

# 2019 Achievable Potential Study

## Final Engagement Summary Report

December 19, 2019

Engagement Initiation: February 2018

### *Engagement description / background*

The Independent Electricity System Operator (IESO) and the Ontario Energy Board (OEB), collectively the Project Team, conducted an integrated electricity and natural gas conservation achievable potential study (APS). The main objective of the APS was to identify and quantify energy savings (electricity and natural gas) and GHG emission reductions and associated costs from energy efficiency and conservation for the period of 2018-2038. An independent third party, Navigant, was selected through a competitive Request for Proposals (RFP) to support delivery of the APS. The engagement activities listed in this summary have enabled stakeholder views and preferences to be considered in the inputs to the final APS report. Input from stakeholders has informed the scope of work, project plan, APS scenarios and final APS results.

### *Engagement objective:*

The objectives of this engagement were to ensure that stakeholders understood the purpose and scope of the APS, and could inform and provide input throughout the course of the study. The Project Team sought stakeholder input to ensure the study was comprehensive, rigorous and incorporated the objectives of the APS as stated in the applicable ministerial directions. Engagement was also critical to understand the needs and potential uses of the APS from various stakeholders, such as the Ministry of Energy, Northern, Development and Mines, the Ministry of Energy, Conservation and Parks, local distribution companies, natural gas utilities and energy consumers.

### *Engagement approach:*

The approach for this engagement initiative included opportunities to provide input through various channels such as face-to-face meetings, webinars, and written feedback. The project team considered all relevant input and illustrated how feedback was considered to shape the stated objectives. Stakeholder engagement on the 2019 APS was divided into three phases.

#### Phase 1: Establishment of Achievable Potential Study Advisory Group

Through a call for applications, the Project Team established an [APS Advisory Group](#) that provided support and advice to inform the study. The open invitation of membership supported the Project Team's goal of achieving representation from the identified stakeholder groups.

#### Phase 2: Public and Advisory Group Meetings on the APS Scope of Work

The first meetings for the APS Advisory Group and first public open engagement focused on

collecting stakeholder input on the scope of work for the APS which was used in the RFP to secure a vendor to conduct the APS.

### Phase 3: On-going Public and Advisory Group Meetings

Once Navigant was selected as the vendor, the Project Team held both APS Advisory Group meetings and public engagement sessions throughout the APS to obtain input from all stakeholders as a critical task to the success of the study.

### *Stakeholder participation*

The Project team hosted 13 Advisory Group meetings and five public engagement webinars. The following groups of stakeholders were involved in the 2019 APS engagement through a combination of the Advisory Group meetings and the public stream of engagement sessions:

- Local distribution companies
- Natural gas utilities
- Consultants
- Government, specifically the Ministry of Energy, Northern Development and Mines and the Ministry of the Environment, Conservation and Parks
- Emerging technologies/developers
- Program delivery agents
- Industry associations
- Consumers
- Academics

These stakeholders have helped to shape the scope of work, project plan, input assumptions, APS scenarios and final APS results through their participation in engagement sessions and through written feedback to the Project Team.

### *How stakeholder input was used:*

The Project Team received stakeholder feedback during each Advisory Group meeting and after each public engagement session. All feedback and Project Team responses were publicly posted on the [2019 APS engagement webpage](#). The following Advisory Group meeting minutes and Project Team response to stakeholder feedback documents include the detailed summary of feedback received throughout the 2019 APS engagement.

- March 21, 2018 – [Advisory Group Meeting Minutes](#)
- May 9, 2018 – [Response to Stakeholder Feedback on the Scope of Work](#)
- May 31, 2018 – [Advisory Group Meeting Minutes](#)
- August 9, 2018 – [Advisory Group Meeting Minutes](#)
- September 13, 2018 – [Response to Stakeholder Feedback on the Draft Project Plan](#)
- September 18, 2018 – [Advisory Group Meeting Minutes](#)
- October 11, 2018 – [Advisory Group Meeting Minutes](#)
- November 8, 2018 – [Advisory Group Meeting Minutes](#)
- December 13, 2018 – [Advisory Group Meeting Minutes](#)

- February 14, 2019 – [Advisory Group Meeting Minutes](#)
- April 11, 2019 – [Advisory Group Meeting Minutes](#)
- May 16, 2019 – [Advisory Group Meeting Minutes](#)
- June 25, 2019 – [Advisory Group Meeting Minutes](#)
- July 18, 2019 – [Advisory Group Meeting Minutes](#)
- August 2, 2019 – [Response to Stakeholder Feedback on Draft APS Results](#)
- September 24, 2019 – [Advisory Group Meeting Minutes](#)

Below is a summary of some of the key areas of focus for which stakeholders submitted feedback and directly helped inform the 2019 APS Final Report. This is not an exhaustive list, as other APS elements also benefited from the input of stakeholders. The responses to feedback and Advisory Group meeting minutes above should be consulted for a detailed record of discussions.

Topic	Description of Stakeholder Feedback and Impact on APS
Scope of Work	<p>In March 2018, the Project Team held the first Advisory Group meeting and public webinar to share the draft scope of work to be included in the APS Request for Proposals (RFP). Soliciting input at this phase allowed stakeholders to provide input early in the project before the consultant had been selected and contract terms established.</p> <p>One major area of stakeholder questions and comments at this phase of the project focused on clarifying the technical scope of the study, for example, the geographic granularity of inputs, data used for forecasts and model calibration, scope of fuel switching analysis and consideration of net to gross ratios. The project team responded to over 25 unique questions individually in order to clarify these items and in several instances refined language in the RFP to remove ambiguity for potential bidders.</p> <p>An item of more significant feedback from members of the Advisory Group during project scoping surrounded the general approach to Achievable Potential Studies. Advisory Group members raised concerns that the measures-based approach used in most potential studies and proposed in the APS scope of work, can fail to account for rapidly changing technology, behaviours and operating conditions under which sectors and sub-sectors conduct business. Members noted that energy efficiency and conservation policy and programs should be based on electricity, natural gas energy savings potential and GHG emission reductions calculated using historical building energy use data and best practices. As a result of this feedback the Project Team added a new task to the APS to test a whole building benchmarking approach to determine the achievable potential for one sub-sector. The whole building</p>

	<p>benchmarking approach leveraged historical energy consumption data collected on existing hospital buildings to develop realistic achievable energy savings for other buildings in that sub-sector.</p>
<p>Debrief from 2016 APS's and learning from other jurisdictions</p>	<p>While the APS RFP was out for tender, the Project Team held a meeting with the Advisory Group to review stakeholder and consultant feedback from the previous electricity and natural gas studies and discuss opportunities to improve the approach and methodology through the 2019 APS.</p> <p>Key areas of improvement to the 2019 APS based on past stakeholder feedback included ensuring adequate review time for stakeholders throughout the study, adding additional constrained and maximum potential scenarios, including more requirements for dynamic and detailed data outputs, evaluating peak savings impacts, including a sensitivity analysis and marginal abatement cost curve in the scope of work and producing an integrated electricity and natural gas study.</p> <p>During this time, the study's Expert Panel also prepared and delivered a presentation to the Advisory Group on APS best practices from other jurisdictions, and responded to questions. The presentation provided context for discussion about methodology for this study.</p>
<p>Draft Project Plan</p>	<p>Once the procurement process was completed and Navigant Consulting was selected as the successful proponent, the Project Team and Navigant presented a draft Project Plan to stakeholders and the public to solicit feedback on Navigant's proposed methodology.</p> <p>This feedback helped identify areas of ambiguity in the project plan and the Project Team responded to over 60 comments clarifying forecasting assumptions, the scope and assumptions sources for energy efficiency measures and cost effectiveness testing among other topics. While many comments pertained to more detailed methodological decisions that would be made later in the project implementation, this feedback helped identify areas of interest that were discussed at future Advisory Group meetings and public webinars.</p> <p>Specific to the first task of base year disaggregation, Navigant separated out low-income multi-unit residential buildings and the residential cooking end use as a result of stakeholder feedback. They also included Excel results for each task output where not explicitly mentioned.</p> <p>A comment about APS modeling being a "black box" was raised and the Project Team committed to continuous engagement on methodological</p>

	<p>decisions throughout the project and to providing at least a week for stakeholder feedback on key deliverables. Feedback from the Advisory Group at the end of the project was very positive around project management and input transparency.</p>
<p>Measure Input Review</p>	<p>One important task of the APS was to develop measure input assumptions around electricity and natural savings, costs, useful life, etc. These measure inputs are some of the most sensitive modeling assumptions and also represent a considerable amount of data given the over 200 individual measures modeled in the study. To balance the goal of modeling transparency with the effort requested for Advisory Group members and the public, the Project Team created a sub-committee of measure input reviewers that was open to all members.</p> <p>In the end, the natural gas utilities and three energy efficiency experts reviewed and provided detailed feedback on measure inputs. Where Advisory Group members who did not participate in the sub-committee had specific questions or comments pertaining to measures and measure assumptions, these were discussed with Navigant and changes were made to several measures including DCKV and adaptive thermostats to reflect Ontario program experience.</p>
<p>APS Scenarios</p>	<p>Another important task of the APS modeling is to develop multiple incentive and adoption scenarios to provide information about the range of potential outcomes that could result from different program and policy decisions. In March 2019, the Project Team solicited input from the Advisory Group and the public on what scenarios should be run in the 2019 APS.</p> <p>Through this feedback, stakeholders recommended specific scenarios to run as well as some decision making criteria. Many stakeholders supported running a maximum achievable potential scenario, which was included in the final analysis. For natural gas potential scenarios, stakeholders suggested evaluating the spending required to achieve the savings scenario shown in the Ministry of Environment, Conservation and Parks' Environment Plan. Another stakeholder suggested developing a budget based on a historic levelized unit energy cost. Versions of both approaches were included in the selected scenarios.</p>
<p>Delphi Panel</p>	<p>To understand how customers are likely to respond under these different modeled scenarios, the Project Team organized a Delphi Panel of experts including program administrators, energy efficiency experts and customer representatives to provide insights on customer's financial</p>

	<p>decision making as well as their perception of non-energy impacts and market barriers. The Delphi process included an online questionnaire and teleconference calls to review survey responses.</p> <p>The Delphi Panel recruitment was led by the Project Team based on their sector networks but was also open to Advisory Group members. This process allowed Navigant and the Project Team to leverage the energy efficiency experience and expertise of a broad set of stakeholders to inform customer behaviour modeling and was also helpful to share information about and raise the profile of the project.</p> <p>Results of the process that fed into the APS modeling were shared with the Advisory Group and the public.</p>
Draft APS Results	<p>At various stages throughout the project Navigant and the Project Team shared updates on the draft results for each of the key project tasks. This helped stakeholders and the public understand directionally where the results were likely to fall well in advance of the final report being published.</p> <p>After the draft achievable potential results were shared, the Project Team solicited input on the reasonability of results, modeling approach and opportunities for future energy efficiency programs. This feedback was helpful to identify areas of the analysis that would require explanation in the report and helped inform key messages and study findings. Feedback on the modeling approach can be used to inform future analyses and recommendations about programs can be considered as part of future framework development.</p>

*Engagement outcome:*

The culmination of these engagement activities is that the IESO and the OEB have completed the first integrated electricity and natural gas conservation achievable potential study. An overview of the 2019 APS results can be found in the IESO and OEB foreword and a detailed description of the project methodology and results can be found in the final report and data appendices linked below.

**Final Report and Supporting Documents**

- [2019 APS Foreword](#)
- [2019 APS Final Report](#)
- [2019 APS Data Appendix 1 – Forecast Potential and Consumption](#)
- [2019 APS Data Appendix 2 – Forecast Potential by Measure](#)