

Conservation Insights and Objectives 2018+

November 2, 2017



IESO Priorities

Providing Public Value by Increasing Opportunities for Customers

- Conservation continues to be the most cost effective resource available, at less than four cents per kilowatt-hour, providing value to the broader system while also helping consumers to manage their electricity costs.

Delivering Superior Reliability in a Changing Environment

- Evolving operational tools to maintain reliability
- Evolution of distribution system to include more energy resources

Driving to a More Efficient and Sustainable Marketplace

- Market Renewal Project

Engaging Communities to Plan for Tomorrow

- Regional planning process engaging consumers in shaping the electricity system



Like LDCs, an ongoing priority for the IESO is helping residential and business customers of all sizes to manage their electricity costs by participating in the energy efficiency programs under the Conservation First Framework. New and enhanced opportunities are being driven by innovative technologies and programs.

The IESO continues to foster a culture of conservation by creating easier access to new and enhanced conservation programs designed to have an enduring impact on consumer behaviour. This year we launched new province-wide programs including the Whole Home Pilot in collaboration with the gas utilities, and the Business Refrigeration Incentive program, that originated from a few local programs designed by LDCs. Several program enhancements were also implemented this year, including Deal Days, that offers instant discounts for energy efficient products at participating retailers until November 5th.

Increasing variable generation, integration of distributed energy resources, and changing demand and supply patterns are creating new operating challenges in managing the bulk power system. The IESO is working with stakeholders to develop cost-effective solutions to address these challenges.

Ontario's electricity market was designed in the late 1990s and introduced in 2002, when the electricity landscape looked very different from today. The elimination of coal, integration of distributed resources like wind and solar, and growing role of the consumer has dramatically changed the dynamics of Ontario's electricity system. The Market Renewal project is a collaborative effort between the IESO and its stakeholders to pursue enhancements to Ontario's electricity market that will address inefficiencies and lay a foundation that will prepare us for the electricity sector of tomorrow.

Finally, an enhanced regional planning process will enable communities and consumers to participate in the sector and

shape the electricity system around them. Stakeholder and community engagement is a cornerstone of the IESO's mandate in ensuring the effective management of Ontario's grid.

In the last twelve months...

➤ Winter 2016/2017

- December : Direction received on province-wide program delivery
- December : Energy Performance Program launches
- January: Mid-term Review Advisory Group established, work underway

➤ Spring 2017

- April: IESO enters into Service Level Agreement with the Ministry of Environment and Climate Change (MOECC) to provide early support with program design, website development and call centre services
- May: Province-wide Whole Home Pilot launches
- May to June: LDC Regional Meetings



3

There has been a lot of activity in the first half of the framework, especially in the last twelve months.

Late last year we launched the public engagement for the Mid-term Review, and in January, the Advisory Group was established, and work on the study began. There has been a lot of activity since then, with the Advisory Group meeting monthly, four public webinars, and ongoing feedback received from customers, LDCs, service providers, associations, and others.

This past spring, the IESO entered into a Service Level Agreement with the Ministry of Environment and Climate Change (MOECC) to provide early support for its new agency. As you know, we have been providing support to the MOECC in program design, website development and call centre services.

The Whole Home Pilot also launched in May, and we have seen some great success. Initial reporting as of early Q3 shows strong participation with over 6,000 pre-assessment audits completed for homes of all heating types, which includes delivering conservation educational material including program information and a walk-through audit [NTD: include updated stats from Fraser].

In the last twelve months (cont'd)...

➤ Summer 2017

- July: 2016 verified results released
- August: Direction received for IESO to enter into agreements with MOECC/Green Ontario Fund for expanded scope of work, and province-wide Home Assistance Program delivery
- August: Announcement of Green Ontario Fund, website launch, and early enrollment for GreenON Installations

➤ Fall 2017

- September: Fall Save on Energy marketing campaign launches
- October: Launch of new Deal Days program



In August we received another Direction from the Ministry of Energy requiring the IESO to enter into an agreement with the MOECC/Green Ontario Fund to support the establishment of the new agency, and to ensure that this new entity complements and builds on the success of the Province's existing suite of CDM programs. This Direction also required the IESO to centrally design, fund and deliver the Home Assistance Program. Later in August we saw the announcement of the Green Ontario Fund, website launch, and early enrollment for their first program, GreenON Installations.

This fall we launched a Save on Energy marketing campaign that included some

Highest
annual
energy
savings
to date
achieved in
2016

Together, we have achieved a lot...

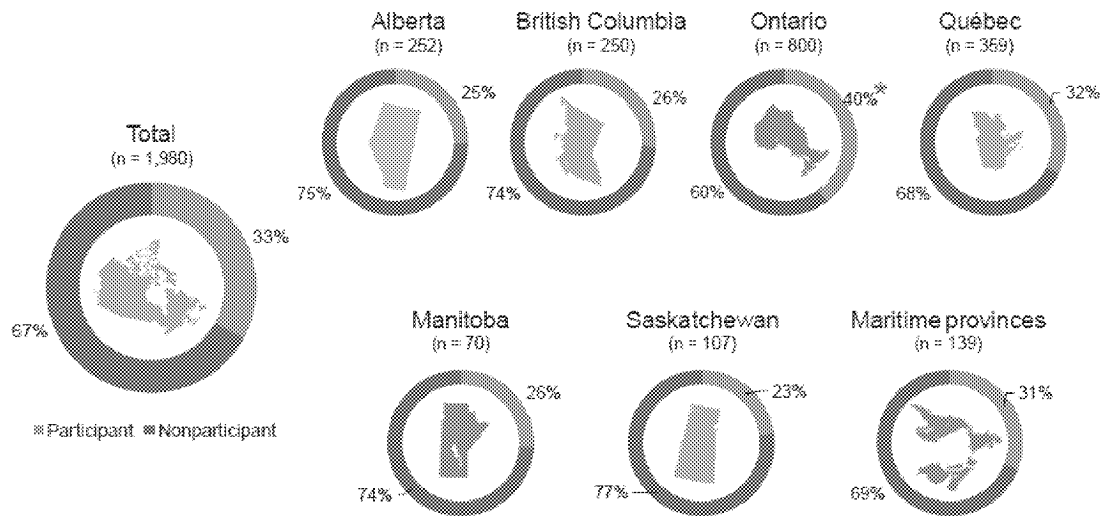
Fourth consecutive year of increased energy savings results

- On track to meet the CFF 2020 Energy Savings Target -As of October 15, 2017, XX% (XXX TWh) of 7 TWh CFF target has been achieved
- Portfolio remains cost-effective – within 4¢/kWh

As of October 15, 2017, XX% of the CFF target was achieved, at a cost of X¢/kWh [NTD: A-J will have updated stats by the end of October – will include when available.]

Ontario continues to demonstrate its CDM leadership

Only one-third of the country's residents participated in at least one CDM program in the past 12 months. Ontario has significantly higher participation than other provinces.



Base: All respondents. Question 55_3: Which of the following programs and services have you used at your primary residence through your energy provider in the past 12 months? Please select all that apply.

© E Source (Canadian Residential Customer Insights Survey 2017)

The verified results don't just speak for themselves.

When we go out to industry conferences and forums like AESP, ACEEE, and others, and talk to other utilities and organizations in this sector, we can really see our contributions to the sector across both Canada and North America.

Some of you may have already seen this infographic from a residential customer study completed by E Source this year, but I wanted to share this with you to highlight our collective success and demonstrated leadership in the energy efficiency space. Ontario is the leading jurisdiction with the highest level of program participation in Canada.

The landscape has evolved...

- Release of Climate Change Action Plan (June 2016)
- Industrial Conservation Initiative (ICI) eligibility expanded (September, 2016)
- Three Minister's Directions
 1. Whole Home Pilot and pay-for-performance program
 2. Gap filling for province-wide program delivery by IESO
 3. IESO support for MOECC/Green Ontario Fund, and province-wide delivery of HAP
- Increasing electricity prices in 2015 and 2016
- Fair Hydro Plan – including further expansion to ICI eligibility (May, 2017)
- Release of Long Term Energy Plan (October, 2017)



We have seen great success, and also quite a bit of change.

In 2015 and 2016 electricity prices were rising.

Last year we saw the release of the Climate Change Action Plan, expansion of Class A eligibility through the Industrial Conservation Initiative, and we also received two Directions from the Ministry of Energy.

This year, we saw the release of the Fair Hydro Plan, which included further expansion of the Class A eligibility through the ICI. And just last week, there was the release of the Long Term Energy Plan.

With all of this, and Market Renewal, the sector is certainly evolving, and inevitably, our objective and priorities, and the way that we work will too.

Conservation Objectives 2018+

- Continue to support and ensure the success of the delivery of the Conservation First Framework (CFF) and Industrial Accelerator Program
- Maintain and evolve productive relationships with LDCs, customers, and channels to drive CFF objectives
- Continue to foster and support innovation and collaboration
- Ensure verified cost-effective energy savings
- Provide support to MOECC/Green Ontario Fund as required by the August 4 Direction
- Recalibrate where required on the second half of the framework based on the Mid-term Review

As we head into the second half of the framework, there are a number of key priorities and objectives for us.

First and foremost, we are going to continue to support and work with LDCs, customers and other stakeholders, and government to ensure the success of the Conservation First Framework and Industrial Accelerator Program. This means ensuring all customers across the province regardless of sector and size have access to programs to help them manage their energy use and costs. Some of the changes we have seen towards the end of the first half of the framework have been largely driven by a gap, or identified need in the marketplace.

Our relationship with LDCs, customers, channels and other stakeholders has always been a key priority for us. Now what we want to do is take the foundation of the relationships we have built, and evolve them to align with our also evolving objectives. This may mean things will not be exactly the same as they were in the last framework, or even last year, but the needs of our sector are changing, and so must the way we work together and our roles.

We will continue to support innovation and collaboration in the sector. At the dawn of the Conservation First Framework, the LDC Innovation Fund has been available to pilot innovative programs, and the LDC Collaboration Fund to provide support to LDCs with innovative collaboration projects and activities. Now, halfway through the framework, we need to re-evaluate where we are, and the kinds of projects and innovation that should be supported at this point in time. As such, I'm happy to announce the reintroduction of the LDC Collaboration Fund that will...[NTD: include speaking points on what this looks like]

Something that will not change, is ensuring verified cost effective energy savings. Conservation is regarded as the cheapest resource we have, and for this to remain true, we need to ensure programs are designed and delivered in a cost

effective manner. Having said that, there is always room to improve here – just because a program delivers a kWh in savings for under four cents, does not mean we cannot be more cost effective. One of the things we are looking at through the Mid-term Review is how we can be even more cost effective given the changing energy landscape – our cost effective thresholds have not changed over at least two frameworks, and I think there is room to achieve even greater cost effective energy savings for the ratepayers of Ontario.

Earlier today you heard from Parminder Sandhu, Chair of the Green Ontario Fund Board of Directors. In accordance with the August 4 Direction from the Ministry of Energy, and LTEP, the IESO will continue to provide support to the MOECC and Green Ontario Fund providing its insights and expertise, involving key partners such as LDCs, delivery agents and other service providers as much as possible. We had a healthy discussion around the potential roles and involvement of LDCs last week with the CFIC LDCs, and even before that had an introductory meeting and discussion with MOECC and Green Ontario Fund at the September 26 CFIC meeting.

And of course, now halfway through the framework and pending the results of the Mid-term Review, recalibrate where required to ensure the continued success of conservation programs in Ontario. We saw in the LTEP released last week that there is a persisting commitment to conservation in Ontario, and it's not going away.