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BY EMAIL AND RESS

September 29, 2023

Ms. Nancy Marconi
Registrar
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON M4P 1E4

Dear Ms. Marconi,

EB-2023-0144 – Hydro One Networks Inc. – Chapleau Public Utilities Corporation – Observation Report

In accordance with Hydro One's interim distribution licence, issued May 23, 2023 pursuant to the OEB's decision and order in proceeding EB-2023-0144, Hydro One, under the management of CPUC's General Manager, Ted Lyberogiannis, is providing the attached observations to inform the OEB of the current distribution operations of the utility.

Hydro One is providing this report, on a best-efforts basis and in accordance with good utility practice, to give information on our observations of CPUC's current asset and operating conditions necessary to supply electricity to consumers in the Township of Chapleau.

An electronic copy of this Report has been filed through the OEB's Regulatory Electronic Submission System.

Sincerely,

Joanne Richardson

HYDRO ONE'S OBSERVATION REPORT ON OPERATION OF CHAPLEAU PUBLIC UTILITIES CORPORATION (EB-2023-0144)

On May 23, 2023, the OEB ordered Hydro One Networks Inc. to take possession and control of the electricity distribution system owned and operated by Chapleau Public Utilities Corporation (CPUC). On June 13, 2023, Hydro One took over management and control of CPUC.

Hydro One met with OEB staff on August 17, 2023, and provided an oral status report on the operations and the condition of the assets of CPUC. This report provides written documentation of Hydro One's comments on findings since managing the operations of CPUC.

EXISTING ASSET CONDITION

In general, lines assets are in relatively good condition. Hydro One has significant concerns however with the station assets and the submarine cables. There may also need to be several replacements based on the discovery of PCB oil.

STATIONS ASSETS

The biggest risk to the supply of power in Chapleau is the failure of station equipment – specifically the two transformers located inside the station. The CPUC station is located next to Hydro One's Distribution station. The relatively small customer base and the desire to mitigate rate impacts are likely why a large investment to renew the station has not been executed in the past.

Panorama View of Hydro One & Chapleau Stations

The transformers at the station are more than 50 years old and diagnostic testing has confirmed that they are at their expected service life. In addition, the manufacturer, General Electric, has released a bulletin indicating that certain transformer components, as contained in the transformers at the CPUC station, are defective.

Side View of Both Transformers

Although the transformers can back each other up most of the year, there are likely certain periods during the peak winter season where the failure of one unit may result in rotating blackouts for the community. The transformers are a non-Hydro One standard voltage (115kV-4kV) and therefore neither CPUC nor Hydro One have any spares. An appropriate contingency plan to restore power to customers in the event of a transformer failure during peak winter season would be to utilize a Mobile Unit Substation. This is not currently available to CPUC customers however, in the interim, this contingency plan could be addressed via Hydro One Mobile Unit Substations in conjunction with another temporary transformer, to be delivered and set up in Chapleau during the event of a failure.

In addition to the transformer condition, there are another four major concerns within the station. First, the clearances from live equipment to ground are not consistent with current industry standards and extra care and safety steps and processes are required when working within the station when compared to current standard-compliant stations.

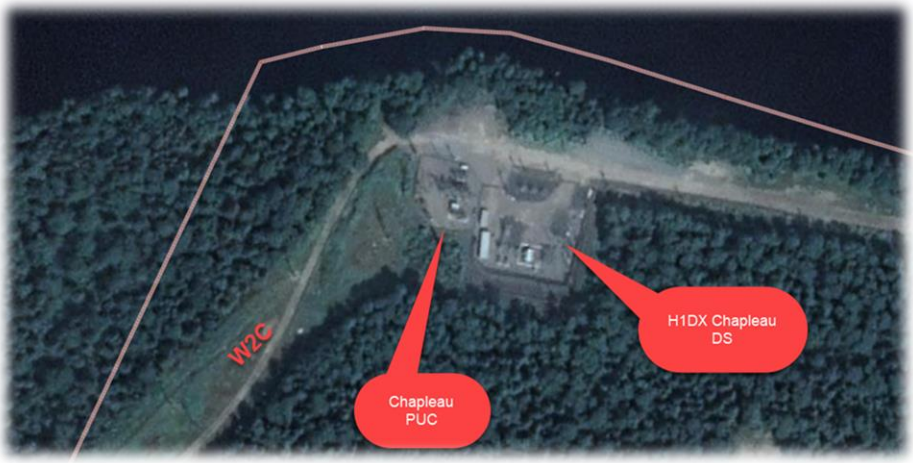
Second, the CPUC station has fuses instead of reclosers. The existence of this old fuse technology means that any time a temporary fault occurs on a feeder, customers will remain

without power until the fuse is replaced manually by field staff. Comparatively, the Hydro One standard requires Distribution station to be fitted with reclosers that can automatically restore power when a temporary fault occurs.

Fuses on Station Structure

Thirdly, with CPUC's station secondary voltage at 4kV, CPUC's distribution system is subject to a large number of line losses. A consultant (METSCO) report from 2018 calculated the system losses to be more than $100k per year when compared to the system if converted to 25kV.

Finally, the station is located next to a body of water often used by the community. In the event of a catastrophic transformer failure, oil may be released into the water.



Overhead View of Hydro One & Chapleau Stations

Given the above reasons, Hydro One believes that a large-scale investment to address the station assets' age and safety related deficiencies will be required within the next few years. Planning for this should begin immediately such that the Town's reliability and quality of service do not deteriorate.

SUBMARINE CABLES

CPUC has a submarine feeder (4 separate cables) that leaves the station and supplies the northern part of the town. Earlier this year, Hydro One assisted CPUC field staff with a temporary assessment and repair of several exposed cables. Based on observations made at that time, Hydro One believes that these cables have reached their expected service life and will need to be replaced within the next few years. Hydro One recommends testing to validate the remaining expected service life of these cables.

Hydro One and Chapleau PUC Staff Repairing Sub Cable

PCB EQUIPMENT REPLACEMENTS

CPUC will be testing approximately 150 pieces of oil-filled equipment for PCB. Depending on how many of them test above the PCB threshold, investments may be required to replace equipment to be compliant with the 2025 deadline.

A Pole-Mounted Transformer

OBSOLETE BILLING SYSTEM

CPUC is currently using a very old billing system that is being supported by a single external individual who is the only person that knows how to program and make changes. Updating of rates and extracting reports from the system is cumbersome and the utility is entirely dependent on this individual.

CONCLUSION

The issues identified in this report encapsulate the findings of Hydro One to date. Should any further material observations be made, Hydro One will update this report and the OEB, accordingly.