THE BRETON LAW GROUP

James R. Gogan
Direct Dial: (902) 563-5920
E-Mail: jim@bretonlawgroup.com

File No. 41736-92

August 14, 2019

Nova Scotia Utility & Review Board
PO Box 1692, Unit "M"
Halifax, Nova Scotia
B3J 3S3

Attention: Doreen Friis, Regulatory Affairs Officer / Clerk

Dear Ms. Friis:

Re: DSM Potential Study

The Nova Scotia Utility and Review Board ("Board"), in its Order in Matter M08604, (EfficiencyOne Application for Approval of Supply Agreement and 2019 DSM Resource Plan) issued July 23, 2018, directed EfficiencyOne to initiate a new DSM Potential Study ("Study") for completion by July 31, 2019. At the request of EfficiencyOne, the Board granted an extension to file the DSM Potential Study Report on August 14, 2019.

2019 DSM POTENTIAL STUDY REPORT

Enclosed please find the DSM Potential Study Report to be filed on behalf of EfficiencyOne, including the following Appendices:

- Appendix A: Methodology Approach
- Appendix B: Baseline Study
  - Appendix B - 1: Electricity Usage Online Instrument – Residential & Site Visit Follow Up
  - Appendix B - 2: Electricity Usage Online Instrument – Commercial
  - Appendix B - 3: Electricity Usage Tables – Residential
  - Appendix B - 4: Electricity Usage Tables – Commercial
- Appendix C: Demand Response Inputs (Excel tool to be filed electronically)
- Appendix D: Demand Response Outputs (Excel tool to be filed electronically)
- Appendix E: Energy Efficiency Inputs (Excel tool to be filed electronically)
- Appendix F: Energy Efficiency Outputs (Excel tool to be filed electronically)
- Appendix G: 8760 Data (hourly savings per sector for all 25 years of the Study) (Excel tool to be filed electronically).

As indicated above, Appendices C, D, E, F and G are Excel tool spreadsheets. Given the nature of these Appendices, EfficiencyOne requests permission to file these electronically. I confirm 4 paper copies of the DSM Potential Study Report and Appendices A and B will be filed with the Board.

2019 DSM POTENTIAL STUDY – STAKEHOLDER ENGAGEMENT PROCESS

In addition to the Report and Appendices filed herein, EfficiencyOne believes it would be of assistance to the Board to detail the process EfficiencyOne undertook in relation to stakeholder engagement throughout the course of the Potential Study.

EfficiencyOne's role as project manager was to facilitate the interactions between the DSMAG members and the successful proponent. As stakeholder engagement figured prominently in the development of the Potential Study, EfficiencyOne developed a stakeholder engagement schedule that allowed DSMAG members (including EfficiencyOne) to have several opportunities to participate in the process. The stakeholder engagement plan included the following four milestones:

- Scope of Work to inform EfficiencyOne's Request for Proposal for Potential Study Development:
    - **November 6, 2018**: EfficiencyOne released a draft scope of work with a stakeholder comment period ending November 16, 2018.
    - **December 6, 2018**: Revised scope of work and EfficiencyOne's reply comments to the DSMAG were released.
    - **December 7, 2018** : DSMAG meeting held where EfficiencyOne presented to stakeholders the final scope of work incorporating the comments received from Stakeholders.
- Navigant's Potential Study assumptions and modelling plan:
    - **March 22, 2019**: Navigant released the Potential Study assumptions and modelling plan to the DSMAG, with a comment period ending April 5, 2019.
    - **May 9, 2019**: Revised Potential Study assumptions and modelling plan and reply to stakeholder comments released.
- Navigant's draft Baseline Study report and detailed model assumptions:
    - **May 27, 2019**: Navigant release of the draft Baseline Study report and detailed modelling assumptions.
    - **June 7, 2019**: EfficiencyOne WebEx with the DSMAG where Navigant reviewed the report and assumptions used prior to the comment period ending.
    - **June 19, 2019**: Revised Baseline Study report and detailed model assumptions and reply to stakeholder comments were released to DSMAG.

- Navigant's draft Potential Study report:
  - **July 15, 2019**: Navigant releases the draft Potential Study report.
  - **July 16, 2019**: EfficiencyOne facilitates Technical Conference with model walk-through for all DSMAG members.
  - **July, 24, 2019**: Navigant releases additional 8760 energy savings data reflective of Navigant's "Base Case" scenario.
  - **August 2, 2019**: Reply to stakeholder comments released to DSMAG.

Throughout each phase of the Potential Study development EfficiencyOne received various feedback from stakeholders. In each case, this feedback was communicated and reviewed with Navigant, and where deemed appropriate, incorporated into the Potential Study process and final report. Details of the comments, and the manner in which they were incorporated into the development process and final draft of the Potential Study, are set out in the attached Appendix "A".

EfficiencyOne appreciates the participation of the stakeholders throughout the development of this Potential Study. EfficiencyOne believes the robust engagement process has resulted in a comprehensive DSM Potential Study that will significantly inform the ongoing development of the 2020 Integrated Resource Plan.

Yours very truly,

THE BRETON LAW GROUP

James R. Gogan

Appendix "A"

Stakeholder Feedback

Stakeholder Review & Comment Period #1 - RFP – Scope of Work

On November 6, 2018 EfficiencyOne shared a draft Scope of Work for the 2019 Potential Study Services with the DSMAG, and invited written comments from stakeholders until November 16, 2018, in an effort to inform the development of the Request for Proposal for these services. The following table highlights specific stakeholder comments and how EfficiencyOne has addressed each:

Stakeholder Comment	How Comment was Addressed
Consider an enhanced consultation process.	E1 revised the final Scope of Work by providing a stakeholder engagement schedule and adding the following additional items: • A comment period for stakeholders to examine and comment on the successful proponent's Draft Potential Study Assumptions and Modelling Plan; • A technical conference and comment period to allow stakeholders the opportunity to review and comment on draft Baseline Study results; and • A technical conference and comment period to allow stakeholders the opportunity to review and comment on draft Potential Study results. Stakeholder comment periods were subsequently expanded to two weeks for each.
Consider enhanced model access and transparency.	E1 revised the final Scope of Work to reflect the following enhanced transparency requirements: • Model inputs, assumptions, data sources, calculations and outputs are available for review by E1, stakeholders and the UARB; and • Proponents must disclose any limitations they require with respect to transparency and the use of their model.
Define cost-effectiveness testing to be provided and the types of benefits/costs to be included.	E1 revised the final Scope of Work to clarify the following: • Non-energy benefits included in Matter M08888 will not be included. • The benefits (or costs, in some cases) included within the TRC test will include Avoided Utility Costs, O&M impacts, fuel-switching impacts, and water impacts.

	Rate Impact Measure (RIM) test results were not included in the final Scope of Work but were provided to stakeholders as part of the Potential Study draft results.
Consider expanding the Scope of Work to be an Integrated DSM Potential Study, with added consideration of Demand Response at a minimum.	E1 modified the final Scope of Work to include demand-focused measures (including Demand Response). In addition, the Demand Response portion of the Study included battery storage technologies and predictions for EV adoption.
Consider analyzing and reporting on the low-income residential segment separately.	E1 revised the final Scope of Work to include specific requirements and disaggregation of results for Low-Income Nova Scotians.
Consider the following when modelling Technical, Economic and Achievable Potential: • Include only those measures that are currently commercially available; • Identify potential from Codes and Standards; • Avoided costs should be specified by E1 to the chosen vendor; • A maximum and current potential scenario should be developed; and • Developing scenarios should be based on incentive levels, good program and incentive design, delivery approach, availability of financing and marketing strategies.	E1 revised the final Scope of Work to include the following: • Clarified that Achievable Potential cases should include additional factors beyond incentive level changes; • Clarified that E1 intends to provide avoided costs information to the vendor; • Clarified the treatment of emerging technologies; and • Clarified that savings from Codes and Standards are to be quantified. E1 recommended that consideration of other comments was more appropriate as part of the review process for the Draft Potential Study Assumptions and Modelling Plan document.

Stakeholder Review & Comment Period #2 – Potential Study Assumptions and Modelling Plan

On March 22, 2019 EfficiencyOne shared draft Potential Study Assumptions and Modelling Plan with the DSMAG and invited written comments from stakeholder until April 5, 2019. The following table highlights specific stakeholder comments and how EfficiencyOne has addressed these:

Stakeholder Comment	How Comment was Addressed
Stakeholders should have the opportunity to specify potential scenarios.	Draft scenarios were provided to stakeholders for review on May 29, 2019 as part of the scenarios/sensitivities and detailed assumptions package.

A scenario showing no incentives should be included.	Draft scenarios were provided to stakeholders for review on May 29, 2019 as part of the scenarios/sensitivities and detailed assumptions package. A “low” scenario will be provided as one of the five potential scenarios modelled. A no incentive scenario effectively forms a forecast of naturally occurring improvements in energy efficiency which is accounted for in NS Power’s load forecast. E1 understands that NS Power’s forecast will form the basis for the IRP load forecasts.
Potential screened using PAC as the cost effectiveness test should be provided.	Draft scenarios were provided to stakeholders for review on May 29, 2019 as part of the scenarios/sensitivities and detailed assumptions package. Navigant provided an alternative view of Economic Potential, screened using the Program Administrator cost test, as part of the Draft Results package shared with the DSMAG.
A scenario should be provided in the Potential Study examining DSM potential in Nova Scotia considering only known, commercially-available technologies from E1's current measure database. Additionally, all scenarios should identify the proportion of savings attributed to measures that are currently not commercially available.	All achievable potential scenarios have been prepared in such a manner that only currently commercially-available technologies have been considered. No future emerging technology assumptions have been included in achievable potential results.

Stakeholder Review & Comment Period #3 – Assumption Detail and Draft Baseline Study Report

On May 24, 2019, EfficiencyOne shared additional assumption detail with the DSMAG, followed by a draft Baseline Study Report, shared on May 27, 2019 and invited written comments from stakeholders until June 7, 2019. The following table highlights specific stakeholder comments and how EfficiencyOne has addressed these:

Stakeholder Comment	How Comment was Addressed
Provide information regarding the source of inputs and assumptions	E1 provided sources for inputs (including incremental costs) along with the Draft Potential Study Report on July 15, 2019.

(including incremental costs assumptions) to stakeholders.	
Consider using updated avoided costs.	The 2019 DSM Potential Study relies on the 2014 IRP avoided costs of energy and capacity as well as the transmission and distribution avoided costs as provided by NS Power in the fall of 2018. E1 does not support using modifications to avoided costs that have not gone through a rigorous regulatory process inclusive of stakeholder review.

Stakeholder Review & Comment Period #4 – Draft Potential Study Report

On July 15, 2019 EfficiencyOne shared a draft Potential Study Report with the DSMAG and invited written comments from stakeholder until July 26, 2019. The following table highlights specific stakeholder comments and how EfficiencyOne has addressed these:

Stakeholder Comment	How Comment was Addressed
Consider continuing to work with stakeholders through the IRP process to increase transparency and to use the Potential Study and historic DSM experience and affordability to inform the IRP process	EfficiencyOne has facilitated multiple opportunities for stakeholder comment throughout the 2019 DSM Potential Study. These stakeholder comment and engagement opportunities exceeded original planning expectations, given the request for additional opportunities brought by NS Power and other stakeholders. EfficiencyOne agrees with the importance of stakeholder participation in the Potential Study process, and has considered all feedback provided by stakeholders. EfficiencyOne intends to respect the filing date of August 14, 2019, established by the UARB, for the Final 2019 DSM Potential Study work products, and does not anticipate any further technical development of the Potential Study beyond that date. EfficiencyOne does intend to fully participate in the 2020 IRP process, and will be available to respond to stakeholder questions for the purposes of clarification and facilitating understanding throughout that process.