



Focus on Energy
Calendar Year 2016 Evaluation Report
Appendices
May 19, 2017

Public Service Commission of Wisconsin
610 North Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

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Prepared by:
Cadmus
Apex Analytics
St. Norbert College Strategic Research Institute

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Appendix A.

Key Achievements and Figures for State of Wisconsin and Focus on Energy

PROGRAM PARTICIPANTS

2016 Residential: **113,476**

- 2016 Upstream Lighting Participants: **688,204**

2016 Nonresidential: **5,907**

2016 Total Participants: **119,383**

TOTAL ELECTRIC AND NATURAL GAS ENERGY USAGE (2015)

Electric Sales to Wisconsin Retail Customers megawatt hours (MWh): **68,698,932**

Wisconsin Aggregated Electric Utilities Noncoincident Peak Demand megawatts (MW): **16,669**

Natural Gas Consumption (therms): **3,650,565,000**

TOTAL VERIFIED GROSS LIFECYCLE SAVINGS

2016 Energy Savings (MWh): **9,491,293**

2016 Demand Reduction (MW): **89**

2016 Natural Gas Savings (therms): **397,099,593**

TOTAL VERIFIED NET ANNUAL SAVINGS

2016 Energy Savings (MWh): **441,549**

2016 Demand Reduction (MW): **63**

2016 Natural Gas Savings (therms): **19,599,292**

POPULATION NUMBERS (2015)

Statewide Census Population: **5,775,120**

Wisconsin Residential Electric Accounts: **2,647,224**

Wisconsin Residential Gas Accounts: **1,721,640**

Wisconsin Nonresidential Electric Accounts: **352,985**

Wisconsin Nonresidential Gas Accounts: **176,551**

Table A 1. CY 2016 Costs, Benefits, and Modified TRC Test Results by Sector

	RESIDENTIAL	NONRESIDENTIAL	TOTAL
Administrative Costs	\$3,672,462	\$4,261,983	\$7,934,445
Delivery Costs	\$8,778,987	\$17,090,091	\$25,869,078
Incremental Measure Costs	\$77,148,733	\$151,345,672	\$228,494,405
Total Non-Incentive Costs	\$89,600,183	\$172,697,745	\$262,297,928
Electric Benefits	\$166,383,352	\$294,527,024	\$460,910,375
Gas Benefits	\$46,194,917	\$175,286,641	\$221,481,558
Emissions Benefits	\$33,448,073	\$70,655,200	\$104,103,273
Total TRC Benefits	\$246,026,342	\$540,468,865	\$786,495,207
TRC Benefits Minus Costs	\$156,426,159	\$367,771,120	\$524,197,279
TRC Ratio¹	2.75	3.13	3.00

¹The TRC ratio equals total TRC benefits divided by non-incentive costs.

Appendix B. Glossary of Terms and List of Acronyms

Table B-1. Glossary of Terms

Term	Definition
Attribution	The establishment of a causal relationship between action(s) taken by a group or program and an outcome. Being attributable to a program means that energy savings and demand reduction can be viewed as a result of the influence of the program, and the savings would not have been achieved in the program’s absence.
Avoided Costs	Costs to the utility avoided by the implementation of an energy efficiency measure, program, or practice.
Administrative Cost	Administrative costs include all costs related to the portfolio-wide management of Focus on Energy programs, including contract management, financial management, application and incentive processing, quality assurance, data collection and reporting, and utility coordination.
Baseline	Conditions (including energy consumption) that would have occurred without implementation of the subject measure or project. The conditions can either be as found prior to the energy efficiency retrofit, meeting state or federal efficiency codes, or a combination of efficient and non-efficient conditions derived from data.
Benefit/Cost Ratio	Mathematical relationship between the benefits and costs associated with the implementation of energy efficiency measures, programs, practices, or emissions reductions.
Claimed Savings	Energy savings the Program Administrator or Program Implementer reports before verification by the Evaluation Team (also called <i>ex ante</i> savings, reported savings, or tracked savings).
Cost-Effectiveness	Indicator of the relative performance or economic attractiveness associated with implementation of energy efficiency measures, programs, practices, or emissions reductions.
Custom Savings	Savings for nonprescriptive measures that do not meet criteria for deemed savings, calculated by a Program Administrator or Program Implementer at the time of the project’s completion. The result reflects savings for the specific project, based on pre- and post-installation energy use.
Deemed Savings	An estimate of energy, demand, or gas savings for a single unit of an installed energy efficiency measure. Deemed savings are typically developed from data sources and analytical methods that are widely considered acceptable for the measure and are applicable to the situation.
Downstream Program	An efficiency program that provides incentives to the end user and directly offsets the first cost of the equipment and reduces the payback period.
Ex Ante Savings	Energy savings the Program Administrator or Program Implementer reports before verification by the Evaluation Team (also called claimed savings, reported savings, or tracked savings).
Ex Post Evaluation	An assessment of an activity’s impact(s) after completion.
Estimated Savings	Savings estimates an evaluator reports after a completed energy-impact evaluation.
Freeriders	Participants who took part in an efficiency program but who would have adopted the energy-efficient measure in the program’s absence. Freeriders can be total, partial, or deferred.

Term	Definition
Gross Savings	The unadjusted program-reported change in energy consumption and/or demand resulting from program-related actions taken by participants in an efficiency program.
Interactive Effects	The influence in energy use between one technology application and the energy required to operate another application.
Locational Marginal Price	The marginal cost to serve a unit of energy at a specific location at the time of delivery.
Lifecycle Savings	Energy savings—expressed as verified gross or verified net—generated from measures installed in the current program cycle over each measure’s effective useful life.
Lifetime Savings	Energy savings—expressed as verified gross or verified net—produced as a result of measures installed in the current program cycle and in the previous program cycle(s), provided the reporting period falls within the measure’s useful life. Savings incorporate annual savings and each measure’s effective useful life.
Market Effects	Changes in marketplace practices, services, and promotional efforts that induce businesses and consumers to buy energy-saving products and services without direct program assistance. Evaluators generally consider these effects resulting from program impacts on the market.
Market Lift	An increase in efficient product sales above a pre-established baseline in response to program incentives, promotion, or advertising.
Measure Life	The life of an energy-consuming measure, including its equipment life and savings persistence.
Midstream Program	An efficiency program that targets retailers and/or distributors. Programs are designed to encourage the targeted audience to stock, promote, and sell more energy-efficient products.
Net Savings	Savings “net” of what would have occurred in the program’s absence (observed impacts attributable to the program). Net savings is typically calculated by applying the net-to-gross ratio to the gross verified savings.
Net-to-Gross Ratio	The ratio of verified net savings (attributed to the program after evaluation) to the verified gross savings.
Non-Energy Benefits	An array of valued attributes, such as increased property values or reduced water usage, that are derived from energy-efficient measures in addition to energy savings.
Nonparticipant Spillover	The effect of general consumers who are eligible but did not participate in an efficiency program but who adopted more energy-saving products or practices due to program influence without program assistance.
Participant Spillover	The effect of participants who, after an initial program experience, adopt more energy-saving products or practices without program assistance.
Precision	The degree that repeated measurements under unchanged conditions produce the same results.
Realization Rate	The ratio of gross savings to verified gross savings.
Reported Savings	Energy savings the Program Administrator or Program Implementer reports before verification by the Evaluation Team (also called tracked savings, <i>ex ante</i> savings, or claimed savings).

Term	Definition
Resource Acquisition Program	An efficiency program designed to directly achieve energy and/or demand savings and avoided emissions.
Standard Error	A measure of a data sample's variability (i.e., the distance of a typical data point from the sample's mean).
Tracked Savings	Energy savings the Program Administrator or Program Implementer reports before verification by the Evaluation Team (also called reported savings, <i>ex ante</i> savings, or claimed savings).
Unclaimed Rewards	Incentives set aside for customers who fail to submit paperwork to claim program incentives.
Upstream Program	An efficiency program that provides incentives to manufacturers and is designed to encourage manufacturers to promote and sell more energy-efficient products.
Verified Gross Savings	Energy savings that are verified by an independent Evaluation Team and are based on inspections and reviews of the number and types of implemented energy efficiency measures and the engineering calculations used to estimate the energy saved. Verified gross savings reflect total calculated savings of changes in energy consumption and/or demand resulting from program-related actions taken by participants in an efficiency program without considering the influence of freeridership or spillover.
Verified Net Savings	Energy savings that evaluators can confidently attribute to program efforts. For verified net savings, the Evaluation Team makes adjustments for outside influences, such as freeridership and spillover.

Table B-2. List of Acronyms

Acronym	Term
ACS	American Community Survey
AFUE	Annual fuel utilization efficiency
AVERT	AVoided Emissions and geneRation Tool
CB&I	Chicago Bridge & Iron Company
CDD	Cooling degree day
CFL	Compact fluorescent lamp
CREED	Consortium for Retail Energy Efficiency Data
CY	Calendar year
ECM	Electronically commutated motor
EIA	U.S. Energy Information Administration
EISA	Energy Independence and Security Act of 2007
EM&V	Evaluation, measurement, and verification
EPA	U.S. Environmental Protection Agency
EUL	Effective useful life
EWG	Energy Working Group
HDD	Heating degree day
HVAC	Heating, ventilation, and air conditioning
ISR	In-service rate

Acronym	Term
KAM	Key account manager
KBtu/h	Thousand British thermal units per hour
KPI	Key performance indicator
kW	Kilowatt
kWh	Kilowatt hour
LED	Light-emitting diode
LMP	Locational marginal pricing
lm	Lumen
MG&E	Madison Gas and Electric
MISO	Midcontinent Independent Transmission System Operator, Inc.
MMBtu	Million British thermal units
MThm	Megatherm
MWh	Megawatt hour
NAC	Normalized annual consumption
NCP	National Consumer Panel
NOAA	National Oceanographic and Atmospheric Administration
NRA	National rebate administrator
NTG	Net-to-gross
OLS	Ordinary least squares
POS	Point-of-sale
PSC	Public Service Commission of Wisconsin
QA/QC	Quality assurance/quality control
RIM	Ratepayer impact measure
RPP	Retail Products Platform
SEER	Seasonal energy efficiency rating
SEERA	Statewide Energy Efficiency and Renewable Administration
SEM	Strategic energy management
SMI	State median income
SMP	Standard market practice
SPECTRUM	Statewide Program for Energy Customer Tracking, Resource Utilization, and Data Management
TMY	Typical meteorological year
TRC	Total resource cost (test)
TRM	Technical reference manual
UAT	Utility administrator test
UCT	Utility cost test
UMP	Uniform Methods Project
VFD	Variable-frequency drive (also known as variable-speed drive, or VSD)

Appendix C. CY 2016 Program Descriptions

This section provides detailed descriptions of Focus on Energy residential and nonresidential programs included in the CY 2016 evaluation.

Descriptions of Residential Programs

During the CY 2016 evaluation, the Evaluation Team assessed the six residential programs and four residential pilot programs described below. Of the residential pilot programs, two operated as a subcomponent of another residential program and two operated independently.

Home Performance with ENERGY STAR Program

Program Dates: The Home Performance with ENERGY STAR Program launched January 1, 2006.

In CY 2016, the Program operated as a single program, offering four paths: the whole home path, the heating and cooling path, the renewable energy path, and the Smart Thermostat Pilot. The whole home and heating and cooling paths offer two tiers of incentive levels – Tier 1 (the standard track) and Tier 2 (the income-qualified track).

Program Purpose: The Home Performance with ENERGY STAR Program provides homeowners an opportunity to increase their home's energy efficiency through installations of energy efficiency building shell, HVAC, and renewable measures.

Target Audience: Tier 1 (standard track) incentives target all homeowners, while higher Tier 2 (income-qualified track) incentives target customers with household incomes at or below 80% of the state median income (SMI).

Program Implementer: CLEAResult serves as the Home Performance with ENERGY STAR Program Implementer.

Process and Associated Measures: Through the Home Performance with ENERGY STAR Program, participants interested in building shell improvements (the whole home path) receive an energy assessment of their home from a participating Trade Ally. The Trade Ally who performs the assessment gives the customer a written report with details about how the participant's home uses energy and recommendations for specific building shell or HVAC improvements.

Participants who want HVAC upgrades, but are not interested in building shell improvements, can work directly with an HVAC Trade Ally to receive incentives for eligible heating and cooling equipment.

Table C-1 provides details on eligibility and incentives for whole home measures and Table C-2 provides detail on heating and cooling measures.

Table C-1. CY 2016 Home Performance with ENERGY STAR Program Eligibility and Incentives: Whole Home Measures

Program Features	Tier 1	Tier 2
Income Qualification	None	Household income of 80% or less of SMI
Assessment Type	Comprehensive (must include blower door and combustion safety tests)	Comprehensive (must include blower door and combustion safety tests)
Assessment Cost	Market rate (average cost \$200-\$400)	\$50 co-pay (Trade Allies reimbursed \$150 by Program) ¹
Eligible Major Measures	Air sealing Attic insulation Exterior wall insulation Interior wall insulation Sill box insulation	Air sealing Attic Insulation Exterior wall insulation Interior wall insulation Sill box insulation
Incentives ^{1, 2}	10% to 19% reduced energy use: \$850 20% to 29% reduced energy use: \$1,250 30%+ reduced energy use: \$2,000 Bonus: \$250 for installing both whole home and HVAC measures	10% to 19% reduced energy use: \$1,000 20% to 29% reduced energy use: \$1,500 30%+ reduced energy use: \$2,250 [No bonus]

¹ We Energies offered Trade Allies an additional \$150 to complete a full assessment for Tier 2 participants and paid Tier 2 participants the remainder of the project cost after the Focus on Energy rebates were applied. This offer was available only through select Trade Allies identified by We Energies and was targeted to high energy users.

² Xcel Energy offered an additional incentive equal to 80% of the Focus on Energy rebate for customers who used Xcel Energy services for space heating, with the total incentive (Program incentive plus Xcel Energy incentive) not to exceed 90% of the project cost. For customers installing both whole home and HVAC measures, Xcel Energy offered an additional bonus of \$200.

Table C-2. CY 2016 Home Performance with ENERGY STAR Program Eligibility and Incentives: Heating and Cooling Measures

Eligibility	Tier 1	Tier 2
Income Qualification	None	Household income of 80% or less of SMI
Measures	Incentive	
Propane multistage furnace with ECM, 90%+ AFUE	\$100	\$300
Natural gas furnace, 95%+ AFUE	n/a	\$350
Natural gas multistage furnace with ECM, 95%+ AFUE	\$125	\$525
Natural gas multistage furnace with ECM and 95%+ AFUE installed with a 16+ SEER air conditioner	\$250	\$750
Modulating natural gas boiler with outdoor reset control, 95%+ AFUE	\$400	\$550
Modulating combination natural gas boiler with integrated domestic hot water and outdoor reset control, 95%+ AFUE	\$500	\$675
Indirect water heater (installed at the same time as qualified boiler)	\$100	\$150
Air source heat pump 16+ SEER and 8.4+ HSPF (propane, oil or electric furnace only; cannot be a mini-split or ductless system)	\$300	\$300
ECM replacement	\$100	\$100
Ductless/mini-split heat pump for electric resistance heated home, 25+ SEER and 9.0+ HSPF (only for homes heated solely with electric resistance heat)	\$500	\$500

The Program also offers incentives for geothermal systems and solar PV installations. Renewable incentives are available to both residential and small business customers and are not stratified by income. Table C-3 provides detail on renewable energy measures.

Table C-3. CY 2016 Home Performance with ENERGY STAR Program Eligibility and Incentives: Renewable Energy Measures

Measure	Incentive
Geothermal Heat Pump	\$650
Solar Electric System	\$600 per KW _{DC} rated capacity ¹

¹ \$300 minimum incentive, \$2,400 maximum incentive.

Smart Thermostat Pilot: Included in the Home Performance with ENERGY STAR Program was the Smart Thermostat Pilot, which offered a \$75 to \$100 rebate for smart thermostats to We Energies and Wisconsin Public Service customers from August 1, 2015, through June 30, 2016. The goal of the Pilot was to gauge the market appetite for this measure and determine potential energy savings.

Multifamily Energy Savings Program and Multifamily Direct Install Program

Program Dates: These programs launched in 2001 as the Apartment and Condominium Efficiency Services Program. In 2012, the programs were revised and renamed to their current titles and offerings.

Program Purpose: The Focus on Energy Multifamily Energy Savings Program and Multifamily Direct Install Program (collectively called the Multifamily Programs) provide education and energy-saving opportunities to multifamily buildings and condominiums of four or more units. The Programs offer incentives for energy-efficient upgrades and no-cost, direct install measures.

Target Audience: The Programs target condominium and apartment associations and multifamily building owners and managers.

Program Implementer: Franklin Energy Services, LLC, serves as the Implementer for both Programs.

Process and Associated Measures: The Multifamily Energy Savings Program offers two types of rewards: prescriptive rebates for eligible measures, including an emphasis on discounts for common area lighting, and custom incentives for performance-based projects. The Multifamily Direct Install Program offers free, direct installation of LEDs, specialty CFLs, pipe insulation, pre-rinse sprayers, faucet aerators, and showerheads as well as water heater temperature setback services. The Program also offers no-cost vending misers and LED retrofits for exit signs in common areas.

The Programs' Implementer markets both Programs to building owners and managers as well as to Trade Allies and contractors working with these customers, through regionally based Energy Advisors. The Programs' Implementer also processes customer applications, manages Program data, and educates Trade Allies to help cost-effectively promote the Programs.

New Homes Program

Program Dates: The New Homes Program originated in 2000 and continued until 2011 under the name Wisconsin ENERGY STAR Homes. For 2011/2012, Focus on Energy modified the Program's design, launching the current version as the New Homes Program in 2012.

Focus on Energy is conducting a baseline and market characterization study in CY 2016 and CY 2017. The study will inform the redesign and launch of a New Homes Program for CY 2018. Focus on Energy will continue the Program during the CY 2017 transition year with notable changes to program incentives to maintain the relationships with participating builders, energy raters, and stakeholders.

Program Purpose: The Program provides information, implementation assistance, and incentives for builders of new, single-family (one- to three-unit) homes in Wisconsin that meet energy efficiency requirements.

Target Audience: The Program targets builders of new, single-family homes.

Program Implementer: The Wisconsin Energy Conservation Corporation (WECC) serves as the New Homes Program Implementer.

Process and Associated Measures: The New Homes Program offers builders graduated incentives for constructing homes that are at least 15% more efficient than Wisconsin’s Uniform Dwelling Code. In CY 2016, the Program offered four incentive levels for homes built by customers who received electric service and four incentive levels for homes built by customers who received electric and gas service. In addition, builders could receive incentives for installing qualified geothermal heat pumps and/or solar electric. Table C-4 shows the incentive levels for each type of home available in CY 2016.

Table C-4. CY 2016 New Homes Program Incentive Levels

Electric Homes	
Level 1: 15.0% – 24.9% better than code	\$100
Level 2: 25.0% – 34.9% better than code	\$150
Level 3: 35.0% – 44.9% better than code	\$250
Level 4: 45.0% – 100% better than code	\$350
Electric and Gas Homes	
Level 1: 15.0% – 24.9% better than code	\$100
Level 2: 25.0% – 34.9% better than code	\$425
Level 3: 35.0% – 44.9% better than code	\$1,100
Level 4: 45.0% – 100% better than code	\$1,600

Retailer Lighting and Appliance Program

Program Dates: Launched January 1, 2006.

Program Purpose: The Retailer Lighting and Appliance Program is a retail-based promotion that provides upstream incentives and price markdowns for efficient lighting. The Program directly pays the distributor or manufacturer for the measure’s higher cost, meaning customers receive an instant discount at the point of sale.

Target Audience: The Program targets residential customers. However, the lighting component is delivered as an upstream program and therefore eligible products may be purchased by customers in other sectors and by participants who are not customers of participating Focus on Energy utilities.

The RPP targets retailers by delivering incentives that encourage them to stock, promote, and ultimately sell more energy-efficient products than they otherwise would have absent the pilot.

Program Implementer: In CY 2016, ICF International served as the Retailer Lighting and Appliance Program Implementer.

Process and Associated Measures: For the lighting component, the Program partners with national, regional, and local retail stores to discount ENERGY STAR®-qualified lighting technologies. Markdowns vary by products and stores, and they change throughout the year. The Program increases brand awareness through Focus on Energy signage on marked-down products and through events at

participating stores. While the Program offered CFLs at the beginning of CY 2016, it became LED-exclusive in the second quarter of CY 2016.

Retail Products Platform: In April of 2016, the Retailer Lighting and Appliance Program launched a market transformation appliance pilot named the Retail Products Platform (RPP). The purpose of this pilot is to transform the market such that the purchase of efficient appliances becomes standard practice. The RPP delivers incentives directly to participating retailers for qualified product sales, encouraging those retailers to promote the sale of more efficient appliances through product placement and promotion.

The RPP partners with ENERGY STAR and the U.S. Environmental Protection Agency (EPA), along with national retailers. The Program Administrator (CB&I) and Program Implementer work with these retailers to offer certain products to customers. Table C-5 lists the products offered in CY 2016, all of which were at or above ENERGY STAR specifications.

Table C-5. CY 2016 Retail Products Platform Qualified Products and Specifications

Qualifying Product	Tier	Specification
Sound Bar	Basic	ENERGY STAR v3 +15% additional savings
	Advanced	ENERGY STAR v3 +50% additional savings
Air Cleaner	Basic	ENERGY STAR v1.2
	Advanced	ENERGY STAR v.2+30% additional savings
Freezer	Basic	ENERGY STAR v5
	Advanced	ENERGY STAR v5 +5% additional savings
Clothes Dryer	Basic	ENERGY STAR v1
	Advanced	2015 Emerging Tech Award (ENERGY STAR Heat Pump)
Room Air Conditioner	Basic	ENERGY STAR v4

Simple Energy Efficiency Program

Program Dates: Launched January 1, 2016.

Program Purpose: In CY 2016, Focus on Energy introduced the Simple Energy Efficiency Program. The Program mailed no-cost and low-cost energy-saving packs containing various combinations and quantities of LEDs, faucet aerators, high-efficiency showerheads, and/or smart strips directly to residential customers’ homes. The Simple Energy Efficiency Program replaced the Express Energy Efficiency Program, which ran until December 31, 2015.

Target Audience: The Program targets owners and renters of residential single-family dwellings with one to three units.

Program Implementer: EFI serves as the Simple Energy Efficiency Program Implementer.

Process and Associated Measures: Customers order the energy-saving packs either through the Focus on Energy website (using the online ordering platform) or by calling the Program Implementer’s customer call center. The Program implementer batches and processes pack shipments once or twice a month, depending on customer demand.

Table C-6 lists the items in each of the various packs offered to customers who participated in the Program in CY 2016.

Table C-6. CY 2016 Simple Energy Efficiency Program Packs

Pack Name	Contents					Cost to Customer
	A19 LEDs	Kitchen Faucet Aerator	Bath Faucet Aerator	Efficient Shower-head	Other Measures	
Express Pack	3	1	1	1	One 13W CFL and one 23W CFL	No cost
Focus Pack ¹	3	1	1	1		No cost
Smart Strip Pack	2	1	1	-	Smart strip	No cost
Decorative Light Upgrade Pack	-	1	1	1	Three 5W candle LEDs	\$3.00
Flood Light Upgrade Pack	-	-	-	-	Four 10W flood LEDs	\$5.75
Globe Light Upgrade Pack	-	1	1	1	Three 5W globe LEDs	\$6.95
Showerhead Upgrade Pack ¹	3	1	1	1		\$8.95

¹ Focus and Showerhead Upgrade Packs have the same quantity of measures, but they differ in the type of showerhead provided. Showerhead Upgrade Packs provides a showerhead with a water-saving trickle button.

Manufactured Homes Pilot

Pilot Dates: Launched September 1, 2015. Ended October 31, 2015. Savings verification for the Pilot occurred in early 2017 because evaluation methods required collecting substantial post-installation usage data.

Pilot Purpose: The Manufactured Homes Pilot targeted manufactured homes in La Crosse County. The Pilot focused on air sealing and direct install measures for manufactured homes to evaluate the cost-effectiveness and market potential for a larger, ongoing program exclusively for manufactured homes.

Target Audience: The Pilot targeted owners of manufactured homes.

Pilot Implementer: WECC implemented the Pilot.

Process and Associated Measures: The Pilot offered whole home energy assessments, direct installation of energy-saving measures, duct sealing, and air sealing to participants. The Program Implementer partnered with a local nonprofit organization to deliver the Pilot.

Pilot measures were selected to achieve a minimum of 10% reduction in energy usage, mainly through a “base package” of duct sealing and direct install measures. Participants received this base package— Measure Package 1—during the initial energy audit. Some participants also received air sealing if the blower door and pressure pan pre-test determined it was needed. Table C-7 lists the measures in Measure Package 1.

Table C-7. Measure Package 1

Measure	Quantity
Indoor CFL and LED Bulbs	Up to 15
Exterior LED Bulbs	Up to 4
Low Flow Showerhead	1
Kitchen Aerator	1
Bath Aerator	Up to 2
Duct Sealing	1
Water Heater Temperature Setback	1
Carbon Monoxide Detector ¹	1

¹This measure was installed for safety purposes; no energy savings were reported.

Table C-8 lists the add-on measures that some participants received if they met one or more of the following criteria:

- The home had the largest potential to benefit from the add-on measures from results of the blower door and pressure pan tests and the age and operating condition of water heaters and refrigerators.
- The home warranted little air sealing based on the blower door and pressure pan tests.
- The field contractor determined that add-on measures were appropriate through on-site observations and customer interaction.

Table C-8. Add-On Measures

Measure	Quantity
Pipe Wrap	Up to 6 feet
Belly Insulation Repair/Touch-Up	n/a
Clothes Dryer Duct Kit	1
Water Heater Replacement	1
ECM Replacement	1
Refrigerator Replacement	1

Seasonal Savings Pilot

Pilot Dates: Launched January 6, 2016.

Pilot Purpose: The Seasonal Savings Pilot uses an algorithm to make small, energy-saving adjustments to thermostat setpoints during summer and/or winter months in qualifying homes with Nest thermostats.

Target Audience: The Pilot targets residential customers who own Nest thermostats.

Pilot Implementer: Nest Labs is the Seasonal Savings Pilot Implementer.

Process and Associated Measures: Nest algorithms use customer temperature setpoints and schedules, along with additional information gathered from Nest thermostats, to determine eligibility for the Seasonal Savings Pilot. Qualifying participants are given the ability to opt in to the Pilot through their Nest thermostat. An algorithm is then applied remotely over a period of three weeks and adjusts temperature settings slightly during the winter and summer seasons.

Descriptions of Nonresidential Programs

The Evaluation Team assessed eight nonresidential programs and two nonresidential pilot programs during the CY 2016 evaluation. Of the nonresidential pilot programs, one operated as a subcomponent of another nonresidential program and one operated independently.

Agriculture, Schools and Government Program

Program Dates: Launched January 1, 2015.

Program Purpose: The Agriculture, School and Government Program offers prescriptive and custom incentives to customers installing energy-efficient equipment at agricultural, educational, and institutional facilities.

Target Audience: The Program targets the following:

- Agriculture producers (e.g., producers of grain, livestock, milk, poultry, fruits, vegetables, bees, honey, fish, and shellfish; target audience includes green houses, grain elevators, and feed mills)
- Educational entities (e.g., K-12 schools, two-year University of Wisconsin colleges, and four-year private colleges that do not qualify as large energy users [average monthly demand exceeding 1,000 kW])
- Government entities (e.g., counties, cities, towns, villages, tribes, and state and federal agencies)
- Municipal wastewater treatment facilities

Program Implementer: CESA 10 implements the Program.

Process and Associated Measures: The Program uses the same measures and incentives offered through other Focus on Energy nonresidential programs as well as specialized incentives targeting agricultural producers, educational facilities, and public buildings to deliver the Program. The Program relies on dedicated Energy Advisors, assigned to various regions of the state, to work with customers and Trade Allies.

Business Incentive Program

Program Dates: Launched April 1, 2012.

Program Purpose: The Business Incentive Program encourages energy efficiency by offering incentives for prescriptive and custom measures to nonresidential customers with electric demand of 1,000 kW or less.

Target Audience: The Program targets nonresidential segments, including commercial spaces (e.g., hotels and independent retailers, food sales, and food service establishments) and small- to medium-sized industrial facilities. It includes customers who are not eligible for the Agriculture, Schools, and Government Program or Large Energy Users Program.

Program Implementer: Franklin Energy Services, LLC, implements the Program.

Process and Associated Measures: The Program heavily relies on Trade Allies to drive energy savings. The Implementer encourages Trade Allies to recruit eligible customers, identify energy-saving opportunities, and lead customers through the incentive application process. Many technologies qualify for prescriptive incentives, including lighting, HVAC, commercial refrigeration, and compressed air. Customers also may receive custom incentives for more complex energy efficiency projects.

Chain Stores and Franchises Program

Program Dates: Launched April 1, 2012. On January 1, 2017, the Program was merged with the Business Incentive Program.

Program Purpose: The Chain Stores and Franchises Program seeks to motivate decision makers at local, regional, and national chain stores, along with franchise operations, to make energy efficiency upgrades at multiple locations.

Target Audience: The Program targets chain stores and franchise operations in retail, food service (restaurants), and food sales (grocery and convenience stores). To qualify for the Program, customers must have a minimum of five locations in Wisconsin.

Program Implementer: Franklin Energy Services, LLC, implements the Program.

Process and Associated Measures: Program Implementer staff assign a dedicated Energy Advisor for specific chain segments (e.g., big box retail stores, restaurants, or convenience stores) and franchise customers. The Energy Advisor works with the customer to identify opportunities for improving energy efficiency. The Energy Advisor provides customer service and technical knowledge, helps develop business cases to support projects, and may assist with marketing and messaging related to energy efficiency actions.

The Program offers all Focus on Energy nonresidential prescriptive measures. Customers also may propose additional energy efficiency projects through the custom incentive option. Customers may

bundle up to 10 sites into one application. Other services include a direct install option, with Energy Advisors installing a limited set of measures at no cost to the customer.

Design Assistance Program

Program Dates: Launched January 1, 2013.

Program Purpose: The Design Assistance Program helps building owners and design teams analyze the benefits and costs of incorporating various energy-saving technologies into the design of their new construction or substantial renovation projects.

Target Audience: The Program targets building owners and design teams engaged in the design and completion of new buildings or substantial remodeling projects (5,000 square feet or greater). The Program offers building analysis support and incentives for building owners and design teams as they implement building renovations or new construction.

Program Implementer: Weidt Group, Inc., implements the Program.

Process and Associated Measures: Although customers can independently request participation in the Program, the Program Implementer also develops relationships with key design firms to drive customer interest. The Program Implementer provides customers with modeling and analysis of how various energy-saving technologies can be incorporated into a building's design. Further, the Program provides custom incentives for whole-building design efficiency measures, based on an incremental decrease in energy use over a code-based design.

Large Energy Users Program

Program Dates: Launched April 1, 2012.

Program Purpose: The Large Energy Users Program encourages the installation of energy-efficient technologies by offering incentives and services for large industrial, commercial, and institutional customers. These offerings include financial incentives for prescriptive and custom energy-efficient technologies, no-cost access to energy experts, training and tools to identify and evaluate energy efficiency opportunities, resources to develop and benchmark energy management practices, and engineering reviews of proposed projects. Many technologies may qualify for prescriptive incentives, including lighting, HVAC, commercial refrigeration, variable frequency drives, and food service equipment.

Target Audience: The Program targets large industrial, commercial, and institutional business customers of participating Wisconsin electric and natural gas utilities; participants must have had a system-wide energy utility bill of at least \$60,000 in one month of the preceding year and energy use at one contiguous facility meeting one or the other of the following criteria:

- Over 1,000 kW of electric demand in a single month in the past year
- Over 100,000 therms of natural gas consumption in a single month in the past year

Program Implementer: Leidos Engineering, LLC, implements the Program.

Process and Associated Measures: Program Energy Advisors work directly with large industrial, commercial, and institutional business customers to identify and analyze opportunities for improving energy efficiency in customers' facilities and processes. The Energy Advisors provide technical expertise as well as ongoing education about large-scale, energy efficiency measures, and best practices. In addition, they help customers develop energy teams and energy management plans, establish energy baselines and key performance indicators for facilities and end uses, and design custom incentive projects or hybrid projects with custom and prescriptive incentives.

The Program offers the same measures and incentives offered through other Focus on Energy nonresidential programs. Customers also may propose additional energy efficiency projects through the custom incentive option.

Strategic Energy Management Pilot: The Strategic Energy Management Pilot is a sub-component of the Large Energy Users Program. The Pilot targets large industrial companies that demonstrate a commitment to improving energy performance. The Pilot works with customers to promote a strategic energy management system in their facilities and develop a workforce of individuals in Wisconsin with experience in leading strategic energy management initiatives. The Pilot offers a strategic energy management advisor, financial incentives, technical training, and professional development opportunities to customers that are looking to implement management systems and energy saving initiatives in their facility.

Renewable Energy Competitive Incentive Program

Program Dates: Launched April 1, 2012.

Program Purpose: Through a competitive bid process, the Renewable Energy Competitive Incentive Program (RECIP) offers financial assistance for eligible, cost-effective, renewable-energy projects, conducted by qualifying business customers.

Target Audience: The Program targets all businesses within Focus on Energy's utility territory.

Program Implementer: As the Program crosses multiple sectors and applies to all nonresidential customers, the Program Administrator (CB&I) issues requests for proposals (RFPs) and awards funding to customers. A Program Implementer is assigned to a customer according to the program for which the customer is eligible. The Program Implementer is responsible for processing the awarded project.

Process and Associated Measures: Through the Program, Focus on Energy solicits proposals from eligible business customers for six renewable energy technologies: solar photovoltaic, solar thermal, wind, geothermal, biogas, and biomass.

The Program offers incentive amounts up to \$0.50 per kWh produced or up to \$1.00 per therm, not to exceed 50% of total project costs. Focus on Energy caps the maximum total incentives per customer (including energy efficiency and renewable energy incentives) at \$500,000.

Small Business Program

Program Dates: Launched July 1, 2012.

Program Purpose: The Small Business Program encourages small business owners to install easy and affordable energy efficiency upgrades through free, on-site energy assessments. The Program includes discounted energy-efficient lighting and refrigeration products, including LEDs, LED cold case lighting, and anti-sweat heater controls, for a minimum co-pay of \$199.

Target Audience: The Program targets independently owned and operated businesses with average monthly electric demand below 100 kW. Typical customers include independent grocers, convenience stores, gas stations, retail shops, locally owned restaurants, small hotels and motels, day care centers, doctors' offices, churches, and community action agencies.

Program Implementer: Staples Energy implemented the Program in CY 2016.

Process and Associated Measures: A small business owner can schedule an assessment; alternatively, Trade Allies with Program-specific training may recruit participants in their local communities. Trade Allies must be registered with the Program to submit applications. The Program Implementer and qualified Trade Allies conduct 30- to 45-minute energy assessments at customer facilities to identify energy efficiency opportunities. After discussing the findings, owners can choose from a variety of discounted, energy-saving lighting and refrigeration measures for a minimum co-pay of \$199.

Renewable Energy Loan Fund

Pilot Dates: Launched January 1, 2016. Ended December 31, 2016.

Pilot Purpose: The Renewable Energy Loan Fund promoted the development of renewable energy projects in Wisconsin by offering reduced-cost financing to customers. Specifically, the Fund provided 50% of the project cost at zero percent interest and partnered with lenders to offer low-interest rates on the other 50% of the project cost.

Target Audience: The Fund targeted residential and nonresidential customers who installed renewable energy systems within Focus on Energy's service territory. Participants that received incentives for renewable projects from the Home Performance with ENERGY STAR Program were also eligible to participate in the Fund.

Pilot Implementer: CleanTech Partners (CTP) implemented the Renewable Energy Loan Fund.

Process and Associated Measures: Focus on Energy budgeted \$2.5 million in CY 2016 for the Renewable Energy Loan Fund: \$500,000 for residential and small business loans and \$2 million for commercial and industrial loans. Monies were provided to customers on a first-come, first-served basis. Loans were capped at \$500,000 per customer, and the allowable maximum loan term was 20 years.

The Fund Implementer provided technical approval of the project, while the participating lenders were responsible for credit analysis, loan structuring, and administrative services. Once the loan was approved, the Fund Implementer disbursed its portion of the loan at or before transaction closing.

On Demand Savings Pilot

Pilot Dates: Launched August 1, 2015; concluded December 31, 2016.

Pilot Purpose: The On Demand Savings Pilot strives to help nonresidential customers understand how their on-peak demand impacts their utility costs and provides the financial resources, technical assistance and software tools to help them mitigate their monthly on-peak demand charges.

Target Audience: Eligible participants are business customers in Madison Gas and Electric (MG&E) service territory with demand use of 20 kW or greater. These customers must be willing to install a pulse meter to provide instantaneous energy data and have a programmable energy management system (EMS) that can control multiple pieces of equipment.

Pilot Implementer: Franklin Energy Services, LLC, implements the Pilot.

Process and Associated Measures: The Pilot strives to help customers to reduce demand during peak periods (as defined by the utility) through these activities:

- Recruiting customers in cooperation with MGE Account Managers and Focus on Energy Representatives
- Identifying demand reduction strategies for peak demand reductions
- Managing Trade Allies throughout the Pilot
- Achieving high customer satisfaction scores through monthly meetings with customers

Table C-9 provides the available incentives for the Pilot.

Table C-9. Incentives Available Through On Demand Savings Pilot

Measure	Incentive
Peak kW Reduction	\$10/kW (per month)
Pulse Meter Reimbursement	\$500/meter
EMS Meter Connection Co-Pay	Up to \$1,500/site
MyMeter Energy Dashboard (implementation budget)	Up to \$2,000/customer
Trade Ally Performance Incentive	\$100/kW Implemented (average annual)
Efficiency Bonus for Participation	10% bonus on total incentive of measures with kW savings

Appendix D. CY 2016 Statewide Total Energy Efficiency Savings and Participation

Table D-1 presents the CY 2016 program savings and participation for Focus on Energy, Northern States Power, We Energies, and Wisconsin Power and Light. These utilities ran voluntary programs, with authorization from the Public Service Commission of Wisconsin, using additional funds to the funding they contribute to Focus on Energy.

Northern States Power and We Energies complemented Focus on Energy programs in CY 2016 by adding bonus incentives. Therefore, these programs' kW, kWh, and therms savings do not represent additive savings but instead are represented as Focus on Energy portfolio savings achieved by the projects that received the bonus incentives.

The Wisconsin Power and Light program did not claim savings during CY 2016. Wisconsin Power and Light measured energy savings for its behavioral program using a difference-in-difference model. As matched control group customers reduced their energy use at higher rates than the treatment customers, the difference-in-difference models were expected to show negative combined savings. Indeed, for both customer groups, the difference-in-difference model results estimated negative or nonsignificant (i.e., statistically zero) savings.

Table D-1. CY 2016 Wisconsin Total Energy Efficiency Verified Gross Annual Savings and Participation

Program	Participation	kW	kWh	therms
Focus on Energy ¹	807,587	88,712	616,718,792	26,378,853
Northern States Power ²	2,156	n/a	23,144,197	465,548
We Energies ³	164	0	0	88,730
Wisconsin Power and Light ⁴	10,497	n/a	0	0

¹Includes estimated Retailer Lighting and Appliance Program participation.

²See Docket 4220-GF-123 for additional details. Northern States Power offers the Community Conservation Program, which is designed to complement Focus on Energy programs by adding bonus incentives for both residential and business customers throughout the service territory. Gross annual kW savings were not calculated for the CY 2016 Program.

³We Energies' Residential Assistance Natural Gas Program. See Docket 6630-GF-136 for additional details.

⁴Wisconsin Power and Light's Alliant Energy Advisor Program. See Docket 6680-GF-133 for additional details. These savings reflect two billing analysis groups: Group A, whose participation spanned from July 2015 to June 2016; and Group B, whose participation began in February 2016. The Alliant Energy Advisor Program ended as of December 31, 2016, and will not operate as a voluntary program in 2017.

Appendix E. Detailed Findings

This section contains detailed first-year annual gross savings and lifecycle savings for the nonresidential and residential segments as well as savings organized by program and measure category.

Overview of Savings

Table E-1 annual gross claimed basis prior to verification, Focus on Energy achieved a total of 4,784,771 MMBtu savings, 617,695,987 kWh savings, 83,874 kW savings and 26,771,922 therms savings.

Table E-1. CY 2016 First-Year Annual Savings by Segment¹

Savings Type	Unit	Residential	Nonresidential	Total
Gross	MMBtu	1,176,587	3,608,184	4,784,771
	kWh	201,446,657	416,249,330	617,695,987
	kW	27,382	56,492	83,874
	therms	4,892,509	21,879,413	26,771,922
Verified Gross	MMBtu	1,118,979	3,623,150	4,742,130
	kWh	199,522,620	417,196,172	616,718,792
	kW	29,612	59,101	88,712
	therms	4,382,082	21,996,771	26,378,853
Verified Net	MMBtu	808,349	2,658,146	3,466,495
	kWh	148,369,600	293,179,447	441,549,046
	kW	21,746	41,663	63,409
	therms	3,021,116	16,578,176	19,599,292

¹Totals may not match the sum of nonresidential and residential savings due to rounding.

Table E-2 lists the verified net annual savings achieved in the first two years of the quadrennial period.

Table E-2. CY 2015 and CY 2016 First-Year Annual Verified Net Savings by Segment¹

Calendar Year	Unit	Residential	Nonresidential	Total
2015	MMBtu	927,346	3,869,846	4,797,192
	kWh	206,530,139	351,708,289	558,238,428
	kW	24,312	48,869	73,180
	therms	2,226,649	26,698,171	28,924,820
2016	MMBtu	808,349	2,658,146	3,466,495
	kWh	148,369,600	293,179,447	441,549,046
	kW	21,746	41,663	63,409
	therms	3,021,116	16,578,176	19,599,292
Total	MMBtu	1,735,694	6,527,992	8,263,686
	kWh	354,899,739	644,887,735	999,787,474
	kW	46,058	90,532	136,590
	therms	5,247,765	43,276,348	48,524,112

¹Totals may not match the sum of residential and nonresidential savings due to rounding.

Table E-3 lists the lifecycle savings achieved by Focus on Energy in CY 2016. Lifecycle savings represent the savings the program can realize through measures over their effective useful life (EUL).

Table E-3. CY 2016 Lifecycle Savings by Segment¹

Savings Type	Unit	Residential	Nonresidential	Total
Gross	MMBtu	21,788,582	51,264,565	73,053,147
	kWh	3,648,524,512	6,268,916,395	9,917,440,907
	kW	27,382	56,492	83,874
	therms	93,398,162	298,750,220	392,148,382
Verified Gross	MMBtu	19,728,652	52,365,600	72,094,252
	kWh	3,199,626,956	6,291,666,334	9,491,293,290
	kW	29,612	59,101	88,712
	therms	88,115,245	308,984,348	397,099,593
Verified Net	MMBtu	13,008,748	38,841,766	51,850,514
	kWh	2,287,784,993	4,450,767,897	6,738,552,890
	kW	21,746	41,663	63,409
	therms	52,028,254	236,557,459	288,585,713

¹Totals may not match the sum of nonresidential and residential savings due to rounding.

Table E-4 lists the verified gross lifecycle savings achieved by Focus on Energy in CY 2015 and CY 2016.

Table E-4. CY 2015 and CY 2016 Verified Gross Lifecycle Savings by Segment¹

Calendar Year	Unit	Residential	Nonresidential	Total
2015	MMBtu	15,832,924	61,140,436	76,973,360
	kWh	2,223,095,841	6,583,672,339	8,806,768,180
	kW	28,896	62,608	91,504
	therms	82,477,213	386,769,461	469,246,674
2016	MMBtu	19,728,652	52,365,600	72,094,252
	kWh	3,199,626,956	6,291,666,334	9,491,293,290
	kW	29,612	59,101	88,712
	therms	88,115,245	308,984,348	397,099,593
Total	MMBtu	35,561,576	113,506,036	149,067,612
	kWh	5,422,722,797	12,875,338,673	18,298,061,470
	kW	58,507	121,709	180,216
	therms	170,592,458	695,753,809	866,346,267

¹Totals may not match the sum of residential and nonresidential savings due to rounding.

Summary of Savings by Program

Table E-5 summarizes the first-year annual savings by program.

Table E-5. Summary of First-Year Annual Savings by Program, CY 2016

Program Name	Gross			Verified Gross			Verified Net		
	kWh	kW	therms	kWh	kW	therms	kWh	kW	therms
Residential Programs									
Multifamily Direct Install	4,010,760	282	150,816	3,868,738	268	142,638	3,868,738	268	142,638
Multifamily Energy Savings	11,555,067	1,291	392,155	11,246,920	1,104	353,092	8,885,067	872	278,942
Home Performance with ENERGY STAR	9,037,088	2,890	1,279,998	9,037,088	2,908	1,286,405	8,432,816	2,976	1,060,429
New Homes	4,734,561	1,388	1,045,694	4,734,561	1,388	1,045,694	0	0	77,139
Retailer Lighting and Appliance	150,281,756	17,722	0	146,942,436	17,135	0	105,898,165	12,349	0
Simple Energy Efficiency	11,864,279	874	820,059	11,265,413	866	688,612	11,248,334	865	688,045
Renewable Rewards	3,799,069	1,468	0	4,481,300	1,563	0	3,089,254	1,105	0
Design Assistance - Residential	5,216,274	764	643,583	5,196,843	740	650,206	4,833,064	688	604,691
Residential Total	200,498,853	26,679	4,332,305	196,773,299	25,971	4,166,647	146,255,438	19,122	2,851,884
Nonresidential Programs									
Agriculture, Schools and Government	68,540,772	9,269	4,773,326	67,602,715	9,431	4,435,341	43,941,765	6,130	2,882,971
Business Incentive	93,573,536	12,867	2,189,999	92,882,376	13,003	2,092,434	40,868,245	5,721	920,671
Chain Stores and Franchises	50,957,439	6,952	328,139	57,107,754	9,434	335,452	35,977,885	5,944	211,335
Design Assistance	26,934,946	3,957	960,441	26,834,611	3,832	970,324	24,956,188	3,564	902,401
Large Energy Users	135,311,286	16,305	13,360,620	130,760,798	15,041	13,896,333	107,223,854	12,333	11,394,993
Small Business	30,819,911	5,273	21,650	31,724,642	6,155	21,650	30,138,409	5,847	20,567
Renewable Energy Competitive Incentive	8,746,700	1,322	245,238	8,782,106	1,543	245,238	8,782,106	1,543	245,238
Renewable Energy Loan Fund	749,086	301	0	780,556	391	0	764,945	383	0
Renewable Rewards – Business	615,653	247	0	720,614	271	0	526,048	197	0
Nonresidential Total	416,249,330	56,492	21,879,413	417,196,172	59,101	21,996,771	293,179,447	41,663	16,578,176

Program Name	Gross			Verified Gross			Verified Net		
	kWh	kW	therms	kWh	kW	therms	kWh	kW	therms
Pilot Programs									
Manufactured Homes	141,806	41	6,640	39,706	12	1,660	39,706	12	1,660
Seasonal Savings	392,779	0	48,281	441,188	0	48,764	441,188	0	48,764
Smart Thermostat Pilot	413,220	661	505,283	2,268,428	3,629	165,011	1,633,268	2,613	118,808
Pilots Total	947,804	702	560,204	2,749,321	3,640	215,435	2,114,161	2,624	169,232
Total All Programs	617,695,987	83,874	26,771,922	616,718,792	88,712	26,378,853	441,549,046	63,409	19,599,292

Because evaluation activities and results were not completed within the CY 2016 evaluation year for the On Demand Savings Pilot and Strategic Energy Management Pilot, the Evaluation Team did not provide evaluation findings for these pilots. For this reason, the gross savings for these pilots are reported separately and excluded from all portfolio summaries of savings and cost-effectiveness. Table E-6 summarizes the first-year annual savings for the On Demand Savings Pilot and Strategic Energy Management Pilot.

Table E-6. Summary of First-Year Annual Gross Savings by Pilot, CY 2016

Pilot Name	Gross		
	kWh	kW	therms
On Demand Savings	0	2,847	0
Strategic Energy Management	1,156,830	-3	1,196,367

Summary of Savings by Measure

Table E-7 summarizes CY 2016 residential savings by measure category.

Table E-7. Summary of First-Year Annual Savings by Measure Category, Residential Sector

Measure Category	Verified Gross						Incentive Dollars	Incentive Dollars %
	kWh	kWh %	kW	kW %	therms	therms %		
Boilers & Burners - Boiler	0	0.00%	0	0.00%	62,317	1.42%	\$161,325.00	0.80%
Boilers & Burners - Controls	0	0.00%	0	0.00%	11,273	0.26%	\$24,394.99	0.12%
Building Shell - Air Sealing	968	0.00%	0	0.00%	1,584	0.04%	\$2,159.43	0.01%
Building Shell - Insulation	1,107	0.00%	2	0.01%	990	0.02%	\$2,850.00	0.01%

Measure Category	Verified Gross						Incentive Dollars	Incentive Dollars %
	kWh	kWh %	kW	kW %	therms	therms %		
Building Shell - Window	0	0.00%	0	0.00%	0	0.00%	\$0.00	0.00%
Domestic Hot Water - Aeration	4,665,960	2.34%	205	0.68%	684,384	15.62%	\$241,427.80	1.19%
Domestic Hot Water - Controls	298	0.00%	0	0.00%	41	0.00%	\$0.00	0.00%
Domestic Hot Water - Insulation	324	0.00%	0	0.00%	16	0.00%	\$49.00	0.00%
Domestic Hot Water - Showerhead	7,938	0.00%	0	0.00%	880	0.02%	\$592.00	0.00%
Domestic Hot Water - Water Heater	-891	0.00%	0	0.00%	13,910	0.32%	\$11,750.00	0.06%
Food Service - Oven	0	0.00%	0	0.00%	0	0.00%	\$25.00	0.00%
HVAC - Controls	2,276,335	1.14%	3,642	12.08%	164,280	3.75%	\$508,725.98	2.52%
HVAC - Furnace	6,368,657	3.19%	1,231	4.08%	566,439	12.93%	\$2,405,150.00	11.90%
HVAC - Other	2,057,660	1.03%	827	2.74%	135,341	3.09%	\$763,900.00	3.78%
Lighting - Controls	1,440,429	0.72%	189	0.63%	0	0.00%	\$333,411.20	1.65%
Lighting - Fluorescent, Compact (CFL)	21,543,600	10.80%	2,506	8.32%	0	0.00%	\$683,313.87	3.38%
Lighting - Light Emitting Diode (LED)	130,575,987	65.46%	15,639	51.90%	133	0.00%	\$8,344,806.59	41.28%
Motors & Drives - Motor	52,290	0.03%	10	0.03%	0	0.00%	\$13,500.00	0.07%
NA - NA	20,342,816	10.20%	2,113	7.01%	1,149,082	26.23%	\$2,423,770.09	11.99%
New Construction - Whole Building	4,383,946	2.20%	1,354	4.49%	1,045,694	23.87%	\$1,144,950.00	5.66%
Other - Bonus	0	0.00%	0	0.00%	0	0.00%	\$28,365.14	0.14%
Other - Other	933,990	0.47%	820	2.72%	544,192	12.42%	\$2,010,585.40	9.95%
Renewable Energy - Geothermal	734,318	0.37%	88	0.29%	0	0.00%	\$65,000.00	0.32%
Renewable Energy - Photovoltaics	4,097,597	2.05%	1,508	5.01%	0	0.00%	\$1,044,874.04	5.17%

Table E-8 lists CY 2016 nonresidential savings by measure category.

Table E-8. Summary of First-Year Annual Savings by Measure Category, Nonresidential Sector

Measure Category	Verified Gross						Incentive Dollars	Incentive Dollars %
	kWh	kWh %	kW	kW %	therms	therms %		
Aeration	3,437,277	0.82%	471	0.80%	19,326	0.09%	\$201,776.84	0.58%
Air Sealing	65,270	0.02%	8	0.01%	127,177	0.58%	\$58,634.70	0.17%
Biogas	6,489,500	1.56%	600	1.02%	201,902	0.92%	\$1,000,000.00	2.87%

Measure Category	Verified Gross						Incentive Dollars	Incentive Dollars %
	kWh	kWh %	kW	kW %	therms	therms %		
Boiler	575,238	0.14%	64	0.11%	2,234,644	10.16%	\$2,012,130.09	5.78%
Bonus	0	0.00%	0	0.00%	0	0.00%	\$120,331.70	0.35%
Chiller	8,732,418	2.09%	1,367	2.31%	0	0.00%	\$960,830.33	2.76%
Clothes Washer	292	0.00%	0	0.00%	3,779	0.02%	\$2,776.56	0.01%
Compressor	6,932,300	1.66%	1,202	2.03%	0	0.00%	\$574,890.00	1.65%
Computer Management	1,104,368	0.26%	0	0.00%	0	0.00%	\$34,284.00	0.10%
Controls	29,446,612	7.06%	2,054	3.48%	1,066,273	4.85%	\$1,607,259.51	4.61%
Delamping	3,980,757	0.95%	848	1.44%	0	0.00%	\$89,103.20	0.26%
Design	24,680,824	5.92%	3,832	6.48%	970,324	4.41%	\$3,004,736.17	8.63%
Dishwasher, Commercial	553,456	0.13%	2	0.00%	9,708	0.04%	\$29,520.00	0.08%
Door	0	0.00%	0	0.00%	12,242	0.06%	\$9,484.00	0.03%
Dryer	994,456	0.24%	187	0.32%	59,928	0.27%	\$90,216.80	0.26%
Economizer	37,624	0.01%	0	0.00%	0	0.00%	\$5,050.00	0.01%
Energy Recovery	-279,438	-0.07%	401	0.68%	3,204,664	14.57%	\$1,914,090.44	5.50%
Fan	1,342,806	0.32%	333	0.56%	1,323	0.01%	\$181,507.26	0.52%
Filtration	589,142	0.14%	148	0.25%	344,923	1.57%	\$150,912.94	0.43%
Fluorescent, Compact (CFL)	136,754	0.03%	41	0.07%	0	0.00%	\$3,061.05	0.01%
Fluorescent, Linear	18,846,873	4.52%	3,872	6.55%	0	0.00%	\$1,057,834.52	3.04%
Fryer	17,475	0.00%	4	0.01%	17,163	0.08%	\$13,560.00	0.04%
Furnace	186,310	0.04%	0	0.00%	154,377	0.70%	\$108,259.20	0.31%
Geothermal	187,326	0.04%	71	0.12%	43,336	0.20%	\$107,132.66	0.31%
Grain Dryer	37,676	0.01%	0	0.00%	29,066	0.13%	\$27,316.74	0.08%
Greenhouse	0	0.00%	0	0.00%	23,629	0.11%	\$7,100.82	0.02%
Griddle	5,837	0.00%	2	0.00%	0	0.00%	\$475.00	0.00%
Heat Exchanger	1,300,305	0.31%	0	0.00%	0	0.00%	\$49,875.00	0.14%
High Intensity Discharge (HID)	104,936	0.03%	4	0.01%	0	0.00%	\$7,680.00	0.02%
Hot Holding Cabinet	63,548	0.02%	12	0.02%	0	0.00%	\$2,200.00	0.01%
Ice Machine	16,933	0.00%	2	0.00%	0	0.00%	\$840.00	0.00%

Measure Category	Verified Gross						Incentive Dollars	Incentive Dollars %
	kWh	kWh %	kW	kW %	therms	therms %		
Infrared Heater	0	0.00%	0	0.00%	53,671	0.24%	\$16,556.75	0.05%
Insulation	186,481	0.04%	27	0.05%	482,954	2.20%	\$260,527.98	0.75%
Light Emitting Diode (LED)	151,406,009	36.29%	24,875	42.09%	0	0.00%	\$11,650,315.72	33.45%
Livestock Waterer	795,324	0.19%	0	0.00%	0	0.00%	\$15,685.00	0.05%
Motor	5,711,487	1.37%	791	1.34%	0	0.00%	\$146,711.34	0.42%
Nozzle	95,291	0.02%	36	0.06%	0	0.00%	\$160.00	0.00%
Other	68,346,864	16.38%	7,792	13.18%	7,694,225	34.98%	\$5,425,321.70	15.58%
Oven	150,369	0.04%	35	0.06%	12,434	0.06%	\$17,700.00	0.05%
Packaged Terminal Unit (PTAC, PTHP)	1,030,459	0.25%	0	0.00%	0	0.00%	\$60,500.00	0.17%
Photovoltaics	2,105,280	0.50%	872	1.48%	0	0.00%	\$935,670.41	2.69%
Pre-Rinse Sprayer	7,719	0.00%	2	0.00%	406	0.00%	\$496.51	0.00%
Process Heat	47,223	0.01%	6	0.01%	0	0.00%	\$4,050.00	0.01%
Pump	658,940	0.16%	17	0.03%	0	0.00%	\$29,433.20	0.08%
Reconfigure Equipment	2,511,258	0.60%	409	0.69%	0	0.00%	\$115,998.78	0.33%
Refrigerated Case Door	2,302,549	0.55%	310	0.52%	181,596	0.83%	\$195,136.00	0.56%
Refrigerator / Freezer - Commercial	726,595	0.17%	96	0.16%	0	0.00%	\$32,762.50	0.09%
Rooftop Unit / Split System AC	1,703,418	0.41%	1,095	1.85%	110,801	0.50%	\$420,400.23	1.21%
Scheduling	409,941	0.10%	14	0.02%	186,013	0.85%	\$161,894.76	0.46%
Showerhead	64,002	0.02%	0	0.00%	3,186	0.01%	\$2,052.00	0.01%
Solar PV	1,501,170	0.36%	661	1.12%	0	0.00%	\$73,573.68	0.21%
Specialty Pulp & Paper	355,486	0.09%	67	0.11%	0	0.00%	\$39,000.00	0.11%
Steam Trap	0	0.00%	0	0.00%	4,634,289	21.07%	\$160,443.43	0.46%
Steamer	109,580	0.03%	20	0.03%	11,838	0.05%	\$9,450.00	0.03%
Strip Curtain	90,601	0.02%	11	0.02%	0	0.00%	\$6,467.76	0.02%
Supporting Equipment	433,995	0.10%	50	0.09%	0	0.00%	\$20,705.49	0.06%
Tune-up / Repair / Commissioning	9,195,014	2.20%	593	1.00%	0	0.00%	\$146,446.82	0.42%
Unit Heater	0	0.00%	0	0.00%	47,014	0.21%	\$23,492.00	0.07%
Variable Speed Drive	57,355,502	13.75%	5,771	9.76%	3,572	0.02%	\$1,349,293.98	3.87%

Measure Category	Verified Gross						Incentive Dollars	Incentive Dollars %
	kWh	kWh %	kW	kW %	therms	therms %		
Water Heater	308,743	0.07%	25	0.04%	43,877	0.20%	\$68,210.20	0.20%
Window	0	0.00%	0	0.00%	7,112	0.03%	\$6,123.20	0.02%
Water Heater	308,743	0.07%	25	0.04%	28,935	0.15%	\$68,210.20	0.19%
Window	0	0.00%	0	0.00%	4,595	0.02%	\$6,123.20	0.02%

Appendix F. Cost-Effectiveness and Emissions Methodology and Analysis

For the current quadrennial cycle (CY 2015–CY 2018), the Focus on Energy Program Administrator developed a specific calculator for its use and use by implementers in assessing the cost-effectiveness of program designs prior to their implementation each year. The cost-effectiveness calculator was developed with the oversight of, and in collaboration with, the Public Service Commission (PSC) and the Evaluation Team.

To maintain consistency between planning and evaluation approaches—critical for an understanding of program performance compared to expectations—the Evaluation Team used the same calculator to evaluate the cost-effectiveness of the Focus on Energy programs in CY 2016. Its findings are presented in this section.

As directed by the PSC,¹ the modified Total Resource Cost (TRC) test is considered the primary test in assessing the cost-effectiveness of individual programs or the entire Focus on Energy portfolio of programs. The PSC also directs that three additional tests be conducted for advisory purposes. These are an expanded TRC test that also includes net economic benefits, the Utility Administrator Test (UAT), and the Ratepayer Impact Measure (RIM) test.

Net-to-gross (NTG) ratios can be a significant driver in the results of the TRC, UAT, and RIM tests. NTG ratios are applied to adjust the impacts of the programs so they reflect only the gains resulting from the programs. Therefore, NTG ratios take into account energy savings that would have been achieved without the efficiency programs (that is, when NTG is less than 1 savings are removed and when NTG is greater than 1 savings are added). In all cases, the savings are multiplied by NTG.

On the cost side, expenditures that would have occurred without the efficiency effort are also removed. These expenditures include the incremental measure costs and lost revenues, both of which are multiplied by the NTG. Costs that would not have occurred in the absence of the programs are not impacted by NTG (e.g., delivery and administrative costs).

Test Descriptions

The Evaluation Team—as well as the Program Administrator in developing its calculator—uses methods adapted from the California Standard Practice Manual, the conventional standard of cost-effectiveness analysis for energy efficiency programs in the United States.² Four tests—the modified TRC test, the expanded TRC test, the UAT, and the RIM test—are described in the next sections.

¹ The use of the modified TRC test as the primary cost-effectiveness test is directed by the PSC. Public Service Commission of Wisconsin. *Quadrennial Planning Process II – Scope*. Order PSC Docket 5-FE-100, REF#:215245. September 3, 2014. Available online: http://psc.wi.gov/apps35/ERF_view/viewdoc.aspx?docid=215245

² California Public Utilities Commission. *California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects*. July 2002. Available online: http://www.calmac.org/events/SPM_9_20_02.pdf

Modified Total Resource Cost Test

The TRC test is the most commonly applied test for evaluating the cost-effectiveness of energy efficiency and renewable resource programs around the country. Applications range across states and utility jurisdictions, from the standard TRC test to the Societal Cost Test, which expands the test inputs to account for a more holistic societal perspective. Modifications to the standard TRC test often include reducing the discount rate or including various environmental and non-energy benefits. The test includes total participant and Program Administrator costs. The test also includes some non-energy benefits (e.g., emission reduction benefits).

The modified TRC test used for the CY 2016 evaluation defines if programs are cost-effective from a regulatory perspective (i.e., as directed by the PSC) and is intended to measure the overall impacts of program benefits and costs on the state of Wisconsin. The test compares all benefits and costs to the state that can be measured with a high degree of confidence, including any net avoided emissions that are regulated and that have either well-defined market or commission-established values. The test's purpose here is to determine if the total costs incurred by residents, businesses, and Focus on Energy for operating the programs are outweighed by the total benefits they receive.

In simple terms, the benefit/cost value of the modified TRC test is the ratio of avoided utility and environmental costs from avoided energy consumption and the combination of program administrative costs, program delivery costs, and net participant incremental measure costs.

The benefit/cost equation used for the modified TRC test is:

$$TRC \frac{B}{C} = \frac{[Value\ of\ Gross\ Saved\ Energy + Value\ of\ Gross\ Avoided\ Emissions] * NTG}{[Administrative\ Costs + Delivery\ Costs + (Incremental\ Measure\ Cost * NTG)]}$$

Where:

$$Value\ of\ Gross\ Saved\ Energy = Net\ Gross\ Savings \times Utility\ Avoided\ Costs$$

Expanded Total Resource Cost Test with Net Economic Benefits

The Evaluation Team investigated the impact of expanding the TRC to include net economic benefits for the CY 2016 programs. The analysis of economic benefits is conducted every two years, and the Evaluation Team issues the results separately from the evaluation reports.

The benefit/cost equation used for the expanded TRC test with net economic benefits is:

$$TRC \frac{B}{C} = \frac{[(Value\ of\ Gross\ Saved\ Energy + Value\ of\ Gross\ Avoided\ Emissions) * NTG + Net\ Economic\ Benefits]}{[Administrative\ Costs + Delivery\ Costs + (Incremental\ Measure\ Cost * NTG)]}$$

Utility Administrator/Program Administrator Cost Test

The Evaluation Team also assessed the portfolio's cost-effectiveness using the UAT, which measures the net benefits and costs of the programs as a resource option from the perspective of the Focus on Energy

Program Administrator. In Wisconsin, the UAT effectively represents the collective perspectives of the participating utilities that hire and fund the Program Administrator.

The UAT, previously called the Revenue Requirements Test, effectively estimates the impacts on utility revenue requirements (i.e., the costs of providing service) by comparing the benefits of avoided utility costs from avoided energy consumption to the combined costs of operating the program, such as incentive payments, administrative costs, and delivery costs. A positive benefit/cost ratio, therefore, indicates that the program improves an energy system’s overall efficiency.

For this evaluation, the UAT’s benefit/cost value indicates whether the combined revenue requirements from all participating utilities increase or decrease as a result of the Focus on Energy programs. The net benefits determined with the UAT indicate the estimated dollar value of the change in the combined revenue requirements from all participating utilities. The NTG ratio impacts only the benefit side of the UAT because none of the costs would have occurred absent the effort and, therefore, all are kept in the test (i.e., not subtracted from denominator).

The benefit/cost equation used for the UAT is:

$$UAT \frac{B}{C} = \frac{[Value\ of\ Gross\ Saved\ Energy * NTG]}{[Participant\ Incentives + Administrative\ Costs + Delivery\ Costs]}$$

Ratepayer Impact Measure Test

Generally, the RIM test indicates the isolated and marginal effect on utility energy rates from changes in revenues and operating costs caused by energy efficiency and renewable resource programs, all else being equal. It does not, however, provide a comprehensive picture of ratepayer impacts. The RIM test’s estimated effects are theoretical and assume annual rate cases that may, in fact, not take place. Furthermore, the RIM test neither accounts for non-energy benefits enjoyed by ratepayers, nor does it clearly distinguish the difference between rate and total bill impacts.

From the RIM test perspective, the relatively expansive view of program costs, particularly the inclusion of lost revenues—which are foregone revenues as opposed to new costs—from avoided energy consumption, leads most energy efficiency and renewable energy programs to not be cost-effective. Exceptions include demand response programs or programs targeted to the highest marginal cost hours (when marginal costs are greater than rates). In simple terms, the RIM test benefit/cost value is the ratio of avoided utility costs and the combination of participant incentives, administrative costs, and lost utility revenue.

The benefit/cost equation used for the RIM test is:

$$RIM \frac{B}{C} = \frac{[Value\ of\ Gross\ Saved\ Energy * NTG]}{[Participant\ Incentives + Administrative\ Costs + Lost\ Revenue * NTG]}$$

For this evaluation, a RIM test benefit/cost value less than 1 indicates that Focus on Energy will induce theoretical upward pressure on rates because the decrease in utility revenues caused by its programs is

greater than the avoided utility costs (i.e., net benefits are negative) and vice versa. Conversely, a value greater than 1 indicates that Focus on Energy will induce theoretical downward pressure on rates because the decrease in revenues is less than the avoided utility costs.

Results from the RIM test are better understood within the context of UAT results. The most common combination of results involves a UAT benefit/cost value greater than 1 and a RIM test benefit/cost value less than 1. Passing the UAT means that revenue requirements (i.e., revenue needed to operate the utility business and deliver energy services) will decrease as a result of the programs; in other words, the utilities are running more efficiently because of their programs.

However, if the programs do not pass the RIM test, it means the improvement in efficiency and the associated decrease in revenue requirements were not sufficient to offset the lost revenues. As a result, the programs will put upward pressure on rates. Rates are roughly estimated as in this formula:

$$\frac{\text{revenue requirement}}{\text{sales (kWh or therms)}}$$

The numerator (revenue requirement) decreases but so does the denominator (sales). If the denominator decreases more than the numerator, the ratio of the two will increase. In this scenario, although all *rates* may theoretically increase, the energy *bills* for participants will decrease and the energy *bills* for nonparticipants will increase. The decrease in revenue requirement means that the decrease in participant bills will exceed the increase in nonparticipant bills such that the average bills across the two customer groups will decrease.

In essence, the RIM test is not a cost-effectiveness (i.e., efficiency) test in an economic sense but rather an analysis of the distributional (i.e., equity) impacts on energy bills.³ Because Focus on Energy programs are designed to meet a statutory requirement to make program benefits available to all ratepayers, the RIM test results for Focus are influenced by its programs' success in meeting that requirement, its ability to meet that requirement within existing resources, and its customers' individual willingness to participate.

The RIM test assumes that a true-up will occur every year through rate cases. The test as applied could be considered the worst case scenario. The RIM test also does not consider any societal nor some system benefits that accrue to *all* customers.

Interpreting Test Results

No single benefit/cost test can provide a comprehensive understanding of program performance or impacts in isolation. The results of tests that measure overall program cost-effectiveness, such as the modified TRC test, should be reviewed along with the results of other tests such as the UAT. Such a multi-perspective approach warrants a clear understanding of the tradeoffs among the tests.

³ The RIM test assumes annual rate cases that may not take place. If there is not an annual rate adjustment, there is a transfer payment to participants from utility shareholders rather than from nonparticipants.

Because of changes in avoided electric energy and natural gas costs and in emissions allowance prices for the current quadrennial (CY 2015–CY 2018), the cost-effectiveness results reported here are not directly comparable to results from the previous quadrennial cycle (CY 2011–CY 2014).

Energy Avoided Costs

The PSC established the methodology to estimate electric energy avoided costs in PSC Order, docket 5-GF-191 (PSC REF#:166932).⁴ The source for electric energy avoided costs in this CY 2016 evaluation comes from the annualized forecast avoided cost model developed by Cadmus. This forecast relied on the Midwest Independent Transmission System Operator, Inc. (MISO), forecast of Locational Margin Price (LMP) for the years 2019, 2024, and 2029.⁵ The PSC established the natural gas avoided costs on in PSC Order, docket 5-FE-100 (PSC REF#:232431).⁶ These electric and gas costs are based on Henry Hub price forecasts from the U.S. Energy Information Administration (EIA) 2014 Annual Energy Outlook.⁷

The forecast model decreases the verified gross energy savings by the conventional attribution factor of NTG to derive net savings. The net savings are then increased by the line loss factor of 8% to account for avoided distribution losses. Table F-1 shows the assumptions for the 2015 and 2016 evaluation avoided cost used for the cost-effectiveness tests.

⁴ Public Service Commission of Wisconsin. Quadrennial Planning Process II – Scope. Order PSC Docket 5-FE-100, REF#:166932. June 18, 2012. Available online:
http://psc.wi.gov/apps35/ERF_view/viewdoc.aspx?docid=166932

⁵ Midcontinent Independent Transmission System Operator, Inc. Available online:
<https://www.misoenergy.org/Planning/TransmissionExpansionPlanning/Pages/MTEPFutures.aspx>

⁶ Public Service Commission of Wisconsin. Quadrennial Planning Process II – Scope. Order PSC Docket 5-FE-100, REF#:232431. February 25, 2015. Available online:
http://psc.wi.gov/apps35/ERF_view/viewdoc.aspx?docid=232431

⁷ U.S. Energy Information Administration. *Annual Energy Outlook 2014*. May 7, 2014. Available online:
<https://www.eia.gov/outlooks/archive/aeo14/>

Table F-1. Avoided Costs

Avoided Cost	CY 2015	CY 2016
Electric Energy (\$/kWh)	\$0.02914–\$0.06871 ¹	\$0.02914–\$0.06871 ¹
Electric Capacity (\$/kW year)	130.26	130.26
Gas (\$/therms)	\$0.625–\$1.278 ²	\$0.625–\$1.278 ²
Avoided Cost Inflation	0%	0%
Real Discount Rate	2%	2%
Line Loss	8%	8%

¹The CY 2015 and CY 2016 cost-effectiveness analyses used a time series that grows from \$0.02914 to \$0.06871 over 14 years in the forecast model.

²The natural gas avoided costs grows from \$0.625 to \$1.278 over a 25-year period based on growth rates from the U.S. Energy Information Administration. *Annual Energy Outlook 2014*. May 7, 2014. Available online: <https://www.eia.gov/outlooks/archive/aeo14/>

Emissions Benefits

The modified TRC benefit/cost calculations include the benefit of avoiding three air pollutants that are regulated under the Clean Air Act. These are carbon dioxide (CO₂), sulfur dioxide (SO₂), and nitrogen oxides (NO_x). Determining the emissions benefits requires three key parameters—lifecycle net energy savings, emissions factors, and the dollar value of the displaced emissions.

Emissions factors are the rate at which the criteria pollutants are emitted per unit of energy and are most often expressed in tons of pollutant per energy unit—electric is in tons/megawatt hour (MWh), and gas is in tons/thousand therms (MThm). The product of the emissions factor and the net energy savings is the total weight of air pollutant offset or avoided by the program. The product of the total tonnage of pollutant saved and the dollar value of the reduced emissions per ton is therefore the avoided emissions benefit, as shown in this equation.

Value of Avoided Emissions

$$= [Net\ Saved\ Energy \times Emissions\ Factor \times Value\ of\ Emissions\ Allowance]$$

The natural gas emissions factor has remained constant since the 2011 evaluation report and is derived from a best-practice greenhouse gas inventory method developed by the California Energy Commission. For CY 2016, the Evaluation Team revised the electric emissions factors using a tool developed by the U.S. Environmental Protection Agency (EPA) to calculate avoided emissions from renewable energy and energy efficiency programs (the tool is officially called the “AVoided Emissions and geneRation Tool” or “AVERT”). AVERT is a spreadsheet-based model that uses historical hourly generation and emissions data to determine the individual power plants that are likely to be displaced by energy efficiency or renewable energy during each hour of the year. The Evaluation Team used the model to compare the electricity generation avoided by the Focus on Energy programs during each hour of the year with the hourly generation information to determine the quantity of emissions displaced. It then calculated an emissions factor based on the tons of emissions displaced by each MWh of generation avoided.

Table F-2 lists the emissions factors and allowance prices.

Table F-2. Emissions Factors and Allowance Price

Service Fuel Type	CO ₂	NO _x	SO ₂
Electric Emissions Factor (Tons/MWh)	0.8855	0.0007	0.0015
Gas Emissions Factor (Tons/MThm)	5.85	N/A	N/A
Allowance Price (\$/Ton)	\$15	\$7.50	\$2

The Evaluation Team obtained NO_x and SO₂ emissions allowance prices from near the end of 2016 from the EPA’s Cross State Air Pollution Rule (CSAPR).⁸ Markets for NO_x and SO₂ allowances continue to be volatile, making it difficult to forecast NO_x and SO₂ allowance prices. However, given the generally lower prices in 2016, the Evaluation Team lowered the avoided emissions values for SO₂ and NO_x to maintain a conservative estimate of the value of avoided emissions. The Evaluation Team used the CO₂ emissions price in the PSC’s Order, docket 5-FE-100 Ref#: 279739, which states, “For purposes of evaluating the Focus program during the 2015–2018 quadrennium, the value of avoided carbon emissions shall be \$15 per ton.”⁹

Table F-3 lists the emissions benefits for all programs by residential and nonresidential segment.

Table F-3. Total Program Emissions Benefits by Segment¹

Program Year	Residential	Nonresidential	Total
CY 2015 Emissions Benefits	\$25,236,521	\$85,344,610	\$110,581,131
CY 2016 Emissions Benefits	\$33,448,073	\$70,655,200	\$104,103,273

¹Reported emissions impacts are based upon portfolio level modeling within AVERT and are not measure-or project-level specific.

Program Costs

The 2016 program costs were provided to the Evaluation Team from Focus on Energy’s contract fiscal agent, the accounting firm Wipfli. The program costs represent all costs associated with running the efficiency programs (including administration and delivery costs). Note that incentive costs are not included as program costs because they are deemed transfer payments, which is consistent with industry guidelines defining the TRC test.

⁸ S&P Global. “Platts MegaWatt Daily.” November 23, 2016. Accessed April 2017: http://nyarea.org/wp-content/uploads/11_23_16_EARNED-MEDIA_Platts-Megawatt-Daily_King-Coal-to-reign-again-%E2%80%94-for-the-winter-EIA.pdf

⁹ Public Service Commission of Wisconsin. *Quadrennial Planning Process II – Scope*. Order PSC Docket 5-FE-100, REF#:279739. September 3, 2014. Available online: http://psc.wi.gov/apps35/ERF_view/viewdoc.aspx?docid=279739

Incremental Costs

The gross incremental costs are the additional costs incurred as a result of purchasing efficient equipment over and above a baseline nonqualified product. The Evaluation Team derived the gross incremental cost values used in this CY 2016 evaluation from the incremental cost study conducted by the Program Administrator, implementers, and Evaluation Team, which established up-to-date incremental costs for all measures based on the best available data, including historical Focus on Energy program data and independent research from other state programs. The gross incremental costs, similar to the energy savings values used in the cost-effectiveness tests, required the application of attribution factors to account for freeridership.

Similar to the previous quadrennial’s evaluation effort, the Evaluation Team assigned actual project cost values from the program tracking databases to the renewable energy projects.

Cost-Effectiveness Results by Test

Table F-4 presents the inputs and results from the modified TRC test for the Focus on Energy 2016 energy efficiency and renewable resource program portfolio. Application of the modified TRC test showed that net statewide benefits to residents, businesses, and Focus on Energy from the 2016 programs were more than \$786 million overall. The benefits from the residential programs were 2.75 times greater than the costs, while the benefits from the nonresidential programs outweighed the costs by a factor of 3.13.

Table F-4. CY 2016 Sector-Level and Overall Results, Modified Total Resource Cost Test

	Residential	Nonresidential	Total
Administrative Costs	\$3,672,462	\$4,261,983	\$7,934,445
Delivery Costs	\$8,778,987	\$17,090,091	\$25,869,078
Incremental Measure Costs	\$77,148,733	\$151,345,672	\$228,494,405
Total TRC Costs	\$89,600,183	\$172,697,745	\$262,297,928
Electric Benefits	\$166,383,352	\$294,527,024	\$460,910,375
Gas Benefits	\$46,194,917	\$175,286,641	\$221,481,558
Emissions Benefits	\$33,448,073	\$70,655,200	\$104,103,273
Total TRC Benefits	\$246,026,342	\$540,468,865	\$786,495,207
TRC Benefits Minus Costs	\$156,426,159	\$367,771,120	\$524,197,279
TRC Benefit/Cost Ratio	2.75	3.13	3.00

The Focus on Energy portfolio’s net economic benefits are determined every two years; results from the next economic impact analysis will be applied later in the CY 2015–CY 2018 quadrennial. Based on inputs and results from the expanded TRC test, net statewide benefits—including the 2014 Focus on Energy portfolio’s net economic benefits—to residents, businesses, and Focus on Energy from the 2016 programs were nearly \$1.5 billion overall (Table F-5). The benefits from the residential programs were 5.05 times greater than the costs, while the benefits from the nonresidential programs were 6.32 times

greater than the costs. The Evaluation Team is currently conducting an economic benefits analysis for CY 2015 and CY 2016 that will be applied to the CY 2017 and CY 2018 program years.

Table F-5. CY 2016 Sector-Level and Overall Results, Expanded Total Resource Cost Test with Economic Benefits

	Residential	Nonresidential	Total
Administrative Costs	\$3,672,462	\$4,261,983	\$7,934,445
Delivery Costs	\$8,778,987	\$17,090,091	\$25,869,078
Incremental Measure Costs	\$77,148,733	\$151,345,672	\$228,494,405
Total TRC Costs	\$89,600,183	\$172,697,745	\$262,297,928
Electric Benefits	\$166,383,352	\$294,527,024	\$460,910,375
Gas Benefits	\$46,194,917	\$175,286,641	\$221,481,558
Emissions Benefits	\$33,448,073	\$70,655,200	\$104,103,273
Economic Benefits	\$206,039,409	\$550,179,341	\$550,179,341
Total TRC Benefits	\$452,065,751	\$1,090,648,206	\$1,542,713,957
TRC Benefits Minus Costs	\$362,465,568	\$917,950,461	\$1,280,416,029
TRC Benefit/Cost Ratio	5.05	6.32	5.88

Table F-6 presents the inputs and results from the UAT for the 2016 Focus on Energy portfolio. Results show that net benefits were approximately \$592 million; in other words, the 2016 portfolio resulted in a statewide reduction in combined utility revenue requirements of \$592 million. The benefits from the residential programs were 6.49 times greater than the costs, while the benefits from the nonresidential programs outweighed the costs by a factor of 8.26.

Table F-6. CY 2016 Sector-Level and Overall Results, Utility Administrator Test

	Residential	Nonresidential	Total
Incentive Costs	\$20,313,920	\$35,523,227	\$55,837,147
Administrative Costs	\$3,672,462	\$4,261,983	\$7,934,445
Delivery Costs	\$8,778,987	\$17,090,091	\$25,869,078
Total UAT Costs	\$32,765,369	\$56,875,300	\$89,640,670
Electric Benefits	\$166,383,352	\$294,527,024	\$460,910,375
Gas Benefits	\$46,194,917	\$175,286,641	\$221,481,558
Total UAT Benefits	\$212,578,269	\$469,813,665	\$682,391,934
UAT Benefits Minus Costs	\$179,812,899	\$412,938,365	\$592,751,264
UAT Benefit/Cost Ratio	6.49	8.26	7.61

Table F-7 shows the inputs and results from the RIM test for 2016 energy efficiency and renewable resource programs. As expected, estimated benefit/cost value from the RIM test is near 1. When interpreted within the context of the UAT test results, these findings indicate that although annual Focus on Energy activities will probably induce theoretical upward pressure on future energy rates, total ratepayer energy costs will go down.

Table F-7. CY 2016 Sector-Level and Overall Results, Ratepayer Impact Measure Test

	Residential	Nonresidential	Total
Incentive Costs	\$20,313,920	\$35,523,227	\$55,837,147
Electric Lost Revenues	\$263,503,508	\$281,298,231	\$544,801,738
Gas Lost Revenues	\$33,901,126	\$102,642,201	\$136,543,327
Admin Costs	\$3,672,462	\$4,261,983	\$7,934,445
Delivery Costs	\$8,778,987	\$17,090,091	\$25,869,078
Total RIM Costs	\$330,170,003	\$440,815,732	\$770,985,735
Electric Benefits	\$166,383,352	\$294,527,024	\$460,910,375
Gas Benefits	\$46,194,917	\$175,286,641	\$221,481,558
Total RIM Benefits	\$212,578,269	\$469,813,665	\$682,391,934
RIM Benefits Minus Costs	(\$117,591,735)	\$28,997,933	(\$88,593,802)
RIM Benefit/Cost Ratio¹	0.64	1.07	0.89

¹ For the CY 2016 cost-effectiveness analysis the lost revenue portion of the RIM test assumes a fixed utility rate that does not escalate over time, while the avoided energy costs are escalated on a yearly basis resulting in greater benefits than costs for the nonresidential Portfolio.

Cost-Effectiveness Results by Program

Table F-8 provides the sector-level and overall results of the cost-effectiveness analysis with renewables reported separately. Incentive costs are provided below but are not included in the TRC calculation. The TRC ratio equals the total TRC benefits divided by total non-incentive costs.

Table F-8. CY 2016 Overall with Renewables Separate Cost-Effectiveness Analysis

	Residential	Nonresidential	Renewables	Total
Incentive Costs	\$19,245,326	\$33,654,563	\$2,937,257	\$55,837,147
Administrative Costs	\$3,535,986	\$4,103,598	\$294,862	\$7,934,445
Delivery Costs	\$8,587,718	\$16,717,746	\$563,614	\$25,869,078
Incremental Measure Costs	\$68,296,421	\$133,979,746	\$26,218,238	\$228,494,405
Total Non-Incentive Costs	\$80,420,125	\$154,801,091	\$27,076,713	\$262,297,928
Electric Benefits	\$158,299,589	\$280,217,379	\$22,393,408	\$460,910,375
Gas Benefits	\$45,472,265	\$172,544,541	\$3,464,752	\$221,481,558
Emissions Benefits	\$32,244,469	\$68,112,725	\$3,746,079	\$104,103,273
Total TRC Benefits	\$236,016,323	\$520,874,644	\$29,604,239	\$786,495,207
TRC Benefits Minus Costs	\$155,596,198	\$366,073,554	\$2,527,526	\$524,197,279
TRC Ratio	2.93	3.36	1.09	3.00

Table F-9 provides the residential program cost-effectiveness analysis. Incentive costs are provided below but are not included in the TRC calculation. The TRC ratio equals the total TRC benefits divided by total non-incentive costs.

Table F-9. CY 2016 Residential Programs Cost-Effectiveness Analysis

	Home Performance with ENERGY STAR		Simple Energy Efficiency	Multifamily Energy Savings	Multifamily Direct Install	New Homes	Retailer Lighting and Appliance
	HVAC and Whole Home	Renewable Rewards					
Incentive Costs	\$5,409,905	\$1,084,624	\$1,096,464	\$1,265,281	\$286,026	\$1,170,050	\$8,439,351
Administrative Costs	\$1,077,241	\$180,122	\$457,760	\$329,869	\$251,800	\$224,605	\$982,240
Delivery Costs	\$2,456,590	\$410,759	\$1,043,896	\$752,249	\$574,217	\$512,199	\$2,239,945
Incremental Measure Costs	\$33,289,125	\$7,612,624	\$1,154,398	\$3,400,605	\$542,024	\$306,382	\$27,050,675
Total Non-Incentive Costs	\$36,822,956	\$8,203,505	\$2,656,054	\$4,482,724	\$1,368,042	\$1,043,185	\$30,272,860
Electric Benefits	\$15,381,498	\$6,511,948	\$8,697,039	\$6,769,894	\$3,368,800	\$0	\$115,493,355
Gas Benefits	\$25,501,072	\$0	\$4,950,201	\$3,087,346	\$1,049,055	\$1,738,214	\$0
Emissions Benefits	\$4,505,567	\$807,021	\$2,306,966	\$1,647,883	\$793,084	\$154,636	\$20,972,436
Total TRC Benefits	\$45,388,136	\$7,318,969	\$15,954,206	\$11,505,123	\$5,210,938	\$1,892,850	\$136,465,790
TRC Benefits Minus Costs	\$8,565,180	(\$884,536)	\$13,298,152	\$7,022,399	\$3,842,896	\$849,664	\$106,192,931
TRC Ratio	1.23	0.89	6.01	2.57	3.81	1.81	4.51

Table F-10 provides nonresidential program cost-effectiveness analysis. Incentive costs are provided below but are not included in the TRC calculation. The TRC ratio equals the total TRC benefits divided by total non-incentive costs.

Table F-10. CY 2016 Nonresidential Programs Cost-Effectiveness Analysis

	Agriculture, Schools and Government	Business Incentive	Chain Stores and Franchises	Large Energy Users	Small Business	Design Assistance	Renewable Energy Competitive Incentive	Renewable Energy Loan Fund
Incentive Costs	\$6,373,340	\$5,820,692	\$2,799,870	\$10,341,953	\$4,142,650	\$4,874,177	\$2,042,803	\$0
Admin Costs	\$776,604	\$943,943	\$309,868	\$1,201,920	\$313,672	\$604,527	\$2,547	\$99,967
Delivery Costs	\$3,171,197	\$3,854,513	\$1,265,321	\$4,907,942	\$1,280,855	\$2,275,910	\$10,400	\$94,846
Incremental Measure Costs	\$27,047,432	\$20,001,455	\$16,131,275	\$49,792,860	\$10,818,975	\$11,987,515	\$17,797,612	\$582,789
Total Non-Incentive Costs	\$30,995,232	\$24,799,911	\$17,706,464	\$55,902,722	\$12,413,501	\$14,867,952	\$17,810,559	\$777,601
Electric Benefits	\$42,529,151	\$39,469,899	\$40,515,614	\$97,457,224	\$31,802,438	\$36,576,085	\$11,996,471	\$383,081
Gas Benefits	\$23,737,403	\$8,431,618	\$2,057,220	\$124,834,595	\$179,719	\$21,541,900	\$3,464,752	\$0
Emissions Benefits	\$10,146,612	\$7,855,712	\$6,989,714	\$31,688,806	\$5,193,825	\$8,393,755	\$2,292,591	\$40,492
Total TRC Benefits	\$76,413,166	\$55,757,229	\$49,562,548	\$253,980,625	\$37,175,982	\$66,511,741	\$17,753,814	\$423,573
TRC Benefits Minus Costs	\$45,417,934	\$30,957,319	\$31,856,084	\$198,077,903	\$24,762,480	\$51,643,789	(\$56,745)	(\$354,029)
TRC Ratio	2.47	2.25	2.80	4.54	2.99	4.47	1.00	0.54

Table F-11 provides pilot program cost-effectiveness analysis. Incentive costs are provided below but are not included in the TRC calculation. The TRC ratio equals the total TRC benefits divided by total non-incentive costs.

Table F-11. CY 2016 Pilots Cost-Effectiveness Analysis

	Manufactured Homes	Smart Thermostat	Seasonal Savings
Incentive Costs	\$118,641	\$571,320	\$0
Admin Costs	\$5,266	\$27,776	\$28,944
Delivery Costs	\$109,254	\$370,234	\$66,006
Incremental Measure Costs	\$0	\$978,660	\$0
Total Non-Incentive Costs	\$114,520	\$1,376,670	\$94,951
Electric Benefits	\$54,014	\$3,888,314	\$15,553
Gas Benefits	\$20,160	\$854,607	\$33,696
Emissions Benefits	\$9,622	\$294,408	\$10,143
Total TRC Benefits	\$83,796	\$5,037,328	\$59,391
TRC Benefits Minus Costs	(\$30,724)	\$3,660,659	(\$35,559)
TRC Ratio	0.73	3.66	0.63

Cost-Effectiveness Results for Renewables

Table F-12 lists the CY 2015 and CY 2016 cost-effectiveness results, with renewables separate and with renewables included.

Table F-12. Cost-Effectiveness Results for Focus on Energy Portfolio

Calendar Year	Residential	Nonresidential	Renewables	Total
CY 2015: Modified TRC Test Result with Renewables	3.12	3.63	N/A	3.51
CY 2015: Modified TRC Test Result Renewables Separate	3.33	3.93	1.18	3.51
CY 2016: Modified TRC Test Result with Renewables	2.75	3.13	N/A	3.00
CY 2016: Modified TRC Test Result Renewables Separate	2.93	3.36	1.09	3.00

Appendix G. Summary of Confidence and Precision

Focus on Energy gives significant consideration to evaluation design to ensure that its programs achieve the most accurate and reliable results possible under the available evaluation budget. The evaluation uses statistical confidence and precision standards as a key driver in determining the scale and scope of the evaluation design for each program for which the target for net savings over the 2015–2018 quadrennial is 90% confidence and 10% precision.

The Evaluation Team calculated the precision of final net first-year and lifetime energy savings estimates (MMBtu) at 90% confidence for each program in the Wisconsin Focus on Energy portfolio. The precision reflects the uncertainty in the savings estimates because of measurement error, regression error, and sampling error. Measurement error refers to the uncertainty around engineering parameters derived from simulation or professional judgment, regression error refers to uncertainty around estimates derived from regression analysis, and sampling error refers to uncertainty introduced by estimating population parameters based on a sample.

After calculating standard errors (SE), the Evaluation Team calculated the precision of the final estimates using the following formula:

$$\text{relative precision} = \frac{z\text{-statistic} * SE}{\text{total net savings}}$$

Where:

z-statistic	=	Critical value at a specific confidence level
SE	=	Standard error of the total net savings estimate
total net savings	=	Total net savings estimated based on the evaluation results

Below, the Evaluation Team provides details on how it calculated total net savings estimates and their standard errors.

Introduction to Statistical Uncertainty

The Evaluation Team collected data from surveys, billing histories, meters, and secondary sources including the Focus on Energy Technical Reference Manual (TRM) to estimate net savings for each program and the portfolio. Statistical uncertainty is inherent in all activities for which samples or models are used to estimate a property of a population. Using sampled data is often preferred to save on costs and time associated with studying an entire population and because random samples of the population provide sufficiently accurate and precise results. The strength of an estimate is related to the amount of uncertainty or error around it, determined based on the statistical properties of sampled data and how they are used to make inferences about a population.

Statistical uncertainty comprises two parts: the confidence and the precision of the estimate. Confidence intervals show the range of values within which we expect the unknown population parameter to fall. It refers to the probability that true value of the metric of interest (e.g., kWh saved)

will fall within some level of precision. A statement of precision without a statement of confidence is misleading. For example, if energy savings is estimated as 24 kWh with precision of ±5 kWh at 90% confidence, the interpretation is that we are 90% confident that the true energy savings is between 19 kWh and 29 kWh. Narrower confidence intervals indicate that the savings estimate is very precise whereas wider confidence intervals indicate that the variability in the data is large and that more information would be required to produce a more precise estimate.

For the Focus on Energy evaluation, the general standard for uncertainty is to achieve evaluation results with 90% confidence and 10% precision over the 2015–2018 quadrennial. Evaluation activities are defined and prioritized to align with this standard. This standard is in line with nationwide best practices for the evaluation of energy efficiency programs, as documented in the U.S. Environmental Protection Agency’s National Action Plan for Energy Efficiency and elsewhere.¹⁰

Combining Net Uncertainty with Gross Uncertainty

When two estimates are based on different evaluation activities and combined to produce a final estimate the uncertainty from each estimate must be considered in calculating the uncertainty of the final estimate. For example, one set of data collected from surveys, billing analyses, metering, and/or TRM review are used to estimate gross savings and another set of data collected from a separate survey are used to estimate spillover, freeridership, and net-to-gross (NTG) ratios, and then that NTG ratio is applied to the gross savings to estimate net savings, the standard error of total net savings should be based on the standard error of gross savings and the NTG ratio. Details are provided below, specific to each set of programs.

When the Evaluation Team estimated NTG ratios using survey data collected from an independent simple random sample of participants, it used a ratio estimator and its standard error formula to quantify the uncertainty in the NTG ratios where net savings are represented by y_i , *ex post* saving are represented by x_i , and the standard error of the NTG ratio estimate is represented by SE_{NTG} , in the following formulas:

$$NTG\ Ratio = \frac{\sum_{sample} y_i}{\sum_{sample} x_i}$$

$$SE_{NTG} = \sqrt{\frac{\sum_{i=1}^n (y_i - NTG\ Ratio * x_i)^2}{\bar{x}^2 * n(n - 1)}}$$

¹⁰ U.S. Environmental Protection Agency. “Energy and the Environment. National Action Plan for Energy Efficiency.” Accessed April 2017: <http://www.epa.gov/cleanenergy/energy-programs/suca/resources.html>

The Evaluation Team then multiplied the NTG ratio to the total *ex post* gross savings to estimate total net savings and used the formula for the standard error of the product of two independent random variables to calculate precision, as shown in this formula:

$$SE_{total\ net\ savings} = \sqrt{\frac{NTG^2 * SE_{total\ ex\ post\ gross\ savings}^2 + total\ ex\ post\ gross\ savings^2 * SE_{NTG}^2}{SE_{NTG}^2 + SE_{NTG}^2 * SE_{total\ ex\ post\ gross\ savings}^2}}$$

The Evaluation Team used this method for all programs unless otherwise noted.

Pilot Programs

Pilot program net savings and precision values are based on uncertainty in PRISM savings estimates resulting from billing analyses.

For the Manufactured Homes and Smart Thermostat pilots, the Evaluation Team used PRISM models to estimate total *ex post* gross savings based on observed changes in usage before and after pilot participation. Precision was calculated based on the variance of PRISM results. Net savings for the Smart Thermostat Pilot were calculated based on the self-report methodology described above. Net savings for the Manufactured Homes Pilot were equal to gross savings, i.e., the NTG ratio was 1.

For the Seasonal Savings Pilot, the Evaluation Team applied a percentage savings estimate for the Nest thermostats to the PRISM post-installation period usage estimates to calculate *ex post* savings. The Nest thermostat percentage savings was based on differences between participants and nonparticipants and so captures net savings. The Evaluation Team did not conduct additional NTG analysis. Uncertainty in the Nest percentage savings estimate was not available and not accounted for in the Evaluation Team’s savings estimate.¹¹ Precision is based on the variance of PRISM post-installation period usage estimates only.

Table G-1. Residential Net First-Year MMBtu Energy Savings Precision (90% Confidence)

Pilots	Precision	Sources of Uncertainty
Manufactured Homes Pilot, Electric ¹	38%	PRISM model
Manufactured Homes Pilot, Gas ²	56%	PRISM model
Seasonal Savings Pilot, Electric	3%	PRISM model
Seasonal Savings Pilot, Gas	2%	PRISM model
Smart Thermostat Pilot, Electric	9%	PRISM model, Self-report NTG
Smart Thermostat Pilot, Gas	9%	PRISM model, Self-report NTG

¹ The high precision of ±38% is due to a small sample billing analysis (n=60).

² The high precision of ±56% is due to a small sample billing analysis (n=55).

¹¹ Nest provided the estimate.

Nonresidential Programs

The Evaluation Team selected a sample of projects within each nonresidential program to estimate *ex post* verified gross savings. It used a probability proportional to size sample design to increase the likelihood of selecting projects with the highest *ex ante* MMBtu savings. It then assessed *ex post* verified gross savings for sampled projects and calculated program level realization rates. The Evaluation Team applied the realization rates to the population total *ex ante* savings within each program to estimate the population total *ex post* gross savings. It calculated realization rates and standard errors using the formulas presented in the Uniform Methods Protocol sampling chapter where the weights (w_i) are proportional to the sampling probabilities (i.e., contribution to savings), *ex ante* savings are represented by x_i and *ex post* saving are represented by y_i :¹²

$$RR = \frac{\sum_{sample} w_i y_i}{\sum_{sample} w_i x_i}$$

$$total\ ex\ post\ gross\ savings = RR * \sum_{population} w_i x_i$$

$$SE_{total\ ex\ post\ gross\ savings} = \sqrt{\sum_{i=1}^n w_i (w_i - 1) (y_i - RR * x_i)^2}$$

The Evaluation Team estimated nonresidential NTG ratios using survey data collected from an independent simple random sample of participants and then multiplied these ratios to the total *ex post* gross savings to estimate total net savings for each program. It used a ratio estimator and standard error formula described above to quantify the uncertainty in the NTG ratios.

Table G-2 presents the precision of total net first and cumulative year MMBtu savings estimates at 90% confidence for each nonresidential program.¹³ The sources of uncertainty in all nonresidential savings estimates were due to estimating realization rate and NTG values based on samples.

¹² National Renewable Energy Laboratory. "Chapter 11: Sample Design Cross-Cutting Protocols." *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures*. Prepared by Cadmus. April 2013. Available online: <http://energy.gov/sites/prod/files/2013/11/f5/53827-11.pdf>

¹³ In estimating precision around cumulative savings, the Evaluation Team corrected an error in the precision CY 2015 precision equation and updated CY 2015 precision estimates, provided in Table G-2.

Table G-2. Nonresidential Net First-Year MMBtu Energy Savings Precision

Nonresidential Programs	Precision at 90% Confidence		
	CY 2015	CY 2016	Cumulative
Agriculture, Schools and Government	15%	16%	12%
Business Incentive	38%	54%	32%
Chain Stores and Franchises	27%	27%	19%
Design Assistance	13%	12%	9%
Large Energy Users	14%	21%	12%
Small Business	9%	12%	8%

As in CY 2015, CY 2016 precision of net savings in the Agriculture, Schools and Government, Design Assistance, and Small Business programs are close to the 10% precision target. Precision of net savings in the Business Incentive Program, Chain Stores and Franchises Program, and Large Energy Users Program are two to three times higher. Variation in the freeridership scores for these programs are high, leading to large uncertainties in the NTG ratios, and driving the higher overall precision around program net savings. The Evaluation Team expects to achieve the target of 10% precision over the CY 2015 – CY 2018 quadrennial for these programs. Table G-2 shows that cumulative precision for CY 2015 and CY 2016 is lower for every program.

Residential Programs

The Evaluation Team used various methods to evaluate the residential programs. It applied the methods described above for the nonresidential programs to the Multifamily Direct Install and Multifamily Energy Savings programs.¹⁴ Methods for the remaining programs are described below. Table G-3 presents the precision of total net savings estimates and the sources of uncertainty for each residential program, by program year as well as cumulative.

¹⁴ In estimating precision around cumulative savings for the Multifamily Direct Install and Multifamily Energy Savings Programs, the Evaluation Team corrected an error in the precision CY 2015 precision equation and updated CY 2015 precision estimates, provided in Table G-3.

Table G-3. Residential Net First-Year MMBtu Energy Savings Precision (90% Confidence)

Residential Programs	Precision at 90% Confidence			Sources of Uncertainty
	CY 2015	CY 2016	Cumulative	
Multifamily Direct Install	7%	1%	3%	Realization rate and NTG ratio
Multifamily Energy Savings	19%	12%	12%	Realization rate and NTG ratio
Residential Lighting	n/a	17%	n/a	Freeridership ratio
Home Performance with ENERGY STAR® - Whole Home Standard Track, Electric	15%	42%	19%	PRISM model
Home Performance with ENERGY STAR® - Whole Home Standard Track, Gas	7%	26%	11%	PRISM model
Home Performance with ENERGY STAR® - Whole Home Income Qualified, Electric	38%	38%	30%	PRISM model
Home Performance with ENERGY STAR® - Whole Home Income Qualified, Gas	18%	18%	13%	PRISM model
Home Performance with ENERGY STAR® - HVAC Path	n/a	n/a	n/a	D+R survey and Program data
Simple Energy Efficiency	n/a	6%	n/a	Survey estimated ISRs

Retailer Lighting and Appliance Program

The following describes the method the Evaluation Team used to calculate standard errors around gross and net-to-gross savings for the Retailer Lighting and Appliance Program.

Gross Savings

The Evaluation Team estimated first-year savings for the Retailer Lighting and Appliance Program according to the method described in the Retailer Lighting and Appliance Program chapter. The confidence and precision analysis around gross energy and demand savings from the Retailer Lighting and Appliance Program incorporated two sources of uncertainty: uncertainty from ISRs and uncertainty from the cross-sector sales proportion.

In-Service Rate

The Evaluation Team estimated first-year ISRs in CY 2016 by applying a four-year trajectory ISR to the surveyed ISR. The Evaluation Team calculated the standard error for the surveyed ISRs using the formula for a proportion:

$$ISR = \frac{\# \text{ installed}}{\# \text{ reported}}$$

$$SE_{ISR} = \sqrt{\frac{ISR * (1 - ISR)}{n}}$$

The Evaluation Team calculated a four-year projected ISRs for LEDs and CFLs according to the method recommended in the UMP¹⁵, which uses expected ISRs (estimated through other studies) to estimate program ISRs up to four years after participants received their bulbs. The Evaluation Team did not directly calculate the standard error around the expected ISRs because the sample sizes for these studies were not available. Instead, the Evaluation Team assumed that expected ISRs achieved 10% precision at 90% confidence to calculate the standard errors for each expected ISR in year i :

$$SE_{Traj_{Yi}} = \frac{10\% * Traj_{Yi}}{z\text{-statistic}}$$

Where:

$$Traj_{Yi} = \text{Percent of storage bulbs installed in year } i, i = 2, 3, 4$$

The Evaluation Team calculated the standard error of lifetime ISRs by first re-writing the formula in the UMP as:

$$\begin{aligned} ISR_F &= (ISR_1 - 1) \left[1 - \frac{Traj_{Y2}}{1 + rate} - Traj_{Y3} \left(\frac{1}{(1 + rate)^2} - \frac{1}{(1 + rate)^3} \right) \right] + \frac{Traj_{Y4}}{(1 + rate)^3} + 1 \\ &= X * Y + Z \end{aligned}$$

Where:

$$\begin{aligned} X &= ISR_1 - 1 \\ Y &= 1 - \frac{Traj_{Y2}}{1 + rate} - Traj_{Y3} \left(\frac{1}{(1 + rate)^2} - \frac{1}{(1 + rate)^3} \right) \\ Z &= \frac{Traj_{Y4}}{(1 + rate)^3} + 1 \\ rate &= \text{Discount rate} \end{aligned}$$

The Evaluation Team calculated the standard error of lifetime ISRs as follows:

$$SE_{ISR_F} = \sqrt{SE(X)^2 Y^2 + SE(Y)^2 X^2 + SE(X)^2 SE(Y)^2 + SE(Z)^2}$$

Where:

$$\begin{aligned} SE(X) &= SE_{ISR} \\ SE(Y) &= \sqrt{\left(\frac{1}{1 + rate} \right)^2 SE_{Traj_{Y2}}^2 + \left(\frac{1}{(1 + rate)^2} - \frac{1}{(1 + rate)^3} \right)^2 SE_{Traj_{Y3}}^2} \\ SE(Z) &= \frac{1}{(1 + rate)^3} * SE_{Traj_{Y4}} \end{aligned}$$

¹⁵ National Renewable Energy Laboratory. *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures*. "Chapter 21: Residential Lighting Evaluation Protocol." Prepared by Apex Analytics, LLC. February 2015. Available online: <http://energy.gov/sites/prod/files/2015/02/f19/UMPChapter21-residential-lighting-evaluation-protocol.pdf>

Cross-Sectors Sales Proportion

The Evaluation Team calculated the proportion of cross-sector sales by taking the average of the CY 2014 and CY 2015 cross-sector sales proportions. For each proportion, the Evaluation Team calculated the following standard errors:

$$CSS = \frac{\# \text{ small business customers with CFL or LED purchases from participating retailers}}{\# \text{ CFLs and LEDs purchased from participating retailers}}$$

$$SE_{CSS_{CY}} = \sqrt{\frac{CSS * (1 - CSS)}{n}}$$

To combine the uncertainties from both CY 2014 and CY 2015 cross-sector sales proportions, the Evaluation Team calculated the square root of the sum of squared standard errors of each respective sales proportion:

$$SE_{CSS} = \frac{1}{2} \sqrt{SE_{CSS_{CY2014}}^2 + SE_{CSS_{CY2015}}^2}$$

Gross Savings Results

The Evaluation Team calculated final gross savings by adding residential and commercial gross savings, weighted by the cross-sector sales proportion. The standard error around final gross savings incorporates uncertainties from the ISR and cross-sector sales proportion as follows.

Let C_{res} be the residential fixed values contributing to the residential savings:

$$C_{res} = \frac{\Delta Watts}{1,000} * HOU * 365 * \text{Quantity for energy savings}$$

$$C_{res} = \frac{\Delta Watts}{1,000} * CF * \text{Quantity for demand savings}$$

Similarly, let C_{com} be the commercial fixed values contributing to the commercial savings. We define the standard error around final gross savings as:

$$SE_{\Delta kWh, \Delta kW} = \sqrt{SE_{ISR}^2 * [C_{res} + CSS(C_{com} - C_{res})]^2 + (C_{com} - C_{res})^2 SE_{CSS}^2 * (ISR)^2 + SE_{ISR}^2 * (C_{com} - C_{res})^2 SE_{CSS}^2}$$

Net-to-Gross Savings

The Evaluation Team estimated NTG ratios for LEDs using four separate methods as described in the Retailer Lighting and Appliance Program chapter. It applied the weighted average of the resulting NTG ratio estimates as its final LED NTG ratio, weighted by the precision around each estimate. The Evaluation Team calculated the standard errors around the final LED NTG ratio as follows:

$$SE_{NTG} = \sqrt{\left(\frac{1}{\sum_{m=1}^4 w_m}\right)^2 * \sum_{m=1}^4 SE_{NTG}^2 * w_m^2}$$

Where:

- w_m = 1/(precision of NTG method m)
- NTG_m = Net-to-Gross ratio resulting from NTG method m

The Evaluation Team applied the CFL NTG ratio from the CY 2015 evaluation to the CFL gross savings for CY 2016; however, it did not calculate precision around the NTG ratio.

The uncertainty around final NTG savings incorporates both the uncertainty around NTG ratios and uncertainty around gross savings. The Evaluation Team combined these uncertainties and calculated the standard error around NTG savings as follows:

$$SE_{kWh_{net}} = \sqrt{SE_{\Delta kWh}^2 * NTG^2 + SE_{NTG}^2 * \Delta kWh + SE_{\Delta kWh}^2 * SE_{NTG}^2}$$

Home Performance with ENERGY STAR® Program – Whole Home Path

The Evaluation Team used a different method to evaluate the Home Performance with ENERGY STAR Program whole home path. It applied a NTG factor to each project’s SnuggPro *ex ante* savings to calculate *ex post* net savings. The NTG factor was calculated as the ratio of SnuggPro model savings to net PRISM savings for a sample of homes from previous program years. No additional NTG analysis was necessary because the NTG factor accounted for freeridership and spillover using the net savings estimated using billing analysis and PRISM models.

The Evaluation Team used a ratio estimator to calculate the NTG factor and its standard error to quantify the uncertainty in the resulting total net savings, where net PRISM savings are represented by y_i and SnuggPro *ex ante* savings are represented by x_i in the following formulas:

$$NTG\ Factor = \frac{\sum_{sample} y_i}{\sum_{sample} x_i}$$

$$SE_{NTG\ Factor} = \sqrt{\sum_{i=1}^n \frac{(y_i - NTG\ Factor * x_i)^2}{\bar{x}^2 * n(n - 1)}}$$

$$total\ net\ savings = NTG\ Factor * \sum_{population} x_i$$

$$SE_{total\ net\ savings} = \sum_{population} x_i * SE_{NTG\ Factor}$$

Home Performance with ENERGY STAR® Program – HVAC Path

The Evaluation Team used a standard market practice analysis to estimate savings for the Home Performance with ENERGY STAR Program HVAC path. It used D+R data to estimate the proportion of HVAC equipment in each AFUE category. The D+R survey reported proportions based on over 9,000 sampled units. The Evaluation Team calculated the corresponding precision of these estimates, which is close to 0%. It combined the D+R AFUE proportions with those observed in the program tracking database to estimate a Wisconsin-specific distribution of non-program HVAC AFUE in the market place and then multiplied this result with the energy consumption estimates calculated using an engineering algorithm with inputs from the TRM.

The TRM values are not reported with error bounds, thus the Evaluation Team was not able to calculate the uncertainty in the energy consumption estimates. To estimate savings, the Evaluation Team calculated the difference between the market baseline and the program energy consumption estimates. Because the Evaluation Team could not account for uncertainty in the engineering algorithm inputs from the TRM, it did not calculate the precision of net savings for this program.

Simple Energy Efficiency Program

The Evaluation Team used a survey to collect information on in-service rates (ISRs) from a sample of customers. It estimated the in-service rates for each measure, then multiplied by the total *ex ante* for that measure to estimate the *ex post* gross savings, and finally summed the gross savings for each measure. The uncertainty in the total savings estimate is associated with the estimated in-service rates, for which the Evaluation Team calculated standard errors as follows:

$$ISR = \frac{\# \text{ installed}}{\# \text{ reported}}$$

$$SE_{ISR} = \sqrt{\frac{ISR * (1 - ISR)}{n}}$$

For LED and CFL savings, the Evaluation Team estimated lifetime savings using the trajectory in-service rate method described in the

Retailer Lighting and Appliance Program section, applying the same standard error calculations to find the standard errors around lifetime in-service rates.

The Evaluation Team calculated the standard error for the gross savings associated with each measure as:

$$SE_{gross \text{ measure savings}} = gross \text{ measure savings} * SE_{ISR}$$

And the standard error for the total gross savings as:

$$SE_{total\ gross\ savings} = \sqrt{\sum_{measures} gross\ measure\ savings^2 * SE_{ISR}^2}$$

The Evaluation Team calculated standard errors around net savings according to the method described in the Combining Net Uncertainty with Gross Uncertainty section.

Appendix H. Measure Analysis

This appendix describes the CY 2016 analyses, including the methodologies followed and the results applied to CY 2016 program evaluations.

Retailer Lighting and Appliance Program

Unit Energy Savings Input Details

Table H-1 provides the descriptions, values, and sources for the inputs the Program Implementer applied to estimate *ex ante* savings for the lighting component of the Retailer Lighting and Appliance Program. The Evaluation Team used items under the heading Unit Savings Inputs to calculate savings for individual bulbs, and items under the heading Total Savings Inputs were applied to aggregated savings.

Table H-1. CY 2016 Lighting SPECTRUM Inputs

Input	Description	Value	Units	Source
Unit Savings Inputs				
HOU ¹	Hours of use: daily average use of CFLs and LEDs	2.73	Hours/day	WI February 2016 TRM
ISR	In-service rate: percentage of lights installed	n/a	-	Not applied in SPECTRUM
ΔWatts	Delta watts: difference in wattage between the efficient and baseline bulb	varies	W	WI February 2016 TRM
CF ¹	Coincidence factor: summer peak coincidence factor	0.116	-	WI February 2016 TRM
365	Days per year: conversion to annualize the daily hours of use	365	Days/year	WI February 2016 TRM
Total Savings Inputs				
EUL _{CFL} ²	Effective useful life: average life of a CFL bulb	8.0	Years	WI February 2016 TRM
EUL _{LED} ²	Effective useful life: average life of a LED bulb	20.0	Years	WI February 2016 TRM

¹HOU and CF include adjustments for cross-sector sales (CSS) of 6.6%.

²Effective useful life (EUL) values listed are for the CFLs and LEDs offered by the Program and are not representative of all existing CFLs or LEDs.

The Evaluation Team used the values shown in Table H-2 to calculate verified savings.

Table H-2. CY 2016 Lighting Verified Gross Inputs

Input	Description	Residential Value	Nonresidential Value	Units	Source
Unit Savings Inputs					
HOU	Hours of use: daily average use of CFLs and LEDs	2.20	10.20	Hours/day	WI February 2016 TRM
ISR _{CFL}	In-service rate: percentage of CFLs installed	96%	96%	%	Survey administered during the WI 2016 in-home audits of 120 homes. Net present value ISR accounts for bulbs installed from storage.
ISR _{LED}	In-service rate: percentage of LEDs installed	97%	97%	%	
ΔWatts	Delta watts: difference in wattage between the efficient and baseline bulb	varies	varies	W	WI 2016 lumen equivalence analysis
CF	Coincidence factor: summer peak coincidence factor	0.069	0.770	-	WI February 2016 TRM
365	Days per year: conversion to annualize the daily hours of use	365	365	Days/year	WI February 2016 TRM
Total Savings Inputs					
CSS	Cross-sector sales: percentage of bulbs sales allocated to the residential and nonresidential sector	93.4%	6.6%	%	WI 2015 cross-sector sale analysis
EUL _{CFL}	Effective useful life: average life of a CFL bulb	8.0	5.0	Years	WI February 2016 TRM, MMID 2959 and 2134
EUL _{LED}	Effective useful life: average life of a LED bulb	20.0	7.0	Years	WI February 2016 TRM, MMID 3553-3556 and 3112

The verified inputs include the cross-sector sales percentage of 6.6% because verified savings calculate residential and nonresidential savings independently, then weight the savings for each residential and nonresidential measure using the cross-sector sales percentage. The verified savings in Table H-3. show the residential, nonresidential, and weighted savings.

Table H-3. CY 2016 Verified Gross Unit Savings¹

Measure	Residential		Nonresidential		Residential/ Nonresidential Weighted ²	
	kWh	kW	kWh	kW	kWh	kW
CFL, Reflector	26	0.002	123	0.025	35	0.004
CFL, Standard Bulb, 310-749 lm	15	0.001	68	0.012	18	0.002
CFL, Standard Bulb, 750-1,049 lm	23	0.002	107	0.020	29	0.003
CFL, Standard Bulb, 1,050-1,489 lm	25	0.002	120	0.025	31	0.004
CFL, Standard Bulb, 1,490-2,600 lm	38	0.003	174	0.033	47	0.005
LED, Reflector	41	0.004	189	0.038	50	0.006
LED, Omnidirectional, 310-749 lm	21	0.002	99	0.017	26	0.003
LED, Omnidirectional, 750-1,049 lm	26	0.002	122	0.025	33	0.004
LED, Omnidirectional, 1,050-1,489 lm	32	0.002	150	0.027	40	0.005
LED, Omnidirectional, 1,490-2,600 lm	45	0.004	209	0.041	56	0.007

¹No gas savings are claimed for the Program.

²Residential and nonresidential unit savings weighted by evaluated cross-sector sales percentage

Table H-4 provides baseline and efficient wattages and the corresponding delta watts values for the *ex ante* and verified savings.

Table H-4. *Ex Ante* and Verified Delta Watts Comparison

Measure	<i>Ex Ante</i> Baseline	Average Evaluated Baseline	<i>Ex Ante</i> Bulb Wattage	Average Bulb Wattage	<i>Ex Ante</i> Delta watts	Average Evaluated Delta watts
CFL, Reflector	65	53	15	14	50	39
CFL, Standard Bulb, 310-749 lm	29	30	9	11	20	19
CFL, Standard Bulb, 750-1,049 lm	43	43	13	13	30	30
CFL, Standard Bulb, 1,050-1,489 lm	53	53	18	19	35	34
CFL, Standard Bulb, 1,490-2,600 lm	72	72	23	23	49	49
LED, Reflector	65	62	12	10	53	52
LED, Omnidirectional, 310-749 lm	29	33	7	6	22	27
LED, Omnidirectional, 750-1,049 lm	43	43	11	9	32	34
LED, Omnidirectional, 1,050-1,489 lm	53	53	13	12	40	42
LED, Omnidirectional, 1,490-2,600 lm	72	73	17	15	55	58

Delta Watts Lumens Bins

This section provides details related to lumens bins, which was used when calculating verified delta watts inputs. Lumen bins for specialty bulbs are below in Table H-5, Table H-6, and Table H-7. The U.S. Department of Energy’s Uniform Methods Project (UMP) specifies these lumen bins.¹⁶

Table H-5. Globe Lumen Bins

Bin	Baseline (EISA-Impacted Bulbs)
250-349	25
350-499	29
500-574	43
575-649	53
650-1099	72
1100-1300	72

Table H-6. Decorative Shape (Candles) Lumen Bins

Bin	Baseline (EISA-Impacted Bulbs)
70-89	10
90-149	15
150-299	25
300-499	29
500-699	43

Table H-7. EISA-Exempt Lumen Bins (i.e., 3-way, post lamps, etc.)

Bin	Baseline (Exempt Bulbs)
0-309	25
310-449	25
450-799	40
800-1099	60
1100-1599	75
1600-1999	100
2000-2600	150
2601-3300	150
3301-4815	200

¹⁶ *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures.* “Chapter 21: Residential Lighting Evaluation Protocol.” Prepared by Apex Analytics, LLC. February 2015. Available online: <http://energy.gov/sites/prod/files/2015/02/f19/UMPChapter21-residential-lighting-evaluation-protocol.pdf>

Smart Thermostat and Manufactured Homes Pilots

The Evaluation Team conducted billing analyses to establish the gross natural gas and electric savings of the Smart Thermostat and Manufactured Homes Pilots. Focus on Energy provided the Evaluation Team with natural gas and electric billing data for customers who participated in the Smart Thermostat Pilot from July 2015 through January 2016. Focus on Energy provided the Evaluation Team with natural gas and electric billing data for customers who participated in the Manufactured Homes Pilot from December 2015 to January 2016.

The billing data received for both pilots covered the period from January 2014 through December 2016. Focus on Energy also provided detailed SPECTRUM tracking data for pilot participants from CY 2015 through CY 2016.

Because post-period data were insufficient due to the timing of when the billing analyses were conducted, the Evaluation Team did not use nonparticipant groups (composed of future participants) to control for exogenous factors during the analysis periods. As a result, the billing analyses provide gross savings estimates. The Evaluation Team estimated the pilots' savings overall and by pre-participation-use quartile gross energy savings.

For each participant, the Evaluation Team obtained these data:

- SPECTRUM ID and customer ID
- Customer name and address including zip code
- Minimum measure installation date
- Maximum measure installation date
- Total *ex ante* gas therms savings
- Total *ex ante* electric kWh savings
- Minimum other Focus on Energy program measure installation date
- Maximum other Focus on Energy program measure installation date
- Total other Focus on Energy program participation therms *ex ante* savings
- Total other Focus on Energy program participation kWh *ex ante* savings
- Other thermostat related information such as make and type of thermostat installed, place of purchase, and the number of thermostats installed.

The Evaluation Team then combined the customer-level tracking information with the electric and gas billing data by SPECTRUM ID.

Next, the Evaluation Team followed these steps to conduct each billing analysis:

1. Checked each participant account against SPECTRUM tracking data for participation in other programs occurring in the analysis period
2. Obtained daily average temperature weather data from January 2014 through December 2016 for 20 National Oceanic and Atmospheric Administration (NOAA) weather stations, representing all zip codes associated with the participants
3. Used daily average temperatures to determine base 45 through base 85 heating degree days (HDDs) and cooling degree days (CDDs) for each station
4. Obtained typical meteorological year 3 (TMY3; 1991–2005) annual normal and cooling degree days to weather normalize the billing data
5. Matched billing data periods with the CDDs and HDDs from the associated stations

The Evaluation Team defined the participant pre-installation period as the one year before the first measure installation and the post-installation period as the one year after the measure installation.

The Evaluation Team relied on the PRinceton Scorekeeping Method (PRISM) to develop savings estimates because its models are easier to summarize across various groups.

Data Screening

The Evaluation Team removed these items from the analyses:

- Billing data readings that spanned less than 15 days or more than 65 days
- Electric billing data monthly readings where the use was less than 1 kWh per day
- Participant customers with fewer than 10 pre- and 10 post-installation months

This ensured that the pre- and post-installation periods were well balanced and that all seasons were represented in the PRISM models.

PRISM Modeling Approach

In the next step of the screening process, the Evaluation Team estimated PRISM models for pre- and post-installation billing data. These models provided weather-normalized pre- and post-installation annual use for each account.

The PRISM electric model used the following specification:

$$ADC_{it} = \alpha_i + \beta_1 AVGHDD_{it} + \beta_2 AVGCDD_{it} + \varepsilon_{it}$$

Where for each customer *i* and month *t*:

ADC_{it}	=	Average daily kWh consumption in the pre-/post-installation period
α_i	=	Participant intercept; represents the average daily kWh base load
β_1	=	Model space heating parameter value
β_2	=	Model cooling parameter value

- $AVGHDD_{it}$ = Base 45-65 average daily HDDs for the specific location
- $AVGCDD_{it}$ = Base 65-85 average daily CDDs for the specific location
- ε_{it} = Error term

Using this model, the Evaluation Team computed weather-normalized annual consumption (NAC) for each heating and cooling reference temperature, as follows:

$$NAC_i = \alpha_i * 365 + \beta_1 LRHDD_i + \beta_2 LRCDD_i + \varepsilon_i$$

Where for each customer 'i':

- NAC_i = Normalized annual kWh consumption
- α_i = Intercept is the average daily or base load for each participant; it represents the average daily base load from the model
- $\alpha_i * 365$ = Annual base load kWh usage (non-weather sensitive)
- β_1 = Heating parameter value; in effect, this is usage per heating degree day from the model above
- $LRHDD_i$ = Annual, long-run HDDs of a typical meteorological year (TMY3) in the 1991–2005 series from NOAA, based on the home location
- $\beta_1 * LRHDD_i$ = Weather-normalized annual weather sensitive heating usage, also known as HEATNAC
- β_2 = Cooling parameter value; in effect, this is usage per CDD from the model above
- $LRCDD_i$ = Annual, long-run CDDs of a typical meteorological year (TMY3) in the 1991–2005 series from NOAA, based on home location
- $\beta_2 * LRCDD_i$ = Weather-normalized annual weather sensitive cooling usage, also known as COOLNAC
- ε_i = Error term

Furthermore, if the heating and cooling models above yielded negative intercepts, negative heating parameters, or negative cooling parameters, the Evaluation Team estimated additional models that included only the cooling usage (cooling-only models) or the heating usage (heating-only models). From these models with correct signs on all of the parameters, the best model chosen for each participant for the pre- and post-installation periods was the model that had the highest R-square.

The PRISM gas models used the following specification:

$$ADC_{it} = \alpha_i + \beta_1 AVGHDD_{it} + \varepsilon_{it}$$

Where for each customer ‘i’ and month ‘t’:

ADC_{it}	=	Average daily therms consumption in the pre-/post-program period
α_i	=	Participant intercept; represents the average daily therms base load
β_1	=	Model space heating parameter value
$AVGHDD_{it}$	=	Base 45-65 average daily HDDs for the specific location
ε_{it}	=	Error term

Using this model, the Evaluation Team computed NAC for each heating and cooling reference temperature, as follows:

$$NAC_i = \alpha_i * 365 + \beta_1 LRHDD_i + \varepsilon_i$$

Where for each customer ‘i’:

NAC_i	=	Normalized annual therms consumption
α_i	=	Intercept is the average daily or base load for each participant; it represents the average daily base load from the model
$\alpha_i * 365$	=	Annual base load therms usage (non-weather sensitive)
β_1	=	Heating parameter value; in effect, this is usage per heating degree day from the model above
$LRHDD_i$	=	Annual, long-run HDDs of a typical month year (TMY3) in the 1991–2005 series from NOAA, based on the home location
$\beta_1 * LRHDD_i$	=	Weather-normalized annual weather sensitive heating usage, also known as HEATNAC
ε_i	=	Error term

Once the pre- and post-installation uses were obtained for each customer, the Evaluation Team applied other PRISM-based screening steps and excluded these items:

- Accounts where the post-installation weather-normalized (POSTNAC) use was 70% higher or lower than the pre-installation weather-normalized (PRENAC) use. Such large changes could indicate property vacancies when adding or removing other electric equipment that are unrelated to the pilots.
- Accounts that had missing PRENAC or POSTNAC estimates (because of negative heating/cooling slopes or negative intercepts) because they probably indicated problems with the billing data
- Accounts that received additional measures through other programs in the analysis period
- Electric accounts where PRENAC or POSTNAC was less than 1,000 kWh or more than 65,000 kWh
- Gas accounts where PRENAC or POSTNAC was less than 100 therms or more than 4,000 therms

Finally, the Evaluation Team performed billing data screens that examined the natural gas and electric monthly billing data for one customer at a time and plotted average monthly use. To avoid confounding the billing analyses, the Evaluation Team removed accounts with outliers, vacancies, seasonal use, and equipment changes in the pre- or post-installation periods.

Smart Thermostat Pilot Data Screening Results

Table H-8 summarizes the attrition for the Smart Thermostat Pilot natural gas account participants from the various screens. The data showed that 4,148 participants received a smart thermostat from July 2015 through January 2016. The Team removed approximately 28% of participants due to attrition (because billing data did not match and because of insufficient months of billing data). Another 7% were removed from PRISM screening because of large percentage changes in usage and participation in other programs during the analysis period. Six percent of participants were removed from individual billing review. The final gas analysis group included 2,427 participants.

Table H-8. Smart Thermostat Pilot Gas Participant Account Attrition

Screen	Participants Remaining	Percentage Remaining	Number Dropped	Percentage Dropped
Original Natural Gas Accounts	4,148	100%	0	0%
Matched to Billing Data Provided	3,903	94%	245	6%
Less than 10 Months of Pre- or Post-Period Billing Data	2,974	72%	929	22%
Usage/Percentage Change Screens and PRISM Screening	2,799	67%	175	4%
Individual Customer Bill Review: Outliers, Vacancies, Seasonal Usage, and Equipment Changes	2,558	62%	241	6%
Participated In Other Programs During Analysis Period	2,427	59%	131	3%
Final Analysis Group	2,427	59%	1,721	41%

Table H-9 summarizes the attrition for the Smart Thermostat Pilot electric account participants from the various screens. The data showed that 4,017 participants received a smart thermostat from July 2015 through January 2016. Attrition removed approximately 35% of participants because billing data did not match and because of insufficient months of billing data. Another 7% were removed due to individual billing review problems, and 5% were removed because of PRISM screening, large percentage changes in usage, and participation in other programs during the analysis period. The final electric analysis group included 2,110 participants.

Table H-9. Smart Thermostat Pilot Electric Participant Account Attrition

Screen	Participants Remaining	Percentage Remaining	Number Dropped	Percentage Dropped
Original Electric Accounts	4,017	100%	0	0%
Matched to Billing Data Provided	3,625	90%	392	10%
Less than 10 Months of Pre- or Post-Period Billing Data	2,622	65%	1,003	25%
Usage/Percentage Change Screens and PRISM Screening	2,566	64%	56	1%
Individual Customer Bill Review: Outliers, Vacancies, Seasonal Usage, and Equipment Changes	2,266	56%	300	7%
Participated In Other Programs During Analysis Period	2,110	53%	156	4%
Final Analysis Group	2,110	53%	1,907	47%

Following these screens, the Smart Thermostat Pilot gas analysis group included 2,427 participants (59% of the original total) and the electric analysis group included 2,110 participants (53% of the original total).

Manufactured Homes Pilot Data Screening Results

Table H-10 summarizes the attrition for the Manufactured Homes Pilot natural gas account participants from the various screens. The data showed that 68 participants received Pilot measures as of January 2016. The Team removed approximately 13% due to attrition (because billing data did not match and because of insufficient months of billing data), another 3% due to PRISM screening and large percentage changes in usage, and 3% due to individual billing review. The final gas analysis group included 55 participants (81% of the original total).

Table H-10. Manufactured Homes Pilot Gas Participant Account Attrition

Screen	Participants Remaining	Percentage Remaining	Number Dropped	Percentage Dropped
Original Natural Gas Accounts	68	100%	0	0%
Matched to Billing Data Provided	68	100%	0	0%
Less than 10 Months of Pre- or Post-Period Billing Data	59	87%	9	13%
Usage/Percentage Change Screens and PRISM Screening	57	84%	2	3%
Individual Customer Bill Review: Outliers, Vacancies, Seasonal Usage, and Equipment Changes	55	81%	2	3%
Participated In Other Programs During Analysis Period	55	81%	0	0%
Final Analysis Group	55	81%	13	19%

Table H-11 summarizes the attrition for the Manufactured Homes Pilot electric account participants from the various screens. The data showed that 78 participants received Pilot measures as of January 2016. The Evaluation Team removed approximately 16% due to attrition (because billing data did not match and because of insufficient months of billing data), and another 6% due to individual billing review. The final electric analysis group included 60 participants (77% of the original total).

Table H-11. Manufactured Homes Pilot Electric Participant Account Attrition

Screen	Participants Remaining	Percentage Remaining	Number Dropped	Percentage Dropped
Original Electric Accounts	78	100%	0	0%
Matched to Billing Data Provided	77	99%	1	1%
Less than 10 Months of Pre- or Post-Period Billing Data	65	83%	12	15%
Usage/Percentage Change Screens and PRISM Screening	65	83%	0	0%
Individual Customer Bill Review: Outliers, Vacancies, Seasonal Usage, and Equipment Changes	60	77%	5	6%
Participated In Other Programs During Analysis Period	60	77%	0	0%
Final Analysis Group	60	77%	18	23%

From the screened billing analysis samples, the Evaluation Team summarized the PRISM average Difference in Normalized Annual Consumption (DNAC = PRENAC – POSTNAC) for participants to yield the average gross savings for each pilot. The Evaluation Team also used the PRISM method to obtain the weather normalized pre-installation period usage (PRENAC) used to determine the percentage savings.

Smart Thermostat Pilot Billing Analysis Results

Electric Savings Results

Table H-12 summarizes the Smart Thermostat Pilot electric gross realized savings estimated by the PRISM models and realization rates, as well as the standard errors around the savings estimates. The participant group reduced weather sensitive (heating and cooling) energy use by 444 kWh, or 18.5%. Compared to an *ex ante* estimate of 81 kWh, the savings represent a 549% realization rate. With an average total pre-period NAC (normalized annual consumption) of 10,051 kWh, the savings represent a 4.4% reduction in total usage.

Table H-12. Smart Thermostat Pilot Gross Electric Savings from Billing Analysis

Group	N	Ex Post Model Savings (kWh)	Ex Ante Savings per Participant (kWh)	Realization Rate	Precision at 90% Level	PRENAC (kWh)	Weather Sensitive PRENAC (Heating + Cooling kWh)	Ex Ante Expected Savings	Ex Post Savings
Participant Gross	2,110	444	81	549%	9%	10,051	2,397	3.4%	18.5%

The table below presents the Smart Thermostat Pilot gross electric savings overall and by quartile of total pre-period usage.¹⁷ Gross savings represented approximately 16% of pre-installation period weather sensitive consumption for the lowest quartile and 19% for the higher use quartiles.¹⁸ The *ex ante* expected consumption savings as a percentage of pre-installation period weather sensitive consumption were as high as 6% for the first quartile (i.e., lowest pre-installation period consumption), down to 2% for the highest quartile. Thus, the realized savings were high, at 291% of claimed savings, for the lowest quartile group and 878% for the highest consumption quartile.

¹⁷ Quartiles are defined as equal groups of participant sorted by pre-installation period consumption (lowest to highest).

¹⁸ Savings as percentage of total usage were consistent between the four quartiles – ranging from 4.2% to 4.6%, with an average of 4.4%.

Table H-13. Smart Thermostat Pilot Evaluated Detailed Gross Electric Energy Savings from Billing Analysis

Group	N	Ex Post Model Savings (kWh)	Ex Ante Savings per Participant (kWh)	Realization Rate	Precision at 90% Level	Weather Sensitive PRENAC (Heating + Cooling kWh)	Ex Ante Expected Savings	Ex Post Savings
Quartile 1	527	234	80	291%	20%	1,422	5.6%	16.4%
Quartile 2	528	338	81	419%	17%	1,944	4.2%	17.4%
Quartile 3	528	489	81	603%	15%	2,481	3.3%	19.7%
Quartile 4	527	716	82	878%	16%	3,742	2.2%	19.1%
Overall	2,110	444	81	549%	9%	2,397	3.4%	18.5%

Gas Savings Results

The next table summarizes the Smart Thermostat Pilot gas gross realized savings estimated by the PRISM models and realization rates, as well as the standard errors around the savings estimates. The participant group reduced weather sensitive (heating) energy use by 31 therms, or 4.7%. Compared to an *ex ante* estimate of 96 therms, the savings represent a 33% realization rate. With an average total pre-period NAC (normalized annual consumption) of 844 therms, the savings represent a 3.7% reduction in total usage.

Table H-14. Smart Thermostat Pilot Gross Gas Savings from Billing Analysis

Group	N	Ex Post Model Savings (therms)	Ex Ante Savings per Participant (therms)	Realization Rate	Precision at 90% Level	PRENAC (therms)	Weather Sensitive PRENAC (Heating therms)	Ex Ante Expected Savings	Ex Post Savings
Participant Gross	2,427	31	96	33%	9%	844	670	14.3%	4.7%

The next table presents the Smart Thermostat Pilot gross gas savings overall and by quartile of total pre-installation period heating usage. Gross savings represented approximately 2% of pre-installation period heating consumption for the lowest quartile and 6% for the higher use quartiles.¹⁹ The *ex ante* expected consumption savings as a percentage of pre-installation period weather sensitive consumption were as high as 24% for the first quartile (i.e., lowest pre-installation period consumption) down to 10% for the highest quartile. Thus, the realized savings were very low, at 10% of claimed savings, for the lowest quartile group and 61% for the highest consumption quartile.

¹⁹ Savings as percentage of total usage were 1.8% in the lowest quartile, increasing for each quartile up to 5.0% in the highest quartile, with an average of 3.7%.

Table H-15. Smart Thermostat Pilot Evaluated Detailed Gross Gas Energy Savings from Billing Analysis

Group	N	Ex Post Model Savings (therms)	Ex Ante Savings per Participant (therms)	Realization Rate	Precision at 90% Level	Weather Sensitive PRENAC (Heating therms)	Ex Ante Expected Savings	Ex Post Savings
Quartile 1	606	10	93	10%	35%	380	24.4%	2.5%
Quartile 2	608	20	93	21%	20%	551	16.9%	3.5%
Quartile 3	606	33	94	35%	18%	703	13.3%	4.7%
Quartile 4	607	63	104	61%	12%	1,044	9.9%	6.0%
Overall	2,427	31	96	33%	9%	670	14.3%	4.7%

Manufactured Homes Pilot Billing Analysis Results

Electric Savings Results

Table H-16 summarizes the Manufactured Homes Pilot electric gross realized savings estimated by the PRISM models and realization rates, as well as the standard errors around the savings estimates. The participant group reduced energy use by 513 kWh, or 6.5%. Compared to an *ex ante* estimate of 1,826 kWh, the savings represent a 28% realization rate. The *ex ante* savings estimate is 23% of the total pre-installation period usage.

Table H-16. Manufactured Homes Pilot Gross Electric Savings from Billing Analysis

Group	N	Ex Post Model Savings (kWh)	Ex Ante Savings per Participant (kWh)	Realization Rate	Precision at 90% Level	PRENAC (kWh)	Ex Ante Expected Savings	Ex Post Savings
Participant Gross	60	513	1,826	28%	38%	7,842	23.3%	6.5%

Table H-17 presents the Manufactured Homes gross electric savings overall and by quartile of total pre-installation period usage.²⁰ Gross savings represented approximately 7% of pre-installation period consumption for the low-use group and 6% for the high-use group. The *ex ante* expected consumption savings as a percentage of pre-installation period was 30% for the low-use group and 20% for the high-use group. Thus, the realized savings were 24% of claimed savings for the low-use group, and 32% for the high-use group.

²⁰ Quartiles are defined as equal groups of participant sorted by pre-installation period consumption (lowest to highest). Due to small sample sizes quartiles 1 and 2 were combined into a low usage category, and quartiles 3 and 4 were combined into a high usage category.

**Table H-17. Manufactured Homes Pilot Evaluated
Usage Group Gross Electric Energy Savings from Billing Analysis**

Group	N	Ex Post Model Savings (kWh)	Ex Ante Savings per Participant (kWh)	Realization Rate	Precision at 90% Level	PRENAC (kWh)	Ex Ante Expected Savings	Ex Post Savings
Quartiles 1 and 2 (Low Use)	30	389	1,654	24%	42%	5,475	30.2%	7.1%
Quartiles 3 and 4 (High Use)	30	636	1,997	32%	55%	10,209	19.6%	6.2%
Overall	60	513	1,826	28%	38%	7,842	23.3%	6.5%

The next table presents the Manufactured Homes Pilot gross electric savings overall and by vintage of the manufactured homes (pre-1993 or 1993 and after). Gross savings represented approximately 6% of pre-installation consumption for the pre-1993 built manufactured homes and 9% for the 1993 or later built manufactured homes. The *ex ante* expected consumption savings as a percentage of pre-installation period was 24% for the pre-1993 group and 22% for the post-1993 group. Thus, the realized savings were 24% of claimed savings for the pre-1993 group, and 40% for the post-1993 group. Although there is similarity between the *ex ante* savings for the two vintage categories, it is unclear why the newer homes are achieving higher electric savings.

**Table H-18. Manufactured Homes Pilot Evaluated
Vintage Gross Electric Energy Savings from Billing Analysis**

Vintage	N	Ex Post Model Savings (kWh)	Ex Ante Savings per Participant (kWh)	Realization Rate	Precision at 90% Level	PRENAC (kWh)	Ex Ante Expected Savings	Ex Post Savings
Before 1993	43	432	1,838	24%	±49%	7,654	24.0%	5.6%
1993 or after	17	716	1,793	40%	±60%	8,318	21.6%	8.6%
Overall	60	513	1,826	28%	±38%	7,842	23.3%	6.5%

Gas Savings Results

Table H-19 summarizes the Manufactured Homes Pilot gas gross realized savings estimated by the PRISM models and realization rates, as well as the standard errors around the savings estimates. The participant group reduced energy use by 24 therms, or 3.7%. Compared to an *ex ante* estimate of 95 therms, the savings represent a 25% realization rate. The *ex ante* savings estimate is 15% of the total pre-installation period usage.

Table H-19. Manufactured Homes Pilot Gross Gas Savings from Billing Analysis

Group	N	Ex Post Model Savings (therms)	Ex Ante Savings per Participant (therms)	Realization Rate	Precision at 90% Level	PRENAC (therms)	Ex Ante Expected Savings	Ex Post Savings
Participant Gross	55	24	95	25%	56%	649	14.7%	3.7%

Table H-20 presents the Manufactured Homes gross gas savings overall and by quartile of total pre-installation period heating usage.²¹ Gross savings represented approximately 1% of pre-installation period weather sensitive consumption for the low-use group and 6% for the high-use group. The *ex ante* expected consumption savings as a percentage of pre-installation period was 17% for the low-use group and 13% for the high-use group. Thus, the realized savings were 5% of claimed savings for the low-use group and 43% for the high-use group.

Table H-20. Manufactured Homes Pilot Evaluated Usage Group Gross Gas Energy Savings from Billing Analysis

Usage Group	N	Ex Post Model Savings (therms)	Ex Ante Savings per Participant (therms)	Realization Rate	Precision at 90% Level	PRENAC (therms)	Ex Ante Expected Savings	Ex Post Savings
Quartiles 1 and 2 (Low Use)	28	5	86	5%	350%	515	16.7%	0.9%
Quartiles 3 and 4 (High Use)	27	45	105	43%	46%	787	13.3%	6.3%
Overall	55	24	136	25%	56%	649	14.7%	3.7%

The next table presents the Manufactured Homes gross natural gas savings overall and by vintage of the manufactured homes (pre-1993 or 1993 and after). Gross savings represented approximately 6% of pre-installation consumption for the pre-1993 built manufactured homes and -4% for the 1993 or later built manufactured homes. The *ex ante* expected consumption savings as a percentage of pre-installation period was 16% for the pre-1993 group and 10% for the post-1993 group.

Thus, the realized savings were 35% of claimed savings for the pre-1993 group, and -38% for the post-1993 group. The post-1993 homes show insignificant negative savings—possibly indicating that the homes were already fairly efficient—and these homes received less measures (lower *ex ante*). The savings in the pre-1993 built homes are higher at 37 therms (5.5%), revealing that there is more savings potential in the older homes.

²¹ Quartiles are defined as equal groups of participant sorted by pre-installation period consumption (lowest to highest). Due to small sample sizes quartiles 1 and 2 were combined into a low usage category, and quartiles 3 and 4 were combined into a high usage category.

**Table H-21. Manufactured Homes Pilot Evaluated
Vintage Gross Gas Energy Savings from Billing Analysis**

Vintage	N	Ex Post Model Savings (therms)	Ex Ante Savings per Participant (therms)	Realization Rate	Precision at 90% Level	PRENAC (therms)	Ex Ante Expected Savings	Ex Post Savings
Before 1993	43	37	106	35%	±40%	667	15.9%	5.5%
1993 or after	12	-21	56	-38%	±111%	582	9.6%	-3.7%
Overall	55	24	136	25%	±56%	649	14.7%	3.7%

Seasonal Savings Pilot

The Seasonal Savings Pilot was implemented by Nest Labs, which did not collect the customer data required to obtain billing data for Pilot participants. Instead, the Pilot Implementer provided the following information to the Evaluation Team:

- Savings reports produced from the Pilot Implementer’s internal analyses²²
- The Stata analysis script used by the Pilot Implementer to determine overall setpoint changes
- Thermostat data aggregated to daily values of the following variables:
 - Anonymous thermostat ID
 - Participation status for each season (winter and summer)
 - Date
 - Heating/cooling mode hours per day
 - Hours of heating/cooling furnace run time per day
 - Scheduled setpoint temperature
 - Actual setpoint temperature (includes participant overrides)
 - Indoor temperature
 - Outdoor temperature

The Pilot Implementer’s data covered December 2015 to April 2016 for winter deployment and June 2016 to October 2016 for summer deployment. Customers were asked to opt-in to the pilot and participation status was designated as *Accepted*, *Did Not Accept*, *Did Not Qualify*, or *Control*. The Pilot Implementer used a winter deployment control group consisting of nonparticipants in nearby states, such as Illinois, and a summer deployment control group consisting of Smart Thermostat Pilot participants.

The Pilot Implementer calculated *ex ante* savings based on changes in scheduled heating and cooling setpoints over the same periods of interest. It then converted these overall setpoint differences to

²² Nest Labs. “Seasonal Savings Impacts in Wisconsin: Summer 2016, June 2016 through October 2016” and “Seasonal Savings Impacts in Wisconsin, January 2016 through April 2016.”

energy savings by two main factors—there was a 4.5% (9.2%) reduction in heating (cooling) run time per degree change in setpoint, and the gas and electricity use per hour of run time was derived from Wisconsin TRM assumptions.

The Evaluation Team used the provided thermostat data with Smart Thermostat Pilot billing data to confirm the overall Pilot Implementer setpoint changes and evaluate both of these conversion factors.

Thermostat Data Review

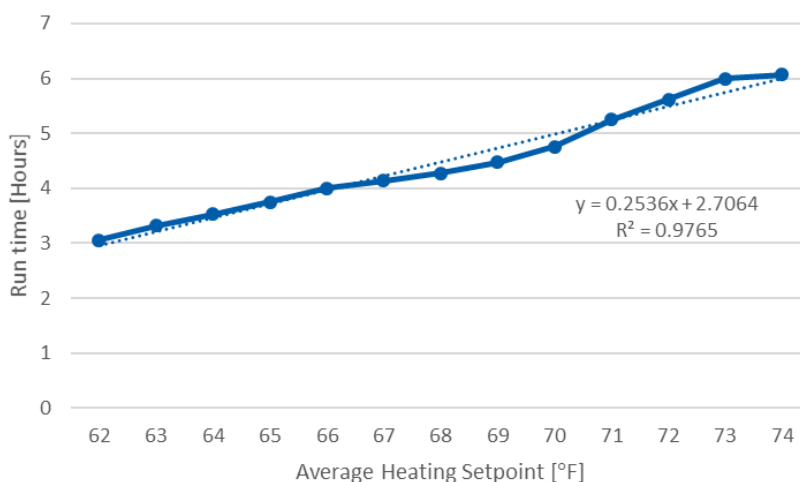
The Evaluation Team’s review of participant thermostat data began with a simple confirmation of overall setpoint differences attributable to the Seasonal Savings Pilot for both winter and summer seasons (informed by the Pilot Implementer’s Stata analysis script). The Pilot Implementer’s reported setpoint changes were 0.43°F (winter deployment) and 0.52°F (summer deployment).

The Evaluation Team then tested the Pilot Implementer’s savings per degree setpoint change by using the daily thermostat data to correlate furnace run time to setpoint temperature for both winter and summer seasons.

Winter

Figure H-1 shows the relationship between heating setpoint and heating run time for Seasonal Savings Pilot winter participants. On average, there was a 5.7% reduction in usage for each degree decrease in thermostat setting. This suggested that the Pilot Implementer’s assumption of a 4.5% energy use reduction per degree was reasonable, if not conservative.

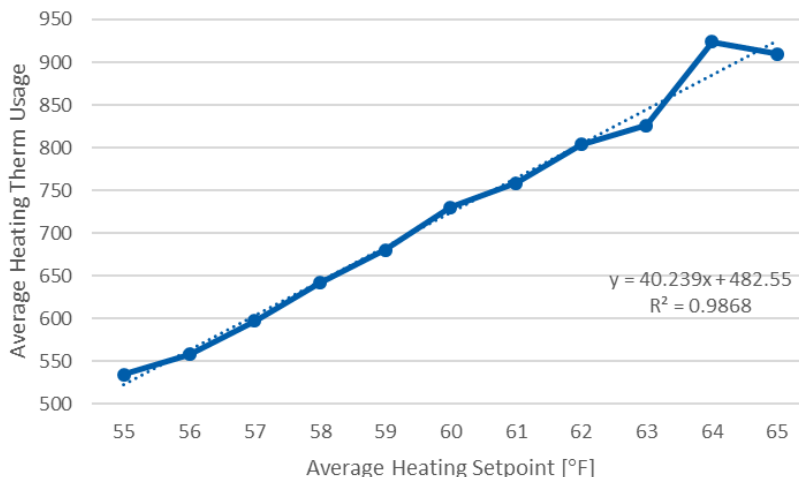
Figure H-1. Nest Winter Participant Furnace Run Time vs. Thermostat Setpoint



The Evaluation Team further tested this assumption by using billing data from another utility. Figure H-2 shows the relationship between average heating usage and PRISM-selected reference temperature (i.e., setpoint). In this case, there was a 5.5% reduction in usage for each degree decrease in temperature. Although this finding also supported the Pilot Implementer’s savings assumptions, it should be noted that these data came from a different climate zone.

Based on these two analyses, the Evaluation Team concluded that the Pilot Implementer’s assumption of 4.5% HVAC savings per degree setpoint change (in winter) was a reasonable estimate.

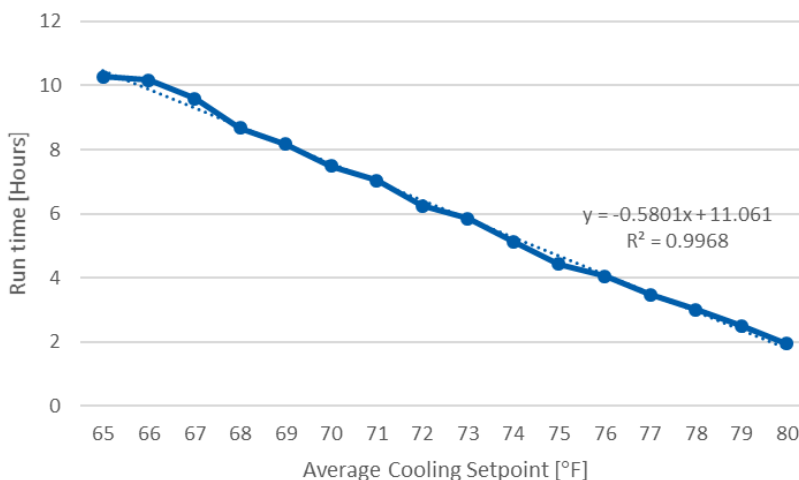
Figure H-2. Anonymous Utility Billing Analysis Therms Use vs. Thermostat Setpoint



Summer

The Evaluation Team also tested the Pilot Implementer’s assumption of a 9.2% HVAC energy savings per degree setpoint change in summer. Figure H-3 shows the relationship between cooling setpoint and run time for Seasonal Savings Pilot summer participants. On average, there was a 10% reduction in usage for each degree increase in thermostat setting. This finding also supported the Pilot Implementer’s savings assumptions.

Figure H-3. Nest Summer Participant Cooling Run Time vs. Thermostat Setpoint



Seasonal Savings Pilot Supplemental Billing Analysis

The Evaluation Team conducted a billing analysis for the Smart Thermostat Pilot (see the Smart Thermostat and Manufactured Homes Pilot section). A significant fraction of Smart Thermostat Pilot participants used Nest thermostats but did not participate in the Seasonal Savings Pilot. By applying the billing data from this subset of Smart Thermostat Pilot participants, the Evaluation Team obtained an estimate of actual heating and cooling energy use for Wisconsin residents who own Nest thermostats but who did not participate in the Seasonal Savings Pilot.

Winter Gas Savings Results

The Smart Thermostat Pilot gas billing sample contained 1,842 Nest users. The Evaluation Team used the results of the Smart Thermostat Pilot PRISM analysis to obtain average annual gas heating use for this subset of participants (post-thermostat installation). The Team then adjusted usage by the fraction of total HDD contained in the Seasonal Savings Pilot period of interest (61.4%) to determine the baseline gas heating use over the winter deployment period.

The Evaluation Team then applied the previously tested Pilot Implementer assumptions (e.g., percent HVAC savings) to this usage. This resulted in a 7.46 therms reduction per thermostat over the winter deployment period for the two utilities participating in the Smart Thermostat Pilot (We Energies and Wisconsin Public Service, or WPS). The Evaluation Team compared these savings to the Pilot Implementer’s estimated savings for the same two utilities (7.37 therms) and determined an overall gas use realization rate of 101%. The Team then applied this realization rate to the statewide results (i.e., all utilities).

Table H-22 compares the Evaluation Team’s usage and savings estimates with the Nest run time report.²³ Overall heating usage estimates were very similar, suggesting that the Wisconsin TRM heating capacities and furnace efficiencies (on which the Pilot Implementer based its heating use estimates) provided a very good approximation of the furnace energy use of the sample.²⁴

Table H-22. Winter Seasonal Savings Deployment Therms Savings Summary

Analysis Source	PRISM-Based Annual Heating Usage (therm)	HDD Factor	Heating Usage – Deployment Period (therm)	Savings – Billing Sample (therm/unit)	Realization Rate	Savings State Wide (therm/unit)
Evaluation Team	633	61.41%	389	7.46	101.2%	7.29
Nest	-	-	384	7.37		7.20

²³ Nest Labs. “Seasonal Savings Impacts in Wisconsin, January 2016 through April 2016.”

²⁴ Nest used the actual heating run-times based on the thermostat information. The TRM usage is composed of three factors: Equivalent Full Load Heating Hours (EFLH), Heating Capacity, and Heating AFUE efficiency. Since the Evaluation Team and Nest usage estimates align, the source of the unusually high Smart Thermostat Pilot gas baseline usage appears to be due to high TRM EFLH estimates.

Winter Electric Savings Results

The Smart Thermostat Pilot electric billing sample contained 1,610 Nest users. The Evaluation Team used the results of the Smart Thermostat Pilot PRISM analysis to obtain average annual HVAC fan (i.e., electric) heating use for this subset of participants (post-thermostat installation). The Team then adjusted this usage by the fraction of total HDD contained in the Seasonal Savings Pilot period of interest (61.4%) to determine the baseline electric heating use over the winter deployment period.

The Evaluation Team again applied the previously tested Pilot Implementer assumptions (e.g., percent HVAC savings) to this usage. This resulted in an 8.5 kWh reduction per thermostat over the winter deployment period for the two utilities participating in the Smart Thermostat Pilot (We Energies and WPS). The Team compared these savings to the Pilot Implementer’s estimated savings for the same two utilities (5.4 kWh) and determined an overall winter electric use realization rate of 157%. The Team then applied this realization rate to the statewide results (i.e., all utilities).

Table H-23 compares the Evaluation Team’s usage and savings estimates with the Nest run time report.²⁵ Overall heating usage estimates from the PRISM analysis were higher than those estimated by the Pilot Implementer (using the Wisconsin TRM) and could be caused by a number of factors, including these:

- The PRISM models may have allocated some other loads (such as lighting) to the electric fan use.
- Some customers may be utilizing supplemental electric heating in the winter.

Table H-23. Winter Seasonal Savings Deployment kWh Savings Summary

Analysis Source	PRISM-Based Annual Heating Usage (kWh)	HDD Factor	Heating Usage – Deployment Period (kWh)	Savings – Billing Sample (kWh/unit)	Realization Rate	Savings State Wide (kWh/unit)
Evaluation Team	723	61.41%	444	8.53	157.3%	8.34
Nest	-	-	282	5.42		5.30

Summer Electric Savings Results

Similar to the previous electric analysis, the summer electric savings evaluation made use of the 1,610 Nest users found in the Smart Thermostat Pilot electric billing analysis sample. The Evaluation Team used the results of the Smart Thermostat Pilot PRISM analysis to obtain average annual HVAC cooling use for this subset of participants. The Team then adjusted this usage by the fraction of total CDD contained in the Seasonal Savings Pilot period of interest (90.3%) to determine the baseline electric cooling use over the summer deployment period.

The Evaluation Team applied the previously tested Pilot Implementer assumptions (e.g., 3.66% HVAC savings in summer) to this usage. This resulted in a 41.8 kWh reduction per thermostat over the summer deployment period for the two utilities participating in the Smart Thermostat Pilot (We Energies and

²⁵ Nest Labs. “Seasonal Savings Impacts in Wisconsin, January 2016 through April 2016.”

WPS). The Team compared these savings to the Pilot Implementer’s estimated savings for the same two utilities (38.7 kWh) and determined an overall summer electric use realization rate of 108%. The Team then applied this realization rate to the statewide results (i.e., all utilities).

Table H-24 compares the Evaluation Team’s usage and savings estimates with the Nest run time report.²⁶ Overall cooling usage estimates were very similar, suggesting that the Wisconsin TRM cooling capacities and AC SEER efficiencies are accurate, and again provide a good approximation of the cooling energy use of the investigated sample.²⁷

Table H-24. Summer Seasonal Savings Deployment kWh Savings Summary

Analysis Source	PRISM-Based Annual Cooling Usage (kWh)	CDD Factor	Cooling Usage – Deployment Period (kWh)	Savings – Billing Sample (kWh/unit)	Realization Rate	Savings State Wide (kWh/unit)
Evaluation Team	1,265	90.32%	1,143	41.83	108.2%	39.80
Nest	-	-	1,056	38.67		37.10

²⁶ Nest Labs. “Seasonal Savings Impacts in Wisconsin: Summer 2016, June 2016 through October 2016”

²⁷ Nest used the actual cooling run-times based on the thermostat information. The TRM usage is composed of three factors: Equivalent Full Load Cooling Hours (EFLC), Cooling Capacity, and AC SEER efficiency. Since the Evaluation Team and Nest usage estimates align, the source of the unusually low Smart Thermostat Pilot electric cooling baseline usage appears to be due to low TRM EFLC estimates.

Appendix I. Net Savings Analysis Methodologies

For the CY 2016 evaluation of Focus on Energy's programs, the Evaluation Team applied net-to-gross (NTG) adjustments drawn mostly from primary research. This appendix presents four general approaches used to assess net savings—standard market practice (SMP), demand elasticity modeling, national sales data modeling, and self-report NTG—and how they were applied to each program.

Net Savings Overview

As described in Volume II, the evaluation of a program involves reviewing the reported gross savings to ensure that the measures installed have remained installed and are working as intended and then applying any adjustments from the findings of the review. The result is the verified gross savings.

Net savings are the final savings, as reviewed by an independent evaluator, attributed to a program. This means that the program is directly responsible for the savings, and the savings would not have been achieved in the absence of that program. In deriving this value, evaluators account for, and deduct, reported savings that are associated with freeriders (participants who would have undertaken the same action and achieved the same savings in the absence of a program) and account for, and add, spillover savings (savings that are the result of a program's influence but for which no incentive was paid and for which no program has recorded savings).

Net savings represent the total savings achieved from the investment of ratepayer dollars into the program. These net savings are the primary benefits factored into the benefit/cost analysis used for designing programs and ensuring that they are operating in a manner that returns a net positive benefit to ratepayers. For Focus on Energy, these net savings are also used for tracking the progress toward the savings targets established for Focus on Energy by the Public Service Commission of Wisconsin.

This appendix discusses the specific approaches the Evaluation Team used in deriving the net savings for the CY 2016 Focus on Energy programs. Of particular note, beginning in CY 2013, the Evaluation Team began the process of moving away from estimating net savings exclusively from survey results to approaches driven by sales data or results determined through an experimental design. One example is SMP, an approach that measures the impact of the programs on the average efficiencies of measures sold and installed in Wisconsin. Other examples of data-driven approaches are national sales data modeling and demand elasticity modeling (which measures the lift in retail sales from changes in incentive levels).

Focus on Energy's long-term goal is to use these data-driven approaches as broadly as possible and to limit reliance on self-reporting methods. The Evaluation Work Group (EWG) approved the use of these approaches and supports increasing their use where reliable results can be obtained with reasonable cost and effort.

The Evaluation Team conducted SMP, demand elasticity modeling, national sales data modeling, and self-report for measures offered throughout the portfolio. In some cases, the Evaluation Team combined

the measure-level results from the SMP with the self-report methods to determine savings-weighted average program NTG ratios. Table I-1 shows the net savings method(s) applied for each program for the CY 2016 evaluation.

Table I-1. CY 2016 Net Savings Methodology by Program

CY 2016 Programs	Net Savings Methodologies
Residential	
Multifamily Energy Savings	Self-Report
Multifamily Direct Install	Stipulated NTG = 1.0
Home Performance with ENERGY STAR (Whole Home emHome Projects)	CY 2015 Billing Analysis ¹
Home Performance with ENERGY STAR (Whole Home SnuggPro Projects)	Modeling Software Calibration
Home Performance with ENERGY STAR (HVAC Standard Track)	Standard Market Practice and CY 2015 Self-Report ¹
Home Performance with ENERGY STAR (HVAC Income-Qualified Track)	Stipulated NTG = 1.0
New Homes	CY 2015 Billing Analysis ¹
Retailer Lighting and Appliance	Demand Elasticity Modeling, National Sales Data Modeling, and Self-Report
Simple Energy Efficiency	Self-Report and Stipulated NTG = 1.0
Nonresidential	
Agriculture, Schools and Government	Self-Report
Business Incentive	Self-Report
Chain Stores and Franchises	Self-Report
Small Business	Self-Report
Large Energy Users	Self-Report
Renewable Energy Competitive Incentive	Self-Report
Design Assistance	Self-Report
Renewable Energy Loan Fund	Self-Report
Pilots	
Manufactured Homes	Stipulated NTG = 1.0
Seasonal Savings	Stipulated NTG = 1.0
Smart Thermostats	Self-Report

¹ CY 2015 results were applied to CY 2016 projects as the Evaluation Team, with approval from the PSC, did not conduct additional research in CY 2016.

The Evaluation Team attempted market research for nonresidential lighting in CY 2016 but could not obtain sufficient sales data to apply SMP results as a net method. The Evaluation Team launched a new strategy to collect these data for CY 2017 directly from distributors and manufacturers.

Standard Market Practice Approach

This section describes the Evaluation Team’s methods in applying the SMP approach during the CY 2016 evaluation. The SMP approach was applied to the HVAC standard track of the Home Performance with ENERGY STAR® Program. The Evaluation Team calculated net-of-freeridership savings using program data and data collected through the evaluation process, to define the average market baseline and average program-installed energy consumption (kWh and/or therm) of each measure category.

The Evaluation Team first accessed data on a significant share of sales and current installations in Wisconsin, showing efficiency levels of a particular equipment type outside of the Focus on Energy program. Market baselines include a range of varying efficiency levels (both inefficient and efficient levels) and nominally represent the average efficiency installed in Wisconsin during the current program year. In the SMP approach, net-of-freeridership savings are calculated as the difference between the average market baseline and the average program-installed energy consumption, under the assumption that freeridership is captured in the baseline. Note that since verified gross savings employ deemed values for baseline and installed efficiency for these measures, the market baseline adjustment is considered a net adjustment even though it can be understood to have gross savings implications.

However, the SMP approach does not capture participant spillover effects, so the Evaluation Team applied participant spillover (estimated through the self-response surveys) to the net-of-freeridership savings. The NTG ratio is derived from the comparison of net savings to the verified gross savings.

SMP Baseline Data Sources

The Evaluation Team then determined the baseline for each selected Residential Rewards Program measure category using these two sources of sales and installation data:

- D+R International sales data from 2014 and 2015
- CY 2012–CY 2016 Home Performance with ENERGY STAR® Program audit data

Table I-2 lists the measures selected for the SMP analysis in CY 2016 and their corresponding baseline data sources.

Table I-2. Measures Assessed with Standard Market Practice Methodology

CY 2016 SMP Measures	Baseline Data Source
Natural Gas Furnace	D+R International (2014 – 2015) and HPwES Audit Data (2012 – 2016)
Air Conditioner	D+R International (2014 – 2015) and HPwES Audit Data (2012 – 2016)
ECM	D+R International (2014 – 2015)

D+R International 2014 and 2015 HVAC Market Reports

D+R International Ltd. has an exclusive license with Heating, Air-conditioning & Refrigeration Distributors International (HARDI) that authorizes D+R to collect data from HARDI members and to aggregate member data to produce analysis and reports. The Evaluation Team contracted with D+R to purchase a report of residential HVAC measures sold in Wisconsin during 2014 and 2015, which used

sales data reported to D+R International by HARDI members participating in the Unitary HVAC Market Report. The report contained summaries of quantities of observed sales by efficiency level and estimations of the size of each measure’s total market in 2014 and 2015. To represent a rolling market baseline, the data from 2014 and 2015 were used. These data were combined to produce average annual fuel utilization efficiency (AFUE), seasonal energy efficiency rating (SEER), and electronically commutated motor (ECM) penetration values.

Home Performance with ENERGY STAR Program Audit Data

CLEAResult, the Program Implementer for the Home Performance with ENERGY STAR (HPwES) Program, provided the Evaluation Team with data obtained during all home assessments (i.e., before Program upgrades were made) since the inception of the Program in CY 2012 through CY 2016. The data contained information on efficiency and age of household equipment such as furnaces and air conditioners.

Measure-Specific Analyses

The Evaluation Team used the SMP approach to determine freeridership for furnaces, air conditioners, and ECMs offered under the Home Performance with ENERGY STAR Program. The analysis used sales data from the same two sources (D+R and HPwES audit data) to estimate a market baseline efficiency.

Table I-3 presents the SMP results for Home Performance with ENERGY STAR Program, showing per-unit net-of-freeridership savings and the corresponding percentage of freeridership for all measures evaluated.

Table I-3. CY 2016 Summary of Net-of-Freeridership Savings by Measure

Measure	Per-Unit Savings			Freeridership (%)		
	kWh	kW	therms	kWh	kW	therms
ECM, Furnace, New or Replacement	342	0.07	-	18%	18%	n/a
Furnace and A/C, ECM, 95%+ AFUE (Existing)	462 ¹	0.19	37.5	11%	33%	-30%
NG Furnace with ECM, 95%+ AFUE (Existing)	342	0.07	33.8	18%	18%	-18%
NG Furnace with ECM, 96%+ AFUE	342	0.07	32.6	18%	18%	-9%
NG Furnace with ECM, 97%+ AFUE	342	0.07	42.9	18%	18%	9%
NG Furnace with ECM, 98%+ AFUE	342	0.07	59.7	18%	18%	-24%
LP Furnace with ECM, 90%+ AFUE (Existing)	342	0.07	-	18%	18%	n/a

¹ The Evaluation Team added the electric net-of-freeridership savings for the ECM and air conditioner measures to calculate the total electric savings for this measure.

SMP gas savings for furnaces produced varying freeridership results because of three factors:

- The Evaluation Team conducted model number look-ups on all furnaces sold through the Program in CY 2016 and found higher efficiency units on average than anticipated in the *ex ante*

assumptions for the 95% AFUE furnace measures. This had a large negative effect on freeridership.

- Beginning in CY 2015 and continuing through CY 2016, the Program Implementer updated the *ex ante* savings to account for a market baseline of 92% AFUE, which was recommended from the 2013 Baseline Report (i.e., furnace *ex ante* savings already accounted for a market baseline, as opposed to the lowest available efficiency baseline).²⁸ The market baseline AFUE was found to be 92.5%. This had a large positive effect on freeridership.
- Furnaces rebated through the Program often had capacities larger or smaller than the TRM assumptions, which had a small effect on freeridership.

Net-of-freeridership gas savings for most furnace measures produced a negative freeridership percentage, meaning the savings found through this analysis were higher than the reported *ex ante* savings. This was because of a combination of the three factors listed above. For instance, for the “NG Furnace with ECM, 95%+ AFUE (Existing)” measure, the actual Program average installed AFUE was 96.2% instead of the deemed value of 95%. This factor alone would have driven gas savings freeridership down to -38%. However, because the market baseline AFUE was 92.5% instead of the deemed 92%, gas freeridership rose to -21%. Finally, the capacity adjustment from the deemed 72 MBTU/h to 70.5 MBTU/h drives gas freeridership to a final value of -18% for this measure.

Ex ante assumptions for electricity and demand savings for furnaces, air conditioners, and ECMs did not incorporate market baselines, and therefore freeridership is higher for those savings types (ranging from 18% to 33%).

The following sections provide the measure-level methodology and results for the Home Performance with ENERGY STAR Program measures using the SMP approach.

Natural Gas Furnace

To estimate net-of-freeridership savings for natural gas furnaces, the Evaluation Team first calculated weighted average market baseline efficiency (AFUE) using the two baseline data sources. Because of offsetting strengths and weaknesses in these data sources, the Evaluation Team chose to average the market baseline efficiencies, resulting in a 92.5% AFUE as shown in Table I-4.

Table I-4. CY 2016 Natural Gas Furnace Market Baseline AFUE by Data Source

Data Source	Market Baseline AFUE
D+R International (2014 and 2015 sales data)	92.6
HPwES Assessment Data (2012 – 2016)	92.2
Average	92.5

²⁸ Cadmus. *Focus on Energy Calendar Year 2013 Baseline Market Study*. May 14th, 2014. Available online: https://focusonenergy.com/sites/default/files/FOC_XC_Baseline%20Evaluation%20Report%20CY%202013.pdf

The Evaluation Team then applied the 92.5% AFUE as the baseline efficiency to calculate the average baseline consumption. Similarly, the Evaluation Team used the weighted average efficiency of all units in the Program tracking database (Program-installed average efficiency) to calculate the average Program-installed energy consumption.

The Evaluation Team used the following equation and inputs, as shown in Table I-5, to calculate furnace consumption for the market baseline and the average efficient case for each natural gas furnace:

$$Annual\ therms = \frac{MBTU/h \times Hours_{Heating}}{\frac{AFUE}{100}}$$

Table I-5. CY 2016 Natural Gas Furnace SMP Inputs

Variable	Market Baseline Input	Efficient Case Input	Market Baseline Source	Efficient Case Source
95% Furnace with ECM				
MBTU/h	70.5		SPECTRUM CY 2016 Data	
Hour _{Heating}	1,158		Wisconsin TRM	
AFUE	92.5	96.2	HPwES/D+R	SPECTRUM CY 2016 Data
96% Furnace with ECM				
MBTU/h	69.9		SPECTRUM CY 2016 Data	
Hour _{Heating}	1,158		Wisconsin TRM	
AFUE	92.5	96.1	HPwES/D+R	SPECTRUM CY 2016 Data
97% Furnace with ECM				
MBTU/h	71.9		SPECTRUM CY 2016 Data	
Hour _{Heating}	1,158		Wisconsin TRM	
AFUE	92.5	97.2	HPwES/D+R	SPECTRUM CY 2016 Data
98% Furnace with ECM				
MBTU/h	85.4		SPECTRUM CY 2016 Data	
Hours _{heating}	1,158		Wisconsin TRM	
AFUE	92.5	98.0	HPwES/D+R	SPECTRUM CY 2016 Data
95% Furnace and Air Conditioner with ECM				
MBTU/h	72.0		SPECTRUM CY 2016 Data	
Hour _{Heating}	1,158		Wisconsin TRM	
AFUE	92.5	96.6	HPwES/D+R	SPECTRUM CY 2016 Data

Table I-6 provides the average market baseline and efficient case gas consumption for the five natural gas furnace measures offered by the Home Performance with ENERGY STAR Program. The difference between the baseline and efficient consumption yields the net-of-freeridership savings for each measure.

Table I-6. CY 2015 Natural Gas Furnace SMP Savings Results (therms)

Measure	Market Baseline Consumption	Efficient Case Consumption	Net-of-Freeridership Per Unit Savings
95% Furnace with ECM	882.5	848.7	33.8
96% Furnace with ECM	875.2	842.6	32.6
97% Furnace with ECM	899.4	856.5	42.9
98% Furnace with ECM	1,069.1	1,009.3	59.7
95% Furnace and Air Conditioner with ECM	900.5	863.0	37.5

Air Conditioner

Similar to natural gas furnaces, the Evaluation Team calculated a weighted average SEER value from baseline source data to calculate the average consumption of a market baseline air conditioner. Again, because of offsetting strengths and weaknesses from the data sources, the Evaluation Team chose to average the market baseline efficiencies, resulting in a 13.8 SEER (Table I-7).

Table I-7. CY 2016 Air Conditioner Market Baseline SEER Value by Data Source

Data Source	Market Baseline SEER
D+R International (2014 and 2015 sales data)	13.8
HPwES Assessment Data (2012 – 2016)	13.8
Average	13.8

The Evaluation Team applied the 13.8 SEER as the baseline efficiency to calculate the average baseline consumption. The Evaluation Team used the weighted average efficiency of all units in the Program tracking database (Program-installed average efficiency) to calculate the average Program-installed energy consumption.

The Evaluation Team used the following equation and inputs, as shown in Table I-8, to calculate the electric consumption of air conditioners for the market baseline and the average efficient case:

$$Annual\ kWh = \frac{Mbtu/h \times Hours_{Cooling}}{SEER}$$

Table I-8. CY 2016 Air Conditioner SMP Inputs

Variable	Market Baseline Input	Efficient Case Input	Market Baseline Source	Efficient Case Source
MBTU/h	28.7		SPECTRUM CY 2016 Data	
Hours _{Cooling}	410		Wisconsin TRM (January 2016)	
SEER	13.8	17.5	HPwES/D+R	SPECTRUM CY 2016 Data

Table I-9 provides the average market baseline and efficient case electric consumption for the joint air conditioner measure offered by the Home Performance with ENERGY STAR Program. The difference between the baseline and efficient consumption yields the net-of-freeridership savings for each measure.

Table I-9. CY 2016 Air Conditioner SMP Savings Results (kWh)

Measure	Market Baseline Consumption	Efficient Case Consumption	Net-of-Freeridership Per Unit Savings
Air Conditioner	852.6	673.4	179.2

Electronically Commutated Motors

Measuring net-of-freeridership savings for ECMs differs from the analysis for furnaces and air conditioners, which used an efficiency rating to determine the market baseline, because there are no efficiency ratings for furnace fans. The Evaluation Team used a binary approach—the measure is simply installed or not installed—to estimate freeridership as the percentage of market furnaces (sold outside of the Program) that had ECMs compared to other types of motors such as a permanent split capacitor.

Using market data from D+R International, the Evaluation Team estimated that 18% of furnaces sold outside of the Program had ECMs. The Evaluation Team then relied on the Wisconsin TRM savings of 416 kWh per motor and 345.5 kWh per air conditioner with ECM measure and applied 18% freeridership to calculate net-of-freeridership savings.²⁹

Table I-10 lists the savings in the Wisconsin TRM (January 2016) and the net-of-freeridership savings calculated by the Evaluation Team.

Table I-10. ECMs: CY 2016 Net-of-Freeridership Electric and Demand Savings

Measure	WI TRM Per-Unit Savings		Freeridership	Net-of-Freeridership Per-Unit Savings	
	kWh	kW		kWh	kW
Furnace with ECM	416.0	0.079	18%	341.9	0.065
Standalone ECM	416.0	0.079	18%	341.9	0.065
Furnace and A/C with ECM	345.5	0.172	18%	284.0	0.188 ¹

¹ Net-of-freeridership demand savings for the joint furnace and AC measure includes demand savings from both the air conditioners and the ECMs.

²⁹ The value of 345.5 kWh excludes cooling savings achieved, because this variable is accounted for in the air conditioner analysis. The cooling savings from the air conditioner is added to the ECM savings in the total measure net-of-freeridership savings.

Demand Elasticity Modeling

Demand elasticity modeling draws upon the same economic principle that drives program design: changes in price and promotion generate changes in quantities sold (i.e., the upstream buy-down approach). Demand elasticity modeling uses sales and promotion information to achieve the following:

- Quantify the relationship of price and promotion to sales
- Determine likely sales levels without the program's intervention (baseline sales)
- Estimate freeridership by comparing modeled baseline sales with actual sales

The Evaluation Team used the demand elasticity modeling approach for the Retailer Lighting and Appliance Program. After estimating variable coefficients, the Evaluation Team used the resulting model to predict these:

- Sales that would occur *without* the Program's price impact
- Sales that would occur *with* the Program (and should be close to actual sales with a representative model)

The Evaluation Team applied evaluated savings, calculated as part of this evaluation, to these sales predictions, and then calculated savings freeridership using this equation:

$$FR\ Ratio = \left(\frac{Predicted\ Savings\ without\ Program}{Predicted\ Savings\ with\ Program} \right)$$

Input Data

Because the demand elasticity approach relies exclusively on program data, a model's robustness depends on data quality. The Program Implementer provided the Evaluation Team with detailed tracking data for the Retailer Lighting and Appliance Program that included product sales by unique product number and by retailer and unique store number. The reporting frequencies varied by manufacturer and retailer, but most sales were reported weekly or monthly. The Evaluation Team aggregated all sales to monthly sales so time periods across all observations were consistent.

Price Variation

The Evaluation Team modeled sales as a panel, with cross-sections of Program bulbs modeled over time as a function of price. The cross-sections were defined as sales and prices across all comparable products within each unique retailer's store location. The average price for each bulb type within each store reflects the monthly sales-weighted, per-bulb price across all comparable products. Monthly sales equaled the sum of all sales within each store, across the same group of comparable products (e.g., monthly prices and sales for all 60-watt, incandescent-equivalent, general purpose LED bulbs at a single Home Depot store).

Combining sales and prices this way (rather than observing price and sales changes for each individual model number) presented an advantage because it captured any substitutions between comparable

products (e.g., a decrease in the average price per-bulb when adding a three-pack of an existing bulb to the Program and a corresponding increase in total Program sales of that bulb type).

Similarly, suppose an updated version of a bulb (with a different model number) replaced an original bulb model. The first model's sales would likely drop because the retailer sells through backstock, even as the second model's sales would increase. Aggregating prices and sales would capture variations across both products rather than controlling for the sales impacts of factors unrelated to price (i.e., products phased out and replaced).

The Evaluation Team included only sales of products with price variations in the model, as products with no variations in price did not contribute any information to the model. The greater the price variations across retailers and lamp styles, the more representative the elasticity estimates became when applied to sales of products that did not exhibit price variations. Overall, the model included 94% of total program sales with the majority of sales represented within each retail channel and bulb type with one exception. For grocery retailers, the model included 50% of standard LED sales and 14% of reflector sales; however, grocery retailers accounted for less than 3% of total Program sales.

Merchandising Displays

The Program Administrator collected data on product merchandising (e.g., clip strips, end caps, pallet displays). However, the data did not indicate which product was featured in the display, only that Program bulbs were featured at a given store location during the time the field staff visited each location.

The data were not complete for the year and some months were missing data. For example, in August 2016, field staff recorded only cross-merchandising displays and whether they were able to build new displays, but they did not record end caps or wing stacks as in prior months. No data were provided after August.

Seasonality Adjustment

In economic analysis, it is critical to separate data variations that result from seasonality from those that result from relevant external factors. For example, suppose prices had been reduced on umbrellas at the beginning of the rainy season. Any estimate of the impact of this price shift would be skewed if the analysis did not account for the natural seasonality of umbrella sales.

To adjust for seasonal variations in sales, the Evaluation Team used time fixed-effects that interacted with bulb type (standard, specialty, and reflector). Time fixed-effects control for time-invariant effects over time—that is, factors other than price, the main Program instrument. Interacting the fixed-effects with bulb type allowed for differences in time.

Model Specification

The Evaluation Team modeled bulb, pricing, and promotional data using an econometric model, addressing these data as a panel, with a cross-section of Program package quantities modeled over time as a function of prices, promotional events, and retail channels. This involved testing a variety of

specifications to ascertain price impacts—the main instrument affected by the Program—on bulb demand. The Evaluation Team estimated this equation for the model (for bulb model i , in month t):

$$\ln(Q_{it}) = \sum_{\pi} (\beta_{\pi} Store ID_{\pi,i}) * (Measure_{\theta,i}) + \sum_{\theta} (\beta_{\theta 1} [\ln(P_{it}) * (Channel_{\theta,i}) * (Measure_{\theta,i})]) + \beta_{\theta 2} \ln(P_{it}) * (Standard_{\theta,i}) + \beta_{\theta 3} \ln(P_{it}) * (Specialty_{\theta,i}) + \beta_{\theta 4} (Promo_t) * (Standard_{\theta,i}) + \beta_{\theta 5} (Promo_t) * (Reflector_{\theta,i}) + \alpha Seasonal Trend_t + \varepsilon_i + \gamma_t$$

Where:

\ln	=	Natural log
Q	=	Quantity of bulbs sold during the month
P	=	Per-bulb retail price (after markdown) in that month
Channel	=	Retail category (club, DIY, grocery, HTR, mass-market retailer)
Bulb Type	=	Product category (standard, specialty, reflector)
Month	=	Dummy variable equaling 1 for each month of the program year; 0 otherwise
ε_{it}	=	Cross-sectional random-error term
γ_{it}	=	Time series random-error term

The model specification assumed a negative binomial distribution, which served as the best fit. The negative binomial distribution provided accurate predictions for a small number of high-volume sale bulbs, while the other distributions under-predicted sales for those bulbs.

Using the following criteria, the Evaluation Team ran over 80 different model scenarios to identify the one with the best parsimony and explanatory power:

- Model coefficient p-values (keeping values less than <0.1)³⁰
- Explanatory variable cross-correlation (minimizing where possible)
- Minimizing the number of coefficients signs (+/-) contrary to expectations and economic theory
- Model Akaike's Information Criteria (AIC) (minimizing between models)³¹
- Minimizing multicollinearity
- Optimizing model fit

³⁰ Where a qualitative variable had many states (such as bulb types), the Evaluation Team did not omit variables if one state was insignificant; rather, the analysis considered the joint significance of all states.

³¹ The Team used AIC to assess model fit, as nonlinear models do not define the R-square statistic. AIC also offers a desirable property in that it penalizes overly complex models, similarly to the adjusted R-square.

The model’s fit can be examined by comparing model-predicted sales with actual sales. The model-predicted sales matched closely with actual sales indicating the model fit the data well. Overall, the modeled sales fell within 1% of actual sales.

Findings

The Evaluation Team estimated an LED freeridership of 38%, as shown in Table I-11. CFLs were not included in the model because support for CFLs was discontinued after the end of the first quarter (Q1) of 2016.

Table I-11. Modeling Results by Bulb Type

Bulb Type	Freeridership
LED	38%

Table I-12 shows the average elasticity estimate by retail channel and bulb type.

Table I-12. Price Elasticities by Retail Channel and Bulb Type

Retail Channel	Bulb Type	Average Elasticity Coefficient
Club	Reflector	-1.42
	Specialty	-0.99
	Standard	-1.37
DIY	Reflector	-1.49
	Specialty	0.16
	Standard	-1.99
Grocery	Reflector	-0.50
	Standard	-0.24
Large Hardware	Reflector	-0.68
	Specialty	-1.80
	Standard	-0.39
Mass Market	Reflector	-0.65
	Specialty	-1.52
	Standard	-1.84

Price elasticity of demand measures the percentage change in the quantity demanded given a percentage change in price. Because of the form of the model’s logarithmic functional form, these changes simply represented the coefficients for each price variable. In previous, similar analyses, the Evaluation Team has seen elasticities ranging from -1 to -3, meaning a 10% drop in price led to a 10% to 30% increase in the quantity sold. The elasticities largely fell within this range for CY 2016 as well with a couple of exceptions.

Grocery retailers had lower price elasticities. However, half of standard bulb sales within the grocery channel observed no variation in price so were excluded from the model. It is common for retailers with low product diversity not to have variation in price within a program year.

Specialty bulbs at do-it-yourself (DIY) retailers had a slightly positive elasticity, which suggests a positive relationship between price and sales that is counter to economic theory. However, only 48% of sales within this category had observed price changes, so the sample and estimated elasticity may not be fully representative. Ultimately, these bulbs accounted for less than 1% of total Program sales, so the impact of this is negligible.

Table I-13 shows the incentive as a share of the original retail price and the estimated freeridership ratio by bulb type and retail channel. Typically, the proportional price reduction and the freeridership trend correlate—the greater the markdown and/or elasticity, the lower the freeridership.

Table I-13. Modeling Results by Bulb Type and Retail Channel

Retail Channel	Lamp Type	Original Price	Target Retail Price	Program Incentive	Manufacturer Contribution	Markdown	FR
Club	Reflector	\$5.25	\$2.44	\$2.81	\$0.00	54%	29%
	Specialty	\$6.06	\$4.23	\$1.83	\$0.00	30%	68%
	Standard	\$3.49	\$1.53	\$1.95	\$0.02	56%	27%
DIY	Reflector	\$7.22	\$2.07	\$3.72	\$1.42	71%	17%
	Specialty	\$8.91	\$4.55	\$2.66	\$1.71	49%	114%
	Standard	\$5.84	\$1.15	\$1.80	\$2.88	80%	8%
Grocery	Reflector	\$13.06	\$1.10	\$3.62	\$8.34	92%	29%
	Standard	\$10.75	\$1.61	\$1.95	\$7.19	85%	63%
Large Hardware	Reflector	\$9.05	\$5.43	\$3.35	\$0.27	40%	66%
	Specialty	\$6.30	\$4.10	\$2.00	\$0.21	35%	46%
	Standard	\$6.26	\$3.59	\$2.28	\$0.39	43%	79%
Mass Market	Reflector	\$11.37	\$8.21	\$3.16	\$0.00	28%	78%
	Specialty	\$11.47	\$9.16	\$2.31	\$0.00	20%	71%
	Standard	\$3.04	\$1.57	\$1.47	\$0.00	48%	25%

Benchmarking

Freeridership for Program LEDs was comparable between CY 2015 and CY 2016, rising slightly from 29% to 38%. Both values are within the range of other recent evaluation results ranging from 30% to 40%.

Table I-14. Benchmarking LED Freeridership

Evaluation	Freeridership
Focus on Energy Wisconsin (2016)	38%
Focus on Energy Wisconsin (2015)	29%
Midwest Utility 1 (2016)	40%
Ameren Missouri (2015)	35%
Northeast Utility (2016)	39%
Mid-Atlantic Utility (2015-2016)	39%

National Sales Data Modeling

The Evaluation Team developed a national lighting sales model to determine the Retailer Lighting and Appliance Program's attribution for the Wisconsin efficient lighting market. The model quantified the relationship between Program intensity (e.g., Program spending per household) and efficient lighting sales (the percentage of light bulb purchases that are efficient).

The underlying theory behind the model is that states with strong upstream lighting program activity, compared to those with little to no program activity, should have a higher market share (via sales) of efficient lighting products (e.g., CFLs and LEDs). Therefore, the model takes advantage of full category lighting sales data to estimate market lift as a function of program activity while also controlling for other factors that might impact efficient lighting sales (e.g., household and demographic characteristics). The result of the modeling is a comprehensive NTG estimate that captures freeridership, participant spillover, and nonparticipant spillover.

Data Sources

The Evaluation Team relied on a variety of data sources for model development, but primarily on 2015 sales data prepared by the Consortium for Retail Energy Efficiency Data (CREED) LightTracker initiative.^{32,33} These sales data were generated from two main sources: point-of-sale (POS) state sales data (representing one group of retail channels) and National Consumer Panel (NCP) state sales data (representing a different group of retail channels). Together, these two sources represent the majority of bulb sales across the United States. Besides these sales data available through LightTracker, the model inputs are a combination of Program data collected by the Evaluation Team and household and demographic data collected through various publicly available websites.

The primary model input data sources are listed here, and discussed in more detail below:

- National bulb sales
 - POS data (grocery, drug, dollar, discount, mass merchandiser, and selected club stores)
 - Panel data (home improvement, hardware, online, and selected club stores)
- U.S. Census Bureau import data (CFLs)

³² CREED comprises of program administrators, retailers, and manufacturers that work together to collect the necessary data to better plan and evaluate energy efficiency programs. LightTracker is CREED's first initiative, focused on acquiring full-category lighting data—including incandescent, halogen, CFL, and LED bulb types—for all distribution channels in the entire United States. CREED speaks as one voice for program administrators nationwide as they request, collect, and report on the sales data needed by the energy efficiency community. More details are available online: <https://www.creedlighttracker.com>. Note that 2015 data were the most recent available at the time of this study.

³³ The information contained herein is based in part on data reported by IRI through its Advantage service, interpreted solely by LightTracker. Any opinions expressed herein reflect the judgement of LightTracker, Inc. and are subject to change. IRI disclaims liability of any kind arising from the use of this information.

- ENERGY STAR shipment data (imports and ENERGY STAR market share)
- North American Electrical Manufacturers Association shipment data
- American Community Survey (ACS) data (household characteristics and demographic data)
- Retailer square footage per state (based on the two primary retailer channel data sources)
- General population surveys, lighting saturation studies, and other primary data collection made publicly available through evaluation reports

Lighting Sales

The LightTracker POS dataset includes lighting sales data for grocery, drug, dollar, club, and mass market distribution channels. These data represent actual sales that are scanned at the cash register for participating retailers.

The NCP represents a panel of approximately 100,000 residential households that are provided a handheld scanner for their home and instructed to scan every purchase they make that has a bar code. For Wisconsin, the NCP included approximately 1,500 households in 2015. The use of a scanner avoids the potential recall bias prevalent in self-report methods that ask about lighting purchases.

Although the dataset the Evaluation Team received included detailed records of lighting data purchases, the data required a considerable effort to ensure data integrity and the inclusion of all necessary bulb attributes. For example, not all records had some of the more critical variables populated, including bulb type, style, and wattage, and some clearly had erroneous values (e.g., 60-watt CFLs).

After a thorough review and quality control of the dataset, the Evaluation Team reclassified and standardized the data, populated missing records, created additional variables, and performed general enhancements. To populate missing records, validate existing records, and include additional bulb attributes, the Team created a proprietary Universal Product Code (UPC) database with approximately 20,000 bulbs from four sources:

- Manufacturer product databases provided to LightTracker
- Product catalogs downloaded from manufacturer websites
- Product offerings downloaded from retailer websites
- Automated look-ups of online UPC databases³⁴

LightTracker then merged the Team's UPC bulb database with the POS/panel data, populating fields based on a hierarchy of data sources based on reliability, prioritized in the following order: manufacturer specifications, UPC look-ups, and original IRI-based database values. The Evaluation Team also conducted a large number of manual website look-ups of individual bulbs to determine final assignments.

³⁴ An example of an online UPC database is UPCitemdb. Available online: www.upcitemdb.com

In addition, the Evaluation Team investigated the bulb assignment and the quantity of bulbs per package by examining the average price per unit and identifying outliers. This process helped the Team identify misclassification of certain bulb types (e.g., bulbs that were flagged as low cost LEDs but were really LED nightlights, so needed to be classified as “other”) as well as bulb counts that sometimes represented box shipments (e.g., a box identified as having 36 bulbs was really six packages of six-pack CFLs).

The final model ended up representing 39 states, excluding some smaller states that lacked sufficient sample size from the panel data.³⁵

Key aspects of the lighting dataset included these:

- 2015 sales volume and pricing for CFLs, LEDs, halogens, and incandescent bulbs for all retailer sectors combined, and broken out by POS and non-POS channels
- Data reporting by state and bulb type
- Inclusion of all bulb styles and controls

As discussed below, the dependent variable of the model used percentage of efficient bulb sales, rather than total efficient bulb sales, to normalize for states with greater or lesser bulb sales (efficient or standard) due to differences in number of households, number of sockets, existing saturation, and other factors that drive lighting sales.

Program Activity

To research program activity, the Evaluation Team used internal resources and conducted a literature review of publicly available reports found on the internet or provided by program administrators or their evaluators.³⁶ The Team contacted local utilities in each given area when reports with the relevant information were not available. Additionally, the Evaluation Team accessed DSM Insights, an E Source product that provides a detailed breakdown of program-level spending, including incentives, marketing, and delivery for over 100 program administrators around the country.³⁷

³⁵ The Team excluded states that had low sample sizes (typically 30 homes or less that scanned in LEDs or other lighting products purchased), since extrapolating these to the population would not be reliable.

³⁶ In particular, the Evaluation Team began by searching the ENERGY STAR Summary of Lighting Programs website (https://www.energystar.gov/ia/partners/downloads/FINAL_2015_ENERGY_STAR_Summary_of_Lighting_Programs.pdf) and referenced the Database of State Incentives for Renewables & Efficiency (www.dsireusa.org).

³⁷ E Source. “DSM Insights.” July 2016.

The program data collection activity included:

- Total number of claimed CFL and LED upstream program bulbs (broken out between CFL and LED) reported by each program
- Upstream CFL and LED incentives
- Total upstream program budget

Where available, the Evaluation Team used actual program expenditures; otherwise, it used ENERGY STAR reported expenditures as a proxy.³⁸ The Team aggregated data from each utility by state and assigned a modeling flag to each state based on the source of and confidence in the data provided across all major utilities and program administrators. As an example, any state with no program activity was assigned a 0. The Team assigned a 1 to states where it successfully collected all program activity data points from every program administrator (including municipalities and cooperatives). States assigned a 2 had some program administrator data captured and some derived from ENERGY STAR (usually overall program expenditures). The Team assigned a 3 to the remaining states where the sole data points were derived from ENERGY STAR. The Team could then iterate through the model using states with the most accurate data (with flags of 0 or 1) then open the model up to include additional states (with flags of 2 or 3).

To determine the Program activity in Wisconsin, the Evaluation Team used the SPECTRUM database as a key input in developing a 2015 efficient lighting NTG estimate. This dataset lists the incentives, number and type of Program-supported bulbs sold in each utility service area, and overall Program expenditures.

Presence and Absence of Retailers (Channel Variables)

The Evaluation Team conducted secondary internet research to determine the number and total square footage of store locations in each state for five primary energy efficient bulb retailers: The Home Depot, Lowe's, Walmart, Costco, and Menards. The Team used these data as explanatory variables in the model since these retailers sell a large quantity of energy efficient bulbs, thus the percentage of efficient bulbs may differ in states with more or fewer of these retailers.

State-Level Household and Demographic Characteristics

The Evaluation Team gathered state-level demographic data from the ACS, including annual state-level data for the population, total number of households, household tenure (own versus rent), home age, education, income, and average number of rooms in the home. As explained below, the Team then combined these data with other potential explanatory variables, including political index, average cost of living, and average electric retail rates.

³⁸ Note that because the ENERGY STAR report included only expenditure ranges, the midpoints of the ranges were used to represent the expenditures.

Modeling Methods

The primary goal of the model was to quantify the impact of state-level program activity on the sales of efficient lighting. Clearly, other factors influence the sales of efficient lighting, and as noted above, the Evaluation Team considered a number of demographics, household characteristics, and retail channel variables to capture and control for the unique characteristics of each state that could affect the uptake of efficient lighting products.

The general form of the model is specified here, followed by a more detailed discussion of the data sources for each variable. (Note that the list of variables below is comprehensive of those considered; the final model, with summary statistics presented in Table I-15, lists the set of variables that were ultimately selected for inclusion based on their statistical significance and ability to improve the model specification.)

$$EE\ Market\ Share_i = \beta_0 + \beta_1 * Program\ Spending\ per\ HH + \beta_c * \sum_1^c Channel\ Variables + \beta_d * \sum_1^d Demographic\ Variables + \epsilon_i$$

Where:

EE Market Share_i = Proportion of total bulb sales in state 'i' that are efficient. Equal to [(CFL sales + LED sales)/total bulb sales]

β_0 = The model intercept

β_1 = The primary coefficient of interest. This represents the marginal effect or program intensity, or the expected increase in the market share of efficient bulbs for each \$1 in additional program spending per household

Program Spending per HH_i = The number of 2015 retail lighting program dollars per household in state 'i'. Equal to total retail lighting program expenditures in state 'i' (incentive and nonincentive) divided by the number of households in state 'i'

β_c and β_d = Array of regression coefficients for the channel variables and demographic variables

Channel Variables = Numeric variables summarizing state-level retailer characteristics (additional detail is provided in Table I-15)

Demographic Variables = Numeric variables that summarize state-level population, housing, and economic attributes in (additional detail is provided in Table I-15)

ϵ_i = Error term

Table I-15. Channel and Demographic Variables

Type of Variable	Description
Channel Variables	
Sqft NonPOS per HH _i	The average non-POS retail square footage per household in state 'i.' Equal to non-POS square footage divided by the number of households in state 'i'
Percent Sqft NonPOS _i	The percentage of total retail square footage belonging to non-POS retailers in state 'i.' Equal to non-POS square footage divided by (POS sqft + non-POS sqft)
Demographic Variables	
Political Index _i	A state-level partisan voter index developed by Cook Political Report, ¹ using presidential election voting results as a state-level partisan proxy. A higher than 1.0 value represents greater Democratic influence and a value less than 1.0 indicates greater Republican influence.
Average Electricity Cost _i	The state-level average residential retail rate of electricity, sourced directly from the Energy Information Agency ²
Cost of Living _i	State-level cost of living indices developed by the Missouri Economic Research and Information Center ³
Percentage of Homes Built Pre-1980 _i	All of these state-level demographic and household variables were derived from the most current U.S. Census ACS ⁴
Percentage of Renters Paying Utilities _i	
Median Income _i	
Percentage Owner Occupied _i	
Percentage of Population with College Degree _i	

¹ Wasserman, David. "Partisan Voter Index." The Cook Political Report. April 4, 2013. Available online: <http://cookpolitical.com/house/pvi>

² U.S. Energy Information Administration. "Electricity, Detailed State Data." Available online: <https://www.eia.gov/electricity/data/state/>

³ Missouri Economic Research and Information Center. "Cost of Living Data Series 2016 Annual Average." Available online: https://www.missourieconomy.org/indicators/cost_of_living/

⁴ U.S. Census. "American FactFinder." Available online: <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

Correlation of the Independent (Explanatory) Variables

Figure I-1 shows the correlation between the dependent variable (market share of efficient lighting products) and 10 potential channel and demographic/household variables. Eight of the variables are positively correlated with energy-efficient market share and two are negatively correlated. Correlation coefficients can range from -1 to 1, and the magnitude of the absolute value indicates the degree of correlation. As shown in the figure, the percentage of retailer square footage that is non-POS is the variable most correlated with energy efficient market share (i.e., states with more home improvement stores, such as Home Depot and Lowe’s, tend to also have a greater share of efficient lighting sales). Of the eight demographic variables, the political index is the most correlated with efficient market share, with higher efficient market shares typically occurring in Democratic states.

Figure I-1. Independent Variable Correlation

	EE Market Share
Sqft NonPOS per HH	0.28
Percent Sqft NonPOS	0.55
Political Index	0.41
Average Electricity Cost	0.06
Cost of Living	0.26
Percentage of Homes Built Pre-1980	0.04
Percentage of Renters Paying Utilities	-0.25
Median Income	0.37
Percentage Owner Occupied	-0.22
Percentage of Population with College Degree	0.35

Source: Evaluation Team

Figure I-2 provides a correlation matrix among the potential independent variables. Although political index and cost of living are both positively correlated with energy-efficient market share, they are highly correlated with one another (with a correlation coefficient of 0.7). When multiple independent variables that are correlated with one another are included in a model specification, a regression model will have difficulty precisely estimating the effect of either term. This issue is compounded by the relatively low number of observations in the dataset.

Figure I-2. Covariance Table of Potential Independent Variables

	Sqft NonPOS per HH	Percent Sqft NonPOS	Political Index	Average Electricity Cost	Cost of Living	Percentage of Homes Built Pre-1980	Percentage of Renters Paying Utilities	Median Income	Percentage Owner Occupied	Percentage of Population with College Degree
Sqft NonPOS per HH	1.00									
Percent Sqft NonPOS	0.34	1.00								
Political Index	0.05	0.76	1.00							
Average Electricity Cost	-0.06	0.60	0.62	1.00						
Cost of Living	-0.20	0.71	0.70	0.79	1.00					
Percentage of Homes Built Pre-1980	0.09	0.45	0.44	0.45	0.41	1.00				
Percentage of Renters Paying Utilities	-0.20	-0.45	-0.45	-0.32	-0.45	-0.64	1.00			
Median Income	0.28	0.77	0.63	0.66	0.68	0.39	-0.59	1.00		
Percentage Owner Occupied	0.40	-0.31	-0.38	-0.32	-0.32	0.13	-0.08	-0.22	1.00	
Percentage of Population with College Degree	0.22	0.73	0.65	0.64	0.64	0.39	-0.61	0.92	-0.21	1.00

Source: Evaluation Team

Because of the complexity of the relationships and numerous options of these channel, demographic, and household characteristic variables, the Evaluation Team developed and tested different model options, focused on finding the final best fit model option discussed in the NTG Results section below.

Model Weighting

Another key consideration in the model was the weighting of states. One option was to weight all 39 states equally. However, since each state was one observation in the model, the Evaluation Team wanted to account for larger states that have larger sample sizes in the panel data and bigger impacts on the lighting market as a whole, weighting by either the number of households or total bulb sales. The

Team used analytic weights in the model,³⁹ which was appropriate because the dataset consisted of a series of purchase transactions that had been condensed into an observed mean.

Estimating the following regression model with analytic weights, where each state’s average market share is based on ‘n’ observations:

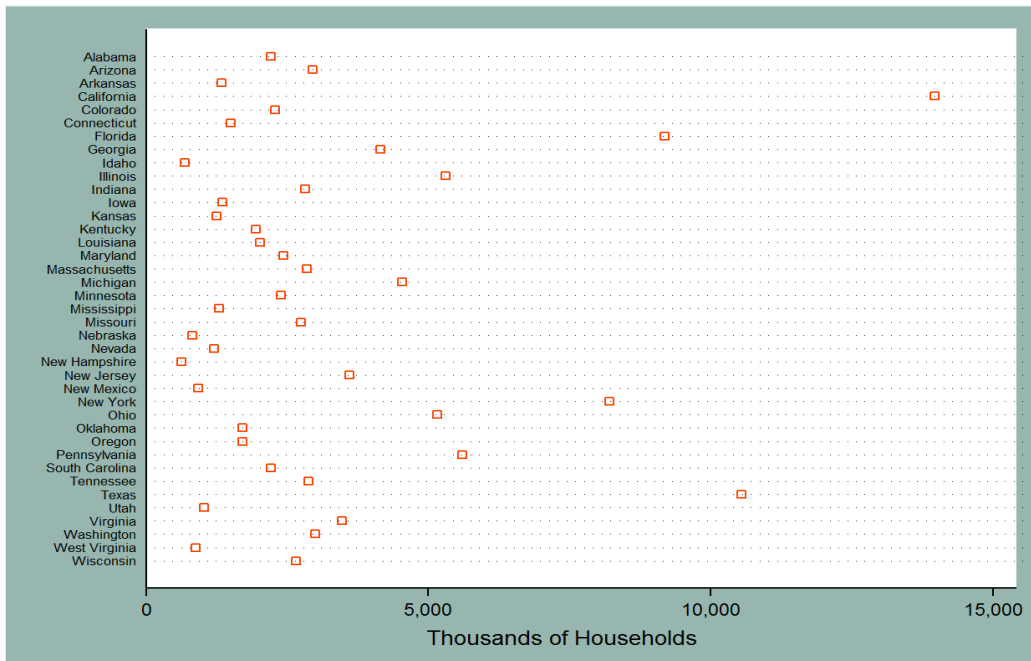
$$EE\ Market\ Share_i = \beta_0 + \beta_1 * Program\ Spending\ per\ HH_i$$

Would be analogous to estimating:

$$EE\ Market\ Share_i * \sqrt{n_i} = \beta_0 * \sqrt{n_i} + \beta_1 * Program\ Spending\ per\ HH_i * \sqrt{n_i}$$

The square root term means that the weights were proportional to the inverse of the variance. Because the dataset consisted of multiple data streams, the definition of an observation was inconsistent; hence, a proxy was needed for the weighting variable. The sample size in the panel data was generally proportional to state population, and large states also represented a larger share of the overall U.S. lighting market than smaller states. This also gave the Evaluation Team more general confidence in the non-POS lamp shares for larger states compared to smaller states, because the average lighting share value in large states was based on more measurements than lighting shares in small states, which should have made the market share estimate more precise. Figure I-3 shows the number of households for each of the 39 states determined to have a sufficient panel sample size.

Figure I-3. Number of Households by State



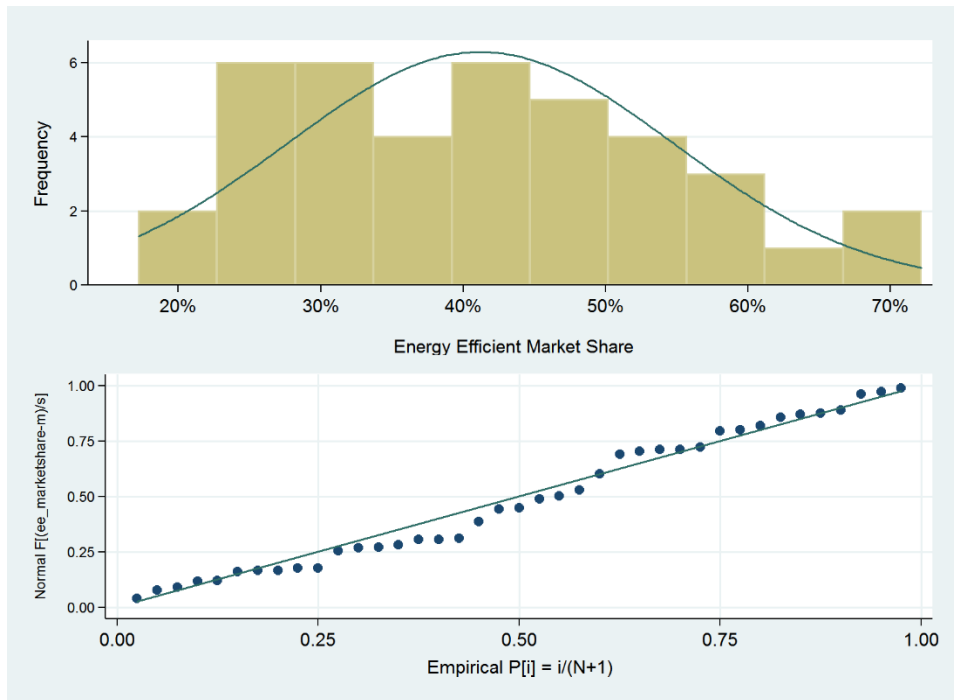
Source: Evaluation Team

³⁹ Stata. “Stata 14 help for weight.” Available online: <http://www.stata.com/help.cgi?weight>

Model Functional Form

Another critical decision in the modeling process was selecting the functional form of the model. A key input in this decision was the distribution of the dependent variable. Figure I-4 contains a histogram and a standardized normal probability plot for the energy efficient market share of the 39 states in the analysis dataset, showing that the data are approximately normally distributed.⁴⁰

Figure I-4. Histogram and Standardized Normal Probability Plot



Source: Evaluation Team

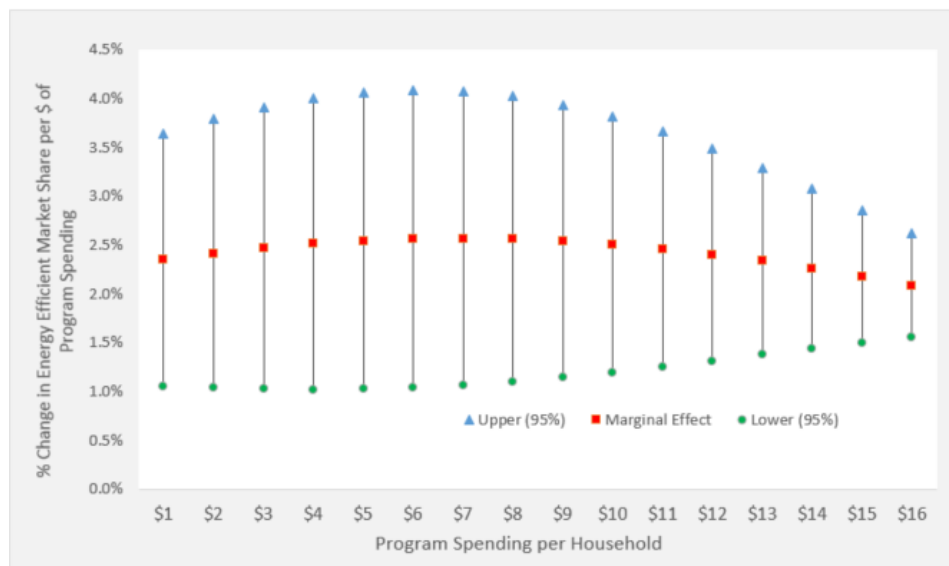
Energy-efficient market share has practical bounds on both ends of the distribution. It cannot be less than 0% and it cannot be greater than 100%. The Evaluation Team considered beta regression as well as fractional regressions (both probit and logit) to explicitly address this limitation and impose the theoretical limitations on the model. Ultimately, the Team elected to estimate the model using ordinary least squares (OLS) regression because the observed relationship between program spending and market share is relatively flat across the observed program intensity levels, and the results are easier to interpret (e.g., for every dollar increase in spending per household there is a constant increase in efficiency share).

Figure I-5 illustrates the basis of this decision by presenting the fitted marginal effect values (increase in energy efficient market share per \$1 of spending per household) from a nonlinear beta regression

⁴⁰ The Evaluation Team also ran a Shapiro-Wilk test for normality, where the null hypothesis is that the data are normally distributed. The p-value of this test was 0.35 at the 95% confidence level, so there is no reason to reject the hypothesis that energy efficient market share is normally distributed.

model. In 2015, retail lighting program spending ranged from \$0 to \$15 per household. Even though the beta regression is equipped to estimate a nonlinear trend, the estimated effect through the observed spending levels curves only slightly, indicating that the linear fit was a reasonable approximation.

Figure I-5. Shape of Marginal Effect Across Observed Program Spending Levels – Beta Regression



Source: Evaluation Team

NTG Estimates

Using the results of the regression models, efficient bulb sales data, and the program tracking databases, the Evaluation Team estimated NTG ratios for all efficient bulbs (CFLs and LEDs), CFLs only, and LEDs only in 2015. The Team derived NTG ratios by first using the model to predict the share of efficient bulbs with and without a program (determining the counterfactual of no program activity by setting the program variable to zero). This change in share represents the program lift, or net increase in the share of efficient bulbs resulting from program activity.

To then calculate NTG, the Team multiplied the change in share by the total number of bulbs—for all bulb types—sold in 2015, as determined by the sales data analysis described above. This value represents the net impact of the program (i.e., the total lift in the number of efficient bulbs sold), which the Team then divided by the total number of program bulbs sold (i.e., the gross number of bulbs) to determine NTG, using this equation:

$$NTGR = \frac{(\# \text{ bulbs sold with program} - \# \text{ bulbs sold with no program})}{\# \text{ of program incented bulbs sold}}$$

NTG Results

The regression coefficients for the program intensity variables, and subsequent estimates of the NTG ratio, proved relatively stable across a number of model specifications. The Evaluation Team explored both forward and backward stepwise regression procedures to allow different combinations of

independent variables to enter and exit the model. Table I-16 displays the relevant statistics and outcomes from the best fit model specification.⁴¹ The table shows the regression coefficient and its associated p-value for each independent variable included in the model (non-POS square foot per household, political index, median income, percentage owner-occupied homes, and an interaction term between political index and median income). The p-values are all below 0.1, meaning all of the coefficients are significant at the 90% confidence level.

Table I-16. Model Summary Statistics (n=39 States)

Independent Variables	Model Coefficient and P-Value	P-Value of Coefficient
Intercept	(2.814)	0.015
Program Spending per Household	0.024	0.001
Percentage Square Feet Non-POS	0.598	0.057
Political Index	0.032	0.010
Median Income	0.0000494	0.020
Political Index * Median Income	(0.0000005)	0.011
Model R-squared		0.64

The NTG calculations are shown in Table I-17. The Evaluation Team determined NTG using a “modeled:modeled” calculation as opposed to a “modeled:actual” calculation. This means the Team compared the counterfactual scenario (which can only be modeled) to a *modeled* energy-efficient market share rather than the actual energy efficient market share for Wisconsin in the dataset.⁴² As shown in the table, the estimated 2015 NTG modeled ratio for CFLs and LEDs combined is 72%.

⁴¹ As noted above, the Team selected to use an ordinary least squares (OLS) model and weighted by the number of homes in each state.

⁴² For the Program scenario, the Evaluation Team included both Program and manufacturer incentives, consistent with the demand elasticity modeling approach. As noted in the 2015 evaluation report, “Program incentives did not account for the entire markdown in HTR (hard-to-reach) and grocery retailers. The Evaluation Team assumed that manufacturers would probably not have provided the additional incentives, which effectively doubled the markdown, absent the Program. Therefore, the Evaluation Team attributed the entire markdown to the Program.” Cadmus. *Focus on Energy Calendar Year 2015 Evaluation Report. Volume II*. May 20, 2016. Available online: <https://www.focusonenergy.com/sites/default/files/WI%20FOE%20CY%202015%20Volume%20II.pdf>

Table I-17. NTG Calculations

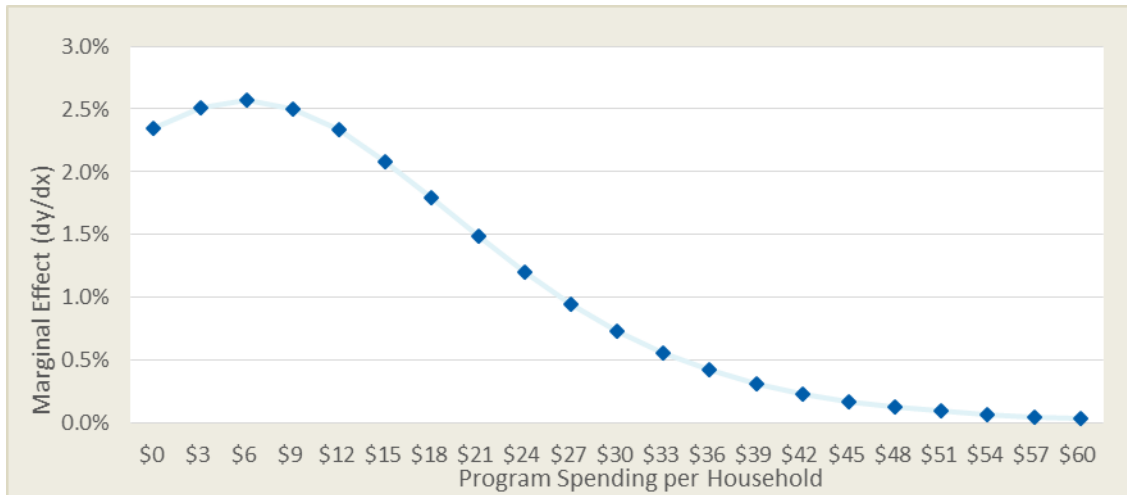
Calculation Term	Value
Total Wisconsin Bulbs in 2015	32,830,300
Program \$ per Household Actual	\$4.80
Program \$ per Household with Manufacturer Incentives	\$5.29
Program \$ per Household Counterfactual	\$0.00
Energy Efficient Market Share Counterfactual	38.0%
Energy Efficient Market Share Modeled	50.6%
Energy Efficient Market Share Actual	53.6%
Efficient Bulbs Counterfactual	12,488,631
Efficient Bulbs Modeled	16,604,330
Efficient Bulbs Actual	17,602,011
Program Bulbs Sold in 2015	5,737,096
Net Bulbs Modeled	4,115,700
NTG Ratio Modeled	72%

The Evaluation Team also developed separate models for CFLs and LEDs, but robustness of the models suffered because only 19 states had sufficiently granular data to estimate a lamp-specific model. This lack of data was largely because LEDs were still gaining market share in 2015, and it was challenging to gain technology specific program spending for a number of states. As LED market share increases in 2016 and 2017, and more states emphasize LEDs and phase out Program CFL support, the findings from LED-only models will be more robust.

Although the Evaluation Team ultimately elected to employ a linear (OLS) regression to estimate the regression model and calculate NTG ratios, alternative specifications can provide some useful information for Program planning purposes. A theoretical issue with a linear fit is that it produces impossible estimates at out-of-sample Program spending levels (e.g., at program spending above \$30 per household, the estimated energy efficient market share is greater than 100%). A non-linear beta regression model imposes a ceiling of 100% market share.

Figure I-6 shows the same beta regression model output as Figure I-5 but across a larger range of Program spending. This model estimates a gradual diminishing return on Program investment that begins around \$7 per household and accelerates at about \$9 per household. As Program expenditures increase to extremely high levels, the expected increase in energy efficient market share per dollar spent per household drops sharply. This is largely because the estimated market share is approaching 100%.

Figure I-6. Marginal Effect Plot Showing Extended Spending Range



Source: Evaluation Team

Retailer Lighting and Appliance Program Net-to-Gross Strengths and Limitations

Assessing net savings for the Retailer Lighting and Appliance Program faces a number of unique challenges, which include the upstream design of the Program (i.e., the Program is largely “invisible” to customers purchasing Program bulbs), the rapidly changing market due to the Energy Independence and Security Act of 2007 (EISA), the release of a new ENERGY STAR lighting specification in 2016, and the rapid introduction of lower-cost LED lamps.

To account for these challenges, the Evaluation Team chose to assess net-to-gross for the upstream lighting portion of the Program using these three methods—demand elasticity modeling, corporate retailer and manufacturer surveys, and national sales data modeling. Using three methods balances the strengths and limitations of each method and allows for a more comprehensive assessment that captures each of the net-to-gross components (freeridership, participant spillover, and nonparticipant spillover). The discussion below provides additional details regarding the strengths and limitations for each method.

Demand Elasticity Modeling Strengths and Limitations

Strengths. Demand elasticity modeling uses program sales data instead of self-report or other third-party data alternatives. The analysis closely follows the program theory in estimating net-to-gross (i.e., what the relationship is between the decrease in price and the increase in sales). The methodology allows for stratification and elasticities specific to various sales channels and bulb styles, plus incorporated indicators for product promotion.

Limitations. Statistical models always include an inherent amount of error, including these:

- **Omitted variable bias.** The Evaluation Team is not able to capture all variables that affect sale of efficient bulbs, thus there may be a bias due to omitted variables.
- **Lack of non-program sales.** The model assumes that non-discounted bulbs follow the same demand curve as discounted bulbs. This “out-of-sample” extrapolation might be quite extreme; in some cases, programs discount bulbs by up to 50%, meaning the approach needs to assume the same price elasticity at prices that may be 100% higher than those modeled.
- **No spillover estimate.** The analysis provides a net-of-freerider estimate, but does not account for any form of spillover.
- **Substitute goods.** Although this analysis provides "own-price" elasticity and measures how a bulb's sales volume responds to variation in its price point, it does not explicitly control for cross-price elasticities or how sales volume is affected by the price of non-program substitute goods. As an example, assuming there are non-program LEDs priced comparably to program LEDs absent program incentives, discounting of program bulbs may simply shift sales from the non-program LED to the discounted program LED. Rather than creating a sale that would not have happened otherwise, what appears as sales lift may be cannibalization of sales of another efficient bulb.

National Sales Data Modeling Strengths and Limitations

Strengths. This method includes sales data of Program and non-Program bulbs. The data are based on a combination of actual sales or estimated sales (from panel scans), and thus they do not have to rely on self-report responses. Regression modeling reduces the need for a perfect comparison area as demographic and social characteristics are taken into account. The method can estimate both freeridership and various components of spillover, including participant and nonparticipant spillover.

Limitations. There are a number of threats to validity with the use of national sales data modeling, including these:

- **Omitted variable bias.** As noted above with demand elasticity modeling, no model can account for all influencing factors.
- **Limited sales data.** Although the lighting sales data are available for the grocery, drug, club, discount, and mass merchandiser channels, sales data for the other channels were estimated based on purchases from a consumer panel.
- **Cross-state effects.** The model effectively uses comparison states to estimate the counterfactual, and thus cannot account for any cross-state effects of the Program (or other programs) that may increase estimated baseline sales in states with little to no program activity.
- **Combined CFL/LED estimates.** The model using the CY 2015 Program data is most robust with a combined CFL/LED net-to-gross, largely due to limited LED sales. The model with CY 2016 sales data anticipates isolating the effects to LEDs only.

Corporate Retailers and Manufacturer Surveys Strengths and Limitations

Strengths. This is a simple and straightforward way of calculating net-to-gross because it relies on retailers and manufacturers to answer specific questions and allows the Evaluation Team to estimate the increase in sales as a result of the Program. The Evaluation Team designed the sampling to survey retailers and manufacturers representing a large percentage of Program sales. The results encompassed freeridership and participant spillover.

Limitations. This method, a self-report approach with upstream market actors, suffers from of number of similar biases as consumer self-report approaches as well as some unique threats to validity:

- **Non-response bias/survey fatigue.** Certain retailers and manufacturers can be very difficult to reach to complete surveys. Corporate contacts, in particular, are surveyed for the many different programs they participate in across the country, and thus they may not be willing to take the survey. Store-level retailers are busy managing their lighting department and stores. Respondents who do participate in the studies, therefore, may attempt to rush the survey or interview, providing less reliable responses to quickly get off the telephone.
- **Social desirability/gaming bias.** Participating retailers and manufacturers have a social desirability and gaming bias that work in opposing directions. On one hand, respondents typically want to provide answers that make their company look “green” and environmentally responsible, so they are likely to provide responses that can lead to high freeridership. On the other hand, respondents may also provide responses that can exaggerate the influence of the Program (and thus understate freeridership) as a way to ensure that the incentives continue. The presence and magnitude of each of these biases can vary based on the respondent.
- **Recall bias.** Respondents typically are not looking up actual sales but estimating them in “real time” while conducting the interview, so they may exhibit some recall bias.

Self-Report Net-To-Gross Methodology

Two components—freeridership and spillover—constitute NTG. True freeriders are customers who would have purchased a measure without a program’s influence. Spillover is the amount of additional savings obtained by customers investing in additional, energy-efficient measures or activities because of their program participation.

This section presents the approaches and detailed results of residential and nonresidential NTG estimates derived from the analysis of self-reports procured through participant surveys. The Evaluation Team applied these results to measure categories and programs for which adequate baseline data were unavailable. In some cases, the Evaluation Team combined the measure-level results from the SMP and the self-report methods to determine weighted average program NTG ratios.

Survey Design

For programs for which participating customer surveys were conducted in the CY 2016 evaluation, the Evaluation Team asked a series of freeridership and spillover questions. These programs are listed in Table I-1.

The Evaluation Team designed the freeridership questions to elicit, to the best of the respondent's ability, the impact of the particular program on the respondent's decision to purchase the high-efficiency equipment. Programs can also influence a customer to purchase an energy-efficient measure sooner than planned, to purchase a higher-efficiency measure than planned, or to purchase more units than planned without the program. The survey also sought to establish what decision-makers might have done in the program's absence.

Direct questions such as "Would you have installed measure X without the program incentive?" tend to result in exaggerated "yes" responses. Participants often provide answers they believe surveyors seek, so a question becomes the equivalent of asking: "Would you have done the right thing on your own?" Effectively avoiding such bias involves asking a question in several different ways then checking for consistent responses.

Basing freeridership estimates on a series of questions, rather than a single question, can help evaluators recognize and minimize response biases. Not all questions are weighted equally. For example, if a respondent would not have installed the measure(s) to the same level of efficiency without the program, they are automatically a 0% freerider. If they would not have installed the measure(s) within two years without the program, they are automatically a 0% freerider.

Other questions included in the freeridership analysis are assigned partial weights for responses that are indicative of a non-freerider. This method does not allow estimation of a respondent as a 100% freerider based on a single answer to a single question; a customer must provide consistent responses across the relevant questions in the freeridership analysis.

The survey questions addressed five core freeridership dimensions for residential programs and six core freeridership dimensions for nonresidential programs:

- Would participants have installed measures without the program?
- Were participants planning on ordering or installing the measures before learning about the program?
- Would participants have installed the measures at the same efficiency levels without the program incentive?
- Would participants have installed the same quantity of measures without the program?
- In the program's absence, would participants have installed the measures at a different time?
- Was the purchase of the measures in the organization's most recent capital budget?
(Nonresidential only)

The survey design included several skip patterns, allowing interviewers to confirm answers previously provided by respondents by asking the same question in a different format. Specific freeridership questions used for the programs are presented in their analysis sections in this appendix.

Freeridership Methodology

The Evaluation Team developed a score for all participants, using their responses to the freeridership questions, and developed a probability matrix for assigning a single score to each participant, using his or her objective responses to targeted survey questions.⁴³ The Evaluation Team applied freeridership scores to question response patterns in the probability matrix and calculated confidence and precision estimates to the distribution of these scores.

This matrix approach provides these key benefits:

- Derivation of a partial freeridership score, based on the likelihood of a respondent taking similar actions in the incentive's absence
- Use of a rules-based approach for consistency among multiple respondents
- Ability to change weightings in a "what if" exercise, testing the response set's stability

The Evaluation Team's method offered the advantage of partial freeridership. Experience has shown that program participants do not fall neatly into freerider and non-freerider categories. For example, the Evaluation Team assigned partial freeridership scores to participants who had plans to install a measure; although the program exerted some influence over their decisions, these respondents were also influenced by other market characteristics outside of the program. Further, the Evaluation Team could assign partial credit to "don't know" and "refused" responses, rather than removing respondents entirely from the analysis.

The Evaluation Team assessed freeridership at three levels:

- Each participant survey response was converted into a freeridership matrix terminology.
- Each participant's combination of responses received a score from the matrix.
- All participants were aggregated into an average freeridership score for the entire program category.

Convert Responses to Matrix Terminology

The Evaluation Team independently evaluated each survey question's response, assessed participants' freeridership levels for each question, and converted each survey response option into one of these values:

- "Yes" (indicative of freeridership)
- "No" (indicative of non-freeridership)
- "Partial" (partially indicative of freeridership)

Participant Freeridership Scoring

Following conversion of survey responses into matrix terminology, the Evaluation Team created a freeridership matrix for each program, allowing each participant's combined responses to be assigned a

⁴³ Khawaja, M. S. *The NAPEE Handbook on DSM Evaluation*. 2007 edition, page 5-1.

freeridership score. All combinations of survey question responses were considered in creating the matrix, with each combination receiving a freeridership score of 0% to 100%.

The Evaluation Team’s process for determining freeridership score is as follows:

- Customers were categorized as 0% freeriders in these instances:
 - They had no plans to install the measure in the absence of the program’s incentives and would not have installed the measure within a year for residential programs and within two years for nonresidential programs.
 - They had specific plans to install the measure before learning about the program but would not have done so without program incentives.
 - In the absence of program incentives, the customer would not have purchased or installed equipment to the same level of efficiency.
- Customers were categorized as 100% freeriders if they would have installed the measure without the program or if they had installed the measure before learning about the program.
- Customers received a partial freeridership score (ranging from 12% to 75%) if they had plans to install the measure and their decision was influenced by the program. (This influence may have been installation timing, the number of measures installed, or the efficiency levels of measures installed.) For customers who were highly likely to install a measure and for whom the program had less influence over their decision, a higher freeridership percentage was applied.

Measure Category Freeridership Scoring

After assigning a freeridership score to every survey respondent, the Evaluation Team calculated a savings-weighted average freerider score for the measure category. For each program, the respondents’ freerider scores were individually weighted by estimated savings of equipment installed, using the following calculation:

$$\text{SavingsWeightedFreeridership} = \frac{\sum[\text{Respondent FR Score}] * [\text{Measure Energy Savings}]}{\sum[\text{All Respondents Measure Energy Savings}]}$$

Spillover Methodology

Spillover refers to additional savings generated by program participants through their participation but not captured by program records. Spillover occurs when participants choose to purchase energy-efficient measures or adopt energy-efficient practices because of a program’s influence but do not participate (or otherwise cannot participate) in the program.

The Evaluation Team measured spillover by asking a sample of participants purchasing and receiving an incentive for a particular measure if, because of the program, they installed another efficient measure or undertook another energy efficiency activity. Respondents were asked to rate the program’s (and incentive’s) relative influence (either very, somewhat, or not at all important) on their decisions to pursue additional savings.

Participant Spillover Analysis

The Evaluation Team used a top-down approach to calculate spillover savings. Analysis began with a subset containing only the survey respondents who indicated they had installed additional energy-saving measures after participating in the program. The Evaluation Team screened out any respondents who received an incentive for these additional measures. It also removed respondents if they indicated the program had little influence on their decisions to purchase additional measures, thus retaining only those respondents who rated the program as *very important*.

The Evaluation Team applied evaluated and deemed savings to the spillover measures that respondents said they had installed as a result of their program participation.

The spillover percentage per program category was calculated by dividing the sum of additional spillover savings reported by respondents for a given program category by total gross savings achieved by all respondents in the program category:

$$\text{Spillover \%} = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

Net-to-Gross Analysis

The Evaluation Team combined this spillover information with the program-level freeridership results to achieve the NTG ratio, using the following calculation:

$$\text{NTG} = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-18 summarizes the self-report CY 2016 participant freeridership, spillover and NTG results by program.

Table I-18. CY 2016 Self-Report Participant Freeridership, Spillover and NTG by Program

Program	n	Freeridership ¹	Spillover ¹	NTG ¹
Renewable Rewards – Solar PV	133	30%	3%	73%
Renewable Rewards - GSHP	24	69%	1%	32%
Simple Energy Efficiency – Specialty LEDs	28	11%	0%	89%
Simple Energy Efficiency – Upgrade Showerheads	15	12%	0%	88%
Smart Thermostat Pilot	70	29%	1%	72%
Business Incentive	70	56%	0%	44%
Multifamily Energy Savings	70	23%	2%	79%
Agriculture, Schools and Government	142	36%	1%	65%
Chain Stores and Franchises	70	37%	0%	63%
Large Energy Users	70	19%	1%	82%
Small Business	70	6%	1%	95%
Renewable Energy Competitive Incentive	3	0%	0%	100%
Design Assistance	9	12%	5%	93%

¹Weighted by gross evaluated energy savings.

Renewable Rewards Program Solar PV Self-Report NTG Methodology and Findings

Freeridership Survey Questions

The participant survey's freeridership section included seven questions, addressing the five core freeridership dimensions:

- B1. Before you heard anything about the Focus on Energy Renewable Rewards Program, had you already purchased or installed your PV system?
- B2. [Ask if question B1 is Yes] So just to be clear, you installed your PV system before you heard anything about the Focus on Energy Renewable Rewards Program. Is that correct?
- B3. Before you heard about the Program, had you already been planning to install a PV system?
- B4. Would you have installed the same PV system without the Cash-Back Reward from Focus on Energy?
- B5. [Ask if question B4 is No or DK/RF] What would you have done differently if the Renewable Rewards Program had not been available to you?
- B7. And, thinking about timing, without the Focus on Energy Cash-Back Reward, would you have installed the PV system... [READ LIST]
- B8. [Ask if question B5 is 'I would not have installed a PV system at all'] So just to confirm, you would not have installed a PV system at all, without a Focus on Energy Cash-Back Reward. Is that correct?

Convert Responses to Matrix Terminology

Table I-19 illustrates how initial survey responses are translated into whether the response is “yes,” “no,” or “partially” indicative of freeridership (in parentheses).

Table I-19. Renewable Rewards Program Solar PV Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

B1. Before you heard anything about the Focus on Energy Renewable Rewards program, had you already purchased or installed your PV system?	B2. So just to be clear, you installed your PV system before you heard anything about the Focus on Energy Renewable Rewards program. Is that correct?	B3. Before you heard about the program, had you already been planning to install a PV system?	B4. Would you have installed the same PV system without the Cash-back Reward from Focus on Energy?	B5. What would you have done differently if the Renewable Rewards program had not been available to you?	B7. And, thinking about timing, without the Focus on Energy Cash-back Reward, would you have installed the PV system...	B8. So just to confirm, you would not have installed a PV system at all, without a Focus on Energy Cash-back Reward. Is that correct?
Yes (Yes)	Yes, that's correct (Yes)	Yes (Yes)	Yes (Yes)	I would have installed a larger PV system (Yes)	At the same time (Yes)	Yes (No)
No (No)	No, that's not correct (No)	No (No)	No (No)	I would have installed a smaller PV system (No)	Within the same year (Partial)	No (Yes)
Don't Know (No)	Don't Know (No)	Don't Know (Partial)	Don't Know (Partial)	I would not have installed a PV system at all (No)	One to two years out (No)	Don't Know (Partial)
Refused (No)	Refused (No)	Refused (Partial)	Refused (Partial)	Don't Know (Partial)	More than two years out (No)	Refused (Partial)
				Refused (Partial)	Never (No)	
					Don't Know (Partial)	
					Refused (Partial)	

Participant Freeridership Scoring

Each freeridership score started with 100%, which the Evaluation Team decremented based on the participant’s responses to the seven questions shown in Table I-20.

Table I-20. Renewable Rewards Program Solar PV Freeridership Scoring Legend

Q#	Decrement
B1	0% decrement for "No," Partial level not needed
B2	100% FR if "Yes," 0% decrement for "No" level, "Partial" level not needed
B3	50% decrement for "No," 25% decrement for "Partial"
B4	50% decrement for "No," 25% decrement for "Partial"
B5	50% decrement for "No," 25% decrement for "Partial"
B7	100% decrement for "No," 25% decrement for "Partial"
B8	100% decrement for "No," 25% decrement for "Partial"

Table I-21 illustrates the unique response combinations from participants answering the Renewable Rewards Program solar PV freeridership battery (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses. The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-21. Renewable Rewards Program Solar PV Frequency of Freeridership Scoring Combinations¹

B1. Before you heard anything about the Focus on Energy Renewable Rewards program, had you already purchased or installed your PV system?	B2. So just to be clear, you installed your PV system before you heard anything about the Focus on Energy Renewable Rewards program. Is that correct?	B3. Before you heard about the program, had you already been planning to install a PV system?	B4. Would you have installed the same PV system without the Cash-back Reward from Focus on Energy?	B5. What would you have done differently if the Renewable Rewards program had not been available to you?	B7. And, thinking about timing, without the Focus on Energy Cash-back Reward, would you have installed the PV system...	B8. So just to confirm, you would not have installed a PV system at all, without a Focus on Energy Cash-back Reward. Is that correct?	FR Score	Frequency
Yes	Yes	x	x	x	x	x	100%	4
No	x	Yes	Yes	x	Yes	x	100%	15
No	x	Yes	Yes	x	Partial	x	75%	5
No	x	Yes	Yes	x	No	x	0%	7
No	x	Yes	Partial	Partial	x	x	50%	17
No	x	Yes	Partial	No	x	No	0%	2
No	x	Yes	Partial	No	Yes	x	25%	3
No	x	Yes	Partial	No	No	x	0%	3
No	x	Yes	No	Partial	x	x	25%	2
No	x	Yes	No	No	Yes	x	12.5%	3
No	x	Yes	No	No	Partial	x	0%	3
No	x	Yes	No	No	No	x	0%	8
No	x	Yes	No	No	x	Yes	12.5%	1
No	x	Yes	No	No	x	No	0%	5
No	x	Partial	Yes	x	Yes	x	75%	3
No	x	Partial	No	Partial	x	x	12.5%	2
No	x	Partial	No	No	Partial	x	0%	1
No	x	Partial	No	No	x	No	0%	2
No	x	No	Yes	x	Yes	x	50%	6
No	x	No	Yes	x	No	x	0%	2
No	x	No	Partial	Partial	x	x	12.5%	7
No	x	No	Partial	No	Partial	x	0%	2
No	x	No	No	Yes	Partial	x	12.5%	1
No	x	No	No	Yes	No	x	0%	1
No	x	No	No	Partial	x	x	12.5%	2
No	x	No	No	No	Partial	x	0%	3
No	x	No	No	No	x	No	0%	23

¹An “x” in this table and subsequent tables indicates that the respondent was not asked that particular question. These questions were skipped intentionally, based on customer responses, to avoid asking redundant questions.

Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment or appliances following their participation in the Renewable Rewards Program. The Team applied evaluated and deemed savings to the spillover measures customers said they had installed as a result of their Program participation (Table I-22).

Table I-22. Renewable Rewards Program Solar PV Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
Air Sealing	1	0.8
Electric Storage Water Heater	2	0.7
ENERGY STAR Clothes Washer	6	4.1
ENERGY STAR Refrigerator	7	2.7
Gas Furnace	1	4.3
Gas Tankless Water Heater	2	18.6
Ground Source Heat Pump	2	34.8
Insulation	6 projects	15.1
Wind System	1	10.2

Next, the Evaluation Team divided the sample spillover savings by the Program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 3% spillover estimate, when rounded to the nearest whole percentage point, for the Residential Rewards Program respondents (Table I-23).

Table I-23. Renewable Rewards Program Solar PV Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	91.3
Program Savings	3,181.6
Spillover Estimate	3%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the solar PV NTG ratio of 73%, using the following calculation:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-24. Renewable Rewards Program Solar PV NTG Estimates

n	Freeridership ¹	Spillover	NTG
133	30%	3%	73%

¹Weighted by gross evaluated energy savings

Renewable Rewards Program Ground Source Heat Pump Self-Report NTG Methodology and Findings

Freeridership Survey Questions

The participant survey's freeridership section included six questions, addressing the five core freeridership dimensions:

- C1. Before you heard anything about the Focus on Energy Renewable Energy Program, had you already purchased or installed your ground-source heat pump?
- C2. [Ask if question C1 is Yes] So just to be clear, you installed your ground-source heat pump before you heard anything about the Focus on Energy Renewable Energy Program. Is that correct?
- C3. Before you heard about the program, had you already been planning to install a ground-source heat pump?
- C4. Would you have installed the same ground-source heat pump without the cash-back incentive from Focus on Energy?
- C5. Thinking about timing, without the Focus on Energy cash-back incentive, would you have installed the ground-source heat pump...[READ LIST]
- C6. [Ask if question C5 is 'Never'] So just to confirm, you would not have installed a ground-source heat pump at all, without a Focus on Energy cash-back incentive. Is that correct?

Convert Responses to Matrix Terminology

Table I-25 illustrates how initial survey responses are translated into whether the response is "yes," "no," or "partially" indicative of freeridership (in parentheses).

Table I-25. Renewable Rewards Program Ground Source Heat Pump Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

C1. Before you heard anything about the Focus on Energy Renewable Energy Program, had you already purchased or installed your ground-source heat pump?	C2. So just to be clear, you installed your ground-source heat pump before you heard anything about the Focus on Energy Renewable Energy Program. Is that correct?	C3. Before you heard about the program, had you already been planning to install a ground-source heat pump?	C4. Would you have installed the same ground-source heat pump without the cash-back incentive from Focus on Energy?	C5. Thinking about timing, without the Focus on Energy cash-back incentive, would you have installed the ground-source heat pump...	C6. So just to confirm, you would not have installed a ground-source heat pump at all, without a Focus on Energy cash-back incentive. Is that correct?
Yes (Yes)	Yes, that's correct (Yes)	Yes (Yes)	Yes (Yes)	At the same time (Yes)	Yes (No)
No (No)	No, that's not correct (No)	No (No)	No (No)	Within the same year (Partial)	No (Yes)
Don't Know (No)	Don't Know (No)	Don't Know (Partial)	Don't Know (Partial)	One to two years out (No)	Don't Know (Partial)
Refused (No)	Refused (No)	Refused (Partial)	Refused (Partial)	More than two years out (No)	Refused (Partial)
				Never (No)	
				Don't Know (Partial)	
				Refused (Partial)	

Participant Freeridership Scoring

Each freeridership score started with 100%, which the Evaluation Team decremented based on participant's responses to the six questions shown in the next table.

Table I-26. Renewable Rewards Ground Source Heat Pump Freeridership Scoring Legend

Q#	Decrement
C1	0% decrement for "No," Partial level not needed
C2	100% FR if "Yes," 0% decrement for "No" level, "Partial" level not needed
C3	50% decrement for "No," 25% decrement for "Partial"
C4	50% decrement for "No," 25% decrement for "Partial"
C5	100% decrement for "No," 25% decrement for "Partial"
C6	100% decrement for "No," 25% decrement for "Partial"

The next table illustrates the unique response combinations from participants answering the Renewable Rewards Program ground source heat pump freeridership battery (actual responses mapped to "yes," "no," or "partial," as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses. The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-27. Renewable Rewards Ground Source Heat Pump Frequency of Freeridership Scoring Combinations¹

C1. Before you heard anything about the Focus on Energy Renewable Energy Program, had you already purchased or installed your ground-source heat pump?	C2. So just to be clear, you installed your ground-source heat pump before you heard anything about the Focus on Energy Renewable Energy Program. Is that correct?	C3. Before you heard about the program, had you already been planning to install a ground-source heat pump?	C4. Would you have installed the same ground-source heat pump without the cash-back incentive from Focus on Energy?	C5. Thinking about timing, without the Focus on Energy cash-back incentive, would you have installed the ground-source heat pump...	C6. So just to confirm, you would not have installed a ground-source heat pump at all, without a Focus on Energy cash-back incentive. Is that correct?	FR Score	Frequency
Yes	Yes	x	x	x	x	100%	2
No	x	Yes	Yes	Yes	x	100%	9
No	x	Yes	Yes	Partial	x	75%	2
No	x	Yes	Partial	Yes	x	75%	4
No	x	Yes	No	Partial	x	25%	2
No	x	Yes	No	No	x	0%	1
No	x	No	Yes	Yes	x	50%	1
No	x	No	No	No	x	0%	3

¹ An “x” in this table and subsequent tables indicates that the respondent was not asked that particular question. These questions were skipped intentionally, based on customer responses, to avoid asking redundant questions.

Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment or appliances following their participation in the Renewable Rewards Program. The Team applied evaluated and deemed savings to the spillover measures customers said they had installed as a result of their Program participation (see table below).

Table I-28. Renewable Rewards Program Ground Source Heat Pump Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
Air Sealing	1	0.8
Electric Storage Water Heater	1	0.4
ENERGY STAR Clothes Washer	3	2.3
ENERGY STAR Refrigerator	1	0.4
Insulation	1 project	0.6

Next, the Evaluation Team divided the sample spillover savings by the Program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 1% spillover estimate, when rounded to the nearest whole percentage point, for the Residential Rewards Program ground source heat pump respondents (see table below).

Table I-29. Renewable Rewards Program Ground Source Heat Pump Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	4.5
Program Savings	327.2
Spillover Estimate	1%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the ground source heat pump NTG ratio of 32%, using the following calculation:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-30. Renewable Rewards Program Ground Source Heat Pump NTG Estimate

n	Freeridership ¹	Spillover	NTG
24	69%	1%	32%

¹ Weighted by gross evaluated energy savings.

Simple Energy Efficiency Program Self-Report NTG Methodology

Freeridership Survey Questions

The participant survey’s freeridership section included three questions, which were asked separately for the specialty LED bulbs and upgrade showerheads:

- C33/C47/C97. If Focus on Energy did not offer the \$3 energy-efficient pack, would you have purchased [decorative candle LED bulbs/flood light LED bulbs/water-saving showerheads] on your own?
- C34/C48/C98. In terms of timing, when would you have purchased the [decorative candle LED bulbs/flood light LED bulbs/water-saving showerheads] on your own? Would you have purchased them ...[READ LIST]
- C32/C46/C96. Before you signed up to receive a pack, did you already have [decorative candle LED bulbs/flood light LED bulbs/water-saving showerheads] installed at your home?

Convert Responses to Matrix Terminology

Table I-31 illustrates how initial survey responses are translated into whether the response is “yes,” “no,” or “partially” indicative of freeridership (in parentheses).

Table I-31. Simple Energy Efficiency Program Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

C33/C47/C97. If Focus on Energy did not offer the [\$X] energy-efficient pack, would you have purchased [decorative candle LED bulbs/flood light LED bulbs/water-saving showerheads] on your own?	C34/C48/C98. In terms of timing, when would you have purchased the [decorative candle LED bulbs/flood light LED bulbs/water-saving showerheads] on your own? Would you have purchased them ...[READ LIST]	C32/C46/C96. Before you signed up to receive a pack, did you already have [decorative candle LED bulbs/flood light LED bulbs/water-saving showerheads] installed at your home?
Yes (Yes)	Around the same time you received the pack (Yes)	Yes (Yes)
No (No)	Later but within the same year (Partial)	No (No)
No, I already had them installed in all available showers (Yes2)	In one year or more (No)	Don't Know (Partial)
Don't Know (Partial)	Don't Know (Partial)	Refused (Partial)
Refused (Partial)	Refused (Partial)	

Participant Freeridership Scoring

Each freeridership score started with 100%, which the Evaluation Team decremented based on participant’s responses to the three questions shown in Table I-32.

Table I-32. Simple Energy Efficiency Program Freeridership Scoring Legend

Q#	Decrement
C1	100% FR if "Yes2," 100% decrement for "No," 25% decrement for "Partial"
C2	100% decrement for "No" level, 50% decrement for "Partial"
C3	50% decrement for "No," 25% decrement for "Partial"

Table I-33 illustrates the unique response combinations from specialty LED participants answering the Simple Energy Efficiency Program freeridership battery (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses. The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-33. Simple Energy Efficiency Program Specialty LED Frequency of Freeridership Scoring Combinations¹

C33/C47/C97. If Focus on Energy did not offer the [\$X] energy-efficient pack, would you have purchased [decorative candle LED bulbs/flood light LED bulbs/globe LED bulbs] on your own?	C34/C48/C98. In terms of timing, when would you have purchased the [decorative candle LED bulbs/flood light LED bulbs/ globe LED bulbs] on your own? Would you have purchased them ...[READ LIST]	C32/C46/C96. Before you signed up to receive a pack, did you already have [decorative candle LED bulbs/flood light LED bulbs/ globe LED bulbs] installed at your home?	FR Score	Frequency
Yes	Yes	Yes	100%	1
Yes	Yes	No	50%	1
Yes	Partial	Yes	50%	3
Yes	Partial	No	12.5%	4
Yes	No	x	0%	5
No	x	x	0%	14

¹ An “x” in this table and subsequent tables indicates that the respondent was not asked that particular question. These questions were skipped intentionally, based on customer responses, to avoid asking redundant questions.

Table I-34 illustrates the unique response combinations from participants answering the Simple Energy Efficiency Program water-savings showerhead freeridership battery.

Table I-34. Simple Energy Efficiency Program Upgrade Showerhead Frequency of Freeridership Scoring Combinations¹

C97. If Focus on Energy did not offer the [\$X] energy-efficient pack, would you have purchased water-saving showerheads on your own?	C98. In terms of timing, when would you have purchased the water-saving showerheads on your own? Would you have purchased them ...[READ LIST]	C96. Before you signed up to receive a pack, did you already have water-saving showerheads installed at your home?	FR Score	Frequency
Yes	Yes	Yes	100%	1
Yes	Partial	Partial	25%	1
Yes	Partial	No	12.5%	2
Yes	No	x	0%	2
Partial	x	x	25%	1
No	x	x	0%	8

¹ An “x” in this table and subsequent tables indicates that the respondent was not asked that particular question. These questions were skipped intentionally, based on customer responses, to avoid asking redundant questions.

Participant Spillover Analysis

The Evaluation Team determined that there was no participant spillover for the Program based on self-report survey data. No surveyed participants who purchased specialty LEDs or upgrade showerheads attributed additional energy-efficient equipment purchases (for which they did not receive an incentive) to their participation in the Program.

This yielded a 0% spillover estimate, when rounded to the nearest whole percentage point, for the specialty LED and upgrade showerhead respondents (Table I-35).

Table I-35. Simple Energy Efficiency Program Participant Spillover Percentage Estimate

Variable	Total kWh Savings Estimate
Spillover Savings	0
Program Savings	1,816
Spillover Estimate	0%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the specialty LED and upgrade showerhead NTG ratios, using the following calculation:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-36. Simple Energy Efficiency Program NTG Estimate

Measure	n	Freeridership ¹	Spillover	NTG
Specialty LEDs	28	11%	0%	89%
Upgrade Showerheads	15	12%	0%	88%

¹Weighted by gross evaluated energy savings

Smart Thermostat Pilot Self-Report NTG Methodology

Freeridership Survey Questions

The participant survey’s freeridership section included 10 questions, addressing the five core freeridership dimensions. These freeridership questions were asked in the survey format for smart thermostats:

- F1. Before you heard anything about the Focus on Energy Reward for smart thermostats program, had you already purchased or installed your smart thermostat?
- F2. [Ask if question F1 is Yes] So just to be clear, you installed your smart thermostat before you heard anything about the Focus on Energy Reward for smart thermostats. Is that correct?
- F3. Before you heard about the Focus on Energy Reward for smart thermostats, had you already been planning to purchase a smart thermostat??
- F4. Would you have installed the same smart thermostat without the Reward from Focus on Energy?
- F5. [Ask if question F4 is No or DK/RF] So I understand, would you have installed a different thermostat without the Focus on Energy Reward or would you have decided to install nothing?
- F6. When you say you would have installed a thermostat without the Focus on Energy Reward from Focus on Energy, would you have installed a smart thermostat, that is, one with Wi-Fi and occupancy sensor capabilities?
- F7. And, thinking about timing, without the Focus on Energy Reward, would you have installed the thermostat... [READ LIST]

- F8. [Ask if question F5 is 'I would have decided to install nothing'] So just to confirm, you would not have installed a thermostat at all, without a Focus on Energy Reward. Is that correct?
- F9. [Ask if question F9 is No] Without the Focus on Energy Reward, would you have installed a thermostat, but one that does not have the Wi-Fi or occupancy sensor capabilities of a smart thermostat?
- F10. [Ask if question F9 is No] And with respect to timing, would you have installed the thermostat... [READ LIST]

Convert Responses to Matrix Terminology

Table I-37 illustrates how initial survey responses were translated into whether the response was “yes,” “no,” or “partially” indicative of freeridership (in parentheses).

Table I-37. Smart Thermostat Pilot Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

F1. Before you heard anything about the Focus on Energy Reward for smart thermostats program, had you already purchased or installed your smart thermostat?	F2. So just to be clear, you installed your smart thermostat before you heard anything about the Focus on Energy Reward for smart thermostats. Is that correct?	F3. Before you heard about the Focus on Energy Reward for smart thermostats, had you already been planning to purchase a smart thermostat?	F4. Would you have installed the same smart thermostat without the Reward from Focus on Energy?	F5. So I understand, would you have installed a different thermostat without the Focus on Energy Reward or would you have decided to install nothing?	F6. When you say you would have installed a thermostat without the Focus on Energy Reward from Focus on Energy, would you have installed a smart thermostat, that is, one with Wi-Fi and occupancy sensor capabilities?	F7. And, thinking about timing, without the Focus on Energy Reward, would you have installed the thermostat...	F8. So just to confirm, you would not have installed a thermostat at all, without a Focus on Energy Reward. Is that correct?	F9. Without the Focus on Energy Reward, would you have installed a thermostat, but one that does not have the Wi-Fi or occupancy sensor capabilities of a smart thermostat?	F10. And with respect to timing, would you have installed the thermostat...
Yes (Yes)	Yes, that's correct (Yes)	Yes (Yes)	Yes (Yes)	I would have installed a different measure (Yes)	Yes (Yes)	At the same time (Yes)	Yes (No)	Yes (Yes)	At the same time (Yes)
No (No)	No, that's not correct (No)	No (No)	No (No)	I would have decided to install nothing (No)	No (No)	Within the same year (Partial)	No (Yes)	No (No)	Within the same year (Partial)
Don't Know (No)	Don't Know (No)	Don't Know (Partial)	Don't Know (Partial)	Don't Know (Partial)	Don't Know (Partial)	One to two years out (No)	Don't Know (Partial)	Don't Know (Partial)	One to two years out (No)
Refused (No)	Refused (No)	Refused (Partial)	Refused (Partial)	Refused (Partial)	Refused (Partial)	More than two years out (No)	Refused (Partial)	Refused (Partial)	More than two years out (No)
						Never (No)			Never (No)
						Don't Know (Partial)			Don't Know (Partial)
						Refused (Partial)			Refused (Partial)

Participant Freeridership Scoring

Each freeridership score started with 100%, which the Evaluation Team decremented based on participant’s responses to the 10 questions, as shown in Table I-38.

Table I-38. Smart Thermostat Pilot Freeridership Scoring Legend

Q#	Decrement
F1	0% decrement for "No," Partial level not needed
F2	100% FR if "Yes," "Partial" level not needed
F3	50% decrement for "No," 25% decrement for "Partial"
F4	50% decrement for "No," 25% decrement for "Partial"
F5	0% decrement for "No," Partial level not needed
F6	100% decrement for "No," 25% decrement for "Partial"
F7	100% decrement for "No," 25% decrement for "Partial"
F8	100% decrement for "No," 25% decrement for "Partial"
F9	100% decrement for "No," 25% decrement for "Partial"
F10	100% decrement for "No," 25% decrement for "Partial"

Table I-39 illustrates the unique response combinations from participants answering the Smart Thermostat Pilot freeridership battery (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses. The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-39. Smart Thermostat Pilot Frequency of Freeridership Scoring Combinations¹

F1. Before you heard anything about the Focus on Energy Reward for smart thermostats program, had you already purchased or installed your smart thermostat?	F2. So just to be clear, you installed your smart thermostat before you heard anything about the Focus on Energy Reward for smart thermostats. Is that correct?	F3. Before you heard about the Focus on Energy Reward for smart thermostats, had you already been planning to purchase a smart thermostat?	F4. Would you have installed the same smart thermostat without the Reward from Focus on Energy?	F5. So I understand, would you have installed a different thermostat without the Focus on Energy Reward or would you have decided to install nothing?	F6. When you say you would have installed a thermostat without the Focus on Energy Reward from Focus on Energy, would you have installed a smart thermostat, that is, one with Wi-Fi and occupancy sensor capabilities?	F7. And, thinking about timing, without the Focus on Energy Reward, would you have installed the thermostat...	F8. So just to confirm, you would not have installed a thermostat at all, without a Focus on Energy Reward. Is that correct?	F9. Without the Focus on Energy Reward, would you have installed a thermostat, but one that does not have the Wi-Fi or occupancy sensor capabilities of a smart thermostat?	F10. And with respect to timing, would you have installed the thermostat...	FR Score	Frequency
Yes	Yes	x	x	x	x	x	x	x	x	100%	4
No	x	Yes	Yes	x	Yes	Yes	x	x	x	100%	6
No	x	Yes	Yes	x	Yes	Partial	x	x	x	75%	9
No	x	Yes	Yes	x	Yes	No	x	x	x	0%	5
No	x	Yes	Partial	Yes	Yes	Yes	x	x	x	75%	1
No	x	Yes	Partial	Yes	Yes	Partial	x	x	x	50%	1
No	x	Yes	Partial	No	x	x	No	x	x	0%	4
No	x	Yes	No	Yes	Yes	Partial	x	x	x	25%	3
No	x	Yes	No	Yes	Yes	No	x	x	x	0%	2
No	x	Yes	No	No	x	x	Yes	No	x	0.0%	1
No	x	Yes	No	No	x	x	No	x	x	0.0%	6
No	x	Partial	Yes	x	Yes	Partial	x	x	x	50.0%	1
No	x	Partial	Yes	x	Yes	No	x	x	x	0.0%	1
No	x	Partial	Partial	No	x	x	No	x	x	0.0%	1
No	x	Partial	No	No	x	x	No	x	x	0.0%	1
No	x	No	Yes	x	Yes	Partial	x	x	x	25.0%	2
No	x	No	Yes	x	Yes	No	x	x	x	0.0%	1
No	x	No	Yes	x	Partial	No	x	x	x	0.0%	1
No	x	No	Partial	No	x	x	No	x	x	0.0%	1
No	x	No	Partial	No	x	x	x	x	Partial	12.5%	1
No	x	No	No	Yes	No	x	x	x	x	0.0%	4
No	x	No	No	No	x	x	No	x	x	0.0%	14

¹ An “x” in this table and subsequent tables indicates that the respondent was not asked that particular question. These questions were skipped intentionally, based on customer responses, to avoid asking redundant questions.

Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment or appliances following their participation in the Smart Thermostat Pilot. The Team applied evaluated and deemed savings to the spillover measures customers said they had installed as a result of their Program participation (Table I-40).

Table I-40. Smart Thermostat Pilot Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
Gas Furnace	1	4.3

Next, the Evaluation Team divided the sample spillover savings by the program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 1% spillover estimate, when rounded to the nearest whole percentage point, for the Smart Thermostat Pilot respondents (Table I-41).

Table I-41. Smart Thermostat Pilot Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	4.3
Program Savings	668.6
Spillover Estimate	1%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the NTG ratio of 72%, using the following calculation:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-42. Smart Thermostat Pilot NTG Estimates

n	Freeridership ¹	Spillover	NTG
70	29%	1%	72%

¹Weighted by gross evaluated energy savings

Business Incentive, Multifamily Energy Savings, Agriculture, Schools and Government, Chain Stores and Franchises, and Large Energy User Programs' Self-Report NTG Methodology and Findings

Freeridership Survey Questions

The following programs participant survey's freeridership sections included two separate sets of questions, which addressed the six core freeridership dimensions, for the following programs:

- Business Incentive Program
- Multifamily Energy Savings Program
- Agriculture, Schools and Government Program
- Chain Stores and Franchises Program

For these programs, one set of freeridership questions was asked of participants who said they were the decision makers. A second set was asked of participants whose contractor helped make the decision. Participants were asked only one of the sets of questions.

The two sets of freeridership questions were directly comparable—the difference was that one was oriented toward counterfactual behavior without the program incentive and one toward counterfactual behavior if there was no involvement from the contractors.

The freeridership questions about the Program incentive (asked in the survey format) were these:

- G1. First, did your organization have specific plans to install the [MEASURE][s] before learning about the incentive?
- G2. Prior to learning about the incentive, was the purchase of the [MEASURE[s]] included in your organization's capital budget?
- G3. Had your organization ALREADY ordered or purchased the [MEASURE[s]] BEFORE your organization heard about the [PROGRAM] incentive?
- G4. Would you have purchased and installed the same [MEASURE[s]] without the incentive?
- G5. Would you have installed something without the incentive?
- G6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?
- G7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the incentive, would you have installed the same amount of [MEASURE1[s]]?
- G8. Without the [INCENTIVE FOR MEASURE], would you have installed the [MEASURE[s]]...
- G9. When you say you would not have installed the same [MEASURE1 OR C_MEASURE1][s] without the incentive, would you have installed anything at all?
- G10. Without the incentive, would you have installed something that was just as energy-efficient as the [MEASURE[s]] you installed?

- G11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive, would you have installed the same amount of [MEASURE[s]]?
- G12. And, would you have installed the same [MEASURE1[s]]. . .

The freeridership questions oriented toward the involvement of the contractor (as asked in the survey format) were these:

- H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE][s]?
- H2. Did your organization have specific plans to install the [MEASURE][s] before you began working with your contractor?
- H3. [Ask if question H1 is Yes] Before you began working with your contractor, was the purchase of the [MEASURE][s] included in your organization's capital budget?
- H4. Would you have purchased and installed the same [MEASURE][s] without the assistance from your contractor?
- H5. [Ask if question H4 is Don't Know or Refused] Would you have installed something without the involvement of your contractor?
- H6. [Ask if H5 is Yes] When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE1 OR C_MEASURE1][s] you installed?
- H7. [Ask if QTY > 1 and question H4 is Yes or H5 is Yes] And without the assistance from your contractor, would you have installed the same amount of [MEASURE]?
- H8. Without the assistance from your contractor, would you have installed the [MEASURE][s]?
- H9. [Ask if question H4 is No or if H5 is No] When you say you would not have installed the same [MEASURE][s] without the assistance from your contractor, would you have installed anything at all?
- H10. [Ask if question H9 is Yes] Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE][s] you installed?
- H11. [Ask if QTY > 1 and H11 is Yes] And without the contractor, would you have installed the same amount of [MEASURE][s]?
- H12. [Ask if H9 is Yes] And, when would you have installed the same [MEASURE][s]?

Convert Responses to Matrix Terminology

Table I-43 shows how initial the incentive-focused survey responses were translated into the responses *yes*, *no*, or *partially*, indicative of freeridership (in parentheses). Table I-44 shows how initial contractor-focused survey responses were translated into the responses "yes," "no," or "partially," indicative of freeridership (in parentheses).

Table I-43. Incentive - Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

G1. First, did your organization have specific plans to install the [MEASURE1 OR C_MEASURE1] [s] before learning about the incentive?	G2. Prior to learning about the incentive, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	G3. Had your organization ALREADY ordered or purchased the [MEASURE[s]] BEFORE your organization heard about the program incentive?	G4. Would you have purchased and installed the same [MEASURE[s]] without the incentive?	G5. Would you have installed something without the incentive?	G6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the incentive, would you have installed the same amount of [MEASURE[s]]?	G8. Without the [INCENTIVE FOR MEASURE1 OR C_MEASURE1], would you have installed the [[MEASURE[s]]	G9. When you say you would not have installed the same [MEASURE[s]] without the incentive, would you have installed anything at all?	G10. Without the incentive, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive, would you have installed the same amount of [MEASURE1 OR C_MEASURE1][s]?	G12. And, would you have installed the same [MEASURE1 OR C_MEASURE1][s] . . .
Yes (Yes)	Yes (Yes)	Yes (Yes)	Yes (Yes)	Yes, would have installed something (Yes)	Yes (Yes)	Yes (Yes)	Within the same year? (Yes)	Yes, would have installed something (Yes)	Yes (Yes)	Yes, the same amount (Yes)	Within the same year? (Yes)
No (No)	No (No)	No (No)	No (No)	No, would not have installed anything (No)	No (No)	No (No)	Within one to two years? (Partial)	No, would not have installed anything at all (No)	No (No)	No, would have installed less (No)	Within one to two years? (Partial)
Don't Know (Partial)	Don't Know (Partial)	Don't Know (No)	Don't Know (Partial)	Don't Know (Partial)	Don't Know (Partial)	Don't Know (Partial)	Within three to five years? (No)	Don't Know (Partial)	Don't Know (Partial)	No, would have installed more (Yes)	Within three to five years? (No)
Refused (Partial)	Refused (Partial)	Refused (No)	Refused (Partial)	Refused (Partial)	Refused (Partial)	Refused (Partial)	In more than five years? (No)	Refused (Partial)	Refused (Partial)	Don't Know (Partial)	In more than five years? (No)
							Don't Know (Partial)			Refused (Partial)	Don't Know (Partial)
							Refused (Partial)				Refused (Partial)

Table I-44. Contractor - Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE][s] ?	H2. Did your organization have specific plans to install the [MEASURE][s] before you began working with your contractor?	H3. [Ask if question H2 is Yes] Before you began working with your contractor, was the purchase of the [MEASURE][s] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE][s] without the assistance from your contractor?	H5. [Ask if question H4 is Don't Know or Refused] Would you have installed something without the involvement of your contractor?	H6. [Ask if H5 is Yes] When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE1 OR C_MEASURE1][s] you installed?	H7. [Ask if QTY > 1 and question H4 is Yes or H5 is Yes] And without the assistance from your contractor, would you have installed the same amount of [MEASURE]?	H8. Without the assistance from your contractor, would you have installed the [MEASURE][s]?	H9. [Ask if question H4 is No or if H5 is No] When you say you would not have installed the same [MEASURE][s] without the assistance from your contractor, would you have installed anything at all?	H10. [Ask if question H9 is Yes] Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE][s] you installed?	H11. [Ask if QTY > 1 and H11 is Yes] And without the contractor, would you have installed the same amount of [MEASURE][s]?	H12. [Ask if H9 is Yes] And, when would you have installed the same [MEASURE][s]?
Yes (Yes)	Yes (Yes)	Yes (Yes)	Yes (Yes)	Yes, would have installed something (Yes)	Yes (Yes)	Yes, the same amount (Yes)	Within the same year? (Yes)	Yes, would have installed something (Yes)	Yes (Yes)	Yes, the same amount (Yes)	Within the same year? (Yes)
No (No)	No (No)	No (No)	No (No)	No, would NOT have installed anything (No)	No (No)	No, would have installed less (No)	Within one to two years? (Partial)	No, would not have installed anything at all (No)	No (No)	No, would have installed less (No)	Within one to two years? (Partial)
Don't Know (Partial)	Don't Know (Partial)	Don't Know (No)	Don't Know (Partial)	Don't Know (Partial)	Don't Know (Partial)	No, would have installed more (Yes)	Within three to five years? (No)	Don't Know (Partial)	Don't Know (Partial)	No, would have installed more (Yes)	Within three to five years? (No)
Refused (Partial)	Refused (Partial)	Refused (No)	Refused (Partial)	Refused (Partial)	Refused (Partial)	Don't Know (Partial)	In more than five years? (No)	Refused (Partial)	Refused (Partial)	Don't Know (Partial)	In more than five years? (No)
						Refused (Partial)	Don't Know (Partial)			Refused (Partial)	Don't Know (Partial)
							Refused (Partial)				Refused (Partial)

Participant Freeridership Scoring

For each incentive path, the freeridership score started with 100%, which the Evaluation Team decremented based on the participant’s responses to the 12 incentive questions, as shown in Table I-45.

Table I-45. Incentive - Freeridership Scoring Legend

Q#	Decrement
G1	50% decrement for "No," 25% decrement for "Partial"
G2	50% decrement for "No," 25% decrement for "Partial"
G3	100% FR if "Yes," 0% decrement for "No" level, "Partial" level not needed
G4	25% decrement for 'No', 0% decrement for 'Partial'
G5	25% decrement for 'No', 100% decrement for 'Partial'
G6	100% decrement for 'No', 25% decrement for 'Partial'
G7	50% decrement for 'No', 25% decrement for 'Partial'
G8	100% decrement for 'No', 25% decrement for 'Partial'
G9	100% decrement for 'No', 25% decrement for 'Partial'
G10	100% decrement for 'No', 25% decrement for 'Partial'
G11	50% decrement for 'No', 25% decrement for 'Partial'
G12	100% decrement for 'No', 25% decrement for 'Partial'

The scoring decrements participant freeridership score were based on responses to the 12 questions for the contractor path, as shown in Table I-46.

Table I-46. Contractor - Freeridership Scoring Legend

Q#	Decrement
H1	100% FR if "Yes," 0% decrement for "No" level, "Partial" level not needed
H2	50% decrement for "No," 25% decrement for "Partial"
H3	50% decrement for "No," 25% decrement for "Partial"
H4	25% decrement for 'No', 0% decrement for 'Partial'
H5	25% decrement for 'No', 100% decrement for 'Partial'
H6	100% decrement for 'No', 25% decrement for 'Partial'
H7	50% decrement for 'No', 25% decrement for 'Partial'
H8	100% decrement for 'No', 25% decrement for 'Partial'
H9	100% decrement for 'No', 25% decrement for 'Partial'
H10	100% decrement for 'No', 25% decrement for 'Partial'
H11	50% decrement for 'No', 25% decrement for 'Partial'
H12	100% decrement for 'No', 25% decrement for 'Partial'

Business Incentive Program Findings

In Table I-47 and Table I-48 show the unique response combinations from participants answering the Business Incentive Program freeridership incentive and contractor freeridership questions (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses. The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-47. Incentive - Business Incentive Program Frequency of Freeridership Scoring Combinations

G1. First, did your organization have specific plans to install the [MEASURE1 OR C_MEASURE1][s] before learning about the incentive?	G2. Prior to learning about the incentive, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	G3. Had your organization ALREADY ordered or purchased the [MEASURE[s]] BEFORE your organization heard about the program incentive?	G4. Would you have purchased and installed the same [MEASURE[s]] without the incentive?	G5. Would you have installed something without the incentive?	G6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the incentive, would you have installed the same amount of [MEASURE[s]]?	G8. Without the [INCENTIVE FOR MEASURE1 OR C_MEASURE1], would you have installed the [[MEASURE[s]]	G9. When you say you would not have installed the same [MEASURE[s]] without the incentive, would you have installed anything at all?	G10. Without the incentive, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive, would you have installed the same amount of [MEASURE1 OR C_MEASURE1][s]?	G12. And, would you have installed the same [MEASURE1 OR C_MEASURE1][s].	FR Score	Frequency
Yes	Yes	Yes	z	x	x	x	x	x	x	x	x	100%	2
Yes	Yes	No	Yes	x	x	Yes	Yes	x	x	x	x	100%	2
Yes	Yes	No	Yes	x	x	No	Yes	x	x	x	x	50%	1
Yes	No	x	Yes	x	x	Partial	Partial	x	x	x	x	13%	1
Partial	x	x	Partial	Partial	x	x	x	x	x	x	x	0%	1
No	x	x	Yes	x	x	No	Yes	x	x	x	x	13%	1
No	x	x	Yes	x	x	No	No	x	x	x	x	0%	2
No	x	x	No	x	x	x	x	Yes	No	No	x	0%	1
No	x	x	No	x	x	x	x	No	x	x	x	0%	1

Table I-48. Contractor - Business Incentive Program Frequency of Freeridership Scoring Combinations

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the assistance from your contractor, would you have installed the same number of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...[READ LIST AND RECORD ONE RESPONSE]	[ASK H9 TO H13 IF H4=2 OR H5=2] H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] And without the assistance from your contractor, would you have installed the same number of:	H12. And, would you have installed the same [MEASURE[s]] . . .	FR Score	Frequency
Yes	x	x	x	x	x	x	x	x	x	x	x	100%	7
No	Yes	Yes	Yes	x	x	Yes	Yes	x	x	x	x	100%	9
No	Yes	Yes	Yes	x	x	Yes	Partial	x	x	x	x	75%	1
No	Yes	Yes	Partial	Yes	Yes	Yes	Yes	x	x	x	x	100%	1
No	Yes	Yes	Partial	Yes	Partial	Partial	No	x	x	x	x	0%	1
No	Yes	Yes	Partial	Yes	Partial	No	No	x	x	x	x	0%	1
No	Yes	Yes	No	x	x	x	x	Yes	No	x	x	0%	1
No	Yes	Yes	No	x	x	x	x	No	x	x	x	0%	2
No	Yes	No	Yes	x	x	Yes	Yes	x	x	x	x	50%	1
No	Yes	No	Yes	x	x	Yes	Partial	x	x	x	x	25%	1
No	Yes	No	Partial	Yes	Yes	Yes	Yes	x	x	x	x	50%	2
No	Yes	No	No	x	x	x	x	Yes	Yes	No	Yes	0%	1
No	Yes	No	No	x	x	x	x	Yes	Partial	No	No	0%	1
No	Yes	No	No	x	x	x	x	Yes	No	x	x	0%	1
No	Yes	No	No	x	x	x	x	No	x	x	x	0%	3
No	No	x	Yes	x	x	Yes	Yes	x	x	x	x	50%	2
No	No	x	Yes	x	x	Yes	Partial	x	x	x	x	25%	1
No	No	x	Yes	x	x	Yes	No	x	x	x	x	0%	1
No	No	x	No	x	x	x	x	Yes	Yes	Yes	Yes	25%	1
No	No	x	No	x	x	x	x	Yes	Partial	Yes	Yes	12.5%	2
No	No	x	No	x	x	x	x	Yes	No	x	x	0%	6
No	No	x	No	x	x	x	x	No	x	x	x	0%	12

Business Incentive Program Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment or appliances following their participation in the Business Incentive Program. The Evaluation Team applied evaluated and deemed savings to the spillover measures that customers said they had installed as a result of their Program participation, presented in Table I-49.

Table I-49. Business Incentive Program Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
LED Lighting	32	120.96
Central Air Conditioner	1	14.13

Next, the Evaluation Team divided the sample spillover savings by the program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 0% spillover estimate, when rounded to the nearest whole percentage, for the Business Incentive Program respondents (Table I-50).

Table I-50. Business Incentive Program Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	135.09
Program Savings	69,962.45
Spillover Estimate	0%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the NTG ratios, using the following calculation, as shown in Table I-51:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-51. Business Incentive Program NTG Estimates

Analysis Category	n	Freeridership	Spillover	NTG	Percentage of Total Survey Sample Savings
Incentive	12	47%	0%	53%	3%
Contractor	58	57%	0%	43%	97%
Overall	70	56%¹	0%¹	44%¹	100%

¹ Weighted by gross evaluated energy savings.

Multifamily Energy Savings Program Findings

In Table I-52 and Table I-53, the Evaluation Team illustrates the unique response combinations from participants answering the Multifamily Energy Savings Program incentive and contractor focused freeridership batteries (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses.

The Evaluation Team calculated a freeridership score for the program based on the distribution of scores within the matrix.

Table I-52. Incentive - Multifamily Energy Savings Program Frequency of Incentive Freeridership Scoring Combinations

G1. First, did your organization have specific plans to install the [MEASURE1[s]] before learning about the incentive?	G2. Prior to learning about the incentive, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	G3. Had your organization ALREADY ordered or purchased the [MEASURE[s]] BEFORE your organization heard about the program incentive?	G4. Would you have purchased and installed the same [MEASURE[s]] without the incentive?	G5. Would you have installed something without the incentive?	G6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the incentive, would you have installed the same amount of [MEASURE[s]]?	G8. Without the [INCENTIVE FOR MEASURE1 OR C_MEASURE1], would you have installed the [[MEASURE[s]]	G9. When you say you would not have installed the same [MEASURE[s]] without the incentive, would you have installed anything at all?	G10. Without the incentive, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive, would you have installed the same amount of [MEASURE1 OR C_MEASURE1] [s]?	G12. And, would you have installed the same [MEASURE1 OR C_MEASURE1][s]. .	FR Score	Frequency
Yes	Yes	Yes	x	x	x	x	x	x	x	x	x	100%	3
Yes	Yes	No	Yes	x	x	No	Yes	x	x	x	x	50%	2
Yes	Yes	No	No	x	x	x	x	Partial	Yes	No	Partial	0%	1
Yes	Yes	No	No	x	x	x	x	No	x	x	x	0%	1
Yes	No	x	Yes	x	x	Yes	Yes	x	x	x	x	50%	1
Yes	No	x	Partial	Yes	Partial	Partial	Yes	x	x	x	x	12.5%	1
Yes	No	x	Partial	Yes	No	x	x	x	x	x	x	0%	1
Yes	No	x	No	x	x	x	x	Yes	No	x	x	0%	1
Partial	x	x	Yes	x	x	No	Partial	x	x	x	x	12.5%	1
Partial	x	x	Partial	Yes	Yes	Yes	Yes	x	x	x	x	75%	1
Partial	x	x	Partial	Yes	Partial	Yes	Yes	x	x	x	x	50%	1
No	x	x	Yes	x	x	No	No	x	x	x	x	0%	1
No	x	x	No	x	x	x	x	Yes	Partial	No	Yes	0%	1
No	x	x	No	x	x	x	x	Yes	No	x	x	0%	1
No	x	x	No	x	x	x	x	No	x	x	x	0%	3

Table I-53. Contractor - Multifamily Energy Savings Program Frequency of Freeridership Scoring Combinations

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor?	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the assistance from your contractor, would you have installed the same number of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...[READ LIST]	H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] And without the assistance from your contractor, would you have installed the same number of:	H12. And, would you have installed the same [MEASURE[s]] . . .	FR Score	Frequency
Yes	x	x	x	x	x	x	x	x	x	x	x	100%	3
No	Yes	Yes	Yes	x	x	Yes	Yes	x	x	x	x	100%	1
No	Yes	Yes	Yes	x	x	Yes	Partial	x	x	x	x	75%	1
No	Yes	Yes	Partial	Yes	Yes	Yes	Yes	x	x	x	x	100%	1
No	Yes	Yes	Partial	No	x	x	x	x	x	x	x	0%	1
No	Yes	Yes	No	x	x	x	x	Yes	Yes	No	Partial	12.5%	1
No	Yes	Yes	No	x	x	x	x	Yes	Partial	Yes	Yes	50%	1
No	Yes	Yes	No	x	x	x	x	Yes	Partial	No	Yes	12.5%	1
No	Yes	Yes	No	x	x	x	x	No	x	x	x	0%	1
No	Yes	Partial	Partial	Yes	Partial	Partial	No	x	x	x	x	0%	1
No	Yes	No	Yes	x	x	Yes	Yes	x	x	x	x	50%	1
No	Yes	No	Yes	x	x	Yes	No	x	x	x	x	0%	3
No	Yes	No	Yes	x	x	No	No	x	x	x	x	0%	1
No	Yes	No	Partial	Yes	Partial	No	Partial	x	x	x	x	0%	1
No	Yes	No	Partial	Yes	No	x	x	x	x	x	x	0%	2
No	Yes	No	Partial	No	x	x	x	x	x	x	x	0%	1
No	Yes	No	No	x	x	x	x	Yes	Partial	Yes	Yes	12.5%	1
No	Yes	No	No	x	x	x	x	Yes	No	x	x	0%	2
No	Yes	No	No	x	x	x	x	No	x	x	x	0%	1
No	Partial	x	Yes	x	x	No	Partial	x	x	x	x	12.5%	1
No	No	x	Yes	x	x	Yes	Yes	x	x	x	x	50%	1

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor?	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the assistance from your contractor, would you have installed the same number of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...[READ LIST]	H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] And without the assistance from your contractor, would you have installed the same number of:	H12. And, would you have installed the same [MEASURE] [s]. . .	FR Score	Frequency
No	No	x	Partial	Yes	Yes	Yes	Partial	x	x	x	x	25%	1
No	No	x	Partial	Yes	Partial	Yes	Yes	x	x	x	x	25%	1
No	No	x	No	x	x	x	x	Yes	Yes	Yes	Yes	25%	3
No	No	x	No	x	x	x	x	Yes	Yes	Yes	Partial	12.5%	1
No	No	x	No	x	x	x	x	Yes	Yes	Yes	No	0%	1
No	No	x	No	x	x	x	x	Yes	Yes	No	Partial	0%	1
No	No	x	No	x	x	x	x	Yes	Yes	No	No	0%	1
No	No	x	No	x	x	x	x	Yes	Partial	Yes	Yes	12.5%	1
No	No	x	No	x	x	x	x	No	x	x	x	0%	13

Multifamily Energy Savings Program Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment following their participation in the Multifamily Energy Savings Program. The Evaluation Team applied evaluated and deemed savings to the spillover measures that customers said they had installed as a result of their Program participation, as shown in Table I-54.

Table I-54. Multifamily Energy Savings Program Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
LED Lighting	150	678.57
Motion Switches	6	139.86

Next, the Evaluation Team divided the sample spillover savings by the program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 2% spillover estimate, rounded to the nearest whole percentage point, for the Multifamily Energy Savings Program respondents (Table I-55).

Table I-55. Multifamily Energy Savings Program Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	818.43
Program Savings	45,444.65
Spillover Estimate	2%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the measure-level freeridership results to achieve the NTG ratios, using the following calculation, and shown in Table I-56:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-56. Multifamily Energy Savings Program NTG Estimates

Analysis Category	n	Freeridership	Spillover	NTG	Percentage of Total Survey Sample Savings
Incentive	20	36%	2%	66%	34%
Contractor	50	16%	2%	86%	66%
Overall	70	23%¹	2%¹	79%¹	100%

¹Weighted by gross evaluated energy savings.

Agriculture, Schools and Government Program Findings

In Table I-57 and Table I-58, the Evaluation Team illustrates the unique response combinations from participants answering the Agriculture, Schools and Government Program incentive and contractor focused freeridership batteries (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses.

The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-57. Incentive – Agriculture, Schools and Government Program Frequency of Freeridership Scoring Combinations

G1. First, did your organization have specific plans to install the [MEASURE1 OR C_MEASURE1][s] before learning about the incentive?	G2. Prior to learning about the incentive, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	G3. Had your organization ALREADY ordered or purchased the [MEASURE[s]] BEFORE your organization heard about the program incentive?	G4. Would you have purchased and installed the same [MEASURE[s]] without the incentive?	G5. Would you have installed something without the incentive?	G6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the incentive, would you have installed the same amount of [MEASURE[s]]?	G8. Without the [INCENTIVE FOR MEASURE1 OR C_MEASURE1], would you have installed the [[MEASURE[s]]	G9. When you say you would not have installed the same [MEASURE[s]] without the incentive, would you have installed anything at all?	G10. Without the incentive, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive, would you have installed the same amount of [MEASURE1 OR C_MEASURE1][s]?	G12. And, would you have installed the same [MEASURE1 OR C_MEASURE1][s].	FR Score	Frequency
Yes	Yes	Yes	x	x	x	x	x	x	x	x	x	100%	9
Yes	Yes	No	Yes	x	x	Yes	Yes	x	x	x	x	100%	4
Yes	Yes	No	Yes	x	x	Yes	Partial	x	x	x	x	75%	1
Yes	Yes	No	Yes	x	x	No	Yes	x	x	x	x	50%	1
Yes	Yes	No	Partial	No	x	x	x	Yes	Partial	Yes	Partial	25%	1
Yes	Partial	x	No	x	x	x	x	Yes	Yes	Partial	Yes	25%	5
Yes	Partial	x	No	x	x	x	x	Yes	Yes	Partial	Partial	13%	1
Yes	Partial	x	No	x	x	x	x	Yes	Yes	Partial	No	0%	1
Yes	Partial	x	No	x	x	x	x	Yes	Partial	Yes	Partial	13%	2
Yes	No	x	Partial	No	x	x	x	Yes	Partial	Yes	No	0%	1
Yes	No	x	Partial	No	x	x	x	Yes	Partial	Partial	Yes	0%	1
Yes	No	x	Partial	No	x	x	x	No	x	x	x	0%	1
Partial	x	x	Partial	No	x	x	x	Yes	Yes	Partial	Partial	13%	1
Partial	x	x	Partial	No	x	x	x	Yes	Yes	Partial	No	0%	1
Partial	x	x	Partial	No	x	x	x	Yes	Yes	No	No	0%	1
Partial	x	x	Partial	No	x	x	x	Yes	Partial	Partial	Yes	13%	1
Partial	x	x	No	x	x	x	x	Yes	Yes	Yes	Yes	50%	1
No	x	x	Partial	Yes	x	Partial	No	x	x	x	x	0%	4

Table I-58. Contractor – Agriculture, Schools and Government Program Frequency of Freeridership Scoring Combinations

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the assistance from your contractor, would you have installed the same amount of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...[READ LIST AND RECORD ONE RESPONSE]	[ASK H9 TO H13 IF H4=2 OR H5= 2] H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] And without the assistance from your contractor, would you have installed the same amount of:	H12. And, would you have installed the same [MEASURE] [s]. . .	FR Score	Frequency
Yes	x	x	x	x	x	x	x	x	x	x	x	100%	9
No	Yes	Yes	Yes	x	x	Yes	Yes	x	x	x	x	100%	2
No	Yes	Yes	Yes	x	x	No	Yes	x	x	x	x	50%	3
No	Yes	Yes	Yes	x	x	No	Partial	x	x	x	x	25%	1
No	Yes	Yes	Partial	Yes	Yes	Yes	Partial	x	x	x	x	75%	1
No	Yes	Yes	Partial	Yes	Partial	Yes	Yes	x	x	x	x	75%	1
No	Yes	Yes	Partial	No	x	x	x	x	x	x	x	0%	1
No	Yes	Yes	No	x	x	x	x	Yes	No	x	x	0%	2
No	Yes	Yes	No	x	x	x	x	No	x	x	x	0%	1
No	Yes	Partial	No	x	x	x	x	Yes	Yes	x	Yes	50%	1
No	Yes	Partial	No	x	x	x	x	No	x	x	x	0%	1
No	Yes	No	Yes	x	x	Yes	Yes	x	x	x	x	50%	9
No	Yes	No	Yes	x	x	Yes	Partial	x	x	x	x	25%	1
No	Yes	No	Yes	x	x	No	Yes	x	x	x	x	12.5%	1
No	Yes	No	Yes	x	x	No	No	x	x	x	x	0%	1
No	Yes	No	Partial	Yes	Partial	No	Partial	x	x	x	x	0%	1
No	Yes	No	Partial	Yes	No	x	x	x	x	x	x	0%	1
No	Yes	No	Partial	Partial	x	x	x	x	x	x	x	25%	1
No	Yes	No	Partial	No	x	x	x	x	x	x	x	0%	1

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the assistance from your contractor, would you have installed the same amount of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...[READ LIST AND RECORD ONE RESPONSE]	[ASK H9 TO H13 IF H4=2 OR H5= 2] H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] And without the assistance from your contractor, would you have installed the same amount of:	H12. And, would you have installed the same [MEASURE] [s]. . .	FR Score	Frequency
No	Yes	No	No	x	x	x	x	Yes	Yes	x	Yes	25%	3
No	Yes	No	No	x	x	x	x	Yes	Yes	x	Partial	12.5%	1
No	Yes	No	No	x	x	x	x	Yes	Partial	x	Yes	12.5%	1
No	Yes	No	No	x	x	x	x	Yes	Partial	No	Yes	0%	1
No	Yes	No	No	x	x	x	x	Yes	No	x	x	0%	5
No	Yes	No	No	x	x	x	x	Partial	Partial	Partial	No	0%	1
No	Yes	No	No	x	x	x	x	No	x	x	x	0%	13
No	Partial	x	Partial	Partial	x	x	x	x	x	x	x	50%	1
No	Partial	x	Partial	No	x	x	x	x	x	x	x	0%	1
No	Partial	x	No	x	x	x	x	Yes	Yes	x	Yes	50%	1
No	Partial	x	No	x	x	x	x	Yes	No	x	x	0%	1
No	No	x	Yes	x	x	Yes	Yes	x	x	x	x	50%	4
No	No	x	Yes	x	x	Yes	Partial	x	x	x	x	25%	2
No	No	x	Yes	x	x	Yes	No	x	x	x	x	0%	1
No	No	x	Yes	x	x	Partial	Yes	x	x	x	x	25%	1
No	No	x	Yes	x	x	No	Yes	x	x	x	x	12.5%	2
No	No	x	Yes	x	x	No	Partial	x	x	x	x	0%	2
No	No	x	Partial	Yes	Partial	Yes	Yes	x	x	x	x	25%	1
No	No	x	Partial	No	x	x	x	x	x	x	x	0%	1
No	No	x	No	x	x	x	x	Yes	Yes	x	Yes	25%	2

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the assistance from your contractor, would you have installed the same amount of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...[READ LIST AND RECORD ONE RESPONSE]	[ASK H9 TO H13 IF H4=2 OR H5= 2] H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] And without the assistance from your contractor, would you have installed the same amount of:	H12. And, would you have installed the same [MEASURE] [s]. . .	FR Score	Frequency
No	No	x	No	x	x	x	x	Yes	Yes	No	Partial	0%	1
No	No	x	No	x	x	x	x	Yes	Partial	Partial	Partial	0%	2
No	No	x	No	x	x	x	x	Yes	No	x	x	0%	5
No	No	x	No	x	x	x	x	No	x	x	x	0%	13

Agriculture, Schools and Government Program Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment following their participation in the Agriculture, Schools, and Government Program and who rated their Program participation as *very important* in their decision. The Evaluation Team applied evaluated and deemed savings values to the spillover measures that customers' said they had installed as a result of their Program participation, presented in Table I-59.

Table I-59. Agriculture, Schools and Government Program Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
LED Lighting	60	424.67
Building Fans	21	685.40

Next, the Evaluation Team divided the sample spillover savings by the Program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 1% spillover estimate, rounded to the nearest whole percentage, for the Agriculture, Schools, and Government Program respondents (Table I-60).

Table I-60. Agriculture, Schools and Government Program Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	1,110.07
Program Savings	187,497.72
Spillover Estimate	1%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the NTG ratios, using the following calculation, as shown in Table I-61.

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-61. Agriculture, Schools and Government Program NTG Estimates

Analysis Category	n	Freeridership	Spillover	NTG	Percentage of Total Survey Sample Savings
Incentive	37	54%	1%	47%	42%
Contractor	105	23%	1%	78%	58%
Overall	142	36%¹	1%¹	65%¹	100%

¹Weighted by gross evaluated energy savings

Chain Stores and Franchise Program Findings

In Table I-62 and Table I-63, the Evaluation Team illustrates the unique response combinations from participants answering the Chain Stores and Franchise Program findings incentive and contractor focused freeridership batteries (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses.

The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-62. Incentive – Chain Stores and Franchise Program Frequency of Freeridership Scoring Combinations

G1. First, did your organization have specific plans to install the [MEASURE1 OR C_MEASURE1][s] before learning about the incentive?	G2. Prior to learning about the incentive, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	G3. Had your organization ALREADY ordered or purchased the [MEASURE[s]] BEFORE your organization heard about the program incentive?	G4. Would you have purchased and installed the same [MEASURE[s]] without the incentive?	G5. Would you have installed something without the incentive?	G6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the incentive, would you have installed the same amount of [MEASURE[s]]?	G8. Without the [INCENTIVE FOR MEASURE1 OR C_MEASURE1], would you have installed the [[MEASURE[s]]	G9. When you say you would not have installed the same [MEASURE[s]] without the incentive, would you have installed anything at all?	G10. Without the incentive, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	G11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive, would you have installed the same amount of [MEASURE1 OR C_MEASURE1][s]?	G12. And, would you have installed the same [MEASURE1 OR C_MEASURE1][s].	FR Score	Frequency
Yes	Yes	Yes	x	x	x	x	x	x	x	x	x	100%	3
Yes	Yes	No	Yes	x	x	Yes	Yes	x	x	x	x	100%	1
Yes	Yes	No	Yes	x	x	Yes	Partial	x	x	x	x	75%	1
Yes	Yes	No	Yes	x	x	Partial	Partial	x	x	x	x	50%	1
Yes	Yes	No	No	x	x	x	x	Yes	Yes	No	Partial	12.5%	1
Yes	Yes	No	No	x	x	x	x	Yes	No	x	x	0%	1
Yes	Partial	x	Yes	x	x	No	Partial	x	x	x	x	12.5%	1
Yes	Partial	x	Partial	Partial	x	x	x	x	x	x	x	50%	1
Yes	No	x	Yes	x	x	Yes	Yes	x	x	x	x	50%	1
Yes	No	x	Yes	x	x	No	Partial	x	x	x	x	0%	2
Yes	No	x	No	x	x	x	x	No	x	x	x	0%	1
No	x	x	Yes	x	x	Yes	Partial	x	x	x	x	25%	2
No	x	x	Yes	x	x	Yes	No	x	x	x	x	0%	1
No	x	x	No	x	x	x	x	Yes	No	x	x	0%	2
No	x	x	No	x	x	x	x	No	x	x	x	0%	5

Table I-63. Contractor - Chain Stores and Franchise Program Frequency of Freeridership Scoring Combinations

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. And without the assistance from your contractor, would you have installed the same amount of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...	H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. And without the assistance from your contractor, would you have installed the same amount of:	H12. And, would you have installed the same [MEASURE] [s]. . .	FR Score	Frequency
Yes	x	x	x	x	x	x	x	x	x	x	x	100%	2
No	Yes	Yes	Yes	x	x	Yes	Yes	x	x	x	x	100%	4
No	Yes	Yes	Yes	x	x	Yes	Partial	x	x	x	x	75%	1
No	Yes	Yes	Partial	Yes	Yes	No	Partial	x	x	x	x	25%	1
No	Yes	Yes	Partial	Yes	Partial	Yes	Partial	x	x	x	x	50%	1
No	Yes	Yes	Partial	Partial	x	x	x	x	x	x	x	75%	1
No	Yes	Yes	No	x	x	x	x	Yes	Yes	Yes	Yes	75%	1
No	Yes	Yes	No	x	x	x	x	Yes	Yes	No	Yes	25%	1
No	Yes	Yes	No	x	x	x	x	Yes	Yes	No	No	0%	1
No	Yes	Yes	No	x	x	x	x	No	x	x	x	0%	4
No	Yes	Partial	Yes	x	x	Yes	Yes	x	x	x	x	75%	2
No	Yes	No	Partial	No	x	x	x	No	x	x	x	0%	2
No	Yes	No	No	x	x	x	x	Yes	Yes	Yes	Yes	25%	1
No	Yes	No	No	x	x	x	x	Yes	Yes	Yes	Partial	12.5%	1
No	Yes	No	No	x	x	x	x	Yes	No	x	x	0%	1
No	Yes	No	No	x	x	x	x	No	x	x	x	0%	3
No	Partial	x	Partial	Yes	Yes	Yes	Yes	x	x	x	x	75%	1
No	Partial	x	Partial	Partial	x	x	x	x	x	x	x	50%	2
No	Partial	x	No	x	x	x	x	Yes	Yes	No	Partial	0%	1
No	No	x	Yes	x	x	Yes	Yes	x	x	x	x	50%	1
No	No	x	Yes	x	x	Yes	Partial	x	x	x	x	25%	2
No	No	x	Partial	No	x	x	x	No	x	x	x	0%	1

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. And without the assistance from your contractor, would you have installed the same amount of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...	H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. And without the assistance from your contractor, would you have installed the same amount of:	H12. And, would you have installed the same [MEASURE[s]] . . .	FR Score	Frequency
No	No	x	No	x	x	x	x	Yes	Yes	Yes	Yes	25%	3
No	No	x	No	x	x	x	x	Yes	Yes	Yes	Partial	12.5%	1
No	No	x	No	x	x	x	x	Yes	Yes	No	Partial	0%	1
No	No	x	No	x	x	x	x	Yes	Partial	No	Yes	0%	1
No	No	x	No	x	x	x	x	Yes	No	x	x	0%	1
No	No	x	No	x	x	x	x	No	x	x	x	0%	4

Chain Stores and Franchise Program Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment following their participation in the Chain Stores and Franchise Program. The Evaluation Team applied evaluated and deemed savings to the spillover measures that customers said they had installed as a result of their Program participation, presented in Table I-64.

Table I-64. Chain Stores and Franchise Program Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
LEDs	48	71.5
LED Cooler Lights	9	33.7
Cooler Door Gaskets	20	61.4
Central Air Conditioner	1	83.3

Next, the Evaluation Team divided the sample spillover savings by the program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 0% spillover estimate, rounded to the nearest whole percentage point, for the Chain Stores and Franchise Program respondents (Table I-65).⁴⁴

Table I-65. Chain Stores and Franchise Program Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	249.9
Program Savings	101,690
Spillover Estimate	0%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the NTG ratios, using the following calculation, as shown in Table I-66:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

These NTG findings were only applied to program savings that were not associated with a National Rebate Administrator (NRA).

⁴⁴ Actual value is 0.2%.

Table I-66. Chain Stores and Franchise Program Participant Customer NTG Estimates

Analysis Category	n	Freeridership	Spillover	NTG	Percentage of Total Survey Sample Savings
Incentive	24	24%	0%	76%	37%
Contractor	46	50%	0%	50%	63%
Overall	70	40%¹	0%¹	60%¹	100%

¹Weighted by gross evaluated energy savings

Chain Stores and Franchise National Rebate Administrator Freeridership

In CY 2016, the Evaluation Team collected new self-report data from third-party market actors named National Rebate Administrators. The Team used the freeridership scores determined from interviews with these actors and applied the savings-weighted freeridership score to project savings associated with the National Rebate Administrators.

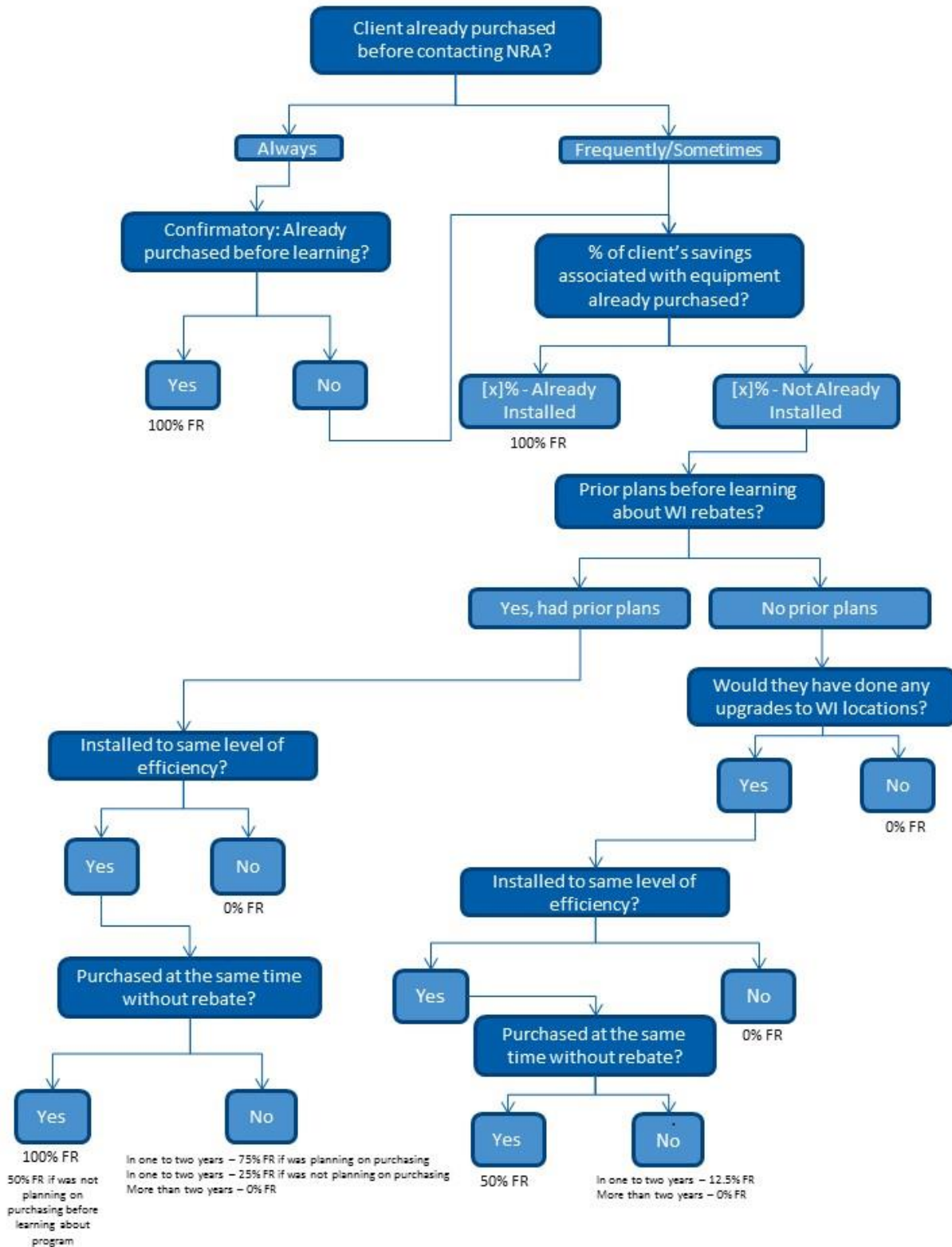
In CY 2016, there were 39 companies that pursued projects through the Program by using a National Rebate Administrator. These organizations help national chains maximize their return on investment when making store upgrades or installing new equipment by “matching” them with various utility incentive programs around the country. National Rebate Administrators will often help national companies process incentive applications, advise them on program-qualifying equipment, and navigate eligibility guidelines.

Because they play a significant role in customer decision-making and work with companies representing a notable share of Program savings (11% of total MMBtu in 2016), the Evaluation Team interviewed the three National Rebate Administrators operating in Wisconsin to help inform freeridership in CY 2016.

To measure freeridership, the Evaluation Team used the same scoring approach and a similar question battery used for participant self-report surveys, with some slight modifications. Because National Rebate Administrators dealt with multiple clients and projects, interviewers stressed that answers should reflect the majority of cases, or typical scenarios. Wherever possible, respondents distinguished between the frequency of one occurrence versus another (e.g., clients purchased and installed equipment prior to learning about the rebate about 10% of the time; 90% of the time they did not). The National Rebate Administrator interview guide is included in Appendix J.

Figure I-7, on the next page, contains a high-level flow-chart of the freeridership scoring approach. Although the Evaluation Team used its typical decrement approach to scoring, final results relied also on verbatim comments and qualitative information, a key benefit of utilizing in-depth interviews as the data collection tool.

Figure I-7. National Rebate Administrator Freeridership Flow Chart (Chain Stores and Franchises)



Freeridership was low (Table I-67). All three interviewed National Rebate Administrators reported that Focus on Energy was very influential in how their clients decide on facility upgrades. Two interviewees reported that their clients occasionally will purchase and install equipment prior to learning about the rebates and this activity accounts for all of the overall 10% savings-weighted freeridership estimate.

Table I-67. National Rebate Administrator Respondent Freeridership Scores

Respondent	Freeridership Score
NRA #1	0%
NRA #2	10%
NRA #3	15%
Overall Savings-Weighted NRA Freeridership Score	10%

Overall Chain Stores and Franchise Program NTG

After calculating a savings-weighted average freeridership score of 6% from the interviews, the Evaluation Team applied this freeridership ratio to the proportion of savings associated with National Rebate Administrator projects. For the remainder of the program savings, the Team applied the self-report freeridership score that was determined through the CY 2016 participant survey.

Overall, this approach resulted in a Program-level freeridership score of 37% and NTG estimate of 63% for the CY 2016 Chain Stores and Franchises Program (Table I-68).

Table I-68. Chain Stores and Franchise Program Overall NTG Estimates

Analysis Category	Freeridership	Spillover	NTG	Percentage of Total Survey Sample Savings
Participant Customer	40%	0%	60%	89%
National Rebate Advisor	10%	0%	90%	11%
Overall	37%	0%	63%	100%

Large Energy User Program Findings

In Table I-69 and Table I-70, the Evaluation Team illustrates the unique response combinations from participants answering the incentive and contractor focused freeridership batteries (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses.

The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-69. Incentive - Large Energy Users Program Frequency of Freeridership Scoring Combinations

G1. First, did your organization have specific plans to install the [MEASURE][s] before learning about the incentive?	G2. Prior to learning about the incentive, was the purchase of the [MEASURE][s] included in your organization's capital budget?	G3. Had your organization ALREADY ordered or purchased the [MEASURE][s] BEFORE your organization heard about the Large Energy Users Program incentive?	G4. Would you have purchased and installed the same [MEASURE][s] without the incentive and information or education from Focus on Energy?	G5. Would you have installed something without the incentive and information or education from Focus on Energy?	G6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE][s] you installed?	G7. And without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1][s] ?	G8. Without the [INCENTIVE FOR MEASURE CATEGORY1 OR C_MEASURE1] and information or education from Focus on Energy, would you have installed the [MEASURE CATEGORY1][s]...	G9. When you say you would not have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy, would you have installed anything at all?	G10. Without the incentive and information or education from Focus on Energy, would you have installed something that was just as energy efficient as the [MEASURE][s] you installed?	G11. Without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE][s]?	G12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE 1][s]. . .	FR Score	Frequency
Yes	Yes	No	Yes	x	x	x	x	x	x	x	x	100%	1
Yes	Partial	x	No	x	x	x	x	Yes	Yes	Partial	Yes	25%	2
Yes	No	x	Partial	No	x	x	x	Yes	Partial	Yes	No	0%	1
Yes	No	x	Partial	No	x	x	x	Yes	Partial	Partial	Yes	0%	2
Yes	No	x	Partial	No	x	x	x	No	x	x	x	0%	1
Yes	No	x	No	x	x	x	x	Yes	Yes	Yes	Partial	13%	1
Partial	x	x	Partial	No	x	x	x	Yes	Yes	Yes	No	0%	1
Partial	x	x	Partial	No	x	x	x	Yes	Yes	Partial	No	0%	1
Partial	x	x	Partial	No	x	x	x	Yes	Partial	Yes	Partial	13%	1
No	x	x	Partial	Yes	x	Partial	Yes	x	x	x	x	25%	1
No	x	x	Partial	Yes	x	Partial	Partial	x	x	x	x	13%	2

Table I-70. Contractor - Large Energy Users Program Frequency of Freeridership Scoring Combinations

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. And without the assistance from your contractor, would you have installed the same amount of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...	H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. And without the assistance from your contractor, would you have installed the same amount of:	H12. And, would you have installed the same [MEASURE] [s]. . .	FR Score	Frequency
Yes	x	x	x	x	x	x	x	x	x	x	x	100%	7
No	Yes	Yes	Yes	x	x	Yes	Yes	x	x	x	x	100%	6
No	Yes	Yes	Yes	x	x	Yes	Partial	x	x	x	x	75%	2
No	Yes	Yes	Yes	x	x	Partial	Partial	x	x	x	x	50%	1
No	Yes	Yes	Yes	x	x	No	Yes	x	x	x	x	50%	1
No	Yes	Yes	Partial	Yes	Partial	Yes	Partial	x	x	x	x	50%	1
No	Yes	Yes	Partial	No	x	x	x	x	x	x	x	0%	3
No	Yes	Yes	No	x	x	x	x	Yes	Partial	No	Yes	12.5%	1
No	Yes	Yes	No	x	x	x	x	Yes	No	x	x	0%	1
No	Yes	Partial	Partial	No	x	x	x	x	x	x	x	0%	1
No	Yes	Partial	No	x	x	x	x	Yes	Partial	Yes	Yes	25%	1
No	Yes	No	Yes	x	x	Yes	Yes	x	x	x	x	50%	2
No	Yes	No	Partial	Yes	Yes	Yes	Yes	x	x	x	x	50%	2
No	Yes	No	Partial	Partial	x	x	x	x	x	x	x	25%	1
No	Yes	No	Partial	No	x	x	x	x	x	x	x	0%	1
No	Yes	No	No	x	x	x	x	Yes	Partial	No	Yes	0%	1
No	Yes	No	No	x	x	x	x	Yes	No	x	x	0%	2
No	Yes	No	No	x	x	x	x	No	x	x	x	0%	1
No	Partial	x	Yes	x	x	Yes	Yes	x	x	x	x	75%	1
No	Partial	x	Partial	Partial	x	x	x	x	x	x	x	50%	1
No	Partial	x	Partial	No	x	x	x	x	x	x	x	0%	1
No	No	x	Yes	x	x	Yes	Yes	x	x	x	x	50%	2
No	No	x	Yes	x	x	No	No	x	x	x	x	0%	1

H1. At the time that you first started working with your contractor on this project, had you already purchased or installed the [MEASURE]?	H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE[s]] before you began working with your contractor?	H3. Before you began working with your contractor, was the purchase of the [MEASURE[s]] included in your organization's capital budget?	H4. Would you have purchased and installed the same [MEASURE[s]] without the assistance from your contractor?	H5. Would you have installed something without the involvement of your contractor? [DO NOT READ LIST UNLESS NECESSARY]	H6. When you say you would have installed something, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H7. And without the assistance from your contractor, would you have installed the same amount of:	H8. Without the assistance from your contractor, would you have installed the [MEASURE[s]] ...	H9. When you say you would not have installed the same [MEASURE[s]] without the assistance from your contractor, would you have installed anything at all?	H10. Without the assistance from your contractor, would you have installed something that was just as energy efficient as the [MEASURE[s]] you installed?	H11. And without the assistance from your contractor, would you have installed the same amount of:	H12. And, would you have installed the same [MEASURE[s]] . . .	FR Score	Frequency
No	No	x	Partial	Yes	Yes	No	No	x	x	x	x	0%	1
No	No	x	Partial	No	x	x	x	x	x	x	x	0%	1
No	No	x	No	x	x	x	x	Yes	Yes	No	Partial	0%	1
No	No	x	No	x	x	x	x	Yes	No	x	x	0%	6
No	No	x	No	x	x	x	x	No	x	x	x	0%	6

Large Energy Users Program Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment following their participation in the Chain Stores and Franchise Program. The Evaluation Team applied evaluated and deemed savings to the spillover measures that customers said they had installed as a result of their Program participation, presented in Table I-71.

Table I-71. Large Energy Users Program Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
LED Lighting	316	1,100.19
Digital Direct Controls	7	265.11
Tune-Up Repair and Commissioning	1	1,577.25

Next, the Evaluation Team divided the sample spillover savings by the program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 1% spillover estimate, rounded to the nearest whole percentage point, for the Large Energy User Program respondents (Table I-72).

Table I-72. Large Energy Users Program Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	2,942.55
Program Savings	225,255.41
Spillover Estimate	1%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the NTG ratios, using the following calculation:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-73. Large Energy Users Program NTG Estimate

Analysis Category	n	Freeridership	Spillover	NTG	Percentage of Total Survey Sample Savings
Incentive	14	6%	1%	95%	10%
Contractor	56	21%	1%	80%	90%
Overall	70	19%¹	1%¹	82%¹	100%

¹ Weighted by gross evaluated energy savings

Small Business Program Self-Report NTG Methodology and Findings

Freeridership Survey Questions

The Small Business Program participant survey freeridership section included 12 questions, which addressed the six core freeridership dimensions.

The freeridership questions about the Program energy assessment (asked in the survey format) were:

- G1. First, did your business have specific plans to install the energy-efficient products before your contractor conducted the free energy assessment?
- G2. Before you received the energy assessment, was the purchase of the energy-efficient products recommended by your contractor included in your organization’s budget?
- G3. Had your organization already ordered or purchased the energy-efficient products before you received the recommendations in the energy assessment report?
- G4. Would you have purchased and installed the same products without the energy assessment report and product discounts from your contractor?
- G5. [ASK IF G4=DK OR RF] Would you have purchased and installed something else, but not the recommended products, without the energy assessment and product discounts?
- G6. [ASK IF G4=1] When you say you would have purchased and installed something, would you have installed something that was just as energy efficient?
- G7. [ASK G7-G8 IF G4=Yes OR G5=Yes] And without the energy assessment report and product discounts, would you have purchased and installed the same amount of new products?
- G8. Without the information from the contractor’s energy assessment report and the product discounts, would you have purchased and installed the recommended energy-efficient products...[READ LIST AND RECORD ONE RESPONSE]
- G9. [ASK G9 TO G12 IF G4=No OR G5= No] When you say you would not have purchased and installed the same efficient products without the recommendations from the energy assessment report and product discounts, do you mean you would not have installed the products at all?
- G10. Without the information from the energy assessment report and product discounts, would you have put in the same type of products but it would not have been as energy efficient?
- G11. Without the information from the energy assessment report and the product discounts, would you have purchased and installed a smaller number of efficient products?
- G12. And, would you have purchased and installed the same products?

Convert Responses to Matrix Terminology

Table I-74 illustrates how initial survey responses are translated into the responses “yes,” “no,” or “partially,” indicative of freeridership (in parentheses).

Table I-74. Small Business - Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

G1. First, did your business have specific plans to install the energy-efficient products before your contractor conducted the free energy assessment?	G2. Before you received the energy assessment, was the purchase and installation of the energy-efficient products recommended by your contractor included in your business' budget?	G3. Had your company already ordered or purchased similar energy-efficient products before you received the recommendations in the energy assessment report?	G4. Would you have purchased and installed the same products without the energy assessment report and product discounts from your contractor?	G5. Would you have purchased and installed something else, but not the recommended products, without the energy assessment and the product discounts?	G6. When you say you would have purchased and installed something, would you have installed something that was just as energy efficient?	G7. And without the energy assessment report and the product discounts, would you have purchased and installed the same amount of new products?	G8. Without the energy assessment report and the product discounts, would you have purchased and installed the recommended energy-efficient products...	G9. When you say you would not have purchased and installed the same efficient products without the recommendations from the energy assessment report and the product discounts, do you mean you would not have installed the products at all?	G10. Without the energy assessment report and the product discounts, would you have put in the same type of products but it would not have been as energy efficient?	G11. Without the energy assessment report and the product discounts, would you have purchased and installed a smaller number of efficient products?	G12. And, would you have purchased and installed the same products... [READ LIST]
Yes (Yes)	Yes (Yes)	Yes (Yes)	Yes (Yes)	Yes, would have done something else (Yes)	Yes (Yes)	Yes, the same amount (Yes)	Within the same year? (Yes)	Yes, I would not have installed any of the products (Yes)	Yes (No)	Yes (No)	Within the same year? (Yes)
No (No)	No (No)	No (No)	No (No)	No, would not have installed anything (No)	No (No)	No, would have installed less (No)	Within one to two years? (Partial)	No, I would have installed something (No)	No (Yes)	No (Yes)	Within one to two years? (Partial)
Don't Know (Partial)	Don't Know (Partial)	Don't Know (No)	Don't Know (Partial)	Don't Know (Partial)	Don't Know (Partial)	No, would have installed more (Yes)	Within three to five years? (No)	Don't Know (Partial)	Don't Know (Partial)	Don't Know (Partial)	Within three to five years? (No)
Refused (Partial)	Refused (Partial)	Refused (No)	Refused (Partial)	Refused (Partial)	Refused (Partial)	Don't Know (Partial)	In more than five years? (No)	Refused (Partial)	Refused (Partial)	Refused (Partial)	In more than five years? (No)
						Refused (Partial)	Don't Know (Partial)				Don't Know (Partial)
							Refused (Partial)				Refused (Partial)

Participant Freeridership Scoring

For the Small Business Program, the freeridership score started with 100%, which the Evaluation Team decremented based on the participant’s responses to the 12 questions shown in Table I-75.

Table I-75. Small Business - Freeridership Scoring Legend

Q#	Decrement
G1	50% decrement for "No," 25% decrement for "Partial"
G2	50% decrement for "No," 25% decrement for "Partial"
G3	100% FR if "Yes," 0% decrement for "No" level, "Partial" level not needed
G4	25% decrement for 'No', 0% decrement for 'Partial'
G5	25% decrement for 'No', 100% decrement for 'Partial'
G6	100% decrement for 'No', 25% decrement for 'Partial'
G7	50% decrement for 'No', 25% decrement for 'Partial'
G8	100% decrement for 'No', 25% decrement for 'Partial'
G9	100% decrement for 'No', 25% decrement for 'Partial'
G10	100% decrement for 'No', 25% decrement for 'Partial'
G11	50% decrement for 'No', 25% decrement for 'Partial'
G12	100% decrement for 'No', 25% decrement for 'Partial'

Small Business Program Findings

In Table I-76, the Evaluation Team illustrates the unique response combinations from participants answering the Small Business Program findings freeridership battery (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses.

The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-76. Small Business Program Frequency of Incentive Freeridership Scoring Combinations

G1. First, did your business have specific plans to install the energy-efficient products before your contractor conducted the free energy assessment?	G2. Before you received the energy assessment, was the purchase and installation of the energy-efficient products recommended by your contractor included in your business' budget?	G3. Had your company already ordered or purchased similar energy-efficient products before you received the recommendations in the energy assessment report?	G4. Would you have purchased and installed the same products without the energy assessment report and product discounts from your contractor?	G5. Would you have purchased and installed something else, but not the recommended products, without the energy assessment and the product discounts?	G6. When you say you would have purchased and installed something, would you have installed something that was just as energy efficient?	G7. And without the energy assessment report and the product discounts, would you have purchased and installed the same amount of new products?	G8. Without the energy assessment report and the product discounts, would you have purchased and installed the recommended energy-efficient products...	G9. When you say you would not have purchased and installed the same efficient products without the recommendations from the energy assessment report and the product discounts, do you mean you would not have installed the products at all?	G10. Without the energy assessment report and the product discounts, would you have put in the same type of products but it would not have been as energy efficient?	G11. Without the energy assessment report and the product discounts, would you have purchased and installed a smaller number of efficient products?	G12. And, would you have purchased and installed the same products ... [READ LIST]	FR Score	Frequency
Yes	Yes	Yes	x	x	x	x	x	x	x	x	x	100%	3
Yes	Yes	No	Yes	x	x	Yes	No	x	x	x	x	0%	1
Yes	Yes	No	No	x	x	x	x	Yes	No	x	x	0%	2
Yes	Yes	No	No	x	x	x	x	No	x	x	x	0%	2
Yes	Partial	No	Yes	x	x	Yes	Yes	x	x	x	x	75%	1
Yes	No	Yes	x	x	x	x	x	x	x	x	x	100%	5
Yes	No	No	Yes	x	x	No	Yes	x	x	x	x	12.5%	1
Yes	No	No	No	x	x	x	x	Yes	Yes	Yes	No	0%	1
Yes	No	No	No	x	x	x	x	Yes	Yes	No	No	0%	1
Yes	No	No	No	x	x	x	x	Yes	Partial	No	No	0%	2
Yes	No	No	No	x	x	x	x	Yes	No	x	x	0%	1
No	x	x	Yes	x	x	No	Partial	x	x	x	x	0%	3
No	x	x	Partial	Yes	Partial	Yes	Partial	x	x	x	x	12.5%	1
No	x	x	Partial	Partial	x	x	x	x	x	x	x	25%	2
No	x	x	No	x	x	x	x	Yes	Yes	Yes	Yes	25%	1
No	x	x	No	x	x	x	x	Yes	Yes	Yes	Partial	12.5%	1
No	x	x	No	x	x	x	x	Yes	Yes	Yes	No	0%	2
No	x	x	No	x	x	x	x	Yes	Yes	Partial	Yes	12.5%	1
No	x	x	No	x	x	x	x	Yes	Yes	No	Yes	0%	1
No	x	x	No	x	x	x	x	Yes	Yes	No	Partial	0%	1

G1. First, did your business have specific plans to install the energy-efficient products before your contractor conducted the free energy assessment?	G2. Before you received the energy assessment, was the purchase and installation of the energy-efficient products recommended by your contractor included in your business' budget?	G3. Had your company already ordered or purchased similar energy-efficient products before you received the recommendations in the energy assessment report?	G4. Would you have purchased and installed the same products without the energy assessment report and product discounts from your contractor?	G5. Would you have purchased and installed something else, but not the recommended products, without the energy assessment and the product discounts?	G6. When you say you would have purchased and installed something, would you have installed something that was just as energy efficient?	G7. And without the energy assessment report and the product discounts, would you have purchased and installed the same amount of new products?	G8. Without the energy assessment report and the product discounts, would you have purchased and installed the recommended energy-efficient products...	G9. When you say you would not have purchased and installed the same efficient products without the recommendations from the energy assessment report and the product discounts, do you mean you would not have installed the products at all?	G10. Without the energy assessment report and the product discounts, would you have put in the same type of products but it would not have been as energy efficient?	G11. Without the energy assessment report and the product discounts, would you have purchased and installed a smaller number of efficient products?	G12. And, would you have purchased and installed the same products ... [READ LIST]	FR Score	Frequency
No	x	x	No	x	x	x	x	Yes	Yes	No	No	0%	3
No	x	x	No	x	x	x	x	Yes	Partial	Yes	No	0%	1
No	x	x	No	x	x	x	x	Yes	Partial	No	Partial	0%	3
No	x	x	No	x	x	x	x	Yes	No	x	x	0%	5
No	x	x	No	x	x	x	x	No	x	x	x	0%	25

Small Business Program Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment following their participation in the Small Business Program. The Evaluation Team applied evaluated and deemed savings to the spillover measures that customers said they had installed as a result of their Program participation, presented in Table I-77.

Table I-77. Small Business Program Participant Spillover Measures and Savings

Spillover Measure	Quantity	Total MMBtu Savings Estimate
LEDs	25	59.7

Next, the Evaluation Team divided the sample spillover savings by the program gross savings from the entire survey sample, as shown in this equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Energy Savings for All Survey Respondents}}{\sum \text{Program Measure Energy Savings for All Survey Respondents}}$$

This yielded a 1% spillover estimate, rounded to the nearest whole percentage point, for the Small Business Program respondents (Table I-78).

Table I-78. Small Business Program Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	59.7
Program Savings	11,647.8
Spillover Estimate	1%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the measure-level NTG ratios, using the following calculation, as shown in Table I-79:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-79. Small Business Program Findings NTG Estimate

n	Freeridership	Spillover	NTG
70	6% ¹	1%	95% ¹

¹Weighted by gross evaluated energy savings

Renewable Energy Competitive Incentive Program (RECIP) Self-Report NTG Methodology and Findings

Freeridership Survey Questions

The participant survey's freeridership section included eight questions, addressing five core freeridership dimensions. The freeridership questions included these (asked in the survey format):

- F1. First, would your organization have installed the [INSERT PROJECT] without the incentives offered through the RECIP program?
- F2. I will read four statements and would like you to select the one that best describes where you were in the planning of your project's installation when you first learned of Focus on Energy's RECIP program. [READ ALL AND SELECT ONE]
- F3. Prior to participating in the RECIP, was the [INSERT PROJECT] included in your organization's capital or operating budget?
- F4. [IF YES TO F3] Did your capital or operating budget assume that the [INSERT PROJECT] would receive an incentive through RECIP?
- F5. [Ask if Yes to question F1] Without the RECIP program, would you have installed... [READ LIST AND SELECT ONE]
- F6. [Ask if Yes to question F1] Without the RECIP incentive, would you have installed the renewable energy project... [READ LIST; WHEN RESPONSE SELECTED, SKIP TO SECTION G]
- F6. [Ask if No to question F1] To confirm, when you say you would not have installed the same [INSERT PROJECT], do you mean that without the incentive from RECIP, that you would not have installed [INSERT PROJECT] at all?
- F7. [Ask if No to question F1] Without the RECIP program, would you have installed... [READ LIST AND SELECT ONE]
- F8. [Ask if No to question F1] Any finally, would you have installed the [INSERT PROJECT], ... [READ LIST AND SELECT ONE]
- F9. [ASK IF NO TO F1] And finally, would you have installed the [INSERT PROJECT]... [READ LIST AND SELECT ONE]

Convert Responses to Matrix Terminology

Table I-80 illustrates how initial survey responses are translated into whether the response is "yes," "no," or "partially" indicative of freeridership (in parentheses).

Table I-80. RECIP- Raw Survey Response Translation to Freeridership Scoring Matrix Terminology

F1. First, would your organization have installed the [INSERT PROJECT] without the incentives offered through the RECIP program?	F2. I will read four statements and would like you to select the one that best describes where you were in the planning of your project's installation when you first learned of Focus on Energy's RECIP program. [READ ALL AND SELECT ONE]	F3. Prior to participating in the RECIP, was the [INSERT PROJECT] included in your organization's capital or operating budget?	F4. [IF YES TO F3] Did your capital or operating budget assume that the [INSERT PROJECT] would receive an incentive through RECIP?	F5. [IF YES TO F1] Without the RECIP program, would you have installed... [READ LIST AND SELECT ONE]	F6. [IF YES TO F1] Without the RECIP incentive, would you have installed the renewable energy project...	F7. [ASK IF NO TO F1] To confirm, when you say you would not have installed the same [INSERT PROJECT], do you mean that without the incentive from RECIP, that you would not have installed [INSERT PROJECT] at all?	F8. [ASK IF NO TO F1] Without the RP program, would you have installed... [READ LIST AND SELECT ONE]	F9. [ASK IF NO TO F1] And finally, would you have installed the [INSERT PROJECT]... [READ LIST AND SELECT ONE]
Yes (Yes)	We had no formal plans for the project (No)	Yes (Yes)	Yes (Yes)	The same size system (Yes)	Within the same year? (Yes)	Yes (No)	The same size system (Yes)	Within the same year? (Yes)
No (No)	We had already spoken to installation contractors but had not received any quotes for the project (Partial)	No (No)	No (No)	A smaller system (No)	Within one to two years? (Partial)	No (Yes)	A smaller system (No)	Within one to two years? (Partial)
Don't Know (Partial)	We had already spoken to installation contractors and had received a quote (Yes)	Don't Know (Partial)	Don't Know (Partial)	No new system at all (No)	Within three to five years? (No)	Don't Know (Partial)	No new system at all (No)	Within three to five years? (No)
Refused (Partial)	We had received a quote and decided upon the renewable energy system we wanted to install (Yes)	Refused (Partial)	Refused (Partial)	Don't Know (Partial)	In more than five years? (No)	Refused (Partial)	Don't Know (Partial)	In more than five years? (No)
	Don't Know (Partial)			Refused (Partial)	Don't Know (Partial)		Refused (Partial)	Don't Know (Partial)
	Refused (Partial)				Refused (Partial)			Refused (Partial)

RECIP Participant Freeridership Scoring

Each freeridership score started with 100%, which the Evaluation Team decremented based on the participant’s responses to the eight questions, as shown in Table I-81.

Table I-81. RECIP Freeridership Scoring Legend

Q#	Decrement
F1	50% decrement for "No," 25% decrement for "Partial"
F2	50% decrement for 'No', 25% decrement for 'Partial'
F3	50% decrement for 'No', 25% decrement for 'Partial'
F4	50% decrement for 'No', 25% decrement for 'Partial'
F5	50% decrement for 'No', 25% decrement for 'Partial'
F6	100% decrement for 'No', 25% decrement for 'Partial'
F7	100% decrement for 'No', 25% decrement for 'Partial'
F8	50% decrement for 'No', 25% decrement for 'Partial'
F9	100% decrement for 'No', 25% decrement for 'Partial'

RECIP Freeridership Findings

In Table I-82, the Evaluation Team illustrates the unique response combinations from participants answering the Small Business Program findings freeridership battery (actual responses mapped to “yes,” “no,” or “partial,” as indicative of freeridership), the freeridership score assigned to each combination, and the number of responses.

The Evaluation Team calculated a freeridership score for the Program based on the distribution of scores within the matrix.

Table I-82. RECIP Program Frequency of Incentive Freeridership Scoring Combinations

F1. First, would your organization have installed the [INSERT PROJECT] without the incentives offered through the RECIP program?	F2. I will read four statements and would like you to select the one that best describes where you were in the planning of your project's installation when you first learned of Focus on Energy's RECIP program. [READ ALL AND SELECT ONE]	F3. Prior to participating in the RECIP, was the [INSERT PROJECT] included in your organization's capital or operating budget?	F4. [IF YES TO F3] Did your capital or operating budget assume that the [INSERT PROJECT] would receive an incentive through RECIP?	F5. [IF YES TO F1] Without the RECIP program, would you have installed... [READ LIST AND SELECT ONE]	F6. [IF YES TO F1] Without the RECIP incentive, would you have installed the renewable energy project...	F7. [ASK IF NO TO F1] To confirm, when you say you would not have installed the same [INSERT PROJECT], do you mean that without the incentive from RECIP, that you would not have installed [INSERT PROJECT] at all?	F8. [ASK IF NO TO F1] Without the RECIP program, would you have installed... [READ LIST AND SELECT ONE]	F9. [ASK IF NO TO F1] And finally, would you have installed the [INSERT PROJECT]... [READ LIST AND SELECT ONE]	FR Score	Frequency
Yes	Yes	Yes	No	Yes	Yes	x	x	x	50%	1
Yes	Partial	No	x	No	Yes	x	x	x	0%	1
Yes	Partial	No	x	No	Partial	x	x	x	0%	1
Yes	Partial	Yes	No	Yes	Partial	x	x	x	13%	1
Yes	Partial	Yes	No	No	Yes	x	x	x	0%	1
Yes	No	No	x	No	Yes	x	x	x	0%	2
Yes	No	Yes	No	Yes	Yes	x	x	x	13%	1
No	Yes	No	x	x	x	No	x	x	0%	3
No	Partial	Yes	No	x	x	No	x	x	0%	4
No	Partial	No	x	x	x	Yes	No	No	0%	1
No	Partial	No	x	x	x	No	x	x	0%	5
No	No	No	x	x	x	Yes	No	Yes	0%	1
No	No	No	x	x	x	Yes	No	Partial	0%	1
No	No	No	x	x	x	Yes	No	No	0%	1
No	No	No	x	x	x	No	x	x	0%	8

RECIP Energy Savings Program Participant Spillover Analysis

No RECIP participants surveyed by the Evaluation Team reported purchasing or installing high-efficiency equipment after participating in the program that was influenced by their participation in the RECIP. This yielded a 0% spillover estimate for the RECIP respondents (Table I-83).⁴⁵

Table I-83. RECIP Participant Spillover Percentage Estimate

Variable	Total kWh Savings Estimate
Spillover Savings	0
Program Savings	577,737
Spillover Estimate	0%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the NTG ratio, using the following calculation:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-84. RECIP Program NTG Estimate

n	Freeridership	Spillover	NTG
3	0% ¹	0%	100% ¹

¹Weighted by gross evaluated savings

Design Assistance Program Self-Report NTG Methodology and Findings

As in CY 2015, when assessing the Design Assistance Program’s net savings the Evaluation Team considered both the modeling assistance and incentives it offers. In CY 2016, the Evaluation Team estimated two different intention-based freeridership scores: one score addresses the modeling assistance and another score addresses the incentives.

In addition, for CY 2016, the Evaluated Team included an influence-based freeridership score that was combined with the average of the modeling assistance and incentive intention-based freeridership scores. The intention-based freeridership scoring was based on eight questions: five questions that assessed the importance of the modeling assistance and three questions that assessed the participant’s likelihood to install energy efficient equipment or features without the incentives and assistance from the program.

⁴⁵ Actual value is 0.05%.

Freeridership Survey Questions

The modeling assistance focused intention freeridership questions included (asked in the survey format):

- G1. Without this assistance, would your team have conducted energy modeling to the same extent during the early stages of the design process?
- G2. And would you have conducted the same advanced and comprehensive modeling in the early stages without the modeling assistance from the Focus on Energy program staff?
- G3. And would you have conducted the same advanced and comprehensive modeling in the early stages without the modeling assistance and tools provided by the Focus on Energy program staff?
- G4. [IF NO TO G1,G2,OR G3] Would you have done modeling in the early stages at all?
- G6. How important was the energy modeling analysis in the early stages on your decision to add higher efficiency measures to your building? Were the recommendations...[read list]

The incentive focused intention freeridership questions included (asked in the survey format):

- G7. Without the incentive and the report, would you have installed equipment that was just as efficient?
- G8. Had the incentive or energy modeling not been available, would you have installed the same energy efficient equipment?
- G3. And would you have conducted the same advanced and comprehensive modeling in the early stages without the modeling assistance and tools provided by the Focus on Energy program staff?
- G9. Before you learned about the program, was the purchase and installation of the specific energy efficient equipment highlighted in the report included in your construction budget?

The influence-focused freeridership question asked participants to rate the level of influence, on a 1 to 5 scale, with 1 being not at all influential and 5 being very influential, for seven different program factors in their decision to participate in the Design Assistance Program. This question was added to the freeridership methodology because in discussions with program stakeholders following the CY 2014 evaluation it was determined that the Program contained elements that were not specifically addressed through the intention-focused freeridership questions and an additional freeridership score was needed to fully account for all program factors. The program factors asked were these:

- Total incentives
- Program staff
- Modeling results and report
- Design assistance
- NEO tool
- Program Outreach

Design Assistance Program Participant Freeridership Scoring

Modeling Assistance Focused Intention Freeridership Scoring

Each participant freeridership score started with 50%, which the Evaluation Team decremented based on the participant’s responses to the five questions shown in Table I-85. Decrements are contained in parentheses following a response option.

Table I-85. Modeling Assistance Focused - Intention - Freeridership Scoring Legend

G1. Without this assistance, would your team have conducted energy modeling to the same extent during the early stages of the design process?	G2. And would you have conducted the same advanced and comprehensive modeling in the early stages without the modeling assistance from the Focus on Energy program staff?	G3. And would you have conducted the same advanced and comprehensive modeling in the early stages without the modeling assistance and tools provided by the Focus on Energy program staff?	G4. [IF NO TO G1,G2,OR G3] Would you have done modeling in the early stages at all?	G6. How important was the energy modeling analysis in the early stages on your decision to add higher efficiency measures to your building? Were the recommendations...[read list]
Yes (-0%)	Yes (-0%)	Yes (-0%)	Yes (-0%)	Very important (-12.5%)
No (-12.5%)	No (-12.5%)	No (- 12.5%)	No (-37.5%)	Somewhat important (-12.5%)
Don't Know (-12.5%)	Don't Know (-12.5%)	Don't Know (-12.5%)		Not too important (-0%)
				Not at all important (0%)
				Don't Know (-12.5%)

Incentive Focused Intention Freeridership Scoring

Each freeridership score started with 50%, which the Evaluation Team decremented based on the participant’s responses to the three questions as shown in Table I-86. Decrements are contained in parentheses following a response option.

Table I-86. Incentive Focused - Intention - Freeridership Scoring Legend

G7. Without the incentive and the report, would you have installed equipment that was just as efficient?	G8. Had the incentive or energy modeling not been available, would you have installed the same energy efficient equipment...	Before you learned about the program, was the purchase and installation of the specific energy efficient equipment highlighted in the report included in your construction budget?
Yes - all (-0)	This year (-0%)	Yes (-0%)
Yes - some (-25%)	Within 1-2 years (- 25%)	No (-25%)
No (-50%)	Within 3 years (-50%)	Don't Know (-12.5%)
	I would not have done it (-50%)	

Influence Focused Freeridership Scoring

The Evaluation Team used the maximum rating given by each participant for any program factor addresses through the influence question to determine their influence freeridership score. The scoring, based on a 1 to 5 ranking, was assigned a score according to Table I-87.

Table I-87. Influence Focused - Freeridership Scoring Legend

Maximum Influence Rating	Influence Score
1 - Not at all influential	50%
2	37.5%
3	25%
4	12.5%
5 - Very influential	0%

Design Assistance Program Freeridership Findings

The modeling assistance, incentive, and influence-focused freeridership scores had maximum values of 50%. The average of the modeling assistance and incentive focus freeridership score was summed with the influence freeridership score to obtain the final freeridership score for a participant. The Evaluation Team then calculated the overall program level freeridership estimate of 12% (rounded to the nearest whole percentage) by weighting participant’s final freeridership scores by evaluated program savings, as shown in Table I-88.

Table I-88. Design Assistance Program Freeridership Findings Summary

Respondent (n=8)	Modeling Assistance - Freeridership	Incentive - Freeridership	Average of Modeling Assistance & Incentive Freeridership	Influence - Freeridership	Final FR Score	Evaluated MMBtu Program Savings
1	0.0%	0.0%	0.0%	0.0%	0.0%	42,566
2	0.0%	0.0%	0.0%	0.0%	0.0%	1,457
3	0.0%	0.0%	0.0%	0.0%	0.0%	206,477
4	0.0%	37.5%	18.8%	0.0%	18.8%	17,057
5	0.0%	25.0%	12.5%	12.5%	25.0%	47,361
6	50.0%	12.5%	31.3%	0.0%	31.3%	3,439
7	37.5%	25.0%	31.3%	0.0%	31.3%	46,356
8	0.0%	0.0%	0.0%	0.0%	0.0%	14,515
9	37.5%	25.0%	31.3%	0.0%	31.3%	66,019
Overall Weighted Average	10%	11%	10%	1%	11.5%	445,247

Design Assistance Program Participant Spillover Analysis

The Evaluation Team estimated participant spillover based on answers from respondents who purchased additional high-efficiency equipment following their participation in the Design Assistance Program. One building owner installed Design Assistance Program qualifying measure at five nonparticipating projects during the Program year, and reported that their participation in the Design Assistance Program was *very important* in their decisions. The Evaluation Team applied the average

evaluated savings of two of the building owners’ Program projects. These projects were representative of the total amount of spillover measures that the participant said they had installed as a result of their Program participation. The evaluated savings associated with the purchase of these additional measure yielded a 5% spillover estimate for the Design Assistance Program respondents (Table I-89).

Table I-89. Design Assistance Program Participant Spillover Percentage Estimate

Variable	Total MMBtu Savings Estimate
Spillover Savings	23,116
Program Savings	445,247
Spillover Estimate	5%

Net-to-Gross Analysis

The Evaluation Team combined the spillover information with the freeridership results to achieve the measure-level NTG ratios, using the following calculation:

$$NTG = 1 - \text{Freeridership} + \text{Spillover}$$

Table I-90. Design Assistance Program NTG Estimate

n	Freeridership	Spillover	NTG
9	12% ¹	5%	93% ¹

¹ Weighted by gross evaluated savings

Renewable Energy Loan Fund Self-Report NTG Methodology and Findings

Freeridership Survey Questions

To determine the overall freeridership for the Renewable Energy Loan Fund, the Evaluation Team asked respondents two questions, as shown in Table I-91.

Table I-91. Renewable Energy Loan Fund Overall Freeridership Questions

Audience	Factor	Question	Response Options
All respondents	System Size	If neither the rebate nor the financing assistance from Focus on Energy had been available, what size system would you have installed?	<ul style="list-style-type: none"> • A larger system • The same system • A smaller system • No system at all
(If installing a larger, same, or smaller system)	Timing	If neither the rebate nor the financing assistance had been available, when would you have installed your system?	<ul style="list-style-type: none"> • Sooner • At the same time • Later but within 1 year • Later but within 1-2 years • Never

Participant Freeridership Scoring

The Evaluation Team assigned a score to each possible combination of responses to the two questions. The score indicated the percentage freeridership assigned to that respondent. Table I-92 shows all possible response combinations and the associated score.

Table I-92. Renewable Energy Loan Fund Overall Freeridership Scoring Matrix

System Size	Timing	Response Combination	Freeridership Score
None	(n/a)	None/(n/a)	0.0%
Smaller	Never	Smaller/never	0.0%
Smaller	Later, within 1-2 years	Smaller/later, within 1-2 years	12.5%
Smaller	Later, within same year	Smaller/later, within same year	25.0%
Smaller	Sooner/same time	Smaller/sooner/same time	50.0%
Larger/Same	Never	Larger/same/never	0.0%
Larger/Same	Later, within 1-2 years	Larger/same/later, within 1-2 years	50.0%
Larger/Same	Later, within same year	Larger/same/later, within same year	75.0%
Larger/Same	Sooner/same time	Larger/same/sooner/same time	100.0%

Net-to-Gross Analysis

The Evaluation Team did not determine spillover for the Fund, so the NTG was defined as:

$$NTG = 1 - FR$$

The Evaluation Team received eight valid responses to the freeridership questions: seven from participants who also received a rebate from Focus on Energy, and one from a participant who received only a loan and did not receive a rebate. Table I-93 presents the NTG rate and net savings results by respondent and for the Fund overall.

Table I-93. Renewable Energy Loan Fund NTG Rate by Participant Survey Respondent

Respondent	NTG
Residential	
GSHP Respondent 1	25%
Solar PV Respondent 1	100%
Solar PV Respondent 2	50%
Solar PV Respondent 3	100%
Solar PV Respondent 4	100%
Subtotal (weighted by Net Annual Savings)	93%
Commercial	
Solar PV Respondent 1	100%
Solar PV Respondent 2	50%
Solar PV Respondent 2	100%
Subtotal (weighted by Net Annual Savings)	98%
Overall Fund NTG, Weighted by Net Annual Savings	98%

Appendix J. Survey Instruments by Program

This appendix includes the CY 2016 survey instruments and interview guides for the following programs in Focus on Energy's residential and nonresidential sectors as well as ongoing participant satisfaction surveys.

Special text indicates the following throughout all of the survey scripts:

- **Green text:** Interview instructions
- **Red text:** CATI programming instructions
- Asterisk (*): Survey questions labeled with an asterisk are core question that will be asked across all Focus on Energy phone surveys, where appropriate.

Residential Programs

- Home Performance with ENERGY STAR Program Trade Ally Interview Guide
- Home Performance with ENERGY STAR Program Trade Ally Online Survey
- Multifamily Programs Partial Participant Interview Guide
- Multifamily Energy Savings Program Participant Survey
- Renewable Rewards Program GSHP Participant Survey
- Renewable Rewards Program Solar PV Participant Survey
- Retailer Lighting and Appliance Program Storefront Manager Survey
- Retailer Lighting and Appliance Program Corporate Retailer and Manufacturer Interview Guide
- Simple Energy Efficiency Program Participant Survey
- Smart Thermostat Pilot Participant Survey

Nonresidential Programs

- Agriculture, Schools and Government Program Participant Survey
- Business Incentive Program Participant Survey
- Chain Stores and Franchises Program Franchise Owner Interview Guide
- Chain Stores and Franchises Program National Rebate Administrator Interview Guide
- Chain Stores and Franchises Program Participant Survey
- Design Assistance Program Design Team and Building Owner Interview Guide
- Large Energy Users Program Participant Survey
- Nonresidential Online Trade Ally Survey
- On Demand Savings Pilot Participant Interview Guide
- RECIP Biogas and Biomass Participant Interview Guide
- RECIP Solar PV Online Participant Survey

- Renewable Energy Loan Fund Nonparticipating Lender Interview Guide
- Renewable Energy Loan Fund Participating Lender Interview Guide
- Renewable Energy Loan Fund Participant Interview Guide
- Small Business Program Participant Survey
- Strategic Energy Management Pilot Participant Interview Guide

Ongoing Participant Satisfaction Surveys

Residential Programs

- Home Performance with ENERGY STAR Program – Whole Home Path
- Home Performance with ENERGY STAR Program – HVAC Path
- Multifamily Energy Savings Program
- Multifamily Direct Install Program
- Renewable Rewards Program
- Simple Energy Efficiency Program

Nonresidential Programs

- Agriculture, Schools and Government Program
- Business Incentive Program
- Chain Stores and Franchises Program
- Large Energy Users Program
- Small Business Program

Residential Programs

- Home Performance with ENERGY STAR Program Trade Ally Interview Guide
- Home Performance with ENERGY STAR Program Trade Ally Online Survey
- Multifamily Programs Partial Participant Interview Guide
- Multifamily Energy Savings Program Participant Survey
- Renewable Rewards Program GSHP Participant Survey
- Renewable Rewards Program Solar PV Participant Survey
- Retailer Lighting and Appliance Program Storefront Manager Survey
- Retailer Lighting and Appliance Program Corporate Retailer and Manufacturer Interview Guide
- Simple Energy Efficiency Program Participant Survey
- Smart Thermostat Pilot Participant Survey

**Focus on Energy CY 2016 Interview Guide:
Trade Allies
Home Performance with ENERGY STAR Program
July 2016**

Respondent name:

Respondent phone:

Interview date:

Interviewer initials:

Table 1. Research Objectives Map

Research Questions	Interview Guide Questions
Recruitment and Satisfaction	
What about the program motivates trade allies to participate?	B15
Are there barriers to trade ally participation?	B16
Are trade allies satisfied with program design and implementation? (Training, communication, time to receive checks, etc.)	B17-B26, F55-F57
How have recent program design changes affected trade ally businesses, if at all? Do trade allies expect any effects in the future?	A7-A13, C30-C31, D43-46
Marketing	
What are the most effective channels and messages for promoting the program?	C32-C40
Do trade allies reference the program in business advertising?	C32-C33
Customer Experience	
What insights do trade allies have on what barriers exist to customer participation?	D47-D49, E51-E54
Has customer response to the program changed as a result of changes to the website and program messaging?	C38, E52
What opportunities exist for program improvements?	B19, B22, C35

Introduction

Thank you for making the time to speak with me. Have you participated in an interview like this before? **[If not]** We are interviewing several trade allies in the Home Performance with ENERGY STAR (HPwES) program to get a deeper understanding of how your business is interacting with the changing program. We hope to get your perspective on things that are working well and any areas where you have experienced challenges. This information will inform potential program changes in the coming year, so we encourage you to be as direct as possible and offer any suggestions you have for program improvement.

While we do not expect to ask you anything sensitive, our policy is to never use your name or the name of your company in our report. Do you have any questions before we begin?

A. Role and Responsibilities

First, I'd like to know about your specific role and responsibilities with regard to the Focus on Energy HPwES program.

1. Please tell me your title and a little about what you do for [name of company].
2. Can you confirm that your company offers [HPwES services: HVAC, assessments, insulation, solar PV] through the Focus on Energy HPwES program? Does your company perform any other types of services, for which Focus on Energy incentives are not available? [Record services, if any.]
3. [HVAC] How long has your firm participated in the Focus on Energy HVAC incentive program?
4. [All] When did your company become a participating contractor for the HPwES program?
5. In what part of the state do you generally work?
6. Are you familiar with the difference between the standard and income qualified paths in the program? [Record any lack of understanding]
7. Our records show that you have completed:
 - Standard projects, and
 - Income qualified projects in 2016

Does that sound about right? [If not, record correct values.]

8. [If participated last year] According to our records, this is [HIGHER/LOWER] than the number of projects you completed at this time last year. Does that sound right to you? [If not the same, probe: different mix of projects, different volume of projects?]
9. [If # different than previous year] What do you think accounts for the difference in project volume between this year and last year? [Probe: are program changes a factor in the difference?]
10. On average, what percentage of your company's overall workflow is done through the HPwES program? [An estimate is fine.]
11. How would you describe the program's impact on your business? [Probe: exposed to more leads? More customers agree to install? Larger project sizes?]
12. How have the program design changes in 2016 affected your business, if at all?
13. Have you changed any of the services you offer as a result these changes, or do you plan to?

B. Recruitment and Implementation

Now I'll ask a few questions about the process to join the program.

14. How did you first learn about the HPwES program [or HVAC program if historically participated in that program]?
15. What motivated your company to participate as a registered trade ally?
16. What barriers to participation, if any, did your company face? [PROBE: in terms of needing additional training, licenses, insurance or any other requirements?]
17. Do you feel you have an adequate understanding of available incentives, forms, application processes, and program software?
18. Did anyone in your company attend the Better Buildings, Better Business (B4) Conference this year? Has anyone in your company attended any other technical training or conferences through the Home Performance with ENERGY STAR Program in 2016? [NOTE: According to Scott, up to 13 HVAC employees will attend the BPI course in August.]
19. Is there any additional training or support that you would like the program to offer? If so, what?
20. I'd like to ask a survey-style question. I'll read off a list of actions Focus on Energy is taking with regard to the program. For each, I'd like you to tell me if you think Focus on Energy is doing an excellent, good, fair, or poor job. So, how is Focus on Energy doing when it comes to ...
 - A. Reaching out to you and keeping you informed about programs and offerings
 - B. Paying you in a timely manner, if you receive the incentive on behalf of your customer
 - C. Making the paperwork easy to submit
 - D. Providing you with tools and resources to effectively market programs to your customers
 - E. Providing educational opportunities or training resources
 - Providing the right amount of support so you can confidently sell and install energy efficiency equipment
21. How frequently do you run into challenges with the incentive application process?
 1. Very frequently
 2. Often
 3. Not very often
 4. Almost never
 98. Don't know

[ASK IF 21 = 1 OR 2]

22. What are your most frequent challenges with the incentive application process?
23. [If HVAC] About how often do you have the HVAC incentive sent to you, instead of having the customer receive it? [Probe for estimate percent of projects.]
24. [All receiving rebate check directly] How long does it normally take to receive the incentive check?
25. [If customer receives check] Have customers given you any feedback on the time it takes to process incentive forms, or receive their check? Can you describe this feedback?

26. How would you characterize your experience with the program's QA/QC processes for applications and installation? QA/QC includes application review and site visit verification in some cases. Do you have any suggestions for improving these processes?

C. Marketing and Promotion

Now let's move on to the subject of marketing and promotion.

27. Where do most of your program sales leads come from? [PROBE: Do customers contact you off the program website? Do you receive leads from the Focus on Energy staff? What percent of your leads come from each source?]

28. How often do you promote Focus on Energy programs to customers?

1. All the time
2. Frequently
3. Sometimes
4. Seldom
5. Never

[ASK IF 28 = 3 or 4 or 5]

29. Why don't you promote the programs to the customers more often?

30. [Weatherization] Have you made any changes in how you present the program based on the new insulation incentive amounts or the integration of HVAC incentives? If not, why not?

31. [HVAC] Have you made any changes in how you present the program based on the integration of insulation incentives? If not, why not?

32. Do you advertise your company? If so, do you mention the HPwES program, or Focus on Energy, in your advertising?

33. What marketing messages do you think work best to promote home performance?

34. Do you use any of the materials provided by the HPwES program? If so, which materials do you use? Do you have any suggestions for improvements to individual marketing pieces supplied by the program? [Probe: Do you think the materials use appropriate messaging?]

35. How, if at all, could Focus on Energy better support your marketing efforts?

36. Are you aware of Focus on Energy's efforts to market the HPwES program directly? If so, what is your perception of their marketing? Does Focus on Energy direct marketing create any conflict with your own marketing efforts?

37. Have you ever visited the Focus on Energy Home Performance with ENERGY STAR website? Would you recommend any improvements to the website?

38. Do you direct customers to the website? The administrator made several changes to the website earlier this year to reflect changes in the program. Since then, have you noticed any change in the feedback you receive from customers, if any, about the website?

39. Do you operate in the service territory of Xcel Energy? Do you also promote their incentive programs? What is your perception of the importance of these other programs? Would HPwES be as useful on its own?
40. [If solar PV and other services] How do you integrate solar PV and [service offered] in your business? Do customers tend to install both? What are the advantages for your business in offering both? Which service do you offer first?

D. Technical Issues

I'd like to ask you about some of the technical components of the program as well.

41. [Weatherization] Focus on Energy recently changed the Whole Home incentive structure so that it offers multiple energy saving percentage levels and incentives. . As a result of this change in incentive structure, have you made any changes to how you make proposals to customers, or how you complete an installation? If not, why not?
42. [Weatherization/Audits] Have you used the new software tool used by the program, Snugg Pro? [If participated previously] How does it compare to the previous software program, EmHome?
43. [Weatherization/Audits] Do you discuss HVAC upgrades with your customers? What information do you provide? [Probe: suggest issues to address, refer to program incentives, refer to specific HVAC installer] Have you changed how you approach this as a result of the program changes for 2016?
44. [If responding "No" above] Why do you not discuss HVAC upgrades?
45. [HVAC, if no audit or insulation services] Do you discuss weatherization issues with your customers? If so, what information do you provide? [Probe: suggest issues to address, refer to auditor, refer to program incentives, refer to specific insulation installer] Have you changed how you approach this as a result of the program changes for 2016?
46. [If responding "No" above] Why do you not discuss weatherization issues?
47. What are the primary obstacles facing your customers that want to make energy efficiency upgrades? Does the program address the obstacles?
48. Are these obstacles different for income-qualified customers? Does the program adequately address obstacles for income-qualified customers?
49. What could the program do to better serve customers through the standard path? What could the program do to better serve customers through the income-qualified path?
50. [Solar PV] What do you think are the primary obstacles in the solar PV market? Does the program address these obstacles?

E. Customer Response

51. Are the incentive levels effective for persuading customers to complete a project? In what ways do standard and income-qualified customers respond differently to the incentives?

52. [Weatherization] Have you seen any change in how customers respond to the program as a result of the new energy savings-based incentive structure?
53. [If provide audits] Do customers view the assessment and assessment report as helpful tools? How does the assessment report impact your sales process, if at all?
54. Overall, are customers satisfied with the HPwES program? What do you think they're most satisfied with? Least satisfied with?

F. Wrap-up

55. On a 10-point scale where 0 means "not all satisfied" and 10 means "extremely satisfied," how satisfied are you with Focus on Energy overall? [RESPONSE CHOICES RANGING FROM 0-10, PLUS "DON'T KNOW"]
56. Have you ever recommended this program to another contractor? If not, why not?
57. What is one important thing Focus on Energy can improve to increase your satisfaction?
58. [If needed] In addition to incentive amounts, what is one additional thing Focus on Energy can improve to increase your satisfaction?
59. Is there anything we have not discussed that you think we should know about or keep in mind?

Focus on Energy Home Performance with ENERGY STAR Trade Ally Online Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Firmographics	Determine trade ally's company characteristics	Section A
Engagement	Promotion of the programs	Section B
Satisfaction	Satisfaction with Trade Ally Network and Focus on Energy	Section C

SAMPLE Variables:

[EMAIL ADDRESS] = Trade ally's email address

[COMPANY] = Name of trade ally's company

[FIRST NAME] = Trade ally's first name

[LAST NAME] = Trade ally's last name

A. Survey Invitation E-mail Message

To: [EMAIL ADDRESS]

From: Focus on Energy

Subject: Have 3 minutes to take a survey?

Dear [FIRST NAME]:

Focus on Energy is interested in hearing from trade professionals involved with residential energy-efficient equipment or services. We'd like to know more about your experiences so we can improve our programs. Your responses will remain anonymous and be kept confidential. This survey should take 3 minutes. Please complete the survey by **XX, 2016**.

Follow this link to the survey: [SURVEY LINK]

Or copy and paste this URL into your internet browser: [SURVEY LINK]

Focus on Energy greatly appreciates your participation. If you have any questions about the survey, please feel free to contact me. Thank you in advance!

Sincerely,
Joe Fontaine

Focus on Energy Performance Manager
Public Service Commission of Wisconsin

Follow the link to opt out of future emails:
\${!://OptOutLink?d=Click here to unsubscribe}

B. Survey Start Screen



[DISPLAY FOCUS ON ENERGY LOGO]

Welcome! Our records show that your customers have participated in the Home Performance with ENERGY STAR Program. Although we know you or your customers may be involved in other programs that Focus on Energy offers, *for the purposes of this survey, please think about your experiences with the Home Performance Program when answering the questions.*

[DISPLAY "BEGIN SURVEY" BUTTON]

A. Firmographics

A1. How many employees work at your office(s) in Wisconsin? [TEXT ENTRY BOX; NUMERIC VALIDATION 0-999]

A2. What does your company specialize in? (Select all that apply)

1. Commissioning services
2. Electrical/lighting
3. Energy assessments, diagnostics, or ratings
4. HVAC equipment
5. Other mechanical systems
6. Insulation/building envelope
7. New building construction
8. Refrigeration
9. Renewable energy
10. Renovations
11. Training/consulting
12. Other [FORCED TEXT ENTRY RESPONSE]
99. Don't know

B. Engagement

B1. How often do you promote Focus on Energy programs to customers?

1. All the time
2. Frequently
3. Sometimes
4. Seldom
5. Never

[ASK IF B1 = 3, 4 or 5]

B2. Why don't you promote the programs to the customers more often? [Select all that apply]

1. I'm not confident about the details of the programs or who is eligible
2. It's confusing to the customer
3. Too much paperwork
4. For the jobs I do, the incentives are not worth the hassle
5. I don't like the equipment or products that Focus on Energy promotes
6. I perceive a financial risk to myself or my customer
7. I don't like having my work inspected
8. Other [FORCED TEXT ENTRY RESPONSE]
99. Don't know

C. Satisfaction

C1. How is Focus on Energy doing when it comes to the following:

[MATRIX WITH RESPONSE CHOICES: EXCELLENT, GOOD, FAIR, POOR, DON'T KNOW, or NOT APPLICABLE] [RANDOMIZE ORDER]

- A. Reaching out to you and keeping you informed about programs and offerings
- B. Paying you in a timely manner, if you receive the incentive on behalf of your customer
- C. Making the paperwork easy to submit
- D. Providing you with tools and resources to effectively market programs to your customers
- E. Providing educational opportunities or training resources
- F. Providing the right amount of support so you can confidently sell and install energy efficiency equipment

C2. How frequently do you run into challenges with the incentive application process?

1. Very frequently
2. Often
3. Not very often
4. Almost never
98. Don't know

[ASK IF C2 = 1 OR 2]

C3. What are your most frequent challenges with the incentive application process? [Select all that apply]

1. Too much information required

2. Too many supporting documents required (e.g., energy savings calculations, contractor invoices)
3. Takes too much time
4. Too many requirements for eligible equipment
5. Difficult to get a hold of program staff when I had questions
6. Took too long for approval
7. Other [FORCED TEXT ENTRY RESPONSE]
99. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

C4. On a 10-point scale where 0 means “not all satisfied” and 10 means “extremely satisfied,” how satisfied are you with Focus on Energy overall? [RESPONSE CHOICES RANGING FROM 0-10, PLUS “DON’T KNOW”]

[ASK IF C2 < 7]

C5. Besides incentive amounts, what is one important thing Focus on Energy can improve to increase your satisfaction? [TEXT ENTRY BOX; NO FORCED RESPONSE]

[END OF SURVEY MESSAGE]

Success! Your responses have been submitted. Thank you for taking the time to complete our survey. Have a nice day!

**Focus on Energy CY 2016 Interview Guide:
Partial Participants
Multifamily Programs
September 2016**

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Program Process and Delivery	How effectively does the MFDI program generate interest in MESP? <ul style="list-style-type: none"> • Whether/how participant received recommendations report • Usefulness of recommendations report • Frequency, quality and usefulness of program staff follow-up • Likelihood of pursuing a project in the future, participant awareness and use of the MESP in next steps 	B1-B4, C3
	How familiar are MFDI participants with the CALP offers? How often are electrical Trade Allies promoting CALP offers?	B5
Barriers	What are the barriers and challenges to moving from MFDI to MESP?	C1, C3
	How does condo associations/owners' experience and satisfaction differ from that of multifamily property owners?	A3, B3, B4, C1
	How can the program better reach and serve mixed-use properties (e.g., retail/residential)?	A4, B3, C1

Interviewer instructions are in green.

[BACKGROUND INFORMATION NOT TO BE READ TO RESPONDENT:]

SAMPLE FRAME: CY 2015 the Multifamily Direct Install Program (MFDI) program participants who have not participated in the Multifamily Energy Savings Program (MESP) before or after (from CY 2013 to August, 2016) they received direct install services. It is understood that some MESP participants may have been pursued for direct install services after receiving an incentive through MESP, which is why the sample frame checks for participation from CY 2013-2015. The Evaluation Team chose CY 2015 MFDI participants to limit issues with recalling their Program experience and/or recommendations report, and to limit impacts of participant staff turnover.

It is also assumed that, through an MFDI program representative, participants received an opportunities report with recommendations for next steps that include potential incentives through MESP. The participants we call for this survey will have had at least nine months to act on energy-saving recommendations received via the opportunities report.

QUOTA: 12-15 interviews

PURPOSE: The goal of these interviews is to understand how Multifamily Direct Install (MFDI) Program participants engage with Focus on Energy Programs and whether additional support could lead to deeper energy savings and cross-program (i.e., MESP) participation. Participant interviews will be structured, but open-ended, to allow respondents to highlight successes and challenges from their perspective. Conversations will be 15-20 minutes long.]

A. Introduction

- A1. Hello, my name is [NAME] and I am calling on behalf of Wisconsin’s Focus on Energy Programs. Focus on Energy wants to learn about your participation in the Multifamily Program for the property at [SITE ADDRESS(ES)] [SOME CONTACTS MAY HAVE RECEIVED SERVICES FOR MORE THAN ONE PROPERTY/SITE ADDRESS]

[IF NEEDED – THE MULTIFAMILY DIRECT INSTALL PROGRAM OFFERS FREE INSTALLATION OF ENERGY SAVING ITEMS SUCH AS LED LIGHT BULBS, FAUCET AERATORS, SHOWERHEADS, AND WATER HEATER PIPE INSULATION]

[IF NO CONTACT NAME]: May I please speak with the person at [SITE ADDRESS] who was most involved with the property’s participation in Focus on Energy’s Multifamily Program? [IF CONTACT NAME PROVIDED]: May I please speak with [CONTACT NAME]?

- a) (Yes)
- b) (Yes, call transferred) [START OVER WITH NEW RESPONDENT]
- c) (No, not available) [SCHEDULE CALLBACK]
- 98. (DON’T KNOW) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
- 99. (REFUSED) [THANK AND TERMINATE]

- A2. I’d like to ask you about your role in relation to the property. What is the best way to describe your role at [SITE ADDRESS]? Are you the . . .? [READ LIST]

- a) Property owner
- b) Property manager
- c) Both property owner and manager
- d) Maintenance or facilities supervisor
- e) Onsite contact
- f) Other [Specify: _____]
- 98. (Don’t know)
- 99. (Refused)

- A3. Is the property an apartment complex or condo association?

- a) (Apartment complex)
- b) (Condominiums/ condo association)
- 98. (DON’T KNOW) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
- 99. (REFUSED) [THANK AND TERMINATE]

- A4. Does the property have leased retail or office space within it, in addition to the residential tenant units?
- a) Yes
 - A4a. *[Specify type of mixed use property: _____]*
 - A4b. Who is involved with making decisions on upgrading these mixed-use *[If needed: retail or office]* spaces?
 - A4c. Is the decision making process for these spaces different from residential tenant spaces or common areas?
 - b) No
 - 98. (Don't know)
 - 99. (Refused)
- A5. Does your company own or manage other 4+ unit multifamily properties in Wisconsin?
- a) Yes *[Specify number of properties and whether any are mixed use properties: _____]*
 - b) No
 - 98. (Don't know)
 - 99. (Refused)

B. Program Process and Delivery

- B1. Are you aware that Focus on Energy offers incentives for energy-efficient products installed in multifamily properties, beyond the direct install services you received?
- a) How had you heard about these incentives? *[Determine whether they had heard about them before participating in the direct install program]*
- B2. Thinking back to when you received the direct install measures at the property, do you recall the program staff or a contractor looking for energy-saving opportunities in other areas of the property besides the tenant units? *[This may have been a formal or informal process that occurred on the same day as the installations, or on a different day. The walk-through/assessment would have occurred in the common and/or mixed use areas of the building]*
- a) Can you describe what occurred?
 - b) Who performed the assessment?
 - c) How long did it take?
 - d) What parts of the building received a walk-through?
- B3. Did you receive the Prescriptive and Custom Incentives Recommendation Checklist from program staff? *[If needed: this is an energy assessment report or a list of energy efficiency improvement recommendations]*?
- a) How did you receive the report/recommendations (e.g., verbal communication, email, printed report)? *[If condominium, ask: How was the information presented to condo owners?]*
 - b) What type of recommendations were included?
 - c) *[If mixed use]* Did the report address the common areas of the property only or did it also include the retail/office spaces within the property?
 - d) Did you find the recommendations useful? Why or why not?

- e) Did you feel the report or list of recommendations included the necessary information to move forward with implementing some/all of the recommendations? Why or why not?
- f) Have you moved forward with a project? If so: what was the project, and have you received incentives from Focus on Energy or any other source?

B4. Since participating in the Multifamily Program, have you or anyone else at your organization been contacted by program staff about other opportunities to save energy at the property? *[Probe for email or phone contact, then who contacted the property, topic of conversation, and frequency of communication]*

- a) Are you satisfied with this communication? Why or why not?
- b) Do you feel you have sufficient information to move forward with energy-saving upgrades at the property in the future?
- c) Who do you contact if you have questions about moving forward with energy-saving upgrades at the property?

B5. I'm going to ask you a couple more questions about the common area lighting package, which is a lighting discount offer available only through select contractors. Lighting packages are available at reduced prices for exit signs, CFL and LED fixtures, occupancy sensors, T8s and ballasts.

- a) Did your recommendations report include information about the common area lighting package? *[If no, probe if they're familiar with the offer. If no, skip to C1]*
- b) Did you receive assistance from program staff to navigate this program offer?
- c) Did you contact a Trade Ally to discuss further? Has an electrical or lighting contractor ever approached you about the common area lighting package?
- d) Why did you decide to not participate in this offer?

C. Barriers

These last few questions are about your organization's next steps with the property and the barriers you may be encountering.

C1. What are the reasons your organization has not acted on the recommendations that program staff made, or any other energy efficiency project at the property?

- a) What could the Multifamily Programs have done to help your company proceed with making upgrades?

C2. What challenges do you face in making energy saving upgrades at the property?

- a) What is the decision-making process for making energy saving upgrades to the property's common areas? *[Probe who is involved in decision making and how long decisions take to finalize. Check for nuances if property is a condominium. If mixed use, specify reference to common areas versus retail/office areas previously discussed.]*
- b) How could Focus on Energy help your organization move projects forward more effectively?

C3. How likely is your organization to pursue an energy efficiency project for the property in the future?

- a) What type of project is the highest priority for the property?
- b) When do you think this type of upgrade would occur?

- c) How likely is your organization to apply for a Focus on Energy financial incentive to offset the cost of the project? Why or why not? Do you feel you have the information you need to make the next step?
- d) How could Focus on Energy help with this future project?

D. Closing

Thank you for your participation.

- D1. Do you have any final comments about the program or your experience?

Focus on Energy Multifamily Energy Savings Program Participant Property Manager/Owner Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Screening	Project initiation process	C1-C4, D1
Marketing and Outreach	Program Awareness	A3-A5, C1,
	Brand identity and messaging impacts	C5 -C9
	Key factors influencing customers' decision to participate in program	D1-D7, E3, E7
Barriers	Obstacles to installing high-efficiency equipment	O, E2
	Barriers to participating in the MFDI program	E3-E4
Satisfaction	Assess satisfaction with various program components and reasons for dissatisfaction among participants	C2-J6, K1-K2
Program Impacts	Determine net program impacts	G1-I5
	Verify installation and persistence of program measures	A2, F1-F5
Firmographics	Determine building and company characteristics of participants	B1-B13

Interviewer instructions are in green.

CATI programming instructions are in red.

Words in parenthesis should not be read to respondent

*Indicates core questions

~ Indicates CY 2016 marketing core questions

Quota = 70 completes

SAMPLE Variables:

CONTACT NAME

SITE ADDRESS

[MEASURE CATEGORY1]

[MEASURE CATEGORY2]

[MEASURE CATEGORY3]

DI PARTICIPATION [TRUE OR FALSE]

UTILITY

A. Introduction

- A1. Hello, my name is [NAME] and I am calling on behalf of Wisconsin's Focus on Energy Programs. Focus on Energy wants to learn about your recent participation in the Multifamily Energy Savings Program for the property at [SITE ADDRESS].

[IF NO CONTACT NAME, OR CONTACT NO LONGER WORKS FOR PROPERTY]: May I please speak with the person who was most involved with the property's 2016 participation in Focus on Energy's Multifamily Program? [IF CONTACT NAME PROVIDED]: May I please speak with [CONTACT NAME]?

1. (Yes)
2. (Yes, call transferred) [START OVER WITH NEW RESPONDENT]
3. (No, not available) [SCHEDULE CALLBACK]
99. (DON'T KNOW) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
88. (REFUSED) [THANK AND TERMINATE]

Back-up information, not to be programmed:

[If "No – Not available," ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: "APPROXIMATELY 15 MINUTES."]

[IF NEEDED:] This survey is for research purposes only and this is not a marketing call. Your participation in this study is important so that Focus on Energy can improve the energy efficiency programs it offers to businesses and other organizations.

[Only if asked for a Focus on Energy contact to verify the survey authenticity, offer Joe Fontaine with the Public Service Commission of Wisconsin, 608-266-0910.]

[Only if respondent says they already did a survey: Thank you for your responses to that survey. This is another Focus on Energy study that you have been selected for, that asks a few more questions about your experience with the program and your decision-making. If you have a few more spare minutes, we would greatly appreciate your responses!]

A2. *Our records show that you installed energy efficient equipment including [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3] at [SITE ADDRESS]. To ensure our records are correct, can you confirm that you installed this/these upgrades earlier this year?

1. (Yes)
2. (No, wrong year) [RECORD CORRECT YEAR, IF POSSIBLE]
3. (No, wrong address) [RECORD CORRECT ADDRESS]
4. (No, wrong measure) [CORRECT BELOW]
 - H3a. (MEASURE CATEGORY1 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE1]
 - H3a. (MEASURE CATEGORY2 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE2]
 - H3a. (MEASURE CATEGORY3 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE3]
5. (No, I did not install any measures) [THANK AND TERMINATE]
99. (Don't know) [Is there someone we could speak with that would know this? Record name and contact information:_____]
88. (Refused) [THANK AND TERMINATE]

A3. Are you aware that Focus on Energy also offers a free Multifamily Direct Install Program for tenant units? [IF NEEDED: This is a program where installation staff come to your property and install free,

energy saving equipment such as light bulbs, faucet aerators, and showerheads in your tenant units.]

1. Yes
2. No [SKIP TO SECTION D]
99. (Don't know) [SKIP TO SECTION D]
88. (Refused) [SKIP TO SECTION D]

A4. [IF "DI PARTICIPATION" = FALSE] Our records show that [SITE ADDRESS] has not participated in the Multifamily Direct Install Program. To ensure our records are correct, can you confirm this?

1. (Correct, property has NOT participated in the Multifamily Direct Install Program)
2. (Incorrect, property has participated in the Multifamily Direct Install Program) [SPECIFY YEAR OF PARTICIPATION: _____] [SKIP TO SECTION B]
99. (Don't know) [SKIP TO SECTION B]
88. (Refused) [SKIP TO SECTION B]

A5. [IF A4 = 2] What are the reasons this property didn't participate in Multifamily Direct Install Program? [DO NOT READ LIST; RECORD ALL THAT APPLY]

1. (No cost savings for property manager/owner- tenants pay their own utility bills)
2. (Concern whether installation staff would provide high quality products and services)
3. (Lack of personnel/staff resources- arranging for staff to allow installers into occupied tenant units to make changes)
4. (Difficulty getting approval to participate from others, including property owners)
5. (The time and paperwork required)
6. (Difficulty finding replacement bulbs/equipment)
7. (High cost of replacement bulbs/equipment)
8. (Skeptical if program was actually free)
9. (Other) [SPECIFY _____]
99. (Don't know)
88. (Refused)

B. Overview

I'd like to ask you about your role in relation to the property at [SITE ADDRESS].

B1. What is the best way to describe your role at [SITE ADDRESS]? Are you the...? [READ LIST]

1. Property owner
2. Property manager
3. Both property owner and manager
4. Maintenance or facilities supervisor
5. On-site contact
6. Chief financial officer/controller/finance manager
7. Other [Specify: _____]
99. (Don't know)
88. (Refused)

B2. How long have you been in that role for this property?

1. [RECORD RESPONSE: _____]

- 99. (Don't know)
- 88. (Refused)

B3. What is the total number of apartment or condo units at the property [IF NEEDED, REPEAT ADDRESS]?

- 1. [RECORD RESPONSE: _____]
- 99. (Don't know)
- 88. (Refused)

B4. Is the property an apartment or condominium building?

- 1. Apartment building
- 2. Condominium building
- 3. Some combination of both
- 99. (Don't know)
- 88. (Refused)

B5. Does the property have retail or office space within it, in addition to the residential tenant units?

- 1. Yes
- 2. No
- 99. (Don't know)
- 88. (Refused)

B6. [IF B5 = 1] If the commercial tenant wanted to upgrade the lighting, does the tenant or the building owner pay for upgrades to the interior commercial space?

- 1. Building owner pays
- 2. Tenant pays
- 3. Some combination of both
- 99. (Don't know)
- 88. (Refused)

B7. [IF B6 = 3] What percent of this type of upgrade is paid by the commercial tenant?

- 1. [RECORD RESPONSE: _____]
- 99. (Don't know)
- 88. (Refused)

B8. What is the approximate total square footage of the property?

- 1. [RECORD NUMBER: _____]
- 99. (Don't know)
- 88. (Refused)

B9. Does the building owner pay for an electricity bill that includes electricity used in the tenants' units, or do your tenants pay their own electric bill directly to the utility?

- 1. Building owner pays
- 2. Tenant pays
- 3. Some combination of both
- 99. (Don't know)
- 88. (Refused)

- B10. Does that also apply to the natural gas bill?
1. Building owner pays
 2. Tenant pays
 3. Some combination of both
 99. (Don't know)
 88. (Refused)
- B11. Does your company own or manage other multifamily properties in Wisconsin?
1. Yes [RECORD NUMBER: _____]
 99. (Don't know)
 88. (Refused)
- B12. [IF B11 = 1] How many of these other multifamily properties are condominium buildings [IF NEEDED: AS OPPOSED TO APARTMENT BUILDINGS]?
1. [RECORD NUMBER: _____]
 99. (Don't know)
 88. (Refused)
- B13. [IF B11 = 1] How many of these other multifamily properties have retail or office space within it, in addition to the residential tenant units?
1. [RECORD NUMBER: _____]
 99. (Don't know)
 88. (Refused)

C. Awareness

- C1. *How did your organization learn about the Focus on Energy incentives available for this project? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE] [IF RESPONDENT MENTIONS WEBSITE CLARIFY IF UTILITY OR FOCUS ON ENERGY WEBSITE SO YOU KNOW HOW TO CODE ANSWER ON LIST.]
1. (Contact with Focus on Energy representative through phone, email, or in person)
 2. (Focus on Energy quarterly newsletter)
 3. (Focus on Energy website)
 4. (Focus on Energy sponsored workshop or event)
 5. (Focus on Energy printed program materials)
 6. (Contact with utility representative)
 7. (Utility mailing, bill insert, or utility Website)
 8. (Word of mouth (family, friend, or business colleague))
 9. (I contacted my contractor/ vendor to ask)
 10. (My contractor or vendor let me know about them)
 11. (Previously participated in program/received an incentive)
 12. (Through a trade association or professional organization [SPECIFY: _____])
 13. (Other [SPECIFY: _____])
 99. (Don't know)

88. (Refused)
- C2. *Did you receive an incentive check in the mail for the upgrades, or did your contractor provide a discount on the cost of the project?
1. (Rebate in the mail)
 2. (Contractor discount)
99. (Don't know)
88. (Refused)
- C3. *Who took the lead role in completing the application for the financial incentive? Was it... [READ OPTIONS, RANDOMIZE OPTIONS, ONLY ONE RESPONSE]
1. You (i.e., respondent)
 2. Someone at your organization
 3. The contractor and/or vendor
 4. A Focus on Energy Energy Advisor
 5. Someone else [SPECIFY: _____]
99. (Don't know)
88. (Refused)
- C4. *Who else contributed to completing the application for the financial incentive? [READ LIST IF NEEDED, PROBE FOR ALL PARTIES INVOLVED, MULTIPLE RESPONSES ALLOWED]
1. (No one else was involved)
 2. (Me [i.e., respondent])
 3. (Someone else at my organization)
 4. (The contractor and/or vendor)
 5. (A Focus on Energy Energy Advisor)
 6. (Other) [SPECIFY: _____]
99. (Don't know)
88. (Refused)
- C5. ~ What are the first three words that come to mind when you hear "Focus on Energy"? [OPEN END, RECORD ONLY FIRST THREE RESPONSES]
- C6. ~ I'm going to read you a list of statements about Focus on Energy and your multifamily property's energy utility. Please tell me whether you agree or disagree with these statements. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?]
- [READ LIST AND RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=SOMEWHAT DISAGREE, AND 4=STRONGLY DISAGREE; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]
1. Focus on Energy is a brand that multifamily properties like mine can trust.
 2. Focus on Energy offers programs, tools, and/or services that are valuable to my multifamily property.
 3. Focus on Energy provides programs that can or did help my multifamily property lower its overall energy costs.
 4. Focus on Energy provides programs that can or did help make my multifamily property more aware of energy saving opportunities.

5. My organization is more satisfied with our energy utility because it partners with Focus on Energy to offer energy efficiency programs to multifamily properties like mine.

C7. ~ Which of the following statements would make you most interested in learning more about Focus on Energy? [READ LIST AND RANDOMIZE; ALLOW ONLY ONE RESPONSE; REPEAT INTRO STATEMENT AS NEEDED] Focus on Energy helps Wisconsin multifamily properties:

1. Reduce their energy costs and save money.
2. With solutions to use energy smarter and save money.
3. Grow by making smarter decisions about their energy use.
4. Lower their energy costs.
5. (None of the above)

C8. ~ Next, I'm going to read you a list of statements about energy efficiency. Please tell me how important these statements are to you when deciding whether to upgrade the energy efficiency of your multifamily property. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say this statement is very important, somewhat important, not too important, or not at all important when deciding whether to upgrade the energy efficiency of your business?]

[READ LIST AND RECORD 1=VERY IMPORTANT, 2=SOMEWHAT IMPORTANT, 3=NOT TOO IMPORTANT, AND 4=NOT AT ALL IMPORTANT; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]

1. Energy efficiency saves my multifamily property money on its utility bills.
2. Energy efficiency creates jobs and contributes to the Wisconsin economy.
3. Energy efficiency protects the environment by reducing greenhouse gas emissions.

C9. ~ Of the energy efficiency statements you just rated, which is the **most important** to you when deciding whether to upgrade the energy efficiency of your multifamily property? [READ RESPONSES FROM C8 IF NEEDED; RECORD ONLY ONE RESPONSE]

99. (Don't know)
88. (Refused)

D. Decision Making

Now I'd like to understand more about how your property made decisions about this energy efficiency project.

D1. *I'm going to read you a short list. Please tell me who, if anyone, was involved in helping you initiate your energy efficiency project. [READ LIST AND MARK 1=YES, 2=NO, 99=DON'T KNOW; 88 REFUSED FOR EACH]

1. Your contractor or vendor
2. A Focus on Energy "Energy Advisor"
3. Your utility account manager

D2. *What factor was most important to your company's decision to make the energy-efficient upgrades for which you received an incentive? [DO NOT READ LIST; SINGLE RESPONSE]

1. (To save money on energy bills, reduce energy consumption or energy demand)
2. (To obtain a program or bonus incentive)

- 3. (To obtain a tax credit)
- 4. (To replace old (but still functioning) equipment)
- 5. (To replace broken equipment)
- 6. (To enhance performance of our system(s))
- 7. (To improve comfort)
- 8. (Tenant satisfaction/retention)
- 9. (Other [SPECIFY _____])
- 99. (Don't know)
- 88. (Refused)

D3. ~ Do you require approval from someone else at your organization before committing to an energy efficiency upgrade?

- 1. (Yes)
- 2. (No)
- 99. (Don't know)
- 88. (Refused)

[ASK IF D3 = 1]

D4. ~ Who at your organization is involved in making decisions about energy efficiency when making capital upgrades or improvements? [DO NOT READ OPTIONS, MULTIPLE RESPONSES ALLOWED]

- 1. (President/CEO/Executive Director/Property Owner)
- 2. (Facility maintenance department/property manager)
- 3. (Corporate headquarters)
- 4. (Board of directors, condo association board)
- 5. (Condo owners)
- 6. (Other [SPECIFY _____])
- 99. (Don't know)
- 88. (Refused)

[ASK IF D3 = 1]

D5. ~ How long does it typically take to receive approval to move forward with an energy efficiency upgrade?

- 1. Less than 1 week
- 2. 1-3 weeks
- 3. 4-6 weeks
- 4. 7-8 weeks
- 5. Over 8 weeks
- 99. (Don't know)
- 88. (Refused)

D6. *Have you or anyone else within your organization attended an in-person or web-based training delivered by Focus on Energy in the past two years?

- 1. (Yes)
- 2. (No)
- 99. (Don't know)
- 88. (Refused)

D7. *[IF D6 = 1] How important was your business' participation in the training in your decision to move forward with the energy efficient upgrades for which you received an incentive? Was the training...

[READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (Don't know)
88. (Refused)

E. Barriers

The next questions are to understand the barriers your organization may face when implementing an energy efficiency project.

E1. *What do so see as the biggest challenges to making energy-efficient improvements at your properties? [DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]

1. (High initial costs)
2. (Budget limitations)
3. (Long payback period)
4. (Funding competition for other investments/improvements)
5. (Replacing equipment without affecting operations)
6. (Understanding potential areas for improvement)
7. (Lack of awareness about available incentives for energy efficient equipment)
8. (Understanding equipment eligibility)
9. (Issues with program application process)
10. (Finding a trade ally with which to work)
11. (Inadequate incentive)
12. (Other [SPECIFY:_____])
99. (Don't know)
88. (Refused)

E2. *What could be done to help your company overcome challenges with energy efficiency improvements? [DO NOT READ LIST, ALLOW MULTIPLE RESPONSES]

1. (Nothing)
2. (Higher incentives)
3. (Provide upfront rewards)
4. (Offer low-interest loans)
5. (Simplify the paperwork)
6. (Provide better/more information about program [SPECIFY WHAT TYPE OF INFORMATION THEY NEED:_____])
7. (Provide an energy audit)
8. (Other [RECORD VERBATIM ANSWER_____])
99. (Don't know)
- (Refused)

- E3. **[IF B4 = 2 OR 3, OR IF B12 ≥ 1]** What challenges does your business face specific to making energy-efficient improvements to condominium buildings?
1. (Multiple decision makers)
 2. (Splitting cost of upgrades with tenant/owner)
 3. (High initial costs)
 4. (Budget limitations)
 5. (Long payback period, payback longer than lease term)
 6. (Funding competition for other investments/improvements)
 7. (Replacing equipment without affecting operations)
 8. (Understanding potential areas for improvement)
 9. (Lack of awareness about available incentives for energy efficient equipment)
 10. (Understanding equipment eligibility)
 11. (Issues with program application process)
 12. (Finding a trade ally with which to work)
 13. (Inadequate incentive)
 14. (Other **[SPECIFY: _____]**)
 99. (Don't know)
 88. (Refused)
- E4. **[IF E3 = 1-14]** How can Focus on Energy help your company overcome these challenges with condominium buildings?
1. **[RECORD RESPONSE: _____]**
 99. (Don't know)
 88. (Refused)
- E5. **[IF B5 = 1 OR B13 ≥ 1]** What challenges does your business face specific to making energy-efficient improvements to mixed use buildings – buildings with residential and commercial tenants?
1. (Multiple decision makers)
 2. (Splitting cost of upgrades with tenant/owner)
 3. (High initial costs)
 4. (Budget limitations)
 5. (Long payback period, payback longer than lease term)
 6. (Funding competition for other investments/improvements)
 7. (Replacing equipment without affecting operations)
 8. (Understanding potential areas for improvement)
 9. (Lack of awareness about available incentives for energy efficient equipment)
 10. (Understanding equipment eligibility)
 11. (Issues with program application process)
 12. (Finding a trade ally with which to work)
 13. (Inadequate incentive)
 14. (Other **[SPECIFY: _____]**)
 99. (Don't know)
 88. (Refused)
- E6. **[IF E5 = 1-14]** How can Focus on Energy help your company overcome these challenges with mixed-use buildings?
1. **[RECORD RESPONSE: _____]**

- 99. (Don't know)
- 88. (Refused)

E7. ~ Who do you seek out as a trusted source of information regarding energy efficiency upgrades for your business? [MULTIPLE RESPONSE ALLOWED; READ LIST IF NEEDED]

- 1. My Focus on Energy Energy Advisor
- 2. [UTILITY] representatives
- 3. My installation contractor/vendor
- 4. Other business owners/managers
- 5. Web resources [SPECIFY SITES]
- 6. Internal maintenance staff
- 7. Apartment/trade associations (presentations and newsletters)
- 8. I don't purchase energy-efficient products for my property
- 9. (Other) [SPECIFY]
- 99. (Don't know)
- 88. (Refused)

F. Verification

F1. My records show that you installed [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3]. Is all of the energy efficient equipment installed through the program this year still in-place and operating as planned? [USE VARIABLE C_MEASURE1-3 IF ANY WERE CORRECTED IN A2]

- 1. Yes [SKIP TO SECTION G]
- 2. No
- 99. (Don't know) [SKIP TO SECTION G]
- 88. (Refused) [SKIP TO SECTION G]

F2. [ASK IF F1 = 2] Which equipment is no longer installed or operating as planned? [DO NOT READ LIST, SELECT ALL THAT APPLY]

- 1. [MEASURE CATEGORY1]
- 2. [MEASURE CATEGORY2]
- 3. [MEASURE CATEGORY3]
- 4. (Other) [SPECIFY _____]
- 99. (Don't know)
- 88. (Refused)

F3. [ASK IF F1 = 2] [ASK FOR EACH RESPONSE SELECTED IN F2] How many [RESPONSE FROM F2] did you or your contractor originally install? [OPEN END NUMERIC]

F4. [ASK IF F1 = 2] And how many [RESPONSE FROM F2] are installed and operating now? [OPEN END NUMERIC]

F5. [ASK IF F1 = 2] [ASK FOR EACH RESPONSE SELECTED IN F2] Why are the [RESPONSE FROM F2] no longer installed or operating as planned? [OPEN END]

G. Freeridership

[IF D1 = 1 SKIP TO SECTION H OTHERWISE ASK THIS SECTION - CONTRACTOR DID NOT HELP IN THE DECISION MAKING]

Now I'd like to talk with you a bit more about your decisions to purchase the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though you may have received incentives for other energy saving equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1] that was purchased.

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- G1. First, did your organization have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before learning about the incentive?
1. (Yes) [ASK G2]
 2. (No) [SKIP TO G4]
 99. (DON'T KNOW) [SKIP TO G4]
 88. (REFUSED) [SKIP TO G4]
- G2. Prior to learning about the incentive, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your property's capital budget?
1. (Yes)
 2. (No) [SKIP TO G4]
 99. (DON'T KNOW) [SKIP TO G4]
 88. (REFUSED) [SKIP TO G4]
- G3. Had your property **ALREADY** ordered or purchased the [MEASURE CATEGORY1 OR C_MEASURE1][s] **BEFORE** your property heard about the Multifamily Energy Savings Program incentive?
1. (Yes)
 2. (No)
 99. (DON'T KNOW)
 88. (REFUSED)
- G4. Would you have purchased and installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy?
1. (Yes) [SKIP TO G7]
 2. (No) [SKIP TO G9]
 99. (DON'T KNOW) [ASK G5]
 88. (REFUSED) [ASK G5]
- G5. Would you have installed **something** without the incentive and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]
1. (Yes, would have installed something) [ASK G6]
 2. (No, would NOT have installed anything) [SKIP TO G9]
 99. (DON'T KNOW) [SKIP TO I1]

88. (REFUSED) [SKIP TO I1]
- G6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK G7]
 2. (No) [ASK G7]
99. (DON'T KNOW) [ASK G7]
88. (REFUSED) [ASK G7]
- G7. And without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes, the same amount) [ASK G8]
 2. (No, would have installed less) [ASK G8]
 3. (No, would have installed more) [ASK G8]
99. (DON'T KNOW) [ASK G8]
88. (REFUSED) [ASK G8]
- G8. Without the [INCENTIVE FOR MEASURE CATEGORY1 OR C_MEASURE1] and information or education from Focus on Energy, would you have installed the [MEASURE CATEGORY1 OR C_MEASURE1][s]...[READ LIST AND RECORD ONE RESPONSE]
1. Within the same year? [SKIP TO I1]
 2. Within one to two years? [SKIP TO I1]
 3. Within three to five years? [SKIP TO I1]
 4. In more than five years? [SKIP TO I1]
99. (DON'T KNOW) [SKIP TO I1]
- (REFUSED) [SKIP TO I1]
- G9. [ASK G9 TO G12 IF G4 =2 OR G5 = 2] When you say **you would not have installed** the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy, would you have installed anything at all?
1. (Yes, would have installed something) [ASK G10]
 2. (No, would not have installed anything at all) [SKIP TO I1]
99. (DON'T KNOW) [ASK G10]
88. (REFUSED) [ASK G10]
- G10. Without the incentive and information or education from Focus on Energy, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK G11]
 2. (No) [ASK G11]
99. (DON'T KNOW) [ASK G11]
88. (REFUSED) [ASK G11]
- G11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes, the same amount) [ASK G12]
 2. (No, would have installed less) [ASK G12]

- 3. (No, would have installed more) [ASK G12]
- 99. (DON'T KNOW) [ASK G12]
- 88. (REFUSED) [ASK G12]

G12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] . . . [READ LIST AND RECORD ONE RESPONSE]

- 1. In the same year? [SKIP TO I1]
- 2. In one to two years? [SKIP TO I1]
- 3. In three to five years? [SKIP TO I1]
- 4. More than five years out? [SKIP TO I1]
- 99. (DON'T KNOW) [SKIP TO I1]
- 88. (REFUSED) [SKIP TO I1]

H. Freeridership- Contractor

[ASK EITHER SECTION G OR SECTION H - **NOT BOTH**]

[ASK IF D1=1 – CONTRACTOR HELPED IN THE DECISION MAKING]

Now I'd like to talk with you about the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though your contractor may have installed other energy efficient equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1].

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- H1. At the time that you first started working with your contractor on this project, had you...? [READ LIST AND RECORD ONE FOR EACH: 1=YES OR 2=NO OR 99=DON'T KNOW OR 88=REFUSED]
- 1. Already been thinking about purchasing [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 2. Already begun collecting information about [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 3. Already selected the particular [MEASURE CATEGORY1 OR C_MEASURE1] and were going to purchase it?
 - 4. Already purchased the [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 5. Already installed the [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 6. Already heard about Focus on Energy?
 - 99. (DON'T KNOW)
 - 88. (REFUSED)
- H2. Just to make sure I understand, did your property have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before you began working with your contractor?
- 1. (Yes) [ASK H3]
 - 2. (No) [SKIP TO H4]
 - 99. (DON'T KNOW) [SKIP TO H4]
 - 88. (REFUSED) [SKIP TO H4]
- H3. Before you began working with your contractor, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your property's capital budget?

1. (Yes) **ASK H3a:**
 - H3a. Did your contractor help your organization make the decision to include the purchase of **[MEASURE CATEGORY1 OR C_MEASURE1][s]** in your property's capital budget? **[ASK H4]**
 2. (No) **[ASK H4]**
 99. (DON'T KNOW) **[ASK H4]**
 88. (REFUSED) **[ASK H4]**
- H4. Would you have purchased and installed the same **[MEASURE CATEGORY1 OR C_MEASURE1][s]** without the assistance from your contractor and information or education from Focus on Energy?
1. (Yes) **[SKIP TO H7]**
 2. (No) **[SKIP TO H9]**
 99. (DON'T KNOW) **[ASK H5]**
 88. (REFUSED) **[ASK H5]**
- H5. Would you have installed **something** without the involvement of your contractor and information or education from Focus on Energy? **[DO NOT READ LIST UNLESS NECESSARY]**
1. (Yes, would have installed something) **[ASK H6]**
 2. (No, would NOT have installed anything) **[SKIP TO H9]**
 99. (DON'T KNOW) **[SKIP TO I1]**
 88. (REFUSED) **[SKIP TO I1]**
- H6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the **[MEASURE CATEGORY1 OR C_MEASURE1][s]** you installed?
1. (Yes) **[ASK H7]**
 2. (No) **[ASK H7]**
 99. (DON'T KNOW) **[ASK H7]**
 88. (REFUSED) **[ASK H7]**
- H7. **[ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1]** And without the involvement of your contractor and information or education from Focus on Energy would you have installed the same number of **[MEASURE CATEGORY1 OR C_MEASURE1][s]**?
1. (Yes) **[ASK H8]**
 2. (No) **ASK:**
 - H3a. Would you have installed fewer or more of the **[MEASURE CATEGORY1 OR C_MEASURE1](S)**? **[ASK H8]**
 99. (DON'T KNOW) **[ASK H8]**
 88. (REFUSED) **[ASK H8]**
- H8. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the **[MEASURE CATEGORY1 OR C_MEASURE1][s]**...**[READ LIST AND RECORD ONE RESPONSE]**
1. Within the same year? **[SKIP TO I1]**
 2. Within one to two years? **[SKIP TO I1]**
 3. Within three to five years? **[SKIP TO I1]**
 4. In more than five years? **[SKIP TO I1]**
 99. (DON'T KNOW) **[SKIP TO I1]**

88. (REFUSED) [SKIP TO I1]
- H9. [ASK H9 TO H13 IF H4 = 2 OR H5 = 2] When you say **you would not have installed** the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy, would you have installed anything at all?
1. (Yes) [ASK H10]
 2. (No) [SKIP TO I1]
99. (DON'T KNOW) [ASK H10]
88. (REFUSED) [ASK H10]
- H10. Without the assistance from your contractor and information or education from Focus on Energy, **would you have installed** something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK H11]
 2. (No) [ASK H11]
99. (DON'T KNOW) [ASK H11]
88. (REFUSED) [ASK H11]
- H11. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes) [ASK H12]
 2. (No) ASK:
 - H3a. Would you have installed fewer or more of the [MEASURE CATEGORY1 OR C_MEASURE1][S]? [ASK H12]
99. (DON'T KNOW) [ASK H12]
88. (REFUSED) [ASK H12]
- H12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]
1. In the same year? [ASK H13]
 2. In one to two years? [ASK H13]
 3. In three to five years? [ASK H13]
 4. More than five years out? [ASK H13]
99. (DON'T KNOW) [ASK H13]
88. (REFUSED) [ASK H13]
- H13. If the assistance or information from your contractor had not been available, would you have done anything differently on this project?
1. (Yes) [ASK H14]
 2. (No) [SKIP TO I1]
99. (DON'T KNOW) [SKIP TO I1]
88. (REFUSED) [SKIP TO I1]
- H14. What would you have done differently? [RECORD OPEN ENDED RESPONSE]

I. Spillover

[ASK EVERYONE SECTION I]

11. Since making these energy-efficiency upgrades has your company installed any other energy-efficient products in your facility that you did **NOT** receive a Focus on Energy incentive for? [IF NEEDED: By energy-efficient products, I mean appliances such as ENERGY STAR clothes washers; high efficiency water heaters, insulation or windows, or ENERGY STAR lighting such as LED lightbulbs.]
 1. (Yes) [ASK I2]
 2. (No) [SKIP TO SECTION J]
 99. (DON'T KNOW) [SKIP TO SECTION J]
 88. (REFUSED) [SKIP TO SECTION J]

12. What were the other energy-efficient products that you installed without getting an incentive? [DO NOT READ LIST; MARK ALL THAT APPLY; 99=DON'T KNOW, 88=REFUSED, -96=N/A] [If the customer says they bought something but have not installed it, the equipment has to be installed and operating for us to count it towards spillover.]
 1. (CFLs)
 2. (LEDs)
 3. (Fluorescent tubes (T5s, T8s, etc.))
 4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
 5. (High efficiency motors)
 6. (Air source heat pumps)
 7. (Ground source heat pumps)
 8. (Central AC)
 9. (VSD (variable speed drive))
 10. (Water heating equipment)
 11. (Boiler)
 12. (Compressed air equipment)
 13. (Gas furnaces)
 14. (Exit signs)
 15. (Refrigeration equipment (refrigerators, freezers))
 16. Operational improvements [SPECIFY: _____]
 17. (Other) [SPECIFY: _____]
 99. (DON'T KNOW) [SKIP TO SECTION J]
 88. (REFUSED) [SKIP TO SECTION J]

[ASK I2.11-I2.13 IF I2 = 1, 2, 3]

- I2.11 What is the wattage of the lighting? [SPECIFY]: _____
- I2.12 In what location was it installed (Wall/Ceiling/Outdoors)? [SPECIFY]: _____
- I2.13 What type of equipment was removed or replaced? [SPECIFY]: _____

[ASK I2.21-I2.23 IF I2 = 5]

- I2.21 What equipment was the motor installed on? [SPECIFY TYPE]: _____
- I2.22 What is the horsepower of the motor? [SPECIFY]: _____

[ASK I2.31-I2.33 IF I2 = 6, 7, 8]

- I2.31** What Fuel type is used? **[SPECIFY]:** _____
I2.32 What is the efficiency rating of the equipment? **[SPECIFY]:** _____
I2.33 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.41-I2.42 IF I2 = 9]

- I2.41** What type of motor was it installed on? **[SPECIFY TYPE]:** _____
I2.42 What is the horsepower of the motor? **[SPECIFY]:** _____

[ASK I2.51-I2.54 IF I2 = 10]

- I2.51** What type of water heating equipment was purchased and installed? **[SPECIFY TYPE]:** _____
I2.52 What Fuel type is used? **[SPECIFY]:** _____
I2.53 What is the efficiency rating of the equipment? **[SPECIFY]:** _____
I2.54 (If water heater with storage) What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.61-I2.62 IF I2 = 12]

- I2.61** What type of application was the compressed air equipment purchased and installed? **[SPECIFY APPLICATION]:** _____
I2.62 What is the horsepower of the compressor motor? **[SPECIFY]:** _____

[ASK I2.71-I2.72 IF I2 = 13]

- I2.71** What is the efficiency rating of the equipment? **[SPECIFY]:** _____
I2.72 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.81 IF I2 = 15]

- I2.81** What type of refrigeration equipment was purchased and installed? **[SPECIFY TYPE]:** _____

13. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** How many **[INSERT ITEM FROM I2]** did you install? **[RECORD NUMBER _____, 99 FOR DON'T KNOW, 88 FOR REFUSED, AND -96 FOR N/A]**

14. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** Please tell me how important **[IF ANY D1.1 = 1 READ, "assistance from your contractor and information and education from Focus on Energy" OTHERWISE READ, "the Multifamily Energy Savings Program"]** was in your decision to install **[ANSWER FROM I2]"** Was it...?: **[READ LIST EMPHASIZE EACH ANSWER OPTION AND PAUSE IN BETWEEN EACH OPTION.]**

1. Very important,
2. Somewhat important,
3. Not too important, or
4. Not at all important
99. (Don't know)

88. (Refused)

- I5. Was [INSERT EACH ITEM FROM I2] installed at [SITE ADDRESS]?
1. Yes
 2. No (ASK: What is the address of the location where you installed [INSERT EACH ITEM FROM I2]? [SPECIFY _____])
99. (Don't know)
88. (Refused)

J. Satisfaction and Application Ease

These last few questions are about your incentive application.

- J1. [ASK IF C3 = 1 OR C4 = 2] *Thinking about the application you submitted, how easy would you say this paperwork was to complete? Would you say: [READ LIST]
1. Very easy,
 2. Easy,
 3. Somewhat challenging, or
 4. Very challenging?
99. (Don't know)
88. (Refused)
- J2. [ASK IF J1 = 3 or 4] *Why do you say that? [OPEN END]
- J3. [ASK IF C2 = 1] *Thinking about the incentive check you received in the mail, about how long did it take to arrive? [READ LIST]
1. 1-3 weeks
 2. 4-6 weeks
 3. 7-8 weeks
 4. Over 8 weeks?
99. (Don't know)
88. (Refused)
- J4. [IF D1 = 2] Overall, how satisfied were you with the quality of communication between you and your Focus on Energy Energy Advisor? Would you say: [READ LIST]
1. Very satisfied,
 2. Somewhat satisfied,
 3. Not too satisfied, or
 4. Not satisfied at all?
99. (Don't know)
88. (Refused)
- J5. *What would you say are the main benefits your company has experienced as a result of the energy efficiency upgrades we've discussed? [DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]
1. (The incentive payment)

- 2. (Using less energy, reducing energy consumption or energy demand)
- 3. (Saving money on our utility bills; lower energy bills)
- 4. (Increased occupant comfort)
- 5. (Better aesthetics/better or brighter lighting)
- 6. (Saving money on maintenance costs)
- 7. (Other [SPECIFY: _____])
- 8. (NO BENEFITS)
- 99. (Don't know)
- 88. (Refused)

J6. *Is there anything that Focus on Energy could have done to improve your overall experience with the Multifamily Energy Savings Program? [DO NOT READ THE LIST, RECORD ALL THAT APPLY]

- 1. (Better/more communication [SPECIFY: Who would you like more communication from? _____])
- 2. (Quicker response time [SPECIFY: Who would you like a quicker response time from? ___])
- 3. (Larger selection of eligible equipment [ASK: What energy-efficient equipment should Focus on Energy offer incentives for? _____])
- 4. (Increasing the incentive amount)
- 5. (Simplify the application process)[ASK: In what way should it be simplified? _____?]
- 6. (Allow me to fill out the applications online)
- 7. (Simplify the website)[ASK: In what way? _____]
- 8. (Provide quicker approval on applications)
- 9. (Send incentive check out faster)
- 10. (Provide more face-time with my Energy Advisor (this may include more frequent visits))
- 11. (Other [SPECIFY: _____])
- 12. (No, nothing)
- 99. (Don't know)
- 88. (Refused)

K. Closing

K1. *Do you have any other comments about your experience with the Multifamily Energy Savings Program you would like to share?

[RECORD RESPONSE: _____; 99 FOR DON'T KNOW, 88 FOR REFUSED]

K2. *On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. May we share your responses with a program manager, who may contact you regarding your experience?

- 1. Yes
- 2. No
- 99. (Don't know)
- 88. (Refused)

Thank you. We appreciate your help with this survey. You may also be contacted for an on-site visit if you have not been contacted already. Have a nice day.

Wisconsin Focus on Energy Renewable Rewards Program CY 2016 GHSP Participant Survey

This survey is designed for customers who received an incentive for purchasing and installing a ground-source heat pump system through the Renewable Rewards Program.

Target Quota: 30

Survey Greeting and Instructions

Thank you for participating in Focus on Energy's Renewable Energy Program. Your feedback is very important to Focus on Energy, and will help improve energy-efficiency programs for customers like you. This survey should only take about 12 minutes. Your responses are confidential and will be used for research purposes only.

Click the arrow button at the bottom of each page to navigate through the survey.

Upon completing this survey you will be entered to win a \$100 Visa gift card.

A. Awareness and Motivation

- A1. What was your primary motivation for installing a ground-source heat pump?
1. (Financial savings/reducing energy bills)
 2. (Helping the environment)
 3. (Other [SPECIFY: _____])
- A2. *Where did you most recently hear about Focus on Energy's Renewable Energy Program? (Select all that apply)
1. (Television)
 2. (Radio)
 3. (Print media (magazine, newspaper article or advertisement))
 4. (Billboard/outdoor ad)
 5. (Bill insert)
 6. (Direct mail/brochure/postcard)
 7. (Family/friends/word-of-mouth)
 8. (Focus on Energy or Utility website)
 9. (Other website [SPECIFY: _____])
 10. (Email)
 11. (Social Media)
 12. (Focus on Energy or Utility representative)
 13. (Contractor)
 14. (Realtor, home builder)
 15. (Retail stores)
 16. (Home/trade shows)
 17. (Sporting or community event)

- 18. (Other [SPECIFY: _____])
- 99. (Don't know)

A3. *Are there any other ways you heard about the program?

- 1. No other ways
- 2. Bill insert
- 3. Direct mail/brochure/postcard
- 4. Family/friend/word-of-mouth
- 5. Focus on Energy or Utility website
- 6. Social media such as Twitter, Facebook, Instagram, etc.
- 7. Television
- 8. Radio
- 9. Print media, such as magazine, newspaper article or advertisement
- 10. Billboard/outdoor ad
- 11. Other [SPECIFY: _____]

A4. *What do you think is the best way for Focus on Energy to inform the public about energy-efficiency programs?

- 1. Television
- 2. Radio
- 3. Print media, such as magazine, newspaper article or advertisement
- 4. Billboard/outdoor ad
- 5. Bill insert
- 6. Direct mail/brochure/postcard
- 7. Family/friends/word-of-mouth
- 8. Focus on Energy or Utility website
- 9. Social media such as Twitter, Facebook, or Instagram
- 10. Contractor network
- 11. Other [SPECIFY: _____]
- 12. Do not want to receive this information

B. System Specifications

B1. What is your back-up heating fuel source?

- 1. Electric
- 2. Natural gas
- 3. Propane
- 4. Oil
- 5. Other [SPECIFY: _____]
- 99. (Don't know)

B2. Approximately, what percent of your living or other spaces (garage, barn, etc.) are heated and/or cooled with your ground-source heat pump? [SPECIFY]

B3. Does your ground-source heat pump system have integral auxiliary electric heat (strip heat)?

- 1. Yes
- 2. No

99. (Don't know)

B4. What is your back-up heating system type? (Select all that apply)

1. Furnace
2. Boiler
3. Electric baseboard
4. Fireplace
5. Air-source heat pump
6. Mini-split heat pump
7. Other [SPECIFY: _____]
99. (Don't know)

B5. What is the rated efficiency ratio (EER) of your ground-source heat pump in cooling mode?

1. Rated efficiency [Enter value: _____]
99. (Don't know)

B6. What is the installed COP (coefficient of performance) for your ground-source heat pump in heating mode?

1. Rated efficiency [Enter value: _____]
99. (Don't know)

C. Freeridership

We would like find out what your plans were for installing a ground-source heat pump **before** you found out about the Focus on Energy Renewable Energy Program.

C1. **Before** you heard anything about the Focus on Energy Renewable Energy Program, had you already purchased or installed your ground-source heat pump?

1. (Yes)
2. (No) [SKIP TO C3]
99. (Don't know) [SKIP TO C3]

C2. So just to be clear, you installed your ground-source heat pump before you heard anything about the Focus on Energy Renewable Energy Program. Is that correct?

1. (Yes, that's correct) [SKIP TO D1]
2. (No, that's not correct)
99. (Don't know)

C3. **Before** you heard about the program, had you already been **planning to install** a ground-source heat pump?

1. (Yes)
2. (No)
99. (Don't know)

C4. Would you have installed the *same* ground-source heat pump without the cash-back incentive from Focus on Energy?

1. (Yes)

- 2. (No)
- 99. (Don't know)

C5. Thinking about timing, without the Focus on Energy cash-back incentive, would you have installed the ground-source heat pump...

- 1. At the same time [SKIP TO C7]
- 2. Within the same year [SKIP TO C7]
- 3. One to two years out [SKIP TO C7]
- 4. More than two years out [SKIP TO C7]
- 5. Never
- 99. (Don't know) [SKIP TO C7]

C6. So just to confirm, you would not have installed a ground-source heat pump at all, without a Focus on Energy cash-back incentive. Is that correct?

- 1. (Yes) [SKIP TO D1]
- 2. (No)
- 99. (Don't know)

C7. Please tell me how important the Focus on cash-back incentive was in your decision to install your ground-source heat pump. Would you say it was ...

- 1. Very important
- 2. Somewhat important
- 3. Not too important
- 4. Not at all important
- 99. (Don't know)

D. Spillover

Now we would like to learn about any energy saving improvements you may have made since installing the ground-source heat pump and receiving a cash-back incentive from Focus on Energy.

D1. Since installing the ground-source heat pump and receiving a cash-back incentive from Focus on Energy, have you installed any other energy-efficient products in your home that you did NOT receive a cash-back incentive for? By energy-efficient products, we mean appliances such as ENERGY STAR clothes washers, high efficiency water heaters, insulation, windows, or ENERGY STAR lighting such as LED or CFL light bulbs.

- 1. (Yes)
- 2. (No) [SKIP TO D5]
- 99. (Don't know) [SKIP TO D5]

D2. What were the products that you installed without getting a cash-back incentive?

- 1. (Gas boiler)
- 2. (Gas furnace)
- 3. (Gas tank-less water heater)
- 4. (Gas storage water heater)
- 5. (Electric tank-less water heater)

6. (Electric storage water heater)
7. (Insulation; attic) [How many square feet? _____]
8. (Insulation; floor) [How many square feet? _____]
9. (Insulation; ceiling) [How many square feet? _____]
10. (Insulation; other [SPECIFY: _____]) [How many square feet? _____]
11. (Air sealing)
12. (ENERGY STAR clothes washer)
13. (ENERGY STAR dishwasher)
14. (Windows) [How many square feet? ____]
15. (Programmable thermostat)
16. (Efficient lighting; CFLs) [How many did you install?_____]
17. (Efficient lighting; LEDs) [How many did you install?_____]
18. (Efficient lighting; Fluorescent) [How many did you install?_____]
19. (Efficient lighting; Fixtures) [How many did you install?_____]
20. (Efficient lighting; other [SPECIFY: _____]) [How many did you install?_____]
21. (ENERGY STAR refrigerator)
22. (Heat pump water heater)
23. (Room AC) [How many did you install? _____]
24. (Central AC)
25. (Heat Pump; air source)
26. (Heat pump; ground source)
27. (Heat pump; other [SPECIFY: _____])
28. (Smart power strip)
29. (Other [SPECIFY: _____]) [How many did you install? _____]
99. (Don't know)

D3. Please tell me how important your experience with the Focus on Energy Renewable Energy Program was in your decision to install [INSERT EACH ONE SELECTED IN D2]. Was it very important, somewhat important, not too important, or not at all important in your decision to install these energy-efficient product(s)?

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (Don't know)

[ASK D4 FOR EACH ONE SELECTED IN D2 EXCEPT 12 (clothes washer), 13 (dishwasher), 14 (windows), 16-20 (Efficient lighting), 21 (refrigerator), 22 (heat pump water heater), 23 (room AC), OR 29 (other).]

D4. Why didn't you apply for and receive a cash-back incentive for [INSERT EACH ONE SELECTED IN D2]?

1. (Did not know cash-back incentive was available)
2. (Product did not qualify)
3. (Other [SPECIFY: _____])
99. (Don't know)

D5. Has your participation in the Focus on Energy Renewable Energy Program led you to install any additional renewable energy measures?

1. Solar PV system [How many kW installed?_____]
2. Small wind system [How many kW installed?_____]
3. Solar hot water system [How many collectors?_____]
4. Small hydroelectric system [How many kW installed?_____]
5. Other [SPECIFY:_____]
6. No new renewable energy systems installed
99. (Don't know)

D6. [ASK IF D5 = 1-5, OTHERWISE SKIP TO D7] Please tell me how important the Focus on Energy cash-back incentive for a ground-source heat pump was in your decision to [INSERT EACH ONE SELECTED IN D5]. Was it very important, somewhat important, not too important, or not at all important in your decision to take these action(s)?

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (Don't know)

D7. [ASK IF D5 = 6, OTHERWISE SKIP TO SECTION E] Do you intend to install any more renewable energy technology at your home? How likely are you to install each of the following technologies within the next 5 years? [This question will show up as a grid asking one column: Very likely, somewhat likely, not too likely, unlikely; and the second column: How many kW of nameplate capacity.]

1. Solar PV
2. Small wind
3. Solar hot water
4. Small hydroelectric
5. Other [SPECIFY:_____]
99. (Don't know)

E. Financing

These next questions are designed to provide us with an understanding of how you paid for your new ground-source heat pump.

E1. There are a variety of incentives available for ground-source heat pump owners. Other than the Focus on Energy Program incentive that you received, which of the following other incentives did you also receive? (Select all that apply)

1. Federal Investment Tax Credit
2. Renewable Energy Sales Tax Exemption
3. Residential Renewable Energy Tax Credit
4. Utility incentive (other than the Focus on Energy incentive)
5. Focus on Energy Renewable Loan
6. Other [SPECIFY:_____]
7. I did not receive any incentives beside the Renewable Energy cash-back reward
99. (Don't know)

- E2. Please explain how you paid for your portion of the ground-source heat pump costs. Did you pay for it with ...
1. Cash or debit [Please enter percent: _____]
 2. Home equity loan [Please enter percent: _____]
 3. Credit card [Please enter percent: _____]
 4. Another form of credit [Please enter percent: _____]
 5. (Other) [SPECIFY: _____]
 99. (Don't know)

F. System Operability

- F1. Since your ground-source heat pump was installed, have you had any unscheduled maintenance or downtime on your ground-source heat pump?
1. Yes
 2. No [SKIP to SECTION G]
 99. (Don't know)
- F2. [ASK IF F1 = 1, OTHERWISE SKIP TO SECTION G] Which system component, or components, have you had issues with? (Select all that apply)
1. Ground source heat exchanger [Please describe the issue: _____]
 2. Heat pump [Please describe the issue: _____]
 3. Air delivery system (ducts) [Please describe the issue: _____]
 4. Other [Please describe the issue: _____]
 99. (Don't know)
- F3. What would you estimate is the total amount of time your ground source heat pump was partially, or fully, inoperable since its installation? (Please input response in hours, days, or months)
1. [SPECIFY UNITS (HOURS, DAYS, MONTHS)]
 99. (Don't know)
- F4. Is your system currently operating?
1. Yes
 2. No
 99. (Don't know)

G. Demographics and Household Information

These last few questions are for statistical purposes only.

- G1. * What type of fuel does your water heater use?
1. (Natural gas)
 2. (Electricity)
 3. (Propane/Bottled gas)
 4. (Other [SPECIFY: _____])
 99. (Don't know)
- G2. *What type of home do you live in? Is it a:

1. Single-family home, detached house
2. Attached house (townhouse, row house, or duplex)
3. Multifamily apartment or condo building with 4 or more units
4. Mobile/manufactured home
5. Co-op/retirement community
6. Other [SPECIFY: _____]
99. (Don't know)

G3. * Do you or members of your household own this home or do you rent?

1. (Own/buying)
2. (Rent/lease)
3. (Occupied without payment of rent)
4. (Other [SPECIFY: _____])
99. (Don't know)

G4. * What is the highest level of school that you have completed?

1. (Less than ninth grade)
2. (Ninth to twelfth grade; no diploma)
3. (High school graduate; includes GED)
4. (Some college, no degree)
5. (Associates degree)
6. (Bachelor's degree)
7. (Graduate or professional degree)
99. (Don't know)
99. (Prefer not to answer)

G5. * Which of the following categories best represents your age?

1. 18-24
2. 25-34
3. 35-44
4. 45-54
5. 55-64
6. 65-74
7. 75 or older
99. (Don't know)
99. (Prefer not to answer)

G6. * Which category best describes your total household income in 2016 before taxes?

1. Less than \$20,000
2. \$20,000, up to \$50,000
3. \$50,000, up to \$75,000
4. \$75,000, up to \$100,000
5. \$100,000, up to \$150,000
6. \$150,000 up to \$200,000
7. \$200,000 or more
99. (Don't know)
99. (Prefer not to answer)

Closing

Those are all the questions we have. Focus on Energy appreciates your input. You will be added into the drawing for a \$100 Visa gift card. Thank you for your time!

Wisconsin Focus on Energy Renewable Rewards Program CY 2016 PV Participant Survey

This survey is designed for customers who received an incentive for purchasing and installing a solar PV system through the Renewable Rewards Program.

Target Quota: 60

Survey Greeting and Instructions

Thank you for participating in Focus on Energy's Renewable Energy Program. Your feedback is very important to Focus on Energy, and will help improve energy efficiency programs for customers like you. This survey should only take about 10 minutes. Your responses are confidential and will be used for research purposes only.

Click the arrow button at the bottom of each page to navigate through the survey.

Upon completing this survey you will be entered to win a \$100 Visa gift card.

A. Awareness and Motivation

- A1. What was your primary motivation for installing a solar PV system?
1. (Financial savings/reducing energy bills)
 2. (Helping the environment)
 3. (Other [SPECIFY: _____])
- A2. *Where did you most recently hear about Focus on Energy's Renewable Energy Program? (Select all that apply)
1. (Television)
 2. (Radio)
 3. (Print media (magazine, newspaper article or advertisement))
 4. (Billboard/outdoor ad)
 5. (Bill insert)
 6. (Direct mail/brochure/postcard)
 7. (Family/friends/word-of-mouth)
 8. (Focus on Energy or Utility website)
 9. (Other website [SPECIFY: _____])
 10. (Email)
 11. (Social Media)
 12. (Focus on Energy or Utility representative)
 13. (Contractor)
 14. (Realtor, home builder)
 15. (Retail stores)
 16. (Home/trade shows)
 17. (Sporting or community event)

- 18. (Other [SPECIFY: _____])
- 99. (Don't know)

A3. *Are there any other ways you heard about the program?

- 1. No other ways
- 2. Bill insert
- 3. Direct mail/brochure/postcard
- 4. Family/friend/word-of-mouth
- 5. Focus on Energy or Utility website
- 6. Social media such as Twitter, Facebook, Instagram, etc.
- 7. Television
- 8. Radio
- 9. Print media, such as magazine, newspaper article or advertisement
- 10. Billboard/outdoor ad
- 11. Other [SPECIFY: _____]

A4. *What do you think is the best way for Focus on Energy to inform the public about energy-efficiency programs?

- 1. Television
- 2. Radio
- 3. Print media, such as magazine, newspaper article or advertisement
- 4. Billboard/outdoor ad
- 5. Bill insert
- 6. Direct mail/brochure/postcard
- 7. Family/friends/word-of-mouth
- 8. Focus on Energy or Utility website
- 9. Social media such as Twitter, Facebook, or Instagram
- 10. Other [SPECIFY: _____]
- 11. Trade ally
- 12. Do not want to receive this information

B. Freeridership

We would like find out what your plans were for installing a PV system **before** you found out about the Focus on Energy Renewable Energy Program.

B1. **Before** you heard anything about the Focus on Energy Renewable Energy Program, had you already purchased or installed your PV system?

- 1. (Yes)
- 2. (No) [SKIP TO B3]
- 99. (Don't know) [SKIP TO B3]

B2. So just to be clear, you installed your PV system before you heard anything about the Focus on Energy Renewable Energy Program. Is that correct?

- 1. (Yes, that's correct) [SKIP TO C1]
- 2. (No, that's not correct)
- 99. (Don't know)

- B3. **Before** you heard about the program, had you already been **planning to install** a PV system?
1. (Yes)
 2. (No)
 99. (Don't know)
- B4. Would you have installed the same PV system without the cash-back incentive from Focus on Energy?
1. (Yes) **[SKIP TO B7]**
 2. (No)
 99. (Don't know)
- B5. What would you have done differently if the Focus on Energy Renewable Energy Program had not been available to you?
1. I would have installed a larger PV system
 2. I would have installed a smaller PV system
 3. I would not have installed a PV system at all **[SKIP TO B8]**
 99. (Don't know) **[SKIP TO B9]**
- B6. How much **[RESPONSE FROM B5: SMALLER/LARGER]** would your system have been, as a percentage? **[SPECIFY]**
- B7. And, thinking about timing, without the Focus on Energy cash-back incentive, would you have installed the PV system...
1. At the same time **[SKIP TO B9]**
 2. Within the same year **[SKIP TO B9]**
 3. One to two years out **[SKIP TO B9]**
 4. More than two years out **[SKIP TO B9]**
 5. Never
 99. (Don't know) **[SKIP TO B9]**
- B8. So just to confirm, you would not have installed a PV system at all, without a Focus on Energy cash-back incentive. Is that correct?
1. (Yes) **[SKIP TO C1]**
 2. (No)
 99. (Don't know)
- B9. Please tell me how important the Focus on Energy cash-back incentive was in your decision to install your PV system. Would you say it was ...
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not at all important
 99. (Don't know)

C. Spillover

Now we would like to learn about any energy saving improvements you may have made since installing the PV system and receiving a cash-back incentive from Focus on Energy.

- C1. Since installing the PV system and receiving a cash-back incentive from Focus on Energy, have you installed any other energy-efficient products in your home that you did NOT receive a cash-back incentive for? By energy-efficient products, we mean appliances such as ENERGY STAR clothes washers, high efficiency water heaters, insulation, windows, or ENERGY STAR lighting such as LED or CFL light bulbs.
1. (Yes)
 2. (No) **[SKIP TO C5]**
 99. (Don't know) **[SKIP TO C5]**
- C2. What were the products that you installed without getting a cash-back incentive?
1. (Gas boiler)
 2. (Gas furnace)
 3. (Gas tank-less water heater)
 4. (Gas storage water heater)
 5. (Electric tank-less water heater)
 6. (Electric storage water heater)
 7. (Insulation; attic) **[How many square feet? _____]**
 8. (Insulation; floor) **[How many square feet? _____]**
 9. (Insulation; ceiling) **[How many square feet? _____]**
 10. (Insulation; other **[SPECIFY: _____]**) **[How many square feet? _____]**
 11. (Air sealing)
 12. (ENERGY STAR clothes washer)
 13. (ENERGY STAR dishwasher)
 14. (Windows) **[How many square feet? ____]**
 15. (Programmable thermostat)
 16. (Efficient lighting; CFLs) **[How many did you install? _____]**
 17. (Efficient lighting; LEDs) **[How many did you install? _____]**
 18. (Efficient lighting; Fluorescent) **[How many did you install? _____]**
 19. (Efficient lighting; Fixtures) **[How many did you install? _____]**
 20. (Efficient lighting; other **[SPECIFY: _____]**) **[How many did you install? _____]**
 21. (ENERGY STAR refrigerator)
 22. (Heat pump water heater)
 23. (Room AC) **[How many did you install? _____]**
 24. (Central AC)
 25. (Heat Pump; air source)
 26. (Heat pump; ground source)
 27. (Heat pump; other **[SPECIFY: _____]**)
 28. (Smart power strip)
 29. (Other **[SPECIFY: _____]**) **[How many did you install? _____]**
 99. (Don't know)

- C3. Please tell me how important your experience with the Focus on Energy Renewable Energy Program was in your decision to install [INSERT EACH ONE SELECTED IN C2]. Was it very important, somewhat important, not too important, or not at all important in your decision to install these energy-efficient product(s)?
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not at all important
 99. (Don't know)

[ASK C4 FOR EACH ONE SELECTED IN C2 EXCEPT 12 (clothes washer), 13 (dishwasher), 14 (windows), 16-20 (Efficient lighting), 21 (refrigerator), 22 (heat pump water heater), 23 (room AC), OR 29 (other).]

- C4. Why didn't you apply for and receive a cash-back incentive for [INSERT EACH ONE SELECTED IN C2]?
1. (Did not know cash-back incentive was available)
 2. (Product did not qualify)
 3. (Other [SPECIFY: _____])
 99. (Don't know)

- C5. Has your participation in the Focus on Energy Renewable Energy Program led you to install any additional renewable energy measures?
1. Additional solar PV system [How many kW installed? ____]
 2. Small wind system [How many kW installed? ____]
 3. Solar hot water system [How many collectors? _____]
 4. Small hydroelectric system [How many kW installed? ____]
 5. Other [SPECIFY: _____]
 6. No new renewable energy systems installed
 99. (Don't know)

- C6. [ASK IF C5 = 1-5, OTHERWISE SKIP TO C7] Please tell me how important the Focus on Energy cash-back incentive for PV systems was in your decision to [INSERT EACH ONE SELECTED IN C5]. Was it very important, somewhat important, not too important, or not at all important in your decision to take these action(s)?
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not at all important
 99. (Don't know)

- C7. [ASK IF C5 = 6, OTHERWISE SKIP TO SECTION D] Do you intend to install any more renewable energy technology at your home? How likely are you to install each of the following technologies within the next 5 years? [This question will show up as a grid asking one column: Very likely, somewhat likely, not too likely, unlikely; and the second column: How many kW of nameplate capacity?]
1. Additional solar PV
 2. Small wind
 3. Solar hot water
 4. Small hydroelectric
 5. Other [SPECIFY: _____]

99. (Don't know)

D. Financing

These next questions are designed to provide us with an understanding of how you paid for your new PV system.

D1. There are a variety of incentives available for solar PV system owners. Other than the Focus on Energy Program incentive that you received, which of the following other incentives did you also receive? (Select all that apply)

1. Federal Investment Tax Credit
2. Renewable Energy Sales Tax Exemption
3. Residential Renewable Energy Tax Credit
4. Utility incentive (other than the Focus on Energy incentive)
5. Focus on Energy Renewable Loan
6. Other [SPECIFY: _____]
7. I did not receive any incentives beside the Renewable Energy cash-back incentive
99. (Don't know)

D2. Please explain how you paid for your portion of the PV system costs. Did you pay for it with ...

1. Cash or debit [Please enter percent: _____]
2. Home equity loan [Please enter percent: _____]
3. Credit card [Please enter percent: _____]
4. Another form of credit [Please enter percent: _____]
5. (Other) [SPECIFY: _____]
99. (Don't know)

E. System Operability

E1. Since your PV system was installed, have you had any unscheduled maintenance or downtime on your PV system?

1. Yes
2. No [SKIP to F1]
99. (Don't know)

E2. [ASK IF E1 = 1, OTHERWISE SKIP TO SECTION F] Which system component, or components, have you had issues with? (Select all that apply)

1. PV modules [Please describe the issue: _____]
2. Racking [Please describe the issue: _____]
3. Roof penetrations/mounting (including leaks, if applicable) [Please describe the issue: _____]
4. Array wiring [Please describe the issue: _____]
5. Disconnects or combiners [Please describe the issue: _____]
6. Microinverter [Please describe the issue: _____]
7. DC optimizer [Please describe the issue: _____]
8. String inverter [Please describe the issue: _____]
9. Monitoring system [Please describe the issue: _____]
10. Other [Please describe the issue: _____]

99. (Don't know)

E3. What would you estimate is the total amount of time your system was partially, or fully, inoperable since its installation? (Please input response in hours, days, or months)

1. [SPECIFY UNITS (HOURS, DAYS, MONTHS)]

99. (Don't know)

E4. Is the system currently inoperable?

1. Yes

2. No

99. (Don't know)

F. Demographics and Household Information

These last few questions are for statistical purposes only.

F1. *What type of fuel do you use to heat your home?

1. (Natural gas)

2. (Electricity)

3. (Propane/Bottled gas)

4. (Wood)

5. (Other [SPECIFY: _____])

99. (Don't know)

F2. *What type of fuel does your water heater use?

1. (Natural gas)

2. (Electricity)

3. (Propane/Bottled gas)

4. (Other [SPECIFY: _____])

99. (Don't know)

F3. *What type of home do you live in? Is it a:

1. Single-family home, detached house

2. Attached house (townhouse, row house, or duplex)

3. Multifamily apartment or condo building with 4 or more units

4. Mobile/manufactured home

5. Co-op/retirement community

6. Other [SPECIFY: _____]

99. (Don't know)

F4. * Do you or members of your household own this home or do you rent?

1. (Own/buying)

2. (Rent/lease)

3. (Occupied without payment of rent)

4. (Other [SPECIFY: _____])

99. (Don't know)

- F5. * What is the highest level of school that you have completed?
1. (Less than ninth grade)
 2. (Ninth to twelfth grade; no diploma)
 3. (High school graduate; includes GED)
 4. (Some college, no degree)
 5. (Associates degree)
 6. (Bachelor's degree)
 7. (Graduate or professional degree)
 99. (Don't know)
 88. (Prefer not to answer)
- F6. * Which of the following categories best represents your age?
1. 18-24
 2. 25-34
 3. 35-44
 4. 45-54
 5. 55-64
 6. 65-74
 7. 75 or older
 99. (Don't know)
 88. (Prefer not to answer)
- F7. * Which category best describes your total household income in 2016 before taxes?
1. Less than \$20,000
 2. \$20,000, up to \$50,000
 3. \$50,000, up to \$75,000
 4. \$75,000, up to \$100,000
 5. \$100,000, up to \$150,000
 6. \$150,000 up to \$200,000
 7. \$200,000 or more
 99. (Don't know)
 88. (Prefer not to answer)

Closing

Those are all the questions we have. Focus on Energy appreciates your input. You will be added into the drawing for a \$100 Visa gift card. Thank you for your time!

Retailer Lighting and Appliance Program Storefront Manager Survey

Retailer Address: _____

Survey Date: _____

Store Number: _____

Interviewer Initials: _____

Contact Name: _____

Contact Phone Number: _____

Retailer

1. Menards
2. Home Depot...

Will want to have the following information for the interviewer:

- ➔ Retailer Name
- ➔ Store Number
- ➔ Street
- ➔ City
- ➔ Lighting Manager (ideally program designated contact)
- ➔ Telephone
- ➔ # of LED bulbs sold through program

Introduction

[TO RESPONDENT] Hello, my name is [INSERT FIRST NAME] and I am calling from [Survey Firm/Cadmus/Apex] on behalf of Wisconsin Focus on Energy. May I please speak with [INSERT CONTACT IF PROVIDED] OR [THE STORE MANAGER OR ELECTRICAL DEPARTMENT MANAGER] OR [SOMEONE WHO IS FAMILIAR WITH THE FOCUS ON ENERGY RESIDENTIAL LIGHTING PROGRAM THAT RANS AT THIS STORE. CAN YOU DIRECT ME TO SOMEONE ELSE WHO IS KNOWLEDGABLE ABOUT THAT PROGRAM? REINTRODUCE, THEN CONTINUE]

[IF CONTACT IS AVAILABLE, CONTINUE; IF UNAVAILABLE TRY TO RESCHEDULE, IF CONTACT CONTINUES TO BE UNAVAILABLE SAY "I AM HOPING TO SPEAK WITH SOMEONE WHO IS FAMILIAR WITH THE FOCUS ON ENERGY RESIDENTIAL LIGHTING PROGRAM. CAN YOU DIRECT ME TO SOMEONE ELSE WHO IS KNOWLEDGABLE ABOUT THAT PROGRAM? REINTRODUCE, THEN CONTINUE]

We are currently evaluating the 2016 FOCUS ON ENERGY residential lighting program and I have a few questions I'd like to ask you about your experience with the program and the lighting products you carry. The FOCUS ON ENERGY program has been approved by and received ongoing support from your corporate office. Your responses will remain confidential and will help us determine the effectiveness of the program to assist with future planning for the program and ongoing rebate opportunities for your store to continue to incentivize energy efficient lighting products. This survey should take only 10 minutes.

[RESPONSES TO RETAILER QUESTIONS – MAY BE USED IF NECESSARY]

(WHO?: Focus on Energy residential lighting program provided discounts on CFL and LED bulbs sold through your store.)

(IF REFERRED TO CORPORATE: We already have calls planned to your corporate office, however, we also are looking for the experiences at the store level.)

(TIMING: This survey should take 10 minutes of your time. Is this a good time for us to speak with you? **[IF NOT, SET UP CALL BACK APPOINTMENT])**

(WHO ARE YOU WITH: I'm with Cadmus/Apex, independent research firm that has been hired by FOCUS ON ENERGY to evaluate the residential lighting program. The FOCUS ON ENERGY program has been approved by and received ongoing support from your corporate office.)

(SALES CONCERN: I am not selling anything; we would simply like to learn about your experience with the FOCUS ON ENERGY residential lighting program. Your individual responses and your company-specific information will remain confidential. If you would like to talk with someone from FOCUS ON ENERGY about this study, feel free to call Joe Fontaine from the Public Service Commission at (608) 266-0910.

(WHY ARE YOU CONDUCTING THIS STUDY: Studies like this help FOCUS ON ENERGY better understand customers' needs and interest in energy efficiency programs and services. Sharing your opinions and experiences will help us as we consider modifications and improvements to the program going forward.)

A1) This will take about 10 minutes; is now a good time to talk?

1. Yes
2. No **[ARRANGE CALLBACK]**

[IF INITIAL CONTACT WAS NOT REACHED, ASK A2)]

A2) [IF NAME &/OR TITLE NOT PROVIDED IN CONTACT LIST] Could you tell me, what is your name and role or title at this store? **[OPEN END]** [NAME] [TITLE]

A3) Are you familiar with the FOCUS ON ENERGY residential lighting program?

1. Yes
2. No **[SAY: "Can you provide me with a contact name and phone number for a person at your store who might be more familiar with FOCUS ON ENERGY residential lighting program?" [IF NO, THANK AND TERMINATE, IF YES - EITHER HANG UP AND RESTART, OR CONTINUE WITH SURVEY IF TRANSFERRED]**

Program Benefits and Satisfaction

Please note that I will refer to the 2016 residential lighting program as the "Program".

B1) In general, what benefits, if any, did you see from participating in the program? [IF NEEDED: The program provided point of purchase marketing materials and bought down the price of CFLs by between \$1 to \$2 and between \$2 and \$6 for LEDs] **[DO NOT READ; SELECT ALL THAT APPLY]**

1. Drives more customers to the store
2. Encourages customers to purchase additional products
3. Raises consumer awareness of energy efficient products
4. Raises employee awareness of energy efficient products

5. We stock more energy efficient products
6. Increases sales
7. Other [Specify]
8. I don't see any benefit to participation
98. **[DO NOT READ]** DON'T KNOW
99. **[DO NOT READ]** REFUSED

B2) What advertising, materials or promotions did Focus on Energy use in your store to promote the CFL and LED bulbs discounted through the program? **[DO NOT READ; SELECT ALL THAT APPLY]**

1. Shelf talkers
2. Flyers
3. End cap displays/placements
4. Aisle displays
5. Header cards
6. Direct mailer
7. Store/Digital flyer
8. Aisle violators
9. Product stickers
10. Social media
11. Store demonstrations
12. Other [Specify]
13. None [Focus on Energy did not advertise or promote the discounted bulbs]
98. **[DO NOT READ]** DON'T KNOW
99. **[DO NOT READ]** REFUSED

B3) [IF B2=B2]13 (none)] Why did Focus on Energy not promote the discounted bulbs in your store? **[OPEN END]**

B4) Which of these promotions do you believe was the most effective? **[RECORD # ABOVE]**

B5) Why is that? **[OPEN END]**

B6) Thinking about lighting promotions that did not involve Focus on Energy, what types of advertising or materials have been effective? **[DO NOT READ; ACCEPT MULTIPLE]**

1. Shelf talkers
2. Flyers
3. End cap displays/placements
4. Aisle displays
5. Header cards
6. Direct mailer
7. Store/Digital flyer
8. Aisle violators
9. Product stickers
10. Social media
11. Staff Training/Incentives
12. Other [Specify]
13. None
98. **[DO NOT READ]** DON'T KNOW
99. **[DO NOT READ]** REFUSED

- B7) Are there any changes you would recommend to improve the Focus on Energy residential lighting program?
1. Yes [RECORD]
 2. No
98. DON'T KNOW
99. REFUSED
- B8) On a scale of 0 to 10, where 0 is "not at all satisfied" and 10 is "extremely satisfied," how would you rate your overall satisfaction with the residential lighting program over the last six months?
1. [RECORD 0-10] _____
98. DON'T KNOW
99. REFUSED
- B9) Why do you give the program that rating?
- B10) On a scale of 0 to 10, where 0 is "not at all satisfied" and 10 is "extremely satisfied," how would you rate your overall satisfaction in working with Focus on Energy representatives?
1. [RECORD 0-10] _____
98. DON'T KNOW
99. REFUSED
- B11) Why do you say that?
- B12) On a scale of 0 to 10, where 0 is "not at all effective" and 10 is "extremely effective," how would you rate the effectiveness of the FOCUS ON ENERGY lighting program point of purchase materials, marketing and promotional efforts in driving efficient lighting sales?
1. [RECORD 0-10] _____
98. DON'T KNOW
99. REFUSED
- B13) Why do you say that?

Lighting Sales

Next, let's talk a bit about stocking practice. Please note that when I refer to LEDs I mean LEDs used to replace regular screw-based light bulbs and not LED tubes, nightlights, flashlights, or other specialty lighting applications. Now I'm going to ask you some questions on the possible effects of the FOCUS ON ENERGY lighting program on your sales of standard LED lighting products so far this year.

- C1) Including the FOCUS ON ENERGY incentivized LED & CFL bulbs, which of the following types of light bulbs has your store stocked in 2016? **[READ LIST; SELECT ALL THAT APPLY]**
1. Standard compact fluorescent light bulbs, or CFLs [IF NEEDED: By standard CFLs I mean bulbs that have spiral shapes and do not have any special features such as dimmability or three-way capability.]

- 2. Specialty CFLs, such as dimmable, 3-way, a-lamps, floodlights, or reflector CFLs.
- 3. ENERGY STAR LED bulbs
- 4. Non-ENERGY STAR LED bulbs
- 5. Incandescent and/or Halogen bulbs
- 6. NONE [Our store does not stock lightbulbs outside of the bulb incentivized through the FOCUS ON ENERGY lighting program]
- 98. **[DO NOT READ] DON'T KNOW**
- 99. **[DO NOT READ] REFUSED**

C2) Prior to participating in the program, did your store stock LED bulbs?

- 1. Yes
- 2. No
- 98. DON'T KNOW
- 99. REFUSED

C3) Our records indicate that from January through May, 2016,, the Focus on Energy program processed incentives for approximately **[INSERT QUANTITY]** LEDs from your store. Roughly what percent of the total LEDs that your store sold during this time period were discounted by FOCUS ON ENERGY through the program? **IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW** [CLARIFICATION IF NEEDED: WE ARE LOOKING FOR THE % OF ALL LEDS YOU SELL THAT WERE INCENTED THROUGH THE FOCUS ON ENERGY LIGHTING PROGRAM, FOR EXAMPLE, IF YOU ONLY SOLD LEDS THROUGH THE FOCUS ON ENERGY PROGRAM, YOUR ANSWER WOULD BE 100%. IF HALF OF THE LEDS YOU SOLD WERE INCENTED THROUGH THE PROGRAM, YOUR ANSWER WOULD BE 50%]

- i) % sold through FOCUS ON ENERGY
- 98. **[DO NOT READ] DON'T KNOW [SKIP TO S1]**
- 99. **[DO NOT READ] REFUSED [SKIP TO E1]**

C3A) According to this estimate, your store sold approximately [PROGRAM QTY/C3]] total LEDs in the first half of 2016. Does this sound correct?

- i) Yes
- ii) No, What is the right number_____
- 98. **[DO NOT READ] DON'T KNOW/REFUSED [SKIP TO S1]**

IF C3A=1 THEN TOTAL_LED= **PROGRAM QTY/C3]**
 IF C3A=2 THEN TOTAL_LED= C3A (ii)

C4) [FOR REFERENCE, BELOW IS THE TOTAL LEDs SOLD BOTH THROUGH THE PROGRAM AND OUTSIDE OF THE PROGRAM]

a. [QUANTITYFROM SPECTRUM]

[IF QUANTITY WAS CORRECTED IN LAST QUESTION, THERE WILL BE A NUMBER LISTED BELOW. USE THIS ONE INSTEAD]

C3.a (II)

If the program incentives of between approximately \$2 and \$6 per LED bulb were not available during this time period, do you think your store would have sold about the same, lower, or higher than [TOTAL_LED] total LEDs sold in your store? [IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]

1. Same
2. Lower
3. Higher
98. DON'T KNOW/REFUSED [SKIP TO S1]]

C5) [Ask IF C4) = same lower or higher] Why do you think sales of LEDs would have been [SAME/LOWER/HIGHER]? [CHECK TO MAKE SURE THAT THE EXPLANATION MATCHES THE RESPONSE TO C4)]

1. [RECORD]
98. DON'T KNOW
99. REFUSED

C6) [ASK IF C4)= 2 OR 3] By what percent would your total sales [CLARIFY TOTAL WE MEAN PROGRAM AND NON-PROGRAM] of LEDs have been [LOWER/HIGHER] without the program? [IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]

1. [RECORD]
98. DON'T KNOW [SKIP TO S1]]
99. REFUSED [SKIP TO E1]]

C7) [ASK IF C4)= 2] I want to make sure I understand you correctly when you say your store's sales of LEDs would be [%FROM QUESTION C6)] lower without the program incentives. So you're saying that if you sold 100 LEDs in a given month with the program discounts, you would have sold [100 - (%FROM QUESTION C6) * 100]] that month without the program discounts, which reduced the retail prices of the LED bulbs. Does that sound about right? [IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]

- a. Yes
- b. No [CORRECTED PERCENTAGE OR CLARIFY RESPONSE]
98. [DO NOT READ] DON'T KNOW
99. [DO NOT READ] REFUSED

C8) [ASK IF C4)= 1] I want to make sure I understand you correctly when you say your store's sales of LEDs would be *the same* without the program incentives. So you're saying that if you sold 100 LEDs in a given month with the program discounts, you would have still sold 100 LEDs *that* month without the program discounts, and the reduced retail prices did not drive any incremental sales for your store. Does that sound about right? [IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]

- a. Yes
- b. No [DETERMINE PERCENTAGE HIGHER OR LOWER, OR CLARIFY RESPONSE]
98. [DO NOT READ] DON'T KNOW
99. [DO NOT READ] REFUSED

C9) [ASK IF C4)= 3] I want to make sure I understand you correctly when you say your store's sales of LEDs would be [%FROM QUESTION C6)] higher without the program discounts. So you're saying that if you sold 100 LEDs in a given month with the program discounts, you would have sold [100 +

(%FROM QUESTION C6) * 100)] that month without the program discounts. Does that sound about right? **[IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]**

- a. Yes
- b. No [CORRECTED PERCENTAGE OR CLARIFY RESPONSE]
- 98. **[DO NOT READ]** DON'T KNOW
- 99. **[DO NOT READ]** REFUSED

Future of Lighting

S1) In 2016 the FOCUS ON ENERGY lighting program underwent a change in the implementation firm managing the program. Are you aware of that transition?

- 1. Yes
- 2. No
- 98. DON'T KNOW
- 99. REFUSED

S2) [IF S1) = 1] Have you experienced any issues or concerns with this transition? [PROBE: Did the transition interrupt 2016 sales or inventory in any way?]

- 1. Yes [RECORD]
- 2. No
- 98. DON'T KNOW
- 99. REFUSED

S3) [FOR EACH BULB TYPE MENTIONED IN C1), ASK] We understand that the lighting market is changing rapidly, how much longer do you expect to offer [INSERT BULB TYPE] at your store? [DON'T READ RESPONSES]

a. Standard CFLs

- 1. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
- 2. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
- 3. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
- 4. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
- 5. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
- 6. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
- 7. Other : [SPECIFY]
- 8. DON'T KNOW
- 9. REFUSED

b. Specialty CFLs

- 1. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
- 2. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
- 3. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
- 4. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
- 5. Through 2020, I expect we will cease stocking these bulbs at the end of 2020

6. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
7. Other : [SPECIFY]
8. DON'T KNOW
9. REFUSED

c. ENERGY STAR LEDs

1. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
2. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
3. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
4. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
5. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
6. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
7. Other : [SPECIFY]
8. DON'T KNOW
9. REFUSED

d. Non- ENERGY STAR LEDs

1. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
2. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
3. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
4. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
5. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
6. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
7. Other : [SPECIFY]
8. DON'T KNOW
9. REFUSED

e. Incandescent and/or Halogen Bulbs

1. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
2. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
3. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
4. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
5. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
6. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
7. Other : [SPECIFY]
8. DON'T KNOW
9. REFUSED

S4) Do you know if there are any changes planned for your lighting product inventory or promotions for the remainder of 2016?

- 1. YES [RECORD]_____
- 2. NO – THESE PLANS ARE MADE BY CORPORATE
- 98. NO - OTHER
- 99. REFUSED

S5) What, if any, [other] changes have occurred to the stocking and selling of efficient lighting so far in your store in 2016?

- 1. [RECORD]_____
- 98. DON'T KNOW
- 99. REFUSED

S6) Have you noticed any trends to customer purchasing behavior [for lighting products] over the past year?

- 1. [RECORD]_____
- 98. DON'T KNOW
- 99. REFUSED

S7) [ASK IF PROVIDED RESPONSE TO S6)] Please tell me the key factors that you attribute these changes to?

- 1. [RECORD]_____
- 98. DON'T KNOW
- 99. REFUSED

S8) What do you believe are the primary barriers to consumer adoption of LED lighting? [SELECT ALL THAT APPLY]

- 1. Cost
- 2. Lack of awareness
- 3. Product quality
- 4. Light quality
- 5. Other [Specify_____]
- 98. DON'T KNOW
- 99. REFUSED

S9) What is the most effective means of overcoming these barriers and to increase LED sales?

- 1. [RECORD]_____
- 98. DON'T KNOW
- 99. REFUSED

Conclusion

E1) Do you have any final comments or recommendations ofr the program?

- 1. Yes [RECORD]
- 2. No
- 98. DON'T KNOW
- 99. REFUSED

Retailer Lighting and Appliance Program Corporate Retailer and Manufacturer Interview Guide

Representing: _____

Interview Date: _____

Contact Name: _____

Interviewer Initials: _____

Contact Phone Number: _____

For interviewer: Through the Residential Lighting Program in 2016, Focus on Energy partnered with retailers throughout Wisconsin to mark down the cost of CFLs and LED bulbs to offer instant discounts to residential customers on qualified products in participating stores. Please note that, as of March, 2016, the Program no longer offers incentives for CFLs, only LEDs. The Program also provides a wide range of retail support activities such as training, promotional events, and display materials.

Introduction

[TO RESPONDENT] Hello, my name is **[INSERT FIRST NAME]** and I am calling from **[RESEARCH FIRM]** on behalf of Wisconsin Focus on Energy. May I please speak with **[INSERT CONTACT]**

[IF CONTACT IS AVAILABLE, CONTINUE; IF UNAVAILABLE TRY TO RESCHEDULE, IF CONTACT CONTINUES TO BE UNAVAILABLE SAY "I AM HOPING TO SPEAK WITH SOMEONE WHO IS FAMILIAR WITH THE FOCUS ON ENERGY UPSTREAM LIGHTING PROGRAM. CAN YOU DIRECT ME TO SOMEONE ELSE WHO IS KNOWLEDGABLE ABOUT THAT PROGRAM? REINTRODUCE, THEN CONTINUE]

We are currently evaluating the Focus on Energy Upstream Lighting program and I have a few questions I'd like to ask you about your experience with the program. Your individual responses will remain confidential and this interview should take about 30 minutes. Your feedback will help us determine the effectiveness of the program and assist with future planning for the program and ongoing rebate opportunities to allow retailers to continue to incentivize energy efficient lighting products.

[RESPONSES TO CONCERNS – MAY BE USED IF NECESSARY]

(WHO?: Focus on Energy is the name for the Wisconsin statewide energy efficiency program established and overseen by the State of Wisconsin. They provided discounts on CFL and LED bulbs sold through retailers like yours)

(TIMING: This interview should take 30 minutes of your time. Your insight on this program is very important as we continue to evaluate and refine this new program structure. Is this a good time for us to speak with you? **[IF NOT, SET UP CALL BACK APPOINTMENT])**

(WHO ARE YOU WITH: I'm with **[RESEARCH FIRM]**, independent research firm that has been hired by Focus on Energy to evaluate the FOCUS ON ENERGY Upstream Lighting program.)

(SALES CONCERN: I am not selling anything; we would simply like to learn about your experience with the FOCUS ON ENERGY Upstream Lighting program. Your individual responses and your company-specific information will remain confidential. If you would like to talk with someone from FOCUS ON ENERGY about this study, feel free to call Joe Fontaine from the Wisconsin Public Service Commission at (608) 266-0910.

(WHY ARE YOU CONDUCTING THIS STUDY: Studies like this help FOCUS ON ENERGY better understand customers' need and interest in energy programs and services. Sharing your opinions and experiences will help us as we consider modifications and improvements to the program going forward.)

A1) Do you have a few minutes to talk?

1. Yes
2. No **[ARRANGE CALLBACK]**

[IF INITIAL CONTACT WAS NOT REACHED, ASK A2)

A2) Are you familiar with the FOCUS ON ENERGY Upstream Lighting program where FOCUS ON ENERGY provided incentives to discount CFL and LED bulbs sold through **[RETAILER]** in 2016?

1. Yes
2. No **[SAY: "Can you provide me with a contact name and phone number for a person at your store who might be more familiar with this FOCUS ON ENERGY lighting promotion?" [IF NO, THANK AND TERMINATE, IF YES - EITHER HANG UP AND RESTART, OR CONTINUE WITH INTERVIEW IF TRANSFERRED]**

Program Benefits and Satisfaction

- B1) In general, what benefits to your corporation, if any, do you see from participating in the FOCUS ON ENERGY Upstream Lighting program? The FOCUS ON ENERGY Upstream Lighting program bought down the price of CFLs by between \$1 and \$2 per bulb and between \$2 and \$6 per LED bulb during the 2016 program year. **[DO NOT READ; SELECT ALL THAT APPLY; RECORD OPEN ENDS]**
- a. Drives more customers to the store
 - b. Encourages customers to purchase additional products
 - c. Increases consumer awareness of energy efficient products
 - d. Increases store employee awareness of energy efficient products
 - e. We stock more energy efficient products
 - f. Increases sales
 - g. Other **[Specify]**
 - h. I don't see any benefit to participation
98. **[DO NOT READ] DON'T KNOW**
99. **[DO NOT READ] REFUSED**
- B2) What advertising, materials or promotions did Focus on Energy use in your store to promote the LED and CFL bulbs discounted through the FOCUS ON ENERGY Upstream Lighting program? **[DO NOT READ; SELECT ALL THAT APPLY; RECORD OPEN ENDS]**
- a. Shelf Talkers
 - b. Direct Mailer
 - c. In-Store and Digital Flyers
 - d. End Cap Displays/Placements
 - e. Aisle Displays
 - f. Aisle Violators
 - g. Product Stickers

- h. Social Media
- i. Header Cards
- j. Other [Specify]
- k. None [We did not advertise or promote the discounted bulb]
- 98. **[DO NOT READ]** DON'T KNOW
- 99. **[DO NOT READ]** REFUSED

- B3) **[IF B2)=B2)k (none)]** Why did your company not promote the discounted bulbs? **[OPEN END]**
- B4) Which of these promotions do you believe is the most effective? **[RECORD # ABOVE]**
- B5) Are there any changes you would recommend to improve the current FOCUS ON ENERGY Upstream Lighting program?
 - 1. Yes **[RECORD]**
 - 2. No
 - 98. DON'T KNOW
 - 99. REFUSED

- B6) On a scale of 0 to 10, where 0 is "not at all satisfied" and 10 is "extremely satisfied," how would you rate your overall satisfaction with the FOCUS ON ENERGY upstream lighting program?
 - 1. **[RECORD 0-10]** _____
 - 98. DON'T KNOW
 - 99. REFUSED

- B7) Why did you give the program that rating?
- B8) On a scale of 0 to 10, where 0 is "not at all satisfied" and 10 is "extremely satisfied," how would you rate your overall satisfaction in working with Focus on Energy representatives?
 - 1. **[RECORD 0-10]** _____
 - 98. DON'T KNOW
 - 99. REFUSED

- B9) Why do you say that?
- B10) On a scale of 0 to 10, where 0 is "not at all effective" and 10 is "extremely effective," how would you rate the effectiveness of the FOCUS ON ENERGY lighting program marketing and promotional efforts in driving 2016 efficient lighting sales?
 - 1. **[RECORD 0-10]** _____
 - 98. DON'T KNOW
 - 99. REFUSED

- B11) Why do you say that?

Lighting Sales

C1) Please note in the next section that when I refer to LEDs I mean LEDs used to replace regular screw-based light bulbs and not LED tubes, nightlights, flashlights, or other specialty lighting applications. Now I'm going to ask you some questions on the possible effects of the FOCUS ON ENERGY lighting program on your sales of standard LED lighting products. Excluding the FOCUS ON ENERGY incentivized LED & CFL bulbs, which of the following types of light bulbs does your company stock in 2016 in Wisconsin? **[READ LIST; MAY HAVE MULTIPLE RESPONSES]**

1. Standard compact fluorescent light bulbs, or CFLs that were not incented by Focus on Energy. [IF NEEDED: By standard CFLs I mean bulbs that have spiral shapes and do not have any special features such as dimmability or three-way capability.]
2. Specialty CFLs, such as dimmable, 3-way, a-lamps, floodlights, or reflector CFLs.
3. ENERGY STAR LED bulbs
4. Non-ENERGY STAR LED bulbs
5. Incandescent and/or Halogen bulbs
6. NONE [Our store does not stock lightbulbs outside of the bulb incentivized through the FOCUS ON ENERGY lighting program]
98. **[DO NOT READ] DON'T KNOW**
99. **[DO NOT READ] REFUSED**

C2) Prior to your participation in the FOCUS ON ENERGY upstream lighting program did your company stock LED bulbs for Wisconsin?

1. Yes
2. No
98. DON'T KNOW
99. REFUSED

C3) Our records indicate that during the first six months of 2016 (January through June), your company sold **[INSERT PROGRAM QTY]** LEDs that were incentivized through the FOCUS ON ENERGY upstream lighting program. Roughly what percent of the total LEDs that your company sold during that same period in Wisconsin were discounted by FOCUS ON ENERGY through the upstream lighting program? [CLARIFICATION IF NEEDED: WE ARE LOOKING FOR THE % OF ALL LEDS YOU SELL IN WISCONSIN THAT WERE INCENTED THROUGH THE FOCUS ON ENERGY LIGHTING PROGRAM, FOR EXAMPLE, IF YOU ONLY SOLD LEDS IN WISCONSIN THROUGH THE FOCUS ON ENERGY LIGHTING PROGRAM IN THIS TIME PERIOD, YOUR ANSWER WOULD BE 100%. IF HALF OF THE LEDS YOU SOLD IN WISCONSIN ARE INCENTED THROUGH THE PROGRAM, YOUR ANSWER WOULD BE 50%] **IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]**

1. % sold
98. **[DO NOT READ] DON'T KNOW** **[SKIP TO E1]**
99. **[DO NOT READ] REFUSED** **[SKIP TO S1]**

C4) According to this estimate, your company sold approximately **[PROGRAM QTY/C3]** total LEDs in in the first six months of 2016 in Wisconsin. Does this sound correct?

1. Yes
2. No **[Then what is the total number of LEDs your company sold the first half of 2016 in Wisconsin? Record: _____]**

- 98. DON'T KNOW [SKIP TO E1]
- 99. REFUSED [SKIP TO S1]

IF C4)=1 THEN TOTAL_LED= PROGRAM QTY/C3)]
 IF C4)=2 THEN TOTAL_LED= C4) (2)

C5) If the FOCUS ON ENERGY Upstream Lighting program incentives of between approximately \$2 and \$6 per LED bulb were not available during the first six months of 2016, do you think your company would have sold about the same, lower, or higher than [TOTAL_LED] LEDs in Wisconsin?
[IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]

- 1. Same
- 2. Lower
- 3. Higher
- 98. DON'T KNOW [SKIP TO S1]
- 99. REFUSED [SKIP TO S1]

C6) Why do you think sales of LEDs would have been [SAME/LOWER/HIGHER] in Wisconsin? **[CHECK TO MAKE SURE THAT THE EXPLANATION MATCHES THE RESPONSE TO C5)**

- 1. [RECORD]
- 98. DON'T KNOW
- 99. REFUSED

C7) **[ASK IF C5)= 2 OR 3]** By what percent would your sales of LEDs in Wisconsin have been [LOWER/HIGHER] without the FOCUS ON ENERGY Upstream Lighting program? **[IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]**

- 1. [RECORD]
- 98. DON'T KNOW [SKIP TO S1]
- 99. REFUSED [SKIP TO E1]

C8) **[ASK IF C5)= 2]** I want to make sure I understand you correctly when you say your company's sales of LEDs in Wisconsin would be [%FROM QUESTION C7)] lower without the FOCUS ON ENERGY Upstream Lighting program discounts. So you're saying that if you sold 100 LEDs in a given month with the program discounts, you would have sold [100 - (%FROM QUESTION C7) * 100] that month in Wisconsin without the program discounts. Does that sound about right? **[IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]**

- 1. Yes
- 2. No [CLARIFY RESPONSE]
- 98. [DO NOT READ] DON'T KNOW
- 99. [DO NOT READ] REFUSED

C9) **[ASK IF C5)= 1]** I want to make sure I understand you correctly when you say your company's sales of LEDs would be *the same* without the program discounts. So you're saying that if you sold 100 LEDs in a given month with the FOCUS ON ENERGY Upstream Lighting program discounts, you would have still sold 100 LEDs *that* month in Wisconsin without the program discounts. Does that sound about right? **[IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]**

- 1. Yes

- 2. No [CLARIFY RESPONSE]
- 98. [DO NOT READ] DON'T KNOW
- 99. [DO NOT READ] REFUSED

C10) [ASK IF C5]= 3] I want to make sure I understand you correctly when you say your company's sales of LEDs would be [%FROM QUESTION C7]) higher without the program discounts. So you're saying that if you sold 100 LEDs in a given month with the FOCUS ON ENERGY Upstream Lighting program discounts, you would have sold [100 + (%FROM QUESTION C7) * 100]) that month in Wisconsin without the program discounts. Does that sound about right? [IMPORTANT QUESTION FOR NTG: PROBE IF DON'T KNOW]

- 1. Yes
- 2. No [CLARIFY RESPONSE]
- 98. [DO NOT READ] DON'T KNOW
- 99. [DO NOT READ] REFUSED

Future of Lighting

S1. Do you expect (or have plans to) change your stocking or promotion of LED bulbs for the second half of 2016?

- 1. Yes
- 2. No [SKIP TO S3]
- 98. Don't know [SKIP TO S3]
- 99. REFUSED [SKIP TO S3]

S2. [IF S1 = YES, ASK] How do you plan to change your stocking or promotion of LEDs for the second half of 2016? [PROBE: INCREASE STOCKING? DECREASING STOCKING? BY WHAT PERCENT?]

- 1. [RECORD] _____
- 98. DON'T KNOW
- 99. REFUSED

S3. In 2015 the FOCUS ON ENERGY lighting program was managed by a company called CLEAResult. This changed in 2016 to management under a different company, ICF Consulting. Are you aware of that transition?

- 1. Yes
- 2. No
- 98. Don't know
- 99. REFUSED

S4. [IF S3 = 1] Have you experienced any issues or concerns with this transition? [PROBE: Did the transition interrupt 2016 sales or inventory in any way?]

- 1. Yes [RECORD]
- 2. No
- 98. Don't know
- 99. REFUSED

S5. **[FOR EACH BULB TYPE MENTIONED IN C1), ASK]** We understand that the lighting market is changing rapidly, how much longer do you expect to offer **[INSERT BULB TYPE]** at your store?
[DON'T READ RESPONSES]

2 Standard CFLs

- a. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
- b. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
- c. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
- d. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
- e. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
- f. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
- g. Other : **[SPECIFY]**
- h. DON'T KNOW
- i. REFUSED

3 Specialty CFLs

- a. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
- b. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
- c. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
- d. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
- e. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
- f. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
- g. Other : **[SPECIFY]**
- h. DON'T KNOW
- i. REFUSED

4 ENERGY STAR LEDs

- a. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
- b. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
- c. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
- d. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
- e. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
- f. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
- g. Other : **[SPECIFY]**
- h. DON'T KNOW
- i. REFUSED

5 Non- ENERGY STAR LEDs

- a. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
- b. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
- c. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
- d. Through 2019, I expect we will cease stocking these bulbs at the end of 2019

- e. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
- f. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
- g. Other : **[SPECIFY]**
- h. DON'T KNOW
- i. REFUSED

6 Incandescent and/or Halogen Bulbs

- a. Only through 2016, I expect we will cease stocking these bulbs at the end of 2016
- b. Through 2017, I expect we will cease stocking these bulbs at the end of 2017
- c. Through 2018, I expect we will cease stocking these bulbs at the end of 2018
- d. Through 2019, I expect we will cease stocking these bulbs at the end of 2019
- e. Through 2020, I expect we will cease stocking these bulbs at the end of 2020
- f. Indefinitely. We expect to continue stocking these bulbs for the foreseeable future and/or do not have plans to discontinue this bulb type.
- g. Other : **[SPECIFY]**
- h. DON'T KNOW
- i. REFUSED

S6. Are you aware of the upcoming changes to ENERGY STAR lighting specifications? In what ways is your company preparing for this?

- 1. Yes **[RECORD]**
- 2. No **[SKIP TO S9]**
- 98. Don't know **[SKIP TO S9]**
- 99. Refused **[SKIP TO S9]**

S7. How will these changes impact your light bulb stocking decisions? **[PROBE: Will you change your stocking practices for non-ENERGY STAR LEDs?]**

- 1. **[RECORD]** _____
- 98. DON'T KNOW
- 99. REFUSED

S8. What impact will this have on the market for LEDs (for consumers and programs like FOCUS ON ENERGY)?

- 1. **[RECORD]** _____
- 98. DON'T KNOW
- 99. REFUSED

S9. Additionally, DOE recently issued a draft rulemaking, upholding the EISA backstop provision in 2020 that will require bulbs to produce at least 45 lumens per watt. Are you aware of this as well? **[IF NO – then SKIP]** – In what ways is your company preparing for this, and what do you see as impact this will have on the market (for consumers and programs like FOCUS ON ENERGY)?

1. **[RECORD]** _____
98. DON'T KNOW
99. REFUSED

S10. We are also interested in your outlook in general – outside of these two factors discussed above (ENERGY STAR and EISA) what do you see as the primary changes or developments you expect to see in the lighting market over the next couple years, and what are the primary drivers behind these changes? [PROBE: What are manufacturers identifying as market trends over the next couple years?]

1. **[RECORD]** _____
98. DON'T KNOW
99. REFUSED

Conclusion

E1) Do you have any final questions, comments, or feedback on the FOCUS ON ENERGY upstream lighting program?

1. Yes **[RECORD]**
2. No
98. DON'T KNOW
99. REFUSED

Thank you again for your time.

**Wisconsin Focus on Energy Simple Energy Efficiency Program
CY 2016 Participant Survey**

Target Quota = [140+ completes]

Smart Strip Sample tab = [70 completes]

Non-Smart Strip Sample tab = [70 completes]

Specialty Sample tab = [Census]

Topics	Researchable Questions	Survey Questions
Program awareness	How did the customer hear about the Simple Energy Efficiency program?	Section B
Installation Verification	How many of each measure were installed? How many items were removed? Why were items removed? Why were items never installed? Where are the items now? How satisfied are customers with the pack items?	Section C
Program satisfaction	Is the customer satisfied with program processes?	Section D
Energy-saving actions	Has the customer taken any energy-saving actions since participating in the program?	Section E
Cross-program participation	Is the customer knowledgeable of other programs? Has the customer participated in other programs?	Section F
Freeridership and Spillover	Questions used to calculate NTG.	Section C and Section G
Customer demographics	What are some general household characteristics?	Section G

General Instructions

- Interviewer instructions are in green **[LIKE THIS]** (the style is “Survey: Interviewer Instructions”).
- CATI programming instructions are in red **[LIKE THIS]** (the style is “Survey: Programming”).
- Items that should not be read by the interviewer are in parentheses like this ().
- Questions from core question list are indicated with an asterisk (*)

[PACK TYPE]

Pack Name	Pack Type	Price	13W CFLs	23W CFLs	A19 LEDs	Decor LEDs	R30 LEDs	G25 LEDs	Kitchen aerators	Bath aerators	Shower heads	Smart strips	Water Pik shower
Express	1	\$0	1	1	3				1	1	1		
Focus	2	\$0			3				1	1	1		
Smart strip	3	\$0			2				1	1		1	
Decor light	4	\$3				3			1	1	1		
Flood light	5	\$5.75					4						
Globe light	6	\$6.95						3	1	1	1		
Shower head	7	\$8.95			3				1	1			1

A. Introduction and Screening

[ASK TO SPEAK WITH LISTED PERSON. IF NO NAME THEN ASK TO SPEAK WITH SOMEONE INVOLVED IN ENERGY DECISIONS FOR THE HOUSEHOLD.]

Hello, my name is **[NAME]** and I am calling on behalf of Focus on Energy, your statewide energy efficiency program. Our records show that you received an energy efficiency pack through Focus on Energy in 2016.

[IF NEEDED: YOUR ANSWERS WILL HELP US UNDERSTAND HOW THE PROGRAM IS DOING AND WHERE IT CAN BE IMPROVED. THE SURVEY SHOULD TAKE ABOUT 20 MINUTES. YOUR RESPONSES WILL BE KEPT STRICTLY CONFIDENTIAL.]

[IF CUSTOMER IS WARY OF THE SURVEY, REASSURE THEM THAT YOU ARE NOT SELLING ANYTHING. IF NECESSARY, OFFER JOE FONTAINE AT THE PUBLIC SERVICE COMMISSION (608-266-0910) AS THE PERSON TO CONTACT WITH ANY QUESTIONS ABOUT THE VALIDITY OF THE RESEARCH.]

- A1. Do you recall receiving this pack, which includes energy-saving products such as LED light bulbs?
[IF NEEDED: This is also known as a Focus Pack, and it would have been provided by Focus on Energy. You probably signed up to receive the pack on-line.]
1. Yes
 2. No **[ASK "IS THERE SOMEONE ELSE IN YOUR HOME I COULD SPEAK TO WHO MAY HAVE SIGNED UP TO RECEIVE THE PACK OR HAS BEEN INVOLVED IN MAKING ENERGY IMPROVEMENTS TO YOUR HOME?" IF SO, TRANSFER TO NEW PERSON AND REPEAT INTRO] [IF NO ONE ELSE IS AWARE, THANK AND TERMINATE]**
 98. Don't know **[THANK AND TERMINATE]**
 99. Refused **[THANK AND TERMINATE]**

B. Program Awareness

B1. *Where did you most recently hear about the Focus on Energy pack program? **[DO NOT READ**

LIST, RECORD ONE ANSWER]

1. (Bill insert)
2. (Direct mail/brochure/postcard)
3. (Family/friends/word-of-mouth)
4. (Focus on Energy or Utility website)
5. (Social Media such as Twitter, Facebook, Instagram, etc.)
6. (Television)
7. (Radio)
8. (Print media, such as magazine, newspaper article or advertisement)
9. (Billboard/outdoor ad)
10. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

B2. *Are there any other ways you heard about the program? **[DO NOT READ, RECORD ALL THAT**

APPLY]

1. (No other ways)
2. (Bill insert)
3. (Direct mail/brochure/postcard)
4. (Family/friends/word-of-mouth)
5. (Focus on Energy or Utility website)
6. (Social Media such as Twitter, Facebook, Instagram, etc.)
7. (Television)
8. (Radio)
9. (Print media, such as magazine, newspaper article or advertisement)
10. (Billboard/outdoor ad)
11. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

B3. *What do you think is the best way for Focus on Energy to inform the public about energy-efficiency programs? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**

1. (Television)
2. (Radio)
3. (Print media, such as magazine, newspaper article or advertisement)
4. (Billboard/outdoor ad)
5. (Bill insert)
6. (Direct mail/brochure/postcard)
7. (Family/friends/word-of-mouth)
8. (Focus on Energy or Utility website)
9. (Social Media such as Twitter, Facebook, or Instagram)
10. (Other **[SPECIFY:_____]**)
11. (Do not want to receive information)
98. (Don't know)
99. (Refused)

B4. *What motivated you to participate in Focus on Energy's pack program? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**

1. (Save energy)
2. (Reduce energy costs)
3. (The pack was free/reduced cost)
4. (Good for the environment)
5. (Recommended by a friend/relative)
6. (Recommended by a retailer/dealer)
7. (Recommended by a contractor)
8. (Advertisement [newspaper, radio, online, etc.])
9. (Utility sponsorship of the program)
10. (Other **[SPECIFY:_____]**)
98. (Don't know)
99. (Refused)

C. *Installation Verification*

Now I would like to ask you about the energy-saving items you received through the program.

CFLs (C1 to C11)

[ASK C1 TO C11 IF PACK TYPE = 1, OTHERWISE SKIP TO C12]

Our records show that you received two CFLs in your pack – a 13 watt CFL and a 23 watt CFL. **[IF NEEDED: THE MOST COMMON TYPE OF COMPACT FLUORESCENT BULB IS MADE WITH A GLASS TUBE BENT INTO A SPIRAL, RESEMBLING SOFT-SERVE ICE CREAM, AND IT FITS IN A REGULAR LIGHT BULB SOCKET.]**

- C1. Is the 13 watt CFL bulb currently installed in your home? **[IF NEEDED: THE 13 WATT CFL BULB IS THE SMALLER OF THE TWO CFL BULBS YOU RECEIVED IN YOUR PACK.]**
1. Yes
 2. No
 98. (Don't know)
 99. (Refused)
- C2. Is the 23 watt CFL bulb currently installed in your home? **[IF NEEDED: THE 23 WATT CFL BULB IS THE LARGER OF THE TWO CFL BULBS YOU RECEIVED IN YOUR PACK.]**
1. Yes
 2. No
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C3. **[IF C1 AND/OR C2 = 2]** Of the CFL bulb(s) that is/are not currently installed, “was this”/“were either of these” bulb(s) ever installed in your home and then removed?
1. Yes **C3_1. [ASK: HOW MANY WERE REMOVED?]**
 2. No **[SKIP TO C6]**
 98. (Don't know) **[SKIP TO C6]**
 99. (Refused) **[SKIP TO C6]**
- C4. **[IF C3 = 1]** What did you do with this/these CFL(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved them to a different room in the house **C4_1. [ASK: WHERE DID YOU MOVE THEM/IT?]**)
 2. (Storing them for future use)
 3. (Threw them away/recycled them)
 4. (Gave them to someone else)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

- C5. **[IF C3 = 1]** Why did you remove the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Burned out/broke/stopped working)
 2. (Delay in light coming on)
 3. (Did not work with dimmer/three-way switch)
 4. (Didn't fit properly in fixture)
 5. (Difficult to install/could not install)
 6. (Light color [too bright or not bright enough])
 7. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C6. **[IF C1 AND/OR C2 = 2, AND 2 – C3_1 > 0]** Of the CFL bulb(s) that is/are not currently installed, "was this bulb"/"were either of these bulbs" never installed?
1. Yes **C6_1. [ASK: HOW MANY WERE NEVER INSTALLED?]**
 2. No **[SKIP TO NEXT SECTION]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C7. **[IF C6 = 1]** What did you do with the CFL(s) that was/were never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing them for future use)
 2. (Threw them away/recycled them)
 3. (Gave them to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C8. **[IF C6 = 1]** Why did you not install the CFL(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (It broke)
 2. (Did not work with dimmer/three-way switch)
 3. (Didn't fit properly in fixture)
 4. (Difficult to install/could not install)
 5. (Already had bulbs installed in every possible location)
 6. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C9. **[ASK IF C1 AND/OR C2 AND/OR C3 = 1]** Did you have any difficulty when installing the CFLs you received in your pack?
1. (Yes) **C9_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING THEM?]**
 2. (No)
 98. (Don't know)
 99. (Refused)

C10. **[ASK IF C1 AND/OR C2 AND/OR C3 = 1]** How satisfied are you with the CFLs you received?

Would you say you are: **[READ LIST]**

1. Very satisfied **[SKIP TO NEXT SECTION]**
2. Somewhat satisfied **[SKIP TO NEXT SECTION]**
3. Not too satisfied
4. Not satisfied at all
98. (Don't know) **[SKIP TO NEXT SECTION]**
99. (Refused) **[SKIP TO NEXT SECTION]**

C11. **[IF C10 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**

1. (I don't like the color of the light [too bright or too dim])
2. (They flicker)
3. (They take too long to light up)
4. (They don't fit well in my fixtures)
5. (They are difficult to install/could not install them)
6. (They burned out/broke/stopped working)
7. (I just didn't like them)
8. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

A19/General Purpose LEDs (C12 to C21)

[ASK C12 TO C21 IF PACK TYPE = 1, 2, 3, OR 7, OTHERWISE SKIP TO C22]

C12. **[IF PACK TYPE = 1, 2 OR 7]** Of the three general purpose LED bulbs you received in your pack, how many are currently installed in your home?

[IF PACK TYPE = 3] Of the two general purpose LED bulbs you received in your pack, how many are currently installed in your home?

[IF NEEDED: THE GENERAL PURPOSE LED BULBS YOU RECEIVED IN YOUR PACK ARE CAPSULE-SHAPED. THEY HAVE A SIMILAR SHAPE AND SIZE OF TRADITIONAL INCANDESCENT LIGHT BULBS.]

1. **[RECORD NUMBER] [IF ANSWER = 3 FOR PACK TYPE 1, 2 OR 7, OR ANSWER = 2 FOR PACK TYPE 3, SKIP TO C19]**
98. (Don't know) **[SKIP TO NEXT SECTION]**
99. (Refused) **[SKIP TO NEXT SECTION]**

C13. **[IF PACK TYPE BULBS (3 FOR PACK TYPE 1, 2 OR 7; 2 FOR PACK TYPE 3) – C12_1 > 0]** Of the LED bulb(s) that is/are not currently installed, “was this”/“were any of these” bulb(s) ever installed in your home and then removed?

1. Yes **C13_1. [ASK: HOW MANY WERE REMOVED?]**
2. No **[SKIP TO C16]**

98. (Don't know) **[SKIP TO C16]**
99. (Refused) **[SKIP TO C16]**
- C14. **[IF C13 = 1]** What did you do with this/these bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved them to a different room in the house **C14_1**. **[ASK: WHERE DID YOU MOVE THEM/IT?]**)
 2. (Storing them for future use)
 3. (Threw them away/recycled them)
 4. (Gave them to someone else)
 5. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)
- C15. **[IF C13 = 1]** Why did you remove the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Burned out/broke/stopped working)
 2. (Delay in light coming on)
 3. (Did not work with dimmer/three-way switch)
 4. (Didn't fit properly in fixture)
 5. (Difficult to install/could not install)
 6. (Light color [too bright or not bright enough])
 7. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)
- C16. **[IF PACK TYPE BULBS – C12 – C13_1 > 0 OR C13 = 2]** Of the ED bulb(s) that is/are not currently installed, “was this bulb”/“were any of these bulbs” never installed?
1. Yes **C16_1**. **[ASK: HOW MANY WERE NEVER INSTALLED?]**
 2. No **[SKIP TO NEXT SECTION]**
98. (Don't know) **[SKIP TO NEXT SECTION]**
99. (Refused) **[SKIP TO NEXT SECTION]**
- C17. **[IF C16 = 1]** What did you do with the bulb(s) that was/were never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing them for future use)
 2. (Threw them away/recycled them)
 3. (Gave them to someone else)
 4. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

- C18. **[IF C16 = 1]** Why did you not install the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (It broke)
 2. (Did not work with dimmer/three-way switch)
 3. (Didn't fit properly in fixture)
 4. (Difficult to install/could not install)
 5. (Already had bulbs installed in every possible location)
 6. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C19. **[ASK IF C12 AND/OR C13 = 1]** Did you have any difficulty when installing the LED bulbs you received in your pack?
1. (Yes) **C19_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING THEM?]**
 2. (No)
 98. (Don't know)
 99. (Refused)
- C20. **[ASK IF C12 AND/OR C13 = 1]** How satisfied are you with the LED bulbs you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO NEXT SECTION]**
 2. Somewhat satisfied **[SKIP TO NEXT SECTION]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C21. **[IF C20 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (I don't like the color of the light [too bright or too dim])
 2. (They flicker)
 3. (They take too long to light up)
 4. (They don't fit well in my fixtures)
 5. (They are difficult to install/could not install them)
 6. (They burned out/broke/stopped working)
 7. (I just didn't like them)
 8. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

Decorative Candle LEDs (C22 to C35)

[ASK C22 TO C35 IF PACK TYPE = 4, OTHERWISE SKIP TO C36]

- C22. Of the three decorative candle LED bulbs you paid to upgrade in your pack, how many are currently installed in your home?
[IF NEEDED: DECORATIVE LED BULBS ARE SHAPED LIKE A CANDLE AND HAVE A SMALL SCREW BASE.]
1. **[RECORD NUMBER] [IF ANSWER = 3, SKIP TO C29]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C23. **[IF 3 – C22_1 > 0]** Of the decorative LED bulb(s) that is/are not currently installed, “was this”/“were any of these” bulb(s) ever installed in your home and then removed?
1. Yes **C23_1. [ASK: HOW MANY WERE REMOVED?]**
 2. No **[SKIP TO C26]**
 98. (Don't know) **[SKIP TO C26]**
 99. (Refused) **[SKIP TO C26]**
- C24. **[IF C23 = 1]** What did you do with this/these bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved them to a different room in the house **C24_1. [ASK: WHERE DID YOU MOVE THEM/IT?]**)
 2. (Storing them for future use)
 3. (Threw them away/recycled them)
 4. (Gave them to someone else)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C25. **[IF C23 = 1]** Why did you remove the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Burned out/broke/stopped working)
 2. (Delay in light coming on)
 3. (Did not work with dimmer/three-way switch)
 4. (Didn't fit properly in fixture)
 5. (Difficult to install/could not install)
 6. (Light color [too bright or not bright enough])
 7. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C26. **[IF 3 – C22 – C24_1 > 0]** Of the decorative LED bulb(s) that is/are not currently installed, “was this bulb”/“were either of these bulbs” never installed?
1. Yes **C26_1. [ASK: HOW MANY WERE NEVER INSTALLED?]**
 2. No **[SKIP TO NEXT SECTION]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**

- C27. **[IF C26 = 1]** What did you do with the bulb(s) that was/were never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing them for future use)
 2. (Threw them away/recycled them)
 3. (Gave them to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C28. **[IF C26 = 1]** Why did you not install the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (It broke)
 2. (Did not work with dimmer/three-way switch)
 3. (Didn't fit properly in fixture)
 4. (Difficult to install/could not install)
 5. (Already had bulbs installed in every possible location)
 6. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C29. **[ASK IF C22 AND/OR C23 = 1]** Did you have any difficulty when installing the decorative LED bulbs you received in your pack?
1. (Yes) **C29_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING THEM?]**
 2. (No)
 98. (Don't know)
 99. (Refused)
- C30. **[ASK IF C22 AND/OR C23 = 1]** How satisfied are you with the decorative LED bulbs you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO C32]**
 2. Somewhat satisfied **[SKIP TO C32]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don't know) **[SKIP TO C32]**
 99. (Refused) **[SKIP TO C32]**

- C31. **[IF C30C29 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (I don't like the color of the light [too bright or too dim])
 2. (They flicker)
 3. (They take too long to light up)
 4. (They don't fit well in my fixtures)
 5. (They are difficult to install/could not install them)
 6. (They burned out/broke/stopped working)
 7. (I just didn't like them)
 8. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C32. Before you signed up to receive a pack, did you already have decorative candle LED bulbs installed in your home?
1. (Yes)
 2. (No)
 98. (Don't know)
 99. (Refused)
- C33. If Focus on Energy did not offer the \$3 energy-efficient pack, would you have purchased decorative candle LEDs on your own?
1. (Yes)
 2. (No) **[SKIP TO NEXT SECTION]**
 3. (No, I already had them installed in all available sockets) **[SKIP TO NEXT SECTION]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C34. **[ASK IF C33 = 1]** In terms of timing, when would you have purchased the decorative candle LEDs on your own? Would you have purchased them ... **[READ LIST]**
1. Around the same time you received the pack
 2. Later but within the same year
 3. In one year or more **[SKIP TO NEXT SECTION]**
 98. Don't know
 99. (Refused)
- C35. **[ASK IF C34 = 1, 2, 98 or 99]** How many decorative candle LEDs would you have purchased? **[IF NEEDED: AN ESTIMATE IS OK.]**
1. **[RECORD NUMBER]**
 98. (Don't know)
 99. (Refused)

R30/Flood Light LEDs (C36 to C49)

[ASK C36 TO C49 IF PACK TYPE = 5, OTHERWISE SKIP TO C50]

- C36. Of the four flood light LED bulbs you paid to upgrade in your pack, how many are currently installed in your home?
[IF NEEDED: FLOOD LIGHTS ARE ALSO KNOWN AS REFLECTORS. THEY ARE SHAPED LIKE CONES, AND USUALLY INSTALLED OUTDOORS AND IN RECESSED LIGHTING FIXTURES.]
1. **[RECORD NUMBER] [IF ANSWER = 4, SKIP TO C43]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C37. **[IF 4 – C36_1 > 0]** Of the flood light LED bulb(s) that is/are not currently installed, “was this”/“were any of these” bulb(s) ever installed in your home and then removed?
1. Yes **C37_1. [ASK: HOW MANY WERE REMOVED?]**
 2. No **[SKIP TO C40]**
 98. (Don't know) **[SKIP TO C40]**
 99. (Refused) **[SKIP TO C40]**
- C38. **[IF C37 = 1]** What did you do with this/these bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved them to a different room in the house) **C38_1. [ASK: WHERE DID YOU MOVE THEM/IT?]**
 2. (Storing them for future use)
 3. (Threw them away/recycled them)
 4. (Gave them to someone else)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C39. **[IF C37 = 1]** Why did you remove the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Burned out/broke/stopped working)
 2. (Delay in light coming on)
 3. (Did not work with dimmer/three-way switch)
 4. (Didn't fit properly in fixture)
 5. (Difficult to install/could not install)
 6. (Light color [too bright or not bright enough])
 7. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

- C40. **[IF 4 – C36 – C37_1 > 0]** Of the flood light LED bulb(s) that is/are not currently installed, “was this bulb”/“were either of these bulbs” never installed?
1. Yes **C40_1. [ASK: HOW MANY WERE NEVER INSTALLED?]**
 2. No **[SKIP TO NEXT SECTION]**
 98. (Don’t know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C41. **[IF C40 = 1]** What did you do with the bulb(s) that was/were never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing them for future use)
 2. (Threw them away/recycled them)
 3. (Gave them to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don’t know)
 99. (Refused)
- C42. **[IF C40 = 1]** Why did you not install the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (It broke)
 2. (Did not work with dimmer/three-way switch)
 3. (Didn’t fit properly in fixture)
 4. (Difficult to install/could not install)
 5. (Already had bulbs installed in every possible location)
 6. (Other **[SPECIFY: _____]**)
 98. (Don’t know)
 99. (Refused)
- C43. **[ASK IF C36 AND/OR C37 = 1]** Did you have any difficulty when installing the flood light LED bulbs you received in your pack?
1. (Yes) **C43_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING THEM?]**
 2. (No)
 98. (Don’t know)
 99. (Refused)
- C44. **[ASK IF C36 AND/OR C37 = 1]** How satisfied are you with the flood light LED bulbs you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO C46]**
 2. Somewhat satisfied **[SKIP TO C46]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don’t know) **[SKIP TO C46]**
 99. (Refused) **[SKIP TO C46]**

- C45. **[IF C44C43 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (I don't like the color of the light [too bright or too dim])
 2. (They flicker)
 3. (They take too long to light up)
 4. (They don't fit well in my fixtures)
 5. (They are difficult to install/could not install them)
 6. (They burned out/broke/stopped working)
 7. (I just didn't like them)
 8. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C46. Before you signed up to receive a pack, did you already have flood light LED bulbs installed at your home?
1. (Yes)
 2. (No)
 98. (Don't know)
 99. (Refused)
- C47. If Focus on Energy did not offer the \$5.75 energy-efficient pack, would you have purchased flood light LEDs on your own?
1. (Yes)
 2. (No) **[SKIP TO NEXT SECTION]**
 3. (No, I already had them installed in all available sockets) **[SKIP TO NEXT SECTION]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C48. **[ASK IF C47 = 1]** In terms of timing, when would you have purchased the flood light LEDs on your own? Would you have purchased them ... **[READ LIST]**
1. Around the same time you received the pack
 2. Later but within the same year
 3. In one year or more **[SKIP TO NEXT SECTION]**
 98. Don't know
 99. (Refused)
- C49. **[ASK IF C48 = 1, 2, 98 or 99]** How many flood light LEDs would you have purchased? **[IF NEEDED: AN ESTIMATE IS OK.]**
1. **[RECORD NUMBER OF BULBS]**
 98. (Don't know)
 99. (Refused)

G25/Globe LEDs (C50 to C63)

[ASK C50 TO C63 IF PACK TYPE = 6, OTHERWISE SKIP TO C64]

- C50. Of the three globe LED bulbs you paid to upgrade in your pack, how many are currently installed in your home?
[IF NEEDED: GLOBE LED BULBS ARE ROUND LIKE A SPHERE. THEY ARE USUALLY INSTALLED IN BATHROOM FIXTURES.]
1. **[RECORD NUMBER] [IF ANSWER = 3, SKIP TO C57]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C51. **[IF 3 – C50_1 > 0]** Of the globe LED bulb(s) that is/are not currently installed, “was this”/“were any of these” bulb(s) ever installed in your home and then removed?
1. Yes **C51_1. [ASK: HOW MANY WERE REMOVED?]**
 2. No **[SKIP TO C54]**
 98. (Don't know) **[SKIP TO C54]**
 99. (Refused) **[SKIP TO C54]**
- C52. **[IF C51 = 1]** What did you do with this/these bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved them to a different room in the house **C52_1. [ASK: WHERE DID YOU MOVE THEM/IT?]**)
 2. (Storing them for future use)
 3. (Threw them away/recycled them)
 4. (Gave them to someone else)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C53. **[IF C51 = 1]** Why did you remove the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Burned out/broke/stopped working)
 2. (Delay in light coming on)
 3. (Did not work with dimmer/three-way switch)
 4. (Didn't fit properly in fixture)
 5. (Difficult to install/could not install)
 6. (Light color [too bright or not bright enough])
 7. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

- C54. **[IF 3 – C50 – C51_1 > 0]** Of the globe LED bulb(s) that is/are not currently installed, “was this bulb”/“were either of these bulbs” never installed?
1. Yes **C54_1. [ASK: HOW MANY WERE NEVER INSTALLED?]**
 2. No **[SKIP TO NEXT SECTION]**
 98. (Don’t know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C55. **[IF C54 = 1]** What did you do with the bulb(s) that was/were never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing them for future use)
 2. (Threw them away/recycled them)
 3. (Gave them to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don’t know)
 99. (Refused)
- C56. **[IF C54 = 1]** Why did you not install the bulb(s)? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (It broke)
 2. (Did not work with dimmer/three-way switch)
 3. (Didn’t fit properly in fixture)
 4. (Difficult to install/could not install)
 5. (Already had bulbs installed in every possible location)
 6. (Other **[SPECIFY: _____]**)
 98. (Don’t know)
 99. (Refused)
- C57. **[ASK IF C50 AND/OR C51 = 1]** Did you have any difficulty when installing the globe LED bulbs you received in your pack?
1. (Yes) **C57_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING THEM?]**
 2. (No)
 98. (Don’t know)
 99. (Refused)
- C58. **[ASK IF C50 AND/OR C51 = 1]** How satisfied are you with the globe LED bulbs you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO C60]**
 2. Somewhat satisfied **[SKIP TO C60]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don’t know) **[SKIP TO C60]**
 99. (Refused) **[SKIP TO C60]**

- C59. **[IF C58 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (I don't like the color of the light [too bright or too dim])
 2. (They flicker)
 3. (They take too long to light up)
 4. (They don't fit well in my fixtures)
 5. (They are difficult to install/could not install them)
 6. (They burned out/broke/stopped working)
 7. (I just didn't like them)
 8. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C60. Before you signed up to receive a pack, did you already have globe LED bulbs installed in your home?
1. (Yes)
 2. (No)
 98. (Don't know)
 99. (Refused)
- C61. If Focus on Energy did not offer the \$6.95 energy-efficient pack, would you have purchased globe LEDs on your own?
1. (Yes)
 2. (No) **[SKIP TO NEXT SECTION]**
 3. (No, I already had them installed in all available sockets) **[SKIP TO NEXT SECTION]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C62. **[ASK IF C61 = 1]** In terms of timing, when would you have purchased the globe LEDs on your own? Would you have purchased them ... **[READ LIST]**
1. Around the same time you received the pack
 2. Later but within the same year
 3. In one year or more **[SKIP TO NEXT SECTION]**
 98. Don't know
 99. (Refused)
- C63. **[ASK IF C62 = 1, 2, 98 or 99]** How many globe LEDs would you have purchased? **[IF NEEDED: AN ESTIMATE IS OK.]**
1. **[RECORD NUMBER]**
 98. (Don't know)
 99. (Refused)

Kitchen Faucet Aerators (C64 to C73)

[ASK C64 TO C73 IF PACK TYPE = 1, 2, 3, 4, 6, OR 7, OTHERWISE SKIP TO C74.]

- C64. Is the water-saving kitchen faucet aerator you received in your pack currently installed in your home? **[IF NEEDED: THE KITCHEN FAUCET AERATOR YOU RECEIVED IN YOUR PACK IS ABLE TO SWIVEL.]**
1. Yes **[SKIP TO C71]**
 2. No
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C65. **[IF C64 = 2]** Was the kitchen faucet aerator ever installed in your home and then removed?
1. Yes
 2. No **[SKIP TO C68]**
 98. (Don't know) **[SKIP TO C68]**
 99. (Refused) **[SKIP TO C68]**
- C66. **[IF C65 = 1]** What did you do with this faucet aerator? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved it to a different room in the house) **C66_1. [ASK: WHERE DID YOU MOVE IT?]**
 2. (Storing it for future use)
 3. (Threw it away)
 4. (Gave it to someone else)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C67. **[IF C65 = 1]** Why did you remove the faucet aerator? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like the water pressure)
 2. (It broke)
 3. (Difficult to install/could not install)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C68. **[IF C64 AND C65 = 2]** To confirm, the kitchen faucet aerator was never installed?
1. Yes, that is correct
 2. No, it was installed **C68_1. [ASK: WHAT HAPPENED TO THE FAUCET AERATOR?]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**

- C69. **[IF C68 = 1]** What did you do with the faucet aerator that was never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing it for future use)
 2. (Threw it away)
 3. (Gave it to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C70. **[IF C68 = 1]** Why did you not install the faucet aerator? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (It broke)
 2. (Difficult to install/could not install)
 3. (Already had kitchen faucet aerators installed in every possible location)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C71. **[ASK IF C64 AND/OR C65 = 1]** Did you have any difficulty when installing the kitchen faucet aerator you received in your pack?
1. (Yes) **C71_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING IT?]**
 2. (No)
 98. (Don't know)
 99. (Refused)
- C72. **[ASK IF C64 AND/OR C65 = 1]** How satisfied are you with the kitchen faucet aerator you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO NEXT SECTION]**
 2. Somewhat satisfied **[SKIP TO NEXT SECTION]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**

C73. **[IF C72 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**

1. (Didn't like the water pressure)
2. (Didn't like how it looked)
3. (Didn't fit properly)
4. (It broke)
5. (Difficult to install/could not install)
6. (I just didn't like them)
7. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

Bathroom Faucet Aerators (C74 to C83)

[ASK C74 TO C83 IF PACK TYPE = 1, 2, 3, 4, 6, OR 7, OTHERWISE SKIP TO C84.]

C74. Is the water-saving bathroom faucet aerator you received in your pack currently installed in your home?

1. Yes **[SKIP TO C81]**
2. No
98. (Don't know) **[SKIP TO NEXT SECTION]**
99. (Refused) **[SKIP TO NEXT SECTION]**

C75. **[IF C74 = 2]** Was the bathroom faucet aerator ever installed in your home and then removed?

1. Yes
2. No **[SKIP TO C78]**
98. (Don't know) **[SKIP TO C78]**
99. (Refused) **[SKIP TO C78]**

C76. **[IF C75 = 1]** What did you do with this faucet aerator? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**

1. (Moved it to a different room in the house) **C76_1. [ASK: WHERE DID YOU MOVE IT?]**
2. (Storing it for future use)
3. (Threw it away)
4. (Gave it to someone else)
5. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

- C77. **[IF C75= 1]** Why did you remove the faucet aerator? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like the water pressure)
 2. (It broke)
 3. (Difficult to install/could not install)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C78. **[IF C75 AND C76 = 2]** To confirm, the bathroom faucet aerator was never installed?
1. Yes
 2. No **C78_1. [ASK: WHAT HAPPENED TO THE FAUCET AERATOR?]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C79. **[IF C78 = 1]** What did you do with the faucet aerator that was never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing it for future use)
 2. (Threw it away)
 3. (Gave it to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C80. **[IF C78 = 1]** Why did you not install the faucet aerator? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (It broke)
 2. (Difficult to install/could not install)
 3. (Already had bathroom faucet aerators installed in every possible location)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C81. **[ASK IF C74 AND/OR C75 = 1]** Did you have any difficulty when installing the bathroom faucet aerator you received in your pack?
1. (Yes) **C81_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING IT?]**
 2. (No)
 98. (Don't know)
 99. (Refused)

- C82. **[ASK IF C74 AND/OR C75 = 1]** How satisfied are you with the bathroom faucet aerator you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO NEXT SECTION]**
 2. Somewhat satisfied **[SKIP TO NEXT SECTION]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**

- C83. **[IF C82 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like the water pressure)
 2. (Didn't like how it looked)
 3. (Didn't fit properly)
 4. (It broke)
 5. (Difficult to install/could not install)
 6. (I just didn't like them)
 7. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

High-Efficiency Showerheads/Water Pik Showerheads (C84 to C98)

[ASK C84 TO C98 IF PACK TYPE = 1, 2, 4, 6, OR 7, OTHERWISE SKIP TO C99]

- C84. Is the water-saving showerhead you paid to upgrade in your pack currently installed in your home?
1. Yes **[SKIP TO C91]**
 2. No
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C85. **[IF C84 = 2]** Was the water-saving showerhead ever installed in your home and then removed?
1. Yes
 2. No **[SKIP TO C88]**
 98. (Don't know) **[SKIP TO C88]**
 99. (Refused) **[SKIP TO C88]**

- C86. **[IF C85 = 1]** What did you do with this showerhead? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved it to a different room in the house) **C86_1. [ASK: WHERE DID YOU MOVE IT?]**
 2. (Storing it for future use)
 3. (Threw it away)
 4. (Gave it to someone else)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C87. **[IF C85 = 1]** Why did you remove the showerhead? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like the water pressure)
 2. (Didn't like how it looked)
 3. (Didn't fit properly)
 4. (It broke)
 5. (Difficult to install/could not install)
 6. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C88. **[IF C84 AND C85 = 2]** To confirm, the water-saving showerhead was never installed?
1. Yes
 2. No **C88_1. [ASK: WHAT HAPPENED TO THE SHOWERHEAD?]**
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C89. **[IF C88 = 1]** What did you do with the showerhead that was never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing it for future use)
 2. (Threw it away)
 3. (Gave it to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

- C90. **[IF C88 = 1]** Why did you not install the showerhead? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like how it looked)
 2. (Didn't fit properly)
 3. (It broke)
 4. (Difficult to install/could not install)
 5. (Already had high-efficiency showerheads installed in every possible location)
 6. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C91. **[ASK IF C84 AND/OR C85 = 1]** Did you have any difficulty when installing the water-saving showerhead you received in your pack?
1. (Yes) **C91_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING IT?]**
 2. (No)
 98. (Don't know)
 99. (Refused)
- C92. **[ASK IF C84 AND/OR C85 = 1]** How satisfied are you with the water-saving showerhead you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO NEXT SECTION]**
 2. Somewhat satisfied **[SKIP TO NEXT SECTION]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**
- C93. **[IF C92 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like the water pressure)
 2. (Didn't like how it looked)
 3. (Didn't fit properly)
 4. (It broke)
 5. (Difficult to install/could not install)
 6. (I just didn't like them)
 7. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

[ASK C94 TO C98 IF PACK TYPE = 7, OTHERWISE SKIP TO NEXT SECTION]

C94. Why did you decide to purchase the \$8.95 Focus pack with the Water Pik showerhead instead of ordering the free kit with a conventional water-saving showerhead? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**

1. (I did not know about the free kit)
2. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

C95. Before you signed up to receive a pack, did you already have water-saving showerheads installed in your home?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

C96. If Focus on Energy did not offer the \$8.95 energy-efficient pack, would you have purchased water-saving showerhead on your own?

1. (Yes)
2. (No) **[SKIP TO NEXT SECTION]**
3. (No, I already had them installed in all available showers) **[SKIP TO NEXT SECTION]**
98. (Don't know) **[SKIP TO NEXT SECTION]**
99. (Refused) **[SKIP TO NEXT SECTION]**

C97. **[ASK IF C96 = 1]** In terms of timing, when would you have purchased the water-saving showerheads on your own? Would you have purchased them ... **[READ LIST]**

1. Around the same time you received the pack
2. Later but within the same year
3. In one year or more
98. Don't know
99. (Refused)

C98. **[ASK IF C97 = 1, 2, 98 or 99]** How many the water-saving showerheads would you have purchased? **[IF NEEDED: AN ESTIMATE IS OK.]**

1. **[RECORD NUMBER]**
98. (Don't know)
99. (Refused)

Smart Strips (C99 to C109)

[ASK C99 TO C109 IF PACK TYPE = 3, OTHERWISE SKIP TO NEXT SECTION]

C99. Is the smart strip you received in your pack currently plugged in and being used in your home?

1. Yes
2. No **[SKIP TO C101]**

98. (Don't know) **[SKIP TO NEXT SECTION]**
99. (Refused) **[SKIP TO NEXT SECTION]**
- C100. Is the smart strip plugged being used for your ... **[READ LIST]**
1. Home entertainment center **[IF NEEDED: equipment in a home entertainment center includes TVs, cable boxes, streaming devices (like Apple TV or Roku), and DVD players]**
 2. Home office **[IF NEEDED: equipment in a home office includes laptops, desktop computers, computer monitors, scanners, printers, and fax machines]**
 3. Or some other application **(SPECIFY: _____)**
98. (Don't know)
99. (Refused)
- C101. **[IF C99 = 2]** Was the smart strip ever plugged in and then removed?
1. Yes
 2. No **[SKIP TO C104]**
98. (Don't know) **[SKIP TO C104]**
99. (Refused) **[SKIP TO C104]**
- C102. **[IF C101= 1]** What did you do with the smart strip? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Moved it to a different room in the house) **C102_1. [ASK: WHERE DID YOU MOVE IT?]**
 2. (Storing it for future use)
 3. (Threw it away)
 4. (Gave it to someone else)
 5. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)
- C103. **[IF C101C85 = 1]** Why did you remove the smart strip? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like how it looked)
 2. (Didn't fit properly)
 3. (It broke)
 4. (Difficult to install/could not install)
 5. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)
- C104. **[IF C99 AND C100 = 2]** To confirm, the smart strip was never installed?
1. Yes
 2. No **C104_1. [ASK: WHAT HAPPENED TO THE SMART STRIP?]**
98. (Don't know) **[SKIP TO NEXT SECTION]**
99. (Refused) **[SKIP TO NEXT SECTION]**

- C105. **[IF C104 = 1]** What did you do with the smart strip that was never installed? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Storing it for future use)
 2. (Threw it away)
 3. (Gave it to someone else)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C106. **[IF C104 = 1]** Why did you not install the smart strip? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Didn't like how it looked)
 2. (It broke)
 3. (Difficult to install/could not install)
 4. (Already had smart strips installed in every possible location)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- C107. **[ASK IF C99 AND/OR C101 = 1]** Did you have any difficulty when installing the smart strip you received in your pack?
1. (Yes) **C106_1. [ASK: WHAT DID YOU FIND DIFFICULT ABOUT INSTALLING IT?]**
 2. (No)
 98. (Don't know)
 99. (Refused)
- C108. **[ASK IF C99 AND/OR C101 = 1]** How satisfied are you with the smart strip you received? Would you say you are: **[READ LIST]**
1. Very satisfied **[SKIP TO NEXT SECTION]**
 2. Somewhat satisfied **[SKIP TO NEXT SECTION]**
 3. Not too satisfied
 4. Not satisfied at all
 98. (Don't know) **[SKIP TO NEXT SECTION]**
 99. (Refused) **[SKIP TO NEXT SECTION]**

C109. **[IF C108 = 3 OR 4]** Can you explain why you are not satisfied? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**

1. (Didn't like how it looked)
2. (It broke)
3. (Difficult to install/could not install)
4. (I just didn't like them)
5. (Other **[SPECIFY: _____]**)
98. (Don't know)
99. (Refused)

D. Program Satisfaction

Now I am going to ask you some questions about your experience with the program.

D1. Did you request your pack using the Focus on Energy website, or did you call the 1-800 number?

1. (Website)
2. (1-800 number) **[SKIP TO D4]**
3. (Other **[SPECIFY: _____]**) **[SKIP TO D4]**
98. (Don't know) **[SKIP TO D4]**
99. (Refused) **[SKIP TO D4]**

D2. How easy was it to fill out the online request for the Focus pack? **[READ LIST]**

1. Very Easy **[SKIP TO D4]**
2. Somewhat Easy **[SKIP TO D4]**
3. Not Very Easy
4. Not At All Easy
98. (Don't Know) **[SKIP TO D4]**
99. (Refused) **[SKIP TO D4]**

D3. **[IF D2 = 3 OR 4]** Please explain why it was not easy?

1. **[OPEN END]**
98. (Don't know)
99. (Refused)

D4. After you submitted the request for the Focus pack, how long did it take to receive the kit in the mail? **[READ LIST]**

1. Less than 4 weeks
2. Between 4 and 8 weeks
3. More than 8 weeks
98. (Don't Know)
99. (Refused)

D5. Were you satisfied with how long it took to receive the pack?

1. (Yes)
2. (Somewhat)
3. (No)
98. (Don't Know)
99. (Refused)

E. Energy-Saving Actions

E1. You should have received a pamphlet with information on actions you can take to save energy in your pack. Have you taken any of these actions?

1. (Yes) **E1_1. [ASK: WHICH ACTIONS DID YOU TAKE? HAVE YOU ...] [READ LIST]**
 1. (Use dimmers on indoor lighting to lower light levels)
 2. (Change the furnace filter)
 3. (Leave shades open during the day to heat my home)
 4. (Keep the freezer full)
 5. (Always wash laundry in cold water)
 6. (Reduce water heater temperature to 120 degrees)
 7. (Other) **[SPECIFY]**
 8. (Don't know)
 9. (Refused)
2. (No)
3. (Did not receive pamphlet)
98. (Don't know)
99. (Refused)

E2. Since participating in Focus on Energy's program, have you taken any other actions to reduce energy consumption that you have not already mentioned? **[PROBE WITH: "An energy efficiency action could be turning down the temperature on your thermostat or you water heater, or powering down appliances or computers."]**

1. (Yes)
2. (No) **[SKIP TO E4]**
98. Don't Know **[SKIP TO E4]**
99. Refused **[SKIP TO E4]**

- E3. **[ASK IF E2 = 1]** Specifically, what actions have you taken? **[DON'T READ LIST; RECORD ALL THAT APPLY]**
1. (Turn down temperature on furnace)
 2. (Turn up temperature on AC)
 3. (Take shorter or fewer showers)
 4. (Not leave water running)
 5. (Turn off appliances)
 6. (Turn off computers)
 7. (Turn off lights)
 8. (Other **[SPECIFY: _____]**)
 98. Don't Know
 99. Refused
- E4. Please tell me how important the Focus on Energy pack program was in your decision to **[INSERT EACH ONE SELECTED IN E1 AND E3]**. Was it very important, somewhat important, not too important, or not at all important in your decision to take these action(s)? **[IF MORE THAN ONE ACTION/HABIT IN E3, "WAS IT THE SAME INFLUENCE FOR EVERY ACTION?"]**
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not at all important
 98. Don't Know
 99. Refused
- E5. And, over time, have you continued to take these actions to save energy? Let's start with ... **[INSERT EACH ANSWER FROM E1 AND E3]**. **[IF NEEDED, "Have you continued to take this action to save energy?"]**
1. (Yes)
 2. (No)
 98. Don't Know
 99. Refused

F. Cross-Program Marketing

- F1. *Are you aware of any other Focus on Energy programs or rebates? **[IF NEEDED: SUCH AS REBATES ON LED BULBS, ENERGY STAR APPLIANCES, ENERGY-EFFICIENT UPGRADES, OR HOME ENERGY AUDITS]**
1. (Yes)
 2. (No) **[SKIP TO SECTION G]**
 98. (Don't know) **[SKIP TO G]**
 99. (Refused) **[SKIP TO G]**

- F2. *Which programs or rebates are you aware of? **[DO NOT READ LIST; RECORD ALL THAT APPLY]**
1. (Home Performance with ENERGY STAR) [Other key words: energy assessments, home audits, weatherization, insulation, HVAC equipment, heating equipment, geothermal, solar panels]
 2. (New Homes) [Other key words: new construction, building a new home, new build]
 3. (Appliance Recycling) [Other key words: refrigerator recycling, freezer recycling, refrigerator pick up]
 4. (Residential Lighting) [Other key words: lighting discounts, CFL bulbs, LED bulbs, rebates on light bulbs]
 5. (Multifamily) [Other key words: multifamily direct install, multifamily energy savings, landlord installed efficient products, free products for renters]
 6. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- F3. *Have you participated in any other Focus on Energy programs? **[DO NOT READ, BUT PROMPT IF NECESSARY; RECORD ALL THAT APPLY; IF NEEDED: SUCH AS REBATES ON LED BULBS, ENERGY STAR APPLIANCES, ENERGY-EFFICIENT UPGRADES OR HOME ENERGY AUDITS]**
1. (Yes)
 2. (No) **[SKIP TO F5]**
 98. (Don't know) **[SKIP TO F5]**
 99. (Refused) **[SKIP TO F5]**
- F4. **[ASK IF F3 = 1]** *Which programs, rebates, or projects? **[DO NOT READ, BUT PROMPT IF NECESSARY; RECORD ALL THAT APPLY]**
1. (Home Performance with ENERGY STAR) [Other key words: energy assessments, home audits, weatherization, insulation, HVAC equipment, heating equipment, geothermal, solar panels]
 2. (New Homes) [Other key words: new construction, building a new home]
 3. (Appliance Recycling) [Other key words: refrigerator recycling, freezer recycling, refrigerator pick up]
 4. (Residential Lighting) [Other key words: lighting discounts, CFL bulbs, LED bulbs, rebates on light bulbs]
 5. (Multifamily) [Other key words: multifamily direct install, multifamily energy savings, landlord installed efficient products, free products for renters]
 6. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

F5. Do you plan to participate in any Focus on Energy programs, rebates or projects within the next year?

1. (Yes) **F5_1. [ASK: WHICH PROGRAMS?] [DO NOT READ, BUT PROMPT IF NECESSARY; RECORD ALL THAT APPLY]**

1. (Home Performance with ENERGY STAR)
2. (New Homes)
3. (Appliance Recycling)
4. (Residential Lighting)
5. (Multifamily)
6. (Other **[SPECIFY: _____]**)
7. (Don't know)
8. (Refused)

2. (No)

98. (Don't know)

99. (Refused)

G. Spillover

Now I'd like to talk to you about any energy saving improvements you may have made since receiving your pack from Focus on Energy.

G1. Since receiving the Focus pack, have you installed any other energy-efficient products in your home that you did NOT receive a reward or incentive for? By energy-efficient products, I mean appliances such as ENERGY STAR clothes washers; high efficiency water heaters, insulation or windows, or efficient lighting such as CFL and LED light bulbs.

1. Yes

2. No

98. Don't Know

99. Refused

[IF G1 = 2, 98 OR 99 SKIP TO NEXT SECTION]

G2. What were the products you installed without receiving a reward or incentive? **DO NOT READ LIST; PROMPT IF NEEDED; RECORD ALL THAT APPLY**

1. (Gas boiler)
2. (Gas furnace)
3. (Gas tank-less water heater)
4. (Gas storage water heater)
5. (Electric tank-less water heater)
6. (Electric storage water heater)
7. (Insulation; attic) **[ASK: HOW MANY SQUARE FEET?]**
8. (Insulation; floor) **[ASK: HOW MANY SQUARE FEET?]**
9. (Insulation; ceiling) **[ASK: HOW MANY SQUARE FEET?]**
10. (Insulation; other **[SPECIFY: _____]**) **[ASK: HOW MANY SQUARE FEET?]**
11. (Air sealing)
12. (Clothes washer)
13. (Dishwasher)
14. (Windows) **[ASK: HOW MANY SQUARE FEET?]**
15. (Programmable thermostat)
16. (Efficient lighting; CFLs) **[ASK: HOW MANY DID YOU INSTALL?]**
17. (Efficient lighting; LEDs) **[ASK: HOW MANY DID YOU INSTALL?]**
18. (Efficient lighting; Fluorescent) **[ASK: HOW MANY DID YOU INSTALL?]**
19. (Efficient lighting; Fixtures) **[ASK: HOW MANY DID YOU INSTALL?]**
20. (Efficient lighting; other **[SPECIFY: _____]**) **[ASK: HOW MANY DID YOU INSTALL?]**
21. (Refrigerator)
22. (Heat pump water heater)
23. (Room AC) **[ASK: HOW MANY DID YOU INSTALL?]**
24. (Central AC)
25. (Heat Pump; air source)
26. (Heat pump; ground source)
27. (Heat pump; other **[SPECIFY: _____]**)
28. (Other **[SPECIFY: _____]**) **[ASK: HOW MANY DID YOU INSTALL?]**
98. Don't Know
99. Refused

- G3. Please tell me how important your experience with the Focus on Energy pack program was in your decision to install **[INSERT EACH ONE SELECTED IN G2]**. Was it very important, somewhat important, not too important, or not at all important in your decision to install the/these energy-efficient product(s)?
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not at all important
 98. Don't Know
 99. Refused

[ASK G4 FOR EACH ONE SELECTED IN G2 EXCEPT 12 (CLOTHES WASHER), 13 (DISHWASHER), 14 (WINDOWS), 16-20 (EFFICIENT LIGHTING), 21 (REFRIGERATOR), 22 (HEAT PUMP WATER HEATER), 23 (ROOM AC), OR 28 (OTHER)]

- G4. Why didn't you apply for and receive a cash-back reward **for [INSERT EACH ONE SELECTED IN G2]**? **[DO NOT READ LIST; RECORD ONE ANSWER FOR EACH]**
1. (Did not know cash-back reward was available)
 2. (Product did not qualify)
 3. (Other **[SPECIFY: _____]**)
 98. Don't Know
 99. Refused

H. Customer Demographics

The last few questions are for statistical purposes only.

- H1. What type of fuel does your water heater use?
1. (Natural gas)
 2. (Electricity)
 3. (Propane/Bottled gas)
 4. (Wood)
 5. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)

- H2. What type of home do you live in? Is it a: **[READ LIST]**
1. Single-family home, detached house
 2. Attached house (townhouse, row house, or duplex)
 3. Multifamily apartment or condo building with 4 or more units
 4. Mobile/manufactured home
 5. Co-op/retirement community
 6. Other **[SPECIFY: _____]**
 98. (Don't know)
 99. (Refused)
- H3. Do you or members of your household own this home or do you rent? **[DO NOT READ LIST; RECORD ONE ANSWER]**
1. (Own/buying)
 2. (Rent/lease)
 3. (Occupied without payment of rent)
 4. (Other **[SPECIFY: _____]**)
 98. (Don't know)
 99. (Refused)
- H4. What is the highest level of school that you have completed? **[READ CATEGORIES IF NECESSARY]**
1. Less than ninth grade
 2. Ninth to twelfth grade; no diploma
 3. High school graduate (includes GED)
 4. Some college, no degree
 5. Associates degree
 6. Bachelor's degree
 7. Graduate or professional degree
 98. (Don't know)
 99. (Refused)
- H5. Which of the following categories best represents your age? Please stop me when I get to the appropriate category. **[READ LIST]**
1. 18-24
 2. 25-34
 3. 35-44
 4. 45-54
 5. 55-64
 6. 65-74
 7. 75 or older
 98. (Don't know)
 99. [(Refused)

H6. Which category best describes your total household income in 2015 before taxes? Please stop me when I get to the appropriate category. **[READ LIST]**

1. Less than \$20,000
2. \$20,000, up to \$50,000
3. \$50,000, up to \$75,000
4. \$75,000, up to \$100,000
5. \$100,000, up to \$150,000
6. \$150,000, up to \$200,000
7. \$200,000 or more
98. (Don't know)
99. (Refused)

[CLOSING SCRIPT] Those are all the questions we have. Focus on Energy appreciates your input. Thank you very much for your time.

**Wisconsin Focus on Energy
Smart Thermostat Pilot
Participant Survey CY 2016**

This survey is designed for customers who received a Focus on Energy Reward for purchasing a smart thermostat through the Smart Thermostat Pilot component of the Focus on Energy Residential and Enhanced Rewards Program.

Topics	Researchable Questions	Question Numbers
Program awareness	How did the customer hear about the Smart Thermostat Reward?	Section B
Customer experience	Are customers satisfied with the application process? Were there any barriers? What opportunities for improvement exist? How easy was the thermostat to install? How satisfied are customers with the thermostat?	Section C
Previous equipment	What type of thermostat did customers replace with the smart thermostat? How were they using the old thermostat?	Section E
Smart thermostat usage	How are customers using the smart thermostat? How are they interacting with the smart thermostat? How frequently do customers override the schedule?	Section D
Freeridership	Assess freeridership	Section F
Participant spillover	Assess participant spillover	Section G
Demographics	What are the general household characteristics of Residential and Enhanced Rewards participants? What type of heating and cooling systems do customers have in their home?	Section H

Target Quota: 70 participants

- Interviewer instructions are in green.
- CATI programming instructions are in red.
- Response choices in parenthesis should not be read
- Questions with an * are core Focus questions

A. Introduction

- A1. Hello, my name is [FIRST NAME], and I am calling on behalf of Focus on Energy. Can I please speak with [CUSTOMER NAME]? [IF CUSTOMER UNAVAILABLE SCHEDULE A CALLBACK] Focus on Energy is actively seeking your opinions about your recent experience with Focus on Energy's Smart Thermostat Reward. Our records show that you received a Reward from Focus on Energy for purchasing a smart thermostat. Is that correct?
1. (Yes)
 99. (No/Don't know) [ASK TO SPEAK WITH SOMEONE WHO KNOWS AND BEGIN AGAIN. IF PERSON DOESN'T RECOGNIZE PROGRAM SAY: "You may remember receiving a \$100 Reward from Focus on Energy for installing a new thermostat that connects to your home's Wi-Fi network, known as a "smart thermostat". Does this sound familiar now?"] [THANK AND TERMINATE IF DON'T REMEMBER AND NO ONE ELSE IN HOUSEHOLD KNOWS.]
 88. (Refused) [THANK AND TERMINATE]
- A2. Great, would you be willing to participate in a short survey to help Focus on Energy evaluate and improve their programs? All your answers will be kept confidential.
1. (Continue)
 2. (No) [THANK AND TERMINATE]
 99. (Don't know) [THANK AND TERMINATE]
 88. (Refused) [THANK AND TERMINATE]

Back-up information, not to be programmed:

[If "No – Not a convenient time," ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: "APPROXIMATELY 20 MINUTES."]

[IF NEEDED: I am not selling anything, we are interested in your opinions to help improve our programs, and understand how to assist customers in saving money on their utility bills. Your response will remain confidential."]

[IF NEEDED: If the respondent says that they have already been contacted by the program via an email/online survey or a postcard survey, the following response should be provided: "Focus on Energy follows up with each participant to ensure that it has met its high customer service standards through a brief online or postcard questionnaire. The survey that I am calling about now explores additional questions to help improve the program's offerings."]

[IF CUSTOMER IS WARY OF THE SURVEY, REASSURE THEM THAT YOU ARE NOT SELLING ANYTHING. IF NECESSARY OFFER JOE FONTAINE WITH THE PUBLIC SERVICE COMMISSION OF WISCONSIN (608-266-0910) AS THE PERSON TO CONTACT WITH ANY QUESTIONS ABOUT THE VALIDITY OF THE RESEARCH.]

[TERMINATION SCRIPT: Those are all the questions we have for you. Thank you very much for your time."]

B. Awareness and Satisfaction

- B1. *Where did you hear about Focus on Energy’s Reward for smart thermostats? [DO NOT READ LIST, RECORD ONE ANSWER]
1. (Television)
 2. (Radio)
 3. (Print media (magazine, newspaper article or advertisement))
 4. (Billboard/outdoor ad)
 5. (Bill insert)
 6. (Direct mail/brochure/postcard from Focus on Energy)
 7. (Direct mail/brochure/postcard from a source other than Focus on Energy)
 8. (Family/friends/word-of-mouth)
 9. (Focus on Energy or Utility website)
 10. (Other website [SPECIFY: _____])
 11. (Email)
 12. (Social Media)
 13. (Focus on Energy or Utility representative)
 14. (Contractor)
 15. (Realtor, home builder)
 16. (Retail stores)
 17. (Home/trade shows)
 18. (Sporting or community event)
 19. (Other, [SPECIFY: _____])
 99. (Don’t know)
 88. (Refused)

C. Application Process and Installation

- C1. What kind of thermostat did you purchase? Was it a/an...? [READ OPTIONS AND RECORD ONE RESPONSE]
1. Allure Energy Eversense
 2. Ecobee3
 3. Honeywell Lyric
 4. Lennox iComfort S30
 5. Nest 2nd Generation
 6. Nest 3rd Generation
 7. Radio Thermostat CT50
 8. Radio Thermostat CT80
 9. (Other, [SPECIFY: _____])
 99. (Don’t know)
 88. (Refused)

[USE TABLE BELOW TO CODE FOR “MEASURE NAME” GOING FORWARD]

C1	[Measure Name]	"A, an, or some"
1	Allure Eversense	an
2	Ecobee	an
3	Honeywell Lyric	a
4	Lennox iComfort	a
5	Nest	a
6	Nest	a
7	Radio	a
8	Radio	a
9	[specify]	a/an

C2. Did you purchase your smart thermostat...? [READ OPTIONS AND RECORD ONE RESPONSE]

1. In a store
2. Online, or
3. Directly from a contractor
99. (Don't know)
88. (Refused)

C3. Did you submit the application for the reward online or on a paper form?

1. Online
2. Paper
99. (Don't know)
88. (Refused)

C4. How satisfied are you with the Focus on Energy Reward application process? Would you say you are ... [READ LIST]

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not at all satisfied
99. (Don't know)
88. (Refused)

[ASK IF C4 = 3 OR 4]

C5. Why are you [INSERT ANSWER FROM C4] with the application process? [DO NOT READ LIST; RECORD ALL THAT APPLY]

1. (Difficulty filling out the application [ASK: What was difficult? _____])
2. (Application processing took too long [ASK: How long did it take? _____])
3. (Other [SPECIFY: _____])
99. (Don't know)
88. (Refused)

[ASK C6 IF C4 = 3 OR 4, OTHERWISE SKIP TO C7]

C6. Do you have any suggestions to improve the application process?

1. [RECORD RESPONSE]

- 2. (No suggestions)
- 99. (Don't know)
- 88. (Refused)

C7. Did you or someone in your household install the thermostat yourself, or did a contractor install it for you?

- 1. I or someone in my household installed it
- 2. Contractor installed it [SKIP TO C10]
- 3. It hasn't been installed yet [SKIP TO C17]
- 99. (Don't know) [SKIP TO C14]
- 88. (Refused) [SKIP TO C14]

[ASK C8 IF C7 = 1]

C8. Thinking about just the installation of your [MEASURE NAME] thermostat and not about how the thermostat works, how easy was the smart thermostat to install? Would you say it was...?

- 1. Very easy
- 2. Somewhat easy
- 3. Not too easy
- 4. Not at all easy
- 99. (Don't know)
- 88. (Refused)

[ASK C9 IF C8 = 2, 3, OR 4]

C9. What was difficult about installing your thermostat?

- 1. [RECORD RESPONSE]
- 99. (Don't know)
- 88. (Refused)

[ASK C10 IF C7 = 2, OTHERWISE SKIP TO C13]

C10. Why did you hire a contractor instead of installing the thermostat yourself?

- 1. [RECORD RESPONSE]
- 99. (Don't know)
- 88. (Refused)

C11. Looking back now, do you think that hiring a contractor was necessary for effectively installing the thermostat?

- 1. (Yes) [Probe for reason why: _____]
- 2. (No) [Probe for reason why: _____]
- 99. (Don't know)
- 88. (Refused)

C12. Were you satisfied with the quality of the installation by the contractor?

- 1. (Yes)
- 2. (No) [Probe for reason why not: _____]
- 99. (Don't know)
- 88. (Refused)

C13. Did you have to install any new wiring to get the thermostat properly installed?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

[SKIP C14 IF C7 = 3]

C14. Is the [INSERT MEASURE NAME] currently installed in your home?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

[ASK C15 IF C14 = 2]

C15. Was the thermostat installed and then removed, or has it not been installed yet?

1. (Installed and removed)
2. (Not installed yet)
99. (Don't know)
88. (Refused)

[ASK C16 IF C15 = 1]

C16. Why was the thermostat removed?

1. [RECORD RESPONSE]
99. (Don't know)
88. (Refused)

[ASK C17 IF C7 = 3 OR C15 = 2, OTHERWISE SKIP TO SECTION D]

C17. Why has the smart thermostat not been installed yet? [DO NOT READ LIST; RECORD ALL THAT APPLY]

1. (Haven't had time)
2. (Don't know how to install it)
3. (Other, [SPECIFY: _____])
99. (Don't know)
88. (Refused)

C18. When do you plan to install your smart thermostat? [READ LIST IF NEEDED]

1. (Never)
2. (1 week)
3. (2 weeks)
4. (3 weeks)
5. (1 month)
6. (2 months)
7. (More than 2 months)
99. (Don't know)
88. (Refused)

D. Smart Thermostat Usage and Functionality

These next questions are about how you are currently using your **NEW** thermostat.

- D1. Does your [MEASURE NAME] thermostat automatically change the temperature of your home based on your schedule?
1. (Yes)
 2. (No)
 99. (Don't know)
 88. (Refused)

[ASK D2 IF D1 = 1]

- D2. Did you or someone in your household program the thermostat, or did a contractor program it for you?
1. (I or someone in my household programmed it)
 2. (Contractor programmed it)
 3. (No one programmed the thermostat)
 99. (Don't know)
 88. (Refused)

- D3. How do you most often control your [MEASURE NAME] thermostat? Do you...?[READ LIST AND RECORD ONE RESPONSE]
1. Manually adjust temperature using a regular schedule, by manually changing the temperature for different times of the day or week
 2. Manually adjust temperature using no regular schedule
 3. Keep it at a constant temperature throughout each season
 4. Rely on the thermostat to change temperatures at different times of the day or week
 5. Some other way [SPECIFY: _____]
 99. (Don't know)
 88. (Refused)

- D4. In what ways have you accessed your thermostat to perform actions such as changing your temperature settings or schedule? [READ LIST AND RECORD ALL THAT APPLY]
1. On the thermostat itself
 2. Through the smartphone or tablet app
 3. Through the website
 99. (Don't know)
 88. (Refused)

[ASK IF MORE THAN ONE RESPONSE TO D4]

- D5. How do you most often access the thermostat? [READ RESPONSES FROM D4 IF NEEDED, RECORD ONE RESPONSE]
1. On the thermostat itself
 2. Through the smartphone or tablet app
 3. Through the website
 99. (Don't know)
 88. (Refused)

[ASK D6 IF D4 = 1]

- D6. How often do you use the thermostat itself to manually change the temperature of your home? This would not include any “learning periods” for smart thermostats [READ LIST AND RECORD ONE RESPONSE]
1. Never
 2. Once per month
 3. Several times per month
 4. Several times per week
 5. Once per day
 6. Several times per day
 99. (Don't know)
 88. (Refused)

[ASK D7 IF D4 = 2]

- D7. How often do you or a household member use the smartphone or tablet app to manually change the temperature of your home? [READ LIST AND RECORD ONE RESPONSE]
1. Never
 2. Once per month
 3. Several times per month
 4. Several times per week
 5. Once per day
 6. Several times per day
 99. (Don't know)
 88. (Refused)

[ASK D8 IF D4 = 3]

- D8. How often do you or a household member use the website to manually change the temperature of your home? [READ LIST AND RECORD ONE RESPONSE]
1. Never
 2. Once per month
 3. Several times per month
 4. Several times per week
 5. Once per day
 6. Several times per day
 7. This Feature is not available for my thermostat
 99. (Don't know)
 88. (Refused)

[ASK D9 IF D3 = 4 OR 5]

- D9. What had the greatest influence on how you chose your [MEASURE NAME] thermostat temperature and time settings? Was it...? [READ LIST AND RECORD ONE RESPONSE]
1. Set the same as your previous thermostat
 2. Information from the manufacturer website
 3. [DO NOT READ IF D2 = 1] The HVAC contractor programmed it
 4. Or did you manually set the temperatures while your thermostat “learned”
 5. Other [SPECIFY: _____]
 99. (Don't know)

88. (Refused)

D10. I am going to read you a list of thermostat set-up activities. For each, please rate how easy or difficult it was to perform that activity. If you don't have experience with one of these actions, please tell me whether you have not performed this action or whether the contractor performed it. [READ EACH ITEM AND RECORD 1 = Very easy, 2 = Somewhat easy, 3 = Not too easy, 4 = Not at all easy, 5 = I have not performed this activity, 6 = Contractor performed this activity, DO NOT READ: 99=Don't know, 88=Refused]

- a. Program the temperature by hour of day and day of week
- b. Set up the thermostat mobile or tablet application
- c. Set up an online account for my new thermostat

D11. I am going to read you a list of activities you may have performed with your new thermostat. For each, please rate how easy or difficult it has been to use your thermostat for that activity. If you have not performed the activity, please give that as your answer. [READ EACH ITEM AND RECORD 1 = Very easy, 2 = Somewhat easy, 3 = Not too easy, 4 = Not at all easy, 5 = I have not performed this activity, DO NOT READ: 99=Don't know, 88=Refused]

- a. Navigate through different functions and settings of my thermostat
- b. View current temperature settings
- c. Increase or decrease the temperature
- d. Change the temperature schedule (change temperature for different times of day and days of week)
- e. Keep the temperature in my home comfortable

D12. Now, I am going to read you a list of online capabilities of your thermostat. You would have accessed these through either the smartphone or tablet application or by going directly to the manufacturer's website and signing in. For each, please tell me if you have used this function. [READ LIST AND RECORD ALL THAT APPLY]

1. Check how much energy you have used
2. Adjust the thermostat temperature settings
3. Modify your temperature setting schedule
4. Check inside or outside temperature
5. Just checking it out to see what it has to offer
6. Other [SPECIFY: _____]
99. (Don't know)
88. (Refused)

D13. Overall, how satisfied are you with your [MEASURE NAME] thermostat? Are you...?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not at all satisfied
99. (Don't know)
88. (Refused)

[SKIP IF D13 = 99 or 88]

D14. Why are you [INSERT RESPONSE FROM D13] with your new thermostat?

- 1. [RECORD VERBATIM: _____]
- 99. (Don't know)
- 88. (Refused)

E. Old Thermostat Usage

These next questions are designed to provide us with an understanding of how you used your **OLD** thermostat.

- E1. What type of thermostat did your [MEASURE NAME] thermostat replace? [READ LIST AND RECORD ONE RESPONSE]
- 1. Manual thermostat
 - 2. Programmable thermostat
 - 3. Wi-Fi connected or smart or learning thermostat [ASK: What brand and model was your old thermostat? _____]
 - 99. (Don't know)
 - 88. (Refused)

- E2. Which option best represents how you most often used or interacted with your **OLD** thermostat in the summer months? [READ LIST AND RECORD ONE RESPONSE]
- 1. Manually adjusted temperature using a regular schedule by changing the temperature for different times of the day or week.
 - 2. Manually adjusted temperature using no regular schedule
 - 3. Kept it at a constant temperature throughout each season
 - 4. [DO NOT READ IF E1 = 1] Relied on the programmed schedule of temperature, and never manually changed the temperature
 - 5. [DO NOT READ IF E1 = 1] Relied on the programmed schedule of temperatures, but sometimes manually changed the temperature
 - 6. Some other way [SPECIFY: _____]
 - 99. (Don't know)
 - 88. (Refused)

[ASK E3 IF E2 = 1, 2, 4, 5, or 6; OTHERWISE SKIP TO E5]

- E3. In the summer months, did you typically [IF E2 = 1, 2, OR 6 SAY "MANUALLY CHANGE"; IF E2 = 3 OR 4 SAY "PROGRAM CHANGES TO" the thermostat setting when you were away from home or asleep?
- 1. (Yes, when I was away)
 - 2. (Yes, when I was asleep)
 - 3. (Yes, when I was away and asleep)
 - 4. (No)
 - 99. (Don't know)
 - 88. (Refused)

[ASK E4 IF E3 = 1, 2, 3, OTHERWISE SKIP TO E50]

- E4. How did you set the thermostat when [INSERT RESPONSE FROM E3: AWAY, ASLEEP, or AWAY AND ASLEEP]?
1. [RECORD RESPONSE]
 99. (Don't know)
 88. (Refused)
- E5. What was the main driver for how you determined your temperature settings with your **OLD** thermostat in the summer months? [READ LIST AND RECORD ONE RESPONSE]
1. Based on comfort
 2. Based on saving money
 3. Based on habit
 4. Based on being environmentally responsible
 5. Some other reason [SPECIFY: _____]
 6. (Not applicable, I rarely changed the temperature of my thermostat)
 99. (Don't know)
 88. (Refused)
- E6. Now I'd like to ask the same questions, but about your old thermostat usage in the winter months. Which option best represents how you most often used your **OLD** thermostat in the winter months? [READ LIST AND RECORD ONE RESPONSE]
1. Manually adjusted temperature using a regular schedule by manually changing the temperature for different times of the day or week
 2. Manually adjusted temperature using no regular schedule
 3. Kept it at a constant temperature throughout each season
 4. [DO NOT READ IF E1 = 1] Relied on the programmed schedule of temperature, and never manually changed the temperature
 5. [DO NOT READ IF E1 = 1] Relied on the programmed schedule of temperatures, but sometimes manually changed the temperature.
 6. Some other way [SPECIFY: _____]
 99. (Don't know)
 88. (Refused)

[ASK E7 IF E6 = 1, 2, 4, 5, OTHERWISE SKIP TO E9]

- E7. In the winter months, did you typically [IF E6 = 1, 2, OR 6 SAY "MANUALLY CHANGE"; IF E6 = 3 OR 4 SAY "PROGRAM CHANGES TO"] the thermostat setting when you were away from home or asleep?
1. (Yes, when I was away)
 2. (Yes, when I was asleep)
 3. (Yes, when I was away and asleep)
 4. (No)
 99. (Don't know)
 88. (Refused)

[ASK E8 IF E7 = 1, 2, 3, OTHERWISE SKIP TO E9]

- E8. How did you set the thermostat when [INSERT RESPONSE FROM E7: AWAY, ASLEEP, or AWAY AND ASLEEP]?
1. [RECORD RESPONSE]
 99. (Don't know)

88. (Refused)

E9. What was the main driver for how you determined your temperature settings with your ***OLD*** thermostat in the winter months? [READ LIST AND RECORD ONE RESPONSE]

1. Based on comfort
2. Based on saving money
3. Based on habit
4. Based on being environmentally responsible
5. Some other reason [SPECIFY: _____]
6. (Not applicable, I rarely changed the temperature of my thermostat)
99. (Don't know)
88. (Refused)

F. Freeridership

I'd like to find out what your plans were for replacing your thermostat ***before*** you found out about the Focus on Energy Reward for smart thermostats.

F1. **Before** you heard anything about the Focus on Energy Reward for smart thermostats program, had you already purchased or installed your smart thermostat?

1. (Yes)
2. (No) [SKIP TO F3]
99. (Don't know) [SKIP TO F3]
88. (Refused) [SKIP TO F3]

F2. So just to be clear, you installed your smart thermostat before you heard anything about the Focus on Energy Reward for smart thermostats. Is that correct?

1. (Yes, that's correct) [SKIP TO G1]
2. (No, that's not correct)
99. (Don't know)
88. (Refused)

F3. **Before** you heard about the Focus on Energy Reward for smart thermostats, had you already been **planning to purchase** a smart thermostat?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

F4. Would you have installed the same smart thermostat without the Reward from Focus on Energy?

1. (Yes) [SKIP TO F6]
2. (No)
99. (Don't know)
88. (Refused)

- F5. So I understand, would you have installed a different thermostat without the Focus on Energy Reward or would you have decided to install nothing?
1. (I would have installed a different thermostat)
 2. (I would have decided to install nothing) [SKIP TO F8]
 99. (Don't know) [SKIP TO F10]
 88. (Refused) [SKIP TO F10]
- F6. When you say you would have installed a thermostat without the Focus on Energy Reward from Focus on Energy, would you have installed a smart thermostat, that is, one with Wi-Fi and occupancy sensor capabilities?
1. (Yes)
 2. (No)
 99. (Don't know)
 88. (Refused)
- F7. And, thinking about timing, without the Focus on Energy Reward, would you have installed the thermostat... [READ LIST]
1. At the same time [SKIP TO F11]
 2. Within the same year [SKIP TO F11]
 3. One to two years out [SKIP TO F11]
 4. More than two years out [SKIP TO F11]
 5. Never [SKIP TO F8]
 99. (Don't know) [SKIP TO F10]
 88. (Refused) [SKIP TO F10]
- F8. So just to confirm, you would not have installed a thermostat at all, without a Focus on Energy Reward. Is that correct?
1. (Yes) [SKIP TO F11]
 2. (No)
 99. (Don't know)
 88. (Refused)
- F9. Without the Focus on Energy Reward, would you have installed a thermostat, but one that does not have the Wi-Fi or occupancy sensor capabilities of a smart thermostat?
1. (Yes)
 2. (No)
 99. (Don't know)
 88. (Refused)
- F10. And with respect to timing, would you have installed the thermostat... [READ LIST]
1. At the same time
 2. Within the same year
 3. One to two years out
 4. More than two years out
 5. Never
 99. (Don't know)

88. (Refused)

F11. Please tell me how important the Focus on Energy Reward was in your decision to purchase the smart thermostat. Would you say it was ... [READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (Don't know)
88. (Refused)

G. Spillover

Now I'd like to talk to you about any energy saving improvements you may have made since installing the smart thermostat and receiving a reward from Focus on Energy.

G1. Since installing the smart thermostat and receiving a reward from Focus on Energy, have you installed any other energy-efficient products in your home that you did NOT receive a Reward for? By energy-efficient products, I mean appliances such as ENERGY STAR clothes washers; high efficiency water heaters, insulation or windows, or ENERGY STAR lighting such as CFL light bulbs.

1. (Yes)
2. (No) [SKIP TO G5]
99. (Don't know) [SKIP TO G5]
88. (Refused) [SKIP TO G5]

G2. What were the products that you installed without getting a Reward? [DO NOT READ LIST; CLARIFY AS NEEDED TO CODE ANSWER CORRECTLY, RECORD ALL THAT APPLY]

1. (Gas boiler)
2. (Gas furnace)
3. (Gas tank-less water heater)
4. (Gas storage water heater)
5. (Electric tank-less water heater)
6. (Electric storage water heater)
7. (Insulation; attic and ceiling) [ASK: How many square feet?]
8. (Insulation; floor) [ASK: How many square feet?]
9. (Insulation; wall) [ASK: How many square feet?]
10. (Insulation; other [SPECIFY: _____]) [ASK: How many square feet?]
11. (Air sealing)
12. (Clothes washer)
13. (Dishwasher)
14. (Windows) [ASK: How many square feet?]
15. (Programmable thermostat)
16. (Efficient lighting; CFLs) [ASK: How many did you install?]
17. (Efficient lighting; LEDs) [ASK: How many did you install?]
18. (Efficient lighting; Fluorescent) [ASK: How many did you install?]
19. (Efficient lighting; Fixtures) [ASK: How many did you install?]

- 20. (Efficient lighting; other [SPECIFY: _____]) [ASK: How many did you install?]
- 21. (Refrigerator)
- 22. (Heat pump water heater)
- 23. (Room AC) [ASK: How many did you install?]
- 24. (Central AC)
- 25. (Heat Pump; air source)
- 26. (Heat pump; ground source)
- 27. (Heat pump; other [SPECIFY: _____])
- 28. (Smart power strip)
- 29. (Other [SPECIFY: _____]) [ASK: How many did you install?]
- 99. (Don't know)
- 88. (Refused)

G3. Please tell me how important your experience with the Focus on Energy program was in your decision to install [INSERT EACH ONE SELECTED IN G2]. Was it very important, somewhat important, not too important, or not at all important in your decision to install these energy-efficient product(s)?

- 1. Very important
- 2. Somewhat important
- 3. Not too important
- 4. Not at all important
- 99. (Don't know)
- 88. (Refused)

[ASK G4 FOR EACH ONE SELECTED IN G2 EXCEPT 12 (clothes washer), 13 (dishwasher), 14 (windows), 16-20 (Efficient lighting), 21 (refrigerator), 22 (heat pump water heater), 23 (room AC), OR 28 (other).]

G4. Why didn't you apply for and receive a Reward for [INSERT EACH ONE SELECTED IN G2]? [DO NOT READ LIST; RECORD ONE ANSWER FOR EACH]

- 1. (Did not know Reward was available)
- 2. (Product did not qualify)
- 3. (Other [SPECIFY: _____])
- 99. (Don't know)
- 88. (Refused)

G5. Since receiving the Focus on Energy Reward for installing your smart thermostat, have you taken any other actions to reduce energy consumption? [PROBE WITH: "An energy efficiency action could be turning down the temperature on your thermostat or you water heater, or powering down appliances or computers."]

- 1. (Yes)
- 2. (No)
- 99. (Don't know)
- 88. (Refused)

[ASK IF G5 = 1]

G6. Specifically, what actions have you taken? [DON'T READ LIST; RECORD ALL THAT APPLY]

- 1. (Turn down temperature on water heater)
- 2. (Turn down temperature on furnace)

- 3. (Take shorter or fewer showers)
- 4. (Wash clothes only in cold water)
- 5. (Not leave water running)
- 6. (Turn off appliances)
- 7. (Turn off computers)
- 8. (Turn off lights)
- 9. (Other [SPECIFY: _____])
- 99. (Don't know)
- 88. (Refused)

G7. Please tell me how important the Focus on Energy Reward for smart thermostats was in your decision to [INSERT EACH ONE SELECTED IN G6]. Was it very important, somewhat important, not too important, or not at all important in your decision to take these action(s)? [IF MORE THAN ONE ACTION/HABIT IN G6, "Was it the same influence for every action?"]

- 1. Very important
- 2. Somewhat important
- 3. Not too important
- 4. Not at all important
- 99. (Don't know)
- 88. (Refused)

G8. And, over time, have you continued to take these actions to save energy? Let's start with ... [INSERT EACH ANSWER FROM G6]. [IF NEEDED, "Have you continued to take this action to save energy?"]

- 1. (Yes)
- 2. (No)
- 99. (Don't know)
- 88. (Refused)

H. Demographics and Household Information

We are almost finished. These last few questions are for analytical purposes only.

H1. What is the primary type of heating system in your home? [READ LIST IF NEEDED, RECORD ONE RESPONSE]

- 1. Central forced air furnace
- 2. Air-source heat pump
- 3. Ground-source heat pump
- 4. Hot water boiler
- 5. Steam boiler
- 6. Radiant floor heating
- 7. Electric baseboard heating
- 8. Portable heaters [SPECIFY NUMBER OF HEATERS: _____]
- 9. Other [SPECIFY: _____]
- 10. None (no heating system)
- 99. (Don't know)
- 88. (Refused)

H2. *What type of fuel do you use to heat your home?

1. (Natural gas)
2. (Electricity)
3. (Propane/Bottled gas)
4. (Wood)
5. (Other [SPECIFY: _____])
99. (Don't know)
88. (Refused)

H3. What is the primary type of cooling system in your home? [READ LIST IF NEEDED, RECORD ONE RESPONSE]

1. Central air conditioner
2. Air-source heat pump
3. Ground-source heat pump
4. Room air conditioners [SPECIFY NUMBER OF UNITS: _____]
5. Ductless mini-split air conditioner
6. Evaporative cooler (Swamp cooler)
7. Portable fans
8. Whole-house fan
9. Ceiling fans
10. Other [SPECIFY: _____]
11. None (no cooling system)
99. (Don't know)
88. (Refused)

H4. Did the number of occupants in your home increase or decrease since your thermostat was installed?

1. (Yes, increased [RECORD NUMBER OF ADDITIONAL OCCUPANTS])
2. (Yes, decreased [RECORD NUMBER OF ADDITIONAL OCCUPANTS])
99. (Don't know)
88. (Refused)

[ASK IF H2 = 1]

H5. Since your thermostat was installed, were any new appliances or equipment installed in your home that require additional **natural gas** usage?

1. (Yes, [SPECIFY TYPE AND QUANTITY OF ITEMS: _____])
2. (No)
99. (Don't know)
88. (Refused)

H6. Since your thermostat was installed, were any new appliances or equipment installed in your home that require additional **electricity** usage?

1. (Yes, [SPECIFY TYPE AND QUANTITY OF ITEMS: _____])
2. (No)
99. (Don't know)
88. (Refused)

- H7. Have you been away from your home for any extended period since the thermostat was installed?
1. (Yes, [RECORD NUMBER OF DAYS: _____])
 2. (No)
 99. (Don't know)
 88. (Refused)

[ASK IF H7 = 1]

- H8. Were you away more, less, or about the same as you were last fall and winter?
1. (More)
 2. (Less)
 3. (About the same)
 99. (Don't know)
 88. (Refused)

- H9. Other than weather, were there any other changes that occurred since your thermostat was installed that would cause your energy usage to be higher or lower than the previous year?
1. (Yes, higher [ASK: What changes occurred? _____])
 2. (Yes, lower [ASK: What changes occurred? _____])
 3. (No)
 99. (Don't know)
 88. (Refused)

These last few questions are for statistical purposes only.

- H10. *What type of home do you live in? Is it a: [READ LIST]
1. Single-family home, detached house
 2. Attached house (townhouse, row house, or duplex)
 3. Multifamily apartment or condo building with 4 or more units
 4. Mobile/manufactured home
 5. Co-op/retirement community
 6. Other [SPECIFY: _____]
 99. (Don't know)
 88. (Refused)
- H11. * Do you or members of your household own this home or do you rent?
1. (Own/buying)
 2. (Rent/lease)
 3. (Occupied without payment of rent)
 4. (Other [SPECIFY: _____])
 99. (Don't know)
 88. (Refused)
- H12. * Approximately how many square feet of living space does your home have? Don't include the basement unless it is a space that you consider lived in. [READ CATEGORIES IF NEEDED]
1. (Less than 1,000)
 2. (1,000 to less than 1,500)
 3. (1,500 to less than 2,000)

- 4. (2,000 to less than 2,500)
- 5. (2,500 to less than 3,000)
- 6. (3,000 to less than 4,000)
- 7. (4,000 or more)
- 99. (Don't know)
- 88. (Refused)

H13. *About when was your home first built? [READ CATEGORIES IF NEEDED]

- 1. (Before 1970s)
- 2. (1970s)
- 3. (1980s)
- 4. (1990 – 1994)
- 5. (1995 – 1999)
- 6. (2000s)
- 7. (Other [SPECIFY: _____])
- 99. (Don't know)
- 88. (Refused)

H14. *Including yourself, how many people currently live in this household on a full time basis? [IF NEEDED: Please include everyone who lives in your home whether or not they are related to you and exclude anyone who is just visiting or in the military or children who may be away at college.]

- 1. [RECORD ANSWER]
- 99. (Don't know)
- 88. (Refused)

[ASK IF H14 > 1]

H15. * How many people under the age of 18 live in your home year round?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7 OR MORE
- 99. (Don't know)
- 88. (Refused)

H16. * What is the highest level of school that someone in your home has completed? [READ CATEGORIES, IF NECESSARY]

- 1. (Less than ninth grade)
- 2. (Ninth to twelfth grade; no diploma)
- 3. (High school graduate; includes GED)
- 4. (Some college, no degree)
- 5. (Associates degree)
- 6. (Bachelor's degree)
- 7. (Graduate or professional degree)
- 99. (Don't know)

88. (Refused)

H17. * Which of the following categories best represents your age? Please stop me when I get to the appropriate category.

1. 18-24
2. 25-34
3. 35-44
4. 45-54
5. 55-64
6. 65-74
7. 75 or older
99. (Don't know)
88. (Refused)

H18. * Which category best describes your total household income in 2014 before taxes? [IF NEEDED: "Please stop me when I get to the appropriate category."]

1. Less than \$20,000
2. \$20,000, up to \$50,000
3. \$50,000, up to \$75,000
4. \$75,000, up to \$100,000
5. \$100,000, up to \$150,000
6. \$150,000 up to \$200,000
7. \$200,000 or more
99. (Don't know)
88. (Refused)

CLOSING SCRIPT: Those are all the questions we have. **Focus on Energy** appreciates your input. Thank you for your time.

Nonresidential Programs

- Agriculture, Schools and Government Program Participant Survey
- Business Incentive Program Participant Survey
- Chain Stores and Franchises Program Franchise Owner Interview Guide
- Chain Stores and Franchises Program National Rebate Administrator Interview Guide
- Chain Stores and Franchises Program Participant Survey
- Design Assistance Program Design Team and Building Owner Interview Guide
- Large Energy Users Program Participant Survey
- Nonresidential Online Trade Ally Survey
- On Demand Savings Pilot Participant Interview Guide
- RECIP Biogas and Biomass Participant Interview Guide
- RECIP Solar PV Online Participant Survey
- Renewable Energy Loan Fund Nonparticipating Lender Interview Guide
- Renewable Energy Loan Fund Participating Lender Interview Guide
- Renewable Energy Loan Fund Participant Interview Guide
- Small Business Program Participant Survey
- Strategic Energy Management Pilot Participant Interview Guide

Focus on Energy Agriculture, Schools, and Government Program Participant Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Screening	Project initiation process	A4-A7
Marketing and Outreach	Program Awareness	A7
	Brand identity and messaging impacts	B1-B5
	Key factors influencing customers' decision to participate in program	C1
Barriers	Obstacles to installing high-efficiency equipment	D1-D4
	Barriers to and opportunities for converting participants from single program participation to engaging in more and deeper efforts to save energy.	C2-C10
Satisfaction	Assess satisfaction with various program components and reasons for dissatisfaction among participants	E1-E5, K1-K2
Firmographics	Determine building and company characteristics of participants	Section J
Decision Making	Understand decision making processes and how they relate to corporate structure	C1-C3, C5-C10
Verification, Freeridership and Spillover	Verify project, assess net savings	A3, F1-F5

Interviewer instructions are in green.

CATI programming instructions are in red.

Words in (parentheses) should not be read to respondent

* Indicates core questions

~ Indicates CY 2016 marketing core questions

SAMPLE Variables:

[CONTACT]

[SITE ADDRESS]

[UTILITY]

[MEASURE CATEGORY1]

[MEASURE CATEGORY2]

[MEASURE CATEGORY3]

[APPLICATION MEASURE ID]

[MEASURETYPE] *Indicates quota*

Quotas:

Agriculture = 70

Schools/Government = 70

Total = 140 completes

Table 1. Sector Definitions for Sample

Property Usage Category	Sector	Company Category in Survey
Agriculture	Agriculture	Business
Education	Schools & Government	School
Food Sales	Schools & Government	Business
Food Service	Agriculture	Business
Health Care (Inpatient)	Schools & Government	Facility
Lodging	Schools & Government	Business
Manufacturing	Agriculture	Business
Office	Schools & Government	Business
Other	Any Sector	Business
Public Assembly	Schools & Government	Business
Public Order and Safety	Schools & Government	Business
Religious Worship	Schools & Government	Facility
Service	Schools & Government	Business
Skilled Nursing	Schools & Government	Facility
Unknown	Agriculture	Business
Water and Waste Water	Schools & Government	Business

A. Introduction

- A1. Hello, may I speak with [PRIMARY APPLICATION CONTACT] [OR IF NO NAME: May I speak with the person who handles energy and building project decisions for your company]? [IF NOT AT THIS LOCATION, ASK FOR PHONE NUMBER AND NAME AT CORRECT LOCATION AND CALL RESPONDENT]
1. (Yes) [CONTINUE WITH RESPONDENT ON PHONE]
 88. (REFUSED) [THANK AND TERMINATE]

Back-up information, not to be programmed:

[If “No – Not available,” ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: “APPROXIMATELY 20 MINUTES.”]

[IF NEEDED:] This survey is for research purposes only and this is not a marketing call. Your participation in this study is important so that Focus on Energy can improve the energy efficiency programs it offers to businesses and other organizations.

[Only if asked for a Focus on Energy contact to verify the survey authenticity, offer Joe Fontaine with the Public Service Commission of Wisconsin, 608-266-0910.]

[Only if respondent says they already did a survey: Thank you for your responses to that survey. This is another Focus on Energy study that you have been selected for, that asks a few more questions about your experience with the program and your decision-making. If you have a few more spare minutes, we would greatly appreciate your responses!]

- A2. Hello, I am [INSERT NAME] calling with a short survey on behalf of Wisconsin's Focus on Energy Programs. Are you the person responsible for making equipment decisions regarding energy efficiency at your [COMPANY CATEGORY IN SURVEY]? [IF NEEDED: Focus on Energy is a statewide utility-funded program to encourage energy efficiency.]
1. (Yes)
 2. (No, but person can come to phone) [START OVER AT A2 WITH NEW RESPONDENT]
 3. (No, not available [SCHEDULE CALLBACK])
 99. (DON'T KNOW) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
 88. (REFUSED) [THANK AND TERMINATE]
- A3. *Our records show that you installed energy efficient equipment including [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3] at [SITE ADDRESS]. To ensure our records are correct, can you confirm that you received an incentive for this/these upgrades earlier this year?
1. (Yes)
 2. (No, wrong year) [Record correct year, if possible]
 3. (No, wrong address) [RECORD CORRECT ADDRESS]
 4. (No, wrong measure) [CORRECT BELOW]
- (MEASURE CATEGORY1 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE1]
 (MEASURE CATEGORY2 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE2]
 (MEASURE CATEGORY3 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE3]
5. (No, I did not install any measures) [THANK AND TERMINATE]
 99. (Don't Know) Is there someone we could speak with that would know this? [Record name and contact information: _____]
 88. (Refused) [THANK AND TERMINATE]
- [THANK AND TERMINATE TEXT: Those are all of our questions. Thanks for your help. Have a nice day.]
- A4. *I'm going to read you a short list. Please tell me who, if anyone, was involved in helping you initiate your energy efficiency project. [READ LIST AND MARK 1= YES, 2=NO, 99=DON'T KNOW; 88 REFUSED FOR EACH]
1. Your contractor or vendor
 2. A Focus on Energy "Energy Advisor"
 3. Your utility account manager
- A5. *How did your [COMPANY CATEGORY IN SURVEY] learn about the Focus on Energy incentives available for this project? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE] [IF RESPONDENT MENTIONS WEBSITE CLARIFY IF UTILITY OR FOCUS ON ENERGY WEBSITE SO YOU KNOW HOW TO CODE ANSWER ON LIST.]
1. (Contact with Focus on Energy representative through phone, email, or in person)
 2. (Focus on Energy quarterly newsletter)
 3. (Focus on Energy website)
 4. (Focus on Energy sponsored workshop or event)
 5. (Focus on Energy printed program materials)
 6. (Contact with utility representative)
 7. (Utility mailing, bill insert, or utility Website)
 8. (Word of mouth (family, friend, or business colleague))
 9. (I contacted my contractor/vendor to ask)
 10. (My contractor/vendor let me know about them)

- 11. (Previously participated in program/received an incentive)
- 12. (Through a trade association or professional organization SPECIFY: _____)
- 13. (Other [SPECIFY: _____])
- 99. (Don't know)
- 88. (Refused)

A6. *Did you receive an incentive check in the mail for the upgrades, or did your contractor provide a discount on the cost of the project?

- 1. (Rebate in the mail)
- 2. (Contractor discount)
- 99. (Don't know)
- 88. (Refused)

A7. *Who took the lead role in completing the application for the financial incentive? Was it... [READ OPTIONS, RANDOMIZE OPTIONS, ONLY ONE RESPONSE]

- 1. You (i.e., respondent)
- 2. Someone at your organization
- 3. The contractor and/or vendor
- 4. A Focus on Energy Energy Advisor
- 5. Someone else [SPECIFY: _____]
- 99. (Don't know)
- 88. (Refused)

A8. *Who else contributed to completing the application for the financial incentive? [READ LIST IF NEEDED, PROBE FOR ALL PARTIES INVOLVED, MULTIPLE RESPONSES ALLOWED]

- 1. (Me i.e., respondent)
- 2. (No one else was involved)
- 3. (Someone else at my organization)
- 4. (The contractor and/or vendor)
- 5. (A Focus on Energy Energy Advisor)
- 6. (Other) [SPECIFY: _____]
- 99. (Don't know)
- 88. (Refused)

B. Awareness

B1. ~ What are the first three words that come to mind when you hear "Focus on Energy"? [OPEN END, RECORD ONLY FIRST THREE RESPONSES]

B2. ~ I'm going to read you a list of statements about Focus on Energy and your business' energy utility. Please tell me whether you agree or disagree with these statements. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?] [READ LIST AND RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=SOMEWHAT DISAGREE, AND 4=STRONGLY DISAGREE; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]

- 1. Focus on Energy is a brand that [COMPANY CATEGORY IN SURVEY] like mine can trust.

2. Focus on Energy offers programs, tools, and/or services that are valuable to my [COMPANY CATEGORY IN SURVEY].
3. Focus on Energy provides programs that can or did help my [COMPANY CATEGORY IN SURVEY] lower its overall energy costs.
4. Focus on Energy provides programs that can or did help make my [COMPANY CATEGORY IN SURVEY] more aware of energy saving opportunities.
5. My business is more satisfied with our energy utility because it partners with Focus on Energy to offer energy efficiency programs to [COMPANY CATEGORY IN SURVEY]'S like mine.

B3. ~ Which of the following statements would make you most interested in learning more about Focus on Energy? [READ LIST AND RANDOMIZE; ALLOW ONLY ONE RESPONSE; REPEAT INTRO STATEMENT AS NEEDED] Focus on Energy helps Wisconsin [COMPANY CATEGORY IN SURVEY]:

1. Reduce their energy costs and save money.
2. With solutions to use energy smarter and save money.
3. Grow by making smarter decisions about their energy use.
4. Lower their energy costs.
5. (None of the above)

B4. ~ Next, I'm going to read you a list of statements about energy efficiency. Please tell me how important these statements are to you when deciding whether to upgrade the energy efficiency of your [COMPANY CATEGORY IN SURVEY]. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say this statement is very important, somewhat important, not too important, or not at all important when deciding whether to upgrade the energy efficiency of your business?] [READ LIST AND RECORD 1=VERY IMPORTANT, 2=SOMEWHAT IMPORTANT, 3=NOT TOO IMPORTANT, AND 4=NOT AT ALL IMPORTANT; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]

1. Energy efficiency saves my [COMPANY CATEGORY IN SURVEY] money on its utility bills.
2. Energy efficiency upgrades make my [COMPANY CATEGORY IN SURVEY] more productive.
3. Energy efficiency creates jobs and contributes to the Wisconsin economy.
4. Energy efficiency protects the environment by reducing greenhouse gas emissions.

B5. ~ Of the energy efficiency statements you just rated, which is the **most important** to you when deciding whether to upgrade the energy efficiency of your business? [READ RESPONSES FROM B4 IF NEEDED; RECORD ONLY ONE RESPONSE]

99. (DON'T KNOW)
88. (REFUSED)

[ASK B6-B11 IF SECTOR = AGRICULTURE; OTHERWISE SKIP TO C1]

B6. In the past ten months, have you heard a radio advertisement from Focus on Energy promoting financial incentives for agriculture customers?

1. (Yes)
2. (No)
3. (Don't Know)
4. (Refused)

[ASK IF B6-B8 = 1; OTHERWISE SKIP TO B9]

- B7. What radio station were you listening to? [OPEN END]
- B8. Approximately, what time of day did you hear this ad?
1. (Early Morning [Between 12am and 12pm])
 2. (Afternoon [Between 12pm and 6pm])
 3. (Evening [Between 6pm and 12am])
 88. (Don't know)
 99. (Refused)
- B9. In the past ten months, have you received any materials in the mail promoting Focus on Energy financial incentives for agriculture customers?
1. (Yes)
 2. (No)
 88. (Don't know)
 99. (Refused)
- B10. Which of the following ways would you prefer to stay informed about Focus on Energy financial incentives for agriculture customers? (MULTIPLE RESPONSES ALLOWED; READ LIST)
1. E-mails
 2. Energy Advisor
 3. Trade Ally
 4. Website
 5. Mailings
 6. Other [SPECIFY _____]
- B11. [SKIP IF A4 = 1 OR A5 = 10] Did your contractor inform you of the Focus on Energy financial incentives available to agriculture customers when discussing your energy efficiency project?
1. (Yes)
 2. (No)
 88. (Don't know)
 99. (Refused)

C. Decision Making

Now I'd like to understand more about how your [COMPANY CATEGORY IN SURVEY] made decisions about your specific energy efficiency project.

- C1. *What factor was **most** important to your [COMPANY CATEGORY IN SURVEY]'S decision to make the energy-efficient upgrades for which you received an incentive? [DO NOT READ LIST; SINGLE RESPONSE]
1. (To save money on energy bills, reduce energy consumption or energy demand)
 2. (To obtain a program or bonus incentive)
 3. (To obtain a tax credit)
 4. (To replace old (but still functioning) equipment)
 5. (To replace broken equipment)
 6. (To enhance performance of our system(s))
 7. (To improve comfort)

- 8. (Other [SPECIFY _____])
- 99. (DON'T KNOW)
- 88. (Refused)

C2. How important is energy efficiency to your [COMPANY CATEGORY IN SURVEY] when making facility upgrades or improvements? Is energy efficiency ... [READ LIST]

- 1. Very important
- 2. Somewhat important
- 3. Not too important
- 4. Not at all important
- 99. (DON'T KNOW)
- 88. (Refused)

C3. [ASK IF C2 = 3 or 4] Can you please tell me why energy efficiency is not an important factor in making upgrades?

- 1. [RECORD ANSWER _____-]
- 99. (DON'T KNOW)
- 88. (Refused)

[ASK C5 IF SECTOR = AGRICULTURE]

C4. Who at your [COMPANY CATEGORY IN SURVEY] is responsible for making decisions about energy efficient upgrades? [OPEN END]

[ASK C5 IF SECTOR = SCHOOLS AND GOVERNMENT]

C5. ~ Do you require approval from someone else at your [COMPANY CATEGORY IN SURVEY] before committing to an energy efficiency upgrade?

- 1. (Yes)
- 2. (No)
- 99. (DON'T KNOW)
- 88. (REFUSED)

[ASK IF C5 = 1]

C6. ~ Who at your [COMPANY CATEGORY IN SURVEY] is involved in making decisions about energy efficiency when making capital upgrades or improvements? [DO NOT READ OPTIONS, MULTIPLE RESPONSES ALLOWED]

- 1. (School board)
- 2. (School administrator)
- 3. (School principal)
- 4. (Facility maintenance department/manager)
- 5. (Corporate headquarters)
- 6. (Board of directors)
- 7. (Other [SPECIFY _____])
- 99. (DON'T KNOW)
- 88. (Refused)

[ASK IF C5 = 2 OR SECTOR = AGRICULTURE]

C7. ~ What is your role or title at your [COMPANY CATEGORY IN SURVEY]?

1. (Farm owner)
2. (School board)
3. (School administrator)
4. (School principal)
5. (Facility or Maintenance lead/manager)
6. (Chief financial officer (CFO)/ controller/ finance manager)
7. (Other [SPECIFY _____])
99. (DON'T KNOW)
88. (Refused)

[ASK IF C5 = 1]

C8. ~ How long does it typically take to receive approval to move forward with an energy efficiency upgrade?

1. Less than 1 week
2. 1-3 weeks
3. 4-6 weeks
4. 7-8 weeks
5. Over 8 weeks
99. (Don't know)
88. (Refused)

C9. *Have you or anyone else within your [COMPANY CATEGORY IN SURVEY] attended an in-person or web-based training delivered by Focus on Energy in the past two years?

1. (Yes)
2. (No)
99. (DON'T KNOW)
88. (REFUSED)

C10. [IF C9 = 1] How important was your [COMPANY CATEGORY IN SURVEY]'s participation in the training in your decision to move forward with the energy efficient upgrades for which you received an incentive? Was the training... [READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (DON'T KNOW)
88. (Refused)

D. Benefits and Barriers

D1. *What would you say are the main benefits your [COMPANY CATEGORY IN SURVEY] has experienced as a result of the energy efficiency upgrades we've discussed? [DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]

1. (The incentive payment)
2. (Using less energy, reducing energy consumption or energy demand)
3. (Saving money on our utility bills; lower energy bills)
4. (Increased occupant comfort)
5. (Better aesthetics/better or brighter lighting)

- 6. (Saving money on maintenance costs)
- 7. (Other [SPECIFY: _____])
- 8. (NO BENEFITS)
- 99. (DON'T KNOW)
- 88. (Refused)

D2. *What do you see as the biggest challenges to making energy-efficient improvements inside your [COMPANY CATEGORY IN SURVEY]? [DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]

- 1. (High initial costs)
- 2. (Budget limitations)
- 3. (Long payback period)
- 4. (Funding competition for other investments/improvements)
- 5. (Replacing equipment without affecting operations)
- 6. (Understanding potential areas for improvement)
- 7. (Lack of awareness about available incentives for energy efficient equipment)
- 8. (Understanding equipment eligibility)
- 9. (Issues with program application process)
- 10. (Finding a trade ally with which to work)
- 11. (Inadequate incentive)
- 12. (Other [SPECIFY: _____])
- 99. (Don't know)
- 88. (Refused)

D3. *What could be done to help your [COMPANY CATEGORY IN SURVEY] overcome challenges with energy-efficiency improvements? [DO NOT READ LIST, ALLOW MULTIPLE RESPONSES]

- 1. (Nothing)
- 2. (Higher incentives)
- 3. (Provide upfront rewards/instant discount from contractor)
- 4. (Offer low-interest loans)
- 5. (Simplify the paperwork)
- 6. (Provide better/more information about program [SPECIFY WHAT TYPE OF INFORMATION THEY NEED: _____])
- 7. (Provide an energy audit)
- 8. (Other [RECORD VERBATIM ANSWER _____])
- 99. (DON'T KNOW)
- 88. (REFUSED)

D4. ~ Who do you seek out as a trusted source of information regarding energy efficiency upgrades for your [COMPANY CATEGORY IN SURVEY]? [MULTIPLE RESPONSE ALLOWED; READ LIST IF NEEDED]

- 1. My Focus on Energy Advisor
- 2. [UTILITY] representatives
- 3. My installation contractor/vendor
- 4. Other business owners/managers
- 5. Web resources [SPECIFY SITES]
- 6. (Other) [SPECIFY]
- 99. (DON'T KNOW)

88. (REFUSED)

E. Satisfaction and Application Ease

Next, I have a few questions for you about your application.

[ASK IF A7 = 1; OTHERWISE SKIP TO E3]

E1. *Thinking about the application you submitted, how easy would you say this paperwork was to complete? Would you say: [READ LIST]

1. Very easy,
2. Easy,
3. Somewhat challenging, or
4. Very challenging?
99. (Don't know)
88. (Refused)

[ASK IF E1 = 3 or 4]

E2. *Why do you say that? [OPEN END]

[ASK IF A6 = 1; OTHERWISE SKIP TO E5]

E3. *Thinking about the incentive check you received in the mail, about how long did it take to arrive?

[READ LIST]

1. 1-3 weeks
2. 4-6 weeks
3. 7-8 weeks
4. Over 8 weeks?
99. (Don't know)
88. (Refused)

E4. How satisfied were you with the time it took to receive the check? Would you say: [READ LIST]

1. Very satisfied,
2. Somewhat satisfied,
3. Not too satisfied, or
4. Not satisfied at all?
99. (Don't know)
88. (Refused)

E5. *Is there anything that Focus on Energy could have done to improve your overall experience with the Agriculture, Schools, and Government Program? [DO NOT READ THE LIST, RECORD ALL THAT APPLY]

1. (Better/more communication [SPECIFY: Who would you like more communication from? _____])
2. (Quicker response time [SPECIFY: Who would you like a quicker response time from? ____])
3. (Larger selection of eligible equipment [ASK: What energy-efficient equipment should Focus on Energy offer incentives for? _____])
4. (Increasing the incentive amount)
5. (Simplify the application process) [ASK: In what way? _____]
6. (Allow me to fill out the applications online)

- 7. (Simplify the website)[ASK: In what way? _____]
- 8. (Provide quicker approval on applications)
- 9. (Send incentive check out faster)
- 10. (Provide more face-time with my Energy Advisor (this may include more frequent visits))
- 11. (Other [SPECIFY: _____])
- 12. (No, nothing)
- 99. (DON'T KNOW)
- 88. (REFUSED)

F. Verification

F1. Is all of the energy efficient equipment installed through the program this year still in-place and operating as planned? My records show that you installed [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3].

- 1. (Yes)
- 2. (No)
- 99. (Don't know)
- 88. (Refused)

[ASK IF F1 = 2]

F2. Which equipment is no longer installed or operating as planned? [DO NOT READ LIST, SELECT ALL THAT APPLY]

- 1. [MEASURE CATEGORY1]
- 2. [MEASURE CATEGORY2]
- 3. [MEASURE CATEGORY3]
- 4. (Other) [SPECIFY]
- 99. (Don't know)
- 88. (Refused)

[ASK F3-F4 IF F1 = 2] [ASK FOR EACH RESPONSE SELECTED IN F2]

F3. How many [RESPONSE FROM F2] did you or your contractor originally install?
[OPEN END NUMERIC]

F4. And how many [RESPONSE FROM F2] are installed and operating now?
[OPEN END NUMERIC]

F5. Why are the [RESPONSE FROM F2] no longer installed or operating as planned?
[OPEN END]

G. +Freeridership

[IF A4.1 = 1 SKIP TO SECTION H; OTHERWISE ASK SECTION G - CONTRACTOR DID NOT HELP IN THE DECISION MAKING]

Now I'd like to talk with you a bit more about your decisions to purchase the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though you may have received incentives for other energy saving equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1] that was purchased.

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- G1. First, did your [COMPANY CATEGORY IN SURVEY] have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before learning about the incentive?
1. (Yes) [ASK G2]
 2. (No) [SKIP TO G4]
 99. (DON'T KNOW) [SKIP TO G4]
 88. (REFUSED) [SKIP TO G4]
- G2. Prior to learning about the incentive, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your [COMPANY CATEGORY IN SURVEY]'s capital budget?
1. (Yes)
 2. (No) [ASK G4]
 99. (DON'T KNOW) [ASK G4]
 88. (REFUSED) [ASK G4]
- G3. Had your organization **ALREADY** ordered or purchased the [MEASURE CATEGORY1 OR C_MEASURE1][s] **BEFORE** your [COMPANY CATEGORY IN SURVEY] heard about the Agriculture, Schools, and Government Program incentive?
1. (Yes)
 2. (No)
 99. (DON'T KNOW)
 88. (REFUSED)
- G4. Would you have purchased and installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy?
1. (Yes) [SKIP TO G7]
 2. (No) [SKIP TO G9]
 99. (DON'T KNOW) [ASK G5]
 88. (REFUSED) [ASK G5]
- G5. Would you have installed **something** without the incentive and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]
1. (Yes, would have installed something) [ASK G6]
 2. (No, would NOT have installed anything) [SKIP TO G9]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]
- G6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK G7]
 2. (No) [ASK G7]
 99. (DON'T KNOW) [ASK G7]
 88. (REFUSED) [ASK G7]

- G7. And without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes, the same amount) [ASK G8]
 2. (No, would have installed less) [ASK G8]
 3. (No, would have installed more) [ASK G8]
 99. (DON'T KNOW) [ASK G8]
 88. (REFUSED) [ASK G8]
- G8. Without the [INCENTIVE FOR MEASURE CATEGORY1 OR C_MEASURE1] and information or education from Focus on Energy, would you have installed the [MEASURE CATEGORY1 OR C_MEASURE1][s]...[READ LIST AND RECORD ONE RESPONSE]
1. Within the same year? [SKIP TO I1]
 2. Within one to two years? [SKIP TO I1]
 3. Within three to five years? [SKIP TO I1]
 4. In more than five years? [SKIP TO I1]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]
- [ASK G9 TO G12 IF G4 = 2 OR G5 = 2]
- G9. When you say **you would not have installed** the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy, would you have installed anything at all?
1. (Yes, would have installed something) [ASK G10]
 2. (No, would not have installed anything at all) [SKIP TO I1]
 99. (DON'T KNOW) [ASK G10]
 88. (REFUSED) [ASK G10]
- G10. Without the incentive and information or education from Focus on Energy, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK G11]
 2. (No) [ASK G11]
 99. (DON'T KNOW) [ASK G11]
 88. (REFUSED) [ASK G11]
- G11. Without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes, the same amount) [ASK G12]
 2. (No, would have installed less) [ASK G12]
 3. (No, would have installed more) [ASK G12]
 99. (DON'T KNOW) [ASK G12]
 88. (REFUSED) [ASK G12]
- G12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]
1. In the same year? [SKIP TO I1]
 2. In one to two years? [SKIP TO I1]

- 3. In three to five years? [SKIP TO I1]
- 4. More than five years out? [SKIP TO I1]
- 99. (DON'T KNOW) [SKIP TO I1]
- 88. (REFUSED) [SKIP TO I1]

H. +Freeridership – (Contractor)

[ASK EITHER SECTION G OR SECTION H]

[ASK IF A4.1 = 1 CONTRACTOR HELPED IN THE DECISION MAKING]

Now I'd like to talk with you about the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though your contractor may have installed other energy efficient equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1].

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- H1. At the time that you first started working with your contractor on this project, had you...? [READ LIST AND RECORD ONE FOR EACH: 1=YES OR 2=NO OR 99=DON'T KNOW OR 88=REFUSED]
- 1. Already been thinking about purchasing [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 2. Already begun collecting information about [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 3. Already selected the particular [MEASURE CATEGORY1 OR C_MEASURE1] and were going to purchase it?
 - 4. Already purchased the [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 5. Already installed the [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 6. Already heard about Focus on Energy?
- H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before you began working with your contractor?
- 1. (Yes) [ASK H3]
 - 2. (No) [SKIP TO H4]
 - 99. (DON'T KNOW) [SKIP TO H4]
 - 88. (REFUSED) [SKIP TO H4]
- H3. Before you began working with your contractor, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your [COMPANY CATEGORY IN SURVEY] 's capital budget?
- 1. (Yes) ASK:
- H3a. Did your contractor help your organization make the decision to include the purchase of [MEASURE CATEGORY1 OR C_MEASURE1][s] in your [COMPANY CATEGORY IN SURVEY] 's capital budget? [ASK H4]
- 2. (No) [ASK H4]
 - 99. (DON'T KNOW) [ASK H4]
 - 88. (REFUSED) [ASK H4]
- H4. Would you have purchased and installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy?
- 1. (Yes) [SKIP TO H7]

- 2. (No) [SKIP TO H9]
- 99. (DON'T KNOW) [ASK H5]
- 88. (REFUSED) [ASK H5]

H5. Would you have installed **something** without the involvement of your contractor and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]

- 1. (Yes, would have installed something) [ASK H6]
- 2. (No, would NOT have installed anything) [SKIP TO H9]
- 99. (DON'T KNOW) [SKIP TO I1]
- 88. (REFUSED) [SKIP TO I1]

H6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?

- 1. (Yes) [ASK H7]
- 2. (No) [ASK H7]
- 99. (DON'T KNOW) [ASK H7]
- 88. (REFUSED) [ASK H7]

H7. And without the involvement of your contractor and information or education from Focus on Energy would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?

- 1. (Yes) [ASK H8]
- 2. (No) [ASK J7.2a]

H7a. Would you have installed fewer or more of the [MEASURE CATEGORY1 OR C_MEASURE1](S)? [ASK H8]

- 99. (DON'T KNOW) [ASK H8]
- 88. (REFUSED) [ASK H8]

H8. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the [MEASURE CATEGORY1 OR C_MEASURE1][s]...[READ LIST AND RECORD ONE RESPONSE]

- 1. Within the same year? [SKIP TO I1]
- 2. Within one to two years? [SKIP TO I1]
- 3. Within three to five years? [SKIP TO I1]
- 4. In more than five years? [SKIP TO I1]
- 99. (DON'T KNOW) [SKIP TO I1]
- 88. (REFUSED) [SKIP TO I1]

[ASK H9 TO H13 IF H4 = 2 OR H5 = 2]

H9. When you say **you would not have installed** the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy, would you have installed anything at all?

- 1. (Yes) [ASK H10]
- 2. (No) [SKIP TO I1]
- 99. (DON'T KNOW) [ASK H10]
- 88. (REFUSED) [ASK H10]

- H10. Without the assistance from your contractor and information or education from Focus on Energy, **would you have installed** something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK H11]
 2. (No) [ASK H11]
 99. (DON'T KNOW) [ASK H11]
 88. (REFUSED) [ASK H11]
- H11. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes) [ASK H12]
 2. (No) [ASK J11.2A]
- H11a. Would you have installed fewer or more of the [MEASURE CATEGORY1 OR C_MEASURE1][S]? [ASK H12]
99. (DON'T KNOW) [ASK H12]
 88. (REFUSED) [ASK H12]
- H12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]
1. In the same year? [ASK H13]
 2. In one to two years? [ASK H13]
 3. In three to five years? [ASK H13]
 4. More than five years out? [ASK H13]
 99. (DON'T KNOW) [ASK H13]
 88. (REFUSED) [ASK H13]
- H13. If the assistance or information from your contractor had not been available, would you have done anything differently on this project?
1. (Yes) [ASK H14]
 2. (No) [SKIP TO I1]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]
- H14. What would you have done differently? [RECORD OPEN ENDED RESPONSE]

I. +Spillover

[ASK EVERYONE SECTION K]

- I1. Since making these energy efficiency upgrades has your company installed any other energy-efficient products in your facility that you did **NOT** receive a Focus on Energy incentive for? [IF NEEDED: By energy-efficient products, I mean high efficiency lighting such as LEDs; high efficiency motors and variable speed drives; high efficiency air conditioners and heat pumps, efficient heating or water heating equipment, et cetera.]
1. (Yes) [ASK I2]
 2. (No) [SKIP TO SECTION J]
 99. (DON'T KNOW) [SKIP TO SECTION J]

88. (REFUSED) [SKIP TO SECTION J]

12. What were the other energy-efficient products that you installed without getting an incentive? [DO NOT READ LIST; MARK ALL THAT APPLY; 99=DON'T KNOW, 88=REFUSED, -96=N/A] [If the customer says they bought something but have not installed it, the equipment has to be installed and operating for us to count it towards spillover.]

1. (CFLs)
2. (LEDs)
3. (Fluorescent tubes (T5s, T8s, etc.))
4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
5. (High efficiency motors)
6. (Air source heat pumps)
7. (Ground source heat pumps)
8. (Central AC)
9. (VSD (variable speed drive))
10. (Water heating equipment)
11. (Boiler)
12. (Compressed air equipment)
13. (Gas furnaces)
14. (Exit signs)
15. (Refrigeration equipment (refrigerators, freezers))
16. Operational Improvements [SPECIFY: _____]
17. (Other) [SPECIFY: _____]
99. (DON'T KNOW)
88. (REFUSED)

[ASK I2.11-I2.13 IF I2 = 1, 2, 3]

- I2.11 What is the wattage of the lighting? [SPECIFY]: _____
 I2.12 In what location was it installed (Wall/Ceiling/Outdoors)? [SPECIFY]: _____
 I2.13 What type of equipment was removed or replaced? [SPECIFY]: _____

[ASK I2.21-I2.23 IF I2 = 5]

- I2.21 What equipment was the motor installed on? [SPECIFY TYPE]: _____
 I2.22 What is the horsepower of the motor? [SPECIFY]: _____

[ASK I2.31-I2.33 IF I2 = 6, 7, 8]

- I2.31 What Fuel type is used? [SPECIFY]: _____
 I2.32 What is the efficiency rating of the equipment? [SPECIFY]: _____
 I2.33 What is the capacity of the equipment? [SPECIFY]: _____

[ASK I2.41-I2.42 IF I2 = 9]

- I2.41 What type of motor was it installed on? [SPECIFY TYPE]: _____
 I2.42 What is the horsepower of the motor? [SPECIFY]: _____

[ASK I2.51-I2.54 IF I2 = 10]

I2.51 What type of water heating equipment was purchased and installed? **[SPECIFY TYPE]:**

I2.52 What Fuel type is used? **[SPECIFY]:** _____

I2.53 What is the efficiency rating of the equipment? **[SPECIFY]:** _____

I2.54 (If water heater with storage) What is the capacity of the equipment? **[SPECIFY]:**

[ASK I2.61-I2.62 IF I2 = 12]

I2.61 What type of application was the compressed air equipment purchased and installed?

[SPECIFY APPLICATION]: _____

I2.62 What is the horsepower of the compressor motor? **[SPECIFY]:** _____

[ASK I2.71-I2.72 IF I2 = 13]

I2.71 What is the efficiency rating of the equipment? **[SPECIFY]:** _____

I2.72 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.81 IF I2 = 15]

I2.81 What type of refrigeration equipment was purchased and installed? **[SPECIFY TYPE]:** _____

13. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** How many **[INSERT ITEM FROM I2]** did you install?
[RECORD NUMBER _____, 99 FOR DON'T KNOW, 88 FOR REFUSED, AND -96 FOR N/A]]

14. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** Please tell me how important **[IF A4=1 READ, "the assistance from your contractor" OTHERWISE READ, "the Agriculture, Schools, and Government Program"]** was in your decision to install **[ANSWER FROM I2]**. Was it:

[EMPHASIZE EACH ANSWER OPTION AND PAUSE IN BETWEEN EACH OPTION.]

1. Very important,
2. Somewhat important,
3. Not too important, or
4. Not at all important?
99. (Don't know)
88. (Refused)

15. Was **[INSERT EACH ITEM FROM I2]** installed at **[SITE ADDRESS]**?

1. Yes
2. No (**ASK: What is the address of the location where you installed **[INSERT EACH ITEM FROM I2]**? **[SPECIFY _____]****)
(Don't know)
(Refused)

J. Firmographics

Finally, I would like to ask you some questions about your **[COMPANY CATEGORY IN SURVEY]**.

[ASK J1 AND J2 ONLY IF SECTOR= AGRICULTURE]

- J1. How many locations does your company operate in Wisconsin?
1. [RECORD NUMBER: _____]
 - (DON'T KNOW)
 - (REFUSED)
- J2. *Does your [COMPANY CATEGORY IN SURVEY] lease or own the facility or facilities?
1. (Lease)
 2. (Own)
 3. (Other [SPECIFY: _____])
 - (DON'T KNOW)
 - (REFUSED)

[ASK ALL RESPONDENTS J3]

- J3. *How many people are employed at the location where the project took place?
1. [RECORD NUMBER: _____]
 99. (DON'T KNOW)
 88. (REFUSED)

K. Closing

- K1. *Do you have any other comments about energy efficiency decisions and purchases you would like to share?
- [RECORD RESPONSE: _____; 99 FOR DON'T KNOW, 88 FOR REFUSED]
- K2. *On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. May we share your responses with a program manager, who may contact you regarding your experience?
1. Yes
 2. No
 99. (DON'T KNOW)
 88. (REFUSED)

Thank you. We appreciate your help with this survey. You may also be contacted for an on-site visit if you have not been contacted already. Have a nice day.

Focus on Energy Business Incentive Program Participant Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Screening	Project initiation process	A4-A7
Marketing and Outreach	Program Awareness	A7
	Brand identity and messaging impacts	B1-B5
	Key factors influencing customers' decision to participate in program	C1
Barriers	Obstacles to installing high-efficiency equipment	D1-D4
	Barriers to and opportunities for converting participants from single program participation to engaging in more and deeper efforts to save energy.	C2-C9
Satisfaction	Assess satisfaction with various program components and reasons for dissatisfaction among participants	E1-E5, K1-K2
Firmographics	Determine building and company characteristics of participants	J1-J4
Decision Making	Understand decision making processes and how they relate to corporate structure	C1-C3, C4-C9
Verification, Freeridership and Spillover	Verify project, assess net savings	A3, F1-I5

Interviewer instructions are in green.

CATI programming instructions are in red.

Words in (parentheses) should not be read to respondent

* Indicates core questions

~ Indicates CY 2016 marketing core questions

SAMPLE Variables:

[CONTACT]

[SITE ADDRESS]

[UTILITY]

[MEASURE CATEGORY1]

[MEASURE CATEGORY2]

[MEASURE CATEGORY3]

[APPLICATION MEASURE ID]

[MEASURETYPE] *Indicates quota*

Total = 70 completes

A. Introduction

- A1. Hello, may I speak with [PRIMARY APPLICATION CONTACT] [OR IF NO NAME: May I speak with the person who handles energy and building project decisions for your company]? [IF NOT AT THIS LOCATION, ASK FOR PHONE NUMBER AND NAME AT CORRECT LOCATION AND CALL RESPONDENT]

1. (Yes) [CONTINUE WITH RESPONDENT ON PHONE]
88. (REFUSED) [THANK AND TERMINATE]

Back-up information, not to be programmed:

[If “No – Not available,” ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: “APPROXIMATELY 20 MINUTES.”]

[IF NEEDED:] This survey is for research purposes only and this is not a marketing call. Your participation in this study is important so that Focus on Energy can improve the energy efficiency programs it offers to businesses and other organizations.

[Only if asked for a Focus on Energy contact to verify the survey authenticity, offer Joe Fontaine with the Public Service Commission of Wisconsin, 608-266-0910.]

[Only if respondent says they already did a survey: Thank you for your responses to that survey. This is another Focus on Energy study that you have been selected for, that asks a few more questions about your experience with the program and your decision-making. If you have a few more spare minutes, we would greatly appreciate your responses!]

- A2. Hello, I am [INSERT NAME] calling with a short survey on behalf of Wisconsin’s Focus on Energy Programs. Are you the person responsible for making equipment decisions regarding energy efficiency at your company? [IF NEEDED: Focus on Energy is a statewide utility-funded program to encourage energy efficiency.]
1. (Yes)
 2. (No, but person can come to phone) [START OVER AT A2 WITH NEW RESPONDENT]
 3. (No, not available [SCHEDULE CALLBACK])
 99. (DON’T KNOW) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
 88. (REFUSED) [THANK AND TERMINATE]

- A3. *Our records show that you installed energy efficient equipment including [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3] at [SITE ADDRESS]. To ensure our records are correct, can you confirm that you received an incentive for this/these upgrades earlier this year?

1. (Yes)
2. (No, wrong year) [Record correct year, if possible]
3. (No, wrong address) [RECORD CORRECT ADDRESS]
4. (No, wrong measure) [CORRECT BELOW]

(MEASURE CATEGORY1 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE1]

(MEASURE CATEGORY2 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE2]

(MEASURE CATEGORY3 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE3]

5. (No, I did not install any measures) [THANK AND TERMINATE]
99. (Don’t Know) Is there someone we could speak with that would know this? [Record name and contact information: _____]
88. (Refused) [THANK AND TERMINATE]

[THANK AND TERMINATE TEXT: Those are all of our questions. Thanks for your help. Have a nice day.]

- A4. *I'm going to read you a short list. Please tell me who, if anyone, was involved in helping you initiate your energy efficiency project. [READ LIST AND MARK 1= YES, 2=NO, 99=DON'T KNOW; 88 REFUSED FOR EACH]
1. Your contractor or vendor
 2. A Focus on Energy "Energy Advisor"
 3. Your utility account manager
- A5. *How did your organization learn about the Focus on Energy incentives available for this project? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE] [IF RESPONDENT MENTIONS WEBSITE CLARIFY IF UTILITY OR FOCUS ON ENERGY WEBSITE SO YOU KNOW HOW TO CODE ANSWER ON LIST.]
1. (Contact with Focus on Energy representative through phone, email, or in person)
 2. (Focus on Energy quarterly newsletter)
 3. (Focus on Energy website)
 4. (Focus on Energy sponsored workshop or event)
 5. (Focus on Energy printed program materials)
 6. (Contact with utility representative)
 7. (Utility mailing, bill insert, or utility Website)
 8. (Word of mouth (family, friend, or business colleague))
 9. (I contacted my contractor/vendor to ask)
 10. (My contractor/vendor let me know about them)
 11. (Previously participated in program/received an incentive)
 12. (Through a trade association or professional organization SPECIFY: _____)
 13. (Other [SPECIFY: _____])
 99. (Don't know)
 88. (Refused)
- A6. *Did you receive an incentive check in the mail for the upgrades, or did your contractor provide a discount on the cost of the project?
1. (Rebate in the mail)
 2. (Contractor discount)
 99. (Don't know)
 88. (Refused)
- A7. *Who took the lead role in completing the application for the financial incentive? Was it... [READ OPTIONS, RANDOMIZE OPTIONS, ONLY ONE RESPONSE]
1. You (i.e., respondent)
 2. Someone at your organization
 3. The contractor and/or vendor
 4. A Focus on Energy Energy Advisor
 5. Someone else [SPECIFY: _____]
 99. (Don't know)
 88. (Refused)
- A8. *Who else contributed to completing the application for the financial incentive? [READ LIST IF NEEDED, PROBE FOR ALL PARTIES INVOLVED, MULTIPLE RESPONSES ALLOWED]
1. (No one else was involved)

2. (Someone else at my organization)
3. (The contractor and/or vendor)
4. (A Focus on Energy Energy Advisor)
5. (Other) [SPECIFY: _____]
99. (Don't know)
88. (Refused)

B. Awareness

- B1. ~ What are the first three words that come to mind when you hear "Focus on Energy"? [OPEN END, RECORD ONLY FIRST THREE RESPONSES]
- B2. ~ I'm going to read you a list of statements about Focus on Energy and your business' energy utility. Please tell me whether you agree or disagree with these statements. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?] [READ LIST AND RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=SOMEWHAT DISAGREE, AND 4=STRONGLY DISAGREE; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]
1. Focus on Energy is a brand that businesses like mine can trust.
 2. Focus on Energy offers programs, tools, and/or services that are valuable to my business.
 3. Focus on Energy provides programs that can or did help my business lower its overall energy costs.
 4. Focus on Energy provides programs that can or did help make my business more aware of energy saving opportunities.
 5. My business is more satisfied with our energy utility because it partners with Focus on Energy to offer energy efficiency programs to businesses like mine.
- B3. ~ Which of the following statements would make you most interested in learning more about Focus on Energy? [READ LIST AND RANDOMIZE; ALLOW ONLY ONE RESPONSE; REPEAT INTRO STATEMENT AS NEEDED] Focus on Energy helps Wisconsin businesses:
1. Reduce their energy costs and save money.
 2. With solutions to use energy smarter and save money.
 3. Grow by making smarter decisions about their energy use.
 4. Lower their energy costs.
 5. (None of the above)
- B4. ~ Next, I'm going to read you a list of statements about energy efficiency. Please tell me how important these statements are to you when deciding whether to upgrade the energy efficiency of your business. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say this statement is very important, somewhat important, not too important, or not at all important when deciding whether to upgrade the energy efficiency of your business?] [READ LIST AND RECORD 1=VERY IMPORTANT, 2=SOMEWHAT IMPORTANT, 3=NOT TOO IMPORTANT, AND 4=NOT AT ALL IMPORTANT; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]
1. Energy efficiency saves my business money on its utility bills.
 2. Energy efficiency upgrades make my business more productive.

3. Energy efficiency creates jobs and contributes to the Wisconsin economy.
4. Energy efficiency protects the environment by reducing greenhouse gas emissions.

- B5. ~ Of the energy efficiency statements you just rated, which is the **most important** to you when deciding whether to upgrade the energy efficiency of your business? [READ RESPONSES FROM B4 IF NEEDED; RECORD ONLY ONE RESPONSE]
99. (DON'T KNOW)
 88. (REFUSED)

C. Decision Making

Now I'd like to understand more about how your organization made decisions about your specific energy efficiency project.

- C1. *What factor was **most** important to your company's decision to make the energy-efficient upgrades for which you received an incentive? [DO NOT READ LIST; SINGLE RESPONSE]
1. (To save money on energy bills, reduce energy consumption or energy demand)
 2. (To obtain a program or bonus incentive)
 3. (To obtain a tax credit)
 4. (To replace old (but still functioning) equipment)
 5. (To replace broken equipment)
 6. (To enhance performance of our system(s))
 7. (To improve comfort)
 8. (Other [SPECIFY _____])
 99. (DON'T KNOW)
 88. (Refused)
- C2. How important is energy efficiency to your organization when making capital upgrades or improvements? Is energy efficiency ... [READ LIST]
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not at all important
 99. (DON'T KNOW)
 88. (Refused)
- C3. [ASK IF C2 = 3 or 4] Can you please tell me why energy efficiency is not an important factor in making upgrades?
1. [RECORD ANSWER _____-]
 99. (DON'T KNOW)
 88. (Refused)
- C4. ~ Do you require approval from someone else at your organization before committing to an energy efficiency upgrade?
1. (Yes)
 2. (No)
 99. (DON'T KNOW)
 88. (REFUSED)

[ASK IF C4 = 1]

- C5. ~ Who at your organization is involved in making decisions about energy efficiency when making capital upgrades or improvements? [DO NOT READ OPTIONS, MULTIPLE RESPONSES ALLOWED]
1. (President/CEO/Executive Director)
 2. (Facility maintenance department/manager)
 3. (Corporate headquarters)
 4. (Board of directors)
 5. (Other [SPECIFY _____])
 99. (DON'T KNOW)
 88. (Refused)

[ASK IF C4 = 2]

- C6. ~ What is your role or title at your organization?
1. (President/CEO/Executive Director/Owner)
 2. (Facility or Maintenance lead/manager)
 3. (Chief financial officer (CFO)/ controller/ finance manager)
 4. (Other [SPECIFY _____])
 99. (DON'T KNOW)
 88. (Refused)

[ASK IF C4 = 1]

- C7. ~ How long does it typically take to receive approval to move forward with an energy efficiency upgrade?
1. Less than 1 week
 2. 1-3 weeks
 3. 4-6 weeks
 4. 7-8 weeks
 5. Over 8 weeks
 99. (Don't know)
 88. (Refused)

- C8. *Have you or anyone else within your organization attended an in-person or web-based training delivered by Focus on Energy in the past two years?
1. (Yes)
 2. (No)
 99. (DON'T KNOW)
 88. (REFUSED)

- C9. *[IF C8 = 1] How important was your business' participation in the training in your decision to move forward with the energy efficient upgrades for which you received an incentive? Was the training... [READ LIST]
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not at all important
 99. (DON'T KNOW)
 88. (Refused)

D. Benefits and Barriers

- D1. *What would you say are the main benefits your company has experienced as a result of the energy efficiency upgrades we've discussed? [DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]
1. (The incentive payment)
 2. (Using less energy, reducing energy consumption or energy demand)
 3. (Saving money on our utility bills; lower energy bills)
 4. (Increased occupant comfort)
 5. (Better aesthetics/better or brighter lighting)
 6. (Saving money on maintenance costs)
 7. (Other [SPECIFY: _____])
 8. (NO BENEFITS)
 99. (DON'T KNOW)
 88. (Refused)
- D2. *What do so see as the biggest challenges to making energy-efficient improvements inside your company? [DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]
1. (High initial costs)
 2. (Budget limitations)
 3. (Long payback period)
 4. (Funding competition for other investments/improvements)
 5. (Replacing equipment without affecting operations)
 6. (Understanding potential areas for improvement)
 7. (Lack of awareness about available incentives for energy efficient equipment)
 8. (Understanding equipment eligibility)
 9. (Issues with program application process)
 10. (Finding a trade ally with which to work)
 11. (Inadequate incentive)
 12. (Other [SPECIFY: _____])
 99. (Don't know)
 88. (Refused)
- D3. *What could be done to help your company overcome challenges with energy-efficiency improvements? [DO NOT READ LIST, ALLOW MULTIPLE RESPONSES]
1. (Nothing)
 2. (Higher incentives)
 3. (Provide upfront rewards/instant discount from contractor)
 4. (Offer low-interest loans)
 5. (Simplify the paperwork)
 6. (Provide better/more information about program [SPECIFY WHAT TYPE OF INFORMATION THEY NEED: _____])
 7. (Provide an energy audit)
 8. (Other [RECORD VERBATIM ANSWER _____])
 99. (DON'T KNOW)
 88. (REFUSED)

- D4. ~ Who do you seek out as a trusted source of information regarding energy efficiency upgrades for your business? [MULTIPLE RESPONSE ALLOWED; READ LIST IF NEEDED]
1. My Focus on Energy Energy Advisor
 2. [UTILITY] representatives
 3. My installation contractor/vendor
 4. Other business owners/managers
 5. Web resources [SPECIFY SITES]
 6. (Other) [SPECIFY]
 99. (DON'T KNOW)
 88. (REFUSED)

E. Satisfaction and Application Ease

Next, I have a few questions for you about your application.

[ASK IF A7 = 1; OTHERWISE SKIP TO E3]

- E1. *Thinking about the application you submitted, how easy would you say this paperwork was to complete? Would you say: [READ LIST]
1. Very easy,
 2. Easy,
 3. Somewhat challenging, or
 4. Very challenging?
 99. (Don't know)
 88. (Refused)

[ASK IF E1 = 3 or 4]

- E2. *Why do you say that? [OPEN END]

[ASK IF A6 = 1; OTHERWISE SKIP TO E5]

- E3. *Thinking about the incentive check you received in the mail, about how long did it take to arrive? [READ LIST]
1. 1-3 weeks
 2. 4-6 weeks
 3. 7-8 weeks
 4. Over 8 weeks?
 99. (Don't know)
 88. (Refused)
- E4. How satisfied were you with the time it took to receive the check? Would you say: [READ LIST]
1. Very satisfied,
 2. Somewhat satisfied,
 3. Not too satisfied, or
 4. Not satisfied at all?
 99. (Don't know)
 88. (Refused)

- E5. *Is there anything that Focus on Energy could have done to improve your overall experience with the Business Incentive Program? [DO NOT READ THE LIST, RECORD ALL THAT APPLY]

1. (Better/more communication [SPECIFY: Who would you like more communication from? _____])
2. (Quicker response time [SPECIFY: Who would you like a quicker response time from? ___])
3. (Larger selection of eligible equipment [ASK: What energy-efficient equipment should Focus on Energy offer incentives for? _____])
4. (Increasing the incentive amount)
5. (Simplify the application process)[ASK: In what way? _____]
6. (Allow me to fill out the applications online)
7. (Simplify the website)[ASK: In what way? _____]
8. (Provide quicker approval on applications)
9. (Send incentive check out faster)
10. (Provide more face-time with my Energy Advisor (this may include more frequent visits))
11. (Other [SPECIFY: _____])
12. (No, nothing)
99. (DON'T KNOW)
88. (REFUSED)

F. Verification

F1. Is all of the energy efficient equipment installed through the program this year still in-place and operating as planned? My records show that you installed [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3].

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

[ASK IF F1 = 2]

F2. Which equipment is no longer installed or operating as planned? [DO NOT READ LIST, SELECT ALL THAT APPLY]

1. [MEASURE CATEGORY1]
2. [MEASURE CATEGORY2]
3. [MEASURE CATEGORY3]
4. (Other) [SPECIFY]
99. (Don't know)
88. (Refused)

[ASK F3-F4 IF F1 = 2] [ASK FOR EACH RESPONSE SELECTED IN F2]

F3. How many [RESPONSE FROM F2] did you or your contractor originally install?
[OPEN END NUMERIC]

F4. And how many [RESPONSE FROM F2] are installed and operating now?
[OPEN END NUMERIC]

F5. Why are the [RESPONSE FROM F2] no longer installed or operating as planned?
[OPEN END]

G. +Freeridership

[IF A4.1 = 1 SKIP TO SECTION H; OTHERWISE ASK SECTION G - CONTRACTOR DID NOT HELP IN THE DECISION MAKING]

Now I'd like to talk with you a bit more about your decisions to purchase the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though you may have received incentives for other energy saving equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1] that was purchased.

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- G1. First, did your organization have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before learning about the incentive?
1. (Yes) [ASK G2]
 2. (No) [SKIP TO G4]
 99. (DON'T KNOW) [SKIP TO G4]
 88. (REFUSED) [SKIP TO G4]
- G2. Prior to learning about the incentive, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your organization's capital budget?
1. (Yes)
 2. (No) [ASK G4]
 99. (DON'T KNOW) [ASK G4]
 88. (REFUSED) [ASK G4]
- G3. Had your organization **ALREADY** ordered or purchased the [MEASURE CATEGORY1 OR C_MEASURE1][s] **BEFORE** your organization heard about the Business Incentive Program incentive?
1. (Yes)
 2. (No)
 99. (DON'T KNOW)
 88. (REFUSED)
- G4. Would you have purchased and installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy?
1. (Yes) [SKIP TO G7]
 2. (No) [SKIP TO G9]
 99. (DON'T KNOW) [ASK G5]
 88. (REFUSED) [ASK G5]
- G5. Would you have installed **something** without the incentive and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]
1. (Yes, would have installed something) [ASK G6]
 2. (No, would NOT have installed anything) [SKIP TO G10]
 99. (DON'T KNOW) [SKIP TO I1]

88. (REFUSED) [SKIP TO I1]

G6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?

1. (Yes) [ASK G7]
2. (No) [ASK G7]
99. (DON'T KNOW) [ASK G7]
88. (REFUSED) [ASK G7]

G7. And without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?

1. (Yes, the same amount) [ASK G8]
2. (No, would have installed less) [ASK G8]
3. (No, would have installed more) [ASK G8]
99. (DON'T KNOW) [ASK G8]
88. (REFUSED) [ASK G8]

G8. Without the [INCENTIVE FOR MEASURE CATEGORY1 OR C_MEASURE1] and information or education from Focus on Energy, would you have installed the [MEASURE CATEGORY1 OR C_MEASURE1][s]...[READ LIST AND RECORD ONE RESPONSE]

1. Within the same year? [SKIP TO I1]
2. Within one to two years? [SKIP TO I1]
3. Within three to five years? [SKIP TO I1]
4. In more than five years? [SKIP TO I1]
99. (DON'T KNOW) [SKIP TO I1]
88. (REFUSED) [SKIP TO I1]

[ASK G9 TO G12 IF G4 = 2 OR G5 = 2]

G9. When you say you **would not have installed** the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy, would you have installed anything at all?

1. (Yes, would have installed something) [ASK G10]
2. (No, would not have installed anything at all) [SKIP TO I1]
99. (DON'T KNOW) [ASK G10]
88. (REFUSED) [ASK G10]

G10. Without the incentive and information or education from Focus on Energy, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?

1. (Yes) [ASK G11]
2. (No) [ASK G11]
99. (DON'T KNOW) [ASK G11]
88. (REFUSED) [ASK G11]

G11. Without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?

1. (Yes, the same amount) [ASK G12]

- 2. (No, would have installed less) [ASK G12]
- 3. (No, would have installed more) [ASK G12]
- 99. (DON'T KNOW) [ASK G12]
- 88. (REFUSED) [ASK G12]

G12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]

- 1. In the same year? [SKIP TO I1]
- 2. In one to two years? [SKIP TO I1]
- 3. In three to five years? [SKIP TO I1]
- 4. More than five years out? [SKIP TO I1]
- 99. (DON'T KNOW) [SKIP TO I1]
- 88. (REFUSED) [SKIP TO I1]

H. +Freeridership - (Contractor)

[ASK EITHER SECTION G OR SECTION H]

[ASK IF A4.1 = 1 CONTRACTOR HELPED IN THE DECISION MAKING]

Now I'd like to talk with you about the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though your contractor may have installed other energy efficient equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1].

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- H1. At the time that you first started working with your contractor on this project, had you...? [READ LIST AND RECORD ONE FOR EACH: 1=YES OR 2=NO OR 99=DON'T KNOW OR 88=REFUSED]
- 1. Already been thinking about purchasing [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 2. Already begun collecting information about [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 3. Already selected the particular [MEASURE CATEGORY1 OR C_MEASURE1] and were going to purchase it?
 - 4. Already purchased the [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 5. Already installed the [MEASURE CATEGORY1 OR C_MEASURE1]?
 - 6. Already heard about Focus on Energy?
- H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before you began working with your contractor?
- 1. (Yes) [ASK H3]
 - 2. (No) [SKIP TO H4]
 - 99. (DON'T KNOW) [SKIP TO H4]
 - 88. (REFUSED) [SKIP TO H4]
- H3. Before you began working with your contractor, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your organization's capital budget?
- 1. (Yes) ASK:

- D2a. Did your contractor help your organization make the decision to include the purchase of [MEASURE CATEGORY1 OR C_MEASURE1][s] in your organization's capital budget? [ASK H4]
2. (No) [ASK H4]
 99. (DON'T KNOW) [ASK H4]
 88. (REFUSED) [ASK H4]
- H4. Would you have purchased and installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy?
1. (Yes) [SKIP TO H7]
 2. (No) [SKIP TO H9]
 99. (DON'T KNOW) [ASK H5]
 88. (REFUSED) [ASK H5]
- H5. Would you have installed **something** without the involvement of your contractor and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]
1. (Yes, would have installed something) [ASK H6]
 2. (No, would NOT have installed anything) [SKIP TO H9]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]
- H6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK H7]
 2. (No) [ASK H7]
 99. (DON'T KNOW) [ASK H7]
 88. (REFUSED) [ASK H7]
- H7. And without the involvement of your contractor and information or education from Focus on Energy would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes) [ASK H8]
 2. (No) [ASK H7.2a]
 - D2a. Would you have installed fewer or more of the [MEASURE CATEGORY1 OR C_MEASURE1](S)? [ASK H8]
 99. (DON'T KNOW) [ASK H8]
 88. (REFUSED) [ASK H8]
- H8. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the [MEASURE CATEGORY1 OR C_MEASURE1][s]...[READ LIST AND RECORD ONE RESPONSE]
1. Within the same year? [SKIP TO I1]
 2. Within one to two years? [SKIP TO I1]
 3. Within three to five years? [SKIP TO I1]
 4. In more than five years? [SKIP TO I1]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]

[ASK H9 TO H13 IF H4 = 2 OR H5 = 2]

- H9. When you say **you would not have installed** the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy, would you have installed anything at all?
1. (Yes) [ASK H10]
 2. (No) [SKIP TO I1]
 99. (DON'T KNOW) [ASK H10]
 88. (REFUSED) [ASK H10]
- H10. Without the assistance from your contractor and information or education from Focus on Energy, **would you have installed** something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK H11]
 2. (No) [ASK H11]
 99. (DON'T KNOW) [ASK H11]
 88. (REFUSED) [ASK H11]
- H11. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes) [ASK H12]
 2. (No) [ASK H11.2A]
 - D2b. Would you have installed fewer or more of the [MEASURE CATEGORY1 OR C_MEASURE1][S]? [ASK H12]
 99. (DON'T KNOW) [ASK H12]
 88. (REFUSED) [ASK H12]
- H12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]
1. In the same year? [ASK H13]
 2. In one to two years? [ASK H13]
 3. In three to five years? [ASK H13]
 4. More than five years out? [ASK H13]
 99. (DON'T KNOW) [ASK H13]
 88. (REFUSED) [ASK H13]
- H13. If the assistance or information from your contractor had not been available, would you have done anything differently on this project?
1. (Yes) [ASK H14]
 2. (No) [SKIP TO I1]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]
- H14. What would you have done differently?
[RECORD OPEN ENDED RESPONSE]

I. +Spillover

[ASK EVERYONE SECTION I]

11. Since making these energy efficiency upgrades has your company installed any other energy-efficient products in your facility that you did **NOT** receive a Focus on Energy incentive for? [IF NEEDED: By energy-efficient products, I mean high efficiency lighting such as LEDs; high efficiency motors and variable speed drives; high efficiency air conditioners and heat pumps, efficient heating or water heating equipment, et cetera.]
1. (Yes) [ASK I2]
 2. (No) [SKIP TO SECTION J]
 99. (DON'T KNOW) [SKIP TO SECTION J]
 88. (REFUSED) [SKIP TO SECTION J]
12. What were the other energy-efficient products that you installed without getting an incentive? [DO NOT READ LIST; MARK ALL THAT APPLY; 99=DON'T KNOW, 88=REFUSED, -96=N/A] [If the customer says they bought something but have not installed it, the equipment has to be installed and operating for us to count it towards spillover.]
1. (CFLs)
 2. (LEDs)
 3. (Fluorescent tubes (T5s, T8s, etc.))
 4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
 5. (High efficiency motors)
 6. (Air source heat pumps)
 7. (Ground source heat pumps)
 8. (Central AC)
 9. (VSD (variable speed drive))
 10. (Water heating equipment)
 11. (Boiler)
 12. (Compressed air equipment)
 13. (Gas furnaces)
 14. (Exit signs)
 15. (Refrigeration equipment (refrigerators, freezers))
 16. Operational Improvements [SPECIFY: _____]
 17. (Other) [SPECIFY: _____]
 99. (DON'T KNOW)
 88. (REFUSED)

[ASK I2.11-I2.13 IF I2 = 1, 2, 3]

- I2.11 What is the wattage of the lighting? [SPECIFY]: _____
- I2.12 In what location was it installed (Wall/Ceiling/Outdoors)? [SPECIFY]: _____
- I2.13 What type of equipment was removed or replaced? [SPECIFY]: _____

[ASK I2.21-I2.23 IF I2 = 5]

- I2.21 What equipment was the motor installed on? [SPECIFY TYPE]: _____
- I2.22 What is the horsepower of the motor? [SPECIFY]: _____

[ASK I2.31-I2.33 IF I2 = 6, 7, 8]

- I2.31** What Fuel type is used? **[SPECIFY]:** _____
I2.32 What is the efficiency rating of the equipment? **[SPECIFY]:** _____
I2.33 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.41-I2.42 IF I2 = 9]

- I2.41** What type of motor was it installed on? **[SPECIFY TYPE]:** _____
I2.42 What is the horsepower of the motor? **[SPECIFY]:** _____

[ASK I2.51-I2.54 IF I2 = 10]

- I2.51** What type of water heating equipment was purchased and installed? **[SPECIFY TYPE]:** _____
I2.52 What Fuel type is used? **[SPECIFY]:** _____
I2.53 What is the efficiency rating of the equipment? **[SPECIFY]:** _____
I2.54 (If water heater with storage) What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.61-I2.62 IF I2 = 12]

- I2.61** What type of application was the compressed air equipment purchased and installed? **[SPECIFY APPLICATION]:** _____
I2.62 What is the horsepower of the compressor motor? **[SPECIFY]:** _____

[ASK I2.71-I2.72 IF I2 = 13]

- I2.71** What is the efficiency rating of the equipment? **[SPECIFY]:** _____
I2.72 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.81 IF I2 = 15]

- I2.81** What type of refrigeration equipment was purchased and installed? **[SPECIFY TYPE]:** _____

13. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** How many **[INSERT ITEM FROM I2]** did you install? **[RECORD NUMBER _____, 99 FOR DON'T KNOW, 88 FOR REFUSED, AND -96 FOR N/A]**
14. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** Please tell me how important **[IF A4=1 READ, "the assistance from your contractor" OTHERWISE READ, "the Business Incentive Program"]** was in your decision to install **[ANSWER FROM I2]**. Was it:

[EMPHASIZE EACH ANSWER OPTION AND PAUSE IN BETWEEN EACH OPTION.]

1. Very important,
2. Somewhat important,
3. Not too important, or
4. Not at all important?
99. (Don't know)

88. (Refused)

I5. Was [INSERT EACH ITEM FROM I2] installed at [SITE ADDRESS]?

1. Yes
 2. No (ASK: What is the address of the location where you installed [INSERT EACH ITEM FROM I2]? [SPECIFY _____])
99. (Don't know)
88. (Refused)

J. Firmographics

Finally, I would like to ask you some questions about your company.

J1. *What industry is your company in? [CODE ONE RESPONSE BELOW; DON'T READ UNLESS NECESSARY]

1. (Agriculture, Mining)
 2. (Communications)
 3. (Construction)
 4. (Education)
 5. (Finance, Insurance, Real Estate)
 6. (Food Service (restaurants))
 7. (Government)
 8. (Health Care)
 9. (Manufacturing)
 10. (Nonprofit / churches / schools)
 11. (Retail, Wholesale)
 12. (Transportation)
 13. (Hotel/motels)
 14. (Other [SPECIFY: _____])
99. (DON'T KNOW)
88. (REFUSED)

J2. How many locations does your company operate in Wisconsin?

1. [RECORD NUMBER: _____]
99. (DON'T KNOW)
88. (REFUSED)

J3. *Does your organization lease or own the facility or facilities?

1. (Lease)
 2. (Own)
 3. (Other [SPECIFY: _____])
99. (DON'T KNOW)
88. (REFUSED)

J4. *How many people are employed at the location where the project took place?

1. [RECORD NUMBER: _____]
99. (DON'T KNOW)
88. (REFUSED)

K. Closing

- K1. *Do you have any other comments about energy efficiency decisions and purchases you would like to share?
[RECORD RESPONSE: _____; 99 FOR DON'T KNOW, 88 FOR REFUSED]
- K2. *On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. May we share your responses with a program manager, who may contact you regarding your experience?
1. Yes
 2. No
 99. (DON'T KNOW)
 88. (REFUSED)

Thank you. We appreciate your help with this survey. You may also be contacted for an on-site visit if you have not been contacted already. Have a nice day.

Focus on Energy CY 2016 Chain Stores and Franchises Franchise Owner/Operator Interview Guide

Respondent name/company: _____

Type of Business: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Researchable Questions	Item
Where do customers experience the greatest knowledge gaps regarding energy saving opportunities?	D4 to D5
Where do customers see the biggest opportunities to save energy?	D1 to D3
What energy savings-related topics are of greatest relevance to chain stores and franchises?	D4 to D5
What are the most effective ways for engaging franchises about saving energy?	E1 to E4
What specific barriers do franchise owners face in saving energy and how can the program help address these challenges?	C1 to C5

Target Quota = 6-8

Audience: Franchise Owners who have participated in the Chain Stores and Franchises program.

A. Introduction

Hello, my name is ____, I am calling on behalf of Focus on Energy. Thank you for taking the time to talk with me today about the Chain Stores and Franchises Program in Wisconsin. We are seeking input from owners and operators of franchise businesses on how the Program went this year and about your participation.

May I speak with _____ or may I speak with the person at your organization who handles decisions about making investments in energy efficient equipment?

B. Energy Efficiency Investment Decision-Making

[NOTE TO INTERVIEWER: This section includes questions intended to obtain understanding of how franchise owners/operators make decisions about investing in energy efficient equipment and how they interact with their corporate offices in regards to making decisions about investing in efficient equipment.]

- B1. First, can you please describe your role at your company? *[Probe for title and high-level responsibilities.]*
- B2. *[Ask if not apparent from the business name:]* What kind of franchise business do you operate?
- B3. How many stores/restaurants do you operate in Wisconsin?
- B4. Can you describe the level of autonomy you have in making decisions about what kind of energy efficient equipment you invest in?
- B4a. Who all is involved in making decisions about energy efficiency when making capital upgrades or improvements at your company?
- B4b. Do you require approval from someone else at your franchise organization before committing to an energy efficiency upgrade, such as a franchiser/corporate headquarters? If so, whose approval is required?
- B4c. **[If requiring approval]** How long does it typically take to receive approval to move forward with an energy efficiency upgrade?
- B4d. **[If requiring approval]** How satisfied are you with the approval process at your franchiser/corporate headquarters?
- B5. What are the primary reasons for investing in energy efficient equipment at your stores/restaurants?
- B6. *[Ask if not apparent from B5:]* What are the most important drivers selecting the energy efficient equipment that you invest in at your stores/restaurants? *[Probe for ROI, payback period, ease of installation, etc. and ask to prioritize if multiple drivers mentioned]*
- B7. *[Skip if corporate headquarters involvement was previously discussed in B4:]* What is the role of your corporate headquarters in making decisions on investing in energy-efficient equipment?
- B7a. What guidance do you receive from corporate headquarters in regards to energy efficiency?
- B7b. What is the process for you and corporate headquarters to agree on what investments in energy efficient equipment to pursue?
- B7c. Have you had any differences of opinion, if yes, how were they resolved (if at all)?

- B8. Are you aware that Focus on Energy offers a Participation Milestone Incentive program where additional rewards are available to franchise operators if the franchise chain as a whole meets certain energy saving thresholds in Wisconsin? *[Note if necessary: This offering is different from an individual rebate that you have received as it provides additional benefits to you if your franchise organization as a whole meets certain targets.]* If so, have you participated?
- B8a. **[If they participated]** What worked well about this offering?
- B8b. **[If they participated]** What were the challenges, if any?
- B8c. **[If they participated]** How did you become aware of this offering?
- B8d. If you were aware of the offering, but did not participate, why not?
- B8e. This year, the Program relied heavily on monthly e-blasts to franchise owners to provide updates on franchise organization progress to qualifying for higher levels of incentives. Are there alternative methods of communication that the Program could explore in the future to drive greater awareness to you and other franchise owners/operators in Wisconsin?

C. *Challenges or Barriers to Saving Energy*

[NOTE TO INTERVIEWER: This sections includes questions intended to obtain understanding of what challenges franchise owners/operators face in upgrading equipment at their stores/restaurants and saving energy in general.]

- C1. What are the biggest challenges that you face when saving energy at your restaurants/stores?
- C2. This year you installed/upgraded **[INSERT MEASURE(S) FROM DATA]**. Can you please describe why you chose to focus on upgrading this particular equipment? *[Probe whether equipment was working or had failed already.]*
- C3. Can you please describe if you experienced any particular challenges in making this/these upgrade(s)? *[Probe to determine whether challenge(s) were Focus on Energy Program-related (Energy Advisors, Incentives, etc.), a Trade Ally/workmanship issue, or something else]*
- C3a. How, if at all, could Focus on Energy manage its programs differently to help you reduce these challenges?

- C4. Do you have any plans to make additional energy efficiency upgrades at your restaurants/stores in the next two years? If so, what upgrades are you considering? If not, why not?
- C4a. If you plan to complete another energy efficiency upgrade at your business in the next two years, how likely are you to apply for a Focus on Energy incentive? Why or why not? *[Probe about likelihood of participating in milestone incentive program, if still available.]*
- C5. How could Focus on Energy assist you in making energy efficiency upgrade(s) in the future?

D. Franchise Owner/Operator Knowledge of Energy Efficient Measures

[NOTE TO INTERVIEWER: This sections includes questions intended to gauge franchise owners/operators understanding of energy efficiency measures, understand how they learn about efficient technologies, and learn what additional topics are relevant to them.]

- D1. Where do you see the greatest opportunities to save energy at your stores/restaurants?
- D1a. Why do you see these specific opportunities as having the greatest potential?
- D2. How do you primarily learn about opportunities to save energy at your stores/restaurants? *[Probe for trusted sources of information: Energy Advisors, Focus on Energy website, other websites, etc.]*
- D3. Does your franchiser/corporate branch provide much direction on ways to reduce energy at your store(s)? If so, what are their current recommendations?
- D4. Are there any upgrades/opportunities that you think could save you energy, but you are uncertain about them and/or would like to learn more?
- D5. Are there any other energy related topics or processes that you would be interested in learning more about?
- D6. Are there any energy savings technologies that you are considering that the Chain Stores and Franchises Program currently does not offer an incentive on?

E. Program Communication

[NOTE TO INTERVIEWER: This sections includes questions intended to obtain understanding of how well program communication is received by franchise owners/operators, what approaches work particularly well, and what additional topics could be relevant to the franchise owners/operators.]

- E1. What is the most effective way that you learn about program offerings and incentives? *[Probe for role of Energy Advisors, marketing emails, Focus on Energy website, contractors, and catalogues.]*
- E2. What has been the role of the Energy Advisor in providing you with information about opportunities to save energy and about the program? *[Probe for frequency, type of communication, and if franchise owners feel like they can call the Energy Advisor if they have a question.]*
- E3. What has been the role of your installation contractors/vendors in providing you with information about opportunities to save energy and about the program?
- E4. Are there any ways in which you would prefer to learn about the program that are not currently available, or are there additional approaches to sharing information about energy saving opportunities and rebates that you would like to see the program take? What are they?

F. Closing

- F1. Is there anything else you want to add?
- F2. On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. May we share your responses with a program manager, who may contact you regarding your experience?

Focus on Energy CY 2016 Chain Stores and Franchises National Rebate Administrator Interview Guide

Respondent name/company: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Researchable Questions	Item
Is the program influencing customer decision and behavior? (NTG)	B1 to B16

Target Quota = 3

Audience: National Rebate Administrators with clients who have participated in the Chain Stores and Franchises program. Representatives will be emailed to set up an appointment prior to the call.

A. Introduction

Hello, my name is ____, I am calling on behalf of Focus on Energy. Thank you for taking the time to talk with me today about the Wisconsin’s Focus on Energy Chain Stores and Franchises Program. We are seeking your input on how the program went this year and about your clients’ participation.

- A1. To begin, can you please describe your role at [X COMPANY]?
- A2. Does your company focus on a particular equipment type or industry? If so, what kind?
- A3. What factors do you consider when helping clients determine which locations to target first?
[PROBE: incentive levels, ease of program use, length of time it takes to get projects pre-approved, scale of utility programs in question, or other geographical impacts]
- A4. How does Wisconsin’s Focus on Energy program offerings compare to similar offerings in other states? *[PROBE: incentive levels, eligibility limitations, measure mix]*
 - 1. What are the most competitive elements of the Wisconsin Focus on Energy program compared to similar offerings in other states?
 - 2. What are the least competitive aspects of the Focus on Energy program compared to similar offerings in other states?
 - 3. How does the paperwork process (i.e. measure catalogs) for Focus on Energy compare to other programs?

4. Who do you typically interact with at Focus on Energy?

B. Freeridership

Next, I have some questions for you about the energy efficiency projects that your clients completed in Wisconsin thus far in 2016.

- B1. At the time your clients approached your company about possible incentives for their retrofit projects in Wisconsin, how often would you say they had *already* made energy efficiency upgrades or purchased equipment for these locations in 2016? Keep in mind that I am only talking about the upgrades that are eligible for a rebate. Would you say this happens:
1. Always
 2. Frequently **[SKIP TO B3]**
 3. Sometimes **[SKIP TO B3]**
 4. Rarely **[SKIP TO B3]**
 5. Never **[SKIP TO B4]**

[ASK IF B = 1]

- B2. Just to make sure I understand, do all of your clients *always* purchase equipment or install the upgrades for their Wisconsin locations *before* learning about the availability of Focus on Energy incentives?
1. (Yes) **[SKIP TO B15]**
 2. (No) **[CONTINUE]**

[IF B = 2, 3, OR 4 OR B2 = 2]

- B3. Our records show that in 2016, your clients received [\$\$] through Wisconsin's Focus on Energy Program. Keeping this number in mind, about what percentage of these incentives do you estimate came from equipment that had *already* been purchased or installed before learning about the Focus on Energy incentives? **[ENTER PERCENTAGE]**
EXAMPLE ANSWER: 40% of the time. Therefore, 40% of these projects that go through this NRA are 100% FR. Final scores will be weighted according to this break-down.
- B4. Ok, please think about the other **[X% of incentive dollars]**, which represent projects for which clients had not made a purchase or installed upgrades before learning about the Focus on Energy incentives. We know your clients are already interested in exploring energy efficiency opportunities when they contact you. But, do your clients typically already know the exact equipment models and specifications that they plan to install before knowing about the Focus on Energy incentives? Please think about the majority of cases, we recognize this might not be the same for every single client or every single project.
1. (Yes)
 2. (No) **[SKIP TO B9]**

100% FR Path

- B5. Without the Focus on Energy incentives, would these clients have purchased equipment that was just as energy-efficient for their Wisconsin locations? Again, I'd like you to think about the majority of time.
1. (Yes)
 2. (No)
 3. (Don't know or mixed/uncertainty) – partial decrement **[PROBE FOR BALLPARK PERCENTAGE]**
- B6. Without the Focus on Energy incentives, would the majority of these clients move forward with projects in Wisconsin ...
1. Within the same year,
 2. Within one to two years,
 3. Within three to five years,
 4. In more than five years?
 5. Don't know/mixed/uncertainty **[PROBE FOR BALLPARK PERCENTAGE]**
 6. Refused
- B7. Do your clients typically have a specific payback period or other return on investment criteria that must be met for a project to go forward?
1. (Yes) **[SPECIFY: _____]**
 2. (No)
 3. (Don't know)
 4. (Refused)

[IF B7 = 1]

- B8. Without the Wisconsin Focus on Energy incentives, would the majority of projects have met this criteria?
1. (Yes)
 2. (No)
 3. (Don't Know)

[If B4 = 2] 50% FR Path

- B9. Without the Focus on Energy incentives would these clients have moved forward with *some kind of* energy efficient upgrades to Wisconsin locations? Again, I'd like you to think about the majority of time.
1. (Yes) **[SKIP TO B11]**
 2. (No) **[CONTINUE]**
 3. (Don't know or mixed/uncertainty) **[SKIP TO B11]**
- B10. To confirm, without the Focus on Energy incentives, the majority of clients would *not* have installed *any* new equipment?
1. (Yes) **[SKIP TO B15]**
 2. (No) **[CONTINUE]**
 3. (Don't know or mixed/uncertainty) **[PROBE FOR BALLPARK PERCENTAGE] [CONTINUE]**

- B11. Without the Focus on Energy incentives, would the majority of these clients have purchased equipment that was just as energy-efficient for their Wisconsin locations?
1. (Yes)
 2. (No)
 3. Don't know mixed/uncertainty – partial decrement **[PROBE FOR BALLPARK PERCENTAGE]**
- B12. Without the Focus on Energy incentives, would the majority of these clients typically move forward with the projects in Wisconsin ...
1. Within the same year,
 2. Within one to two years,
 3. Within three to five years,
 4. In more than five years?
 5. Don't know/mixed/uncertainty **[PROBE FOR BALLPARK PERCENTAGE]**
 6. Refused
- B13. Do your clients typically have a specific payback period or other return on investment criteria that must be met for a project to go forward?
1. (Yes) **[SPECIFY: _____]**
 2. (No)
 3. (Don't know)
 4. (Refused)

[IF B13 = 1]

- B14. Without the Focus on Energy incentives, would the majority of projects have met this criteria?
1. (Yes)
 2. (No)
 3. (Don't Know)
- B15. Please summarize the impact the Wisconsin Focus on Energy Program has on your clients' decisions to make energy efficient upgrades in their Wisconsin locations. Would you say the Wisconsin Focus on Energy Program was ...
1. Very influential,
 2. Somewhat influential,
 3. Not too influential
 4. Not influential at all?

[IF NEEDED – ask B16 if there is a contradiction between initial battery and B15] [OR, ASK IF B15 = 3 OR 4]

- B16. Please describe how the Focus on Energy Program impacted your client's decision to purchase and install energy-efficient equipment in Wisconsin.

C. Closing

- C1. Based on your experience with Wisconsin's Focus on Energy Chain Stores and Franchises Program, do you have any suggestions for improvement?

Thank you very much for your time. Focus on Energy appreciates your responses! Have a good day.

Focus on Energy Chain Stores and Franchises Program Participant Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Screening	Project initiation process	A5-A9
Program-Specific Researchable Questions		
Participant Experience	Is it easy to participate?	D2, F1
	What are the primary reasons for participation?	C1
	What are the (industry-specific) barriers and challenges?	D2
	Are marketing activities sufficient and effective to reach targets?	A6, B6-B8
Industry-specific knowledge gaps	Where do customers experience the greatest knowledge gaps regarding energy saving opportunities?	D2, E1-E3
	Where do customers see the biggest opportunities to save energy?	E1-E3
	What challenges do customers experience in saving energy and how can the program help them address these challenges?	D2-D3
Information-sharing opportunities	What are the most effective ways for the program to communicate with customers (regarding opportunities to save energy at chain stores or franchises)?	A6, E4
Core Questions		
Marketing and Outreach	Program Awareness	A6, B1
	Brand identity and messaging impacts	B2-B5
	Key factors influencing customers' decision to participate in program	C1
Barriers	Obstacles to installing high-efficiency equipment	D1-D3
Satisfaction	Assess satisfaction with various program components and reasons for dissatisfaction among participants	F1-F5
Firmographics	Determine building and company characteristics of participants	A4, L1-L5
Decision Making	Understand decision making processes and how they relate to corporate structure	C1-C8
Verification, Freeridership and Spillover	Verify project, assess net savings	G1-G5, H1-K5

Interviewer instructions are in green.

CATI programming instructions are in red.

Words in parenthesis should not be read to respondent

*Indicates core questions

~ Indicates CY 2016 marketing core questions

SAMPLE Variables:

[CONTACT]

[DIRECT INSTALL]

[MEASURE1] [QUANTITY]
 [MEASURE2] [QUANTITY]
 [MEASURE3] [QUANTITY]
 [UTILITY]
 [APPMEASUREID]

A. Introduction

- A1. Hello, may I speak with [CONTACT] [OR IF NO NAME: May I speak with the person who handles energy decisions for your company]? [IF NOT AT THIS LOCATION, ASK FOR PHONE NUMBER AND NAME AT CORRECT LOCATION AND CALL RESPONDENT]
1. (Yes) [CONTINUE WITH RESPONDENT ON PHONE]
 88. (REFUSED) [THANK AND TERMINATE]

Back-up information, not to be programmed:

[If “No – Not available,” ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: “APPROXIMATELY 20 MINUTES.”]

[IF NEEDED:] This survey is for research purposes only and this is not a marketing call. Your participation in this study is important so that Focus on Energy can improve the energy efficiency programs it offers to businesses and other organizations.

[Only if asked for a Focus on Energy contact to verify the survey authenticity, offer Joe Fontaine with the Public Service Commission of Wisconsin, 608-266-0910.]

[Only if respondent says they already did a survey: Thank you for your responses to that survey. This is another Focus on Energy study that you have been selected for, that asks a few more questions about your experience with the program and your decision-making. If you have a few more spare minutes, we would greatly appreciate your responses!]

- A2. Hello, I am [INSERT NAME] calling with a short survey on behalf of Wisconsin’s Focus on Energy Programs. Are you the person responsible for making equipment decisions regarding energy efficiency at your company? [IF NEEDED: Focus on Energy is a statewide utility-funded program overseen by the Wisconsin Public Service Commission to encourage energy efficiency.]
1. (Yes)
 2. (No, but person can come to phone) [START OVER AT A2 WITH NEW RESPONDENT]
 3. (No, not available) [SCHEDULE CALLBACK]
 99. (DON’T KNOW) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
 88. (REFUSED) [THANK AND TERMINATE]
- A3. *Our records show that you installed energy efficient equipment including [MEASURE1], [MEASURE2], and [MEASURE3] at [INSERT ADDRESS]. To ensure our records are correct, can you confirm that you received an incentive for this/these upgrades earlier this year?
1. (Yes)
 2. (No, wrong year) [Record correct year, if possible]
 3. (No, wrong address) [RECORD CORRECT ADDRESS]

- 4. (No, wrong measure) [CORRECT BELOW]
 (MEASURE1 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE1]
 (MEASURE2 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE2]
 (MEASURE3 IS INCORRECT [Correct: _____]) [CALL THIS VARIABLE C_MEASURE3]
- 5. (No, I did not install any measures) [THANK AND TERMINATE]
- 99. (Don't Know) [Is there someone we could speak with that would know this? Record name and contact information: _____]
- 88. (Refused) [THANK AND TERMINATE]

[THANK AND TERMINATE TEXT: Those are all of our questions. Thanks for your help. Have a nice day.]

- A4. Is your organization a franchise or a corporate branch?
 - 1. (Franchise)
 - 2. (Corporate branch)
 - 3. (Other [SPECIFY: _____]) [THANK AND TERMINATE]
 - 98. (DON'T KNOW)
 - 99. (Refused)

- A5. *I'm going to read you a short list. Please tell me who, if anyone, was involved in helping you initiate your energy efficiency project. [READ LIST AND MARK 1= YES, 2=NO, 99=DON'T KNOW; 88 REFUSED FOR EACH]
 - 1. Your contractor or vendor
 - 2. A National Rebate Administrator
 - 3. A Focus on Energy "Energy Advisor"
 - 4. Your utility account manager

- A6. *How did your organization learn about the Focus on Energy incentives available for this project? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE] [IF RESPONDENT MENTIONS WEBSITE CLARIFY IF UTILITY OR FOCUS ON ENERGY WEBSITE SO YOU KNOW HOW TO CODE ANSWER ON LIST.]
 - 1. (Contact with Focus on Energy representative through phone, email, or in person)
 - 2. (Focus on Energy marketing email)
 - 3. (Focus on Energy monthly newsletter)
 - 4. (Focus on Energy website)
 - 5. (Focus on Energy sponsored workshop or event)
 - 6. (Focus on Energy printed program materials)
 - 7. (Contact with utility representative)
 - 8. (Utility mailing, bill insert, or utility Website)
 - 9. (Word of mouth (family, friend, or business colleague))
 - 10. (I contacted my contractor/vendor to ask)
 - 11. (My contractor/vendor let me know about them)
 - 12. (Previously participated in program/received an incentive)
 - 13. (Through a trade association or professional organization [SPECIFY: _____])
 - 14. (National Rebate Administrator)
 - 15. (Other [SPECIFY: _____])
 - 99. (Don't know)

88. (Refused)

A7. *Did you receive an incentive check in the mail for the upgrades, or did your contractor provide a discount on the cost of the project?

1. (Incentive check in the mail)

2. (Contractor discount)

99. (Don't know)

88. (Refused)

A8. *Who took the lead role in completing the application for the financial incentive? Was it... [READ OPTIONS, RANDOMIZE OPTIONS, ONLY ONE RESPONSE]

1. You (i.e., respondent)

2. Someone at your organization

3. The contractor and/or vendor

4. The National Rebate Administrator

5. A Focus on Energy "Energy Advisor"

6. Someone else [SPECIFY: _____]

99. (Don't know)

88. (Refused)

A9. *Who else contributed to completing the application for the financial incentive? [READ LIST IF NEEDED, PROBE FOR ALL PARTIES INVOLVED, MULTIPLE RESPONSES ALLOWED]

1. (No one else was involved)

2. (Me [i.e., respondent])

3. (Someone else at my organization)

4. (The contractor and/or vendor)

5. (The National Rebate Administrator)

6. (A Focus on Energy "Energy Advisor")

7. (Other) [SPECIFY: _____]

99. (Don't know)

88. (Refused)

A10. *Thinking about the application you submitted, how easy would you say this paperwork was to complete? Would you say: [READ LIST]

1. Very easy,

2. Easy,

3. Somewhat challenging, or

4. Very challenging?

99. (Don't know)

88. (Refused)

[ASK IF A10 = 3 or 4]

A11. *Why do you say that? [OPEN END]

B. Awareness

- B1. ~ What are the first three words that come to mind when you hear “Focus on Energy”? [OPEN END, RECORD ONLY FIRST THREE RESPONSES]
- B2. ~ I’m going to read you a list of statements about Focus on Energy and your business’ energy utility. Please tell me whether you agree or disagree with these statements. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?] [READ LIST AND RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=SOMEWHAT DISAGREE, AND 4=STRONGLY DISAGREE; 97= NOT APPLICABLE, 99=DON’T KNOW, AND 88=REFUSED]
1. Focus on Energy is a brand that businesses like mine can trust.
 2. Focus on Energy offers programs, tools, and/or services that are valuable to my business.
 3. Focus on Energy provides programs that can or did help my business lower its overall energy costs.
 4. Focus on Energy provides programs that can or did help make my business more aware of energy saving opportunities.
 5. My business is more satisfied with our energy utility because it partners with Focus on Energy to offer energy efficiency programs to businesses like mine.
- B3. ~ Which of the following statements would make you most interested in learning more about Focus on Energy? [READ LIST AND RANDOMIZE; ALLOW ONLY ONE RESPONSE; REPEAT INTRO STATEMENT AS NEEDED] Focus on Energy helps Wisconsin businesses:
1. Reduce their energy costs and save money.
 2. With solutions to use energy smarter and save money.
 3. Grow by making smarter decisions about their energy use.
 4. Lower their energy costs.
 5. (None of the above)
- B4. ~ Next, I’m going to read you a list of statements about energy efficiency. Please tell me how important these statements are to you when deciding whether to upgrade the energy efficiency of your business. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say this statement is very important, somewhat important, not too important, or not at all important when deciding whether to upgrade the energy efficiency of your business?] [READ LIST AND RECORD 1=VERY IMPORTANT, 2=SOMEWHAT IMPORTANT, 3=NOT TOO IMPORTANT, AND 4=NOT AT ALL IMPORTANT; 97= NOT APPLICABLE, 99=DON’T KNOW, AND 88=REFUSED]
1. Energy efficiency saves my business money on its utility bills.
 2. Energy efficiency upgrades make my business more productive.
 3. Energy efficiency creates jobs and contributes to the Wisconsin economy.
 4. Energy efficiency protects the environment by reducing greenhouse gas emissions.
- B5. ~ Of the energy efficiency statements you just rated, which is the **most important** to you when deciding whether to upgrade the energy efficiency of your business? [READ RESPONSES FROM B4 IF NEEDED; RECORD ONLY ONE RESPONSE]
99. (DON’T KNOW)
 88. (REFUSED)

- B6. **[ASK IF ELIGIBLE FRANCHISE]** Are you aware that Focus on Energy offers a milestone incentive offering where additional rewards are available to franchise operators if the franchise chain as a whole meets certain energy savings thresholds in Wisconsin?
1. Yes
 2. No
 99. (Don't know)
 88. (REFUSED)
- B7. **[ASK IF B6 = 1]** Did you participate in this offering?
1. Yes
 2. No
 99. (DON'T KNOW)
 88. (Refused)
- B8. **[ASK IF B6 = 1]** How did you become aware of this offering? **[READ LIST, ALLOW MULTIPLE RESPONSES]**
1. Through a Focus on Energy Advisor
 2. Through a Focus on Energy email communication
 3. My contractor told me about it
 4. My corporate office / headquarters told me about it
 5. (Other **[SPECIFY _____]**)
 99. (DON'T KNOW)
 88. (Refused)

C. Decision Making

Now I'd like to understand more about how your organization made decisions about this energy efficiency project.

- C1. *What factor was **most** important to your company's decision to make the energy-efficient upgrades for which you received an incentive? **[DO NOT READ LIST; SINGLE RESPONSE]**
1. (To save money on energy bills, reduce energy consumption or energy demand)
 2. (To obtain a program or bonus incentive)
 3. (To obtain a tax credit)
 4. (To replace old (but still functioning) equipment)
 5. (To replace broken equipment)
 6. (To enhance performance of our system(s))
 7. (To improve comfort)
 8. (Other **[SPECIFY _____]**)
 99. (DON'T KNOW)
 88. (Refused)
- C2. As a chain or franchise business, how involved is the corporate headquarters in making decisions about energy-efficiency upgrades at your facility? Would you say ... **[READ LIST]**
1. Very involved
 2. Somewhat involved
 3. Not too involved

- 4. Not at all involved
- 99. (DON'T KNOW)
- 88. (Refused)

[SKIP IF C2 = 4]

- C3. As a chain or franchise business, do you have to receive corporate approval before committing to an energy-efficiency upgrade at your facility?
- 1. (Yes)
 - 2. (No)
 - 3. (Other [SPECIFY _____])
 - 98. (DON'T KNOW)
 - 99. (Refused)

[ASK IF C3 = 1]

- C4. ~ How long does it typically take to receive approval to move forward with an energy efficiency upgrade?
- 1. Less than 1 week
 - 2. 1-3 weeks
 - 3. 4-6 weeks
 - 4. 7-8 weeks
 - 5. Over 8 weeks
 - 99. (Don't know)
 - 88. (Refused)

- C5. How important is energy efficiency when making capital upgrades or improvements? Is it ... [READ LIST]
- 1. Very important
 - 2. Somewhat important
 - 3. Not too important
 - 4. Not at all important
 - 5. (DON'T KNOW)
 - 6. (Refused)

- C6. [ASK IF C5 = 3 or 4] Can you please tell me why energy efficiency is not an important factor in making upgrades?
- 1. [RECORD ANSWER _____-]
 - 99. (DON'T KNOW)
 - 88. (Refused)

- C7. *Have you or anyone else within your organization attended an in-person or web-based training delivered by Focus on Energy in the past two years?
- 1. (Yes)
 - 2. (No)
 - 99. (DON'T KNOW)
 - 88. (REFUSED)

C8. ***[IF C7 = 1]** How important was your business' participation in the training in your decision to move forward with the energy efficient upgrades for which you received an incentive? Was the training...
[READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (DON'T KNOW)
88. (Refused)

D. Benefits and Barriers

D1. *What would you say are the main benefits your company has experienced as a result of the energy efficiency upgrades we've discussed? **[DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]**

1. (The incentive payment)
2. (Using less energy, reducing energy consumption or energy demand)
3. (Saving money on our utility bills; lower energy bills)
4. (Increased occupant comfort)
5. (Better aesthetics/better or brighter lighting)
6. (Saving money on maintenance costs)
7. (Other **[SPECIFY: _____]**)
8. (NO BENEFITS)
99. (DON'T KNOW)
88. (Refused)

D2. *What do so see as the biggest challenges to making energy-efficient improvements inside your company? **[DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]**

1. (High initial costs)
2. (Budget limitations)
3. (Long payback period)
4. (Funding competition for other investments/improvements)
5. (Replacing equipment without affecting operations)
6. (Understanding potential areas for improvement)
7. (Lack of awareness about available incentives for energy efficient equipment)
8. (Understanding equipment eligibility)
9. (Issues with program application process)
10. (Finding a trade ally with which to work)
11. (Inadequate incentive)
12. (Other **[SPECIFY: _____]**)
99. (Don't know)
88. (Refused)

D3. *What could be done to help your company overcome challenges with energy efficiency improvements? **[DO NOT READ LIST, ALLOW MULTIPLE RESPONSES]**

1. (Nothing)
2. (Higher incentives)

3. (Provide upfront rewards/instant discount from contractor)
4. (Offer low-interest loans)
5. (Simplify the paperwork)
6. (Provide better/more information about program [SPECIFY WHAT TYPE OF INFORMATION THEY NEED: _____])
7. (Provide an energy audit)
8. (Other [RECORD VERBATIM ANSWER _____])
99. (DON'T KNOW)
88. (REFUSED)

D4. ~ Who do you seek out as a trusted source of information regarding energy efficiency upgrades for your business? [MULTIPLE RESPONSE ALLOWED; READ LIST IF NEEDED]

1. My Focus on Energy "Energy Advisor"
2. [UTILITY] representatives
3. My installation contractor/vendor
4. Other business owners/managers
5. Web resources [SPECIFY SITES]
6. (Other) [SPECIFY]
99. (DON'T KNOW)
88. (REFUSED)

E. Opportunities to Save Energy, Knowledge Gaps, and Program Communication

E1. In your opinion, what kind of energy-efficient upgrades could result in significant energy savings at your business in the future? [RECORD ALL THAT APPLY, DO NOT READ]

1. Indoor lighting improvements
2. Outdoor lighting improvements
3. Upgrading space heating and cooling system components
4. Upgrading water heaters
5. Upgrading plumbing equipment
6. Upgrading cooking equipment
7. Upgrading ventilation systems
8. Upgrading washing equipment
9. Process systems such as air compressors, pump and fan upgrades, or heat recovery
10. Other [Record: _____]
99. (DON'T KNOW)
88. (REFUSE)

E2. [IF MORE THAN ONE RESPONSES IN E1 READ RESPONSES AND ASK] Which of these upgrades presents the greatest energy-saving opportunity for your business?

1. [Record: _____]
99. (DON'T KNOW)
88. (REFUSE)

E3. In your opinion, why does [RESPONSE FROM E2] present the greatest energy-saving opportunity for your business?

1. [Record: _____]

- 99. (DON'T KNOW)
- 88. (REFUSE)

- E4. What is the most effective way for Focus on Energy to communicate with you about opportunities to save energy at your business? [RANDOMIZE, DO NOT READ LIST]?
- 1. (Printed content delivered to my business location)
 - 2. (Advice from my contractor)
 - 3. (Regular emails from Focus on Energy)
 - 4. (Workshops or Trainings)
 - 5. (Interactions with Focus on Energy advisors)
 - 6. (Checking the Focus on Energy website)
 - 7. (Other) [Record: _____]
 - 99. (DON'T KNOW)
 - 88. (REFUSE)

F. Satisfaction and Application Ease

Next, I have a few additional questions for you about your application.

[ASK IF A7 = 1; OTHERWISE SKIP TO F3]

- F1. *Thinking about the incentive check you received in the mail, about how long did it take to arrive?
[READ LIST]
- 1. 1-3 weeks
 - 2. 4-6 weeks
 - 3. 7-8 weeks
 - 4. Over 8 weeks?
 - 99. (Don't know)
 - 88. (Refused)
- F2. How satisfied were you with the time it took to receive the check? Would you say: [READ LIST]
- 1. Very satisfied,
 - 2. Somewhat satisfied,
 - 3. Not too satisfied, or
 - 4. Not satisfied at all?
 - 99. (Don't know)
 - 88. (Refused)
- F3. *Is there anything that Focus on Energy could have done to improve your overall experience with the Chain Stores and Franchises Program? [DO NOT READ THE LIST, RECORD ALL THAT APPLY]
- 1. (Better/more communication [SPECIFY: Who would you like more communication from? _____])
 - 2. (Quicker response time [SPECIFY: Who would you like a quicker response time from? ___])
 - 3. (Larger selection of eligible equipment [ASK: What energy-efficient equipment should Focus on Energy offer incentives for? _____])
 - 4. (Increasing the incentive amount)
 - 5. (Simplify the application process)[ASK: In what way? _____]
 - 6. (Allow me to fill out the applications online)
 - 7. (Simplify the website)[ASK: In what way? _____]

- 8. (Provide quicker approval on applications)
- 9. (Send incentive check out faster)
- 10. (Provide more face-time with my Energy Advisor (this may include more frequent visits))
- 11. (Other [SPECIFY: _____])
- 12. (No, nothing)
- 99. (DON'T KNOW)
- 88. (REFUSED)

G. Verification

- G1. Is all of the energy efficient equipment installed through the program this year still in-place and operating as planned? My records show that you installed [MEASURE1 OR C_MEASURE1], [MEASURE2 OR C_MEASURE2], and [MEASURE3 OR C_MEASURE3].
- 1. (Yes)
 - 2. (No)
 - 99. (Don't know)
 - 88. (Refused)

[ASK IF G1 = 2]

- G2. Which equipment is no longer installed or operating as planned? [DO NOT READ LIST, SELECT ALL THAT APPLY]
- 1. [MEASURE1 OR C_MEASURE1]
 - 2. [MEASURE2 OR C_MEASURE2]
 - 3. [MEASURE3 OR C_MEASURE3]
 - 4. (Other) [SPECIFY]
 - 99. (Don't know)
 - 88. (Refused)

[ASK G3-G4 IF G1 = 2] [ASK FOR EACH RESPONSE SELECTED IN G2]

- G3. How many [RESPONSE FROM G2] did you or your contractor originally install?
[OPEN END NUMERIC]
- G4. And how many [RESPONSE FROM G2] are installed and operating now?
[OPEN END NUMERIC]

[ASK IF G1 = 2] [ASK FOR EACH RESPONSE SELECTED IN G2]

- G5. Why are the [RESPONSE FROM G2] no longer installed or operating?
[OPEN END]

H. +Freeridership (Non-DI)

The next set of questions is to better understand the reasons why you made specific investments in energy efficient equipment.

[ASK IF CUSTOMER ≠ DIRECTINSTALL]

[IF A5.2=1 OR A5.3=1 OR A5.4=1 SKIP TO SECTION I OTHERWISE ASK THIS SECTION - CONTRACTOR DID NOT HELP IN THE DECISION MAKING]

Now I'd like to talk with you a bit more about your decisions to purchase the new [MEASURE1 OR C_MEASURE1]. Even though you may have received incentives for other energy saving equipment, these questions are just about the [MEASURE1 OR C_MEASURE1] that was purchased.

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- H1. First, did your organization have specific plans to install the [MEASURE1 OR C_MEASURE1][s] before learning about the incentive?
1. (Yes) [ASK H2]
 2. (No) [SKIP TO H4]
 99. (DON'T KNOW) [SKIP TO H4]
 88. (REFUSED) [SKIP TO H4]
- H2. Prior to learning about the incentive, was the purchase of the [MEASURE1 OR C_MEASURE1][s] included in your organization's capital budget?
1. (Yes)
 2. (No) [ASK H4]
 99. (DON'T KNOW) [ASK H4]
 88. (REFUSED) [ASK H4]
- H3. Had your organization **ALREADY** ordered or purchased the [MEASURE1 OR C_MEASURE1][s] **BEFORE** your organization heard about the Chain Stores and Franchises Program incentive?
1. (Yes)
 2. (No)
 99. (DON'T KNOW)
 88. (REFUSED)
- H4. Would you have purchased and installed the same [MEASURE1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy?
1. (Yes) [SKIP TO H7]
 2. (No) [SKIP TO H9]
 99. (DON'T KNOW) [ASK H5]
 88. (REFUSED) [ASK H5]
- H5. Would you have installed **something** without the incentive and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]
1. (Yes, would have installed something) [ASK H6]
 2. (No, would NOT have installed anything) [SKIP TO H10]
 99. (DON'T KNOW) [SKIP TO K1]
 88. (REFUSED) [SKIP TO K1]
- H6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK H7]
 2. (No) [ASK H7]

- 99. (DON'T KNOW) [ASK H7]
- 88. (REFUSED) [ASK H7]

- H7. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the incentive and information or education from Focus on Energy, would you have installed the same number of [MEASURE1 OR C_MEASURE1][s]?
- 1. (Yes, the same amount) [ASK H8]
 - 2. (No, would have installed less) [ASK H8]
 - 3. (No, would have installed more) [ASK H8]
 - 99. (DON'T KNOW) [ASK H8]
 - 88. (REFUSED) [ASK H8]

- H8. Without the [INCENTIVE FOR MEASURE1 OR C_MEASURE1] and information or education from Focus on Energy, would you have installed the [MEASURE1 OR C_MEASURE1][s]...[READ LIST AND RECORD ONE RESPONSE]
- 1. Within the same year? [SKIP TO K1]
 - 2. Within one to two years? [SKIP TO K1]
 - 3. Within three to five years? [SKIP TO K1]
 - 4. In more than five years? [SKIP TO K1]
 - 99. (DON'T KNOW) [SKIP TO K1]
 - 88. (REFUSED) [SKIP TO K1]

[ASK H9 TO H12 IF H4 = 2 OR H5 = 2]

- H9. When you say **you would not have installed** the same [MEASURE1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy, would you have installed anything at all?
- 1. (Yes, would have installed something) [ASK H10]
 - 2. (No, would not have installed anything at all) [SKIP TO K1]
 - 99. (DON'T KNOW) [ASK H10]
 - 88. (REFUSED) [ASK H10]

- H10. Without the incentive and information or education from Focus on Energy, would you have installed something that was just as energy efficient as the [MEASURE1 OR C_MEASURE1][s] you installed?
- 1. (Yes) [ASK H11]
 - 2. (No) [ASK H11]
 - 99. (DON'T KNOW) [ASK H11]
 - 88. (REFUSED) [ASK H11]

- H11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the incentive and information or education from Focus on Energy, would you have installed the same [MEASURE1 OR C_MEASURE1][s]?
- 1. (Yes, the same amount) [ASK H12]
 - 2. (No, would have installed less) [ASK H12]
 - 3. (No, would have installed more) [ASK H12]
 - 99. (DON'T KNOW) [ASK H12]
 - 88. (REFUSED) [ASK H12]

H12. And, would you have installed the same [MEASURE1 OR C_MEASURE1][s] . . . [READ LIST AND RECORD ONE RESPONSE]

1. In the same year? [SKIP TO K1]
2. In one to two years? [SKIP TO K1]
3. In three to five years? [SKIP TO K1]
4. More than five years out? [SKIP TO K1]
99. (DON'T KNOW) [SKIP TO K1]
88. (REFUSED) [SKIP TO K1]

I. +Freeridership – (Non-DI, contractor)

[ASK EITHER SECTION H OR SECTION I]

[ASK IF CUSTOMER ≠ DIRECTINSTALL AND IF ANYA5.1 OR A5.2 OR A5.3=1 – CONTRACTOR HELPED IN THE DECISION MAKING]

Now I'd like to talk with you about the new [MEASURE1 OR C_MEASURE1]. Even though your contractor may have installed other energy efficient equipment, these questions are just about the [MEASURE1 OR C_MEASURE1].

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

I1. At the time that you first started working with your contractor on this project, had you...? [READ LIST AND RECORD ONE FOR EACH: 1=YES OR 2=NO OR 99=DON'T KNOW OR 88=REFUSED]

1. Already been thinking about purchasing [MEASURE1 OR C_MEASURE1]?
2. Already begun collecting information about [MEASURE1 OR C_MEASURE1]?
3. Already selected the particular [MEASURE1 OR C_MEASURE1] and were going to purchase it?
4. Already purchased the [MEASURE1 OR C_MEASURE1]?
5. Already installed the [MEASURE1 OR C_MEASURE1]?
6. Made no plans to purchase the [MEASURE1 OR C_MEASURE1]?
99. (Don't know)
88. (Refused)

I2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE1 OR C_MEASURE1][s] before you began working with your contractor?

1. (Yes) [ASK I3]
2. (No) [SKIP TO I4]
99. (DON'T KNOW) [SKIP TO I4]
88. (REFUSED) [SKIP TO I4]

I3. Before you began working with your contractor, was the purchase of the [MEASURE1 OR C_MEASURE1][s] included in your organization's capital budget?

1. (Yes) ASK I3a
 - I3a. Did your contractor help your organization make the decision to include the purchase of [MEASURE1 OR C_MEASURE1][s] in your organization's capital budget? [ASK I4]

- 2. (No) [ASK I4]
 - 99. (DON'T KNOW) [ASK I4]
 - 88. (REFUSED) [ASK I4]
14. Would you have purchased and installed the same [MEASURE1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy?
- 1. (Yes) [SKIP TO I7]
 - 2. (No) [SKIP TO I9]
 - 99. (DON'T KNOW) [ASK I5]
 - 88. (REFUSED) [ASK I5]
15. Would you have installed **something** without the involvement of your contractor and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]
- 1. (Yes, would have installed something) [ASK I6]
 - 2. (No, would NOT have installed anything) [SKIP TO I9]
 - 99. (DON'T KNOW) [SKIP TO K1]
 - 88. (REFUSED) [SKIP TO K1]
16. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE1 OR C_MEASURE1][s] you installed?
- 1. (Yes) [ASK I7]
 - 2. (No) [ASK I7]
 - 99. (DON'T KNOW) [ASK I7]
 - 88. (REFUSED) [ASK I7]
17. [ASK FOR MEASURE WITH ACTUAL UNIT GREATER THAN 1] And without the involvement of your contractor and information or education from Focus on Energy, would you have installed the same number of [MEASURE1 OR C_MEASURE1][s]?
- 1. (Yes, the same amount) [ASK I8]
 - 2. (No, would have installed less) [ASK I8]
 - 3. (No, would have installed more) [ASK I8]
 - 99. (DON'T KNOW) [ASK I8]
 - 88. (REFUSED) [ASK I8]
18. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the [MEASURE1 OR C_MEASURE1][s]...[READ LIST AND RECORD ONE RESPONSE]
- 1. Within the same year? [SKIP TO K1]
 - 2. Within one to two years? [SKIP TO K1]
 - 3. Within three to five years? [SKIP TO K1]
 - 4. In more than five years? [SKIP TO K1]
 - 99. (DON'T KNOW) [SKIP TO K1]
 - 88. (REFUSED) [SKIP TO K1]

[ASK I9 TO I13 IF I4 = 2 OR I5 = 2]

- I9. When you say **you would not have installed** the same [MEASURE1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy, would you have installed anything at all?
1. (Yes) [ASK I10]
 2. (No) [SKIP TO K1]
 99. (DON'T KNOW) [ASK I10]
 88. (REFUSED) [ASK I10]
- I10. Without the assistance from your contractor and information or education from Focus on Energy, **would you have installed** something that was just as energy efficient as the [MEASURE1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK I11]
 2. (No) [ASK I11]
 99. (DON'T KNOW) [ASK I11]
 88. (REFUSED) [ASK I11]
- I11. [ASK FOR MEASURE WITH ACTUAL UNITS GREATER THAN 1] Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the same amount of [MEASURE1 OR C_MEASURE1][s]?
1. (Yes, the same amount) [ASK I12]
 2. (No, would have installed less) [ASK 12]
 3. (No, would have installed more) [ASK I12]
 99. (DON'T KNOW) [ASK I12]
 88. (REFUSED) [ASK I12]
- I12. And, would you have installed the same [MEASURE1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]
1. In the same year? [ASK I13]
 2. In one to two years? [ASK I13]
 3. In three to five years? [ASK I13]
 4. More than five years out? [ASK I13]
 99. (DON'T KNOW) [ASK I13]
 88. (REFUSED) [ASK I13]
- I13. If the assistance or information from your contractor had not been available, would you have done anything differently on this project?
1. (Yes) [ASK I14]
 2. (No) [SKIP TO K1]
 99. (DON'T KNOW) [SKIP TO K1]
 88. (REFUSED) [SKIP TO K1]
- I14. What would you have done differently? [RECORD OPEN ENDED RESPONSE]

J. +Freeridership (DI)

[ASK IF CUSTOMER = DIRECT INSTALL]

Now I'd like to talk with you a bit more about the [MEASURE1 OR C_MEASURE1] that was installed by a Focus on Energy representative. Even though you may have received incentives for other energy saving equipment, these questions are just about the [MEASURE1 OR C_MEASURE1] that was installed.

- J1. Approximately how many [MEASURE1 OR C_MEASURE1]s, if any, did you have installed in your facilities prior to your participation in the Focus on Energy program?
1. [RECORD #]
 99. (DON'T KNOW)
 88. (REFUSED)
- J2. My records show that you had [QUANTITY MEASURE 1] [MEASURE1 OR C_MEASURE1] installed through the Focus on Energy Chain Stores and Franchises program. Is that correct?
1. (Yes) [ASK J3]
 2. (No) [ASK: "What is the correct number?"] [RECORD #] [IF #>0, ASK J3]
 99. (DON'T KNOW) [SKIP TO J4]
 88. (REFUSED) [SKIP TO J4]
- J3. How many of those [MEASURE1 OR C_MEASURE1]s are still being used? [RECORD #]
- J4. If you had not received any free [MEASURE1 OR C_MEASURE1]s from Focus on Energy, how many [MEASURE1 OR C_MEASURE1]s, if any, would you have purchased for your facilities in the near future?
1. [RECORD #] [ASK J5]
 99. (DON'T KNOW) [SKIP TO K1]
 88. (REFUSED) [SKIP TO K1]
- J5. And when would you have purchased [MEASURE1 OR C_MEASURE1]s on your own? Would it have been... [READ LIST]
1. At the same time that you got the free upgrades from the program
 2. Within a few months
 3. Within a year
 4. Within one to two years
 5. More than two years
 6. Never
 99. (DON'T KNOW)
 88. (REFUSED)

[ASK EVERYONE SECTION K]

K. +Spillover

- K1. Since making these energy-efficiency upgrades has your company installed any other energy-efficient products in your facility that you did **NOT** receive a Focus on Energy incentive for? [IF

NEEDED: By energy-efficient products, I mean high efficiency lighting such as LEDs; high efficiency motors and variable speed drives; high efficiency air conditioners and heat pumps, efficient heating or water heating equipment, et cetera.]

1. (Yes) [ASK K2]
2. (No) [SKIP TO SECTION L]
99. (DON'T KNOW) [SKIP TO SECTION L]
88. (REFUSED) [SKIP TO SECTION L]

K2. What were the other energy-efficient products that you installed without getting an incentive? [DO NOT READ LIST; MARK ALL THAT APPLY; 99=DON'T KNOW, 88=REFUSED, -96=N/A] [If the customer says they bought something but have not installed it, the equipment has to be installed and operating for us to count it towards spillover.]

1. (CFLs)
2. (LEDs)
3. (Fluorescent tubes (T5s, T8s, etc.))
4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
5. (High efficiency motors)
6. (Air source heat pumps)
7. (Ground source heat pumps)
8. (Central AC)
9. (VSD (variable speed drive))
10. Water heating equipment
11. (Boiler)
12. (Compressed air equipment)
13. (Gas furnaces)
14. (Exit signs)
15. (Refrigeration equipment (refrigerators, freezers))
16. (Operational Improvements) [SPECIFY: _____]
17. (Other) [SPECIFY: _____]
99. (DON'T KNOW)
88. (REFUSED)

[ASK K2.11-K2.13 IF K2 = 1, 2, 3]

- K2.11** What is the wattage of the lighting? [SPECIFY]: _____
K2.12 In what location was it installed (Wall/Ceiling/Outdoors)? [SPECIFY]: _____
K2.13 What type of equipment was removed or replaced? [SPECIFY]: _____

[ASK K2.21-K2.23 IF K2 = 5]

- K2.21** What equipment was the motor installed on? [SPECIFY TYPE]: _____
K2.22 What is the horsepower of the motor? [SPECIFY]: _____

[ASK K2.31-K2.33 IF K2 = 6, 7, 8]

- K2.31** What Fuel type is used? [SPECIFY]: _____
K2.32 What is the efficiency rating of the equipment? [SPECIFY]: _____

K2.33 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK K2.41-K2.42 IF K2 = 9]

K2.41 What type of motor was it installed on? **[SPECIFY TYPE]:** _____

K2.42 What is the horsepower of the motor? **[SPECIFY]:** _____

[ASK K2.51-K2.54 IF K2 = 10]

K2.51 What type of water heating equipment was purchased and installed? **[SPECIFY TYPE]:**

K2.52 What Fuel type is used? **[SPECIFY]:** _____

K2.53 What is the efficiency rating of the equipment? **[SPECIFY]:** _____

K2.54 (If water heater with storage) What is the capacity of the equipment? **[SPECIFY]:**

[ASK K2.61-K2.62 IF K2 = 12]

K2.61 What type of application was the compressed air equipment purchased and installed?

[SPECIFY APPLICATION]: _____

K2.62 What is the horsepower of the compressor motor? **[SPECIFY]:** _____

[ASK K2.71-K2.72 IF K2 = 13]

K2.71 What is the efficiency rating of the equipment? **[SPECIFY]:** _____

K2.72 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK K2.81 IF K2 = 15]

K2.81 What type of refrigeration equipment was purchased and installed? **[SPECIFY TYPE]:** _____

K3. **[REPEAT FOR EACH ITEM MENTIONED IN K2]** How many **[INSERT ITEM FROM K2]** did you install?
[RECORD NUMBER _____, 99 FOR DON'T KNOW, 88 FOR REFUSED, AND -96 FOR N/A]

K4. **[REPEAT FOR EACH ITEM MENTIONED IN K2]** Please tell me how important **[IF ANY A5.1, A5.2, A5.3=1 READ, "assistance from your contractor and information and education from Focus on Energy" OTHERWISE READ, "the Chain Store and Franchises Program"]** was in your decision to install **[ANSWER FROM K2]** Was it:

[EMPHASIZE EACH ANSWER OPTION AND PAUSE IN BETWEEN EACH OPTION.]

1. Very important,
2. Somewhat important,
3. Not too important, or
4. Not at all important?
99. (Don't know)
88. (Refused)

- K5. Was [INSERT EACH ITEM FROM K2] installed at [SITE ADDRESS]?
1. Yes
 2. No (ASK: What is the address of the location where you installed [INSERT EACH ITEM FROM K2]? [SPECIFY _____])
 99. (Don't know)
 88. (Refused)

L. Firmographics

Finally, I would like to ask you some questions about your company.

- L1. *What industry is your company in? [CODE ONE RESPONSE BELOW; DON'T READ UNLESS NECESSARY]
1. (Agriculture, Mining)
 2. (Communications)
 3. (Construction)
 4. (Education)
 5. (Finance, Insurance, Real Estate)
 6. (Food Service (restaurants))
 7. (Government)
 8. (Health Care)
 9. (Manufacturing)
 10. (Gas stations)
 11. (Nonprofit / churches / schools)
 12. (Retail, Wholesale)
 13. (Transportation)
 14. (Hotel/motels)
 15. (Other [SPECIFY: _____])
 98. (DON'T KNOW)
 99. (Refused)
- L2. How many locations does your company operate (includes franchise locations not operated/owned by the individual franchise holder) in Wisconsin?
1. [RECORD NUMBER: _____]
 2. DON'T KNOW
 3. REFUSED
- L3. [ASK IF A4 = 1] How many franchise locations do you operate?
1. [RECORD NUMBER: _____]
 2. DON'T KNOW
 3. REFUSED
- L4. *Does your organization lease or own the facility or facilities?
1. (Lease)
 2. (Own)
 3. (Other [SPECIFY: _____])
 4. (DON'T KNOW)

(REFUSED)

L5. *How many people are employed at the location where the project took place?

- 1. [RECORD NUMBER: _____]
- 98. DON'T KNOW
- 99. REFUSED

M. Closing

M1. *Do you have any other comments about energy efficiency decisions and purchases you would like to share?

[RECORD RESPONSE: _____; 99 FOR DON'T KNOW, 88 FOR REFUSED]

M2. *On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. May we share your responses with a program manager, who may contact you regarding your experience?

- 1. Yes
- 2. No
- 99. (DON'T KNOW)
- 88. (REFUSED)

Thank you. We appreciate your help with this survey. You may also be contacted for an on-site visit if you have not been contacted already. Have a nice day.

Focus on Energy Design Assistance Program Joint Participating Design Team and Building Owner Interviews CY 2016

Respondent names: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Awareness and Marketing	Brand identity and messaging impacts	Online Pre-Interview Survey
	Program awareness and promotion	C1-C2
Motivations and Decision Making	Key factors influencing building owner and design team decision to participate in program	D1-D5
Barriers and Benefits	Benefits of program participation	E1
	Challenges to energy efficient building design and program participation	E2-E4
Enrollment Process	Participant experience with the Enrollment Wizard	F1
Satisfaction	Satisfaction with program components and the program overall	Section G
Freeridership and Spillover	Program influence on participant decisions and behavior	Section H and Section I

Notes to Reviewer:

Interviewer instructions are in green.

(*) Indicates core questions

(~) Indicates marketing core questions

QUOTA: 10-12 interviews

This interviews will be conducted over the phone by Cadmus staff familiar with the Design Assistance Program. Both participating Design Teams and building owners will participate in the interview call, which will be scheduled ahead of time. Each of these qualitative in-depth interviews will take approximately one hour. We will use this interview guide to frame the discussion, but it is not meant to be a verbatim script. Where relevant, the interviewer will attempt to gather (and separate in the final report) responses to questions from both Design Teams and building owners.

Prior to conducting the interviews, Cadmus will also invite the main building owner contact from each team to participate in a brief online survey. These surveys will include evaluation marketing core questions to explore Focus on Energy brand identity and messaging impacts.

A. Online Pre-Interview Survey (To Be Completed Online Prior to Interviews)

Welcome! Thank you for your participation in this brief survey. We are interested in hearing about your thoughts on energy efficiency and Focus on Energy. Your responses are automatically saved and you can resume the survey by clicking on the link provided in the email.

- A1. ~ What are the first three words that come to mind when you hear “Focus on Energy”? [OPEN END]
- A2. ~ The following are statements about Focus on Energy and your energy utility. Please indicate whether you agree or disagree with these statements. [RANDOMIZE, MATRIX WITH RESPONSE OPTIONS: strongly agree, somewhat agree, somewhat disagree, or strongly disagree]
1. Focus on Energy is a brand that organizations like mine can trust.
 2. Focus on Energy offers programs, tools, and/or services that are valuable to my organization.
 3. Focus on Energy provides programs that can or did help my organization lower its overall energy costs.
 4. Focus on Energy provides programs that can or did help make my organization more aware of energy saving opportunities.
 5. My organization is more satisfied with our energy utility because it partners with Focus on Energy to offer energy efficiency programs to businesses like mine.
- A3. ~ Which of the following statements would make you most interested in learning more about Focus on Energy? [RANDOMIZE; ALLOW ONLY ONE RESPONSE] Focus on Energy helps Wisconsin organizations:
1. Reduce their energy costs and save money.
 2. With solutions to use energy smarter and save money.
 3. Grow by making smarter decisions about their energy use.
 4. Lower their energy costs.
 5. (None of the above)
- A4. ~ The following is a list of statements about energy efficiency. Please indicate how important these statements are to you when deciding whether to design and build energy efficient buildings. [RANDOMIZE, MATRIX WITH RESPONSE OPTIONS: very important, somewhat important, not too important, or not at all important when deciding whether to upgrade the energy efficiency of your organization]
1. Energy efficiency saves my organization money on its utility bills.
 2. Energy efficiency upgrades make my organization more productive.
 3. Energy efficiency creates jobs and contributes to the Wisconsin economy.
 4. Energy efficiency protects the environment by reducing greenhouse gas emissions.
- A5. ~ Of the energy efficiency statements you just rated, which is the most important to you when deciding whether to design and build energy efficient buildings? [PIPE IN RESPONSE CHOICES FROM A4, SINGLE RESPONSE ALLOWED]
- A6. ~ Who do you seek out as a trusted source of information regarding energy efficiency building design and improvements?

B. Interview Introduction

Hello. I'm [INSERT NAME], calling from Cadmus on behalf of Wisconsin's Focus on Energy Programs. Thank you for scheduling some time to talk with me about your experience with the Design Assistance Program and provide feedback on how the program is going.

C. Awareness and Marketing

- C1. *How did your organization learn about the incentives available for this project from Focus on Energy?
- C2. [ASK DESIGN TEAM] For the other building owners you work with through the Design Assistance Program, do they typically learn about the incentives from your organization or are they already aware of it?
1. Do you promote the Program to your clients? If so, how?

D. Motivations and Decision Making

Now I'd like to understand more about how your organization made decisions about designing an efficient building and participating in the Program.

- D1. [ASK OWNERS] What were the most important factors in your company's decision to implement a more efficient design plan for this new construction project?
- D2. [ASK OWNERS] As you may recall, the Program provides comprehensive whole-building modeling analysis and assistance to identify energy saving options, demonstrate design impacts on building performance and costs, and identify Program incentives. Before you enrolled in the Design Assistance Program, had your organization sought out this level of modeling assistance when designing new buildings? Why or why not?
- D3. [ASK OWNERS] On a 1 to 5 scale, where 1 is not at all important and 5 is very important, how important was it to maximize the energy efficiency of your building? What are your reasons for saying that?
- D4. [ASK DESIGN TEAMS] Do you think that the Program is reaching customers early enough in the design process to inform and influence decisions around whole building energy efficiency?
1. If not, when is the optimal time to reach customers to effectively influence decision making?
 2. How could the Program reach customers earlier?
- D5. [ASK DESIGN TEAMS] For this project, did your team perform the energy modeling or did a Focus on Energy program representative conduct that analysis?
1. [ASK IF DESIGN TEAM PERFORMED MODELING] What were the most important factors in your company's decision to perform the energy modeling?
 2. [ASK IF DESIGN TEAM PERFORMED MODELING] What value, if any, do you see in performing the energy modeling? What makes you say that?
 3. [ASK IF DESIGN TEAM PERFORMED MODELING] Did the Program provide your team with sufficient resources to perform the energy modelling? Why or why not?

4. **[ASK IF DESIGN TEAM PERFORMED MODELING]** What challenges, if any, did you face in performing the energy modeling?
5. **[ASK IF DESIGN TEAM DID NOT PERFORM MODELING]** What value, if any, do you see in the energy modeling provided by the Program representative(s)? What makes you say that?

E. Benefits and Barriers

- E1. *What would you say are the main benefits your company/organization has experienced as a result of participating in the Design Assistance Program?
- E2. What challenges, if any, did you face in participating in the Program?
- E3. What do you see as the biggest barriers to designing and building energy efficient buildings?
- E4. *Other than increased incentives, what could be done to help your company overcome these challenges?

F. Enrollment Process

Next, I have a few questions for you about the enrollment process.

- F1. Did you use the Enrollment Wizard on the Focus on Energy website when enrolling in the Program? (Probe for whether design team or building owner completed the enrollment)
 1. If yes, please describe your experience with the Enrollment Wizard (Probe: How easy or difficult was it to use?)

G. Satisfaction

Now I have a few questions for you about your satisfaction with the Program.

- G1. On a scale from 0-10, where 0=not at all satisfied and 10=extremely satisfied, how satisfied are you with the Focus on Energy staff member who assisted you with your project?
 1. What are your reasons for providing that rating?
- G2. Using the same scale, how satisfied are you with the amount of the incentive you received?
 1. What are your reasons for providing that rating?
- G3. **[ASK DESIGN TEAM]** How satisfied are you with the energy modeling assistance that you received from the Program? [IF NEEDED: On a scale from 0-10, where 0=not at all satisfied and 10=extremely satisfied]
 1. What are your reasons for providing that rating?
- G4. Overall, how satisfied are you with the Focus on Energy Design Assistance Program? [IF NEEDED: On a scale from 0-10, where 0=not at all satisfied and 10=extremely satisfied]
 1. What are your reasons for providing that rating?
- G5. On a scale from 0-10 where 0=not at all likely and 10=extremely likely, how likely is it that you would recommend this Program to others?
 1. What are your reasons for providing that rating?

- G6. *Is there anything that Focus on Energy could have done to improve your overall experience with the Design Assistance Program?

H. Freeridership (Both Building Owners and Design Teams)

Now I'd like to talk specifically about the services you received through the Program. My next several questions are about the advanced and comprehensive modeling performed through the Focus on Energy Design Assistance Program. [IF NEEDED: This is the comprehensive whole-building modeling analysis and assistance that is used to identify energy saving options, demonstrate design impacts on building performance and costs, and identify program incentives.] Throughout the discussion, I'll refer to this comprehensive modeling simply as the "energy modeling".

[H1-H6: ASK DESIGN TEAMS ONLY]

- H1. Focus on Energy provided an incentive of [ACTUAL CALCULATED INCENTIVE AMOUNT] based on the outcomes of the energy modeling analysis providing during the early stages of design. Without this [ACTUAL CALCULATED INCENTIVE AMOUNT], would your team have conducted energy modeling to the same extent during the early stages of the design process? That is, examined, in detail, energy use associated with envelope, lighting design, lighting controls, HVAC and outside air options, etc. during the early stages of the building design phase?
1. Yes
 2. No
 3. It depends [RECORD RESPONSE: _____]
 99. (Don't Know)
 88. (Refused)
- H2. And would you have conducted the same energy modeling in the early stages without the staff input and consultation from the Focus on Energy Program staff?
1. Yes
 2. No
 3. It depends [RECORD RESPONSE: _____]
 99. (Don't Know)
 88. (Refused)
- H3. And would you have conducted the same energy modeling in the early stages without the modeling guidelines and tools provided by the Focus on Energy Program staff? This can be either your own internal modeling, or the modeling tool that was provided, NEO.
1. Yes
 2. No
 3. It depends [RECORD RESPONSE: _____]
 99. (Don't Know)
 88. (Refused)
- H4. [IF NO TO H1, H2, OR H3] Would you have done modeling in the early stages at all?
1. Yes
 2. No [SKIP TO H7]

- 99. (Don't Know)
- 88. (Refused)

H5. **[IF H4 = YES]** How would it have been different?

- 1. **[SPECIFY]**

H6. How important was the energy modeling analysis in the early stages on your decision to add higher efficiency measures to the project? Were the recommendations...[read list]

- 1. Very important
- 2. Somewhat important
- 3. Not too important
- 4. Not at all important
- 99. (Don't Know)
- 88. (Refused)

[H7-H10: ASK BUILDING OWNERS ONLY]

H7. Our records show that Focus on Energy provided an incentive of **[ACTUAL CALCULATED INCENTIVE AMOUNT]** and a comprehensive analysis report for the energy efficient features you installed. Without the incentive and the report, would you have considered and implemented strategies that were just as efficient?

- 1. Yes- all
- 2. Yes- some
- 3. No
- 99. (Don't Know)
- 88. (Refused)

H8. Had the incentive or energy modeling not been available, when would you have considered and implemented the same energy efficiency strategies... **[READ LIST]**

- 1. This year
- 2. Within 1-2 years
- 3. Within 3 years
- 4. I would not have done it
- 99. (Don't Know)
- 88. (Refused)

H9. **[ASK IF H7 = 1 OR 2 AND 99 = 1 OR 2]** Before you enrolled in the Design Assistance Program, was the purchase and installation of the specific energy efficient strategies highlighted in the report included in your construction budget?

- 1. Yes
- 2. No
- 99. (Don't Know)
- 88. (Refused)

H10. Was there an expectation of an incentive for improved energy efficiency design when planning and budgeting for this project?

- 1. Yes
- 2. No

- 99. (Don't Know)
- 88. (Refused)

[ASK ALL]

H11. Finally, I'd like you to rate the level of importance for several factors in your decision to include energy-efficiency features and equipment in this building. For each factor, please identify on a 1 to 5 scale, where 1 is not at all important and 5 is very important.

Factor	Importance of Program Factors							
	Not at all Important			Very Important			DK	NA
A) Total financial incentives	1	2	3	4	5	DK		
B) Assistance provided by Design Assistance Program staff in bundle selection	1	2	3	4	5	DK	NA	
C) Energy modeling results and report identifying energy saving options	1	2	3	4	5	DK	NA	
D) Quick turn-around time of results facilitated through the Enrollment Wizard, NEO tool and the overall combination of software services provided	1	2	3	4	5	DK	NA	

I. Spillover

[I1-I11: ASK BUILDING OWNERS ONLY]

- I1. In the course of construction, did you purchase any energy efficient equipment that did not have modeled savings, or that did not receive a Focus on Energy incentive?
 - 1. Yes
 - 2. No
 - 99. (Don't Know)
 - 88. (Refused)
- I2. **[IF I1 = YES]** What equipment did you purchase?
 - 1. **[SPECIFY]**
- I3. How did you determine whether or not it was energy efficient?
 - 1. It was ENERGY STAR certified
 - 2. Other **[SPECIFY]**
 - 99. (Don't Know)
 - 88. (Refused)
- I4. How many **[MEASURE FROM I2]** did you install?
 - 1. **[SPECIFY QUANTITY]**
 - 99. (Don't Know)
 - 88. (Refused)

15. How important was your participation in the Design Assistance Program in your decision to install [INSERT ANSWER FROM I2]? Would you say:
1. Very Important
 2. Somewhat important
 3. Not too important
 4. Not important at all
 99. (Don't Know)
 88. (Refused)
16. Since participating in the Program, have you developed any other buildings, *specifically in Wisconsin*, with energy-efficient equipment or strategies?
1. Yes
 2. No [SKIP TO I12]
 99. (Don't Know)
 88. (Refused)
17. What energy-efficient equipment did you purchase and install in these other buildings?
1. [SPECIFY]
 99. (Don't Know)
 88. (Refused)
18. Did you receive an incentive from Focus on Energy for this project?
1. Yes
 2. No
 99. (Don't Know)
 88. (Refused)
19. How did you determine whether or not it was energy-efficient?
1. It was ENERGY STAR certified
 2. Other [SPECIFY]
 99. (Don't know)
 88. (Refused)
- I10. How many [MEASURE FROM I7] did you install?
1. [SPECIFY QUANTITY]
 99. (Don't Know)
 88. (Refused)
- I11. How important was your participation in the Design Assistance Program in your decision to install [INSERT ANSWER FROM I7]? Would you say:
1. Very Important
 2. Somewhat important
 3. Not too important
 4. Not important at all
 99. (Don't Know)
 88. (Refused)

[I12 TO I19: ASK DESIGN TEAMS ONLY]

- I12. Has your working with the Design Assistance Program changed the way you approach projects and customers as they complete the planning and design process?
1. Yes
 2. No
 99. (Don't Know)
 88. (Refused)

- I13. **[IF I12 = 1]** Please describe how it has changed.

1. **[SPECIFY]**
99. (Don't Know)
88. (Refused)

My next several questions will be about the advanced and comprehensive modeling you conducted through the Focus On Energy Design Assistance Program, which I'll refer to simply as "energy modeling." [IF NEEDED: This is the comprehensive whole-building modeling analysis and assistance that is used to identify energy saving options and demonstrate design impacts on building performance and costs.]

- I14. During 2016, approximately how many of your company's new building projects in Focus on Energy's service territory included this type of advanced and comprehensive energy modeling in the early planning stages to identify energy saving opportunities?
1. **[RECORD # OF PROJECTS]**
 99. (Don't Know)
 88. (Refused)

- I15. Please think about all energy modeling you have performed for projects during 2016. Did you specify or perform energy modeling for customers who built buildings without participating in the Design Assistance Program?
1. Yes
 2. No **[SKIP TO I19]**
 99. (Don't Know) **[SKIP TO I19]**
 88. (Refused)

- I16. **[ASK IF I15 = YES]** Approximately what percent of all the energy modeling projects you specified or performed for Focus on Energy service territory customers did not receive an incentive through the Design Assistance Program?
1. **[RECORD # OF PROJECTS]**
 99. (Don't Know)
 88. (Refused)

- I17. **[ASK IF > 0% ELSE SKIP TO I19]** During 2016, you mentioned that about **[__%]** of the energy modeling projects you specified or performed would have been eligible for an incentive through the Design Assistance Program, but did not receive an incentive.

What are the main reasons why your firm or the customer did not request a customer incentive for this energy modeling you specified and performed?

1. Not worth the paperwork for our firm to help the customer apply for the incentive
2. Customer did not want to spend time applying for the incentive
3. Take too long for approval
4. Not time – needed it done quickly
5. Thought the Program ended
6. Didn't know the modeling qualified at the time
7. Just didn't think of it
8. Unable to get an incentive (unsure why)
9. Other [SPECIFY]
99. (Don't Know)
88. (Refused)

I18. I'm going to read you 3 statements. For each statement, please tell me whether you agree or disagree that this statement applies to your company. There are no right or wrong answers; we just want your honest opinion.

1. Our experience specifying or performing energy modeling through the Design Assistance Program has convinced us this level of Program-eligible energy modeling is cost-effective or beneficial even without a Program incentive.
2. We are better able to identify opportunities to improve energy efficiency by using energy modeling because of our previous experience with performing energy modeling through the Design Assistance Program.
3. We are more likely to discuss energy modeling with all of our customers when developing energy efficiency project plans because of our previous experience performing energy modeling through the Design Assistance Program.

I19. Please describe what impact, if any, the Focus on Energy Design Assistance Program had on your decision to specify or perform advanced modeling for projects outside the Program?

1. [RECORD VERBATIM]
99. (Don't Know)
88. (Refused)

J. Closing

J1. *Do you have any other comments about energy efficiency decisions and purchases you would like to share?

[RECORD RESPONSE: _____]

Thank you for sharing your opinions and taking the time to participate, your input is greatly appreciated.

Focus on Energy Large Energy Users Program Participant Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Screening	Project initiation process	A4-A7
Marketing and Outreach	Program Awareness	A4, A5, A7, B1
	Brand identity and messaging impacts	B1-B5
	Key factors influencing customers' decision to participate in program	C1, K1
Barriers	Obstacles to installing high-efficiency equipment	D1-D4
	Barriers to and opportunities for converting participants from single program participation to engaging in more and deeper efforts to save energy.	C2-C10
Satisfaction	Assess satisfaction with various program components and reasons for dissatisfaction among participants	E1-E7, K1-K2
Firmographics	Determine building and company characteristics of participants	J1-J4
Decision Making	Understand decision making processes and how they relate to corporate structure	C1-C10
Verification, Freeridership and Spillover	Verify project, assess net savings	A3, F1-I5

Interviewer instructions are in green.

CATI programming instructions are in red.

Words in (parentheses) should not be read to respondent

* Indicates core questions

~ Indicates CY 2016 marketing core questions

SAMPLE Variables:

[CONTACT]

[SITE ADDRESS]

[UTILITY]

[MEASURE CATEGORY1]

[MEASURE CATEGORY2]

[MEASURE CATEGORY3]

[APPLICATION MEASURE ID]

[MEASURETYPE] *Indicates quota*

Total = 70 completes

A. Introduction

- A1. Hello, may I speak with [PRIMARY APPLICATION CONTACT] [OR IF NO NAME: May I speak with the person who handles energy and building project decisions for your company]? [IF NOT AT THIS LOCATION, ASK FOR PHONE NUMBER AND NAME AT CORRECT LOCATION AND CALL RESPONDENT]
1. (Yes) [CONTINUE WITH RESPONDENT ON PHONE]

88. (REFUSED) [THANK AND TERMINATE]

Back-up information, not to be programmed:

[If “No – Not available,” ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: “APPROXIMATELY 20 MINUTES.”]

[IF NEEDED:] This survey is for research purposes only and this is not a marketing call. Your participation in this study is important so that Focus on Energy can improve the energy efficiency programs it offers to businesses and other organizations.

[Only if asked for a Focus on Energy contact to verify the survey authenticity, offer Joe Fontaine with the Public Service Commission of Wisconsin, 608-266-0910.]

[Only if respondent says they already did a survey: Thank you for your responses to that survey. This is another Focus on Energy study that you have been selected for, that asks a few more questions about your experience with the program and your decision-making. If you have a few more spare minutes, we would greatly appreciate your responses!]

- A2. Hello, I am [INSERT NAME] calling with a survey on behalf of Wisconsin’s Focus on Energy Programs. Are you the person responsible for making equipment decisions regarding energy efficiency at your company? [IF NEEDED: Focus on Energy is a statewide utility-funded program to encourage energy efficiency.]
1. (Yes)
 2. (No, but person can come to phone) [START OVER AT A2 WITH NEW RESPONDENT]
 3. (No, not available) [SCHEDULE CALLBACK]
 99. (DON’T KNOW) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
 88. (REFUSED) [THANK AND TERMINATE]

- A3. *Our records show that you installed energy efficient equipment including [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3] at [SITE ADDRESS]. To ensure our records are correct, can you confirm that you received an incentive for this/these upgrades earlier this year?

1. (Yes)
 2. (No, wrong year) [Record correct year, if possible]
 3. (No, wrong address) [RECORD CORRECT ADDRESS]
 4. (No, wrong measure) [CORRECT BELOW]
- (MEASURE CATEGORY1 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE1]
 (MEASURE CATEGORY2 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE2]
 (MEASURE CATEGORY3 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE3]
5. (No, I did not install any measures) [THANK AND TERMINATE]
 99. (Don’t Know) Is there someone we could speak with that would know this? [Record name and contact information: _____]
 88. (Refused) [THANK AND TERMINATE]

[THANK AND TERMINATE TEXT: Those are all of our questions. Thanks for your help. Have a nice day.]

- A4. *I'm going to read you a short list. Please tell me who, if anyone, was involved in helping you initiate your energy efficiency project. [READ LIST AND MARK 1= YES, 2=NO, 99=DON'T KNOW; 88 REFUSED FOR EACH]
1. Your contractor or vendor
 2. A Focus on Energy "Energy Advisor"
 3. Your utility account manager
- A5. *How did your organization learn about the Focus on Energy incentives available for this project? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE] [IF RESPONDENT MENTIONS WEBSITE CLARIFY IF UTILITY OR FOCUS ON ENERGY WEBSITE SO YOU KNOW HOW TO CODE ANSWER ON LIST.]
1. (Contact with Focus on Energy representative through phone, email, or in person)
 2. (Focus on Energy quarterly newsletter)
 3. (Focus on Energy website)
 4. (Focus on Energy sponsored workshop or event)
 5. (Focus on Energy printed program materials)
 6. (Contact with utility representative)
 7. (Utility mailing, bill insert, or utility Website)
 8. (Word of mouth (family, friend, or business colleague))
 9. (I contacted my contractor/vendor to ask)
 10. (My contractor/vendor let me know about them)
 11. (Previously participated in program/received an incentive)
 12. (Through a trade association or professional organization SPECIFY: _____)
 13. (Other [SPECIFY: _____])
 99. (Don't know)
 88. (Refused)
- A6. *Did you receive an incentive check in the mail for the upgrades, or did your contractor provide a discount on the cost of the project?
1. (Rebate in the mail)
 2. (Contractor discount)
 99. (Don't know)
 88. (Refused)
- A7. *Who took the lead role in completing the application for the financial incentive? Was it... [READ OPTIONS, RANDOMIZE OPTIONS, ONLY ONE RESPONSE]
1. You (i.e., respondent)
 2. Someone at your organization
 3. The contractor and/or vendor
 4. A Focus on Energy Energy Advisor
 5. Someone else [SPECIFY: _____]
 99. (Don't know)
 88. (Refused)
- A8. *Who else contributed to completing the application for the financial incentive? [READ LIST IF NEEDED, PROBE FOR ALL PARTIES INVOLVED, MULTIPLE RESPONSES ALLOWED]
1. (No one else was involved)

2. (Me [i.e., respondent])
3. (Someone else at my organization)
4. (The contractor and/or vendor)
5. (A Focus on Energy Energy Advisor)
6. (Other) [SPECIFY: _____]
99. (Don't know)
88. (Refused)

B. Awareness

- B1. ~ What are the first three words that come to mind when you hear "Focus on Energy"? [OPEN END, RECORD ONLY FIRST THREE RESPONSES]
- B2. ~ I'm going to read you a list of statements about Focus on Energy and your business' energy utility. Please tell me whether you agree or disagree with these statements. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?] [READ LIST AND RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=SOMEWHAT DISAGREE, AND 4=STRONGLY DISAGREE; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]
1. Focus on Energy is a brand that businesses like mine can trust.
 2. Focus on Energy offers programs, tools, and/or services that are valuable to my business.
 3. Focus on Energy provides programs that can or did help my business lower its overall energy costs.
 4. Focus on Energy provides programs that can or did help make my business more aware of energy saving opportunities.
 5. My business is more satisfied with our energy utility because it partners with Focus on Energy to offer energy efficiency programs to businesses like mine.
- B3. ~ Which of the following statements would make you most interested in learning more about Focus on Energy? [READ LIST AND RANDOMIZE; ALLOW ONLY ONE RESPONSE; REPEAT INTRO STATEMENT AS NEEDED] Focus on Energy helps Wisconsin businesses:
1. Reduce their energy costs and save money.
 2. With solutions to use energy smarter and save money.
 3. Grow by making smarter decisions about their energy use.
 4. Lower their energy costs.
 5. (None of the above)
- B4. ~ Next, I'm going to read you a list of statements about energy efficiency. Please tell me how important these statements are to you when deciding whether to upgrade the energy efficiency of your business. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say this statement is very important, somewhat important, not too important, or not at all important when deciding whether to upgrade the energy efficiency of your business?] [READ LIST AND RECORD 1=VERY IMPORTANT, 2=SOMEWHAT IMPORTANT, 3=NOT TOO IMPORTANT, AND 4=NOT AT ALL IMPORTANT; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]
1. Energy efficiency saves my business money on its utility bills.
 2. Energy efficiency upgrades make my business more productive.

3. Energy efficiency creates jobs and contributes to the Wisconsin economy.
4. Energy efficiency protects the environment by reducing greenhouse gas emissions.

- B5. ~ Of the energy efficiency statements you just rated, which is the **most important** to you when deciding whether to upgrade the energy efficiency of your business? [READ RESPONSES FROM B4 IF NEEDED; RECORD ONLY ONE RESPONSE]
99. (DON'T KNOW)
 88. (REFUSED)

C. Decision Making

Now I'd like to understand more about how your organization made decisions about your specific energy efficiency project.

- C1. *What factor was **most** important to your company's decision to make the energy-efficient upgrades for which you received an incentive? [DO NOT READ LIST; SINGLE RESPONSE]

1. (To save money on energy bills, reduce energy consumption or energy demand)
2. (To obtain a program or bonus incentive)
3. (To obtain a tax credit)
4. (To replace old (but still functioning) equipment)
5. (To replace broken equipment)
6. (To enhance performance of our system(s))
7. (To improve comfort)
8. (To improve facility safety)
9. (To confirm claimed energy savings by program)
10. (To reduce the project's payback period)
11. (Other [SPECIFY _____])
99. (DON'T KNOW)
88. (Refused)

- C2. How important is energy efficiency to your organization when making capital upgrades or improvements? Is energy efficiency ... [READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (DON'T KNOW)
88. (Refused)

- C3. [ASK IF C2 = 3 or 4] Can you please tell me why energy efficiency is not an important factor in making upgrades?

1. [RECORD ANSWER _____-]
99. (DON'T KNOW)
88. (Refused)

- C4. ~ Do you require approval from someone else at your organization before committing to an energy efficiency upgrade?

1. (Yes)

- 2. (No)
- 99. (DON'T KNOW)
- 88. (REFUSED)

[ASK IF C4 = 1]

- C5. ~ Who at your organization is involved in making decisions about energy efficiency when making capital upgrades or improvements? [DO NOT READ OPTIONS, MULTIPLE RESPONSES ALLOWED]
- 1. (President/CEO/Executive Director)
 - 2. (Facility maintenance department/manager)
 - 3. (Corporate headquarters)
 - 4. (Board of directors)
 - 5. (Other [SPECIFY _____])
 - 99. (DON'T KNOW)
 - 88. (Refused)

[ASK IF C4 = 2]

- C6. ~ What is your role or title at your organization?
- 1. (President/CEO/Executive Director/Owner)
 - 2. (Facility or Maintenance lead/manager)
 - 3. (Chief financial officer (CFO)/ controller/ finance manager)
 - 4. (Other [SPECIFY _____])
 - 99. (DON'T KNOW)
 - 88. (Refused)

[ASK IF C4 = 1]

- C7. ~ How long does it typically take to receive approval from someone else at your organization to move forward with an energy efficiency upgrade?
- 1. Less than 1 week
 - 2. 1-3 weeks
 - 3. 4-6 weeks
 - 4. 7-8 weeks
 - 5. Over 8 weeks
 - 99. (Don't know)
 - 88. (Refused)

- C8. Do you have an internal payback threshold that projects must meet in order to go forward?
- 1. (Yes) [WHAT IS THAT THRESHOLD, IN YEARS? _____]
 - 2. (No)
 - 99. (DON'T KNOW)
 - 88. (REFUSED)

- C9. *Have you or anyone else within your organization attended an in-person or web-based training delivered by Focus on Energy in the past two years?
- 1. (Yes)
 - 2. (No)
 - 99. (DON'T KNOW)
 - 88. (REFUSED)

C10. **[IF C9 = 1]** How important was your business' participation in the training in your decision to move forward with the energy efficient upgrades for which you received an incentive? Was the training...
[READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (DON'T KNOW)
88. (Refused)

D. Benefits and Barriers

D1. *What would you say are the main benefits your company has experienced as a result of the energy efficiency upgrades we've discussed? **[DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]**

1. (The incentive payment)
2. (Using less energy, reducing energy consumption or energy demand)
3. (Saving money on our utility bills; lower energy bills)
4. (Increased occupant comfort)
5. (Better aesthetics/better or brighter lighting)
6. (Saving money on maintenance costs)
7. (Improved facility safety)
8. (Other **[SPECIFY: _____]**)
9. (NO BENEFITS)
99. (DON'T KNOW)
88. (Refused)

D2. *What do so see as the biggest challenges to making energy-efficient improvements inside your company? **[DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]**

1. (High initial costs)
2. (Budget limitations)
3. (Long payback period)
4. (Funding competition for other investments/improvements)
5. (Replacing equipment without affecting operations)
6. (Understanding potential areas for improvement)
7. (Lack of awareness about available incentives for energy efficient equipment)
8. (Understanding equipment eligibility)
9. (Issues with program application process)
10. (Finding a trade ally with which to work)
11. (Inadequate incentive)
12. (Other **[SPECIFY: _____]**)
99. (Don't know)
88. (Refused)

D3. *What could be done to help your company overcome challenges with energy-efficiency improvements? **[DO NOT READ LIST, ALLOW MULTIPLE RESPONSES]**

1. (Nothing)

2. (Higher incentives)
3. (Provide upfront rewards/instant discount from contractor)
4. (Offer low-interest loans)
5. (Simplify the paperwork)
6. (Provide better/more information about program [SPECIFY WHAT TYPE OF INFORMATION THEY NEED: _____])
7. (Provide an energy audit)
8. (Technical support for proposed equipment)
9. (Other [RECORD VERBATIM ANSWER _____])
99. (DON'T KNOW)
88. (REFUSED)

D4. ~ Who do you seek out as a trusted source of information regarding energy efficiency upgrades for your business? [MULTIPLE RESPONSE ALLOWED; READ LIST IF NEEDED]

1. My Focus on Energy Energy Advisor
2. [UTILITY] representatives
3. My installation contractor/vendor
4. Other business owners/managers
5. Web resources [SPECIFY SITES]
6. (Other) [SPECIFY]
99. (DON'T KNOW)
88. (REFUSED)

E. Satisfaction and Application Ease

Next, I have a few questions for you about your application.

[ASK IF A7 = 1; OTHERWISE SKIP TO E5]

E1. *Thinking about the application you submitted, how easy would you say this paperwork was to complete? Would you say: [READ LIST]

1. Very easy,
2. Easy,
3. Somewhat challenging, or
4. Very challenging?
99. (Don't know)
88. (Refused)

[ASK IF E1 = 3 or 4]

E2. *Why do you say that? [OPEN END]

E3. [ASK IF A7 = 1 AND MEASURE TYPE = CUSTOM] Did you have to submit a pre-approval application for your project?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

E4. [ASK IF E3 = 1] Thinking about the pre-approval process, how satisfied were you with the amount of time it took to receive approval to begin the project? Would you say?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not satisfied at all
99. (Don't know)
88. (Refused)

[ASK IF A6 = 1; OTHERWISE SKIP TO E7]

E5. *Thinking about the incentive check you received in the mail, about how long did it take to arrive?

[READ LIST]

1. 1-3 weeks
2. 4-6 weeks
3. 7-8 weeks
4. Over 8 weeks?
99. (Don't know)
88. (Refused)

E6. How satisfied were you with the time it took to receive the check? Would you say: [READ LIST]

1. Very satisfied,
2. Somewhat satisfied,
3. Not too satisfied, or
4. Not satisfied at all?
99. (Don't know)
88. (Refused)

E7. *Is there anything that Focus on Energy could have done to improve your overall experience with the Large Energy Users Program? [DO NOT READ THE LIST, RECORD ALL THAT APPLY]

1. (Better/more communication about program processes [SPECIFY: Who would you like more communication from? _____])
2. (Quicker response time [SPECIFY: Who would you like a quicker response time from? ___])
3. (Larger selection of eligible equipment [ASK: What energy-efficient equipment should Focus on Energy offer incentives for? _____])
4. (Increasing the incentive amount)
5. (Simplify the application process)[ASK: In what way? _____]
6. (Allow me to fill out the applications online)
7. (Simplify the website)[ASK: In what way? _____]
8. (Provide quicker approval on applications)
9. (Send incentive check out faster)
10. (Provide more face-time with my Energy Advisor (this may include more frequent visits))
11. (Other [SPECIFY: _____])
12. (No, nothing)
99. (DON'T KNOW)
88. (REFUSED)

F. Verification

- F1. Is all of the energy efficient equipment installed through the program this year still in-place and operating as planned? My records show that you installed [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3].
1. (Yes)
 2. (No)
 99. (Don't know)
 88. (Refused)

[ASK IF F1 = 2]

- F2. Which equipment is no longer installed or operating as planned? [DO NOT READ LIST, SELECT ALL THAT APPLY]
1. [MEASURE CATEGORY1]
 2. [MEASURE CATEGORY2]
 3. [MEASURE CATEGORY3]
 4. (Other) [SPECIFY]
 99. (Don't know)
 88. (Refused)

[ASK F3-F5 IF F1 = 2] [ASK FOR EACH RESPONSE SELECTED IN F2]

- F3. How many [RESPONSE FROM F2] did you or your contractor originally install?
[OPEN END NUMERIC]
- F4. And how many [RESPONSE FROM F2] are installed and operating now?
[OPEN END NUMERIC]
- F5. Why are the [RESPONSE FROM F2] no longer installed or operating as planned?
[OPEN END]

G. +Freeridership

[IF A4.1 = 1 SKIP TO SECTION H; OTHERWISE ASK SECTION G - CONTRACTOR DID NOT HELP IN THE DECISION MAKING]

Now I'd like to talk with you a bit more about your decisions to purchase the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though you may have received incentives for other energy saving equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1] that was purchased.

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- G1. First, did your organization have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before learning about the incentive?
1. (Yes) [ASK G2]
 2. (No) [SKIP TO G4]

- 99. (DON'T KNOW) [SKIP TO G4]
- 88. (REFUSED) [SKIP TO G4]

G2. Prior to learning about the incentive, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your organization's capital budget?

- 1. (Yes)
- 2. (No) [ASK G4]
- 99. (DON'T KNOW) [ASK G4]
- 88. (REFUSED) [ASK G4]

G3. Had your organization **ALREADY** ordered or purchased the [MEASURE CATEGORY1 OR C_MEASURE1][s] **BEFORE** your organization heard about the Large Energy Users Program incentive?

- 1. (Yes)
- 2. (No)
- 99. (DON'T KNOW)
- 88. (REFUSED)

G4. Would you have purchased and installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy?

- 1. (Yes) [SKIP TO G7]
- 2. (No) [SKIP TO G9]
- 99. (DON'T KNOW) [ASK G5]
- 88. (REFUSED) [ASK G5]

G5. Would you have installed **something** without the incentive and information or education from Focus on Energy? [DO NOT READ LIST UNLESS NECESSARY]

- 1. (Yes, would have installed something) [ASK G6]
- 2. (No, would NOT have installed anything) [SKIP TO I1]
- 99. (DON'T KNOW) [SKIP TO I1]
- 88. (REFUSED) [SKIP TO I1]

G6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?

- 1. (Yes) [ASK G7]
- 2. (No) [ASK G7]
- 99. (DON'T KNOW) [ASK G7]
- 88. (REFUSED) [ASK G7]

G7. And without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?

- 1. (Yes, the same amount) [ASK G8]
- 2. (No, would have installed less) [ASK G8]
- 3. (No, would have installed more) [ASK G8]
- 99. (DON'T KNOW) [ASK G8]
- 88. (REFUSED) [ASK G8]

- G8. Without the [INCENTIVE FOR MEASURE CATEGORY1 OR C_MEASURE1] and information or education from Focus on Energy, would you have installed the [MEASURE CATEGORY1 OR C_MEASURE1][s]... [READ LIST AND RECORD ONE RESPONSE]
1. Within the same year? [SKIP TO I1]
 2. Within one to two years? [SKIP TO I1]
 3. Within three to five years? [SKIP TO I1]
 4. In more than five years? [SKIP TO I1]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]
- [ASK G9 TO G12 IF G4 = 2]
- G9. When you say **you would not have installed** the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the incentive and information or education from Focus on Energy, would you have installed anything at all?
1. (Yes, would have installed something) [ASK G10]
 2. (No, would not have installed anything at all) [SKIP TO I1]
 99. (DON'T KNOW) [ASK G10]
 88. (REFUSED) [ASK G10]
- G10. Without the incentive and information or education from Focus on Energy, would you have installed something that was just as energy efficient as the [MEASURE CATEGORY1 OR C_MEASURE1][s] you installed?
1. (Yes) [ASK G11]
 2. (No) [ASK G11]
 99. (DON'T KNOW) [ASK G11]
 88. (REFUSED) [ASK G11]
- G11. Without the incentive and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?
1. (Yes, the same amount) [ASK G12]
 2. (No, would have installed less) [ASK G12]
 3. (No, would have installed more) [ASK G12]
 99. (DON'T KNOW) [ASK G12]
 88. (REFUSED) [ASK G12]
- G12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]
1. In the same year? [SKIP TO I1]
 2. In one to two years? [SKIP TO I1]
 3. In three to five years? [SKIP TO I1]
 4. More than five years out? [SKIP TO I1]
 99. (DON'T KNOW) [SKIP TO I1]
 88. (REFUSED) [SKIP TO I1]

H. +Freeridership – (Contractor)

[ASK EITHER SECTION G OR SECTION H - **NOT BOTH**]

[ASK IF A4.1 = 1 CONTRACTOR HELPED IN THE DECISION MAKING]

Now I'd like to talk with you about the new [MEASURE CATEGORY1 OR C_MEASURE1]. Even though your contractor may have installed other energy efficient equipment, these questions are just about the [MEASURE CATEGORY1 OR C_MEASURE1].

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- H1. At the time that you first started working with your contractor on this project, had you...? [READ LIST AND RECORD ONE FOR EACH: 1=YES OR 2=NO OR 99=DON'T KNOW OR 88=REFUSED]
1. Already been thinking about purchasing [MEASURE CATEGORY1 OR C_MEASURE1]?
 2. Already begun collecting information about [MEASURE CATEGORY1 OR C_MEASURE1]?
 3. Already selected the particular [MEASURE CATEGORY1 OR C_MEASURE1] and were going to purchase it?
 4. Already purchased the [MEASURE CATEGORY1 OR C_MEASURE1]?
 5. Already installed the [MEASURE CATEGORY1 OR C_MEASURE1]?
 6. Already heard about Focus on Energy?
- H2. Just to make sure I understand, did your organization have specific plans to install the [MEASURE CATEGORY1 OR C_MEASURE1][s] before you began working with your contractor?
1. (Yes) [ASK H3]
 2. (No) [SKIP TO H4]
 99. (DON'T KNOW) [SKIP TO H4]
 88. (REFUSED) [SKIP TO H4]
- H3. Before you began working with your contractor, was the purchase of the [MEASURE CATEGORY1 OR C_MEASURE1][s] included in your organization's capital budget?
1. (Yes) ASK:
 - D2a. Did your contractor help your organization make the decision to include the purchase of [MEASURE CATEGORY1 OR C_MEASURE1][s] in your organization's capital budget? [ASK H4]
 2. (No) [ASK H4]
 99. (DON'T KNOW) [ASK H4]
 88. (REFUSED) [ASK H4]
- H4. Would you have purchased and installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s] without the assistance from your contractor and information or education from Focus on Energy?
1. (Yes) [SKIP TO H7]
 2. (No) [SKIP TO H9]
 99. (DON'T KNOW) [ASK H5]
 88. (REFUSED) [ASK H5]

- H5. Would you have installed **something** without the involvement of your contractor and information or education from Focus on Energy? **[DO NOT READ LIST UNLESS NECESSARY]**
1. (Yes, would have installed something) **[ASK H6]**
 2. (No, would NOT have installed anything) **[SKIP TO I1]**
 99. (DON'T KNOW) **[SKIP TO I1]**
 88. (REFUSED) **[SKIP TO I1]**
- H6. When you say you **would have installed** something, would you have installed something that was just as energy efficient as the **[MEASURE CATEGORY1 OR C_MEASURE1][s]** you installed?
1. (Yes) **[ASK H7]**
 2. (No) **[ASK H7]**
 99. (DON'T KNOW) **[ASK H7]**
 88. (REFUSED) **[ASK H7]**
- H7. And without the involvement of your contractor and information or education from Focus on Energy would you have installed the same amount of **[MEASURE CATEGORY1 OR C_MEASURE1][s]**?
1. (Yes, the same amount) **[ASK H8]**
 2. (No, would have installed less) **[ASK H8]**
 3. (No, would have installed more) **[ASK H8]**
 99. (DON'T KNOW) **[ASK H8]**
 88. (REFUSED) **[ASK H8]**
- H8. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the **[MEASURE CATEGORY1 OR C_MEASURE1][s]**...**[READ LIST AND RECORD ONE RESPONSE]**
1. Within the same year? **[SKIP TO I1]**
 2. Within one to two years? **[SKIP TO I1]**
 3. Within three to five years? **[SKIP TO I1]**
 4. In more than five years? **[SKIP TO I1]**
 99. (DON'T KNOW) **[SKIP TO I1]**
 88. (REFUSED) **[SKIP TO I1]**
- [ASK H9 TO H13 IF H4 = 2]**
- H9. When you say **you would not have installed** the same **[MEASURE CATEGORY1 OR C_MEASURE1][s]** without the assistance from your contractor and information or education from Focus on Energy, would you have installed anything at all?
1. (Yes) **[ASK H10]**
 2. (No) **[SKIP TO I1]**
 99. (DON'T KNOW) **[ASK H10]**
 88. (REFUSED) **[ASK H10]**
- H10. Without the assistance from your contractor and information or education from Focus on Energy, **would you have installed** something that was just as energy efficient as the **[MEASURE CATEGORY1 OR C_MEASURE1][s]** you installed?
1. (Yes) **[ASK H11]**
 2. (No) **[ASK H11]**
 99. (DON'T KNOW) **[ASK H11]**

88. (REFUSED) [ASK H11]

H11. Without the assistance from your contractor and information or education from Focus on Energy, would you have installed the same amount of [MEASURE CATEGORY1 OR C_MEASURE1][s]?

1. (Yes, the same amount) [ASK H12]
2. (No, would have installed less) [ASK H12]
3. (No, would have installed more) [ASK H12]
99. (DON'T KNOW) [ASK H12]
88. (REFUSED) [ASK H12]

H12. And, would you have installed the same [MEASURE CATEGORY1 OR C_MEASURE1][s]. . . [READ LIST AND RECORD ONE RESPONSE]

1. In the same year? [ASK H13]
2. In one to two years? [ASK H13]
3. In three to five years? [ASK H13]
4. More than five years out? [ASK H13]
99. (DON'T KNOW) [ASK H13]
88. (REFUSED) [ASK H13]

H13. If the assistance or information from your contractor had not been available, would you have done anything differently on this project?

1. (Yes) [ASK H14]
2. (No) [SKIP TO I1]
99. (DON'T KNOW) [SKIP TO I1]
88. (REFUSED) [SKIP TO I1]

H14. What would you have done differently?
[RECORD OPEN ENDED RESPONSE]

I. +Spillover

[ASK EVERYONE SECTION I]

I1. Since making these energy efficiency upgrades has your company installed any other energy-efficient products in your facility that you did **NOT** receive a Focus on Energy incentive for? [IF NEEDED: By energy-efficient products, I mean high efficiency lighting such as LEDs; high efficiency motors and variable speed drives; high efficiency air conditioners and heat pumps, efficient heating or water heating equipment, et cetera.]

1. (Yes) [ASK I2]
2. (No) [SKIP TO SECTION J]
99. (DON'T KNOW) [SKIP TO SECTION J]
88. (REFUSED) [SKIP TO SECTION J]

I2. What were the other energy-efficient products that you installed without getting an incentive? [DO NOT READ LIST; MARK ALL THAT APPLY; 99=DON'T KNOW, 88=REFUSED, -96=N/A] [If the customer says they bought something but have not installed it, the equipment has to be installed and operating for us to count it towards spillover.]

1. (CFLs)
2. (LEDs)
3. (Fluorescent tubes (T5s, T8s, etc.))
4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
5. (High efficiency motors)
6. (Air source heat pumps)
7. (Ground source heat pumps)
8. (Central AC)
9. (VSD (variable speed drive))
10. (Water heating equipment)
11. (Boiler)
12. (Compressed air equipment)
13. (Gas furnaces)
14. (Exit signs)
15. (Refrigeration equipment (refrigerators, freezers))
16. Operational Improvements [SPECIFY: _____]
17. (Other) [SPECIFY: _____]
99. (DON'T KNOW)
88. (REFUSED)

[ASK I2.11-I2.13 IF I2 = 1, 2, 3]

- I2.11** What is the wattage of the lighting? [SPECIFY]: _____
I2.12 In what location was it installed (Wall/Ceiling/Outdoors)? [SPECIFY]: _____
I2.13 What type of equipment was removed or replaced? [SPECIFY]: _____

[ASK I2.21-I2.23 IF I2 = 5]

- I2.21** What equipment was the motor installed on? [SPECIFY TYPE]: _____
I2.22 What is the horsepower of the motor? [SPECIFY]: _____

[ASK I2.31-I2.33 IF I2 = 6, 7, 8]

- I2.31** What Fuel type is used? [SPECIFY]: _____
I2.32 What is the efficiency rating of the equipment? [SPECIFY]: _____
I2.33 What is the capacity of the equipment? [SPECIFY]: _____

[ASK I2.41-I2.42 IF I2 = 9]

- I2.41** What type of motor was it installed on? [SPECIFY TYPE]: _____
I2.42 What is the horsepower of the motor? [SPECIFY]: _____

[ASK I2.51-I2.54 IF I2 = 10]

- I2.51** What type of water heating equipment was purchased and installed? [SPECIFY TYPE]: _____
I2.52 What Fuel type is used? [SPECIFY]: _____
I2.53 What is the efficiency rating of the equipment? [SPECIFY]: _____

I2.54 (If water heater with storage) What is the capacity of the equipment? **[SPECIFY]:**

[ASK I2.61-I2.62 IF I2 = 12]

I2.61 What type of application was the compressed air equipment purchased and installed?

[SPECIFY APPLICATION]: _____

I2.62 What is the horsepower of the compressor motor? **[SPECIFY]:** _____

[ASK I2.71-I2.72 IF I2 = 13]

I2.71 What is the efficiency rating of the equipment? **[SPECIFY]:** _____

I2.72 What is the capacity of the equipment? **[SPECIFY]:** _____

[ASK I2.81 IF I2 = 15]

I2.81 What type of refrigeration equipment was purchased and installed? **[SPECIFY TYPE]:** _____

I3. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** How many **[INSERT ITEM FROM I2]** did you install?
[RECORD NUMBER _____, 99 FOR DON'T KNOW, 88 FOR REFUSED, AND -96 FOR N/A]

I4. **[REPEAT FOR EACH ITEM MENTIONED IN I2]** Please tell me how important **[IF A4=1 READ, "the assistance from your contractor" OTHERWISE READ, "the Large Energy Users Program"]** was in your decision to install **[ANSWER FROM I2]**. Was it:

[EMPHASIZE EACH ANSWER OPTION AND PAUSE IN BETWEEN EACH OPTION.]

1. Very important,
2. Somewhat important,
3. Not too important, or
4. Not at all important?
99. (Don't know)
88. (Refused)

I5. Was **[INSERT EACH ITEM FROM I2]** installed at **[SITE ADDRESS]**?

1. Yes
2. No (**ASK:** What is the address of the location where you installed **[INSERT EACH ITEM FROM I2]**? **[SPECIFY _____]**)
99. (Don't know)
88. (Refused)

J. Firmographics

Finally, I would like to ask you some questions about your company.

J1. *What industry is your company in? **[CODE ONE RESPONSE BELOW; DON'T READ UNLESS NECESSARY]**

1. (Agriculture, Mining)
2. (Communications)
3. (Construction)

- 4. (Education)
- 5. (Finance, Insurance, Real Estate)
- 6. (Food Service (restaurants))
- 7. (Government)
- 8. (Health Care)
- 9. (Manufacturing)
- 10. (Nonprofit / churches / schools)
- 11. (Retail, Wholesale)
- 12. (Transportation)
- 13. (Hotel/motels)
- 14. (Other [SPECIFY: _____])
- 99. (DON'T KNOW)
- 88. (REFUSED)

J2. How many locations does your company operate in Wisconsin?

- 1. [RECORD NUMBER: _____]
- 99. (DON'T KNOW)
- 88. (REFUSED)

J3. *Does your organization lease or own the facility or facilities?

- 1. (Lease)
- 2. (Own)
- 3. (Other [SPECIFY: _____])
- 99. (DON'T KNOW)
- 88. (REFUSED)

J4. *How many people are employed at the location where the project took place?

- 1. [RECORD NUMBER: _____]
- 99. (DON'T KNOW)
- 88. (REFUSED)

K. Closing

K1. *Do you have any other comments about energy efficiency decisions and purchases you would like to share?

[RECORD RESPONSE: _____; 99 FOR DON'T KNOW, 88 FOR REFUSED]

K2. *On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. May we share your responses with a program manager, who may contact you regarding your experience?

- 1. Yes
- 2. No
- 99. (DON'T KNOW)
- 88. (REFUSED)

Thank you. We appreciate your help with this survey. You may also be contacted for an on-site visit if you have not been contacted already. Have a nice day.

Focus on Energy Nonresidential Programs Trade Ally Online Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Firmographics	Determine trade ally's company characteristics	D1
Marketing and Participation Decision-Making	Awareness of Focus on Energy	B1
	Communication channels	C2, C3
	Key factors and barriers influencing trade ally's decision to register w/Program	C1
Engagement	Promotion of the programs	B3, B4
	Trade ally's value propositions	B5, B6
Economic Impact	Economic benefits of Focus on Energy programs	E1-E3
Satisfaction	Satisfaction with Trade Ally Network and Focus on Energy	F1-F10
Application Assistance	To what extent are Trade Allies assisting with application paperwork?	G1-G4
Market Barriers and Financing	Specific customer groups that are hard-to-reach, availability and use of financing programs	H1-H4
Program-Specific Questions	Specific questions for AgSG, BIP, CSF, LEU, MESP, and SBP	Sections I-N
Spillover	Trade ally spillover	O1-O3
Lighting Standard Market Practice	How do contractors purchase linear lighting products (distributor, manufacturer, retailer, online sales)?	P5, P7
	What percent of their linear lamp sales are installed in residential and new construction applications?	P1-P4, P10
	What percent of sales are used in applications not eligible for prescriptive incentives?	P8-P10

Target Quota = 150 to 180 completes (each program will aim for at least 25 completes)

Sample Variables:

- [EMAIL ADDRESS] = Trade ally's email address
- [COMPANY] = Name of trade ally's company name
- [FIRST NAME] = Trade ally's first name
- [LAST NAME] = Trade ally's last name
- [TYPE] = Noncore or Core
- [DESIGNATED PROGRAM 1] = Determines which program module the trade ally will complete
- [DESIGNATED PROGRAM 1 NAME] = Program name text, for display
- [DESIGNATED PROGRAM 2 NAME] = For Core trade allies only, program name text for display
- [DESIGNATED PROGRAM 3 NAME] = For Core trade allies only, program name text for display
- [MEASURE CATEGORY1] = Measure categories of Focus on Energy rebated equipment
- [MEASURE CATEGORY2] = Measure categories of Focus on Energy rebated equipment

[MEASURE CATEGORY3] = Measure categories of Focus on Energy rebated equipment

[BIP RANK] = Trade ally's performance rank

Survey Invitation E-mail Message for NonCore Trade Allies

To: [EMAIL ADDRESS]

From: Focus on Energy

Subject: Take the Trade Ally Survey and Win \$100

Reply-To: masumi.izawa@cadmusgroup.com

Dear [FIRST NAME]:

Focus on Energy is interested in hearing from trade professionals, like yourself, who participate in our programs. We'd like to know more about your experiences so we can improve our programs. We know your time is valuable, so by completing the survey, you will be entered in a drawing for a chance to win a \$100 Visa gift card. Six winners will be randomly selected. Your responses will remain anonymous and confidential. This survey will take approximately 20 minutes.

Follow this link to the survey: [SURVEY LINK]

Or copy and paste this URL into your internet browser: [SURVEY LINK]

Focus on Energy greatly appreciates your participation. If you have any questions about the survey, please feel free to contact me. Thank you in advance!

Sincerely,
Joe Fontaine

Focus on Energy Performance Manager
Public Service Commission of Wisconsin
(608) 266-0910
Joe.Fontaine@wisconsin.gov

Follow the link to opt out of future emails:
{!://OptOutLink?d=Click here to unsubscribe}

Survey Invitation E-mail Message for Core Trade Allies

To: [EMAIL ADDRESS]

From: Focus on Energy

Subject: Take the Trade Ally Survey and Receive \$20

Reply-To: masumi.izawa@cadmusgroup.com

Dear [FIRST NAME]:

Focus on Energy is interested in hearing from trade professionals, like yourself, who participate in our programs. We'd like to know more about your experiences so we can improve our programs. We know

your time is valuable, so by completing the survey, you will receive a \$20 Visa gift card. Your responses will remain anonymous and confidential. This survey will take approximately 30 minutes.

Follow this link to the survey: [\[SURVEY LINK\]](#)

Or copy and paste this URL into your internet browser: [\[SURVEY LINK\]](#)

Focus on Energy greatly appreciates your participation. If you have any questions about the survey, please feel free to contact me. Thank you in advance!

Sincerely,
Joe Fontaine

Focus on Energy Performance Manager
Public Service Commission of Wisconsin
(608) 266-0910
Joe.Fontaine@wisconsin.gov

Follow the link to opt out of future emails:
[\\${!://OptOutLink?d=Click here to unsubscribe}](#)

AA. Survey Start Screen



Welcome! Thank you for registering with our Trade Ally Network. Your responses are automatically saved and you can resume the survey by clicking on the link provided in the email.

B. Engagement

- B1. What are the first three words that come to mind when you hear “Focus on Energy”?
[OPEN END, RECORD ONLY FIRST THREE RESPONSES]
- B2. How familiar are you with each of the following Focus on Energy programs and incentives for business customers? **[MATRIX WITH RESPONSE CHOICES: VERY FAMILIAR, SOMEWHAT FAMILIAR, NOT TOO FAMILIAR, AND NOT AT ALL FAMILIAR] [RANDOMIZE ORDER]**
- A. Agriculture, Schools and Government
 - B. Business Incentive
 - C. Chain Stores and Franchises
 - D. Large Energy Users
 - E. Multifamily Energy Savings
 - F. Small Business
 - G. Design Assistance

B3. How often do you promote Focus on Energy Programs to customers?

1. All the time
2. Frequently
3. Sometimes
4. Seldom
5. Never

[ASK IF B3 = 3, 4, OR 5]

B4. Why don't you promote Focus on Energy Programs more often? (Select all that apply) [RANDOMIZE ORDER FOR 1-7]

1. I'm not confident about the details of the programs or who is eligible
2. It's confusing to the customer
3. Too much paperwork
4. For the jobs I do, the incentives are not worth the hassle
5. I don't like the equipment or products that Focus on Energy promotes
6. I perceive a financial risk to myself or my customer
7. I don't like having my work inspected
8. Other [FORCED TEXT ENTRY RESPONSE]
9. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

[ASK IF B3 = 1, 2, 3]

B5. What is the greatest benefit of promoting Focus on Energy Programs? [RANDOMIZE ORDER FOR 1-7]

1. The financial incentives for my customer
2. Increased business
3. Competitive advantage
4. Affiliation with Focus on Energy
5. Doing something good for the environment
6. The technical assistance Focus on Energy provides in support of me/my customers
7. Being able to access third-party reviews and confirmation of proposals to my customers
8. Other [FORCED TEXT ENTRY RESPONSE]
9. Don't know

B6. On a 10-point scale where 0 means "strongly disagree" and 10 means "strongly agree," please select your level of agreement with the following statements. [DROP DOWN SELECTION MENU WITH RESPONSE CHOICES RANGING FROM 0-10, PLUS "DON'T KNOW"] [RANDOMIZE ORDER]

- A. I play a significant role in educating my customers about energy efficiency.
- B. Focus on Energy is a brand businesses like mine can trust.
- C. Focus on Energy offers programs, tools, and/or services that are valuable to my business.
- D. I find the benefit of being involved with Focus on Energy outweigh any challenges.

C. Participation Decision-Making and Marketing

C1. What are the reasons that your company chose to enroll in Focus on Energy's Trade Ally Network? (Select all that apply) [RANDOMIZE ORDER 1-7]

1. Having my company listed on the Focus on Energy website

2. Having access to co-branding marketing opportunities
3. Being able to receive the incentive on my customer's behalf
4. Have a dedicated Focus on Energy contact (or Energy Advisor)
5. Wanting to learn more about the Focus on Energy Program
6. To gain a competitive advantage in the marketplace
7. To be able to advertise my business as a Trade Ally
8. I was not aware that my company participates in the Trade Ally Network
9. Other [FORCED TEXT ENTRY RESPONSE]
10. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

C2. What is your preferred source for staying informed about Focus on Energy's programs and Trade Ally Network? [RANDOMIZE ORDER FOR 1-5]

1. Focus on Energy website
2. E-mails
3. Meetings (trade ally forums and staff meetings)
4. My Energy Advisor with Focus on Energy
5. Trainings provided by Focus on Energy
6. Other [FORCED TEXT ENTRY RESPONSE]
7. Nothing/I don't look for any information [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]
8. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

C3. Now we would like to know how useful these information sources are in helping you stay up to date with Focus on Energy programs. Please rank the following communication options from most useful to least useful. (Drag to rearrange the order. The most useful should appear at the top while the least useful appears on the very bottom.) [RANDOMIZE ORDER]

1. Focus on Energy website
2. E-mails
3. Meetings (trade ally forums and staff meetings)
4. My Energy Advisor with Focus on Energy
5. Trainings provided by Focus on Energy

D. Firmographics

D1. What does your company specialize in? (Select all that apply)

1. Commissioning services
2. Electrical/lighting
3. Energy assessments, diagnostics, or ratings
4. HVAC equipment
5. Other mechanical systems
6. Insulation/building envelope
7. New building construction
8. Refrigeration
9. Renewable energy
10. Renovations
11. Training/consulting

- 12. Other [FORCED TEXT ENTRY RESPONSE]
- 13. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

E. Economic Impact

- E1. So far in 2016, what percentage of your company's projects were eligible and received an incentive from Focus on Energy this year? These are projects for which you or your customers submitted an application to Focus on Energy for an incentive. Use your best guess.

[DROP DOWN SELECTION MENU WITH RESPONSE CHOICES RANGING FROM 0-100% IN 10% INCREMENTS, PLUS "DON'T KNOW"]

- E2. How has the volume of your sales changed as a result of your involvement with Focus on Energy?
- 1. Significantly increased
 - 2. Somewhat increased
 - 3. Have not changed
 - 4. Somewhat decreased
 - 5. Significantly decreased
 - 6. Don't know

[ASK IF E2 = 1 OR 2]

- E3. How has your business changed as a result of the increase in sales? (Select all that apply)

- 1. Hired more staff
- 2. Added more services
- 3. Added more products/equipment
- 4. Increased production of equipment
- 5. Expanded our service location
- 6. Added more vehicles
- 7. Opened more offices
- 8. Other [FORCED TEXT ENTRY RESPONSE]
- 9. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

F. Satisfaction

- F1. How is Focus on Energy doing when it comes to the following:

[MATRIX WITH RESPONSE CHOICES: EXCELLENT, GOOD, FAIR, POOR, DON'T KNOW, or NOT APPLICABLE] [RANDOMIZE ORDER]

- A. Reaching out to you and keeping you informed about programs and offerings
- B. Paying you in a timely manner, if you receive the incentive on behalf of your customer
- C. Making the paperwork easy
- D. Training you on how to effectively market programs to your customers
- E. Providing educational opportunities or training resources
- F. Providing the right amount of support so you can confidently sell and install energy efficient equipment

F2. How satisfied are you with the program support you receive from the Focus on Energy Program Energy Advisors?

1. Very satisfied
2. Somewhat satisfied
3. Not too satisfied
4. Not at all satisfied
5. I have not interacted with Energy Advisors
6. I am not familiar with any Program Energy Advisors

[ASK IF F2 = 1, 2, 3, OR 4]

F3. Do you feel the level of communication with your Energy Advisor is sufficient?

1. Yes, I feel the frequency and communication channels for which I receive updates are sufficient
2. Yes, but I would like to hear from my Energy Advisor more frequently
3. No, I do not feel I receive the level of attention I need to be successful in the program
4. Don't know

[ASK IF F2 = 1, 2, 3, OR 4]

F4. Do you have any recommendations for improving the program-related support you receive from the Energy Advisors? [TEXT ENTRY BOX; NO FORCED RESPONSE]

F5. On a 10-point scale where 0 means "not at all satisfied" and 10 means "extremely satisfied," how satisfied are you with Focus on Energy overall? [RESPONSE CHOICES RANGING FROM 0-10, PLUS "DON'T KNOW"]

[ASK IF F5 < 10]

F6. Besides incentive amounts, what is one important thing Focus on Energy can improve to increase your satisfaction? [TEXT ENTRY BOX; NO FORCED RESPONSE]

F7. Did you receive any Focus on Energy sponsored training?

1. Yes (please specify which training)
2. No [SKIP TO G1]

[ASK IF F7 = 1]

F8. On a 10-point scale where 0 means "not at all useful" and 10 means "extremely useful," how useful was the training in providing the information you needed? [RESPONSE CHOICES RANGING FROM 0-10, PLUS "DON'T KNOW"]

[ASK IF F7 = 1]

F9. How important was the training in your decision to promote Focus on Energy Programs and projects? Was the training...

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
5. Don't know

[ASK IF F8 < 10]

- F10. Do you have any recommendations for improving the Focus on Energy sponsored training you received? [TEXT ENTRY BOX; NO FORCED RESPONSE]

G. Application Assistance

- G1. Do you or someone on your staff assist the customer in completing the incentive application paperwork?

1. Yes
2. No

[ASK IF G1 = 1]

- G2. How often do you or someone on your staff assist the customer in completing the incentive application?

1. All the time
2. Frequently
3. Sometimes
4. Seldom
5. Never

- G3. How often do you run into challenges with the incentive application process?

1. All the time
2. Frequently
3. Sometimes
4. Seldom
5. Never

[ASK IF G3 = 1, 2 OR 3]

- G4. What are your most frequent challenges with the incentive application process? (Select all that apply)

1. Too much information required
2. Too many supporting documents required (e.g., energy savings calculations, contractor invoices)
3. Takes too much time
4. Too many requirements for eligible equipment
5. Difficult to get a hold of program staff when I had questions
6. Took too long for approval
7. Meet the 60-day deadline
8. Other [FORCED TEXT ENTRY RESPONSE]
9. None/I don't have any challenges [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

- G5. Besides increasing the incentive amounts, what is one specific thing Focus on Energy can do to improve the incentive application process? [TEXT ENTRY BOX; NO FORCED RESPONSE]

H. Market Barriers and Financing

H1. Were you aware that Focus on Energy reduced incentives in 2016 across all of their nonresidential programs?

1. Yes
2. No

[ASK IF H1 = 1]

H2. How has the incentive reduction affected how often you promote Focus on Energy Programs? Would you say you promote the programs...?

1. More often
2. Not as often
3. Not changed/stayed the same

H3. Do you work (perform jobs) in other states besides Wisconsin?

1. Yes
2. No

[ASK IF H3 = 1]

H4. How satisfied are you with Wisconsin's Focus on Energy incentives compared to incentives from other states? Would you say you are...

1. More satisfied with Focus on Energy incentives than another state's incentives
2. Less satisfied with Focus on Energy incentives than another state's incentives
3. Equally satisfied with Focus on Energy incentives and another state's incentives
4. Don't know

[ASK IF H3 = 1]

H5. To what degree do you agree or disagree with this statement: I perform work outside of Wisconsin because programs in other states offer higher financial incentives.

1. Strongly agree
2. Somewhat agree
3. Somewhat disagree
4. Strongly disagree
5. Don't know

H6. When presenting energy-efficiency equipment options to your customers, do you promote any type of financing or loan program options offered by Focus on Energy or any other entity?

1. Yes
2. No
3. I would if there were any financing/loan programs available
4. I am not aware of any financing/loan programs

[ASK IF H6 = 1]

H7. Which financing programs do you promote? [TEXT ENTRY BOX; NO FORCED RESPONSE]

[DISPLAY TO NONCORE TRADE ALLIES]

- H8. We know you and your customers may be involved in several Focus on Energy programs. For the purposes of the next set of questions, please think about your experiences with the **[DESIGNATED PROGRAM2]**.

[DISPLAY TO CORE TRADE ALLIES]

- H9. In the next section, we will ask you to think about your experiences with the following programs:

Program Name 1

Program Name 2

Program Name 3

I. Agriculture, Schools and Government Program

[ASK SECTION H IF DESIGNATED PROGRAM = AgSG]

- I1. What marketing tactics, if any, are you using to specifically target agriculture customers? (Select all that apply)
1. Email blasts
 2. Flyers
 3. Mailers
 4. Press releases
 5. Radio Advertisements
 6. TV Advertisements
 7. Newspaper Ads
 8. Trade show participation
 9. Other [FORCED TEXT ENTRY RESPONSE]
 10. None/not specifically targeting agriculture [SKIP TO I8]
 11. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]
- I2. How often would you like to hear from Focus on Energy?
1. Monthly
 2. Quarterly
 3. Annually
 4. Other (please describe): [OPEN ENDED RESPONSE]
 5. Don't know
- I3. How often do you receive the incentive in lieu of your customer receiving it?
1. All the time
 2. Frequently
 3. Sometimes
 4. Seldom
 5. Never
- I4. Have you completed a custom Agriculture, Schools, and Government project during the past year?

1. Yes
2. No
3. Don't know

[IF I4 = 2]

- I5. What do you see as barriers to completing custom Agriculture, Schools, and Government projects?
[TEXT ENTRY BOX; NO FORCED RESPONSE]
- I6. How effective are the 2016 Focus on Energy financial incentives in motivating customers to participate in the Agriculture, Schools, and Government Program? [Matrix with Very effective, somewhat effective, Not too effective, Not at all effective, Don't know]
- I7. Do you have any recommendations for how Focus on Energy could better support you in reaching agricultural customers? [TEXT ENTRY BOX; NO FORCED RESPONSE]
- I8. Are there any energy-efficient technologies that the Agriculture, Schools, and Government Program does not currently incent that you believe would benefit your customers?
 1. Yes (please describe)
 2. No
 3. Don't know

J. Business Incentive Program

[ASK SECTION J IF DESIGNATED PROGRAM = BIP]

- J1. In 2016, the Business Incentive Program sent your company a letter in the mail sharing information about how your business contributes to the Program (energy savings, incentives), and gave your company a performance "ranking" (green, silver, gold, platinum). Have you read the letter?
 1. Yes
 2. No
 3. I don't remember receiving the letter

[IF J1 = 1]

- J2. How valuable is knowing your company's energy savings contribution to the Program?
 1. Very valuable
 2. Somewhat valuable
 3. Not too valuable
 4. Not at all valuable
 5. Don't know

[IF J1 = 1]

- J3. How valuable is knowing your company's Program performance compared to other Trade Allies?
 1. Very valuable
 2. Somewhat valuable
 3. Not too valuable
 4. Not at all valuable

5. Don't know

[IF J2 OR J3 = 2, 3 OR 4]

J4. How could the Program improve the contribution and ranking information to make it more valuable to your business? [TEXT ENTRY BOX; NO FORCED RESPONSE]

[IF J1 = 1]

J5. Regarding the Program contribution and ranking information, how likely are you to:

	Extremely unlikely 0	1	2	3	4	5	6	7	8	9	Extremely likely 10	Already have done this	Don't know
Share it with staff/coworkers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use the information in your business' marketing materials?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use the information as a sales tool with customers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[IF J1 = 1]

J6. How often would you like to receive the Program contribution and ranking information? [SINGLE RESPONSE]

- 6. Monthly
- 7. Quarterly
- 8. Annually
- 9. Other (please describe)
- 10. Don't know

J7. Lastly, how could Focus on Energy better-support you in promoting the Business Incentive Program to property owners/managers of mixed-use buildings (i.e. multifamily property that includes commercial space within the building)? [TEXT ENTRY BOX; NO FORCED RESPONSE]

K. Chain Stores and Franchises Program

[ASK SECTION K IF DESIGNATED PROGRAM = CSF]

K1. When working with a chain store or franchise customer to make an energy efficiency upgrade, are any of the following actors also involved in the decision-making process? (Select all that apply)

- 1. Corporate staff
- 2. National Rebate Administrators
- 3. Other (please describe)

4. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

K2. What are the biggest challenges for chain store and franchise customers in moving forward with energy efficiency upgrades? (Select all that apply) [RANDOMIZE ORDER 1-6]

1. Cost of making upgrades
2. Difficulty in calculating energy savings, return on investment or payback period
3. Potential upgrades don't meet return on investment or payback period requirements
4. Lack of familiarity with new technologies
5. Disruption to business activities by making upgrades
6. Difficulty of obtaining approval to complete upgrade
7. Other (please describe)
8. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS] [SKIP TO K4]

K3. What can Focus on Energy do to address these challenges, specific to chain store and franchise customers? [TEXT ENTRY BOX; NO FORCED RESPONSE]

K4. When you first meet with a chain store or franchise customer, how knowledgeable are they about opportunities to save energy at their location(s)?

1. Very knowledgeable
2. Somewhat knowledgeable
3. Not too knowledgeable
4. Not at all knowledgeable
5. Don't know

[ASK IF K4 = 1, 2, 3 OR 4]

K5. In your opinion, how do your chain store and franchise customers' level of knowledge about opportunities to save energy at their location(s) compare to other nonresidential customers? Would you say...

1. Chain store and franchise customers have the same level of knowledge about opportunities to save energy at their location(s) as other nonresidential customers
2. Chain store and franchise customers have more knowledge about opportunities to save energy at their location(s) than other nonresidential customers
3. Chain store and franchise customers have less knowledge about opportunities to save energy at their location(s) as other nonresidential customers
4. Don't know

K6. Based on your interactions with chain store and franchise customers, what elements of the Program should marketing messages highlight to increase participant knowledge on how to save energy at their location(s)? [TEXT ENTRY BOX; NO FORCED RESPONSE]

L. Large Energy Users Program

[ASK SECTION L IF DESIGNATED PROGRAM = LEU]

- L1. How important are the following incentive factors in motivating customers to participate in the Large Energy Users Program? [Matrix with Very important, somewhat important, Not too important, Not at all important, Don't know] [Randomize response options]:
1. Price per kWh
 2. Price per kW demand
 3. Price per therm
 4. Annual customer cap
 5. Single project cap
 6. Maximum payback eligibility window
 7. Maximum incentive percentage of project cost
- L2. How effective are the 2016 Focus on Energy financial incentives in motivating customers to participate in the Large Energy Users Program? [Matrix with Very effective, somewhat effective, Not too effective, Not at all effective, Don't know] [Randomize response options]
- A. \$100 per kW reduction (custom incentive)
 - B. \$0.03 per kWh (non-lighting, custom incentive)
 - C. \$0.02 per kWh for lighting project (custom incentive)
 - D. \$0.40 per therm (custom incentive)
 - E. 5-year maximum payback eligibility (1.5 years minimum)
 - F. 30% maximum of project total cost
 - G. \$150,000 single project cap
 - H. \$300,000 customer annual cap
- L3. [IF ANY FROM L2 = NOT TOO EFFECTIVE OR NOT AT ALL EFFECTIVE] Using the same scale, how effective would the following financial incentives be in motivating customers to participate in the Large Energy Users Program? [Matrix with Very effective, somewhat effective, Not too effective, Not at all effective, Don't know] [Randomize response options]
- A. \$125 per kW reduction (custom incentive) [Display if L2A = not at all effective or not too effective]
 - B. \$0.04 per kWh (non-lighting, custom incentive) [Display if L2B = not at all effective or not too effective]
 - C. \$0.04 per kWh for lighting project (custom incentive) [Display if L2C = not at all effective or not too effective]
 - D. \$0.80 per therm (custom incentive) [Display if L2D = not at all effective or not too effective]
 - E. 10-year maximum payback eligibility (1.5 years minimum) [Display if L2E = not at all effective or not too effective]
 - F. 50% maximum of project total cost [Display if L2F = not at all effective or not too effective]
 - G. \$200,000 single project cap [Display if L2G = not at all effective or not too effective]
 - H. \$400,000 customer annual cap [Display if L2H = not at all effective or not too effective]
- L4. How have the suspense of program measures, such as compressed air leak survey and repair, compressed air heat recovery, or HVAC chillers affected how often you promote the Large Energy Users Program to customers? Would you say you promote the Large Energy Users Program...
1. More often
 2. Not as often
 3. Not changed/stayed the same

- L5. What industries do you target to participate in the Large Energy Users Program? (Select all that apply)
1. Agricultural/mining facilities
 2. Educational facilities (e.g., schools, colleges)
 3. Food processing facilities
 4. Health care facilities
 5. Manufacturing facilities
 6. Other (please describe)
 7. Don't know **[ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]**
- L6. Does your company create marketing materials to promote the Large Energy Users Program to customers in specific industries?
1. Yes (pleases specify which industries)
 2. No
 3. Don't know

M. Multifamily Energy Savings Program

[ASK SECTION M IF DESIGNATED PROGRAM = MESP]

- M1. What level of interaction do you prefer from your Multifamily Energy Savings Program Energy Advisor? (Select all that apply)
1. I don't need my Energy Advisor to contact me; I will reach out to them when I feel it's appropriate
 2. I only want to work with my Energy Advisor when it's related to a specific project
 3. I want to hear from my Energy Advisor with updates on training opportunities and special incentive/program offerings
 4. I prefer to have regular communications, even if it's to see how my business is doing
 5. Other (please describe)
- M2. Are you currently qualified to offer the common area lighting package to your multifamily customers? The package provides customers equipment such as fixtures, occupancy sensors and T8 lamps for a \$250 copay.
1. Yes
 2. No **[SKIP TO M7]**
 3. Don't know **[SKIP TO M7]**

[IF M2 = 1]

- M3. How often do you promote the common area lighting package to your multifamily customers?
1. All the time
 2. Frequently
 3. Sometimes
 4. Seldom
 5. Never

[ASK IF M3 = 3, 4, OR 5]

M4. Why don't you promote the common area lighting package more often? (Select all that apply)

[RANDOMIZE ORDER FOR 1-7]

1. I'm not confident about the details of the programs or who is eligible
2. It's confusing to the customer
3. Too much paperwork
4. For the jobs I do, the incentives are not worth the hassle
5. I don't like the equipment or products that Focus on Energy promotes
6. I perceive a financial risk to myself or my customer
7. I don't like having my work inspected
8. Other (please describe) [FORCED TEXT ENTRY RESPONSE]
9. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]

[IF M2 = 1]

M5. How effective is the common area lighting package in encouraging multifamily property owners/managers to install comprehensive energy saving upgrades at their properties?

1. Very effective
2. Somewhat effective
3. Not too effective
4. Not at all effective
5. Don't know

M7. Lastly, how could Focus on Energy better-support you in promoting the Multifamily Energy Savings Program to property owners/managers of mixed-use buildings (i.e. multifamily property that includes commercial space within the building)? [TEXT ENTRY BOX; NO FORCED RESPONSE]

N. Small Business Program

[ASK SECTION N IF DESIGNATED PROGRAM = SBP]

N1. CFLs and LEDs are some of the energy-efficient products available to Small Business Program customers. Which statement best describes the impact these program offerings have had on your Focus on Energy projects and business?

1. LEDs have had the greatest impact
2. CFLs have had the greatest impact
3. Both LEDs and CFLs have had an equal impact
4. No impact from LEDs and CFLs
5. Don't know

N2. Refrigeration equipment are some of the newest energy-efficient products available to Small Business Program customers. How familiar are you with the new refrigeration equipment offerings and incentives available?

1. Very familiar
2. Somewhat familiar
3. Not too familiar
4. Not at all familiar

- N3. Please indicate whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with the following statements: [MATRIX WITH RESPONSE CHOICES: STRONGLY AGREE, SOMEWHAT AGREE, SOMEWHAT DISAGREE, STRONGLY DISAGREE, OR DON'T KNOW] [RANDOMIZE ORDER]
- A. Participation eligibility for my customers through the Small Business Program is well-understood
 - B. The Energy Snapshot tool is an effective way to communicate about program announcements
 - C. The usability of the Energy Snapshot tool has improved since last year
 - D. I am satisfied with the current incentive amounts for the Small Business Program
 - E. My customers are interested in the new refrigeration equipment offerings
 - F. It's easy to get customers that participate in the Small Business Program interested in other Focus on Energy incentives and programs
- N4. Thinking about all the Small Business Program customers and potential customers you have encountered this year, what measures are they most interested in? (Select all that apply)
1. Aeration: faucet aerators
 2. Controls: occupancy sensors, lighting controls, heater controls, fan controls
 3. CFLs
 4. Delamping: removal of excess lamps
 5. Insulation: pipe wrap
 6. Linear fluorescents: T5, T8, or T12 lighting fixtures
 7. LEDs: signs, LED lamps, case lighting
 8. Motor: ECM compressor fan motor
 9. Refrigeration
 10. Showerheads
 11. Strip curtains
 12. Other (please describe) [FORCED TEXT ENTRY RESPONSE]
 13. Don't know [ANSWER LOGIC: CANNOT BE SELECTED ALONG WITH OTHER ANSWERS]
- N5. What is one important thing you would suggest Focus on Energy do to improve its Small Business Program? [TEXT ENTRY BOX; NO FORCED RESPONSE]

O. Trade Ally Spillover

In the next set of questions, we would like to understand whether participating in Focus on Energy has encouraged you to promote and sell other energy-efficient equipment that does not receive a Focus on Energy incentive.

[REPEAT O1 TO O3 FOR EACH OF THE THREE PROGRAM MEASURE CATEGORIES LISTED IN THE SAMPLE FIELDS]

- O1. Our records show that your company specified, sold, and/or installed [MEASURE CATEGORY 1] equipment to nonresidential customers in 2016 that received a Focus on Energy financial incentive. During the 2016 program year, how many [MEASURE CATEGORY 1](s) did you sell within Focus on Energy's service territory? This should include standard and high efficiency equipment.

1. [RECORD #]

- O2. Approximately what percentage of your total [MEASURE CATEGORY 1] equipment installations (in terms of dollars) was...
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]
 - A. Standard Efficiency
 - B. High Efficiency – that DID RECEIVE an incentive from Focus on Energy
 - C. High Efficiency – that DID NOT RECEIVE an incentive from Focus on Energy

- O3. On a 10-point scale where 0 is “not at all influential” and 10 is “extremely influential”, please rate how influential participating in Focus on Energy Programs has been on your sales of non-rebated high efficiency [MEASURE CATEGORY 1] products to your customers.
 1. 0 – not at all influential
 2. 1
 3. 2
 4. 3
 5. 4
 6. 5
 7. 6
 8. 7
 9. 8
 10. 9
 11. 10 – extremely influential
 12. Don't know

P. Lighting Standard Market Practice

[ASK SECTION P IF D1 = 2 ELECTRICAL/LIGHTING]

In this last section of the survey, we'd like to know more about your lighting product sales from nonresidential customers. Please base your responses to the following questions on sales of **linear** lamp, fixture, ballast, and controls in **Wisconsin from 2015 to 2016**.

- P1. About what percent of your nonresidential linear lighting sales are used in **retrofit** applications (compared to new construction)? Note that Focus on Energy defines new construction projects as free-standing buildings or major additions, and adaptive reuse or substantial renovations to existing buildings.
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]

- P2. About what percent of your nonresidential linear lighting sales are installed in unconditioned spaces (garages, exterior, etc.)?
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]

- P3. About what percent of your linear lighting sales are for regularly-unoccupied spaces (storage, maintenance closets, etc.)?
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]

- P4. About what percent of your nonresidential linear lighting sales include controls such as dimming capability or occupancy, photocell, or wireless sensors?
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]
- P5. About what percent of your linear lighting sales are for single-family residential or in-unit, non-common area multifamily properties?
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]
- P6. Approximately what percent of your nonresidential linear lighting sales are purchased through the following channels? Your answers should add up to 100%. [CONSTANT SUM QUESTION TYPE]
1. Distributors ____% [TEXT ENTRY BOX; NUMERIC VALIDATION 0-100]
 2. Manufacturers or manufacturers' representatives (including their websites) ____% [TEXT ENTRY BOX; NUMERIC VALIDATION 0-100]
 3. Store-front retailers (including online sales through these retailers) ____% [TEXT ENTRY BOX; NUMERIC VALIDATION 0-100]
 4. Online-exclusive retailers ____% [TEXT ENTRY BOX; NUMERIC VALIDATION 0-100]
 5. Other (please describe) ____% [TEXT ENTRY BOX; NUMERIC VALIDATION 0-100], Describe: ____ [FORCED TEXT ENTRY BOX]
- P7. [IF P6.1 CONTAINS A NUMBER BESIDES 0] Who are your top three distributors that you purchase linear lighting products from?
1. Distributor #1 name: [TEXT ENTRY BOX]
 2. Distributor #1 city: [TEXT ENTRY BOX]
 3. Distributor #2 name: [TEXT ENTRY BOX]
 4. Distributor #2 city: [TEXT ENTRY BOX]
 5. Distributor #3 name: [TEXT ENTRY BOX]
 6. Distributor #3 city: [TEXT ENTRY BOX]
- P8. Based on your knowledge of the Focus on Energy Business Programs, of all your 2015 linear lighting sales that **qualified for prescriptive incentives**, what percent actually received a financial incentive?
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]
- P9. Of all your 2015 linear lighting sales that **qualified for custom incentives**, what percent did customers actually apply for an incentive?
 [DROPDOWN MENU, OPTIONS FROM 0-100% IN 5% INCREMENTS AND "DON'T KNOW"]
- P10. [IF P9 <100%] Why did your customers choose not to apply for Focus on Energy **custom** incentives?
 [TEXT ENTRY BOX; NO FORCED RESPONSE]

Q. Gift Card

[DISPLAY TO NONCORE TRADE ALLIES]

- Q1. Those are all the questions we have. Please provide your mailing address to be entered into a drawing for a chance to win one of six \$100 Visa gift cards. We will notify winners by email and deliver the gift card by mail in 4 to 6 weeks.

Name	<input type="text"/>
Street or PO Address	<input type="text"/>
City	<input type="text"/>
State	<input type="text"/>
Zip Code	<input type="text"/>

[DISPLAY TO CORE TRADE ALLIES]

Q2. Those are all the questions we have. Please provide your mailing address to receive your \$20 Visa gift card. We will deliver the gift card by mail in 4 to 6 weeks. Please be on the lookout for a white, business-size envelope from our research company CADMUS.

Name	<input type="text"/>
Street or PO Address	<input type="text"/>
City	<input type="text"/>
State	<input type="text"/>
Zip Code	<input type="text"/>

[END OF SURVEY MESSAGE]

Success! Your responses have been submitted. Thank you for your time today.

Focus on Energy CY 2016 On Demand Savings Pilot Participant Interview Guide – Round 1 March 2016

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Note: This interview guide builds on the draft survey questions for ODS that Franklin Energy developed last fall. The objective of these interviews is to obtain early program feedback for the pilot.

Research Questions	Interview Guide Questions
How have customers' experienced the early stages of the ODS program? (recruitment, onboarding, and monthly meetings?)	B1, B2, C1, C3, D2
Is there anything the Program could do to improve this process in the early stages of a customer's participation?	B3, C5, D3
If using MyMeter yet, are participants receiving clear information/training?	Section E
If using MyMeter yet, are participants satisfied?	Section E
So far in the program, have participants gained a greater understanding about strategies for peak demand reduction?	F1
Is the program beginning to change customer behavior/practice?	F3, F4

A. Introduction

Thank you for making the time to speak with me. I received your contact information from Focus on Energy and would like to speak with you about your participation in the Focus on Energy "On Demand Savings Pilot Program," in order to gather feedback and help improve the program for the coming year. As I mentioned in my email, this should probably take around 15-20 minutes.

- A1. To start, please tell me a little bit about what stage you are in in the program. How have you interacted with the program so far?
- A2. How did you first learn about the opportunity to participate in this program?

Great. Next, I'm going to ask you a couple questions about some initial meetings you had with Program representatives early on in the process.

B. Recruitment Meeting

- B1. During the recruitment meeting, how well did the Program representatives explain the full scope and intent of the Program? Would you say.... [READ LIST, AND ALSO RECORD ANY VERBATIM COMMENTS THE PARTICIPANT HAS]
- a. Very effectively
 - b. Somewhat effectively
 - c. Not too effectively
 - d. Not effectively at all
- B2. During the recruitment meeting, could the Program representatives have provided more clarity on certain information? If so, what?
- B3. What suggestions, if any, do you have to make the recruitment meeting better?

C. Onboarding Meeting

- C1. During the onboarding meeting where baselines and demand limiting strategies were discussed, did you find that the right mix of people were in the room? Why or why not?
- C2. What are the primary factors that influence your company's on-peak demand?
- C3. During the onboarding meeting, did you feel that the recommended demand limiting strategies were appropriate for the targeted building?
- a. Why or why not?
 - b. Which of the demand limiting strategies did you find most useful?
- C4. Was the demand baseline presented to you easy to understand? If no, why not?
- C5. What suggestions, if any, do you have to make the onboarding meeting better?

D. Monthly Review Meetings

- D1. Have you participated in a "2015 recap meeting" where Program representatives present interim demand savings for your facility? Have you had any of these meetings yet? [IF NO, SKIP TO NEXT SECTION]
- D2. How did you find the savings compared to your expectations? Would you say...[READ LIST, AND ALSO RECORD ANY VERBATIM COMMENTS THE PARTICIPANT HAS]
- a. Equal to expectations,
 - b. Below expectations, or
 - c. Above expectations
- D3. Do you have any suggestions to make the monthly review meetings better?

- a. Is there any more information that you would like to receive, but haven't?

E. MyMeter Energy Dashboard

- E1. How long have you been using the MyMeter dashboard?
- E2. How frequently would you say you use the dashboard?
 - a) Daily
 - b) Weekly
 - c) Monthly
 - d) Other
- E3. What is your perspective on the platform's performance?
 - a) Have you experienced any software glitches?
 - b) If you could suggest an improvement, what would it be?
- E4. How would you rate the training that you received on the use of the dashboard?
 - a) In person?
 - b) Videos?
- E5. Are you aware that there is a web services integration to ENERGY STAR Portfolio Manager for benchmarking?
 - a) If yes, are you using it?
- E6. On a scale of 0-10, where 0 means not at all satisfied and 10 means extremely satisfied, please rate your satisfaction with the following:
 - a) Your overall experience using MyMeter
 - b) MyMeter ease of use
 - c) MyMeter mobile experience

F. Wrap-Up

- F1. Do you feel you have a better understanding of your utility bill and how demand charges impact your utility costs?
- F2. Generally, do you feel you have a better understanding of strategies to reduce on-peak demand since you began participating in the ODS Program?
 - a) Probe if needed: How has your understanding changed?
- F3. What strategies, if any, had you implemented prior to participating in the Program?
- F4. What strategies, if any, have you implemented since participating in the Program?
- F5. So far, how has the ODS Program helped change your thinking about using your building automation system?

- a) Probe if needed: For example, do you feel more equipped to use it as an energy management tool as opposed to just using it to maintain occupant comfort? How?
- F6. On a scale of 0-10, where 0 means not at all satisfied and 10 means extremely satisfied, overall how satisfied are you with the program?
- F7. Do you have any other comments or suggestions for the Program at this time?

Focus on Energy CY 2016

On Demand Savings Pilot Participant Interview Guide – Round 2

January 2017

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Research Questions	Interview Guide Questions
How have customers experienced the ODS program? (recruitment, onboarding, and follow up meetings?)	B2, B3, C1, C2, D1, D3, D5, D6, E1, E2
Is there anything the Program could do to improve this process in the early stages of a customer’s participation?	C1, C2, D1, D3, D5, D6, E3
If using MyMeter, are participants receiving clear information/training?	F4
If using MyMeter, are participants satisfied with the platform?	F3, F6
Have participants gained a greater understanding about strategies for peak demand reduction?	G1, G2
Have customers set specific demand reduction goals and are they achieving results?	G3, G4, G5
Is the program beginning to change customer behavior/practice?	G5, G6, G7, G8
What is the customer satisfaction level with the program?	G9, G10, Section H

Target: (10 Round 1 interviewees, 10 new respondents)

General notes and instructions

- We plan to check back in with previous respondents who had completed only the early stages of the program when we first spoke with them in order to assess their participation experience since the last interview. During interviews with previously interviewed respondents, we will reference the Round 1 notes to avoid redundancy.
- Interviewer instructions are in green **[LIKE THIS]**.
- CATI programming instructions are in red **[LIKE THIS]**.
- Items that should not be read by the interviewer are in parentheses (like this).

A. Introduction

- A1. May I speak with **[CONTACT NAME]**? **[IF THAT PERSON IS NOT AT THIS PHONE NUMBER, ASK FOR NAME AND PHONE NUMBER AND START AGAIN]**
1. (Yes)
 2. (No, person is not able to come to phone) **[GET NAME, PHONE NUMBER, AND SCHEDULE CALLBACK]**
 3. **(No, person no longer works there) [ASK FOR THE CONTACT NAME AND PHONE NUMBER FOR THE PERSON MOST FAMILIAR WITH PARTICIPATING IN ODS PROGRAM.]**
 98. (Don't know) **[ASK TO SPEAK WITH SOMEONE WHO KNOWS AND BEGIN AGAIN]**
 99. (Refused) **[THANK AND TERMINATE]**
- A2. Hello, I'm **[INSERT NAME]** calling from Cadmus on behalf of Focus on Energy. Our records show that you are the person who is most knowledgeable about your company's involvement in Focus on Energy's On Demand Savings Program, is this correct?
1. (Yes)
 2. (No) **[ASK FOR THE CONTACT NAME AND PHONE NUMBER FOR THE CONTACT]**
 98. (Don't know) **[ASK TO SPEAK WITH SOMEONE WHO KNOWS AND BEGIN AGAIN]**
 99. (Refused) **[THANK AND TERMINATE]**
- A3. Focus on Energy wants to hear about your experience with the On Demand Savings Program. Your opinions will help us assess the success of the program and learn from the experience. We expect this call to take about 15 minutes. Is this a good time? **[IF NOT A GOOD TIME, ASK TO SCHEDULE A TIME TO CALL BACK]**

B. General

[SKIP TO NEXT SECTION IF RESPONDENT WAS PREVIOUSLY INTERVIEWED]

- B1. First, can you please describe your role at your company or organization? **[PROBE FOR TITLE AND HIGH-LEVEL RESPONSIBILITIES.]**
[RECORD: _____]
- B2. How long have you been working with the On Demand Savings Program at your company?
[RECORD: _____]
- B3. How did you first learn about the opportunity to participate in this program?
[RECORD: _____]

Great. Next, I'm going to ask you a couple questions about some initial meetings you had with Program representatives early on in the process.

C. Recruitment Meeting

[SKIP TO NEXT SECTION IF RESPONDENT WAS PREVIOUSLY INTERVIEWED]

C1. During the recruitment meeting, how effective were the Program representatives in explaining the full scope and intent of the Program? Would you say they were... **[READ LIST, AND ALSO RECORD ANY VERBATIM COMMENTS THE PARTICIPANT HAS?]**

1. Very effective
2. Somewhat effective
3. Not too effective
4. Not at all effective
98. (Don't know)
99. (Refused)

[ASK IF C1 = 2, 3, OR 4] How could the meeting be improved?

[RECORD: _____]

C2. During the recruitment meeting, could the Program representatives have provided more clarity on how the program operates? (*PROBE: program goals, customer incentives, participant responsibilities, etc.*)

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

[ASK IF C2 = 1] What could be improved?

[RECORD: _____]

D. Onboarding Meeting

[SKIP TO NEXT SECTION IF RESPONDENT WAS PREVIOUSLY INTERVIEWED]

D1. During the onboarding meeting where baselines and demand limiting strategies were discussed, did you find that the right mix of people were in the room?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

[ASK IF D1 = 2] Who should have been there that was not?

[RECORD: _____]

D2. What are the primary factors that influence your company's on-peak demand?

[RECORD: _____]

D3. During the onboarding meeting, how appropriate were the recommended demand limiting strategies for the targeted building? Would you say they were...?

1. Very appropriate
2. Somewhat appropriate
3. Not too appropriate
4. Not at all appropriate
98. (Don't know)
99. (Refused)

[ASK IF D3 = 2, 3, OR 4] What makes you say that?

[RECORD: _____]

D4. Which of the demand limiting strategies did you find to be most helpful for your building(s)

[RECORD: _____]

D5. Was the demand baseline presented to you easy to understand?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

[ASK IF D5 = 2] What makes you say that?

[RECORD: _____]

D6. What suggestions, if any, do you have to make the onboarding meeting better?

[RECORD: _____]

E. Follow-up Meetings (Monthly and Wrap-up)

E1. Have you participated in a follow up (monthly or wrap-up) meeting where Program representatives present interim demand savings and discuss strategies for your facility? **[IF NO, SKIP TO NEXT SECTION]**

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

E2. Do you have any suggestions to make the follow up meetings better?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

[ASK IF E2 = 1] What could be improved?

[RECORD: _____]

E3. Is there any more information that you would like to receive, but haven't?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

[ASK IF E3 = 1] What information would you like?

[RECORD: _____]

F. MyMeter Energy Dashboard

[SKIP TO NEXT SECTION IF RESPONDENT WAS PREVIOUSLY INTERVIEWED]

F1. How long have you been using the MyMeter dashboard?

[RECORD: _____]

F2. How frequently do use the dashboard?

1. Daily
2. Weekly
3. Monthly
4. Other [RECORD: _____]

F3. On a scale of 0 to 10, where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied are you with the dashboard platform's performance?

1. [RECORD: _____]
98. (Don't know)
99. (Refused)

[ASK IF F3 < 7] If you could suggest an improvement, what would it be?

[RECORD: _____]

(Probe for: Have you experienced any software glitches? IT issues?)

F4. How effective was the training you received in teaching you how to use the dashboard? Was it...

- a) In person training?
 1. Very effective
 2. Somewhat effective
 3. Not too effective
 4. Not at all effective
 98. (Don't know)
 99. (Refused)
- b) Training videos?
 1. Very effective
 2. Somewhat effective

- 3. Not too effective
- 4. Not at all effective
- 98. (Don't know)
- 99. (Refused)

[ASK IF F4A OR F4B = 2, 3, OR 4] How could training be improved?

[RECORD: _____]

(Probe for: Have you used the videos? How often do you reference the videos?)

F5. Are you aware that there is a web services integration from MyMeter to ENERGY STAR Portfolio Manager for benchmarking?

- 1. (Yes)
- 2. (No)
- 98. (Don't know)
- 99. (Refused)

[ASK IF F5 = 1] If yes, how are you using it?

[RECORD: _____]

F6. On a scale of 0-10, where 0 means not at all satisfied and 10 means extremely satisfied, please rate your satisfaction with the following:

- a) Your overall experience using MyMeter
- b) MyMeter ease of use
- c) MyMeter mobile experience

[RECORD: a) _____ b) _____ c) _____]

G. Outcomes

G1. How has your understanding of how demand charges impact your utility costs changed since you began participating in the ODS Program? Would you say you have...?

- 1. A better understanding
- 2. The same level of understanding
- 3. Less understanding
- 98. (Don't know)
- 99. (Refused)

G2. Generally, how has your understanding of strategies to reduce on-peak demand changed since you began participating in the ODS Program? Would you say you have...?

- 1. A better understanding
- 2. The same level of understanding
- 3. Less understanding
- 98. (Don't know)
- 99. (Refused)

[ASK IF G2 = 1] How has your understanding changed?

[RECORD: _____]

G3. Have you been able to quantify your successes of measurable demand reductions compared to historical billing data?

- 1. (Yes)
- 2. (No)
- 98. (Don't know)
- 99. (Refused)

G4. How did you find the savings compared to your expectations? Would you say the savings were...

[READ LIST, AND ALSO RECORD ANY VERBATIM COMMENTS THE PARTICIPANT HAS]

- 1. Equal to your expectations,
- 2. Below your expectations, or
- 3. Above your expectations

Why do you say that? **[RECORD:** _____]

G5. Have you set a specific demand reduction target for your facility?

- 1. (Yes)
- 2. (No)
- 98. (Don't know)
- 99. (Refused)

[ASK IF G5 = 1] What kW reduction did you set? Were you able to meet the targeted reduction?

[RECORD: _____]

G6. What demand reduction strategies, if any, had you implemented prior to participating in the Program?

[RECORD: _____]

G7. What demand reduction strategies, if any, have you implemented since you started participating in the Program?

[RECORD: _____]

G8. So far, how has the ODS Program helped change your thinking about using your building automation system?

[RECORD: _____]

(Probe if needed: For example, do you feel more equipped to use it as an energy management tool as opposed to just using it to maintain occupant comfort? Have you increased your use of the trending, alarming, or scheduling functions?)

G9. How, if at all, has your perception of MG&E changed since you started participating in the program?

[RECORD: _____]

G10. How, if at all, has your perception of Focus on Energy changed since you started participating in the program?
 [RECORD: _____]

H. Satisfaction

H1. On a scale of 0 to 10, where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied are you with the level of communication that you received from Focus on Energy?

- 1. [RECORD: _____]
- 98. (Don't know)
- 99. (Refused)

[ASK IF H1 < 7] If you could suggest an improvement, what would it be?

[RECORD: _____]

H2. On a scale of 0 to 10, where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied are you with the processes, such as the application process and rebate processing, of the Focus on Energy program? Would you say that you are...?

- 1. [RECORD: _____]
- 98. (Don't know)
- 99. (Refused)

[ASK IF H2 < 7] If you could suggest an improvement, what would it be?

[RECORD: _____]

H3. On a scale of 0 to 10, where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied are you with the amount of customer incentive you received from the ODS Program? Would you say that you are...?

- 2. [RECORD: _____]
- 98. (Don't know)
- 99. (Refused)

[ASK IF H3 < 8] How did the rebate compare with your expectations?

[RECORD: _____]

H4. On a scale of 0-10, where 0 means not at all satisfied and 10 means extremely satisfied, overall how satisfied are you with the ODS Program?

[RECORD: _____]

H5. On a scale of 0-10, where 0 means not at all likely and 10 means extremely likely, how likely is it that you would continue to participate in this program?

[RECORD: _____]

[ASK IF H5 > 5] If you continue with the program what would you like to see changed?

[RECORD: _____]

H6. On a scale of 0-10, where 0 means not at all likely and 10 means extremely likely, how likely is it that you would recommend this program to others?

[RECORD: _____]

H7. How can Focus on Energy make it easier for companies like yours to participate in its energy efficiency programs?

[RECORD: _____]

H8. Do you have any other comments or suggestions for the Program at this time?

[RECORD: _____]

Those are all my questions. Thank you very much for your time and for your support of this important study. Have a great day!

Wisconsin Focus on Energy RECIP Program CY 2016 Biogas and Biomass Participant Survey

Target = 8; 6 biogas and 2 biomass

Introduction

Hello, my name is [INSERT NAME], calling on behalf of Focus on Energy. We'd like to talk with you about your [biomass/biogas] system and experiences with the Renewable Energy Competitive Incentive Program sponsored by Focus on Energy. Your answers will be used as part of a study to evaluate and improve Focus on Energy's programs.

May I speak with [INSERT CUSTOMER CONTACT NAME]?

[IF NEEDED]

The Renewable Energy Competitive Incentive Program, also known as the RECIP Program, provides incentives for renewable energy systems installed at eligible Wisconsin businesses through a competitive request for proposal process.

[IF NEEDED]

This phone call is designed to last about 20 minutes. Let me assure you this is not a sales call. Your individual responses will be kept confidential.

[Only if asked for a Focus on Energy contact to verify the survey authenticity, offer Joe Fontaine with the Public Service Commission of Wisconsin, 608-266-0910.]

A. Awareness (All Participants)

To begin, I have a few questions for you about your experience with the program.

1. *I'm going to read you a short list. Please tell me who, if anyone, was involved in helping you initiate your renewable energy project. [READ LIST AND MARK 1=YES, 2=NO, 99=DON'T KNOW; 88 REFUSED FOR EACH]

1. Your contractor or vendor
2. A Focus on Energy "Energy Advisor"
3. Your utility account manager
4. No outside help
5. (Don't know)

2. *How did your business learn about the Focus on Energy incentives available for this project? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE] [IF RESPONDENT MENTIONS WEBSITE CLARIFY IF UTILITY OR FOCUS ON ENERGY WEBSITE SO YOU KNOW HOW TO CODE ANSWER ON LIST.]

1. (Contact with Focus on Energy representative through phone, email, or in person)
2. (Focus on Energy quarterly newsletter)
3. (Focus on Energy website)
4. (Focus on Energy sponsored workshop or event)
5. (Focus on Energy printed program materials)
6. (Contact with utility representative)

7. (Utility mailing, bill insert, or utility website)
8. (Word of mouth (family, friend, or business colleague))
9. (I contacted my contractor/vendor to ask)
10. (My contractor/vendor let me know about them)
11. (Previously participated in program/received an incentive)
12. (Through a trade association or professional organization SPECIFY: _____))
13. (Other [SPECIFY: _____])
98. (Don't know)
98. (Refused)

B. Biogas Interview Questions

1. What type of heat engine do you operate? (Gas turbine, combustion engine, heat engine, etc.)
2. Does your system operate as a cogeneration or combined (AKA, CPH) system?
3. At what pH does your system operate?
4. Is your system a "high rate" system involving biomass retention? Or a "low rate" system without biomass retention?

[Ask if the system is a high rate biogas system]

- a. What kind of high rate biogas system is it? (Biogas settler, anaerobic baffled reactor [ABR] anaerobic filter, upflow anaerobic sludge blanket reactor [UABR], etc.)

[Ask if the system is a low rate biogas reactor]

- b. What kind of biogas system is it? (Batch reactor, feed-based reactor [accumulation system], plug-flow reactor [PFR], continuously-stirred tank reactor [CSTR], etc.)
5. What is the make and model of your system?
6. How long ago was your system installed (in months)?
7. What is the total solids (TS) content of your digester? (Above 20%, below 20%, etc.)
8. What is the chemical oxygen (COD) demand of your system? *(This questions is very important and used to quantify the final biogas production – probe for answer/response.)*

[Ask if they don't know the COD value of their system]

- a. What is the total anaerobic biodegradability or your system?
9. Has your system functioned as expected? Any surprises?
10. Is there anything else you'd like to share about your experience obtaining your system, or your interaction with the RECIP Program?

C. Biomass Interview Questions

1. What type of biomass system do you operate? (Combined heat and power [CHP], heat only, electric only, etc.)

2. Describe the primary feedstock and source.	
a. Biomass fuel cost (\$/MMBTU)	
b. Energy content (dry) (BTU/lb)	
c. Moisture content (%)	
d. Energy content (as received) (BTU/lb)	

3. Fuel and energy displacement info	
a. Displaced fuel cost (\$/MMBTU)	
b. Displaced retail electricity cost (\$/kWh)	
4. Has the primary feedstock been consistent over the lifetime of the system? (If not, please provide detail on the feedstock history for the facility.)	
5. Nameplate system heat rate	
6. Nameplate electrical efficiency	
7. Nameplate CHP efficiency (if applicable)	
8. Is the system equipped with performance monitoring equipment? (If so, please list all metrics collected by the system.)	
9. Provide annual and total energy production, if available.	
10. Approximately what portion of electrical generation is consumed by onsite loads?	

11. Do you know the stated efficiency of the system?
12. What fuel types and in what quantities (lbs per year) are used to fuel your biomass system?
13. When was your system installed? How old is the system in years?
14. Has your system functioned as expected? Any surprises?
15. Is there anything else you'd like to share about your experience obtaining your system, or your interaction with the RECIP Program?

D. Freeridership (All Participants)

Next I have some questions to learn more about your decision to install the [INSERT PROJECT AND SIZE] and the influence of the Focus on Energy RECIP Program.

- D1. First, would your company have installed the [INSERT PROJECT] without the incentives offered through the RECIP Program?
1. Yes
 2. No
 99. (Don't know)
 98. (Refused)
- D2. I will read four statements and would like you to select the one that best describes where you were in the planning of your project's installation when you first learned of Focus on Energy's RECIP Program. [READ ALL AND SELECT ONE]
1. We had no formal plans for the project.
 2. We had already spoken to installation contractors but had not received any quotes for the project.
 3. We had already spoken to installation contractors and had received a quote, but had not yet determined whether to move forward with the selected renewable energy system.
 4. We had received a quote and were preparing to move forward with the selected renewable energy system.

- 99. (Don't know)
- 98. (Refused)

D3. Prior to participating in RECIP, was the **[INSERT PROJECT]** included in your company's capital or operating budget?

- 1. (Yes)
- 2. (No)
- 99. (Don't know)
- 98. (Refused)

D4. **[IF YES TO D3]** Did your capital or operating budget assume that the **[INSERT PROJECT]** would receive an incentive through RECIP?

- 1. (Yes)
- 2. (No)
- 99. (Don't know)
- 98. (Refused)

D5. **[IF YES TO D1]** Without the RECIP Program, would you have installed... **[READ LIST AND SELECT ONE]**

- 1. The same size system
- 2. A smaller system
- 3. No system at all
- 99. (Don't know)
- 98. (Refused)

D6. **[IF YES TO D1]** Without the RECIP incentive, would you have installed the renewable energy project... **[READ LIST; WHEN RESPONSE SELECTED, SKIP TO SECTION E]**

- 1. Within the same year **[SKIP TO SECTION E/SPILLOVER]**
- 2. Within one to two years **[SKIP TO SECTION E/SPILLOVER]**
- 3. Within three to five years **[SKIP TO SECTION E/SPILLOVER]**
- 99. (Don't know) **[SKIP TO SECTION E/SPILLOVER]**
- 98. (Refused) **[SKIP TO SECTION E/SPILLOVER]**

D7. **[ASK IF NO TO D1]** To confirm, when you say you would not have installed the same **[INSERT PROJECT]**, do you mean that without the incentive from RECIP, that you would not have installed the **[INSERT PROJECT]** at all?

- 1. Yes **[SKIP TO SECTION E/SPILLOVER]**
- 2. No
- 99. (Don't know)
- 98. (Refused)

D8. **[ASK IF NO TO D1]** Without the RECIP Program, would you have installed... **[READ LIST AND SELECT ONE]**

- 1. The same size system
- 2. A smaller system
- 3. No new system at all
- 99. (Don't know)
- 98. (Refused)

D9. [ASK IF NO TO D1] And finally, would you have installed the [INSERT PROJECT]... [READ LIST AND SELECT ONE]

1. Within the same year
2. Within one to two years
3. Within three to five years
99. (Don't know)
98. (Refused)

E. Spillover (All Participants)

E1. Since installing your renewable energy system, has your company installed additional renewable energy equipment at this location or others in Wisconsin for which you did **not** receive a Focus on Energy program incentive?

1. (Yes)
2. (No) [SKIP TO E4]
99. (Don't know) [SKIP TO CLOSING SECTION]
98. (Refused) [SKIP TO CLOSING SECTION]

E2. What type of renewable energy equipment did you install?

1. [RECORD RESPONSE] _____
99. (Don't know)
98. (Refused)

E3. How important was your experience with the Focus on Energy RECIP Program in your decision to install additional renewable energy equipment? Would you say it was: [READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not important at all
99. (Don't know)
98. (Refused)

E4. Since participating in the program, has your company installed any other energy-efficient equipment in your facility that you did **NOT** receive a Focus on Energy incentive for? [IF NEEDED: By energy-efficient products, I mean high efficiency lighting such as LEDs; high efficiency motors and variable speed drives; high efficiency air conditioners and heat pumps, efficient heating or water heating equipment, et cetera.]

1. (Yes) [ASK E5]
2. (No) [SKIP TO SECTION F]
98. (DON'T KNOW) [SKIP TO SECTION F]
98. (REFUSED) [SKIP TO SECTION F]

E5. What was the other energy-efficient equipment that you installed **without** receiving an incentive? [DO NOT READ LIST; MARK ALL THAT APPLY; 99=DON'T KNOW, 88=REFUSED, -96=N/A] [If the

customer says they bought something but have not installed it, the equipment has to be installed and operating for us to count it towards spillover.]

1. (CFLs)
2. (LEDs)
3. (Fluorescent tubes (T5s, T8s, etc.))
4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
5. (High efficiency motors)
6. (Air source heat pumps)
7. (Ground source heat pumps)
8. (Central AC)
9. (VSD (variable speed drive))
10. (Water heating equipment)
11. (Boiler)
12. (Compressed air equipment)
13. (Gas furnaces)
14. (Exit signs)
15. (Refrigeration equipment (refrigerators, freezers))
16. Operational Improvements [SPECIFY: _____]
17. (Other) [SPECIFY: _____]
98. (DON'T KNOW)
98. (REFUSED)

[ASK E5.11-E5.13 IF E5 = 1, 2, 3]

E5.11 What is the wattage of the lighting? [SPECIFY: _____]

E5.12 In what location was it installed (Wall/Ceiling/Outdoors)? SPECIFY: _____]

E5.13 What type of equipment was removed or replaced? [SPECIFY: _____]

[ASK E5.21-E5.23 IF E5 = 5]

E5.21 What equipment was the motor installed on? [SPECIFY TYPE: _____]

E5.22 What is the horsepower of the motor? [SPECIFY: _____]

[ASK E5.31-E5.33 IF E5 = 6, 7, 8]

E5.31 What fuel type is used? [SPECIFY: _____]

E5.32 What is the efficiency rating of the equipment? [SPECIFY: _____]

E5.33 What is the capacity of the equipment? [SPECIFY: _____]

[ASK E5.41-E5.42 IF E5 = 9]

E5.41 What type of motor was it installed on? [SPECIFY TYPE: _____]

E5.42 What is the horsepower of the motor? [SPECIFY: _____]

[ASK E5.51-E5.54 IF E5 = 10]

E5.51 What type of water heating equipment was purchased and installed? [SPECIFY TYPE: _____]

E5.52 What fuel type is used? [SPECIFY: _____]

E5.53 What is the efficiency rating of the equipment? [SPECIFY: _____]

E5.54 (If water heater with storage) What is the capacity of the equipment? [SPECIFY: _____]

[ASK E5.61-E5.62 IF E5 = 12]

E5.61 What type of application was the compressed air equipment purchased and installed? [SPECIFY APPLICATION: _____]

E5.62 What is the horsepower of the compressor motor? [SPECIFY: _____]

[ASK E5.71-E5.72 IF E5 = 13]

E5.71 What is the efficiency rating of the equipment? [SPECIFY: _____]

E5.72 What is the capacity of the equipment? [SPECIFY: _____]

[ASK E5.81 IF E5 = 15]

E5.81 What type of refrigeration equipment was purchased and installed? [SPECIFY TYPE: _____]

E6. [REPEAT FOR EACH ITEM MENTIONED IN E5] How many [INSERT ITEM FROM E5] did you install? [RECORD NUMBER _____, 99 FOR DON'T KNOW, 88 FOR REFUSED, AND -96 FOR N/A]

E7. [REPEAT FOR EACH ITEM MENTIONED IN E5] Please tell me how important was your experience participating in the Focus on Energy RECIP Program in your decision to install [ANSWER FROM E5]. Was it:
[EMPHASIZE EACH ANSWER OPTION AND PAUSE IN BETWEEN EACH OPTION.]

1. Very important,
2. Somewhat important,
3. Not too important, or
4. Not at all important?
98. (Don't know)
98. (Refused)

E8. Was [INSERT EACH ITEM FROM E5] installed at [SITE ADDRESS]?

1. Yes
2. No (ASK: What is the address of the location where you installed [INSERT EACH ITEM FROM E5]? [SPECIFY _____])
98. (Don't know)
98. (Refused)

F. Satisfaction (All Participants)

Next, I have a few questions for you about your experience with the program.

F1. *Thinking about the proposal you submitted, how easy would you say the paperwork was to complete? Would you say: [READ LIST]

1. Very easy,
2. Easy,
3. Somewhat challenging, or
4. Very challenging?
98. (Don't know)
98. (Refused)

[ASK IF F1 = 3 or 4]

F2. *Why do you say that? [OPEN END]

F3. *Thinking about the incentive check you received in the mail, about how long did it take to arrive from when the project was fully installed? [READ LIST]

1. 1-3 weeks
2. 4-6 weeks
3. 7-8 weeks
4. Over 8 weeks
98. (Don't know)
98. (Refused)

F4. How satisfied were you with the time it took to receive the check? Would you say: [READ LIST]

1. Very satisfied,
2. Somewhat satisfied,
3. Not too satisfied, or
4. Not satisfied at all?
98. (Don't know)
98. (Refused)

F5. *Is there anything that Focus on Energy could have done to improve your overall experience with the RECIP Program? [DO NOT READ THE LIST, RECORD ALL THAT APPLY]

1. (Better/more communication [SPECIFY: Who would you like more communication from?_____])
2. (Quicker response time [SPECIFY: Who would you like a quicker response time from?___])
3. (Increasing the incentive amount)
4. (Simplify the RFP process) [ASK: In what way? _____]
5. (Simplify the website)[ASK: In what way?_____]
6. (Provide quicker approval on proposals)
7. (Send incentive check out faster)
8. (Other [SPECIFY:_____])
9. (No, nothing)
98. (DON'T KNOW)
98. (REFUSED)

G. Customer Firmographics (All Participants)

Finally, I would like to ask you some questions about your business.

- G1. Does your company lease or own the facility served by the renewable energy project?
1. (Lease)
 2. (Own)
 3. (Other [SPECIFY: _____])
 99. (DON'T KNOW)
 98. (REFUSED)
- G2. How many people are employed at the location where the project took place?
1. [RECORD NUMBER: _____]
 99. DON'T KNOW
 98. REFUSED
- G3. What industry is your company in? [CODE ONE RESPONSE BELOW; DON'T READ UNLESS NECESSARY]
1. (Agriculture, Mining)
 2. (Communications)
 3. (Construction)
 4. (Education)
 5. (Finance, Insurance, Real Estate)
 6. (Food Service (restaurants))
 7. (Government)
 8. (Health Care)
 9. (Manufacturing)
 10. (Nonprofit / churches / schools)
 11. (Retail, Wholesale)
 12. (Transportation)
 13. (Hotel/motels)
 14. (Other [SPECIFY: _____])
 99. (DON'T KNOW)
 98. (Refused)

Thank you. We appreciate your help with this interview. Have a nice day.

Wisconsin Focus on Energy RECIP Program CY 2016 PV Participant Survey

This survey is designed for customers who received an incentive for purchasing and installing a solar PV system through the RECIP Program.

Target Quota: 60

Survey Greeting and Instructions

Thank you for participating in Focus on Energy's Renewable Energy Competitive Incentive Program (RECIP). Your feedback is very important to Focus on Energy, and will help improve energy-efficiency and renewable energy programs for customers like you. This survey should only take about 10 minutes. Your responses are confidential and will be used for research purposes only.

Click the arrow button at the bottom of each page to navigate through the survey.

Upon completing this survey you will be entered to win a \$100 Visa gift card.

A. Introduction

- A1. *Who, if anyone, was involved in helping you initiate your PV project?
1. My contractor or vendor
 2. A Focus on Energy "Energy Advisor"
 3. My utility account manager
 4. No outside help
 5. (Don't know)
- A2. *How did your business learn about the Focus on Energy incentives available for this project?
(Select all that apply).
1. (Contact with Focus on Energy representative through phone, email, or in person)
 2. (Focus on Energy quarterly newsletter)
 3. (Focus on Energy website)
 4. (Focus on Energy sponsored workshop or event)
 5. (Focus on Energy printed program materials)
 6. (Contact with utility representative)
 7. (Utility mailing, bill insert, or utility website)
 8. (Word of mouth (family, friend, or business colleague))
 9. (I contacted my contractor/vendor to ask)
 10. (My contractor/vendor let me know about them)
 11. (Previously participated in program/received an incentive)
 12. (Through a trade association or professional organization SPECIFY: _____)
 13. (Other [SPECIFY: _____])
 14. (Don't know)

B. Satisfaction and Application Ease

Next, there are a few questions for you about your application.

- B1. *Thinking about the proposal you submitted, how easy would you say the paperwork was to complete? Would you say:
1. Very easy
 2. Easy
 3. Somewhat challenging
 4. Very challenging
 5. (Don't know)
- [ASK IF B1 = 3 or 4]
- B2. *Why do you say that? [OPEN END]
- B3. *Thinking about the incentive check you received in the mail, about how long did it take to arrive since the system was fully installed?
1. 1-3 weeks
 2. 4-6 weeks
 3. 7-8 weeks
 4. Over 8 weeks
 5. (Don't know)
- B4. How satisfied were you with the time it took to receive the check? Would you say:
1. Very satisfied
 2. Somewhat satisfied
 3. Not too satisfied
 4. Not satisfied at all
 5. (Don't know)
- B5. *Is there anything that Focus on Energy could have done to improve your overall experience with the RECIP Program? (Select all that apply.)
1. (Better/more communication [SPECIFY: Who would you like more communication from? _____])
 2. (Quicker response time [SPECIFY: Who would you like a quicker response time from? ____])
 3. [ASK: What energy-efficient equipment should Focus on Energy offer incentives for? _____])
 4. (Increasing the incentive amount)
 5. (Simplify the RFP process) [ASK: In what way? _____]
 6. (Simplify the website)[ASK: In what way? _____]
 7. (Provide quicker approval on proposals)
 8. (Send incentive check out faster)
 9. (Other [SPECIFY: _____])
 10. (No, nothing)
 11. (DON'T KNOW)

C. Freeridership

Next are some questions to learn more about your decision to install the solar PV system and the influence of the Focus on Energy RECIP Program.

- C1. First, would your company have installed the PV system without the incentives offered through the RECIP program?
1. Yes
 2. No
 3. (Don't know)
- C2. Select the statement that best describes where you were in the planning of your project's installation when you first learned of Focus on Energy's RECIP Program.
1. We had no formal plans for the project.
 2. We had already spoken to installation contractors but had not received any quotes for the project.
 3. We had already spoken to installation contractors and had received a quote but had not yet determined whether to move forward with the selected renewable energy system.
 4. We had received a quote and were preparing to move forward with the selected renewable energy system.
 5. (Don't know)
- C3. Prior to participating in RECIP, was the PV system included in your company's capital or operating budget?
1. (Yes)
 2. (No)
 3. (Don't know)
- C4. **[IF YES TO C3]** Did your capital or operating budget assume that the PV system would receive an incentive through RECIP?
1. (Yes)
 2. (No)
 3. (Don't know)
- C5. **[IF YES TO C1]** Without the RECIP Program, would you have installed... **[READ LIST AND SELECT ONE]**
1. The same size system
 2. A smaller system
 3. No system at all
 4. (Don't know)
- C6. **[IF YES TO C1]** Without the RECIP incentive, would you have installed the renewable energy project... **[READ LIST; WHEN RESPONSE SELECTED, SKIP TO SECTION D]**
1. Within the same year **[SKIP TO SECTION D/SPILLOVER]**
 2. Within one to two years **[SKIP TO SECTION D/SPILLOVER]**
 3. Within three to five years **[SKIP TO SECTION D/SPILLOVER]**
 4. (Don't know) **[SKIP TO SECTION D/SPILLOVER]**

- C7. [ASK IF NO TO C1] To confirm, when you say you would not have installed the same PV system, do you mean that without the incentive from RECIP, that you would not have installed the PV system at all?
1. Yes [SKIP TO SECTION D/SPILLOVER]
 2. No
 3. (Don't know)
- C8. [ASK IF NO TO C1] Without the RECIP Program, would you have installed... [READ LIST AND SELECT ONE]
1. The same size system
 2. A smaller system
 3. No new system at all
 4. (Don't know)
- C9. [ASK IF NO TO C1] And finally, would you have installed the PV system... [READ LIST AND SELECT ONE]
1. Within the same year
 2. Within one to two years
 3. Within three to five years
 4. (Don't know)

D. Spillover

- D1. Since installing your renewable energy system, has your company installed additional renewable energy equipment at this location or others in Wisconsin for which you did **not** receive a Focus on Energy program incentive?
1. (Yes)
 2. (No) [SKIP TO SECTION E]
 88. (Don't know) [SKIP TO SECTION E]
- D2. What type of renewable energy equipment did you install?
1. [RECORD RESPONSE] _____
 88. (Don't know)
- D3. How important was your experience with the Focus on Energy RECIP Program in your decision to install additional renewable energy equipment? Would you say it was: [READ LIST]
1. Very important
 2. Somewhat important
 3. Not too important
 4. Not important at all
 88. (Don't know)
- D4. Since participating in the program, has your company installed any other energy-efficient products in your facility that you did **NOT** receive a Focus on Energy incentive for? (Such as high efficiency lighting such as LEDs; high efficiency motors and variable speed drives; high efficiency air conditioners and heat pumps, efficient heating or water heating equipment, etc.)
1. (Yes) [ASK D5]

- 2. (No) [SKIP TO SECTION E]
- 3. (DON'T KNOW) [SKIP TO SECTION E]

D5. What were the other energy-efficient products that you installed **without** receiving an incentive?
(Select all that apply)

- 1. (CFLs)
- 2. (LEDs)
- 3. (Fluorescent tubes (T5s, T8s, etc.))
- 4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
- 5. (High efficiency motors)
- 6. (Air source heat pumps)
- 7. (Ground source heat pumps)
- 8. (Central AC)
- 9. (VSD (variable speed drive))
- 10. (Water heating equipment)
- 11. (Boiler)
- 12. (Compressed air equipment)
- 13. (Gas furnaces)
- 14. (Exit signs)
- 15. (Refrigeration equipment (refrigerators, freezers))
- 16. (Operational Improvements) [SPECIFY: _____]
- 17. (Other) [SPECIFY: _____]
- 18. (DON'T KNOW)

[ASK D5.11-D5.13 IF D5 = 1, 2, 3]

D5.11 What is the wattage of the lighting? [SPECIFY: _____]

D5.12 In what location was it installed (Wall/Ceiling/Outdoors)? SPECIFY: _____]

D5.13 What type of equipment was removed or replaced? [SPECIFY: _____]

[ASK D5.21-D5.23 IF D5 = 5]

D5.21 What equipment was the motor installed on? [SPECIFY TYPE: _____]

D5.22 What is the horsepower of the motor? [SPECIFY: _____]

[ASK D5.31-D5.33 IF D5 = 6, 7, 8]

D5.31 What fuel type is used? [SPECIFY: _____]

D5.32 What is the efficiency rating of the equipment? [SPECIFY: _____]

D5.33 What is the capacity of the equipment? [SPECIFY: _____]

[ASK D5.41-D5.42 IF D5 = 9]

D5.41 What type of motor was it installed on? [SPECIFY TYPE: _____]

D5.42 What is the horsepower of the motor? [SPECIFY: _____]

[ASK D5.51-D5.54 IF D5 = 10]

D5.51 What type of water heating equipment was purchased and installed? [SPECIFY TYPE:_____]

D5.52 What fuel type is used? [SPECIFY:_____]

D5.53 What is the efficiency rating of the equipment? [SPECIFY:_____]

D5.54 (If water heater with storage) What is the capacity of the equipment? [SPECIFY:_____]

[ASK D5.61-D5.62 IF D5 = 12]

D5.61 What type of application was the compressed air equipment purchased and installed? [SPECIFY APPLICATION:_____]

D5.62 What is the horsepower of the compressor motor? [SPECIFY:_____]

[ASK D5.71-D5.72 IF D5 = 13]

D5.71 What is the efficiency rating of the equipment? [SPECIFY:_____]

D5.72 What is the capacity of the equipment? [SPECIFY:_____]

[ASK D5.81 IF D5 = 15]

D5.81 What type of refrigeration equipment was purchased and installed? [SPECIFY TYPE:_____]

D6. [REPEAT FOR EACH ITEM MENTIONED IN D5] How many [INSERT ITEM FROM D5] did you install? [RECORD NUMBER_____]

D7. [REPEAT FOR EACH ITEM MENTIONED IN D5] Please tell me how important your experience participating in the Focus on Energy RECIP Program was in your decision to install [ANSWER FROM D5]. Was it:

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
5. (Don't know)

D8. Was [INSERT EACH ITEM FROM D5] installed at [SITE ADDRESS]?

1. Yes
2. No (ASK: What is the address of the location where you installed [INSERT EACH ITEM FROM D5]? [SPECIFY_____])
3. (Don't know)

E. Firmographics

Finally, we would next like to ask you some questions about your business.

E1. *Does your business lease or own the facility served by the renewable energy project?

1. (Lease)
2. (Own)

3. (Other [SPECIFY: _____])
4. (DON'T KNOW)

E2. *How many people are employed at the location where the project took place?

1. [RECORD NUMBER: _____]
2. (DON'T KNOW)

E3. What industry is your company in?

1. (Agriculture, Mining)
2. (Communications)
3. (Construction)
4. (Education)
5. (Finance, Insurance, Real Estate)
6. (Food Service (restaurants))
7. (Government)
8. (Health Care)
9. (Manufacturing)
10. (Nonprofit / churches / schools)
11. (Retail, Wholesale)
12. (Transportation)
13. (Hotel/motels)
14. (Other [SPECIFY: _____])
15. (DON'T KNOW)

Closing

Those are all the questions we have. Focus on Energy appreciates your input. You will be added into the drawing for a \$100 Visa gift card. Thank you for your time!

**Focus on Energy CY 2016 Interview Guide:
Nonparticipating Lenders
 Renewable Energy Loan Fund
 October 2016**

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Research Question Map

The questions in this guide are designed to answer the overarching research questions for the Renewable Loan Program as noted in the table below.

Research Question	Question Number in Guide
How do lenders learn about the program?	B1
Why didn't the lender participate? What were barriers to participation?	B2-B5, C1-C3
How does the program impact the actual cost of the loan to the customer?	B4
Are there opportunities for improving the program from the lender perspective?	C4-C5
What do lenders see as the market potential for renewable energy lending in the residential and commercial sectors?	D1-D4

[During scheduling: establish that the contact is familiar with the request to participate in the Renewable Loan Program]

Thank you for taking the time to speak with me. My company, Cadmus, was hired by Focus on Energy to evaluate their Renewable Loan Program. We are trying to understand what works, and what could be improved, about the program as it currently operates. Your feedback is a key part of our evaluation.

Please be aware that I will not use your name or the name of your organization in my report, and your answers will be combined with the responses of other nonparticipating lenders. Focus on Energy is interested in making their program as effective as possible. Therefore, we encourage you to be candid in your remarks today. Any questions before we begin?

A. Introduction

- A1. To start, can you please give me your title and tell me your role with regard to the request you received to participate in the Focus on Energy Renewable Loan Program?

B. Awareness and Motivation

- B1. How did you learn about the Focus on Energy Renewable Loan Program? Were you familiar with Focus on Energy prior to learning about this program? If so, what did you know about it?
- B2. Why did you decide not to participate in the Renewable Loan Program? *[Probe: concern about the project, concern about the borrower, or concern about the financing offer]*
- B3. Does your organization use any other “participation” financing, through which a portion of the capital is provided through another source? Can you describe why or why not?
- B4. Did the customer ultimately pursue financing through your organization for the renewable project?
- B5. *[If customer financed with this lender]* Did you offer the customer any incentive, such as a lower interest rate or period of 0% interest, to continue with the loan without Focus on Energy?
- B6. What was your relationship with the customer prior to the request – had they done business with you in the past? Do you expect to do business with them in the future?

C. Program Design and Process

Let’s talk about the product that the Renewable Loan Program offers.

- C1. Although you chose not to participate, did you see any potential benefits from any aspect of the program? If so, what were they?
- C2. How informed did you feel with regard to the financing support that Focus on Energy offers, and the process to participate? What was your primary source of information about the program?
- C3. What changes would you recommend to improve the financing support that the program offers, from the lender perspective?
- C4. What changes would you recommend to improve the process to apply and close the loan, and collect and remit payment to Focus on Energy?
- C5. Would these changes be enough to persuade your organization to participate? Why or why not?

D. Financing for Renewables

- D1. Has your bank/credit union financed any other renewable projects outside the program, whether for solar panels, geothermal systems, wind turbines, or other projects?
- D2. **If not**, what prevents your organization from issuing loans for renewable projects? *[Probe: is there a demand for renewable loans? Is technical review a barrier? Is the loan amount required or collateral available a barrier?]*
- D3. Overall, do you see renewable lending as a business opportunity for your organization? Do you see more opportunity on the residential or the commercial side? Why do you say that?

D4. What do you see as the most significant obstacle for customers that want financing for renewable energy systems, if any? Are the barriers different for residential and commercial projects?

E. Closing

E1. Those are all the questions I have. Is there anything else you would like to mention before we finish?

**Focus on Energy CY 2016 Interview Guide:
Participating Lenders
Renewable Energy Loan Fund
October 2016**

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Research Question Map

The questions in this guide are designed to answer the overarching research questions for the Renewable Loan Program as noted in the table below.

Research Question	Question Number in Guide
How do lenders learn about the program?	B1, D6
What motivates lenders to participate (what do lenders view as benefits), and how satisfied are they with the outcome?	B2-B5, C1, C5
How does the program impact the actual cost of the loan to the customer?	C3-C4, D7
Do lenders face any barriers to participation in the program?	C2
Are there opportunities for improving the program from the lender perspective?	C6-C7
What do lenders see as the market potential for renewable energy lending in the residential and commercial sectors?	D1-D8

Thank you for taking the time to speak with me. My company, Cadmus, was hired by Focus on Energy to evaluate their Renewable Loan Program. We are trying to understand what works, and what could be improved, about the program as it currently operates. Your feedback is a key part of our evaluation.

Please be aware that I will not use your name or the name of your organization in my report, and your answers will be combined with the responses of other participating lenders. Focus on Energy is interested in making their program as effective as possible. Therefore, we encourage you to be candid in your remarks today. Any questions before we begin?

A. Introduction

- A1. To start, can you please give me your title and tell me about your role with regard to loans your organization has issued through the Renewable Loan Program?

B. Awareness and Motivation

- B1. How did you learn about the Focus on Energy Renewable Loan Program? Were you familiar with Focus on Energy prior to learning about this program? If so, what did you know about it?
- B2. What motivated you or your organization to participate in the Renewable Loan Program?
- B3. What was your relationship with the customer prior to the loan – had they done business with you in the past? Do you expect to do business with them in the future?
- B4. Do you plan to promote the program to your customers? If so, in what ways would you promote the program?
- B5. Have you, or do you plan to, share information about the program to others within your organization?
- B6. *[If would not promote the program] Can you tell me more about why you would not promote the program? [If necessary, probe: Under what circumstances, if any, would you participate in the program again?]*

C. Program Design and Process

Let's talk about the product that the Renewable Loan Program offers.

- C1. First, can you tell me about what benefits the Renewable Loan Program financing provides for your organization, if any? *[Probe: mitigate risk, support underwriting (technical approvals), support cross-selling opportunities, improve customer relationships, alleviate capital constraints, new customers, service as a way to retain existing customers]*
- C2. And does the program financing present any obstacles to your organization and how you normally conduct business? *[Probe: reduce profit potential, interrupt business flow, require additional work, present underwriting difficulties]*
- C3. Does the program present additional costs to the customer as a result of any of these obstacles? If so, what costs?
- C4. How did participating in the program affect the interest rate or the term of the loan that the customer received? *[Probe for quantity of impact]*
- C5. Overall, how satisfied were you with your experience with the Renewable Loan Program?
- C6. What changes, if any, would you recommend to improve the financing product that the program offers, from the lender perspective?
- C7. What changes, if any, would you recommend to improve the process to apply and close the loan, and collect and remit payment to Focus on Energy?

D. Financing for Renewables

- D1. Have you financed any other renewable projects outside the program, whether for solar panels, geothermal systems, wind turbines, or other projects?
- D2. **If not**, what prevents your organization from issuing loans for renewable projects? *[Probe: is there a market for renewable loans? Is technical review a barrier? Is the loan amount required or collateral available a barrier?]*
- D3. **If so**, about how many of these projects have you financed in the past year, not including any Focus on Energy loans? How many of these were commercial, and how many residential?
- D4. Can you describe a typical renewable project that you would finance? What kind of technology are customers purchasing? Is it typically part of a larger project? How big is the loan?
- D5. What technical resources do you have available to underwrite a renewable energy project? In other words, were you able to evaluate the technical merit of the project?
- D6. *[If did not evaluate]* Is there an additional cost for increased risk, given that you cannot evaluate the technical proposal? How would you characterize that cost?
- D7. Overall, do you see renewable lending as a business opportunity for your organization? Do you see more opportunity on the residential or the commercial side? Why do you say that?
- D8. What do you see as the most significant obstacle for customers that want financing for renewable energy systems, if any? Are the barriers different for residential and commercial projects?

E. Closing

- E1. Those are all the questions I have. Is there anything else you would like to mention before we finish?

Focus on Energy CY 2016 Interview Guide: Program Participants Renewable Energy Loan Fund November 2016

Target Quota = Census

Research Question	Question Number in Guide
How influential are the rebates, relative to the financing support, on customer decision-making?	Section C and Section D
How do participants learn about the program?	B2, B4-B5
What motivates participants to purchase renewable projects?	B1, B6-B8
What other financing options are available for customers?	B3, D4-D5
How satisfied are participants with the program?	Section E

FIELDS:

- Participant Name **[NAME]**
- Equipment Type **[EQUIP]**
- Rebate Amount **[REBATE]**
- Loan Amount **[LOAN AMOUNT]**

A. Introduction

- A1. Hello, my name is **[INTERVIEWER NAME]** and I'm calling on behalf of Focus on Energy, your statewide energy efficiency and renewable energy program. May I speak with **[NAME]**?
- a) Yes
 - b) Unable to meet at this time **[Schedule call back]**
 98. Don't know **[Ask to speak with someone who knows to begin again]**
 99. Refused **[THANK AND TERMINATE]**
- A2. Our records show you recently purchased a **[EQUIP]** system financed by a loan you received through the Focus on Energy Renewable Loan Program. Is this correct?
- a) Yes
 - b) No **[THANK AND TERMINATE]**
 - c) **[Other]** _____
 98. Don't know **[THANK AND TERMINATE]**
 99. Refused **[THANK AND TERMINATE]**
- A3. Did you also receive a rebate from Focus on Energy as part of this purchase?
- a) Yes
 - b) No **[THANK AND TERMINATE]**
 98. Don't know **[THANK AND TERMINATE]**
 99. Refused **[THANK AND TERMINATE]**

We are conducting a survey about the Loan Program, to better understand how well the Program served customers like you. Can I ask you a few questions about your experience?

[If “No – Not a convenient time,” ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: “APPROXIMATELY 10 MINUTES.”]

[IF NEEDED:] This survey is for research purposes only and this is not a marketing call. This is the primary way for participants to provide input into Focus on Energy’s Renewable Loan Program financing program. Your participation in this study is important so that Focus on Energy can consider your input to potential improvements to the program.

[If customer is wary of the survey, reassure them that you are not SELLING ANYTHING. If necessary, offer Joe Fontaine at the Public Service Commission (608-266-0910) as the person to contact with any questions about the validity of the research.]

B. Awareness and Motivation

Thank you. To begin...

- B1. Why did you decide to purchase a **[EQUIP]** system? **[Do not read. Select up to 2. If selecting more than two, “What would you say are the two primary reasons you chose to purchase a system?”]**
- a) Interested in the technology/wanted to have cutting-edge technology
 - b) Wanted to save money on energy bills
 - c) Wanted to take advantage of the tax credit
 - d) Wanted to be environmentally responsible
 - e) Wanted to increase property value
 - f) **[Other]** _____
 - 98. Don’t know
 - 99. Refused
- B2. *What motivated you to use Focus on Energy’s loan program as part of your financing? **[DO NOT READ]**
- a) Reduced interest rate
 - b) Extended term on the loan
 - c) Required less collateral to secure the loan
 - d) Able to qualify because required less collateral
 - e) Installer recommended it
 - f) Wanted the program technical review/quality assurance check
 - g) **[Other]** _____
 - 98. Don’t know
 - 99. Refused
- B3. How did you learn about the Focus on Energy Renewable Energy Loan Program?
- a) Online search
 - b) Installer/Vendor
 - c) Lender

- d) Focus on Energy staff
- e) **[Other]** _____
- 98. Don't know
- 99. Refused

B4. **[If B3 ≠ b]** At any point in the process to purchase your **[EQUIP]** system, did you discuss financing options with your installer, or did your installer provide information on available financing?

- a) Yes, I asked my installer and they offered financing options
- b) Yes, my installer offered financing options (without my asking)
- c) No, I did not ask my installer about financing and they did not offer any financing options
- 98. Don't know
- 99. Refused

B5. Had you already decided to purchase this system before you learned about either the Focus on Energy rebate or the loan program?

- a) Yes, before learning about either program
- b) No, I learned about the rebate program before I decided to buy the system
- c) No, I learned about the loan program before I decided to buy the system
- d) No, I learned about both programs before I decided to buy the system
- e) **[Other]** _____
- 98. Don't know
- 99. Refused

B6. **[If B5 ≠ b, c]** Which did you learn about first, the Focus on Energy rebate or the Focus on Energy loan program?

- a) Rebate
- b) Loan
- c) Learned about both at the same time
- 98. Don't know
- 99. Refused

B7. If neither the rebate nor the financing assistance from Focus on Energy had been available, would you have installed a larger system, the same system, a smaller system, or no system at all?

- a) Larger
- b) Same
- c) Smaller
- d) None at all
- 98. Don't know
- 99. Refused

B8. **[If B7 = a, b, or c]** If neither the rebate nor the financing assistance had been available, would you have installed the system ...

- a) Sooner
- b) At the same time
- c) Later, but in the same year
- d) Later within 1 to 2 years
- e) Never

- 98. Don't know
- 99. Refused

C. Attribution – Rebates

Now I'm going to ask you a similar set of questions, but for these questions, assume only the financing assistance, and not the cash rebate, was available.

- C1. How likely is it that you would have installed the **[EQUIP]** system without the Focus on Energy rebate of **[REBATE AMOUNT]**? Remember, you can assume the financing assistance was still available. Would you say ... **[READ LIST]**
- a) Very likely
 - b) Somewhat likely
 - c) Not too likely
 - d) Not at all likely
 - 98. (Don't know)
 - 99. (Refused)
- C2. **[IF C1 = a, b, or c]** Without the rebate, would you have installed a system larger, the same size, or smaller than the one you installed, or would you have installed no system at all?
- a) Larger **[Repeat question to confirm]**
 - b) Same
 - c) Smaller
 - d) None at all
 - 98. (Don't know)
 - 99. (Refused)
- C3. If a rebate had not been available for your system, when would you have installed the system? Would you have installed it ... **[READ LIST]**
- a) Sooner **[Repeat question to confirm]**
 - b) At the same time
 - c) Later, but in the same year
 - d) Later within 1 to 2 years
 - e) Never
 - 98. (Don't know)
 - 99. (Refused)

D. Attribution – Loan

Now I would like to run through these questions one more time, this time assuming the rebate was available, but the financing assistance from Focus on Energy was not available.

- D1. How likely is it that you would have installed the **[EQUIP]** system without the Focus on Energy financing assistance? Would you say ... **[READ LIST]**
- a) Very likely
 - b) Somewhat likely

- c) Not too likely
- d) Not at all likely
- 98. (Don't know)
- 99. (Refused)

D2. **[IF D1 = a, b, or c]** Without the Focus on Energy financing assistance, would you have installed a system larger, the same size, or smaller than the one you installed, or would you have installed no system at all?

- a) Larger **[Repeat question to confirm]**
- b) Same
- c) Smaller
- d) None at all
- 98. (Don't know)
- 99. (Refused)

D3. **[IF D1 = a, b, or c]** If the Focus on Energy financing assistance had not been available, when would you have installed the system? Would you have installed it ... **[READ LIST]**

- a) Sooner **[Repeat question to confirm]**
- b) At the same time
- c) Later, but in the same year
- d) Later within 1 to 2 years
- e) Never
- 98. (Don't know)
- 99. (Refused)

D4. **[IF D1 = a, b, or c]** If the Focus on Energy financing assistance was not available, how would you have paid for your system? Would you have paid cash, used a different financing product, used a lease, or used some other form of payment?

- a) Paid cash
- b) Different financing
- c) Lease
- d) Other payment method **[SPECIFY: _____]**
- 98. (Don't know)
- 99. (Refused)

D5. **[IF D4 = b]** What type of financing would you have used? **[READ IF NEEDED]**

- a) Credit card
- b) Unsecured consumer loan
- c) Home equity line of credit/second mortgage/refinance
- d) Financing from my installer
- e) Commercial loan, secured by my property
- f) Commercial line of credit
- g) Other **[SPECIFY: _____]**
- 98. (Don't know)
- 99. (Refused)

E. Satisfaction

- E1. How satisfied were you with the lending institution you chose? Would you say you were ... **[READ LIST]**
- a) Very satisfied
 - b) Somewhat satisfied
 - c) Not too satisfied
 - d) Not at all satisfied
 - 98. (Don't know)
 - 99. (Refused)
- E2. How did you choose the lender that provided the loan? **[DO NOT READ]**
- a) I have done business with the lender in the past/it is my regular lender
 - b) My installer recommended it
 - c) Focus on Energy recommended it
 - d) It offered the best deal
 - e) It was the only lender that would approve my application
 - f) It was the only lender in my area
 - g) Other: **[SPECIFY: _____]**
 - 98. Don't know
 - 99. Refused
- E3. How satisfied were you with the company that installed your system? Would you say you were ... **[READ IF NEEDED]**
- a) Very satisfied
 - b) Somewhat satisfied
 - c) Not too satisfied
 - d) Not at all satisfied
 - 98. (Don't know)
 - 99. (Refused)
- E4. How satisfied were you with the information and support you received from Focus on Energy regarding the Renewable Loan program? Would you say you were ... **[READ IF NEEDED]**
- a) Very satisfied
 - b) Somewhat satisfied
 - c) Not too satisfied
 - d) Not at all satisfied
 - 98. (Don't know)
 - 99. (Refused)
- E5. Overall, how satisfied were you with the Renewable Loan program? Would you say you were ... **[READ IF NEEDED]**
- a) Very satisfied
 - b) Somewhat satisfied
 - c) Not too satisfied

- d) Not at all satisfied
- 98. (Don't know)
- 99. (Refused)

Focus on Energy Small Business Program Participant Survey CY 2016

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Questions
Introduction and screening	--	A1-A3
Verification	Confirm installation of measures	B1-B5
Marketing and Outreach	Gauge customer perception of Focus on Energy (in terms of brand identity/loyalty/affinity). Determine how customers engage with Focus on Energy program information (messaging, content, frequency rather than preferred tactics). Understand customer relationship/engagement with program stakeholders (i.e., Energy Advisors, Utility staff, Trade Allies).	C1-C9
Decision-making	What are the primary reasons for participation?	D1-D9
Benefits and Barriers	Is it easy to participate? What are the barriers and challenges?	E1-E4
Impact of New Product Offerings	How are customers reacting to the new product offerings (i.e., refrigeration and LEDs)? How have these new product offerings (refrigeration and LEDs) impacted customer and TA businesses?	F1-F3
Net-To-Gross: Freeridership and Spillover	Is the program influencing customer decisions and behavior?	G1- H5
Program Uplift	What are ways to engage customer in the next step (i.e., participation in other programs)? Identify barriers to and opportunities for converting participants from single program participation to engaging in more and deeper efforts to save energy.	I1-I7
Satisfaction	Are there improvements that can be made to streamline processes/ease of use?	J1-J3
Firmographics	What are the characteristics of the participant's business and building?	K1-K3

Interviewer instructions are in green.

CATI programming instructions are in red.

Words in parenthesis should not be read to respondent

*Indicates core questions

~ Indicates CY 2016 marketing core questions

[Quota=70 completes]

BACKGROUND: Focus on Energy's Small Business Program provides a free energy assessment to small business customers by a Focus on Energy-trained contractor. The assessment follows up with recommendations on energy-saving improvements that customers can choose to have installed at a discount by the Focus on Energy contractor.

Sample fields:

- [PHONE] Phone 1 Area Code and Phone 1

- [COMPANY] Site Name
- [CONTACT] First Name 1 and Last Name 1
- [SITE ADDRESS] Address and City
- [MEASURE CATEGORY1]
- [MEASURE CATEGORY2]
- [MEASURE CATEGORY3]
- [UTILITY]

A. Introduction and Screening

- A1. Hello, may I speak with [PRIMARY APPLICATION CONTACT] [OR IF NO NAME: May I speak with the person who handles energy and building project decisions for your business]? [IF NOT AT THIS LOCATION, ASK FOR PHONE NUMBER AND NAME AT CORRECT LOCATION AND CALL RESPONDENT]
1. (Yes) [CONTINUE WITH RESPONDENT ON PHONE]
 88. (Refused) [THANK AND TERMINATE]

Back-up information, not to be programmed:

[If “No – Not available,” ask if Respondent would like to arrange a more convenient time for us to call them back or if you can leave a message for that person.]

[IF RESPONDENT ASKS HOW LONG, SAY: “APPROXIMATELY 20 MINUTES.”]

[IF NEEDED:] This survey is for research purposes only and this is not a marketing call. Your participation in this study is important so that Focus on Energy can improve the energy efficiency programs it offers to businesses and other organizations.

[Only if asked for a Focus on Energy contact to verify the survey authenticity, offer Joe Fontaine with the Public Service Commission of Wisconsin, 608-266-0910.]

- A2. Hello, I am [INSERT NAME] calling with a short survey on behalf of Wisconsin’s Focus on Energy Small Business Program. Are you the person responsible for making equipment decisions regarding energy efficiency at your business? [IF NEEDED: Focus on Energy is a statewide program overseen by the Public Service Commission of Wisconsin to encourage energy efficiency.]
1. (Yes)
 2. (No, but person can come to phone) [START OVER AT A2 WITH NEW RESPONDENT]
 3. (No, not available [SCHEDULE CALLBACK]
 99. (Don’t know) [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]
 88. (Refused) [THANK AND TERMINATE]
- A3. *Our records show that this year you installed energy efficient e products including [MEASURE CATEGORY1], [MEASURE CATEGORY2], and [MEASURE CATEGORY3] at [INSERT ADDRESS]. To ensure our records are correct, can you confirm that you received an incentive for this/these upgrades earlier this year?
1. (Yes)
 2. (No, wrong year) [Record correct year, if possible]
 3. (No, wrong address) [RECORD CORRECT ADDRESS]

- 4. (No, wrong measure) [CORRECT BELOW]
(MEASURE CATEGORY1 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE1]
(MEASURE CATEGORY2 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE2]
(MEASURE CATEGORY3 IS INCORRECT [Correct:_____]) [CALL THIS VARIABLE C_MEASURE3]
 - 5. (No, I did not install any measures) [THANK AND TERMINATE]
 - 99. (Don't Know) Is there someone we could speak with that would know this? [Record name and contact information:_____]
 - 88. (Refused) [THANK AND TERMINATE]
- [THANK AND TERMINATE TEXT: Those are all of our questions. Thanks for your help. Have a nice day.]

B. Verification

- B1. Are all of the lighting and other energy efficient products your contractor installed as part of Focus on Energy's Small Business Program still in-place and operating as planned?
 - 1. (Yes)
 - 2. (No)
 - 99. (Don't know)
 - 88. (Refused)

[ASK IF B1 = 2]

- B2. Which products are no longer installed or operating as planned? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE]
 - 1. (**Aeration:** faucet aerators)
 - 2. (**Controls:** occupancy sensors, lighting controls, heater controls, fan controls)
 - 3. (**CFLs**)
 - 4. (**Delamping:** removal of excess lamps)
 - 5. (**Insulation:** pipe wrap)
 - 6. (**Linear fluorescents:** T5, T8, or T12 lighting fixtures)
 - 7. (**LEDs:** signs, LED lamps, case lighting)
 - 8. (**Motor:** ECM compressor fan motor)
 - 9. (**Showerheads**)
 - 10. (**Strip curtains**)
 - 11. (Other) [SPECIFY]
 - 99. (Don't know)
 - 88. (Refused)

[ASK IF B1 = 2] [ASK FOR EACH RESPONSE SELECTED IN B2]

- B3. Why are the [RESPONSE FROM B2] no longer installed or operating as planned? [OPEN END]
 - 99. (Don't know)
 - 88. (Refused)

[ASK B4-B5 IF B1 = 2] [ASK FOR EACH RESPONSE SELECTED IN B2]

- B4. How many [RESPONSE FROM B2] did your contractor originally install? [OPEN END NUMERIC] [IF B2=5, ASK FOR THE LENGTH IN FEET]
 - 99. (Don't know)

88. (Refused)

B5. And how many [RESPONSE FROM B2] are installed and operating now?

[OPEN END NUMERIC] [IF B2=5, ASK FOR THE LENGTH IN FEET]

99. (Don't know)

88. (Refused)

C. Marketing and Outreach

C1. *I'm going to read you a short list. Please tell me who, if anyone, was involved in helping you initiate your energy efficiency project. [READ LIST AND MARK 1= YES, 2=NO, 99=DON'T KNOW; 88 REFUSED FOR EACH]

1. Your contractor or vendor
2. A Focus on Energy "Energy Advisor"
3. Your utility account manager

C2. *How did your business learn about the discounts available for energy efficient products through Focus on Energy's Small Business Program? [DO NOT READ LIST; MULTIPLE RESPONSES POSSIBLE] [IF RESPONDENT MENTIONS "WEBSITE," CLARIFY IF UTILITY OR FOCUS ON ENERGY WEBSITE SO YOU KNOW HOW TO CODE ANSWER ON LIST.]

1. (Contact with Focus on Energy representative through phone, email, or in person)
2. (Focus on Energy quarterly newsletter)
3. (Focus on Energy website)
4. (Focus on Energy sponsored workshop or event)
5. (Focus on Energy printed program materials)
6. (Contact with utility representative)
7. (Utility mailing, bill insert, or utility Website)
8. (Word of mouth: family, friend, or business colleague)
9. (I contacted my contractor/vendor to ask)
10. (My contractor/vendor let me know about them)
11. (Previously participated in program/received an incentive)
12. (Through a trade association or professional organization
[SPECIFY: _____])
13. (Other [SPECIFY: _____])
99. (Don't know)
88. (Refused)

C3. *Who took the lead role in completing the application form? Was it... [READ OPTIONS, RANDOMIZE ITEMS 1-4, ONLY ONE RESPONSE]

1. You (i.e., respondent)
2. Someone at your organization
3. The contractor and/or vendor
4. A Focus on Energy Energy Advisor
5. Someone else [SPECIFY: _____]
99. (Don't know)
88. (Refused)

- C4. *Who else contributed to completing the application form? [READ LIST IF NEEDED, PROBE FOR ALL PARTIES INVOLVED, MULTIPLE RESPONSES ALLOWED]
1. (No one else was involved)
 2. (Someone else at my organization)
 3. (The contractor and/or vendor)
 4. (A Focus on Energy Energy Advisor)
 5. (Other) [SPECIFY: _____]
 99. (Don't know)
 88. (Refused)
- C5. ~ What are the first three words that come to mind when you hear "Focus on Energy"? [OPEN END, RECORD ONLY FIRST THREE RESPONSES]
- C6. ~ I'm going to read you a list of statements about Focus on Energy and your business' energy utility. Please tell me whether you agree or disagree with these statements. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?] [READ LIST AND RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=SOMEWHAT DISAGREE, AND 4=STRONGLY DISAGREE; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]
1. Focus on Energy is a brand that small businesses like mine can trust.
 2. Focus on Energy offers programs, tools, and/or services that are valuable to my business.
 3. Focus on Energy provides programs that can or did help my business lower its overall energy costs.
 4. Focus on Energy provides programs that can or did help make my business more aware of energy saving opportunities.
 5. My business is more satisfied with our energy utility because it partners with Focus on Energy to offer energy efficiency programs to businesses like mine.
- C7. ~ Which of the following statements would you be most interested in learning more about Focus on Energy? [READ LIST AND RANDOMIZE; ALLOW ONLY ONE RESPONSE; REPEAT INTRO STATEMENT AS NEEDED] Focus on Energy helps Wisconsin businesses:
1. Reduce their energy costs and save money.
 2. With solutions to use energy smarter and save money.
 3. Grow by making smarter decisions about their energy use.
 4. Lower their energy costs.
 5. (None of the above)
- C8. ~ Next, I'm going to read you a list of statements about energy efficiency. Please tell me how important these statements are to you when deciding whether to upgrade the energy efficiency of your business. The first statement is: [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say this statement is very important, somewhat important, not too important, or not at all important when deciding whether to upgrade the energy efficiency of your business?] [READ LIST AND RECORD 1=VERY IMPORTANT, 2=SOMEWHAT IMPORTANT, 3=NOT TOO IMPORTANT, AND 4=NOT AT ALL IMPORTANT; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]
1. Energy efficiency saves my business money on its utility bills.

2. Energy efficiency upgrades make my business more productive.
3. Energy efficiency creates jobs and contributes to the Wisconsin economy.
4. Energy efficiency protects the environment by reducing greenhouse gas emissions.

C9. ~ Of the energy efficiency statements you just rated, which is the **most important** to you when deciding whether to upgrade the energy efficiency of your business? [READ RESPONSES FROM C8 IF NEEDED; RECORD ONLY ONE RESPONSE]

99. (Don't know)
88. (Refused)

D. Decision Making

Now I'd like to understand more about how your business made decisions about participating in Focus on Energy's Small Business program.

D1. *What factor was **most** important to your business' decision to make these energy-efficient upgrades through the Small Business Program? [DO NOT READ LIST; SINGLE RESPONSE]

1. (To save money on energy bills, reduce energy consumption or energy demand)
2. (To obtain a tax credit)
3. (To replace old (but still functioning) products)
4. (To replace broken products)
5. (To enhance performance of our system(s))
6. (To improve comfort)
7. (The contractor's recommendation/technical expertise)
8. (Other [SPECIFY _____])
99. (Don't know)
88. (Refused)

D2. How important is energy efficiency to your organization when making capital upgrades or improvements? Is energy efficiency ... [READ LIST]

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important
99. (DON'T KNOW)
88. (Refused)

D3. [ASK IF D2 = 3 or 4] Can you please tell me why energy efficiency is not an important factor in making upgrades?

1. [RECORD ANSWER _____-]
99. (DON'T KNOW)
88. (Refused)

D4. ~ Do you require approval from someone else at your organization before committing to an energy efficiency upgrade?

1. (Yes)
2. (No)

- 99. (DON'T KNOW)
- 88. (REFUSED)

[ASK IF D4 = 1]

- D5. ~ Who at your organization is involved in making decisions about energy efficiency when making capital upgrades or improvements? [DO NOT READ OPTIONS, MULTIPLE RESPONSES ALLOWED]
- 1. (President/CEO/Executive Director)
 - 2. (Facility maintenance department/manager)
 - 3. (Corporate headquarters)
 - 4. (Board of directors)
 - 5. (Other [SPECIFY _____])
 - 99. (DON'T KNOW)
 - 88. (Refused)

[ASK IF D4 D4= 2]

- D6. ~ What is your role or title at your organization?
- 1. (President/CEO/Executive Director/Owner)
 - 2. (Facility or Maintenance lead/manager)
 - 3. (Chief financial officer (CFO)/ controller/ finance manager)
 - 4. (Other [SPECIFY _____])
 - 99. (DON'T KNOW)
 - 88. (Refused)

[ASK IF D4 = 1]

- D7. ~ How long does it typically take to receive approval to move forward with an energy efficiency upgrade?
- 1. Less than 1 week
 - 2. 1-3 weeks
 - 3. 4-6 weeks
 - 4. 7-8 weeks
 - 5. Over 8 weeks
 - 99. (Don't know)
 - 88. (Refused)

- D8. *Have you or anyone else within your organization attended an in-person or web-based training delivered by Focus on Energy in the past two years?
- 1. (Yes)
 - 2. (No)
 - 99. (DON'T KNOW)
 - 88. (REFUSED)

- D9. *[IF D8 = 1] How important was your business' participation in the training in your decision to move forward with the energy efficient upgrades for which you received an incentive? Was the training... [READ LIST]
- 1. Very important
 - 2. Somewhat important
 - 3. Not too important

- 4. Not at all important
- 99. (DON'T KNOW)
- 88. (Refused)

E. Benefits and Barriers

E1. *What would you say are the main benefits your business has experienced as a result of the energy efficiency upgrades through the Small Business Program? **[DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]**

- 1. (The discounted energy-efficient products)
- 2. (Using less energy, reducing energy consumption or energy demand)
- 3. (Saving money on our utility bills; lower energy bills)
- 4. (Increased occupant comfort)
- 5. (Better aesthetics/better or brighter lighting)
- 6. (Saving money on maintenance costs)
- 7. (Better understanding of facility energy operations)
- 8. (Other **[SPECIFY: _____]**)
- 9. (No benefits)
- 99. (Don't know)
- 88. (Refused)

E2. *What do you see as the biggest challenges to making energy-efficient improvements inside your business? **[DO NOT READ LIST; RECORD ALL THAT APPLY; PROBE FOR MULTIPLE RESPONSES]**

- 1. (High initial costs)
- 2. (Budget limitations)
- 3. (Long payback period)
- 4. (Funding competition for other investments/improvements)
- 5. (Replacing equipment without affecting operations)
- 6. (Understanding potential areas for improvement)
- 7. (Lack of awareness about available incentives for energy efficient equipment)
- 8. (Understanding equipment eligibility)
- 9. (Issues with program application process)
- 10. (Finding a trade ally with which to work)
- 11. (Inadequate incentive)
- 12. (Other **[SPECIFY: _____]**)
- 99. (Don't know)
- 88. (Refused)

E3. *What could be done to help your business better overcome challenges with energy efficiency improvements? **[DO NOT READ LIST, ALLOW MULTIPLE RESPONSES]**

- 1. (Nothing)
- 2. (Higher incentives)
- 3. (Provide upfront rewards/instant discount from contractor)
- 4. (Offer low-interest loans)
- 5. (Simplify the paperwork)
- 6. (Provide better/more information about program **[SPECIFY WHAT TYPE OF INFORMATION THEY NEED: _____]**)

- 7. (Other [RECORD VERBATIM ANSWER _____])
- 99. (Don't know)
- 88. (Refused)

E4. ~ Who do you seek out as a trusted source of information regarding energy efficiency upgrades for your business? [MULTIPLE RESPONSE ALLOWED; READ LIST IF NEEDED]

- 1. My Energy Advisor
- 2. [UTILITY] representatives
- 3. My installation contractor/vendor
- 4. Other business owners/managers
- 5. Web resources [SPECIFY SITES]
- 6. (Other) [SPECIFY]
- 99. (Don't know)
- 88. (Refused)

F. Impact of New Product Offerings

F1. LEDs are some of the newest energy-efficient products available to small business customers. What benefits has your business gained from the LEDs?

- 1. (Improved productivity)
- 2. (Improved worker/customer safety)
- 3. (Improved aesthetics: business products look better or business place looks better)
- 4. (Improved shelf life of business products)
- 5. (Improved quality of business products)
- 6. (Other [RECORD VERBATIM ANSWER _____])
- 99. (Don't know)
- 88. (Refused)

F2. How important were the new LED products in your decision to participate in the Small Business Program? Would you say...

- 1. Very important
- 2. Somewhat important
- 3. Not too important
- 4. Not at all important
- 5. (Not applicable/did not install LEDs)
- 99. (Don't know)
- 88. (Refused)

F3. Refrigeration equipment are some of the newest energy-efficient products available to customers through Focus on Energy's Small Business Program. Were you aware the Program recently added refrigeration equipment to its list of discounted products?

- 1. Yes
- 2. No
- 99. (Don't know)
- 88. (Refused)

G. Freeridership

Now I'd like to talk about the new energy-efficient products that were purchased and installed through Focus on Energy's Small Business Program. These are about the [C_MEASURE1], [C_MEASURE2], and [C_MEASURE3].

[INTERVIEWER NOTE ABOUT THIS SECTION (don't read to respondent): This section is based on hypothetical behavior so we are asking similar questions to verify that we are gathering the correct responses.]

- G1. First, did your business have specific plans to install the energy-efficient products before your contractor conducted the free energy assessment?
1. (Yes) [ASK G2]
 2. (No) [SKIP TO G4]
 99. (Don't know) [SKIP TO G4]
 88. (Refused) [SKIP TO G4]
- G2. Before you received the energy assessment, was the purchase and installation of the energy-efficient products recommended by your contractor included in your business' budget?
1. (Yes)
 2. (No)
 99. (Don't know)
 88. (Refused)
- G3. Had your company already ordered or purchased similar energy-efficient products before you received the recommendations in the energy assessment report?
1. (Yes)
 2. (No)
 99. (Don't know)
 88. (Refused)
- G4. Would you have purchased and installed the same products without the energy assessment report and product discounts from your contractor?
1. (Yes) [SKIP TO G7]
 2. (No) [SKIP TO G9]
 99. (Don't know) [ASK G5]
 88. (Refused) [ASK G5]
- [ASK IF G4 = 99 OR 88]
- G5. Would you have purchased and installed **something else**, but not the recommended products, without the energy assessment and the product discounts? [DO NOT READ LIST UNLESS NECESSARY]
1. (Yes, would have done something else) [CONTINUE TO G6]
 2. (No, would NOT have installed anything) [SKIP TO G9]
 99. (Don't know) [SKIP TO H1]
 88. (Refused) [SKIP TO H1]

[ASK IF G4 = 1]

G6. When you say you **would have purchased and installed** something, would you have installed something that was just as energy efficient?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

G7. And without the energy assessment report and the product discounts, would you have purchased and installed the same amount of new products?

1. (Yes, the same amount)
2. (No, would have installed less)
3. (No, would have installed more)
99. (Don't know)
88. (Refused)

G8. Without the energy assessment report and the product discounts, would you have purchased and installed the recommended energy-efficient products...[\[READ LIST AND RECORD ONE RESPONSE\]](#)

1. Within the same year?
2. Within one to two years?
3. Within three to five years?
4. In more than five years?
99. (Don't know)
88. (Refused)

[ASK G9 THRU G12 IF G4 = 2 OR G5 = 2]

G9. When you say **you would not have purchased and installed** the same efficient products without the recommendations from the energy assessment report and the product discounts, do you mean you would not have installed the products at all?

1. (Yes) [\[SKIP TO H1\]](#)
2. (No)
99. (Don't know)
88. (Refused)

G10. Without the energy assessment report and the product discounts, would you have put in the same type of products but it would not have been as energy efficient?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

G11. Without the energy assessment report and the product discounts, would you have purchased and installed a smaller number of efficient products?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

G12. And, would you have purchased and installed the same products... [READ LIST AND RECORD ONE RESPONSE]

1. In the same year?
2. In one to two years?
3. In three to five years?
4. More than five years out?
99. (Don't know)
88. (Refused)

H. Spillover

H1. Since purchasing and installing energy-efficient products discounted by the Focus on Energy Small Business Program, has your business added any other energy-efficient products that you did **not** receive a Focus on Energy rebate or discount for? [IF NEEDED: By energy-efficient products, I mean high efficiency lighting such as LEDs, T8s; high efficiency motors and variable speed drives; high efficiency air conditioners and heat pumps, or efficient water heating products.]

1. (Yes) [ASK H2]
2. (No) [SKIP TO SECTION I]
99. (Don't know) [SKIP TO SECTION I]
88. (Refused) [SKIP TO SECTION I]

H2. What were the other energy-efficient products that your business installed without getting a rebate or discount? [DO NOT READ LIST; MARK ALL THAT APPLY; 99=DON'T KNOW, 88=REFUSED, 96=N/A] [If the customer says they bought something but have not installed it, the products has to be installed and operating for us to count it towards spillover.]

1. (CFLs)
2. (LEDs)
3. (Fluorescent tubes (T5s, T8s, etc.))
4. (Efficient lighting controls (occupancy sensors, daylighting, timers))
5. (High efficiency motors)
6. (Air source heat pumps)
7. (Ground source heat pumps)
8. (Central AC)
9. (VSD (variable speed drive))
10. (Water heating equipment)
11. (Boiler)
12. (Compressed air equipment)
13. (Gas furnaces)
14. (Exit signs)
15. (Refrigeration equipment (refrigerators, freezers))
16. (Other [SPECIFY: _____])
99. (Don't know)
88. (Refused)

[ASK H2.11-H2.13 IF H2 = 1, 2, 3]

- H2.11 What is the wattage of the lighting? [SPECIFY]: _____
- H2.12 In what location was it installed (Wall/Ceiling/Outdoors)? [SPECIFY]: _____
- H2.13 What type of equipment was removed or replaced? [SPECIFY]: _____

[ASK H2.21-H2.23 IF H2 = 5]

- H2.21 What equipment was the motor installed on? [SPECIFY TYPE]: _____
- H2.22 What is the horsepower of the motor? [SPECIFY]: _____

[ASK H2.31-H2.33 IF H2 = 6, 7, 8]

- H2.31 What Fuel type is used? [SPECIFY]: _____
- H2.32 What is the efficiency rating of the equipment? [SPECIFY]: _____
- H2.33 What is the capacity of the equipment? [SPECIFY]: _____

[ASK H2.41-H2.42 IF H2 = 9]

- H2.41 What type of motor was it installed on? [SPECIFY TYPE]: _____
- H2.42 What is the horsepower of the motor? [SPECIFY]: _____

[ASK H2.51-H2.54 IF H2 = 10]

- H2.51 What type of water heating equipment was purchased and installed? [SPECIFY TYPE]: _____
- H2.52 What Fuel type is used? [SPECIFY]: _____
- H2.53 What is the efficiency rating of the equipment? [SPECIFY]: _____
- H2.54 (If water heater with storage) What is the capacity of the equipment? [SPECIFY]: _____

[ASK H2.61-H2.62 IF H2 = 12]

- H2.61 What type of application was the compressed air equipment purchased and installed? [SPECIFY APPLICATION]: _____
- H2.62 What is the horsepower of the compressor motor? [SPECIFY]: _____

[ASK H2.71-H2.72 IF H2 = 13]

- H2.71 What is the efficiency rating of the equipment? [SPECIFY]: _____
- H2.72 What is the capacity of the equipment? [SPECIFY]: _____

[ASK H2.81 IF H2 = 15]

- H2.81 What type of refrigeration equipment was purchased and installed? [SPECIFY TYPE]: _____

H3. [REPEAT FOR EACH ITEM MENTIONED IN H2] How many [INSERT ITEM FROM H2] did you install? [RECORD NUMBER _____, 99 FOR DON'T KNOW, 88 FOR REFUSED, AND -96 FOR N/A]

- H4. [REPEAT FOR EACH ITEM MENTIONED IN H2] Please tell me how important the Focus on Energy Small Business Program was in your decision to install [ANSWER FROM H2]. Was it:

[EMPHASIZE EACH ANSWER OPTION AND PAUSE IN BETWEEN EACH OPTION.]

1. Very important,
2. Somewhat important,
3. Not too important, or
4. Not at all important?
99. (Don't know)
88. (Refused)

- H5. Was [INSERT EACH ITEM FROM H2] installed at [SITE ADDRESS]?

1. Yes
2. No (ASK: What is the address of the location where you installed [INSERT EACH ITEM FROM H2]? [SPECIFY _____])
99. (Don't know)
88. (Refused)

I. Program Uplift

- I1. Besides the Small Business Program, did your contractor mention or refer you to other Focus on Energy programs?

1. (Yes)
2. (No)
99. (Don't know)
88. (Refused)

[ASK IF I1 = 1]

- I2. What programs did they mention to you? [RANDOMIZE ITEMS 1-6]

1. (Agriculture, Schools & Government)
2. (Business Incentives)
3. (Chain Stores & Franchises)
4. (Design Assistance)
5. (Multifamily)
6. (Other [SPECIFY: _____])
99. (Don't know)
88. (Refused)

[ASK IF I2 = 1]

- I3. When your contractor mentioned the Agriculture, Schools and Government Program, what did they say?

1. [OPEN END RECORD VERBATIM RESPONSE]
99. (DON'T KNOW)
88. (REFUSED)

[ASK IF I2 = 3]

- I4. When your contractor mentioned the Chain Stores and Franchises Program, what did they say?

- 1. [OPEN END RECORD VERBATIM RESPONSE]
- 99. (DON'T KNOW)
- 88. (REFUSED)

15. ~ How likely are you to complete another energy efficiency upgrade at your business in the next 12 months?

- 1. Very likely
- 2. Somewhat likely
- 3. Not too likely
- 4. Not at all likely
- 99. (DON'T KNOW)
- 88. (REFUSED)

[ASK IF I3 ≤ 3]

16. ~ If you complete another energy efficiency upgrade at your business in the next 12 months, how likely are you to apply for a Focus on Energy incentive?

- 1. Very likely
- 2. Somewhat likely
- 3. Not too likely
- 4. Not at all likely
- 99. (DON'T KNOW)
- 88. (REFUSED)

[ASK IF I6 = 3 OR 4]

17. ~ Why would you be [RESPONSE FROM I6] to apply for a Focus on Energy incentive for your organization's next energy efficiency upgrade?

- 1. [OPEN END RECORD VERBATIM RESPONSE]
- 99. (DON'T KNOW)
- 88. (REFUSED)

J. Satisfaction

[ASK IF C3 = 1; OTHERWISE SKIP TO J3]

J1. *Thinking about the application you submitted, how easy would you say this paperwork was to complete? Would you say: [READ LIST]

- 1. Very easy,
- 2. Easy,
- 3. Somewhat challenging, or
- 4. Very challenging?
- 99. (Don't know)
- 88. (Refused)

[ASK IF J1 = 3 or 4]

J2. *Why do you say that? [OPEN END]

- J3. *Is there anything that Focus on Energy could have done to improve your overall experience with the Small Business Program? [DO NOT READ THE LIST, RECORD ALL THAT APPLY]
1. (Better/more communication [SPECIFY: Who would you like more communication from?_____])
 2. (Quicker response time [SPECIFY: Who would you like a quicker response time from?____])
 3. (Larger selection of eligible products [ASK: What energy-efficient products should Focus on Energy offer incentives for?_____])
 4. (Increasing the incentive amount)
 5. (Simplify the application process) [ASK: In what way?_____]
 6. (Allow me to fill out the applications online)
 7. (Simplify the website) [ASK: In what way?_____]
 8. (Provide quicker approval on applications)
 9. (Provide more face-time with my Energy Advisor (this may include more frequent visits))
 10. (Other [SPECIFY:_____])
 11. (No, nothing)
 99. (Don't know)
 88. (Refused)

K. Firmographics

Finally, I would like to ask you some questions about your business.

- K1. *What industry is your business in? [SINGLE RESPONSE; DON'T READ UNLESS NECESSARY]
1. (Agriculture, Mining)
 2. (Communications)
 3. (Construction)
 4. (Education)
 5. (Finance, Insurance, Real Estate)
 6. (Food Service (restaurants))
 7. (Government)
 8. (Health Care)
 9. (Hotel/motels)
 10. (Manufacturing)
 11. (Nonprofit / churches / schools)
 12. (Retail, Wholesale)
 13. (Transportation)
 14. (Other [SPECIFY:_____])
 99. (Don't know)
 88. (Refused)
- K2. *Does your business lease or own the facility?
1. (Lease)
 2. (Own)
 3. (Other [SPECIFY:_____])
 99. (Don't know)
 88. (Refused)
- K3. *How many people are employed at the location where the project took place?

1. [RECORD NUMBER: _____]
99. (Don't know)
88. (Refused)

L. Closing

- L1. *Do you have any other comments about energy efficiency decisions and purchases you would like to share?
1. [RECORD RESPONSE: _____]
 99. (Don't know)
 88. (Refused)
- L2. *On occasion, the Focus on Energy programs may want to contact a customer to learn more about their participation experience. May we share your responses with a Small Business Program Manager, who may contact you regarding your experience?
1. Yes
 2. No
 99. (Don't know)
 88. (Refused)

Thank you. We appreciate your help with this survey. You may also be contacted for an on-site visit if you have not been contacted already. Have a nice day.

Focus on Energy Strategic Energy Management Pilot Interview Guide CY 2016

Respondent name: _____

Respondent phone: _____

Interview date: _____ Interviewer initials: _____

Researchable Questions	Item
Are participants satisfied with the overall program and various components (contractor, rebate levels and timeliness, etc.)?	G1, G2, G3, G4, G5, G6, G7, G8
Is it easy to participate? What are the primary reasons for participation? What are the barriers and challenges?	B3, B4, B5, D8, F1, F10
Is the program functioning smoothly and as expected? Are there improvements that can be made to streamline processes/ease of use?	E10, G3
What have been the impacts of this program?	E10, F2, F3, F4, F5, F6, F7

SEM Program Elements	Data Source
Roles & Responsibilities	B1, B2, C3
Gap Analysis	E1
Energy Review	E2
Energy Model	E3
Energy Team Meetings	C1, C2, D3, D4, D5
Implement Opportunities	D1, D2, D3, D4
EMIS Assessment & Implementation	E4
Operational Controls	D6, D7, E5, E6, E8
Administrative Infrastructure	B5, C2, E7, E9

Target Quota = 12

Data for reference in interview

- Contact Name
- Facility/company name
- Sector: Equipment manufacturing, Food, Metal cast, paper, plastics, printing, other
- Utility name: Alliant, MGE, MPU, WE, WPPI, WPS, Xcel
- Status of company within the SEM Program

General Instructions

- Interviewer instructions are in green **[LIKE THIS]**.
- CATI programming instructions are in red **[LIKE THIS]**.
- Items that should not be read by the interviewer are in parentheses like this ().

A. Introduction

- A1. May I speak with **[CONTACT NAME]**? **[IF THAT PERSON IS NOT AT THIS PHONE NUMBER, ASK FOR NAME AND PHONE NUMBER AND START AGAIN]**
1. (Yes)
 2. (No, person is not able to come to phone) **[GET NAME, PHONE NUMBER, AND SCHEDULE CALLBACK]**
 3. (No, person no longer works there) **[ASK FOR THE CONTACT NAME AND PHONE NUMBER FOR THE PERSON MOST FAMILIAR WITH PARTICIPATING IN {SEM TYPE} IN {SEM YEAR}]**
 98. (Don't know) **[ASK TO SPEAK WITH SOMEONE WHO KNOWS AND BEGIN AGAIN]**
 99. (Refused) **[THANK AND TERMINATE]**
- A2. Hello, I'm **[INSERT NAME]** calling from Cadmus on behalf of Focus on Energy. Our records show that you are the person who is most knowledgeable about your company's involvement in Focus on Energy's Strategic Energy Management Program, often referred to as SEM, is this correct?
1. (Yes)
 2. (No) **[ASK FOR THE CONTACT NAME AND PHONE NUMBER FOR THE CONTACT]**
 98. (Don't know) **[ASK TO SPEAK WITH SOMEONE WHO KNOWS AND BEGIN AGAIN]**
 99. (Refused) **[THANK AND TERMINATE]**
- A3. Focus on Energy wants to hear about your experience with the Strategic Energy Management Program. Your opinions will directly influence how Focus on Energy delivers this program. We expect this call to take about 15 minutes. Is this a good time? **[IF NOT A GOOD TIME, ASK TO SCHEDULE A TIME TO CALL BACK]**

B. Roles and Responsibilities

- B1. First, can you please describe your role at your company or organization? *[Probe for title and high-level responsibilities.]*
- B2. What is your role with the SEM Program?
1. How did you first become involved with the SEM Program? *[Probe for sources of program awareness, recruitment and enrollment process, etc.]*
- B3. How long have you been working with the Strategic Energy Management Program at your company?
1. Who do you regularly communicate with about this program within your company? *[Probe for frequency and form of communication]*

2. And externally, who else outside of your company are you communicating with about this program? *[Probe for frequency and form of communication]*
3. What is working well in regards to communication and what is not working as well? *[Probe for particular reasons for dissatisfaction, both internal and external]*

B4. What are the primary reasons your organization is participating in the SEM program?

B5. What feedback, if any, have you received from senior management about participating in the SEM Program?

C. *Customer Commitment*

- C1. Do you have an energy team [dedicated staff for energy and energy efficiency] at your facility?
1. **[If so]** How did the energy team originate? Who/what encouraged staff to dedicate time to energy and energy efficiency?
 2. **[If so]** What are the primary goals/responsibilities of the energy team?
 3. **[If so]** How many of your colleagues are a part of this energy team? *[Probe to determine who the energy champions / primary contacts for energy initiatives are: full time / part time / volunteer]*
 4. **[If so]** How frequently does the energy team meet? *[IF "AS NEEDED" ASK IF THEY AT LEAST MEET ANNUALLY, QUARTERLY, MONTHLY OR WEEKLY.]*
 5. What are some of the typical items discussed and decisions that the energy team works on?
- C2. Does your senior management require regular updates from the energy team? Why or why not? *[If so, probe for specifics about frequency and summary reporting]*
- C3. Has your company completed the roles and responsibilities matrix which identifies personnel to support energy management? Why or why not? *[Roles & Responsibilities SEM Element conducted at the Kickoff meeting]*
1. **[If so]** How valuable did you find the process of completing the matrix?
 2. **[If so]** How have the staff members identified in the matrix embraced the roles and responsibilities assigned to them?

D. Customer Commitment - Energy Policies & Goals

- D1. What is your company's process for implementing and pursuing energy-saving opportunities?
- D2. How does your company typically fund efficiency projects? *[Probe about maintenance budgets, capital budgets, etc.]*
1. When seeking funding for efficiency projects, does your company have any payback standards, such as hurdle rates (minimum rate expected to earn when investing) or return on investment? If so, what are the standards required of a project?
 2. Is there any competition for funding projects in your company? For example, could an efficiency project lose priority if another, lower cost or better ROI project arises?
- D3. Since participating in the SEM Program, has your company implemented any capital projects that have received a financial incentive from Focus on Energy's Large Energy Users Program? *[Make sure the participant is referring to measures installed that received an incentive outside the SEM Program]*
1. What were the main drivers for your company to implement this/these project(s)? *[Probe if it was the Large Energy Users Program incentive that influenced their decision to install the measure, or if it was their participation in the SEM Program that influenced their decision, or something else/both]*
 2. How satisfied are you with the capital project(s) you completed? *[0 to 10 scale, where 0 is not at all satisfied, and 10 is extremely satisfied] [If multiple projects, probe for satisfaction of each project]*
- D4. What are some of the energy-saving opportunities your company is looking to implement in the next year? *[Probe if it was the participation in the SEM program that led them to these opportunities.]*
1. How likely are you to initiate an energy-efficiency improvement in the next 12 months? *[0-10 scale, 0= not at all likely, 10= extremely likely]*
- D5. How often are you reviewing the list of energy saving opportunities to ensure that they still align with business and energy performance priorities?
- D6. How do you typically communicate energy-saving opportunities to staff? *[Probe for communication method, frequency, to whom, and if they are measures or behaviors]*
- D7. Have you conducted any formal trainings to promote energy-saving opportunities to staff? *[If so, probe for types of trainings and workshops] [If not, probe for barriers in doing so]*
- D8. What employee engagement activities for energy efficiency opportunities have you promoted? **[IF**

NEEDED: INCLUDES ANY ACTIVITIES THAT INVOLVE STAFF OUTSIDE THE ENERGY TEAM, SUCH AS ENGAGING STAFF TO TURNING OFF EQUIPMENT WHEN NOT USED, AWARENESS CAMPAIGNS, ETC.]

1. **[If any]** Are you planning to continue offering these employee engagement activities?
[Probe for types of trainings and workshops]
2. **[If none]** What are the barriers you face in offering employee engagement activities?
[Probe for barriers in doing so]

D9. What are some of the most significant challenges your company faces when promoting energy-efficiency? How can Focus on Energy help your company alleviate these challenges?

E. Program Elements

- E1. Did your company or organization complete a gap analysis during the kickoff meeting?
[IF NEEDED: This determines the maturity of current SEM efforts and identifies areas for improvements. It is often completed on the same day as the kickoff meeting. It identifies how to obtain utility and production data, process maps, etc.]
1. **[If so]** How valuable did you find the gap analysis results? Why?
 2. **[If not]** What kept your company from completing the gap analysis? *[Probe for barriers in doing so]*
- E2. Did your company or organization conduct an energy review as part of your participation in the SEM program?
[IF NEEDED: This is a breakdown of energy end uses by facility/processes either by estimated energy use or % of facility energy use in order to quantify primary energy sources. It takes all aspects of production and converts it into BTU's. It conveys where the energy is going (motors, pumps, lights, etc.)]
1. (Yes)
[Probe for how effective the data from the review has been and how those data were used]
 2. (No)
[Probe for barriers in doing so]
- E3. When you first started with the SEM program did you model past energy performance? [IF NEEDED: an energy model tracks performance]
1. **[If so]** Have you referenced the energy performance model to track your energy performance since it was first created? [IF NEEDED: An energy performance model is a statistically valid model for tracking performance in Top-Down Analysis]
 2. **[If so]** How often do you update the energy performance model? [IF NEEDED: INCLUDES ADDING NEW PROJECTS OR UPDATING PROJECTS ALREADY IN THE PLAN]
 3. **[If so]** Does the energy model use energy performance indicators to measure progress towards goals? [IF NEEDED: For example, an energy performance indicator could be

energy consumption per unit of production] What energy performance indicators does it use?

- E4. How often do you conduct an Energy IT Assessment? **[READ IF NEEDED: AN ASSESSMENT USING THE HARDWARE AND SOFTWARE NECESSARY TO COLLECT, ANALYZE AND UTILIZE ENERGY DATA]**
1. Does the hardware and software with the Energy IT Assessment provide your company with the information that you need? *[Probe for specifics]*
- E5. Has your company set boundaries (operational control limits) around the expected amount of energy use for key operations of the company? **[READ IF NEEDED: Inventory assessment of key operational characteristics] [IF YES: PROBE FOR EXAMPLES]**
1. **[If so]** How does your company review and assess any deviations higher or lower than those boundaries set for the key operational features? What is the process for correcting these deviations?
- E6. Are any departments, branches, buildings, or processes held individually responsible for their direct energy cost?
- E7. How frequently does your company review its energy performance? *[Probe for who shares with whom]*
- E8. How often is energy use data shared with others in your organization or company? *[Probe for who shares with whom]*
- E9. Does your company have any requirements or procedures in place to ensure the longevity and sustainability of the SEM program? **[PROBE FOR SPECIFICS]**
- E10. Did your company implement the energy saving practices that were originally planned as part of the SEM Program? *[Probe for specific practices embraced and abandoned]*
1. How, if at all, could this be improved?

F. Challenges, Benefits, and Initiatives

- F1. What have been the most challenging aspects of participating in the SEM Program?
- F2. What have been the most beneficial aspects of participating in the SEM Program?
- F3. Are you aware of any of the following: ENERGYSTAR Challenge, ISO Standards, Superior Energy Performance? **[Ask F4, F5, F6 if aware]**
- F4. Has your company expressed any interest in participating in the ENERGYSTAR Challenge? **[IF**

NEEDED: A call-to-action for industrial sites to reduce their energy intensity by 10% within 5 years for EPA recognition] Why or why not?

F5. Has your company expressed any interest in meeting any of the ISO Management Standards? [IF NEEDED: A FRAMEWORK OF REQUIREMENTS FOR ORGANIZATIONS TO DEVELOP POLICY FOR EFFICIENT ENERGY USE, HIT TARGETS FOR EFFICIENCY, AND CONTINUALLY IMPROVE ENERGY MANAGEMENT]

1. **[If so]** Which components?

- F5a. 9001 – Quality
- F5b. 10003 Customer Satisfaction
- F5c. 140001 Environment
- F5d. 22000 Food safety
- F5e. 26000 Social responsibility
- F5f. 27001 Information security
- F5g. 28000 Supply chain security
- F5h. 31000 Risk management
- F5i. 50001 Energy management

F6. Has your company expressed any interest in achieving Superior Energy Performance certification from the Department of Energy? [READ IF NEEDED: A COMPANY THAT HAS MET THE ISO 500001 STANDARD AND HAVE IMPROVED THEIR ENERGY PERFORMANCE UP TO 30% OVER THREE YEARS]

F7. What non-energy benefits have your company experienced through participating in the SEM program?

G. Participant Satisfaction

I have just a few more questions to ask. You may simply answer using a 10-point scale where 0 is not at all satisfied, and 10 is extremely satisfied. Using the 0 through 10 scale, please tell me:

G1. Overall, how satisfied are you with the SEM Program? [0 to 10 scale]

G2. Overall, how satisfied are you with the Energy Advisor who has assisted you while participating in the SEM Program? [0 to 10 scale / I did not work with an Energy advisor]

- G3. How would you rate your satisfaction with the amount of the SEM Program's financial incentives? (If needed, EMIS implementation \$15,000, or SEM completion at \$70,000) [0 to 10 scale; probe for reasons if less than 7]
- G4. How likely is it that you would recommend this program to others? [0 = not likely at all, 10 = Extremely likely, already have]
- G5. I'm going to read you a list of statements about the SEM Program. Please tell me whether you agree or disagree with these statements. [RANDOMIZE, READ STATEMENT; THEN JUST FOR THE FIRST STATEMENT READ THE FOLLOWING: Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?]
1. The SEM Program is meeting the needs of my company or organization as a sustainable energy management framework?
 2. The SEM program utilizes the knowledge of my company's staff to find savings.
 3. And finally, using the same scale, please rate this statement: The SEM program uses data for analysis which provides opportunities for low and no-capital project savings.
- [READ LIST AND RECORD 1=STRONGLY AGREE, 2=SOMEWHAT AGREE, 3=SOMEWHAT DISAGREE, AND 4=STRONGLY DISAGREE; 97= NOT APPLICABLE, 99=DON'T KNOW, AND 88=REFUSED]

H. Closing

And finally just a few questions about your company.

- H1. Is the building that is participating in the SEM Program owned or leased?
- H2. How is energy paid for within your company?
- H3. How can Focus on Energy make it easier for companies like yours to participate in its energy efficiency programs?
- H4. Do you have any additional comments about your participation in the SEM program?
- H5. On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. May we share your responses with a program manager, who may contact you regarding your experience?

Those are all my questions. Thank you very much for your time and for your support of this important study. Have a great day!

Ongoing Participant Satisfaction Surveys

Residential Programs

- Home Performance with ENERGY STAR Program – Whole Home Path
- Home Performance with ENERGY STAR Program – HVAC Path
- Multifamily Energy Savings Program
- Multifamily Direct Install Program
- Renewable Rewards Program
- Simple Energy Efficiency Program

Nonresidential Programs

- Agriculture, Schools and Government Program
- Business Incentive Program
- Chain Stores and Franchises Program
- Large Energy Users Program
- Small Business Program

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's Home Performance with ENERGY STAR® Program. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. 0 (Not at all satisfied) – 10 (Extremely satisfied)

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that performed the energy efficient improvement(s)?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient improvement(s) that were completed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? 0 (Not at all likely) – 10 (Extremely likely)

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What improvements do you plan to complete over the next 12 months, if applicable?

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about my response to this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's Home Performance Program. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. 0 (Not at all satisfied) – 10 (Extremely satisfied)

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that performed the energy efficient improvement(s)?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient improvement(s) that were completed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? 0 (Not at all likely) – 10 (Extremely likely)

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What improvements do you plan to complete over the next 12 months, if applicable?

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about my response to this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Multifamily Energy Savings Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that provided the service?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the Energy Advisor or Focus on Energy staff member who assisted you with your project?

0	1	2	3	4	5	6	7	8	9	10	Don't Know	I did not work with an Energy Advisor or Focus staff member
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient improvement(s) you completed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? *0 (Not at all likely) – 10 (Extremely likely)*

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

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Please do not contact me about this survey

What improvements do you plan to complete over the next 12 months, if applicable?

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please share anything else noteworthy about your experience or any other suggestions for improvement:

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Renewable Rewards Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that completed the renewable energy project?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the renewable energy system that was installed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate an energy-efficiency improvement in the next 12 months? *0 (Not at all likely) – 10 (Extremely likely)*

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What improvements do you plan to complete over the next 12 months, if applicable?

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about my response to this survey

YOUR OPINION MATTERS



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Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Simple Energy Efficiency Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Simple Energy Efficiency program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient pack you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? *0 (Not at all likely) – 10 (Extremely likely)*

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any additional suggestions for improvement.

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Agriculture, Schools & Government Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that provided the service?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the Energy Advisor or Focus on Energy staff member who assisted you with your project?

0	1	2	3	4	5	6	7	8	9	10	Don't Know	I did not work with an Energy Advisor or Focus staff member
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient improvement(s) you completed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? *0 (Not at all likely) – 10 (Extremely likely)*

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Business Incentive Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that provided the service?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the Energy Advisor or Focus on Energy staff member who assisted you with your project?

0	1	2	3	4	5	6	7	8	9	10	Don't Know	I did not work with an Energy Advisor or Focus staff member
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient improvement(s) you completed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? *0 (Not at all likely) – 10 (Extremely likely)*

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

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Please do not contact me about this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Chain Stores & Franchises Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that provided the service?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the Energy Advisor or Focus on Energy staff member who assisted you with your project?

0	1	2	3	4	5	6	7	8	9	10	Don't Know	I did not work with an Energy Advisor or Focus staff member
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient improvement(s) you completed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? *0 (Not at all likely) – 10 (Extremely likely)*

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Large Energy Users Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Focus on Energy program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that provided the service?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the Energy Advisor or Focus on Energy staff member who assisted you with your project?

0	1	2	3	4	5	6	7	8	9	10	Don't Know	I did not work with an Energy Advisor or Focus staff member
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the energy-efficient improvement(s) you completed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the amount of incentive you received?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? *0 (Not at all likely) – 10 (Extremely likely)*

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely is it that you would recommend this program to others?

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience and any suggestions for improvement.

On occasion, Focus on Energy staff may follow up with some survey respondents to learn more about their experience with the program. Please indicate below if you do not want someone from Focus on Energy to contact you about your response to this survey.

Please do not contact me about this survey

YOUR OPINION MATTERS



focus on energysm
Partnering with Wisconsin utilities

Thank you for your recent participation in Focus on Energy's **Small Business Program**. Your feedback will help us continue to improve our program and make Wisconsin a more energy efficient place to work and live. Please take a moment to complete our short survey.

Please fill in the circle completely next to the answer or under the number you wish to select. **0 (Not at all satisfied) – 10 (Extremely satisfied)**

Overall, how satisfied are you with the Small Business program?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with the contractor (Trade Ally) that provided the service?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate below whether the contractor (Trade Ally) met the following expectations:

	Yes	No
<i>Arrived on time for the appointment?</i>	<input type="radio"/>	<input type="radio"/>
<i>Appeared neat and clean?</i>	<input type="radio"/>	<input type="radio"/>
<i>Conducted him/herself in a courteous and pleasant manner?</i>	<input type="radio"/>	<input type="radio"/>
<i>Performed the work to your expectations?</i>	<input type="radio"/>	<input type="radio"/>
<i>Clearly explained the results of the energy assessment?</i>	<input type="radio"/>	<input type="radio"/>
<i>Removed all debris and left a clean worksite after the job was completed?</i>	<input type="radio"/>	<input type="radio"/>
<i>Answered all of your questions satisfactorily or directed you to other resources if needed?</i>	<input type="radio"/>	<input type="radio"/>

Please tell us more about your experience with this trade ally and any suggestions for improvement.

How satisfied are you with the energy-efficient product(s) that were installed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate below why you gave the energy-efficient product(s) this rating and any suggestions for improvement:

Would you like a Focus on Energy representative to contact you to resolve any issues related to the products installed or your experience with the program?

Yes	No
<input type="radio"/>	<input type="radio"/>

How satisfied are you with the discount you received on the energy efficient products that were installed?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to initiate another energy-efficiency improvement in the next 12 months? 0 (Not at all likely) – 10 (Extremely likely)

0	1	2	3	4	5	6	7	8	9	10	Already Have	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What improvements do you plan to complete over the next 12 months, if applicable?

How likely is it that you would recommend this program to other small businesses?

0	1	2	3	4	5	6	7	8	9	10	Don't Know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please share anything else noteworthy about your experience or any other suggestions for improvement:

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