



THE BRETON LAW GROUP

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Nova Scotia Utility and Review Board

3rd Floor, 1601 Lower Water Street

Halifax, NS B3J 3P6

Attention: Doreen Friis, Regulatory Affairs Officer / Clerk

Dear Ms. Friis:

Re: **NSUARB Matter No. M08059 – NSPI Generation Utilization and Optimization**

EfficiencyOne has had the opportunity to review Synapse's Final Report in relation to the Generation Utilization and Optimization proceeding, as well as NS Power's comments regarding that report, and wishes to offer the following comments and observations.

Cost-effectiveness of DSM

In its Final Report, Synapse states :

The net present value of wholesale system revenue requirements (NPVRR, 2018-2042 period) across the modeled scenarios is clearly seen to be lowest for scenarios incorporating moderate ("medium") levels of demand-side management (DSM), reflecting an increase to existing efforts up to a level eventually (within 4 years, as modeled) reaching incremental annual energy efficiency achievements equal to 2 percent of NSPI's retail sales. This occurs even when using first-year costs of incremental saved energy that is on the order of twice as expensive (per unit) as the efficiency savings Efficiency One currently procures.¹

This finding reveals that higher levels of DSM, at higher first-year costs of saved energy remained highly cost-effective when compared against a range of supply-side options, as modelled in Plexos. EfficiencyOne provided updated unit cost information during this proceeding, via an update of the 2013 DSM Potential Study. This update to the 2013 Potential Study considered a portfolio with markedly less energy and capacity savings from lighting-based measures, and as such is indicative of future increased

¹ M08059, N-1, *Final Report – Economic Analysis of Retention of Fossil-Fueled Thermal Fleet To and Beyond 2030*, Filed May 1, 2018, at page 2.

first-year unit costs. However, EfficiencyOne cautions that the actual unit costs provided should be considered directional given the purpose-built and time-limited nature of this potential study update. It should be noted that the somewhat higher upfront costs required for DSM measures such as comprehensive building envelope retrofits remain highly-cost effective when compared to supply-side alternatives, per Synapse's observation.

As a brief illustration, within Table 9a of the Final Report, Scenario 2 represents a version of the Reference Scenario (Scenario 1) with increased levels of DSM (2% of retail sales). The incremental costs of DSM in Scenario 2 (\$0.41 Billion) are more than offset by the relative reduction in fuel costs between Scenarios 2 and 1 (\$0.49 Billion) alone. This does not include the other \$0.61 Billion in savings provided by DSM through decreased Fixed and Variable Operations and Maintenance, Sustaining Capital, New Capacity, and NB Import costs.²

Upcoming IRP Refresh

Of Synapse's nine recommendations, two pertain directly to DSM. Synapse recommends that prior to the next Integrated Resource Planning (IRP) process, EfficiencyOne:

1. Confirm costs and achievable potential for incremental energy efficiency. As seen, energy efficiency displaces higher cost energy sources in the province (gas, oil, imports) and the IRP must fully reflect this resource option.
2. Determine costs and achievable potential for peak-load reducing demand response. Construct specific cost and quantity curves to allow for either resource selection (in Plexos) based on specific demand side resources, or scenario analysis utilizing alternative peak load and annual energy projections.³

Regarding Synapse's first recommendation, EfficiencyOne agrees and expects to conduct a full DSM Potential Study prior to the next IRP process. The DSM Potential Study will present a wide range of achievable potential scenarios, considering measure saturation, past performance of DSM in NS, and the potential impacts of anticipated regulations for certain lighting products.

EfficiencyOne anticipates that the UARB will set a timeline for the next IRP process. To aid in scheduling, EfficiencyOne estimates that a Potential Study would require, at minimum, six to eight months for completion. This includes the time required to procure, undertake and complete the work, and file the DSM Potential Study with the UARB.

Synapse's second recommendation aligns well with EfficiencyOne's intention to design and launch demand reduction pilot activities in 2019, pending approval of the UARB. While demand response activities are unlikely to be in a mature state prior to the next IRP process, these pilots should allow for better planning-grade estimates relating to the costs of demand reduction activities.

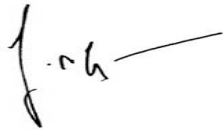
² *Ibid.*, at Table 9a, page 36.

³ *Ibid.*, at page 56.

EfficiencyOne thanks the UARB for the opportunity to provide comments on this matter, all of which are respectfully submitted.

Yours Truly,

THE BRETON LAW GROUP

A handwritten signature in black ink, appearing to read "J. R. Gogan", with a long horizontal line extending to the right.

James R. Gogan

JRG/jmd

cc. M08059 Participants

S. Bruce Outhouse, NSUARB Counsel