

2019 Achievable Potential Study Project Plan Comment Template

August 17, 2018

The Independent Electricity System Operators (IESO) and the Ontario Energy Board (OEB) (collectively the Project Team) are requesting feedback on the draft Project Plan for the 2019 Achievable Potential Study (APS). The draft Project Plan was prepared by Navigant, who is the project consultant and was selected through a competitive procurement process. Navigant presented the draft Project Plan at the August 9, 2018 Advisory Group meeting and the August 20, 2018 public webinar.

More information about the 2019 APS project objectives and governance can be found on the [2019 APS webpage](#).

The purpose of the Project Plan is to:

1. Align expectations at the start of the project between Navigant, the Project Team, the Advisory Group, the Expert Panel and the broader public regarding the methodology, activities, deliverables, and timelines related to this project.
2. Capture any material changes to Navigant's proposed methodology, activities, deliverables and timelines as the project progresses. Changes to the Project Plan may be required as a result of new information regarding data availability, interim findings of Navigant's exploratory analysis or feedback from the Project Team or stakeholders.

To ensure effective tracking and responses to your input, please use the draft Project Plan comment table included below to summarize your comments and suggested actions.

When responding to the draft Project Plan please consider the following questions:

- Does the methodology presented in the draft Project Plan align with best practices in achievable potential studies?
- Will the approach described in the Project Plan tasks achieve the APS objectives?
- Are there any data sources not mentioned in the Project Plan that you think should be considered?

Please submit your comments to engagement@ieso.ca by Wednesday August 29, 2018. The Project Team will work with Navigant to consider and incorporate comments as appropriate and post responses on the 2019 APS webpage by September 12, 2018.

Thank you for your time.



2019 APS Project Plan Comment & Suggest Action Table

Task/Topic	Comment	Suggested Action								
<p>General Comments on the Project Plan</p>	<p>Section 2. pg. 1 “The APS will provide data and analysis to inform the development of future conservation policy and/or frameworks; program design, implementation and evaluations; long-term resource planning; and system operations.”</p>	<p>Please clarify that “system operations” relates to electric utilities only.</p>								
	<p>Please confirm that each item in the “Deliverables Tables” for each Task outlined within the Project Plan will be provided to the Advisory Group.</p>	<p>Natural Gas utilities need to receive copies to help inform DSM program planning.</p>								
	<p>Natural Gas Impacts are represented as GJ</p>	<p>Require that natural gas units be presented in cubic metres.</p>								
<p>Task 1 – Project Plan</p>	<p>Project Plan Section does not include expected timelines.</p>	<p>Require that a timeline for each deliverable/activity be provided to support resource planning.</p>								
<p>Task 2 – Base Year Disaggregation</p>	<p>Section 4.3 Table 4: Segments, by Sector</p>	<p>EGD breaks down Low Rise and High Rise buildings between Residential and Commercial.</p> <table border="1" data-bbox="941 1167 1432 1528"> <tr> <td>Multi-Unit Low Rise</td> <td>Residential</td> </tr> <tr> <td>Multi-Unit High Rise</td> <td>Commercial</td> </tr> <tr> <td>Low Income Part 9 Low Rise</td> <td>Residential</td> </tr> <tr> <td>Low Income Part 3 High Rise (greater than 4 stories)</td> <td>Commercial</td> </tr> </table> <p>Please review and confirm the tables in the Project Plan align with the tables provided by Enbridge (see attached).</p>	Multi-Unit Low Rise	Residential	Multi-Unit High Rise	Commercial	Low Income Part 9 Low Rise	Residential	Low Income Part 3 High Rise (greater than 4 stories)	Commercial
	Multi-Unit Low Rise	Residential								
	Multi-Unit High Rise	Commercial								
Low Income Part 9 Low Rise	Residential									
Low Income Part 3 High Rise (greater than 4 stories)	Commercial									
<p>Section 4.3, Table 4: Data centre in Commercial and Plastic and rubber manufacturing are not segmented currently.</p>	<p>If these sectors need to be separated out EGD will have to establish rules and create this sector. Will have a time impact of 2 weeks for this exercise.</p>									
<p>Section 4.3, Table 4: Residential: Multi</p>										

	<p>unit buildings are captured as part of commercial sector. EGD requires that it being maintained as such as they do not belong in the residential rates.</p>	Multi-unit Low Rise	Residential
		Multi-Unit High Rise	Commercial
		Low Income Part 9 Low Rise	Residential
		Low Income Part 3 High Rise (greater than 4 stories)	Commercial
	<p>Section 4.3, Table 4: Industrial. Industrial consumption is process driven and not weather driven so the regional differences in consumption may not be relevant for the industrial sector.</p>	<p>EGD strongly recommends providing industrial sector not disaggregated by regions. We have stringent aggregation rules to protect customer privacy. If we try to split industrial customers by segments and regions – and meet privacy requirements, the study will end up with a lot of big customers in one unknown bucket.</p> <p>The process is intensive and may delay delivery by 3-4 weeks.</p> <p>EGD may have some of these concerns with the commercial sector too, if the regional breakdowns become smaller than our major regions, but not as acute as the industrial sector.</p>	
	<p>Section 4.4, Table 6. “Develop and finalize strategy to map natural gas utility regions to IESO zones, in consultation with the Project Team and natural gas utilities.”</p> <p>FSA’s are very likely to cross regions.</p>	<p>Further discussion is required.</p>	
	<p>Section 4.4. Table 7. “IESO residential end use and natural gas end use survey results”</p> <p>Enbridge does not have an updated Residential end-use survey since 2013.</p>	<p>As an option, the current assumptions are largely consistent with Residential Energy Consumption Survey (RECS) that is done by U.S. EIA (May 2018; Table CE5.4-New England is a close proxy for Enbridge’s Central region)</p>	
<p>Task 3 – Reference Forecasts</p>	<p>Section 5. Pg. 10 “The reference case forecast(s) will account for the impact of existing and planned future codes and standards, and naturally occurring efficiency changes.”</p>	<p>This statement indicates that the achievable potential savings will be NET. Further, in Figure 8. Market Potential is achieved using NTG adjustments of the Program Data. EGD strongly</p>	

		recommends that savings be shown as GROSS, thereby allowing the gas utilities to apply evolving NTG adjustments for the purposes of future program planning. If NTG adjustments are included, it is critical that this is clearly stated in the study and all assumptions are clearly defined. Finally if results will be provided as net, the utilities require that gross savings also be provided in an Appendix together with 20 year NTG assumption forecasts.
	Section 5, Fig. 4 Schematic Reference Case Development: Reference Case treatment for Residential/Commercial is by Segment/Sector; whereas for Industrial is it End Use.	Please clarify this approach and explain the different treatment.
	The forecast methodology presented in the draft plan looks aligned with best practices in achievable potential studies	Discrepancies in key assumptions (especially in carbon pricing assumption) between utilities could have a significant impact on forecast that is provided to Navigant. Updates on the federal carbon pricing system (new output-based pricing system) might require the forecast to be updated.
Task 4 – Measure Characterization	Section 6.1 Measure List: “The existing and new measures can be further classified into four categories namely prescriptive, custom, behaviour and fuel switching measures , based on the characterisation of the savings, as shown in Figure 5.”	Confirm which screen will be used when considering Fuel Switching. EGD strongly recommends the TRC test be applied.
	Section 6.3, pg. 15 - 16: Prescriptive and Custom Measures. How is custom defined? In other words, what is included in this list and where will the custom calculations be sourced?	EGD recommends using the approach from studies in the past where the model did not discuss if the measure was prescriptive or custom. In Enbridge’s opinion prescriptive vs. custom is a program design issue and distinction within the study will not help inform future program planning.
	Section 6.3, pg. 17 Fuel Switching. How will it be determined which measure is more efficient (i.e. switch from gas to electric, or electric to gas). Will there be separate outputs for fuel switching	Fuel switching measures must factor in site versus source. Any fuel switching scenarios should capture the increased loads associated

	reductions and increases in the respective energy for gas, electric and other fuels?	with the switched measures. For example, fuel switching to natural gas will increase the natural gas forecast. As well, fuel switching from natural gas to electric at the measure level will also increase natural gas load at the central generation plant –in the Industrial “Utility” sector.
Task 5 – Technical Potential	Section 7.4.1, pg. 23. RET model considers remaining useful life (RUL) value to estimate savings.	If using the RUL then the model should also adjust for future costs (i.e. reduced savings and reduced costs)
	Section 7.4.3, pg. 24: Measure Stacking – not clear how it will be determined which measures are prioritized.	Please confirm the method/criteria to determine which measures are priority and how measures are stacked. Please also confirm how competitive savings will be handled.
Task 6 – Economic Potential	Section 8.2, pg. 27: Economic Screening Threshold	EGD strongly advises that TRC is the best screen to use. PAC should only be used for program prioritization – not as an economic screen.
	Section 8.2, pg. 27: Operations and Maintenance Savings	Clarify, as these savings were not shown in the model in Section 7.2
	Section 8.3.1, pg. 28 Cost Effectiveness Test: “The Total Resource Cost (TRC) test or Program Administrator Cost (PAC) test will be used for cost-effectiveness screening.”	EGD strongly advises that TRC is the best screen to use. PAC should only be used for program prioritization – not as an economic screen.
	Section 8.3.1. pg. 28 Cost Effectiveness Test “For fuel switching, an assumption needs to be made about which utility’s perspective are we considering when assessing the cost-effectiveness of a measure”	EGD strongly advises that the TRC be used when considered fuel switching.
Task 7 – Achievable Potential	Section 9, Fig. 11. Achievable Potential as a Function of Customer Awareness and Willingness. The criterion of payback acceptance is not the only barrier to implementation.	Enbridge would like to note that additional barriers include customer’s available cash flow despite level of incentives offered to reduce payback.
	Section 9.1 ,pg. 31 Data Inputs: “In addition, details of “planned rollout” measures, such as behavioural measures, will be determined prior to modelling achievable potential.”	Please confirm that the gas utilities will be providing “details” or explain where the details will be sourced.

	Section 9.2, pg. 31 Model Overview, reference 15: “Delphi panel is a structured method of inquiry which relies on a panel of experts.”	Enbridge requests that the minutes of the Delphi panel be provided to the Advisory Group. EGD strongly recommends that the Delphi panel consist of randomly selected individuals and not experts retained by the OEB/IESO for the purposes of this Study.
	Sec. 9.3.2 Fig. 14. Pay Back Acceptance Curves “The result will be a set of payback acceptance curves, which will be used as inputs to the potential model. As an example, statistical analysis was conducted by Navigant to develop the set of curves shown in Figure 14”	Request clarification that this curve is used for illustrative purposes. If not, EGD does not agree that the Industrial payback requirements are accurate.
	Section 9.3.3, pg. 33 Model Calibration. “The Identifying and ensuring an explanation existed for significant discrepancies between forecast savings and prior year savings, recognising some ramp-up is expected, especially for new measures or archetype programs.”	Confirm that the potential savings model will be calibrated to the most recent final audit of annual DSM savings.
	Section 9.3.3, pg. 33 Model Calibration “Calculating \$/first-year kWh costs by sector and comparing these with past results”	Please confirm that \$/GJ (or m3) by sector will be included.
	Section 9.3.5, pg 35 Scenario Analysis – There are only two scenarios described “Constrained Budget and Unconstrained Budget.”	As included in EGD’s written comments on March 28 th the following budget scenarios would be beneficial to inform program planning and achievement levels: <ul style="list-style-type: none"> •100% higher than 2020 budget levels •50% higher than 2020 budget levels •50% lower than 2020 budget levels Additionally, EGD recommends the following scenarios be included: <ul style="list-style-type: none"> •150% higher than 2020 budget levels •200% lower than 2020 budget levels The additional scenarios will allow the utilities to evaluate the impact from potential changes in government policies or requests from the governments to consider higher or lower DSM budgets.
	Unclear if the savings will be provided as GROSS or NET. Gross savings being	As outlined in Task 3, EGD strongly recommends that savings be shown as

	defined as savings that have been adjusted for baseline efficiency, but have not been adjusted for free ridership & spillover impacts also referred to as Net to Gross (NTG).	GROSS, thereby allowing the gas utilities to apply evolving Net to Gross (NTG) adjustments for the purposes of future program planning. If results will be shown as NET, the utilities require that GROSS savings also be provided in an Appendix together with 20 year NTG assumption forecasts.
Task 8 – Whole Building Benchmarking	Section 10.5 “Navigant will make use of IESO incentive data and historical trends in energy intensity to address the economic factors that drive the historical uptake of CDM (or historical decline in energy intensities) and will require the expert opinion of the subgroup to develop a value of historical consumer awareness.	Is this pilot for electric programming only? Please clarify this statement. If inclusive of natural gas programming, DSM program participation information will require customer consent, if required at a non-aggregated level.
	Section 10	Please explain how the baseline efficiency and net to gross adjustments will be incorporated into this analysis.
		Please outline what is considered a successful pilot?
Task 9 – Sensitivity Analysis		