



APPENDIX B.3: CURRENT STATE SUMMARIES



COLLABORATION

- I. CDM plans
- II. LDC collaboration
- III. Cross fuel collaboration
- IV. Other collaboration

DATA AS OF APRIL 2017 UNLESS
OTHERWISE STATED



I. CDM PLANS

DEFINITION OF JOINT CDM PLANS

Joint CDM Plans: CDM Plan submitted to the IESO completed in cooperation with one or more distribution companies.

- **Context:**

- Collectively, Ontario's LDCs are responsible for planning cost effective ways to reduce 7 TWh of electricity consumption by December 31, 2020, with individual targets assigned to each.
- To meet these targets, LDCs have developed their own six-year plans for delivering CDM programs to their customers.
- An LDC may submit a Joint CDM Plan in cooperation with one or more other distribution companies, provided that the LDC (and each participating distribution company) will at all times have its own CDM Plan Target and CDM Plan Budget allocated to it under the Joint CDM Plan.
- Performance incentives will be assessed with reference to the aggregate performance of the LDC and other participants in the Joint CDM Plan and will be allocated on a prorated basis to the LDC and other participants based on their respective verified electricity savings under the Joint CDM Plan.

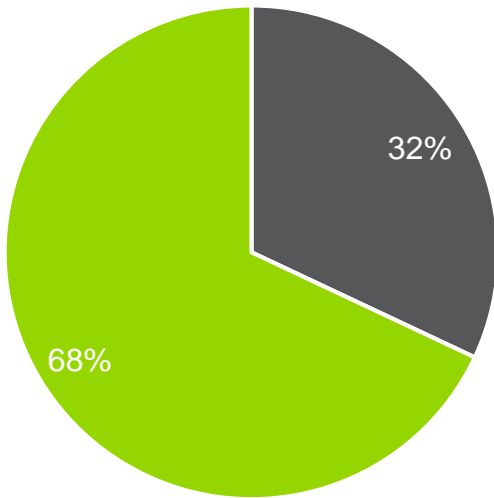
- **Potential Advantages:**

- Higher performance incentives: achieving target incentive increased by 0.05 cents/kWh.
- Risk mitigation: can re-allocate budgets and targets across utilities within the Joint CDM Plan.
- Administrative efficiencies: back-office admin associated with a representative agent for the LDCs in the Joint CDM Plan; joint invoices and reporting are not permitted.
- Delivery efficiencies: can work together to jointly deliver, where appropriate.

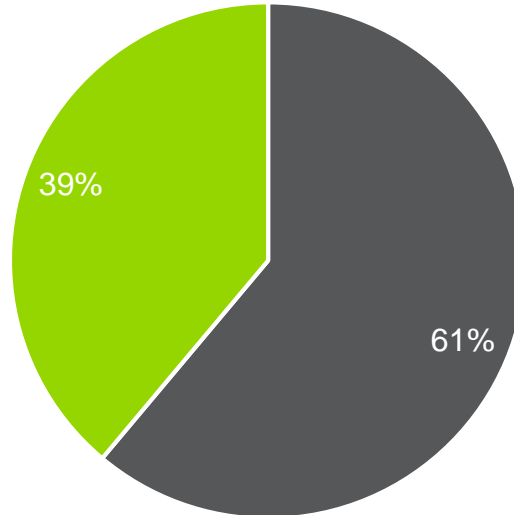
JOINT CDM PLANS REPRESENT A MAJORITY OF THE PROVINCIAL TARGET

- 68 percent of LDCs are in Joint CDM plans, which represents 39 percent of all CDM plans
- 83 percent of the provincial CDM target (7 TWh) is captured by Joint CDM Plans

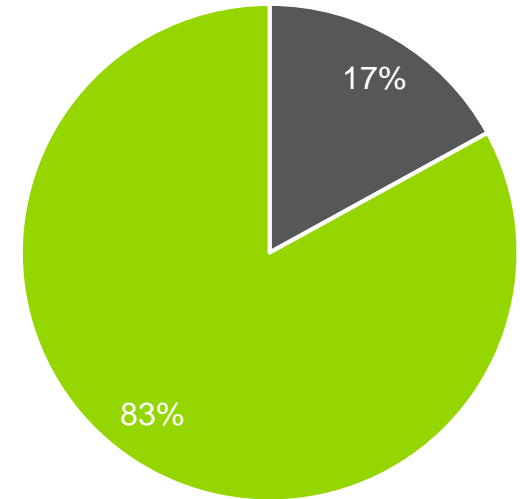
Proportion of LDCs with Joint CDM Plans (out of 68)



Proportion CDM plans that are Joint (out of 36)



Proportion of provincial CDM target covered by Joint CDM Plans (out of 7 TWh)



■ Individual

■ Joint

COMPOSITION OF JOINT CDM PLANS

- This graphic illustrates the composition of the 14 Joint CDM Plans by individual LDCs' planned 2020 energy savings (GWh)
- The heat map shows a view of the size differentiation by budgeted savings between the LDCs within each Joint CDM Plan
- The largest proportion of Joint CDM plans are made up of 2 LDCs (7 of 14 joint plans)

Joint CDM Plan #	Number of LDCs within Plan							Total Plan Size (GWh)
	1	2	3	4	5	6	7	
1	1,576	94						1,670
2	1,259	35						1,294
3	395	4.2						399
4	221	4.9						226
5	153	58						211
6	45	31						76
7	28	11						40
8	1,640	17	40					1,697
9	11	3.2	1.1					15
10	7.9	1.8	1.4					11
11	0.6	0.4	0.4					1
12	61	5.3	3.7	3.7	1.1			74
13	35	32	31	24	14	3.5	2.5	142
14	16	14	11	8.7	8.7	6.3	5.0	70

Heat map of planned 2020 energy savings (GWh) by LDCs in Joint CDM Plans

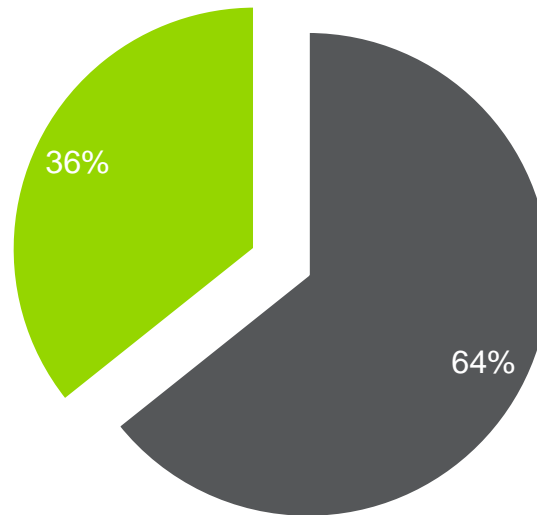
- 5 out of 14 (36 percent) Joint CDM plans consist of one larger LDC and one significantly smaller LDC
- 2 out of 14 (15 percent) joint plans consist of two or more similar sized LDCs
- 5 out of 14 (36 percent) are a combination of smaller, larger and/or comparably sized LDCs

Category	Planned 2020 Energy Savings Range (GWh)
Large	500 – 1,600
Medium	10 – 499
Small	0.1 – 9

REGIONAL BREAKDOWN OF CDM PLANS

- The majority of Joint CDM Plans consist of LDCs that are within the same IESO region and/or are very close in proximity to each other (64 percent)
- Of the five Joint CDM Plans consisting of LDCs that are not close to each other/in the same region, three (60 percent) have comparable customer bases (i.e. similar proportions of residential, commercial and industrial customers)

Regional Breakdown of Joint CDM Plans



■ Joint Plan LDCs are in same region or very close

■ Joint Plan LDCs are in different regions and/or large distances away

THERE IS NO APPARENT TREND IN JOINT VS. INDIVIDUAL DELIVERY COSTS

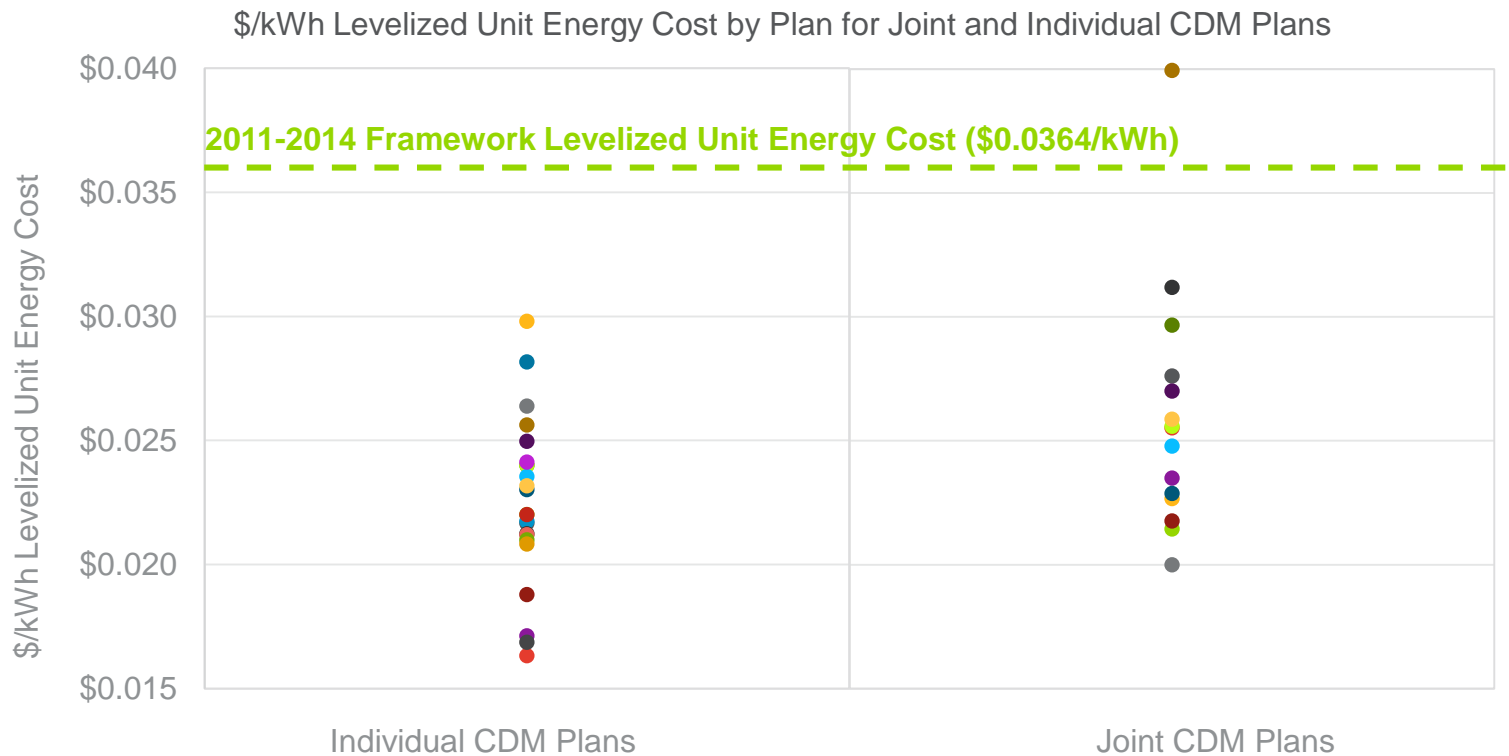
- There is no apparent trend in acquisition costs between a joint or individual CDM Plan
- Delivery (acquisition) costs (\$/2020 kWh) were calculated for each CDM Plan using the total budget and total achievement to target (energy savings persisting to 2020)
- Note: this analysis does not take into account higher delivery costs associated with geography, urban vs. rural, etc.



*kWh include actual and planned achievement within 2015 to 2020 framework, but do not include costs associated with projects funded through 2011 to 2014 framework and completed in 2015 or central services not associated with program delivery (e.g., capability building activities led by IESO)

THERE IS NO APPARENT TREND IN JOINT VS. INDIVIDUAL LUECS

- Ranges of Levelized Unit Energy Costs (LUECs) appear slightly higher for Joint CDM Plans
- LUECs were taken from each CDM plan, as reported by the LDC(s) using a cost effectiveness tool
- Note: this analysis does not take into account higher delivery costs associated with geography, urban vs. rural etc.*



*kWh include actual and planned achievement within 2015 to 2020 framework, but do not include costs associated with projects funded through 2011 to 2014 framework and completed in 2015 or central services not associated with program delivery (e.g., capability building activities led by IESO)



II. LDC COLLABORATION

THIS REPORT WILL REVIEW IESO-REPORTED COLLABORATION

- This report will assess the extent to which reported collaboration is taking place as part of the Conservation First Framework or Industrial Accelerator Program and whether that collaboration is achieving the outcomes of 1) customer convenience and 2) cost efficiencies per the Conservation First Framework Direction
- For the purposes of this topic report, collaboration is defined as IESO reported sources of collaboration as specified in the table below and described on subsequent slides
- Market research will aim to obtain information about LDC collaboration that is not IESO reported

Status in this Report	Collaboration	Collaboration Activity
Included	<ul style="list-style-type: none"> • Joint CDM Plan • Mid-Term Review Advisory Group participation • Stakeholder Advisory Committee participation • LDC Working Group participation 	<ul style="list-style-type: none"> • Collaboration Fund • Local/regional program involving more than one LDC
Not Included *	<ul style="list-style-type: none"> • Informal information sharing and meetings • Formal collaboration groups not reported by IESO 	<ul style="list-style-type: none"> • Informal collaboration on projects or events • Information collaborative outreach to customers

* To be investigated through market research

IESO-REPORTED COLLABORATION INCLUDES FOUR MAIN SOURCES

- LDCs have the opportunity to collaborate through the following formal arrangements or groups: Joint CDM plans, Mid-Term Review Advisory Group participation, Stakeholder Advisory Committee participation, and LDC Working Group participation

Source	Description
Joint CDM Plan	<ul style="list-style-type: none"> • CDM Plan for the 2015 to 2020 period submitted to the IESO completed in cooperation with one or more electricity distribution companies
Mid-Term Review Advisory Group participation	<ul style="list-style-type: none"> • Current participation as either an Advisory Group member or observer (tracked by IESO)
Stakeholder Advisory Committee participation	<ul style="list-style-type: none"> • Current participation as a member of the IESO Stakeholder Advisory Committee (tracked by IESO)
LDC Working Group participation	<ul style="list-style-type: none"> • LDCs, IESO and natural gas utilities participate in regular meetings to discuss, for example, potential changes to province-wide programs • Current Participation as a member of one of the LDC working groups supporting the Conservation First Framework (tracked by IESO) • The IESO tracks participation in working groups

IESO-REPORTED COLLABORATION ACTIVITIES INCLUDE TWO MAIN SOURCES

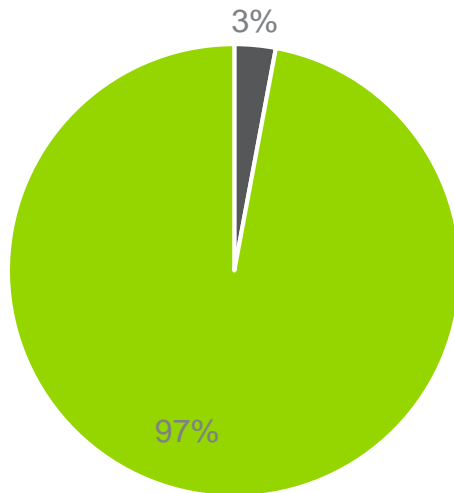
- The Collaboration Fund and Local and Regional programs provide opportunities for LDCs to obtain funding from the IESO in support of collaboration

Source	Description
Collaboration Fund	<p>Funding available to LDCs from the IESO to support and encourage LDC collaboration with the goal of maximizing administrative and operational efficiencies throughout the program delivery process.</p> <ul style="list-style-type: none"> • LDC collaboration allows for greater administrative efficiencies, information sharing, and the fostering of strong working relationships. <p>Select Collaboration Fund guidelines:</p> <ul style="list-style-type: none"> • Activity must include two or more LDCs, and ideally LDCs representing at least two CDM Plans; or be from a working group; • Provide a description and rationale for the collaboration activity (e.g. geographic and target customer commonalities); • Expected to have a measurable short-term and long-term impact and outcome, as determined by the IESO, acting reasonably; • the total amount of funding requested must be justified and optimized to robustly accomplish the objectives and demonstrate ratepayer value • results of the activities must be used to support decisions or actions <p>The Collaboration Fund was under review, but is relaunching and will start accepting new applications in February 2018. The Fund will have application windows in February, June and October (2018 and 2019). Funding will be capped at \$300,000 per activity, \$600,000 per window and provided up to 12 months.</p>
Local and regional programs	<p>Funding available for LDC-led program design and market testing of new initiatives through the central services budget (i.e., not LDC budgets). Testing and learning from small-scale pilot programs (pilots) will contribute to the success and cost effectiveness of the full-scale launch of a new program. Local/regional program guidelines:</p> <ul style="list-style-type: none"> • Gas and/or water integration if applicable; and, • Encouraged to develop pilots that include collaboration between electric and gas distributors and collaboration amongst LDCs. <p>Two categories: (1) innovation (2) local/regional</p>

97 PERCENT OF LDCS ARE PARTICIPATING IN REPORTED COLLABORATION

- All LDCs with the exception of 2 (3 percent) are participating in at least one form of reported collaboration (Joint CDM Plan, collaborative local/regional program or pilot, LDC Working Group, IESO Stakeholder Advisory Committee, Mid-Term Review Advisory Committee, or collaboration fund activity)

Proportion of LDCs not Participating in any Collaboration Activities



- LDCs not Participating in any Collaboration Activities
- LDCs Participating in at least one Collaboration Activity

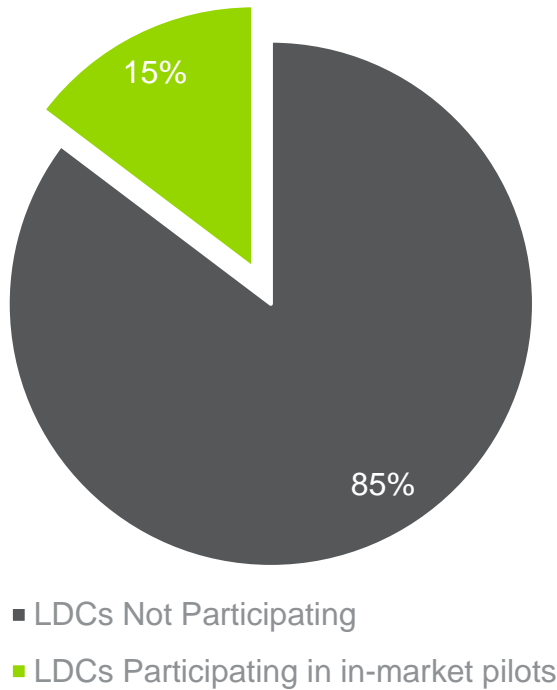
Collaboration Type	# of LDCs
Joint Plan	46
Local/Regional Programs	12
Pilot Programs	10
Collaboration Fund projects	56
LDC Working Group participation	40
Mid-Term Review Advisory Group	5
IESO Stakeholder Advisory Committee	4

**LDCs participating in more than one pilot/program have only been counted once, and only approved collaboration programs have been counted*

15 PERCENT OF LDCS HAVE DESIGNED/DELIVERED COLLABORATIVE INNOVATION PILOTS

- The majority of LDCs in Ontario are not participating in innovation pilots in collaboration with another LDC (85 percent)

Proportion of LDCs Participating in Collaborative Pilot Programs



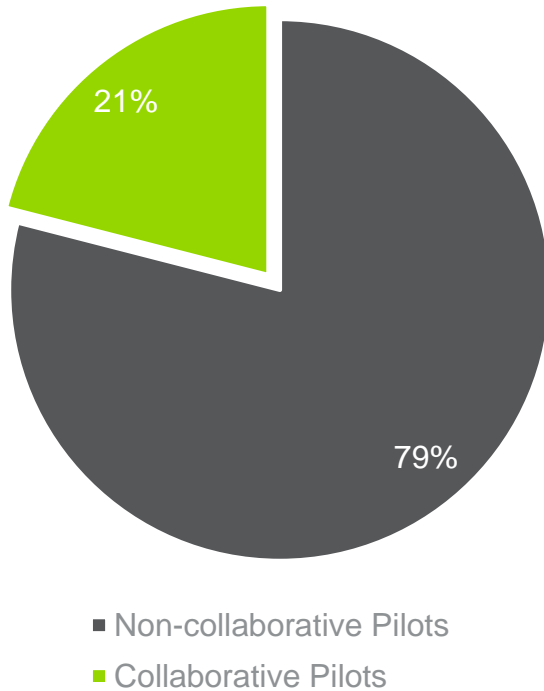
Total LDCs in Ontario	68
LDCs participating in collaborative pilots*	10
Proportion	15%

**LDCs participating in more than one pilot have only been counted once, and only approved pilots have been considered*

21 PERCENT OF INNOVATION PILOTS HAVE BEEN COLLABORATIVE

- 21 percent of approved Pilots since the start of Conservation First Framework have been collaborative

Proportion of Innovation Pilots that include Collaboration Between LDCs



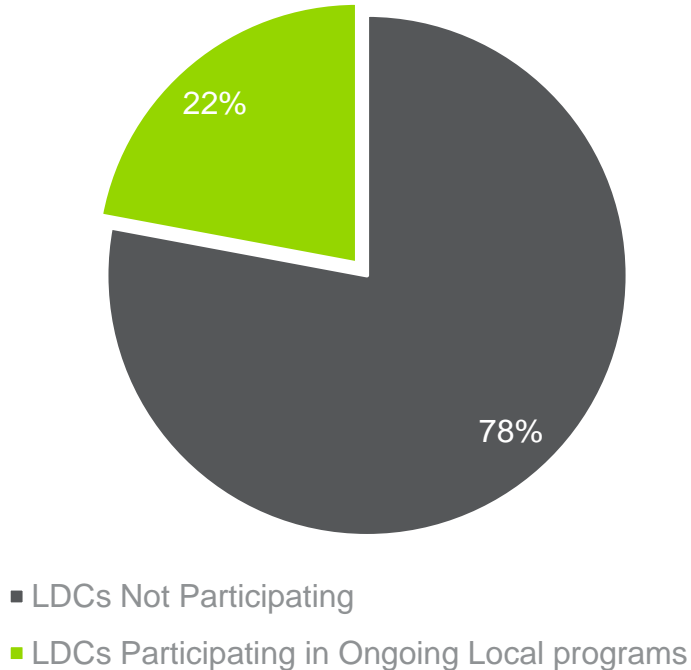
Total pilots	19
Number with multiple LDCs	4
Proportion	21%

Innovation Pilot	Joint Plan?
Residential Direct Mail Pilot Program (.23 GWh)	All LDCs in Same CDM Plan
Home energy assessment and retrofit pilot program (1.5 GWh)	All LDCs in Same CDM Plan
Small & Medium Business Energy Management System Innovation Pilot (2.4 GWh)	No LDCs in Same CDM Plan
ECM Furnace Fan Residential Upstream Pilot (0.73 GWh)	No LDCs in Same CDM Plan

22 PERCENT OF LDCS ARE PARTICIPATING IN COLLABORATIVE LOCAL/REGIONAL PROGRAMS

- The majority of LDCs in Ontario are not participating in local/regional programs in collaboration with another LDC (78%)

Proportion of LDCs Participating in Collaborative Local Programs



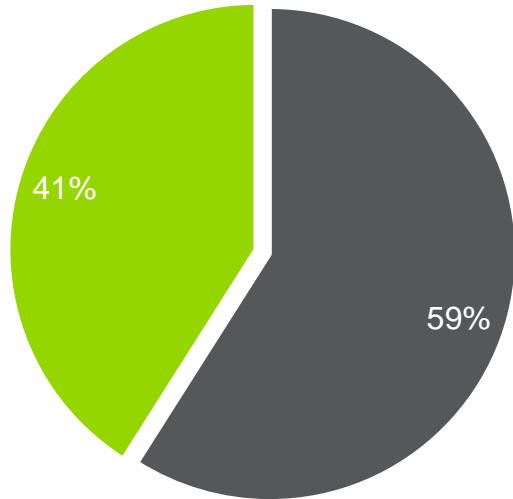
Total LDCs in Ontario	68
LDCs participating in collaborative local/regional programs*	15
Proportion	22%

*LDCs participating in more than one pilot have only been counted once, and only approved collaboration programs have been counted

41 PERCENT OF LOCAL/REGIONAL PROGRAMS ARE COLLABORATIVE

- 41 percent of local/regional programs are collaborative (i.e. carried out by more than one LDC working together)

Proportion of Local Programs that include Collaboration Between LDCs



- Non-collaborative Local Programs
- Collaborative Local Programs

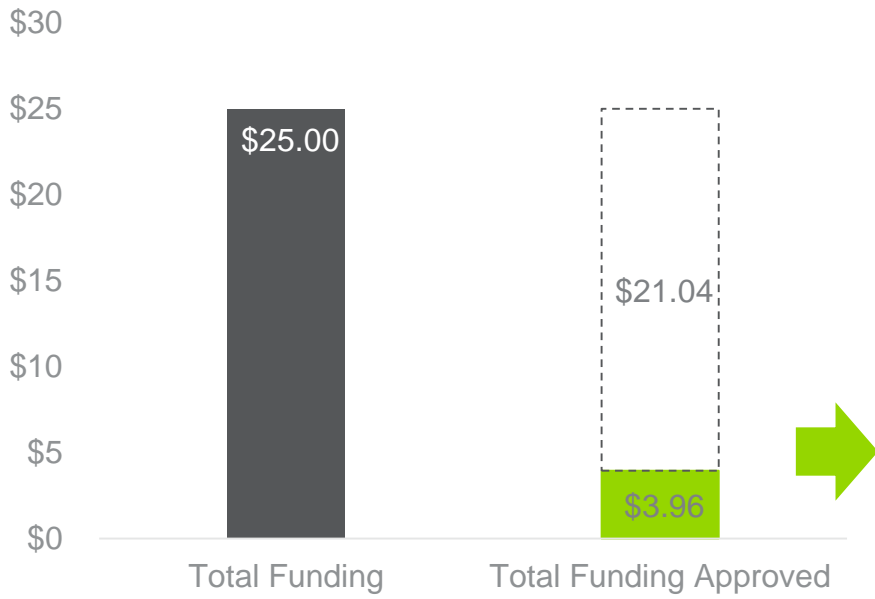
Total Local Programs	22
Number with multiple LDCs	9
Proportion	41%

Local/Regional Program	Joint Plan?
Instant savings program (1.8 GWh)	All LDCs in Same CDM Plan
Swimming pool efficiency program #1 (21 GWh)	All LDCs in Same CDM Plan
High Efficiency Agricultural Pumping Program (26.1 GWh)	No LDCs in Same CDM Plan
Home Assistance Program & Small Business Lighting Program (1.4 GWh)	All LDCs in Same CDM Plan
Swimming pool efficiency program #2 (21 GWh)	All LDCs in Same CDM Plan
Swimming pool efficiency program #3	No LDCs in Same CDM Plan
Business Refrigeration Incentive (7.2 GWh)	All LDCs in Same CDM Plan
Home Energy Reports (20.1 GWh)	All LDCs in Same CDM Plan
Smart RT	All LDCs in Same CDM Plan

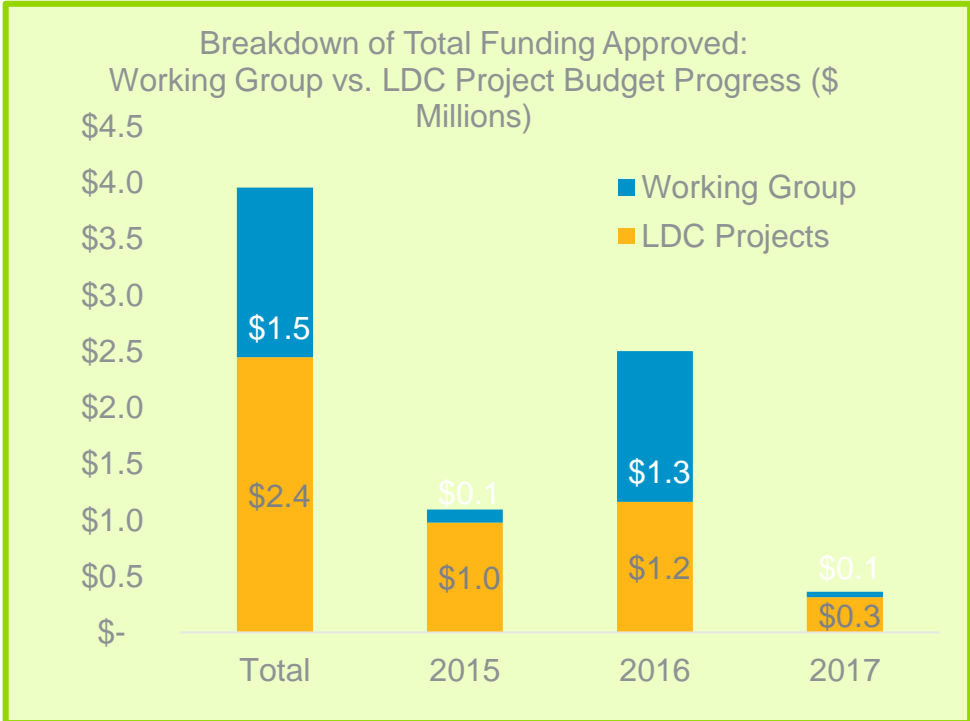
16 PERCENT OF THE COLLABORATION FUND BUDGET IS COMMITTED

- Of the \$25 million Collaboration Fund budget, \$3.96 million has been approved for collaboration projects so far
- Of the approved funds (\$3.96 million), \$1.5 million (38 percent) has been committed to Working Group expenses and \$2.4 million (62 percent) has been committed to LDC Projects
- The Collaboration Fund is under review and not currently accepting applications outside of regular working group functions
- As part of this review, the IESO is revisiting the fund’s purpose and objectives, including its eligibility criteria, in order to develop a new version of the fund that will better support the IESO’s and LDCs’ goals
- All future updates on the status of the Collaboration Fund will be provided through E-BLASTs

Collaboration Fund Budget Progress (\$ Millions)



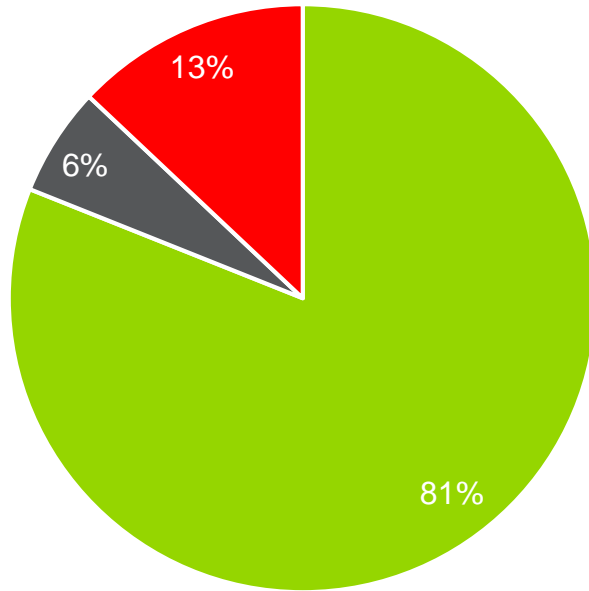
Breakdown of Total Funding Approved: Working Group vs. LDC Project Budget Progress (\$ Millions)



87 PERCENT OF COLLABORATION FUND APPLICATIONS WERE APPROVED OR INVITED TO RESUBMIT

- Of the 32 applications to the collaboration fund, 4 (13 percent) have been rejected
- The rest (87 percent) have either been accepted, or the proponents have been invited to resubmit their application

Collaboration Fund Application Status



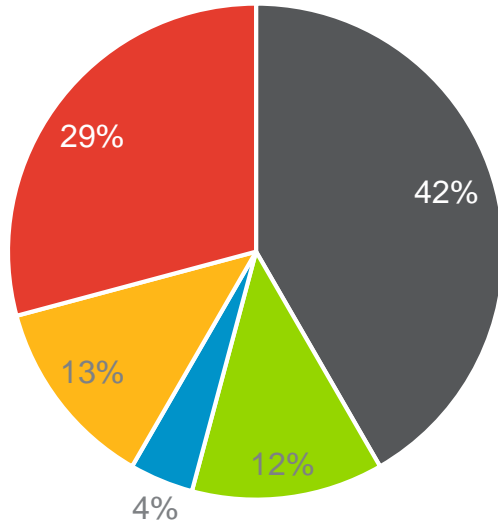
■ Approved ■ Invite to Resubmit ■ Rejected

Collaboration Fund Projects	#
Number of Projects In Contracting	1
Number of Projects Complete	9
Number of Projects Executed	16
Number of Projects Invite to Resubmit	2
Number of Projects Rejected	4
Total Projects	32

MAJORITY OF COLLABORATION FUND PROJECTS ARE HUMAN RESOURCES

- The majority (54 percent) of Collaboration Fund projects are human resources related
- 42 percent of Collaboration Fund projects are tagged to the Working Group (WG)

Breakdown of approved, completed, or executed Collaboration Fund projects



- LDC Human Resources
- WG Human Resources
- WG Training & Education
- LDC Training & Education
- WG Other

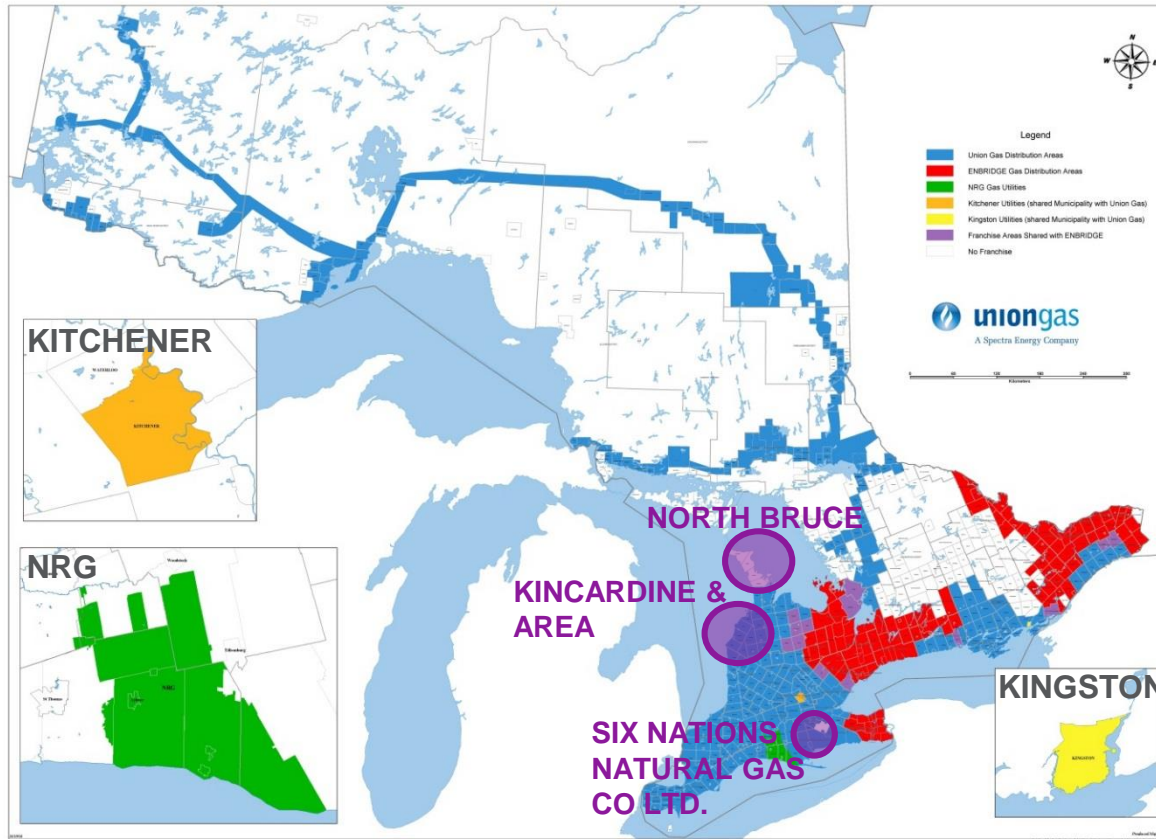
- Human resources (54% of Collaboration Fund projects) consists of funding for:
 - Key account managers/team (2)
 - Energy managers (regional or roving) (7)
 - Technical reviewer services (1)
 - Admin support (1)
 - Business case writer (1)
 - Program development support (1)
- WG Other (29% of Collaboration Fund projects) consists of funding for:
 - Legal services (2)
 - Program design vendor (3)
 - Project management (1)
 - Meeting admin costs (1)



III. CROSS-FUEL COLLABORATION

MOST ELECTRICITY CUSTOMER ALSO HAVE NATURAL GAS SERVICE

- There are minimal service territories in southern Ontario without natural gas service (orange circles)
- Northern Ontario has greater limitations, in particular in Hydro One territory



EXAMPLES OF UTILITIES WITH LIMITED TO NO GAS SERVICE

- Algoma
- Chapleau
- Fort Albany
- Kaschechewan
- Attawapiskat
- Sioux Lookout

BOTH ELECTRICITY AND NATURAL GAS UTILITIES ARE REQUIRED TO COLLABORATE TO GAIN EFFICIENCIES WITHIN THE 2015-2020 PERIOD

- Both the natural gas and electric utilities are working towards the same target timeframe, but the approval bodies vary
- Both IESO and OEB emphasize and encourage collaboration

	Electricity	Natural Gas
Duration	2015 – 2020	2015 – 2020
Province-Wide Target	7 TWh	Metrics developed by program (CCM, households, participants)
Province-Wide Budget	\$1.8 billion + central funding	\$699 million
Approval from	IESO	OEB

- As per government Direction:
 - “The OPA shall require Distributors, where appropriate, to coordinate and integrate Province-Wide Distributor CDM Programs and Local Distributor CDM Programs with natural gas distributor (“Gas Distributors”) conservation programs to achieve efficiencies and convenient integrated programs for electricity and natural gas customers.”
 - “The OPA shall encourage Distributors to maximize administrative and delivery efficiencies by utilizing appropriate program delivery models. Specifically, the OPA and/or Distributors shall provide enhanced co-ordination with regard to [targeting multi-site customers, programs delivered through provincial or national channels (retail specifically mentioned), marketing, procurement, delivery/services “that will afford significant administrative cost and/or delivery efficiencies”].
 - “The OPA shall, where appropriate, coordinate and integrate the Industrial Accelerator Program with natural gas distributor conservation programs to achieve efficiencies and convenient integrated programs.”

SOME ASPECTS OF THE GAS AND ELECTRIC FRAMEWORKS MAY HAVE AN IMPACT ON COLLABORATION

- The table below outlines several areas of the gas DSM and electric CDM frameworks and outlines the potential impact on cross-fuel collaboration

Framework Component	Gas	Electric	Potential Impact
Program Evaluation	OEB has adopted IESO's EMV Protocols for evaluation of gas programs	IESO EMV Protocol used for program evaluation	Alignment achieved
Changes to program portfolio	DSM plans are approved as part of a regulatory process.	Changes to CDM Plans are approved by the IESO.	Regulatory processes could discourage changes to DSM plans and limit new programs and material changes.
Mid term Review	Required.	Required.	Opportunity to share learnings and best practices.
Cost effectiveness	DSM programs are evaluated annually based on cost effectiveness metrics.	CDM programs are evaluated for performance annually based on cost effectiveness metrics.	Frameworks are aligned to measure cost effectiveness using similar tests – Program Administrator cost.
Incentive mechanism	Performance incentives available for meeting and exceeding conservation targets.	Performance incentives available for meeting and exceeding conservation targets.	Financial incentives align utilities towards the target metrics.

THERE ARE AREAS OF PROGRAM ALIGNMENT BETWEEN THE GAS AND ELECTRICITY PROGRAMS TARGETING BUSINESS CUSTOMERS

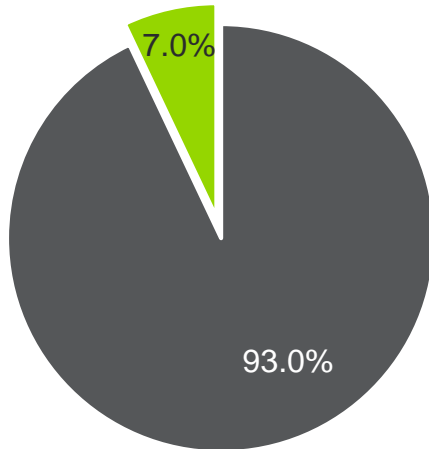
- The following table outlines the programs that align between the CDM and DSM frameworks and portfolios, additional detail for both residential and non-residential programs can be found in Appendix B
- ✓ indicates that a similar electricity conservation program/component exists

ELECTRICITY PROGRAMS ↓	NATURAL GAS PROGRAMS →							
	Custom Industrial	Custom Commercial	Commercial & Industrial	Direct Install	Commercial & Industrial Prescriptive	Savings by Design – Commercial	Run it Right (Run Smart)	Comprehensive (Strategic) Energy
Retrofit (prescriptive and custom)	✓	✓	✓	✓			✓	
Audit Funding			✓					
Energy Managers							✓	
Process & Systems	✓					✓	✓	
System Re-Commissioning						✓		
New Construction					✓			
Monitoring and Targeting						✓	✓	

5 LDCS ARE DELIVERING CROSS-FUEL INNOVATION PILOTS

- 5 out of 71 LDCs are currently delivering innovation pilots with a gas utility

Proportion of LDCs delivering pilot programs with gas utilities



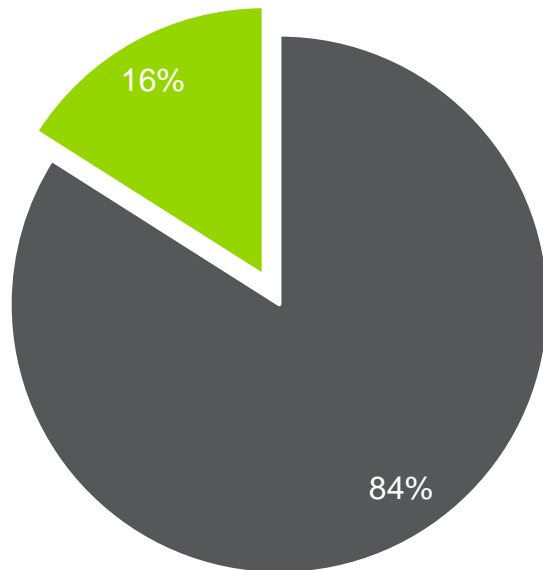
- LDCs not delivering in-market pilots with gas utilities
- LDCs delivering in-market pilots with gas utilities

Total LDCs	#
Total LDCs in Ontario	68
LDCs participating in collaborative pilots with gas utilities	5
Proportion	7%

3 INNOVATION PILOTS FEATURE CROSS-FUEL COLLABORATION

- 3 out of 19 approved pilots feature cross-fuel collaboration

Proportion of Innovation Pilots that include Collaboration Between an electric and gas utility



- Pilots with no Cross-fuel Collaboration
- Pilots with Cross-fuel Collaboration

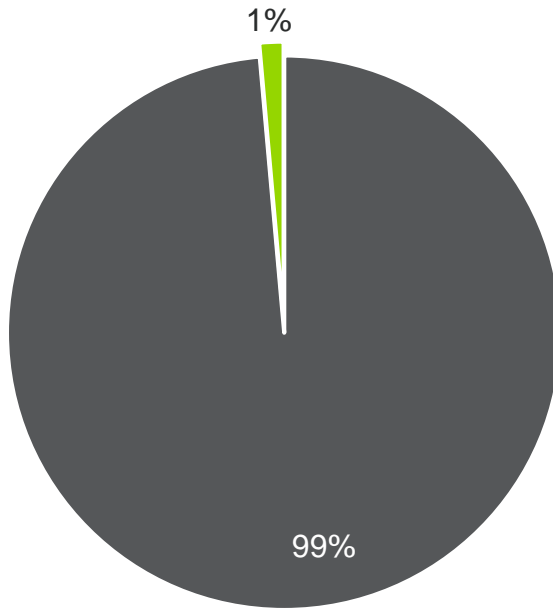
Innovation Pilots	#
Total pilots	19
Number with both electric and gas LDCs	3
Proportion	16%

- Joint Low-Income Program Pilot (0.31 GWh)
- Hotel/Model in-suite A/C Upgrades (2.36 GWh)
- Ecobee for SMBs (2.4 GWh)

1 LDC HAS A LOCAL PROGRAM THAT FEATURES CROSS-FUEL COLLABORATION

- 1 out of 71 LDCs are currently delivering a local/regional program with a gas utility

Proportion of LDCs delivering collaborative local/regional programs with gas utilities



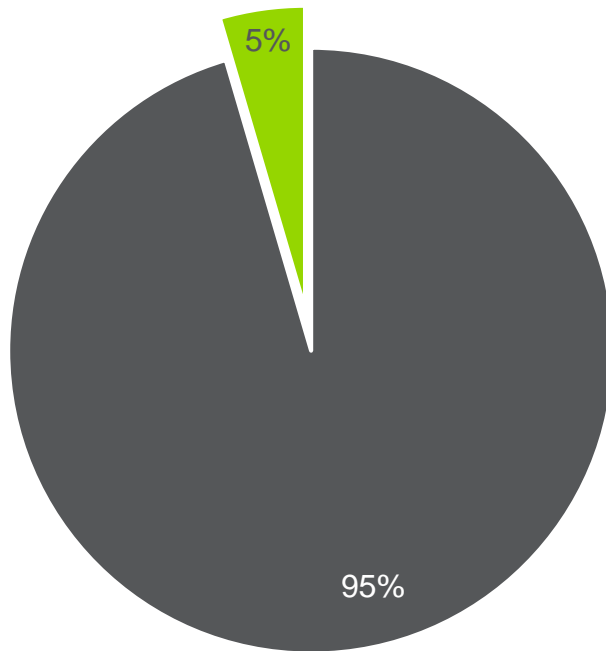
- LDCs not delivering in in-market local programs with gas utilities
- LDCs delivering in in-market local programs with gas utilities

Total LDCs	#
Total LDCs in Ontario	71
LDCs participating in ongoing collaborative local/regional programs with gas utilities	1
Proportion	1%

1 LOCAL PROGRAM FEATURES CROSS-FUEL COLLABORATION

- 1 out of 22 local/regional programs feature cross-fuel collaboration

Proportion of Local Programs that include Collaboration Between an LDC and Gas Utility



■ Local Programs with no Cross-fuel Collaboration

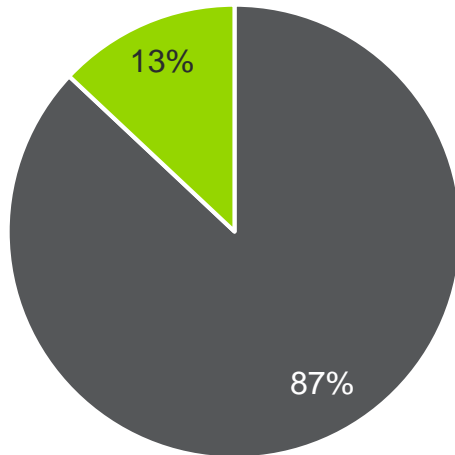
Local Programs	#
Total Local Programs	22
Number of pilots with cross-fuel collaboration	1
Proportion	5%

- Adaptive thermostat rebate program (4.4 GWh)

13 PERCENT OF LDCS ARE PARTICIPATING IN A CROSS-FUEL COLLABORATION FUND ACTIVITY

- 9 out of 71 LDCs are participating in Collaboration Fund LDC Projects with gas utilities (excluding working groups)

Proportion of LDCs Participating in Collaboration fund Activities with Gas Utilities (excluding working groups)



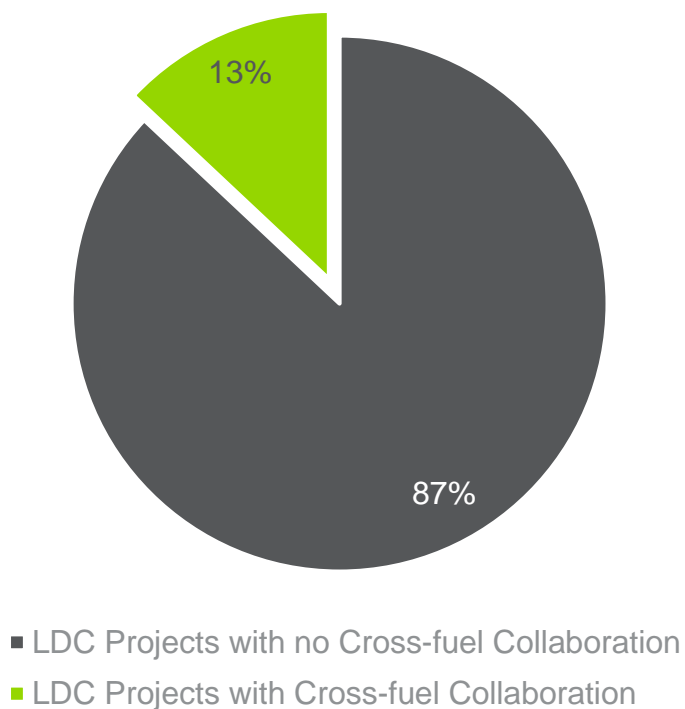
- LDCs Not Participating
- LDCs Participating in Collaboration Fund Activities with Gas Utilities

Total LDCs	#
Total LDCs in Ontario	71
Number of LDCs participating in Collaboration Fund LDC Projects	9
Proportion	13%

13 PERCENT OF COLLABORATION FUND PROJECTS FEATURE CROSS-FUEL COLLABORATION

- 2 out of 15 approved Collaboration Fund LDC Projects (excluding working groups) feature collaboration between electric and gas utilities

Proportion of Collaboration Fund LDC Projects with Cross-fuel Collaboration



Total Projects	#
Total approved, complete or executed Collaboration Fund LDC Projects	15
Number of LDC Projects that feature cross-fuel collaboration	2
Proportion	13%

- Energy Into Action events (5% of total Collaboration Fund budget)

THERE ARE FOUR IESO REPORTED INTEGRATED GAS – ELECTRICITY PROGRAMS IN ONTARIO

- There are four integrated natural gas and electricity pilot programs are either completed (Adaptive Thermostat Rebate program) or beginning soon (Whole Home program) that are reported to the IESO

Whole Home (IESO, Union, Enbridge)

Status: pilot, not yet in market

- The Minister of Energy issued a direction to the IESO on June 10, 2016 to centrally design, fund, and deliver a new province-wide whole home pilot program for residential customers
- Key Principle to provide an **integrated, multi-fuel** whole home **program** that provides a consistent positive experience for residential customers regardless of their home heating fuel type or location in Ontario, targeting approximately 10,000 homes (both electrically heated homes and homes eligible for gas programs)
- Enbridge and Union Gas each offer a whole home program for residential customers
- Employ existing gas utilities' program offers and infrastructure with added complementary electricity savings component

Hotel/Motel Pilot (Niagara Peninsula Energy and Enbridge Gas)

Status: Pilot Program, in Market

- Niagara Peninsula Energy (NPEI), in collaboration with Enbridge Gas, and the Ontario Restaurant Hotel & Motel Association is delivering an 18-month targeted holistic hotel/motel CDM program pilot in NPEI's service territory.
- The pilot is being reported by the Independent Electricity System Operator's (IESO) Innovation Fund.
- The pilot provides a comprehensive electricity - natural gas - water (steam) program for the hotel/motel sector in NPEI's service territory.
- Hotel/motel customers see a 'one-stop shop' for conservation programs, which leverage existing province-wide incentives available through CDM and Gas DSM programs.

THERE ARE FOUR IESO REPORTED INTEGRATED GAS – ELECTRICITY PROGRAMS IN ONTARIO

- There are four integrated natural gas and electricity pilot programs are either completed (Adaptive Thermostat Rebate program) or beginning soon (Whole Home program) that are reported to the IESO

Adaptive Thermostat Rebate (Toronto Hydro, Enbridge)

Status: local/regional program, recently concluded

- This local/regional program was offered collaboratively by Toronto Hydro and Enbridge gas to residential customers within their combined service territory
- Enbridge and Toronto Hydro each offered \$50 of a \$100 incentive for customers to upgrade to a smart thermostat (if the customer has central air conditioning)
- The program allows the customer to fill out one application and receive incentives from two organizations, demonstrating the customer benefit from collaboration
- The collaborative program was in market from March, 2016 until March 31, 2017, and its funding was approved by the IESO

Joint Home Assistance Program (Toronto Hydro, Enbridge)

Status: Pilot Program, in Market

- This pilot program was approved in December, 2015 by the IESO and is ongoing
- The program tests savings and cost feasibility of jointly delivered HAP and Winterization Program for low-income Toronto Hydro and Enbridge Gas customers
- This pilot has the potential to be moved forward into a full program



IV. OTHER COLLABORATION

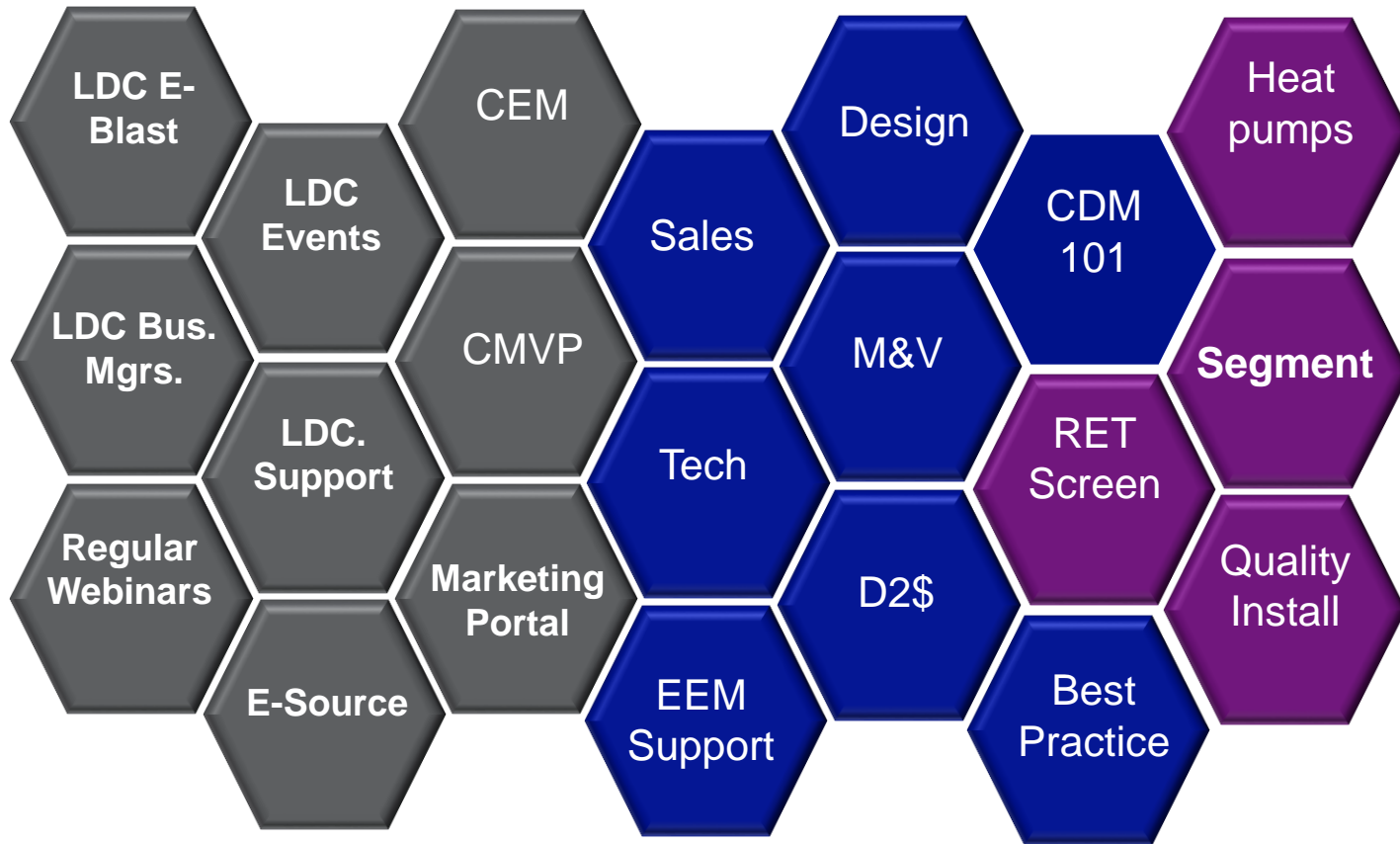
COLLABORATION WITH OTHER ENTITIES THROUGH THE CONSERVATION FUND

- The Conservation Fund provides funding for innovative projects testing technologies and approaches to conservation, collaboration is not a requirement and funding is outside of the Conservation Fund Framework
- Some examples of collaboration with other participants through the Conservation Fund are below

Year	Entities Involved		Description
2015	IESO	Ontario Clean Water Agency	Testing pay-for-performance model
2015	PowerStream	OEB, IESO	Dynamic pricing pilot + technology to inform decisions to implement a voluntary, year-round alternative to TOU structures
2015	IESO	Beworks Inc.	Building off OEB pilot to test effectiveness of communicating TOU pricing information
2014	Enwin	Water utilities	Evaluating benefits of water conservation measures to support integrated conservation programs
2014	IESO	Waterfront Toronto	Analyze energy and water data
2013	IESO, LDCs	EnerNOC	Engage medium and large commercial customers in strategic energy management
2013	IESO	Ryerson University	Three fellowship positions and student awards focused on integration of energy and urban planning, integrated delivery of conservation programs

IESO CAPABILITY BUILDING ACTIVITIES ACROSS MANY TOPIC AREAS

- IESO provides capability building opportunities for LDCs and Channel Partners ranging from information sharing to training and tools



IESO PROVIDES SUPPORT FOR ENERGY MANAGERS THROUGH EVENTS AT WHICH THERE ARE OPPORTUNITIES FOR LDC COLLABORATION

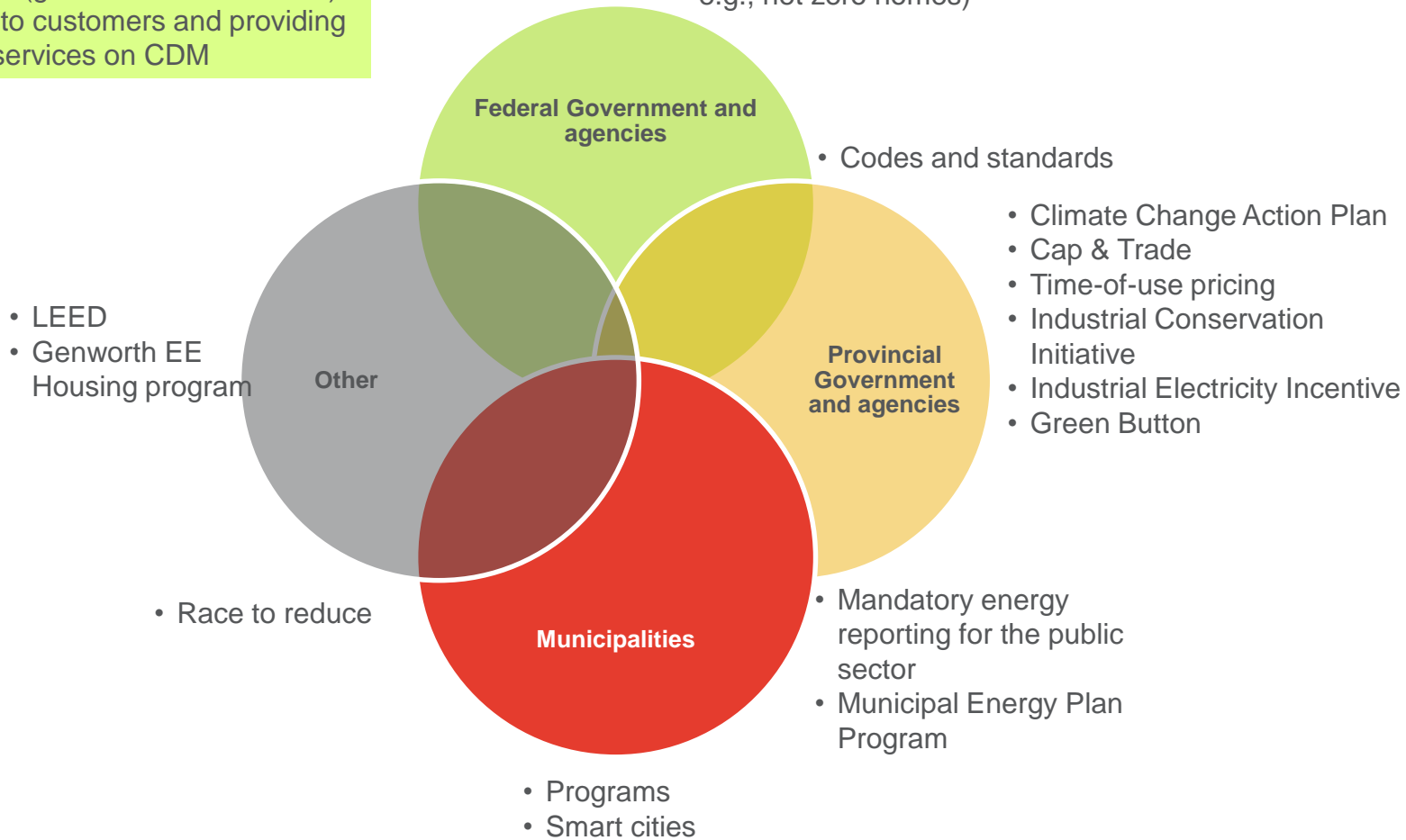
- IESO provides collaboration opportunities specifically for Energy Managers
- 20 events occurred from 2015 to 2017

Year	Event	Attendees
2015	3M Energy Hunt	25
	Cameco Energy Hunt	20
	EM Forum & Emmies	27
	Molson Energy Hunt	12
	Pepsi Energy Hunt	24
	Regional Energy Manager Meeting X 4	75
2016	City of London Energy Hunt	13
	GM Energy Hunt	18
	Regional Energy Manager Meeting X 5	179
2017	Sales Training	53
	Sunnybrook Health Sciences Centre Energy Hunt	16
	University of Toronto Energy Hunt	25

THERE ARE MANY OTHER ORGANIZATIONS INVOLVED IN ADVANCING SIMILAR POLICY GOALS IN ONTARIO, MANY ARE ASSOCIATED WITH GOVERNMENT

- Many other actors (government and others) are reaching out to customers and providing information and services on CDM

- NRCan (former ecoEnergy, other pilot funding – e.g., net zero homes)



IN THE PAST, OTHER PROGRAMS HAVE IMPACTED PARTICIPATION IN IESO PROGRAMS: CASE STUDY HEATING & COOLING PROGRAM

- Case Study: ecoEnergy Retrofit-Homes program and IESO Heating & Cooling program
- The ecoEnergy Retrofit-Homes program was a federal program offering rebates to residential customers replacing heating and cooling equipment
- The IESO (then OPA) had a program that offered incentives (through a contractor) for the same equipment.
- Customers were able to obtain both incentives
- Many participants in Heating & Cooling leveraged both incentives available

Incentives and Tax Credits

In addition to the incentive provided by the OPA initiative, many participants received other incentives or tax credits (Table 89). More furnace purchasing participants (80) than CAC purchasing participants (45) received an additional incentive or tax credit. In addition to rebates and tax credits, three furnace purchasing participants and three CAC purchasing participants received a reimbursement for their energy audit.

Table 89: Participant Incentives and Tax Credits Received

INCENTIVE/TAX CREDIT	FURNACE	CAC
Federal rebate	37	20
Manufacturer rebate	13	8
Provincial rebate	9	5
Rebate from the contractor	6	4
Other rebate	6	4
Don't know/ can't remember	17	6
Total	88	47

THE LARGEST ANTICIPATED FUNDING CATEGORY COULD ALIGN WELL WITH EFFORTS UNDER CONSERVATION FIRST FRAMEWORK

- Funding through the Climate Change Action Plan for buildings and homes could reach between \$2 and \$3 billion which is anticipated to be spent in the next 5 years
- The stars indicate potential areas of alignment and additional details are provided in Appendix A

Ontario Government to invest \$5.9B to \$8.3B through the CCAP

