

Foreword to the 2016 Achievable Potential Study

What is the Achievable Potential Study, why has it been undertaken and what will it be used for?

Over the past decade, Ontario has established itself as a leading jurisdiction in energy efficiency. This leadership has been accomplished through the integration of conservation and demand management (CDM) into long term energy planning, the achievement of some of North America's most ambitious energy efficiency targets, investment in energy efficiency innovation, cost effective program delivery, and rigorous evaluation, measurement, and verification (EMV) of program results. On March 31, 2014, the Government of Ontario renewed its commitment to CDM with a direction from the Minister of Energy that mandated the IESO to work with Ontario's local distribution companies (LDCs) to deliver 7 terawatt-hours (TWh) of electricity savings by the end of 2020 (the Conservation First Framework or "CFF").

This direction also requires the IESO to conduct an achievable potential study (APS) for electricity efficiency in Ontario every three years, with the first study to be completed in 2016. The purpose of this study – as stated in the direction – is to inform electricity efficiency planning and programs. The APS results also factor into the Energy Conservation Agreement (ECA) that governs the relationship between the IESO and LDCs for the delivery of conservation programs within the CFF.

The APS factors into the ECA in two key areas:

1. the potential mid-term financial incentive available to LDCs is based on LDC achievement of the lesser of 50 per cent of their CFF target (a portion of the total 7 TWh provincial target) or 50 per cent of the achievable potential in their service area per the APS; and
2. the APS is one of several inputs to the mid-term review of the CFF to be completed by June 1, 2018 (discussed below).

The APS study consists of two underlying components: a behind-the-meter generation study, and an energy efficiency study that includes an assessment of both short-term (Conservation First Framework 2015-2020) and long-term (2015-2035) energy savings potential. These components are set out in the three documents that accompany this foreword.

Development of the Study

A number of key parties were involved in the APS. The IESO, as the agency responsible for the province's electricity and conservation planning, led the development of the APS. As front-line partners in the delivery of conservation programming, Ontario's local distribution companies (LDCs) have a key stake in the outcomes of the study. As such, an LDC Working Group was created, comprising 12 LDC representatives that provided valuable input into the scope, methodology, and execution of the study.

The LDC Working Group also included observers from the Ministry of Energy, the Ontario Energy Board, the Electricity Distributors Association, Union Gas, Enbridge Gas, and the Environmental Commissioner's Office. The LDC Working Group, together with the IESO, participated in the selection – via competitive procurement – of two independent third-party consultants tasked to undertake the energy efficiency and behind-the-meter components of the study.

The IESO also sought advice from an independent, third party panel of experts made up of three professionals from outside of Ontario with significant experience with similar studies in other jurisdictions. The IESO carefully considered input from the LDC Working Group and worked to reach agreement with members on study method and assumptions wherever possible.

LDC Working Group input on matters such as measure savings assumptions and applicability, program design elements, and customer adoption rates impacted the final APS results. Where there were differing perspectives regarding methodology and assumptions, the IESO looked to the advice of the independent expert panel and third-party consultants for guidance. This inclusive and collaborative process brought greater transparency to the design, methodology, and assumptions that were used for this study.

The 2016 APS was developed from the bottom-up for each LDC, using data provided in large part by LDCs themselves - allowing for results with a greater level of local resolution than has been available in previous studies of achievable potential in Ontario.

While Ontario's electricity market is unique, best practices outside of Ontario used to model electricity savings were considered and incorporated, accomplishing a balance of meeting industry-wide standards while accommodating distinct features and data found in Ontario.

Summary of APS Results

The study has estimated that, within the Conservation First Framework (CFF) timeframe (2015 – 2020) and budget (\$1.8 billion plus approximately \$0.4 billion from the 2011-2014 legacy framework that funded the 2015 transition year), there is approximately 7.4 TWh of achievable electricity savings in Ontario.

While the results indicate that the province-wide CFF target of 7 TWh is achievable, the study reveals that some LDCs may face challenges achieving their individual targets within existing budgets and other LDCs have the potential to surpass their individual targets.

The potential LDC-level challenges revealed by the APS may be addressed in part by the flexibility built into the CFF framework.

Many LDCs have already exercised this flexibility through actions such as collaboration with other LDCs and the development of innovative new local programs and pilot programs.

The APS results can provide LDCs with additional insights to achieve the goals of the CFF.

APS: An Input to the Conservation First Framework Mid-term Review

The APS will be one of several inputs into the mid-term review of the Conservation First Framework which the IESO is required by direction of the Minister of Energy to complete by June 1, 2018.

The mid-term review will focus on the overall 7 TWh target and the allocation of budgets and targets amongst LDCs, lessons learned regarding LDC funding models, customer needs and satisfaction, and conservation integration with regional planning.

In addition to the APS results, the review will consider inputs such as stakeholder consultation, lessons learned through EMV, and an analysis of CFF 2015 to 2017 results and expenditures.

IESO will publish a stakeholder engagement plan for the mid-term review in the coming months to provide all interested stakeholders with information about how they can provide input into the review.

The APS can also serve as a valuable resource for the design and delivery of energy efficiency programs by LDCs and others, as well as a key input to regional and long-term energy planning.

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