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And

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July 17, 2020

Re: M08929 – Integrated Resource Planning – Response to Initial Run of Scenarios

Dear Ms. Godbout and Ms. Fris:

Envigour Policy Consulting Inc. has been retained by QUEST and Marine Renewables Canada as their Consultant in this matter. We have participated in the discussions regarding the initial outcomes from the scenarios.

We have found the information and discussion to be useful and insightful. To maintain the value of this extensive planning process, we suggest the following matters be explored before closing the IRP and developing the Roadmap.

1. DERs are considered a reduction in system demand without a cost to the system. We would want to understand how this assumption fits within the requirement to allow for Enhanced Net-metering by customers. Also, to simply assume DERs as reduced demand for system electricity, likely undervalues the potential positive contribution to the system that could come from a combination of DERs such as solar PV and storage by customers. We understand NS Power is exploring this potential through the NS Smart Grid project and related initiatives.

   The benefits from resiliency and reliability offered by DERs may be part of your planned next step runs and scenario testing. If so, information from that process may help gain insights into the value of DERs, especially when combined with storage. However, we believe there will likely be the need for additional discussions on these matters, and how to incorporate them into the Roadmap.

   Also, several NS Municipalities have expressed interest in Community Solar PV Gardens. It would be useful to discuss whether this concept is the same as DERs from the model's perspective and, if not, how it may be considered as well.

2. The model did not select several potential technologies such as offshore wind, tidal or hydrogen. It would be useful to know what the gap was between these technologies and the ones are chosen. It would help us understand the degree price reduction required to make them competitive in the future. Furthermore, it would be useful to know how the model would have valued any of the unique properties associated with these technologies, such as the predictability of tidal. If they were not valued, what process or opportunity might we see in the future to gain better insight?

3. Several runs chose natural gas solutions. It is difficult to see precisely what was selected as the options are shown in 5 shades of grey. Nevertheless, the narrative suggests a CCGT solution appears in several runs. We recommend there be a fuller discussion of the costs and benefits associated with an investment in this area. We would consider what kind of pathways/solutions would be necessary to achieve a net-zero electricity system by 2050 with a CCGT investment to be a priority. We would also want to identify and quantify the risk to electricity reliability from a dependence on a single natural gas pipeline. Identifying the risk of not being able to have local storage of natural gas should also be explored from a reliability perspective.

4. Each of the scenarios has a different impact on the NS GDP. Will the IRP process be able to differentiate which scenarios would more likely use NS sourced goods and services on a CAPEX and an OPEX basis?

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Bruce Cameron
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c.c. Tonja Leach, Executive Director QUEST
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