

Background

Untimely or long delays in restoring electricity poses a significant risk to the citizens and businesses in Greater Sudbury. When electricity companies work with municipal partners providing timely, specific outage information, city planners are able to complete risk assessments and make informed response decisions to support the community during extended power outages.

Greater Sudbury Hydro Inc. (GSHi) is a local distribution company (LDC) that provides electricity to over 47,400 customers within the City of Greater Sudbury and the Municipality of West Nipissing. GSHi does not produce electricity; it owns and maintains a distribution system of power lines and substations that takes electricity from high voltage transmission stations and delivers it in a lower voltage useable by commercial and residential customers. Greater Sudbury Hydro Inc. alerts CGS Emergency Management with timely detailed power outage information. The City has a local single point of contact for Greater Sudbury Hydro Inc. during outages and this person acts as the liaison between their control room and Emergency Management throughout an incident.

Hydro One owns and operates essential infrastructure including both electricity transmission and distribution assets. Hydro One conveys electricity from generation plants over high voltage transmission lines to transmission stations where it is converted to a lower voltage for local distribution companies. Hydro One is also a local distribution company, serving many communities in both rural and urban settings, including Garson, Lively, Val Caron and others in the City of Greater Sudbury. Historically, CGS Emergency Management has had to rely on less detailed outage and restoration information that is obtained from the Hydro One outage map or through subscribed text alerts or the Hydro One Power Outage and Emergency Telephone Line.

Current Situation

Power outages can pose a serious threat to the City of Greater Sudbury and is ranked fifth in the 2019 CGS Hazard Identification and Risk Assessment (HIRA). Hazards are ranked based on frequency, probability, consequences and response capabilities. The HIRA emphasizes hazards that require specific attention in the Emergency Management Program directing focus for training, exercises, response planning, and public education. Emergency Management's public education platform is personal preparedness. If an emergency were to occur, public education informs residents that it may take up to 72 hours before we can get you help. Every resident has a personal responsibility of trying to ensure their own safety by always having a 72 hour survival kit on hand that can support you and your family until help arrives.

Greater Sudbury Hydro Inc. has reported the outage information in Table 1 to the Ontario Energy Board as part of their annual reporting for 2019. Hydro One data was unavailable at the time of this report.

Table 1 – Greater Sudbury Hydro Inc. Power Outage Information 2019

	Greater Sudbury Hydro Inc.
The amount of time for all customers affected by all causes of power outage	115, 273 hours
Number of interruptions	384
Number of customer interruptions	54,976
Average duration of power outage inclusive of all causes	144 minutes

*GSHi. outage data also includes service to Municipality of West Nipissing

The most significant causes of power disruption for residential, industrial and commercial customers that have the largest impact on outage time are: defective equipment, foreign interference (beyond the control of the distributor – animals, vehicles, sabotage), scheduled outages, and loss of supply (when Hydro One has a problem with their transmission lines or shuts down the supply of power).

Emergency Management utilizes a notification email communication tool whereby industries can advise the City of unusual or hazardous occurrences, such as power outages. Emergency Management staff monitor these notifications 24 hours a day. Once an advisory is received by Emergency Management staff, a risk assessment is completed and all required stakeholders are consulted to facilitate any needed response. For power outages, electricity distributors are consulted to obtain information on the extent, cause, and expected restoration.

Following discussions with Hydro One, the City has added the following processes to improve outage and restoration notification and information to Emergency Management for emergency preparedness and response planning:

- The City has been added to Hydro One's e-mail notification tool in order to be advised of any outages, planned or unplanned, 24 hours a day. Once these notifications are received by Emergency Management they are assessed for impact to residents as well as critical infrastructure. The email notification includes details such as affected areas, number of customers affected, start time of outage, estimated time of restoration, reason for interruption and actions being taken. As needed, staff will contact relevant stakeholders to allow for a comprehensive assessment and forward response planning including a local Hydro One control room/operator who will be able to provide the detailed outage and restoration information.
- Hydro One has provided Emergency Management with a "One Number to Call" to a local operations manager who will provide detailed outage and restoration information for improved planning during outages. This local support will allow us to engage with Hydro One more proactively particularly during significant power

outages, who have offered support in the event of extraordinary situations.

- Finally, Emergency Management is developing a Power Disruption Plan as a threat specific sub-plan of the Municipal Emergency Response Plan (MERP). The purpose of this plan is to identify the general roles and responsibilities that the City of Greater Sudbury Divisions and the Power companies have in responding to a power failure event. This plan will be presented to the Greater Sudbury Emergency Management Advisory Panel at the fall meeting in September to obtain further input from community stakeholders before being approved by ELT.

Conclusion

Information from power companies during extensive power disruptions allows the City to better plan response to all residents including the City's most vulnerable. Building a disaster resilient community that protects the health and safety of our residents remains our priority in Community Safety. Timely notification and detailed information from our electricity providers regarding outages will ensure the health and safety of responding personnel, and contribute significantly to a coordinated recovery plan.