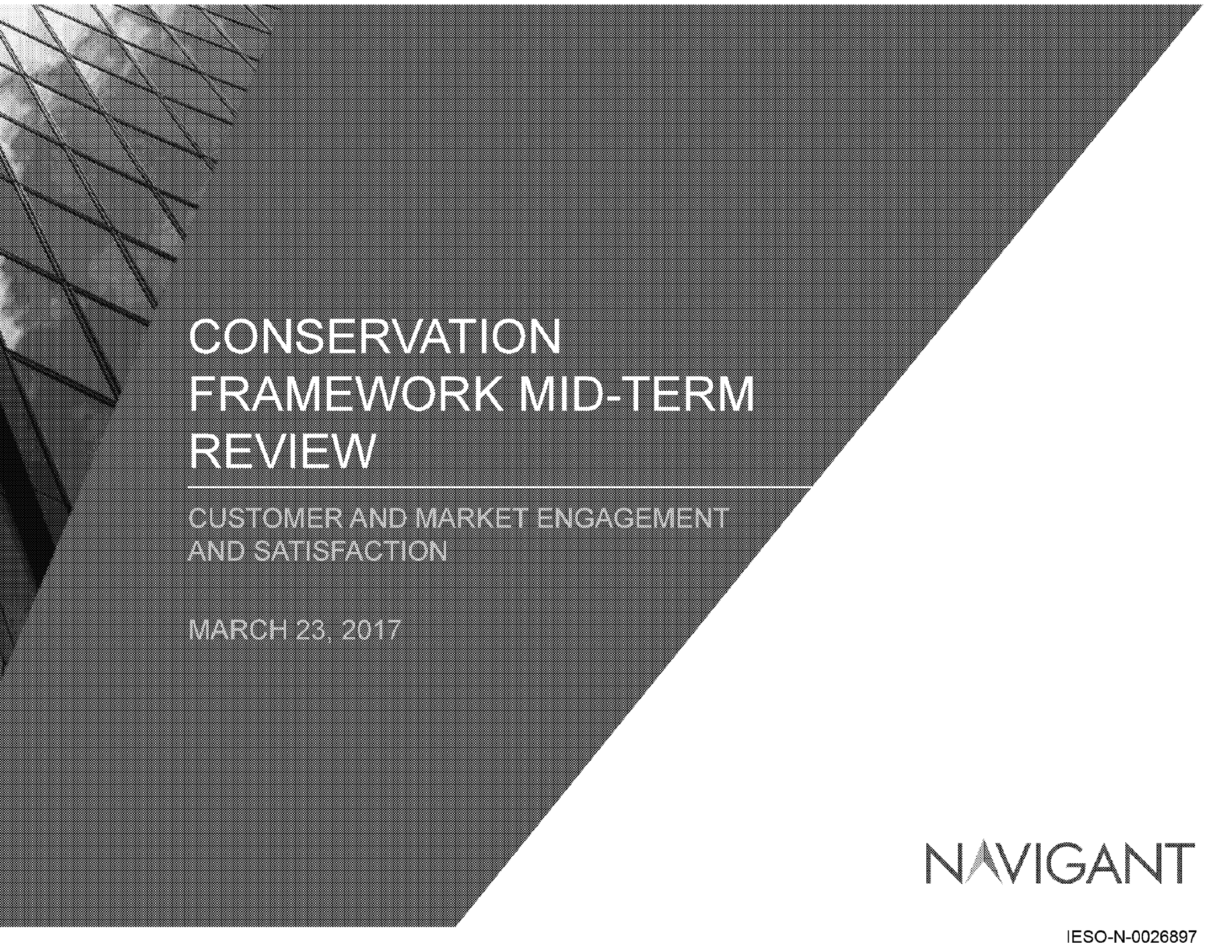




CONSERVATION FRAMEWORK MID-TERM REVIEW

CUSTOMER AND MARKET ENGAGEMENT
AND SATISFACTION

MARCH 23, 2017

NAVIGANT

DISCLAIMER

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SECTION 1: EXECUTIVE SUMMARY

- I. Policy Context
- II. Introduction and Methodology
- III. Scorecard: Customer and
Market Engagement and
Satisfaction
- IV. Current State Summary

CUSTOMER AND MARKET ENGAGEMENT AND SATISFACTION

2013 Long Term Energy Plan (LTEP) contains several statements related to Customer and Market Engagement and Satisfaction, examples include:

Stability and Choice

- There will be long-term, stable funding for conservation so that customers and Local Distribution Companies (LDCs) have the certainty they need to implement and deliver programs.
- Customers will be given more program choice along with streamlined oversight and administration.

Awareness and Information

- There will be renewed efforts to deepen consumer awareness of conservation, and more broadly, of the electricity system.
- The Green Button Initiative will give consumers access to their energy data and the ability to connect to mobile and web-based applications so they can analyze and manage their energy use.
- To help consumers choose the most efficient products for their homes and businesses, Ontario will provide information and incentives; it will also continue to show leadership in establishing minimum efficiency requirements for products such as water heaters, clothes dryers, televisions, fluorescent lamps, motors and boilers.

Program/Sector Specific

- Conservation programs for low-income residential customers will be improved.
- For Aboriginal communities, the role of LDCs in the delivery of conservation programs will be enhanced, particularly for on-reserve First Nation customers.
- Industrial and transmission-connected customers will continue to have access to the Ontario Power Authority's (OPA's) conservation programs, which will be expanded to facilitate broader program choice and financing flexibility.

Other

- The government will work to make new financing tools available to consumers starting in 2015, including on-bill financing for energy efficiency retrofits.

CUSTOMER AND MARKET ENGAGEMENT AND SATISFACTION

Guiding Principles

1. Distributors are the face of electricity conservation to their customers in all sectors.
3. Customers will be given more CDM program choice along with streamlined oversight and administration.
6. While there will be CDM programs available for all residential, commercial and industrial sectors, the value of CDM investments may be higher in some sectors than others.
7. There will be renewed efforts to deepen consumer awareness of CDM and how it relates more broadly to the electricity system.
8. CDM programs for low-income residential customers will be improved.
9. The role of Distributors in the delivery of CDM programs to on-reserve First Nation customers will be enhanced.

CDM: Conservation and Demand Management

CUSTOMER AND MARKET ENGAGEMENT AND SATISFACTION

3.1 "...a core set of Province-Wide Distributor CDM Programs for the following segments... to make available for delivery in Distributors' licensed service areas..."

Residential; Low-income; Small business; Commercial (including multi-family buildings); Agricultural; Institutional; Industrial

3.2 Province-Wide Distributor CDM Programs will..."balance the value of flexibility for some program customization to meet local and/or regional needs with the value of offering consistent CDM measures to customer segments across all Distributor service areas

3.3 The OPA shall support Distributors in designing Local Distributor CDM Programs for specific industry concentrations or customer segments...that require unique approaches to achieve electricity savings, such as on-reserve First Nation customers

3.5 (x) The OPA and/or Distributors shall provide enhanced co-ordination [for administrative and delivery efficiencies] efforts with regard to...consumers with multiple locations across several licensed areas

CUSTOMER AND MARKET ENGAGEMENT AND SATISFACTION

Guiding Principles

1. The Industrial Accelerator Program will be available to new and existing industrial, commercial and institutional customers which are directly or indirectly connected to the IESO-controlled grid
2. Industrial Accelerator Program will facilitate broad choice, including, without limitation, programs offering incentives for eligible process optimization, retrofits, new construction and energy managers. The Industrial Accelerator Program will also facilitate flexibility in respect of financing projects.
3. ...provide financial incentives to participating customers that are sufficient to generate attractive rates of return for CDM projects.
4. ...administration of the Industrial Accelerator Program will be streamlined and simplified, where appropriate, to encourage greater participation in the program.

3.1 (iii) OPA shall, where appropriate, coordinated ...Industrial Accelerator Program with natural gas distributors... to achieve convenient integrated programs.

Industrial Accelerator Program: Industrial Accelerator Program

MID-TERM REVIEW

Navigant was engaged by the IESO to complete the mid-term Framework Review for the Conservation First Framework and Industrial Accelerator Program. Issues were identified by the IESO and grouped into eight major topics that will guide the Framework Review through four key activities outlined below. This report is the topic-based report communicating the current state of **Customer and Market Engagement and Satisfaction**.

Topic-Based Reports			Market Research	Opportunities	Final Study Report
Topics	Report Date	Topic reports:	Objectives:		
Customer and market engagement and satisfaction	March 16	Summarize the current state of each theme (e.g., existing operations, policies, progress, decisions, etc.) and are used as a basis for market research.	- To confirm and enhance content of the topic reports - To gather insights into future framework improvements design, and delivery.	Research, analysis, market research inform potential modifications. Cost-benefit and gap analysis to scope opportunities. Consolidated list of short-term (within 1 year), medium-term (before 2020), and long-term (post 2020) opportunities for prioritization by the IESO.	Consolidation of findings, feedback, and identification of issues and opportunities. Methodologies and approach clearly discussed. Out of Scope: - New mass market research 2011-14 framework in-depth analysis - New program design - LDC Mid-term incentive - Evaluation Measurement & Verification protocols - Codes and Standards
Definition of CDM	April 20				
Collaboration	April 20				
Governance & operations	May 18				
Planning integration	June 15				
Non-energy benefits	July 13				
Climate change	July 13				
Budgets, targets, cost effectiveness	August 17		May to August	September/October	November to February

FOCUS AREAS AND KEY QUESTIONS

This report will analyze available information and begin to explore the issues and opportunities of the key questions and focus areas listed below pertaining to the **Customer and Market Engagement and Satisfaction** topic.

Key Questions

- Are programs meeting the needs of the customer?
- Is the framework itself creating challenges for the customer or market actors who could support CDM/Demand Side Management (DSM)?
- Are there any customer or sector specific gaps in the framework?
- How can the customer experience be improved?
- How do customers view the Save on Energy brand?
- How can customers' perception of the Save on Energy brand be improved?

Focus Areas

I. Conservation First Framework:

- A. Brand/program awareness and customer relationships
- B. Challenges of coordination across multiple utilities
- C. Customers with facilities across multiple territories
- D. Variation in program offering across the province
- E. Customer satisfaction with programs
- F. Channel participation in/support for programs
- G. Efficacy of current approach & barriers to entry

II. Industrial Accelerator Program:

- A. Active and non-participants, efficacy of current approach
- B. CDM/DSM integration into business practices
- C. Awareness and understanding of programs
- D. Channel participation in/support for programs

CONSERVATION FIRST FRAMEWORK SCORECARD

The preliminary scorecard illustrated below will be used to evaluate **Customer and Market Engagement and Satisfaction** in the Conservation First Framework for both the current state and future state assessments.

METRIC	SUB-METRIC	RESULT ¹	TREND	INDICATOR	CRITERIA
Brand Awareness		69%	↔	●	2016 % of brand awareness (brand and brand with description) Power What's Next Survey. Responses from general residential population.
Brand Trustworthiness		89%	↔	●	2016 % of brand awareness (brand and brand with description) Power What's Next Survey. Responses from general residential population.
Customer Satisfaction	Satisfaction with Retrofit program	91%	↔	●	% of program participants in 2016 that reported their "participation met expectations" or "exceeded expectations" as per Customer Satisfaction and Business Customer Experience surveys. Responses from program participants.
	Satisfaction with Heating & Cooling program	94%	↔	●	
	Satisfaction with Coupon program	93%	↔	●	

TREND		INDICATOR	
↔	Minimal (less than 5 percentage points year over years) change in the metric relative to prior years	○	Metric is on track (against what will vary by metric, e.g., forecast, benchmark, expectations, etc.)
↑	Increase in the metric relative to prior years	○	Metric indicates there is an opportunity for improvement
↓	Decrease in the metric relative to prior years	●	Metric is in progress (continue to monitor)

CONSERVATION FIRST FRAMEWORK SCORECARD

The preliminary scorecard illustrated below will be used to evaluate **Customer and Market Engagement and Satisfaction** in the Conservation First Framework for both the current state and future state assessments.

METRIC	SUB-METRIC	RESULT ¹	TREND	INDICATOR	CRITERIA
Market Share	Participation rate, Heating & Cooling program	60%	↑	●	% eligible customers that participated as per Longitudinal Mass Market Research Survey and Power What's Next surveys. Responses from general residential population.
	Participation rate, Coupon program	35%	↑	●	
Program Penetration	% of savings achieved in 2015 and 2016 vs achievable potential in 2015 and 2016 ^{2,3} :		↕	●	% persisting energy savings acquired in 2015 plus new energy savings acquired in 2016 as compared to energy savings as per the achievable potential study in 2015 and 2016. Metrics do not reflect progress to CDM Plan.
	• Residential	70%		●	
	• Business	126%	↕	●	% persisting energy savings acquired in 2015 plus new energy savings acquired in 2016 as compared to energy savings forecast by LDCs in their CDM Plans for the years 2015 and 2016.
	% of reported savings achieved in 2015 and 2016 vs CDM Plans ^{2,3} :			●	
	• Residential	68%	↕	●	
	• Business	80%		●	

Note ²: Includes 2015 verified results and 2016 unverified results.

Note ³: Approximately 67 percent of 2016 progress consists of persisting savings from 2011-2014 framework projects completed in 2015

TREND		INDICATOR	
↔	Minimal (less than 5 percentage points year over years) change in the metric relative to prior years	○	Metric is on track (against what will vary by metric, e.g., forecast, benchmark, expectations, etc.)
↑	Increase in the metric relative to prior years	○	Metric indicates there is an opportunity for improvement
↓	Decrease in the metric relative to prior years	●	Metric is in progress (continue to monitor)

INDUSTRIAL ACCELERATOR PROGRAM SCORECARD

The preliminary scorecard illustrated below will be used to evaluate **Customer and Market Engagement and Satisfaction** in the Industrial Accelerator Program for both the current state and future state assessments.

METRIC	SUB-METRIC	RESULT ¹	TREND	INDICATOR	CRITERIA
Customer Satisfaction		N/A	N/A		Metrics not tracked for Industrial Accelerator Program; market research will inform the metric.
Brand Awareness		N/A	N/A		Metrics not tracked for Industrial Accelerator Program; market research will inform the metric.
Brand Trustworthiness		N/A	N/A		Metrics not tracked for Industrial Accelerator Program; market research will inform the metric.
Market Share	# of participating customers	85%	↑	●	% of eligible customers that have participated.
	Number of projects	31	↑	●	Increase in # of projects from 2015 to 2016.
Energy Managers	Customers with energy managers	25%	N/A	●	% of eligible customers with IESO funded energy managers.

TREND		INDICATOR	
↔	Minimal (less than 5 percentage points year over years) change in the metric relative to prior years	○	Metric is on track (against what will vary by metric, e.g., forecast, benchmark, expectations, etc.)
↑	Increase in the metric relative to prior years	○	Metric indicates there is an opportunity for improvement
↓	Decrease in the metric relative to prior years	●	Metric is in progress (continue to monitor)

PRELIMINARY OBSERVATIONS

How do customers view the Save on Energy brand? How can customers' perception of the Save on Energy brand be improved?

- Brand awareness was high as of December 2016 (at 69% of the general residential population surveyed).
- Brand trustworthiness as of 2016 continues to be high (at 89% of those surveyed).
- Save on Energy Brand Image remains very positive among Ontarians aware of the brand (55% to 81% of Ontarians agree to positive statements about the attributes of Save on Energy).
- Preliminary research provides a good foundation of the pulse of brand awareness and trustworthiness.
- Further research on the brand will not be necessary under the Mid-term Review as IESO's tracking studies will continue through to 2020 (Mid-term Review: continue to monitor results of IESO research)

Are programs meeting the needs of the customer? How can the customer experience be improved?

- Retrofit program customer satisfaction scores remain high – scores of 94% in 2014 and 92% in 2016.
- Large businesses know what it takes to conserve - 87% state they are at least somewhat knowledgeable about what it takes to reduce electricity consumption
- Research is showing strong customer satisfaction metrics for consumer programs over the past three years (Heating & Cooling – 92% and Coupons – 92%, average over 3 year period).
- 76% of Heating & Cooling participants and 76% of Coupon participants were likely to participate in Save on Energy programs the future.
- Preliminary research begins to identify areas of focus for further research (e.g., barriers).
- Potential for further investigation into programs not investigated through existing IESO commissioned market research (i.e., all programs with the exception of Retrofit, Coupons, and Heating & Cooling).

PRELIMINARY OBSERVATIONS

Are there any customer or sector specific gaps in the framework?

- There are programs available to all segments (residential, small commercial, large commercial).
- CDM plans focus target achievement (energy savings) on business customers.
 - Small business customers are 5% of anticipated target achievement (energy savings from the small business lighting program and other local/regional programs targeted towards small businesses).
 - Business customers (not including small business) are anticipated to capture 76% of target achievement (energy savings) as per CDM Plans.
- The Achievable Potential Study indicates available energy efficiency opportunity in the residential sector with possible limitations in the short-term for the business sectors.
- Preliminary research provides a baseline understanding from a program and general awareness/ attitudes perspective (e.g., when customers think of energy efficiency and Save on Energy, what are they thinking of, how do they obtain program information, etc.).
- Potential for further investigation into meaningful gaps in both programming and framework (e.g., are small business and residential programs sufficient to reach potential and meet customer needs).
- Potential to complete further research into opportunities beyond the business segment.

PRELIMINARY OBSERVATIONS

- **Is the framework itself creating challenges for the customer or market actors who could support CDM/DSM?**
 - There appears to be increased engagement in the business sector through energy managers, channel, and multi-site customers (82% of large companies in 2015 reported to have paid attention to managing their electricity annually or more, which is up 5% from 2014).
 - 46% of large customers hear about business programs from channel and supply chain (contractors and distributors).
 - Preliminary research provides a baseline understanding of select program barriers and attitudes (e.g., decision-makers thoughts about managing energy use).
 - Potential to investigate any challenges and satisfaction among market actors serving customers with properties in multiple territories.
 - Seek to understand Industrial Accelerator Program non-participant barriers and/or reasons for non participation in the Industrial Accelerator Program.



SECTION 2: INTRODUCTION & METHODOLOGY

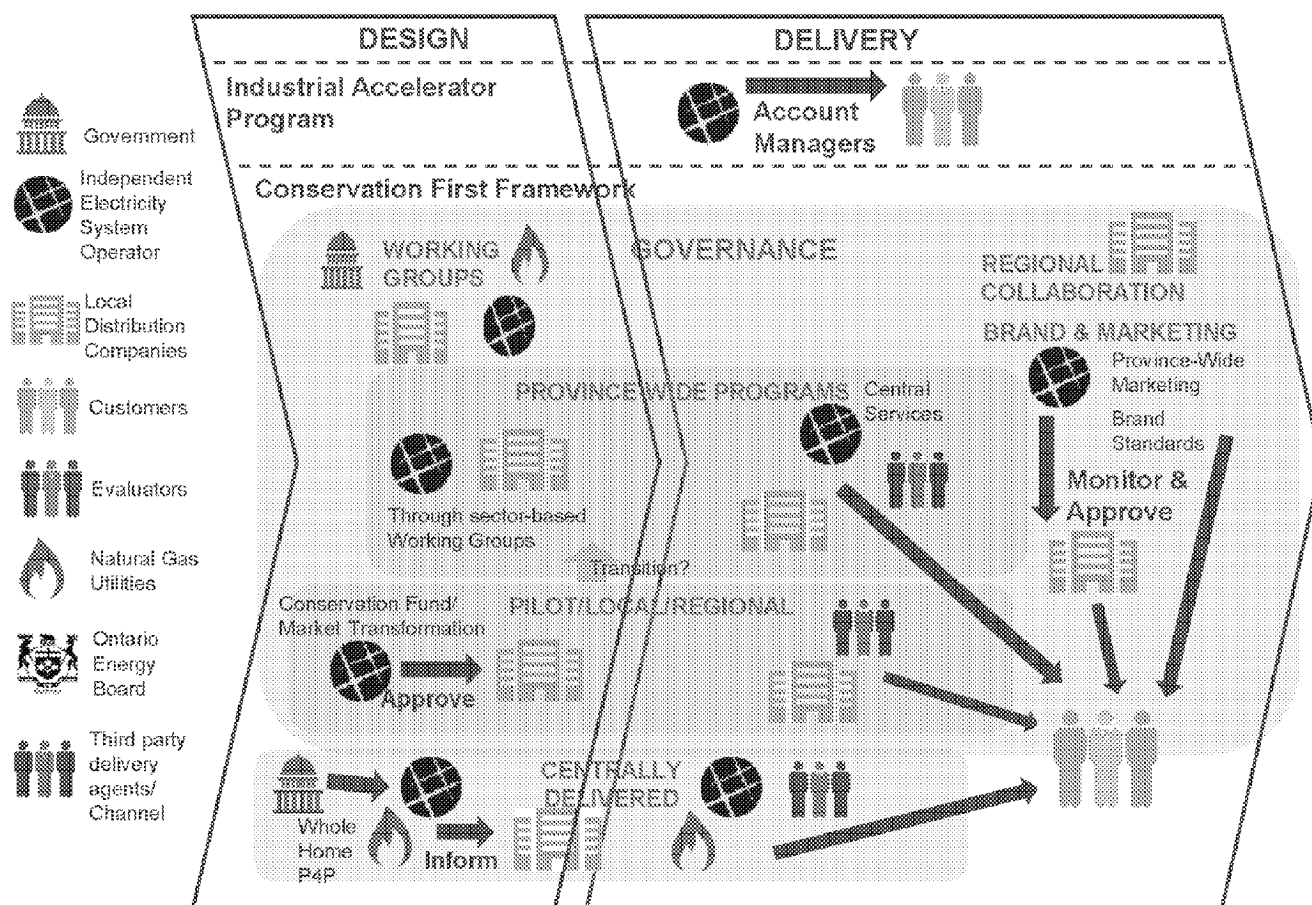
- I. Overview
- II. Approach

CONTEXT

This slide provides a schematic and summary points that are intended to provide a baseline understanding of how customers interact with the Conservation First Framework and Industrial Accelerator Program.

Summary and Key Points:

- Industrial Accelerator Program is delivered to transmission-connected customers via the IESO through account managers.
- Conservation First Framework programs fall into four categories: province-wide, pilot, local/regional, and centrally delivered.
 - Province-wide and centrally delivered programs are available to all eligible Ontario customers connected to the distribution system.
 - Local/regional program coverage varies by LDC, as do pilot programs.
- IESO undertakes province-wide marketing using the Save on Energy brand.
- LDCs must comply with brand standards and also undertake marketing efforts to reach their customers.
- Province-wide programs are modified via collaborative working groups as per the Energy Conservation Agreement



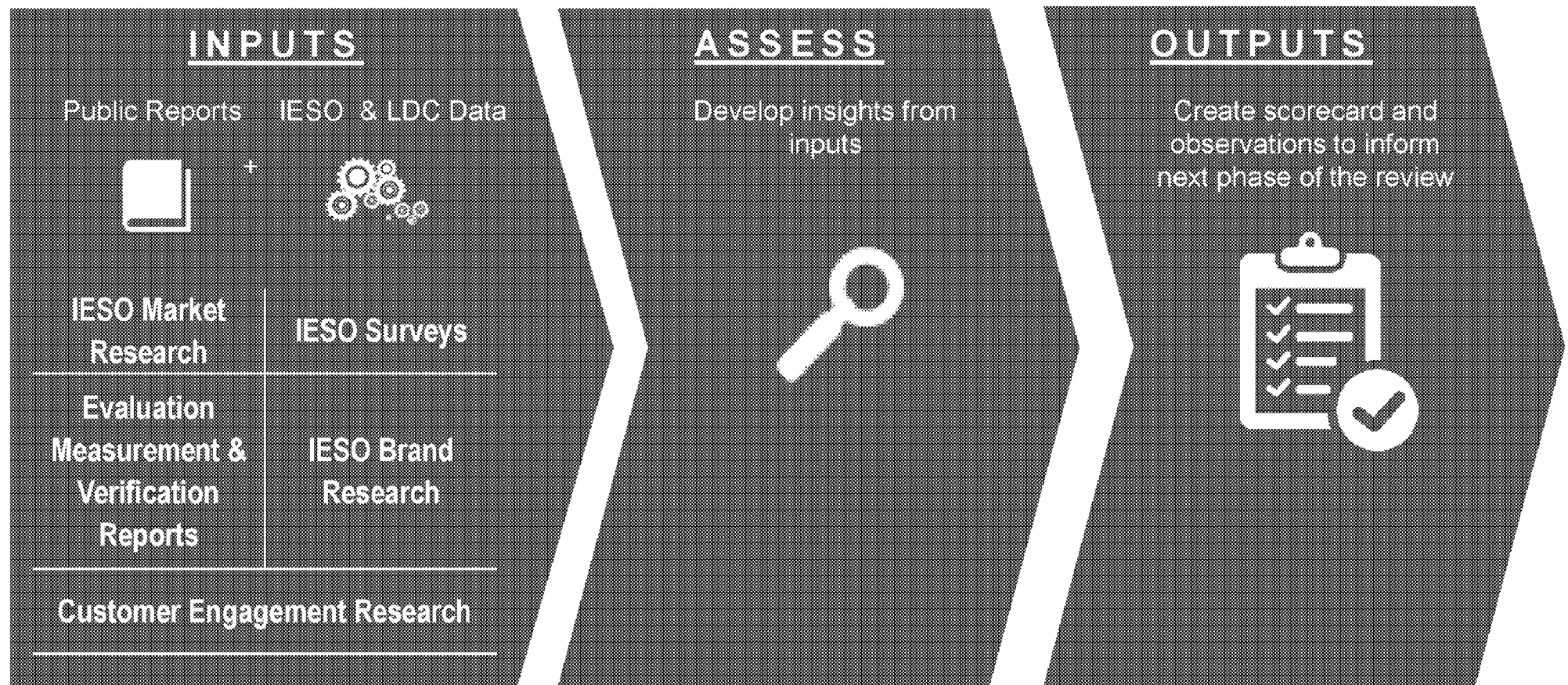
REPORT ORGANIZATION

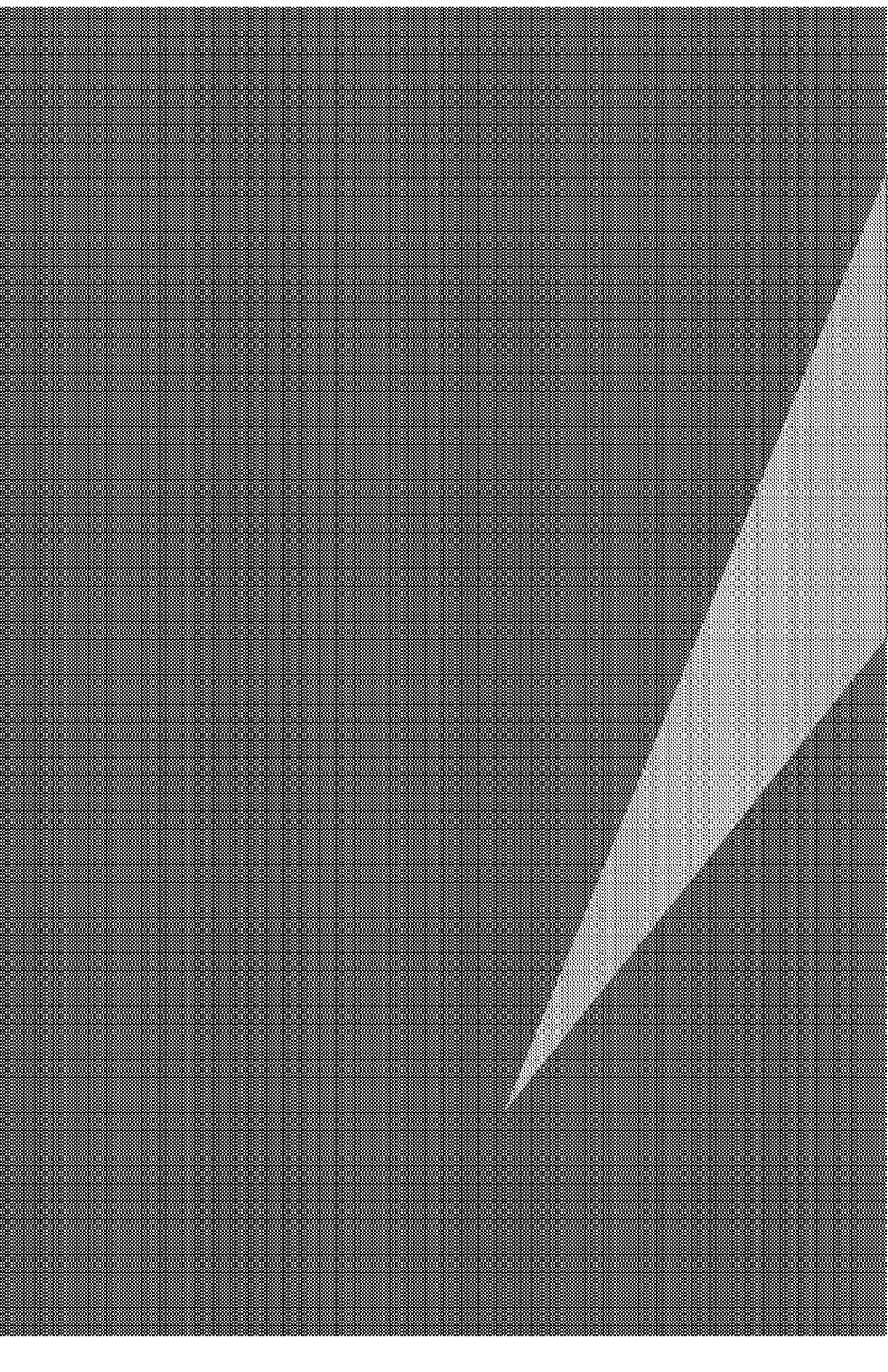
This report will be organized by the sections outlined in the table below. The sections are designed to address one or more of the focus areas identified.

Section	Description	Focus Area
Brand awareness and trustworthiness	Overall awareness of the Save on Energy brand from the broader population. Opinions about and associations with the Save on Energy brand.	Brand/program awareness and customer relationships
Program awareness	Awareness of individual programs from the broader population. Focus on Retrofit, Heating & Cooling, and Coupons.	Brand/program awareness and customer relationships
Customer satisfaction	Customer satisfaction from participating customers for specific programs. Focus on Retrofit, Heating & Cooling, Coupons, and Home Assistance Program (HAP).	Customer satisfaction with programs
Program penetration	Review of participation/activity in programs to date against achievable potential. Additional investigation into barriers. Specific investigation into program delivery models (e.g., multi-site, energy managers, etc.).	- Barriers to entry - Efficacy of current approach - Challenges in coordination across multiple utilities - Customers with facilities across multiple territories - Channel participation in/support for programs
Market share	Review of current program offerings at the local and province-wide level. General attitudes of conservation.	- Variation in program offering across the province - Efficacy of current approach - CDM/DSM integration into business practices

ANALYSIS

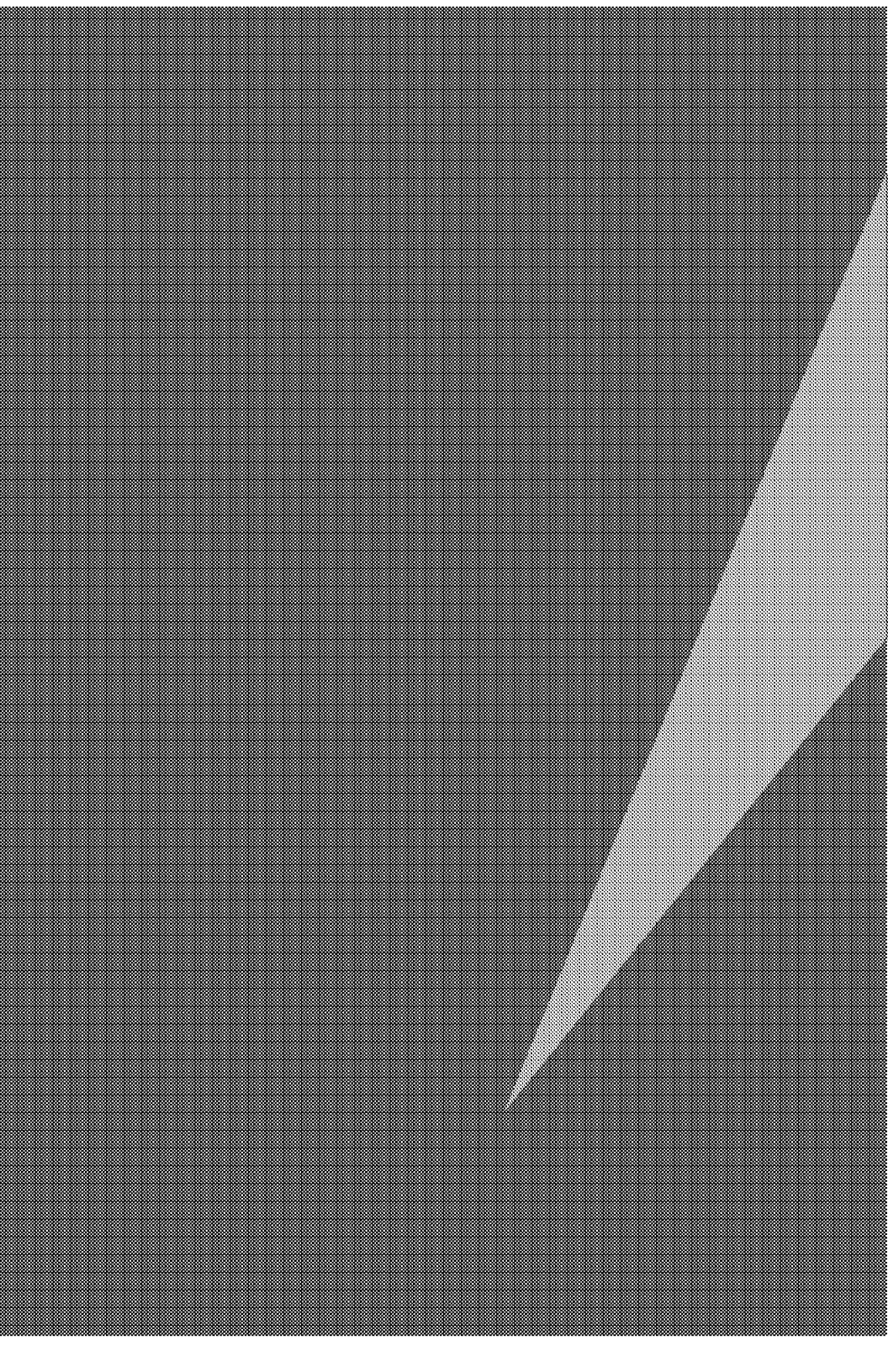
Navigant's approach to analysis for topic reports is outlined in this graphic:





SECTION 3: CURRENT STATE OF AFFAIRS

- I. Brand Awareness & Trustworthiness
- II. Program Awareness
- III. Customer Satisfaction
- IV. Program Penetration
- V. Market Share

An abstract graphic design featuring a dark gray background with a fine grid pattern. A large, light gray triangle is positioned on the left side, pointing towards the right. The triangle is composed of two overlapping shapes, creating a sense of depth and movement.

I. BRAND AWARENESS & TRUSTWORTHINESS

NAVIGANT

IESO-N-0026897

OVERVIEW

Section	Brand awareness & trustworthiness
Description	Overall awareness of the Save on Energy brand from the broader population. Opinions about and associations with the Save on Energy brand.
Focus area	• Brand/program awareness and customer relationships

This section will primarily review metrics associated with the Save on Energy brand as evaluated through the IESO commissioned Power What's Next Campaign research. This section will first discuss overall brand awareness and trustworthiness followed by brand attributes.

Observations:

- Brand awareness continues to be high at 69%, and increased throughout the Power What's Next Campaign.
- Brand trustworthiness continues to be high at 89% (Power What's Next Campaign) .
- Save on Energy Brand Image remains very positive among Ontarians aware of the brand, as 55% to 81% of Ontarians agree to positive statements about the attributes of Save on Energy.
 - The highest attribute is: "[Save on Energy] Is trustworthy" at 89%.
 - The lowest attribute is: "[Save on Energy] helps people and businesses in Ontario be more successful" at 55%.

Additional Insight to be gained through market research:

- Further brand research will not be required as IESO tracking studies will continue.
- Programs and customer segments not tracked through existing research (e.g., small business and Industrial Accelerator Program customers).

SOURCES

- IESO and Ipsos, Power What's Next Campaign Effectiveness Research, December 2016
 - *The Save on Energy Power What's Next campaign launched on June 13, 2016. Surveys are being done to measure brand awareness, brand attributes and effectiveness of the campaign. This report includes results from the December wave of research*

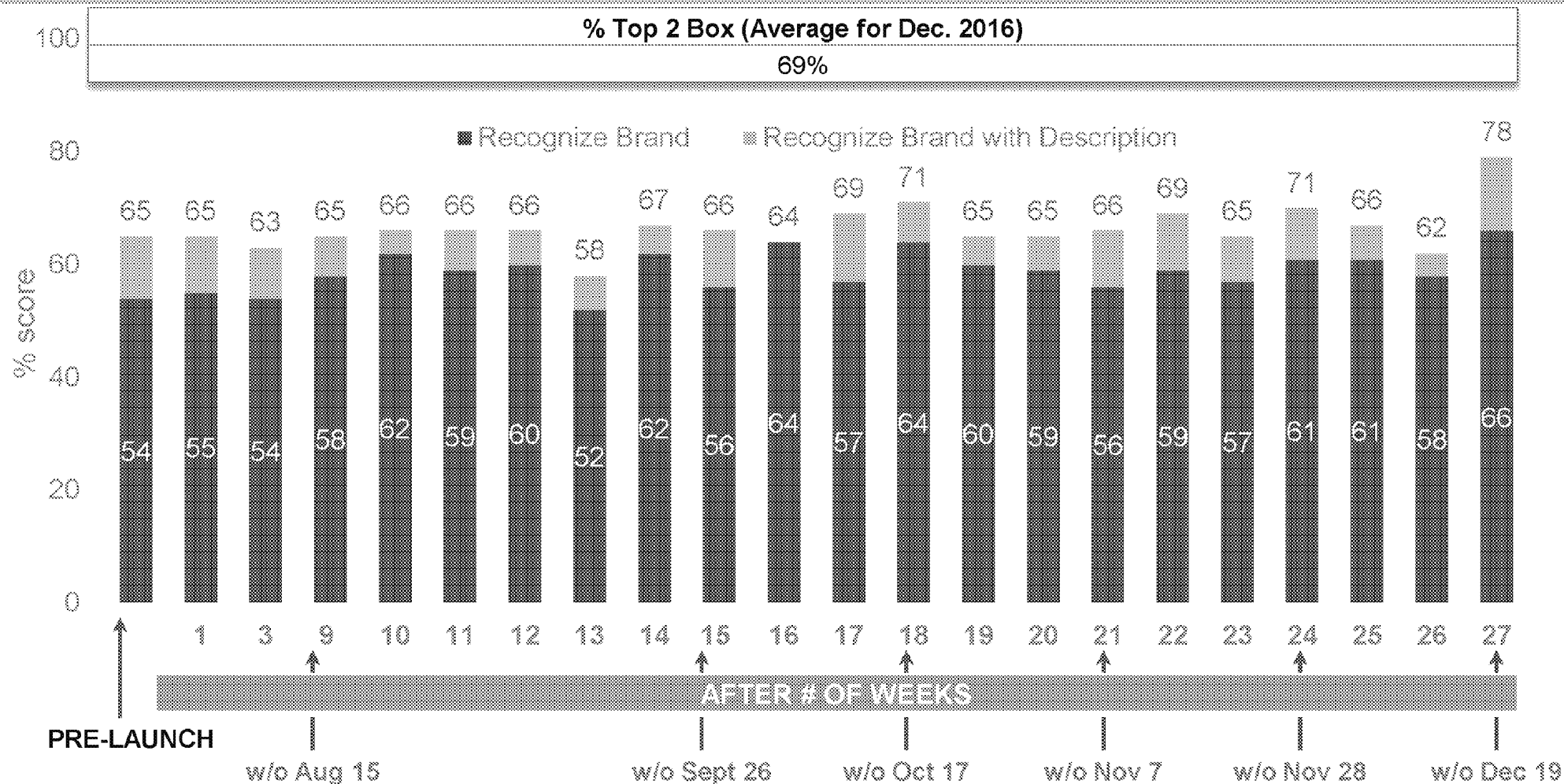
		WEEK																				
Number of survey participants	Pre-launch	1	3	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
TOTAL	803	1000	1001	185	220	186	131	136	154	151	107	132	156	182	101	75	111	285	111	104	167	192
Aware of Save on Energy	421	511	497	120	149	120	87	79	103	100	68	90	111	118	63	48	82	185	77	68	102	154
Aware of Power What's Next campaign	77 {false awareness}	174	201	35	50	35	23	22	48	37	37	40	34	47	25	21	35	76	27	27	54	58

Source(s)

- IESO and Ipsos, Business Energy Conservation Attitudes and Behaviour (ECAB) Research – Supply Chain Perspective, 2015
 - *Interviews conducted by Ipsos Reid to better understand the electricity conservation marketplace, including attitudes about managing electricity, participation in and opinions of incentive programs from customers, and attitudes and opinions about programs and services to manage electricity consumption.*

Participant Group	Number of Completed Interviews	Margin of Error (95%)
Customers (Large Building Owners and Property Managers)	n=200	+/- 6.9%
Supply Chain Serving Large Customers	n=101	+/- 9.8%
Supply Chain Serving Small and Medium-sized Customers	n=134	+/- 8.5%
Total	n=435	+/- 4.8%

SAVE ON ENERGY BRAND AWARENESS INCREASED OVER 2016

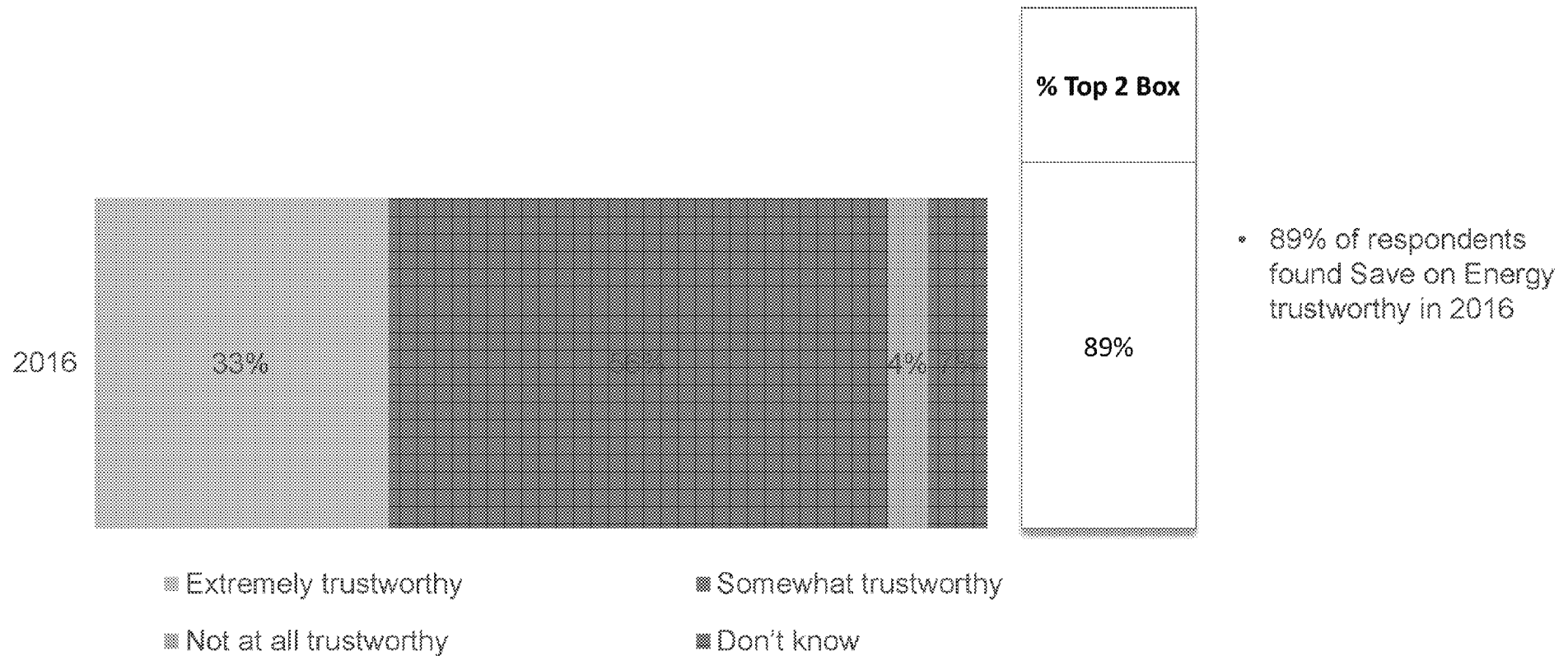


Asked of 803 of general population survey participants. Brand name only: Have you ever heard of Save on Energy?

Brand w/description: Save on Energy (show logo) provides Ontarians with a wide variety of incentive programs and tips to help manage electricity use in the home, save money and help the environment. Having read this description, is this what you believed the program to be?

TRUSTWORTHINESS OF SAVE ON ENERGY BRAND IS HIGH

Trustworthiness of Save on Energy among general population



Asked of those aware of Save on Energy. Based on your understanding of Save on Energy, please rate how strongly you agree or disagree with the following statements: "Is Trustworthy"

SAVE ON ENERGY BRAND IMAGE REMAINS VERY POSITIVE AMONG ONTARIANS AWARE OF THE BRAND

- The highest attribute is: “[Save on Energy] Is trustworthy” at 89%
- The lowest attribute is: “[Save on Energy] helps people and businesses in Ontario be more successful” at 55%

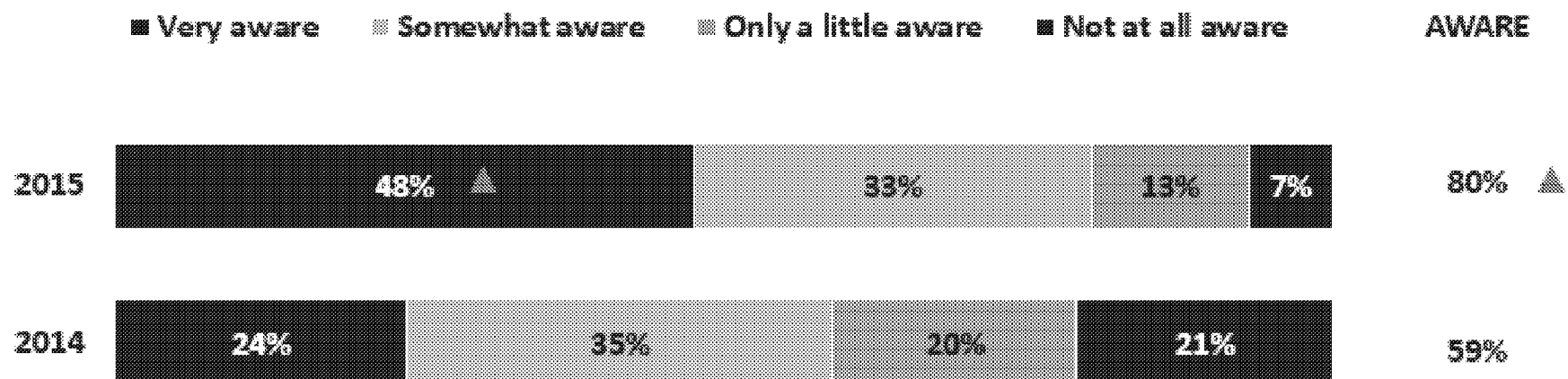
December 2016 Results: Asked of those aware of Save on Energy Save on Energy...	Total 'Agree'	'Strongly Agree'
Is trustworthy	89%	33%
Encourages people to make energy efficient choices for their homes	81%	30%
Helps increase the energy efficiency of my home	70%	23%
Encourages Ontarians to talk about energy efficiency	67%	22%
Benefits my community	67%	22%
Helps me save on my energy bills	65%	23%
Makes me feel better	57%	18%
Increases the comfort and value of my home	56%	16%
Helps people and businesses in Ontario be more successful	55%	20%

Asked of those aware of Save on Energy. Based on your understanding of Save on Energy, please rate how strongly you agree or disagree with the following statements: e.g., “Is Trustworthy” “Encourages people to make energy efficient choices for their homes” etc.

CHANNEL AND SUPPLY CHAIN BRAND AWARENESS IS INCREASING

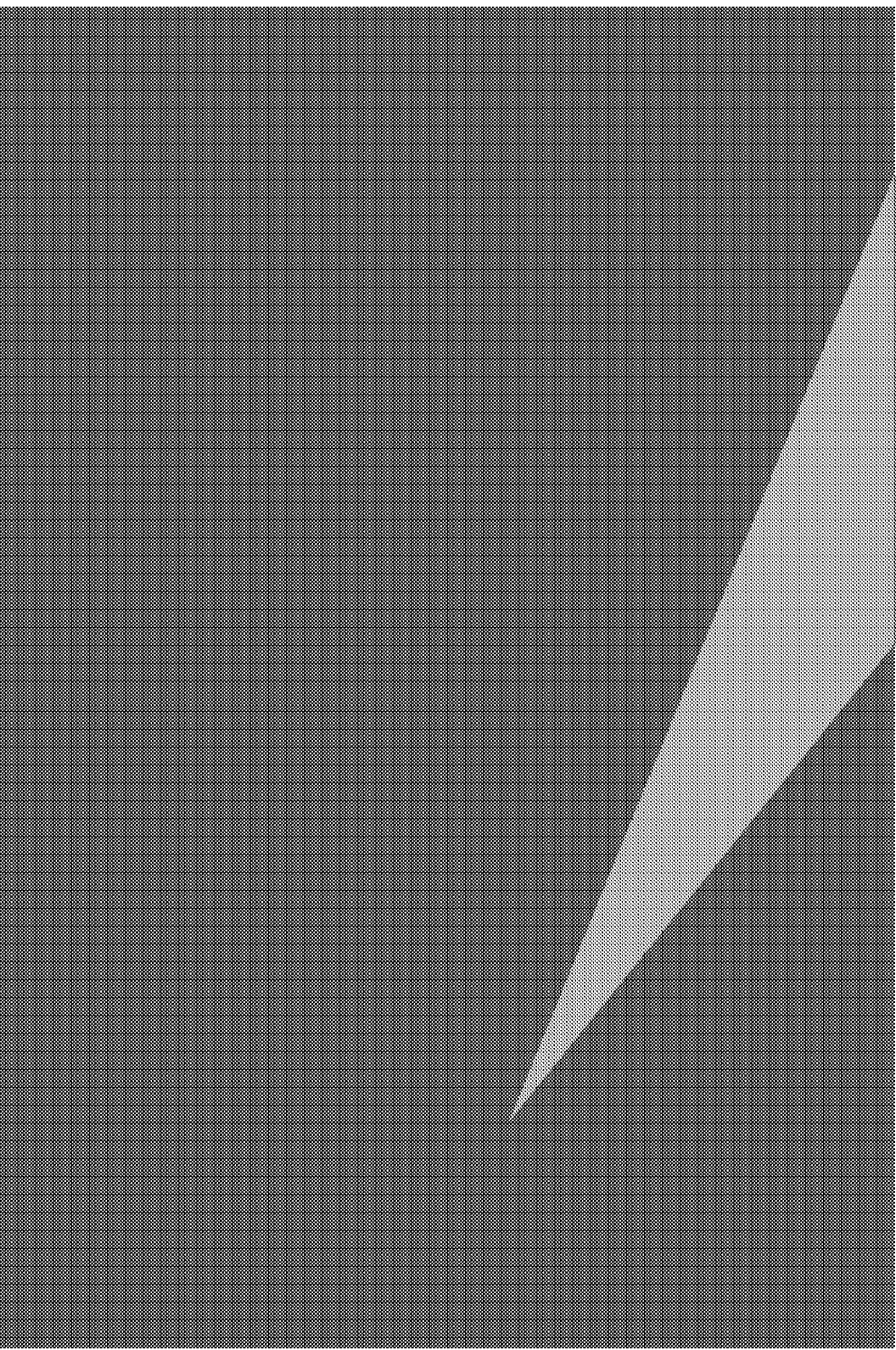
- Higher awareness among organizations who serve as the supply chain to large customers 21% increase in 2015 over 2014
- This metric signifies Save on Energy's brand penetration amongst supply chain/channel partners of large businesses.

Aided Awareness among Supply Chain Serving Large Businesses



20. Would you say that you are very aware, somewhat aware, only a little aware, or not at all aware of electricity management programs called 'Save on Energy'? These programs are designed to enable organizations in Ontario to manage and reduce the amount of electricity that they consume.

Base: Large Supply Chain (n=101)



II. PROGRAM AWARENESS

NAVIGANT

IESO-N-0026897

OVERVIEW

Section	Program awareness
Description	Awareness of individual programs from the broader population. Focus on Retrofit, Heating & Cooling, and Coupons.
Focus area	• Brand/program awareness and customer relationships

This section will review business program awareness, followed by Heating & Cooling and Coupons. It is important to note that program awareness metrics are not tracked consistently across programs nor for the programs that are not presented.

Observations:

- Lack of awareness was identified by the Energy Conservation Attitudes & Behaviour Survey (ECAB) as a major reason why business customers did not participate in Save on Energy programs (30% of supply chain respondents stated that their large customers did not apply to a program because they were unaware).
- Awareness of consumer programs, Heating & Cooling and Coupons, decreased to 44% and to 56% respectively in 2015 relative to 2014, evaluation reports attributed this decrease to lower LDC marketing spend.

Additional Insight to be gained through market research:

- None, extensive research with statistically significant sample sizes exists.
- Any additional insight to be gained from programs not covered by quantitative market research.

Other

- There is specific research targeted at the general population to understand program awareness, however, less research targeted at business customers on this particular topic.

SOURCES

Source(s)

- **Research into Action and IESO, 2015 Consumer Program Evaluation Volume 1: Report, 2016**
 - *The IESO commissions evaluations at the program level (e.g., Consumer Program Evaluation) on an annual basis. 2016 evaluations will be released in summer 2017. As such, 2015 evaluation data is used in this report.*

DATA COLLECTION & ANALYTIC ACTIVITIES	METHOD	POPULATION	PY2015 SAMPLE
Interviews with Ontario households – Triple-A Survey	Web Survey ^a	All households in Ontario - ~4,900,000 ^b	2,020
Interviews with Annual, Spring and Fall Event Coupon participants & nonparticipants	Web Surveys	All households in Ontario - ~4,900,000 ^b	619 ^c
Corporate Retailer In-Depth Interviews	Phone Interview	All participating retailers - 28	11 ^d
Active Partner Store Level (Manager) Retailer Surveys ^e	Phone Survey	All participating stores that redeemed coupons in program year 2015 - 878	47
Inactive Partner Store Level (Manager) Retailer Surveys ^e	Phone Survey	All participating stores that are inactive (redeemed zero coupons in program year 2015) - 876	12
IESO Program Staff	Phone Interview	NA	2

Coupon Program

DATA COLLECTION ACTIVITIES	METHOD	POPULATION	PY 2015 SAMPLE
Surveys with participating contractors	Phone Survey ^a	1,324	66
Surveys with nonparticipating contractors	Phone Survey ^b	~5,000	66
Surveys with Ontario households – Triple-A Survey	Web Survey ^c	All households in Ontario - ~4,900,000 ^d	2,020
Surveys with HVAC Incentives participants (furnace with ECM, CAC, both)	Phone survey	HVAC Incentives participant population - 91,143 ^e	374

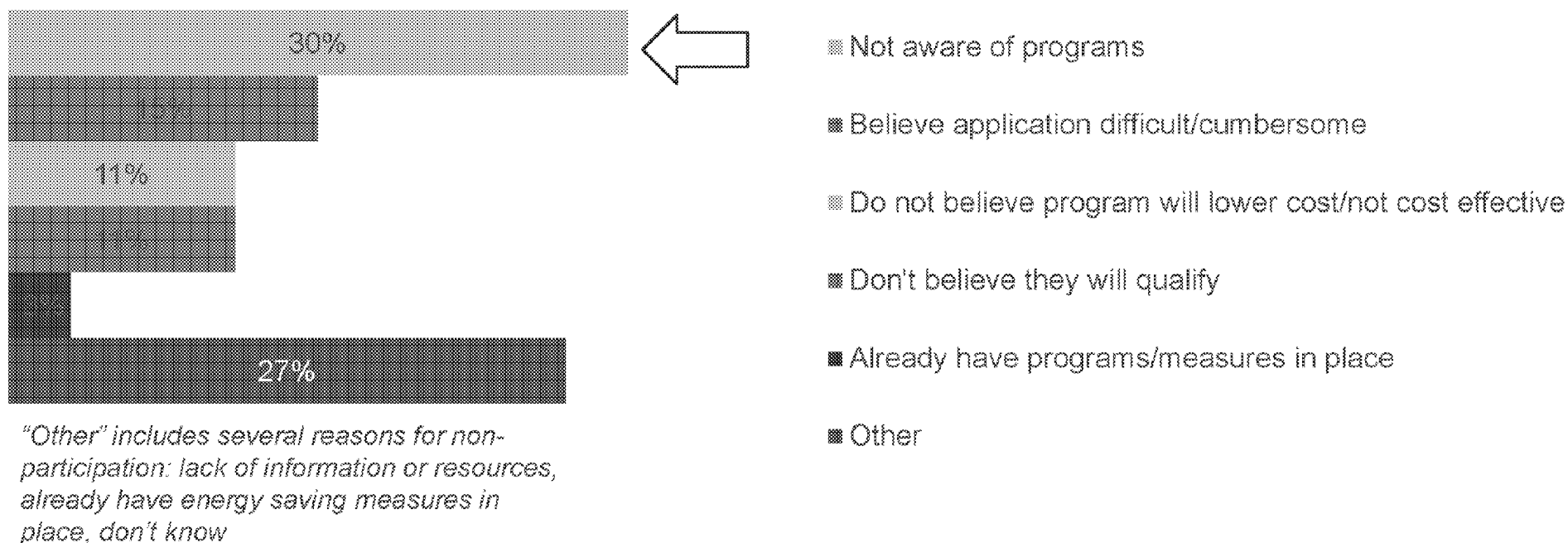
Heating & Cooling program

- **IESO and Ipsos, Business Energy Conservation Attitudes and Behavior (ECAB) Research – Supply Chain Perspective, 2015**
 - *Interviews conducted by Ipsos Reid to better understand the electricity conservation marketplace, including attitudes about managing electricity, participation in and opinions of incentive programs from customers, and attitudes and opinions about programs and services to manage electricity consumption.*

ONE THIRD OF BUSINESS CUSTOMERS ARE NOT AWARE OF PROGRAMS

- Customers are most likely to mention that they did not apply for an incentive for implementing electricity management actions because they simply were not aware of the incentive program (30%).
- *Note that these responses come directly from non-participating large customers

Reasons for non-participation from business customers (2015)*

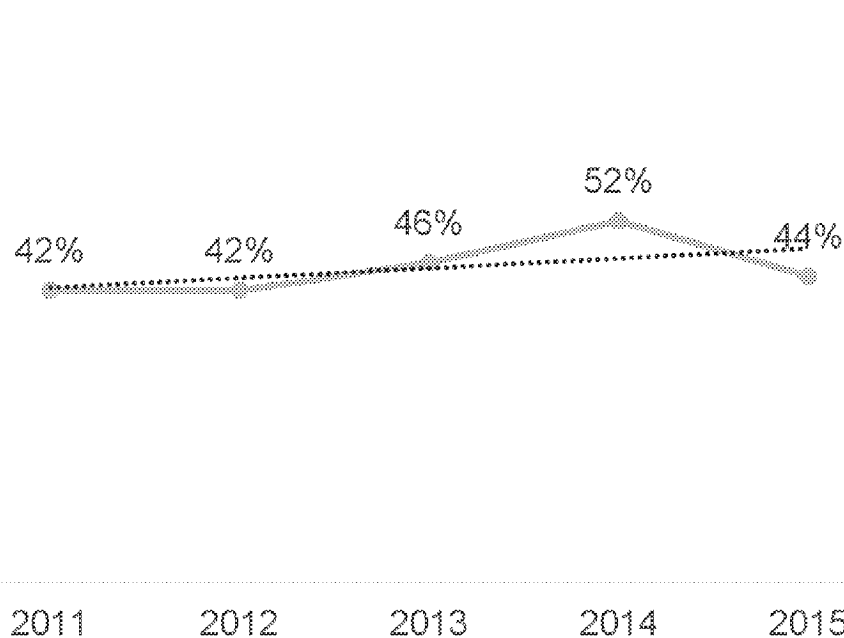


*Q35. Why has your organization not applied for an incentive for the action taken to reduce the amount of electricity that you consume in the past year?
Base: Large Customer who did not undertake any actions/none of the above mentioned Q26 (n=127)

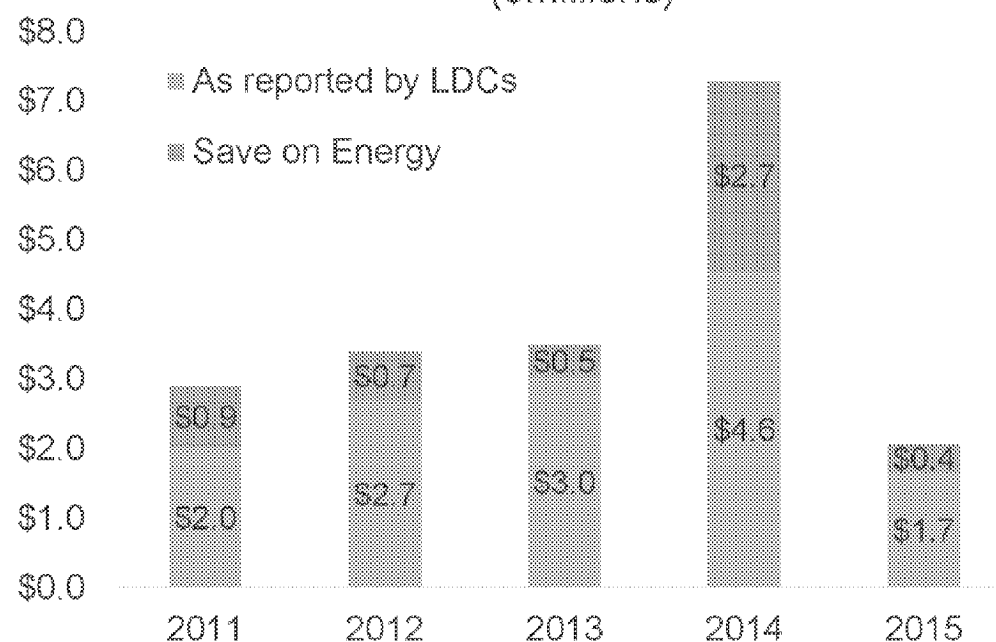
HEATING & COOLING PROGRAM AWARENESS DECREASED FROM 2014 TO 2015

- 2015 was the first year of the 2015-2020 Framework, which saw a decrease in LDC marketing spend from 2015
- Awareness was 2% higher in 2015 than in 2011 (first year of previous framework)
- Marketing spend was less in 2015 than 2011
- Contractors also play a large role in raising awareness for this program

Heating & Cooling program awareness
among general population



Heating & Cooling program marketing spend
(\$Millions)

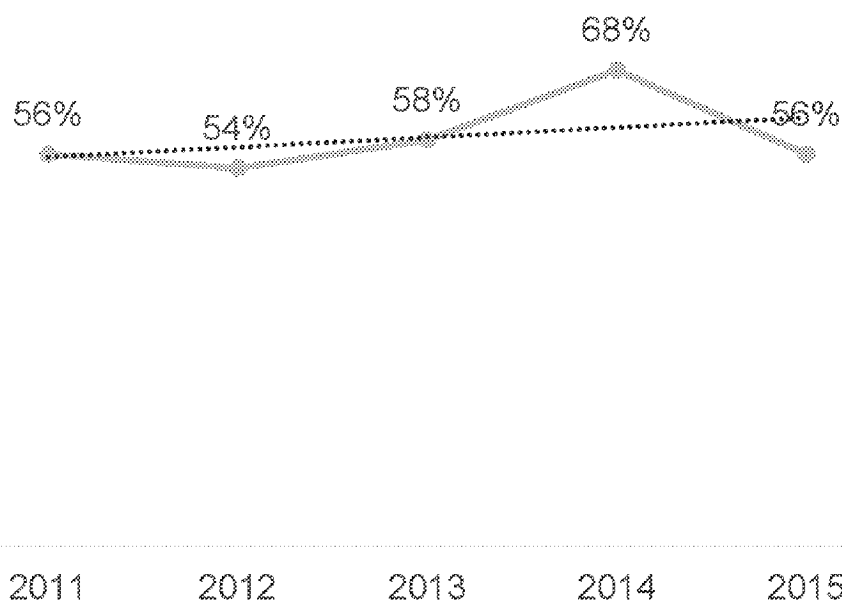


2011 – 2015 Triple A Survey and LDC Marketing Expenditure Data; Q: Have you heard of this program either by name or description (asked of all respondents that answered yes to having central air conditioner and/or furnace with forced air); 2011 n=3,924, 2012 n=4,208, 2013 n=1,334, 2014 n=3,009, 2015 n=1,275

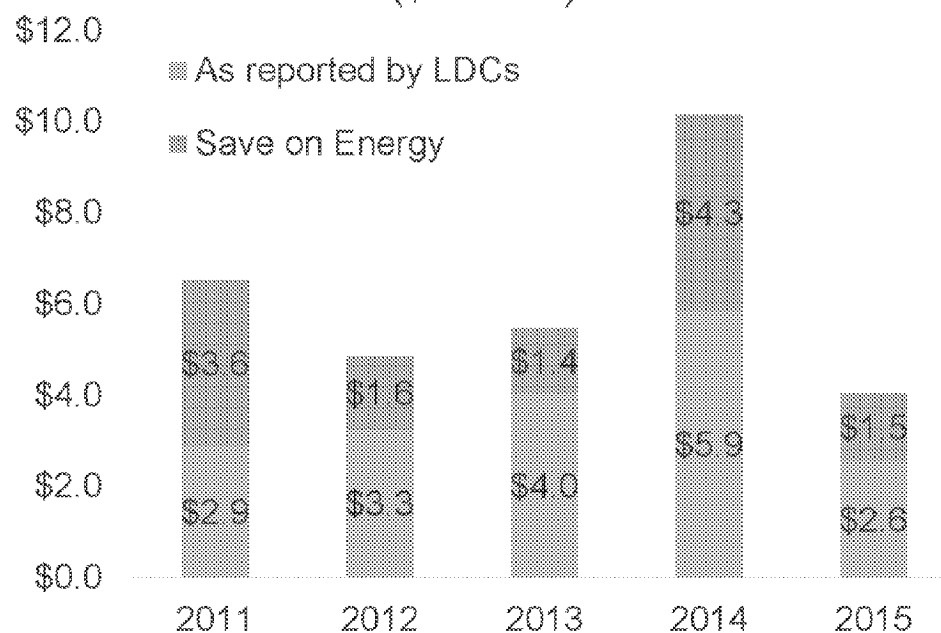
COUPON PROGRAM AWARENESS DECREASED 2014 TO 2015

- 2015 was the first year of 2015-2020 Framework, which saw a decrease in LDC marketing spend
- Awareness in 2015 was equal to 2011 levels (first year of previous framework)
- Marketing spend was less in 2015 than 2011
- Retailers have increased their own marketing of the coupon program year over year since 2011

Coupon program awareness among general population

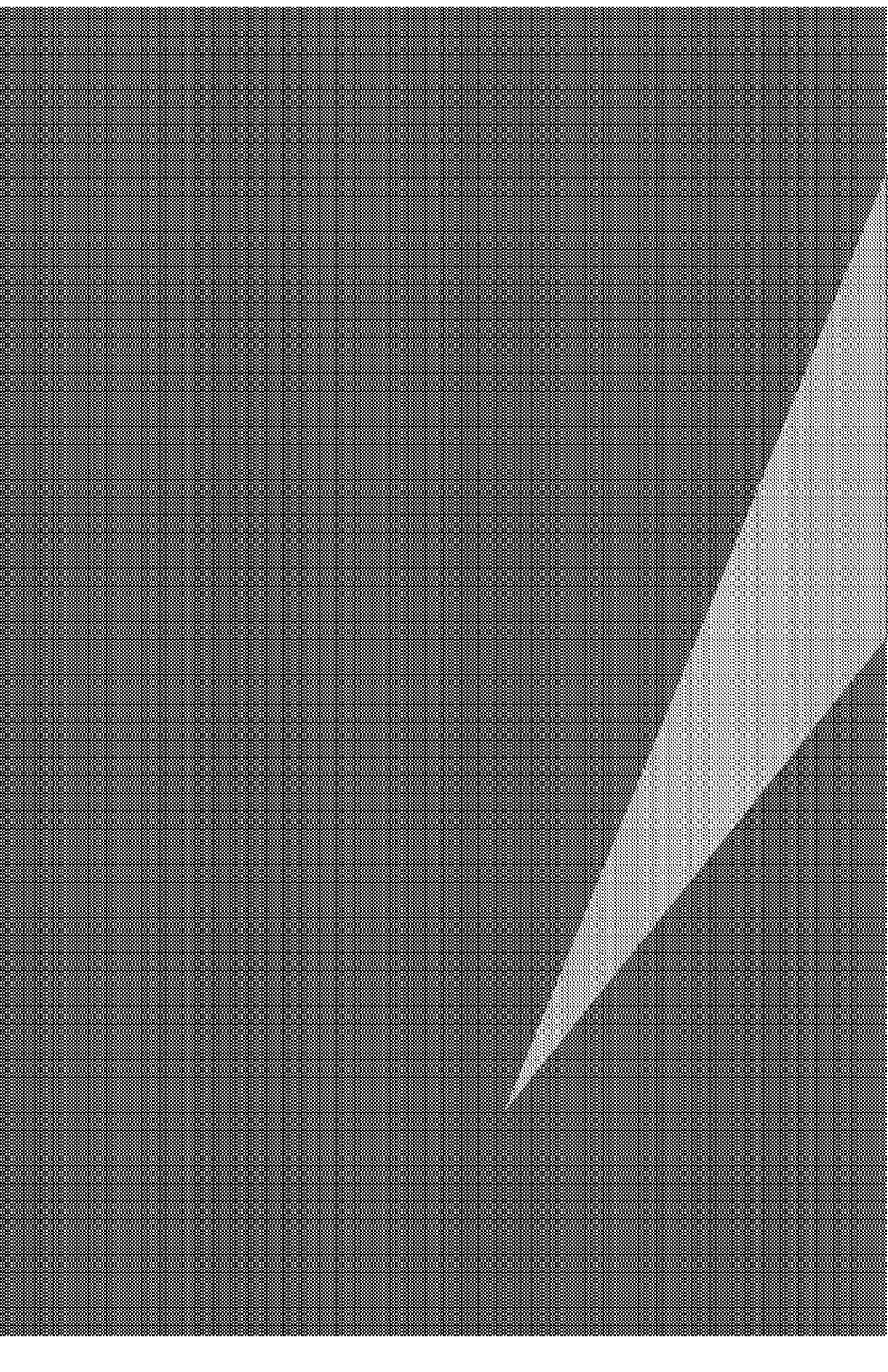


Coupon program marketing spend (\$Millions)*



2011 – 2015 Triple A Survey and LDC Marketing Expenditure Data Q: Have you heard of this program either by name or description; 2011 n=5,432, 2012 n=5,790, 2013 n=2,000, 2014 n=4,544, 2015 n=2,020

*Save on Energy spending reported here includes the printing of coupons

An abstract graphic design featuring a dark gray background with a fine grid pattern. A large, light gray triangle is positioned on the left side, pointing towards the right. The triangle is composed of two overlapping shapes, creating a sense of depth and movement.

III. CUSTOMER SATISFACTION

NAVIGANT

IESO-N-0026897

OVERVIEW

Section	Customer Satisfaction
Description	Customer satisfaction from participating customers for specific programs. Focus on Retrofit, Heating & Cooling, Coupons, and Home Assistance Program (HAP).
Focus area	• Customer satisfaction with programs

This section will review customer satisfaction scores primarily using the IESO Customer Satisfaction surveys. Customer satisfaction with the Retrofit program will be presented followed by Heating & Cooling and Coupons. The section will conclude with limited information about customer satisfaction with the Home Assistance Program.

Observations:

- Research shows high customer satisfaction metrics for the Retrofit program - in 2016, 91% of Retrofit program participants stated that the program met or exceeded expectations.
- Research shows a general increase across customer satisfaction metrics for consumer programs (a 4% and 2% increase from 2014 to 2016 for Heating & Cooling and Coupons respectively).
 - In 2016, 94% of Heating & Cooling participants, and 93% of coupon participants stated the program met or exceeded expectations.

Additional Insight to be gained through market research:

- Understand how collaboration, choice/availability of programs and channel partners impact satisfaction.

Other:

- 2016 Evaluation Measurement & Verification reports may provide additional information.

SOURCES

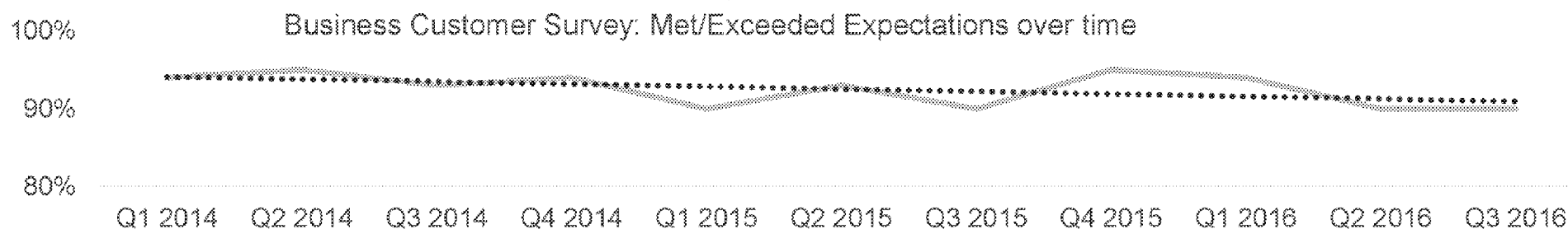
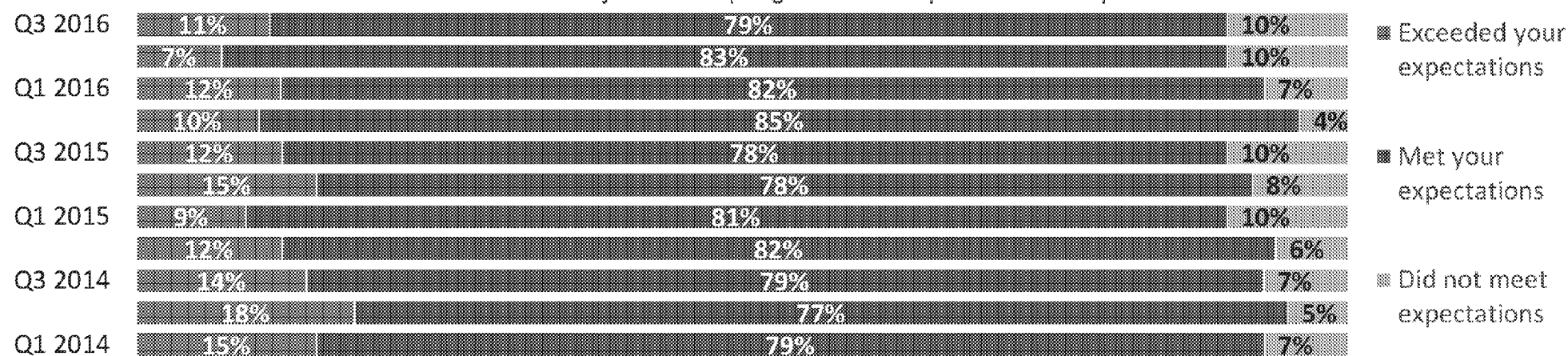
Source(s)

- **Opinion Dynamics and IESO, 2015 Evaluation Report for the Home Assistance Program, 2016**
 - *The IESO commissions evaluations at the program level (e.g., Consumer Program Evaluation) on an annual basis. 2016 evaluations will be released in summer 2017. As such, 2015 evaluation data is used in this report.*
 - *Interviews were completed with 356 customers between April 20 and May 6, 2016.*
- **Ipsos and IESO, Residential Customer Satisfaction Survey Q3 2016, Heating & Cooling Incentive (2016)**
 - *Collect feedback from conservation initiative participants in order to measure their satisfaction with the process and engagement with each particular IESO initiative.*
 - *The survey is executed utilizing the Ipsos Monthly Omnibus and is conducted among a representative sample of n=1,600 Ontarians 18+. From which we determine program participants and ask that subsample questions pertaining to their experiences with the program.*
- **Ipsos and IESO, Residential Customer Satisfaction Survey Q3 2016, Coupon program (2016)**
 - *Collect feedback from conservation initiative participants in order to measure their satisfaction with the process and engagement with each particular IESO initiative.*
 - *The survey is executed utilizing the Ipsos Monthly Omnibus and is conducted among a representative sample of n=1,600 Ontarians 18+. From which we determine program participants and ask that subsample questions pertaining to their experiences with the program.*
- **IESO and IPSOS, Retrofit Business Customer Survey Q3 2016 (2017)**
 - *The goal of the Business Customer Experience Survey was to collect feedback from Save on Energy for business program participants in order to measure the experience of participating, feedback on the process, service and other elements key to a positive customer experience.*
 - *Participants from Retrofit with an application approved or were in post-completion phase between July 1st 2016- September 30th 2016.*
 - *Responses from n=195 participants, all of which were from the Retrofit program*

THERE IS A HIGH CUSTOMER SATISFACTION FOR THE RETROFIT PROGRAM

- Although, participants reported that the program met their expectations on average 2% less in 2016 than in 2014 customer satisfaction remains high at 92%
- On average, "Exceed your expectations" responses were 5 % lower in 2016 than 2014

Business Customer Survey: Retrofit program "Participation Met Expectations"



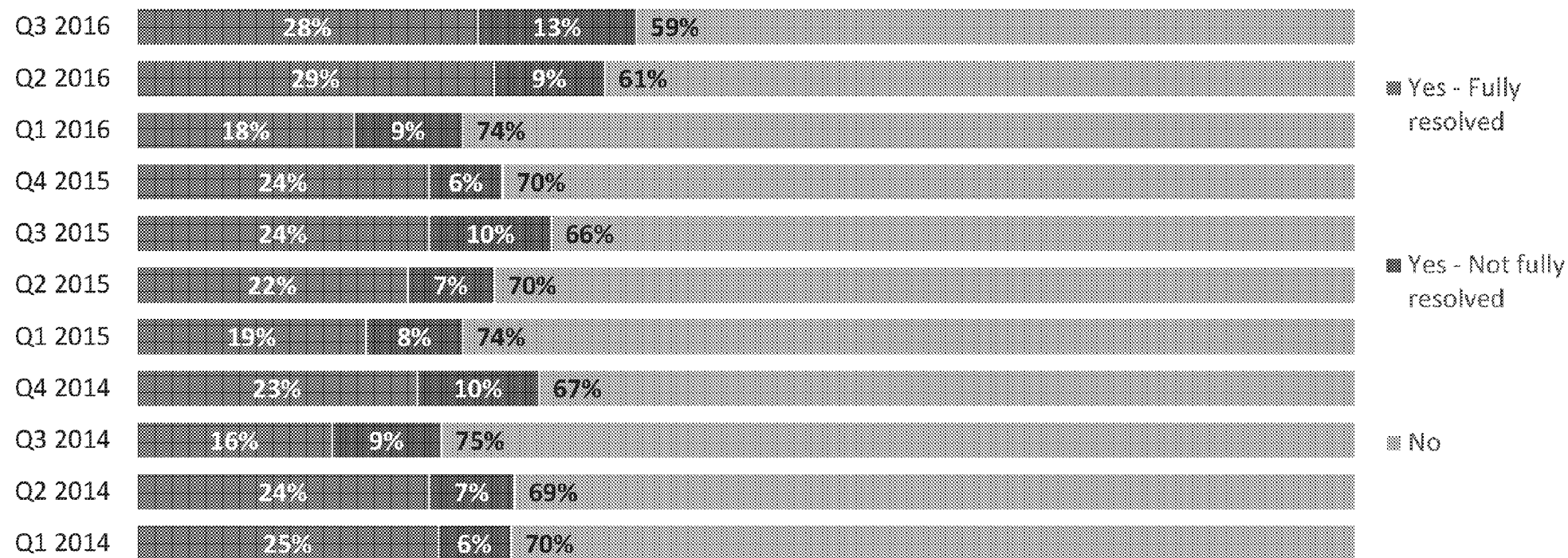
Q9. Did your participation in the [insert program name from S1] meet your expectations, exceed your expectations or did not meet your expectations?

Base: All Respondents: Q1 2014 (n=233); Q2 2014 (n=355); Q3 2014 (n=215); Q4 2014 (n=229); Q1 2015 (n=167); Q2 2015 (n=247); Q3 2015 (n=284); Q4 2015 (n=250); Q1 2016 (n=200); Q2 2016 (n=153); Q3 2016 (n=195);

RETROFIT PROBLEM FREQUENCY IS LOW BUT INCREASED FROM 2014 TO 2016

- The majority of Retrofit participants did not encounter a problem, but problem occurrence in 2016 (35%) is the highest since 2014
- The yearly average of problem occurrence is increasing (~3% per year)

Business Customer Survey: Problem Occurrence



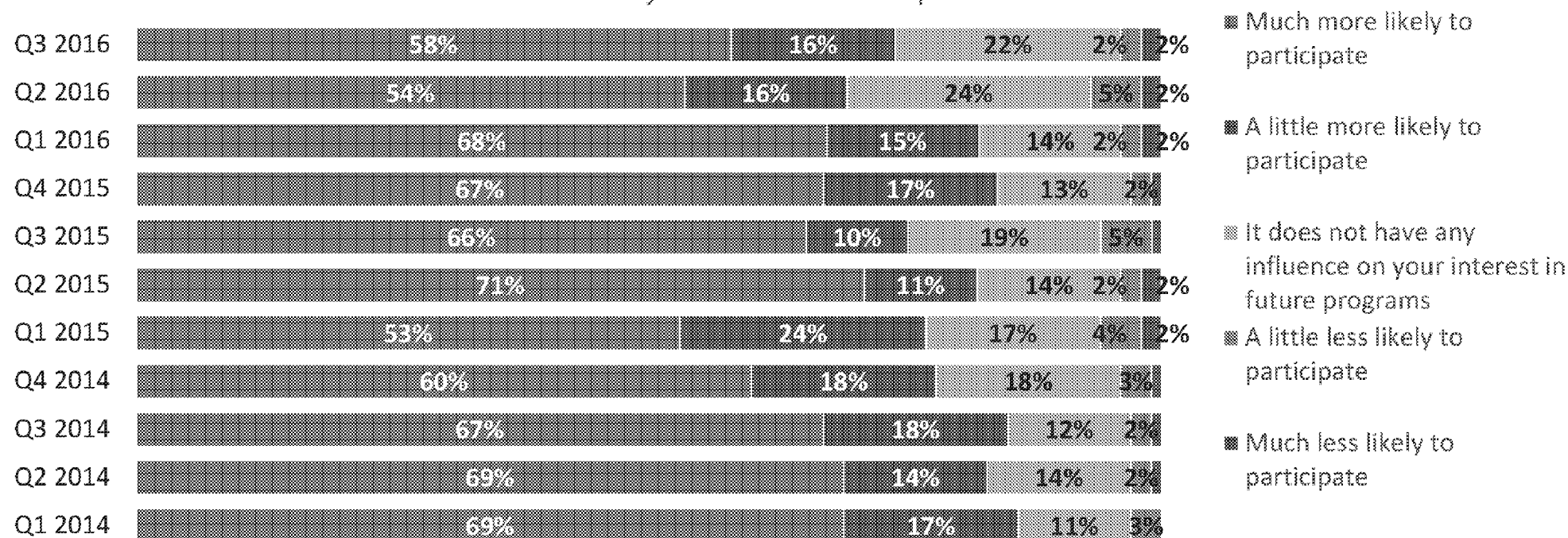
Q12. Did you experience any problems while participating in the [insert program name from S1] and if so, was this problem fully resolved?

Base: All Respondents: Q1 2014 (n=233); Q2 2014 (n=355); Q3 2014 (n=215); Q4 2014 (n=229); Q1 2015 (n=167); Q2 2015 (n=247); Q3 2015 (n=284); Q4 2015 (n=250); Q1 2016 (n=200); Q2 2016 (n=153); Q3 2016 (n=195)

LIKELIHOOD TO PARTICIPATE IN FUTURE SAVE ON ENERGY PROGRAMS IS HIGH, BUT DECREASING

- 76% of participants are either “much more likely to participate” or “a little more likely to participate” in future Retrofit programs
- Likelihood to participate is declining by 3% annually since 2014
- Satisfaction scores of 2016 retrofit participants who stated that they were “much more likely to participate” is at its lowest level in the studied period (60% on average)

Business Customer Survey: Likelihood to Participate in Future



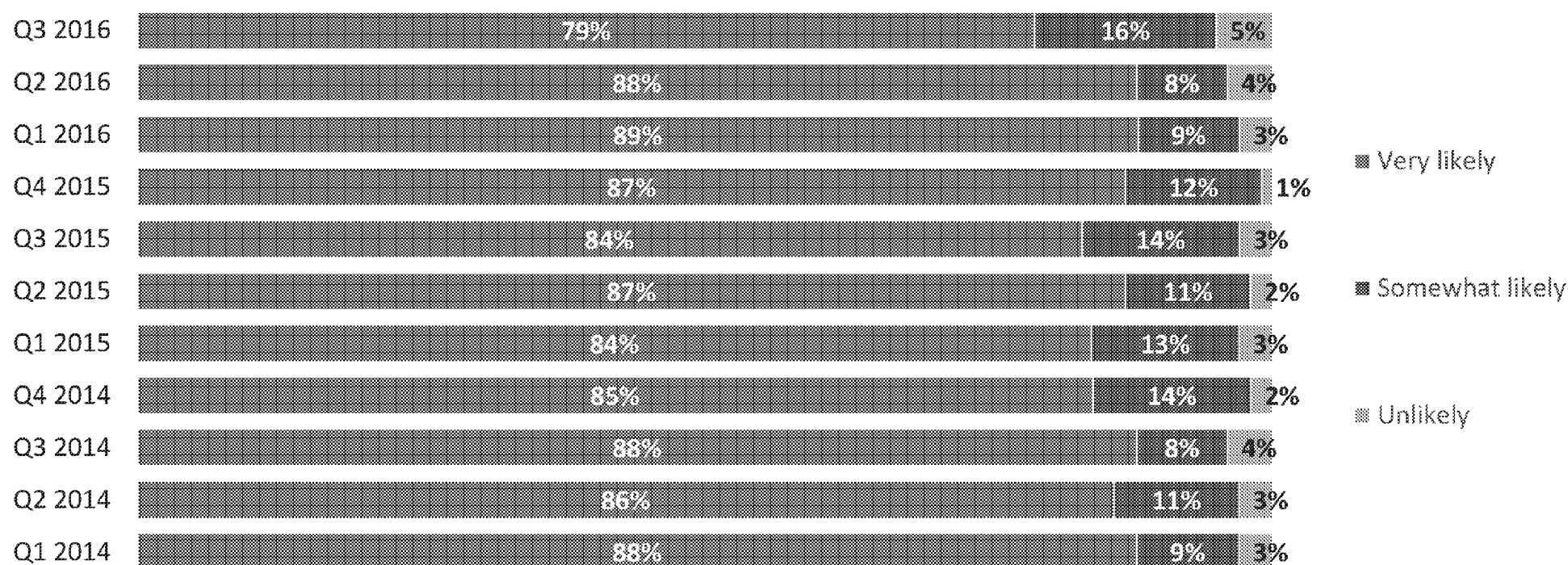
Q13. How does your experience influence your interest in participating in future Save on Energy programs? Would you say you are...

Base: All Respondents: Q1 2014 (n=233); Q2 2014 (n=355); Q3 2014 (n=215); Q1 2015 (n=167); Q2 2015 (n=247); Q3 2015 (n=284); Q4 2015 (n=250); Q1 2016 (n=200); Q2 2016 (n=153); Q3 2016 (n=195).

LIKELIHOOD TO RECOMMEND RETROFIT REMAINS HIGH

- 96% of participants are either very likely or somewhat likely to recommend the Retrofit program
- "Very likely to recommend" hit its lowest level (79%) in the studied period in Q3 2016

Business Customer Survey: Likelihood to Recommend in Future



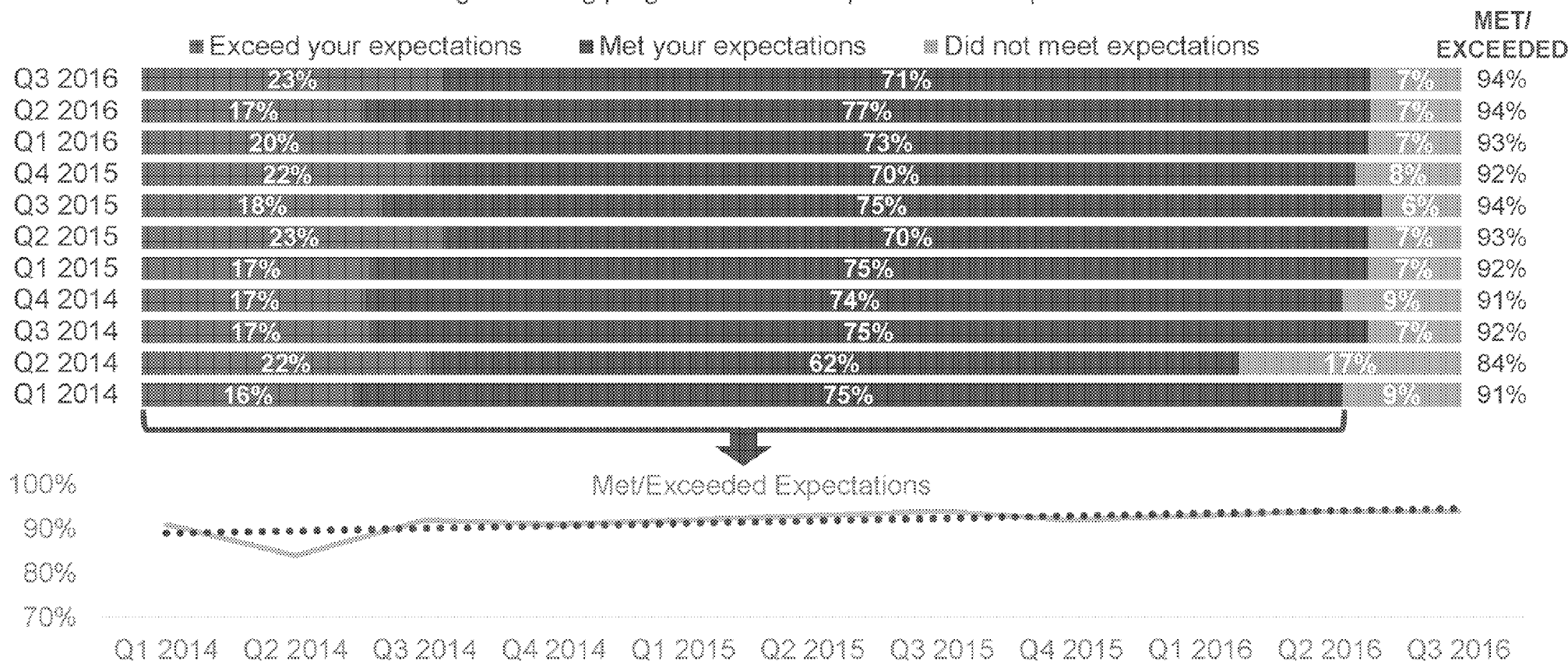
Q3. Considering your experience on this project, how likely would you be to recommend the [insert program name from S1] to a friend or colleague using a scale from 1 to 10 where 1 is not at all likely and 10 is extremely likely?

Base: all respondents: q1 2014 (n=233); q2 2014 (n=355); q3 2014 (n=215); q4 2014 (n=229); q1 2015 (n=167); q2 2015 (n=247); q3 2015 (n=284); q4 2015 (n=250); q1 2016 (n=200); q2 2016 (n=153); q3 2016 (n=195).

HEATING & COOLING SATISFACTION HAS IMPROVED OVER 2014-2016 PERIOD

- Participants reported that the program met their expectations on average 4% more in 2016 than in 2015 and 2014
- On average, "Exceed your expectations" responses were 2% higher in 2016 than 2014

Heating & Cooling program "Did Participation Meet Expectations?"



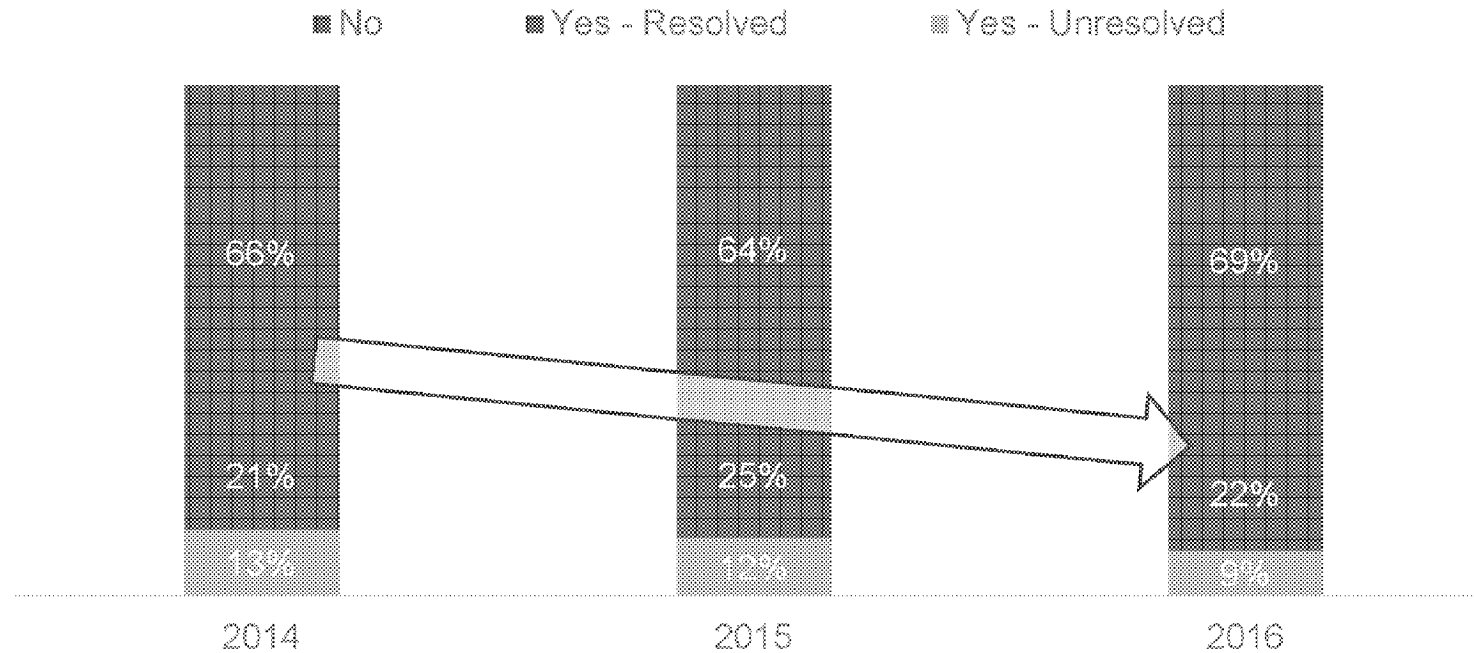
Q4. Did your participation in the Heating Incentive Program meet your expectations, exceed your expectations or did not meet your expectations?

Base: All Respondents; Q1 2014 (n=222); Q2 2014 (n=106); Q3 2014 (n=337); Q4 2014 (n=312); Q1 2015 (n=327); Q2 2015 (n=356); Q3 2015 (n=298); Q4 2015 (n=304); Q1 2016 (n=271); Q2 2016 (n=309); Q3 2016 (n=368)

PROBLEM OCCURRENCE WITH HEATING & COOLING IS LOW & DECREASING

- Unresolved Problem Occurrence is trending downwards relative to 2014 (4% decrease)
- The majority (69%) of Heating & Cooling program participants experienced no problems in 2016

Heating & Cooling program participants – Experienced Problem? (Average 4 Quarters)



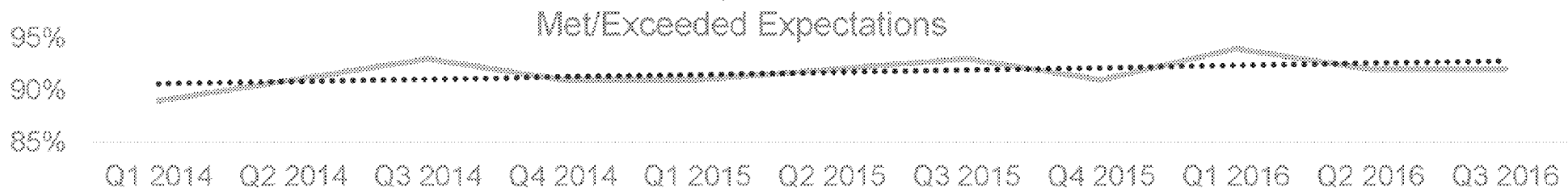
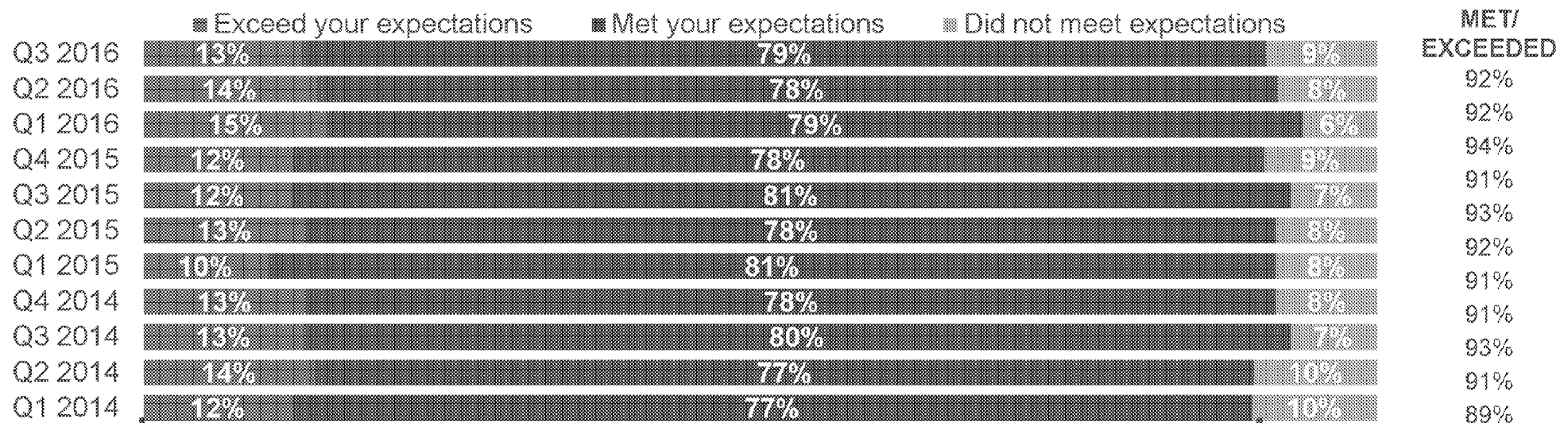
Q6. Did you experience any problems while participating in the Heating and Cooling Incentive and if so, was this problem fully resolved?

Base: All Respondents; Q1 2014 (n=222); Q2 2014 (n=106); Q3 2014 (n=337); Q4 2014 (n=312); Q1 2015 (n=327); Q2 2015 (n=356); Q3 2015 (n=298); Q4 2015 (n=304); Q1 2016 (n=271); Q2 2016 (n=309); Q3 2016=6 (n=368);

COUPON PROGRAM SATISFACTION WAS HIGHER IN 2016 THAN 2014

- Scores for “meeting expectations” are 2% higher in 2016 than in 2014, on average
- Scores for “Exceed your expectations” responses were 1 % higher in 2016 than 2014, on average

Coupon program - “Did Participation Meet Expectations?”

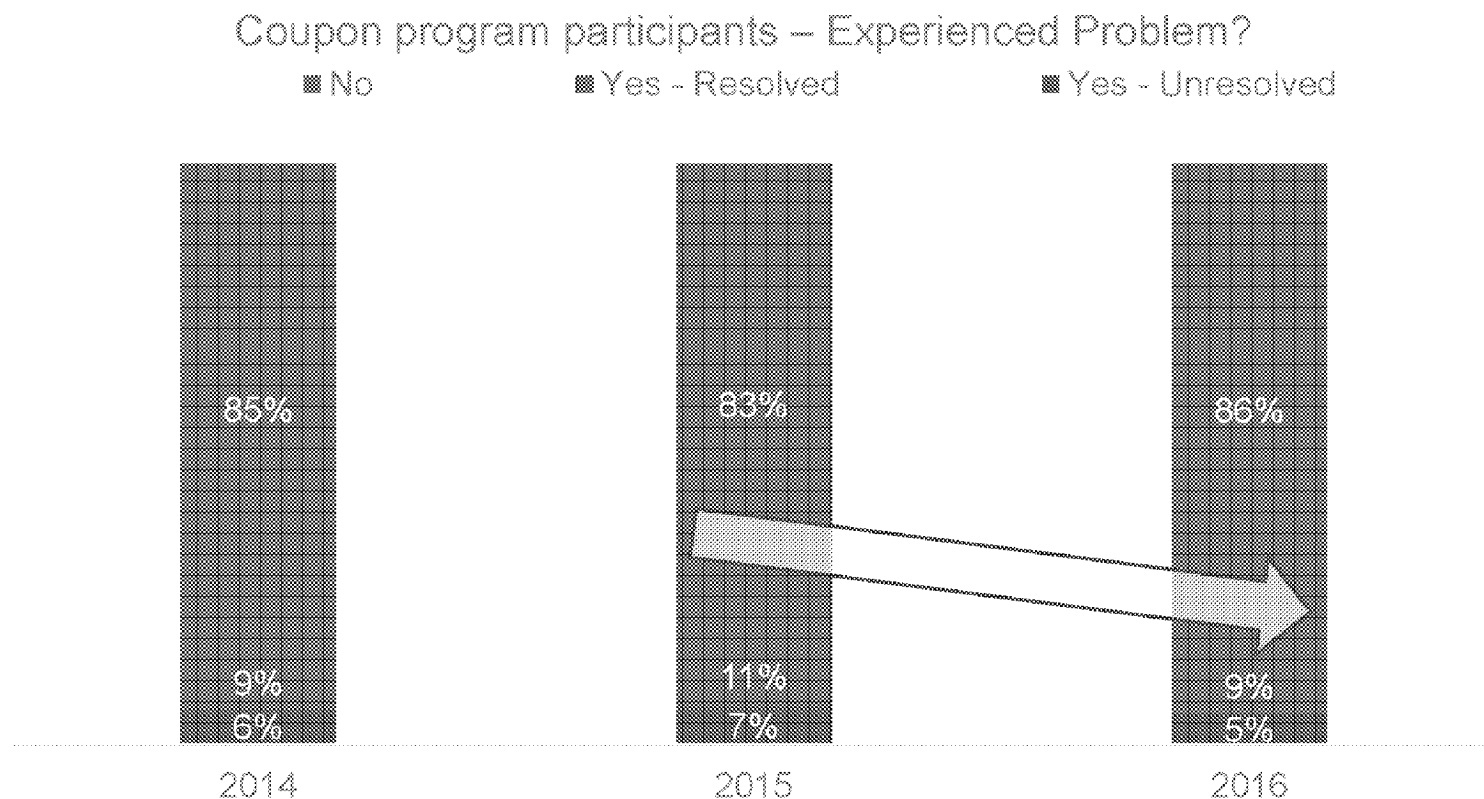


Q4. Did your participation in the Save on Energy Coupon Program meet your expectations, exceed your expectations or did not meet your expectations?

Base: Save on Energy Coupon Program, Q1 2014 (n=682); Q2 2014 (n=259); Q3 2014 (n=874); Q4 2014 (n=975); Q1 2015 (n=938); Q2 2015 (n=981); Q3 2015 (n=891); Q4 2015 (n=1029); Q1 2016 (n=838); Q2 2016 (n=1020); Q3 2016 (1069).

OCCURRENCE OF PROBLEMS WITH COUPONS IS LOW AND DECREASING

- Unresolved Problem Occurrence is trending downwards from 2015 (2% decrease for Coupons)
- The majority of Coupon (86%) program participants experienced no problems in 2016



Q6. Did you experience any problems while participating in the [insert program name] and if so, was this problem fully resolved?

Base: Save on Energy Coupon Program; Q1 2014 (n=682); Q2 2014 (n=259); Q3 2014 (n=874); Q4 2014 (n=975); Q1 2015 (n=938); Q2 2015 (n=981); Q3 2015 (n=891); Q4 2015 (n=1029); Q1 2016 (n=838); Q2 2016 (n=1020); Q3 2016 (1069);

HIGH SATISFACTION AMONG HOME ASSISTANCE PROGRAM PARTICIPANTS WITH INSTALLED MEASURES

- The weighted average measure satisfaction is 84%
- The measure with the highest satisfaction was window A/C unit (99%), but only 6% of respondents received this measure
- The measure with the lowest satisfaction was Thermostat (73%), only 8% of respondents received this measure

Measure	% of Participants with Measure	Mean Satisfaction (out of 7)	n
Window Air Conditioning Unit	6%	6.9	22
Hot Water Tank/Pipe Wrap	12%	6.4	44
Dehumidifier	12%	6.3	41
Block Heater Timer	9%	6.3	31
Power Bar	23%	6.2	83
CFL	92%	5.9	327
Insulation/Air Sealing	10%	5.8	35
Refrigerator/Freezer	48%	5.6	171
Aerator/Shower Head	28%	5.5	98
Thermostat	8%	5.1	27

BENCHMARKING CUSTOMER SATISFACTION

- Customer satisfaction metrics for the programs assessed appear to score well based on a wide range of customer satisfaction benchmarks
- Caveats:
 - Benchmarking is not a horse race and no benchmarking can achieve a strict apples-to-apples comparison.
 - Contextual and methodology differences (population/sample differences, specific areas investigated, etc.)
 - Differences in metrics (percentages vs. indexes, baseline, etc.)

Conservation First Framework Customer Satisfaction Metrics Collected

Program	Metric
Retrofit program	91% met or exceeded expectations
Heating & Cooling program	94% met or exceeded expectations
Coupon program	93% met or exceeded expectations
Home Assistance program measure satisfaction	84% were satisfied

1: Source, University of Michigan

2: Global survey that looked at customer satisfaction levels by industry, geography and company size. Sample: 65 million consumers in 137 countries

Utility Sector:

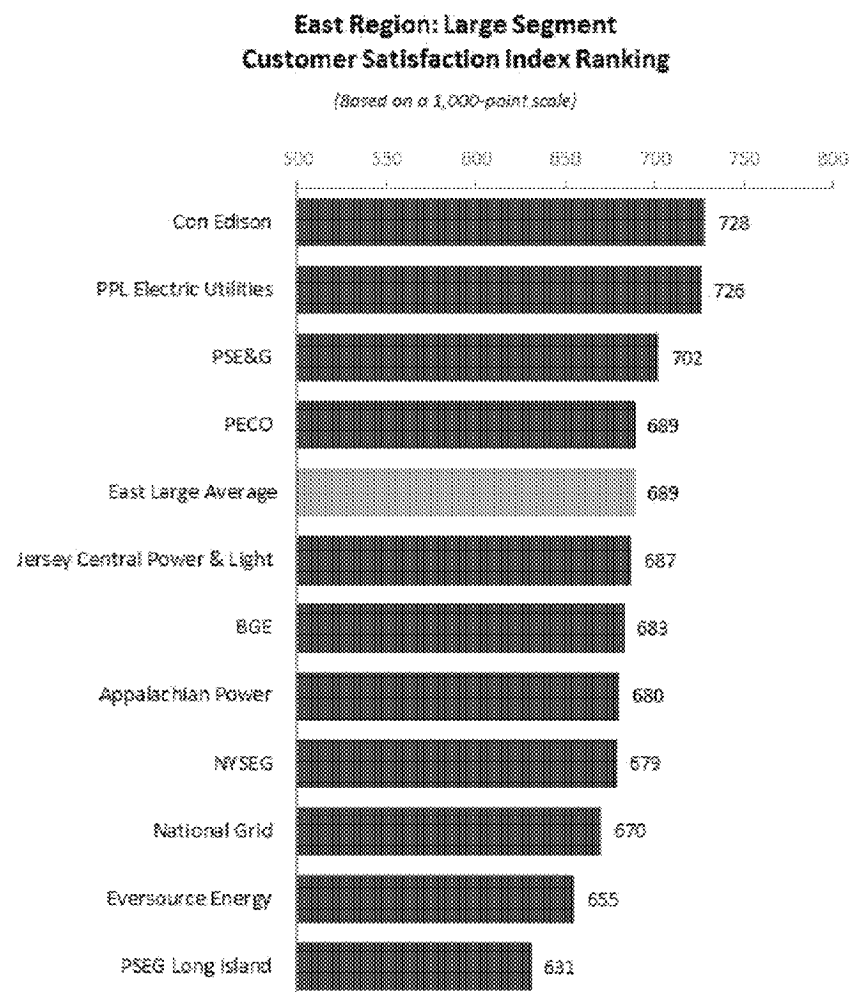
- Customer satisfaction survey results from OEB scorecards for Ontario utilities:
 - Average 89%
 - Range from 73% to 97%
- American Customer Satisfaction Index¹ for utilities: approx. 75 out of 100
- JD Power overall customer satisfaction index for utilities 755 out of 1,000
 - A JD Power study found that customer satisfaction is higher when customers are aware of products and services
 - *"Regardless of contact channel, twice as many business customers contact their electric utility provider twice as often as residential customers, yet their rate of problem resolution is lower"*

General:

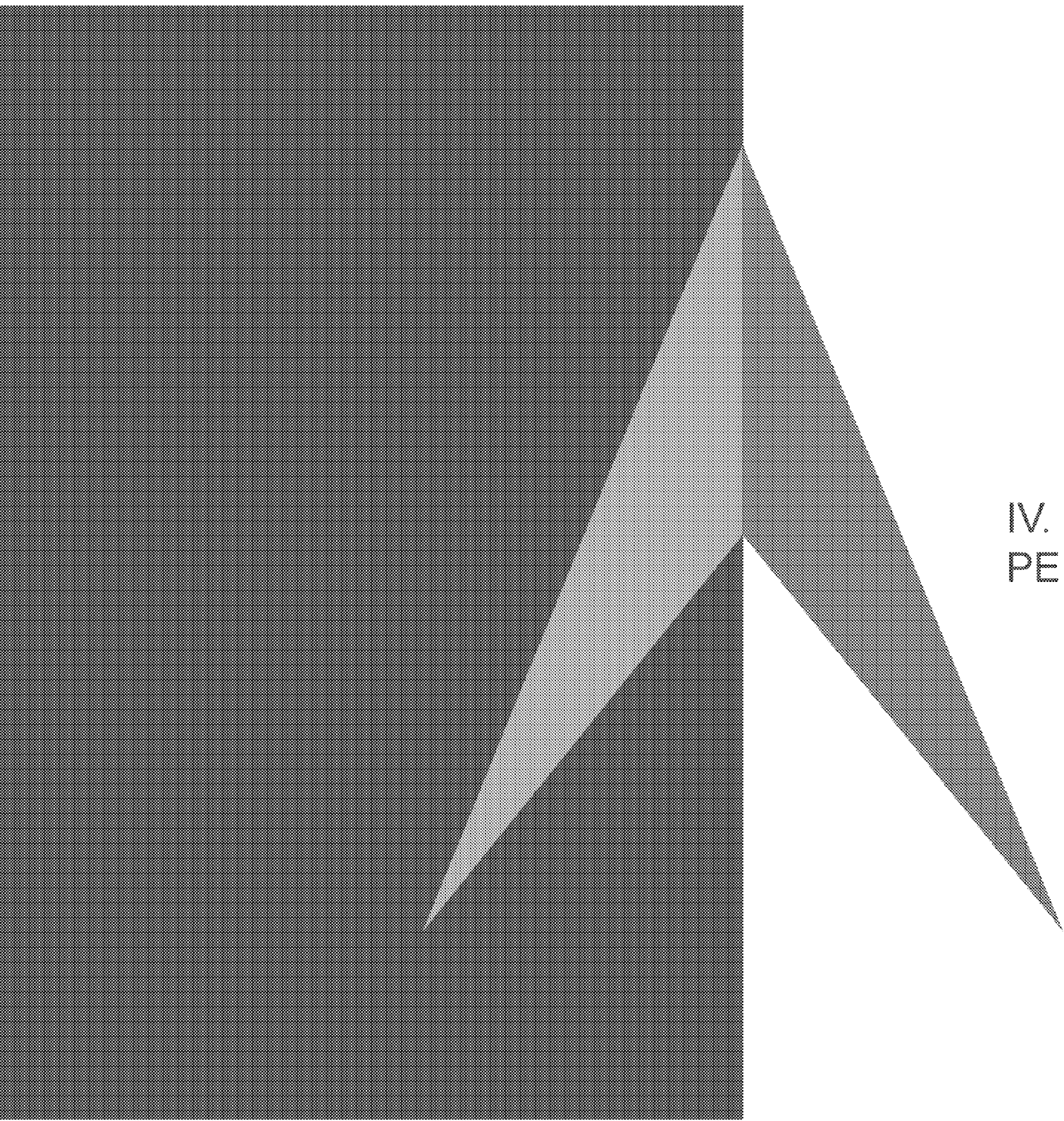
- Forbes Article: customer satisfaction across all companies²:
 - By industry - range from 77% to 96%
 - By company size - range from 84% to 93%
 - By country - range from 52% to 93%

BENCHMARKING CUSTOMER SATISFACTION: JD POWER INDEX – EASTERN U.S. REGION UTILITIES

- JD Power annual customer satisfaction of electric utility business customers scores range from 728 to 631 out of 1000 on their proprietary index for the Eastern U.S. region.
- Source, JD Power 2016 Electric Utility Business Customer Satisfaction Survey:
<http://www.jdpower.com/press-releases/2016-electric-utility-business-customer-satisfaction-study>
- Examples of study findings:
 - A JD Power study found that customer satisfaction is higher when customers are aware of products and services
 - "Regardless of contact channel, twice as many business customers contact their electric utility provider twice as often as residential customers, yet their rate of problem resolution is lower"



Source: J.D. Power 2016 Electric Utility Business Customer Satisfaction StudySM

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IV. PROGRAM PENETRATION

NAVIGANT

IESO-N-0026897

OVERVIEW

Section	Program Penetration	
Description	Review of participation/activity in programs to date against achievable potential. Additional investigation into barriers. Specific investigation into program delivery models (e.g., multi-site, energy managers, etc.).	
Focus area	• Barriers to entry • Efficacy of current approach • Challenges in coordination across multiple utilities	• Customers with facilities across multiple territories • Channel participation in/support for programs

This section will first review portfolio level metrics such as penetration against the achievable potential study, CDM Plans, and program participation for select programs. This section will then discuss multi-site customers and additional insights into business customers in general. The section will conclude with insights by the Heating & Cooling and Coupon program channel.

Observations:

- There appears to be increased engagement in the business sector through energy managers, channel, and multi-site customers.
 - Multi-site customers' retrofit applications increased 27% from 2015 to 2016.
- Channel participants interacting with both residential and business programs reported high satisfaction.
 - Satisfaction scores in 2015: Coupon program retailers = 88%; Heating & Cooling contractors = 70%.

Additional insights needed:

- Seek to understand Industrial Accelerator Program non-participant barriers and/or reasons for non participation as well as Industrial Accelerator Program satisfaction among participants.
- In addition to Industrial Accelerator Program, seek further input on satisfaction, barriers and opportunities with large customers and small businesses, including those with businesses in multiple territories (i.e. those that interact with multiple LDCs or both electric and gas utilities).

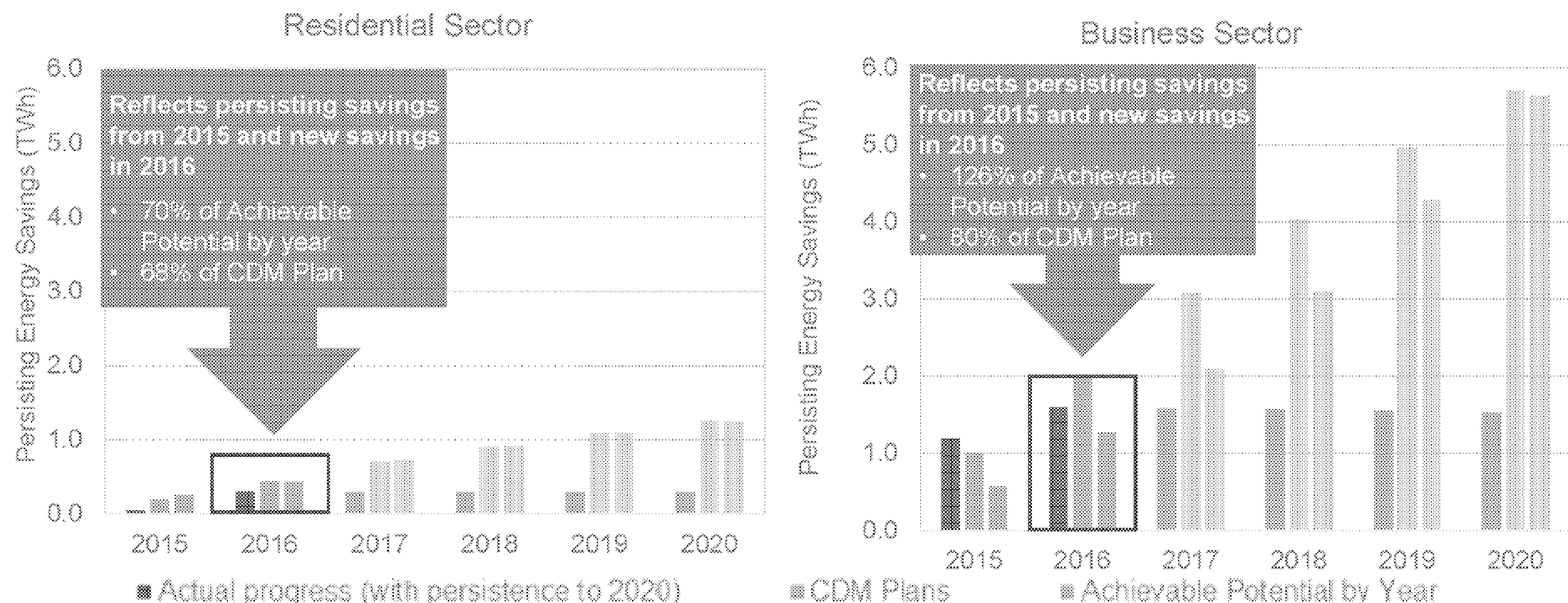
SOURCES

Source(s)

- **Research into Action and IESO, 2015 Consumer Program Evaluation Volume 1: Report, 2016**
 - *The IESO commissions evaluations at the program level (e.g., Consumer Program Evaluation) on an annual basis. 2016 evaluations will be released in summer 2017. As such, 2015 evaluation data is used in this report.*
- **Ipsos and IESO, Residential Customer Satisfaction Survey Q3 2016, Heating & Cooling Incentive (2016)**
- **Ipsos and IESO, Residential Customer Satisfaction Survey Q3 2016, Coupon program (2016)**
- **IESO data**
 - *The IESO tracks verified and unverified program progress, data was provided as of March 2017. IESO also provided annual achievable potential study results, aggregated LDC CDM Plans, Industrial Accelerator Program participation information, Energy Manager participation information, and data specifically for multi-site customers.*
 - *IESO created and occasionally updates a database of non-residential businesses with 10 employees or more. North American Industry Classification System (NAICS) codes are used to define sectors and sub-sectors. Participation history (2011-2015 inclusive) in Small Business Lighting, Retrofit, and Process and Systems programs.*

OPPORTUNITY EXISTS TO DEEPEN PROGRAM PENETRATION

- Mapping progress¹ towards the Achievable Potential Study annual milestones indicates that opportunity remains in the residential sector, but the business sector could be limited in the short-term.
- Mapping progress¹ towards CDM Plans indicates that the business sector is on-track and there is opportunity for additional achievement in the residential sector.
- Approximately **67 percent** of business sector 2016 progress consists of **persisting savings achieved in 2015** from 2011-2014 framework projects.

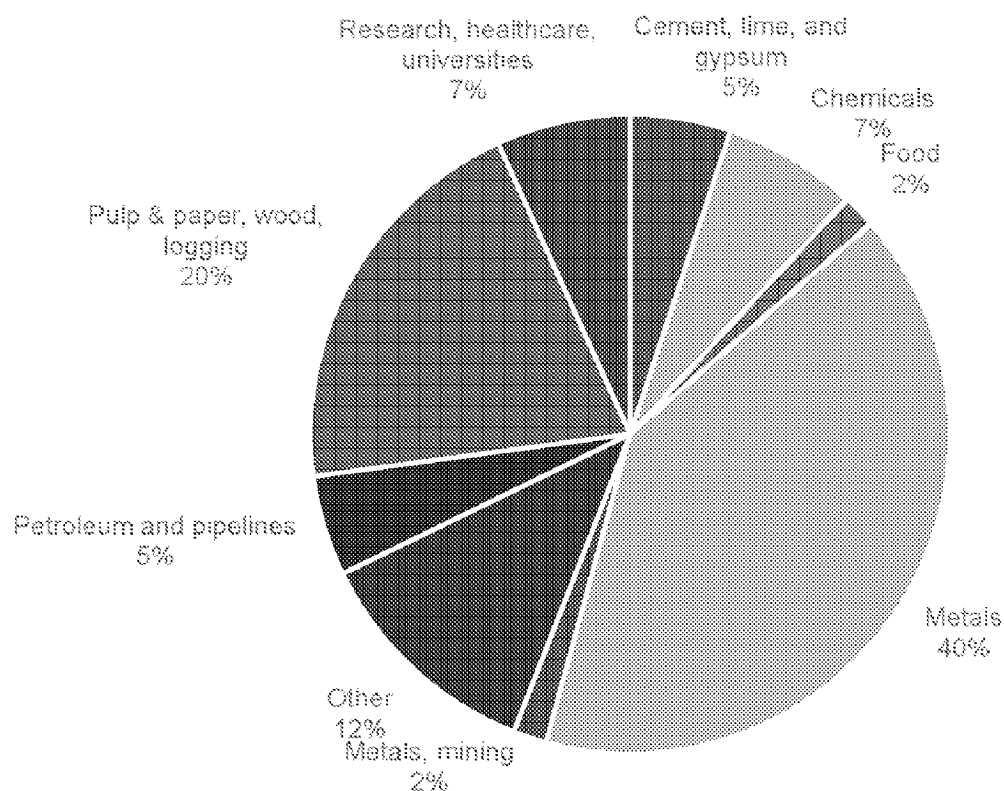


Note 1: 2015 savings are verified and 2016 and 2017 savings results are unverified, to be updated with 2016 verified savings results in summer 2017

HIGH PROPORTION OF ELIGIBLE INDUSTRIAL ACCELERATOR PROGRAM CUSTOMERS HAVE PARTICIPATED

- 50 out of the 59 eligible Industrial Accelerator Program customers have participated in Industrial Accelerator Program
- Five eligible customers participated more than once
- Chart to the right illustrates participation (projects) by grouped area of business

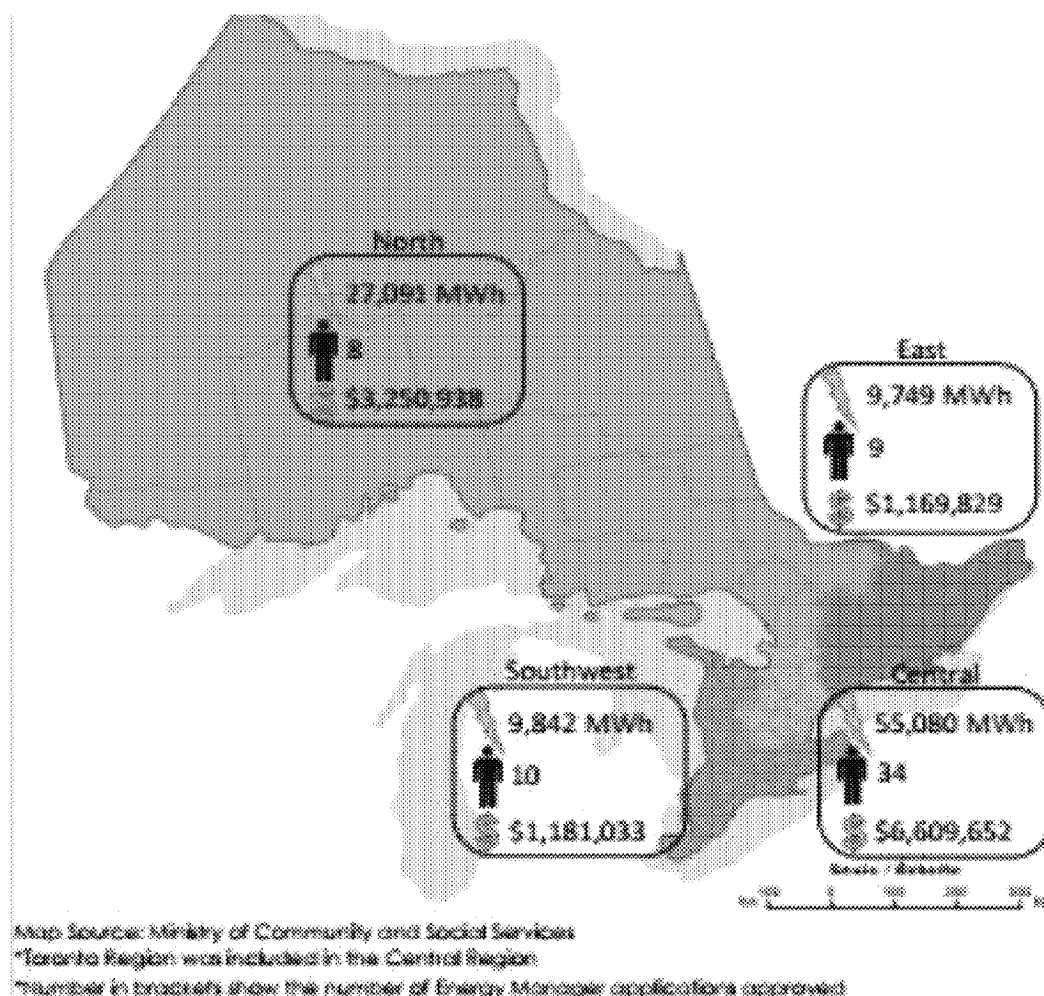
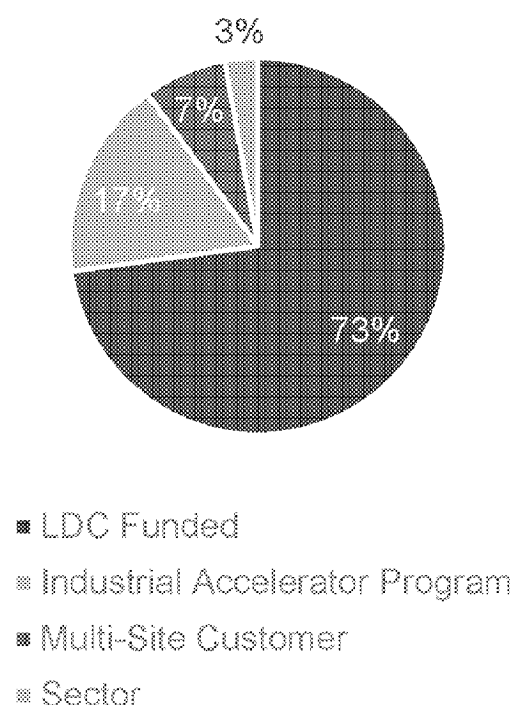
Industrial Accelerator Participation by Grouped Sector



THE NUMBER OF FUNDED ENERGY MANAGERS VARIES ACROSS REGIONS

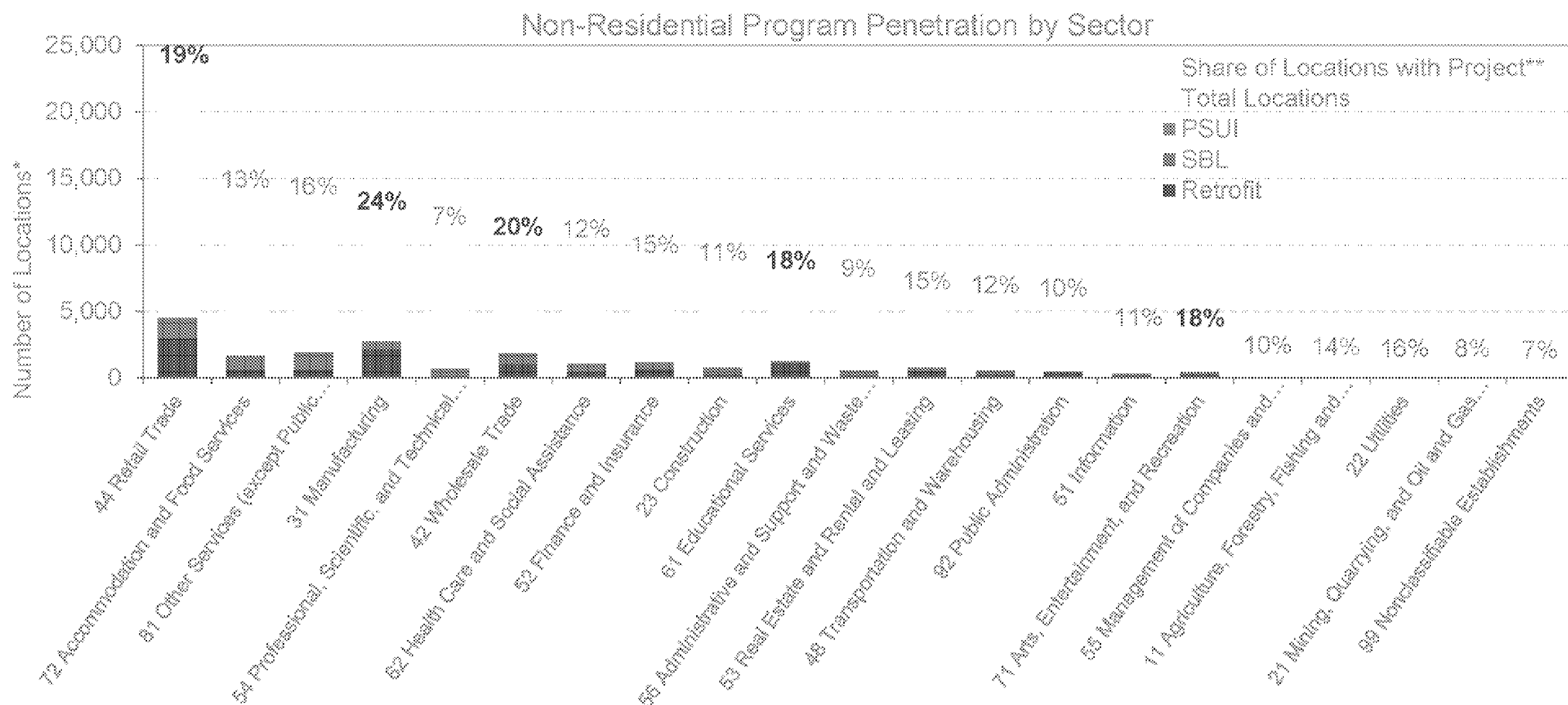
- Funded energy managers are highly concentrated in the central region
- The majority of funded energy managers are part of Conservation First Framework programs (83%), the remainder are part of the Industrial Accelerator Program

Funded Energy Managers in Ontario



NON-RESIDENTIAL PROGRAM PENETRATION VARIES BY SECTOR

- Manufacturing, wholesale trade, retail trade, educational services, and arts, entertainment, and recreation have the highest program penetration
- Range of program penetration between 7 and 24 percent of total locations by sector

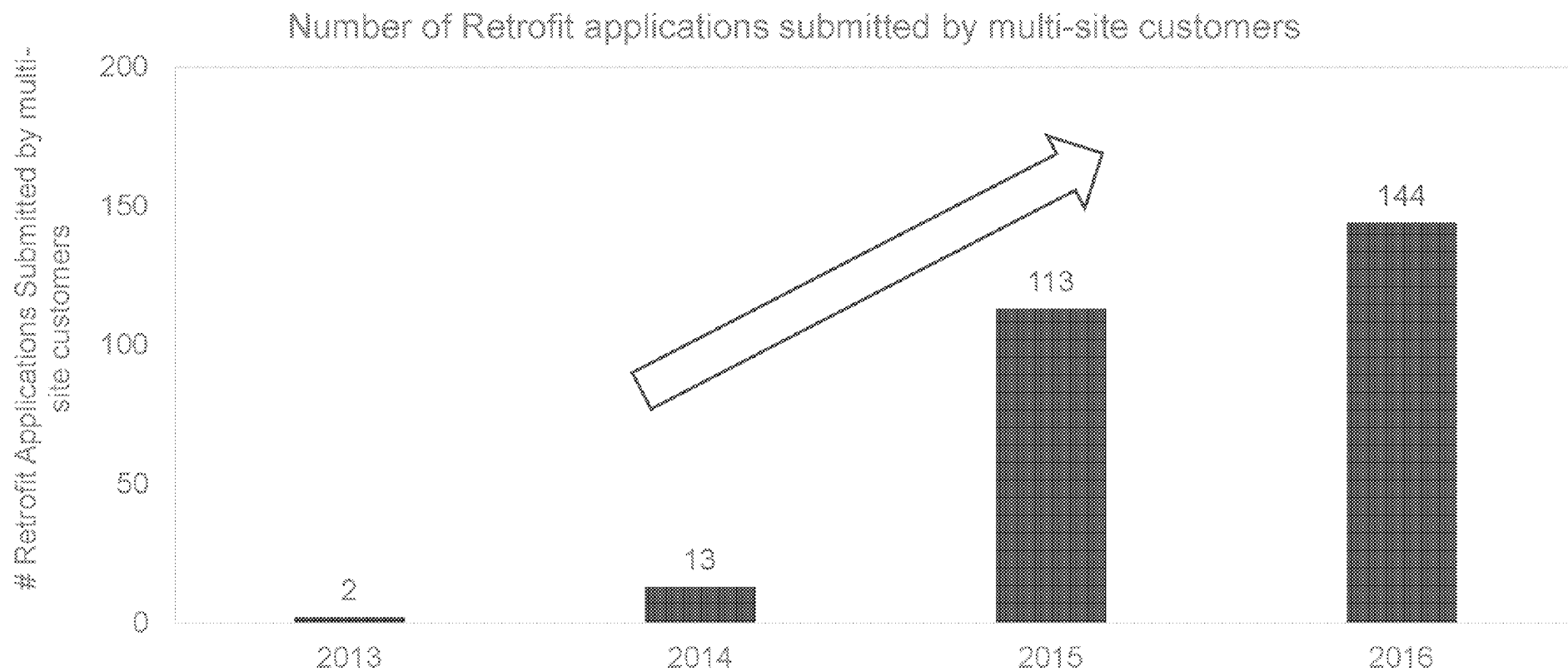


*Includes all multi-location organizations, and all stand-alone organizations with 10 or more employees.

** The share of locations that had a Save on Energy project completed in 2011 – 2015

APPLICATIONS FROM MULTI-SITE CUSTOMERS HAVE INCREASED

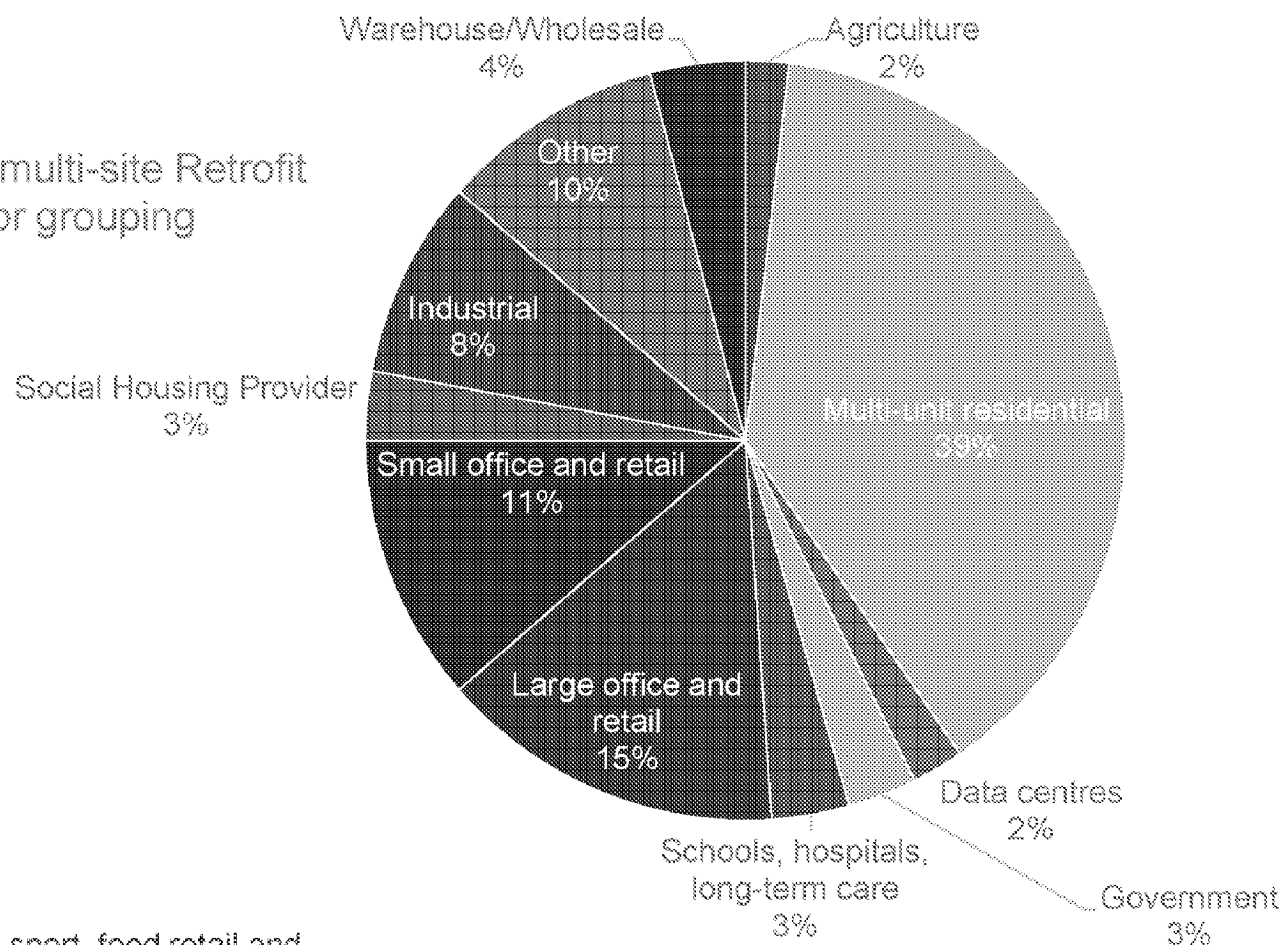
- Multi-site customers are served through a head-office model providing a single point of contact
- Note: government direction (June 10, 2016) requested the IESO centrally design, fund, and deliver a province-wide pay-for-performance program for multi-distributor customers (impact to be explored through next phase market research)



MULTI-SITE CUSTOMER APPLICATIONS ARE CONCENTRATED TO CERTAIN SECTOR GROUPINGS

- Multi-unit residential, large and small office and retail are the sector groupings with the highest percentage of multi-site applications from 2013 to 2016

Percentage breakdown of multi-site Retrofit applications by sector grouping

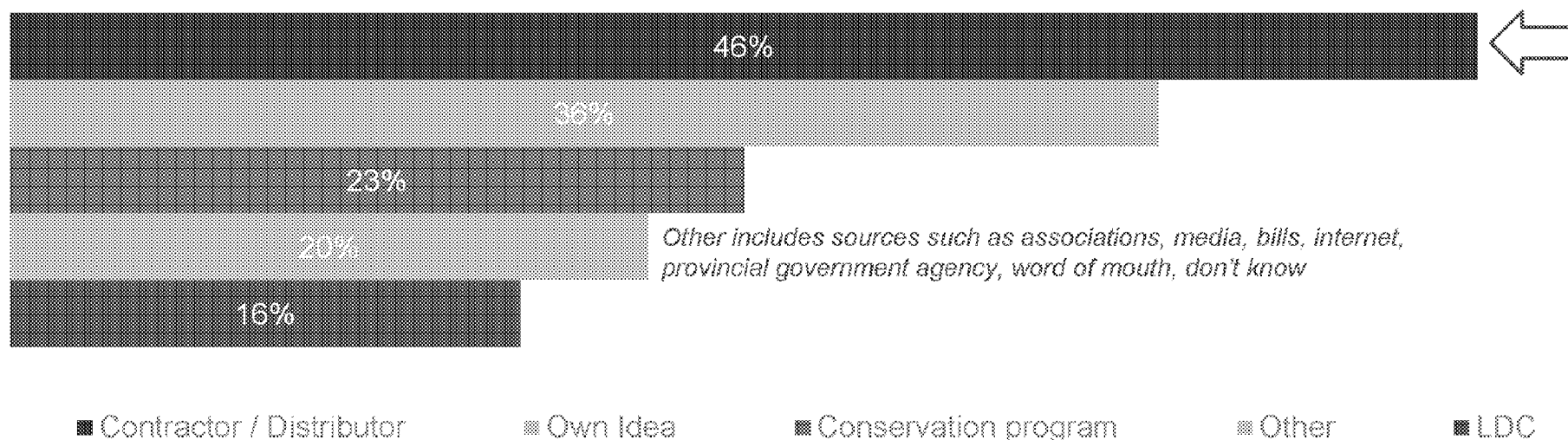


Other includes: entertainment and sport, food retail and restaurants, hotels, and places of worship

CONTRACTORS ARE AN INFORMATION SOURCE TO BUSINESS CUSTOMERS

- Nearly half (46%) of large customers learn about programs through channel participants highlighting the importance of channel actor participation and support for programs.
- Many organizations reported that the supply chain was their preferred way of obtaining information about energy efficiency.

Customer source of information about benefits of managing electricity

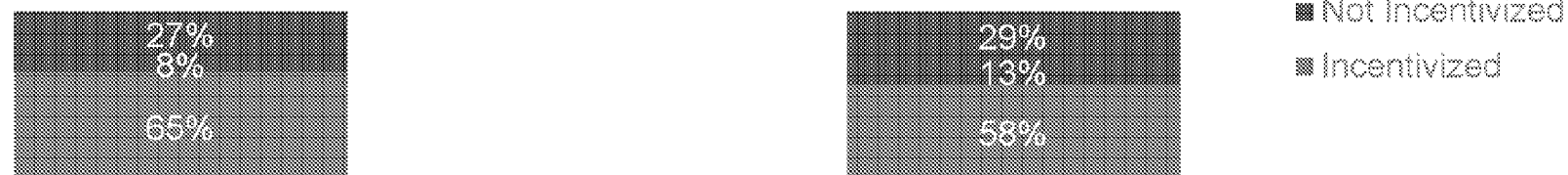


Q27a. Prior to undertaking the action to ..., where did you get the idea or learn about the benefits of undertaking this action?
Base: Large Customers (n=200)

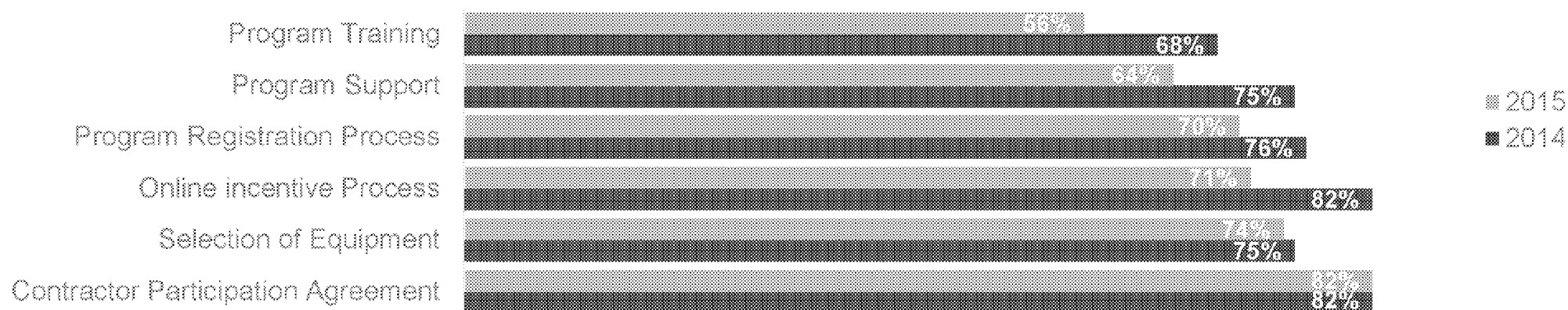
CONTRACTORS HAVE HIGH PARTICIPATION & SUPPORT FOR HEATING & COOLING PROGRAM

- In 2015 the vast majority of qualifying heating and cooling equipment sales were incentivized (80-90%)
- Although participating contractors reported high satisfaction with the Heating & Cooling program, most elements showed slightly lower satisfaction levels
- Program training satisfaction decreased by 12% and satisfaction with program registration decreased by 16%

% of Heating & Cooling equipment sales that received an incentive (2015)



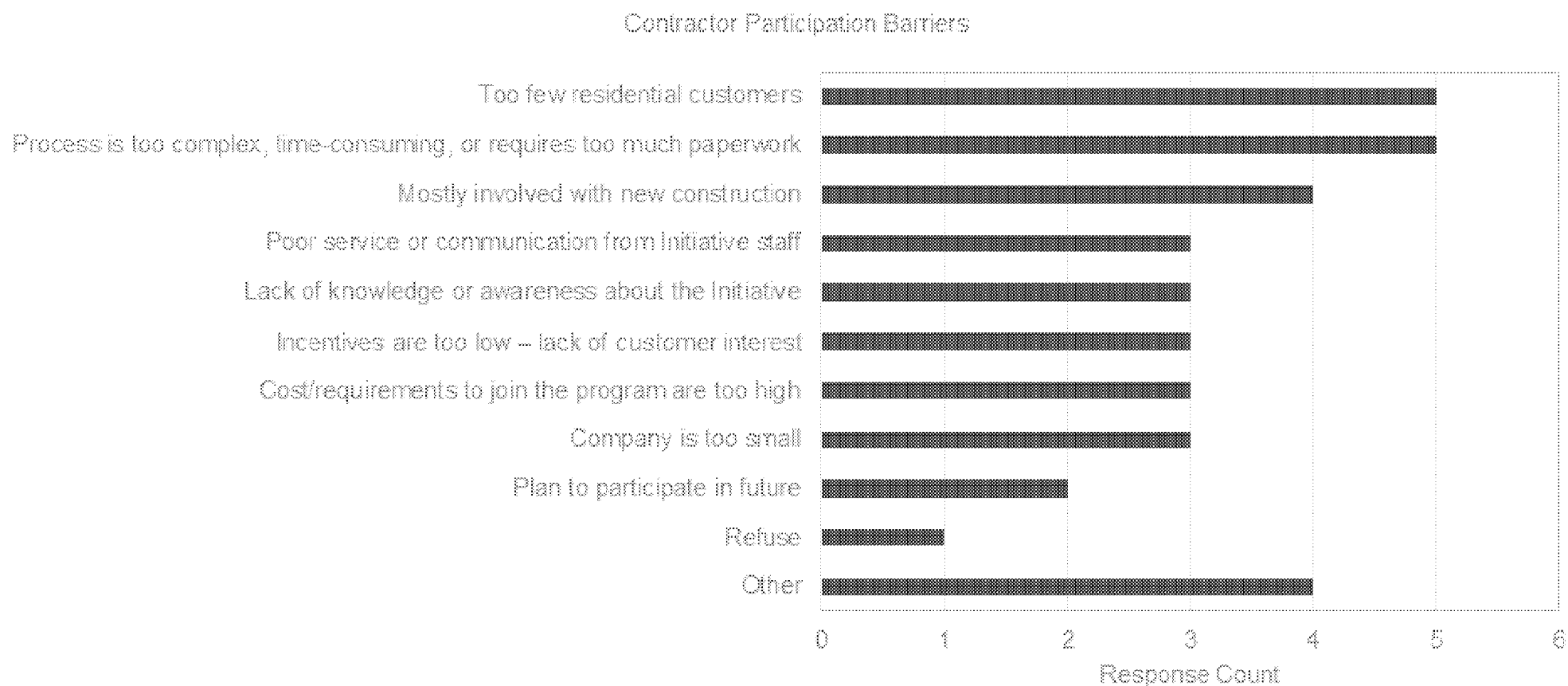
Contractor satisfaction with Heating & Cooling program elements (% Very Satisfied)



Participating contractors (n=68). Average portion of incentivized sales out of total HVAC sales, by equipment type. Satisfaction with specific elements of the HVAC Incentives Initiative by year.

NON-PARTICIPATING CONTRACTORS REPORTED PROGRAM AND BUSINESS BARRIERS

- In 2015 non-participating contractors reported barriers associated with the program (e.g., requirements, complexity, communication, and paperwork) and business reasons (e.g., too few residential customers, small company)

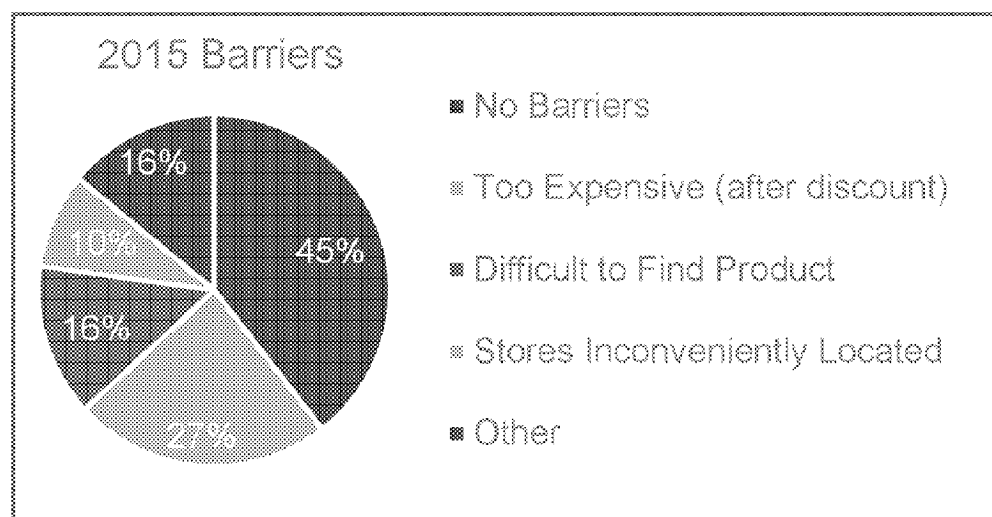
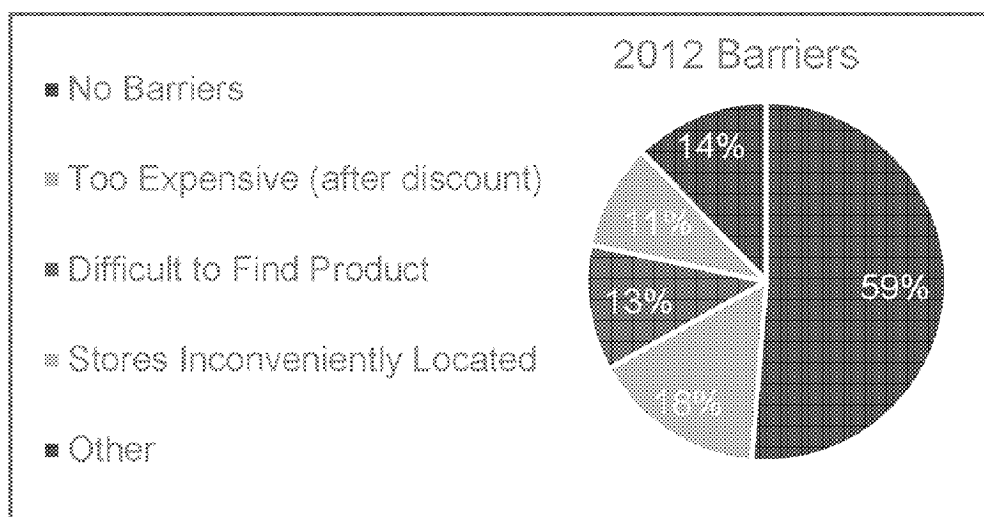
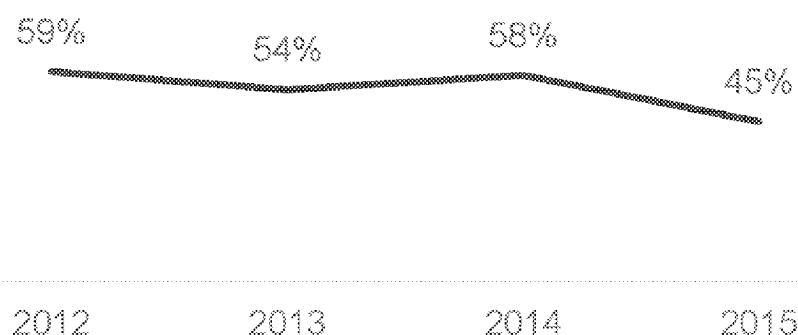


Non-participating contractors (n=32). Multiple responses allowed. Why contractors decided not to participate in the HVAC initiative.

BARRIERS TO ENTRY FOR THE COUPON PROGRAM HAVE INCREASED

- The amount of coupon participants that stated they experienced "No Barriers" to the program decreased 14% from 2012 to 2015.
- 9% more participants found that the incentivized products were too expensive (even after discount)
- 3% more participants thought the products were difficult to find
- 1% less participants found the stores inconveniently located

Percentage of Coupon participants reporting no barriers to participation

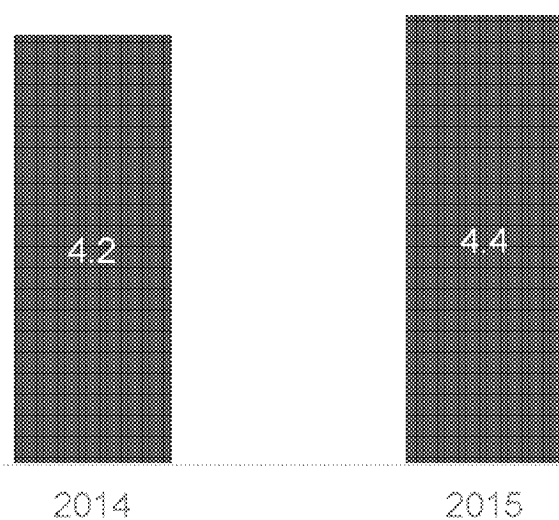


Barriers or difficulties when purchasing items with Save on Energy coupons (Initiative-Specific Survey Data, multiple responses allowed) 2012 n=419, 2015 n=322

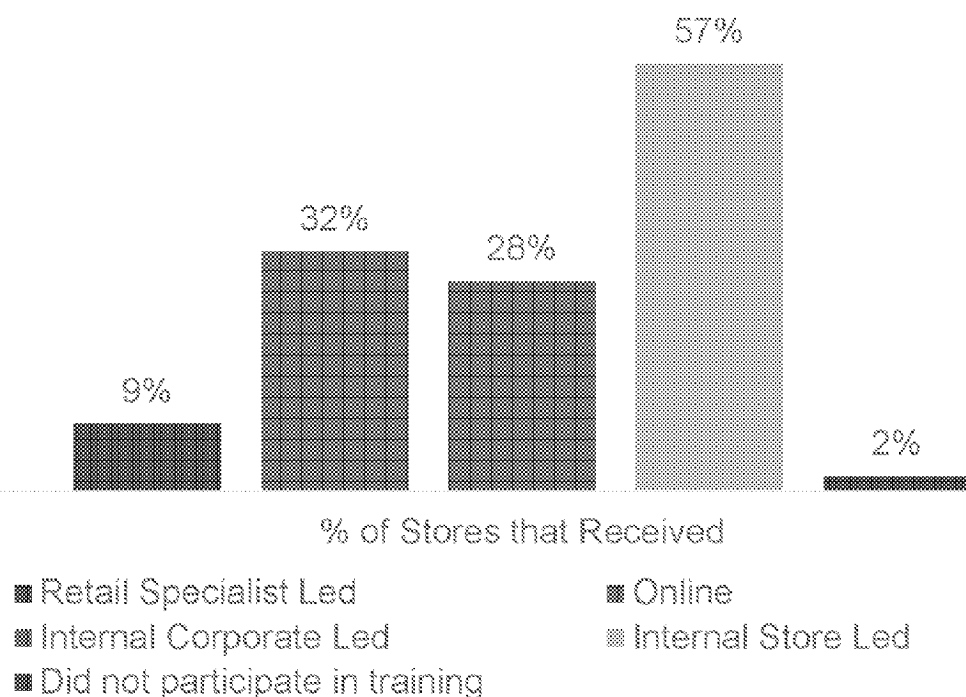
COUPON RETAILERS HAVE HIGH PARTICIPATION & SUPPORT FOR PROGRAM

- 98% of interviewed retailers participated in some form conservation training
- Retailer satisfaction with the program increased from 2014

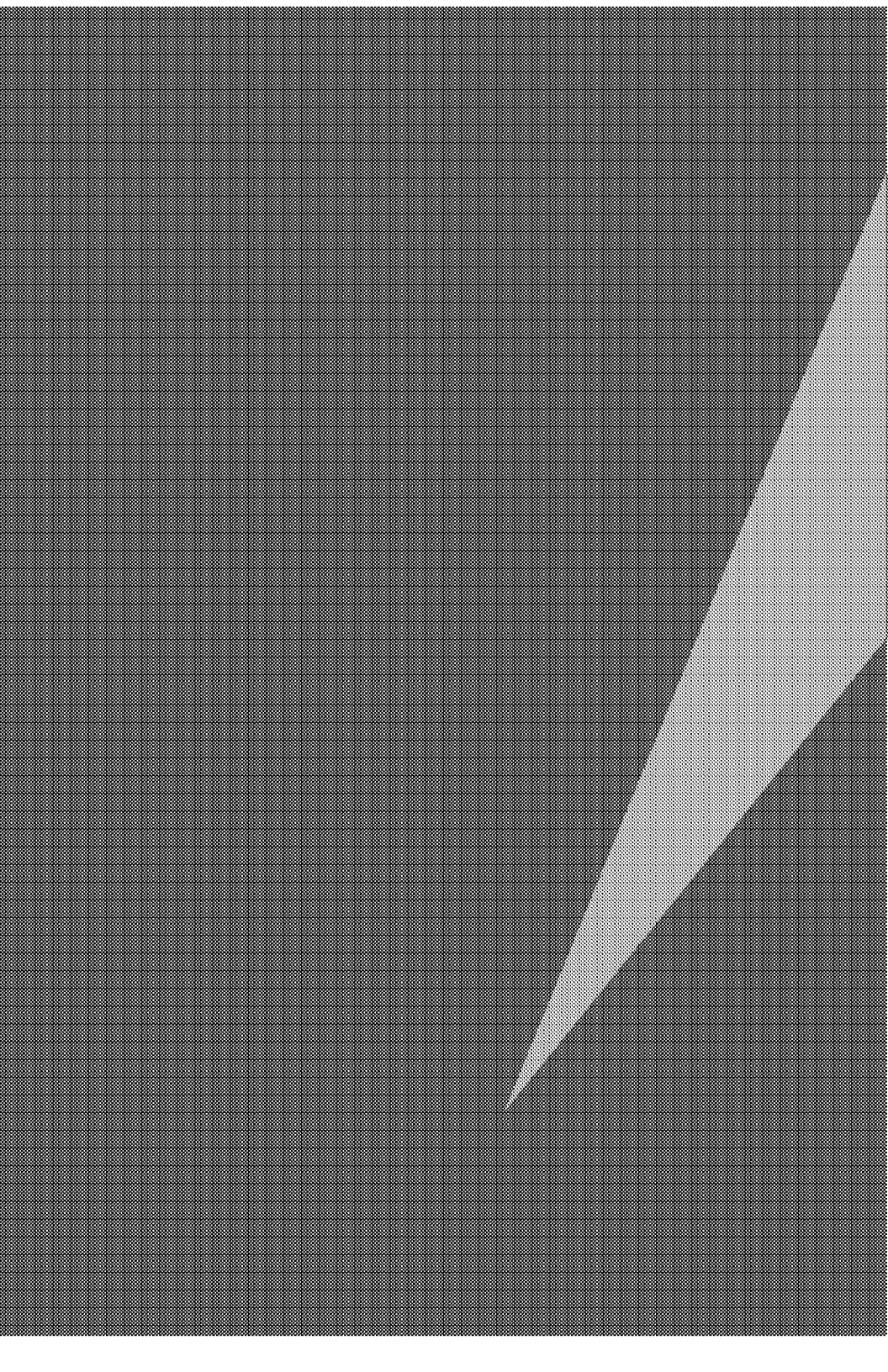
Retailers' satisfaction rating with
Coupon program administrators
(5 point scale)



Training participation by retailers



*Retailer storefront satisfaction with retail specialist and IESO Staff (store managers, relationship with retail specialist n=25, relationship with IESO n=9)
Participating retailers often carried out more than one type of training. Training types and rated effectiveness (store managers, n=47)*



V. MARKET SHARE

NAVIGANT

IESO-N-0026897

OVERVIEW

Section	Market Share	
Description	Review of current program offerings at the local and province-wide level. General attitudes of conservation.	
Focus area	• Variation in program offering across the province • CDM/DSM integration into business practices	• Efficacy of current approach

This section will review the programs and/or technologies available and the prevalence of local programs. This section will present select slides illustrating culture of conservation metrics followed by attitudes and behaviour for business customers and supply chain. Finally, market share data will be presented for Heating & Cooling and Coupons programs. Similar metrics were not available for Retrofit or other programs.

Observations:

- Approximately 76% of forecast savings will come from programs targeted to the business customers (not including small business lighting).
- There are more local programs and LDC Innovation Pilots(5%) for the residential sector than the business sector(12%).
- Culture of conservation appears to be improving on or maintaining past levels. e.g., 48% of respondents strongly agree that they: "I understand what I am supposed to do to not waste energy/conserve energy/use energy wisely in the home", which is up from 36% in 2009.
- 87% of large businesses state they are at least somewhat knowledgeable about what it takes to reduce electricity consumption.
- 76 % of Heating & Cooling participants and 76% of Coupon participants were likely to participate in Save on Energy programs the future.

Additional Insight to be gained through market research:

- Implications on participation and satisfaction with delivery agents when program offering is geographically inconsistent.
- Potential to complete further research into small business opportunities.

SOURCES

Source(s)

- IESO and Ipsos, **Business Energy Conservation Attitudes and Behaviour Research – Supply Chain Perspective**, 2015
- IESO and Ipsos, **Business Customer Experience Survey - Retrofit– Q3 2016, 2017**
- Nielsen and IESO, **Culture of Conservation – Conservation Metric Tracking Q4 2016, 2017;**
 - *Metric that measures, tracks and reports on progress in achieving a Culture of Conservation in Ontario against a base year benchmark*
- IESO and Ipsos, **Longitudinal Mass Market Research Survey (Q1 Report), 2017**
 - *The Longitudinal Mass Market Research Survey (LMMRS) is a multi-faceted survey that has run since 2011 and acts as an input into annual Evaluation Measurement and Verification results of IESO funded Save on Energy programs. The study helps the IESO gain an understanding of consumers awareness, participation and opinions of the Save on Energy campaign overall and the initiatives within the Consumer program. The study objectives include measurement of: the awareness of energy conservation initiatives and Save on Energy, program specific awareness and participation, and customer satisfaction, evaluation of program elements, and likelihood to participate in the future.*
 - *A total of 1,735 interviews were completed over the course of August (n=586), September (n=572) and October (n=577). Quotas were set by the 7 main LDCs and 4 key geographic regions (which capture the remaining LDCs). The quarterly data was weighted by age and gender to ensure that it is representative of the Ontario population.*
- IESO, **Approved Programs & Pilots 2017-02-27**
 - *IESO tracks and approves local and pilot programs, IESO provided data supporting the charts within this report.*

PROGRAMS COVER ALL SEGMENTS TO VARYING DEGREES

- Province-wide program offerings in Ontario have remained relatively consistent over time with some changes to program rules, eligibility and delivery
- Local, regional, and pilot programs were added in a meaningful way beginning in 2015 and supplement the program offering to customers
- Many local programs target similar technologies and approaches

Segment	Province-wide programs	Local/regional programs/target technology
Residential	• Coupons • Heating & Cooling incentive • Home Assistance Program (HAP) • New home construction • Whole home (pilot, not yet in market)	• 12 programs • Adaptive thermostats • Clothesline giveaway • Social benchmarking/home energy reports • Pool pumps • Audit and direct install
Small commercial	• Small business lighting	• 11 programs • Refrigeration (small commercial) • Roof-top units (small commercial)
Larger commercial	• Retrofit program • Audit funding • Energy managers • Existing building commissioning • High performance new construction • New home construction • Energy performance program • Process and systems	• 'Turn-key' retrofit for large closed-loop hydronic Heating & Cooling systems • High efficiency agricultural pumping program • Building operator incentives

12 LOCAL/REGIONAL PROGRAMS APPROVED FOR THE RESIDENTIAL SECTOR

- Residential local/regional programs include six unique program groupings (unique approach, program type, etc.)

Grouping	Program Name	Program and Market Description
Thermostat Program	Adaptive Thermostat Rebate Program	Additional \$50 rebate to increase Enbridge's existing \$50 rebate for learning adaptive thermostats for homes.
Engagement using data	Residential Engagement Platform	Home Energy Reports with energy consumption information and savings tips to drive energy savings in the home.
	Home Energy Report (HER) Program	
	Social Benchmarking Program	Home Energy Reports, using disaggregated smart meter data, with energy consumption information and savings tips to drive energy savings in the home.
	Home Energy Savings Program	
	Social Benchmarking Initiative	Home Energy Reports with energy consumption information, savings tips, and gamification with peers to drive energy savings in the home.
Clothesline Giveaway	Instant Savings Program	Free clothesline giveaway at customer engagement events.
	Clothesline Program	
First Nation Conservation Program		Energy audit and direct install of eligible efficiency, health, and safety, measures, and further education on home energy management for First Nations customers.
Swimming Pool	Swimming Pool Efficiency Program	Point of sale discount for Energy Star rated VFD pool pumps for residential customers with swimming pools.
	Swimming Pool Efficiency Program	
Direct Install	Home Assistance Program & Small Business Lighting Program	Energy audit and direct install of weatherization, lighting, and other measures for homes. Lighting assessment and direct install of lighting measures for small businesses.

11 LOCAL/REGIONAL PROGRAMS APPROVED FOR THE BUSINESS SECTOR

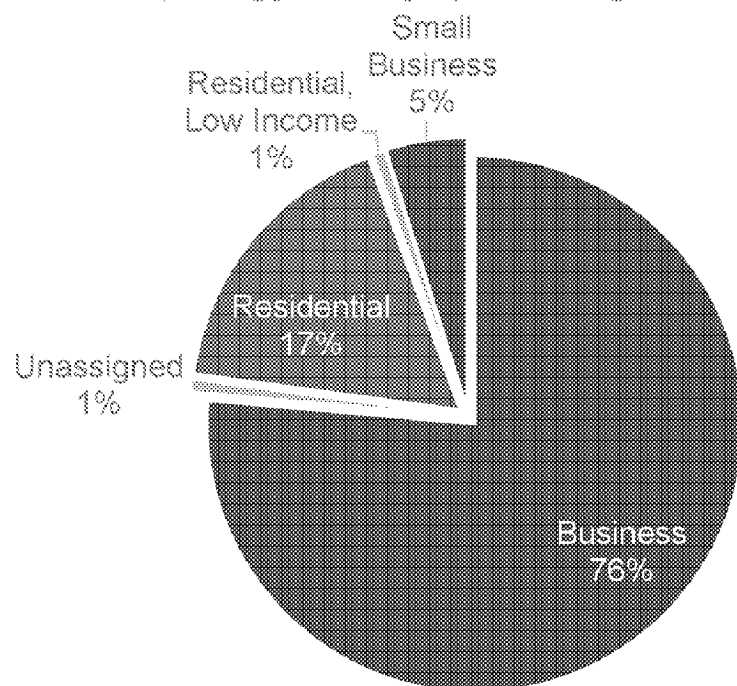
- Business local/regional programs include six unique program groupings (unique approach, program type, etc.)
- Business Refrigeration Incentive program is transitioning to a province-wide program

Grouping	Program Name	Program and Market Description
Refrigeration	Business Refrigeration Incentive Program	Facility assessment, Energy Action Plan (EAP), and direct installation of refrigeration measures for the small business sector.
	Small Business Refrigeration Program	
	Business Refrigeration Incentive	
	Business Refrigeration Incentive Program	
	Business Refrigeration Incentive	
Closed-loop Hydronic heating and cooling systems	Pumpsaver	Provides participants with a 'turn-key' solution to overcome knowledge barriers and provide a no-cost retrofit for large closed-loop hydronic heating and cooling systems.
	Pumpsaver	
Variable Frequency Drives for Agriculture	High Efficiency Agricultural Pumping Program	Point of sale discount on Variable Frequency Drives pumps for agricultural uses.
Process improvement	Opsaver	Tools, coaching, and performance incentives provided to building operators and employees in the institutional, commercial, and industrial sector, to establish processes and practices to save energy.
Roof-top Units	Smart RT for Small and Mid-Size Business	Rebate for smart wifi thermostats for roof top units (RTUs) for commercial buildings
Direct Install	Home Assistance Program & Small Business Lighting Program	Energy audit and direct install of weatherization, lighting, and other measures for homes. Lighting assessment and direct install of lighting measures for small businesses.

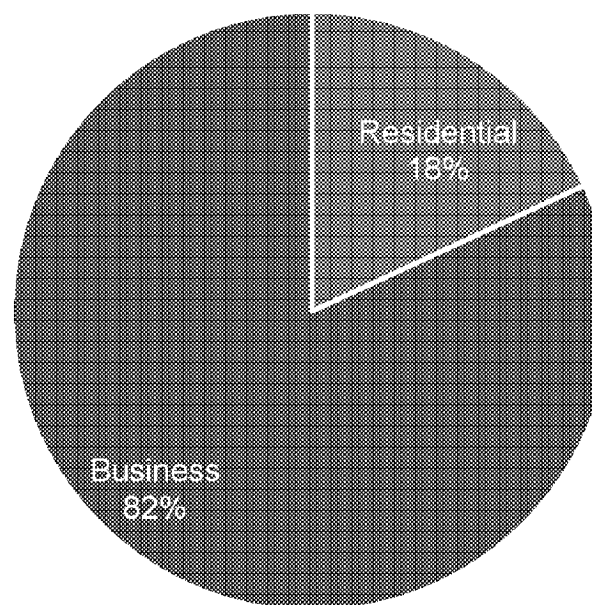
CDM PLANS KWH ARE WEIGHTED TOWARDS BUSINESS CUSTOMERS

- According to LDC CDM plans, approximately 76% of forecast savings will come from programs targeted to business customers (not including small business lighting)
- CDM Plan sector breakdown is similar to Achievable Potential Study breakdown
- To be re-analyzed following the adoption of new province-wide programs (i.e. business refrigeration) and resubmission of all CDM plans following the December 2016 Direction re: province-wide program coverage

CDM Plan Breakdown by Sector
(energy savings persisting to 2020)



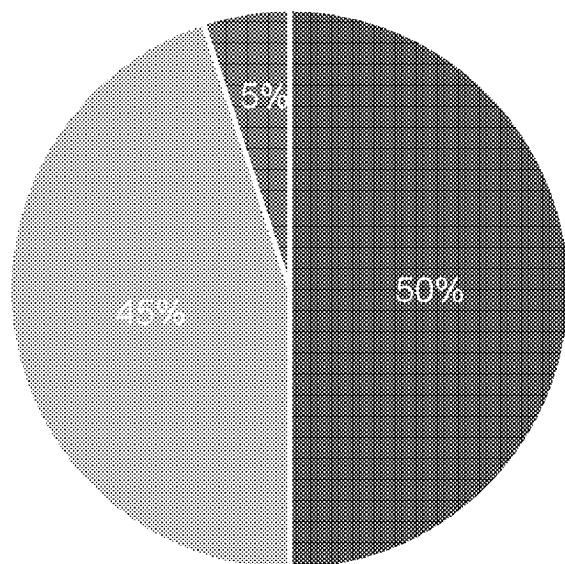
Achievable Potential Study Breakdown
by Sector
(energy savings persisting to 2020)



LOCAL PROGRAM OFFERINGS VARY ACROSS SECTORS

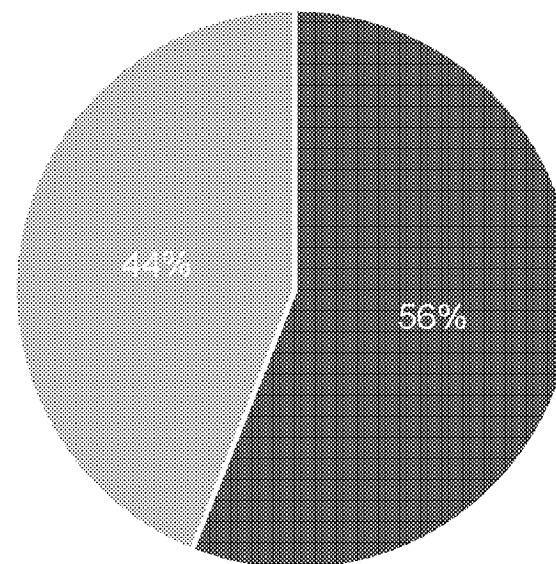
- There are more Local programs and LDC Innovation Pilots for the residential sector than the business sector (5% and 12% more, respectively)

Local programs by sector



■ Residential ■ Business ■ Residential & Business

LDC innovation pilots by sector

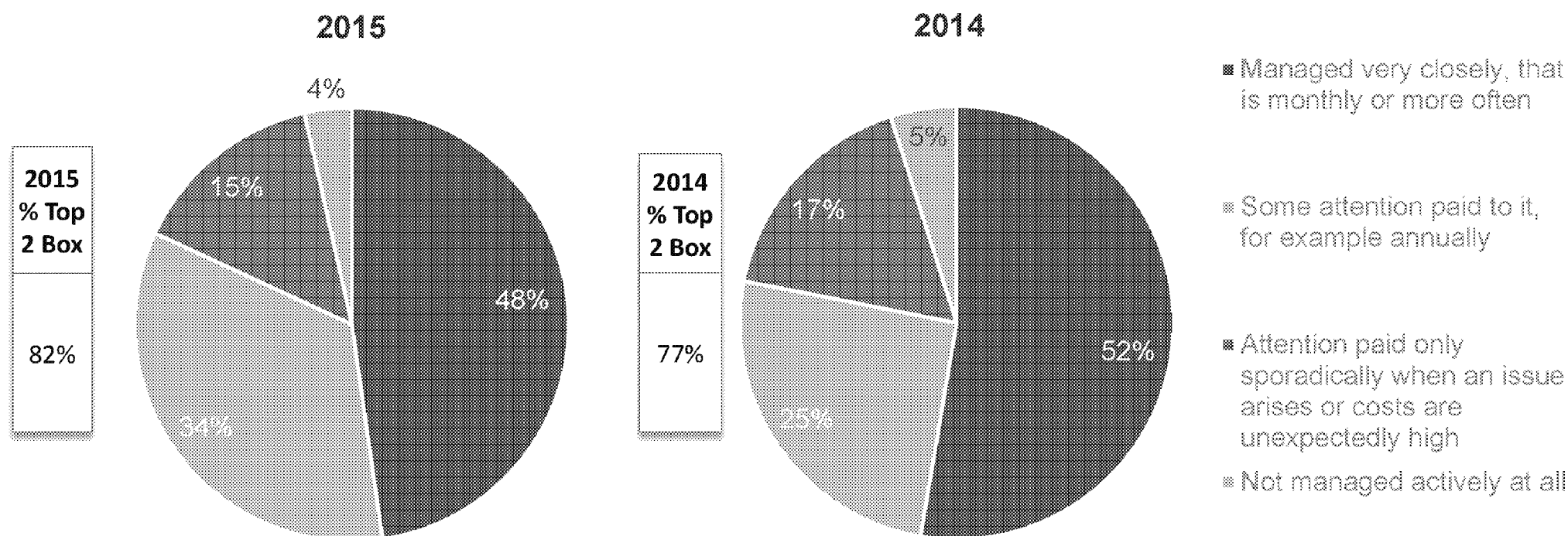


■ Residential ■ Business

COMPANIES ARE INCREASINGLY PAYING ATTENTION TO MANAGING THEIR ELECTRICITY

- 82% of large companies in 2015 reported to have paid attention to managing their electricity annually or more, which is up 5% from 2014

Would you say your [company] generally actively manages the amount of electricity used?

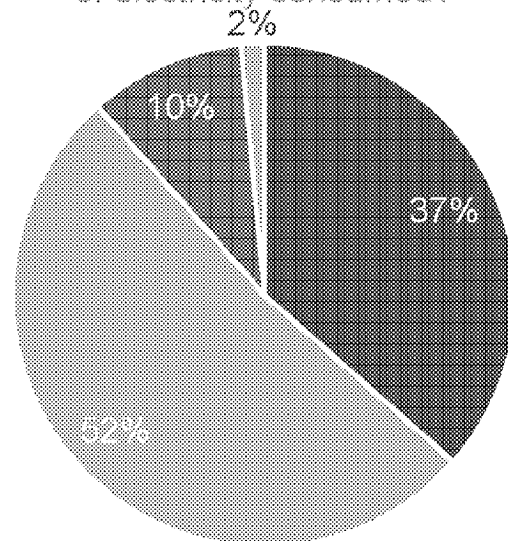


2. Would you say your [If C&I Building Owners and Managers sample read: 'organization' If Supply Chain/Influencers and Equipment Suppliers & Installers Read: 'clients'?] generally actively manage the amount of electricity used or is it not something that is actively managed? Would you say... (Read list). Base: Large Supply Chain (n=101)

LARGE CUSTOMER SR. MANAGEMENT PAYS ATTENTION TO ELECTRICITY MANAGEMENT

- 89% of large customers stated that Sr. Management pays attention to the electricity consumed by their businesses
- 87% of large customers stated that Sr. Management is knowledgeable about the amount of electricity consumed by their businesses

To what extent would you say that Sr. Management... pays attention to reducing the amount of electricity consumed?

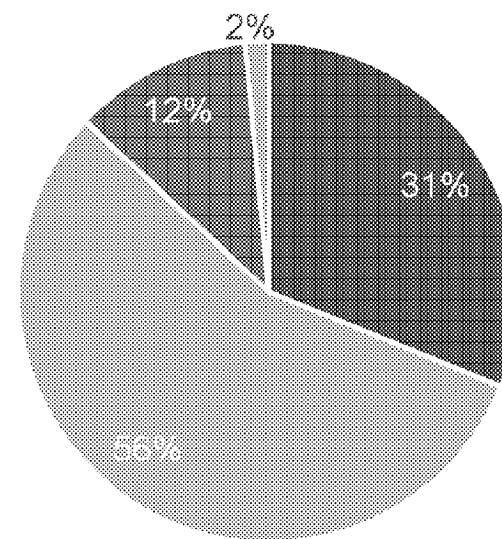


% Top
2 Box

89%

- A great deal of attention
- Little attention
- Some attention
- No Attention

How knowledgeable would you say that [Sr. Management] are about what it takes to actually reduce the amount of electricity used?



% Top
2 Box

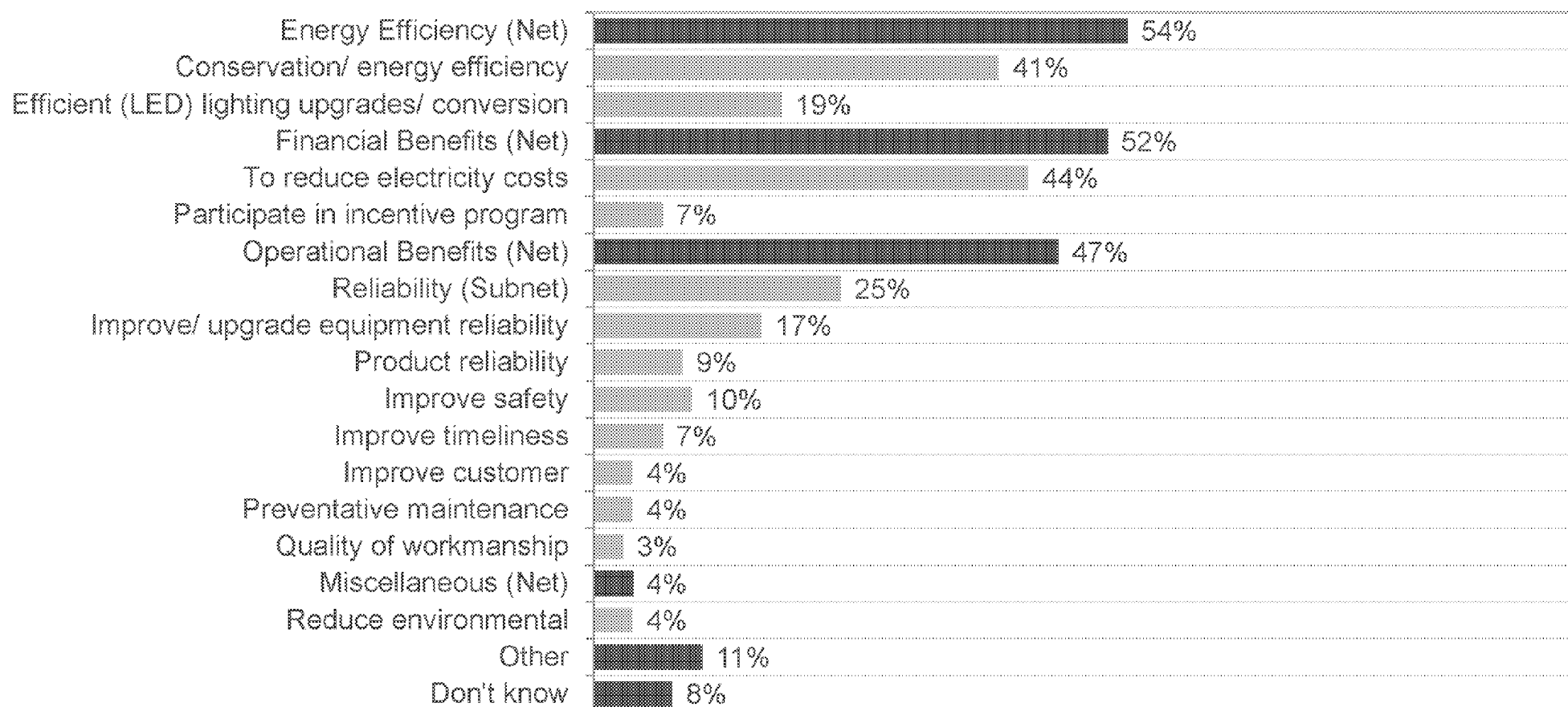
87%

- Very knowledgeable
- Only a little bit knowledgeable
- Somewhat knowledgeable
- Not at all knowledgeable

3a. To what extent would you say that senior management at your clients organization pays attention to reducing the amount of electricity consumed? Would you say... (read list) 3b. How knowledgeable would you say that these decision makers are about what it takes to actually reduce the amount of electricity used at your clients organization? Would you say... (read list) Base: Large Supply Chain (n=101)

LARGE CUSTOMER PRIORITIES ARE IMPROVING ENERGY EFFICIENCY, FINANCIAL BENEFITS, AND OPERATIONAL BENEFITS

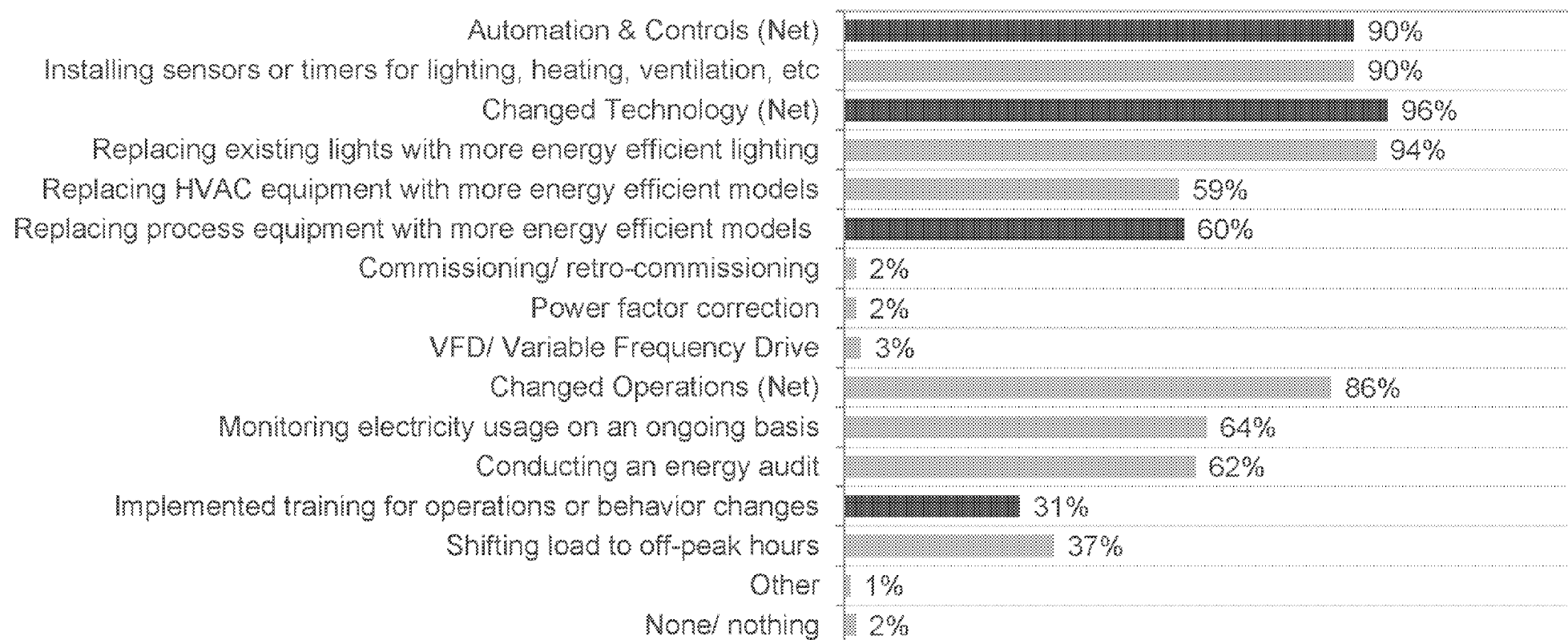
- The Supply Chain are most likely to mention issues associated with energy efficiency (54%), financial benefits (52%), and operational benefits such as such as improving reliability, safety (47%) as top priorities for their large Customers.



1x. Think ahead into 2015 what would you say are the top three priorities for your clients business regarding electricity management? Please be as specific as possible. (Accept up to three responses); Base: Large Supply Chain (n=101)

LARGE CUSTOMER ARE ALREADY USING STRATEGIES TO MANAGE ELECTRICITY USE WITHOUT AN INCENTIVE

- From the point of view of the Supply Chain, a significant proportion of large Customers are already using a variety of strategies to reduce their electricity consumption.



26. Which, if any, of the following actions have your clients undertaken at their organization to reduce the amount of electricity consumed in the past year? (read list and select all they apply) [randomize]; Base: Large Supply Chain 2015 (n=101); 2014 (n=95)

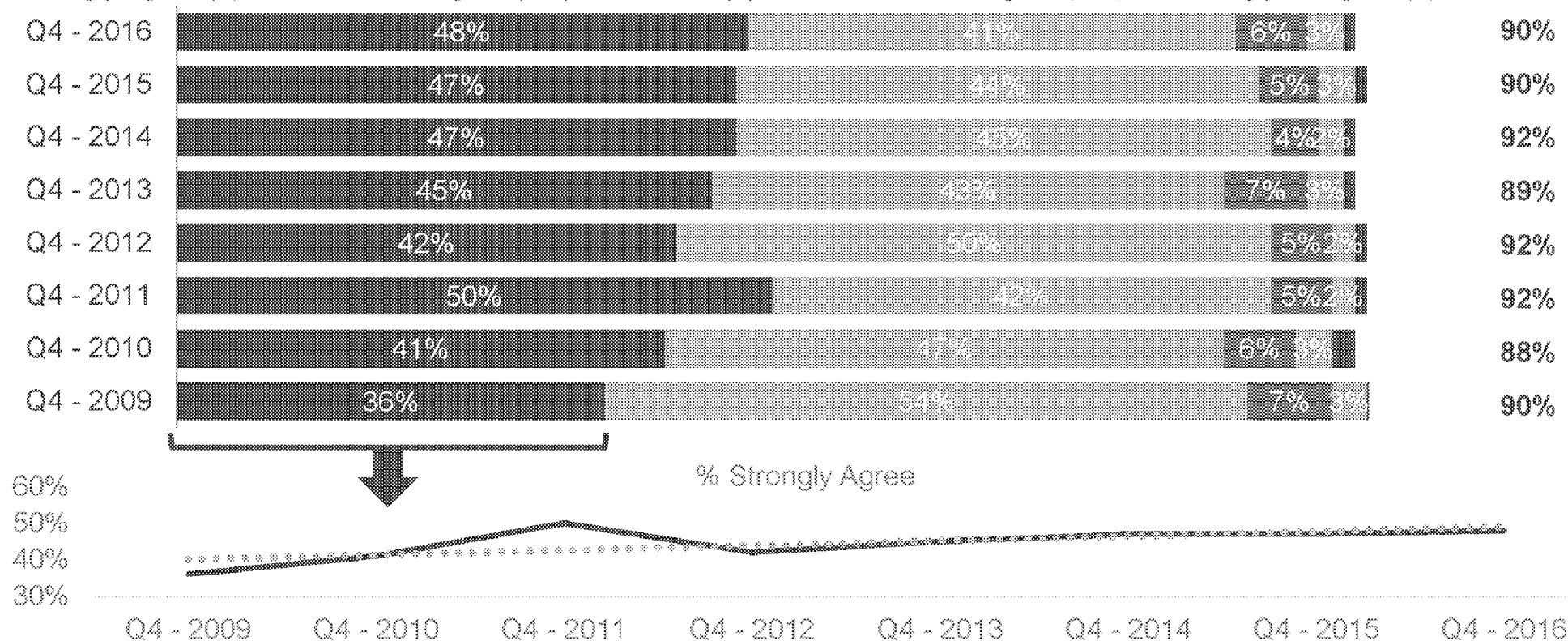
UNDERSTANDING OF CONSERVING ENERGY IS INCREASING

- Understanding of conserving energy is high, 90% (strongly and somewhat agree) over 2009-2016 period
- 12% increase in the strongly agree category over 2009-2016 period

I understand what I am supposed to do to not waste energy/conserve energy/use energy wisely in the home

■ Strongly agree (7) ■ Somewhat agree (6,5) ■ Neutral (4) ■ Somewhat disagree (3,2) ■ Strongly disagree (1)

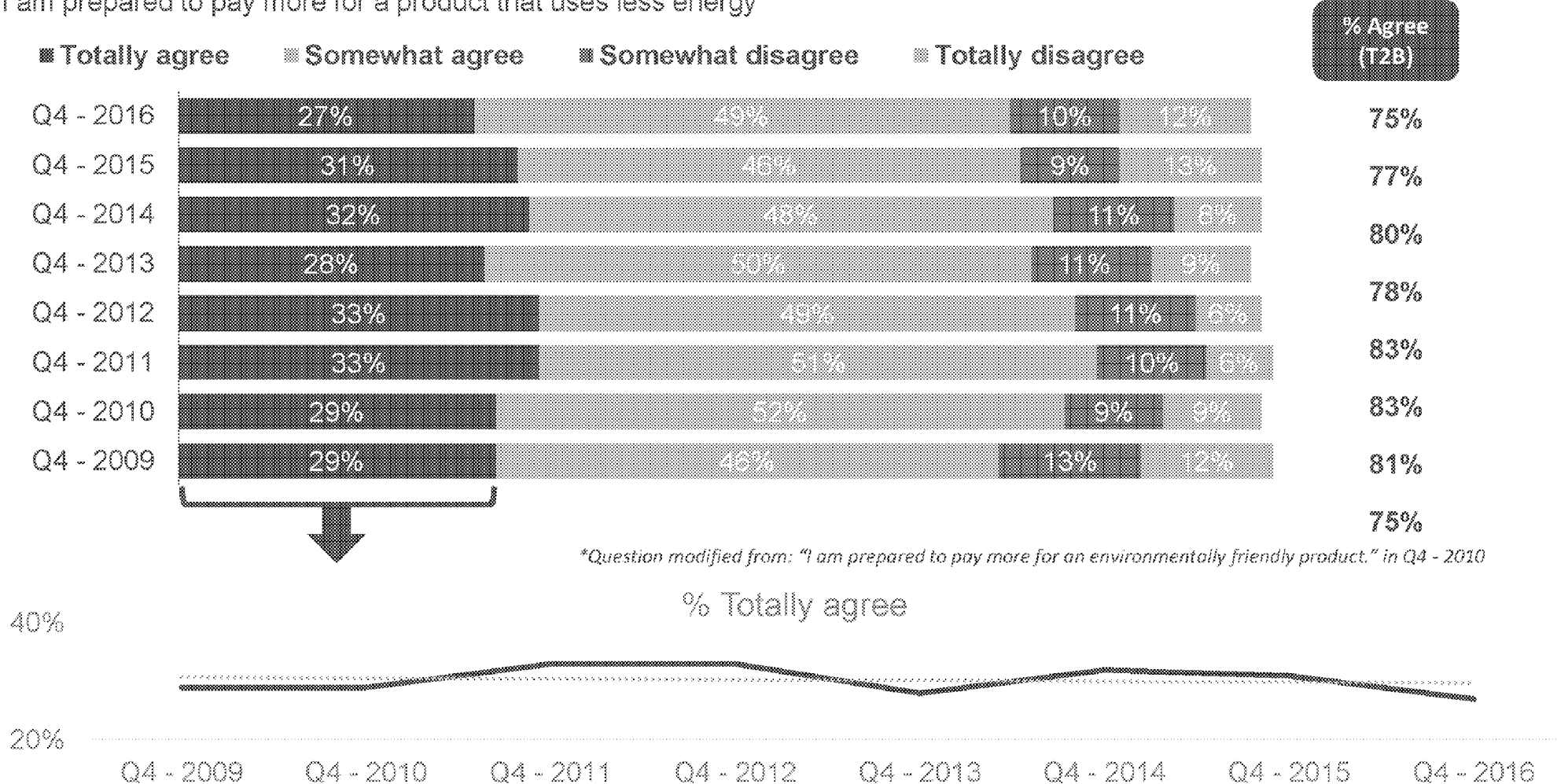
% Agree
(T3B)



Q9A. I am going to read you some things people say about energy. Please use a scale from 1 to 7, with 1 meaning you strongly disagree and 7 meaning you strongly agree with the statement. Base: All respondents: Q4/11, n=625; Q4/12, n=627; Q4/13, n=629; Q4/14, n=641; Q4/15, n=632; Q4/16, n=631. NOTE: Don't know responses not shown

ONTARIANS' WILLINGNESS TO PAY HAS NOT CHANGED OVER TIME

I am prepared to pay more for a product that uses less energy*

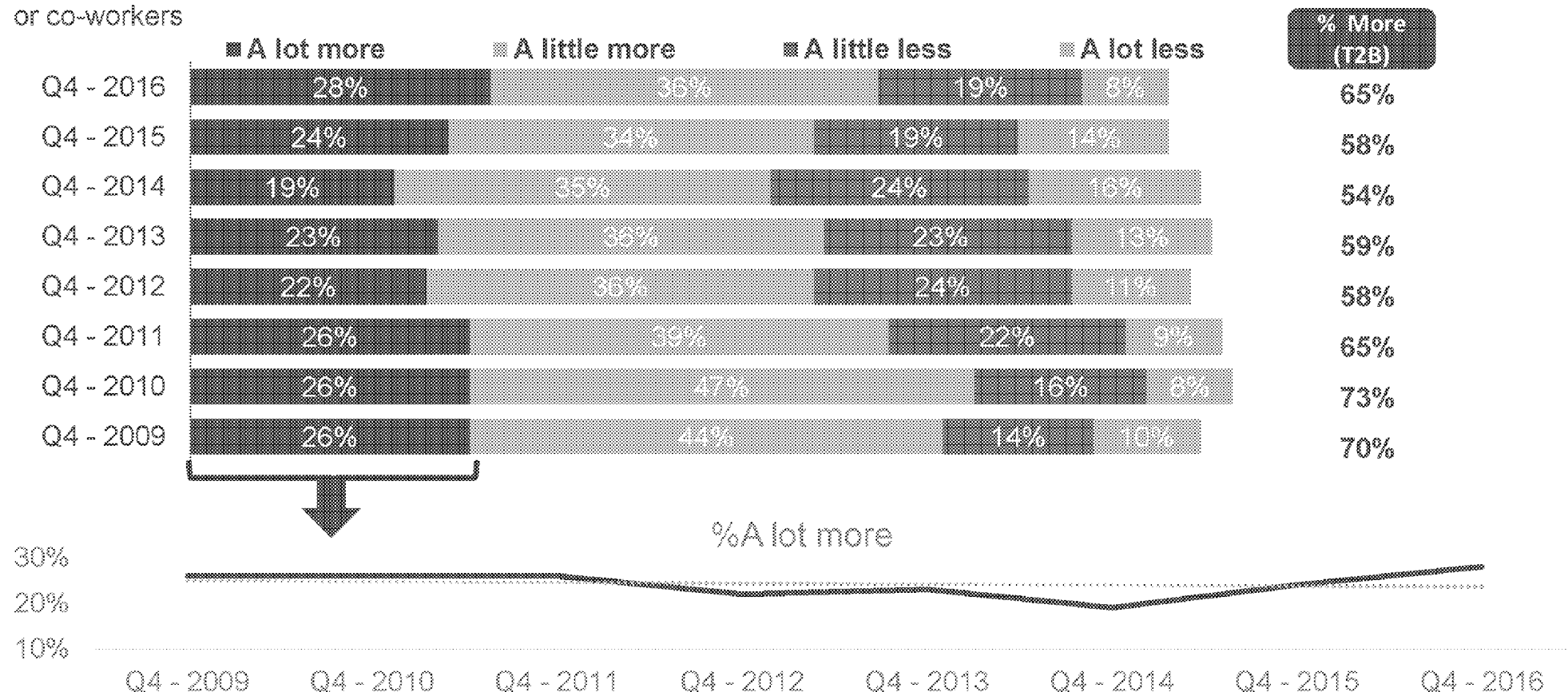


Q15A. I'd like to read you a list of opinions that we often hear expressed. For each one, please tell me whether you totally agree, somewhat agree, somewhat disagree or totally disagree. Base: All respondents: Q4/11, n=625; Q4/12, n=627; Q4/13, n=629; Q4/14, n=641; Q4/15, n=632; Q4/16, n=631. NOTE: Don't know responses not shown

SOCIAL BUZZ ABOUT CONSERVATION INCREASED RELATIVE TO 2015

- People talked about conserving energy with friends, family and co-workers more frequently in Q4 2016 vs Q4 2015 (65% up from 58%)

Surveyed Participants: Talked about not wasting energy/conserving energy/using energy wisely in the home with family, friends or co-workers



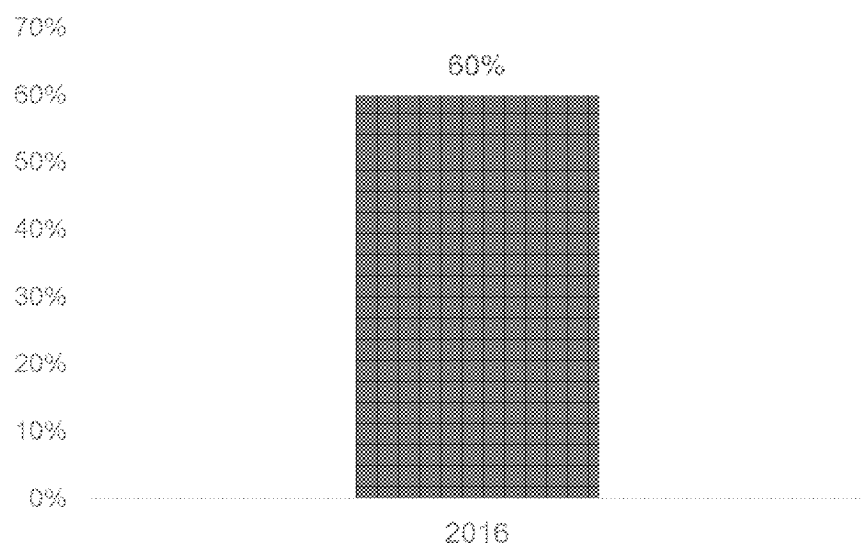
Q8B. Would you say that compared to the past few years, in the past 12 months you have...

Base: All respondents: Q4/11, n=625; Q4/12, n=627; Q4/13, n=629; Q4/14, n=641; Q4/15, n=632; Q4/16, n=631. NOTE: Don't know responses not shown

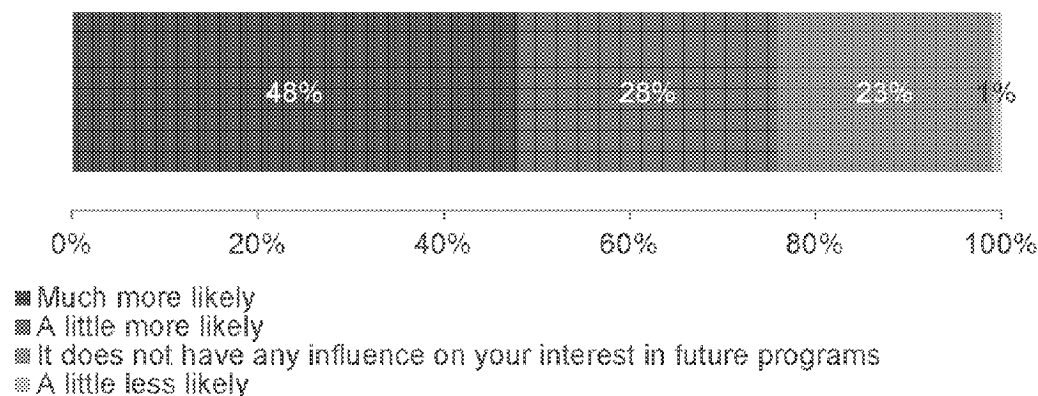
HEATING & COOLING PROGRAM HAD A 60% PARTICIPATION RATE IN 2016

- Approximately 60% of Ontarians report having participated in Heating & Cooling program in 2016
- Based on those who indicated that they had replaced a furnace or air conditioner
- Participation is evenly distributed throughout the year – April (12%), May (18%) have highest participation rates
- Three quarters of participants are likely to participate in future Save on Energy programs

Heating & Cooling program participation rate 2016



Likelihood to participate in Save on Energy programs in the future
Heating & Cooling program participants

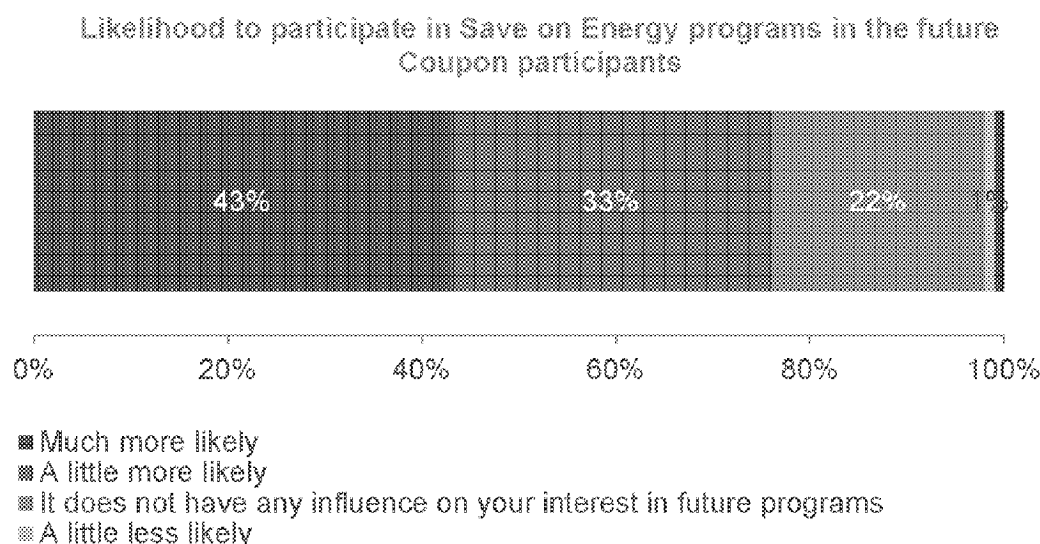
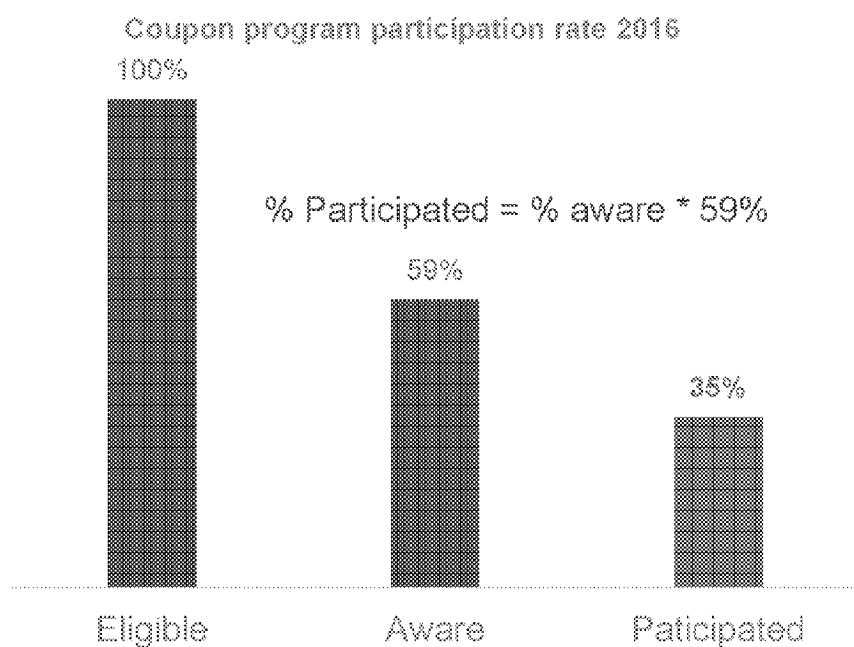


D3. Earlier you indicated that you have replaced your existing [IF S16 = Replaced existing central air conditioner SHOW 'central air conditioner' and/or IF S16 = Replaced existing furnace SHOW 'furnace']. Base: All Answering. (n=244). Did you or your contractor apply for the Save on Energy HEATING & COOLING INCENTIVE rebate?

D4. Considering your experience, how likely would you be to recommend the Save On Energy Heating and Cooling Incentive Program to a friend or colleague using a scale from 1 to 10 where 1 is not at all likely and 10 is extremely likely? Base: All Answering. (n=148)

PARTICIPATION IN COUPON PROGRAM HAS REMAINED CONSISTENT

- Approximately 35% of Ontarians report having participated in Save on Energy Coupon events during 2016
- 59 % of Ontarians have heard of the Coupon program by name or description
- 59% of those aware participated in the Coupon program in 2016
- Three quarters of participants are likely to participate in future Save on Energy programs



C2. Please indicate which of the following products you have purchased since January 1st, 2016 using a Save on Energy coupon. A few examples of the coupons can be found below. Base: All Answering. (n=1,022);

C10. How does your experience participating in this program influence your interest in participating in future Save On Energy programs? Would you say you are...
Base: All Answering. (n=606);

SECTION 4:
SUMMARY
OBSERVATIONS
AND NEXT STEPS

NAVIGANT

IESO-N-0026897

PRELIMINARY OBSERVATIONS

How do customers view the Save on Energy brand? How can customers' perception of the Save on Energy brand be improved?

- Brand awareness was high as of December 2016 (at 69% of the general residential population surveyed).
- Brand trustworthiness as of 2016 continues to be high (at 89% of those surveyed).
- Save on Energy Brand Image remains very positive among Ontarians aware of the brand (55% to 81% of Ontarians agree to positive statements about the attributes of Save on Energy).
- Preliminary research provides a good foundation of the pulse of brand awareness and trustworthiness.
- Further research on the brand will not be necessary under the Mid-term Review as IESO's tracking studies will continue through to 2020 (Mid-term Review: continue to monitor results of IESO research)

Are programs meeting the needs of the customer? How can the customer experience be improved?

- Retrofit program customer satisfaction scores remain high – scores of 94% in 2014 and 92% in 2016.
- Large businesses know what it takes to conserve - 87% state they are at least somewhat knowledgeable about what it takes to reduce electricity consumption
- Research is showing strong customer satisfaction metrics for consumer programs over the past three years (Heating & Cooling – 92% and Coupons – 92%, average over 3 year period).
- 76% of Heating & Cooling participants and 76% of Coupon participants were likely to participate in Save on Energy programs the future.
- Preliminary research begins to identify areas of focus for further research (e.g., barriers).
- Potential for further investigation into programs not investigated through existing IESO commissioned market research (i.e., all programs with the exception of Retrofit, Coupons, and Heating & Cooling).

PRELIMINARY OBSERVATIONS

Are there any customer or sector specific gaps in the framework?

- There are programs available to all segments (residential, small commercial, large commercial).
- CDM plans focus target achievement (energy savings) on business customers.
 - Small business customers are 5% of anticipated target achievement (energy savings from the small business lighting program and other local/regional programs targeted towards small businesses).
 - Business customers (not including small business) are anticipated to capture 76% of target achievement (energy savings) as per CDM Plans.
- The Achievable Potential Study indicates available energy efficiency opportunity in the residential sector with possible limitations in the short-term for the business sectors.
- Preliminary research provides a baseline understanding from a program and general awareness/ attitudes perspective (e.g., when customers think of energy efficiency and Save on Energy, what are they thinking of, how do they obtain program information, etc.).
- Potential for further investigation into meaningful gaps in both programming and framework (e.g., are small business and residential programs sufficient to reach potential and meet customer needs).
- Potential to complete further research into opportunities beyond the business segment.

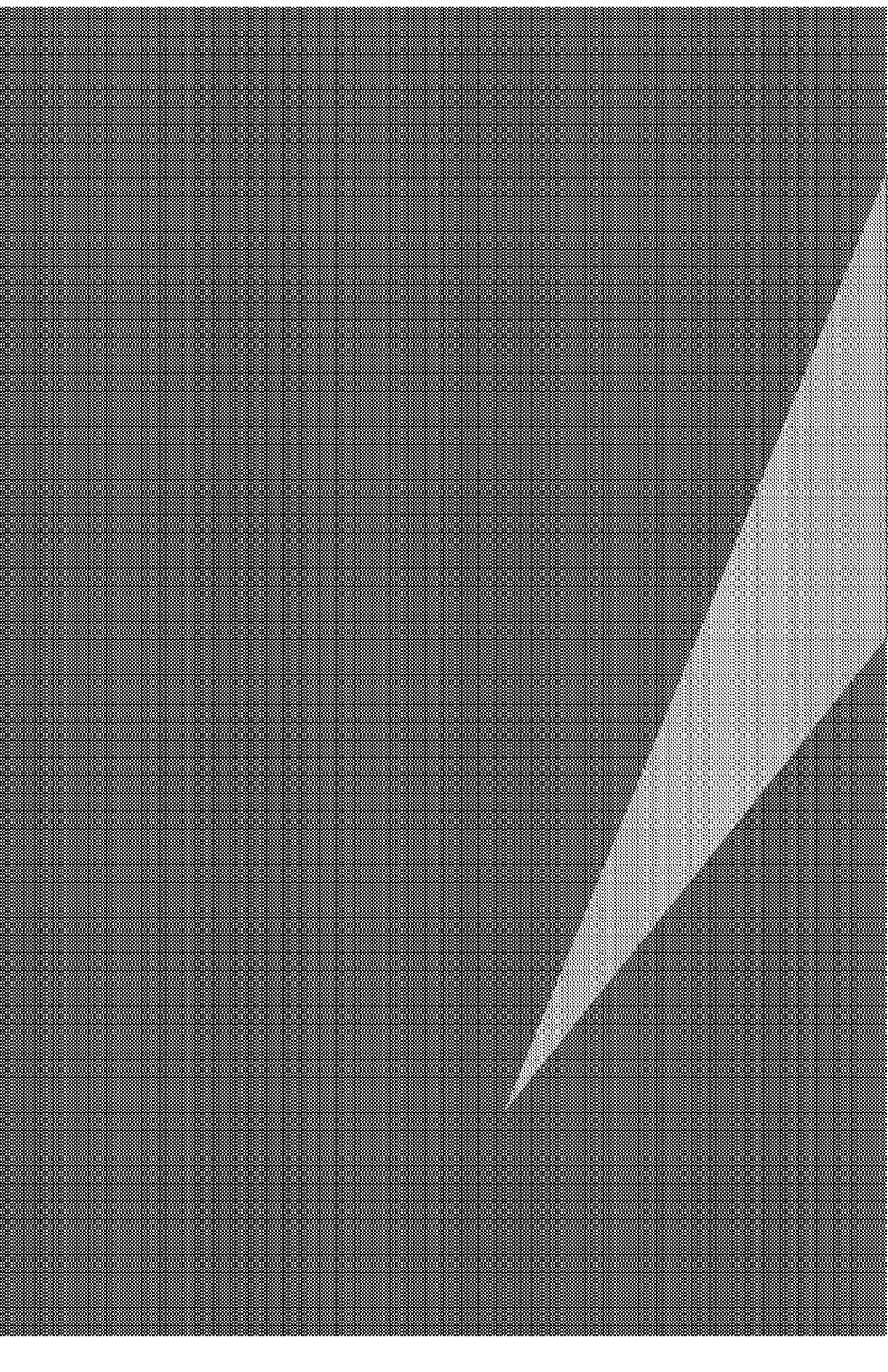
PRELIMINARY OBSERVATIONS

- **Is the framework itself creating challenges for the customer or market actors who could support CDM/DSM?**
 - There appears to be increased engagement in the business sector through energy managers, channel, and multi-site customers (82% of large companies in 2015 reported to have paid attention to managing their electricity annually or more, which is up 5% from 2014).
 - 46% of large customers hear about business programs from channel and supply chain (contractors and distributors).
 - Preliminary research provides a baseline understanding of select program barriers and attitudes (e.g., decision-makers thoughts about managing energy use).
 - Potential to investigate any challenges and satisfaction among market actors serving customers with properties in multiple territories.
 - Seek to understand Industrial Accelerator Program non-participant barriers and/or reasons for non participation in the Industrial Accelerator Program.

NEXT STEPS: FOCUS AREAS FOR MARKET RESEARCH PHASE OF MID-TERM REVIEW

Based on the preliminary assessment of the current state of customer and market engagement and satisfaction, the following areas will be considered in the market research phase:

- Determine how collaboration is impacting customer satisfaction.
- Investigate customers' satisfaction with the choice and availability of programs (by sector).
- Seek to understand Industrial Accelerator Program non-participant barriers and/or reasons for non participation as well as Industrial Accelerator Program satisfaction among participants.
- In addition to Industrial Accelerator Program, seek further input on satisfaction, barriers and opportunities with customers (small and large), including those with businesses in multiple territories (i.e. those that interact with multiple LDCs or both electric and gas utilities).
- Determine the implications on participation and satisfaction with delivery agents when program offering is geographically inconsistent.
- Interaction of other topics and customer and market engagement and satisfaction.



APPENDIX A: GLOSSARY

GLOSSARY

Term	Description
APS	Achievable Potential Study - Carried out by IESO and Nexant. Comprises, in-part, of an energy efficiency study that assess long- and short-term energy savings potential in Ontario.
BRI	The Business Refrigeration Incentive Program provides for facility assessments to identify potential electricity savings opportunities and installation of commercial refrigeration upgrades aimed at reducing electricity consumption. Participants in the BRI Program are non-residential electricity customers that have an average annual peak demand of less than 250 kilowatts (kW).
CCM	Culture of Conservation Metric - Metric that measures, tracks and reports on progress in achieving a Culture of Conservation in Ontario against a base year benchmark.
Channel Partners	Third parties who interact with the customer in the delivery of conservation programs. Some examples by program: Coupons = retailers, Heating & Cooling = furnace vendors/installers, retrofit = the supply chain (i.e. contractors/vendors).
Coupon program	Save on Energy coupons are available for discounts on a range of energy-efficient products from participating retailers.
CSAT	Residential Customer CSAT Survey Q3 2016, Coupons and Heating & Cooling Incentive. The goal of these studies is to collect feedback from conservation initiative participants in order to measure their satisfaction with the process and engagement with each particular IESO initiative. This research will be utilized by IESO to measure and track satisfaction with IESO initiatives and programs on an ongoing basis throughout 2016.
DSM	Demand Side Management: the term for conservation initiatives carried out in other jurisdictions/sectors (e.g. natural gas demand side management).
ECA	Energy Conservation Agreement: Sets out the contractual relationship between the IESO and LDCs under the Conservation First Framework.
ECAB	Energy Conservation Attitudes & Behaviour - see sources in section 3.II. for full description.
EE	Energy efficiency.
HAP	Home Assistance Program - Qualified Ontario homeowners, tenants and social and/or assisted housing providers receive assessments and installation of energy-saving measures.
HVAC	Heating, ventilation and air conditioning.
Heating & Cooling program	Heating & Cooling incentives that are offered for the upgrade to high-efficiency A/C systems and furnaces. Eligible participants include homeowners and businesses that use residential-like systems.
KWh, MWh, GWh, TWh	kilowatt-hour, megawatt-hour, gigawatt-hour & terawatt-hour. Units of energy of differing orders of magnitude.

GLOSSARY

Term	Description
LDC(s)	Local Distribution Company. Provides electricity and conservation programs to distribution-connected customers.
LMMRS	The Longitudinal Mass Market Research Survey (LMMRS) is a multi-faceted survey that has run since 2011 and acts as an input into annual Evaluation Measurement and Verification results of IESO funded Save on Energy programs. The study helps the IESO gain an understanding of consumers awareness, participation and opinions of the Save on Energy campaign overall and the initiatives within the Consumer program. The study objectives include measurement of: the awareness of energy conservation initiatives and Save on Energy, program specific awareness and participation, and customer satisfaction, evaluation of program elements, and likelihood to participate in the future. Also called the “triple A” survey.
Local Program	Programs serving local needs in individual LDC territories.
Achievable Potential Milestones: Business Sector	An estimate of energy conversation potential for the business customer sector expected on milestone years from the 20 year (starting 2012) Achievable Potential Study published by the Ontario Power Authority.
Participation rate	A measure of eligible participation in a conservation program. Specifics for this vary based on the program.
Pilot Program	A program pilot that may achieve energy or demand savings under the LDC Innovation Fund and is funded extraneous to an LDC's CDM Plan Budget. These follow an LDC-led program design and market testing of small-scale pilot programs, which refine program delivery at less risk to the ratepayer.
Power What's Next? Campaign Research	The Save on Energy Power What's Next campaign launched on June 13, 2016. Surveys are being done to measure brand awareness, brand attributes and effectiveness of the campaign. This report includes results from the December wave of research.
Program	A Conservation & Demand Management offering focusing on a particular opportunity or customer end-use (i.e. Retrofit, Heating & Cooling) from the 2015-2020 Conservation First Framework.
Regional Program	Programs serving regional needs in multiple LDC territories .
Achievable Potential Milestones: Residential Sector	An estimate of energy conversation potential for the residential customer sector expected on milestone years from the 20 year (starting 2012) Achievable Potential Study published by the Ontario Power Authority.
Retrofit program	Incentive program to reduce project and operational costs for business to upgrade to more efficient systems (lighting, HVAC, chiller, building envelope etc.).
Save on Energy	Save on Energy: The brand that represents energy conservation programs for homes and businesses. Programs are delivered through LDCs or directly through IESO and funded by the IESO.