

Final Verified 2016 Annual LDC CDM Program Results Report

Letter from the Vice-President, Conservation & Corporate Relations

June 30, 2017

I am pleased to provide LDCs with their Final Verified 2016 Annual Results Report. Collectively in 2016, LDCs achieved 1.2 TWh of energy savings persisting to 2020. When combined with the 2015 results, LDCs have achieved 2.6 TWh of energy savings, representing 38 % of the 7 TWh target. The results show positive progress towards the achievement of the Conservation First Framework (CFF) target and demonstrate the continued collaboration between LDCs and the IESO in promoting a culture of conservation across the province.

Key highlights from the 2016 final results include the following:

- The Coupons program produced a record achievement, delivering 428 GWh of energy savings in 2016, more than doubling the results from 2015. LED light bulbs remained the most common measure accounting for 75 % of coupons redeemed and 96 % of savings.
- The Retrofit program continues to be the highest performing program achieving 567 GWh of energy savings in 2016, despite experiencing a 29 % reduction in savings over the 2015 results (including adjustments). Lighting measures continue to produce the majority of savings, 74 % in 2016, with non-lighting measures accounting for the remainder.
- The success of the Coupons program supported residential sector programs in achieving a larger share of the portfolio savings in 2016 than in previous years, accounting for 44 % of target achievement, with business sector programs and local and pilot programs accounting for 54 % and 1 %, respectively.
 - o It is important to note that there remains a considerable data lag, representing completed, but unreported projects for the Retrofit and Process and Systems Upgrades Programs. Together, these programs have roughly 250 GWh in unverified savings waiting to be reported by LDCs. It is anticipated that these savings will be reported in future year’s 2016 adjustments.
- As with 2015, the IESO evaluation methodology enabled further granulation of net verified results in 2016, resulting in increased LDC-specific and regional level net-to-gross adjustment factors, where data permitted.
- Four LDCs have achieved at least 90 % of their CFF target, and nine others are above 50 %. These early successes are prompting increased dialogue between LDCs with respect to potential target exchange, which is both permitted and encouraged under the CFF.

There were minor revisions to the final results relative to the preliminary results including: 1) revisions/corrections to program savings assumptions / adjustments as required (primarily to participation levels for Coupons Program and Heating & Cooling Program); 2) the inclusion of an additional five LDC Innovation Fund and Conservation Fund Pilot Programs; and 3) amendments based on comments received by LDCs as part of their review of the preliminary results. Further details on the revisions between the preliminary and the final 2016 verified results can be found in the 2016 Frequently Asked Questions (FAQs) and Evaluation Findings Report which will be posted along with the results on the LDC extranet.

Please note that all results contained within this report are considered to be final verified results. Projects included in this report are reflected in the accompanying LDC Project List Report. Any program activity not captured in this report will be included as part of a future adjustment process.

In terms of next steps, as with the 2015 CFF results, Final Verified 2016 Annual Results Reports will be posted on the IESO website in early July. In addition, LDC-Program level and portfolio-level cost effectiveness test results will be available on September 15, 2017, as outlined in the Energy Conservation Agreement version 3.0 update. Finally, 2016 EM&V reports will be available later this summer along with key program recommendations to be shared with the LDC Working Groups and the IESO.

We appreciate your collaboration and cooperation throughout the reporting and evaluation process. As we look ahead, the IESO will be focusing on enhancing its communication and support services to further support LDCs in the delivery of programs and to increase customer participation in these programs. I look forward to continuing to work together in achieving success in the Conservation First Framework.

Sincerely,

Terry Young
Vice-President, Conservation & Corporate Relations
Independent Electricity System Operator

Final Verified 2016 Annual LDC CDM Program Results Report

Table of Contents

#	Worksheet Name	Worksheet Description
1	How to Use This Report	Describes the contents and structure of this report
2	Report Summary	A high level summary of the Final 2016 Annual Verified Results Report, including: 1) progress toward the LDC's a) Allocated 2020 Energy Savings Target; b) Allocated 2015-2020 LDC CDM Plan Budget; c) CDM Plan 2015-2020 Forecasts; 3) annual savings and spending; 4) Annual FCR Progress; 5) annual LDC CDM Plan spending progress; 6) graphs describing: a) contribution to 2020 Target Achievement by program; b) 2015 LDC CDM Plan Budget Spending by Sector; c) annual energy savings persistence to 2020 by year; d) your Allocated Target achievement progress relative to your peers; and e) your LDC CDM Plan Budget Spending progress relative to your peers;
3	LDC Rankings	A comprehensive report of each LDC's performance rankings against all other LDCs in major performance categories.
4	LDC Progress	A comprehensive report of 2016 conservation results including: 1) activity; 2) savings including: a) energy and peak demand; b) net and gross; c) CDM Plan forecasts, verified actuals and relative progress; d) Allocated Target and Target acheivement; and 3) spending, including participant incentives and administrative expenses and IESO Value Added Services Costs. Data is grouped by category and summarized at the LDC level.
5	Province-Wide Progress	A comprehensive report of 2016 conservation results including: 1) activity; 2) savings including: a) energy and peak demand; b) net and gross; c) CDM Plan forecasts, verified actuals and relative progress; d) Allocated Target and Target acheivement; and 3) spending, including participant incentives and administrative expenses and IESO Value Added Services Costs. Data is grouped by category and summarized at the province wide level.
6	LDC Savings Persistence	A report detailing the gross and net energy and peak demand savings persistence by program and implementation year (2015, 2015 Adjustment and 2016) at the LDC Level.
7	Province-Wide Persistence	A report detailing the gross and net energy and peak demand savings persistence by program and implementation year (2015, 2015 Adjustment and 2016) at the province wide Level.
8	Methodology	A description of the methods used to calculate energy savings, financial results and cost-effectiveness.
9	Reference Table	Provides detailing how Province wide Consumer Program results were allocated to specific LDCs.
10	Glossary	Definitions for the terms used throughout this report.

Final Verified 2016 Annual LDC CDM Program Results Report

How to Use this Report

The IESO is pleased to provide you with the 2016 Annual Verified Results Report.

This report provides:

- 1) electricity savings;
 - 2) annual Full Cost Recovery funding model program progress; and
 - 3) peak demand savings;
 - 4) IESO Value Added Services Costs
- in accordance with Section 9.2(b)(i) of the Energy Conservation Agreement.

In addition to the above, this report also provides in greater detail:

- 1) program participation results including:
 - a) forecasts; b) actuals; and c) progress (forecast versus (vs) actuals);
- 2) program savings results including:
 - a) net 2020 annual energy and peak demand savings;
 - b) allocated target, target achievement and progress towards target;
 - c) incremental net first year energy and peak demand savings;
 - d) annual net-to-gross and realization rate adjustments; and
 - e) incremental gross first year energy and peak demand savings;and where available reported by: i) forecasts; ii) verified actuals; and iii) progress (forecast vs actuals);
- 3) program spending including:
 - a) participation incentive spending;
 - b) administrative expense spending (including IESO value-added services costs);
 - c) aggregated total spending; and
 - d) allocated budget, LDC CDM Plan budget spending and progress towards budget;and for each cost: i) forecasts; ii) verified actuals; and iii) progress (forecast vs actuals);
- 4) program savings results persistence for:
 - a) gross energy savings;
 - b) gross peak demand savings;
 - c) net energy savings; and
 - d) net peak demand savings;

by both the LDC specific level and the province-wide aggregated level for 2016 and 2015 including 2015 Adjustments.

This report's format is consistent with the IESO issued Monthly Participation and Cost Report in that it is a dynamic sheet that can be expanded or collapsed by clicking the + button or "Show Detail" feature under the Data tab. Each of the four results categories listed above have been grouped together for easy accessibility.

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Please note:

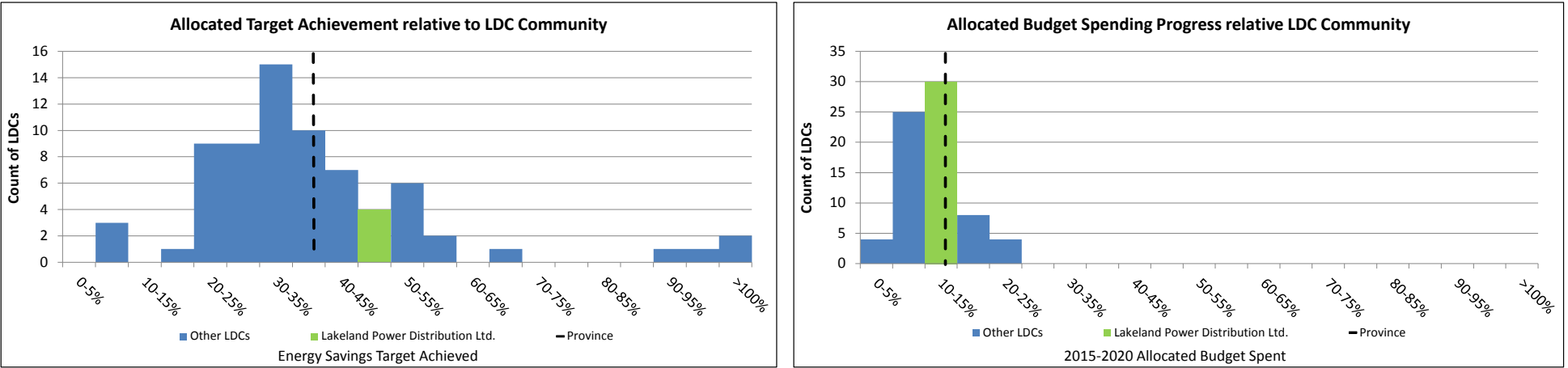
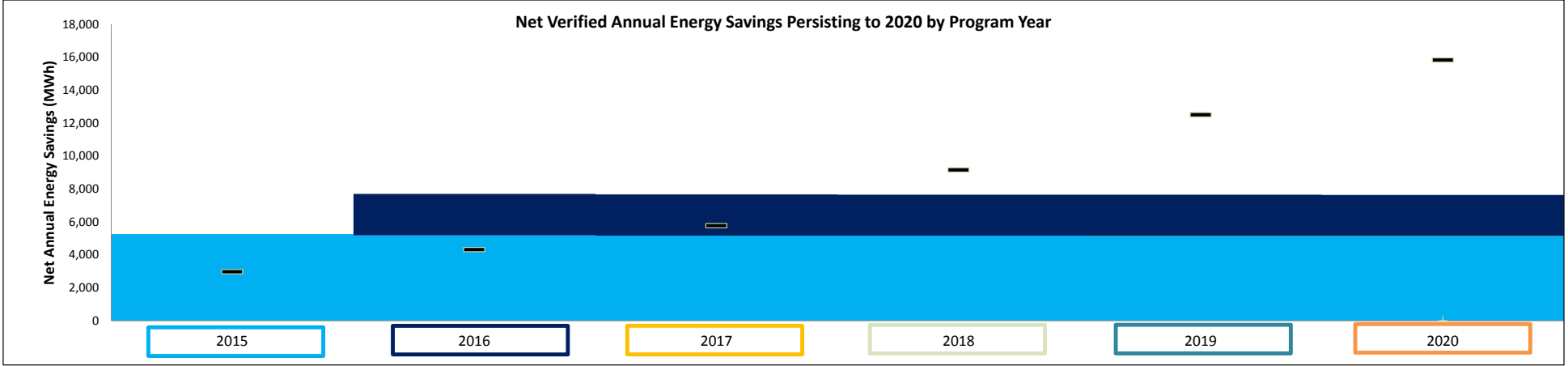
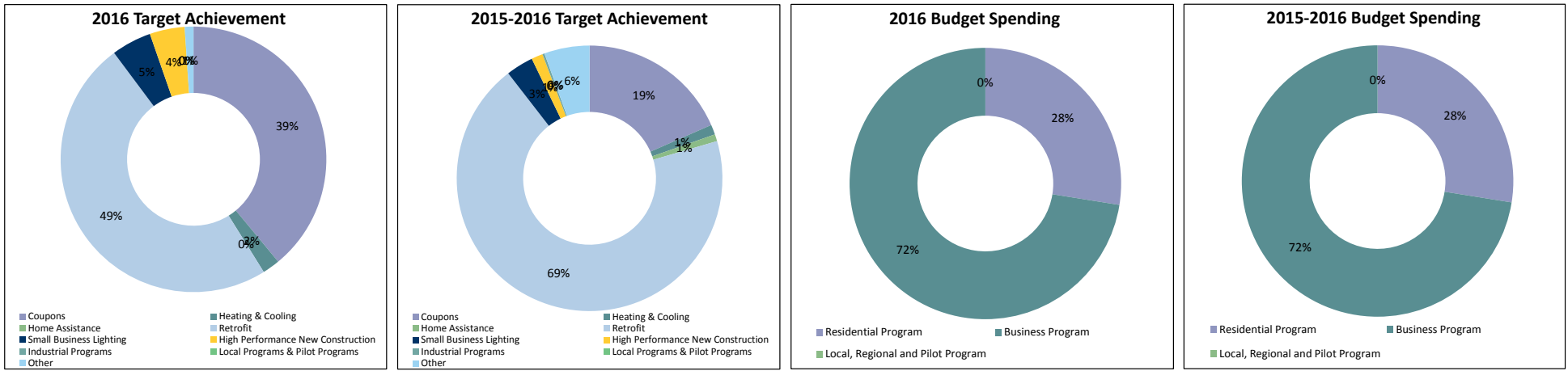
- 1) Cost Effectiveness Test (CET) results including:
 - a) total resource cost test;
 - b) program administration cost test;
 - c) levelized unit energy cost test;and for each test: i) benefits; ii) cost; iii) net benefit; iv) benefit ratio; at the LDC and province wide level will not be available in this report but will be provided to LDCs by September 15 2017, as per the Energy Conservation Agreement, version 3.0.
- 2) forecasts of: a) activity; b) savings; and c) spending; included in this report are based on approved LDC CDM Plan - Cost Effectiveness Tools as of April 1, 2017 (from the i) Program Design; ii) Budget Inputs; iii) Savings Results; and iv) CE Results; worksheets); Please note that this does not contain data for Legacy Framework program spending or CFF pilot program activity, savings, spending or cost effectiveness.
- 3) Annual FCR Progress only includes Full Cost Recovery funding model program savings results and excludes Pay-for-Performance funding model program savings results.
- 4) The complete list of approved programs and pilots as of April 1, 2017 approved LDC CDM Plans have been included, however only programs and pilots in market for a sufficient period of time to enable a valid EM&V process will have verified results.
- 5) 2015 Adjustments consists of projects completed in 2015 but were not reported to the IESO by the 2015 Verified Results Reporting deadline of March 31, 2016.
- 6) Pilot program savings are attributed to the LDC where the pilot program project is located in; and
- 7) This Annual Verified Results Report provides results for the LDC and province only. No aggregated reporting is provided for LDCs that are part of a joint CDM plan;

Final Verified 2016 Annual LDC CDM Program Results Report
Summary

For: Lakeland Power Distribution Ltd.

Results												
#	Metric	2015 Verified Results	2016 Verified Results	2015-2016 Verified Results	Allocated Target / Budget	2015-2016 Progress versus Allocated Target / Budget	2015-2020 LDC CDM Plan Forecast	2015-2016 Progress versus 2015-2020 LDC CDM Plan Forecast	2016 LDC CDM Plan Forecast	2016 Progress versus 2016 LDC CDM Plan Forecast	2015-2016 LDC CDM Plan Forecast	2015-2016 Progress versus 2015-2016 LDC CDM Plan Forecast
1	Net Verified Annual Energy Savings Persisting to 2020	5,141 MWh	2,495 MWh	7,637 MWh	15,770 MWh	48 %	15,833 MWh	48 %	1,345 MWh	186 %	4,319 MWh	177 %
2	LDC Ranking - Net Verified Annual Energy Savings Persisting to 2020	37	41	37	42	16	41	20	49	9	37	16
3	Total Spending (\$)	\$ 0	\$ 433,379	\$ 433,379	\$ 4,142,391	10 %	\$ 4,142,392	10 %	\$ 511,363	85 %	\$ 511,363	85 %
4	LDC Ranking - Total Spending (\$)	43	43	44	42	40	42	41	47	11	47	14

Annual Results				Cost Effectiveness					Annual FCR Progress			
#	Metric	2015	2016	Total	#	Test	2015	2016	Total	#	Metric	Result
1	Net Verified Annual Energy Savings Persisting to 2020 (MWh)	5,141 MWh	2,495 MWh	7,637 MWh	1	Total Resource Cost Test (Ratio)	n/a	tbd	tbd	1	2015-2016 Incremental Net Verified 2020 Annual Energy Savings from Full Cost Recovery Programs	7,637 MWh
2	Net Verified Incremental First Year Energy Savings (MWh)	5,253 MWh	2,516 MWh	7,769 MWh	2	Program Administrator Cost Test (Ratio)	n/a	tbd	tbd	2	2015-2016 Incremental Net 2020 Annual Energy Savingsfrom Full Cost Recovery Program per CDM Plan Forecast	4,319 MWh
3	Total Spending (\$)	\$ 0	\$ 433,379	\$ 433,379	3	Levelized Unit Energy Cost Result (¢/kWh)	n/a	tbd	tbd	3	FCR Progress (%)	177 %



Final Verified 2016 Annual LDC CDM Program Results Report

LDC Rankings

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Progress Report	
For: Lakeland Power Distribution Ltd.	
#	Programs
2015-2020 Conservation First Framework Programs	
Residential Province-Wide Programs	
1	Save on Energy Coupon Program
2	Save on Energy Heating & Cooling Program
3	Save on Energy New Construction Program
4	Save on Energy Home Assistance Program
Sub-total: Residential Province-Wide Programs	
Business Province-Wide Programs	
5	Save on Energy Audit Funding Program
6	Save on Energy Retrofit Program
7	Save on Energy Small Business Lighting Program
8	Save on Energy High Performance New Construction Program
9	Save on Energy Existing Building Commissioning Program
10	Save on Energy Process & Systems Upgrades Program
11	Save on Energy Energy Manager Program
12	Save on Energy Monitoring & Targeting Program
13	Save on Energy Retrofit Program - P4P
14	Save on Energy Process & Systems Upgrades Program - P4P
Sub-total: Business Province-Wide Programs	
Local & Regional Programs	
15	Adaptive Thermostat Local Program
16	Business Refrigeration Incentives Local Program
17	Conservation on the Coast Home Assistance Local Program
18	Conservation on the Coast Small Business Lighting Local Program
19	First Nations Conservation Local Program
20	High Efficiency Agricultural Pumping Local Program
21	Instant Savings Local Program
22	OPSaver Local Program
23	PUMPSaver Local Program
24	Social Benchmarking Local Program
25	THESL Swimming Pool Efficiency Local Program
Sub-total: Local & Regional Programs	
LDC Innovation Fund Pilot Programs	
26	Air Source Heat Pump for Residential Water Heating Pilot Program
27	Building Optimization Pilot Program
28	Conservation Voltage Regulation Leveraging AMI Data Pilot Program
29	Demand Control Kitchen Ventilation Pilot Program
30	Direct Install - Hydronic Pilot Program
31	Direct Install - RTU Controls Pilot Program
32	Electronically Commutated Furnace Motor Pilot Program
33	Electronics Takeback Pilot Program
34	Home Energy Assessment and Retrofit Pilot Program
35	HONI HP Pilot Program
36	P4P for Class B Office Pilot Program
37	Performance Based Conservation Pilot Program
38	Re-Invest Pilot Program
39	Residential Direct Install Pilot Program
40	Residential Direct Mail Pilot Program
41	Residential Ductless Heat Pump Pilot Program
42	Residential Install Pilot Program
43	Social Benchmarking Pilot Program
44	Solar Powered Attic Ventilation Pilot Program
45	Truckload Event Pilot Program
Sub-total: LDC Innovation Fund Pilot Programs	
Program Enabled Savings	
46	Save on Energy Retrofit Program Enabled Savings
47	Save on Energy High Performance New Construction Program Enabled Savings
48	Save on Energy Process & Systems Upgrades Program Enabled Savings
Sub-total: Program Enabled Savings	
Other	
49	Proposed Program or Pilot
50	Unassigned Target
Sub-total: Other	
Sub-total: 2015-2020 Conservation First Framework	
Conservation Fund	
51	EnerNOC Conservation Fund Pilot Program
52	Home Depot Home Appliance Market Uplift Conservation Fund Pilot Progr
53	Loblaw P4P Conservation Fund Pilot Program
54	Ontario Clean Water Agency P4P Conservation Fund Pilot Program
55	Social Benchmarking Conservation Fund Pilot Program
56	Strategic Energy Group Conservation Fund Pilot Program
Sub-total: Conservation Fund	
2011-2014+2015 Extension Legacy Framework Programs	
Residential Program	
57	Appliance Retirement Initiative
58	Coupon Initiative
59	Bi-Annual Retailer Event Initiative
60	HVAC Incentives Initiative
61	Residential New Construction and Major Renovation Initiative
Sub-total: Residential Program	
Commercial & Institutional Program	
62	Energy Audit Initiative
63	Efficiency: Equipment Replacement Incentive Initiative
64	Direct Install Lighting and Water Heating Initiative
65	New Construction and Major Renovation Initiative
66	Existing Building Commissioning Incentive Initiative
Sub-total: Commercial & Institutional Program	
Industrial Program	
67	Process and Systems Upgrades Initiatives - Project Incentive Initiative
68	Process and Systems Upgrades Initiatives - Energy Manager Initiative
69	Process and Systems Upgrades Initiatives - Monitoring and Targeting Initiat
Sub-total: Industrial Program	
Low Income Program	
70	Low Income Initiative
Sub-total: Low-Income Program	
Other	
71	Aboriginal Conservation Program
72	Program Enabled Savings
Sub-total: Other	
Sub-total: 2011-2014+2015 Extension Legacy Framework	
Total	

Participation >
Net Incremental 2020 Annual Energy Savings (Progress towards 2015 - 2020 CFF LDC CDM Plan Target) >
Net Incremental 2020 Annual Peak Demand Savings >
Net Incremental First Year Energy Savings >
Net Incremental First Year Peak Demand Savings >
Net-to-Gross Adjustment - Energy >
Net-to-Gross Adjustment - Peak Demand >
Realization Rate - Energy >
Realization Rate - Peak Demand >
Gross Incremental First Year Energy Savings >
Gross Incremental First Year Peak Demand Savings >
Savings Group >
Participant Incentive Spending >
LDC Administrative Expense Spending >
Value Added Services Provider Administrative Expense Spending >
Total Administrative Expense Spending >
Total 2015-2020 CFF LDC CDM Plan Budget Spending >
Spending Group >
Total Resource Cost - Cost Effectiveness Test - Gross Benefit >
Total Resource Cost - Cost Effectiveness Test - Gross Cost >
Total Resource Cost - Cost Effectiveness Test - Net Benefit >
Total Resource Cost - Cost Effectiveness Test - Net Benefit Ratio >
Program Administrator Cost - Cost Effectiveness Test - Gross Benefit >
Program Administrator Cost - Cost Effectiveness Test - Gross Cost >
Program Administrator Cost - Cost Effectiveness Test - Net Benefit >
Program Administrator Cost - Cost Effectiveness Test - Net Benefit Ratio >
Levelized Unit Energy Cost - Cost Effectiveness Test - Benefit >
Levelized Unit Energy Cost - Cost Effectiveness Test - Cost >
Levelized Unit Energy Cost - Cost Effectiveness Test
Cost Effectiveness Tests Group >

Progress Report

For: Province Wide

#	Programs

2015-2020 Conservation First Framework Programs	
Residential Province-Wide Programs	
1	Save on Energy Coupon Program
2	Save on Energy Heating & Cooling Program
3	Save on Energy New Construction Program
4	Save on Energy Home Assistance Program
Sub-total: Residential Province-Wide Programs	
Business Province-Wide Programs	
5	Save on Energy Audit Funding Program
6	Save on Energy Retrofit Program
7	Save on Energy Small Business Lighting Program
8	Save on Energy High Performance New Construction Program
9	Save on Energy Existing Building Commissioning Program
10	Save on Energy Process & Systems Upgrades Program
11	Save on Energy Energy Manager Program
12	Save on Energy Monitoring & Targeting Program
13	Save on Energy Retrofit Program - P4P
14	Save on Energy Process & Systems Upgrades Program - P4P
Sub-total: Business Province-Wide Programs	
Local & Regional Programs	
15	Adaptive Thermostat Local Program
16	Business Refrigeration Incentives Local Program
17	Conservation on the Coast Home Assistance Local Program
18	Conservation on the Coast Small Business Lighting Local Program
19	First Nations Conservation Local Program
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Sub-total: Local & Regional Programs	
LDC Innovation Fund Pilot Programs	
26	Air Source Heat Pump for Residential Water Heating Pilot Program
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28	Conservation Voltage Regulation Leveraging AMI Data Pilot Program
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32	Electronically Commutated Furnace Motor Pilot Program
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39	Residential Direct Install Pilot Program
40	Residential Direct Mail Pilot Program
41	Residential Ductless Heat Pump Pilot Program
42	Residential Install Pilot Program
43	Social Benchmarking Pilot Program
44	Solar Powered Attic Ventilation Pilot Program
45	Truckload Event Pilot Program
Sub-total: LDC Innovation Fund Pilot Programs	
Program Enabled Savings	
46	Save on Energy Retrofit Program Enabled Savings
47	Save on Energy High Performance New Construction Program Enabled Savings
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Sub-total: Program Enabled Savings	
Other	
49	Proposed Program or Pilot
50	Unassigned Target
Sub-total: Other	
Sub-total: 2015-2020 Conservation First Framework	
Conservation Fund	
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54	Ontario Clean Water Agency P4P Conservation Fund Pilot Program
55	Social Benchmarking Conservation Fund Pilot Program
56	Strategic Energy Group Conservation Fund Pilot Program
Sub-total: Conservation Fund	
2011-2014+2015 Extension Legacy Framework Programs	
Residential Program	
57	Appliance Retirement Initiative
58	Coupon Initiative
59	Bi-Annual Retailer Event Initiative
60	HVAC Incentives Initiative
61	Residential New Construction and Major Renovation Initiative
Sub-total: Residential Program	
Commercial & Institutional Program	
62	Energy Audit Initiative
63	Efficiency: Equipment Replacement Incentive Initiative
64	Direct Install Lighting and Water Heating Initiative
65	New Construction and Major Renovation Initiative
66	Existing Building Commissioning Incentive Initiative
Sub-total: Commercial & Institutional Program	
Industrial Program	
67	Process and Systems Upgrades Initiatives - Project Incentive Initiative
68	Process and Systems Upgrades Initiatives - Energy Manager Initiative
69	Process and Systems Upgrades Initiatives - Monitoring and Targeting Initiat
Sub-total: Industrial Program	
Low Income Program	
70	Low Income Initiative
Sub-total: Low-Income Program	
Other	
71	Aboriginal Conservation Program
72	Program Enabled Savings
Sub-total: Other	
Sub-total: 2011-2014+2015 Extension Legacy Framework	
Total	

Participation >
Net Incremental 2020 Annual Energy Savings (Progress towards 2015 - 2020 CFF LDC CDM Plan Target) >
Net Incremental 2020 Annual Peak Demand Savings >
Net Incremental First Year Energy Savings >
Net Incremental First Year Peak Demand Savings >
Net-to-Gross Adjustment - Energy >
Net-to-Gross Adjustment - Peak Demand >
Realization Rate - Energy >
Realization Rate - Peak Demand >
Gross Incremental First Year Energy Savings >
Gross Incremental First Year Peak Demand Savings >
Savings Group >
Participant Incentive Spending >
LDC Administrative Expense Spending >
Value Added Services Provider Administrative Expense Spending >
Total Administrative Expense Spending >
Total 2015-2020 CFF LDC CDM Plan Budget Spending >
Spending Group >
Total Resource Cost - Cost Effectiveness Test - Gross Benefit >
Total Resource Cost - Cost Effectiveness Test - Gross Cost >
Total Resource Cost - Cost Effectiveness Test - Net Benefit >
Total Resource Cost - Cost Effectiveness Test - Net Benefit Ratio >
Program Administrator Cost - Cost Effectiveness Test - Gross Benefit >
Program Administrator Cost - Cost Effectiveness Test - Gross Cost >
Program Administrator Cost - Cost Effectiveness Test - Net Benefit >
Program Administrator Cost - Cost Effectiveness Test - Net Benefit Ratio >
Levelized Unit Energy Cost - Cost Effectiveness Test - Benefit >
Levelized Unit Energy Cost - Cost Effectiveness Test - Cost >
Levelized Unit Energy Cost - Cost Effectiveness Test >
Cost Effectiveness Tests Group >

Final Verified 2016 Annual LDC CDM Program Results Report

Methodology

General

All results are at the end-user level (not including transmission and distribution losses) and reported to IESO by April 15, 2017. 2015 results are based on projects completed between January 1, 2015 and December 31, 2015 and reported to the IESO by March 31, 2016. 2015 Adjustment results are based on projects completed between January 1, 2015 and December 31, 2015 and reported to the IESO between April 1, 2016 and April 15 2017. 2016 results are based on projects compelted between January 1, 2016 and December 31, 2016 and reported to the IESO by April 15, 2017.

Legacy Framework results are based on projects begun prior to an LDC's transition to the Conservation First Framework program and completed by December 31, 2015. Conservation First Framework results are based on projects begun after an LDC's transition to the Conservation First Framework program and projects transitioned to the Conservation First Framework through a valid Extension Agreement or eligible Programs.

Savings Calculations

#	Project Type	Attributing Savings to LDCs
1	Prescriptive Measures and Projects Programs	Gross Reported Savings = Activity * Per Unit Assumption Savings Gross Verified Savings = Gross Reported Savings * Realization Rate Net Verified Savings = Gross Verified Savings * Net-to-Gross Ratio All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)
2	Engineered and Custom Projects / Programs	Gross Reported Savings = Reported Savings Gross Verified Savings = Gross Reported Savings * Realization Rate Net Verified Savings = Gross Verified Savings * Net-to-Gross Ratio All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)
3	Adjustments to Previous Years' Verified Results	All variances from the Final Annual Results Reports from prior years will be adjusted within this report. Any variances with regards to projects counts, data lag, and calculations etc., will be made within this report. Considers the annual effect of energy savings.

Cost Determination

Costs are determined and allocated to the period based on the date the cost has been reported to the IESO regardless of when the cost was incurred.

E.g. if an LDC reports by the December 2016 IESO Reporting Period: 1) program savings; 2) Participant Incentives; and 3) Administrative Expenses associated with a 2016 completed project, then: a) the savings; b) expenditures; and c) corresponding cost effectiveness; are attributed to the 2016 program year.

However if the same is reported in or after the January 2017 IESO Reporting Period: i) the savings will be attributed to the 2016 program year; ii) the expenditures will be attributed to the 2017 program year and will not appear in the 2016 Verified Results Report; but iii) the project's Participant Incentives will be used to calculate 2016 Cost Effectiveness;

2015-2020 Conservation First Framework

#	Program	Attributing Savings to LDCs	Project List Date	Savings 'start' Date	Calculating Resource Savings
1	Save on Energy Coupon Program	LDC-coded coupons directly attributed to LDC; Otherwise results are allocated based on Consumer Program Allocation Reference Table.	April 15, 2017	Savings are considered to begin in the year in which the coupon was redeemed.	Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
2	Save on Energy Heating & Cooling Program	Results directly attributed to LDC based on customer applications and postal code.	April 15, 2017	Savings are considered to begin in the year that the installation occurred.	
3	Save on Energy New Construction Program	Results are directly attributed to LDC based on LDC identified in LDC Report	April 15, 2017	Savings are considered to begin in the year of the project completion date.	
4	Save on Energy Home Assistance Program	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year in which the measures were installed.	
5	Save on Energy Audit Funding Program	Projects are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year of the audit date.	Peak demand and energy savings are determined by the total savings resulting from an audit as reported (reported). A realization rate is applied to the reported savings. to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
6	Save on Energy Retrofit Program	Projects are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year of the actual project completion date as reported in the LDC Report	Peak demand and energy savings are determined by the total savings for a given project as reported in the ICON system (reported). A realization rate is applied to the reported savings. to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track).
7	Save on Energy Small Business Lighting Program	Results are directly attributed to LDC based on the LDC specified on the work order.	April 15, 2017	Savings are considered to begin in the year of the actual project completion date.	Peak demand and energy savings are determined using the verified measure level per unit assumptions multiplied by the uptake of each measure accounting for the realization rate for both peak demand and energy to reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings take into account net-to-gross factors such as free-ridership and spillover for both peak demand and energy savings at the program level (net).
8	Save on Energy High Performance New Construction Program	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year of the actual project completion date.	Peak demand and energy savings are determined by the total savings for a given project as reported in the CDM LDC Report Template. Preliminary unverified net savings are calculated by multiplying reported savings by 2014 Net-to-gross ratios and realization rates.
9	Save on Energy Existing Building Commissioning Program	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year of the actual project completion date.	
10	Save on Energy Process and Systems Upgrades Program	Results are directly attributed to LDC based on LDC identified in application.	April 15, 2017	Savings are considered to begin in the year in which the project was in-service.	Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings. to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
11	Save on Energy Energy Manager Program	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year in which the project was completed by the energy manager.	
12	Save on Energy Monitoring and Targeting program	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year in which the incentive project was completed.	

2011-2014+2015 Extension Legacy Framework

#	Initiative	Attributing Savings to LDCs	Project List Date	Savings 'start' Date	Calculating Resource Savings
1	saveONenergy Appliance Retirement Initiative	Includes both retail and home pickup stream. Retail stream allocated based on average of 2008 & 2009 residential throughput; Home pickup stream directly attributed by postal code or customer selection.	April 15, 2017	Savings are considered to begin in the year the appliance is picked up.	Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
2	saveONenergy Conservation Instant Coupon Booklet	LDC-coded coupons directly attributed to LDC. Otherwise results are allocated based on average of 2008 & 2009 residential throughput.	April 15, 2017	Savings are considered to begin in the year in which the coupon was redeemed.	
3	saveONenergy Bi-Annual Retailer Event	Results are allocated based on average of 2008 & 2009 residential throughput.	April 15, 2017	Savings are considered to begin in the year in which the event occurs.	
4	saveONenergy HVAC Incentives	Results directly attributed to LDC based on customer applications and postal code.	April 15, 2017	Savings are considered to begin in the year that the installation occurred.	
5	saveONenergy Residential New Construction	Results are directly attributed to LDC based on LDC identified in application in the iCon system.	April 15, 2017	Savings are considered to begin in the year of the project completion date.	Peak demand and energy savings are determined by the total savings resulting from an audit as reported (reported). A realization rate is applied to the reported savings. to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
6	saveONenergy Energy Audit	Projects are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year of the audit date.	
7	saveONenergy Efficiency: Equipment Replacement	Results are directly attributed to LDC based on LDC identified at the facility level in the iCon system. Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see page for Building type to Sector mapping.	April 15, 2017	Savings are considered to begin in the year of the actual project completion date in the iCon system.	Peak demand and energy savings are determined by the total savings for a given project as reported in the ICON system (reported). A realization rate is applied to the reported savings. to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track). Additional Note: project counts were derived by filtering out invalid statuses (e.g. Post-Project Submission - Payment denied by LDC) and only including projects with an "Actual Project Completion Date" in 2014)
8	saveONenergy Direct Installed Lighting	Results are directly attributed to LDC based on the LDC specified on the work order.	April 15, 2017	Savings are considered to begin in the year of the actual project completion date.	Peak demand and energy savings are determined using the verified measure level per unit assumptions multiplied by the uptake of each measure accounting for the realization rate for both peak demand and energy to reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings take into account net-to-gross factors such as free-ridership and spillover for both peak demand and energy savings at the program level (net).
9	saveONenergy New Construction and Major Renovation Incentive	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year in which the measures were installed.	Peak demand and energy savings are determined by the total savings for a given project as reported (reported). A realization rate is applied to the reported savings. to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
10	saveONenergy Existing Building Commissioning Incentive	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017		
11	saveONenergy Process & System Upgrades	Results are directly attributed to LDC based on LDC identified in application.	April 15, 2017	Savings are considered to begin in the year in which the incentive project was completed.	Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings. to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
12	saveONenergy Energy Manager	Results are directly attributed to LDC based on LDC identified in application.	April 15, 2017	Savings are considered to begin in the year in which the project was completed by the energy manager. If no date is specified the savings will begin the year of the Quarterly Report submitted by the energy manager.	
13	saveONenergy Monitoring & Targeting	Results are directly attributed to LDC based on LDC identified in application.	April 15, 2017	Savings are considered to begin in the year in which the incentive project was completed.	
14	saveONenergy Home Assistance Program	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017	Savings are considered to begin in the year in which the measures were installed.	Peak demand and energy savings are determined using the measure level per unit assumption multiplied by the uptake of each measure (gross), taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
15	Aboriginal Conservation Program	Results are directly attributed to LDC based on LDC identified in the application.	April 15, 2017		
16	Program Enabled Savings		April 15, 2017		

Final Verified 2016 Annual LDC CDM Program Results Report
Consumer Program Allocation Reference Table

#	Local Distribution Company	Allocation (%)
1	Algoma Power Inc.	0.18
2	Atikokan Hydro Inc.	0.02
3	Attawapiskat Power Corporation	0.01
4	Bluewater Power Distribution Corporation	0.62
5	Brantford Power Inc.	0.67
6	Burlington Hydro Inc.	1.34
7	Canadian Niagara Power Inc.	0.35
8	Centre Wellington Hydro Ltd.	0.11
9	Chapleau Public Utilities Corporation	0.03
10	CDLLUS PowerStream Corp.	0.25
11	Cooperative Hydro Embrun Inc.	0.06
12	E.L.K. Energy Inc.	0.25
13	Energy+ Inc.	1.12
14	Enersource Hydro Mississauga Inc.	4.64
15	Entegrus Powerlines Inc.	0.70
16	EnlWin Utilities Ltd.	1.49
17	Erie Thames Powerlines Corporation	0.32
18	Espanola Regional Hydro Distribution Corporation	0.06
19	Essex Powerlines Corporation	0.61
20	Festival Hydro Inc.	0.32
21	Fort Albany Power Corporation	0.01
22	Fort Frances Power Corporation	0.09
23	Greater Sudbury Hydro Inc.	0.80
24	Grimsby Power Incorporated	0.18
25	Guelph Hydro Electric Systems Inc.	0.85
26	Halton Hills Hydro Inc.	0.59
27	Hearst Power Distribution Company Limited	0.05
28	Horizon Utilities Corporation	3.72
29	Hydro 2000 Inc.	0.04
30	Hydro Hawkesbury Inc.	0.15
31	Hydro One Brampton Networks Inc.	3.59
32	Hydro One Networks Inc.	27.29
33	Hydro Ottawa Limited	6.61
34	InnPower Corporation	0.33
35	Kashechewan Power Corporation	0.02
36	Kenora Hydro Electric Corporation Ltd.	0.09
37	Kingston Hydro Corporation	0.29
38	Kitchener-Wilmot Hydro Inc.	1.51
39	Lakefront Utilities Inc.	0.11
40	Lakeland Power Distribution Ltd.	0.23
41	London Hydro Inc.	2.61
42	Midland Power Utility Corporation	0.10
43	Milton Hydro Distribution Inc.	0.66
44	Newmarket-Tay Power Distribution Ltd.	0.60
45	Niagara Peninsula Energy Inc.	0.82
46	Niagara-on-the-Lake Hydro Inc.	0.13
47	North Bay Hydro Distribution Limited	0.42
48	Northern Ontario Wires Inc.	0.09
49	Oakville Hydro Electricity Distribution Inc.	1.51
50	Orangeville Hydro Limited	0.20
51	Orillia Power Distribution Corporation	0.22
52	Oshawa PUC Networks Inc.	1.48
53	Ottawa River Power Corporation	0.12
54	Peterborough Distribution Incorporated	0.46
55	PowerStream Inc.	7.82
56	PUC Distribution Inc.	0.65
57	Renfrew Hydro Inc.	0.05
58	Rideau St. Lawrence Distribution Inc.	0.07
59	Sioux Lookout Hydro Inc.	0.08
60	St. Thomas Energy Inc.	0.28
61	Thunder Bay Hydro Electricity Distribution Inc.	0.82
62	Tillsonburg Hydro Inc.	0.12
63	Toronto Hydro-Electric System Limited	15.57
64	Veridian Connections Inc.	2.39
65	Wasaga Distribution Inc.	0.18
66	Waterloo North Hydro Inc.	0.96
67	Welland Hydro-Electric System Corp.	0.31
68	Wellington North Power Inc.	0.06
69	West Coast Huron Energy Inc.	0.06
70	Westario Power Inc.	0.37
71	Whitby Hydro Electric Corporation	1.12
Total		100.00

Final Verified 2016 Annual LDC CDM Program Results Report
Glossary

#	Term	Definition
Reporting Terms		
1	Forecast	An LDCs' forecast of program activity, savings, net-to-gross adjustments, expenditures and cost effectiveness as indicated in each LDC's submitted CDM Plan Cost Effectiveness Tools. Forecasts at the province wide level are the sum of all LDCs' forecasts.
2	Reported	Program activity savings and expenditures as determined by the LDC. For savings: 1) for prescriptive projects/programs: calculating quantity x prescriptive savings assumptions; and 2) for engineered or custom program projects/programs: calculated using prescribed methodologies.
3	Verified	The IESO's annually EM&V assessed program activity, savings, net-to-gross, expenditures and cost effectiveness. Preliminary Verified results are provided by June 1st of each year and Final Verified results are provided by July 1st of each year.
4	Adjustment	Verified results that were achieved in previous years but were not provided in a previous years' Annual Verified Results Report.
5	Progress or Comparison	An assessment of Actual results versus Verified results.
Framework Terms		
6	2011-2014+2015 Extension Legacy Framework	Programs in market from 2011-2015 resulting from the April 23, 2010 GEA CDM Ministerial Directive and funded separately from 2015-2020 Conservation First Framework Programs but whose savings in 2015 are attributed towards the 2015-2020 Conservation First Framework target.
7	2015-2020 Conservation First Framework	Programs in market from 2015-2020 resulting from the March 31, 2014 CFF Ministerial Directive and funded separately from 2011-2014+2015 Extension Legacy Framework Programs.
8	LDC Innovation Fund	A source of funding under the 2015-2020 Conservation First Framework separate from LDC CDM Plan Budgets that the IESO maintains to support LDC led program design and market testing of new initiatives. Savings from LDC Innovation Fund pilot programs contribute to the LDCs savings targets based on the LDC service territory the pilot program is delivered in.
9	Conservation Fund	A source of funding external to the 2015-2020 Conservation First Framework that provides financial support for innovative electricity conservation technologies, practices, research, and pilot programs. Savings from Conservation Fund pilot programs contribute to the LDCs savings targets based on the LDC service territory the pilot program is delivered in.
Programs Terms		
10	Program	A Conservation & Demand Management offering focusing on a particular opportunity or customer end-use (e.g. Coupon; or Retrofit;) from the 2015-2020 Conservation First Framework.
11	Province-Wide Program	Programs available to all LDCs to deliver and that are consistent across the province.
12	Regional Program	Programs designed by LDCs to serve their region and approved by the IESO.
13	Local Program	Programs designed by LDCs to serve their communities and approved by the IESO.
14	Pilot Program	A program pilot that may achieve energy or demand savings and is funded separately from an LDC's CDM Plan Budget.
15	Initiative	A Conservation & Demand Management offering focusing on a particular opportunity or customer end-use (e.g. Fridge & Freezer Pickup) from the 2011-2014+2015 Extension Legacy Framework.
Activity Terms		
16	Participation	A measure of the level of program participation, such as number of projects, homes, equipment, etc..
17	Unit of Measure	For a specific initiative the relevant type of participation acquired in the market place (e.g. appliances picked up; coupon products installed; HVAC equipment installed; audits performed; or projects completed).
Savings Terms		
18	Energy Savings	Energy savings attributable to conservation and demand management activities.
19	Peak Demand Savings	Peak Demand savings attributable to conservation and demand management activities, as determined by the IESO's EM&V Protocols.
20	Incremental Savings	The energy or peak demand savings newly attributable to activity procured in a particular reporting period based on when the savings are considered to 'start'. Savings attributed to activity performed or completed in 2016 are presented as 2016 savings.
21	First Year Savings	The energy or peak demand savings that occur in the year it was achieved (includes resource savings from only new program activity).
22	Annual Savings	The energy or peak demand savings that occur in a given year (includes resource savings from new program activity and resource savings persisting from previous years).
23	Gross Savings	The energy or peak demand savings that have been reported based on a conservation and demand management program's participation tracking.
24	Net Savings	The energy or peak demand savings attributable to conservation and demand management activities, net of free-riders, spillover, etc.
25	Realization Rate	A comparison of originally reported savings and observed or measured savings that adjusts reported savings to arrive at verified savings. Accounts for discrepancies such as audited measure counts; adjustment for connected demand savings to peak demand savings; etc.
26	Net-to-Gross Adjustment	The ratio of net savings to gross savings, which takes into account factors such as free-ridership, spillover, etc.
27	Free-ridership	The percentage of participants who would have implemented the program measure or practice in the absence of the program.
28	Spillover	Reductions in energy consumption and/or demand caused by the presence of the energy efficiency program, beyond the program-related gross savings of the participants. There can be participant and/or non-participant spillover.
29	Allocated Target	Each LDC's assigned portion of the Province's 7 TWh Net 2020 Annual Energy Savings Target of the 2015-2020 Conservation First Framework.
Costs Terms		
30	Participant Incentive	Costs incurred in the delivery of a program related to incenting participants to perform peak demand or energy savings.
31	LDC Administrative Expense	Costs reported by the LDC in the delivery of a program related to labour, marketing, third-party expenses, etc.
32	IESO Value Added Services Cost	Costs incurred by the IESO's Value Added Service Provider related to associated programs (Coupons and Heating & Cooling), and charged to the LDC in which the programs's activity took place.
33	Total Administrative Expense	The sum of LDC Administrative Expense and IESO Value Added Services Cost.
34	Delivery Cost	The sum of Total Administrative Expenses and Participant Incentives. All costs are presented based on the period reported by LDCs to the IESO, not necessarily associated with reported activity. E.g. If an LDC reports by the December 2016 IESO Reporting Period: 1) program savings; 2) Participant Incentives; and 3) Administrative Expenses associated with a 2016 completed project, then: a) the savings; b) expenditures; and c) corresponding cost effectiveness; are attributed to the 2016 program year. However if the same is reported in or after the January 2017 IESO Reporting Period: i) the savings will be attributed to the 2016 program year; ii) the expenditures will be attributed to the 2017 program year and will not appear in the 2016 Verified Results Report; but iii) the project's Participant Incentives will be used to calculate 2016 Cost Effectiveness;
35	Allocated Budget	Each LDC's assigned portion of the Province's \$ 1.835 billion CDM Plan Budget of the 2015-2020 Conservation First Framework.
Cost Effectiveness Terms		
36	Total Resource Cost Cost Effectiveness Test	A cost effectiveness test that measures the net cost of CDM based on the total costs of the program including both participants' and utility's costs.
37	Program Administrator Cost Cost Effectiveness Test	A cost effectiveness test that measures the net cost of CDM based on costs incurred by the program administrator, including incentive costs and excluding net costs incurred by the participant.
38	Levelized Unit Energy Cost Cost Effectiveness Test	A cost effectiveness test that normalizes the costs incurred by the program administrator per unit of energy or demand reduced.