2021-2024 Conservation and Demand Management Framework

Update to 2021-2024 Conservation and Demand Management Framework Program Plan

The Conservation and Demand Management (CDM) Framework Program Plan is an overview of the CDM programs to be delivered by the IESO, under the Save on Energy brand, from January 2021 to December 2024. The plan sets out forecast budgets and, where applicable, savings targets and estimated cost-effectiveness for the portfolio of CDM programs.

The IESO reports on program participation, expenditures against budget, and progress towards demand and energy savings targets, greenhouse gas emission reductions, and additional achievements of the Energy Affordability Program and on-reserve First Nations programs, on an annual and quarterly basis. The IESO has undertaken a mid-term review of the framework; this updated plan reflects the actual spending and savings to date as well as the forecasted activity for the latter part of the framework, including the implementation of the new and enhanced initiatives planned as a result of the Minister's Amending Directive of October 4, 2022.

2021-2024 CDM Framework Overview

Electricity demand in Ontario is expected to grow rapidly in the coming years as a result of economic development and electrification of various sectors of the economy. At the same time, Ontario is seeing the retirement of generation assets resulting in growing system needs. In the midst of these needs, conservation demand management (CDM) initiatives will continue to offer ratepayer value as energy efficiency continues to be counted on as a clean, reliable and cost-effective approach to ensuring the reliability of the grid.

The current suite of programs was launched in 2021, following a directive from the Government of Ontario to develop a new four-year electricity CDM framework. The 2021-2024 CDM Framework focuses on cost-effectively meeting the needs of electricity consumers and Ontario's electricity system through the delivery of programs and opportunities to enable electricity consumers – including industrial, commercial, institutional, on-reserve First Nations, low-income and income-eligible residential consumers - to improve the energy efficiency of their homes, businesses and facilities.

Since the launch of the framework in 2021, the government has taken additional action with a directive to enhance the 2021-2024 Framework. The IESO is pursuing enhancements to various Save on Energy programs (including those focused on income-eligible and First Nations customers) to address system and customer needs. This includes moving forward to launch four new or enhanced CDM programs in 2023 to increase energy efficiency contributions to emerging system needs.

Additional focus areas of the framework include:

- Achieving provincial peak demand reductions and implementing targeted approaches to address regional/local system needs using demand-side solutions as cost-effective alternatives to traditional infrastructure investments
- Leveraging competitive mechanisms to drive cost efficiencies and support innovative customer-based solutions.

Details about the various incentives offered through each program and how to apply is available at SaveOnEnergy.ca.

Budget and Targets:

The plan, which is subject to changes and revisions over time, allocates the 2021-2024 Conservation and Demand Management Framework budget of up to $1.034 billion over the suite of programs and is forecasted to achieve 725 MW of peak demand savings and 3.8 TWh of electricity savings by 2026. These savings are expected to persist for 10 to 20 years from the implementation of the measure.

Reporting:

As part of its responsibilities, the IESO will publish the verified results of its evaluation, measurement and verification (EM&V) of the savings resulting from the 2021-2024 CDM Framework, as well as costs related to its activities in support of the programs such as audits, capability building and training. The IESO will publish verified program results on an annual basis, as well as quarterly program updates, to inform the sector on the progress to meeting the targets. The 2021 Verified Results are available at IESO.ca.

Cost Effectiveness:

Program cost-effectiveness under the 2021-2024 CDM Framework for the CDM Plan is assessed using forecasted program participation and supply-side avoided costs, which estimate the cost of supplying that same amount of energy from the current electricity generation mix. The IESO Cost-Effectiveness Guide is available on the IESO website. Cost effectiveness in this plan is based on avoided supply costs developed in the IESO's 2021 Annual Planning Outlook and has been updated to reflect changes in the province's planning outlook.

2021-2024 CDM Framework Summary Tables:

The following tables outline the associated budget, electricity and demand savings, and cost-effectiveness of the programs delivered under the 2021-2024 CDM Framework.

Budget

Program	Budget ($M)			
	2021	2022	2023	2024
Retrofit Programs	57.3	78.7	93.9	122.1
Small Business	4.1	1.8	6.8	15.8
Energy Performance	2.2	2.1	8.3	8.4
Energy Management	0.4	7.0	6.0	13.6
Industrial Energy Efficiency	0.0	0.0	29.0	41.0
Targeted Greenhouse	0.0	0.0	68.0	68.0
Local Initiatives	0.0	0.0	69.6	70.1
Residential Demand Response	0.0	0.0	10.3	14.6
Total Business & Residential Programs	**64.0**	**89.6**	**291.8**	**353.5**
Energy Affordability Program	10.8	13.8	41.7	87.0
First Nations Programs	1.3	0.1	18.1	16.4
Total Support Programs	**12.0**	**13.9**	**59.8**	**103.4**
Total All Programs	**76.0**	**103.5**	**351.7**	**456.9**
Customer Education and Tools	0.0	0.3	0.4	0.5
Central Services -- Business	2.7	4.3	17.3	17.6
Central Services -- Support	0.0	0.2	1.3	1.3
Total IESO Services	**2.7**	**4.8**	**19.0**	**19.4**
Total Annual Budget	**78.7**	**108.3**	**370.7**	**476.3**
CDM Framework Total				**1,034.0**

Peak Demand and Energy Savings

	Peak Demand Savings (MW)				Energy Savings (GWh)			
Program	**2021**	**2022**	**2023**	**2024**	**2021**	**2022**	**2023**	**2024**
Retrofit Programs	49.5	89.8	96.5	127.9	322	570	359	560
Small Business	1.5	0.6	3.0	9.0	10	4	20	65
Energy Performance	1.8	1.8	8.4	8.4	16	20	50	54
Energy Management	0.1	1.8	8.0	25.1	1	15	29	96
Industrial Energy Efficiency	0.0	0.0	20.0	22.0	0.0	0.0	165	165
Targeted Greenhouse	0.0	0.0	1.4	1.3	0.0	0.0	333	333
Local Initiatives	0.0	8.0	43.0	45.4	0.0	61	161	181
Residential Demand Response	0.0	0.0	84.0	123.0	0.0	0.0	3	7
Total Business & Residential Programs	**52.9**	**101.9**	**264.3**	**362.1**	**349**	**670**	**1,120**	**1,462**
Energy Affordability Program	0.7	1.1	7.5	14.5	7	14	49	97
First Nations Programs	0.0	0.0	2.0	2.0	1	0	15	16
Total Support Programs	**0.7**	**1.1**	**9.5**	**16.5**	**8**	**14**	**64**	**113**
Total Annual Savings	**53.6**	**103.0**	**273.8**	**378.6**	**357**	**684**	**1,184**	**1,575**
CDM Framework Total				**725.0**				**3,800**

*Values may not add up precisely due to rounding

Notes:

- 2022 values are estimates based on available preliminary results and forecasts
- For Residential Demand Response the Peak Savings value is the estimated peak demand impact for the year of operation and does not persist over time. The Total Peak Demand Savings of 725 MW includes the Residential Demand Response peak impact only in 2024 to avoid double counting of savings.
- Retrofit Programs include: Retrofit Prescriptive, Midstream Lighting, Custom Lighting, and Custom Non-Lighting

- Energy Management Programs include: Energy Manager Program, Strategic Energy Management, and Existing Building Commissioning
- Targeted Greenhouse is estimated to provide 2.7 MW of provincial peak demand reduction while also reducing the Southwestern Ontario local peak demand by approximately 225 MW
- Local Initiatives include: Local Initiatives and Enhanced Local Initiatives

Program Cost-Effectiveness

	Cost Effectiveness		
Program	**Program Administrator Cost (PAC) Ratio**	**Levelized Unit Energy Costs ($/MWh)**	**Levelized Unit Capacity Costs ($'000/MW-yr)**
Retrofit Programs	2.3	25	126
Small Business	1.2	39	308
Energy Performance	2.7	20	138
Energy Management	1.6	39	143
Industrial Energy Efficiency	1.9	28	218
Targeted Greenhouse	2.3	21	n/a
Local Initiatives	1.6	41	173
Residential Demand Response	1.0	n/a	112
All Business & Residential Programs	**2.0**	**27**	**144**

Technical Notes:

- Peak demand savings are calculated in accordance with the IESO Evaluation, Measurement and Verification Protocols and Requirements. Peak demand savings and energy savings persist to 2026 and assumes the Residential Demand Response program will continue beyond the current Framework.
- Budgets are funds committed in the calendar year; energy and demand savings in a calendar year are those resulting from the budget commitment.
- Cost effectiveness is calculated in accordance with the IESO's Cost Effectiveness Guide. Avoided supply costs are based on the IESO's 2021 Annual Planning Outlook and has been updated to reflect changes in the province's planning outlook.
- As per the September 30, 2020, Ministerial Directive, the Support Programs are not required to meet cost-effectiveness thresholds as these programs provide significant non-energy benefits not captured through cost-effectiveness analysis.