Q. **Reference: Reliability and Resource Adequacy Study 2022 Update, Volume III, page 54, lines 11 to page 55, line 4.**

Has Hydro engaged external consultants to undertake study, analysis and planning, of supply resource alternatives? If yes, state the outside resources contracted or expected to be contracted, their scope of work committed or expected, and the schedule for completion.

A. Newfoundland and Labrador Hydro ("Hydro") has consistently been engaging external consultants to assist with the study and analysis of supply resource alternatives. Please refer to Hydro's response to PUB-NLH-288 of this proceeding for further details and recent studies provided by external consultants.

Additional work in preparation for the Reliability and Resource Adequacy Study – 2023 Update ("2023 Update") includes:

- A "Wind Power Integration Study"[1] was completed by Hatch Ltd. in the fourth quarter of 2022, as part of the wind integration process. Hydro presented the findings to the Government of Newfoundland and Labrador for utilization in the Crown land application and approval process for private wind proponents. The "Wind Power Integration Study" includes general technical interconnection requirements and quantifies wind opportunity for a number of load forecast scenarios. Please refer to Attachment 1 to Hydro's response to PUB-NLH-232 for the Wind Power Integration Study.
- Hydro has recently issued a professional service request for assistance with the completion of a concept design study to examine the feasibility of additional thermal backup generation on the Avalon Peninsula. This comprehensive feasibility review is required to determine possible site locations, land purchase requirements, fuel supply (biofuel and or gases, such as natural gas and hydrogen), water supply, engine selection,

[1] "Wind Power Integration Study," Hatch Ltd., October 24, 2022.

electrical interconnection, and environmental impacts in the Northeast Avalon area. This study is expected to be completed by the end of the second quarter of 2023.

- TransGrid Solutions has been engaged to assess the Bay d'Espoir to Soldiers Pond transmission constraints and is expected to conclude their analysis in the second quarter 2023.[2]

- Hydro is currently engaging a consultant to support the execution of front-end execution planning ("FEEP") and the project documentation to the required standard to prepare an application for approval by the Board of Commissioners of Public Utilities for Unit 8 at the Bay d'Espoir Hydroelectric Generating Facility ("Bay d'Espoir Unit 8"). This will include the preparation of an AACE[3] Level 3 Construction Schedule and Basis. The current schedule shows completion of FEEP at the end of the fourth quarter of 2023 with application to the Board in the first quarter of 2024; however, that schedule will need to be validated by the consultant.

- Hydro expects to issue a request for proposals ("RFP") by the end of the first quarter of 2023 to conduct a hydraulic study to examine the impact of water surface drawdown on the adequacy of submergence of power intakes.

- Hydro expects to issue an RFP by the end of the first quarter of 2023 to assess pumped storage for new and existing facilities as a resource option.

- Hydro intends to engage a consultant by the beginning of the third quarter of 2023 to support the execution of FEEP and the project documentation to the required standard for thermal backup generation on the Avalon Peninsula. This will include the preparation of an AACE Level 3 Construction Schedule and Basis. This information is necessary for inclusion in the application to the Board regarding Bay d'Espoir Unit 8, anticipated for the first quarter of 2024. It is anticipated the completion of FEEP for thermal backup generation on the Avalon Peninsula will occur by the end of the fourth quarter of 2023; however, that schedule will need to be validated by the consultant.

[2] As other supply alternatives are considered, the transmission requirements for those alternatives will be assessed in consideration of cost, reliability impacts, and location.
[3] Association for the Advancement of Cost Engineering ("AACE").

- Hydro is also committed to assessing existing hydro facilities for efficiency improvements. The intent is to plan the study in 2023 to execute in the fourth quarter of 2023.

Hydro will continue with this work as it advances analysis in preparation for the 2023 Update as well as information needed to advance the regulatory process to seek approval to construct Bay d'Espoir Unit 8.