

## **Canadian Niagara Power Inc. (CNPI) – Major Event Report**

**(February 23, 2023)**

### **Introduction**

On February 23, 2023, CNPI's service territory experienced a severe weather event causing 11,968 customer interruptions. This number of outages represents 39% of CNPI's customer base. On this day southern Ontario experienced freezing rain followed by high winds, with gusts up to 66 kmph. The ice accumulation on CNPI's infrastructure reached 12 to 25mm (about 0.5-1 inch), resulting in a complex service restoration and damage to assets.

### **Prior to the Major Event**

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

Yes                       No

Additional Comments:

On Wednesday, February 22nd, 2023, Environment Canada issued freezing rain warnings for Southern Niagara, indicating that freezing rain leading to build-up and high winds were expected on Wednesday February 22<sup>nd</sup> and Thursday February 23<sup>rd</sup>. CNPI's Regional Manager held meetings with the Operations Department on Tuesday February 21<sup>st</sup> and Wednesday February 22<sup>nd</sup> regarding the potential freezing rain and wind speeds prior to the storm. Appendix A depicts the Special Weather Statement from Environment Canada and the High Wind Watch from the National Weather Service.

**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                       No

All arrangements for standby were made before the storm began. CNPI had a normal complement on-call during the daytime on February 23<sup>rd</sup>, 2023, with the ability to call in additional crews if required.

CNPI hired Hyline Utility to provide two crews on standby ready to work from Tuesday February 21<sup>st</sup> to Wednesday February 22<sup>nd</sup>, but they were not utilized.

**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                       No

Starting Tuesday February 21<sup>st</sup>, 2023, two separate social media posts were made to CNPI customers referencing Environment Canada's weather alert information.

*Did the distributor train its staff on the response plans for this type of a Major Event?*

- Yes                       No

CNPI has a Business Continuity Plan that is periodically updated and reviewed at the management level. The plan is designed to assist in the response to natural disasters, accidents, major outages, environmental disasters, municipal emergencies and cyber-attacks. This plan is available to all staff both via CNPI's corporate intranet, and hard copy. For major outages, this plan covers responsibilities and procedures for all outage restoration and communication efforts, consolidates contact information for internal staff and key external agencies.

In addition to the Business Continuity Plan, CNPI also has an internal procedures document that outlines roles and responsibilities during a major event. This document is a living document that focuses on direct current assignments for roles and responsibilities during Major Outages that the management team can follow on a daily basis during a major outage.

***During the Major Event***

*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.*

- Loss of Supply
- Lightning
- Adverse Weather-Wind
- Adverse Weather-Snow
- Adverse Weather-Freezing rain/Ice storm
- Adverse Environment-Fire
- Adverse Environment-Flooding
- Other

*Please provide a brief description of the event (i.e. what happened?).*

On February 22<sup>nd</sup> and 23<sup>rd</sup>, a freezing rain and wind storm hit the CNPI service territory. Wind gusts of up to 66 kmph caused trees covered with ice to fall onto and damage CNPI line infrastructure, which resulted in outages. The ice accumulation on CNPI's equipment and lines were over 25mm thick in our southern service territory and 12mm thick in our northern service territory. The broken trees, conductors, and other equipment delayed the power restoration significantly.

*If selected "Other", please explain:*

Was the IEEE Standard 1366 used to derive the threshold of the Major Event?

- Yes, used IEEE Standard 1366\*
- No, used IEEE Standard 1366 2-day rolling average
- No, used fixed percentage (i.e., 10% of customers affected)

\*The OEB preferred option

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

February 22, 2023 – The first outage started to happen at approximately 23:20 PM DST, followed by numerous interruptions after.

Did the distributor issue any information about this Major Event, such as estimated times of restoration, to the public during the Major Event?

- Yes                       No

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

Between February 23<sup>rd</sup> and 24<sup>th</sup>, CNPI issued approximately 8 social media posts denoting the approximate number of customers without power and the general areas affected by the outages. ETRs were not provided due to the extent of infrastructure damage which made estimating difficult.

How many customers were interrupted during the Major Event?

11,968 Customers

What percentage of the distributor's total customer base did the interrupted customers represent?

11,968 / 30,558 = 39%

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

19 Hours

Were there any outages associated with Loss of Supply during the Major Event?

- Yes                       No

If yes, please report on the duration and frequency of the Loss of Supply outages:

N/A

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

- Yes

No

Do not have third party mutual assistance agreements with other utilities

If yes, please provide the name of the utilities who provided assistance:

N/A

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

Yes  No

If yes, please describe the shortages: \_\_\_\_\_

**After the Major Event**

**What actions, if any, will be taken to be prepared for, or mitigate, such Major Events in the future?**

No further action is required at this time

Additional staff training

Process improvements

System upgrades

Other

Additional comments: Throughout the course of the event, and shortly after completing restorations, key CNPI personnel were in regular communication to discuss challenges CNPI and successes in managing all facets of the restoration efforts. This helps understand what worked and what requires improvement or a different approach.

The following items are included during the preparation a potential major event:

- Storm task list
- Outreach readiness emails to Town of Fort Erie, City of Port Colborne and PowerAssist
- Social media posts are made to customers referencing Environment Canada weather alerts

## **APPENDIX A: February 23, 2023 Weather Alert Niagara Region (via Environment Canada)**

### **Watches**

6:59 AM EST Tuesday 21 February 2023

#### **Winter storm watch in effect for:**

- Niagara Falls - Welland - Southern Niagara Region
- St. Catharines - Grimsby - Northern Niagara Region

Ice storm possible late Wednesday into Thursday.

#### **Hazards:**

Prolonged period of freezing rain leading to significant ice build up in some areas. Extended and widespread utility outages are possible.

#### **Timing:**

Late Wednesday into Thursday.

#### **Discussion:**

A Colorado low will bring the potential for a prolonged freezing rain event across portions of southwestern Ontario. Precipitation may begin as snow or ice pellets before changing to freezing rain late Wednesday. There remains some uncertainty for the exact location and timing of the freezing rain axis, as well as the amount of ice accretion that may occur.

Freezing rain warnings are expected to be issued as the event draws nearer.

Surfaces such as highways, roads, walkways and parking lots may become icy and slippery. There may be a significant impact on rush hour traffic in urban areas. Public Safety Canada encourages everyone to make an emergency plan and get an emergency kit with drinking water, food, medicine, a first-aid kit and a flashlight. For information on emergency plans and kits go to <http://www.getprepared.gc.ca>.

Please continue to monitor alerts and forecasts issued by Environment Canada. To report severe weather, send an email to [ONstorm@ec.gc.ca](mailto:ONstorm@ec.gc.ca) or tweet reports using #ONStorm.

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## **Alerts for: Niagara**

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### **Warnings**

4:36 AM EST Wednesday 22 February 2023

#### **Freezing rain warning in effect for:**

- Niagara Falls - Welland - Southern Niagara Region

Ice storm beginning this afternoon.

#### **Hazards:**

A prolonged period of freezing rain leading to significant ice build-up in some areas. Ice accretion of 10 to 20 millimetres is possible. Northeasterly winds gusting 50 to 60 km/h.

#### **Timing:**

This afternoon to early Thursday morning.

#### **Discussion:**

Light snow will become heavy at times and mix with ice pellets early this afternoon. Snow and ice pellets will change over to freezing rain late this afternoon. Freezing rain will continue tonight before tapering off early Thursday morning to patchy freezing drizzle. Gusty northeasterly winds will diminish early Thursday morning.

Extensive utility outages and tree damage are likely due to the combination of ice accretion and moderate winds.

Another light wintry mix of precipitation is possible Thursday afternoon into Thursday evening.

Surfaces such as highways, roads, walkways and parking lots will become icy, slippery and extremely hazardous. Slow down driving in slippery conditions. Watch for taillights ahead and maintain a safe following distance. There may be a significant impact on rush hour traffic in urban areas. Beware of branches or electrical wires that could break under the weight of ice. Public Safety Canada encourages everyone to make an emergency plan and get an emergency kit with drinking water, food, medicine, a first-aid kit and a flashlight. For information on emergency plans and kits go to <http://www.getprepared.gc.ca>.

Please continue to monitor alerts and forecasts issued by Environment Canada. To report severe weather, send an email to [ONstorm@ec.gc.ca](mailto:ONstorm@ec.gc.ca) or tweet reports using #ONStorm.

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