?**

   Response: No further action is required at this time.

   Additional Comments: WNH has implemented several grid modernization technologies and will continue to do so to increase system reliability and operational efficiencies. An example is Survalent's Fault Location, Isolation, and Service Restoration (FLISR) software application which combines SCADA, OMS, and automated switching devices to re-route power in the event of a fault. This enables power to be efficiently restored to as many customers as possible via an automatic process. These technologies provide automatic self-healing on the portions of the system unaffected by the fault, ultimately improving restoration times.

   WNH's staff is trained to be on alert for emergencies and major events. The utility also regularly shares outage safety tips, information on where to find outage information and emergency preparedness information with customers through its website and social media accounts. This helps to educate customers about outages and restoration efforts before any major event occurs.