

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

**(December 23-25, 2022)**

### **Introduction**

On December 23, 24, and 25, 2022, CNPI's service territory experienced a severe weather event causing 32,088 customer interruptions. This number of outages represents 106% of CNPI's customer base, indicating that some customers had multiple interruptions. On these days southern Ontario experienced high winds, with gusts up to 125 km/h, as well as heavy snow fall, leading to blowing snow and poor visibility. On December 24, Niagara Region and the Town of Fort Erie declared a State of Emergency. Due to poor road conditions, emergency first responders like police, fire, and EMS were physically unable to respond to calls. Hazards on the roadways included downed trees and powerlines, drifting snow, flooding and abandoned vehicles.

Restoration effort requirements were significant, with the vast majority of customers restored by December 27<sup>th</sup>.

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

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

Yes                       No

Additional Comments:

On Wednesday, December 21st, 2022, Environment Canada issued wind warnings for much of Southern Ontario, indicating that damaging winds were expected on Friday December 23<sup>rd</sup> and Saturday December 24<sup>th</sup>. CNPI's Regional Manager held numerous meetings with the Operations Department during the week of December 19<sup>th</sup> regarding the potential 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

Brief description of arrangements, or explain why extra employees were not arranged:

All arrangements for standby were made before the storm began. CNPI secured internal resources for the holiday weekend prior to December 23<sup>rd</sup>. CNPI sent employees home for rest time on December 22<sup>nd</sup> in order to optimize the available staff hours to respond to the impending storm.

*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

CNPI provided an announcement on December 21, 2022 at 12:52 p.m. that we are preparing for a potentially severe weather event and to continue to monitor through the website, Twitter and Facebook.

*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 December 23<sup>rd</sup> and 24<sup>th</sup>, a snow and wind storm hit the CNPI service territory. Wind gusts of up to 125 km/hr caused trees to fall onto and damage CNPI line infrastructure, which resulted in outages. Blowing snow caused very poor visibility, and vehicles were unable to safely travel on the roadways.

If selected "Other", please explain:

Outages were primarily related to Adverse Weather- extreme wind, however some outages were associated with Tree Contact and a very limited amount had an unknown root cause.

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)?

December 23, 2022 – The first outage started to happen at approximately 2:00 AM, with an increased volume of interruptions beginning around 08:00 AM EST.

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:

CNPI posted 58 updates on both Twitter and Facebook social media channels (without ETR's). The postings provided progress of restoration efforts, special weather statements issued by Environment Canada and emergency related communication in cooperation with both the Town of Fort Erie and City of Port Colborne, over the course of the Major Event Days. There were also five website alerts posted on a daily basis to summarize current restoration status and various customer support recommendations from ESA and local warming centre information. 5,306 customer calls were taken during the Major Event Day period via CNPI's partner call centre.

*How many customers were interrupted during the Major Event?*

32,088 Customers

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

32,088 / 30,414 = 106 % (this indicates that many customers had multiple outages)

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

104 Hours

Additional Comments: Due to the ongoing poor weather, new outages began throughout the period (including on December 23, 24, 25, etc). That is to say, these 90% of interruptions did not all begin with the first outage.

*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:

CNPI utilized assistance from the following companies through third party mutual assistance agreements:

- Welland Hydro
- Niagara Peninsula Energy
- NOTL Hydro
- Burlington Hydro
- Cornwall Electric \*

CNPI also used a number of private utility-based contractors:

- Ground Aerial Maintenance Services
- Peters Excavating
- Pineridge Tree Service
- PowerNorth Utility Group
- Hyline Utility Solutions
- Spark Power Group
- Holland Power Services

*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.

# **APPENDIX A: December 23-24, 2022 Weather Alert Niagara Region**

## **(via Environment Canada)**

### Alerts for: Niagara

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#### Statements

11:31 PM EST Tuesday 20 December 2022

**Special weather statement in effect for:**

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

Major winter storm expected late this week into the holiday weekend.

Precipitation may begin as rain or snow late Thursday before transitioning to rain in many areas Thursday night. Temperatures are expected to plummet on Friday leading to a potential flash freeze for locations that receive rainfall. Rapidly falling temperatures will be accompanied by strong to potentially damaging winds along with snow that may be heavy at times. Blizzard conditions are possible late Friday into the weekend for areas downwind of Lake Huron and Georgian Bay.

A multi-day lake effect snow event is expected into the weekend in the wake of the system for locations east of the Great Lakes.

While there is high confidence in a high impact winter storm, the details regarding wind speeds, precipitation types and amounts remain uncertain at this time. Please monitor your local forecast and the latest alerts for your area.

Consider altering plans through the holiday weekend as travel conditions may become dangerous. Extensive utility outages are possible. Temperatures Friday night into the weekend will likely be the coldest of the season to date.

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.

### Alerts for: Niagara

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#### Warnings

6:52 AM EST Thursday 22 December 2022

**Blizzard warning in effect for:**

- Niagara Falls - Welland - Southern Niagara Region

Crippling blizzard Friday into Saturday.

Travel will become dangerous and is not advised.

**Hazards:**

Blizzard conditions with wind gusts of 100 to 120 km/h.  
Snowfall amounts of 15 to 30 cm by Sunday morning. Locally higher amounts are possible, especially toward Fort Erie.  
Wind chill values near minus 20.  
Flash freeze producing icy and slippery surfaces.

**Timing:**

Strong winds and blizzard conditions developing Friday morning and continuing into Saturday.  
Very cold wind chills are expected to develop Friday and persist into the weekend.  
Flash freeze possible Friday morning.

**Discussion:**

Precipitation will begin as rain this afternoon. Temperatures are expected to plummet on Friday morning leading to a potential flash freeze. Rapidly falling temperatures will be accompanied by strong to damaging winds along with snow heavy at times. Blizzard conditions will develop Friday, especially as lake effect snow off Lake Erie intensifies. Lake effect snow will result in variability of snowfall amounts through the weekend.

Visibility will be suddenly reduced to near zero at times in heavy snow and blowing snow. Protect yourself from wind, cold and disorientation by staying sheltered, indoors or with your vehicle. Anyone who is not dressed warmly is at risk of frostbite and hypothermia in cold weather. Ensure that shelter is provided for pets and outdoor animals. 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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## Warnings

6:29 AM EST Friday 23 December 2022

### Blizzard warning in effect for:

- Niagara Falls - Welland - Southern Niagara Region

Crippling blizzard conditions this morning into Saturday.

Travel will be extremely difficult to impossible at times and is not advised.

#### Hazards:

Blizzard conditions with wind gusts of 100 to 120 km/h. Extensive utility outages are possible.

Snowfall amounts of 25 to 50 cm by Sunday morning. The highest amounts are expected to be toward Fort Erie.

Wind chill values near minus 20.

Flash freeze producing icy and slippery surfaces.

#### Timing:

Damaging winds and blizzard conditions developing this morning and continuing through Saturday.

Very cold wind chill values are expected to develop this morning and persist into the weekend.

Flash freeze possible this morning.

#### Discussion:

Temperatures are expected to plummet this morning leading to a potential flash freeze. Rapidly falling temperatures will be accompanied by blizzard conditions and strong to damaging winds as lake effect snow develops off Lake Erie. Given the localized nature of lake effect snow, accumulations will vary depending on location.

Visibility will be suddenly reduced to near zero at times in heavy snow and blowing snow. Protect yourself from wind, cold and disorientation by staying sheltered, indoors or with your vehicle. Anyone who is not dressed warmly is at risk of frostbite and hypothermia in cold weather. Ensure that shelter is provided for pets and outdoor animals. 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

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## APPENDIX B: Website Advanced Posting

Alerts	<h3>Pending Weather Event</h3> <p>Last update: December 22, 2022 - 7:16am</p> <p>We are currently preparing for a pending weather event that has the potential for the following conditions: Flash freezing Significant lake effect snow High winds These conditions can lead to outages due to ice build-up and/or downed trees. Never...</p> <p><a href="#">More details</a></p>
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## Pending Weather Event

We are currently preparing for a pending weather event that has the potential for the following conditions:

- Flash freezing
- Significant lake effect snow
- High winds

These conditions can lead to outages due to ice build-up and/or downed trees. Never approach downed wires as they may still be energized. Please continue to monitor when making travel plans. You can find the latest weather alerts [here](#).

If you are experiencing a power outage emergency, **please call our 24 hour Emergency Service at 1.844.501.9473**

You can follow us on our [Twitter](#) and [Facebook](#) links or come back to this page for any storm related updates.

Stay Safe!

*Customer Service*



## APPENDIX C: Sample Communications from Local Authorities

