NOVA SCOTIA
Department of Justice
Legal Services Division

8th Floor - 1690 Hollis Street
PO Box 7
Halifax, NS B3J 1T0

Phone: 902-266-4255
Fax: 902-424-1730
E-mail: Daniel.Boyle@novascotia.ca

Daniel Boyle
Barrister & Solicitor

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Ms. Crystal Henwood
Regulatory Affairs Officer/Clerk of the Board
Nova Scotia Utility and Review Board
3rd Floor, 1601 Lower Water Street
Halifax, NS B3J 3P6

Dear Ms. Henwood:

RE: M11307 – NRR Comments on Evergreen Update

NRR has reviewed the results of NS Power's latest Evergreen Update to the 2020 IRP Action Plan and Roadmap filed August 8, 2023, as well as comments offered by Bates White and by Synapse on this update. These are NRR's comments.

Atlantic Loop

The 2023 update of the Integrated Resource Plan ("IRP") is centered on the Atlantic Loop (the "Loop"). While many parties involved were looking for clear answers regarding the usefulness, cost and appropriateness of the Loop, the IRP offered little clarity on the fundamental issues.

Throughout this process, numerous concerns were raised about the Loop, many of which were, at best, under-addressed. e.g., NSP responded to a Bates White comment on capital cost on March 24th, 2023, with: "The capital costs identified for the Atlantic Loop reflect the best available information of the project cost to Nova Scotia customers at this time." It is concerning that NSP chose not to usefully inform, or update, this information for intervenors, even after the numbers became public through the CBC.

NSP received a direct request for sensitivity on the capital cost of the Loop from Bates White, which was ignored and not addressed in NSP's reply comments on March 24th. (NSP offered only a timing sensitivity scenario involving moving the project from an unrealistic in-service date of 2030 to a more reasonable 2035.) Failing to include a cost sensitivity on the largest energy project ever undertaken in Nova Scotia undermines the remainder of the planning work.

NSP continually failed to provide evidence in response to questions from intervenors concerning key aspects of the Loop. In response to a query from Eastward Energy about the state of conversations with Quebec, Eastward notes: "…recent comments from Hydro Quebec regarding the pressure it is facing to meet its own peak demand and its need for significant new capacity…". NSP responded "Discussions with Hydro Quebec leading into the evergreen IRP modeling work have not warranted a limitation of the available capacity for NS Power".

This response dodged the question and the serious underlying concern. Hydro Quebec's own publicly available IRP and Strategic Plan explicitly pointed at its capacity constraints. In this circumstance, the onus was on NSP to demonstrate they had reason to act contrary to this information. At no stage did they present evidence to intervenors that supported the position that firm capacity was available.

NSP had numerous opportunities to address these shortcomings, with the Consumer Advocate going so far as to note in the final round that "When asked whether such contracts [from HQ] were available on commercially reasonable terms, NS Power's response was ambiguous."

Bates White raises several further operational and project issues with the Loop in its comments. NRR takes no issue with this commentary and suggests that NSP be required to address these issues. NRR views these issues as critical and should be resolved before using Loop scenarios for planning.

Commercial Sensitivity

NSP has made the IRP process more opaque than necessary by shielding numbers used in assumptions on the grounds of commercial sensitivity. As this is not a UARB proceeding, stakeholders have no way to contest this lack of disclosure and therefore cannot assure themselves of the validity of the hidden numbers, or of any assumptions NSP makes flowing from them.

NRR observes that the UARB takes confidentiality seriously, and notes that NSP has several clear pathways for sharing confidential information with a select group of intervenors. The absence of information on the actual status of Quebec negotiations was unusual and reduces confidence in the process.

End Effects

NSP concludes that: "the Atlantic Loop shows lower system costs and lower overall emissions than the without Atlantic Loop scenarios", however, this conclusion is apparently based on the 25-year NPV with end effects. Of note in the non-Loop scenarios are the very large investments made in out years, that contribute to NPV primarily through end-effects.

NRR suggests that decisions be weighted based on near- to medium-term when numbers are more likely to be useful, given that technology is changing rapidly, as is pricing for technology and fuel. There is significant value to preserving space to make decisions in the future when more information is known.

Conversion of Lingan to Oil

NRR is pleased to see that a low-cost source for capacity has been identified. The addition of these conversions will save ratepayers millions of dollars, avoid the construction of new fossil-fuel units and do so without negative impacts on greenhouse gas emissions. NRR is concerned that this option was not identified earlier in the planning process, and wonders what additional opportunities may exist which have not been fully explored.

NRR would like to see a comprehensive analysis from NSP of which coal facilities can be converted for use as backup, and the impact on sustaining and existing capital. This request dovetails with the UARB's own request for concrete planning around coal retirement in its recent decision in M11017.

Hydro assumptions

NSP includes refurbishment of all hydro assets, despite a lack of UARB approval or evidence of stakeholder acceptance. NRR would like to see all hydro assets which are up for capital renewal – using reasonable and agreed upon cost assumptions – compared for cost-effectiveness against new resources in this planning exercise.

Avoided Cost

NRR is pleased to see that NSP has accepted E1's desire for refinement of avoided costs. 2030 is rapidly approaching and E1's programming remains a critical part of meeting targets. NRR hopes that NSP and E1 can collaboratively work to ensure appropriate avoided costs are factored into program design as soon as practicable.

As stated earlier, NRR does not believe the scenarios containing the Loop are reasonable to use for this exercise.

Solar, Storage and Battery Capacity interplay

Synapse addresses this issue more comprehensively in its comments on the Evergreen update, and NRR agrees with Synapse that correctly identifying the need for capacity is paramount for all subsequent IRP runs.

The initial analysis – failing to provide a clear ELCC for the three technologies together – was identified to NSP the moment the initial report was presented, but, three years later, remains unaddressed. This error will make it difficult for the UARB to approve new capacity construction while doubt remains on whether this capacity is necessary.

Planning Reserve Margin

Discussion of reserve capacity was largely absent this IRP iteration, though it was present in previous exercises. NSP has modeled a continued use of 20% planning reserve margin, but NRR does not accept this without clear consensus from intervenors and scrutiny by the Board. Establishing the exact value of this number is critical to determining which investments are made in the short term and insufficient conversation has taken place for the parties to accept a raw number.

A change in this value from 20% to 16%, largely a paper exercise, would remove the need to construct an entire combustion turbine.

Clean Electricity Regulation

The Federal Government recently published proposed regulations impacting the electricity system. While the final impact of these decisions will not be known for some time, this change also demonstrates the ever-shifting requirements on the sector, the need for an ability to adapt and the necessity of continuing to update the modelling work on a regular basis.

Conclusion

The use of out-dated cost assumptions, an unmanageable in-service date, and core questions around the product available from Quebec make model runs using the Loop unsuitable for ongoing comparison. The UARB may wish to consider, where appropriate, additional modelling and/or alternative modelling approaches.

NRR does not disagree with all the findings of the IRP, noting that many near-term decisions are common to all scenarios, and that these no-regrets decisions can set the direction for utility operations during the period when the problems with this IRP are resolved.

NRR would also recommend that the avoided costs exercise continue with E1, using the existing, non-Loop, scenarios, to prevent further use of inappropriate avoided cost of capacity numbers from the last IRP update.

NRR appreciates having the opportunity to offer these comments.

Your very truly,

DBoyle

Daniel Boyle

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