After the Derecho: *Adapting to climate change*

Ward 6 presentation

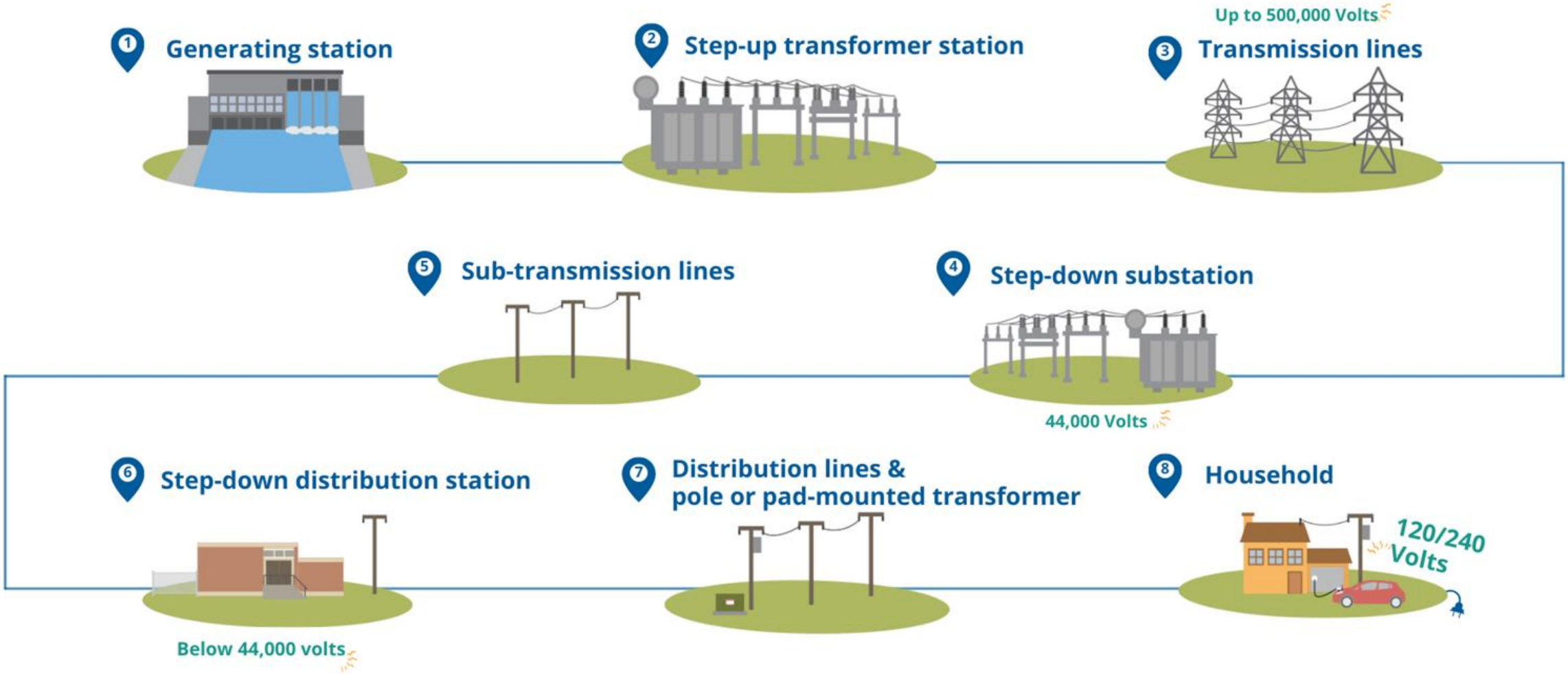
Presented by: Matthew Wilson

November 10, 2025

Today’s agenda

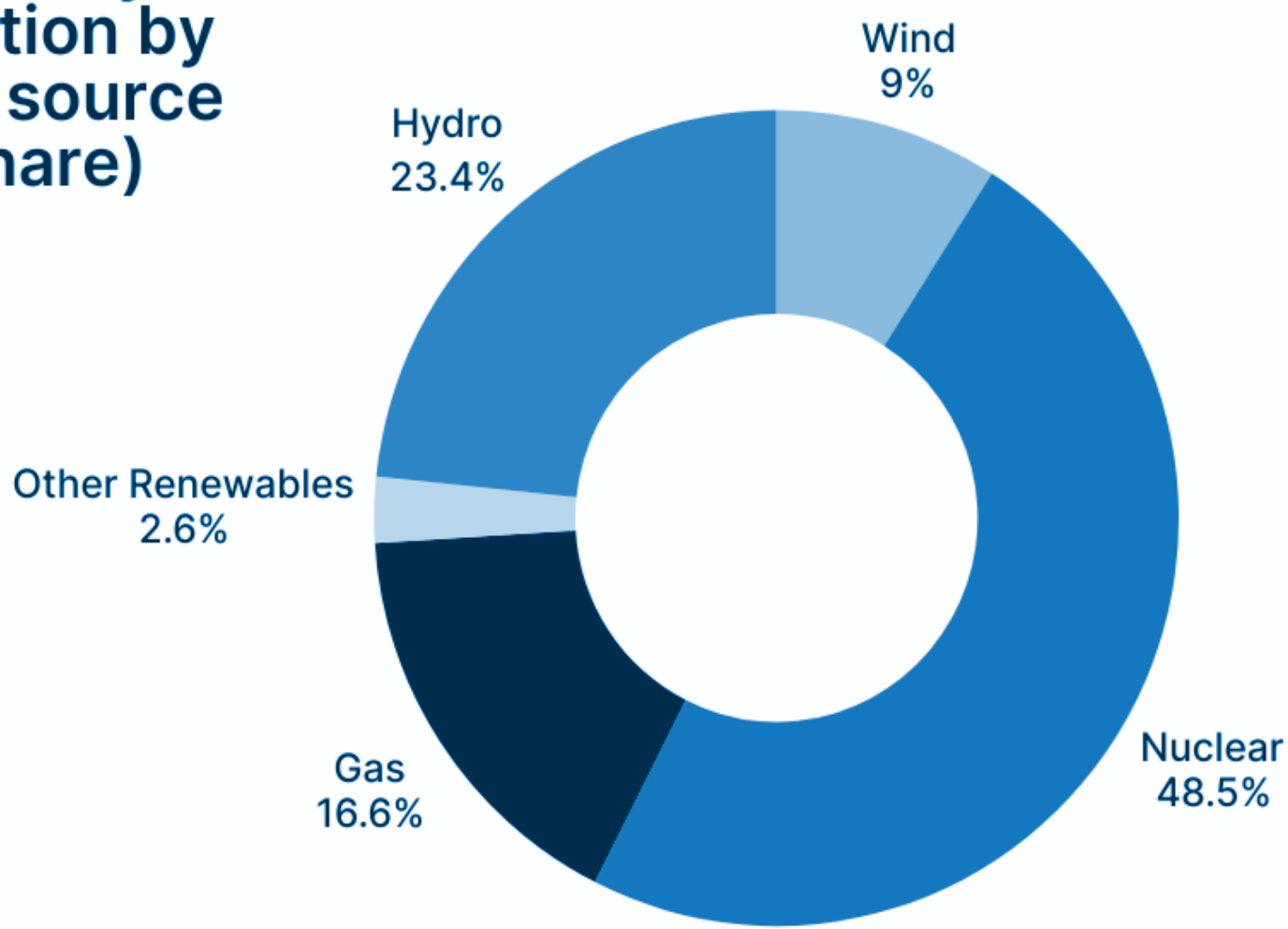
1. Overview of the electricity system - generation, transmission, distribution
2. Reliability and Outages in Ward 6
3. How does Ottawa compare to other capitals?
4. Proposed Ward 6 Investments
5. Common questions and how to stay connected

The journey of electricity



Hydro Ottawa

Ontario electricity generation by energy source (% share)



Source: Independent Electricity System Operator (IESO), 2024 Year in Review.

Hydro Ottawa

Turning the lights on and keeping them on

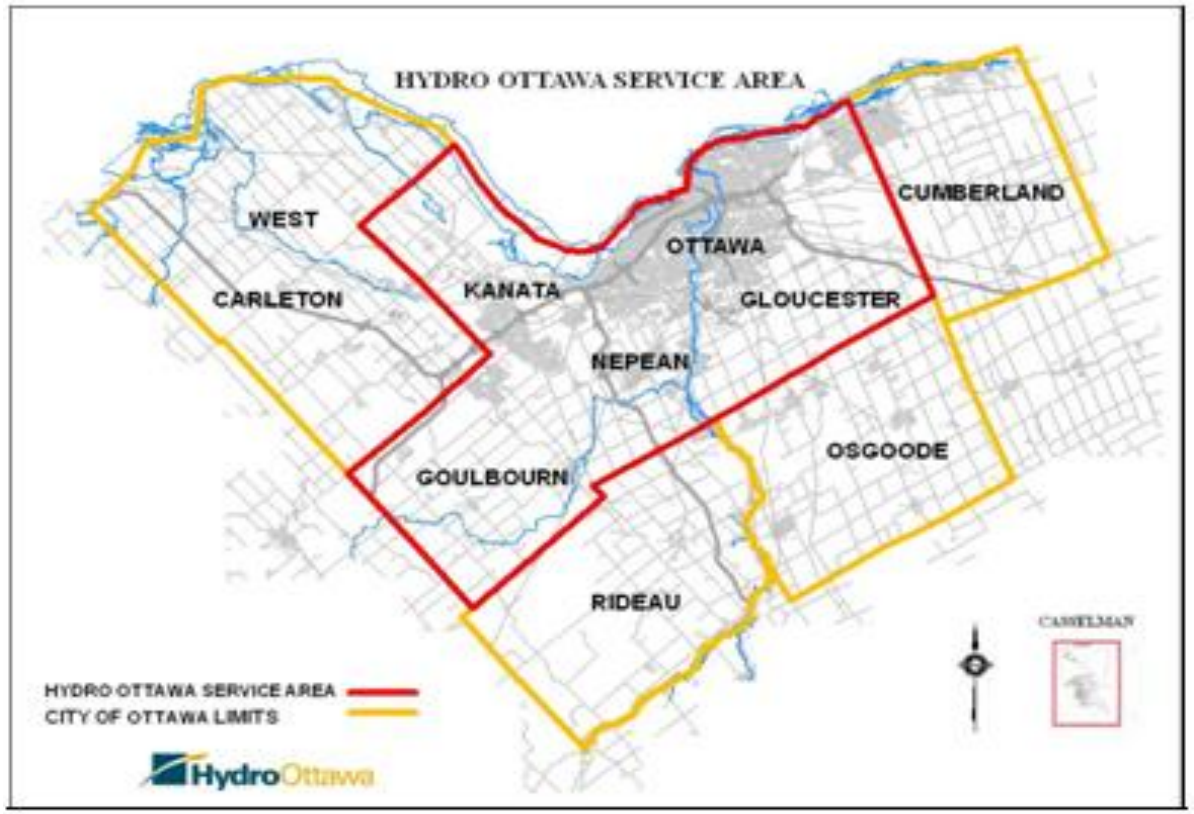
Electricity distribution across 1,116 km²

- **92 substations**
- **49,250 poles**
- **48,900 transformers (pole/pad-mounted)**
- **3,500 km underground cable**
- **2,800 km overhead lines**

372,00 customers

An additional 50,000 customers within the city are served by Hydro One

(all figures approximate)

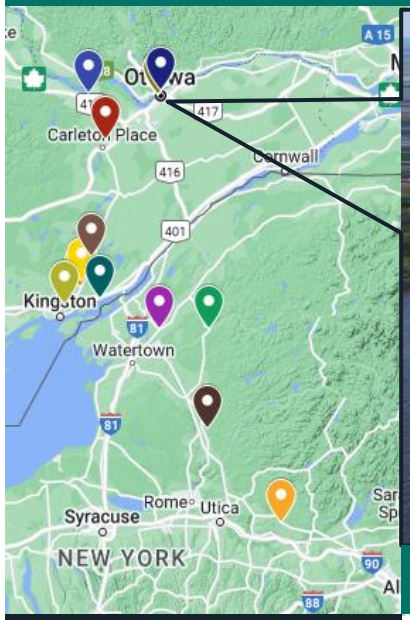


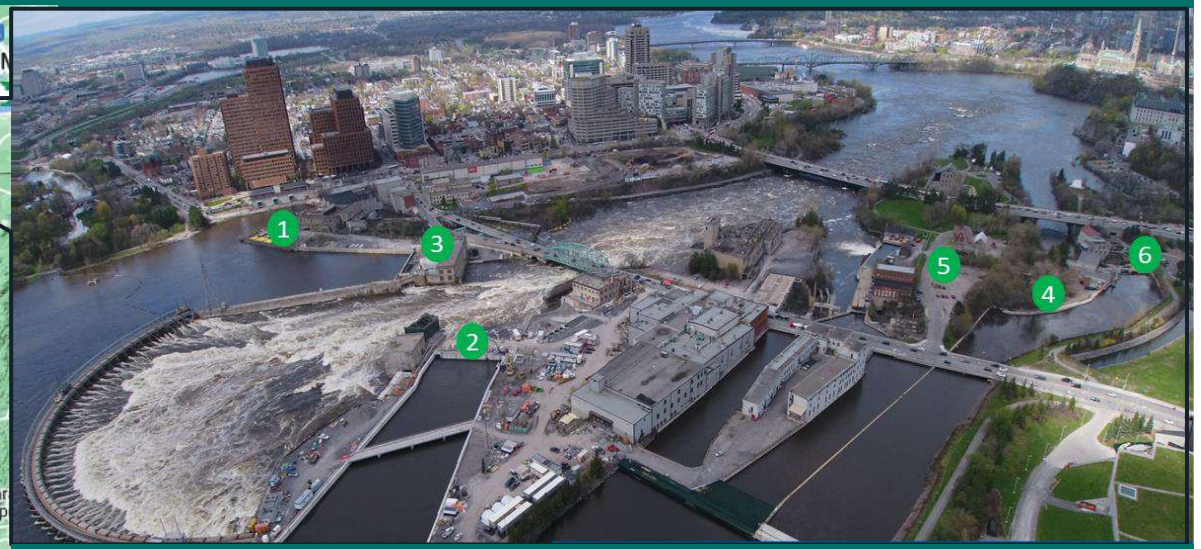
Green generation portfolio (131 MW)

10 MW Landfill Gas to Energy

2.3 MW Solar

119.2 MW Hydroelectric Generation





18 run-of-the-river hydroelectric stations in Ontario, Québec and New York State

- Ontario stations have IESO power purchase agreements
- New York stations receive spot market pricing

EO Gen LP

- Appleton Generating Station
- Brewers Mills Generating Station
- Galetta Generating Station
- Gananoque Generating Station
- Jones Falls Generating Station
- Kingston Mills Generating Station
- Rideau Falls Generating Station
- Washburn Generating Station

EONY Stations

- Diana Generating Station
- Dolgeville Generating Station
- Moose River Generating Station
- Philadelphia Generating Station

Chaudiere Stations

1. 1GS Generating Station
2. GS5 Generating Station
3. Hull 2 Generating Station
4. GS2 Generating Station
5. Grinder Generating Station
6. Grinder Generating Station

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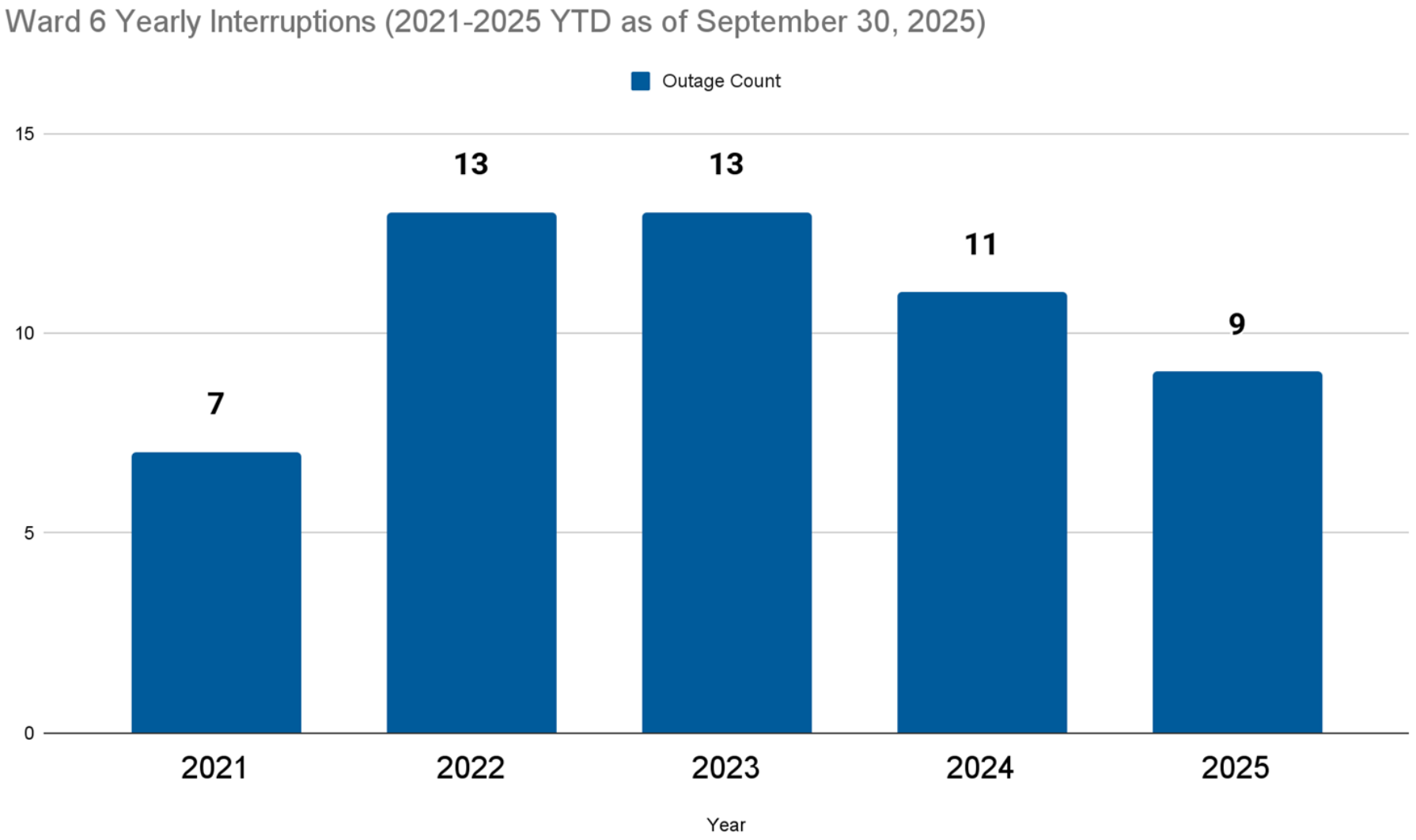
Types of outages

- **Adverse weather**
- **Defective equipment**
- **Foreign interference - a car crashing into a pole, animal, or tree contact**
- **Loss of supply from the provincial grid - (ie. Hydro Ottawa is not receiving power to distribute)**

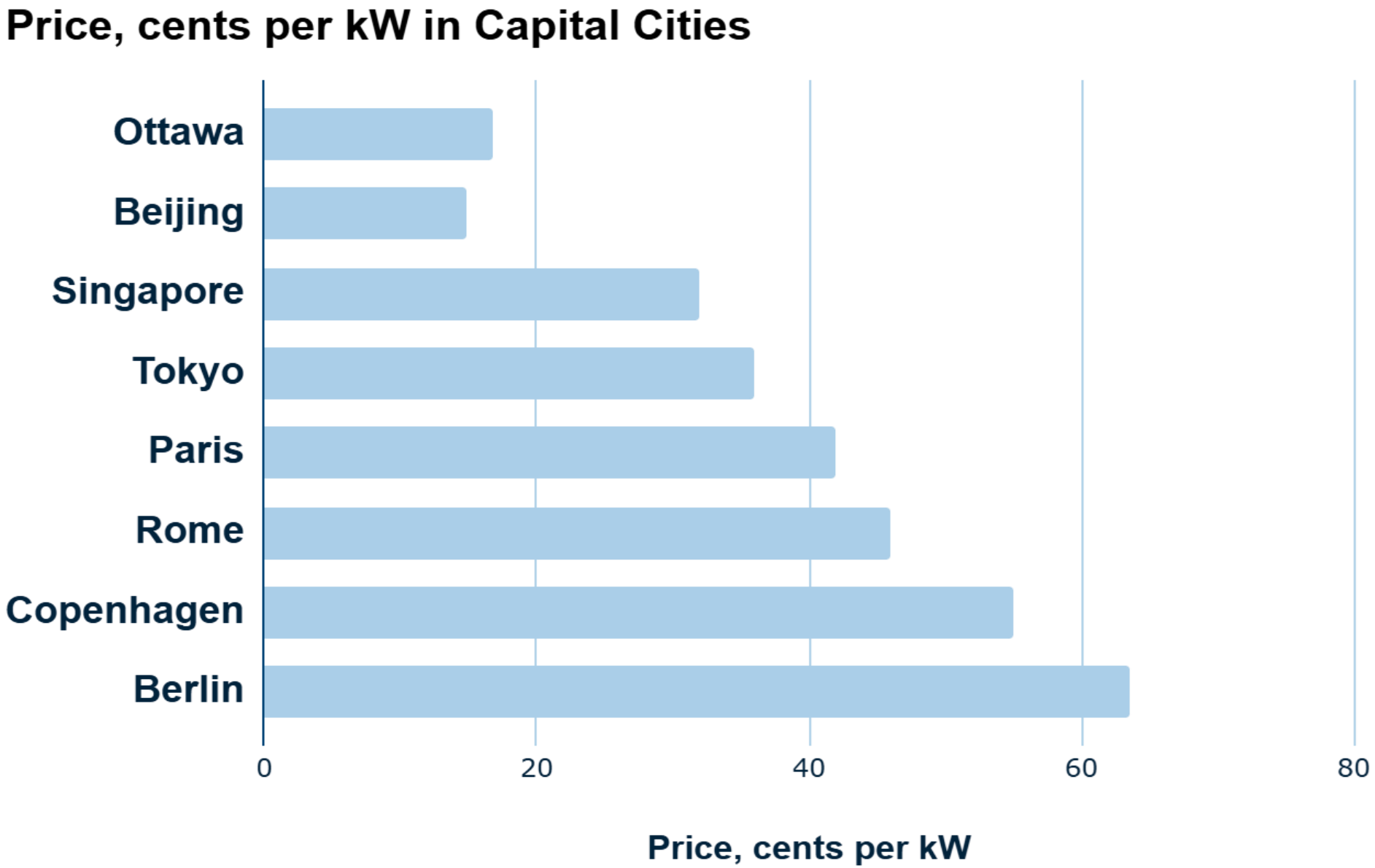
Ward 6 Reliability Overview

- Ward 6 is predominantly served by two Hydro Ottawa (HOL) owned substations—Terry Fox Municipal Transformer Station and Janet King Distribution Station —and a HOL-owned 44kV feeder from the Hydro One-owned South March Transformer Station.
- These interruptions can range from major events to minor incidents.
- On average, 30% of outages in Ward 6 in the past 5 years were localized, affecting fewer than 10 customers.
- The stats you will see on the next page exclude major events and interruptions that affect less than 10 customers and is in keeping with standardized reporting.

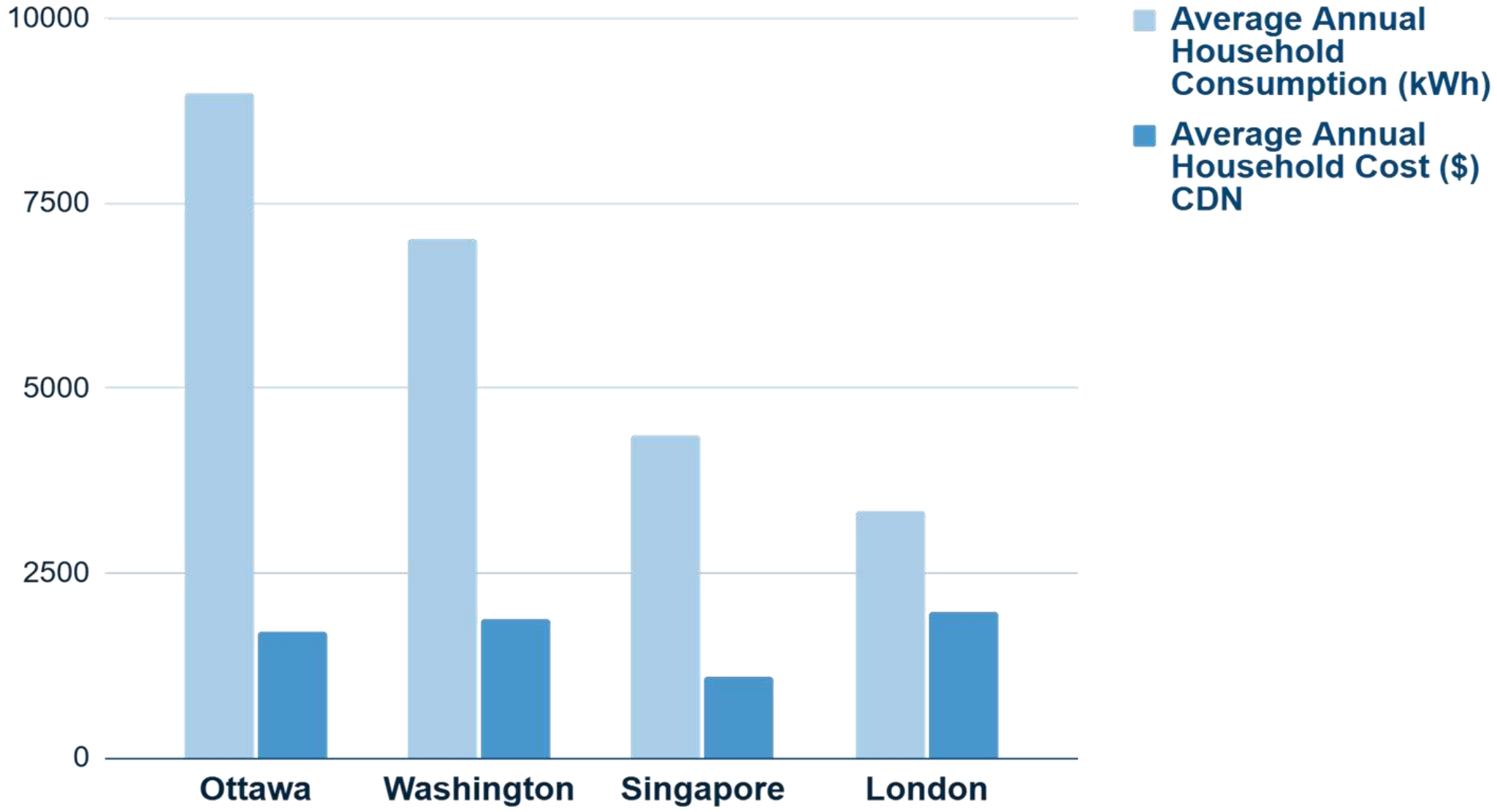
Reliability - Ward 6, 2021-2025



How does Ottawa compare?



Consumption and cost comparison



Proposed Ward 6 investments for 2026-2030

1. **2025 Remote Fault Locating Device Pilot Project:** Hydro Ottawa is currently conducting a pilot project in the West region, which includes Ward 6, for installing remote fault locating devices. This will increase electrical grid observability to quickly pinpoint fault locations and improve restoration timelines during interruptions.
2. **2026-2030 Janet King Distribution Station Renewal:** Replacing end of life equipment is proposed.
3. **2026 Remote Operating Devices Investment**: Proposed additional distribution investments for Ward 6 includes more remote operating devices. These devices will allow for remote operation of switching devices, thereby reducing restoration times during interruptions.
4. **2027 and Beyond:** Hydro Ottawa will scope additional projects on a yearly basis as necessary to improve reliability in the region. The scope for 2027 and onwards have not been finalized yet.

Hydro Ottawa

Common questions

Is high growth in Stittsville affecting reliability?

No. Electrical system supply and demand is forecasted years out. Even with the electrification of all things, from EVs to heat pumps, supply is keeping pace in the near term. But longer-term, significant additional investment is needed to meet demand forecasts.

Are Electric Vehicles (EVs) straining the grid?

No. In fact overnight charging in particular is beneficial for the grid and helps balance day and night loads. As of April 2025 there are just over 1,000 EVs in Ward 6 and 17,000 in the city. In the longer-term additional investments will be needed to meet demand forecasts.

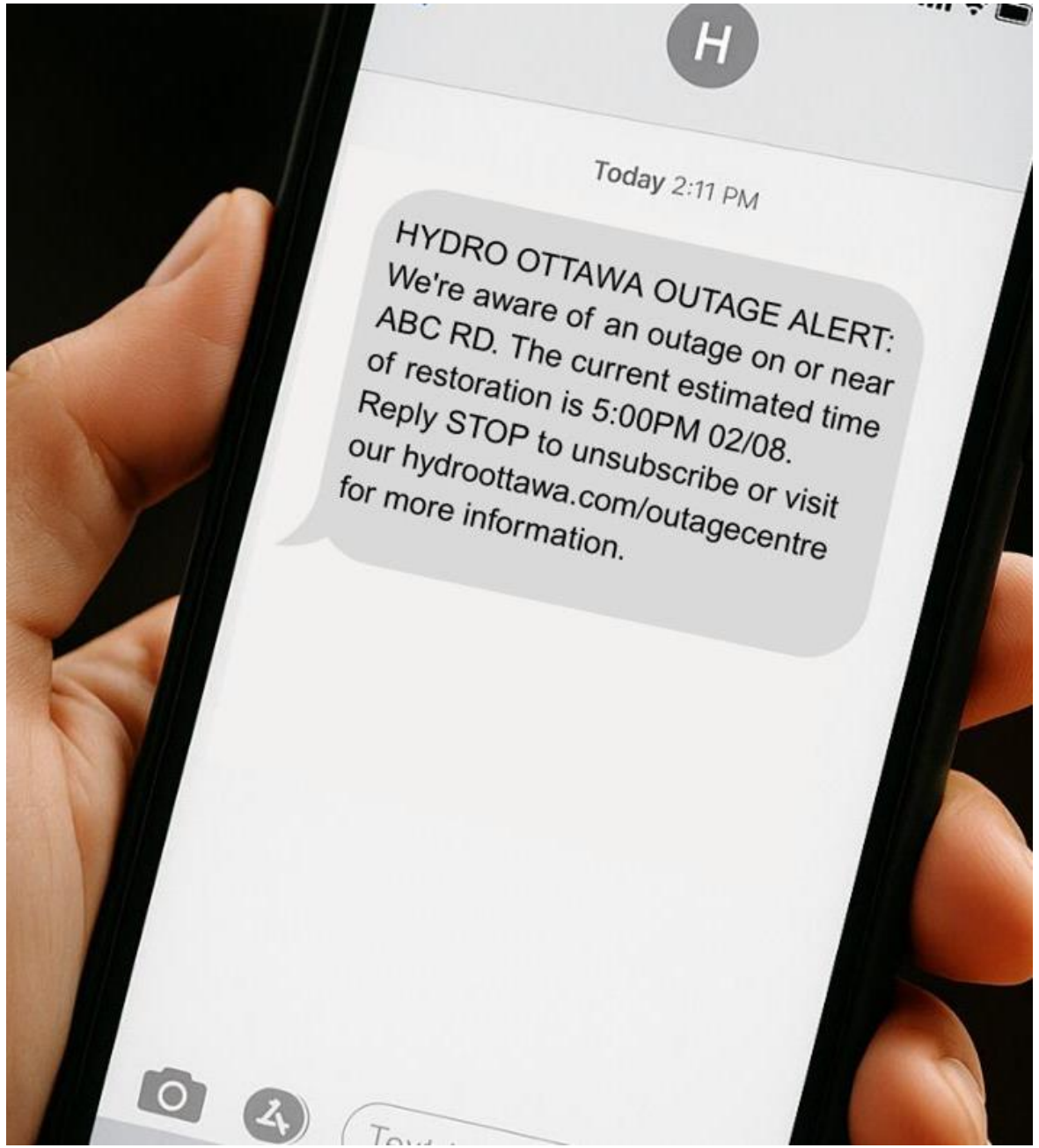
Is battery storage a good thing?

Yes. Battery storage supports overall energy supply and makes renewable generation (ie. wind and solar) more useful at all times of day.

Hydro Ottawa

Steer clear of downed power lines, but do stay connected:

- Sign up for Outage Alerts on MyAccount
- Outage map
- Website
- Major projects open houses and announcements

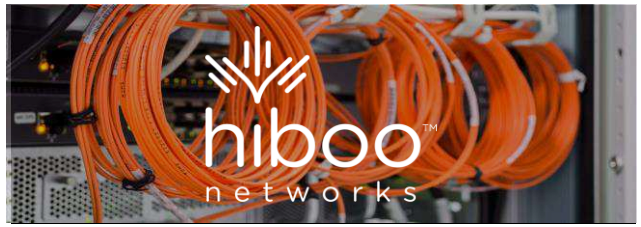


Hydro Ottawa Group overview

3rd largest municipal electricity distributor in Ontario

Ontario's largest municipally-owned green energy producer

Energy solutions and infrastructure management



High-speed fibre optic network services

100%
owned by the City of Ottawa

Operations
in Ontario, Québec, New York

372,000
customers

131 MW
clean energy capacity

$2.8 billion
in assets

~750
employees

OUR VISION – *"A leading partner in a smart energy future"*

Current and future planned projects

Zibi

- Serves sustainable mixed-use community in downtown Ottawa-Gatineau
- First zero-carbon community in National Capital Region
- District energy system currently operating, full build-out of community by mid-2030s
- Peak capacity of **13 MW** of heating and cooling

The Ottawa Hospital Central Utility Plant

- Energy-efficient, 140,000 square foot plant powering New Civic campus
- Will provide thermal energy (steam, heating-water, chilled-water, domestic hot water) and emergency standby generation
- Construction is pending provincial approvals
- Includes **12 MW** of district energy capacity

Sewer Energy Exchange Lebreton Flats

- Pilot project converting excess thermal energy from municipal wastewater into low-carbon heating for 600 residential units
- Complex project, subject to numerous agreements and municipal approvals
- **9 MW** of heating and cooling capacity

Portage Kanata Solar I and II

- Project proposal submitted to IESO
- If approved, starting in 2029, an additional **13 MW** of local renewable generation