Q. **Reference: Economic and Technical Assessment, page 19 (p. 53 pdf)**

Citation:

> The following initiatives would be considered during the detailed design phase for the construction of any new diesel generating station:
>
> - Waste Heat Recovery: Use the thermal energy produced by the diesel gensets to supply heating for the diesel generating station or customers in the area.
>
> …
>
> - Reduce Power Losses (I_2R) on the System's Distribution Lines and Equipment:

a. Are there any large customers in the vicinity of the proposed new Port Hope Simpson plant that could potentially use its waste heat? Has the possibility of installing a district heating system for the surrounding community been explored?

b. Are there any large customers in the vicinity of the three diesel plants that would eventually be decommissioned if this proposal is accepted that might have been able to use their waste heat?

c. Please confirm that transmitting power from PHS to Charlottetown, Mary's Harbour and St. Lewis will result in additional line losses, compared to the status quo. Please elaborate on the tradeoffs between these additional losses and any loss reductions that may occur as a result of higher distribution voltage and other factors.

A. a. During community consultations with the Town of Port Hope Simpson, Newfoundland and Labrador Hydro ("Hydro") was asked, and agreed to explore, opportunities to use plant waste heat for a greenhouse. Hydro is not aware of any other potential customers interested in using waste heat. Hydro will work with the Town of Port Hope Simpson and any other interested customers in exploring the use of waste heat within the community.

b. Hydro currently supplies a small portion of the available waste heat to a church in Mary's Harbour. This system would be decommissioned upon decommissioning of the Mary's Harbour diesel plant.

Hydro is not aware of any other large customers in the vicinity of the three diesel plants that would eventually be decommissioned if this proposal is accepted that might have been able to use their waste heat.

c. Overall, the proposed interconnection will reduce the total system losses and station service consumption for the area of concern. Based on the existing system configuration the distribution system losses are expected to be equivalent to 49,000 L/year of diesel and the station service load is expected to be equivalent to 265,000 L/year, for a total of 314,000 L/year. Following the full interconnection the amount of fuel consumed to supply losses and station service is expected to drop to 47,000 L/year and 122,000 L/year, respectively,[1] for a total of 169,000 L/year. Regional interconnection is therefore expected to provide reductions in system losses and station service equivalent to 145,000 L/year of diesel.

[1] Based on 2021 load levels.