



January 31, 2014

Ms. G. Cheryl Blundon
Director of Corporate Services & Board Secretary
Board of Commissioners of Public Utilities
120 Torbay Road, P.O. Box 12040
St. John's, NL A1A 5B2

Dear Ms. Blundon:

Re: Supply Issues and Power Outages on the Island Interconnected System
Re: Intervenor Submission and Proposed List of Issues of the Consumer Advocate

Enclosed please find an original and eight (8) copies of the Consumer Advocate's Intervenor Submission and an original and eight (8) copies of the Consumer Advocate's Proposed List of Issues.

As the Board's letters to Hydro and Newfoundland Power of January 17, 2014 indicate that both utilities are considered parties in the proceeding, a copy of this correspondence and Intervenor Submission as well as the Proposed List of Issues have been sent to each utility.

As regards the Consumer Advocate's Proposed List of Issues, this is submitted in response to the Board's invitation in its January 17, 2014 letter to file a proposed list of issues in advance of the pre-hearing conference for the consideration of the Board. The Board's letter stated that its investigation is initially focused on whether load requirements on the Island Interconnected system can be met in the near term, but stated that the Board may also inquire into issues such as asset readiness, maintenance practices, load forecasting, planning criteria and assumptions, equipment performance and reliability, preparedness, system response and restoration efforts. The Consumer Advocate agrees with the Board's initial focus being directed to whether load requirements can be met in the short term, but also agrees that the other issues raised by the Board are worthy of further inquiry.

Accordingly, it is hoped that the Consumer Advocate's Proposed List of Issues are of assistance to the Board. The Consumer Advocate recognizes that the utilities and perhaps other interested persons or groups will put forward their respective proposed list of issues in the near future, so it is recognized that there may be other issues raised that are not identified in the enclosed list that the Board may find it reasonable to inquire into.

We trust this is found to be in order.

Yours very truly,

O'DEA, EARLE



THOMAS JOHNSON

TJ/cel

Encl.

cc: Newfoundland Power Inc.
Mr. Gerard Hayes

Newfoundland and Labrador Hydro
Mr. Geoffrey Young

Board Inquiry into Hydro's Recent Supply Issues and Power Outages

- Consumer Advocate's Proposed Issues List

The first issue to deal with is the definition of the timeframe for the initial focus on whether load requirements on the Island Interconnected System can be met. The Consumer Advocate suggests that the time frame for this initial assessment cover the period from the present up to the commissioning date of the Muskrat Falls hydro-generating station and associated transmission infrastructure.

1. Availability and timing of new generation and transmission infrastructure:

- a) When is Muskrat Falls and its associated transmission infrastructure expected to be commissioned for service and how much might it be delayed owing to unforeseen circumstances such as weather delays, equipment delivery delays, unanticipated construction events, etc? In the event Muskrat Falls is delayed, what contingencies does Hydro have in place to ensure demand is met reliably during the delay period?
- b) When is the proposed new 60 MW combustion turbine to be installed on the Avalon Peninsula expected to be commissioned for service? Can its scheduled in-service date be moved ahead? What impact does the combustion turbine have on the security of supply to the Island Interconnected System and is it enough to bridge the gap until Muskrat Falls and its associated transmission is commissioned?
- c) Are sources of generation supply needed in addition to the 60 MW combustion turbine to meet the demands of the Island Interconnected System prior to the commissioning of Muskrat Falls? If so, what sources are available, when could they be brought into service, and what impact would they have on the demand/supply situation?
- d) Would additional transmission facilities into the Avalon Peninsula enhance the security of supply on the Island Interconnected System, and if so, what facilities would be available, when could they be installed, and what impact would they have on security of supply?

2. Load forecast:

- a) What is the current load forecast for the upcoming winter periods and how is it impacted by the higher than forecast demand (of about 50 MW) experienced in December 2013?

- b) What are Hydro's and Newfoundland Power's current load forecasting methodologies and should they be modified in light of the new peak demand established during the 2013/14 winter period?
- c) What is the impact on the load forecast of new demands coming on line, in particular, the ramping up of operations at Vale and Praxair?
- d) How does Hydro currently define and incorporate load forecast uncertainty into the planning process? What are the current high and low uncertainty bands in the load forecast for the coming winter periods?

3. **Existing demand and supply resources available for coming winters:**

a) Demand resources

- i) How does the arrangement with Corner Brook Pulp & Paper (CBPP) relating to generation and curtailable load provide value to the system during emergency situations?
- ii) What is the availability of CBPP generation and curtailable load in the coming winter periods, and what are the associated terms, conditions and price?
- iii) How much curtailable load is available from other Industrial Customers on the Island Interconnected System, and at what terms, conditions and prices?
- iv) What is the availability of additional curtailable load from Newfoundland Power customers, and at what terms, conditions and prices?
- v) What is the current status of Newfoundland Power's seasonal and time-of-day rate options? Can these rate options be expanded to more customers, and if so, what impact would they have on demand in the coming winters?
- vi) Can the CDM program be ramped up, and if so, what impact would it have on demand in the coming winters?

b) Supply resources

- i) Is the current maintenance/asset management plan adequate to ensure Holyrood units are available for the coming winters, and if not, what does Hydro propose to make it adequate?
- ii) Is the current maintenance/asset management plan adequate to ensure thermal generation other than Holyrood is available for coming winters, and if not, what does Hydro propose to make it adequate?
- iii) Is the current maintenance/asset management plan adequate to ensure hydro generation is available for coming winters, and if not, what does Hydro propose to make it adequate?
- iv) Is the current maintenance/asset management plan adequate to ensure the transmission system is available for coming winters, and if not, what does Hydro propose to make it adequate?

4. Current planning process and procedures:

- a) Are the definitions of the various system operating states (i.e., normal, high-risk, emergency), and the procedures implemented upon declaration of each operating state adequate to meet security of supply considerations?
- b) Are Hydro's and Newfoundland Power's emergency preparedness plans adequate to quickly and efficiently manage the impact of system emergency events?
- c) Are Hydro's and Newfoundland Power's system restoration plans adequate to restore supply quickly and efficiently following a system emergency event?
- d) What are Hydro's transmission planning criteria for different planning horizons, and what specific contingency events are planned for and modelled? Is the transmission planning framework adequate to meet supply on the Island Interconnected System in

a secure and reliable manner?

- e) What are Hydro's generation planning criteria for different planning horizons, and what uncertainties are incorporated in the planning process? Is the generation planning framework adequate to meet supply on the Island Interconnected System in a secure and reliable manner?
- f) What does Hydro consider in its planning framework (i.e., demand, demand forecast uncertainty, supply, reserves, outages, etc.), and how do these considerations change with the time frame under consideration; i.e., real-time, day-ahead, week ahead, season ahead, etc? Is the overall planning process adequate to meet supply on the Island Interconnected System in a secure and reliable manner?
- g) What is Hydro's current asset management practice and should it be modified to ensure greater security of supply on the Island Interconnected System?
- h) Does Hydro perform preventative maintenance on its relay and protection systems, and if so, is it adequate to meet system security considerations?
- i) What control actions are available to Hydro for implementation following declaration of a system emergency up to the point prior to cutting firm load? Are other control actions available to avoid/reduce/delay the amount of firm load interrupted?
- j) Is the level of control that Hydro has over generation that it does not own on the Island Interconnected System adequate to enable Hydro to quickly and efficiently manage operation of the power system during emergencies?

5. Supply disruptions of 2013/14 winter:

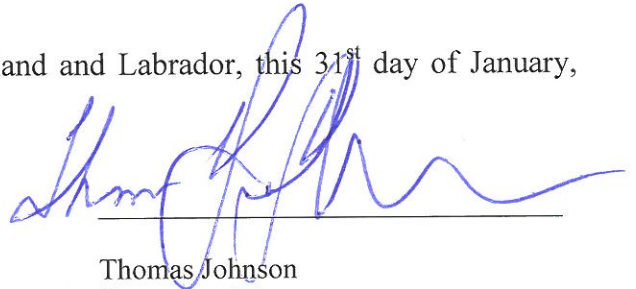
- a) Is Hydro undertaking a thorough internal investigation into the supply disruptions of the 2013/14 winter? Will the report include recommendations and lessons learned from the supply disruption events and will it be made available in unedited form to the public?

- b) Why did the loss of a transformer at the Sunnyside terminal station lead to widespread loss of generation and load? Is the system planned in a manner that it can absorb such a loss without shedding firm load, and if so, what went wrong?
- c) What is the reason for the extensive shut-down of generation following the events at the Sunnyside and Holyrood sub-station and what is Hydro proposing to do to ensure it does not happen again?
- d) Did the relay and protection system function properly, and if so, why was there such widespread loss of generation and load during the supply disruptions of the 2013/14 winter?
- e) Why was so much generation critical to the secure operation of the system unavailable during the supply disruptions of the 2013/14 winter? Does it relate to outage planning, maintenance/asset management practices, the planning process, or some combination, and what does Hydro propose to ensure such assets are available during upcoming winters.
- f) What control actions were implemented during the supply disruptions of the 2013/14 winter? Did all control actions function properly, and if not, what can Hydro do to ensure they function properly in the future?
- g) What role did Holyrood black start play during the supply disruptions? Is Hydro re-thinking the need for the diesel plant for Holyrood black start? Would the resources being spent on the diesel plant be better directed to other aspects of Hydro's emergency preparedness plan?
- h) Did Hydro have adequate control over generation on the Island Interconnected System during the supply disruptions? Could Hydro's emergency response be improved with greater control during system emergencies of generation assets that it does not own?

- i) What role did Newfoundland Power's Curtailable Load customers play during the system emergency events? Was it available, and would modifying the terms and conditions of interruption make it more effective during system emergency events?
- j) Was wind power generation available during the supply disruptions of the 2013/14 winter, and if so, can some portion of its output be counted on for dependable supply during future system emergencies?

And other matters that may arise.

Dated at St. John's, in the Province of Newfoundland and Labrador, this 31st day of January, 2014.



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