



FOCUS ON ENERGY[®]

Calendar Year 2025

Evaluation Report

Volume III: Appendices

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Appendix A. Calendar Year (CY) 2025 Key Achievements

A.1. Offering Participants

- CY 2025 Residential: 142,051
- CY 2025 Nonresidential: 3,127
- CY 2025 Midstream: 29,018
- CY 2025 Total Participants: 174,196

A.2. Total Electric and Natural Gas Energy Usage

- CY 2025 Electric Sales to Wisconsin Retail Customers (MWh): 68,563,904¹
- CY 2025 Wisconsin Aggregated Electric Utilities Noncoincident Peak Demand (MW): 17,580²
- CY 2025 Natural Gas Consumption (MThms): 5,851,113³

A.3. Total Verified Gross Annual Savings

- CY 2025 Energy Savings (kWh): 411,720,261
- CY 2025 Demand Reduction Summer (kW): 65,937
- CY 2025 Demand Reduction Winter (kW): 43,303
- CY 2025 Natural Gas Savings (therms): 22,333,697

A.4. Total Verified Net Annual Savings

- CY 2025 Energy Savings (kWh): 328,724,712
- CY 2025 Demand Reduction Summer (kW): 50,984
- CY 2025 Demand Reduction Winter (kW): 35,051
- CY 2025 Natural Gas Savings (therms): 17,837,001

¹ U.S. Energy Information Administration. Re-Release Date: November 10, 2025. Independent Statistics and Analysis. "Wisconsin Electricity Profile 2024." <https://www.eia.gov/electricity/state/Wisconsin/>

² Ibid.

³ U.S. Energy Information Administration. Independent Statistics and Analysis. Release Date: March 31, 2026. "Natural Gas Consumption by End Use." https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SWI_a.htm. Converted MMcf to MThms using standard conversion of 1.038 therms per 100 cubic feet of natural gas.

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A.5.Total Verified Gross Lifecycle Savings

- CY 2025 Energy Savings (kWh): 7,007,760,268
- CY 2025 Demand Reduction Summer (kW): 65,937
- CY 2025 Demand Reduction Winter (kW): 43,303
- CY 2025 Natural Gas Savings (therms): 367,834,218

A.6.Total Verified Net Lifecycle Savings

- CY 2025 Energy Savings (kWh): 5,436,459,954
- CY 2025 Demand Reduction Summer (kW): 50,984
- CY 2025 Demand Reduction Winter (kW): 35,051
- CY 2025 Natural Gas Savings (therms): 293,781,143

A.7.Population Numbers

- CY 2025 Statewide Census Population: 5,972,787⁴
- CY 2024 Wisconsin Residential Electric Accounts: 2,843,874⁵
- CY 2024 Wisconsin Nonresidential Electric Accounts: 375,172⁶
- CY 2024 Wisconsin Residential Gas Accounts: 1,887,729⁷
- CY 2024 Wisconsin Nonresidential Gas Accounts: 187,717⁸

⁴ U.S. Census Bureau. Accessed April 2026. "Annual Estimates of the Resident Population for the United States, Regions, States, District of Columbia, and Puerto Rico: April 1, 2020 to July 1, 2025 " <https://www.census.gov/data/tables/time-series/demo/popest/2020s-state-total.html>

⁵ U.S. Energy Information Administration. Release Date: October 7, 2025. "Sales (consumption), revenue, prices & customers" "Retail sales of electricity to ultimate customers" "Annual" and "By sector, by state, by provider." <https://www.eia.gov/electricity/data.php>

⁶ Ibid.

⁷ U.S. Energy Information Administration. Release Date: March 31, 2026. "Number of Natural Gas Consumers." https://www.eia.gov/dnav/ng/ng_cons_num_dcw_SWI_a.htm

⁸ Ibid.

Table A-1. CY 2025 Costs, Benefits, and Modified Total Resource Cost (TRC) Test Combined Results by Sector

	Residential	Nonresidential	Renewables	Total
Incentive Costs ^a	\$21,656,936	\$33,673,996	\$2,787,121	\$58,118,053
Administrative Costs	\$1,137,453	\$1,434,085	\$129,313	\$2,700,851
Delivery Costs	\$12,511,688	\$21,423,358	\$1,710,665	\$35,645,711
Incremental Measure Costs	\$58,253,744	\$116,856,229	\$82,337,621	\$257,447,594
Total Non-Incentive Costs	\$71,902,884	\$139,713,673	\$84,177,599	\$295,794,156
Electricity Benefits (kWh)	\$9,717,867	\$83,433,836	\$18,334,786	\$111,486,489
Capacity Benefits (kW)	\$23,619,199	\$87,326,816	\$32,218,967	\$143,164,983
Gas Benefits	\$46,226,228	\$87,248,817	\$0	\$133,475,045
Emissions Benefits	\$45,836,410	\$182,233,753	\$47,997,348	\$276,067,511
T&D Benefits (kW)	\$6,771,515	\$25,068,569	\$9,210,180	\$41,050,264
Total TRC Benefits	\$132,171,219	\$465,311,792	\$107,761,281	\$705,244,292
TRC Benefits Minus Costs	\$60,268,335	\$325,598,119	\$23,583,682	\$409,450,135
TRC Benefit/Cost Ratio	1.84	3.33	1.28	2.38

^a Incentive Costs are not included in Modified TRC Total Costs

Appendix B. Glossary of Terms

Term	Definition
Administrative Costs	Costs not directly associated with a specific program activity but necessary to the development and administration of programs, including record keeping, payroll, accounting, auditing, billing, business management, budgeting and related activities, overhead allocation, and other costs necessary to direct the organization of the program.
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 program’s influence, and the savings would not have been achieved in the program’s absence.
Avoided Costs	Costs the utility avoided by implementing an energy efficiency measure, program, or practice.
Baseline	Conditions (including energy consumption) that would have occurred without implementing the measure or project. These conditions can be either as-found (prior to the energy efficiency retrofit or to conditions that meet the state or federal efficiency codes) or a combination of efficient and non-efficient conditions derived from data.
Benefit/Cost Ratio	The mathematical relationship between the benefits and costs associated with implementing energy efficiency measures, programs, or practices, or including emission reduction benefits resulting from such implementation.
Cost-Effectiveness	Comparison of the benefits and costs associated with implementing energy efficiency measures and programs. The actual benefits and costs included can vary based on the design and intent of different cost-effectiveness tests.
Custom Savings	Savings for nonprescriptive measures that do not meet the criteria for deemed savings as calculated by the offering administrator or offering implementer at the time of project 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 natural 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 Offering	An efficiency program that provides incentives to the end user by directly offsetting the first cost of the equipment and reducing the payback period.
Effective Useful Life	The median number of years of expected operation of a specific measure, i.e., the time until half the units would be expected to have failed or been removed
Estimated Savings	The savings estimated by an evaluator after conducting an energy impact evaluation.
<i>Ex Ante</i> Savings	Energy savings the offering administrator or offering implementer reports before verification by the evaluation team (also called reported savings or tracked savings).
<i>Ex Post</i> Evaluation	An assessment of an activity’s impact(s) after completion.
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.
Gross Savings	The unadjusted program-reported change in energy consumption or demand resulting from efficiency program-related actions taken by participants.
Interactive Effects	The influence of one technology application on the energy required to operate another application.
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 and previous program cycles, provided that the reporting period falls within each measure’s useful life. This incorporates annual savings and each measure’s effective useful life.

Term	Definition
Locational Marginal Price	The marginal cost to serve a unit of energy at a specific location at the time of delivery.
Market Effects	Changes in marketplace practices, services, and promotional efforts that induce businesses and consumers to buy energy-saving products and services without direct offering assistance. Evaluators generally consider these effects as resulting from offering 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.
Midstream Offering	An efficiency program that targets retailers, distributors, or both. Midstream programs are designed to encourage the targeted audience to stock, promote, and sell more energy-efficient products. Incentives are paid directly to the retailer or distributor.
Net Savings	Savings net of what would have occurred in the program's absence (observed impacts attributable to the program). Net savings are typically calculated by applying the net-to-gross ratio to the verified gross 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, derived from energy-efficient measures in addition to energy savings.
Nonparticipant Spillover	The effect on eligible general consumers who did not participate in an efficiency program yet adopted energy-saving products or practices because of the program's influence.
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 to which 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 offering administrator or offering implementer reports before verification by the evaluation team (also called tracked savings or <i>ex ante</i> savings).
Resource Acquisition Offering	An efficiency program designed to directly achieve energy savings and/or demand reduction, as well as avoided emissions.
Standard Error	The measure of a data sample's variability (that is, the distance of a typical data point from the sample mean).
Tracked Savings	Energy savings the offering administrator or offering implementer reports before verification by the evaluation team (also called reported savings or <i>ex ante</i> savings).
Upstream Offering	An efficiency program designed to encourage retailers and manufacturers to promote and sell more energy-efficient products. These programs provide incentives to retailers or manufacturers, which are passed through to customers.
Verified Gross Savings	Energy savings verified by an independent evaluation team and 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 based on changes in energy consumption 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. To calculate verified net savings, the evaluation team makes adjustments for outside influences, such as freeridership and spillover.

Appendix C. Acronyms and Abbreviations

Acronym	Term
ACH	Air changes per hour
APS	Advanced power strip
AFUE	Annual fuel utilization efficiency
ASHP	Air-source heat pump
AVERT	AVoided Emissions and geneRation Tool
BPK	Benefits per kilowatt-hour
C&I	Commercial and industrial
COBRA	Co-Benefits Risk Assessment
CPUC	California Public Utilities Commission
CY	Calendar year
DHW	Domestic hot water
EDA/EDR	Energy Design Assistance/Energy Design Review
eEDA	Express EDA
ECM	Electronically commutated motor
EPA	U.S. Environmental Protection Agency
EUL	Effective useful life
EWG	Evaluation Work Group
GWh	Gigawatt-hour
HVAC	Heating, ventilation, and air conditioning
ISR	In-service rate
kW	Kilowatt
kWh	Kilowatt-hour
LED	Light-emitting diode
MGE	Madison Gas & Electric
MMBtu	Million British thermal units
MMBtu/h	Million British thermal units per hour

Acronym	Term
MMcf	Million cubic feet
MMID	Master measure identification
MThm	Thousand therms
MW	Megawatt
MWh	Megawatt-hour
NEBs	Nonenergy benefits
NEO	Net Energy Optimizer
NPSO	Nonparticipant spillover
NTG	Net-to-gross
PRISM	PRInceton Scorekeeping Method
PSC	Public Service Commission of Wisconsin
PV	Photovoltaic
RAP	Regulatory Assistance Project
SCT	Societal test
SEM	Strategic energy management
SEER	Seasonal energy efficiency rating
SIM	System Information Modeling
SPECTRUM	Statewide Program for Energy Customer Tracking, Resource Utilization, and Data Management
T&D	Transmission and distribution
TBD	To be determined
VSD	Variable-speed drive
TRC	Total resource cost test
TRM	Technical reference manual
UAT	Utility administrator cost test
WPS	Wisconsin Public Service
WWTP	Waste Water Treatment Plant

Appendix D. Voluntary Program Efficiency Savings and Participation

The Public Service Commission of Wisconsin (PSC) authorized Northern States Power-Wisconsin, Wisconsin Power and Light, We Energies, and Wisconsin Public Service Corporation to fund and operate voluntary programs in CY 2025 in addition to the funding they contribute to Focus on Energy.

In general, these voluntary programs complement Focus on Energy offerings by providing bonus incentives on top of the existing Focus on Energy incentives or by offering additional energy efficiency savings opportunities for customers in the respective utility territories. For a number of these voluntary programs that build on existing offerings, their kW, kWh, and therm savings are not considered additive savings but rather as Focus on Energy portfolio savings achieved by the projects. Savings for We Energies' Voluntary Design Assistance Program are not currently claimed by Focus on Energy.

Table D-1 shows the CY 2025 program savings and participation for Investor-Owned Utility voluntary energy efficiency programs, where available.

Table D-1. CY 2025 Utility Voluntary Energy Efficiency Program Summary

Program	Participation	kW	kWh	therms
Northern States Power-Wisconsin Community Conservation Programs ^a	661	4,581	34,293,242	1,616,133
Wisconsin Power & Light Enhanced Low-Income Weatherization Program ^b	74	N/A	N/A	N/A
We Energies Voluntary Design Assistance Program ^c	0	0	0	0
We Energies Residential Natural Gas Assistance Program ^c	175	N/A	N/A	25,487
Wisconsin Public Service Residential Assistance Program ^d	33	N/A	N/A	5,357

^a Final CY 2025 savings are pending independent evaluation of Northern States Power Company-Wisconsin's voluntary programs. See Northern States Power Company-Wisconsin's 2025 Customer Service Conservation Annual Report in PSC Docket No. 4220-EE-2025 for additional program details. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=587861>

^b Final CY 2025 savings were not available as of the time of publication. See Wisconsin Power and Light's 2025 Enhanced Low-Income Weatherization Program Report in PSC Docket No. 6680-EE-2026 for additional program details. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=584873>

^c See We Energies' 2025 Customer Service Conservation Report in PSC Docket No. 5-EE-2025 for additional program details. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=586976>

^d See Wisconsin Public Service's 2025 Customer Service Conservation Report in PSC Docket No. 6690-EE-2025 for additional program details. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=586977>

Appendix E. Detailed Findings

This section contains detailed first-year annual gross savings and lifecycle savings for the residential, nonresidential, and midstream channels, as well as savings organized by offering and measure category.

E.1. Overview of Savings

Table E-1 lists the CY 2025 first-year gross (*ex ante*), verified gross, and verified net savings.

**Table E-1. CY 2025 First-Year Annual Savings Split
between Residential, Nonresidential, and Midstream**

Savings Type	Unit	Residential	Nonresidential	Midstream	Total
Gross	MMBtu	742,237	2,588,059	354,795	3,685,090
	kWh	70,211,202	346,126,043	-4,660,563	411,676,682
	kW Summer	13,858	48,130	1,134	63,123
	kW Winter	6,678	37,957	-2,104	42,531
	Therms	5,026,761	14,070,767	3,706,964	22,804,492
Verified Gross	MMBtu	690,593	2,581,155	366,411	3,638,159
	kWh	68,086,228	346,126,043	-2,492,010	411,720,261
	kW Summer	15,971	48,098	1,868	65,937
	kW Winter	6,805	38,511	-2,014	43,303
	therms	4,582,828	14,001,730	3,749,138	22,333,697
Verified Net	MMBtu	540,349	2,139,969	224,991	2,905,309
	kWh	45,792,703	284,092,638	-1,160,629	328,724,712
	kW Summer	10,536	39,342	1,106	50,984
	kW Winter	4,341	31,849	-1,139	35,051
	therms	3,841,039	11,706,452	2,289,510	17,837,001

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Table E-2 lists the lifecycle savings achieved by Focus on Energy in CY 2025. Lifecycle savings represent the savings an offering can realize through its measures over each measure’s effective useful life.

Table E-2. CY 2025 Lifecycle Savings Split between Residential, Nonresidential, and Midstream

Savings Type	Unit	Residential	Nonresidential	Midstream	Total
Gross	MMBtu	13,100,319	41,356,397	6,727,376	61,184,092
	kWh	1,534,371,324	5,579,717,509	-93,496,378	7,020,592,455
	kW Summer	13,858	48,130	1,134	63,123
	kW Winter	6,678	37,957	-2,104	42,531
	therms	78,650,442	223,184,012	70,463,853	372,298,307
Verified Gross	MMBtu	12,576,338	41,251,390	6,866,171	60,693,900
	kWh	1,498,902,189	5,579,717,516	-70,859,437	7,007,760,268
	kW Summer	15,971	48,098	1,868	65,937
	kW Winter	6,805	38,511	-2,014	43,303
	therms	74,620,839	222,133,941	71,079,438	367,834,218
Verified Net	MMBtu	9,638,971	34,104,416	4,183,929	47,927,316
	kWh	919,506,529	4,554,763,325	-37,809,899	5,436,459,954
	kW Summer	10,536	39,342	1,106	50,984
	kW Winter	4,341	31,849	-1,139	35,051
	therms	65,016,144	185,635,636	43,129,363	293,781,143

E.2. Summary of Savings by Offering

Table E-3 summarizes the first-year annual savings by offering.

Table E-3. Summary of CY 2025 Annual Savings by Offering

Program Name	Offering Name	Gross				Verified Gross				Verified Net			
		kWh	kW Summer	kW Winter	therms	kWh	kW Summer	kW Winter	therms	kWh	kW Summer	kW Winter	therms
Residential Programs													
Direct to Customer	Online Marketplace	7,770,319	63	102	570,381	7,773,621	2,035	186	570,616	6,815,747	1,788	158	496,384
	Packs	6,778,241	863	1,419	2,637,573	5,185,775	609	1,178	2,193,611	4,124,864	492	931	1,673,922
	Income Qualified Direct Install Pilot	63,142	0	0	3,488	63,142	17	2	3,488	63,142	17	2	3,488
Multifamily	EDA/EDR	17,324,966	2,655	1,634	549,907	17,324,966	2,655	1,634	549,907	16,112,218	2,469	1,519	511,414
	Multifamily	1,249,093	60	100	114,458	1,249,093	60	100	114,458	1,036,747	49	83	95,000
Renewable Rewards	Residential Renewable Rewards	26,598,953	5,661	2,543	0	26,084,090	5,631	2,806	0	14,085,409	3,041	1,515	0
Residential New Construction	Residential New Construction	6,387,144	1,920	759	622,967	6,387,144	1,920	759	622,967	447,100	134	53	664,440
	Manufactured Homes Pilot	241,988	181	28	60,990	241,988	181	39	60,990	26,619	20	4	6,709
Trade Ally Solutions	Heating and Cooling	506,811	61	42	28,695	517,435	131	49	28,707	357,238	91	33	20,109
	Insulation and Air Sealing	2,344,632	2,384	37	377,223	2,344,630	2,491	40	377,220	2,136,925	2,283	30	330,387
	Retail Smart Thermostats	840,126	0	0	55,584	840,126	227	1	55,584	512,477	138	0	33,906
	Tribal	274	0	0	849	274	0	0	849	274	0	0	849
Pilots	Accessible Efficiency	105,513	10	15	4,647	73,944	13	13	4,432	73,944	13	13	4,432
Residential Total		70,211,202	13,858	6,678	5,026,761	68,086,228	15,971	6,805	4,582,828	45,792,703	10,536	4,341	3,841,039
Midstream Programs													
Instant	Commercial Midstream	2,234,956	226	218	550,938	2,419,606	240	222	565,069	1,781,038	171	162	390,707
Discount	Residential Midstream	-6,895,519	908	-2,321	3,156,026	-4,911,616	1,628	-2,236	3,184,069	-2,941,668	936	-1,301	1,898,804
Midstream Total		-4,660,563	1,134	-2,104	3,706,964	-2,492,010	1,868	-2,014	3,749,138	-1,160,629	1,106	-1,139	2,289,510

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Program Name	Offering Name	Gross				Verified Gross				Verified Net			
		kWh	kW Summer	kW Winter	therms	kWh	kW Summer	kW Winter	therms	kWh	kW Summer	kW Winter	therms
Nonresidential Programs													
Agribusiness	Agribusiness	43,074,851	6,361	3,366	474,753	43,074,851	6,361	3,366	474,753	33,598,384	4,961	2,626	370,307
Business and Industry	Commercial and Industrial	79,029,021	11,215	8,577	1,695,024	79,029,021	11,215	8,577	1,695,024	62,432,926	8,860	6,776	1,339,069
	EDA/EDR	10,633,091	1,747	1,501	305,569	10,633,091	1,765	1,501	305,569	9,888,775	1,641	1,396	284,179
Large Industrial	Large Industrial	106,336,592	12,806	12,451	6,896,182	106,336,592	12,806	12,451	6,827,220	97,829,665	11,781	11,454	6,281,042
	EDA/EDR	2,454,867	533	328	3,752	2,454,867	533	328	3,677	2,283,026	496	305	3,420
Renewable Rewards	Business Renewable Rewards	31,179,092	6,410	3,171	0	31,179,092	6,410	3,725	0	23,072,528	4,743	2,757	0
Schools and Government	Government	31,340,662	2,492	2,562	1,249,599	31,340,662	2,442	2,562	1,249,599	22,251,870	1,734	1,819	887,215
	Schools	29,485,663	4,518	3,946	3,022,527	29,485,663	4,518	3,946	3,022,527	20,934,821	3,208	2,802	2,145,994
	EDA/EDR	11,308,017	1,874	2,012	401,949	11,308,017	1,874	2,012	401,949	10,516,456	1,743	1,871	373,813
Pilots	Life Sciences Midstream	977,365	112	43	0	977,365	112	43	0	977,365	112	43	0
	Community Impact	306,823	63	0	21,412	306,823	63	0	21,412	306,823	63	0	21,412
Nonresidential Total		346,126,043	48,130	37,957	14,070,767	346,126,043	48,098	38,511	14,001,730	284,092,638	39,342	31,849	11,706,452
Total All Offerings		411,676,682	63,123	42,531	22,804,492	411,720,261	65,937	43,303	22,333,697	328,724,712	50,984	35,051	17,837,001

Note: Totals may not match the sum of channel savings due to rounding.

Table E-4 summarizes the lifecycle savings by offering.

Table E-4. CY 2025 Summary of Lifecycle Savings by Offering

Program Name	Offering Name	Gross		Verified Gross		Verified Net	
		kWh	therms	kWh	therms	kWh	therms
Residential Programs							
Direct to Customer	Online Marketplace	71,074,353	5,598,341	71,118,367	5,601,245	62,320,888	4,856,380
	Packs	81,906,812	28,245,917	60,976,698	24,215,097	48,632,719	18,495,766
	Income Qualified Direct Install Pilot	568,278	31,392	568,278	31,392	568,278	31,392
Multifamily	EDA/EDR	346,499,320	11,075,360	346,499,320	11,075,360	322,244,368	10,300,085
	Multifamily	15,199,871	2,739,960	15,199,871	2,739,960	12,615,893	2,274,167
Renewable Rewards	Residential Renewable Rewards	744,904,455	0	730,354,527	0	394,391,444	0
Residential New Construction	Manufactured Homes Pilot	7,259,640	1,829,700	7,259,640	1,829,700	798,560	201,267
	Residential New Construction	191,614,337	18,689,006	191,614,337	18,689,006	13,413,004	19,933,191
Trade Ally Solutions	Insulation and Air Sealing	58,635,524	9,472,793	58,636,435	9,473,019	53,431,742	8,274,120
	Heating and Cooling	8,129,911	399,517	8,289,075	399,665	5,652,834	278,480
	Retail Smart Thermostats	7,561,134	500,256	7,561,134	500,256	4,612,292	305,156
	Tribal	6,311	21,131	6,302	21,135	6,302	21,135
Pilots	Accessible Efficiency	1,011,378	47,070	818,205	45,005	818,205	45,005
Residential Total		1,534,371,324	78,650,442	1,498,902,189	74,620,839	919,506,529	65,016,144
Midstream Programs							
Instant Discount	Commercial Midstream	23,267,660	7,838,297	25,096,442	7,996,462	18,421,411	5,360,202
	Residential Midstream	-116,764,038	62,625,556	-95,955,879	63,082,975	-56,231,310	37,769,161
Midstream Total		-93,496,378	70,463,853	-70,859,437	71,079,437	-37,809,899	43,129,363

Program Name	Offering Name	Gross		Verified Gross		Verified Net	
		kWh	therms	kWh	therms	kWh	therms
Nonresidential Programs							
Agribusiness	Agribusiness	636,873,485	8,177,178	636,873,485	8,177,178	496,761,319	6,378,198
Business & Industry	Commercial & Industrial	1,127,069,980	28,861,855	1,127,069,980	28,861,855	890,385,284	22,800,865
	EDA/EDR	212,661,820	6,112,440	212,661,820	6,112,440	197,775,493	5,684,569
Large Industrial	EDA/EDR	49,097,340	75,040	49,097,340	73,539	45,660,526	68,391
	Large Industrial	1,524,681,515	104,857,017	1,524,681,515	103,808,446	1,402,706,993	95,503,771
Pilots	Community Impact Program	4,483,068	379,042	4,483,068	379,042	4,483,068	379,042
	Life Sciences Midstream Pilot	11,728,316	0	11,728,316	0	11,728,316	0
Renewable Rewards	Business Renewable Rewards	873,014,560	0	873,014,567	0	646,030,780	0
Schools & Government	Schools	456,031,694	42,945,448	456,031,694	42,945,448	323,782,503	30,491,268
	EDA/EDR	226,160,340	8,038,980	226,160,340	8,038,980	210,329,116	7,476,251
	Government	457,915,391	23,737,013	457,915,391	23,737,013	325,119,928	16,853,279
Nonresidential Total		5,579,717,509	223,184,013	5,579,717,516	222,133,941	4,554,763,325	185,635,636
Total All Offerings		7,020,592,455	372,298,307	7,007,760,268	367,834,218	5,436,459,954	293,781,143

Note: Totals may not match the sum of channel savings due to rounding.

E.3. Summary of Savings by Measure Category

The program administrator uses measure categories to group similar measures under one heading in SPECTRUM. This organization simplifies measure tracking by enabling the program to assess how well specific measure types perform within the portfolio. For example, the HVAC-Heat Pump category includes all heat pump measures rather than tracking ductless, air-source, and ground-source heat pumps individually. These measure categories may change over time for various reasons related to program design, operations, and management. All incentive amounts reflect what is tracked in SPECTRUM.

Table E-5 summarizes CY 2025 residential savings and incentives by measure category.

Table E-5. CY 2025 Summary of First-Year Annual Savings by Measure Category, Residential Channel

Measure Category	Verified Gross								Incentive Dollars \$	Incentive Dollars %
	kWh	kWh (%)	kW Summer	kW Summer (%)	kW Winter	kW Winter %	therms	therms (%)		
Appliance Plug Loads-Advanced Power Strip (APS)	49,004	0.07%	6	0.04%	4	0.05%	0	0.00%	\$18,595	0.11%
Appliance Plug Loads-Room Air Cleaner	72,857	0.11%	8	0.05%	10	0.15%	0	0.00%	\$51,210	0.30%
Boilers & Burners-Boiler ^a	0	0.00%	0	0.00%	0	0.00%	59,354	1.29%	\$82,043	0.48%
Boilers & Burners-Burners ^a	0	0.00%	0	0.00%	0	0.00%	232	0.01%	\$268	0.00%
Boilers & Burners-Controls ^a	0	0.00%	0	0.00%	0	0.00%	572	0.01%	\$1,040	0.01%
Boilers & Burners-Insulation ^a	0	0.00%	0	0.00%	0	0.00%	8,886	0.19%	\$2,175	0.01%
Boilers & Burners-Steam Traps ^a	0	0.00%	0	0.00%	0	0.00%	2,260	0.05%	\$900	0.01%
Boilers & Burners-Tune-up/Repair ^a	0	0.00%	0	0.00%	0	0.00%	296	0.01%	\$1,000	0.01%
Bonus-Equipment ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$328,230	1.91%
Bonus-Other ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$252,600	1.47%
Bonus-Survey/Study ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$103,359	0.60%
Building Shell-Air Sealing	48,627	0.07%	3	0.02%	14	0.21%	69,141	1.51%	\$1,859,789	10.82%
Building Shell-Insulation	2,383,596	3.50%	2,508	15.70%	47	0.70%	406,193	8.86%	\$1,771,218	10.30%
Domestic Hot Water (DHW)- electrically commutate motor (ECM) Pumps	25,426	0.04%	4	0.02%	4	0.05%	0	0.00%	\$640	0.00%
DHW-Low-Flow Devices	223,246	0.33%	31	0.19%	71	1.05%	38,357	0.84%	\$37,363	0.22%
DHW-Other ^b	97	0.00%	0	0.00%	0	0.00%	301	0.01%	\$2,810	0.02%
DHW-Pipe Insulation	147,531	0.22%	26	0.17%	18	0.27%	16,890	0.37%	\$14,672	0.09%
HVAC-Controls	8,552,563	12.56%	2,296	14.37%	86	1.26%	537,216	11.72%	\$906,837	5.27%
HVAC-Distribution Improvements	16	0.00%	0	0.00%	0	0.00%	32	0.00%	\$4,650	0.03%
HVAC-Fans	415	0.00%	0	0.00%	0	0.00%	0	0.00%	\$25	0.00%
HVAC-Heat Pump	385,957	0.57%	45	0.28%	64	0.94%	10,046	0.22%	\$86,160	0.50%
HVAC-Heating Equipment ^c	1,050	0.00%	0	0.00%	0	0.00%	765	0.02%	\$2,600	0.02%
HVAC-Pumps	9,990	0.01%	1	0.01%	2	0.03%	0	0.00%	\$1,590	0.01%
HVAC-Tune-up/Repair	4,485	0.01%	2	0.01%	0	0.00%	4,812	0.10%	\$9,062	0.05%
Lighting-LED Fixtures	816,388	1.20%	26	0.16%	47	0.69%	0	0.00%	\$86,039	0.50%
Lighting-LED Screw-in Lamps	2,313	0.00%	0	0.00%	4	0.05%	0	0.00%	\$9,988	0.06%
Lighting-LED, Other	1,958	0.00%	0	0.00%	0	0.00%	0	0.00%	\$700	0.00%
Lighting-Lighting Controls	458	0.00%	0	0.00%	0	0.00%	0	0.00%	\$48	0.00%
Lighting-TLED	136,289	0.20%	18	0.11%	18	0.26%	0	0.00%	\$3,975	0.02%

Measure Category	Verified Gross								Incentive Dollars \$	Incentive Dollars %
	kWh	kWh (%)	kW Summer	kW Summer (%)	kW Winter	kW Winter %	therms	therms (%)		
Miscellaneous-Adjustment Measure ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$2,538	0.01%
Miscellaneous-Other ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$215,380	1.25%
Miscellaneous-Packs Kits	5,185,775	7.62%	609	3.81%	1,178	17.31%	2,193,611	47.87%	\$4,552,932	26.48%
New Construction-Energy Design Assistance (EDA)	15,461,781	22.71%	2,365	14.81%	1,493	21.94%	473,091	10.32%	\$1,681,516	9.78%
New Construction-Energy Design Review (EDR)	1,863,185	2.74%	290	1.81%	141	2.07%	76,816	1.68%	\$165,562	0.96%
New Construction-Residential New Construction	6,629,132	9.74%	2,101	13.16%	798	11.73%	683,957	14.92%	\$4,051,927	23.57%
Renewables-Solar Photovoltaic (PV)	26,084,090	38.31%	5,631	35.26%	2,806	41.23%	0	0.00%	\$882,859	5.14%

^a Measure categories with incentive dollars but no savings include bonuses, rewards, prize money, survey incentives, shipping reimbursement, and other costs that do not directly induce efficiency improvements but that support the installation or completion of energy efficiency measures.

^b Domestic Hot Water-Other in the residential channel includes temperature turndown.

^c HVAC-Heating Equipment in the residential channel includes furnaces.

Table E-6 lists CY 2025 nonresidential savings and incentives by measure category.

Table E-6. CY 2025 Summary of First-Year Annual Savings by Measure Category, Nonresidential Channel

Measure Category	Verified Gross								Incentive	Incentive Dollars
	kWh	kWh (%)	kW	kW (%)	kW Winter	kW Winter %	therms	therms (%)	Dollars \$	(%)
Adjustment Measure ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$42,319	0.12%
Air Compressor	9,008,282	2.60%	1,342	2.79%	2,074	5.38%	0	0.00%	\$351,286	1.03%
Air Treatment	2,284,524	0.66%	291	0.61%	247	0.64%	0	0.00%	\$108,102	0.32%
Biogas	504,087	0.15%	57	0.12%	47	0.12%	0	0.00%	\$57,736	0.17%
Biomass ^a	0	0.00%	0	0.00%	0	0.00%	18,766	0.13%	\$23,695	0.07%
Boiler	919,791	0.27%	94	0.20%	94	0.24%	2,589,254	18.49%	\$4,275,119	12.58%
Building Element	3,362	0.00%	1	0.00%	0	0.00%	9,650	0.07%	\$30,737	0.09%
Burners ^a	0	0.00%	0	0.00%	0	0.00%	448,186	3.20%	\$388,744	1.14%
Cases	1,262,437	0.36%	127	0.26%	59	0.15%	7,840	0.06%	\$226,728	0.67%
Chiller	3,560,944	1.03%	630	1.31%	15	0.04%	0	0.00%	\$401,728	1.18%
Controls	5,499,844	1.59%	763	1.59%	416	1.08%	412,643	2.95%	\$639,506	1.88%
Cooling Equipment	969,959	0.28%	234	0.49%	13	0.03%	31,941	0.23%	\$251,576	0.74%
Data Center/IT	129,743	0.04%	16	0.03%	13	0.03%	0	0.00%	\$3,193	0.01%
Demand-Side	646,293	0.19%	93	0.19%	97	0.25%	0	0.00%	\$20,679	0.06%
Docks & Doors ^a	0	0.00%	0	0.00%	0	0.00%	28,384	0.20%	\$26,974	0.08%
DHW ^a	0	0.00%	0	0.00%	0	0.00%	14,173	0.10%	\$11,250	0.03%
ECM Pumps	210,217	0.06%	4	0.01%	0	0.00%	0	0.00%	\$8,240	0.02%
EDA	20,831,664	6.02%	3,522	7.32%	3,719	9.66%	652,033	4.66%	\$2,390,884	7.04%
EDR	3,564,311	1.03%	650	1.35%	122	0.32%	59,162	0.42%	\$255,229	0.75%
Equipment ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$111,917	0.33%
Fan ^b	12,389,965	3.58%	1,976	4.11%	0	0.00%	0	0.00%	\$510,965	1.50%
Fans ^c	2,193,697	0.63%	494	1.03%	137	0.36%	0	0.00%	\$137,495	0.40%
Grain Dryer	138,412	0.04%	0	0.00%	0	0.00%	231,406	1.65%	\$155,088	0.46%
Greenhouse Controls ^a	0	0.00%	0	0.00%	0	0.00%	5,722	0.04%	\$5,436	0.02%
Heat Exchanger	1,754,832	0.51%	202	0.42%	202	0.52%	0	0.00%	\$148,050	0.44%
Heat Pump	594,166	0.17%	29	0.06%	77	0.20%	22,579	0.16%	\$40,368	0.12%
Heat Recovery	-28,551	-0.01%	170	0.35%	-15	-0.04%	616,202	4.40%	\$539,162	1.59%
Heating Equipment	483,425	0.14%	70	0.15%	72	0.19%	356,027	2.54%	\$351,849	1.04%

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Measure Category	Verified Gross								Incentive	Incentive Dollars
	kWh	kWh (%)	kW	kW (%)	kW Winter	kW Winter %	therms	therms (%)	Dollars \$	(%)
Hydro	3,666,928	1.06%	419	0.87%	419	1.09%	0	0.00%	\$188,125	0.55%
Insulation	88,522	0.03%	141	0.29%	0	0.00%	1,197,754	8.55%	\$876,388	2.58%
Laboratory	16,077	0.00%	62	0.13%	0	0.00%	16,599	0.12%	\$13,800	0.04%
LED Fixtures	84,743,449	24.48%	8,731	18.15%	9,022	23.43%	0	0.00%	\$6,253,387	18.40%
LED Screw-in Lamps	894,066	0.26%	46	0.10%	253	0.66%	0	0.00%	\$29,173	0.09%
LED, Other	9,487,975	2.74%	1,477	3.07%	1,471	3.82%	0	0.00%	\$722,414	2.13%
LED (old)	350	0.00%	0	0.00%	0	0.00%	0	0.00%	\$12	0.00%
Lighting	14,994	0.00%	2	0.00%	2	0.01%	0	0.00%	\$656	0.00%
Lighting Controls	3,562,244	1.03%	545	1.13%	619	1.61%	0	0.00%	\$371,927	1.09%
NC Lighting	6,042,872	1.75%	840	1.75%	618	1.60%	0	0.00%	\$242,849	0.71%
Other ^d	36,580,881	10.57%	4,765	9.91%	3,977	10.33%	2,599,693	18.57%	\$4,320,707	12.72%
Paper	615,956	0.18%	72	0.15%	49	0.13%	0	0.00%	\$41,000	0.12%
Planning ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$929,765	2.74%
Process Cooling	635,501	0.18%	65	0.13%	42	0.11%	0	0.00%	\$38,229	0.11%
Process Heating	306,124	0.09%	106	0.22%	-9	-0.02%	1,358,324	9.70%	\$666,018	1.96%
Pumping/Piping	2,083,356	0.60%	343	0.71%	343	0.89%	0	0.00%	\$138,480	0.41%
Pumps	13,195	0.00%	0	0.00%	3	0.01%	0	0.00%	\$2,980	0.01%
Retro-commissioning	3,288,000	0.95%	149	0.31%	69	0.18%	205,316	1.47%	\$388,417	1.14%
School Challenge ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$18,456	0.05%
Solar PV	31,179,092	9.01%	6,410	13.33%	3,725	9.67%	0	0.00%	\$1,565,855	4.61%
Steam Traps	0	0.00%	0	0.00%	0	0.00%	477,373	3.41%	\$84,115	0.25%
Strategic Energy Management (SEM)	2,282,236	0.66%	-44	-0.09%	-72	-0.19%	595,688	4.25%	\$167,263	0.49%
Survey/Study ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$251,908	0.74%
Thermal Curtains ^a	0	0.00%	0	0.00%	0	0.00%	71,899	0.51%	\$68,304	0.20%
TLED	12,000,657	3.47%	2,207	4.59%	2,260	5.87%	0	0.00%	\$606,689	1.79%
Trade Ally ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$1,511,114	4.45%
Tune-up/Repair	15,129,864	4.37%	1,746	3.63%	1,674	4.35%	946,984	6.76%	\$257,947	0.76%
Unspecified	2	0.00%	0	0.00%	0	0.00%	4	0.00%	\$625	0.00%
Utility Bill Verified Savings	633,885	0.18%	0	0.00%	0	0.00%	24,100	0.17%	\$37,404	0.11%

Measure Category	Verified Gross								Incentive	Incentive Dollars
	kWh	kWh (%)	kW	kW (%)	kW Winter	kW Winter %	therms	therms (%)	Dollars \$	(%)
Vacuum Pump	177,095	0.05%	30	0.06%	8	0.02%	0	0.00%	\$3,925	0.01%
Variable Speed Drive (VSD)	57,523,625	16.62%	8,212	17.07%	5,553	14.42%	0	0.00%	\$1,695,364	4.99%
Ventilation	341,550	0.10%	55	0.11%	0	0.00%	46,260	0.33%	\$48,000	0.14%
Ventilation Equipment	487,973	0.14%	122	0.25%	128	0.33%	428,520	3.06%	\$322,545	0.95%
Waste Water Treatment Plant (WWTP)	6,703,575	1.94%	821	1.71%	821	2.13%	529,013	3.78%	\$546,841	1.61%
Water Heater	16,644	0.00%	8	0.02%	0	0.00%	235	0.00%	\$24,203	0.07%
Waterer	687,952	0.20%	0	0.00%	148	0.38%	0	0.00%	\$29,660	0.09%

^a Measure categories with incentive dollars but no savings include bonuses, rewards, prize money, survey incentives, and other costs that do not directly induce efficiency improvements but that support the installation or completion of energy efficiency measures.

^b Fan in the nonresidential channel encompasses agricultural ventilation fan measures.

^c Fans in the nonresidential channel encompasses HVAC and refrigeration fan measures.

^d Other in the nonresidential channel encompasses a wide variety of measures, such as unspecified process improvements, unspecified HVAC improvements, unspecified refrigeration improvements, and industrial oven/furnace.

Table E-7 lists CY 2025 midstream savings and incentives by measure category.

Table E-7. CY 2025 Summary of First-Year Annual Savings by Measure Category, Midstream Channel

Measure Category	Verified Gross								Incentive Dollars \$	Incentive Dollars %
	kWh	kWh % ^a	kW Summer	kW Summer %	kW Winter	kW Winter %	therms	therms %		
Adjustment Measure ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$550	0.01%
Boiler ^a	0	0.00%	0	0.00%	0	0.00%	42,552	1.13%	\$17,150	0.26%
Boilers & Burners-Boiler ^a	0	0.00%	0	0.00%	0	0.00%	155,329	4.14%	\$260,100	4.00%
Controls	4,650	-0.19%	0	0.00%	0	0.00%	1,130	0.03%	\$600	0.01%
Cooking	224,127	-8.99%	25	1.33%	27	-1.33%	367,608	9.81%	\$765,670	11.77%
Dishwashing	1,714,263	-68.79%	128	6.84%	138	-6.88%	6,085	0.16%	\$34,750	0.53%
DHW-Water Heater	1,238,557	-49.70%	198	10.58%	320	-15.87%	76,961	2.05%	\$481,331	7.40%
Heat Pump	22,143	-0.89%	32	1.70%	-1	0.07%	29,494	0.79%	\$52,000	0.80%
Heating Equipment	10,978	-0.44%	0	0.00%	4	-0.20%	46,820	1.25%	\$17,875	0.27%
HVAC-Controls	1,660,972	-66.65%	448	23.98%	2	-0.10%	109,568	2.92%	\$206,760	3.18%
HVAC-Heat Pump	-10,345,230	415.14%	982	52.58%	-3,431	170.40%	1,670,139	44.55%	\$1,971,725	30.30%
HVAC-Heating Equipment	2,534,085	-101.69%	0	0.00%	874	-43.39%	1,172,072	31.26%	\$2,286,150	35.13%
Miscellaneous-Adjustment Measure ^a	0	0.00%	0	0.00%	0	0.00%	0	0.00%	\$7,375	0.11%
Refrigeration	189,145	-7.59%	22	1.16%	22	-1.07%	0	0.00%	\$100,100	1.54%
Ventilation	233,090	-9.35%	20	1.08%	19	-0.92%	33,990	0.91%	\$57,500	0.88%
Water Heater	21,210	-0.85%	14	0.75%	14	-0.70%	37,390	1.00%	\$248,305	3.82%

^a Measure-level kWh percentages are not included in this table because the substantial negative kWh impacts from heat pumps offset positive impacts from other measures. This resulted in relatively modest kWh savings at the channel level. As such, comparing large measure-level kWh savings or impacts to small channel-level savings can produce misleading or illogical measure-level percentages of savings.

Table E-8 lists CY 2025 residential lifecycle savings by measure category.

Table E-8. CY 2025 Summary of Lifecycle Savings by Measure Category, Residential Channel

Measure Category	Verified Gross			
	kWh	kWh %	therms	therms %
Appliance Plug Loads-APS	294,024	0.02%	0	0.00%
Appliance Plug Loads-Room Air Cleaner	655,713	0.04%	0	0.00%
Boilers & Burners-Boiler	0	0.00%	1,513,615	2.03%
Boilers & Burners-Burners	0	0.00%	4,876	0.01%
Boilers & Burners-Controls	0	0.00%	8,580	0.01%
Boilers & Burners-Insulation	0	0.00%	133,285	0.18%
Boilers & Burners-Steam Traps	0	0.00%	13,560	0.02%
Boilers & Burners-Tune-up/Repair	0	0.00%	592	0.00%
Bonus-Equipment	0	0.00%	0	0.00%
Bonus-Other	0	0.00%	0	0.00%
Bonus-Survey/Study	0	0.00%	0	0.00%
Building Shell-Air Sealing	699,732	0.05%	990,676	1.33%
Building Shell-Insulation	59,887,960	4.00%	10,394,522	13.93%
DHW-ECM Pumps	381,390	0.03%	0	0.00%
DHW-Low-Flow Devices	2,232,460	0.15%	383,571	0.51%
DHW-Other ^a	195	0.00%	604	0.00%
DHW-Pipe Insulation	2,212,960	0.15%	253,352	0.34%
HVAC-Controls	76,973,067	5.14%	4,834,944	6.48%
HVAC-Distribution Improvements	320	0.00%	640	0.00%
HVAC-Fans	7,470	0.00%	0	0.00%
HVAC-Heat Pump	7,403,605	0.49%	243,639	0.33%
HVAC-Heating Equipment	24,150	0.00%	17,595	0.02%
HVAC-Pumps	149,841	0.01%	0	0.00%
HVAC-Tune-up/Repair	16,044	0.00%	17,626	0.02%
Lighting-LED Fixtures	10,011,950	0.67%	0	0.00%
Lighting-LED Screw-in Lamps	44,499	0.00%	0	0.00%
Lighting-LED, Other	15,660	0.00%	0	0.00%
Lighting-Lighting Controls	3,661	0.00%	0	0.00%
Lighting-TLED	1,182,967	0.08%	0	0.00%
Miscellaneous-Adjustment Measure	0	0.00%	0	0.00%
Miscellaneous-Other	0	0.00%	0	0.00%
Miscellaneous-Packs Kits	60,976,698	4.07%	24,215,097	32.45%
New Construction-EDA	309,235,620	20.63%	9,539,040	12.78%
New Construction-EDR	37,263,700	2.49%	1,536,320	2.06%
New Construction-Residential New Construction	198,873,977	13.27%	20,518,706	27.50%
Renewables-PV	730,354,527	48.73%	0	0.00%

^a DHW-Other in the residential channel includes temperature turndown.

Table E-9 lists CY 2025 nonresidential lifecycle savings by measure category.

Table E-9. CY 2025 Summary of Lifecycle Savings by Measure Category, Nonresidential Channel

Measure Category	Verified Gross			
	kWh	kWh %	therms	therms %
Adjustment Measure	0	0.00%	0	0.00%
Air Compressor	117,237,576	2.10%	0	0.00%
Air Treatment	33,400,981	0.60%	0	0.00%
Biogas	10,081,740	0.18%	0	0.00%
Biomass	0	0.00%	375,329	0.17%
Boiler	22,994,780	0.41%	64,491,152	29.03%
Building Element	67,240	0.00%	193,000	0.09%
Burners	0	0.00%	7,435,361	3.35%
Cases	13,976,068	0.25%	117,600	0.05%
Chiller	73,728,099	1.32%	0	0.00%
Controls	54,790,563	0.98%	5,373,516	2.42%
Cooling Equipment	16,233,470	0.29%	574,938	0.26%
Data Center/IT	1,297,430	0.02%	0	0.00%
Demand-Side	9,694,395	0.17%	0	0.00%
Docks & Doors	0	0.00%	391,127	0.18%
DHW	0	0.00%	212,595	0.10%
ECM Pumps	3,153,367	0.06%	0	0.00%
EDA	416,633,280	7.47%	13,041,711	5.87%
EDR	71,286,220	1.28%	1,183,248	0.53%
Equipment	0	0.00%	0	0.00%
Fan	185,850,130	3.33%	0	0.00%
Fans	37,593,977	0.67%	0	0.00%
Grain Dryer	2,768,240	0.05%	4,628,120	2.08%
Greenhouse Controls	0	0.00%	57,220	0.03%
Heat Exchanger	26,322,480	0.47%	0	0.00%
Heat Pump	3,666,171	0.07%	406,429	0.18%
Heat Recovery	-428,265	-0.01%	8,872,850	3.99%
Heating Equipment	8,702,966	0.16%	6,375,494	2.87%
Hydro	110,007,800	1.97%	0	0.00%
Insulation	2,578,554	0.05%	21,025,856	9.47%
Laboratory	241,155	0.00%	248,990	0.11%
LED Fixtures	1,367,531,128	24.51%	0	0.00%
LED Screw-in Lamps	12,306,390	0.22%	0	0.00%
LED, Other	124,832,895	2.24%	0	0.00%
LED (old)	3,499	0.00%	0	0.00%
Lighting	150,008	0.00%	0	0.00%
Lighting Controls	34,792,996	0.62%	0	0.00%
NC Lighting	90,524,570	1.62%	0	0.00%
Other ^a	535,160,339	9.59%	39,041,293	17.58%
Paper	9,239,340	0.17%	0	0.00%

CADMUS

Measure Category	Verified Gross			
	kWh	kWh %	therms	therms %
Planning	0	0.00%	0	0.00%
Process Cooling	12,710,020	0.23%	0	0.00%
Process Heating	8,294,140	0.15%	18,968,395	8.54%
Pumping/Piping	31,249,980	0.56%	0	0.00%
Pumps	197,920	0.00%	0	0.00%
Retro-commissioning	19,728,006	0.35%	1,231,896	0.55%
School Challenge	0	0.00%	0	0.00%
Solar PV	873,014,567	15.65%	0	0.00%
Steam Traps	0	0.00%	2,865,860	1.29%
SEM	7,602,481	0.14%	5,090,731	2.29%
Survey/Study	0	0.00%	0	0.00%
Thermal Curtains	0	0.00%	608,330	0.27%
TLED	180,637,557	3.24%	0	0.00%
Trade Ally	0	0.00%	0	0.00%
Tune-up/Repair	29,648,558	0.53%	946,984	0.43%
Unspecified	64	0.00%	128	0.00%
Utility Bill Verified Savings	2,535,538	0.05%	96,401	0.04%
Vacuum Pump	2,656,425	0.05%	0	0.00%
VSD	863,134,330	15.47%	0	0.00%
Ventilation	3,415,500	0.06%	462,600	0.21%
Ventilation Equipment	7,319,595	0.13%	7,232,658	3.26%
WWTP	134,071,500	2.40%	10,580,260	4.76%
Water Heater	202,232	0.00%	3,871	0.00%
Waterer	6,879,520	0.12%	0	0.00%

^aOther in the nonresidential channel encompasses a wide variety of measures, such as unspecified process improvements, unspecified HVAC improvements, unspecified refrigeration improvements, and industrial oven/furnace.

Table E-10 lists CY 2025 midstream lifecycle savings by measure category.

Table E-10. CY 2025 Summary of Lifecycle Savings by Measure Category, Midstream Channel

Measure Category	Verified Gross			
	kWh	kWh %	therms	therms %
Adjustment Measure	0	0.00%	0	0.00%
Boiler	0	0.00%	1,061,688	1.49%
Boilers & Burners-Boiler	0	0.00%	4,023,290	5.66%
Controls	41,850	-0.06%	10,170	0.01%
Cooking	2,689,456	-3.80%	4,411,320	6.21%
Dishwashing	17,142,630	-24.19%	60,850	0.09%
DHW-Water Heater	17,025,558	-24.03%	1,053,415	1.48%
Heat Pump	398,574	-0.56%	530,892	0.75%
Heating Equipment	224,842	-0.32%	978,724	1.38%
HVAC-Controls	14,948,748	-21.10%	986,112	1.39%
HVAC-Heat Pump	-186,214,140	262.79%	30,062,502	42.29%
HVAC-Heating Equipment	58,283,955	-82.25%	26,957,656	37.93%
Miscellaneous-Adjustment Measure	0	0.00%	0	0.00%
Refrigeration	2,014,098	-2.84%	0	0.00%
Ventilation	2,330,472	-3.29%	340,221	0.48%
Water Heater	254,520	-0.36%	602,598	0.85%

Appendix F. Measure Analysis

This appendix describes the impact evaluation results for sampled residential and nonresidential projects in the CY 2025 evaluation. The evaluation team performed desk reviews and virtual verification reviews of a sample of measures in the Multifamily Program and in each nonresidential program. The team census-sampled measures are projected to represent 5% or more of the offering savings, and the randomly sampled measures have less than 5%. However, note that several census-sampled measures included in this appendix represent between 2.8% to 5.0% of the offering savings (less than the 5% census sampling criteria set). The team selected these measures in the first wave of sampling, conducted in mid-2025, after linearly projecting year-end offering savings for the remaining months of 2025. Under the projection parameters, these measures fell within the range of census-sampling criteria. Actual year-end offering savings were higher in offerings where these measures were present, resulting in census-sampled measures that represent slightly less than 5% of the year-end offering savings. The team calculated measure-level realization rates based on the analysis of these sampled measures, which informed the offering- and program-level realization rates for CY 2025. A more detailed description of the sampled measures within each program follows.

F.1. Multifamily

The impact evaluation sample for the Multifamily Program included 50 projects; all 50 achieved 100% energy (MMBtu) realization rates. One EDA measure showed insignificant differences between the NEO model savings reported and the SIM files, which resulted in a lifecycle MMBtu realization rate that rounded to 100.0%; as such, we did not include them in Table F-1. One randomly sampled custom Express EDA (eEDA) new construction measure had a peak summer kW demand realization rate that deviated from 100%. Table F-1 provides specific details related to the measure with discrepancies.

Table F-1. CY 2025 Multifamily Program Sample Detailed Projects

MMID	Project Measure	Summer Demand Reduction (kW)		Real. Rate	Share of Offering	Notes
		<i>Ex Ante</i>	<i>Ex Post</i>			
10083	Express EDA	5.85	6.15	105.2%	<1%	The <i>ex ante</i> peak kW summer demand savings calculation file included errors that, once corrected, increased the peak kW summer demand savings realization rate from the <i>ex ante</i> value reported. Final <i>ex post</i> savings reflect the net energy optimizer (NEO) model. Electric energy and therm savings were unaffected, and the lifecycle MMBtu realization rate remains at 100%.

F.2. Agribusiness Program

In the impact evaluation sample for the Agribusiness Program, 36 of 43 sampled measures achieved 100% energy realization rates. The seven remaining measures deviated only slightly (100.3%) due to technical reference manual (TRM) discrepancies with one MMID. The evaluation team randomly sampled the seven measures that deviated from prescriptive measures and, for each, rounded the lifecycle MMBtu realization rate to 100%. Table F-2 provides specific details related to the measures with discrepancies.

Table F-2. CY 2025 Agribusiness Program Sample Detailed Projects

MMID	Project Measure	Lifecycle Savings (MMBtu)		Real. Rate	Share of Offering	Notes
		Ex Ante	Ex Post			
4403	Refrigeration System Tune-up	5.66	5.68	100.3%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 4403 with deemed savings values. <i>Ex ante</i> savings differ from current TRM-deemed values. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings.
4403	Refrigeration System Tune-up	4.79	4.80	100.2%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 4403 with deemed savings values. <i>Ex ante</i> savings differ from current TRM-deemed values. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings.
4403	Refrigeration System Tune-up	27.95	28.0	100.1%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 4403 with deemed savings values. <i>Ex ante</i> savings differ from current TRM-deemed values. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings.
4403	Refrigeration System Tune-up	8.73	8.74	100.1%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 4403 with deemed savings values. <i>Ex ante</i> savings differ from current TRM-deemed values. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings.
4403	Refrigeration System Tune-up	0.72	0.73	100.1%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 4403 with deemed savings values. <i>Ex ante</i> savings differ from current TRM-deemed values. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings.
4403	Refrigeration System Tune-up	18.34	18.37	100.1%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 4403 with deemed savings values. <i>Ex ante</i> savings differ from current TRM-deemed values. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings.

MMID	Project Measure	Lifecycle Savings (MMBtu)		Real. Rate	Share of Offering	Notes
		Ex Ante	Ex Post			
4403	Refrigeration System Tune-up	5.66	5.68	100.3%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 4403 with deemed savings values. <i>Ex ante</i> savings differ from current TRM-deemed values. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings. Additionally, <i>ex ante</i> calculation appears to have used the number of cows at the facility as the algorithm quantity rather than the number of compressors specified for the MMID.

F.3. Business and Industry Program

In the impact evaluation sample for the Business and Industry Program, 58 of 62 measures achieved 100% energy realization rates and kW demand realization rates. Four measures showed insignificant differences between the NEO model savings reported and the system information modeling (SIM) files, which resulted in lifecycle MMBtu realization rates that rounded to 100.0%; as such, we did not include them in Table F-3. Three custom new construction measures had a summer kW realization rate that deviated from 100%. The team selected two of the EDA/EDR measures using a census approach and the other measure using random sampling. One randomly selected custom measure had an energy realization rate that deviated from 100%. Table F-3 provides specific details related to the measures with discrepancies.

Table F-3. CY 2025 Business and Industry Program Sample Detailed Projects

MMID	Measure	Lifecycle Savings (MMBtu)		Real. Rate	Share of Offering	Notes
		Ex Ante	Ex Post			
2464	Mechanical Sub Cooling	139.3	139.1	99.8%	<1%	The specification literature for the installed equipment listed slightly different input variables than those used in the <i>ex ante</i> savings calculations. <i>Ex post</i> adjusted the variables to align with the specification sheet, which resulted in slightly reduced energy savings.
MMID	Measure	Summer Demand Reduction (kW)		Real. Rate	Share of Offering	Notes
		Ex Ante	Ex Post			
5119	EDA Project Savings and Verification	128.3	130.7	101.9%	3.3%	The <i>ex ante</i> summer kW savings calculation file included errors that, once corrected, resulted in an <i>ex post</i> summer kW that is lower than the <i>ex ante</i> value reported. Final <i>ex post</i> savings reflect the NEO model. Electric energy and therm savings were not affected by this change, and the lifecycle MMBtu realization rate remains at 100%.
5119	EDA Project Savings and Verification	114.4	115.2	100.8%	5.5%	The <i>ex ante</i> summer kW savings calculation file included errors that, once corrected, resulted in an <i>ex post</i> summer kW that is higher than the <i>ex ante</i> value reported. Final <i>ex post</i> savings reflect the NEO model. Electric energy and therm savings were not affected by this change, and the lifecycle MMBtu realization rate remains at 100%.
10083	Express EDA Project Savings and Verification	40.7	42.3	103.8%	1.3%	The <i>ex ante</i> summer kW savings calculation file included errors that, once corrected, resulted in an <i>ex post</i> summer kW that is higher than the <i>ex ante</i> value reported. Final <i>ex post</i> savings reflect the NEO model. Electric energy and therm savings were not affected by this change, and the lifecycle MMBtu realization rate remains at 100%.

F.4. Large Industrial Program

In the impact evaluation sample for the Large Industrial Program, 54 of 58 measures achieved 100% energy realization rates and kW demand realization rates. One new construction measure had insignificant differences between the NEO model savings reported and the SIM files, which resulted in a lifecycle MMBtu realization rate that rounded to 100.0%; as such, the evaluation team did not include it in Table F-4. Of the four measures with realization rates that deviated from 100%, one census-sampled EDA measure deviated only in summer kW peak demand, and the remaining three custom measures deviated in energy savings. Table F-4 provides specific details related to the measures with discrepancies.

Table F-4. CY 2025 Large Industrial Program Sample Detailed Projects

MMID	Measure	Lifecycle Savings (MMBtu)		Real. Rate	Share of Offering	Notes
		<i>Ex Ante</i>	<i>Ex Post</i>			
2464	Mechanical Sub Cooling	190,951	187,317	98.1%	1.2%	The <i>ex ante</i> savings calculation included slight errors in river temperature and run hours metrics, deviating from the dataset provided. <i>Ex post</i> savings calculation aligned both metrics with the provided dataset, resulting in slightly decreased savings.
2520	Refrigeration Custom	19,594	21,391	109.2%	<1%	The <i>ex ante</i> savings calculations incorrectly calculated the installed equipment horsepower from a provided psychrometric chart. <i>Ex post</i> calculations produced a slightly higher horsepower using the psychrometric chart, resulting in increased energy savings for the measure.
2499	Process Custom	793,673	785,595	99.0%	5.5%	The <i>ex ante</i> savings calculation included slight errors in the tank temperature enthalpy metric, deviating from the dataset provided. <i>Ex post</i> savings calculation aligned this metric with the provided dataset, resulting in slightly decreased savings.
MMID	Measure	Summer Demand Reduction (kW)		Real. Rate	Share of Offering	Notes
		<i>Ex Ante</i>	<i>Ex Post</i>			
10083	Express EDA Project Savings and Verification	101	99	97.9%	13.0%	The <i>ex ante</i> summer kW savings calculation file included errors that, once corrected, resulted in a lower <i>ex post</i> summer kW than the <i>ex ante</i> value reported. Final <i>ex post</i> savings reflect the NEO model. Electric energy and therm savings were not affected by this change, and the lifecycle MMBtu realization rate remains at 100%.

F.5. Schools and Government Program

In the impact evaluation sample for the Schools and Government Program, 85 of 88 measures achieved a 100% energy realization rate. One new construction measure had insignificant differences between the NEO model savings reported and the SIM files, which resulted in a lifecycle MMBtu realization rate that rounded to 100%; as such, the evaluation team did not include it in Table F-5. Of the three measures where the realization rate deviated from 100%, two were prescriptive, and one was hybrid. The team census-sampled one of the prescriptive measures and randomly sampled the other two. Table F-5 provides specific details related to measures with discrepancies.

Table F-5. CY 2024 Schools and Government Program Sample Detailed Projects

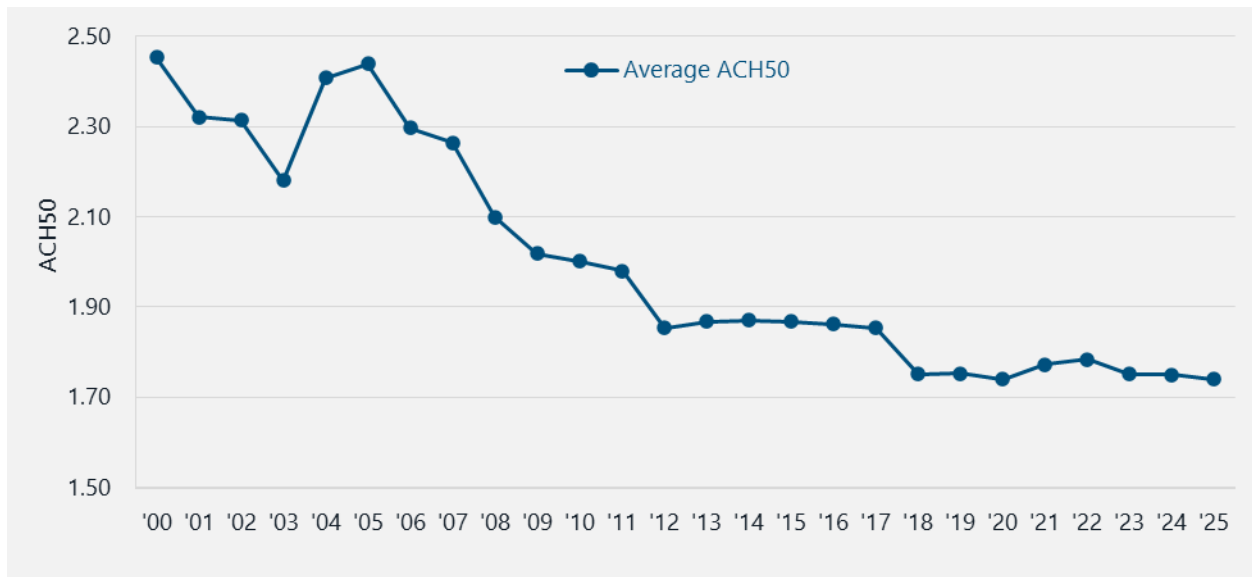
MMID	Project Measure	Lifecycle Savings (MMBtu)		Real. Rate	Share of Offering	Notes
		<i>Ex Ante</i>	<i>Ex Post</i>			
3909	A/C Split System Condensing Unit	141	169	120.0%	<1%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 3909 with deemed savings values. <i>Ex ante</i> savings used an EUL that differs from current TRM-deemed values. <i>Ex post</i> results in the same first-year kWh savings, but higher lifecycle kWh savings given a longer EUL.
3502	Variable Speed ECM Pump	158	159	100.7%	<1%	<i>Ex post</i> savings were derived from the Focus on Energy 2025 TRM, MMID 5019, using deemed savings values for variable-speed ECM pumps. <i>Ex ante</i> savings used values that differ from current TRM-deemed values for this measure category. <i>Ex post</i> results in slightly higher first-year and lifecycle kWh savings.
3276	Boiler Hot Water Condensing	156,320	172,500	110.4%	2.8%	<i>Ex post</i> savings were derived from Focus on Energy 2025 TRM MMID 10222 with deemed savings values for hot water condensing boilers. <i>Ex ante</i> savings used values that differ from current TRM-deemed values for this measure category. <i>Ex post</i> results in higher first-year and lifecycle therm savings.

Appendix G. Residential New Construction Building Practices

As part of the CY 2025 Residential New Construction Program evaluation, the evaluation team collected and tracked data on building practices in CY 2025 program homes. The following sections describe findings from this analysis, alongside similar historical analyses.

Air tightness in program homes remained relatively constant in CY 2025 compared to prior program years. The overall airtightness, measured in ACH50, has remained consistent since CY 2018 but has shown significant improvement since CY 2005 (Figure G-1).

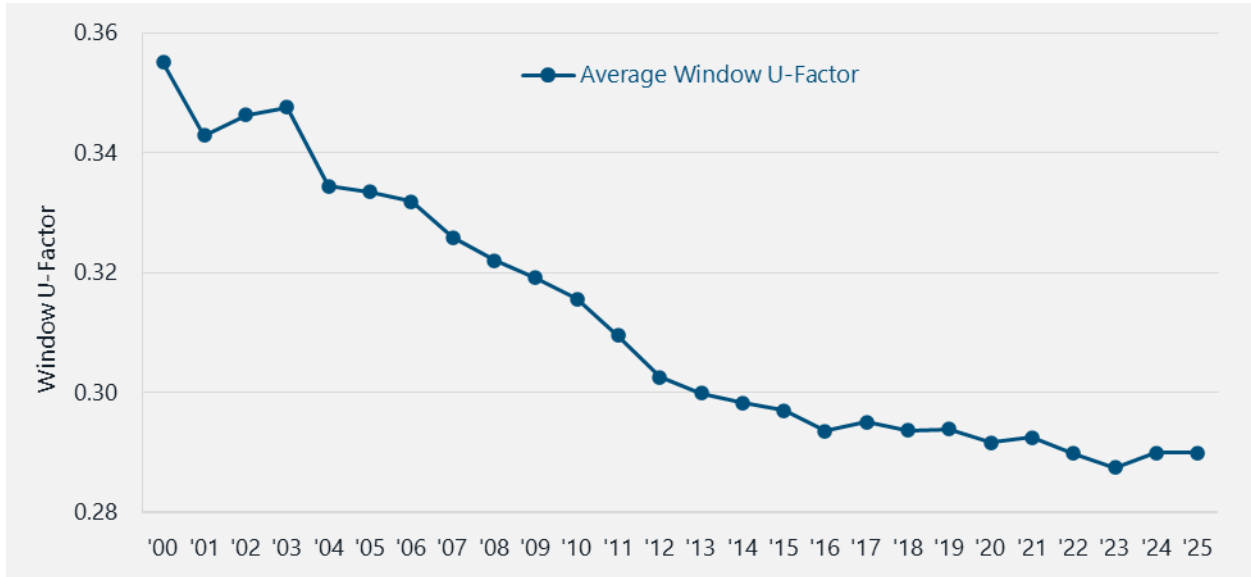
Figure G-1. Residential New Construction Program Average Home Airtightness (CY 2000-CY 2025)



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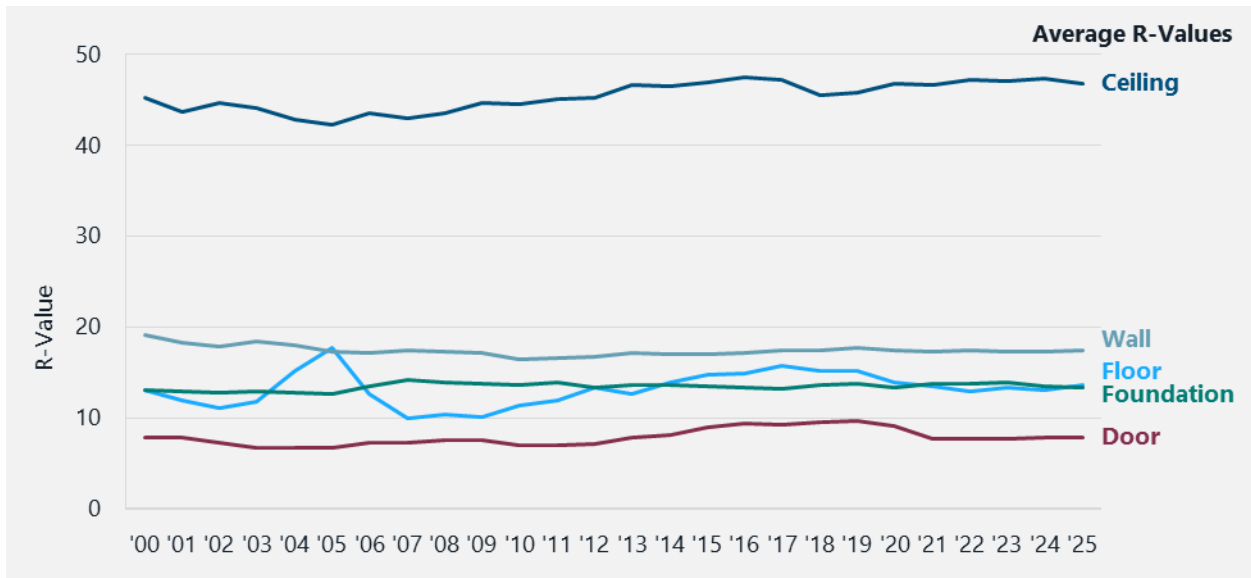
Window efficiency in participating homes has steadily improved since CY 2000, as evidenced by decreases in the average window U-Factor (Figure G-2). However, the efficiency of windows has remained relatively consistent since CY 2016.

**Figure G-2. Residential New Construction Program
Average Window U-Factor (CY 2000-CY 2025)**



Similar to other characteristics of participating homes, measures of home insulation levels have remained stable since CY 2021 (Figure G-3).

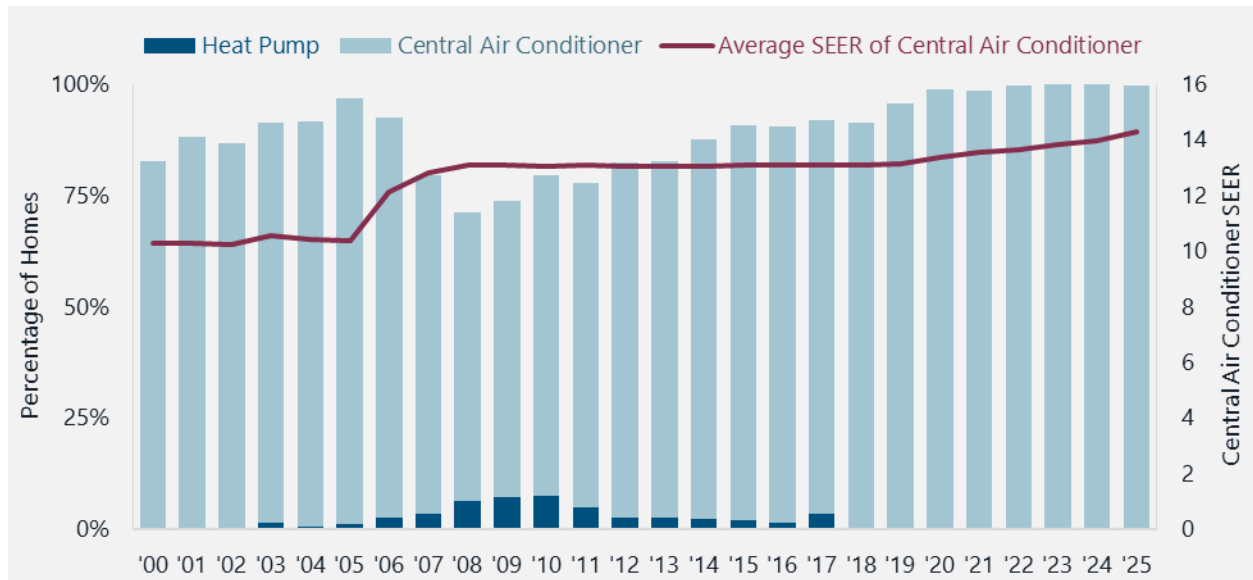
**Figure G-3. Residential New Construction Program
Average Home Insulation Levels (CY 2000-CY 2025)**



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In CY 2025, homes participating in the Residential New Construction Program continued to experience a slight decline in central air conditioner installations, from a high of 99.9% in CY 2023 to 99.2% in CY 2025. This decrease was driven by a modest increase in air-source heat pump (ASHP) adoption, which rose from 0.1% to 0.4% over the same period. (Figure G-4). The figure also shows that since CY 2020, the average efficiency of central air conditioners in participating homes has continued to increase, exceeding the federal minimum Seasonal Energy Efficiency Rating (SEER) 13.⁹

**Figure G-4. Residential New Construction Program
Average Home Cooling Systems Central Air Conditioner SEER Level (CY 2000-CY 2025)**

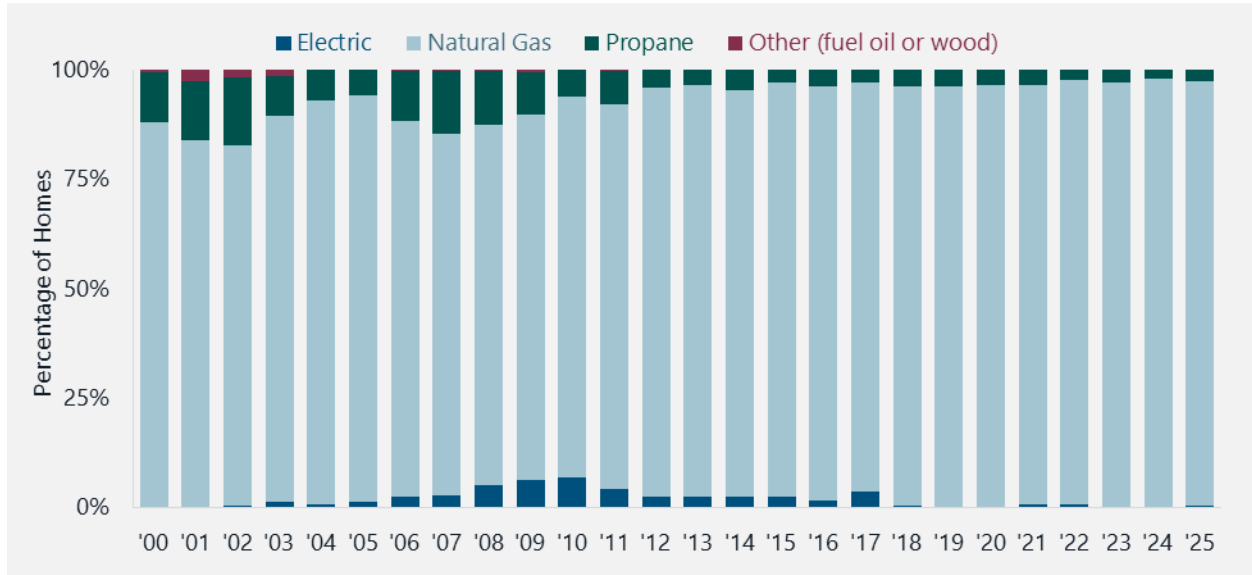


⁹ Two dual-fuel heat pumps and one ASHP extracted from REM/Rate data were rated SEER2.

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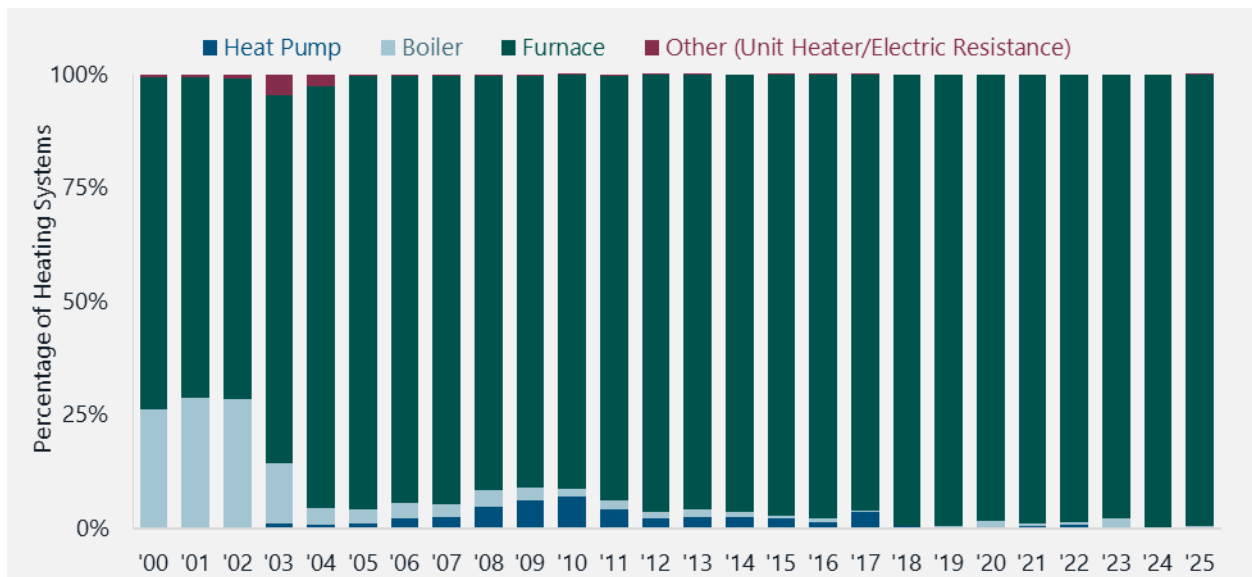
In CY 2025, the primary heating source for most participating homes was natural gas (Figure G-5). Only 3% of these homes were heated with propane, with less than 1% using electricity for heating.

**Figure G-5. Residential New Construction Program
Home Heating Fuel Type (CY 2000-CY 2025)**



In CY 2025, similar to previous years, the primary heating equipment type for participating homes was a furnace (Figure G-6). Less than 1% of the participating homes relied on a boiler or heat pump as their primary heating equipment.

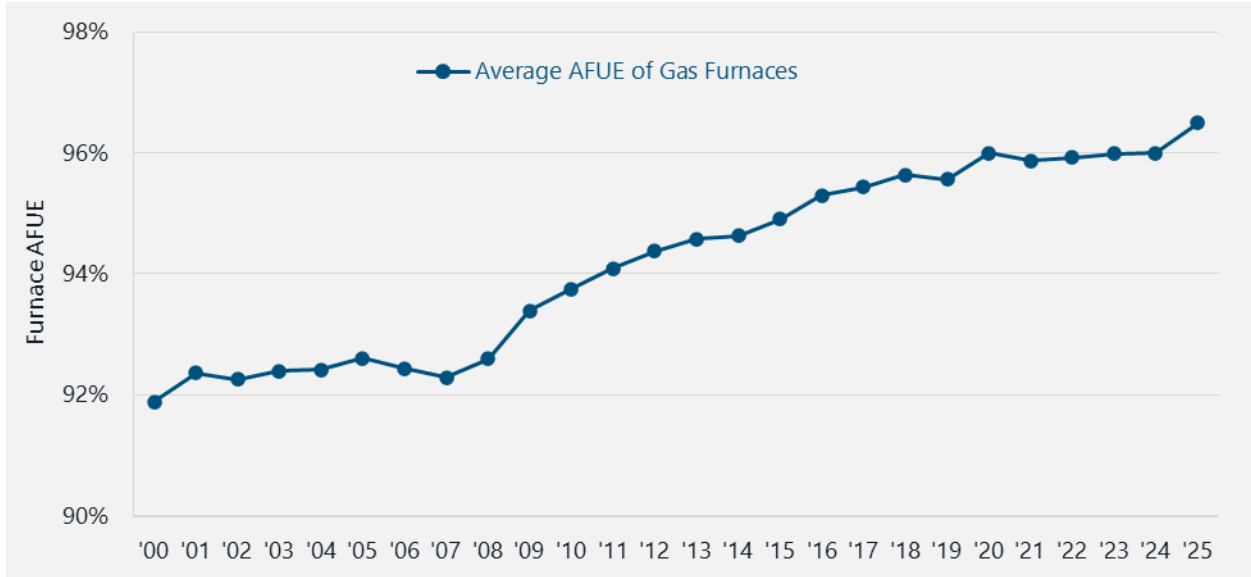
**Figure G-6. Residential New Construction Program
Space Heating System in Participating Homes (CY 2000-CY 2025)**



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Participating homes are primarily heated by natural gas-powered furnaces. Annual Fuel Utilization Efficiency (AFUE) increased to 97% in CY 2025 after remaining at 96% from CY 2018 through CY 2024, despite the introduction of a bonus incentive for highly efficient furnaces in CY 2021. Furnace efficiency has shown a continuous improvement trend since CY 2007 (Figure G-7).

**Figure G-7. Residential New Construction Program
Average Homes Furnace AFUE (CY 2000-CY 2025)**

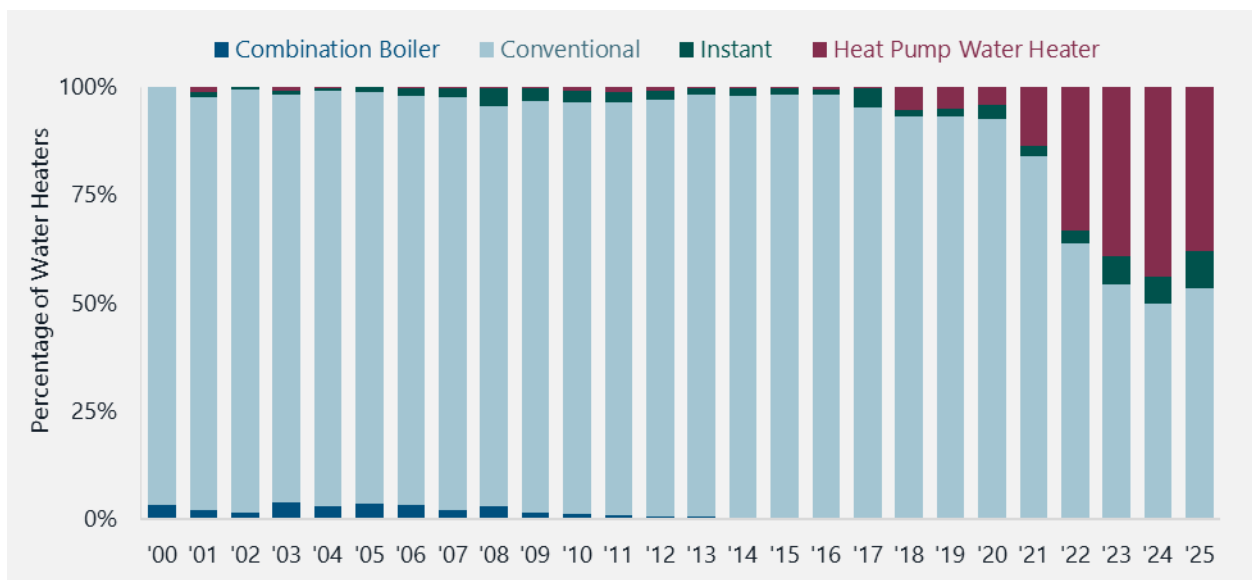


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The prevalence of heat pump water heaters in participating homes has increased sharply since CY 2021, rising from 13% in CY 2021 to 38% in CY 2025 (Figure G-8). This increase corresponds with the introduction of Focus on Energy's bonus incentive for this measure in CY 2021 and CY 2022. Additionally, the most common builder training (for all-electric and zero-energy-ready homes) has emphasized heat pump water heaters, and the implementer reported that it motivated one of the largest builders to use them as the standard water heater in all new homes.

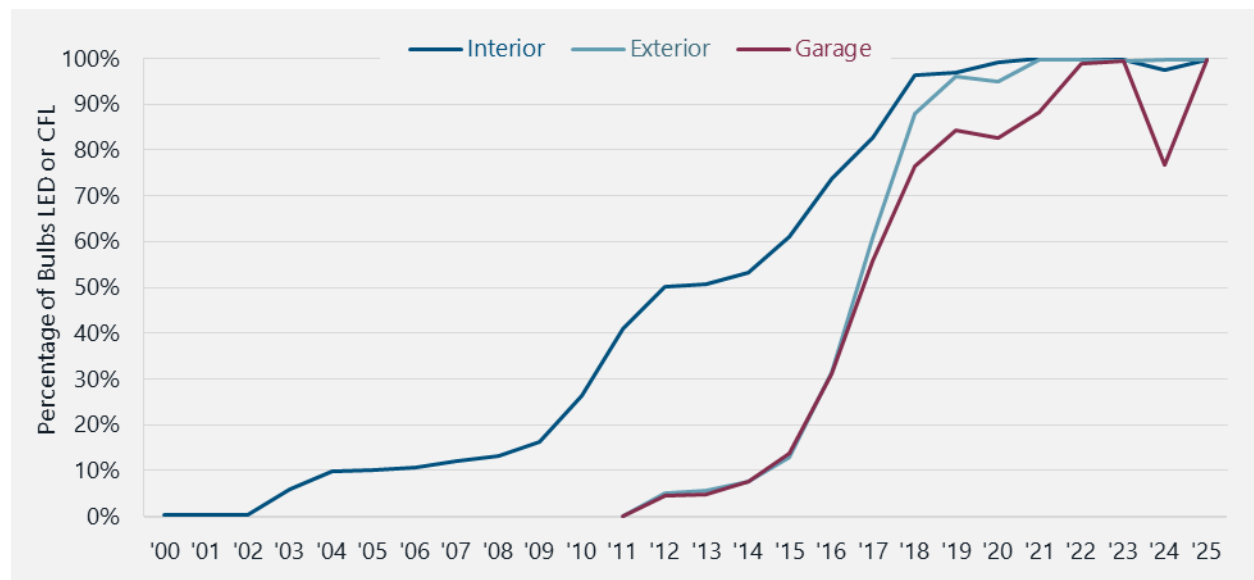
Despite the growing use of heat pump water heaters, the majority of participating homes continue to rely on conventional tank water heating systems, with a small percentage also using instant (i.e., tankless) water heaters. Notably, the proportion of homes using tankless water heaters increased from 2% in CY 2021 to 9% in CY 2025.

Figure G-8. Residential New Construction Program Homes' Water Heating System (CY 2000-CY 2025)



In CY 2025, nearly all participating homes were equipped with efficient LED or compact fluorescent light bulbs in both their interior and exterior lighting fixtures. These increased adoption rates align with the U.S. Department of Energy’s rule that all general service lamps manufactured or sold in the United States must meet a 45-lumen-per-watt threshold by June 30, 2023. The use of efficient bulbs in garage light fixtures declined significantly, dropping to 77% in CY 2024 as homes instead opted for CFL lighting; however, this metric rebounded to over 99% in CY 2025. Figure G-9 illustrates that the adoption of efficient lighting technology has steadily increased in participating homes since CY 2002.

**Figure G-9. Residential New Construction Program
Homes’ Lighting Types (CY 2000-CY 2025)**



For the CY 2025 evaluation, the team also extracted details about participating homes’ mechanical ventilation systems. According to REM/Rate data, all homes still use mechanical ventilation systems, which can increase the electric load, even though the program no longer requires these systems for participation. Thirteen percent of homes use balanced mechanical ventilation systems with air intake and exhaust, and 87% use exhaust-only systems. The average outdoor air fan operating time is 12 hours per day for balanced systems, while exhaust-only systems operate eight hours per day. The REM/Rate data does not include details on where a system is installed (such as part of a bathroom ventilation system) or whether the systems are heat recovery systems, which can improve the efficiency of a home.

Appendix H. Net Savings Analysis

For the CY 2025 evaluation of Focus on Energy’s offerings, the evaluation team applied net-to-gross (NTG) adjustments drawn from CY 2025 and historical primary research. This appendix describes which research findings the team applied to each offering.

H.1. Net Savings Overview

As described in Volume II, the evaluation of a program and its offerings involved reviewing the reported gross savings to ensure that all measures installed remained in place and were working as intended. The evaluation team then applied any adjustments found during that review and calculated verified gross savings.

Net savings are savings that would not have occurred in the absence of a given offering. These are the final savings attributed to an offering, as determined by an independent evaluator. To determine these savings, the evaluator deducts reported savings that are associated with freeriders (participants who would have undertaken the same action and achieved the same savings in the absence of an offering) and adds spillover savings (savings that are the result of an offering’s influence, but for which no incentive was paid and for which no offering has recorded savings).

Net savings represent the total savings achieved by investing ratepayer dollars into the offering. These net savings are the primary benefits factored into the benefit/cost analysis used to help design offerings and ensure they operate in a manner that returns a net positive benefit to ratepayers. Focus on Energy also uses net savings to track progress toward the savings targets established by the PSC.

For CY 2025, the evaluation team calculated net savings by applying NTG ratios estimated from CY 2025 primary research, historical NTG ratios from primary research, or assuming an NTG of 100%. Different offerings relied on NTG results from different evaluation years because primary NTG research was not conducted for each offering every evaluation year. In some cases, the team combined studies to determine the savings-weighted average NTG ratios for each offering. Table H-1 shows the evaluation methods the team used to determine net savings for each offering for the CY 2025 evaluation.

Table H-1. CY 2025 Net Savings Methodology by Offering

CY 2025 Offerings	Net Savings Methodologies
Residential	
Online Marketplace	CY 2024 self-report
Packs	CY 2024 self-report for Focus on Comfort, Focus on Showers, Focus on Baths packs CY 2020 self-report for all other measures
Direct Install Pilot (Income-Qualified)	Assumed 100% NTG
Heating and Cooling (Standard)	CY 2023 self-report
Retail Smart Thermostat	CY 2025 self-report
Insulation and Air Sealing (Standard)	CY 2024 billing analysis
Insulation and Air Sealing (Income-Qualified)	CY 2024 billing analysis
Tribal, Income Qualified	Assumed 100% NTG

CY 2025 Offerings	Net Savings Methodologies
Multifamily	CY 2023 self-report
Multifamily, EDA/EDR	CY 2023 self-report
Renewable Rewards (Residential)	CY 2024 self-report
Residential New Construction	CY 2019 billing analysis for single-family homes CY 2024 self-report from participant retailers and community organization manufactured home purchasers for the New Manufactured Homes Pilot.
Nonresidential	
Agribusiness	CY 2023 self-report
Rural Farmhouse Kits	CY 2020 self-report from Packs participant surveys
Commercial and Industrial	CY 2023 self-report
Large Industrial	CY 2023 self-report
Government	CY 2023 self-report
Schools	CY 2023 self-report
EDA/EDR	CY 2023 self-report
Renewable Rewards (Business)	CY 2024 self-report
Midstream	
Instant Discount	CY 2025 self-report from distributors and contractors for HVAC equipment CY 2025 self-report from distributors for commercial food service equipment CY 2025 self-report from Trade Ally Solutions Program Retail Smart Thermostat offering for smart thermostats CY 2023 self-report from contractors for circulator pumps Average NTG from other Midstream/Instant Discount Program measures for water heating Assumed 100% NTG for Residential Income-Qualified measures.
Pilots	
Accessible Efficiency Pilot	Assumed 100% NTG ^a
Community Impact Pilot	Assumed 100% NTG ^a
Life Sciences Midstream Pilot	Assumed 100% NTG ^a

Note: Consistent with longstanding Focus on Energy practice and past consensus among the program administrator, evaluation team, implementers, and PSC staff regarding deemed savings values documented in the TRM, savings for Income Qualified equipment measures were treated as fully attributable to the program and assigned a deemed NTG ratio of 100%, while Income Qualified insulation and air sealing measures were evaluated separately using billing analysis–based NTG ratios from the CY 2024 evaluation.

^a NTG was assumed to be 100% for pilots because of the significant incentives and the targeted design of the pilots.

H.2. Self-Report Net-to-Gross Methodology

Two components—freeridership and participant spillover—constitute NTG. True freeriders are customers who would have purchased a measure regardless of an offering’s influence. Participant spillover is the savings customers obtain by investing in additional energy-efficient measures or activities specified in the TRM as a result of their program participation.

This section presents the self-report approaches the evaluation team used to determine NTG for CY 2025 residential and nonresidential offerings. In summary, the team conducted participant surveys and used

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self-reported findings to calculate NTG ratios. We then applied these results to measure categories and offerings for which adequate baseline data were unavailable.

H.2.1. Survey Design

To assess NTG for surveyed offerings, the evaluation team asks a series of freeridership and spillover questions. In CY 2025, participants were surveyed for the Retail Smart Thermostat offering. The evaluation team combines two types of freeridership to align with industry best practices:

- *Intention* freeridership relies on customers' self-reported intention to purchase a measure in the absence of the offering. Survey items that addressed the offering's effect on the efficiency, quantity, and timing of purchases.
- *Influence* freeridership relies on the influence of offering elements on the customer's decision to purchase a measure (e.g., Focus on Energy incentives, staff recommendations, or educational materials about energy efficiency).

The team estimates an *intention* freeridership score and an *influence* freeridership score, each ranging from 0% to 100% for each surveyed participant for each offering. Offering-level *intention* and *influence* freeridership scores are then calculated by weighting the individual freeridership component scores by respondents' verified lifecycle gross savings.

By saving-weighting the *intention* methodology with an *influence* methodology, the evaluation team produces a freeridership score for the offering. The team calculates the arithmetic mean of *intention* and *influence* freeridership components to estimate the final freeridership for the offering, as shown in the following equation:

$$\text{Final Freeridership} = \frac{\text{Intention FR Score} + \text{Influence FR Score}}{2}$$

The *intention* freeridership questions are designed to elicit as accurately as possible the impact of a particular offering on the respondent's decision to purchase high-efficiency equipment. Offerings can influence customer decisions in a variety of ways: participants may decide to purchase an energy-efficient measure sooner than planned, purchase a higher efficiency measure than planned, or purchase more units than planned without the offering. To understand the influence of the offering, the survey asks questions about what decision-makers might have done in its absence.

Direct questions such as *Would you have installed measure X without the offering incentive?* tend to elicit exaggerated *yes* responses. Participants often provide answers they believe surveyors are seeking, so such a question amounts to asking: *Would you have done the right thing on your own?* Effectively avoiding such bias involves asking a question in several different ways and checking for consistent responses.

Basing *intention* freeridership estimates on a series of questions rather than a single question helps the evaluation team recognize and minimize response biases. Not all questions are weighted equally. For example, respondents who would not have installed the measure(s) to the same level of efficiency without the offering are automatically 0% *intention* freeriders. If nonresidential participants would not have installed the measure(s) within two years without the offering, they are automatically 0% *intention*

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freeriders. The team assigns other questions included in the *intention* freeridership analysis partial weights to responses indicative of a non-freerider.

The survey questions address five core dimensions of *intention* freeridership for residential offerings and six core intention freeridership dimensions for nonresidential offerings, as listed below:

- Would participants have installed measures without the offering?
- Were participants planning on purchasing or installing the measures before learning about the offering?
- Would participants have installed the measures at the same efficiency levels without the offering incentive?
- Would participants have installed the same quantity of efficient measures without the offering?
- In the absence of the offering, 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)?

Specific intention freeridership questions used for the offerings are presented in their individual analysis sections in this appendix.

Persistent conjecture in the industry indicates that intention self-reports may be subject to biases, yielding an inflated freeridership value. To address this possibility and to provide a triangulation of approaches to the estimate, the evaluation team integrates a second set of survey questions designed to measure the offering's perceived influence on the respondents' purchasing decisions.

To estimate the offering's influence, the survey asks respondents to rate the influence of five offering elements on their purchasing decisions. Responses are captured using a 1 to 5 scale, with 1 meaning *not at all important* and 5 meaning *very important*. A surveyed participant's overall influence rating equals the maximum influence of any single offering element. This draws upon an underlying principle: if a single element had a substantial influence on a respondent's purchasing decision, the offering has successfully influenced the respondent.

H.2.2. *Intention* Freeridership Methodology

To assess freeridership, the team uses a probability matrix to assign a single *intention* freeridership score to each participant based on their responses to targeted survey questions.¹⁰ The team then applies *intention* freeridership scores to question response patterns in the probability matrix.

This matrix approach provides these key benefits:

- Derivation of a partial *intention* freeridership score, based on the likelihood of a respondent taking similar actions in the offering's absence

¹⁰ Khawaja, M. S. 2007 edition. *The N/APEE Handbook on DSM (Demand-Side Management) Evaluation*. p. 5-1.

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- 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 offers the advantage of partial *intention* freeridership. Experience has shown that participants do not fall neatly into freerider and non-freerider categories. For example, the team assigns partial *intention* freeridership scores to participants who plan to install a measure; that is, although the offering exerts some influence over their decisions, these respondents are also influenced by other market factors outside of the offering. Further, the team can assign partial credit to “don’t know” and “refused” responses rather than removing respondents entirely from the analysis.

Next, the evaluation team converts each participant’s survey response into *intention* freeridership matrix terminology, combines each participant’s converted responses to assign an *intention* freeridership score from the matrix, and aggregates all participants into an average *intention* freeridership score for the entire offering category, ultimately assessing *intention* freeridership at three different levels.

H.2.3. Response Conversion to Matrix Terminology

The evaluation team independently evaluates each response, assesses it for *intention* freeridership, and converts it into one of these values:

- Yes (indicative of freeridership)
- No (indicative of non-freeridership)
- Partial (indicative of partial freeridership)

H.2.4. Participant Intention Freeridership Scoring

Following the conversion of survey responses into matrix terminology, the team creates an *intention* freeridership matrix for each offering. The team’s process for determining an *intention* freeridership score is as follows:

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

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H.2.5. Measure Category *Intention* Freeridership Scoring

After assigning an *intention* freeridership score to every survey respondent, the evaluation team calculates a savings-weighted average *intention* freerider score for the measure category. For each offering, the respondents' *intention* freerider scores are individually weighted by estimated savings of equipment installed using the following calculation:

$$\text{Savings Weighted } \textit{Intention} \text{ Freeridership} = \frac{\sum[\text{Respondent } \textit{Intention} \text{ Freerider Score}] * [\text{Verified Measure Lifecycle Gross Energy Savings}]}{\sum[\text{All Respondents Verified Measure Lifecycle Gross Energy Savings}]}$$

H.2.6. *Influence* Freeridership Methodology and Scoring

To estimate an *influence* freeridership score, the survey asks respondents to rate the importance of offering elements on their purchasing decisions. The surveys capture responses using a five-point scale, with 1 meaning *not at all important* and 5 meaning *very important*. A surveyed participant's overall influence rating equals the maximum importance of any single offering element. This methodology assumes that if a single element had a substantial influence on a respondent's purchasing decision, the offering successfully influenced the respondent.

For example, Table H-2 shows a set of questions to capture respondents' perspectives on elements driving them to take energy-efficient actions.¹¹ In this example, the influence rating would be a 5 because the offering's maximum influence was a 5 for "The Focus on Energy incentive or discount."

¹¹ The question wording and program factors in surveys may vary slightly depending on the specific program component. The *Influence Freeridership Analysis* sections in the specific program chapters list factors included for each specific program component.

Table H-2. Example of Influence Freeridership Component Question

I'm going to read a list of possible factors that could have contributed to your decision. For each of the factors listed, please rate how important it was in your decision. Use a scale from 1 to 5, with 1 meaning the factor was *not at all important* and 5 meaning the factor was *very important* in your decision to purchase the energy-efficient [MEASURE][s].

Rate Influence of Offering Elements							
	1 - Not at all important	2	3	4	5 - Very important	Don't Know	Not Applicable
The Focus on Energy incentive or discount	1	2	3	4	(5)	DK	N/A
Recommendation from Focus on Energy Staff	1	2	3	(4)	5	DK	N/A
Information provided by Focus on Energy on energy-saving opportunities	1	2	3	4	5	(DK)	N/A
Recommendation from contractor or vendor	1	(2)	3	4	5	DK	N/A
Previous participation in a Focus on Energy efficiency offering	1	2	(3)	4	5	DK	N/A

High offering-influence ratings and influence freeridership are inversely related: the greater the offering's influence rating, the lower the participant's final influence freeridership score. Table H-3 presents the freeridership level implied by each influence rating.

Table H-3. Influence Freeridership Implied by Response to Influence Items

Influence Rating	Influence Freeridership Score
1 - Not at all important	100%
2	75%
3	50%
4	25%
5 - Very important	0%
Don't know	50%
Not applicable	50%

H.2.7. Measure Category Influence Freeridership Scoring

After assigning an *influence* freeridership score to every survey respondent, the evaluation team calculates a savings-weighted average *influence* freerider score for the measure category. For each offering, the respondents' *influence* freerider scores are individually weighted by the estimated savings of equipment installed using the following calculation:

$$\text{Savings Weighted Influence Freeridership} = \frac{\sum [\text{Respondent Influence Freerider Score}] * [\text{Verified Measure Lifecycle Gross Energy Savings}]}{\sum [\text{All Respondents Verified Measure Lifecycle Gross Energy Savings}]}$$

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H.2.8. Spillover Methodology

Spillover refers to additional savings generated by offering participants following their participation but not captured by offering records. Spillover occurs when participants choose to purchase energy-efficient measures or adopt energy-efficient practices because of an offering's influence, but they do not receive offering incentives from a utility or another organization.

The evaluation team measures spillover by asking a sample of participants who purchased and received an incentive for a particular measure if they installed another efficient measure or undertook another energy efficiency activity because of the offering. Respondents rate the offering's (and incentive's) relative influence (either *very important*, *somewhat important*, *neutral*, *not too important*, or *not at all important*) on their decisions to pursue additional savings.

H.2.9. Participant Spillover Analysis

The evaluation team uses a top-down approach to calculate spillover savings. The team starts the analysis with a subset of survey respondents who indicated they had installed additional energy-saving measures after participating in the offering and screens out any respondents who received an incentive for these additional measures. Respondents are only removed if they indicate the offering had little influence on their decisions to purchase additional measures.

The evaluation team applies evaluated and deemed savings to the spillover measures respondents said they had installed as a result of their participation. To calculate a spillover percentage per offering category, the team divides the sum of additional spillover savings reported by respondents by total gross savings achieved by all respondents in the offering category, as in the following equation:

$$Spillover \% = \frac{\sum \text{Spillover Measure Lifecycle Gross Energy Savings for All Survey Respondents}}{\sum \text{Offering Measure Verified Lifecycle Gross Energy Savings}}$$

H.2.10. Net-to-Gross Analysis

The evaluation team combines this spillover information with the offering-level freeridership results to achieve the NTG ratio using the following calculation:

$$NTG = 100\% - \text{Freeridership} + \text{Spillover}$$

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H.3.CY 2025 Self-Reported Freeridership, Spillover, and NTG Results

Table H-4 lists CY 2025 participants' self-reported freeridership, spillover, and NTG results. The following sections provide additional detail about the methodology and results for each program.

Table H-4. CY 2025 Self-Report Participant Freeridership, Spillover, and NTG by Program

Program	Measure	n	Freeridership ^a	Spillover	NTG
Residential Programs					
Trade Ally Solutions	Retail Smart Thermostat	77	39%	0%	61%
Cross-Cutting Programs					
Instant Discount	Furnace	18	47%	0%	53%
	Boiler	17	40%	0%	60%
	Air-Source Heat Pump	19	42%	0%	58%
	Ductless Heat Pump	18	36%	0%	64%
	Commercial Food Service Measures	10	26%	0%	74%

^a Weighted by CY 2025 verified lifecycle MMBtu gross energy savings.

H.4. Retail Smart Thermostat

H.4.1. Freeridership

Intention Freeridership Survey Questions

The participant survey's *intention* freeridership section included the following questions:

- F1. When did you first hear about the availability of a Focus on Energy rebate for smart thermostats?
- F2. [ASK IF F1=2, 3, OR 4] So just to be clear, you purchased your [MEASURE] before you heard anything about the Focus on Energy rebate. Is that correct?
- F3. Before you heard about the offering, had you already considered installing a smart thermostat?
- F4. Without the rebate and information or education from Focus on Energy, what kind of thermostat would you most likely have installed?
- F5. [ASK IF QUANTITY > 1] Would you most likely have installed the same quantity of [MEASURE] without the rebate from Focus on Energy?
- F6. Thinking about timing, without the rebate and information or education from Focus on Energy, when would you most likely have installed your smart thermostat?

Convert Responses to Matrix Terminology

Table H-5 shows how the initial survey responses were translated into the responses *yes*, *no*, or *partially* indicative of *intention* freeridership (in parentheses).

Table H-5. Retail Smart Thermostat Offering
Raw Survey Response Translation to *Intention* Freeridership Scoring Matrix Terminology

F1. When did you first hear about the availability of a Focus on Energy rebate for smart thermostats?	F2. [ASK IF F1=2, 3, OR 4] So just to be clear, you purchased your [MEASURE] before you heard anything about the Focus on Energy rebate. Is that correct?	F3. Before you heard about the offering, had you already considered installing a smart thermostat?	F4. Without the rebate and information or education from Focus on Energy, what kind of thermostat would you most likely have installed?	F5. [ASK IF QUANTITY > 1] Would you most likely have installed the same quantity of [MEASURE] without the rebate from Focus on Energy?	F6. Thinking about timing, without the rebate and information or education from Focus on Energy, when would you most likely have installed your smart thermostat?
Before I purchased the smart thermostat (No)	Yes, that's correct (Yes)	Yes (Yes)	A smart or learning thermostat (Yes)	Yes, the same quantity (Yes)	At the same time (Yes)
When I received my rebate check from Focus on Energy (Yes)	No, that's correct (No)	No (No)	A Wi-Fi thermostat (non-learning) (Partial2)	No, would have purchased fewer (Partial2)	Later, but within 12 months (Partial2)
After I purchased my smart thermostat (Yes)	Don't Know (No)	Don't Know (Partial)	A programmable thermostat (No)	No, would have purchased more (Yes)	One to two years out (No)
I had not heard of Focus on Energy before this survey (Yes)			A manual thermostat (No)	No, would not have purchased anything at all (No)	More than two years out (No)
Don't Know (No)			Would not have purchased a new thermostat (No)	Don't Know (Partial)	Never (No)
			Don't Know (Partial)		Don't Know (Partial)

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Participant Intention Freeridership Scoring

The *intention* freeridership score started with 100%, which the evaluation team decremented based on the participant's responses to the four questions, as shown in Table H-6.

Table H-6. Retail Smart Thermostat Offering *Intention* Freeridership Scoring Legend

Question Number	Decrement
F1	0% decrement for "No"
F2	100% <i>Intention</i> FR if "Yes," "Partial" level not needed
F3	50% decrement for "No," 25% decrement for "Partial"
F4	100% decrement for "No," 25% decrement for "Partial," 50% decrement for 'Partial2'
F5	100% decrement for "No," 25% decrement for "Partial," 50% decrement for 'Partial2'
F6	100% decrement for "No," 25% decrement for "Partial," 50% decrement for 'Partial2'

Intention Freeridership Analysis

Table H-7 shows the unique response combinations from participants to the *intention* freeridership questions (actual responses mapped to *yes*, *no*, or *partial*, as indicative of freeridership), the *intention* freeridership score assigned to each combination, and the number of responses. The team calculated an *intention* freeridership score for the smart thermostat measure based on the savings-weighted average of the distribution of scores within the matrix.

**Table H-7. Retail Smart Thermostat Offering
Frequency of *Intention* Freeridership Scoring**

F1. When did you first hear about the availability of a Focus on Energy rebate for smart thermostats?	F2. [ASK IF F1=2, 3, OR 4] So just to be clear, you purchased your [MEASURE] before you heard anything about the Focus on Energy rebate. Is that correct?	F3. Before you heard about the offering, had you already considered installing a smart thermostat?	F4. Without the rebate and information or education from Focus on Energy, what kind of thermostat would you most likely have installed?	F5. [ASK IF QUANTITY > 1] Would you most likely have installed the same quantity of [MEASURE] without the rebate from Focus on Energy?	F6. Thinking about timing, without the rebate and information or education from Focus on Energy, when would you most likely have installed your smart thermostat?	<i>Intention</i> Freerider Score	Count
Yes	Yes	-	-	-	-	100%	12
No	-	Yes	Yes	-	Yes	100%	23
No	-	Yes	Yes	-	Partial	75%	2
No	-	Yes	Yes	-	Partial2	50%	8
No	-	Yes	Yes	-	No	0%	3
No	-	Yes	Partial2	-	Yes	50%	7
No	-	Yes	Partial2	-	Partial2	12.5%	1
No	-	Yes	Partial2	-	No	0%	1
No	-	Yes	No	-	-	0%	9
No	-	Partial	Yes	-	Partial	50%	2
No	-	Partial	No	-	-	0%	1
No	-	No	Yes	-	Yes	50%	1
No	-	No	Yes	-	Partial2	12.5%	1
No	-	No	Partial2	-	Partial2	0%	1
No	-	No	No	-	-	0%	5

Table H-8 shows the Retail Smart Thermostat offering *intention* freeridership score.

**Table H-8. Retail Smart Thermostat Offering
Intention Freeridership Results**

Measure Category	n	Intention FR Score
Smart Thermostat	77	59% ^a

^a Weighted by verified lifecycle MMBtu gross energy savings.

Influence Freeridership Analysis

The evaluation team assessed *influence* freeridership by asking participants how important various offering elements were in their purchasing decisions. Table H-9 shows how participants rated the importance, along with a count and average rating for each factor.

**Table H-9. Retail Smart Thermostat Offering
Influence Freeridership Responses**

Influence Rating	Influence FR Score	The Focus on Energy rebate or discount	Recommendation from Focus on Energy Staff	Information provided by Focus on Energy about energy savings opportunities	Recommendation from a contractor or vendor	Previous participation in a Focus on Energy energy-efficiency offering or program
1 - Not at all important	100%	3	33	14	34	17
2	75%	7	6	13	8	7
3	50%	19	14	20	9	15
4	25%	26	8	15	7	15
5 - Very important	0%	22	3	10	8	15
Not applicable	50%	0	13	5	11	8
Average Rating		3.7	2.1	2.9	2.2	3.1

The evaluation team determined each respondent's *influence* freeridership score by using the maximum rating provided for any factor included in Table H-9. As shown in Table H-10, the respondents' maximum influence ratings ranged from 1 (*not at all important*) to 5 (*very important*). A maximum score of 1 means the customer ranked all factors from the Table as *not at all important*, while a maximum score of 5 means the customer ranked at least one factor *very important*. Counts refer to the number of "maximum influence" responses for each factor, or *influence* freeridership score, response option.

**Table H-10. Retail Smart Thermostat Offering
Influence Freeridership Score**

Maximum Influence Rating	Influence FR Score	Count
1 - Not at all important	100%	1
2	75%	4
3	50%	9
4	25%	27
5 - Very important	0%	36
Average Maximum Influence Rating - Simple Average		4.2
Average Influence FR Score - Weighted by Verified Lifecycle MMBtu Gross Savings		19%

Final Freeridership

The evaluation team calculated the mean of the overall intention and the overall influence of freeridership components to estimate the final freeridership for the Retail Smart Thermostat offering. A higher freeridership score means more savings are deducted from the gross savings estimates. Table H-11 lists intention, influence, and final freeridership scores for smart thermostats in the Retail Smart Thermostat offering.

**Table H-11. Retail Smart Thermostat Offering
Freeridership Score**

Measure Category	n	Intention FR Score	Influence FR Score	Final FR Score
Smart Thermostat	77	59% ^a	19% ^a	39%

^a Weighted by verified lifecycle MMBtu gross energy savings.

H.4.2. Participant Spillover Analysis

The evaluation team estimated participant spillover based on responses from those who purchased additional high-efficiency equipment or appliances after participating in the Retail Smart Thermostat offering. The team applied, evaluated, and deemed savings to the spillover measures that customers said they had installed as a result of their offering participation, presented in Table H-12.

**Table H-12. Retail Smart Thermostat Offering
Spillover Measures and Savings**

Measure Category	Spillover Measure	Quantity	Total MMBtu Lifecycle Gross Savings Estimate
Smart Thermostat	Advanced Power Strip	1	1.2

Next, the team divided the sample spillover savings by the offering measure category gross savings from the entire survey sample, as shown in this equation:

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

This yielded a 0% spillover estimate for the Retail Smart Thermostat offering, when rounded to the nearest whole percentage (Table H-13).

Table H-13. Retail Smart Thermostat Offering Spillover Percentage Estimate

Variable	Total Lifecycle MMBtu Savings Estimate
Spillover Savings	1.2
Offering Savings	3,386.9
Spillover Estimate	0%

H.4.3. Final 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 H-14:

$$NTG = 1 - Freeridership + Spillover$$

Table H-14. Retail Smart Thermostat Offering – NTG Estimate

Measure Category	n	Freeridership ^a	Spillover	NTG
Smart Thermostat	77	39%	0%	61%

^a Weighted by verified lifecycle MMBtu gross energy savings.

H.5. Instant Discount Program Self-Report NTG Analysis

Methodology

For HVAC and commercial food service measure categories offered through the Midstream Solution, the evaluation team used a participating trade ally self-report causal pathway NTG methodology. This approach builds on methods used in California and other states for similar upstream/midstream solution offerings, most recently described in the 2020 California Public Utilities Commission (CPUC) HVAC Impact Evaluation Report.¹² The midstream NTG methodology described in the 2020 CPUC HVAC Impact Evaluation Report served as the basis for the CY 2022 Focus on Energy Midstream Solution NTG analysis, as well as a 2021 Massachusetts C&I Upstream HVAC and Gas Water Heating NTG evaluation¹³ and a 2022 Connecticut Midstream C&I HVAC and Water Heating and Foodservice NTG evaluation.¹⁴ In February of 2024, an evaluator submitted an NTG methodology memo to the CPUC for the PY2022 Midstream Commercial Statewide Water Heating Program evaluation, recommending adjustments to the original methodology described in the 2020 CPUC HVAC Impact Evaluation Report. Based on a review of the

¹² See CPUC Impact Evaluation Report – Final – Commercial HVAC Sector – Program Year 2020 EM&V. 2022. Appendix E. 6.5.1.1 https://www.calmac.org/publications/Group_A_YR4_ComHVAC_Impact_Report_Final_CALMAC.pdf

¹³ See Connecticut Midstream C&I HVAC & Water Heating and Foodservice Net-to-Gross Review, June 2022, <https://energizect.com/sites/default/files/documents/C1902A%20CT%20Midstream%20HVAC%20Water%20Heating%20Foodservice%20NTG%20Report%20-%20Final%2020220601.pdf>.

¹⁴ See Massachusetts C&I Upstream HVAC & Gas Water Heating NTG Study (MA20X08- B-CIHVACNTG), Sep 2021, https://ma-eeac.org/wp-content/uploads/MA20X08-B-CIHVACNTG_Final_Report_Clean_9.10.pdf.

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proposed 2024 methodology memo, Cadmus updated its NTG methodology for the Focus on Energy Instant Discount Program.

The methodology presented in this summary establishes program attribution by considering the pathways distributors and contractors take when selling high-efficiency equipment, and the related pathways end users take when purchasing equipment. The term “causal pathway” refers to how the program is intended to influence the final equipment that end users purchase. The evaluation team used this approach to integrate survey responses into freeridership and NTG values.

In this methodology, there are three main causal pathways of influence that can impact distributors, contractors, and equipment end users:

- The program influences distributors to **stock** high-efficiency units, and end users are influenced to purchase high-efficiency units by what distributors keep in stock when replacement is urgent.
- The program encourages distributors and contractors to **upsell** high-efficiency units, and end users are influenced by promotional efforts to purchase high-efficiency units rather than standard-efficiency units.
- The program encourages distributors and contractors to reduce the **price** of high-efficiency units or pass along rebates to end users, and end users are influenced by lower prices to purchase high-efficiency units rather than standard-efficiency units.

Table H-15 presents the question themes associated with the three causal pathways for distributors and contractors.

Table H-15. Question Themes Associated with the Three Causal Pathways

Causal Pathways	Distributor/Contractor Question Theme
Stocking	1. What was the Instant Discount Program’s influence on distributor stock? What was the influence of distributor stock on the equipment that the contractors selected?
Upselling	2. What was the Instant Discount Program’s influence on encouraging the distributor/contractor to promote or upsell the units?
Price	3. Did the distributor/contractor pass on some or all of the incentive to buyers?

Each causal pathway is dependent on the distributor changing their behavior in response to the program, and that change in behavior influences the decision-making of their contractors and buyers. Each causal pathway is based on the assumption that if the program failed to demonstrate attribution through distributors, contractors, or buyers, then it did not affect equipment sales on that particular causal pathway; this does not mean that the program had no influence on the sales, only that any influence it had was not through this path. If another causal pathway did show program influence, then the sales were at least partially program attributable.

Table H-16 shows the distributor attribution scoring approach for each causal pathway for equipment sold through the Focus on Energy Instant Discount Program. Distributors were unable to provide usable responses to the counterfactual stocking intention attribution questions. As a result, the evaluation team replaced the stocking-intention score component with distributors’ reported counterfactual percentage of

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program sales that would have occurred in the absence of the Instant Discount Program. This change resulted in a combined sales-and-stocking causal pathway attribution score.

Table H-16. Distributor Causal Pathway Attribution Scoring Approach

Distributor Causal Pathways	General Question Series Logic	Attribution Scoring
Sales and Stocking	<p>DistSales_Int. If Focus on Energy’s Instant Discount Program had not existed during 2025, what is your best estimate of how many of these sales would have occurred? [PERCENT]</p> <p>DistSales_Inf. Please rate how important participating in the Instant Discount Program has been on your 2025 sales of the following high-efficiency equipment in Wisconsin. Use a scale from 1 to 5, with 1 meaning the program was “not at all important” and 5 meaning the program was “very important”.</p> <p>DistStock_Inf. How important was the program on your stocking decisions related to program-eligible equipment?</p>	$\frac{\text{Sales Intention Score} = \text{DistSales_Int}}{100\% - G1 \text{ response}}$ <p>AVERAGE WITH</p> $\frac{\text{Stocking Influence Score} = \text{Average}(\text{DistSales_Inf}, \text{DistStock_Inf})}{\text{If DistSales_Inf/DistStock_Inf} = '1' \text{ then } 0 \text{ else if '2' then } 0.25 \text{ else if '3' then } 0.5 \text{ else if '4' then } 0.75 \text{ else if '5' then } 1.0}$ <p>=</p> <p>Distributor Attribution_{Sales/Stock}</p>
Upselling	<p>Has the program influenced any upselling or promoting of high-efficiency units?</p> <p>E14. In situations where you are selling [EQUIPMENT TYPE], about what percent of the time are you currently recommending the high-efficiency equipment?</p> <p>E15. For [EQUIPMENT TYPE] equipment, what percent of the time would you have recommended the high-efficiency equipment had the Program not existed in [year]?</p> <p>DistUpsell_Inf. How important were the following factors of the program on your ability to upsell program-qualified equipment to contractors/end-users? Use a scale from 1 to 5, with 1 meaning the program was “not at all important” and 5 meaning the program was “very important”.</p>	$\frac{\text{Upselling Intention Score}}{(E14 \text{ response} - E15 \text{ response})}$ <p>E14 response</p> <p>AVERAGE WITH</p> $\frac{\text{Upselling Influence Score}}{\text{If DistUpsell_Inf} = '1' \text{ then } 0 \text{ else if '2' then } 0.25 \text{ else if '3' then } 0.5 \text{ else if '4' then } 0.75 \text{ else if '5' then } 1.0}$ <p>=</p> <p>Distributor Attribution_{Upsell}</p>
Price	<p>Does any of the incentive get passed on to the buyer?</p> <p>E19. By how much, percentagewise, does the rebate impact the final price paid by the buyer?</p>	<p>E19 Response</p> <p>=</p> <p>Distributor Attribution_{Price}</p>

Table H-17 shows the general contractor attribution scoring approach for each causal pathway for equipment sold through the Focus on Energy Instant Discount Program. Contractors were unable to

provide usable responses to the counterfactual stocking-intention attribution questions. As such, the team did not include the contractors’ stocking causal pathway in the NTG analysis.

Table H-17. Contractor Causal Pathway Attribution Scoring Approach

Contractor Causal Pathways	General Question Series Logic	Attribution Scoring
Upselling	<p>Has the program influenced any upselling or promoting of high-efficiency units? E7. In situations where you are selling [EQUIPMENT TYPE], about what percent of the time are you currently recommending the high-efficiency equipment? E8. For [EQUIPMENT TYPE] equipment, what percent of the time would you have recommended the high-efficiency equipment had the program not existed in [year]? CntrUpsell_Inf. How important were the following factors of the program on your ability to upsell program-qualified equipment to end-users? Use a scale from 1 to 5, with 1 meaning the program was “not at all important” and 5 meaning the program was “very important”.</p>	$\frac{\text{Upselling Intention Score}}{\text{E7 response} - \text{E8 response}}$ $\frac{\text{E7 response}}{\text{AVERAGE WITH}}$ $\text{Upselling Influence Score}$ <p>If CntrUpsell_Inf= '1' then 0 else if '2' then 0.25 else if '3' then 0.5 else if '4' then 0.75 else if '5' then 1.0</p> <p>=</p> <p>Contractor Attribution_{Upsell}</p>
Price	<p>Does any of the incentive get passed on to the end-use buyer? E13. On average, what percent of the rebate is passed on to the buyer for the [EQUIPMENT TYPE], either directly or indirectly?</p>	E13 Response <p>=</p> <p>Contractor Attribution_{Price}</p>

The evaluation team calculated the overall interview-based attribution scores by averaging the survey attribution scores for distributors and, where applicable, contractors along each causal pathway. The team then subtracted the pathway scores from 1 to calculate a freeridership rate on each pathway. Next, the team averaged the three combined causal pathway freeridership scores together and subtracted the result from 1 to get the overall interview-based NTG values.¹⁵

The equations below show the flow of these calculations. The team calculated the distributor and contractor attribution scores based on the equipment type sold through the Instant Discount Program, as demonstrated in the following algorithms:

$$\text{Combined Attribution}_{\text{Sales/Stock}} = \text{Distributor Attribution}_{\text{Sales/Stock}}$$

$$\text{Combined Attribution}_{\text{Upsell}} = \text{Average} (\text{Distributor Attribution}_{\text{Upsell}}, \text{Contractor Attribution}_{\text{Upsell}})$$

¹⁵ The evaluation team recommended averaging causal pathway scores instead of using a multiplicative method. The use of a multiplicative method to combine probabilities should be avoided. See Keating, Ken. 2009. “Freeridership Borscht: Don’t Salt the Soup.” Presented at the 2009 International Energy Program Evaluation Conference. <https://www.iepec.org/conf-docs/papers/2009PapersTOC/papers/012.pdf>

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$$\text{Combined Attribution}_{\text{Price}} = \text{Average} (\text{Distributor Attribution}_{\text{Price}}, \text{Contractor Attribution}_{\text{Price}})$$

$$\text{Freeridership}_{\text{Stock}} = 1 - \text{Combined Attribution}_{\text{Stock}}$$

$$\text{Freeridership}_{\text{Upsell}} = 1 - \text{Combined Attribution}_{\text{Upsell}}$$

$$\text{Freeridership}_{\text{Price}} = 1 - \text{Combined Attribution}_{\text{Upsell}}$$

$$\text{Net to Gross} = 1 - \text{Average} (\text{Freeridership}_{\text{Stock}}, \text{Freeridership}_{\text{Upsell}}, \text{Freeridership}_{\text{Price}})$$

The evaluation team calculated the overall participant survey-based causal pathway attribution scores (NTG ratio) for HVAC and commercial food service measures in the Instant Discount Program by averaging the lifecycle energy savings-weighted survey attribution scores for the distributor, and, where applicable, contractor along each causal pathway.

H.6. Residential General Population Nonparticipant Spillover Findings

Effective program marketing and outreach generate program participation and increase general energy efficiency awareness among customers. The cumulative effect of sustained utility program marketing can affect customers' perceptions of their energy usage and, in some cases, motivate customers to take efficiency actions outside of Focus on Energy offerings. This is generally called nonparticipant spillover (NPSO)—that is, the energy savings caused by, but not rebated through, Focus on Energy's energy efficiency and renewable resource offerings.

To understand whether Focus on Energy's general and specific marketing efforts generated energy efficiency improvements outside of its incentives and offerings, the evaluation team collected spillover data through the general population survey conducted with randomly selected residential customers.

H.6.1. Residential Nonparticipant Spillover Methodology

The evaluation team administered a web-based survey to Wisconsin residents between October 28 and November 17, 2025 (see Appendix J. in Volume III). Using this sample, the team conducted a survey with 349 customers who responded to survey question A50: *In the past year, did you purchase or install any energy-efficient equipment or upgrades at your residence for which you did not receive a rebate or discount from Focus on Energy?* The evaluation team limited the NPSO analysis to the same types of efficiency measures rebated through Focus on Energy offerings (known as like spillover). Examples included performing air sealing and installing high-efficiency ENERGY STAR freezer for which participants (for whatever reason) did not apply for and receive an incentive. The team excluded products similar to Instant Discount Program measures. This precluded potentially double-counting savings already captured through the Instant Discount Program, as no customer information is collected for it.

Using a 1 to 5 scale, with 1 meaning *not at all important* and 5 meaning *very important*, the survey asked customers to rate the importance of several factors on their decisions to install energy-efficient equipment without receiving an incentive from Focus on Energy. This question assessed whether Focus on Energy's energy efficiency initiatives motivated energy-efficient purchases.

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The evaluation team estimated NPSO savings from respondents who rated Focus on Energy as *very important* for any reported energy-efficient actions or installations.

The evaluation team leveraged measure-level estimated gross savings from the CY 2025 Focus on Energy residential evaluation activities for the reported NPSO measures. Using the variables shown in Table H-18. The team determined the total residential NPSO generated by Focus on Energy’s marketing and outreach efforts during the CY 2025 evaluation year.

Table H-18. Residential NPSO Analysis Method

Variable	Metric	Source
A	Total lifecycle gross spillover savings MMBtu from survey respondents	Survey data/engineering estimates
B	Total nonparticipant customers surveyed	Survey disposition minus matched CY 2025 participants
C	Average lifecycle MMBtu savings per nonparticipant surveyed	A ÷ B
D	Total residential customer nonparticipant population housing units	2024 U.S. Census minus Focus on Energy participant population
E	NPSO MMBtu savings applied to the population	C × D
F	Total evaluated lifecycle gross program savings	CY 2025 Focus on Energy evaluation
G	NPSO as a percentage of the total CY 2025 residential portfolio evaluated lifecycle gross MMBtu savings	E ÷ F

H.6.2. Residential Results

Table H-19 shows the survey attrition of the residential general population survey results to arrive at two nonparticipant customers who reported installing energy-efficient measures in their home in CY 2025 where Focus on Energy was *very important* in their purchasing decision.

Table H-19. CY 2025 Residential General Population Survey Attrition for NPSO Consideration

Removal Reason	Respondents
Original Contacted	349
Was not familiar of Focus on Energy at time of survey	-104
No energy-efficient equipment installed in the past year	-210
Did not rate Focus on Energy as <i>very important</i> in purchasing decision of program eligible measure	44
Rated Focus on Energy as <i>very important</i> in purchasing decision of program-eligible measure	2
Customers with NPSO activity being attributed to Focus on Energy for CY 2025	2

Table H-20 presents measures and gross evaluated kilowatt-hour savings evaluation team attributed to Focus on Energy, generating total lifecycle gross savings of 3.52 MMBtu for the NPSO measures.

Table H-20. Residential NPSO Response Summary

Reported Spillover Measures	Mentions by Respondents	Unit Energy Savings (Lifecycle MMBtu) ^a	Total Savings (Lifecycle MMBtu)
Air Sealing	1 ^b	0.05 per unit	1.12
High Efficiency ENERGY STAR Freezer	1	2.40 per unit	2.40
Total	2		3.52

^a Unit energy savings estimated for each measure were generated from the average CY 2025 Focus on Energy evaluated gross savings.

^b Two respondents associated with 23 linear feet of air sealing.

Table H-21 presents variables used to estimate overall NPSO for the Focus on Energy residential portfolio, which the team estimated at 0.2% of total CY 2025 Focus on Energy evaluated lifecycle savings.

Table H-21. CY 2025 Residential NPSO Analysis Results

Variable	Metric	Value	Source
A	Total lifecycle gross spillover savings MMBtu from survey respondents	3.52	Survey data / Engineering Estimates
B	Total nonparticipant customers surveyed	349	Survey disposition
C	Average lifecycle MMBtu savings per nonparticipant surveyed	0.010	A ÷ B
D	Total residential customer nonparticipant population housing units	2,538,082	2024 U.S. Census minus Focus on Energy Participant Population
E	NPSO MMBtu savings applied to the population	25,630	C × D
F	Total evaluated lifecycle gross program savings	12,576,338	CY 2025 Focus on Energy Evaluation
G	NPSO as a percentage of the total CY 2025 residential portfolio evaluated lifecycle gross MMBtu savings	0.2%	E ÷ F

Appendix I. Summary of Confidence and Precision

Focus on Energy gives serious consideration to evaluation design to ensure that its offerings 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 offering; the net savings confidence and precision target is 90% confidence with $\pm 10\%$ precision over the CY 2023-CY 2026 quadrennium.

The evaluation team calculated the precision of final net first-year and lifetime energy savings estimates (MMBtu) at 90% confidence for each offering in the Focus on Energy portfolio. The precision reflects the uncertainty in the savings estimates due to measurement, regression, and sampling errors. 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 when estimating population parameters from a sample.

After calculating standard errors, the evaluation team calculated the precision of the final estimates using the following formula:

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

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

This appendix provides details on how the evaluation team calculated total net savings estimates and their standard errors.

I.1. Introduction to Statistical Uncertainty

The evaluation team collected data from surveys, billing histories, meters, and secondary sources, including the TRM, to estimate net savings for each offering 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 are often preferred to save on the costs and time associated with studying an entire population, and because random samples of the population provide sufficiently reliable results. The strength of an estimate is related to the uncertainty or error around it, which is determined by 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 one expects the unknown population parameter to fall. Confidence refers to the probability that the true value of the metric of interest (such as kilowatt-hours saved) will fall within some level of precision.

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A statement of precision without a statement of confidence is misleading. For example, if energy savings are estimated at 24 kWh with a precision of ±5 kWh at 90% confidence, this means one is 90% confident that the true energy savings are between 19 kWh and 29 kWh. Narrower confidence intervals indicate that the savings estimate is very precise, and wider confidence intervals indicate greater variability in the data and a need for more information to produce a more precise estimate.

For the Focus on Energy evaluation, the general standard for uncertainty is to achieve evaluation results at 90% confidence with ±10% precision over the CY 2023-CY 2026 quadrennium. The team defined and prioritized evaluation activities to align with this standard. This standard aligns with nationwide best practices for evaluating energy efficiency programs, as documented in the U.S. Environmental Protection Agency’s National Action Plan for Energy Efficiency and elsewhere.¹⁶

I.2. Net Uncertainty with Gross Uncertainty

When two estimates are based on different evaluation activities and combined to produce a final estimate, the uncertainty of each estimate must be considered in calculating the uncertainty of the final estimate. For example, if one set of data collected from surveys, billing analyses, metering, or TRM review is used to estimate gross savings and another set of data collected from a separate survey is used to estimate spillover, freeridership, and 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 for each set of offerings.

When the evaluation team estimates NTG ratios using survey data collected from an independent simple random sample of participants, it uses 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* savings are represented by x_i , and the standard error of the NTG ratio estimate is represented by SE_{NTG} , in the following formulas:

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

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

¹⁶ U.S. Environmental Protection Agency. Accessed April 2024. “Energy and the Environment. National Action Plan for Energy Efficiency.” [National Action Plan for Energy Efficiency | Energy and the Environment | US EPA](#)

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The team then multiplies the NTG ratio by the total *ex post* gross savings to estimate total net savings and uses 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 offerings unless otherwise noted.

I.3. Nonresidential Offerings

The evaluation team selected a sample of projects in each of the nonresidential and multifamily offerings to estimate *ex post* verified gross savings. It used a stratified sample design with a random stratum and a census stratum in most offerings. Sampling took place throughout the evaluation year in three waves. The team placed projects with savings above a percentage threshold of total offering savings in the census stratum. The remaining sample was pulled using a random sample design to reach 90% confidence with ±10% precision at the offering level, ultimately rolling up to 90% confidence with ±10% precision at the program level. The sample design successfully achieved low precision across all offerings, as shown in the CY 2025 precision results.

For the random stratum, the evaluation team applied the realization rates to the population total *ex ante* savings in each offering by wave to estimate that wave's population total *ex post* gross savings. The team calculated realization rates and standard errors in the random stratum in each wave using the formulas presented in the Uniform Methods Project sampling chapter.¹⁷

In the following formulas, y_i represents *ex post* savings for each evaluated measure, x_i represents *ex ante* savings for each measure, and n represents each wave's sample size.

$$RR_{random\ stratum} = \frac{\sum_{sample} y_i}{\sum_{sample} x_i}$$

$$random\ stratum\ ex\ post\ gross\ savings = RR_{random\ stratum} * \sum_{random\ stratum\ population} x_i$$

$$SE_{random\ stratum\ total\ ex\ post\ gross\ savings} = \frac{\sum_{random\ stratum\ population} x_i}{\sqrt{n} * \bar{x}_i} * \sqrt{\frac{\sum_{i=1}^n (y_i - RR * x_i)^2}{n - 1}}$$

¹⁷ National Renewable Energy Laboratory. April 2013. *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures*. "Chapter 11: Sample Design Cross-Cutting Protocols." Prepared by Cadmus. <http://energy.gov/sites/prod/files/2013/11/f5/53827-11.pdf>

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The team also calculated realization rates for the census stratum in each offering. In this stratum, the team evaluated all projects to directly verify the highest saving projects. The census stratum has no sampling error. To estimate a single standard for each wave's combined census and random strata, the team used the following formula.

$$SE_{\text{wave total ex post gross savings}} = \sqrt{(SE_{\text{random stratum total ex post gross savings}})^2 + (SE_{\text{census stratum total ex post gross savings}})^2}$$

As the standard error of the census stratum is zero, the standard error for the wave simplifies to the following:

$$SE_{\text{wave total ex post gross savings}} = SE_{\text{random stratum total ex post gross savings}}$$

The following formulas show the realization rate calculations for the census stratum and the method for calculating a single realization rate for the wave. The team used similar methods to combine census and random stratum standard errors and realization rates within and across waves.

$$RR_{\text{census stratum}} = \frac{\sum_{\text{census}} y_i}{\sum_{\text{census}} x_i}$$

$$\text{census stratum ex post gross savings} = RR_{\text{census stratum}} * \sum_{\text{census stratum population}} x_i$$

$$RR_{\text{wave}} = \frac{\text{random stratum ex post gross savings} + \text{census stratum ex post gross savings}}{\sum_{\text{wave}} x_i}$$

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

Table I-1 presents the precision of total net first and cumulative year MMBtu savings estimates at 90% confidence for each nonresidential offering by calendar year. The sources of uncertainty in all nonresidential savings estimates stemmed from estimating the realization rate and NTG values based on sample data.

Table I-1. Nonresidential Net First-Year MMBtu Energy Savings Precision

Nonresidential Offering	Precision at 90% Confidence				
	CY 2023	CY 2024	CY 2025	CY 2026	Cumulative
Agribusiness	11%	9%	12%	TBD	6%
Commercial and Industrial	8%	8%	9%	TBD	5%
Commercial and Industrial New Construction	12%	12%	12%	TBD	6%
Large Industrial	9%	7%	7%	TBD	6%
Large Industrial New Construction	16%	14%	14%	TBD	9%
Government	10%	11%	11%	TBD	6%
Schools	10%	10%	11%	TBD	6%
School and Government New Construction	11%	12%	12%	TBD	7%
Business Renewable Rewards	8%	22%	22%	TBD	9%
Total	5%	5%	4%	TBD	3%

I.4. Residential and Midstream Offerings

The evaluation team used various methods to evaluate the residential and midstream offerings. Table I-2 presents the precision of total net savings estimates and the sources of uncertainty for each residential offering by calendar year and cumulatively.

Table I-2. Residential Net First-Year MMBtu Energy Savings Precision (90% Confidence)

Residential Offering	Precision at 90% Confidence					Sources of Uncertainty
	CY 2023	CY 2024	CY 2025	CY 2026	Cumulative	
Online Marketplace	5%	5%	7%	TBD	3%	In-service rate (ISR) and NTG ratio
Packs	3%	2%	2%	TBD	1%	ISR and NTG ratio
Income Qualified Direct Install Pilot	N/A	N/A	0%	TBD	0%	None, deemed gross savings and NTG of 100%
Retail	13%	N/A	N/A	TBD	13%	ISR and NTG ratio
Heating and Cooling ^a	9%	10%	25%	TBD	6%	Relatively high variance in NTG ratios for ground-source HPs and thermostats increased overall net standard errors.
Insulation and Air Sealing	0%	3%	2%	TBD	1%	NTG determined via billing analysis for projects that accounted for the majority of savings.
Retail Smart Thermostats	N/A	N/A	7%	TBD	7%	NTG ratio
Tribal ^a	2%	7%	0%	TBD	3%	Savings were all income-qualified in 2025 with no statistical variance.
Multifamily	7%	7%	7%	TBD	4%	Realization rate and NTG
Multifamily New Construction	11%	12%	12%	TBD	6%	Realization rate and NTG

Residential Offering	Precision at 90% Confidence					Sources of Uncertainty
	CY 2023	CY 2024	CY 2025	CY 2026	Cumulative	
Renewable Rewards, Residential	7%	11%	11%	TBD	5%	NTG ratio
Residential New Construction	8%	8%	8%	TBD	5%	PRISM model
Total	2%	3%	3%	TBD	2%	

^a The team corrected the CY 2023 precision estimates for the Heating and Cooling and Tribal offerings to use annual MMBtu savings to calculate both standard errors and precision.

Table I-3 presents the precision of total net savings estimates and the sources of uncertainty for each midstream offering by program year and cumulatively.

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

Midstream Offering	Precision at 90% Confidence					Sources of Uncertainty
	CY 2023	CY 2024	CY 2025	CY 2026	Cumulative	
Midstream Contractor	6%	N/A	N/A	TBD	6%	Deemed gross savings and NTG ratio
Community-Based Organization Distribution	0%	N/A	N/A	TBD	0%	Deemed gross savings and NTG. No sampling uncertainty.
Combined Midstream/ Instant Discount Programs	N/A	2%	TBD	TBD	2%	Deemed gross savings and NTG ratio. Baseline efficiency for furnaces and NTG ratio.
Instant Discount Programs	N/A	N/A	1%	TBD	1%	Deemed gross savings and NTG ratio
Total	0.5%	2%	1%	TBD	0.5%	

Appendix J. Cost-Effectiveness and Emissions Methodology and Analysis

The evaluation team calculates cost-effectiveness for the Focus on Energy portfolio, programs, and offerings using the EUROPA tool. EUROPA is a flexible cost-effectiveness tool that our team can configure to calculate custom cost-effectiveness tests at varying levels of temporal granularity. The evaluation team previously calculated cost-effectiveness using a spreadsheet approach developed by the program administrator to help them screen new offerings prior to their implementation. This prior approach was limited to annual timeframes and offering-level calculations. Quad IV priorities established by the PSC may necessitate additional, time-varying tracking and measurement capabilities; therefore, in CY 2024, Focus on Energy transitioned to EUROPA. To confirm that the two methodologies deliver consistent results, CY 2025 cost-effectiveness was evaluated using both tools. Findings from the analysis are presented in this appendix.

The PSC considers the modified total resource cost (modified TRC) test to be the primary test for assessing the cost-effectiveness of both individual offerings and the entire Focus on Energy portfolio.¹⁸ The PSC also directed the evaluation team to conduct three additional tests for advisory purposes. These tests comprise an expanded TRC test that includes net economic benefits, the utility administrator cost test (UAT), and the societal test (SCT).

NTG ratios significantly affect the test results. The team applies NTG ratios to adjust offerings' gross electric and natural gas impacts so they reflect only the net gains resulting from the offering. Therefore, NTG ratios adjust for electric and natural gas impacts that would have been achieved without the efficiency offerings as well as participant spillover. The team removes savings when NTG is less than 1.0 and adds savings when NTG is greater than 1.0. In all cases, we multiply the gross impacts by NTG.

On the cost side, the team also removes expenditures that would have occurred without the efficiency effort. Specifically, we apply NTG to incremental measure costs for the modified TRC, expanded TRC, and SCT; however, we do not apply NTG to any costs in the UAT. Costs that would not have occurred in the absence of the offerings—such as delivery and administrative costs—are not impacted by NTG in any test.

¹⁸ The use of the modified TRC test as the primary cost-effectiveness test is directed by the PSC. Public Service Commission of Wisconsin. September 3, 2014. Quadrennial Planning Process II – Scope. Order PSC Docket 5-FE-100, REF#: 215245. Order was reconfirmed on November 14, 2022. Quadrennial Planning Process IV. Order PSC Docket 5-FE-104, REF#: 453081. http://apps.psc.wi.gov/vs2015/ERF_view/viewdoc.aspx?docid=453081.

J.1. Test Descriptions

The evaluation team used methods adapted from and consistent with the California Standard Practice Manual, the original standard of cost-effectiveness analysis for energy efficiency programs in the United States¹⁹ and the more recent National Standard Practice Manual for Benefit Cost Analysis of Distributed Energy Resources.²⁰ This section describes the four tests—the modified TRC test, the expanded TRC test, the UAT, and the societal test. The program administrator also used the resources to develop its cost-effectiveness calculator.

J.1.1. 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 to the SCT, which expands the test inputs to provide a more holistic societal perspective. The TRC test includes total participant and administrator costs and estimates of benefits in the form of avoided utility costs. Common modifications to the standard TRC test often involve reducing the discount rate or incorporating environmental and other non-energy benefits (such as emissions reduction benefits) to reflect a jurisdiction’s policy objectives. Wisconsin’s version of the modified TRC test accounts for the standard TRC test costs and benefits as well as monetized benefits of reduced emissions (carbon dioxide, sulfur oxide, and nitrogen oxide) due to saving energy.

In CY 2025, the evaluation team used the modified TRC test to determine whether the offerings were cost-effective from a regulatory perspective (as directed by the PSC) and, where feasible, measured the overall impacts of these offerings’ benefits and costs on the State of Wisconsin. In general, the test compares all benefits and costs that can be measured with a high degree of confidence, including any net avoided emissions that have values approved by the PSC. The test’s purpose is to determine whether the total net costs to Wisconsin residents, businesses, utilities, and Focus on Energy from operating the offerings are outweighed by the total net benefits these same groups receive via avoided energy costs and avoided emissions.

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 to the combination of administrative costs, delivery costs, and net participant incremental measure costs.

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

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

¹⁹ California Public Utilities Commission. July 2002. *California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects*. http://www.calmac.org/events/SPM_9_20_02.pdf

²⁰ [National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources](#). August 2020. [national-standard-practice-manual-benefit-cost-analysis-distributed-energy](#)

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Where:

$$\text{Value of Gross Saved Energy} = \text{Evaluated Savings} \times \text{Utility Avoided Costs}$$

J.1.2. 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 2025 offerings. The team conducts an analysis of economic benefits every two years and issues the results separately from the evaluation reports.

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

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

J.1.3. Utility Administrator/Offering 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 offerings as a resource option from the perspective of the Focus on Energy administrator. In Wisconsin, the UAT represents the collective perspectives of the participating utilities that hire and fund the administrator.

The UAT effectively estimates the portfolio's impact on utility revenue requirements (the costs of providing service) by comparing the benefits of avoided utility costs from avoided energy consumption to the combined costs of operating the offering, such as incentive payments, administrative costs, and delivery costs. A benefit/cost ratio above 1.0 indicates that the offering improves an energy system's operational cost-effectiveness.

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 offerings. The net benefits determined using 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; therefore, all are kept in the test (not subtracted from the denominator, as in the TRC and SCT).

The benefit/cost equation used for the UAT follows:

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

J.1.4. Societal Test

In addition to the expanded TRC, the evaluation team investigated the impact of several non-energy benefits (NEBs), such as health, water, purchase deferral, property value, and arrearage benefits that are included in the CY 2025 offerings. These non-energy benefits are estimated for purposes of reporting the results of the SCT.

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The benefit/cost equation used for the societal test is the following:

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

A more detailed discussion of the various non-energy benefits in the SCT is presented below.

J.2. Non-Energy Benefits

Table J-1 summarizes the non-energy benefits from the five metrics quantified in the SCT: health benefits, water benefits, purchase deferral benefits, property value benefits, and income-qualified arrearage benefits. Each benefit is further described in the following sections.

Table J-1. Non-Energy Benefits Results Summary

Benefit	Value	Unit
Health Benefit	\$0.0644	per kWh
Water Benefits - Residential	\$0.01092	per gallon
Water Benefits - Commercial	\$0.00982	per gallon
Purchase Deferral	Measure specific	Measure specific
Property Values	\$9,749	per home
Arrearages	\$26.93	per participant

J.2.1. Health Benefits

The evaluation team estimated the value of health benefits accumulated by reduced emissions attributable to offering activity. The team followed the method recommended by the U.S. Environmental Protection Agency (EPA) using the benefits per kilowatt-hour (BPK) tool. The EPA introduced the BPK tool in late fall 2019, using data from 2017, to help interested parties estimate health benefits from reduced emissions. The EPA last updated the tool in December 2024 using data from 2023.

The BPK tool relies on the AVoided Emissions and geneRation Tool (AVERT) regional inputs, which specify the blend of electric generation sources (coal, natural gas, hydroelectric, other renewables, etc.) and the downstream effects of particulate generation from those sources as determined in the Co-Benefits Risk Assessment (COBRA) health impacts screening and mapping tool.

BPK values are determined using the following equation:

$$BPK_{t,r} = \frac{HealthBenefits_{t,us}}{GenerationChange_{t,r}}$$

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Where:

$BPK_{t,r}$ = Annual monetized public health benefits per kilowatt-hour (c/kWh) for each energy efficiency/renewable energy technology type (t) and AVERT region (r)

$Health\ Benefits_{t,US}$ = Aggregated monetized public health benefits from emissions reductions for each type of energy efficiency/renewable energy technology (t) for the contiguous United States (U.S.) in 2023 dollars

$Generation\ Change_{t,r}$ = Change in electricity generation for each energy efficiency/renewable energy technology type (t) and AVERT region (r)

The effects of these emissions are then tied to the negative health outcomes associated with inhaling those particulates. The EPA's 2024 report on public health and energy provides an in-depth methodology for calculating these benefits.²¹ Figure J-1 shows a snapshot from the EPA's report for the included health inputs, along with the savings associated with each input.

²¹ U.S. Environmental Protection Agency. May 2021. *Public Health Benefits per kWh of Energy Efficiency and Renewable Energy in the United States: A Technical Report*. Page 53. https://www.epa.gov/sites/default/files/2021-05/documents/bpk_report_second_edition.pdf

Figure J-1. U.S. EPA Snapshot of Included Health Inputs

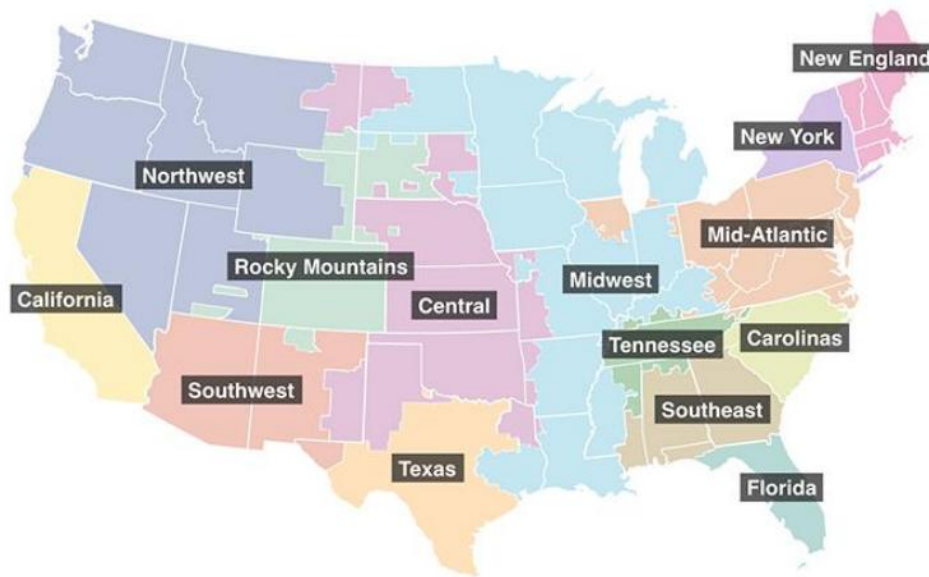
Health Endpoint	Age Range
Mortality ^a	25–99
Infant Mortality ^b	0–0
Acute Myocardial Infarction, Nonfatal ^c	0–24
Acute Myocardial Infarction, Nonfatal ^c	25–44
Acute Myocardial Infarction, Nonfatal ^c	45–54
Acute Myocardial Infarction, Nonfatal ^c	55–64
Acute Myocardial Infarction, Nonfatal ^c	65–99
Acute Myocardial Infarction, Nonfatal ^d	0–24
Acute Myocardial Infarction, Nonfatal ^d	25–44
Acute Myocardial Infarction, Nonfatal ^d	45–54
Acute Myocardial Infarction, Nonfatal ^d	55–64
Acute Myocardial Infarction, Nonfatal ^d	65–99
Hospital Admissions, All Cardiovascular (less-acute myocardial infarction)	18–64
Hospital Admissions, All Cardiovascular (less-acute myocardial infarction)	65–99
Hospital Admissions, All Respiratory	65–99
Hospital Admissions, Asthma	0–17
Hospital Admissions, Chronic Lung Disease	18–64
Asthma Emergency Room Visits (Smith et al. 1997)	0–99
Asthma Emergency Room Visits (Stanford et al. 1999)	0–99
Acute Bronchitis	8–12
Lower Respiratory Symptoms	7–14
Upper Respiratory Symptoms	9–11
Minor Restricted Activity Days	18–64
Work Loss Days	18–64
Asthma Exacerbation (cough, shortness of breath, or wheeze)	6–18

^a Mortality value after adjustment for 20-year lag.
^b Infant mortality value is not adjusted for 20-year lag.
^c Based on Russell (1998).
^d Based on Wittels (1990).

Source: U.S. Environmental Protection Agency

To determine Wisconsin-specific values, the evaluation team used the cost of emissions generated across the AVERT region that covers the state (Midwest, as shown in Figure J-2). The team assumed a 2% discount rate to comply with the PSC's decisions for Quadrennial Planning Process IV, the current Focus on Energy period.

Figure J-2. U.S. EPA AVERT Regions



Source: U.S. Environmental Protection Agency.

The inputs specific to Wisconsin health benefits are a low estimate value of 6.44 cents per kWh, a median estimate of 8.72 cents per kWh, and a high estimate value of 10.99 cents per kWh, as presented in Table J-2. The evaluation team determined that the lowest value was the most appropriate to use because it provides the most conservative estimate of offering-induced health benefits.

Table J-2. Wisconsin-Specific Health Benefits

Region	Technology	Cents/kWh (Low Estimate)	Cents/kWh (Median Estimate)	Cents/kWh (High Estimate)
Midwest - Wisconsin	Uniform energy efficiency	6.44	8.72	10.99

The team generated aggregated health benefits by applying 6.44 cents per kWh to the first five years of lifecycle program savings, a shorter period than claimed for lifetime emissions benefits in the modified TRC. This is in line with EPA recommendations not to extend savings beyond the five-year threshold because of uncertainty about the share of generation each region is expected to draw from various fuel sources during that period, and for the likelihood of revisions to health savings assumptions as the tool is regularly updated.²² For example, power sector emissions have been decreasing with increased deployment of pollution controls and shifts away from coal generation toward more natural gas and renewable sources, which are less polluting than coal and which may substantially reduce the risk of certain specific negative healthcare outcomes while leaving others unaffected.

²² U.S. Environmental Protection Agency. December 2024. *Public Health Benefits per kWh of Energy Efficiency and Renewable Energy in the United States: A Technical Report*. Page 6. https://www.epa.gov/system/files/documents/2024-12/bpk_report_third_edition.pdf

J.2.2. Water Benefits

The evaluation team estimated participant water delivery and wastewater bill savings attributed to reductions in volumetric water consumption accrued over the lifetime of the efficient measures installed. These benefits are estimated for each offering by the following equation:

$$\sum_{Measure=1}^n Units_{Measure} \times PV(Water Savings Per Unit_{Measure} \times Marginal Cost of Water, EUL_{Measure})$$

Where *PV* indicates a present value function that takes annual bill savings and the number of periods as inputs, and *n* indicates the count of unique measures installed within a particular offering.

The marginal cost of water is then shown in this equation:

$$Marginal Cost of Water = (Marginal Cost of Water Delivery + Marginal Cost of Wastewater Service)$$

The evaluation team acquired input data from various sources:

- Measure quantity ($Units_{Measure}$) came directly from Focus on Energy on an offering-by-offering basis.
- Volumetric water savings attributed to the efficient measure relative to some baseline measure ($Water Savings Per Unit_{Measure}$) were calculated using the Wisconsin TRM. The evaluation team scaled the savings data by the NTG ratio for each offering.
- The water delivery rate ($Marginal Cost of Water Delivery$) was estimated using a weighted averaging algorithm from a sample of 25 water utilities in Wisconsin. This sample includes the 10 largest water utilities in Wisconsin, a random sample of 10 utilities from the smallest 50% of utilities in Wisconsin, and a random sample of five additional utilities in Wisconsin, with size measured by the average number of customers served.²³
- From these 25 utilities, the evaluation team calculated average marginal (volumetric) delivery rates for each utility for both residential and commercial sectors by taking the arithmetic mean of the highest and lowest rate tiers charged by each utility.²⁴ The team then calculated overall rate estimates by taking weighted averages of these utility-specific averages for both residential and commercial sectors, where each utility's weight is proportional to the utility's average number of customers relative to the sum of each utility's average number of customers for all utilities included in the sample. The final 2023 water delivery rate estimates for Wisconsin are \$3.96 and \$3.91 per 100 cubic feet for residential and commercial sectors, respectively.

²³ The team acquired utility sales data from the PSC's E-Services Portal, using 2022 and 2023 water sales data. Public Service Commission of Wisconsin. March 2024. E-Services Portal: Municipal Annual Report Data. <https://apps.psc.wi.gov/ARS/WEGSqueries/default.aspx>

²⁴ The team acquired utility tariff data from the Public Service Commission of Wisconsin's E-Services Portal. Public Service Commission of Wisconsin. March 2024. E-Services Portal: Utility Tariffs. <https://apps.psc.wi.gov/RATES/tariffs/default.aspx?tab=4>

Table J-3 summarizes the weighted averaging algorithm used to calculate residential rates in Wisconsin, including intermediate calculation results.²⁵

Table J-3. Residential Water Rate Algorithm Example

Utility Size Bracket	Rank by Gallons Sold	Utility Name	Average Number of Customers	Weight (Utility Customers/ Customers in Sample)	Lowest/ Highest Tier Rates ^a	Rate Average
Top 10	1	Milwaukee Water Works	160,775	33.74%	\$2.46	\$2.46
	2	Madison Water Utility	71,429	14.99%	Low: \$4.60; High: \$10.52	\$7.56
	3	Racine Water Works Commission	34,493	7.24%	Low:\$2.41; High:\$3.11	\$2.76
	4	Green Bay Water Utility	36,091	7.57%	Low: \$1.89; High: \$2.66	\$2.28
	5	City of Oshkosh Water Utility	23,979	5.03%	Low: \$4.26; High: \$5.12	\$4.69
	6	Janesville Water Utility	25,735	5.40%	Low: \$2.19; High: \$3.70	\$2.95
	7	Appleton Water Department	28,334	5.95%	Low: \$4.68; High: \$6.08	\$5.38
	8	Fond Du Lac Water Utility	16,315	3.42%	Low: \$4.31; High: \$4.74	\$4.53
	9	City of Waukesha Water Utility	20,749	4.35%	Low: \$5.82; High: \$9.64	\$7.73
	10	Kenosha Water Utility	31,406	6.59%	Low: \$1.76; High: \$2.26	\$2.01
Random Sample of 10 from Smallest 50%	338	Crandon Water and Sewer Utility	745	0.16%	Low: \$2.65; High: \$3.92	\$3.28
	365	Arlington Water Utility	323	0.07%	\$11.41	\$11.41
	392	Hixton Municipal Water Utility	209	0.04%	Low: \$6.12; High: \$6.95	\$6.54
	402	Town of Farmington Sanitary District	300	0.06%	Low: \$5.35; High: \$9.00	\$7.18
	404	Lannon Municipal Water Utility	486	0.10%	\$5.54	\$5.54
	426	Clyman Utility Commission	141	0.03%	Low: \$1.22; High: \$1.58	\$1.40
	507	Loganville Municipal Water and Sewer Utility	144	0.03%	\$5.12	\$5.12
	508	Lowell Municipal Water and Sewer Utility	117	0.02%	\$6.90	\$6.90

²⁵ Some participants obtained water from sources outside of conventional water delivery from a water utility, such as from natural bodies of water. These participants were not subject to the same marginal cost of delivery charged by water utilities. Because of an inability to reliably identify the source of water saved by program participants, the evaluation team conservatively assumed a water bill savings of \$0 for those larger customers.

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Utility Size Bracket	Rank by Gallons Sold	Utility Name	Average Number of Customers	Weight (Utility Customers/ Customers in Sample)	Lowest/ Highest Tier Rates ^a	Rate Average
	515	Stone Lake Sanitary District	140	0.03%	\$4.60	\$4.60
	535	Town of Knight Municipal Water Utility	114	0.02%	Low: \$5.68; High: \$6.04	\$5.86
Random Sample of Five from Through-out	97	Brookfield Municipal Water Utility	13,196	2.77%	Low: \$3.95; High: \$4.80	\$4.38
	157	Village of Pewaukee Water Utility	2,178	0.46%	Low: \$3.20; High: \$3.85	\$3.47
	175	Ripon Water Utility	3,095	0.65%	Low: \$1.63; High: \$2.14	\$1.89
	253	Redgranite Water Utility	434	0.09%	Low: \$1.88; High: \$2.15	\$2.02
	451	Village of Allouez Water	5,567	1.17%	Low: \$6.35; High: \$10.30	\$8.33
Final Rate Estimate						\$3.96

^a Utilities that list one rate offer a flat rate to their customers.

The following bullets list the rate development and economic assumptions by input component.

- Wastewater rate development.** The team calculated the wastewater service rate (*Marginal Cost of Wastewater Service*) estimate from a population-weighted average of marginal (volumetric) wastewater charges for 326 (41%) Wisconsin wastewater service territories. We acquired population and volumetric charge data from the Wisconsin Sewer User Charge Survey Report.²⁶ The final wastewater rate estimate is \$3.96 per 100 cubic feet for both residential and commercial. This estimate accounts for the prevalence of utilities with no volumetric wastewater charge. The team used the same values and method as in 2019 due to a lack of updated data on wastewater service rates for 2025.
- Private well analysis.** The team conducted a well-water pump analysis to estimate the water delivery rate for the population that uses privately owned wells and pump systems rather than those that are connected to the municipal system. According to research, 31% of the Wisconsin population uses privately owned wells.²⁷ The team applied a weighted average to the water delivery rates to reflect both water delivery types and calculated the residential water delivery rate as \$0.01092 per gallon.
- Commercial sector conversion.** The commercial sector costs of \$3.91 for delivery and \$3.24 for wastewater per 100 cubic feet of water equate to \$0.00982 per gallon.

²⁶ MSA Professional Services, Inc. October 2019. *The Cost of Clean: Wisconsin Sewer User Charge Survey Report*.

²⁷ Wisconsin Department of Natural Resources. *Wisconsin Public Water Systems 2020 Annual Drinking Water Report*. June 2021. <https://dnr.wisconsin.gov/sites/default/files/topic/DrinkingWater/2020AnnualDrinkingWaterReport.pdf>

- **General economic assumptions:**
 - The team derived the effective useful life (EUL) of an efficient measure ($EUL_{Measure}$) from the 2025 Wisconsin TRM.
 - The team assumed a real annual discount rate of 2%.
 - The team included an inflation factor of 3% applied to CY 2024 values (which had accounted for inflation from CY 2023 values) and future years.
 - Between Residential and Nonresidential customers, Focus on Energy participants saved a net of approximately 2.1 million gallons of water in CY 2025

J.2.3. Purchase Deferral

Purchase deferral benefits account for the avoided costs of future baseline measure replacement when the useful life of an efficient measure exceeds the useful life of the baseline measure it replaces. The evaluation team estimated purchase deferral benefits for lighting and non-lighting measures.

Lighting

The team estimated purchase deferral benefits for lighting measures on an EUL basis, where the lifetime of efficient measures (fixtures and lamps) tends to exceed that of their corresponding baseline measures. The implementation of the full Energy Independence and Security Act (EISA) in 2023 greatly reduced the theoretical benefits from purchase deferral, as most short-lived screw-based incandescent and halogen lamps were no longer available for purchase, and as the Focus on Energy portfolio largely phased out providing incentives for most screw-based LED lighting measures.

The evaluation team assumed that participants of Focus on Energy offerings would have replaced each baseline measure with an identical baseline or equivalent at regular intervals equal to the baseline measure’s useful life. We estimated purchase deferral benefits for each offering by the following generalized expression:

$$\sum_{Measure=1}^n Units_{Measure} \times PV(Avoided\ Replacement\ Costs_{Measure})$$

Where PV indicates a present value function, and *Avoided Replacement Costs* refers to the value of avoided baseline measure replacements over the lifetime of the efficient measure.

For each efficient measure installed, the evaluation team attempted to identify a corresponding baseline measure from the Mid-Atlantic TRM, which includes a study of purchase deferral benefits for lighting measures.²⁸ Where available, the team used the present value of purchase deferral benefits provided explicitly by the Mid-Atlantic TRM.

²⁸ Northeast Energy Efficiency Partnerships. October 2019. *Mid-Atlantic Technical Reference Manual, Version 9*. <https://neep.org/sites/default/files/resources/Mid Atlantic TRM V9 Final clean wUpdateSummary%20-%20CT%20FORMAT.pdf>

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In cases where the Mid-Atlantic TRM did not provide purchase deferral benefit estimates or the efficient measure installed through a Focus on Energy offering was not an exact match, the team conducted research to identify the EUL (in life-hours and years) and the cost of the baseline measure indicated in the TRM. The team used these two inputs to estimate benefits accrued from each avoided baseline replacement over the lifetime of the efficient measure, reduced by the Focus on Energy discount rate of 2%. Finally, the team scaled the calculated savings by the NTG ratio for each offering.

Non-Lighting

For non-lighting measures, the evaluation team estimated purchase deferral benefits based on the deferral of maintenance costs. The team leveraged EUL benchmarking data from July 2020 to June 2021 to prioritize significant non-lighting measures based on the MMBtu saving contribution. For the identified measures, the team reviewed the Non-Energy Impacts study in the Mass Save TRM,²⁹ reviewing the benefits arising from equipment maintenance costs for available measures.

Based on the Mass Save TRM, the team estimated purchase deferral benefits for the following non-lighting measures:

- Residential boilers
- Residential furnaces
- Residential thermostats
- Residential/retail ductless mini-split heat pumps

Based on the sourced data, we estimated benefits accrued from avoided equipment maintenance costs over the lifetime of the non-lighting measure and applied the Focus on Energy discount rate of 2%. We then scaled the calculated savings by the NTG ratio for each offering.

J.2.4. Property Values

Participating in energy efficiency programs can increase the value of a home and its associated property. Customers who participate in whole-home offerings, such as the Insulation and Air Sealing offering, are most likely to see increases in property values.

In 2012, Cadmus completed a study for People Working Cooperatively (PWC), a provider of whole-home weatherization for low-income individuals in Cincinnati, examining the impact of low-income whole-home weatherization programs on home value.³⁰ In this study, Cadmus found a \$7,000 increase in property value for participants in the PWC program compared with nonparticipants with similar homes. A more recent study done in 2021 by Oak Ridge National Laboratory confirms that a whole-home weatherization project would increase property value for low-income customers.³¹ Though these studies were specific to low-

²⁹ Non-Energy Benefits. *Massachusetts Technical Reference Manual*. May 2020. <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/12190505>

³⁰ Cadmus. December 2012. *PWC 2009 Ohio Program Services Evaluation Report*. Prepared for People Working Cooperatively. http://www.pwchomerepairs.org/Assets/PWC_2009_Evaluation_FINAL_DEC12.pdf

³¹ Oak Ridge National Laboratory. March 2021. *Addressing Non-Energy Impacts of Weatherization*. [ORNLSR-2020-1840.pdf](https://www.ornl.gov/sites/default/files/2021-03/ORNLSR-2020-1840.pdf)

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income customers, the team deems that the increase in property value can be applied to all customers who complete a whole-home weatherization project.

Many factors can impact home value, making it difficult to measure this benefit. To adjust for inflation from 2012, the evaluation team calculated the net present value (NPV) of \$7,000 as \$9,749 per home. Therefore, for Wisconsin Focus on Energy, the team used an NPV benefit of \$9,749 per whole-home participant (both standard income and income-qualified) of the Insulation and Air Sealing offering within the Trade Ally Solutions Program (formerly the Home Performance with ENERGY STAR Program).

J.2.5. Arrearages

Outstanding customer debt incurs costs for the utility and the customer, including financing costs (e.g., carrying costs, bad-debt write-offs), shutoffs, reconnections, sending notices, and debt collection. Low-income programs provide customers with the opportunity to reduce monthly bills, which in turn lowers the probability they will carry debt and, among those who do carry debt, helps reduce the overall amount owed.

Several utilities have included the reduced arrearage costs associated with providing low-income program benefits in their societal tests. However, there does not appear to be a universally agreed-upon per-participant value associated with these benefits. Limited primary research is available, but what does exist is not recent. Nevertheless, the evaluation team reviewed two benchmarking analyses (Skumatz Economic Research Associates, Inc. and Cadmus in 2010 and Skumatz Economic Research Associates, Inc. 2014),^{32,33} which compiled several potential inputs related to the utility benefits associated with low-income programs.

The 2014 study found a typical arrearage-related carrying cost of \$2.50 per participant, with an additional \$1.75 associated with paying off bad debt and \$2.15 in total costs from shutoffs and reconnects, notices, and customer calls/collections. These direct arrearage costs sum to \$6.40, with an additional \$13 per customer also attributed to reduced low-income subsidy payments and discounts if the program was strictly low-income. Figure J-3 shows a snapshot of the study's findings.

³² Skumatz Economic Research Associates, Inc. & The Cadmus Group. 2010. *Non Energy Benefits: Status, Findings, Next Steps, and Implications for Low Income Program Analyses in California – Revised Report*.

³³ Skumatz Economic Research Associates, Inc. 2014. *Non-Energy Benefits/Non-Energy Impacts (NEBS/NEIS) and Their Role & Values In Cost-Effectiveness Tests: State Of Maryland*.

Figure J-3. Typical Utility Costs Associated with Customer Debt

NEB Estimates from Multiple Weatherization Studies: Dollar and Percentage Analysis	Dollar NEB Values Range Low-High	Typical Value	Percent NEB Values Range Low-High	Typical Value	Notes
UTILITY PERSPECTIVE					
Payment-related					
Carrying cost on arrearages	\$1.50 - \$4.00	\$2.50	0.6% - 4.4%	2.0%	Total arrearages \$2-\$100; \$20-30 typical
Bad Debt Write-offs	\$0.50 - \$3.75	\$1.75	0.4% - 2.0%	0.7%	
Reduced LI subsidy pymt/discouts	\$3.00 - \$25.00	\$13.00	3.9% - 29.0%	16.4%	IF low income program
Shutoffs / Reconnects	\$0.10 - \$3.65	\$0.65	0.1% - 4.4%	0.5%	
Notices	\$0.05 - \$1.50	\$0.60	0.1% - 1.8%	0.9%	
Customer calls / collections	\$0.40 - \$1.60	\$0.90	0.2% - 1.9%	0.6%	

Source: Skumatz Economic Research Associates, Inc. 2014

Therefore, for Focus on Energy, the evaluation team included a per-participant value of \$26.93 (\$19.40 from 2014 adjusted for inflation) applied to income-qualified customers in the Trade Ally Solutions and Instant Discount Programs based on the results of the most direct benchmarking research available.

The evaluation team reviewed other, more recent evaluations of the impact of various program designs on the amount of debt participants carry. One of these programs, a prepayment program in the upper Midwest, showed evidence that customers were able to eliminate approximately \$68 in total debt after participating in the program for at least one calendar year. However, key differences between that program design and the low-income offerings in Wisconsin make direct comparisons difficult. These differences include the targeting or opening of that offering to customers who are not low-income. That is, the total debt paid off through that prepayment program is not necessarily comparable to the debt held by strictly low-income customers in Focus on Energy’s offerings in Wisconsin.

J.3. 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.

Test results summarize the impact of the Focus on Energy portfolio of programs from different perspectives, with test scores above 1.0 indicating that the portfolio benefits outweigh the costs associated with generating those benefits. A modified TRC test score above 1.0 suggests that Focus on Energy is providing a net benefit, with energy and emissions benefits weighed against administrator and participant costs. The UAT score above 1.0 suggests that administrator costs, including incentives, program management, and implementation, are outweighed by avoided energy and capacity benefits. The expanded TRC and SCT compare the same system-wide costs as the modified TRC against those same benefits, with additional benefits accruing from economic activity and non-energy benefits also included.

J.4. Energy Avoided Costs

The PSC established the methodology to estimate electric and natural gas avoided energy costs for Quadrennium IV under PSC docket 5-FE-104 (PSC REF#: 453081). The approach represents a continuation of the avoided cost methodology previously used in Quadrennium II and III. The source for electric avoided costs is based on the Midcontinent Independent Transmission System Operator (MISO)

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forecasted locational marginal price (LMP), that is, the average of LMPs across Wisconsin nodes. Avoided natural gas costs are calculated based on Energy Information Administration 2023 Annual Energy Outlook forecasts of Henry Hub prices, adjusted using Wisconsin City Gate prices and retail prices.

Compared with the previous quadrennium, the updated price forecasts for the current quadrennium, the evaluation team used to calculate avoided costs, are lower by approximately 10% in early years (CY 2025 to CY 2026), to more than 60% in the furthest out years (CY 2040 to CY 2050). The primary driver of the lower trend in avoided electric energy costs is the anticipated ramp-up of zero-fuel-cost renewable energy sources, particularly grid-scale solar, in MISO's forecast modeling. Changes to avoided natural gas costs and avoided T&D costs were also lower than in the previous quadrennium.

The PSC has determined that, for purposes of evaluating Focus on Energy, avoided electric capacity costs shall be based on the unit cost of a peaker plant. The PSC established the step-by-step methodology to estimate avoided electric capacity costs under PSC docket 5-FE-101 (PSC REF#: 390566).³⁴ The PSC approved this methodology to carry forward for the current quadrennium under PSC docket 5-FE-104 (PSC REF#: 453081).³⁵ The approach relies upon MISO-established Cost of New Entry (CONE) values and MISO Narrow Constrained Area net revenues to calculate avoided capacity costs.

The forecast model decreases the verified gross energy savings by the conventional NTG attribution factor to derive net savings. The model then increases the net savings by an 8% line loss factor to account for avoided distribution losses. Table J-4 shows the avoided cost assumptions used for the cost-effectiveness tests for CY 2023 (the first year of Quadrennium IV), CY 2024, and CY 2025. CY 2025 annual avoided cost values are identical to those used in CY 2023 and CY 2024 in each year, but reporting tables have been updated to only reflect the years included in this year's analysis. Table J-5 shows avoided electric generation costs, Table J-6 shows avoided electric capacity costs, and Table J-7 shows avoided natural gas costs for 2025 through 2056.

³⁴ Public Service Commission of Wisconsin. June 1, 2022. Quadrennial Planning Process III. Order PSC Docket 5-FE-101, PSC REF#: 390566. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=390566>

³⁵ Public Service Commission of Wisconsin. November 14, 2022. Quadrennial Planning Process IV. Order PSC Docket 5-FE-104, [PSC REF#: 453081](https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=453081).

Table J-4. Avoided Costs Summary

Avoided Cost	CY 2023	CY 2024	CY 2025
Electric Energy (\$/kWh)	\$0.0299– \$0.0210	\$0.0292– \$0.0212	\$0.0286– \$0.0214
Electric Capacity (\$/kW year)	\$177.33– \$194.34	\$176.06– \$196.46	\$174.29– \$198.61
Gas (\$/therms)	\$0.463– \$0.621	\$0.451– \$0.628	\$0.464– \$0.635
Transmission and Distribution (\$/kW year)	\$49.25– \$54.29	\$48.98– \$54.88	\$48.78– \$55.48
Avoided Cost Inflation	0%	0%	0%
Real Discount Rate	2%	2%	2%
Line Loss	8%	8%	8%

Table J-5. Avoided Electric Generation Costs

Year	Avoided Generation (\$/kWh-Yr)	Year	Avoided Generation (\$/kWh-Yr)
2025	\$0.0286	2041	\$0.0165
2026	\$0.0280	2042	\$0.0168
2027	\$0.0273	2043	\$0.0171
2028	\$0.0267	2044	\$0.0175
2029	\$0.0260	2045	\$0.0178
2030	\$0.0254	2046	\$0.0182
2031	\$0.0248	2047	\$0.0185
2032	\$0.0241	2048	\$0.0189
2033	\$0.0223	2049	\$0.0192
2034	\$0.0205	2050	\$0.0196
2035	\$0.0187	2051	\$0.0199
2036	\$0.0169	2052	\$0.0203
2037	\$0.0151	2053	\$0.0206
2038	\$0.0154	2054	\$0.0210
2039	\$0.0158	2055	\$0.0212
2040	\$0.0161	2056	\$0.0214

Table J-6. Avoided Electric Capacity Costs

Year	Avoided Capacity Cost (\$/kW-Yr)	Year	Avoided Capacity Cost (\$/kW-Yr)
2025	\$174.29	2041	\$176.31
2026	\$172.53	2042	\$177.66
2027	\$170.77	2043	\$179.01
2028	\$169.02	2044	\$180.37
2029	\$167.27	2045	\$181.73
2030	\$165.54	2046	\$183.11
2031	\$163.80	2047	\$184.49
2032	\$172.55	2048	\$185.87
2033	\$172.22	2049	\$187.27
2034	\$171.91	2050	\$188.67
2035	\$171.59	2051	\$190.07
2036	\$171.29	2052	\$191.49
2037	\$170.99	2053	\$192.91
2038	\$172.31	2054	\$194.34
2039	\$173.64	2055	\$196.46
2040	\$174.97	2056	\$198.61

Table J-7. Avoided Natural Gas Costs

Year	Avoided Natural Gas Cost (\$/Therms)	Year	Avoided Natural Gas Cost (\$/Therms)
2025	\$0.464	2041	\$0.571
2026	\$0.480	2042	\$0.568
2027	\$0.490	2043	\$0.564
2028	\$0.511	2044	\$0.564
2029	\$0.530	2045	\$0.565
2030	\$0.538	2046	\$0.567
2031	\$0.541	2047	\$0.571
2032	\$0.551	2048	\$0.579
2033	\$0.561	2049	\$0.588
2034	\$0.566	2050	\$0.595
2035	\$0.569	2051	\$0.601
2036	\$0.569	2052	\$0.608
2037	\$0.568	2053	\$0.614
2038	\$0.571	2054	\$0.621
2039	\$0.571	2055	\$0.628
2040	\$0.571	2056	\$0.635

J.5. Avoided Transmission and Distribution Costs

In its Final Decision of June 1, 2020, the PSC directed the Evaluation Work Group (EWG) to propose a methodology for calculating avoided T&D costs for use in evaluating Focus on Energy (PSC REF#: 390566). In its Final Decision of March 10, 2021, the PSC approved the EWG’s recommended methodology to estimate avoided electric T&D costs for Quadrennium III under PSC docket 5-FE-101 (PSC REF#: 406591).³⁶

As stated in the commission order:

“In order to reduce the year-to-year variability of the costs, a four-year running average of the total miles and the annualized cost per mile per kW-Year are multiplied to get the average cost per kW-Year. For projecting values in future years, this approach escalates the most recent average Midcontinent Independent System Operating (MISO) Cost of New Entry (CONE) value by a growth factor that takes into account inflation and construction costs. The growth factor is calculated by taking the four-year average of construction cost growth as determined by the Wisconsin Department of Transportation in the Chained Fisher Construction Cost Index, and subtracting inflation (U.S. Bureau of Labor Statistics Consumer Price Index, Midwest Region),³⁷ over the same period.”

The evaluation team applied the method first approved in Quadrennium III and specified above to estimate avoided T&D costs per kW for each year from CY 2025 to CY 2056. Table J-8 lists these values.

³⁶ Public Service Commission of Wisconsin. March 10, 2021. Quadrennial Planning Process III. Order PSC Docket 5-FE-101, REF#: 406591. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=406591>

³⁷ Bureau of Labor Statistics Midwest CPI Summaries available here: [Midwest CPI Summaries : Midwest Information Office : U.S. Bureau of Labor Statistics \(bls.gov\)](#)

Table J-8. Calculated and Forecasted Avoided T&D Costs

Year	Avoided T&D Cost (\$/kW-Yr)	Year	Avoided T&D Cost (\$/kW-Yr)
2025	\$48.78	2041	\$50.60
2026	\$48.65	2042	\$50.85
2027	\$48.58	2043	\$51.11
2028	\$48.55	2044	\$51.38
2029	\$48.56	2045	\$51.65
2030	\$48.62	2046	\$51.93
2031	\$48.70	2047	\$52.21
2032	\$48.81	2048	\$52.49
2033	\$48.95	2049	\$52.78
2034	\$49.10	2050	\$53.07
2035	\$49.28	2051	\$53.37
2036	\$49.47	2052	\$53.67
2037	\$49.67	2053	\$53.98
2038	\$49.89	2054	\$54.29
2039	\$50.12	2055	\$54.88
2040	\$50.35	2056	\$55.48

J.6. Emissions Benefits

The modified TRC benefit/cost calculations include the benefit of avoiding exposure to three air pollutants regulated under the Clean Air Act. These are carbon dioxide, sulfur dioxide, and nitrogen oxide. Determining the emissions benefits requires three key parameters: lifecycle net energy savings, emissions factors or a tool that uses emissions factors, and the dollar value of the displaced emissions.

Emission factors are the rates at which criteria pollutants are emitted per unit of energy generated and are most often expressed in tons of pollutant per unit of energy. 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 discounted annual dollar value of the reduced emissions per ton is, therefore, the avoided emissions benefit, as shown in this equation:

$$\begin{aligned}
 & \text{Value of Avoided Emissions} \\
 = & \sum_{\text{Years=MeasureEUL}}^n (\text{Annual Emissions Factor} * \text{Annual Emissions} * \text{Annual Market Value of Emissions})^{PV}
 \end{aligned}$$

Where *PV* indicates a present value function that takes annual emissions results and the number of periods as inputs, and *n* indicates the count of unique measures installed within a particular offering.

For CY 2023, CY 2024, and CY 2025, the evaluation team assessed the benefits of electric emissions for Focus on Energy using AVERT, a tool developed by the EPA to calculate avoided emissions from

renewable energy and energy efficiency programs. AVERT is a spreadsheet-based model that uses historical hourly generation and emissions data to identify the individual power plants that are likely to be displaced by energy efficiency or renewable energy during each hour of the year.

To use AVERT to calculate electric emissions benefits, the lifecycle net electric savings for Focus on Energy need to be attributed to an AVERT region. As shown in Figure J-2 above, Wisconsin falls into a single AVERT region.

Savings for Focus on Energy offerings are run through a region-specific version of AVERT to calculate the electric emissions benefits for each offering. AVERT uses a model from the previous year to compare the electricity generation avoided by the Focus on Energy offerings during each hour of the year with the hourly generation information to determine the amount of emissions displaced.

Table J-9 lists the gas emissions factor and allowance prices. For CY 2025, the electric emissions scalar was 792 tons of carbon dioxide per GWh, which is unchanged from CY 2024³⁸. Note that this can be used to estimate avoided tons of carbon from electric savings; however, it is not exact, will not apply to other years or regions, and will vary in results based on input GWh.

Table J-9. Emissions Factors and Allowance Price for CY 2025

Service Fuel Type	Carbon Dioxide	Nitrogen Oxide	Sulfur Dioxide
Electric Emissions Factor (Tons/MWh)	0.792	0.0004	0.0005
Gas Emissions Factor (Tons/MThm)	5.85	N/A	N/A
Allowance Price (\$/Ton)	\$28.36	\$8.50	\$2.50

For CY 2025, as in previous years, the evaluation team continued to confirm that allowance prices for nitrogen oxide and sulfur dioxide emissions were in line with recent annual auction prices held under the EPA’s Cross State Air Pollution Rule, most recently updated in 2023.³⁹ The team used the carbon dioxide emissions price in the PSC’s Order, docket 5-FE-104, PSC REF#: 487366, which states, “For the purposes of evaluating Focus in Quad IV, a starting point market-based value of \$24.77 per ton of avoided carbon emissions is reasonable and in the public interest.”⁴⁰ Further, this value will increase by 7% in each year of Quad IV, which has a first-year value of \$28.36 per ton in CY 2025.

³⁸ The EPA has not updated the data used in AVERT since 2024. The most current version of the tool relies on data from 2017 through 2023. U.S. EPA. Accessed April 19, 2026, <https://www.epa.gov/avert/avert-web-edition>

³⁹ U.S. EPA. Accessed April 19, 2026. “Progress Report -Program Compliance and Market Activity.” <https://www.epa.gov/power-sector/progress-report-program-compliance-and-market-activity>.

⁴⁰ Public Service Commission of Wisconsin. December 21, 2023. Quadrennial Planning Process IV. Order PSC Docket 5-FE-104, REF#: 487366. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=487366>

The natural gas emission factor has remained constant since the CY 2011 evaluation report and is derived from a best practice greenhouse gas inventory method developed by the California Energy Commission.⁴¹

Table J-10 lists the total avoided emissions by gas type in tons for CY 2023, CY 2024, and CY 2025.

Table J-10. Total Emissions Benefits by Gas Type

Year	Carbon Dioxide	Nitrogen Oxide	Sulfur Oxide
CY 2023 Tons of Emissions Avoided	6,844,843	2,437	3,006
CY 2024 Tons of Emissions Avoided	6,539,245	2,612	3,200
CY 2025 Tons of Emissions Avoided	6,262,340	2,319	2,842

Table J-11 lists the emissions benefits for all programs by segment. The substantial increase in relative benefits between CY 2023 and CY 2025 is primarily due to the increase in per-ton emissions benefits, which grew from \$15 in CY 2022⁴² to a first year value of \$24.77 in CY 2023 and a first year value of \$28.36 in CY 2025, which then is continually increased by 7% per year over the full measure life of all measures in the portfolio.⁴³

Table J-11. Total Emissions Benefits by Segment

Year	Residential	Nonresidential	Total
CY 2023 Emissions Benefits	\$48,554,654	\$187,153,229	\$244,712,899
CY 2024 Emissions Benefits	\$45,759,843	\$202,928,978	\$250,439,621
CY 2025 Emissions Benefits	\$64,030,700	\$212,036,811	\$276,067,511

J.7. Offering Costs

Focus on Energy’s fiscal agent, the accounting firm Wipfli, provided the CY 2025 offering costs to the evaluation team, which represent all costs associated with running the efficiency offerings (including administration and delivery costs). Note that incentive costs are not included as TRC or SCT costs because they are deemed transfer payments, which is consistent with industry guidelines defining the TRC test. Incentive costs; however, are used in the UAT.

J.8. Incremental Costs

The gross incremental costs are the additional costs incurred by participants when purchasing efficient equipment, over and above those for a baseline non-qualified product. The evaluation team derived the gross incremental cost values used in this CY 2025 evaluation from the incremental cost study conducted

⁴¹ California Air Resources Board. 2019. *California Greenhouse Gas Emissions for 2000 to 2017*. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf

⁴² Public Service Commission of Wisconsin. June 6, 2018. Quadrennial Planning Process III. Order PSC Docket 5-FE-101, REF#: 343909. http://apps.psc.wi.gov/vs2015/ERF_view/viewdoc.aspx?docid=343909

⁴³ Public Service Commission of Wisconsin. June 6, 2018. Quadrennial Planning Process IV. Order PSC Docket 5-FE-104, REF#: 487366. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=487366>

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by the administrator, implementers, and evaluation team in CY 2025. This study 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.

J.9. Wisconsin Bill Payer Impacts

The evaluation team determined average annual and projected lifetime values in total bill savings attributable to reductions in energy consumption due to program activity (Table J-12). The team did not apply these results to any cost-effectiveness test but provided them here for informational purposes. To calculate bill impacts, the team collected annual 2025 residential and nonresidential electricity rates from utility websites for Alliant Energy (Wisconsin Power and Light), We Energies, Madison Gas and Electric, Upper Peninsula Power Company, Xcel Energy (Northern States Power), and Wisconsin Public Service Corporation. The team gathered annual 2025 Natural Gas rates from the Energy Information Administration (EIA) website,⁴⁴ and then weighted them using the same population-based ratios used to develop avoided electric generation costs.

Table J-12. Bill Savings Inputs and Estimates

	Weighted Average Rate (\$/kWh or therms)	Annual Net Bill Savings	Average Measure Life	Total Projected Lifetime Bill Savings
Residential Rate (kWh)	\$0.1686	\$7,226,544	20	\$118,164,357
Nonresidential Rate (kWh)	\$0.1507	\$43,084,790	16	\$584,905,868
Residential Rate (therms)	\$1.0347	\$5,393,234	17	\$75,861,619
Nonresidential Rate (therms)	\$0.7987	\$9,664,022	16	\$129,736,079

⁴⁴ EIA. "Natural Gas Prices." Retrieved April 1, 2026. https://www.eia.gov/dnav/ng/NG_PRI_SUM_DCU_SWI_A.htm

J.10. Cost-Effectiveness Results by Test

Table J-13 presents the inputs and results from the modified TRC test for the Focus on Energy CY 2025 energy efficiency and renewable resource portfolio. Application of the modified TRC test showed that net statewide benefits to residents, businesses, and Focus on Energy from the CY 2025 offerings were \$409,450,135.

Table J-13. CY 2025 Sector-Level and Overall Results, Modified TRC

	Residential	Nonresidential	Total
Administrative Costs	\$1,193,586	\$1,507,266	\$2,700,851
Delivery Costs	\$13,129,133	\$22,516,578	\$35,645,711
Incremental Measure Costs	\$101,733,939	\$155,713,655	\$257,447,594
Total TRC Costs	\$116,056,658	\$179,737,499	\$295,794,156
Electricity Benefits (kWh)	\$16,668,009	\$94,818,479	\$111,486,489
Capacity Benefits (kW)	\$36,206,048	\$106,958,935	\$143,164,983
Gas Benefits	\$46,226,228	\$87,248,817	\$133,475,045
Emissions Benefits	\$64,030,700	\$212,036,811	\$276,067,511
T&D Benefits	\$10,369,617	\$30,680,646	\$41,050,264
Total TRC Benefits	\$173,500,603	\$531,743,689	\$705,244,292
TRC Benefits Minus Costs	\$57,443,945	\$352,006,190	\$409,450,135
TRC Benefit/Cost Ratio	1.49	2.96	2.38

Table J-14 presents the inputs and results from the expanded TRC test for the Focus on Energy CY 2025 energy efficiency and renewable resource portfolio. The expanded TRC test includes economic benefits from the portfolio. As expected, the inclusion of economic benefits substantially increases the expanded TRC score from the modified TRC.

Table J-14. CY 2025 Overall Results, Expanded Total Resource Cost Test

	Total
Administrative Costs	\$2,700,851
Delivery Costs	\$35,645,711
Incremental Measure Costs	\$257,447,594
Total TRC Costs	\$295,794,156
Electricity Benefits (kWh)	\$111,486,489
Capacity Benefits (kW)	\$143,164,983
Gas Benefits	\$133,475,045
T&D Benefits (kW)	\$41,050,264
Emissions Benefits	\$276,067,511
Economic Benefits ^a	\$350,641,367
Total TRC Benefits	\$1,055,885,658
TRC Benefits Minus Costs	\$760,091,502
TRC Benefit/Cost Ratio	3.57

^a Cadmus. *Focus on Energy 2019-2022 Quadrennium Economic Impacts, updated to incorporate 2025 inflation (2.98%).*
[2019-2022 Quad Economic Impacts Final Report \(focusonenergy.com\)](https://www.focusonenergy.com/2019-2022-Quad-Economic-Impacts-Final-Report)

Table J-15 presents the inputs and results from the UAT for the CY 2025 Focus on Energy portfolio. The results indicate that the benefits generated by the portfolio far outweigh the combined costs of operating the programs.

Table J-15. CY 2025 Sector-Level and Overall Results, Utility Administrator Cost Test

	Residential	Nonresidential	Total
Incentive Costs	\$22,725,695	\$35,392,358	\$58,118,053
Administrative Costs	\$1,193,586	\$1,507,266	\$2,700,851
Delivery Costs	\$13,129,133	\$22,516,578	\$35,645,711
Total UAT Costs	\$37,048,414	\$59,416,202	\$96,464,616
Electricity Benefits (kWh)	\$16,668,009	\$94,818,479	\$111,486,489
Capacity Benefits (kW)	\$36,206,048	\$106,958,935	\$143,164,983
Gas Benefits	\$46,226,228	\$87,248,817	\$133,475,045
T&D Benefits (kW)	\$10,369,617	\$30,680,646	\$41,050,264
Total UAT Benefits	\$109,469,903	\$319,706,878	\$429,176,781
UAT Benefits Minus Costs	\$72,421,488	\$260,290,677	\$332,712,165
UAT Benefit/Cost Ratio	2.95	5.38	4.45

Table J-16 shows the inputs and results from the SCT for CY 2025 energy efficiency and renewable resource offerings. As expected, the estimated overall benefit/cost value from the SCT is the second highest of the four tests, surpassed only by the UAT. The SCT, which includes the same costs as the modified TRC, with additional non-energy benefits. When interpreted in the context of the modified TRC test results, these findings suggest that Focus on Energy activities provide substantial additional benefits, generating value in terms of personal health cost savings, water savings, lighting purchase deferrals, property values, and arrearage repayment assistance. Benefits from the residential offerings were 1.77

CADMUS

times greater than their costs, while the benefits from the nonresidential offerings outweighed the costs by a factor of 3.48.

Table J-16. CY 2025 Sector-Level and Overall Results, Societal Test

	Residential	Nonresidential	Total
Administrative Costs	\$1,193,586	\$1,507,266	\$2,700,851
Delivery Costs	\$13,129,133	\$22,516,578	\$35,645,711
Incremental Measure Costs	\$101,733,939	\$155,713,655	\$257,447,594
Total Non-Incentive Costs	\$116,056,658	\$179,737,499	\$295,794,156
Electricity Benefits (kWh)	\$16,668,009	\$94,818,479	\$111,486,489
Capacity Benefits (kW)	\$36,206,048	\$106,958,935	\$143,164,983
Gas Benefits	\$46,226,228	\$87,248,817	\$133,475,045
Emissions Benefits	\$64,030,700	\$212,036,811	\$276,067,511
T&D Benefits (kW)	\$10,369,617	\$30,680,646	\$41,050,264
Health Benefits	\$13,798,800	\$89,395,888	\$103,194,689
Water Benefits	\$9,353,053	\$230,615	\$9,583,667
Purchase Deferral Benefits	\$348,034	\$3,693,903	\$4,041,937
Other Non-Energy Benefits ^a	\$8,339,157	\$0	\$8,339,157
Economic Benefits	N/A	N/A	\$350,641,367
Total SCT Benefits	\$205,339,647	\$625,064,095	\$1,181,045,108
SCT Benefits Minus Costs	\$89,282,989	\$445,326,596	\$885,250,952
SCT Benefit/Cost Ratio	1.77	3.48	3.99

^a Includes Property Values and Arrearages

J.11. Cost-Effectiveness Results by Offering

Table J-17 and Table J-18 provide the sector-level and overall results of the cost-effectiveness analysis shown by core efficiency offerings and renewables. Incentive costs are provided below, but they are not included in the TRC calculation. The TRC ratio equals the total TRC benefits divided by total non-incentive costs. Table J-19 provides UAT test results, and Table J-20 provides SCT results.

Table J-17. CY 2025 Overall Cost-Effectiveness Analysis with Portfolio Breakout

Focus on Energy Benefits and Costs	Full Portfolio	Core Programs Alone	Renewables Alone
Incentives	\$58,118,053	\$55,330,932	\$2,787,121
Modified TRC Benefits (\$ millions)	\$705,244,292	\$597,483,010	\$107,761,281
Modified TRC Costs (\$ millions)	\$295,794,156	\$211,616,557	\$84,177,599
Portfolio Modified TRC Benefit/Cost Ratio	2.38	2.82	1.28

**Table J-18. CY 2025 Overall with Renewables Separate Cost-Effectiveness Analysis,
Modified Total Resource Cost Test**

	Residential	Nonresidential	Renewables	Total
Administrative Costs	\$1,137,453	\$1,434,085	\$129,313	\$2,700,851
Delivery Costs	\$12,511,688	\$21,423,358	\$1,710,665	\$35,645,711
Incremental Measure Costs	\$58,253,744	\$116,856,229	\$82,337,621	\$257,447,594
Total Non-Incentive Costs	\$71,902,884	\$139,713,673	\$84,177,599	\$295,794,156
Electricity Benefits (kWh)	\$9,717,867	\$83,433,836	\$18,334,786	\$111,486,489
Capacity Benefits (kW)	\$23,619,199	\$87,326,816	\$32,218,967	\$143,164,983
Gas Benefits	\$46,226,228	\$87,248,817	\$0	\$133,475,045
Emissions Benefits	\$45,836,410	\$182,233,753	\$47,997,348	\$276,067,511
T&D Benefits (kW)	\$6,771,515	\$25,068,569	\$9,210,180	\$41,050,264
Total TRC Benefits	\$132,171,219	\$465,311,792	\$107,761,281	\$705,244,292
TRC Benefits Minus Costs	\$60,268,335	\$325,598,119	\$23,583,682	\$409,450,135
TRC Benefit/Cost Ratio	1.84	3.33	1.28	2.38

**Table J-19. CY 2025 Overall with Renewables Separate Cost-Effectiveness Analysis,
Utility Administrator Cost Test**

	Residential ^a	Nonresidential	Renewables ^a	Total
Incentive Costs	\$21,621,936	\$33,673,996	\$2,822,121	\$58,118,053
Administrative Costs	\$1,137,453	\$1,434,085	\$129,313	\$2,700,851
Delivery Costs	\$12,511,688	\$21,423,358	\$1,710,665	\$35,645,711
Total UAT Costs	\$35,306,077	\$56,531,440	\$4,627,099	\$96,464,616
Electricity Benefits (kWh)	\$9,717,867	\$83,433,836	\$18,334,786	\$111,486,489
Capacity Benefits (kW)	\$23,619,199	\$87,326,816	\$32,218,967	\$143,164,983
Gas Benefits	\$46,226,228	\$87,248,817	\$0	\$133,475,045
T&D Benefits (kW)	\$6,771,515	\$25,068,569	\$9,210,180	\$41,050,264
Total UAT Benefits	\$86,334,809	\$283,078,038	\$59,763,933	\$429,176,781
UAT Benefits Minus Costs	\$51,063,733	\$226,546,598	\$55,101,834	\$332,712,165
UAT Benefit/Cost Ratio	2.45	5.01	12.82	4.45

^a The Department of Administration (DOA) Solar/Heat Pump Pilot spans the Multifamily and Renewable Rewards Programs. Verified savings are allocated to each program based on the type of equipment installed. For the cost-effectiveness analysis, \$35,000 in DOA pilot solar PV incentives are allocated to Residential Renewables; the remainder of pilot costs are allocated to the Multifamily Program

Table J-20. CY 2025 Overall with Renewables Separate Cost-Effectiveness Analysis, Societal Test

	Residential	Nonresidential	Renewables	Total
Incentive Costs	\$21,656,936	\$33,673,996	\$2,787,121	\$58,118,053
Administrative Costs	\$1,137,453	\$1,434,085	\$129,313	\$2,700,851
Delivery Costs	\$12,511,688	\$21,423,358	\$1,710,665	\$35,645,711
Incremental Measure Costs	\$58,253,744	\$116,856,229	\$82,337,621	\$257,447,594
Total Non-Incentive Costs	\$71,902,884	\$139,713,673	\$84,177,599	\$295,794,156
Electricity Benefits (kWh)	\$9,717,867	\$83,433,836	\$18,334,786	\$111,486,489
Capacity Benefits (kW)	\$23,619,199	\$87,326,816	\$32,218,967	\$143,164,983
Gas Benefits	\$46,226,228	\$87,248,817	\$0	\$133,475,045
Emission Benefits	\$45,836,410	\$182,233,753	\$47,997,348	\$276,067,511
T&D Benefits (kW)	\$6,771,515	\$25,068,569	\$9,210,180	\$41,050,264
Health Benefits	\$9,263,799	\$81,967,353	\$11,963,536	\$103,194,689
Water Benefits	\$9,353,053	\$230,615	\$0	\$9,583,667
Purchase Deferral	\$348,034	\$3,693,903	\$0	\$4,041,937
Other Non-Energy Benefits ^a	\$8,339,157	\$0	\$0	\$8,339,157
Economic Benefits	N/A	N/A	N/A	\$350,641,367
Total SCT Benefits	\$159,475,261	\$551,203,662	\$119,724,818	\$1,181,045,108
SCT Benefits Minus Costs	\$87,572,377	\$411,489,989	\$35,547,218	\$885,250,952
SCT Benefit/Cost Ratio	2.22	3.95	1.42	3.99

^a Includes property values and arrearages

Table J-21 provides the cost-effectiveness analysis of the residential offerings and midstream sectors. Incentive costs are provided below, but they are not included in the modified TRC calculation. The modified TRC ratio equals the total TRC benefits divided by total non-incentive costs.

Table J-21. CY 2025 Residential and Instant Discount Offering Modified TRC Cost-Effectiveness Analysis

	Direct to Customer			Multifamily ^a		Renewable Rewards ^a	Residential New Construction			Trade Ally Solutions			Instant Discount (Formerly in Midstream)	
	Direct Install	Online Marketplace	Packs	Multifamily	EDA/EDR	Residential Renewable Rewards	Residential New Construction	New Manufactured Homes Pilot	Heating and Cooling	Insulation and Air Sealing	Tribal	Commercial	Residential	
Incentive Costs	\$15,395	\$1,349,421	\$4,552,932	\$444,429	\$1,812,078	\$1,103,759	\$3,830,464	\$223,500	\$91,666	\$3,431,028	\$23,000	\$1,294,500	\$5,213,441	
Administrative Costs	\$809	\$70,874	\$239,126	\$23,342	\$97,011	\$56,133	\$201,181	\$11,739	\$4,814	\$180,202	\$1,208	\$55,129	\$273,817	
Delivery Costs	\$8,894	\$779,590	\$2,630,329	\$256,756	\$1,067,098	\$617,446	\$2,212,943	\$129,121	\$52,957	\$1,982,180	\$13,288	\$823,560	\$3,011,919	
Incremental Measure Costs	\$27,205	\$2,888,387	\$3,481,197	\$799,216	\$17,507,716	\$43,480,195	\$0	\$71,067	\$98,808	\$12,986,767	\$8,525	\$1,481,050	\$20,066,821	
Total Non-Incentive Costs	\$36,907	\$3,738,851	\$6,350,653	\$1,079,314	\$18,671,825	\$44,153,774	\$2,414,125	\$211,926	\$156,580	\$15,149,150	\$23,020	\$2,359,739	\$23,352,557	
Electricity Benefits (kWh)	\$14,862	\$1,618,498	\$1,161,778	\$291,964	\$6,275,039	\$6,950,143	\$232,107	\$13,819	\$117,539	\$1,092,166	\$117	\$461,590	-\$1,120,881	
Capacity Benefits (kW)	\$26,174	\$2,768,484	\$994,303	\$107,426	\$7,704,046	\$12,586,848	\$588,443	\$87,368	\$219,594	\$8,816,264	\$0	\$319,680	\$2,283,678	
T&D Benefits (kW)	\$7,503	\$793,635	\$285,199	\$30,704	\$2,211,495	\$3,598,102	\$168,012	\$24,945	\$62,911	\$2,524,691	\$0	\$91,660	\$655,700	
Gas Benefits	\$15,008	\$2,312,214	\$8,812,682	\$978,212	\$4,656,474	\$0	\$8,430,399	\$85,122	\$126,601	\$3,754,063	\$9,226	\$2,528,427	\$17,024,794	
Emissions Benefits	\$21,932	\$2,737,050	\$5,386,667	\$1,128,095	\$14,651,746	\$18,194,290	\$7,857,639	\$111,777	\$284,476	\$5,037,624	\$6,858	\$1,831,875	\$8,580,090	
Total TRC Benefits	\$85,478	\$10,229,881	\$16,640,628	\$2,536,401	\$35,498,801	\$41,329,384	\$17,276,600	\$323,031	\$811,121	\$21,224,807	\$16,201	\$5,233,232	\$27,423,382	
TRC Benefits Minus Costs	\$48,570	\$6,491,030	\$10,289,976	\$1,457,086	\$16,826,976	-\$2,824,390	\$14,862,475	\$111,104	\$654,541	\$6,075,658	-\$6,819	\$2,873,493	\$4,070,824	
TRC Benefit/Cost Ratio	2.32	2.74	2.62	2.35	1.90	0.94	7.16	1.52	5.18	1.40	0.70	2.22	1.17	

^a The Department of Administration (DOA) Solar/Heat Pump Pilot spans the Multifamily and Renewable Rewards Programs. Verified savings are allocated to each program based on the type of equipment installed. For the cost-effectiveness analysis, \$35,000 in DOA pilot solar PV incentives are allocated to Residential Renewables; the remainder of pilot costs are allocated to the Multifamily Program.

Table J-22 provides a cost-effectiveness analysis of nonresidential offerings. Incentive costs are provided below, but they are not included in the TRC calculation. The TRC ratio equals the total TRC benefits divided by total non-incentive costs.

Table J-22. CY 2025 Nonresidential Offerings Modified TRC Cost-Effectiveness Analysis

	Agribusiness	Business and Industry			Large Industrial		Renewable Rewards	Schools and Government			Pilots		
	Agribusiness	Commercial and Industrial	EDA/EDR/Express EDA	Industrial Technology Accelerator	Large Industrial	EDA/EDR	Business Renewable Rewards	Government	Schools	EDA/EDR	Community Impact	Life Science Midstream	Accessible Efficiency
Incentive Costs	\$2,726,255	\$7,174,074	\$1,141,350	\$37,124	\$8,704,560	\$224,774	\$1,718,361	\$3,391,643	\$6,537,003	\$1,297,488	\$794,166	\$234,000	\$201,755
Administrative Costs	\$116,104	\$305,525	\$48,607	\$1,581	\$370,704	\$9,573	\$73,180	\$144,441	\$278,393	\$55,257	\$33,821	\$9,965	\$10,596
Delivery Costs	\$1,734,440	\$4,564,138	\$726,126	\$23,618	\$5,537,831	\$143,001	\$1,093,220	\$2,157,759	\$4,158,834	\$825,460	\$505,248	\$148,871	\$116,558
Incremental Measure Costs	\$8,861,760	\$19,668,940	\$9,562,879	\$12,700	\$32,657,351	\$2,103,183	\$38,857,426	\$9,923,745	\$15,336,512	\$15,816,540	\$576,945	\$701,969	\$85,042
Total Non-Incentive Costs	\$10,712,304	\$24,538,602	\$10,337,612	\$37,899	\$38,565,886	\$2,255,757	\$40,023,826	\$12,225,945	\$19,773,740	\$16,697,257	\$1,116,014	\$860,805	\$212,196
Electricity Benefits (kWh)	\$10,644,502	\$19,303,516	\$3,851,266	\$17,674	\$29,917,429	\$889,144	\$11,384,643	\$7,086,026	\$6,790,062	\$4,095,722	\$97,922	\$278,983	\$20,858
Capacity Benefits (kW)	\$11,970,781	\$21,471,321	\$5,120,040	\$12,432	\$27,732,696	\$1,546,316	\$19,632,119	\$4,581,344	\$8,759,594	\$5,438,670	\$149,968	\$223,973	\$23,421
T&D Benefits (kW)	\$3,437,817	\$6,164,208	\$1,469,740	\$3,571	\$7,958,409	\$443,880	\$5,612,078	\$1,315,612	\$2,515,178	\$1,561,205	\$43,059	\$64,230	\$6,721
Gas Benefits	\$2,869,359	\$10,365,971	\$2,572,693	\$0	\$44,237,583	\$30,953	\$0	\$7,549,595	\$13,536,981	\$3,383,657	\$173,598	\$0	\$21,432
Emissions Benefits	\$18,018,186	\$35,164,581	\$8,812,568	\$26,224	\$71,183,033	\$1,696,828	\$29,803,057	\$15,291,225	\$19,858,759	\$9,760,190	\$242,800	\$347,483	\$32,456
Total TRC Benefits	\$46,940,645	\$92,469,597	\$21,826,307	\$59,901	\$181,029,150	\$4,607,121	\$66,431,897	\$35,823,802	\$51,460,575	\$24,239,444	\$707,348	\$914,670	\$104,888
TRC Benefits Minus Costs	\$36,228,341	\$67,930,995	\$11,488,695	\$22,002	\$142,463,264	\$2,351,364	\$26,408,072	\$23,597,857	\$31,686,835	\$7,542,188	-\$408,667	\$53,864	-\$107,308
TRC Benefit/Cost Ratio	4.38	3.77	2.11	1.58	4.69	2.04	1.66	2.93	2.60	1.45	0.63	1.06	0.49

J.12. Cost-Effectiveness Results for Renewables

Table J-23 lists the CY 2023, CY 2024, and CY 2025 cost-effectiveness results, with renewables excluded and with renewables included.

Table J-23. CY 2023, CY 2024, and CY 2025 Cost-Effectiveness Results for Focus on Energy Portfolio

Calendar Year	Residential	Nonresidential	Renewables	Total
CY 2023: Modified TRC Test Result with Renewables	1.37	3.28	N/A	2.58
CY 2023: Modified TRC Test Result Renewables Excluded	1.74	3.63	1.57	2.58
CY 2024: Modified TRC Test Result with Renewables	1.34	3.21	N/A	2.45
CY 2024: Modified TRC Test Result Renewables Excluded	1.75	3.60	1.23	2.45
CY 2025: Modified TRC Test Result with Renewables	1.49	2.96	N/A	2.38
CY 2025: Modified TRC Test Result Renewables Excluded	1.84	3.33	1.28	2.38

J.13. Conclusions and Recommendations

Conclusion 1. The Focus on Energy remained highly cost-effective in CY 2025, consistent with its performance in CY 2023 and CY 2024. The Focus on Energy portfolio remained stable and highly cost-effective in CY 2025, delivering \$2.38 in benefits for each dollar spent, compared to \$2.58 in CY 2023 and \$2.45 in CY 2024. When accounting for downstream economic benefits, the CY 2025 portfolio was even more effective, delivering \$3.57 per dollar spent. After including non-energy benefits through the societal test, the program delivered \$3.99 per dollar spent.

Conclusion 2. Nearly all programs in both the Residential and Nonresidential portfolios delivered more than \$1.00 in benefits for every dollar spent. There were only two program offerings, excluding pilots—Residential Renewable Rewards and the Trade Ally Solutions, Tribal channel—that did not pass the modified TRC threshold of 1.0. The primary driver of lower cost-effectiveness in the Residential Renewable Rewards program is the relatively high per-unit incremental measure costs compared to electric energy savings (Solar PV measures do not generate natural gas benefits). Since Tribal offering provided support to that specific community for reasons beyond energy savings, it is not expected to pass the traditional cost-effectiveness test parameters. Similarly, the Community Impact Pilot did not pass the modified TRC, but pilot programs are generally not expected to pass traditional cost-effectiveness test parameters.

Recommendation 2. Continue to explore alternative cost-effectiveness testing frameworks for beneficial electrification measures, such as heat pumps and solar PV panels, that would align with PSC goals for electrification benefits not fully captured by the modified TRC.

Appendix K. Residential General Population Survey Analysis

In fall 2025, the evaluation team conducted a web-based survey of Wisconsin residents, including those who had and had not participated in Focus on Energy offerings. Objectives of the study were to determine the following:

- General awareness of and participation in Focus on Energy offerings
- Perception of Focus on Energy and energy efficiency
- Barriers to participation and best ways to inform customers about Focus on Energy
- Awareness and attitudes toward electrification and related benefits
- Awareness of energy usage and bill impacts

K.1. Methodology

K.1.1. Sampling and Recruitment

The evaluation team administered a web-based survey to Wisconsin residents between October 28 and November 17, 2025. The final dataset included 344 completed responses from both Focus on Energy program participants and nonparticipants. The team screened respondents to include only adults aged 18 or older living in Wisconsin who reported familiarity with energy-use decisions in their home.

The survey was programmed in Qualtrics and fielded using the Qualtrics research panel service to recruit survey respondents who agreed to participate in the online survey in exchange for incentives. Qualtrics recruited panel members broadly within Wisconsin and determined eligibility through in-survey screening questions. Only those who met the study criteria were allowed to proceed with the full questionnaire.

To support participation among Spanish-speaking residents, the evaluation team translated the survey into Spanish. Thirteen respondents completed the survey in Spanish, and all Spanish-language open-ended responses were translated into English for analysis.

K.1.2. Data Quality and Cleaning

The evaluation team conducted systematic data cleaning and quality assurance reviews following both the soft launch and the completion of full data collection to ensure the quality of survey responses. These reviews assessed overall response quality, survey timing, logical consistency, and the proper functioning of survey programming. After the soft launch, the evaluation team made a small set of programming updates to improve question wording, display logic, numbering, and randomization. These updates ensured that questions appeared to the correct respondents, were clearly worded, followed the intended sequence, and displayed in the proper randomized order.

The team examined response completeness and analyzed completion times to identify potential “speeders,” defined as respondents who completed the survey in less than one-third of the median completion time. Qualtrics automatically removed any respondents who answered in less than four

minutes from the dataset. The team reviewed open-ended responses and excluded nonsensical or low-quality answers and records with clearly invalid responses, removing five responses based on these quality checks. These screening procedures help ensure that the final sample reflects only respondents who demonstrated thoughtful comprehension of survey questions and sufficient cognitive engagement to accurately recall and report their experiences with Focus on Energy activities, services, and offerings, thereby strengthening overall data quality.

An attention-check survey question— designed to confirm that respondents were reading questions carefully and providing thoughtful responses— asked respondents to select *disagree* if they had read the question carefully. Only respondents who passed this check were retained for analysis. Responsiveness was monitored at the question level by calculating question response rates, defined as the number of respondents who answered a question divided by the number eligible to answer that question. The team reviewed the data for any questions with response rates below 85%; however, all questions met or exceeded this threshold. Qualtrics also applied automated quality controls, including checks for “straightlining” (i.e., when a respondent selects the same response option across a series of rating-scale questions in a way that suggests inattention rather than considered responses).

In addition to response-level reviews, the evaluation team verified screening criteria, skip patterns, numeric ranges, exclusive response options, scale anchors, and “other specify” fields. We also monitored geographic coverage to ensure broad representation across Focus territory ZIP codes.

The team documented and removed all identified issues prior to analysis to ensure that the final dataset reflected high-quality responses.

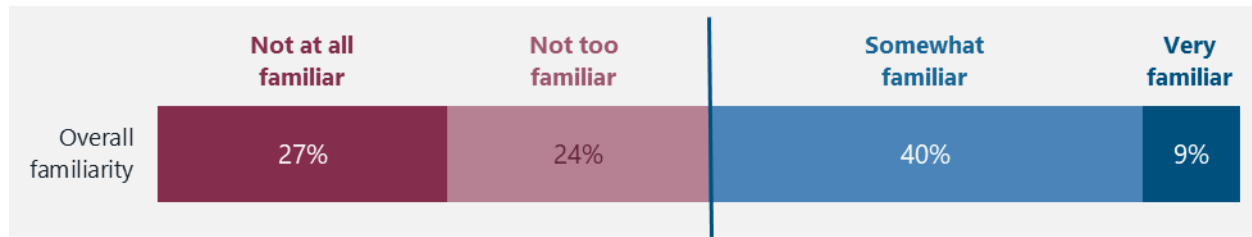
K.2. Survey Findings

This section presents results from the CY 2025 Wisconsin Focus on Energy General Population survey. When appropriate, survey responses are also compared to the last general population survey conducted in CY 2021. Several methodological changes should be considered when interpreting these comparisons. Unlike prior waves, which used customer lists provided by the utility and were fielded primarily by phone, the CY 2025 survey drew on a Qualtrics online research panel and was administered exclusively online. In addition, the CY 2025 instrument included several new questions that were not asked in earlier surveys.

K.2.1. Focus on Energy Awareness and Understanding

The evaluation team asked respondents to rate their level of familiarity with Focus on Energy using a multipoint scale. As shown in Figure K-1, approximately three-quarters of respondents (73%) said they had at least some familiarity with Focus on Energy before they received the survey. In CY 2021, 83% of respondents reported being aware of Focus on Energy in response to a yes/no question.

Figure K-1. Awareness of Focus on Energy Wisconsin



Source: General Population Survey Question A15. "How familiar are you with Focus on Energy?" (n=344)

Program Awareness and Participation

In CY 2025, awareness and participation varied substantially across Focus on Energy offerings. For this analysis, awareness denotes the share of respondents who either participated in the offering or were aware of it but did not participate. The team calculated participation rates among those who were aware of each offering.

As shown in Figure K-2, Free Energy Saving Packs had the highest participation (55% of respondents), whereas 21% were aware but did not participate, and 24% were unaware of the offering. Among those who were aware of the Free Energy Savings Packs offering, 72% participated.⁴⁵

Rebates and Instant Discounts had relatively high awareness but lower uptake, with 49% who were aware did not participate. Only 21% of respondents participated, and 30% were unaware of the program. Among 70% of respondents who were aware of the Rebates and instant discounts, 30% participated.

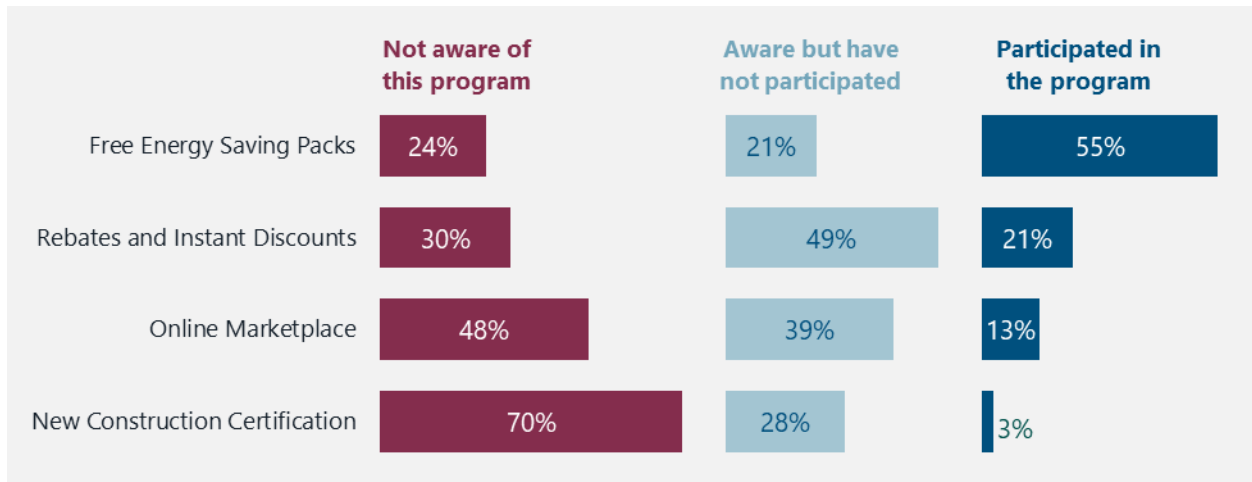
Awareness of the Online Marketplace was more limited, as nearly half of the respondents (48%) were unaware, and only 13% reported participating. Among the 52% of respondents who were aware of the Online Marketplace, 25% reported participating.

New Construction Certification was the least familiar offering among general population respondents, with 70% reporting they were not aware of the program, 28% aware but not participating, and only a very small share (2%) reporting participation. Among the 30% who reported awareness of the New Construction Certification, one in 10 (10%) of respondents reported participating in the program.

Overall, in CY 2025, among the 242 respondents who were aware of the program, 62% reported participating in a Focus program. Compared with CY 2021, participation rates among respondents who were aware of the program were lower in CY 2025. In CY 2021, approximately 82% of respondents who were aware of Focus on Energy reported participating in a program; this was also substantially higher than in CY 2018, when only 45% of aware respondents reported participation.

⁴⁵ Participation among aware respondents is calculated as the percentage who participated divided by the total percentage who were aware of the offering (i.e., participated + aware but did not participate).

Figure K-2. Participation in Focus on Energy Programs (All Respondents)

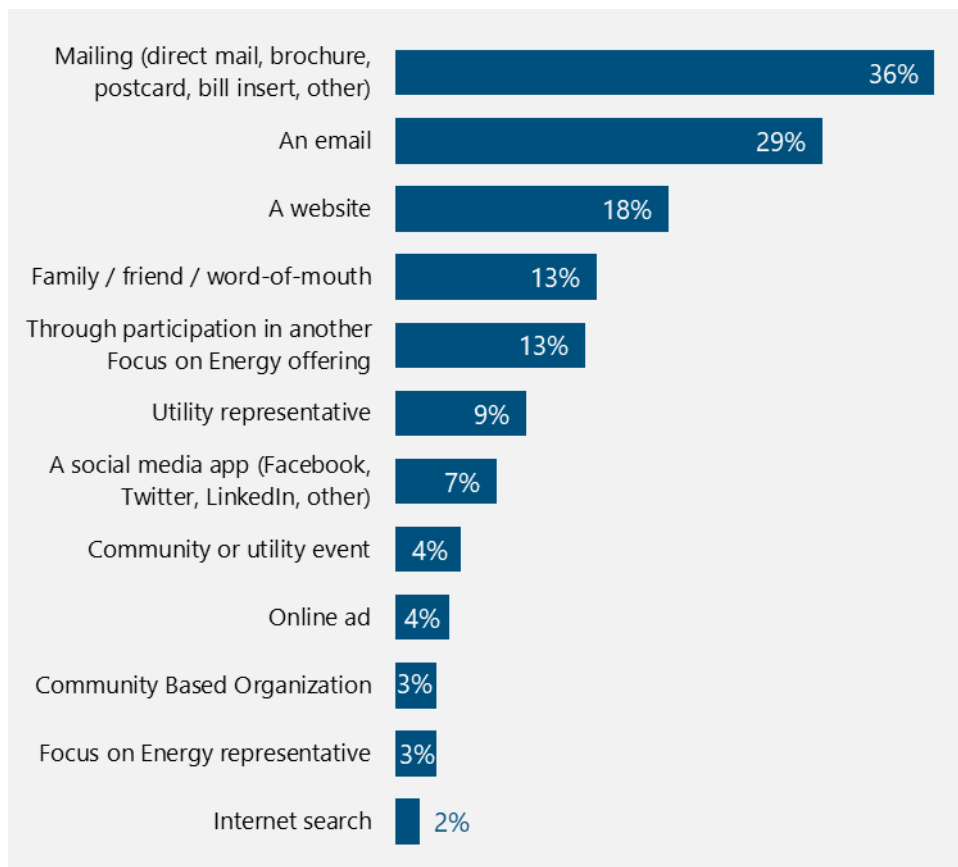


Source: General Population Survey Question A17. “Focus on Energy is Wisconsin’s statewide energy efficiency and renewable energy program that provides residents and businesses with resources, incentives, and support to implement cost-effective energy-saving and clean energy projects. For each of the Focus on Energy programs listed below, please indicate which ones you are aware of and which you have participated in?” (n=344)

Awareness Channels

The evaluation team asked the 252 respondents who were familiar with Focus on Energy before the survey how they had learned about it. As shown in Figure K-3, mail-based outreach was the most common way respondents first learned about Focus on Energy (36% citing direct mail, brochures, postcards, or bill inserts), followed by email (29%). This differs from CY 2021, when respondents identified email as the most frequent method of learning about Focus on Energy (41% non-limited-income respondents, 34% limited-income respondents), and from CY 2018, when 47% of respondents heard about Focus on Energy through utility bill inserts.

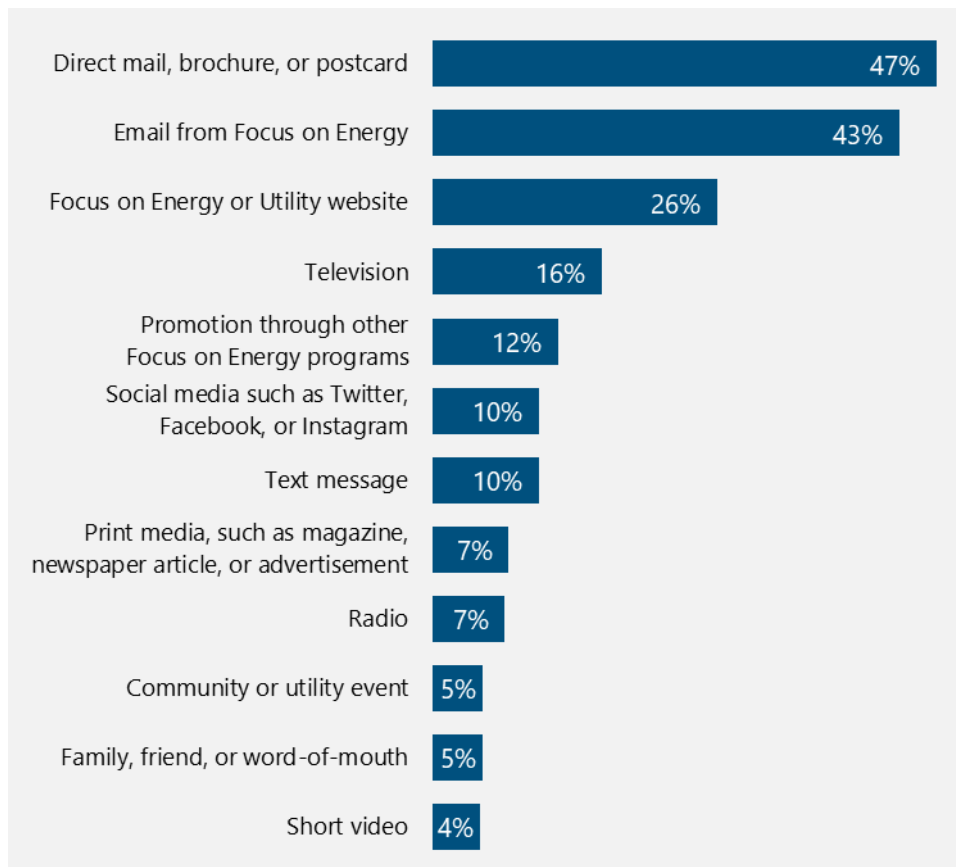
Figure K-3. How Respondents Learned about Focus on Energy



Source: General Population Survey Question A21. “How have you heard about Focus on Energy’s offerings and rebates? Select all that apply.” Multiple responses allowed (n=252)

The evaluation team asked all respondents about the best way for Focus on Energy to inform them about available incentives and programs. As shown in Figure K-4, in CY 2025, respondents most often selected direct mail, brochures, or postcards (47%) as their preferred method of receiving information from Focus on Energy, followed by emails (43%) and the Focus on Energy or utility website (26%). This is a shift since CY 2021, when email was the top channel (59%), followed by Focus on Energy mailings (30%) and utility bill inserts (28%). While email remained a leading option in CY 2025, preferences appear to have moved toward mailed materials and websites rather than bill inserts. Across both surveys, however, respondents consistently favored direct, program-branded communications over community-based or social media sources.

Figure K-4. Preferred Channels for Receiving Information about Focus on Energy Programs and Incentives



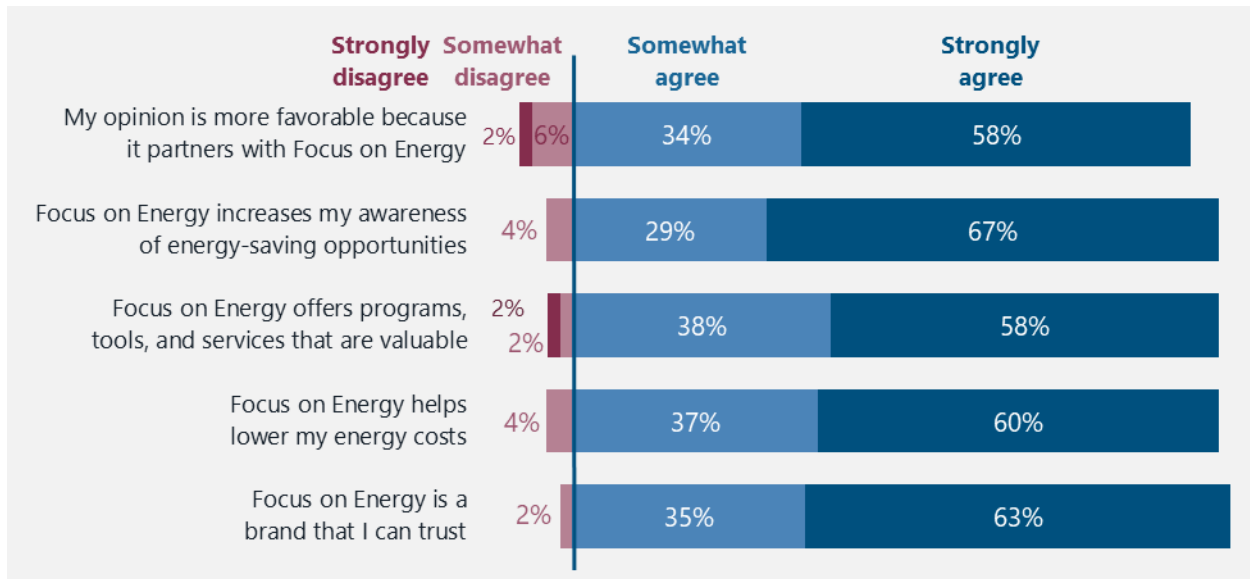
Source: General Population Survey Question A36. “What are the best ways for Focus on Energy to let you know about their rebates and services for energy-efficiency improvements? Select up to three.” (n=344)

K.2.2. Brand Affinity

The evaluation team asked the respondents who were aware of Focus on Energy prior to the survey how strongly they agreed or disagreed with several statements about Focus on Energy. As shown in Figure K-5, nearly all respondents *somewhat* or *strongly agreed* that Focus on Energy is a brand they can trust (98%), helps lower overall energy costs (97%), offers valuable programs, tools, and services (96%), and increases awareness of energy-saving opportunities (96%). Agreement was slightly lower for the statement that partnering with Focus on Energy improves respondents’ perception of utilities, with 92% reporting agreement (58% *strongly agree* and 34% *somewhat agree*). Disagreement across all statements remained minimal.

These results closely mirror findings from CY 2021, when respondents also reported near-universal agreement with statements about Focus on Energy’s trustworthiness, cost-saving benefits, and ability to raise awareness of energy-saving opportunities. As in CY 2021, the utility-partnership statement again received the lowest level of agreement, though it remained strongly positive overall.

Figure K-5. Agreement Level with Statements about Focus on Energy



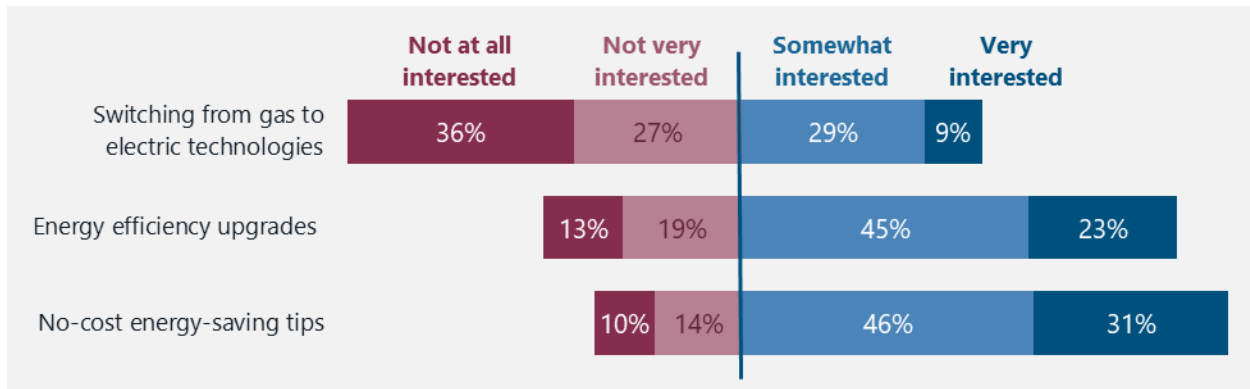
Source: General Population Survey Questions A22–A26. “The following five statements are about Focus on Energy. For each statement, please indicate whether you agree, somewhat agree, somewhat disagree, or strongly disagree.” (n=344)

K.2.3. Electrification Awareness and Interest

The evaluation team examined Wisconsin residents’ interest in different types of energy-saving actions, including no-cost behavioral changes, traditional energy efficiency upgrades, and electrification technologies.

As shown in Figure K-6, when respondents were asked to rate their level of interest in three energy categories using a scale of *not at all interested*, *not very interested*, *somewhat interested*, and *very interested*, respondents provided highest interest ratings for no-cost energy-saving tips (46% *somewhat interested* and 31% *very interested*), followed by energy efficiency upgrades (45% *somewhat interested* and 23% *very interested*). Nine percent of respondents rated their level of interest in switching from gas to electric technologies as *very interested*, and 38% reported being *somewhat interested*.

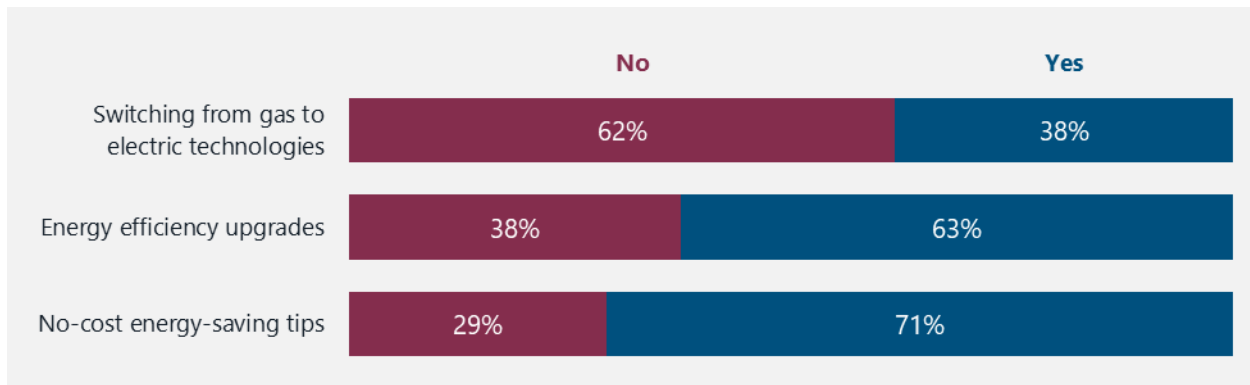
Figure K-6. Customer Interest in Energy-Saving Actions and Electrification Technologies



Source: General Population Survey Question A18. "How interested are you in receiving information about the following topics?" (n=344)

Respondents were asked if they knew where they would go to find reliable information about the same three topics: no-cost energy-saving tips, energy efficiency upgrades, and switching from gas to electric technologies. As shown in Figure K-7, 71% of respondents said they would know where to go for information about no-cost actions. Nearly two-thirds (63%) reported knowing where to find information about energy efficiency upgrades, such as insulation, efficient water heaters, or HVAC improvements. Fewer respondents reported knowing where to find information about electrification. Fewer than four in 10 respondents (38%) said they would know where to find reliable information about switching from gas to electric technologies, while 62% said they would not.

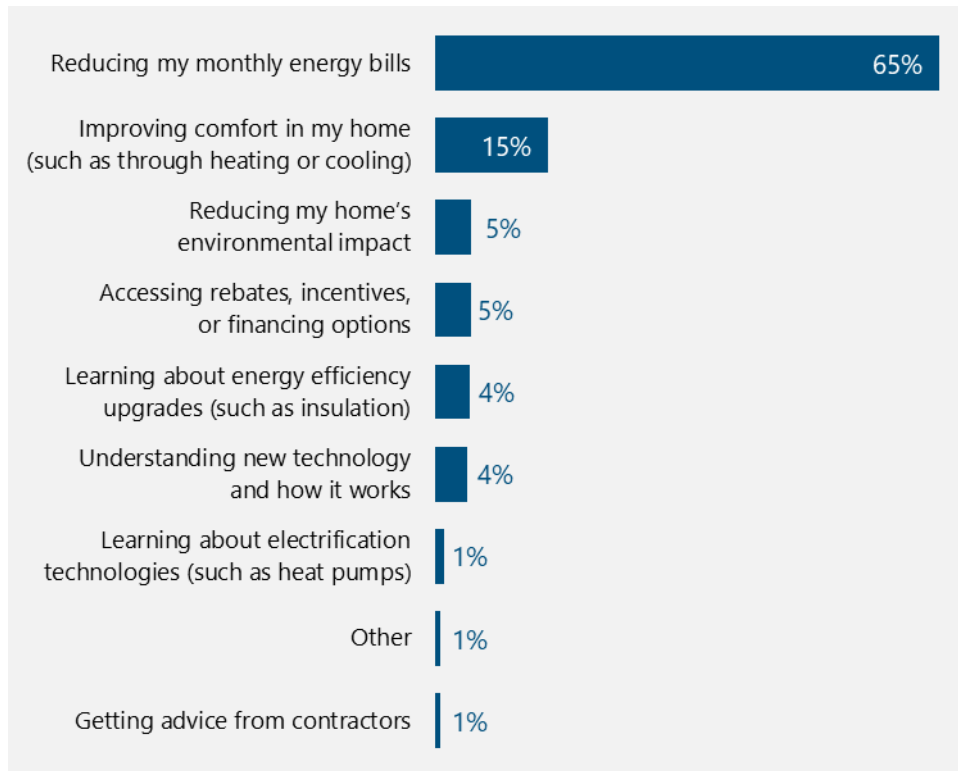
Figure K-7. Customer Knowledge of Where to Find Reliable Information on Efficiency and Electrification



Source: General Population Survey Question A19. "Do you know where you would go today to find reliable information about the following topics?" (n=344; percentages may not sum to 100% due to rounding)

Respondents were asked which factor was most important to them when it came to saving energy at home. As shown in Figure K-8, most respondents said that reducing monthly energy bills was the most important factor (65%), followed by improving home comfort, such as heating or cooling (15%). Respondents also identified reducing environmental impacts (5%), accessing rebates (5%), learning about energy efficiency upgrades (4%), and understanding new technologies (4%).

Figure K-8. Primary Customer Motivations for Seeking Energy Information or Improvements



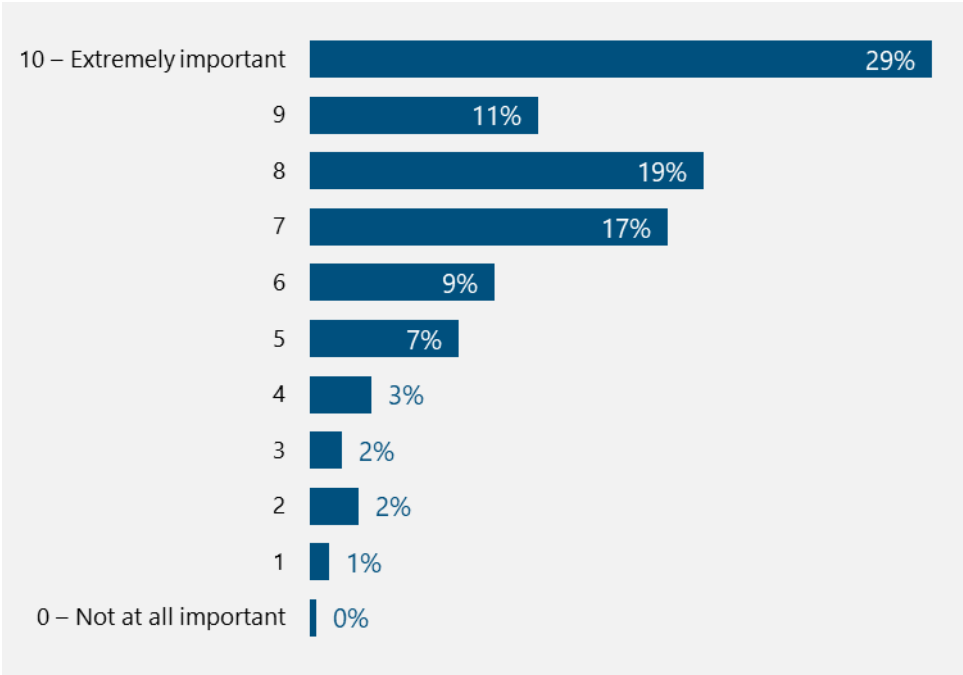
Source: General Population Survey Question A20. "When it comes to saving energy at home, which of the following is most important to you?" (n=344)

K.2.4. Energy Bill Priorities and Perceived Control

The evaluation team explored what motivates customers to save energy, how confident they are in their ability to take action, and where they turn for reliable information. This section summarizes respondents' priorities related to energy bills and their perceived control over household energy use.

Respondents were asked how important it is to reduce household energy bills. As shown in Figure K-9, three in 10 rated the importance of reducing household energy bills as extremely important (29%). In total, 76% of respondents rated the importance of reducing energy bills at 7 or higher, and less than 10% selected ratings of 4 or below.

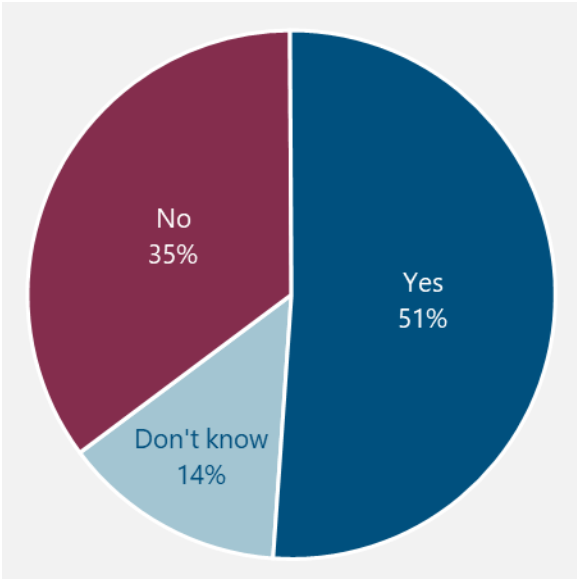
Figure K-9. Importance of Reducing Household Energy Bills



Source: General Population Survey Question A27. “Considering all of your household expenses, how important is reducing your energy bills?” (n=344)

Respondents were asked whether they feel they have control over their household energy bills. As shown in Figure K-10, about half of the respondents (51%) reported that they feel they have control over their energy bills. More than one-third (35%) said they do not feel in control, while 14% said they were unsure.

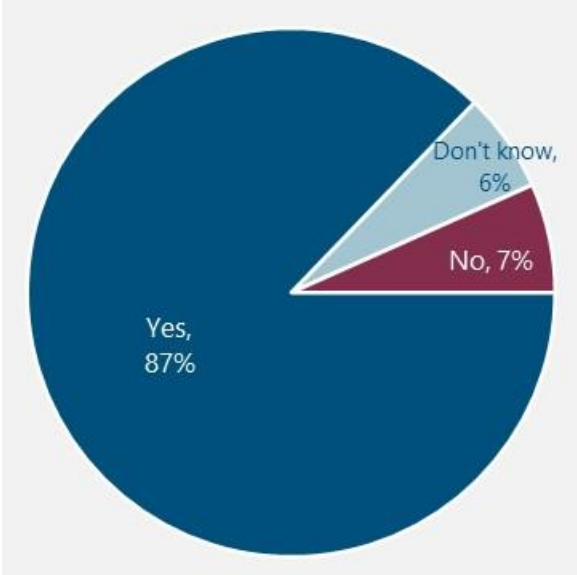
Figure K-10. Perceived Control over Household Energy Bills



Source: General Population Survey Question A29. “Do you feel like you have control over your energy bill?” (n=344)

Respondents were asked whether they feel that their actions in their home have a direct impact on their energy bills. As shown in Figure K-11, a large majority of respondents (87%) said that their household actions directly affect their energy bills. Only 7% reported that they do not feel their actions have an impact, while 6% were unsure.

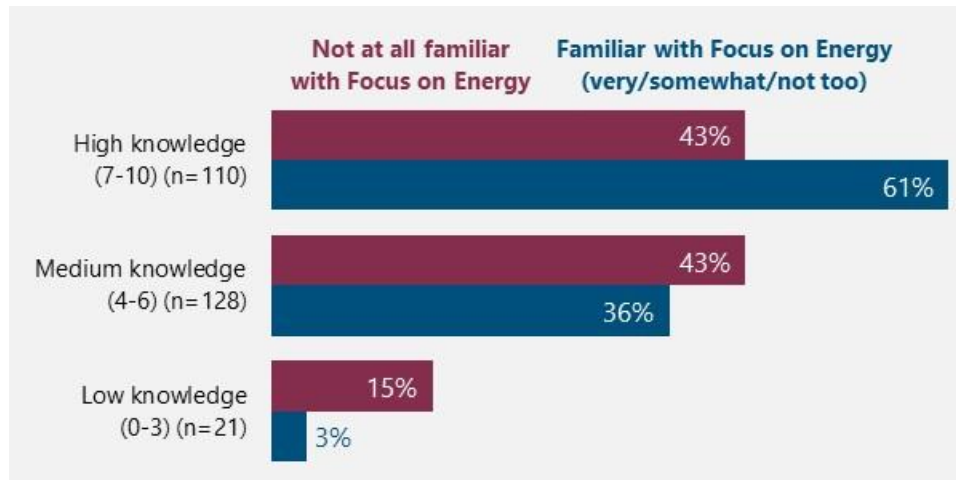
Figure K-11. Perceived Impact of Household Actions on Energy Bills



Source: General Population Survey Question A30. "Do you feel your actions in your home have a direct impact on your energy bill?" (n=344)

Respondents were asked to rate their knowledge of different ways they can save energy in their home. The evaluation team compared responses from respondents who said they were familiar with Focus on Energy—defined as respondents who selected *very familiar*, *somewhat familiar*, or *not too familiar*—with those who said they were *not at all familiar*. As shown in Figure K-12, among respondents who were familiar with Focus on Energy, 97% rated their knowledge as high or medium, and 3% reported their knowledge as low. In contrast, 86% of those who rated themselves as unfamiliar with Focus on Energy reported their knowledge as high, and 15% reported their knowledge as low.

Figure K-12. Self-Rated Knowledge of Ways to Save Energy by Familiarity with Focus on Energy

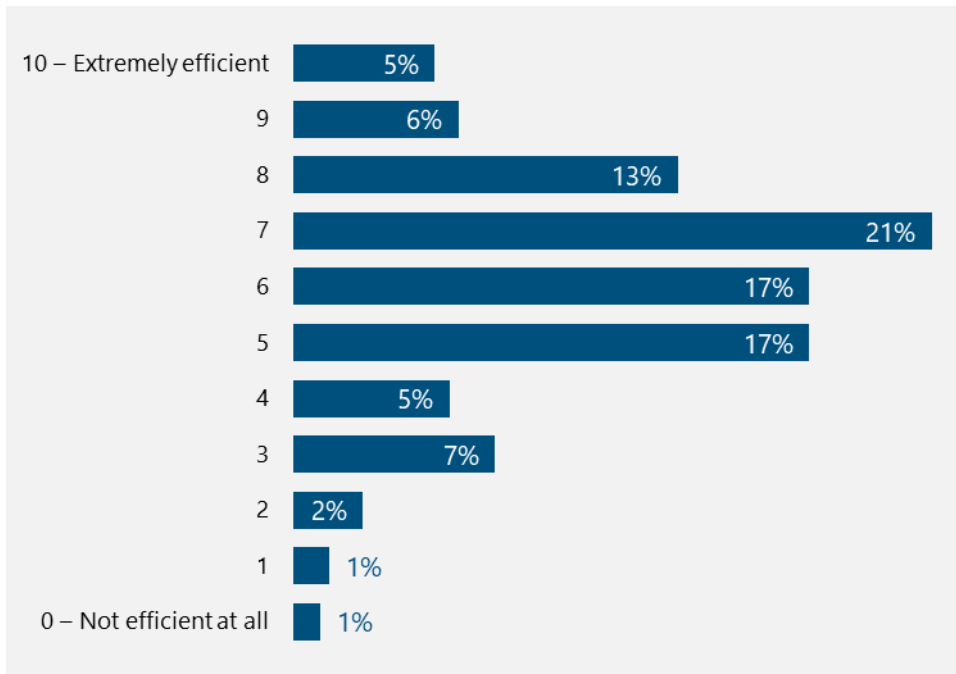


Source: General Population Survey Question A31. “How would you rate your knowledge of different ways you can save energy in your home?” (n=344) and Question A15. “How familiar are you with Focus on Energy?” (n=344)

Respondents were asked to rate how energy efficient they believe their home currently is. As shown in Figure K-13, most respondents selected a score of 7 (21%), followed by scores of 6 and 5 (both 17%). Another 13% rated their home an 8, while relatively few selected 9 or 10 (11% combined).

At the lower end of the scale, few respondents rated their homes as inefficient: about 11% selected ratings of 0 to 3, and only 2% chose the very lowest scores of 0 or 1. On average, respondents rated their home’s energy efficiency at 6.2 out of 10.

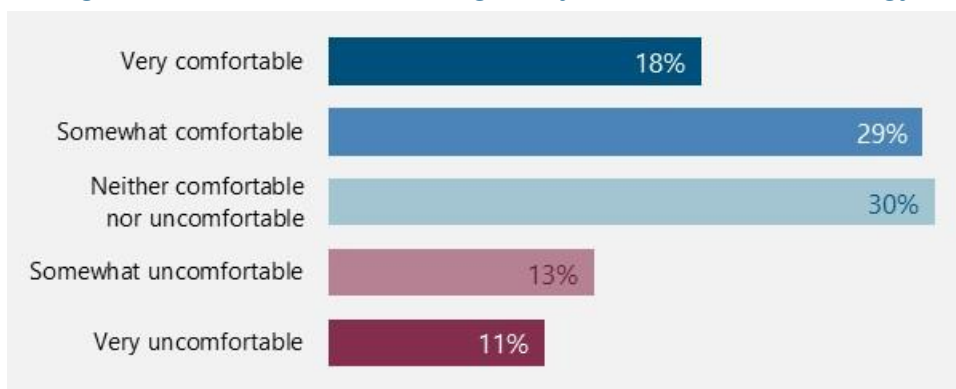
Figure K-13. Self-Rated Home Energy Efficiency



Source: General Population Survey Question A32. “How energy efficient would you say your home currently is?” (n=344)

Respondents were asked how comfortable they would be sharing their electric and/or gas utility data with Focus on Energy. As shown in Figure K-14, responses were mixed regarding comfort with sharing utility data. Nearly half of respondents reported feeling *somewhat* or *very comfortable* (18% and 29%, respectively), while 13% said they were *somewhat uncomfortable* and 11% said they were *very uncomfortable*.

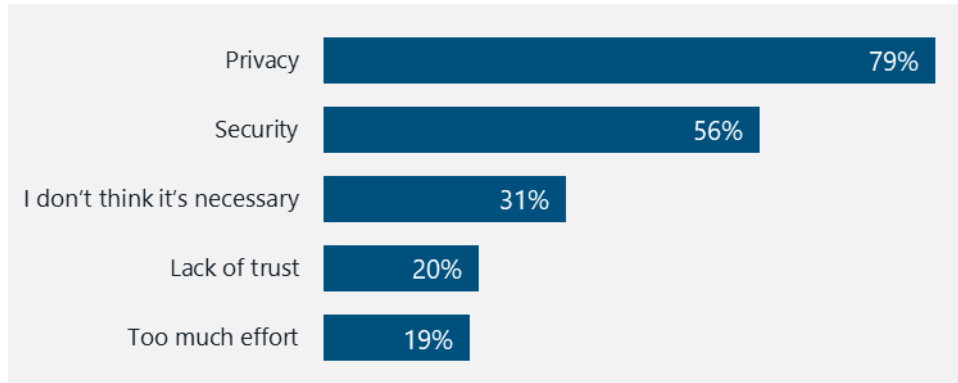
Figure K-14. Comfort with Sharing Utility Data with Focus on Energy



Source: General Population Survey Question A34. “How comfortable would you be with sharing your electric and/or gas utility data (for example, your energy usage, costs, or a copy of your utility bill) with Focus on Energy?” (n=344)

Respondents who indicated that they felt *somewhat* or *very uncomfortable* sharing their utility data with Focus on Energy were asked to identify their main concerns. Among respondents who were uncomfortable sharing utility data, privacy was the most commonly cited concern (79%), followed by security issues (56%). About one-third of respondents (31%) said they did not think sharing their data was necessary, 20% cited lack of trust, and 19% reported that providing data would require too much effort.

Figure K-15. Main Concerns About Sharing Utility Data Among Uncomfortable Respondents

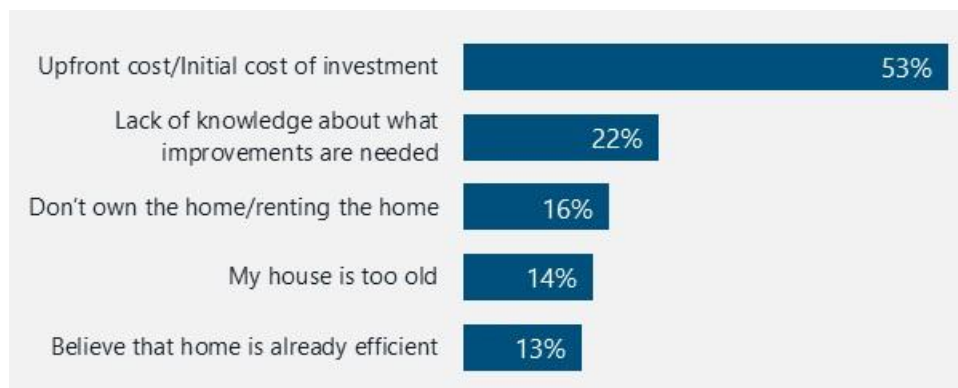


Source: General Population Survey Question A35. "You mentioned you feel uncomfortable sharing your utility data. What are your main concerns? Select all that apply." (n=80)

K.2.5. Participation Barriers and Motivations

The evaluation team asked respondents about the biggest challenge in completing energy efficiency improvements. As shown in Figure K-16, the most common challenge reported by all respondents was upfront costs (53%). This is consistent with findings from CY 2021 and CY 2018, when respondents cited upfront costs as the top challenge (51% and 53%, respectively). In CY 2025, this was followed by a lack of knowledge (22%). Structural or situational factors also played a role for some households: 16% cited renting or not owning their home, 14% stated their home was too old, and 13% reported their home was already energy efficient.

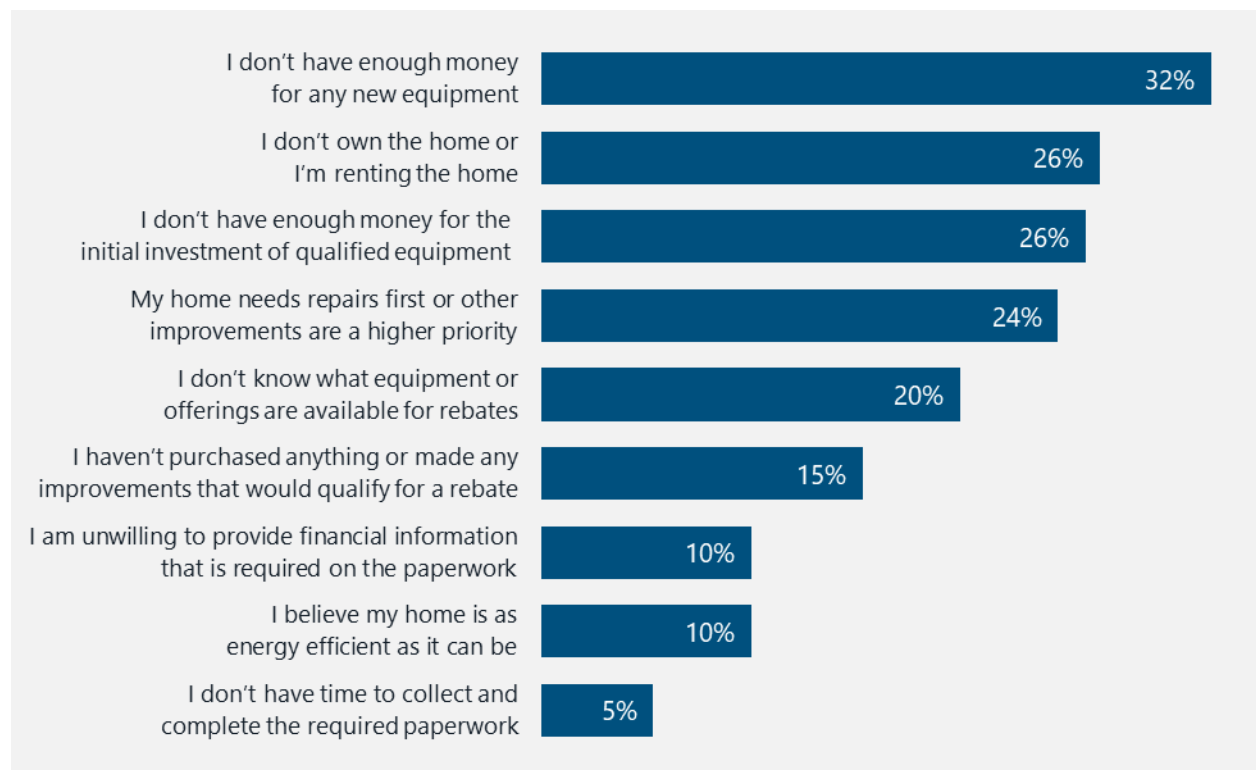
Figure K-16. Top Barriers to Completing Energy-Efficiency Improvements at Home



Source: General Population Survey Question A37. "What are the top challenges in completing energy-efficiency improvements for your home?" (n=344)

Respondents who said they were aware of Focus on Energy prior to the survey but had not participated in a Focus on Energy offering were asked why they had not participated. As shown in Figure K-17, respondents most often cited financial and housing-related barriers as the primary reasons for not participating in Focus on Energy offerings. Respondents most frequently cited not having enough money for any new equipment (32%). This was followed by renting or not owning the home (26%) and not having enough money for the initial investment in qualified equipment (26%). Nearly one-quarter (24%) reported that other home repairs or improvements were a higher priority, while one in five (20%) said they did not know which equipment or offerings were eligible for rebates. These results represent a shift from prior years. In CY 2021, respondents most often cited upfront costs as the biggest challenge to completing energy efficiency projects (51%). However, when asked specifically why they had not participated in Focus on Energy programs, relatively few reported that they did not have enough money for any new equipment. In CY 2021, only 17% of limited-income respondents and 8% of non-limited-income respondents reported this barrier.

Figure K-17. Reasons for Nonparticipation



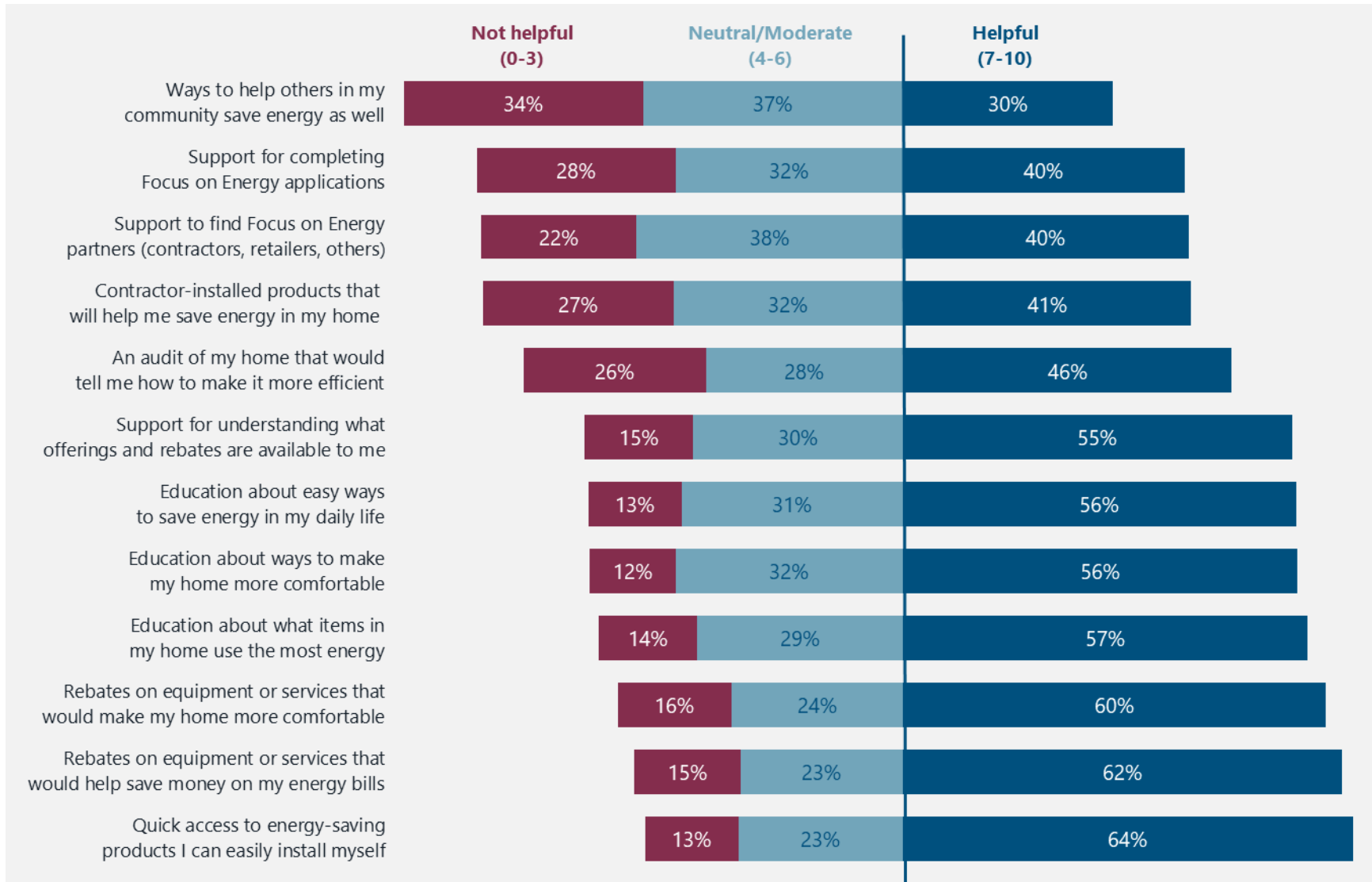
Source: General Population Survey Question A39. "What are the reasons you have not participated in a Focus on Energy program?" (n=191)

Respondents were asked how helpful they would find various types of Focus on Energy offerings, resources, and support services related to saving energy and improving home efficiency (Figure K-18). Respondents expressed the strongest interest in offerings that provide immediate, low-effort savings and financial benefits. The most highly rated option was quick access to easy-to-install energy-saving products, with nearly two-thirds of respondents (64%) reporting they would find this helpful. Rebates for equipment or services that lower energy bills (62%) or increase home comfort (60%) also ranked highly.

Respondents also highly rated educational resources, including information about which household items use the most energy (57%), ways to make homes more comfortable (56%), and daily energy-saving behaviors (56%). Support for understanding available rebates and offerings was also rated highly by a majority of respondents (55%).

More involved services received comparatively lower, but still moderate, levels of interest. Fewer than half rated home energy audits as helpful (46%), while contractor-installed products (41%), assistance finding Focus on Energy partners (40%), and support completing applications (40%) drew moderate support. The lowest rated option was help with saving energy at a community level, with just 30% rating this as helpful, and most viewing it as neutral or not helpful.

Figure K-18. Helpfulness of Focus on Energy Services



Source: General Population Survey Question F7. How helpful would the following Focus on Energy services be to you? Use a scale from 0-10, with 0 being *not at all helpful* and 10 being *extremely helpful*. (n=534)

K.2.6. Demographics

Figure K-1 and Figure K-2 show that most survey respondents live in single-family detached houses (74% of all respondents) and own their home (76% of all respondents). Both sets of percentages are higher than the Wisconsin average⁴⁶ (66% of residents live in one-unit homes, and 68% own their home).

Table K-1. Type of Home

Response	All Respondents (n=344)	Wisconsin Average
Single-family, detached	74%	66%
Attached house, 1-3 units	7%	2 units - 10%
Multifamily apartment or condo building	16%	3 or more units 21%
Mobile/manufactured home	2%	3%
Other	<1%	N/A

Source: General Population Survey Question A7. "What type of home do you live in?" (n=344)

Table K-2. Home Ownership

Response	All Respondents (n=344)	Wisconsin Average
Own/buying	76%	68%
Rent/lease	24%	32%

Source: General Population Survey Question A8. "Do you or members of your household own this home or do you rent?" (n=344)

Survey respondents also had a higher level of education than the Wisconsin average. As shown in Figure K-3, 27% of respondents had bachelor's degrees and 11% had graduate degrees. Of Wisconsin residents, 23% have bachelor's degrees and 12% have graduate degrees.

Table K-3. Level of Education

Response	% Respondents	Wisconsin Average
Less than a high school diploma	2%	6%
High school graduate, includes GED	22%	29%
Some college, no degree	20%	19%
Associates degree	18%	12%
Bachelor's degree	27%	23%
Graduate or professional degree	11%	12%

Source: General Population Survey Question A11. What is the highest level of school that someone in your home has completed? (n=344)

Note: American Community Survey data used for Wisconsin average included one category for "some college or associate's degree" for the 18- to 24-year old segment of the population. That population was split evenly between "some college, no degree," and "associate's degree" in this table.

⁴⁶ Wisconsin averages based on the U.S. Census Bureau. U.S. Census Bureau. Accessed January 30, 2026. "Community Facts." American Community Survey 2024 data. <https://data.census.gov>

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Survey respondents also had a lower income level than the Wisconsin average. As shown in Figure K-4, 43% of respondents made \$50,000 to \$99,999, and 36% made less than \$50,000, compared to 31% and 31% of Wisconsin residents, respectively.

Table K-4. Household Income

Response	% Respondents	Wisconsin Average
Less than \$50,000	43%	31%
\$50,001 up to \$99,999	36%	31%
\$100,000 up to \$149,999	14%	28%
\$150,000 or more	7%	9%

Source: General Population Survey Question A12. "Please indicate your household's approximate total pre-tax income for 2024 including wages, salaries, pensions, social security, etc. for all members of this household combined. Drag the slider to your approximate income level - if your total household income was more than \$200,000, please select \$200,000." (n=344)

Survey respondents' electric utility providers closely matched statewide distributions. As shown in Figure K-5, 45% of respondents reported being served by We Energies compared to 37% statewide, while 16% reported Alliant Energy (Wisconsin Power & Light) compared to 15% of Wisconsin residents.⁴⁷ Representation for WPS (Wisconsin Public Service) was identical to the statewide share (14%), and respondents served by Xcel Energy (Northern States Power) were also similar to statewide levels (9% versus 8%). There were smaller differences between MGE (Madison Gas & Electric) and statewide levels (4% versus 5%). Respondents were somewhat less likely to report being served by another utility (13%) than the statewide average (20%).

Table K-5. Electric Utility

Response	% Respondents	Wisconsin Average
Alliant Energy (Wisconsin Power & Light)	16%	15%
MGE	4%	5%
We Energies	45%	37%
WPS	14%	14%
Xcel Energy (Northern States Power)	9%	8%
Another utility	13%	20%

Source: General Population Survey Question A4. "Please select the utility that provides electricity for this residence." (n=658)

⁴⁷ Wisconsin average based upon U.S. Energy Information Administration (EIA). EIA. Accessed February 5, 2026. Form EIA-861: Annual Electric Power Industry Report. 2024 data. <https://www.eia.gov/electricity/data/eia861/>

K.3. Conclusions and Recommendations

Conclusion 1. Focus on Energy maintains strong brand trust and perceived value among Wisconsin residents. Nearly four in five respondents (73%) reported at least some familiarity with Focus on Energy. Brand perceptions remained extremely positive, with 98% of respondents who are aware of Focus on Energy agreeing that Focus on Energy is a brand they can trust, 97% agreeing that it helps lower energy costs, and 96% agreeing that it offers valuable programs and increases awareness of energy-saving opportunities.

Recommendation 1a. Maintain the program's current messaging around trustworthiness and bill savings, while strengthening calls to action that clearly explain next steps for participation.

Conclusion 2. Participation among aware customers has declined compared to prior surveys. Upfront costs remain the primary barrier to home energy improvements and are increasingly cited as a reason for not participating in Focus offerings. Among respondents who were aware of Focus on Energy, 62% (150 of 242) reported participating in at least one Focus offering, down from 82% among aware respondents in CY 2021. At the same time, more than half of respondents (53%) reported upfront costs as their biggest challenge to completing energy-efficiency upgrades. Among aware nonparticipants, 32% said they did not have enough money for new equipment, 26% cited renting or not owning their home, and 26% lacked funds for the initial investment in qualified equipment.

Recommendation 2a. Continue emphasizing rebates and incentives in outreach materials, including typical dollar amounts and expected bill savings.

Recommendation 2b. Expand or more clearly market financing options and low-cost, easy-to-adopt efficiency measures to reduce customers' concerns about upfront costs.

Conclusion 3. Electrification generates lower interest than no-cost energy saving tips and traditional efficiency upgrades, and residents report substantial information gaps. Fewer than half of respondents expressed interest in switching from gas to electric technologies (38% were *somewhat interested* and 9% were *very interested*), compared to 68% who were interested in energy efficiency upgrades, and 77% who were interested in no-cost energy-saving tips. In addition, only 38% of respondents reported knowing where to find reliable information about electrification, which is substantially lower than those who said they knew where to go for efficiency upgrades (63%) or no-cost actions (71%).

Recommendation 3a. Work with utilities to encourage early-stage education outreach focusing on basic awareness, costs, comfort benefits, and bill impacts.

Appendix L. Quadrennium IV Commission Priorities Progress

The evaluation team will complete a variety of research and analysis activities in Quadrennium IV to help Focus on Energy meet priorities established by the PSC during the Quadrennium IV planning process. These activities will help Focus on Energy develop additional program offerings (e.g., market transformation), track additional metrics (e.g., peak gas reductions), and/or track existing metrics at increased granularity (e.g., hourly emissions benefits) in the upcoming Quadrennium V. In late CY 2023, the PSC approved the budget and timing for a number of research and analysis tasks for the evaluation team during Quadrennium IV.⁴⁸ Table L-1 lists commission priorities that the evaluation team made progress on in CY 2025.

Table L-1. CY 2025 Evaluation Activities Related to Commission Priorities

Commission Priority	CY 2025 Activity
Develop recommendations to operationalize enhanced measurement and tracking of the program’s carbon emissions reduction impacts.	Emissions measurement enhancement activities have been built on the adoption of measure-specific load shapes, which allowed a better understanding of time-varying emissions impacts of energy efficiency and renewable resources. Specifically, in CY 2024, the evaluation team adopted National Renewable Energy Laboratory load shapes to enable measure-category-specific emissions calculations. In CY 2025, the team developed a methodology for calculating statewide hourly weighted marginal emissions rates for load-following resources, using emissions data from the Wisconsin Strategic Energy Assessment. This methodology also includes projection of six-year forward-looking marginal emissions rates based on utilities' anticipated generation mix, as well as long-term rates extending to the end of measures' effective useful lives using utilities' publicly stated carbon reduction goals. The team will calculate CY 2025 emissions reductions that use the current annual avoided emissions value, as well as conduct parallel calculations using the time-varying approach, enabling avoided emissions estimates that reflect the time-varying carbon intensity of the Wisconsin grid

⁴⁸ Public Service Commission of Wisconsin. December 21, 2023. *Quadrennial Planning Process IV– Order*. PSC Docket 5-FE-104, PSC REF#: 487366. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=487366>.

Commission Priority	CY 2025 Activity
<p>Position Focus on Energy to take on a larger role in promoting beneficial electrification statewide.</p>	<p>In CY 2025, the evaluation team completed a two-year Quadrennium V Planning Study. The analysis showed potential Focus on Energy program impacts under six program design scenarios, one of which was focused on electrification. The team delivered a final report from the study in December 2025.⁴⁹</p> <p>In CY 2025, the Evaluation Work Group held a series of meetings with assistance from Lawrence Berkeley National Laboratory to examine the appropriateness of the current Focus on Energy cost-effectiveness framework in assessing beneficial electrification initiatives. The Evaluation Work Group provided guidance to the PSC as an informational memorandum.⁵⁰</p>
<p>Adopt a winter peak electric period definition and begin quantifying and tracking the winter electric peak demand reductions achieved by the program.</p>	<p>The Focus on Energy Evaluation Work Group adopted the following winter electric peak definition in CY 2023: non-holiday weekdays, December through February, from 8:00 a.m. to Noon, and non-holiday weekdays, December through February, from 5:00 p.m. to 9:00 p.m.</p> <p>In CY 2024, the evaluation team worked with the administrator to add winter electric peak demand savings to the 2025 TRM, which was published in January 2025.</p> <p>In CY 2025, Focus on Energy began tracking, and the evaluation team began evaluating winter electric peak demand savings.</p>
<p>Adopt a winter natural gas peak period definition; begin quantifying and tracking winter natural gas demand reductions achieved by the program.</p>	<p>In CY 2024, the evaluation team conducted research to learn how other jurisdictions define peak natural gas periods and how they track savings and estimate avoided costs for the period. The team presented a memo to Commission staff in November 2024 that summarized its research and recommended the next steps to define peak gas and associated savings.</p>
<p>Investigate and develop recommendations for estimating peak natural gas avoided costs for the Commission’s consideration.</p>	<p>In CY 2025, the team developed and added natural gas peak savings algorithms to the 2026 TRM. The team will begin evaluating and reporting winter gas peak impacts for CY 2026.</p> <p>The team will complete its work to recommend peak natural gas avoided cost estimates in CY 2026.</p>
<p>Report annually on the program’s progress toward identifying and implementing strategies to adapt the portfolio to achieve long-term market effects.</p>	<p>The program administrator participated in interviews with the evaluation team to discuss market conditions for the top opportunities researched in the Market Transformation Assessment. The administrator also participated in meetings to discuss study results. See the update below.</p>
<p>Develop an assessment of Focus on Energy’s market transformation potential in coordination with the Program</p>	<p>In CY 2024, the evaluation team launched a two-year Market Transformation Assessment that aimed to identify and provide an implementation roadmap for the top market transformation opportunities for Wisconsin. The first</p>

⁴⁹ Cadmus. December 2025. *Focus on Energy Quad V Planning Study (2027-2030)*. <https://focusonenergy.com/about/quad-v-planning-study>

⁵⁰ Public Service Commission of Wisconsin. November 21, 2025. *Quadrennial Planning Process IV– Focus on Energy Evaluation Work Group Guidance for Assessing Beneficial Electrification Cost-Effectiveness*. PSC Docket 5-FE-104, [PSC REF#: 570030](#).

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Commission Priority	CY 2025 Activity
Administrator and Commission staff, with input from stakeholders.	<p>phase of the study included reviewing Wisconsin statutes and codes to assess how market transformation aligns with Focus on Energy policies. The team also interviewed administrators of other jurisdictions that offer market transformation programs to identify opportunities and lessons learned. Based on interviews and the 2021 Focus on Energy potential study, the team identified 20 market transformation opportunities and expanded them into opportunity descriptions. The team then scored each opportunity to identify the top five opportunities for Wisconsin.</p> <p>In CY 2025, the team completed the second phase of the study and continued researching the top opportunities identified in CY 2024 to better assess their appropriateness for Wisconsin. For each opportunity, the team developed savings potential, program cost, and cost-effectiveness estimates, and provided a detailed market overview and preliminary logic model. The team delivered a comprehensive report outlining its findings and recommendations in December 2025.⁵¹</p>
Review options and propose an approach for applying a benefits adder for programs and offerings targeting customers below 60% of the statewide median income in Focus on Energy’s primary cost-effectiveness test.	Completed in CY 2023
Develop and propose an alternative method(s) for calculating avoided electric transmission and distribution costs for the PSC’s consideration.	The evaluation team conducted research in CY 2024 to assess alternative methods to calculate avoided transmission and distribution costs. With support from the Regulatory Assistance Project (RAP), the team developed a memo that analyzed alternative approaches and put forth a recommended approach for the Focus on Energy Evaluation Work Group’s (EWG’s) consideration. After reviewing and discussing the memo, the EWG supported the approach recommended by the evaluation team and RAP. In November 2024, Commission staff delivered a memo to the Commission for its consideration seeking a decision on the EWG’s recommended approach. ⁵²
Research and analysis on an appropriate market-based carbon value for the PSC’s consideration.	Completed in CY 2023

⁵¹ Cadmus. December 22, 2025. *Focus on Energy Market Transformation Assessment Study Phase 2*. <https://assets.focusonenergy.com/production/docs/evaluation/Focus-MT-Potential-Phase-2-Report.pdf>

⁵² Public Service Commission of Wisconsin. November 14, 2024. *Quadrennial Planning Process IV*. PSC Docket 5-FE-104, PSC REF#: 524099. <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=524099>

Appendix M. Survey and Interview Instruments by Offering

This appendix includes the following survey and interview instruments.

M.1. Residential Programs

- Direct to Customer Program – Income Qualified Direct Install Thermostat Participant Survey
- Multifamily Program – Building Owner and Manager Interview
- Multifamily Program - Express EDA Participant Interview
- Trade Ally Solutions Program – Retail Smart Thermostat Participant Survey
- Residential General Population Survey

Focus on Energy – IQ Direct Install Smart Thermostat Online Survey

Research Objectives	Corresponding Question Numbers
Assess customer satisfaction with the program, installation process, application process, contractor, and their thermostats	C1, C2, C5, E5, E6, E8, E9, E14, E15, G1 - G5
Direct Install scheduling and installation experience	E4 - E15
Assess sources of customer awareness of Smart Thermostat Direct Install program	D1 - D5
Assess customer awareness of and participation in other Focus on Energy programs, including demand response	D6 - D10
Experience with Focus on Energy Staff	E7
Assess customer awareness of non-energy benefits	H1
Understand customer demographics	I1 - I11

General Instructions:

- Programming instructions are in red [like this] (the style is “Survey: Programming”).
- Responses will be required for all questions, unless indicated
- Single response only, unless indicated
- Core questions marked with an asterisk (*)

This survey is designed for income qualified residential customers who purchased a smart thermostat and had it directly installed for free.

Variables to be Pulled into Survey

[FIRSTNAME] = CUSTOMER FIRST NAME

[LASTNAME] = CUSTOMER LAST NAME

[EMAIL] = CUSTOMER EMAIL

[UTILITY] = CUSTOMER UTILITY (ALLIANT)

[QUANTITY] = NUMBER OF MEASURE INSTALLED (NUMERIC)

[TYPE] = DUAL OR ELECTRICONLY

[ZIP] = 5-DIGIT ZIP CODE

[MONTH] = PURCHASE MONTH

[YEAR] = PURCHASE YEAR

[INCENTIVE]=YES/NO

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Email Invitation

To: **[EMAIL]**

From: **[CADMUS CONTACT]**

Subject: Tell Focus on Energy about your experience with your new smart thermostat

Dear **[FIRSTNAME AND LASTNAME]**,

You recently purchased a smart thermostat from Focus on Energy that qualified for a discounted installation service. We invite you to tell us about your experience with your new thermostat and the installation process. Your responses will be confidential, and your input will be used to improve Focus on Energy's programs that help customers like you save energy. **The survey will take 15 minutes to complete.** The first **50 respondents** to complete the survey will receive a **\$10 gift card.**

Click the link below to take the survey:

[auto-generated link]

Or you may copy and paste the following URL into your internet browser: [auto-generated url]

If you have any questions about this research, or any difficulties taking the survey, please contact the survey coordinator, Joseph Keegan, via email at joseph.keegan@cadmusgroup.com. If you would like to confirm the validity of the research effort, please contact Jacob Slattery at the Public Service Commission of Wisconsin at jacob.slattery@wisconsin.gov or 608-261-9418 <mailto:mitch.horrie@wisconsin.gov>

Thank you for helping us build smarter, more responsive energy programs across the state. We truly appreciate your time and experience.

Warm regards,

[NAME]

[SIGNATURE]

Reminder Invitation

To: **[EMAIL]**

From: **[CLIENT]**

Subject: Don't forget to tell Focus on Energy about your Smart Thermostat experience!

Dear **[FIRSTNAME AND LASTNAME]**,

CADMUS

We recently invited you to tell us about your experience with your new smart thermostat and the installation process. We would still like to hear from you. Your input will be used to improve Focus on Energy programs and will be kept confidential. **Please take 15 minutes today to complete the survey.** The first **50 respondents** to complete the survey will receive a **\$10 gift card.**

Click the link below to take the survey:

[auto-generated link]

Or you may copy and paste the following URL into your internet browser: [auto-generated url]

If you have any questions about this research, or any difficulties taking the survey, please contact the survey coordinator, Joseph Keegan, via email at joseph.keegan@cadmusgroup.com. If you would like to confirm the validity of the research effort, please contact Mitch Horrie at the Public Service Commission of Wisconsin at mitch.horrie@wisconsin.gov or (608) 267-3206.

Thank you for helping us build smarter, more responsive energy programs across the state. We truly appreciate your time and experience.

Warm regards,

[NAME]

[SIGNATURE]

A. Introduction and Screener

[THIS INTRODUCTION AND THE SCREENER QUESTION BELOW ARE DESIGNED TO FIND THE CORRECT PERSON AND MAKE THE INTENDED RESPONDENT FEEL COMFORTABLE COMPLETING A SURVEY.]

Welcome! This survey will take about 15 minutes to complete. Your responses will remain confidential and will be used to improve our programs for customers like you. The first **50 respondents** to complete the survey will receive a **\$10 gift card.**

- A1. Our records show that you purchased a smart thermostat in **[MONTH] [YEAR]** from Focus on Energy. Do you remember purchasing that thermostat?
1. Yes
 2. No **[THANK AND TERMINATE]**
 3. Don't know **[THANK AND TERMINATE]**

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B. Verification

- B1. Is the new thermostat installed in your home?
1. Yes
 2. No
 3. It was, but it was removed
 4. Don't know **[THANK AND TERMINATE]**
- B2. **[IF B1 = 2,3]** What was the main reason you did not install or removed the thermostat?
1. Not enough time
 2. Installation was too complicated
 3. Problems with the installer **[SPECIFY: _____]**
 4. New thermostat did not work with my heating/cooling equipment
 5. Lost the thermostat
 6. Did not like the new thermostat
 7. Other **[SPECIFY: _____]**
- B3. **[IF B1 = 2]** What would have helped you utilize your new thermostat?
1. **[OPTIONAL OPEN-END]**

C. Website Satisfaction

- C1. Overall, how easy was the process of using the Focus on Energy website to order your thermostat?
1. Very easy
 2. Somewhat easy
 3. Neither easy nor difficult
 4. Somewhat difficult
 5. Very difficult
 98. Don't know
- C2. **[IF C1 = 4 OR 5]** What made the process of using the Focus on Energy Website to order your thermostat difficult?
1. **[OPTIONAL OPEN-END]**
 98. Don't know
- C3. Did you complete the Product Advisor Quiz?
1. Yes
 2. No
 98. Don't know

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- C4. **[IF C3= 2]** Why didn't you complete the Product Advisor Quiz?
1. Other **[SPECIFY: _____]**
 98. Don't know
- C5. How helpful were each of the following Focus on Website features? **[FORMAT: DROP DOWN MENU. RANDOMIZE LIST OF ITEMS; SAME 7 RESPONSE OPTIONS FOR EACH ITEM: VERY HELPFUL, SOMEWHAT HELPFUL, NEITHER HELPFUL OR UNHELPFUL, SOMEWHAT UNHELPFUL, VERY UNHELPFUL, DON'T KNOW.]**
- D4a. Information on the Focus on Energy Website
 - D4b. Installation scheduling
 - D4c. **[IF C3= 1]** The Product Advisor Quiz
 - D4d. Increased comfort in my home

D.Awareness and Motivation

- D1. How did you learn about this Focus on Energy program? Select all that apply. **[RANDOMIZE ITEMS 1-4, MULTIPLE RESPONSE]**
1. I received an email
 2. I received direct mail/brochure/post card
 3. I heard about the program from someone else
 4. A different source – which one? **[SPECIFY: _____]**
 98. Don't know **[EXCLUSIVE]**
- D2. **[IF D1= 1,2,3, OR 4]** How helpful was the information that you received in this communication?
1. Very helpful
 2. Somewhat helpful
 3. Neither helpful or unhelpful
 4. Somewhat unhelpful
 5. Very unhelpful
 98. Don't know
- D3. **[IF D2= 4 OR 5]** What made the information you received unhelpful?
1. **[OPTIONAL OPEN-END]**
 98. Don't know

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D4. How important were each of the four factors in your decision to purchase your smart thermostat? **[FORMAT: DROP DOWN MENUS. RANDOMIZE LIST OF ITEMS; SAME 7 RESPONSE OPTIONS FOR EACH ITEM: VERY IMPORTANT, SOMEWHAT IMPORTANT, NEITHER IMPORTANT OR UNIMPORTANT, SOMEWHAT UNIMPORTANT, VERY UNIMPORTANT, DON'T KNOW]**

- D4a. Price of the thermostat
- D4b. Availability of free shipping
- D4c. Discounted installation cost
- D4d. Increased comfort in my home
- D4d. Reducing energy use or energy cost

D5. *Were you aware that Focus on Energy offers discounted thermostats on the Online Marketplace before you received the initial communication about the program?

- 1. Yes
- 2. No
- 98. Don't know **[EXCLUSIVE]**

D6. * Other than the discounted thermostats offered by Focus on Energy, are you aware of any Focus on Energy programs or rebates?

- 1. Yes
- 2. No
- 98. Don't know

D7. * **[ASK IF D6 = 1]** For the Focus on Energy programs listed below, please indicate which ones you are aware of and which you have participated in. **[TABLE FORMAT; EACH PROGRAM LISTED HAS A DROP DOWN MENU WITH THE THREE RESPONSE OPTIONS: PARTICIPATED IN THIS PROGRAM, AWARE BUT HAVE NOT PARTICIPATED, NOT AWARE OF THIS PROGRAM]**

Program	Description
Energy Saving Packs	Free packs of energy saving items such as LEDs, low-flow showerheads and weatherization products, delivered through the mail
Insulation and Air Sealing	Rebates for sealing air leaks and adding insulation in your home
New Construction	Certification of energy efficient homes built above code
Online Marketplace	Online store available through the Focus on Energy website, offering instant discounts on a range of energy-saving products for your home
Multifamily	A program for property owners that offers incentives for improvements that will reduce energy use in units and common areas
Renewable Energy	Rebates for solar PV installations

D8. Are you aware of any demand response opportunities that may be offered by your utility, such as variable “time of use” rates or bill credits if you agree to reduce your energy use on certain days or times (usually very hot or very cold days)?

1. Yes
2. No

D9. **[IF D8 = YES]** Have you participated in any of these opportunities?

1. Yes [What was the opportunity? _____]
2. No
3. Don’t know

D10. **[IF D8 = NO]** Would you be interested in an opportunity to save money on your electricity bill by shifting high-energy activities to off-peak times when energy demand is low? Off-peak times are typically early mornings, nights, weekends, and holidays. High-energy activities include electric space and water heating, EV charging, clothes dryer.

1. Yes, interested in an opportunity where I pay a cheaper electric rate during off-peak times compared to on-peak times throughout the entire year.
2. Yes, interested in an opportunity where I receive bill credits if I reduce or shift my electric load on specific high demand days after receiving communication from my utility requesting I do so.
3. Yes, interested in both opportunities described above.

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4. No, not interested
98. Don't know

E. Installation and Application Process

The following questions are about your experience installing your thermostat.

- E1. Our records show that you did not choose to purchase the discounted installation for \$25 when you purchased the thermostat, is this correct?
1. Yes
 2. No **[SKIP TO E9]**
 3. Don't know **[SKIP TO F1]**
- E2. Would you have purchased the discounted installation under either of the following circumstances **[Yes/No/Don't Know]**
1. The price of installation was lower
 2. **[ASK: what price would you have paid? (Valid: \$0-\$25)]**
 3. The installation was free
- E3. Who installed your thermostat? [Ask if INCENTIVE=NO]
1. I installed it
 2. A friend or relative
 3. A contractor **[SKIP TO E7]**
 4. Landlord
 5. Someone else
 98. Don't know **[SKIP TO F1]**
- E4. What factors contributed to your decision to not hire a contractor for the installation of your thermostat? Select all that apply. **[RANDOMIZE ITEMS 1-4, MULTIPLE RESPONSE]**
1. I felt comfortable installing the thermostat myself
 2. I did not want someone else in my home
 3. It was difficult to schedule a time
 4. It wasn't my decision
 5. Other **[SPECIFY: _____]**
 98. Don't know
- E5. Overall, how would you rate the ease of installing your thermostat?
1. Very easy **[SKIP TO F1]**
 2. Somewhat easy **[SKIP TO F1]**
 3. Neither easy nor difficult **[SKIP TO F1]**
 4. Somewhat difficult

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5. Very difficult
98. Don't know **[SKIP TO F1]**
- E6. **[IF E5= 4 OR 5]** What made the installation process of your thermostat difficult?
1. **[OPTIONAL OPEN-END] [SKIP TO F1]**
- E7. How did you find the contractor who installed your new thermostat? [Ask if E1 = YES]
[RANDOMIZE LIST EXCEPT FOR OTHER AND DON'T KNOW]
1. Used the same contractor previously
2. Called Focus on Energy/ Focus on Energy's website, i.e. 'Find a Trade Ally' link
3. Focus on Energy or Utility representative
4. Referral from family / friend / word of mouth
5. Retailer / store – Home Depot, Lowes, etc.
6. Focus on Energy advertising
7. Social media from Focus on Energy
8. Social media other than Focus on Energy
9. Contractor advertising
10. Personal research
11. Other **[SPECIFY: _____]**
98. Don't know
- E8. What was your top reason for choosing the contractor who installed your thermostat? [Ask if E1=YES]
1. Used the same contractor previously
2. They were close by / near my house
3. Listed on Focus on Energy website
4. Only program-eligible contractor available in my area
5. Referral from friend, family member, colleague
6. Influenced by an advertisement or website
7. Timing / scheduling worked out
8. Most responsive / easiest to communicate with
9. They were the only option through the program
10. They appeared to provide the best quality / value; appeared to be the most trustworthy
11. Other **[SPECIFY: _____]**
98. Don't Know
- E9. Overall, how was the process of scheduling the contractor to install your thermostat? [E3=3 or Incentive=YES]
1. Very easy
2. Somewhat easy
3. Neither easy nor difficult

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4. Somewhat difficult
5. Very difficult
98. Don't know

E10. **[IF E9= 4 OR 5]** What made the process of scheduling a contractor to install your thermostat difficult?

1. **[OPTIONAL OPEN-END]**
2. Other **[SPECIFY: _____]**
98. Don't know

E11. Overall, how satisfied were you with the contractor who installed your thermostat? [E3=3 or Incentive=YES]

1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied
98. Don't know

E12. **[IF E11=4 OR 5]** What made the experience of working with the contractor less than satisfactory?

1. **[OPEN-END]**

E13. Do you think that having a installation contractor had an impact on how soon the smart thermostat was installed? [Ask if E3=3 or Incentive=YES]

1. Yes, my smart thermostat was installed sooner because I hired a contractor
2. No, I would have been able to install it sooner without a contractor
3. It would have been installed around the same time with or without help from a contractor
4. It wouldn't have been installed without a contractor
5. Other **[SPECIFY: _____]**
98. Don't know

E14. How satisfied are you with the overall installation process?

1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied
98. Don't know

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- E15. **[IF E14= 4 OR 5]** What made the overall installation process less than satisfactory?
1. **[OPTIONAL OPEN-END]**
 2. Other **[SPECIFY: _____]**
 98. Don't know

F. Usage Patterns

[DO NOT ASK Section F IF B1 = 2,3] The next set of questions are about how you use your new smart thermostat.

- F1. What equipment does the thermostat control in your home?
1. Heating equipment
 2. Air Conditioning equipment
 3. Heating and Air Conditioning equipment
 4. Other **[SPECIFY: _____]**
 98. Don't know
- F2. How do you use your thermostat?
1. I programmed it and rarely or never adjust the temperature
 2. I programmed it and sometimes adjust the temperature
 3. I programmed it and often adjust the temperature
 4. I only adjust the temperature (do not follow a programmed or pre-set schedule)
 5. Other **[SPECIFY: _____]**
 98. Don't know
- F3. What type of thermostat did the new thermostat replace?
1. A "Smart" thermostat (advanced, wi-fi, or connected with learning capabilities, like the one you purchased)
 2. A Wi-Fi thermostat (non-learning, controllable through a smart device but does not adjust to your preferences)
 3. A programmable thermostat
 4. A manual thermostat
 98. Don't know

G.Measure Satisfaction

G1. Overall, how would you rate the experience of **learning to use** your new thermostat?

1. Very satisfied **[SKIP TO G3]**
2. Somewhat satisfied **[SKIP TO G3]**
3. Neither satisfied nor dissatisfied **[SKIP TO G3]**
4. Somewhat dissatisfied
5. Very dissatisfied
98. Don't know **[SKIP TO G5]**

G2. **[IF G1 > 3]** Why were you dissatisfied with the process of learning to use your new thermostat?

1. **[OPEN-END]**

G3. Overall, how would you rate the experience with your new thermostat **once you had learned to use it?**

1. Very satisfied **[SKIP TO G5]**
2. Somewhat satisfied **[SKIP TO G5]**
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied
98. Don't know **[SKIP TO G5]**

G4. **[IF G3 > 3]** Why were you dissatisfied with your new thermostat after you learned to use it?

1. **[OPEN-END]**

G5. How much do you agree with each of the following statements? **[FORMAT: DROP DOWN MENUS. RANDOMIZE LIST OF ITEMS; SAME 6 RESPONSE OPTIONS FOR EACH ITEM]**

1. Strongly agree
2. Somewhat agree
3. Neither agree nor disagree
4. Somewhat disagree
5. Strongly disagree
6. Don't know/not applicable

G5a. My smart thermostat has increased comfort in my home.

G5b. I would recommend a smart thermostat to a friend or relative.

G5c. My smart thermostat has reduced my energy bill.

G5d. It is easier for me to control the temperature in my home.

G5e. I have peace of mind from using a more environmentally friendly thermostat to control my space heating and cooling.

H. Energy Usage Motivations

H1. * How much do you agree with each of the following statements? **[FORMAT: DROP DOWN MENU. RANDOMIZE LIST OF ITEMS; SAME 6 RESPONSE OPTIONS FOR EACH ITEM]**

1. Strongly agree
 2. Somewhat agree
 3. Neither agree nor disagree
 4. Somewhat disagree
 5. Strongly disagree
 6. Don't know
- I try to save energy to lower my energy bill
 - Keeping the home comfortable is more important than saving on my bill
 - I've tried a few things to save energy, but have not seen any real savings on my energy bill
 - It is important to conserve resources to be more environmentally friendly
 - I prefer to use the most advanced technologies available to control my energy use
 - I am willing to pay more for efficient products that will save me money in the long term
 - I am willing to pay more for efficient products that are more environmentally friendly
 - Energy efficient improvements increase my home's comfort
 - I'm not interested in improving my home's efficiency
 - I wish Focus on Energy would offer more options to help manage my energy usage
 - It is not convenient to be energy efficient at home

H2. * How informed do you feel about all the ways you can save energy, including buying and using energy efficient appliances and equipment?

1. Very informed
2. Somewhat informed
3. Neutral
4. Not too informed
5. Not at all informed
98. Don't know

H3. * How much attention do you pay to the amount of energy (gas or electric) that you use in your home?

1. Very close attention
2. A fair amount of attention
3. Some attention
4. Not much attention
5. No attention at all

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98. Don't know

H4. *What other energy improvements do you plan to make to your home over the next 5 to 10 years? Select all that apply. **[MULTIPLE RESPONSES ALLOWED]**

1. Gas boiler
 2. Gas furnace
 3. Gas tankless water heater
 4. Gas storage water heater
 5. Electric tankless water heater
 6. Electric storage water heater
 7. Insulation; attic
 8. Insulation; floor
 9. Insulation; ceiling
 10. Insulation; basement
 11. Air sealing
 12. Duct sealing
 13. Low-E Storm windows
 14. ENERGY STAR windows
 15. ENERGY STAR air purifier
 16. ENERGY STAR dehumidifier
 17. ENERGY STAR clothes washer
 18. ENERGY STAR dishwasher
 19. ENERGY STAR pool pump
 20. ENERGY STAR room air conditioner
 21. ENERGY STAR refrigerator
 22. ENERGY STAR freezer
 23. Heat pump water heater
 24. Central air conditioner
 25. Air source heat pump
 26. Ductless heat pump
 27. Ground source heat pump
 28. Smart power strip
 29. Other equipment, please specify the items_below: **[TEXT ENTRY]**
98. Don't know

I. Demographics and Household Information

The last few questions are for statistical purposes only.

- I1. What is the primary language you speak at home?
 1. English
 2. Spanish
 3. Hmong
 4. Chinese
 5. Other **[SPECIFY: _____]**
 6. Prefer not to answer

- I2. What is your current age?
 1. Under 18
 2. 18 to 24
 3. 25 to 34
 4. 35 to 44
 5. 45 to 54
 6. 55 to 64
 7. 65 to 74
 8. 75 or older

- I3. *What is the main type of fuel you use to **heat your home**?
 1. Natural Gas
 2. Oil
 3. Propane
 4. Electricity
 5. Wood
 6. Other **[SPECIFY: _____]**
 98. Don't know

- I4. What is the primary heating system in your home?
 1. Furnace
 2. Air Source Heat Pump
 3. Ground Source Heat Pump (geothermal)
 4. Boiler
 5. Wood or pellet stove
 6. Radiant floor heating
 7. Electric baseboard heaters
 8. Fireplace

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9. Other **[SPECIFY: _____]**
98. Don't know
15. **[If I4 = 2]** Do you have back-up heating equipment?
1. Yes
2. No
98. Don't know
16. **[If I5 = 1]** What is the switchover temperature (the temperature at which the backup equipment is used instead of the primary equipment)?
1. Above 45 degrees F
2. 45 degrees F
3. 40 degrees F
4. 35 degrees F
5. 30 degrees F
6. 25 degrees F
7. 20 degrees F
8. 15 degrees F
9. Below 15 degrees F
98. Don't know
17. What is the primary cooling system in your house?
1. My house does not have a cooling system
2. Central air conditioning
3. Heat Pump
4. Window air conditioning units
5. Other **[SPECIFY: _____]**
98. Don't know
18. * What type of home do you live in?
1. Mobile / manufactured home
2. Single-family home, detached house
3. Attached house townhouse, row house, or duplex
4. Multifamily apartment or condo building with 4 or more units
5. Co-op/retirement community
6. Other **[SPECIFY: _____]**
98. Don't know/prefer not to answer
19. How is your electric utility bill paid?
1. My utility bills me directly
2. My maintenance fees or rent includes utility costs

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3. My bill is split evenly between units within the complex
 4. Other **[SPECIFY: _____]**
 98. Don't know
- I10. **[ASK IF I8 = 2 OR 3]** How is your gas utility bill paid?
1. My utility bills me directly -
 2. My maintenance fees or rent includes utility costs
 3. My bill is split evenly between units within the complex
 4. I don't have natural gas service
 5. Other **[SPECIFY: _____]**
 98. Don't know
- I11. * What is the highest level of school that you have completed?
1. Less than 9th grade
 2. 9th to 12th grade; no diploma
 3. High school graduate [includes GED]
 4. Some college, no degree
 5. Associate's degree
 6. Bachelor's degree
 7. Graduate or professional degree
 8. Prefer not to answer

J. Closing

- J1. * Do you have any other comments about your experience with Focus on Energy that you would like to share?
1. Yes: **[OPEN ENDED TEXT, FORCED IF YES]**
 2. No
 98. Don't know
- J2. * 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
 98. Don't know

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- J3. Finally, we would like to confirm where to send your \$10 reward. Please enter a name and email address below. The gift cards will be distributed within two weeks of this survey closes.

You may leave this blank if you do not want to receive a gift card.

1. FIRSTNAME LASTNAME
2. EMAIL

[END OF SURVEY MESSAGE] This completes the survey. We appreciate your participation and thank you for your time. Have a good day.

CY 2025 Affordable Housing Building Owner & Manager Interview Guide

Focus on Energy Multifamily Program

Table 1. Topic Areas

Researchable Questions		
Key Research Topics	Areas of Investigation	Related Section/ Questions
Affordable Housing Context and Participant Profile	<ul style="list-style-type: none"> Understand building and ownership characteristics specific to affordable housing. Identify how affordability constraints influence capital planning, equipment decisions, and energy efficiency projects. 	0
Program Participation & Experience	<ul style="list-style-type: none"> Assess experience with Focus on Energy and other energy programs, including motivations and barriers. Capture feedback on outreach effectiveness, technical assistance, and incentives. 	B
Explore Electric Baseboard to Heat Pump Opportunities & Barriers	<ul style="list-style-type: none"> Assess current heating situation and awareness of heat pumps as an alternative to baseboards. Gauge interest, feasibility, and tenant receptivity to electrification (heat pumps). Explore concerns about up-front costs, long-term affordability, interest in rebates. Explore common barriers (installation feasibility, decision making) and barriers unique to affordable housing (utility allowances, regulatory restrictions). 	C
IRA & Incentive Awareness	<ul style="list-style-type: none"> Measure awareness of Inflation Reduction Act funding and interest in leveraging these resources. Explore what information, support, or design elements would encourage participation. 	Error! Reference source not found.
Future Program Design	<ul style="list-style-type: none"> Collect input on what would make an Affordable Housing-focused MF program attractive, equitable, and accessible. Understand variation by property type and size to inform weighting and segmentation. 	D

Target completes: 10

Sample audience: 2024 Affordable Housing MF BOMs.

CADMUS

Email Invitation

Hello **[CUSTOMER NAME]**,

Focus on Energy is exploring how to better support owners and managers of affordable multifamily housing across Wisconsin, and we'd like to hear from you.

Focus on Energy is partnering with Cadmus, an independent research company to conduct confidential interviews with building owners and property managers like you to understand your experience with energy use, equipment, upgrades, and participation in energy programs. Your insights will directly inform the design of future programs that better meet the needs of affordable housing providers and tenants. The interview will last around 45 minutes.

Please click this link to schedule our conversation the day and time that work for you. If none of the times work, please reply to this email or email Whitney White at Cadmus (Whitney.White@cadmusgroup.com) and we'll accommodate your schedule.

As a thank you for your time, we are offering a \$100 e-gift card.

If you have any questions about the validity of this research, you may contact Mitch Horrie at Public Service Commission of Wisconsin at 608-267-3206 or mitch.horrie@wisconsin.gov.

We greatly appreciate your time and input.

Thank you very much!

Warm regards,
Whitney White

On behalf of Focus on Energy
Cadmus

Introduction

Welcome! Thank you for your time to participate in this interview, Focus on Energy is exploring how to better serve affordable multifamily housing through targeted energy efficiency programs, and your feedback will be crucial for future program design.

As a thank you for your time completing this survey, we are offering a \$100 e-gift card.

This interview will take about 45 minutes. May I have permission to record?

I'd also like to reiterate the confidentiality of your responses. We will not share your name or individualize your responses without your permission.

A. Context and Participant Profile

- A1. Can you tell me about your organization and your role in managing/owning affordable housing?
- A2. Do you exclusively own/manage affordable housing buildings?
1. **[INTERVIEWER, IF NOT, CLARIFY THAT ALL THE QUESTIONS THROUGHOUT THIS INTERVIEW WILL FOCUS ON AFFORDABLE HOUSING].**
- A3. How many affordable housing properties do you oversee/own in Wisconsin?
- A4. What types of affordability apply **[PROBE: PUBLIC HOUSING, SECTION 8, LIHTC]**?
- A5. What's the typical size and building type of the properties in your portfolio **[PROBE: UNITS PER SITE, BUILDING TYPES]**?
- A6. What types of primary heating systems are used in your affordable housing buildings?
1. Electric resistance like baseboard heaters
2. Heat pumps
3. Natural gas furnace
4. Natural gas boiler (for central heating, radiators, or baseboards)
5. Oil furnace or boiler
6. Propane furnace or boiler
7. District steam or hot water
8. Wood or biomass system
Other. Please specify: _____
- A7. Approximately what percentage of units uses each type? **[INTERVIEWER, ASK FOR EACH OF THE SYSTEMS THE INTERVIEWEE SELECTED ABOVE].**
1. Do they serve individual or multiple units?
2. For each, how are energy costs typically managed? Are they paid by tenants or by the owner? On a scale of 1 to 5, where 1 is very dissatisfied and 5 is very satisfied, how satisfied are you with your main current heating system in terms of:
3. Reliability and maintenance needs/repairs
4. Operating cost (energy bills paid by you or tenants?)
- A8. Do tenants complain about comfort regarding the heating system? **[PROBE ABOUT DRAFTS, CONDENSATION ON/AROUND WINDOWS, NOISE].**
- A9. What types of primary cooling systems are used in your buildings?
1. Central air conditioning (shared system for the whole building)
2. Packaged terminal air conditioner (PTAC) units
3. Heat pumps

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4. Window units
5. Portable/room air conditioners
6. Evaporative (swamp) coolers
7. No cooling system
8. Other (please specify: _____)

A10. Approximately what percentage of units uses each type? **[INTERVIEWER, ASK FOR EACH OF THE SYSTEMS MENTIONED ABOVE].**

1. Do they serve individual or multiple units?
2. How are energy costs typically managed for the different types? Are they paid by tenants or by the owner?

A11. On a scale of 1 to 5, where 1 is very dissatisfied and 5 is very satisfied, how satisfied are you with your current cooling systems in terms of the following key characteristics:

1. Reliability / Maintenance Needs
2. Operating Costs (energy bills paid by you or tenants?)

A12. Do tenants complain about comfort regarding their cooling system? **[PROBE ABOUT TEMPERATURE CONTROL ISSUES, UNEVEN COOLING, NOISE, AIR QUALITY, HUMIDITY PROBLEMS].**

A13. What types of water heating systems do your buildings have? **[PROBE: TANK, TANKLESS, ELECTRIC, GAS, HEAT PUMP WATER HEATERS].**

1. Approximately what percentage of units uses each type? **[INTERVIEWER, ASK FOR EACH OF THE SYSTEMS MENTIONED ABOVE].**
2. Do they serve individual or multiple units?
3. How are energy costs typically managed for the different types? Are they paid by tenants or by the owner?

A14. On a scale of 1 to 5, where 1 is very dissatisfied and 5 is very satisfied, how satisfied are you with your current water heating systems in terms of the following key characteristics:

1. Reliability / Maintenance Needs
2. Operating Costs (energy bills paid by you or tenants?)

A15. What types of water heating complaints do tenants typically bring to your attention?

[PROBE: INSUFFICIENT HOT WATER, INCONSISTENT TEMPERATURES, SLOW RECOVERY TIME, SCALDING/SAFETY ISSUES]

A16. Who is primarily responsible for making heating, cooling, and water heating system investment decisions in your properties?

A17. Do you typically perform insulation and air sealing upgrades in our properties?

1. **[IF YES]** How often do you perform this kind of upgrades?

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2. Do you think insulation and air sealing upgrades could improve energy bills and tenant comfort?

A18. Are there any regulatory or funding requirements that shape how you invest in upgrades or equipment?

A19. What's your process for replacing or upgrading HVAC and water heating equipment?

1. How far in advance do you budget and plan for HVAC, WH, and insulation upgrades?

A20. Have you installed any HVAC or water heating equipment in the last few years? If so, what motivated that decision?

A21. **[IF A15=YES]** From the equipment you installed, was any of it energy-efficient? If so, what motivated the decision to install equipment that was energy efficient?

A22. What are the biggest challenges when considering equipment upgrades?

B. Participation and Experiences

B1. What has been your experience participating Focus on Energy's offerings? What aspects worked well, and what was challenging?

B2. What motivated you to participate in Focus on Energy's offerings?

B3. What upgrades did you make through your previous participation?

B4. Are there any barriers or program rules that make it harder for affordable housing providers like you to participate in Focus on Energy's offerings?

B5. What would have made participation easier for AH providers like yourself?

C. Transition to Heat Pumps

[KEY:

A6=1: Interviewee identified electric resistance like baseboard heaters as one of the primary heating systems in their buildings

A6= 3 or 4: Interviewee identified natural gas furnace or boilers as one of the primary heating systems in their buildings

A6=1 AND ≠2: Their units have electric resistance like baseboard heaters and NOT heat pumps].

C1. **[ASK IF A6=1]** Have you considered installing heat pumps in your properties for heating and cooling or water heating? Why or why not?

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- C2. **[ASK IF A6=1]** What may be the benefits of installing heat pumps at your properties? How might these benefits impact your tenants? ?
- C3. **[ASK IF A6=1]** What may be the downsides of installing heat pumps at your properties? How might these downsides affect your tenants?
- C4. **[ASK IF A6= 3 OR 4]** Are there challenges that make it more difficult to replace gas equipment (such as HVAC or water heating) with electric equipment in affordable housing compared to standard multifamily properties? **[PROBE: TECHNICAL, FINANCIAL, TENANT-RELATED CHALLENGES]**
- C5. **[ASK IF A6=1 AND ≠2]** If installing a heat pump would reduce the monthly energy bills for tenants in your properties, how much savings would make it feel worthwhile? **[PROBE IF ANY PERCENTAGE OF SAVINGS, AT LEAST 10% PER MONTH, AT LEAST 25% PER MONTH, AT LEAST 50% PER MONTH, OR SAVINGS DON'T MATTER TO THEM].**
- C6. **[ASK IF A6=1 AND ≠2]** If installing a heat pump would reduce the monthly energy bills for owners and managers in your properties, how much savings would make it feel worthwhile? **[PROBE IF ANY AMOUNT OF SAVINGS, AT LEAST 10% PER MONTH, AT LEAST 25% PER MONTH, AT LEAST 50% PER MONTH, OR SAVINGS DON'T MATTER TO THEM].**
- C7. **[ASK IF A6=1 AND ≠2]** Which of the following would make you more likely to consider installing a heat pump? **[INTERVIEWER, READ ALL AND SELECT ALL THAT APPLY]**
1. Large upfront rebates
 2. Low-interest financing or monthly payment plan
 3. Tax credits
 4. Utility bill savings for tenants
 5. Reduced maintenance burden for me as an owner
 6. Increased property value or rental competitiveness
 7. More information about the benefits of heat pumps
 8. Other (please specify)
 9. Not sure
- C8. Have you considered installing windows heat pumps for cooling in your properties Why or why not?
- C9. **[ASK IF A6≠ 3 OR 4]** Do you think Affordable Housing buildings, compared to other building types, have additional challenges that would make installing heat pumps more difficult?
- C10. What's been your sense of tenant interest or resistance to changes like installing a heat pump? Are tenants in Affordable Housing units generally supportive, resistant, or unaware of these technologies?

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C11. How concerned would you be about the hassle or disruption of installing a new HVAC system across occupied units in Affordable Housing properties?

D. Future Program Design

- D1. If Focus on Energy created a program to improve energy efficiency in affordable Multifamily housing, what would you like it to offer?
- D2. What types of incentives would be most useful to you **[PROBE: REBATES, TECHNICAL ASSISTANCE, FINANCING SUPPORT, TENANT OUTREACH]**?
- D3. What kinds of support do you need during planning and implementation of energy upgrades?
- D4. How should they market such a program to reach owners like you?
 - 1. What channels, messages, or partnerships would work best?
- D5. How could the program help you navigate approval processes **[PROBE: HOUSING AUTHORITY BOARDS, NONPROFIT BOARDS, SYNDICATORS]**?

E. Closing

- E1. Is there anything else you'd like to share about your experience with energy upgrades in affordable housing?
- E2. Please confirm your email so we send your \$100 e-gift card:
 - 1. Email:

Please allow two to three weeks to receive your e-gift card via email, and check your spam folder in case the email from Tango goes to spam. We really appreciate you taking the time to improve Focus on Energy's offerings. Have a great rest of your day.

Focus on Energy Express EDA Track Online Interview

Objective: Gather feedback on customer experiences with Express EDA to evaluate benefits, understand early adoption patterns, and compare with previous PEP offerings.

Target Participants: Customers using Express EDA across Multifamily New Construction projects

Research Objectives	Corresponding Question Numbers
Introduction and Screener	A
Awareness, Enrollment and Participation Drivers	B
Expectations, Benefits, and Satisfaction	C
Comparison with PEP Experience	D
Multifamily feedback	E
Future Outlook & Suggestions for Improvement	F
Firmographics	G

Target Quota = [10 completes]

Variables to be Pulled into Interview

- Email
- FirstName
- LastName
- Company Name
- Cadmus Account Key

Email Invitation

To: **[EMAIL]**

From: **[CLIENT]**

Subject: Tell Focus on Energy about your experience with the Multifamily Express EDA Track

Dear **[FIRSTNAME AND LASTNAME]**,

Thank you for working with Focus on Energy. We invite you to tell us about your recent experience with the Express Track of the Multifamily offering, or Express EDA (Energy Design Assistance in your **[SITE STREET, SITE CITY]**) property in [YEAR]. Your input will be used to improve participants' experiences and satisfaction, and will be kept confidential. **The interview will take 30-45 minutes to complete. As our thanks for completing the interview, we are offering you a \$100 Visa gift card.** Click the link below to take schedule a time slot:

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[\[calendar link\]](#)

Or you may copy and paste the following URL into your internet browser: [\[calendar url\]](#)

If you have any questions about the validity of this email or interview, please contact Mitch Horrie at the Public Service Commission of Wisconsin (mitch.horrie@wisconsin.gov). If you have any difficulties scheduling the interview, please contact Whitney White from The Cadmus Group, the national research firm conducting this interview on Focus on Energy's behalf (Whitney.White@cadmusgroup.com).

Thank you in advance for sharing your experiences and your time.

**[CLIENT CONTACT PERSON'S FIRST AND LAST NAME
THEIR TITLE
COMPANY NAME]**

Reminder Invitation

To: **[EMAIL]**

From: **[CLIENT]**

Subject: Don't forget to tell Focus on Energy about your experience with the Multifamily Express EDA Track

Dear **[FIRSTNAME AND LASTNAME]**,

We recently invited you to tell us about your experience with the Express Energy Design Assistance (EDA) Track of the Multifamily offering. We would still love to hear from you. Your input will be used to improve Focus on Energy's programs and will be kept confidential. The interview will take from **30 to 45 minutes, and as our thanks for your time and insights, we are offering you a \$100 Visa gift card..**

Click the link below to pick a time that works for you:

[\[auto-generated link\]](#)

Or you may copy and paste the following URL into your internet browser: [\[calendar url\]](#)

If you have any questions about the validity of this email or the interview, please contact Mitch Horrie at the Public Service Commission of Wisconsin (mitch.horrie@wisconsin.gov). If you have any difficulties scheduling the interview, please contact Whitney White from The Cadmus Group, the national research firm conducting this interview on Focus on Energy's behalf (Whitney.White@cadmusgroup.com).

Thank you in advance for sharing your experiences and your time.

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**[CLIENT CONTACT PERSON'S FIRST AND LAST NAME
THEIR TITLE
COMPANY NAME]**

A. Introduction and Screener

Welcome! This interview will take about 45 minutes to complete. Your responses will remain confidential and will be used to improve Focus on Energy's programs for customers like you. We're conducting this interview to understand your experience with our streamlined, self-service energy design track for the Multifamily offering, or Express EDA, and identify ways to improve the offering. By participating in this interview, you'll receive a \$100 egift card. Please allow 2 weeks to process your gift card.

- A1. Our records show that your property recently participated in Focus on Energy's Multifamily offering, particularly through the Express Energy Design Assistance (or Express EDA) track. Is this correct?
1. Yes
 2. No **[TERMINATE]**
 3. Don't know **[IS THERE SOMEONE WHO WOULD KNOW THAT YOU CAN REACH OUT TO TAKE THIS INTERVIEW INSTEAD? IF YES, RECORD THEIR EMAIL AND NAME. IF NO, TERMINATE]**

[TERMINATION LANGUAGE] We're sorry, you don't qualify for the interview. Thank you for taking the time to participate.

B. Awareness, Enrollment and Motivation

Our first set of questions is about your early experiences with the Express EDA track and your motivations for enrolling.

- B1. How did you first hear about Express EDA? **[INTERVIEWER: SELECT ONE UNPROMPTED; IF RESPONDENT DOES NOT KNOW, READ RESPONSES]**
1. Focus on Energy communication
 2. Focus on Energy website
 3. Trade Ally/contractor recommendation
 4. Industry colleague/peer referral
 5. Industry conference or event
 6. Professional association or network
 7. Online search/research
 8. Utility company communication

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9. Previous experience with other Focus on Energy programs
10. Other: Specify _____
11. Don't know

B2. What motivated you to participate in the Express EDA track for Multifamily buildings?

[INTERVIEWER: ALLOW TIME FOR OPEN ENDED; THEN PROBE: SELF-SERVICE CONVENIENCE VS. TRADITIONAL CONSULTANT-LED PROGRAMS; REDUCED TIME COMMITMENT; ABILITY TO FOCUS ON SINGLE SYSTEMS INSTEAD OF WHOLE BUILDING; REAL-TIME MODELING TOOL AND INSTANT FEEDBACK; STREAMLINED PROCESS]

B3. Why did you choose Express EDA over traditional design assistance (EDA/EDR) for your project?

[READ THE FOLLOWING IF PARTICIPANT ASKS WHAT TRADITIONAL ASSISTANCE IS OR WHAT EDA/EDR ARE] As a reminder, EDA or Energy Design Assistance offers participants multiple design options, each progressively more efficient, so that building owners and design teams can customize dozens of design elements and maximize savings.

Energy Design Review (EDR) provides a streamlined option for projects later in design, offering whole-building energy analysis, owner incentives based on savings, and potential financial support for design teams using their own energy models.

[INTERVIEWER: ALLOW TIME FOR OPEN ENDED; THEN PROBE: PROJECT TIMELINE CONSTRAINTS; REDUCED COMPLEXITY NEEDS; COST CONSIDERATIONS; INTERNAL RESOURCE AVAILABILITY; PREVIOUS PROGRAM EXPERIENCES].

B4. In what stage of your project did you enroll in Express EDA? **[READ OPTIONS]**

1. During the planning and design phase
2. After the design phase was finalized, but before construction began
3. During the construction phase
4. After occupancy
5. Don't know

B5. What strategies did you employ through Express EDA? **[INTERVIEWER: ALLOW TIME FOR OPEN ENDED; THEN READ AND ALLOW MULTIPLE RESPONSES]**

1. Lighting
2. HVAC
3. Water heating

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4. Other (Specify:_____)
5. Don't know

B6. On a scale from 1 to 5, how easy was it to enroll in Express EDA? [**READ**

ALTERNATIVES]

1. Not easy at all
2. Not too easy
3. Neutral
4. Somewhat easy
5. Very easy
6. Don't know

B7. [**IF B6<3**] What was difficult about the enrollment experience? [**OPEN ENDED**]
[**PROBE: CLARITY OF ELIGIBILITY, REQUIRED DOCUMENTATION, TIMING**]

C. Expectations, Benefits and Satisfaction

The following questions relate to the expectations you had about the Express EDA track and how satisfied you are with the experience.

C1. What benefits did you expect when you enrolled in Express EDA? [**OPEN ENDED**]

[**INTERVIEWER: SELECT ALL THAT APPLY, YOU CAN PROBE ANY OF THE REPOSSES BELOW IF PARTICIPANT DOES NOT KNOW**]

1. Cost savings
2. Energy efficiency improvements
3. Operational insights
4. Time savings compared to traditional programs
5. Self-service convenience
6. Real-time modeling and incentive visualization
7. Reduced consultant dependency
8. Faster project enrollment and processing
9. Other (Specify:_____)
10. Don't know

C2. What benefits have you actually experienced participating in the Express EDA track?

[**INTERVIEWER: SELECT ALL THAT APPLY, YOU CAN PROBE ANY OF THE REPOSSES BELOW IF PARTICIPANT DOES NOT KNOW**]

1. Cost savings
2. Energy efficiency improvements

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3. Operational insights
4. Time savings compared to traditional programs
5. Self-service convenience
6. Real-time modeling and incentive visualization
7. Reduced consultant dependency
8. Faster project enrollment and processing
9. Other (Specify:_____)
10. Don't know

C3. As part of your experience with the Express EDA track, did you use the New Construction Online Tool?

1. Yes
2. No
3. Don't know

C4. **[IF C3=1]** In terms of ease or difficulty, what best describes your experience entering building details into the Express EDA New Construction Online Tool? **[INTERVIEWER: READ THE SCALE, BUT GIVE OPPORTUNITY TO ELABORATE]**

1. The tool was very difficult to use
2. The tool was somewhat difficult to use
3. Neutral
4. The tool was somewhat easy to use
5. The tool was very easy to use

C5. **[IF C3=1]** How useful would you say the Express EDA New Construction Online Tool was? **[INTERVIEWER: READ THE SCALE, BUT GIVE OPPORTUNITY TO ELABORATE]**

1. Not useful at all
2. Not very useful
3. Neutral
4. Somewhat useful
5. Very useful

C6. **[IF C5<3]** What suggestions to do have to make the New Construction Online Tool more useful? **[OPEN ENDED]**

C7. How much value would you say the final report added to your project? **[INTERVIEWER: READ THE SCALE, BUT GIVE OPPORTUNITY TO ELABORATE]**

1. No value at all

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2. Little value
3. Neutral
4. Some value
5. A great deal of value

C8. Can you provide a specific example of how Express EDA has (or hasn't) added value to your project? **[OPEN ENDED]**

C9. In terms of ease, how would you rate your experience with the implementation review process for Express EDA? **[INTERVIEWER: READ THE SCALE, BUT GIVE OPPORTUNITY TO ELLABORATE]**

1. Not easy at all
2. Not too easy
3. Neutral
4. Somewhat easy
5. Very easy

C10. Did your project require an on-site inspection?

1. Yes
2. No
- Don't know

C11. **[IF C10=1]** How satisfied were you with how the inspection was conducted? **[INTERVIEWER: READ THE SCALE, BUT GIVE OPPORTUNITY TO ELLABORATE]**

1. Not at all satisfied
2. Not too satisfied
3. Neutral
4. Somewhat satisfied
5. Very satisfied

C12. Throughout your participation, did you seek Focus on Energy support?

1. Yes
2. No
3. Don't know

C13. **[IF C12=1]** How satisfied are you with the support you received from Focus on Energy? **[INTERVIEWER: READ THE SCALE, BUT GIVE OPPORTUNITY TO ELLABORATE]**

1. Not at all satisfied
2. Not too satisfied
3. Neutral

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4. Somewhat satisfied
5. Very satisfied

C14. **[IF C13<3]** What can Focus on Energy do to improve their support of customers like you?

C15. Final incentive payments are based on actual energy savings. How satisfied were you with your final incentive payment? **[INTERVIEWER: READ THE SCALE, BUT GIVE OPPORTUNITY TO ELABORATE]**

1. Not at all satisfied
2. Not too satisfied
3. Neutral
4. Somewhat satisfied
5. Very satisfied

C16. On a scale of 1 to 5, how would you rate your overall experience with Express EDA? **[INTERVIEWER: READ THE SCALE]**

1. Very bad
2. Somewhat bad
3. Neutral
4. Somewhat good
5. Very good

C17. **[IF C16<3]** What factors contributed to this rating?

D. Comparison with PEP Offering

We are interested in your participation in other Focus on Energy offerings, specifically within the Multifamily Product and Equipment Performance (PEP) offering. PEP incrementally rewarded property owners as they incorporated more energy-efficient best practices into the building design. PEP has since been discontinued and was replaced by the Express EDA track.

D1. In the past, did you ever participate in Focus on Energy's Multifamily PEP offering?

1. Yes
2. No **[SKIP TO SECTION E]**
3. Don't know

D2. Compared to your experience with the PEP offering, how would you describe the *time* involved in participating in Express EDA/EDR?

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1. PEP took more time
2. Express EDA takes more time
3. Don't know

D3. Compared to your experience with the PEP offering, how would you describe the *effort* involved in participating in Express EDA/EDR?

1. PEP took more effort
2. Express EDA takes more effort
3. Don't know

D4. Compared to PEP, what offering provided more value to your project?

1. PEP provided more value
2. Express EDA provided more value
3. Both equally
4. Don't know

D5. Could you elaborate on why do you think said option added more value to your project?

[OPEN ENDED]

E. Multifamily Feedback

The following questions relate specifically to how well the Express EDA track works for Multifamily properties.

E1. Which aspects of multifamily building design and operation do you feel Express EDA addresses well? **[OPEN ENDED]**

E2. Which aspects of multifamily building design and operation do you feel Express EDA *does not* adequately address? **[OPEN ENDED]**

F. Future Outlook & Recommendations

F1. How likely are you to continue using Express EDA for future new construction or major renovation projects?

1. Not likely at all
2. Somewhat unlikely
3. Neutral

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4. Somewhat likely
5. Very likely

F2. How likely would you be to recommend Express EDA to others in the Multifamily sector?

1. Not likely at all
2. Somewhat unlikely
3. Neutral
4. Somewhat likely
5. Very likely

F3. What improvements or additional features would make Express EDA more valuable or easier to use? **[PROBE: IMPROVED USER INTERFACE; ADDITIONAL BUILDING SYSTEM OPTIONS; ENHANCED REPORTING CAPABILITIES; SUPPORT AND GUIDANCE RESOURCES; ENROLLMENT PROCESS IMPROVEMENTS].**

G. Firmographics

These final questions ask for general details about the property that participated in the Express EDA track.

G1. What type of multifamily projects participated in the Express EDA track?

1. Apartments
2. Townhomes/row houses
3. Mixed-use developments
4. Student housing
5. Senior living facilities
6. Affordable housing

G2. What is the size range of the multifamily property that participated in the Express EDA track?

1. Small (3-25 units)
2. Medium (26-75 units)
3. Large (76-150 units)
4. Very large (150+ units)

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H. Wrap-Up

H1. On occasion, Focus on Energy contacts customers to learn more about their participation experience. **Please click on the box below if you prefer NOT to be contacted by a program manager.**

1. Do NOT contact me

H2. Do you have any other comments or questions for Focus on Energy at this time?

1. Specify: _____
2. None

[END OF INTERVIEW MESSAGE] Those are all the questions I had for you. Your responses are very important to Focus on Energy. We appreciate your participation and thank you for your time. Please allow 2 to 3 weeks to receive your e-gift card via email and check your spam folder for an email from Tango. Have a good day!

Focus on Energy - Trade Ally Solutions Smart Thermostat Online Survey

Research Objectives	Corresponding Question Numbers
Assess customer satisfaction with the program, installation process, application process, their contractor, and their thermostats	E1 - E12, H1 - H5
Assess sources of customer awareness of Smart Thermostat program	D1 - D4, E7
Assess customer awareness of and participation in other Focus on Energy programs, including demand response	D5 - D8
Assess customer awareness of non-energy benefits	D1, H5, I1
Understand customer demographics	J1 - J12
Gather freeridership and spillover data for net-to-gross calculation	B1 - B3, C1 - C2, F1 - F7, G1 - G5

Target Quota = 75 total completes, or enough to reach 90/10

General Instructions:

- Programming instructions are in red **[LIKE THIS]** (the style is "Survey: Programming").
- Responses will be required for all questions, unless indicated
- Single response only, unless indicated
- Core questions marked with an asterisk (*)

This survey is designed for residential customers who received a rebate for purchasing and installing equipment through the Focus on Energy Trade Ally Solutions offering.

Variables to be Pulled into Survey

- [FIRSTNAME] = CUSTOMER FIRST NAME**
- [LASTNAME] = CUSTOMER LAST NAME**
- [EMAIL] = CUSTOMER EMAIL**
- [UTILITY] = CUSTOMER UTILITY**
- [QUANTITY] = NUMBER OF MEASURE INSTALLED (NUMERIC)**
- [TIER2] = 1 (YES) OR 0 (NO)**
- [ZIP] = 5-DIGIT ZIP CODE**
- [MONTH] = PURCHASE MONTH**
- [YEAR] = PURCHASE YEAR**

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Email Invitation

To: **[EMAIL]**

From: **[CADMUS CONTACT]**

Subject: Tell Focus on Energy about your experience with your new smart thermostat

Dear **[FIRSTNAME AND LASTNAME]**,

You recently purchased a smart thermostat that qualified for a rebate from Focus on Energy. We invite you to tell us about your experience with your new thermostat. Your responses will be confidential, and your input will be used to improve Focus on Energy's programs that help customers like you save energy. **The survey will take X minutes to complete.** As our thanks for completing the survey, you may enter a drawing to win a \$200 gift card.

Click the link below to take the survey:

[auto-generated link]

Or you may copy and paste the following URL into your internet browser: **[auto-generated url]**

If you have any questions about this research, or any difficulties taking the survey, please contact the survey coordinator, Jacob Straus, via email at jacob.straus@cadmusgroup.com. If you would like to confirm the validity of the research effort, please contact Mitch Horrie at the Public Service Commission of Wisconsin at mitch.horrie@wisconsin.gov or (608) 267-3206.

Thank you for helping us build smarter, more responsive energy programs across the state. We truly appreciate your time and experience.

Warm regards,

[NAME]

[SIGNATURE]

Reminder Invitation

To: **[EMAIL]**

From: **[CLIENT]**

Subject: Don't forget to tell Focus on Energy about your Smart Thermostat experience!

Dear **[FIRSTNAME AND LASTNAME]**,

CADMUS

We recently invited you to tell us about your experience with your new smart thermostat. We would still like to hear from you. Your input will be used to improve Focus on Energy programs and will be kept confidential. **Please take X minutes today to complete the survey.** As our thanks for completing the survey, you will be entered into a drawing to win a \$200 gift card.

Click the link below to take the survey:

[auto-generated link]

Or you may copy and paste the following URL into your internet browser: **[auto-generated url]**

If you have any questions about this research, or any difficulties taking the survey, please contact the survey coordinator, Jacob Straus, via email at jacob.straus@cadmusgroup.com. If you would like to confirm the validity of the research effort, please contact Mitch Horrie at the Public Service Commission of Wisconsin at mitch.horrie@wisconsin.gov or (608) 267-3206.

Thank you for helping us build smarter, more responsive energy programs across the state. We truly appreciate your time and experience.

Warm regards,

[NAME]

[SIGNATURE]

A. Introduction and Screener

[THIS INTRODUCTION AND THE SCREENER QUESTION BELOW ARE DESIGNED TO FIND THE CORRECT PERSON AND MAKE THE INTENDED RESPONDENT FEEL COMFORTABLE COMPLETING A SURVEY.]

Welcome! This survey will take about **XX** minutes to complete. Your responses will remain confidential and will be used to improve our programs for customers like you. When you complete the survey, you can choose to enter a drawing to win a \$200 gift card.

- A1. Our records show that you purchased a smart thermostat in **[MONTH] [YEAR]**. Do you remember purchasing that thermostat?
1. Yes
 2. No **[THANK AND TERMINATE]**
 3. Don't know **[THANK AND TERMINATE]**

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B. Verification

B1. Is the new thermostat installed in your home?

1. Yes
2. No
3. Don't know **[THANK AND TERMINATE]**

B2. **[IF B1 = 2]** What was the main reason you did not install the thermostat?

1. Not enough time
2. Installation was too complicated
3. New thermostat did not work with my heating/cooling equipment
4. Lost the thermostat
5. Other **[SPECIFY: _____]**

B3. **[IF B1 = 2]** What would have helped you install your new thermostat?

1. **[OPTIONAL OPEN-END] [SKIP TO J1]**

C. Usage Patterns

C1. What equipment does the thermostat control in your home?

1. Heating equipment
2. Air Conditioning equipment
3. Heating and Air Conditioning equipment
4. Other **[SPECIFY: _____]**
98. Don't know

C2. How do you use your thermostat?

1. I programmed it and rarely or never manually adjust the temperature
2. I programmed it and sometimes manually adjust the temperature
3. I programmed it and often manually adjust the temperature
4. I only manually adjust the temperature (do not follow a programmed or pre-set schedule)
5. Other **[SPECIFY: _____]**
98. Don't know

C3. What type of thermostat did the new thermostat replace?

1. A "Smart" thermostat (advanced, wi-fi, or connected with learning capabilities, like the one you purchased)
2. A Wi-Fi thermostat (non-learning, controllable through a smart device but does not adjust to your preferences)
3. A programmable thermostat

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- 4. A manual thermostat
- 98. Don't know

D.Awareness and Motivation

D1. * What factor was the most important for you to purchase your thermostat? **[RANDOMIZE**

1-12]

1. Saving energy / reducing energy waste / being more energy efficient
2. Reducing energy costs / lowering bill
3. Good for the environment
4. Concern about climate change
5. Increase home comfort
6. Recommendation from a friend / relative
7. Recommendation from a contractor
8. Convenience of being able to remotely control thermostat
9. Aesthetics of thermostat
10. Cash / rebate / incentive payment
11. Federal tax credit
12. Advertisement [newspaper, radio, online, etc.]
13. Utility sponsorship of the program
14. Other **[SPECIFY: _____]**
98. Don't know

D2. **[IF D1 = 12]** Do you remember who this advertisement was from? i.e. Focus on Energy, a utility, a retailer?

1. Yes **[SPECIFY]:**
2. No

D3. * Where have you heard about Focus on Energy's rebates for thermostats? Select all that apply. **[RANDOMIZE ITEMS 1-13, MULTIPLE RESPONSES ALLOWED]**

1. Mailing (direct mail, brochure, postcard, bill insert, etc.)
 - Who sent the mailing?
 1. My utility
 2. Focus on Energy
 3. Another Organization
 4. I'm not sure
3. New Homeowner Welcome Kit
4. An email
 - Who sent the email?
 1. My utility
 2. Focus on Energy
 3. Another Organization
 4. I'm not sure

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5. Social media (Facebook, Twitter, LinkedIn, etc.)
6. Online ad
7. Internet search
 - What were you searching for? **[SPECIFY]**
8. A website
 - Which website?
 1. My utility
 2. Focus on Energy
 3. Another Organization
 4. I'm not sure
9. Family / friend / word-of-mouth
10. Focus on Energy representative
11. Utility representative
12. Community or utility event
13. Installer / Contractor / Trade ally
14. In store
15. Through participation in another Focus on Energy program
16. A different source – what was it? **[SPECIFY]**
17. Didn't know about the rebate before this survey **[EXCLUSIVE]**
98. Don't know **[EXCLUSIVE]**

D4. * What are the best ways for Focus on Energy to inform people about programs that can help them save energy? Select all that apply. **[RANDOMIZE ITEMS 1-14, MULTIPLE RESPONSE]**

1. Promotion through other Focus on Energy programs
2. Television
3. Radio
4. In-store signage
5. Print media, such as magazine, newspaper article or advertisement
6. Billboard / outdoor ad
7. Direct mail / brochure / postcard
8. Family / friend / word-of-mouth
9. Email from Focus on Energy
10. Focus on Energy or Utility website
11. Community or utility event
12. Other website: **[SPECIFY: _____]**
13. Social Media such as Twitter, Facebook, or Instagram
14. A different source – which one? **[SPECIFY: _____]**
15. I do not want to receive information **[EXCLUSIVE]**

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98. Don't know **[EXCLUSIVE]**

D5. * Other than Focus on Energy's thermostat rebates, are you aware of any Focus on Energy programs or rebates?

1. Yes
2. No

98. Don't know

D6. * **[ASK IF D5 = 1]** For the Focus on Energy programs listed below, please indicate which ones you are aware of and which you have participated in. **[TABLE FORMAT; EACH PROGRAM LISTED HAS A DROP DOWN MENU WITH THE THREE RESPONSE OPTIONS: PARTICIPATED IN THIS PROGRAM, AWARE BUT HAVE NOT PARTICIPATED, NOT AWARE OF THIS PROGRAM]**

Program	Description
Energy Saving Packs	Free packs of energy saving items such as LEDs, low-flow showerheads and weatherization products, delivered through the mail
Insulation and Air Sealing	Rebates for sealing air leaks and adding insulation in your home
New Construction	Certification of energy efficient homes built above code
Online Marketplace	Online store available through the Focus on Energy website, offering instant discounts on a range of energy-saving products for your home
Multifamily	A program for property owners that offers incentives for improvements that will reduce energy use in units and common areas
Renewable Energy	Rebates for solar PV installations

D7. Are you aware of any demand response opportunities that may be offered by your utility, such as variable "time of use" rates or bill credits if you agree to reduce your energy use on certain days or times (usually very hot or very cold days)?

1. Yes
2. No

D8. **[IF D7 = YES]** Have you participated in any of these opportunities?

1. Yes [What was the opportunity? _____]
2. No
3. Don't know

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- D9. **[IF D7 = NO]** Would you be interested in an opportunity to save money on your electricity bill by shifting high-energy activities to off-peak times when energy demand is low? Off-peak times are typically early mornings, nights, weekends, and holidays. High-energy activities include electric space and water heating, EV charging, clothes dryer.
1. Yes, interested in an opportunity where I pay a cheaper electric rate during off-peak times compared to on-peak times throughout the entire year.
 2. Yes, interested in an opportunity where I receive bill credits if I reduce or shift my electric load on specific high demand days after receiving communication from my utility requesting I do so.
 3. Yes, interested in both opportunities described above.
 4. No, not interested
 5. Don't know

E. Installation and Application Process

The following questions are about your experience installing your thermostat.

- E1. Who installed your new thermostat?
1. I installed it
 2. A friend or relative **[SKIP TO E10]**
 3. A contractor **[SKIP TO E4]**
 4. Landlord **[SKIP TO E10]**
 5. Someone else **[SKIP TO E10]**
 98. Don't know **[SKIP TO E10]**
- E2. **[IF E1=1]** Overall, how would you rate the ease of installing your thermostat?
1. Very easy **[SKIP TO E10]**
 2. Somewhat easy **[SKIP TO E10]**
 3. Neither easy nor difficult **[SKIP TO E10]**
 4. Somewhat difficult
 5. Very difficult
 98. Don't know **[SKIP TO E10]**
- E3. **[IF E2 = 4 OR 5]** What made the installation process of your thermostat difficult?
1. **[OPTIONAL OPEN-END]**
- E4. **[IF E1=3]** How did you find the contractor who installed your new thermostat?
[RANDOMIZE LIST EXCEPT FOR OTHER AND DON'T KNOW]
1. Used the same contractor previously
 2. Called Focus on Energy/ Focus on Energy's website, i.e. 'Find a Trade Ally' link
 3. Focus on Energy or Utility representative

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4. Referral from family / friend / word of mouth
5. Retailer / store – Home Depot, Lowes, etc.
6. Focus on Energy advertising
7. Social media from Focus on Energy
8. Social media other than Focus on Energy
9. Contractor advertising
10. Personal research
11. Other **[SPECIFY: _____]**
98. Don't know

E5. **[IF E1=3]** What was your top reason for choosing the contractor who installed your thermostat? **[RANDOMIZE 1-12]**

1. Used the same contractor previously
2. They were the least expensive / price
3. They were close by / near my house
4. Listed on Focus on Energy website, i.e. Find a Trade Ally
5. Only program-eligible contractor available in my area
6. Referral from friend, family member, colleague
7. Influenced by an advertisement or website
8. Timing / scheduling worked out
9. Most responsive / easiest to communicate with
10. Only one available for emergency replacement
11. They appeared to provide the best quality / value; appeared to be the most trustworthy
12. **[ASK IF UTILITY = XCEL ENERGY]** Knowledge/familiarity with the additional rebates from Xcel
13. Other **[SPECIFY: _____]**
98. Don't Know

E6. **[IF E1=3 AND E5=4]** How easy was it to find a contractor using the Focus on Energy website?

1. Very easy **[SKIP TO E8]**
2. Somewhat easy **[SKIP TO E8]**
3. Neither easy nor difficult **[SKIP TO E8]**
4. Somewhat difficult
5. Very difficult
98. Don't know **[SKIP TO E8]**

E7. **[IF E6 = 4 OR 5]** Why was it difficult to find a contractor using the Focus on Energy website?

1. **[OPEN-END]**

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E8. **[IF E1=3]** Overall, how satisfied were you with the contractor who installed your thermostat?

1. Very satisfied **[SKIP TO E10]**
2. Somewhat satisfied **[SKIP TO E10]**
3. Neither satisfied nor dissatisfied **[SKIP TO E10]**
4. Somewhat dissatisfied
5. Very dissatisfied
98. Don't know **[SKIP TO E10]**

E9. **[IF E8=4 OR 5]** What made the experience of working with the contractor less than satisfactory?

1. **[OPEN-END]**

For the next few questions, please think back to when you applied for the thermostat rebate.

E10. Who filled out the application to receive your rebate for your thermostat?

1. I filled out my application
2. My contractor filled out my application **[SKIP TO F1]**
3. Both my contractor and I filled out my application
4. A friend or relative **[SKIP TO F1]**
5. Landlord **[SKIP TO F1]**
6. Someone else **[SKIP TO F1]**
98. Don't know **[SKIP TO F1]**

E11. **[IF E10= 1]** How would you rate the ease of filling out the application?

1. Very easy **[SKIP TO F1]**
2. Somewhat easy **[SKIP TO F1]**
3. Neither easy nor difficult **[SKIP TO F1]**
4. Somewhat difficult
5. Very difficult
98. Don't know **[SKIP TO F1]**

E12. **[IF E11 = 4 OR 5]** Please let us know why filling out the application was not easy.

Select all that apply. **[RANDOMIZE ITEMS 1-5; MULTIPLE RESPONSES ALLOWED]**

1. Hard to locate required information (utility account number, equipment model/serial numbers, etc.)
2. Application form was too long
3. Application form was too confusing
4. Difficulty keeping track of receipts / invoices
5. Trouble with submitting application
6. Other **[SPECIFY: _____]**

98. Don't know **[EXCLUSIVE]**

F. Freeridership Questions

[FORCED RESPONSES ACCORDING TO PROGRAMMING INSTRUCTIONS]

For the next questions, please think about how you made your decision to purchase your smart thermostat.

F1. When did you first hear about the availability of the Focus on Energy rebate for smart thermostats?

1. Before I purchased the smart thermostat **[SKIP TO F3]**
 2. When I received my rebate check from Focus on Energy **[ASK F2]**
 3. After I purchased my smart thermostat **[ASK F2]**
 4. I had not heard of Focus on Energy before this survey **[ASK F2]**
98. Don't know **[EXCLUSIVE]**

F2. **[ASK IF F1=2, 3 OR 4]** So just to be clear, you purchased your thermostat before you heard anything about the Focus on Energy rebate. Is that correct?

1. Yes, that's correct **[SKIP TO F7]**
 2. No, that's not correct **[ASK F3]**
98. Don't know **[ASK F3]**

F3. Before you heard about the Focus on Energy rebate, had you already considered installing a smart thermostat?

1. Yes
 2. No
98. Don't know **[EXCLUSIVE]**

F4. Without the rebate and information or education from Focus on Energy, what kind of thermostat would you most likely have installed?

1. A smart or learning thermostat (like the one you purchased)
2. A WiFi thermostat (non-learning)
3. A programmable thermostat
4. A manual thermostat
5. Would not have installed a new thermostat

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- F5. **[ASK IF QUANTITY >1]** Would you most likely have installed the same quantity of smart thermostats without the rebate and information or education from Focus on Energy?
- F6. Thinking about timing, without the rebate and information or education from Focus on Energy, when would you most likely have installed your smart thermostat?
1. At the same time
 2. Later, but within 12 months
 3. One to two years out
 4. More than two years out
 5. Never
 98. Don't know **[EXCLUSIVE]**
- F7. **[ASK EVERYONE]** We would like to know more about the factors that contributed to your purchase of the smart thermostat. For the list of possible factors that could have contributed to your decision shown below, please rate how important each was in your decision. Use a scale from 1 to 5, with 1 meaning the factor was "not at all important" and 5 meaning the factor was "very important" in your decision to purchase your smart thermostat. **[1 TO 6 - RANDOMIZE LIST] [DROP DOWN LIST SELECTION; "1 – NOT AT ALL IMPORTANT", "2", "3", "4", "5 – VERY IMPORTANT", "NOT APPLICABLE" CODE AS 97]**
1. **[Response from D1 IF D1 ≠ 7, 8 OR 98]**
 2. The Focus on Energy rebate or discount
 3. Recommendation from Focus on Energy Staff
 4. Information provided by Focus on Energy on energy savings opportunities
 5. Recommendation from a contractor or vendor
 6. Previous participation in a Focus on Energy energy-efficiency offering or program

G.Spillover

[FORCED RESPONSES ACCORDING TO PROGRAMMING INSTRUCTIONS]

Now we would like to learn about any energy-saving improvements you may have made since installing the smart thermostat and receiving a rebate from Focus on Energy.

For the next questions, please think about how you made your decision to purchase your smart thermostat.

- G1. Since installing the smart thermostat and receiving the Focus on Energy rebate, have you made any other energy saving improvements or high-efficiency equipment purchases for your home that you did NOT receive for free or a rebate from Focus on Energy or another organization?
1. Yes

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2. No **[SKIP TO NEXT SECTION]**
98. Don't know **[SKIP TO NEXT SECTION]**

G2. What were the products that you installed without receiving for free or getting a rebate?

1. Gas boiler **[HOW MANY DID YOU INSTALL?]**
2. Gas furnace **[HOW MANY DID YOU INSTALL?]**
3. Gas tankless water heater **[HOW MANY DID YOU INSTALL?]**
4. Gas storage water heater **[HOW MANY DID YOU INSTALL?]**
5. Heat pump water heater **[HOW MANY DID YOU INSTALL?]**
6. Insulation; attic **[HOW MANY SQUARE FEET?]**
7. Insulation; floor **[HOW MANY SQUARE FEET?]**
8. Insulation; ceiling **[HOW MANY SQUARE FEET?]**
9. Weatherstripping **[HOW MANY LINEAR FEET?]**
10. Duct sealing **[HOW MANY LINEAR FEET?]**
11. ENERGY STAR windows **[HOW MANY SQUARE FEET?]**
12. ENERGY STAR air purifier **[HOW MANY DID YOU INSTALL?]**
13. ENERGY STAR dehumidifier **[HOW MANY DID YOU INSTALL?]**
14. ENERGY STAR clothes washer **[HOW MANY DID YOU INSTALL?]**
15. ENERGY STAR dishwasher **[HOW MANY DID YOU INSTALL?]**
16. ENERGY STAR pool pump **[HOW MANY DID YOU INSTALL?]**
17. ENERGY STAR room air conditioner **[HOW MANY DID YOU INSTALL?]**
18. ENERGY STAR refrigerator **[HOW MANY DID YOU INSTALL?]**
19. ENERGY STAR freezer **[HOW MANY DID YOU INSTALL?]**
20. Central air conditioner **[HOW MANY DID YOU INSTALL?]**
21. Air source heat pump **[HOW MANY DID YOU INSTALL?]**
22. Ductless heat pump **[HOW MANY DID YOU INSTALL?]**
23. Ground source heat pump **[HOW MANY DID YOU INSTALL?]**
24. Smart power strip **[HOW MANY DID YOU INSTALL?]**
25. Other equipment, please specify the items and quantity: **[OPEN-ENDED RESPONSE]**
98. Don't know **[SKIP TO NEXT SECTION]**

G3. **[REPEAT FOR EACH ITEM MENTIONED IN G2]** How important was your experience with Focus on Energy's program in your decision to install **[INSERT EACH ONE SELECTED IN G2]**?

1. **[DROP DOWN LIST SELECTION; "1 – NOT AT ALL IMPORTANT", "2", "3", "4", "5 – VERY IMPORTANT", "DON'T KNOW"]**

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- G4. **[REPEAT FOR EACH ITEM MENTIONED IN G2]** In what year was the **[INSERT EACH ONE SELECTED IN G2]** purchased and installed?
1. **[DROP DOWN LIST SELECTION; "2025", "2024", "BEFORE 2024" ..., 99 FOR DON'T KNOW]**
- G5. **[ASK G5 FOR EACH ONE SELECTED IN G2 EXCEPT 3 (GAS TANKLESS WATER HEATER) , 4 (GAS STORAGE WATER HEATER), 5 (HEAT PUMP WATER HEATER), 11 (ENERGY STAR WINDOWS), 12 (ENERGY STAR AIR PURIFIER), 13 (ENERGY STAR DEHUMIDIFIER), 14 (ENERGY STAR CLOTHES WASHER), 15 (ENERGY STAR DISHWASHER), 16 (ENERGY STAR POOL PUMP), 17 (ENERGY STAR ROOM AIR CONDITIONER), 18 (ENERGY STAR REFRIGERATOR), 19 (ENERGY STAR FREEZER) , 24 (SMART POWER STRIP) OR 25 (OTHER EQUIPMENT.)]** Why didn't you apply for and receive a Focus on Energy rebate for **[INSERT EACH ONE SELECTED IN G2]**?
1. Did not know rebate was available
 2. Product did not qualify
 3. Other **[SPECIFY: _____]**
 98. Don't know

H.Measure Satisfaction

- H1. Overall, how would you rate the experience of **learning to use** your new thermostat?
1. Very satisfied **[SKIP TO H3]**
 2. Somewhat satisfied **[SKIP TO H3]**
 3. Neither satisfied nor dissatisfied **[SKIP TO H3]**
 4. Somewhat dissatisfied
 5. Very dissatisfied
 98. Don't know **[SKIP TO H5]**
- H2. **[IF H1 > 3]** Why you were you dissatisfied with the process of learning to use your new thermostat?
1. **[OPEN-END]**
- H3. Overall, how would you rate the experience with your new thermostat **once you had learned to use it?**
1. Very satisfied **[SKIP TO H5]**
 2. Somewhat satisfied **[SKIP TO H5]**
 3. Neither satisfied nor dissatisfied
 4. Somewhat dissatisfied
 5. Very dissatisfied

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98. Don't know **[SKIP TO H5]**

H4. **[IF H3 > 3]** Why were you dissatisfied with your new thermostat after you learned to use it?

1. **[OPEN-END]**

H5. How much do you agree with each of the following statements? **[FORMAT: DROP DOWN MENUS. RANDOMIZE LIST OF ITEMS; SAME 6 RESPONSE OPTIONS FOR EACH ITEM]**

1. Strongly agree
2. Somewhat agree
3. Neither agree nor disagree
4. Somewhat disagree
5. Strongly disagree
6. Don't know/not applicable
 - My smart thermostat has increased comfort in my home.
 - I would recommend a smart thermostat to a friend or relative.
 - My smart thermostat has reduced my energy bill.
 - It is easier for me to control the temperature in my home.
 - I have peace of mind from using a more environmentally friendly thermostat to control my space heating and cooling.

I. Energy Usage Motivations

I1. * How much do you agree with each of the following statements? **[FORMAT: DROP DOWN MENUS. RANDOMIZE LIST OF ITEMS; SAME 6 RESPONSE OPTIONS FOR EACH ITEM]**

1. Strongly agree
2. Somewhat agree
3. Neither agree nor disagree
4. Somewhat disagree
5. Strongly disagree
6. Don't know
 - I try to save energy to lower my energy bill
 - Keeping the home comfortable is more important than saving on my bill
 - I've tried a few things to save energy, but have not seen any real savings on my energy bill
 - It is important to conserve resources to be more environmentally friendly
 - I prefer to use the most advanced technologies available to control my energy use
 - I am willing to pay more for efficient products that will save me money in the long term
 - I am willing to pay more for efficient products that are more environmentally friendly
 - Energy efficient improvements increase my home's comfort

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- I'm not interested in improving my home's efficiency
 - I wish Focus on Energy would offer more options to help manage my energy usage
 - It is not convenient to be energy efficient at home
12. * How informed do you feel about all the ways you can save energy, including buying and using energy efficient appliances and equipment?
1. Very informed
 2. Somewhat informed
 3. Neutral
 4. Not too informed
 5. Not at all informed
 98. Don't know
13. * How much attention do you pay to the amount of energy (gas or electric) that you use in your home?
1. Very close attention
 2. A fair amount of attention
 3. Some attention
 4. Not much attention
 5. No attention at all
 98. Don't know
14. * What other energy improvements do you plan to make to your home over the next 5 to 10 years? Select all that apply. **[MULTIPLE RESPONSES ALLOWED]**
1. Gas boiler
 2. Gas furnace
 3. Gas tankless water heater
 4. Gas storage water heater
 5. Electric tankless water heater
 6. Electric storage water heater
 7. Insulation; attic
 8. Insulation; floor
 9. Insulation; ceiling
 10. Insulation; basement
 11. Air sealing
 12. Duct sealing
 13. Low-E Storm windows
 14. ENERGY STAR windows
 15. ENERGY STAR air purifier
 16. ENERGY STAR dehumidifier

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17. ENERGY STAR clothes washer
 18. ENERGY STAR dishwasher
 19. ENERGY STAR pool pump
 20. ENERGY STAR room air conditioner
 21. ENERGY STAR refrigerator
 22. ENERGY STAR freezer
 23. Heat pump water heater
 24. Central air conditioner
 25. Air source heat pump
 26. Ductless heat pump
 27. Ground source heat pump
 28. Smart power strip
 29. Other equipment, please specify the items_below: **[TEXT ENTRY]**
 98. Don't know
15. Is the building where the smart thermostat was installed your primary residence?
1. Yes
 2. No
16. **[IF I5=1]** How many hours each week is someone typically at home? (For reference, there are 168 hours in a week, so if people are at home about half of the time, that would be 84 hours per week.) **[OPEN ENDED NUMERIC RESPONSE 1-168]**
17. **[IF I5=2]** How many months out of the year do you spend there? **[OPEN ENDED NUMERIC RESPONSE 1-12]**

J. Demographics and Household Information

The last few questions are for statistical purposes only.

- J1. What is the primary language you speak at home?
1. English
 2. Spanish
 3. Hmong
 4. Chinese
 5. Other **[SPECIFY:_____]**
 6. Prefer not to answer
- J2. *What type of fuel does your **water heater** use?
1. Natural gas
 2. Electricity

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3. Propane/Bottled gas
4. Wood
5. Other **[SPECIFY: _____ TEXT – FORCE]**
98. Don't know

J3. * What is the main type of fuel you use to **heat your home**?

1. Natural Gas
2. Oil
3. Propane
4. Electricity
5. Wood
6. Other **[SPECIFY: _____]**
98. Don't know

J4. What is the primary heating system in your home?

1. Furnace
2. Air Source Heat Pump
3. Ground Source Heat Pump (geothermal)
4. Boiler
5. Wood or pellet stove
6. Radiant floor heating
7. Electric baseboard heaters
8. Fireplace
9. Other **[SPECIFY: _____]**
98. Don't know

J5. **[If J4 = 2]** Do you have back-up heating equipment?

1. Yes
2. No
98. Don't know

J6. **[If J5 = 1]** What is the switchover temperature (the temperature at which the backup equipment is used instead of the primary equipment)?

1. Above 45 degrees F
2. 45 degrees F
3. 40 degrees F
4. 35 degrees F
5. 30 degrees F
6. 25 degrees F
7. 20 degrees F
8. 15 degrees F

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9. Below 15 degrees F

98. Don't know

J7. What is the primary cooling system in your house?

1. My house does not have a cooling system

2. Central air conditioning

3. Heat Pump

4. Window air conditioning units

5. Other **[SPECIFY: _____]**

98. Don't know

J8. * What type of home do you live in?

1. Mobile / manufactured home

2. Single-family home, detached house

3. Attached house townhouse, row house, or duplex

4. Multifamily apartment or condo building with 4 or more units

5. Co-op/retirement community

6. Other **[SPECIFY: _____]**

98. Don't know/prefer not to answer

J9. * Do you or members of your household own or rent this home?

1. Own

2. Rent

3. Other **[SPECIFY: _____]**

98. Don't know/prefer not to answer

J10. **[ASK IF J9 = 2 OR 3]** How is your electric utility bill paid?

1. My utility bills me directly

2. My maintenance fees or rent includes utility costs

3. My bill is split evenly between units within the complex

4. Other **[SPECIFY: _____]**

98. Don't know

J11. **[ASK IF J9 = 2 OR 3]** How is your gas utility bill paid?

1. My utility bills me directly -

2. My maintenance fees or rent includes utility costs

3. My bill is split evenly between units within the complex

4. I don't have natural gas service

5. Other **[SPECIFY: _____]**

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98. Don't know

J12.* What is the highest level of school that you have completed?

1. Less than 9th grade
2. 9th to 12th grade; no diploma
3. High school graduate [includes GED]
4. Some college, no degree
5. Associate's degree
6. Bachelor's degree
7. Graduate or professional degree
8. Prefer not to answer

K. Closing

K1. * Do you have any other comments about your experience with Focus on Energy that you would like to share?

1. Yes: **[OPEN ENDED TEXT]**
 2. No
98. Don't know

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
98. Don't know

K3. Finally, we would like to confirm where to send your prize if you are selected as a \$200 gift card winner. Please enter a name and email address below. The gift card winners will be selected and notified within two weeks after this survey closes. You may leave this blank if you do not want to be included in the drawing.

1. FIRSTNAME LASTNAME
2. EMAIL

[END OF SURVEY MESSAGE] This completes the survey. We appreciate your participation and thank you for your time. Have a good day.

Wisconsin Focus on Energy: General Population Survey

Research Objectives	Corresponding Question Numbers
Awareness and attitudes toward electrification and related benefits	A19-A21
Focus on Energy awareness and depth of understanding	A15-A22
Nonparticipant spillover	A50-A86
Awareness of time of use rates, energy usage, and bill impacts	A28-A32, A34, A35

Targets:

- Minimum 300 completes from Focus on Energy service territories

General Instructions:

General programming instructions for online surveys are in red **[LIKE THIS]**.

Variables to be pulled into survey:

- **None**

Introduction:

- **Not applicable – survey to be delivered by Qualtrics**

A. Screeners and Demographics

A1. What is your current age?

1. Under 18 [TERMINATE]
2. 18 to 24
3. 25 to 34
4. 35 to 44
5. 45 to 54
6. 55 to 64
7. 65 to 74
99. 75 or older

A2. What state do you reside in? If you have residences in more than one state, please select the one where you live most of the time.

[DROP DOWN LIST OF 50 STATES] [TERMINATE IF THEY DO NOT SELECT WISCONSIN]

A3. What is the zip code of this residence?

[NUMERIC ENTRY] [TERMINATE IF THEY DO NOT SELECT A ZIP FROM LIST]

A4. Please select the utility that provides electricity for this residence.

1. Alliant Energy (Wisconsin Power & Light)
2. MGE (Madison Gas & Electric)
3. We Energies
4. WPS (Wisconsin Public Service)
5. Xcel Energy (Northern States Power)
6. Another utility (please specify): **[RECORD VERBATIM]**
98. Don't know

A5. Are you familiar with energy use decisions for your home?

1. Yes
2. No [THANK AND TERMINATE]

[THANK AND TERMINATE MESSAGE:] Thank you very much for your time. However you are ineligible for this survey.

A6. How many people live in your home year-round, including yourself? (In other words, what is the total number of year-round residents in your household)?

1. **[NUMERIC OPEN-END 1-30]**
99. Prefer not to answer

CADMUS

A7. What type of home do you live in?

1. Single-family home, detached house
2. Mobile/manufactured home
3. Attached house with 1 to 3 units (townhouse, row house, or duplex)
4. Multifamily apartment or condo building with 4 or more units
5. Retirement community or Co-op
6. Student housing
7. Something else, please describe: (SPECIFY: _____)
98. Don't know

A8. Do you or members of your household own this home, or do you rent?

1. Own/buying
2. Rent/lease
3. Some other situation, please describe: (SPECIFY: _____)
99. Prefer not to answer

A9. [IF A8=1] What year was your home built?

1. [NUMERIC OPEN-END]
98. Don't know

A10. How long have you lived in your home?

1. Less than 3 years
2. 3 to 5 years
3. 6 to 10 years
4. 11 to 20 years
5. 21 to 30 years
6. More than 30 years
99. Prefer not to answer

A11. What is the highest level of school that someone in your home has completed?

1. Less than a high school diploma
2. High school graduate; includes GED
3. Some college, no degree
4. Associates degree
5. Bachelor's degree
6. Graduate or professional degree
99. Prefer not to answer

CADMUS

A12. Please indicate your household's approximate total pre-tax income for 2024 including wages, salaries, pensions, social security, etc. for all members of this household combined. Drag the slider to your approximate income level - if your total household income was more than \$200,000, please select \$200,000.

1. [SLIDER FROM \$0 to \$200,000] [TERMINATE IF "ZERO" ENTERED]

A13. Are you of Hispanic, Latino, or Spanish ethnicity?

1. Yes
2. No
99. Prefer not to answer

A14. Which of the following best describes you? Select all that apply. **[MULTIPLE RESPONSES ALLOWED]**

1. Asian
2. Native American or Alaska Native
3. Black or African American
4. Pacific Islander
5. White or Caucasian
6. Other, please specify: (SPECIFY: _____)
99. Prefer not to answer

Awareness

A15. How familiar are you with Focus on Energy®?

1. Very familiar
2. Somewhat familiar
3. Not too familiar
4. Not at all familiar **[SKIP TO A19]**

A16. **[ASK IF A15=1-3]** We want to understand how much Wisconsin residents know about Focus on Energy. In your own words, what do you think Focus on Energy does?

1. [Record VERBATIM: _____]

CADMUS

A17. [ASK IF A15=1-3] Focus on Energy is Wisconsin’s statewide energy efficiency and renewable energy program that provides residents and businesses with resources, incentives, and support to implement cost-effective energy-saving and clean energy projects.

A18. For each of the Focus on Energy programs listed below, please indicate which ones you are aware of and which you have participated in. [TABLE FORMAT; EACH PROGRAM LISTED HAS A DROP DOWN MENU WITH THE THREE RESPONSE OPTIONS: PARTICIPATED IN THIS PROGRAM, AWARE BUT HAVE NOT PARTICIPATED, NOT AWARE OF THIS PROGRAM]

Program	Description
Free Energy Saving Packs	Free packs of energy saving items such as LEDs, low-flow showerheads and weatherization products, delivered through the mail
Rebates and Instant Discounts	Rebates and discounts for energy-efficient upgrades such as insulation, air sealing, heating and cooling systems (such as furnaces), water heating, and solar PV
New Construction Certification	Certification of energy efficient homes built above code
Online Marketplace	Online store available through the Focus on Energy website, offering instant discounts on a range of energy-saving products for your home

A19. How interested are you in receiving information about the following topics?

1. Energy efficiency upgrades (such as insulation, efficient water heaters, HVAC upgrades, etc.)
2. Where such as heat pumps, induction stoves, or other electric alternatives to gas equipment
3. No-cost energy-saving tips (such as adjusting thermostat settings or changing daily habits to reduce energy use)

Not at all interested (1)	Not very interested (2)	Somewhat interested (3)	Very interested (4)

A20. Do you know where you would go today to find reliable information about the following topics?

1. Energy efficiency upgrades (such as insulation, efficient water heaters, HVAC upgrades, etc.)
2. Switching from gas to electric technologies (such as heat pumps, induction stoves, or other electric alternatives to gas equipment)

CADMUS

3. No-cost energy-saving tips (such as adjusting thermostat settings or changing daily habits to reduce energy use)

Yes (1)	No (2)

A21. When it comes to saving energy at home, which of the following is most important to you?

[RANDOMIZE 1-8]

1. Reducing my monthly energy bills
2. Learning about energy efficiency upgrades (e.g., insulation)
3. Learning about electrification technologies (e.g., heat pumps)
4. Accessing rebates, incentives, or financing options
5. Improving comfort in my home (e.g., heating, cooling)
6. Reducing my home's environmental impact
7. Understanding new technology and how it works
8. Getting advice from contractors
9. Other (please specify)

A22. [ASK IF A15=1-3] How have you heard about Focus on Energy's offerings and rebates?
Select all that apply. **[MULTIPLE RESPONSES ALLOWED]** [RANDOMIZE FIRST 12 ITEMS]

1. Mailing - direct mail, brochure, postcard, bill insert, etc.
 - (i) Who sent the mailing?
 1. My utility
 2. Focus on Energy
 3. Another Organization
 4. I'm not sure
2. An email
 - (i) Who sent the email?
 1. My utility
 2. Focus on Energy
 3. Another Organization
 4. I'm not sure
3. A social media app - Facebook, Twitter, LinkedIn, etc.

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4. Online ad
5. Internet search
 - (i) What were you searching for? [SPECIFY: _____]
6. A website
 - (i) Which website?
 1. My utility
 2. Focus on Energy
 3. Another Organization
 4. I'm not sure
7. Family / friend / word-of-mouth
8. Focus on Energy representative
9. Utility representative
10. Community or utility event
11. Community Based Organization
12. Through participation in another Focus on Energy offering
13. A different source – what was it? [SPECIFY: _____]
98. Don't know

Brand Affinity

[ASK QUESTIONS A23 - A27 IF A15=1. OTHERWISE, SKIP TO A28]

The following five statements are about Focus on Energy. For each statement, please indicate whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. **[PROGRAM AS A MATRIX TABLE AND RANDOMIZE THE ORDER OF QUESTIONS A23 TO A27 FOR EACH SURVEY.]**

A23. Focus on Energy is a brand that I can trust.

1. Strongly agree
2. Somewhat agree
3. Somewhat disagree
4. Strongly disagree
98. Don't know

A24. Focus on Energy offers programs, tools, and services that are valuable.

1. Strongly agree
2. Somewhat agree

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- 3. Somewhat disagree
- 4. Strongly disagree
- 98. Don't know

A25. Focus on Energy provides services and programs that can help me lower my overall energy costs.

- 1. Strongly agree
- 2. Somewhat agree
- 3. Somewhat disagree
- 4. Strongly disagree
- 98. Don't know

A26. Focus on Energy provides services and programs that can help make me more aware of energy-saving opportunities.

- 1. Strongly agree
- 2. Somewhat agree
- 3. Somewhat disagree
- 4. Strongly disagree
- 98. Don't know

A27. My opinion of my energy utility is more favorable because it partners with Focus on Energy to offer energy-efficiency programs to its customers.

- 1. Strongly agree
- 2. Somewhat agree
- 3. Somewhat disagree
- 4. Strongly disagree
- 98. Don't know

A28. Considering all of your household expenses, how important is reducing your energy bills?

- 1. 0 – Not at all important
- 2. 1
- 3. 2
- 4. 3
- 5. 4
- 6. 5
- 7. 6
- 8. 7
- 9. 8
- 10. 9
- 11. 10 – Extremely important
- 98. Don't know

CADMUS

A29. Do you feel like you have control over your energy bill?

1. Yes
2. No

98. Don't know

A30. Do you feel your actions in your home have a direct impact on your energy bill?

1. Yes
2. No

98. Don't know

A31. How would you rate your knowledge of different ways you can save energy in your home?

1. 0 – Not at all knowledgeable
 2. 1
 3. 2
 4. 3
 5. 4
 6. 5
 7. 6
 8. 7
 9. 8
 10. 9
 11. 10 – Extremely knowledgeable
98. Don't know

A32. How energy efficient would you say your home currently is?

1. 0 – Not efficient at all
 2. 1
 3. 2
 4. 3
 5. 4
 6. 5
 7. 6
 8. 7
 9. 8
 10. 9
 11. 10 – Extremely efficient
98. Don't know

CADMUS

A33. Who do you seek out as a trusted source of information regarding energy efficiency?

[multiple **RESPONSES ALLOWED; RANDOMIZE FIRST 11 ITEMS**]

1. Friends/family
2. Contractor
3. Realtor
4. Home builder
5. Home improvement/hardware store staff
6. Utility representative
7. Focus on Energy representative
8. Utility web site
9. Focus on Energy web site
10. Newspaper/magazine articles
11. Energy-related web sites
12. Someone or someplace else, please describe: **[RECORD RESPONSE VERBATIM ____]**
98. Don't know or none of the above

A34. How comfortable would you be with sharing your electric and/or gas utility data (for example, your energy usage, costs, or a copy of your utility bill) with Focus on Energy?

1. Very comfortable
2. Somewhat comfortable
3. Neither comfortable nor uncomfortable
4. Somewhat uncomfortable
5. Very uncomfortable

A35. **[IF A34 = 4 OR 5]** You mentioned you feel uncomfortable sharing your utility data. What are your main concerns? Select all that apply. [multiple responses allowed]

1. Privacy
2. Security
3. Lack of trust
4. Too much effort
5. I don't think it's necessary
6. Something else, please describe: **[RECORD RESPONSE VERBATIM ____]**

Outreach, Motivation, Barriers to Participation

A36. What are the best ways for Focus on Energy to let you know about their rebates and services for energy-efficiency improvements? Select up to three. **[RECORD UP TO THREE RESPONSES.] [RANDOMIZE FIRST 17 ITEMS.]**

1. Promotion through other Focus on Energy programs

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2. Television
3. Radio
4. Print media, such as magazine, newspaper article or advertisement
5. Billboard / outdoor ad
6. Direct mail / brochure / postcard
7. Family / friend / word-of-mouth
8. Email from Focus on Energy
9. Text message
10. Short video
11. Blog article
12. Focus on Energy or Utility website
13. Community or utility event
14. Community Based Organization
15. Other website - which one? **[SPECIFY]**
16. Social Media such as Twitter, Facebook, or Instagram
17. **[IF A7 = 4]** Property owner or manager
18. A different source – which one? **[SPECIFY]**
19. I do not want to receive information **[EXCLUSIVE]**
98. Don't Know **[EXCLUSIVE]**

A37. What are the top challenges in completing energy-efficiency improvements for your home?

[ALLOW **MULTIPLE RESPONSES**] **[RANDOMIZE FIRST 9 ITEMS]**

1. Upfront cost/Initial cost of investment
2. Lack of knowledge about what improvements are needed
3. Lack of time to plan/complete projects
4. Don't understand benefits of these improvements
5. Believe that home is already efficient
6. Don't have reliable contractor/installer
7. My house is too old
8. Don't own the home/renting the home
9. My house doesn't need energy-efficiency improvements
10. Something else, please describe: **[RECORD VERBATIM_____]**
98. Don't know **[Exclusive]**

A38. **[ASK IF 2 OR MORE ITEMS CHECKED IN A37]** Of the challenges you just named regarding completing energy-efficiency improvements for your home, which one would you say is the biggest challenge?

1. **[INSERT ALL ITEMS CHECKED IN A37]**
98. Don't know

CADMUS

A39. [ASK if respondent has not participated in a program in A17] What are the reasons you have not participated in a Focus on Energy program? **[ALLOW MULTIPLE RESPONSES]**

[RANDOMIZE FIRST 12 ITEMS]

1. Haven't purchased anything or made any improvements that I think would qualify for a Focus on Energy rebate
2. I believe my home is as energy efficient as it can be
3. I don't know what equipment or offerings are available for rebates
4. I don't have time to collect and complete the required paperwork
5. I don't understand the technical aspects of the application paperwork, I need help completing the application
6. English is not my first language, I need help translating the information
7. I don't have enough money for any new equipment
8. I don't have enough money for the initial investment of qualified equipment
9. There are not contractors close enough to me to do the installation and/or repairs
10. I don't own the home/I'm renting the home
11. My home needs repairs first/Other improvements are a higher priority
12. I am unwilling to provide financial information that is required on the paperwork
13. Something else, please describe: **[RECORD VERBATIM_____]**

98. Don't know **[EXCLUSIVE]**

Energy Efficiency Priorities and Financial Burden (all respondents answer this section)

A40. The following are five statements about energy efficiency. Using a scale of 0 to 10, where 0 is "not at all important" and 10 is "extremely important" please rate how important each of the following is to you when deciding whether to make energy efficient improvements to your home. **[RANDOMIZE LIST, SINGLE RESPONSE.]**

1. Saving money on my utility bills
 2. Increasing the home value
 3. Protecting the environment by reducing greenhouse gas emissions
 4. Making my home more comfortable.
 5. Making sure my home is safe and a healthy environment
98. Don't know

CADMUS

A41. In the past three years, have you been contacted by Focus on Energy, a community organization, or a utility regarding participation in an energy efficiency program?

1. Yes

Who contacted you? [OPEN-ENDED RESPONSE; Not sure]

2. No

98. Don't know

A42. **[ASK IF A8=2]** What utility bills are you responsible for? Select all that apply.

1. Electric

2. Gas

3. Water/Sewer

4. Other, please specify: **[OPEN-ENDED RESPONSE]**

A43. When thinking about both hot summer months and cold winter months, how big of a financial burden would you say your utility bills are?

1. 0 – Not a burden at all

2. 1

3. 2

4. 3

5. 4

6. 5

7. 6

8. 7

9. 8

10. 9

11. 10 – Extreme burden

98. Don't know

A44. **[IF A8=2]** Has your landlord or property manager made any energy efficiency upgrades to your residence (including any common areas) since you've lived there?

1. Yes, in specific units/homes AND common areas/whole building

2. Yes, but only in specific units/homes, NOT common areas or the whole building

3. Yes, but only in common areas or the whole building, NOT specific units/homes

4. No

98. Don't know

CADMUS

A45. How helpful would the following Focus on Energy services be to you? Use a scale from 0-10, with 0 being "not at all helpful" and 10 being "extremely helpful." **[DROP DOWN MENU FOR EACH ITEM WITH 0-10 AND DON'T KNOW RESPONSES; RANDOMIZE LIST]**

1. Education about ways to make my home more comfortable
2. Rebates on equipment or services that would make my home more comfortable
3. Rebates on equipment or services that would help save money on my energy bills
4. Quick access to easy-to-install energy-saving products that I can install myself
5. Contractor-installed products that will help me save energy in my home
6. Education about what items in my home use the most energy
7. Education about easy ways to save energy in my daily life
8. An audit of my home that would tell me how to make it more efficient
9. Support for understanding what offerings and rebates are available to me
10. Support to find Focus on Energy partners (contractors, retailers, etc.)
11. Support for completing Focus on Energy applications
12. Ways to help others in my community save energy as well

A46. [IF A45.11 > 6] What support could Focus on Energy provide to help complete the application?

1. [RECORD VERBATIM/OPEN-ENDED RESPONSE]

A47. Are there any other ways Focus on Energy can support you to improve the energy efficiency of your home?

1. [RECORD VERBATIM/OPEN-ENDED RESPONSE]

A48. How likely would you be to participate in a Focus on Energy program in the future?

1. 0 – Not at all likely
2. 1
3. 2
4. 3
5. 4
6. 5
7. 6
8. 7
9. 8
10. 9
11. 10 – Extremely likely
98. Don't know

A49. [IF A48 RATING IS <5] Why would you be unlikely to participate?

1. [RECORD VERBATIM/OPEN-ENDED RESPONSE]

Nonparticipant Spillover

The following questions are about energy-efficient improvements or energy-efficient equipment that might affect your home's energy use.

A50. In the past year, did you purchase or install any energy-efficient equipment or upgrades at your residence for which you did not receive a rebate or discount from Focus on Energy?

1. Yes
2. No **[SKIP TO NEXT SECTION]**
98. Don't know **[SKIP TO NEXT SECTION]**

A51. Which of the following types of energy efficient improvements, products, or equipment did you install in the past year? **[ACCEPT MULTIPLE RESPONSES]**

1. Central air source heat pump
2. Ductless / mini-split heat pump
3. Ground source / geothermal heat pump
4. Central air conditioner
5. Furnace
6. Boiler
7. Water heating equipment
8. ENERGY STAR appliances
9. ENERGY STAR air purifier
10. Insulation
11. Air sealing
12. Duct sealing
13. Smart or Wi-Fi enabled thermostat
14. Recycled a working refrigerator or freezer
15. Other efficient equipment, please specify: **[SPECIFY: _____]**
98. Don't know **[SKIP TO NEXT SECTION]**

A52. **[ASK IF A51 = 1]** What is the heating seasonal performance factor (HSPF) rating, cooling seasonal energy efficiency ratio (SEER), and capacity (in BTUs) of the central air source heat pump?

1. Heating efficiency rating: **[RECORD RESPONSE]**
2. Cooling efficiency ratio: **[RECORD RESPONSE]**
3. Capacity in BTUs: **[RECORD RESPONSE]**
98. Don't Know

A53. **[ASK IF A52 = 98]** If you don't know exact numbers, which best describes your central air source heat pump's efficiency?

1. Standard efficiency (minimum code)

CADMUS

2. Higher efficiency (above code, but not the highest)
3. High/advanced efficiency (premium or top tier)
98. Don't know

A54. **[ASK IF A51=2]** What is the heating efficiency performance factor (HSPF) rating, cooling seasonal energy efficiency ratio (SEER), and capacity in BTUs of the ductless heat pump?

1. Heating efficiency rating: **[RECORD RESPONSE]**
2. Cooling efficiency ratio: **[RECORD RESPONSE]**
3. Capacity in BTUs: **[RECORD RESPONSE]**
98. Don't Know

A55. **[ASK IF A54=98]** If you don't know exact numbers, which best describes your ductless heat pump's efficiency?

1. Standard efficiency (minimum code)
2. Higher efficiency (above code, but not the highest)
3. High/advanced efficiency (premium or top tier)
98. Don't know

A56. **[ASK IF A51=3]** What is the heating efficiency performance factor (HSPF) rating, cooling seasonal energy efficiency ratio (SEER), and capacity in BTUs of the ground source heat pump?

1. Heating efficiency rating: **[RECORD RESPONSE]**
2. Cooling efficiency ratio: **[RECORD RESPONSE]**
3. Capacity in BTUs: **[RECORD RESPONSE]**
98. Don't Know

A57. **[ASK IF A56=98]** If you don't know exact numbers, which best describes your ground source heat pump's efficiency?

1. Standard efficiency (minimum code)
2. Higher efficiency (above code, but not the highest)
3. High/advanced efficiency (premium or top tier)
98. Don't know

A58. **[ASK IF A51=4]** What is the cooling seasonal energy efficiency ratio (SEER) and capacity in BTUs of the central air conditioner?

1. Cooling efficiency ratio: **[RECORD RESPONSE]**
2. Capacity in BTUs: **[RECORD RESPONSE]**
98. Don't Know

A59. **[ASK IF A58=98]** If you don't know exact numbers, which best describes your central air conditioner's efficiency?

1. Standard efficiency (minimum code)

CADMUS

2. Higher efficiency (above code, but not the highest)
3. High/advanced efficiency (premium or top tier)
98. Don't know

A60. [ASK IF A51=5] What is the annual fuel utilization efficiency (AFUE) rating and capacity in BTUs of the furnace?

1. Annual fuel utilization efficiency (AFUE) rating: **[RECORD RESPONSE]**
2. Capacity in BTUs: **[RECORD RESPONSE]**
98. Don't Know

A61. [ASK IF A51=6] What is the annual fuel utilization efficiency (AFUE) rating and capacity in BTUs of the boiler?

1. Annual fuel utilization efficiency (AFUE) rating: **[RECORD RESPONSE]**
2. Capacity: **[RECORD RESPONSE]**
98. Don't Know

A62. [ASK IF A51=1-6] How did you learn the new heating/cooling equipment is energy-efficient?

1. **[RECORD RESPONSE]**
98. Don't Know

[ASK A63-A68 IF A51=7]

A63. What type of water heating equipment was purchased and installed? **[SINGLE RESPONSE]**

1. Tankless on-demand water heater
2. Conventional storage tank water heater
3. Heat pump water heater
4. Boiler
5. Condensing water heater
6. Other **[SPECIFY: _____]**
98. Don't know

A64. What is the uniform efficiency factor (UEF) rating of the water heating equipment?

1. **[RECORD RESPONSE]**
98. Don't know

A65. **[ASK IF A64=98]** If you don't know exact numbers, which best describes the efficiency of your water heating equipment?

1. Standard efficiency (minimum code)
2. Higher efficiency (above code, but not the highest)
3. High/advanced efficiency (premium or top tier)

CADMUS

98. Don't know

A66.[ASK IF A63≠1] What is the water heater capacity in gallons?

1. [RECORD RESPONSE]

98. Don't know

A67.[ASK IF A63≠3, 4] What fuel type does the water heating equipment use?

1. [RECORD RESPONSE]

98. Don't Know

A68.[ASK IF A65≠1] How did you learn the new water heating equipment is energy-efficient?

1. [RECORD RESPONSE]

98. Don't Know

A69.[ASK IF A51=8] What type of ENERGY STAR appliances were purchased and installed?

[ACCEPT MULTIPLE RESPONSES]

1. Refrigerator

2. Freezer

3. Refrigerator/freezer combined unit

4. Clothes washer

5. Clothes dryer

6. Other (Please specify): [SPECIFY: _____]

98. Don't Know

A70.[ASK IF A51=8; LOOP THROUGH EACH RESPONSE SELECTED IN A69] How did you learn the new [LOOP IN RESPONSES FROM A69] is energy-efficient?

1. [RECORD RESPONSE]

98. Don't Know

A71.[ASK IF A51=9] How did you learn the new air purifying equipment is energy-efficient?

1. [RECORD RESPONSE]

98. Don't Know

[ASK A72-A73 IF A51=10]

A72.What is the R-value efficiency rating of the insulation installed?

1. [RECORD RESPONSE]

98. Don't know

A73.How did you learn about insulation updates that can improve efficiency in your home?

1. [RECORD RESPONSE]

98. Don't Know

CADMUS

[ASK A74-A76 IF A51=13]

A74. Is the thermostat you installed just programmable or is it also Wi-Fi enabled?

- 1. Programmable but not Wi-Fi enabled
- 2. Wi-Fi enabled
- 98. Don't know

A75. **[ASK IF A74=2]** Is the thermostat you installed a Smart thermostat? (A Smart thermostat is Wi-Fi capable and connected to the home. It has three of the following listed features: occupancy sensors, proximity sensing, behavior or learning features, basic demand response capability.)

- 1. Yes [Please specify]
- 2. No
- 98. Don't know

A76. How did you learn the new thermostat is energy-efficient?

- 1. [RECORD RESPONSE]
- 98. Don't Know

[ASK A77-A78 IF A51=14]

A77. Did you recycle a refrigerator or a freezer?

- 1. Refrigerator
- 2. Freezer
- 3. Both refrigerator and freezer
- 98. Don't know

A78. How many did you recycle?

- 1. [RECORD RESPONSE]
- 98. Don't know

A79. How many of the following types of energy efficient improvements, products or equipment did you install in the past year? If you aren't sure exactly make your best guess, or leave the box blank if you don't know.

Equipment	Quantity
[DISPLAY IF A51=1] Central air source heat pumps (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=2] Ductless / mini-split heat pumps (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=3] Ground source / geothermal heat pumps (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=4] Central air conditioners (record number of units)	[NUMERIC TEXT BOX]

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Equipment	Quantity
[DISPLAY IF A51=5] Furnaces (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=6] Boilers (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=7] Water heaters (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=8] ENERGY STAR [LOOP THROUGH EACH RESPONSE SELECTED IN A69] (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=9] ENERGY STAR Air purifiers (record number of units)	
[DISPLAY IF A51=10] Insulation (record square feet)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=102] Air sealing (record linear feet)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=12] Duct sealing (record linear feet)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=13] Wi-Fi-enabled thermostats (record number of units)	[NUMERIC TEXT BOX]
[DISPLAY IF A51=15] [PIPE IN ANSWER FROM A55.A51.15] (record number of units)	[NUMERIC TEXT BOX]

A80. [REPEAT FOR EACH ITEM MENTIONED IN A51] In what year was the [INSERT ITEM FROM A51] purchased and installed? [MATRIX TABLE WITH DROP DOWN MENUS FOR EACH ITEM]
[RECORD YEAR: "2025", "2024", "Before 2024", OR DON'T KNOW (98)]

A81. Did you know that your purchase(s) might have been eligible for a rebate or discount from Focus on Energy at the time of the purchase?

1. Yes
2. No
98. Don't know

A82. Why did you not apply for a discount or rebate?

1. [RECORD RESPONSE]
98. Don't know

A83. **[REPEAT FOR EACH ITEM MENTIONED IN A51]** How important were each of the following in your decision to purchase and install the energy-efficient products? Please use a scale from 1, meaning "not at all important", to 5, meaning the item was "very important" to your decisions.

1. **[ASK IF A51=1]** How important were each of the following on your decision to purchase the central air source heat pump(s)?

CADMUS

2. **[ASK IF A51=2]** How important were each of the following on your decision to purchase the ductless heat pump(s)?
3. **[ASK IF A51=3]** How important were each of the following on your decision to purchase the ground source heat pump(s)?
4. **[ASK IF A51=4]** How important were each of the following on your decision to purchase the central air conditioner(s)?
5. **[ASK IF A51=5]** How important were each of the following on your decision to purchase the furnace(s)?
6. **[ASK IF A51=6]** How important were each of the following on your decision to purchase the boiler(s)?
7. **[ASK IF A51=7]** How important were each of the following on your decision to purchase the water heater(s)?
8. **[ASK IF A51=8; LOOP THROUGH EACH RESPONSE SELECTED IN A69]** How important were each of the following on your decision to purchase [PIPE IN RESPONSE FROM A69]?
9. **[ASK IF A51=9]** How important were each of the following on your decision to purchase the air purifier(s)?
10. **[ASK IF A51=10]** How important were each of the following on your decision to purchase the insulation?
11. **[ASK IF A51=11]** How important were each of the following on your decision to have the air sealing performed?
12. **[ASK IF A51=12]** How important were each of the following on your decision to have the duct sealing performed?
13. **[ASK IF A51=13]** How important were each of the following on your decision to purchase the programmable or Wi-Fi-enabled thermostat(s)?
14. **[ASK IF A51=14]** How important were each of the following on your decision to recycle the refrigerator(s)/freezer(s)?
15. **[ASK IF A51=15]** How important were each of the following on your decision to purchase the **[PIPE IN ANSWER FROM A55.A51.15]**?

Item	Not at all important (1)	(2)	(3)	(4)	Very important (5)	Don't know (98)	Not applicable (97)
a. Replace old or broken equipment							
b. Reduce energy consumption or energy demand							
c. General information about energy efficiency provided by Focus on Energy							

CADMUS

e. Information from friends or family members who installed energy efficient equipment and received a rebate from Focus on Energy							
f. Energy efficiency savings information from a Federal, state or local government website or agency							
g. Previous participation in a Focus on Energy offering over a year ago							

A84. Was there anything else that was important in your decision to purchase and install energy efficient equipment: **[ONLY DISPLAY OPTIONS SELECTED IN A51]**

1. Central air source heat pump **[TEXT ENTRY]**
2. Ductless / mini-split heat pump **[TEXT ENTRY]**
3. Ground source / geothermal heat pump **[TEXT ENTRY]**
4. Central air conditioner **[TEXT ENTRY]**
5. Furnace **[TEXT ENTRY]**
6. Boiler **[TEXT ENTRY]**
7. Water heating equipment **[TEXT ENTRY]**
8. ENERGY STAR refrigeration equipment (refrigerators, freezers) **[TEXT ENTRY]**
9. ENERGY STAR air purifier **[TEXT ENTRY]**
10. Insulation **[TEXT ENTRY]**
11. Air sealing **[TEXT ENTRY]**
12. Duct sealing **[TEXT ENTRY]**
13. Programmable or Wi-Fi enabled thermostat **[TEXT ENTRY]**
14. Recycled a working refrigerator or freezer **[TEXT ENTRY]**

A85. **[PIPE IN ANSWER FROM A55.A51.15]** Thinking about energy-saving improvements that might still need to be done in your home, what do you think is the most important remaining improvement to help save energy? **[TEXT ENTRY]**

1. **[RECORD VERBATIM/OPEN-ENDED RESPONSE]**
98. Don't know

A86. The following is a list of energy-saving actions. Please indicate if you regularly perform these actions in your home. [OPTIONS FOR EACH: YES (regularly perform), NO, DON'T KNOW] [Randomize OPTIONS, PROGRAM AS A MATRIX WITH DROP DOWN MENUS.]

1. Adjust heating or cooling to save energy

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2. Use fans instead of air conditioning
3. Close blinds or curtains during the day in the summer to keep your home cooler
4. Reduce water heater temperature to save energy
5. Wash clothes in cold water
6. Wash full loads of clothes
7. Wash full dishwasher loads
8. Turn off lights in unused areas
9. Unplug or shut down electronics when not in use
10. Maintain heating equipment for more efficient operation
11. Use a programmable or smart thermostat to automatically adjust temperature settings

B. Closing

Thank you very much for taking the time to provide your input.

CADMUS

M.2. Nonresidential Programs

- Nonresidential Cross-Cutting – Trade Ally Interview
- Nonresidential Cross-Cutting – Participant Survey

Focus on Energy Nonresidential Programs CY 2025 Trade Ally Interview Guide

This document serves as the interview guide for the Cadmus and Apex team's (the evaluation team) forthcoming interviews with trade allies of Focus on Energy's Non-Residential Programs. The primary goal of these interviews is to explore optimal timing, frequency, medium, and content for program communication. Additionally, these interviews will explore potential trends in prescriptive rebate uptake.

General Instructions:

- Interview instructions are in green [LIKE THIS]
- Interview patterns or variables are in red [LIKE THIS]

A. Interview Parameters

- **Target completes:**
 - 25-30 stratified by trade ally type and primary program
 - Sampling stratification to be conducted upon receipt of updated August tracking data
- **Interview targets:**
 - Employee with knowledge and/or involvement with Focus on Energy
 - Include both engaged TAs and TAs whose engagement has fallen off
- **Incentives:**
 - \$100/complete - \$2,500 - \$3,000 total
- **Interview medium:**
 - Phone
- **Recruitment medium:**
 - Email/Phone
- **Recruitment approach:**
 1. Attempt recruitment via email to all sample participants with viable email addresses
 2. Send secondary recruitment email 1 week after initial recruitment
 3. Conduct phone recruitment as necessary to supplement and satisfy quotas

B. Email Recruitment Script

Initial Recruitment Email

Subject: Help Focus on Energy improve our energy efficiency Program offerings

Hello!

As you know, Focus on Energy has ambitious goals related to saving energy in Wisconsin. We would not be able to attain those goals without the support of dedicated trade partners like yourself, and we would like your feedback so that we can work with our trade partners more effectively. We would appreciate it if you would participate in a brief phone interview about your experiences participating as a Trade Ally in the Focus on Energy Programs. If you are not the person who works most closely with Focus on Energy, we appreciate you forwarding this email to the person that is most familiar with your company's participation with Focus on Energy.

The interviews should take approximately **20-30** minutes, and **we are offering a \$100 electronic gift card** in appreciation of your time and insights. Please reply to this email with your interest in completing an interview, and a member of the research team will reach out to coordinate a convenient time. If we don't hear back from you, a member of the research team will follow up with you by phone sometime next week.

Focus on Energy is working with Apex Analytics, an independent research firm, to conduct this research. If you have any questions about the validity of this email or the interviews, please contact Mitch Horrie at Public Service Commission of Wisconsin at 608-267-3206 or mitch.horrie@wisconsin.gov.

Thank you very much,

Michelle Pham

Follow-Up Recruitment Email

Subject: Help Focus on Energy improve our energy efficiency Program offerings

Hello!

We wanted to follow up on our email from last week to see if you'd be willing to share your experiences as a Focus on Energy Trade Ally. We have gotten great feedback from other trade allies but want to make sure you have a chance to include your perspective in the research we are doing to help Focus on Energy more effectively work with its trade ally partners.

We know your time is valuable, and to thank you for taking **20-30** minutes to talk with us **we are offering a \$100 electronic gift card** in appreciation of your time and insights. Please reply to this email and let us know what days and times would be convenient for you. If we don't hear back from you, a member of the research team will follow-up with you by phone.

Focus on Energy is working with Apex Analytics, an independent research firm, to conduct this research. If you have any questions about the validity of this email or the interviews, please contact Mitch Horrie at Public Service Commission of Wisconsin at 608-267-3206 or mitch.horrie@wisconsin.gov.

Thank you very much,

Michelle Pham

C. Phone Recruitment

Hello, my name is **[NAME]**, and I am calling on behalf of Wisconsin's Focus on Energy programs. I am calling because we want to speak with trade allies like yourself to learn more about your experience participating in Focus on Energy Programs. Are you the person at your company who is most involved with the Focus on Energy programs?

[IF RESPONDENT IS MOST INVOLVED WITH FOCUS] Is now a good time to talk? We anticipate interviews should take roughly 20-30 minutes, and we are offering a \$100 gift card as a thank you for your time. If this isn't a good time, we can schedule a time that is convenient in the next few days.

[IF ANOTHER PERSON IS MORE INVOLVED WITH FOCUS] Who would be the best person to talk with at your company about Focus on Energy? **[RECORD NAME]** Can you transfer me to that person? Or is there another phone number that I can use to reach them directly? **[RECORD NUMBER, REPEAT INTRODUCTION WITH NEW CONTACT]**

D. Introduction

D1. Thank you for taking the time to speak with us today. We're looking to improve how Focus on Energy communicates with trade allies like yourself. This interview will focus on how and when you receive program updates, what kinds of information you find most useful, and how we can improve communication. We also have space to hear about your overall experience with the program.

Do you have any questions before we begin?

D2. I'll be taking notes as we talk. Is it OK if I also record the call, just to help with my notetaking? We won't share the recording with anyone, and we won't report anything in a way that would identify any individual respondent.

1. **[YES] [START RECORDING]**
2. **[No]** That's ok, we can proceed without the audio recording

E. Background

- E1. To begin, please tell me a little bit about your role at your company and how long you've been there.
- E2. What types of projects and work does your company do? **[PROBE ON COMMERCIAL, RESIDENTIAL MARKETS, COMMERCIAL SECTORS, NEW CONSTRUCTION/RETROFIT, AND TYPE OF WORK, E.G., HVAC, ELECTRICAL, ETC.]**
- E3. What geographic area does your company serve?
- E4. How do you participate in Focus on Energy Programs? **[PROBE FOR INSTANT DISCOUNTS, MAIL IN REBATES; IF NEW CONSTRUCTION PROBE FOR EDA VS. PRESCRIPTIVE CATALOG OFFERINGS.]**
- E5. How long has your company worked with the Focus on Energy programs?
- E6. **[IF A REGISTERED TA WITH FOCUS ON ENERGY]** How long has your company been a registered TA with Focus on Energy?
- E7. How did you learn about Focus on Energy programs?
- E8. From your perspective, what have been the most impactful changes to the **[PROGRAM(S) USED]** this year, if any?
 1. How did you hear about them?
 2. Do you see those changes as positive, negative, or neutral? Why do you say that?
- E9. How, if at all, has the number of projects you do that receive Focus on Energy incentives changed over the past few years? **[FOR TAS THAT HAVE DROPPED OFF IN PARTICIPATION]** Our records indicate a drop off in participation – what are the main drivers of that?
 1. What were/are the reasons for those changes?
 2. **[IF NOT MENTIONED]** Is the drop off due to program design changes?
- E10. What is the most challenging part of incorporating Focus on Energy to help increase your sales process?
- E11. Is there anything Focus on Energy could do that would increase your incorporation of Focus on Energy into your sales process?

F. General Communication Preferences

Medium/Format/Content

- F1. Overall, which of the channels that Focus on Energy used to communicate with you do you find most useful? Why?
1. Do you prefer written information (emails, newsletters, PDFs) or verbal/interactive formats (phone calls, webinars, in-person meetings)? Why?
- F2. Are there communication channels you feel are overused?
1. Are there any communication channels you feel are not as effective?
 2. Why do you say that?
- F3. Focus on Energy sends out communication about different topics, and they want to make sure they are reaching the right people. What is the job title of the person at your organization who would be best to receive information about:
1. Incentive offerings and amounts?
 2. Eligibility requirements?
 3. Application processes?
 4. Customer-facing materials and co-branding opportunities?
 5. New opportunities and best practices related to energy efficient equipment?

Timing/Frequency

- F4. Overall, do you feel like the amount of communication you received from Focus on Energy is:
1. Too much
 2. Too little, or
 3. Just right?
- [PROBE ON WHAT THEY WOULD LIKE MORE OF OR LESS OF: EMAIL OUTREACH/NEWSLETTERS, PHONE CALLS, VISITS, LINKEDIN, SOCIAL MEDIA, TEXTS]**
- F5. How often do you hear from a Focus on Energy Advisor?
1. Never
 2. 1-2 times per year
 3. 3-4 times per year
 4. 4+ times per year
 98. Don't know
 99. Refused
- F6. **<If F5= 1, 98, 99>** Would it be helpful have regular touchpoints with a Focus on Energy Advisor? Why or why not?
- F7. **<If F5 = 2, 3, 4>** What are the most useful aspects of these interactions?
- F8. **<If F5 = 2, 3, 4>** How could those interactions be improved?
- F9. Are there certain times of year when communication from the program is more helpful?

1. Why? **[PROBE FOR SEASONS, OFFERS, TRENDS]**

- F10. At what point during a project or sales cycle do you most need support or updates from the program?
1. **[PROBE]** What would be the best way for the program to reach you at that stage?
 2. What would be the best way for Focus on Energy to reach you during the project design phase to provide information about applicable offerings?

G. Additional Questions

- G1. Have you utilized any co-branded materials provided by Focus on Energy?
1. **[IF SO]** Which ones? How useful did you find them? Why?
 2. **[IF NOT]** Why not?
- G2. Have you received Focus on Energy's seasonal Trade Ally newsletter? **[FOR B&I, SENT TO THOSE WHO SUBSCRIBED TO BUSINESS UPDATES THROUGH THE WEBSITE (CUSTOMERS AND TRADE ALLIES), FOR AG THESE ARE MAILED]**
1. What components of the newsletter, if any, do you find most useful? What makes them useful? **[PROBE: TO WHAT EXTENT DO THE NEWSLETTERS GIVE YOU NEW INFORMATION ABOUT ENERGY EFFICIENCY OPPORTUNITIES?]**
 2. What components of the newsletter, if any, do you not find useful? How, if at all, could they be more useful?
 3. What, if anything, would you like to see the newsletter include that it does not currently?
- G3. Have you noticed any changes in the format of the incentive catalog this year? From your perspective, did those changes make the catalog easier or harder to use? Why do you say that?
- G4. **[IF NOT COVERED ABOVE]** Have you participated in any Lunch and Learns hosted by Focus on Energy?
1. Was it helpful? Why or why not?
- G5. **[IF NOT COVERED ABOVE]** Focus on Energy deployed various factsheets, videos, and toolkits this year. Which, if any, of those have you used?
1. What were the most useful to your business? Why?
 2. How could they be more useful?
- G6. **[IF NEVER USED FACTSHEETS, VIDEOS, TOOLKITS]** Which of these tools sound most useful?
- G7. Focus publishes numerous case studies throughout the year to highlight customer successes and achievements. Do you recall seeing any of these case studies?
1. **[IF YES]** Do you find those case studies useful? **[IF SO]** In what way? **[IF NOT]** Why not?

2. Who do you see as the main audience for the case studies? **[IF NEEDED]** Is it trade allies like you? End-use customers?
3. How effective do you think case studies are in reaching that audience? Why do you say that?
4. What types of projects or facilities would you like to see Focus feature in case studies? Why do you say that?

- G8. How often do you visit the Focus on Energy website?
1. What pages are you using when you visit?
 2. What information do you look for on the website?
 3. How do you use that information?
 4. What information, if anything, was hard to find?

- G9. **[FOR TAS WHO HAVE PARTICIPATED SINCE 1/1/2024 AND ACHIEVED MORE THAN 1,000 LC MMBTU PER YEAR]** Have you received a year-over-year participation report? This would have come to your email in April and showed the number of projects you completed year over year, how many dollars in incentives used, and how much your customers saved in energy costs as a result of those projects.
1. If yes, was it helpful? Why or why not?
 2. Do you think you would do additional projects through Focus on Energy if there were rewards for meeting certain goals—like increasing your participation each year or reaching a specific number of qualifying projects?

Agribusiness

- G10. **[IF THEY WERE A PART OF THE PILOT GROUP FOR THE YEAR END REVIEW]** I understand you were one of the trade allies that received a Year End Review flier. This would have been delivered via email in May/June. Do you recall receiving this?
1. What did you find useful or not useful about the Year End Review flyer?
 2. How did you use it, if at all?
 3. What was most impactful about the flyer?
 4. What suggestions do you have for improving it?

G11.

H. General Program Feedback & Closing

- H1. **[IF NOT COVERED ABOVE]** What is working well right now in your interaction with Focus on Energy?
- H2. What are the biggest challenges or frustrations you've encountered in your interaction with Focus on Energy?
- H3. Those are all the questions that we have for today! Do you have any other comments about your experience with Focus on Energy that you would like to share?

Thank you for your time today, we appreciate your help with this interview. As previously mentioned, we will be sending you a \$100 gift card as a thank you for your participation in this effort. Gift cards are distributed through a service called "Tango Card." You will receive an electronic gift card via email, that you can redeem at various online retailers. Can you please provide me with the email address where you would like to have that gift card directed?

Desired Email Address:

Thank you again. Gift cards will be sent within two weeks. I will send you a personal email directly once the gift cards are processed; feel free to contact me if you have any difficulties accessing or utilizing the gift card.

Focus on Energy Nonresidential Programs CY 2025 Participant Survey

This document presents a survey instrument for the Cadmus and Apex team's (the evaluation team) forthcoming surveys with participants of Focus on Energy's Non-Residential Programs. The primary goal of these surveys is to explore optimal timing, frequency, medium, and content for program communication across Business & Industry and Large Industrial participants.

General Instructions:

- Survey instructions are in green [LIKE THIS]
- Survey patterns or variables are in red [LIKE THIS]

A. Data Collection Activity Parameters

- **Target completes:**
 - All participants invited to take survey (goal for completes of about 70+ for B&I and 20+ for Large Industrial). Sampling to be conducted upon receipt of updated August tracking data.
- **Incentives:**
 - \$25/complete for survey respondents
 - \$3,500 total
- **Survey medium:**
 - Mixed-mode web/phone
- **Interview medium:**
 - Phone
- **Recruitment medium:**
 - Email/Phone
- **Recruitment approach:**
 1. Attempt recruitment via email to all sample participants with viable email addresses
 2. Send secondary recruitment email 1 week after initial recruitment
 3. Conduct phone recruitment as necessary to supplement and satisfy quotas
- **SAMPLE Variables:**
 - [CONTACT NAME]
 - [SITE ADDRESS]
 - [MEASURE CATEGORY1]
 - [MEASURE CATEGORY2]
 - [MEASURE CATEGORY3]
 - [MEASURE CATEGORY1_QUANTITY]
 - [MEASURE CATEGORY2_QUANTITY]
 - [MEASURE CATEGORY3_QUANTITY]

B. Email Recruitment Script

Initial Recruitment Email

Dear \${m://FirstName} \${m://LastName},

Focus on Energy invites you to participate in a survey about your company's experience with its programs. Your input will help Focus on Energy strengthen its programs and ensure they are meeting the needs of customers like you. The survey should take 10 to 15 minutes to complete. **As a thank you for your time, we are offering a \$25 e-gift card to use at an online retailer of your choice.** To start, please click the link below to take the survey.

Your participation is critical to building strong Focus on Energy programs!

Follow this link to the Survey:

[\\${l://SurveyLink?d=Take the Survey}](#)

Or copy and paste the URL below into your internet browser:

[\\${l://SurveyURL}](#)

If you have any questions about this research or any difficulties taking the survey, please contact Jamie Lynch at the St. Norbert College Strategic Research Institute at 920-403-3088 or jamie.lynch@snc.edu.

If you have any questions about the validity of this email or the survey, please contact Mitch Horrie at Public Service Commission of Wisconsin at 608-267-3206 or mitch.horrie@wisconsin.gov.

We greatly appreciate your time and feedback in completing this survey.

Thank you very much!

Follow-Up Recruitment Email

Dear \${m://FirstName} \${m://LastName},

You may have seen an email from us last week, but we wanted to reach out one more time to invite you to share your experiences as a participant in Focus on Energy programs.

As a recent participant in Focus on Energy's **[PROGRAM]** program, your feedback is very valuable. Your input will help Focus on Energy strengthen its programs and ensure they are meeting the needs of customers like you. The survey should take 10 to 15 minutes to complete. **As a thank you for your time, we are offering a \$25 e-gift card to use at an online retailer of your choice.** To start, please click the link below to open our survey.

Your participation is critical to building strong Focus on Energy programs!

Follow this link to the Survey:

[\\${l://SurveyLink?d=Take the Survey}](#)

Or copy and paste the URL below into your internet browser:
\${!://SurveyURL}


If you have any questions about this research or any difficulties taking the survey, please contact Jamie Lynch at the St. Norbert College Strategic Research Institute at 920-403-3088 or jamie.lynch@snc.edu.

If you have any questions about the validity of this email or the survey, please contact Mitch Horrie at Public Service Commission of Wisconsin at 608-267-3206 or mitch.horrie@wisconsin.gov.

We greatly appreciate your time and feedback in completing this survey.

Thank you very much!

C. Web Survey Introduction

Thank you for responding to this survey about your experience with Focus on Energy, specifically how they communicate with you. The survey will take 10 to 15 minutes to complete. If you are responding on a mobile device, you may be able to use the voice-to-text feature on your keyboard  to provide spoken, rather than written, responses to open-ended questions.

If you have any questions about this research or any difficulties taking the survey, please contact Jamie Lynch at the St. Norbert College Strategic Research Institute. You can reach him at 920-403-3088 or jamie.lynch@snc.edu. If you have any questions about the validity of this survey, please contact Mitch Horrie at Public Service Commission of Wisconsin at 608-267-3206 or mitch.horrie@wisconsin.gov.

As a thank you for your time completing this survey, we are offering a \$25 e-gift card. Please confirm your email address at the end of the survey so that we can send you the e-gift card to use at an online retailer of your choice.

Please click "Next" below to begin the survey.

D. Phone Introduction

D1. Hello, my name is **[NAME]**, and I am calling on behalf of Focus on Energy. Focus on Energy would like to learn about your organization’s experience using their programs.

[IF NO CONTACT NAME, OR CONTACT NO LONGER WORKS FOR ORG] May I please speak with someone who is most familiar with Focus on Energy?

[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]**
98. Don’t Know **[ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN]**
99. 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 10-15 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 its energy efficiency programs for businesses and other organizations.

[Only if asked] for a Focus on Energy contact to verify the survey authenticity, offer Mitch Horrie with the Public Service Commission of Wisconsin, 608.267.3206]

[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 offering and your decision-making. If you have a few more spare minutes, we would greatly appreciate your responses!]

D2. We’d like to ask you to participate in a brief survey about your experience with Focus on Energy, specifically how they communicate with you. We expect this survey to take roughly 10-15 minutes. As a thank you for your time, we’d like to offer you a \$25 electronic gift card. Are you able to assist us with this research?

1. Yes **[GO TO SECTION E]**
2. Not right now **[SCHEDULE CALL BACK]**
99. Refuse **[THANK AND TERMINATE]**

E. Introduction: Involvement with Focus on Energy

- E1. Our records show that your organization received an incentive or technical support from Focus on Energy to improve the energy efficiency of your facility at **[SITE ADDRESS]** in **[YEAR]**. Is that correct? **[IF NEEDED]** In some cases, contractors or other service providers pass along Focus on Energy incentives as a discount or direct credit.
1. Yes
 2. No, wrong year **[RECORD CORRECT YEAR]**
 3. No, wrong address **[RECORD CORRECT ADDRESS]**
 4. No, I did not install any measures or receive support **[THANK AND TERMINATE]**
 98. Don't know **[IS THERE SOMEONE WE COULD SPEAK WITH THAT WOULD KNOW THIS? RECORD NAME AND CONTACT INFORMATION: _____]**
 99. Refused **[THANK AND TERMINATE]**

F. General Communication Preferences

Medium/Format

- F1. Please select all the ways you receive communication from Focus on Energy and indicate which type of communication you received most recently. **[ALLOW FOR MULTIPLE RESPONSES IN COLUMN A WITH OPTIONS 97-99 EXCLUSIVE; ALLOW SINGLE RESPONSE IN COLUMN B]**

Type of communication from Focus on Energy	a. Select if received	b. Indicate if most recent communication
1. Email newsletters or announcements		
2. Focus on Energy website		
3. Webinars or virtual trainings		
4. In-person events or trade shows		
5. Contact from a Focus on Energy advisor		
6. Contact from a contractor or service provider		
7. Contact from a utility representative		
8. Social Media, Ex. Facebook, LinkedIn		
9. Other [SPECIFY _____]		
97. Do not receive communication from Focus on Energy		
98. Don't know		
99. Refused		

F2. <If F1b = 1-9> You indicated that the most recent communication you received from Focus on Energy was a [F1.b RESPONSE]. What, if anything, do you recall about the content of that communication?

1. [OPEN-ENDED]

F3. <If F1b = 1-9> To what extent do you agree or disagree with the following statements about the most recent communication you received?

	1. Completely disagree	2. Somewhat disagree	3. Neither agree or disagree	4. Somewhat agree	5. Completely agree
a. I learned something I didn't already know					
b. The information was useful to me					
c. The information was interesting or engaging					
d. I understood the information					
e. The next steps for me to take, if any, were clear					

F4. Please rate the effectiveness of each communication channel that Focus on Energy uses to reach you on a scale from one to five, with one being not at all effective and five being extremely effective:

Rank each method for their effectiveness at:	a. Keeping you up to date on changes to Focus on Energy incentives and eligibility requirements?	b. Informing you about energy efficiency opportunities in your facility?	c. Educating you about energy efficiency technologies in the market?
<If F1 = 1> 1. Email newsletters or announcements			
<If F1 = 2> 2. Focus on Energy Website			
<If F1 = 3> 3. Webinars or Virtual Trainings			
<If F1 = 4> 4. In-person events or trade shows			
<If F1 = 5> 5. Communications from a Focus on Energy advisor			
<If F1 = 6> 6. Communications from a contractor or service provider			
<If F1 = 7> 7. Utility representative			
<If F1 = 8> 8. Social media			
<If F1 = 9> 9. Other: [F1.9 OPEN ENDED RESPONSE]			

- F5. **<If F1= a1>** You noted that you recall receiving the Focus newsletter. What, if anything, would you like to see the newsletter include, that it does not currently?
1. **[OPEN-ENDED]**
- F6. **<If F1= /a1 (a1 IS NOT SELECTED)>** If you were to receive a regular Focus on Energy newsletter, what types of information would be most beneficial to you?
1. **[OPEN-ENDED]**

Timing/Frequency

- F7. How often do you currently receive updates or information from Focus on Energy? **[ONE RESPONSE]**
1. Multiple times per month
 2. Monthly
 3. Quarterly
 4. Less than quarterly
 5. Never - I don't remember receiving communications
 98. Don't know
 99. Refused
- F8. **[If F7 = 1, 2, 3, 4]** How would you describe the current frequency of communication from Focus on Energy? **[ONE RESPONSE]**
1. Too frequent
 2. Just right
 3. Not frequent enough
 4. Other **[SPECIFY _____]**
- F9. Focus on Energy has dedicated Energy Advisors who provide one-on-one support to help customers identify energy efficiency opportunities and navigate Focus on Energy programs. Have you worked with a Focus on Energy Advisor?
1. Yes
 2. No
 3. Don't know
- F10. Do you know how to get in touch with a Focus on Energy Advisor?
1. Yes
 2. No
- F11. How often do you hear from a Focus on Energy Advisor? **[LIMIT ONE RESPONSE]**
1. 4+ times per year
 2. 3-4 times per year
 3. 1-2 times per year
 4. Never
 98. Don't know
 99. Refused
- F12. **<If F11 = 4, 98, 99>** Would it be helpful to have regular contact with a Focus on Energy Advisor?

1. Yes
2. No
98. Don't know
99. Refused

F13. **<If F11= 1, 2, 3>** How satisfied are you with your interactions with a Focus on Energy Advisor? **[ONE RESPONSE]**

1. 1 – Not at all satisfied
2. 2 – Slightly satisfied
3. 3 – Moderately satisfied
4. 4 – Very satisfied
5. 5 – Extremely satisfied

F14. **<If F13 = 1, 2, 3>** How could those interactions be better?

1. **[OPEN-ENDED]**

F15. **<If F13 = 4, 5>** What are the most useful aspects of your interactions with a Focus on Energy Advisor?

1. **[OPEN-ENDED]**

F16. What are the job titles of the people in your organization that are typically involved in early-stage decisions about capital project planning and project design?

1. **[OPEN-ENDED]**

F17. What's the best way for Focus on Energy to connect with them early in the capital planning process?

1. **[OPEN-ENDED]**

F18. What, if anything, makes it difficult to bring Focus on Energy into your organization's capital planning process?

1. **[OPEN-ENDED]**

F19. **<IF F16/=EMPTY>** What could Focus offer to overcome these barriers?

1. **[OPEN-ENDED]**

Content/Messaging

F20. What kinds of information from Focus on Energy are most valuable to your organization? **[ALLOW MULTIPLE RESPONSES]**

1. Rebate and incentive updates
2. Application or deadline reminders
3. Success stories or case studies
4. Technical guidance or specifications
5. Energy savings calculators/tools
6. Training opportunities)
7. Other **[SPECIFY _____]**

- 98. Don't know
- 99. Refused

- F21. Have you ever shared information from Focus on Energy with others in your organization (e.g., finance, operations, facilities, leadership)? **[ONE RESPONSE]**
- 1. Yes – regularly
 - 2. Yes – occasionally
 - 3. No – but I would if the content were more relevant
 - 4. No – and I'm unlikely to
- F22. What type of information, if any, do you wish Focus on Energy would provide?
- 1. **[OPEN-ENDED]**
- F23. **<If F21= 1 or 2>** What information do you typically share?
- 1. **[OPEN-ENDED]**
- F24. **<If F21= 4>** Why are you unlikely to share information from Focus on Energy?
- 1. **[OPEN-ENDED]**
- F25. What's working well about the way Focus on Energy communicates with your organization?
- 1. **[OPEN-ENDED]**
- F26. What could be improved about the way Focus on Energy communicates with you?
- 1. **[OPEN-ENDED]**

G. Additional Questions

- G1. Do you regularly use LinkedIn?
- 1. Yes
 - 2. No
- G2. **<If G1= 1>** Have you seen Focus on Energy content on LinkedIn?
- 1. Yes
 - 2. No
- G3. **<If G2=1>** How would you rate the usefulness of the Focus on Energy content you've seen on LinkedIn? **[LIMIT ONE RESPONSE]**
- 1. Very useful
 - 2. Somewhat useful
 - 3. Neither useful nor not useful
 - 4. Somewhat not useful
 - 5. Not useful at all
 - 98. Don't remember

- G4. Focus on Energy publishes numerous case studies throughout the year to highlight how organizations like yours have benefitted from using the programs. Would those types of case studies be useful to you?
1. Yes
 2. Maybe
 3. No
- G5. **<If G4 = 1>** How would you use that type of case study information?
1. **[OPEN-ENDED]**
- G6. **<If G4 = 2>** In what cases would that type of case study be useful?
1. **[OPEN-ENDED]**
- G7. **<If G4 = 3>** Why not?
1. **[OPEN-ENDED]**
- G8. **<If G4 = 1 OR 2>** What types of projects would you like to see featured as case studies?
1. **[OPEN-ENDED]**
- G9. Would your company be interested in participating in a case study if asked?
1. Yes
 2. Maybe
 3. No

H. General Program Feedback

- H1. On a scale from one to five, with one meaning not at all satisfied and five meaning extremely satisfied, how satisfied are you with your overall experience working with Focus on Energy? **[LIMIT ONE RESPONSE]**
1. 1 – Not at all satisfied
 2. 2 – Slightly satisfied
 3. 3 – Moderately satisfied
 4. 4 – Very satisfied
 5. 5 – Extremely satisfied
- H2. **<If H1 = 4 or 5>** What is working well right now?
1. **[OPEN-ENDED]**
- H3. **<If H1= 1 or 2>** What are the biggest challenges or frustrations you've encountered?
1. **[OPEN-ENDED]**
- H4. What factors limit how many projects you complete that are supported by Focus on Energy programs? **[ALLOW MULTIPLE RESPONSES]**
1. Limited budget for efficient technologies or improvements
 2. Reluctant to invest in improvements to rented space
 3. Have already made all practical energy efficiency improvement

4. Reluctant to invest due to economic uncertainty
5. Other **[SPECIFY _____]**
6. None

I. Participant Background & Closing

- I1. How many locations does your organization operate in Wisconsin? **[LIMIT ONE RESPONSE]**
 1. 1
 2. 2
 3. 3 to 5
 4. 6 to 10
 5. More than 10
 98. Don't know
 99. Refused

- I2. How many people does your organization employ in Wisconsin (best guess)? **[LIMIT ONE RESPONSE]**
 1. One to less than 10;
 2. 10 to less than 20;
 3. 20 to less than 50;
 4. 50 to less than 100;
 5. 100 to less than 1,000;
 6. More than 1,000
 98. Don't know
 99. Refused

- I3. **[IF CUSTOMER TYPE <> S&G]** How many locations does your organization operate outside of Wisconsin? **[LIMIT ONE RESPONSE]**
 1. None
 2. 1
 3. 2
 4. 3 to 5
 5. 6 to 10
 6. More than 10
 98. Don't know
 99. Refused

- I4. **[IF CUSTOMER TYPE <> S&G AND I3 <> "NONE"]** How many people does your organization employ outside of Wisconsin (best guess)? **[LIMIT ONE RESPONSE]**
 1. One to less than 10;
 2. 10 to less than 20;
 3. 20 to less than 50;
 4. 50 to less than 100;
 5. 100 to less than 1,000;
 6. More than 1,000

- 98. Don't know
- 99. Refused

15. What is your role within your organization?

- 1. **[OPEN ENDED]**

16. Those are all the questions that we have for today! Do you have any other comments about your experience with Focus on Energy that you would like to share?

[RECORD RESPONSE: _____; 98 FOR DON'T KNOW, 99 FOR REFUSED]

17. Thank you for your time today, we appreciate your help with this survey effort.

As previously mentioned, we will be sending you a \$25 gift card as a thank you for your participation in this effort. Gift cards are distributed through a service called "Tango Card." You will receive an email from Tango Card or RewardGenius, that will give you information about how to redeem your gift card at various online retailers, or you also have the option to have a physical gift card mailed to you.

Can you please confirm the email address where you would like to have that gift card directed?

- 1. Desired Email Address:

Thank you again. Gift cards will be sent out within the next two weeks. We will send you a personal email directly once the gift cards are processed; feel free to contact us if you have any difficulties accessing or utilizing the gift card. Have a great day!

CADMUS

M.3. Cross-Cutting Programs

- Accessible Efficiency Pilot – Community-based Organization Interview
- Accessible Efficiency Pilot – Trade Ally Interview
- Accessible Efficiency Pilot – Participant Survey
- Instant Discount Program – Food Service Distributor Interview
- Instant Discount Program – HVAC Distributor Interview
- Instant Discount Program – HVAC Contractor Interview
- Instant Discount Program – Heat Pump Customer Survey

Accessible Efficiency Pilot Community-based Organization Interview Guide

Research Objectives	Corresponding Question Numbers
Assess how the installed measures improve independence and comfort for participants	D
Evaluate pilot design by measuring participant and CBO satisfaction and identify what is working well and what requires improvement	B, C, D
Gauge awareness of Focus on Energy and energy efficiency in general following participation	D
Verify how many energy-saving measures were installed and remain in use among participants	N/A
Determine if and how energy use changed with installation of accessible measures	N/A

Audience: Community-based Organizations providing referrals to the Accessible Efficiency Program

Purpose: These in-depth interviews will be conducted by Cadmus staff. Interviews will be scheduled in advance of the call via email. The interview will take 60 minutes via phone call.

Target: 2

CADMUS

A. Introduction and Interviewee Details

Thank you for taking the time to speak with me. For the Accessible Efficiency program evaluation, Cadmus is conducting in-depth interviews with partnering community-based organizations.

The purpose of these interviews is to make sure we have a thorough understanding of the program and to document how the program works in practice. We'll also get your perspective on things that are working well or any areas where you have experienced challenges so far. We will use the information you provide to inform our understanding of the program so we can provide well-rounded and balanced observations and recommendations. The interview will take about 60 minutes. As a thank you for your time, you will be receiving a \$100 gift card redeemable at a retailer of your choice.

- A1. Will you briefly describe your organization's mission, primary services, and client base?
 - 1. How many years has your organization operated in this community?
- A2. What is your role at **[ORGANIZATION]**? **[PROBE TO SEE IF INTERVIEWEE WORKS DIRECTLY WITH PROGRAM PARTICIPANTS]**
- A3. Will you walk me through the referral process, from when you first approach a client about the program to **[ORGANIZATION]** receiving the incentive after meeting the milestone(s)?

B. Referral Process

- B1. What motivated **[ORGANIZATION]** to participate in a referral program for free smart devices and energy-saving home upgrades to qualifying Focus on Energy customers?
- B2. **[IF NOT ANSWERED IN A3]** Please describe the main way you're educating clients about the Accessible Efficiency program and providing referrals.
 - 1. Did you make any changes to your recruitment strategy in the last year?
 - (1) **[IF YES]** What were those changes and why?
- B3. Overall, what do you think works particularly well with the Accessible Efficiency program referral process?
 - 1. What about the incentive milestones?
- B4. Do you cross-promote this program with other services you offer to your clients?
 - 1. **[IF YES]** Which ones?

CADMUS

- B5. Have you encountered any obstacles or bottlenecks in recruitment for the program?
- B6. Have you experienced any capacity or resource constraints that have limited your ability to make referrals (such as staff time, knowledge, training, follow-up)?
 - 1. **[IF YES]** How can Focus on Energy help address the capacity or resource constraints you are experiencing?
- B7. Have you spoken with clients about the program who are eligible but aren't interested in being referred to Focus on Energy?
 - 1. **[IF YES]** Do you know why they weren't interested in participating?
 - 2. Do you have any suggestions for how to improve messaging to these clients?
- B8. Other than what we've already talked about, can you think of any reason an eligible Focus on Energy customer may not want to participate in the Accessible Efficiency program?

C. CBO Satisfaction

- C1. On a scale of 1 to 5, with 1 being not at all satisfied and 5 being very satisfied, how satisfied are you with the following aspects of your experience with the Accessible Efficiency program?
 - 1. Training provided by Focus on Energy
 - 2. Marketing materials provided by Focus on Energy
 - 3. Clarity of referral criteria
 - 4. Ease of referral submission
 - 5. Understanding of incentive milestones
 - 6. Usefulness of communication channels
 - 7. Frequency of communication
 - 8. Feedback on referral outcomes
 - 9. Overall satisfaction
- C2. **[C1=1-3 RATING]** Why were you less than satisfied?

CADMUS

D. Service Delivery and Devices/Upgrades

- D1. What feedback have you heard from clients (about process, measures, etc.)?
- D2. Are there any aspects of the program that aren't working well or challenges you've faced that we haven't discussed yet?
 - 1. Please share anything you'd like the program to address in the future.
- D3. Are you familiar with the smart devices and home upgrades that Focus on Energy is offering through the program?
- D4. Which smart devices contribute the most to improving independence?
 - 1. What are the biggest benefits?
- D5. Are there any devices or energy efficiency upgrades that are not currently offered that you think would enhance accessibility/independence for your clients?
- D6. Have your clients had questions or concerns about receiving a free installation from a utility-sponsored program?
- D7. Since participating in the program, how aware are you **[or ORGANIZATION]** of Focus on Energy offerings?
 - 1. How confident do you feel in your knowledge of energy efficiency?
 - (1) In your ability to talk about energy efficiency with clients?
- D8. Are there any other client groups you're familiar with who tend to be especially difficult to reach with this kind of service?
 - 1. **[IF YES]** Why are these customers, in particular, hard to reach?
 - 2. What incentives or modifications might encourage these hard-to-reach customers to engage with Focus on Energy?

E. Closing

Thank you for participating in this interview. As part of this research effort, Cadmus will be conducting a participant survey.

CADMUS

- E1. Are there any other specific questions or issues you think we should investigate during our evaluation of the Accessible Efficiency program?
- E2. Is there anything else you'd like to discuss that we did not ask about?
- E3. Is it okay if I reach out to you with additional questions that may arise during the evaluation?

Again, thank you so much for your time and input; we really appreciate it. Feel free to contact me if you think of anything else or have any questions. Have a nice day.

Accessible Efficiency Pilot Trade Ally Interview Guide

Research Objectives	Corresponding Question Numbers
Assess how the installed measures improve independence and comfort for participants	B
Evaluate pilot design by measuring participant and CBO satisfaction and identify what is working well and what requires improvement	B, C, D
Gauge awareness of Focus on Energy and energy efficiency in general following participation	N/A
Verify how many energy-saving measures were installed and remain in use among participants	N/A
Determine if and how energy use changed with installation of accessible measures	N/A

Audience: Trade Ally providing installations for the Accessible Efficiency Pilot.

Purpose: Cadmus staff will conduct this in-depth interview. The interview will be scheduled in advance of the call via email. The interview will take 30-45 minutes via phone call.

Target: 1

Incentive Distribution: Interviewee will be offered a \$50 incentive for their participation. The incentive will be distributed via email through the service "Tango."

CADMUS

A. Introduction and Interviewee Details

Thank you for taking the time to speak with me. For the Accessible Efficiency program evaluation, Cadmus is conducting in-depth interviews with partnering organizations.

The purpose of these interviews is to make sure we have a thorough understanding of the program and to document how the program works in practice. We'll also get your perspective on things that are working well or any areas where you have experienced challenges so far. We will use the information you provide to inform our understanding of the program so we can provide well-rounded and balanced observations and recommendations. The interview will take about 30-45 minutes. The report that results from this research will be made public; Cadmus won't use personal or organization names.

As a thank you for your time, you will be receiving a \$50 gift card redeemable at a retailer of your choice.

- A1. How long have you been completing projects that receive rebates or incentives from Focus on Energy?
- A2. What type of services or specialties do you offer within the Trade Ally Network, if any?
- A3. Briefly describe your role(s) at **[ORGANIZATION]**.
- A4. What motivated **[ORGANIZATION]** to participate as a program partner in the Accessible Efficiency program?

B. Customer Experience

- B1. Walk me through a typical home visit, from getting the customers information to installing the measures and getting the rebate.
 1. How do you typically prepare for a customer visit?
- B2. When you meet with a customer, how do you approach the conversation about their needs and accessibility concerns?
- B3. How do you decide what smart devices and home upgrades are appropriate for a given customer's circumstances?
- B4. Describe the main ways you educate customers about their installed measures.
- B5. Have you received any direct feedback from customers about the program?
 1. About the measures?

CADMUS

- B6. From your perspective, how satisfied are customers with the program?
1. With the measures you install?
- B7. What are the most common issues you encountered during measure installation?
1. Any follow up issues (device malfunction, user confusion, compatibility, etc.)?
 2. How do you address issues?
- B8. What difference do you see the smart devices/upgrades making in the daily lives of customers?
1. Do you have any examples of customers whose independence improved because of the installation? (anonymized)
 - (1) What changed for them?
 2. Do you have examples of customers whose energy use changed because of the installation?
 - (1) How did it change?
- B9. From your perspective, which smart devices contribute the most to improving independence?
1. What are the biggest benefits?
- B10. From your perspective, which smart devices contribute the most to energy savings?
- B11. Are there any devices or energy efficiency upgrades that are not currently offered that you think would enhance accessibility/independence for these customers?
- B12. Can the consultation and installation process be improved to better serve customers with accessibility needs?
1. **[IF YES]** How can Focus on Energy support improvements?

CADMUS

C. Trade Ally Satisfaction

C1. On a scale of 1 to 5, with 1 being not at all satisfied and 5 being very satisfied, how satisfied *are you* with the following aspects of your experience with the Accessible Efficiency program?

Item	Not at all satisfied (1)	Not too satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	Don't know/not applicable (6)
a. Communication with Focus on Energy						
b. Support and resources from Focus on Energy						
c. Training provided by Focus on Energy						
d. Inclusive incentive amount						
e. Incentive payment timeliness						
f. Project documentation required						
g. Data submittal processes						
h. Increased business						
i. Customer satisfaction						
j. Types of devices and home upgrades eligible for incentive						
k. Program experience overall						

C2. **[C1=1-2 RATING]** Why were you less satisfied?

C3. Have you experienced any capacity or resource constraints that have limited your ability to conduct projects for the program?

1. **[IF YES]** How can Focus on Energy help address the capacity or resource constraints you are experiencing?

D. Program Delivery

D1. Are there any aspects of the program that aren't working well or challenges you've faced that we haven't discussed yet?

1. Please share anything you'd like the program to address in the future.

CADMUS

- D2. What aspects of the program are working very well?
- D3. How confident do you feel in your ability to talk about Focus on Energy programs with customers?
- D4. How likely are you to recommend Focus on Energy programs to other contractors or professionals in your industry?
 - 1. Very unlikely
 - 2. Somewhat unlikely
 - 3. Neither likely nor unlikely
 - 4. Somewhat likely
 - 5. Very likely
- D5. Are there any other customer groups you're familiar with who tend to be especially difficult to reach with this kind of service?
 - 1. **[IF YES]** Why are these customers, in particular, hard to reach?
 - 2. What incentives or modifications might encourage these hard-to-reach customers to engage with Focus on Energy?

E. Closing

Thank you for participating in this interview. As part of this research effort, Cadmus will be conducting a participant survey.

- E1. Is there anything else you'd like to share that we haven't yet asked about — any success stories, challenges, or insights you believe are especially important?
- E2. Are there any other specific questions or issues you think we should investigate during our evaluation of the Accessible Efficiency program?
- E3. Is it okay if I reach out to you with additional questions that may arise during the evaluation?

Again, thank you so much for your time and input; we really appreciate it. Feel free to contact me if you think of anything else or have any questions. Have a nice day.

Focus on Energy Accessible Efficiency Pilot

Participant Online Survey

Research Objectives	Corresponding Question Numbers
Assess how the installed measures improve independence and comfort for participants	C
Evaluate pilot design by measuring participant and CBO satisfaction and identify what is working well and what requires improvement	D
Gauge awareness of Focus on Energy and energy efficiency in general following participation	E
Verify how many energy-saving measures were installed and remain in use among participants	B
Determine if and how energy use changed with installation of accessible measures	C, E

Target Audience: Accessible Efficiency Pilot participants

Target Quota: 44 completes

Target Length: 10 minutes

Incentive: \$20 per completed survey per respondent

Variables to be Pulled into Survey

- Email
- FirstName
- LastName
- Measure
- Organization (Referring CBO)
- Cadmus Account Key

General Instructions:

- Survey instructions are in green **[LIKE THIS]**.
- Skip patterns or variables are in red **[LIKE THIS]**.

Email Invitation

To: [EMAIL]

From: [CBO]

Subject: Your chance to tell Focus on Energy about your experience with the Accessible Efficiency program

Dear [FIRSTNAME],

We invite you to tell us about your recent experience with the Accessible Efficiency program. Your input will be used to improve Focus on Energy programs and will be kept confidential. The survey will take 10 minutes to complete. **As our thanks for completing the survey, we will send you a \$20 gift card redeemable at popular retailers.**

Click the link below to take the survey:

[auto-generated link]

Or you may copy and paste the following URL into your internet browser: [auto-generated url]

If you have any questions about this research or any difficulties taking the survey, please contact Madison Charrier Olson from The Cadmus Group, the research firm conducting this survey on our behalf, at Madison.CharrierOlson@cadmusgroup.com.

If you have any questions about the validity of this email or the survey, please contact Mitch Horrie of the Public Service Commission of Wisconsin at mitch.horrie@wisconsin.gov or (608) 267-3206.

Thank you in advance for sharing your experiences and your time.

Reminder Invitation

To: [EMAIL]

From: [CBO]

Subject: Don't forget to tell Focus on Energy about your Accessible Efficiency program experience!

Dear [FIRSTNAME],

We recently invited you to tell us about your experience with the Accessible Efficiency program. We would still like to hear from you. Your input will be used to improve Focus on Energy programs and will be kept confidential. **Please take 10 minutes today to complete the survey. As our thanks for completing the survey, we will send you a \$20 gift card redeemable at popular retailers.**

Click the link below to take the survey:

[auto-generated link]

Or you may copy and paste the following URL into your internet browser: [\[auto-generated url\]](#)


If you have any questions about this research or any difficulties taking the survey, please contact Madison Charrier Olson from The Cadmus Group, the research firm conducting this survey on our behalf, at Madison.CharrierOlson@cadmusgroup.com.

If you have any questions about the validity of this email or the survey, please contact Mitch Horrie of the Public Service Commission of Wisconsin at mitch.horrie@wisconsin.gov or (608) 267-3206.

Thank you in advance for sharing your experiences and your time.

A. Introduction and Screener

Welcome! Thank you for taking this survey about Focus on Energy's Accessible Efficiency Program! This survey will take about 10 minutes to complete. You may skip any question you do not want to answer.

For questions that ask for written responses, you might be able to use the voice-to-text feature  if you are taking the survey on a smart phone or tablet.

You will receive a \$20 gift card from Tango.com via email, 2-3 weeks after submitting the survey.

A1. Do you remember participating in Focus on Energy's *Accessible Efficiency program?

*The *Accessible Efficiency program offers free smart devices and homes upgrades to eligible Wisconsin residents. Eligible participants are referred by trusted community-based organizations. Home improvements are designed to enhance comfort, independence, and energy savings. The program is managed by Focus on Energy, a statewide program that helps homeowners and businesses save energy and money by offering rebates, technical support, and energy-saving options.*

1. Yes
2. No **[TERMINATE]**
3. Don't know
4. Prefer not to answer **[TERMINATE]**

[TERMINATION LANGUAGE] We're sorry, you don't qualify for the survey. Thank you for taking the time to participate.

A2. **[A=3]** Is there someone in your household who would know that we can send this survey to?

1. Yes, their email is: **[OPEN TEXT] [TERMINATE]**
2. No **[TERMINATE]**

B. Motivation and Measure Verification

B1. Thinking back to when you first heard about the program from **[ORGANIZATION]**, why did you want to participate? Pick up to three. **[RANDOMIZE RESPONSES]**

1. To lower my monthly utility bills
2. To better control heating/cooling/lighting in my home
3. To use energy more wisely
4. Trust in the organization that referred me
5. To increase my independence in my home
6. To use a new technology
7. Because it was free
8. Other **[SPECIFY]**
98. Don't know/remember **[EXCLUSIVE]**

B2. Below are the devices and upgrades that were installed in your home. Are these still installed? **[DROP DOWN MENU FOR EACH MEASURE, INDIVIDUAL LINE FOR EACH MEASURE – MULTIPLE LEDS, ETC.]**

Measure	Definition	Installed and STILL USING	Installed and NO LONGER USING	No longer installed (I removed)	I don't remember receiving	Don't know
[MEASURE LIST]	[SIMPLE DEFINITION OF MEASURE]					
Smart Thermostat	Thermostat you can control with your phone or by voice (for heating/cooling).					
Smart Speaker	Speaker you can control by voice					
Smart Display	Voice speaker with a touch screen that shows info					

Room Air Cleaner	Device that filters and cleans the air in a room					
Wi-Fi Connected Candelabra Bulb	Efficient light bulb (small, decorative shape) you control via Wi-Fi					
Wi-Fi Connected Standard Bulb	Efficient light bulb (standard shape) you control via Wi-Fi					
LED Bulbs	Energy-efficient light bulbs					
Handheld Showerhead	Detachable showerhead you can hold in your hand					
Advanced Power Strip	Power strip that can turn off unused outlets automatically					
Faucet Aerator, Bath	Tiny device on bath faucet that mixes air and water to save water					
Faucet Aerator, Kitchen	Tiny device on kitchen faucet that mixes air and water to save water					
Pipe Insulation	Material wrapped around pipes to reduce heat loss or gain					

B3. **[ADVANCED POWER STRIP=INSTALLED/STILL USING]** What's plugged into your advanced power strip?

1. **[OPEN TEXT]**

B4. **[ADVANCED POWER STRIP=INSTALLED/STILL USING]** How are you using your advanced power strip? Select one.

Like a regular power strip	Automatically to turn things on/off to save energy

B5. **[Error! Reference source not found.=“NO LONGER USING” OR “I REMOVED”]** What is your primary reason for removing or not using the **[MEASURES SELECTED IN B2]** **[RANDOMIZE ITEMS 1-5]** **[MULTIPLE RESPONSE]**

99. Broken/didn't work

100. Difficult/unable to set up

101. Difficult to use

102. Didn't like how it worked

103. Didn't like how it looked

104. **[AIR PURIFIER]** Too loud/noise

105. Other **[SPECIFY]**

98. Don't know **[EXCLUSIVE]**

B6. **[Error! Reference source not found.=“NO LONGER USING” OR “I REMOVED”]** What did you do with the **[MEASURES SELECTED IN 8]**?

1. Stored for future use

2. Threw away

3. Gave to someone else

4. Other **[SPECIFY]**

98. Don't know **[EXCLUSIVE]**

C. Non-energy Benefits

[MEASURE= WIFI CONNECTED BULBS, SMART DISPLAY, SMART SPEAKER]

C1. How much effort does it take to adjust the **lighting** in your home?

	Very high effort	Somewhat high effort	Moderate effort	Somewhat low effort	Very low effort
Before installing smart device(s)					
After installing smart device(s)					

C2. How often do you feel frustrated with controlling devices to adjust **lighting** in your home?

	Very often	Often	Sometimes	Rarely	Never
Before installing smart device(s)					
After installing smart device(s)					

C3. How much help do you need from others to control or manage **lighting** in your home?

	A lot of help	Some help	A little help	No help
Before installing smart device(s)				
After installing smart device(s)				

C4. [MEASURE=WIFI CONNECTED BULBS] Thinking about the rooms where the Wi-Fi-connected bulbs were installed, do you use those lights more, less, or about the same as before the program?

1. I use them **more** now than before the program
2. I use them **less** now than before the program
3. I use them **about the same**

[MEASURE= SMART THERMOSTAT, SMART DISPLAY, SMART SPEAKER]

C5. How much effort does it take to adjust the **temperature** in your home?

	Very high effort	Somewhat high effort	Moderate effort	Somewhat low effort	Very low effort
Before installing smart device(s)					
After installing smart device(s)					

C6. How often do you feel frustrated with controlling devices to adjust **temperature** in your home?

	Very often	Often	Sometimes	Rarely	Never
Before installing smart device(s)					
After installing smart device(s)					

C7. How much help do you need from others to control or manage **temperature** in your home?

	A lot of help	Some help	A little help	No help
Before installing smart device(s)				
After installing smart device(s)				

C8. **[IF MEASURE=SMART THERMOSTAT]** Have you changed what temperature you keep your home with the new smart thermostat?

How you use your thermostat	Warmer	Cooler	About the Same
[PROJECT COMPLETED PRIOR TO JULY] This summer , did you keep your home warmer or cooler with the new thermostat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This autumn , have you kept your home warmer or cooler with the new thermostat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C9. **[MEASURE=SMART THERMOSTAT]** Please tell us a bit about how you use your new smart thermostat compared to your old thermostat.

How you use your thermostat	NEW Thermostat	OLD Thermostat
I program the thermostat and never adjust the temperature	<input type="checkbox"/>	<input type="checkbox"/>

I program the thermostat and sometimes adjust the temperature	<input type="checkbox"/>	<input type="checkbox"/>
I only manually adjust the temperature	<input type="checkbox"/>	<input type="checkbox"/>
I never adjust the temperature	<input type="checkbox"/>	<input type="checkbox"/>

C10. **[MEASURE=SMART DEVICES + AIR PURIFIER]** How comfortable do you feel in your primary room, in terms of lighting, temperature, and air quality?

	Very comfortable	Somewhat comfortable	Neither comfortable nor uncomfortable	Somewhat comfortable	Very comfortable
Before installing smart device(s)					
After installing smart device(s)					

C11. **[MEASURE=SHOWERHEAD]** Before installing the handheld showerhead, how difficult was it for you to use the shower because of physical difficulties?

	Very difficult	Somewhat difficult	Neither difficult nor easy	Somewhat easy	Very easy
Before installing handheld showerhead					
After installing handheld showerhead					

C12. Overall, how independent do you feel in your home?

	Not independent at all	A little independent	Somewhat independent	Very independent
Before installing smart device(s) or home upgrade(s)				
After installing smart device(s) or home upgrade(s)				

D. Participant Satisfaction

D1. For each item, choose a number between 1 and 5 that shows how satisfied you are with parts of the program. **[DROP DOWN MENU FOR EACH ITEM]**

Item	Not at all satisfied (1)	Not too satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	Don't know (6)
a. How much you understood your eligibility for the program						
b. Variety of smart devices and home upgrades available						
c. How well the installer communicated with you						
d. How helpful the installer was in explaining the smart device(s) or home upgrade(s)						
e. Time from your application to installation						
f. The follow up visit to check your smart device(s) or home upgrade(s)						
g. The smart device(s) or home upgrade(s) overall (ease of use, reliability, quality)						
h. How much your daily life has improved because of the smart device(s) or home upgrade(s)						
i. The ability to control your home conditions (such as lighting, temperature, etc.)						

D2. **[D1g.=1-2]** Which, if any, of your smart device(s) or home upgrade(s) were you dissatisfied with and why? **[DROPDOWN TO SELECT MEASURES AND PROVIDE OPEN TEXT RESPONSE, INCLUDE NONE]**

D3. Would you recommend this kind of program to others who have similar accessibility needs?

1. Yes
2. Maybe
3. No
98. Don't know **[EXCLUSIVE]**

E. Focus on Energy and Energy Efficiency Awareness

E1. Were you aware of Focus on Energy before participating in the Accessible Efficiency program?

1. Yes
2. No
98. Don't know **[EXCLUSIVE]**

E2. For each of the Focus on Energy programs listed below, please indicate if you are now aware of or have participated in any. **[DROP-DOWN MENU WITH THE THREE RESPONSE OPTIONS: PARTICIPATED IN THIS PROGRAM, AWARE BUT HAVE NOT PARTICIPATED, NOT AWARE OF THIS PROGRAM]**

Program	Description
Free Energy Saving Packs	Free packs of energy-saving items such as LEDs, low-flow showerheads and weatherization products, delivered through the mail
Online Marketplace	Online store available through the Focus on Energy website, offering instant discounts on a range of energy-saving products for your home
Rebates and Instant Discounts	Rebates and discounts for energy-efficient upgrades such as insulation, air sealing, heating and cooling systems (such as furnaces), water heating, and solar PV
Other [SPECIFY]	NULL

E3. Since participating in the program, how much more do you feel you know about saving energy / being energy efficient?

1. A lot more
2. A little more
3. About the same
4. Less
5. Not sure
98. Don't know **[EXCLUSIVE]**

E4. Since participating in the program, have you taken any additional actions to be energy efficient/ save energy? Select all that apply. **[RANDOMIZE ITEMS 1-6] [MULTIPLE RESPONSE]**

1. Improved insulation or sealed drafts
2. Installed draft stoppers or applied weatherstripping
3. Installed additional smart bulbs

4. Considered or purchased an energy efficient appliance
5. Installed other energy saving items **[SPECIFY]**
6. Other **[SPECIFY]**
7. I have not been able to take any additional actions **[EXCLUSIVE]**
98. Don't know **[EXCLUSIVE]**

E5. **[E4=1-6]** In general, did your participation in the Accessible Efficiency program motivate you to perform these actions?

1. Yes
2. No
98. Don't know **[EXCLUSIVE]**

E6. Have you noticed changes to your energy bills since receiving the smart device(s) or home upgrade(s) through Focus on Energy?

1. Significant decrease
2. Moderate decrease
3. No Change
4. Increase
98. Don't know **[EXCLUSIVE]**

F. Demographics

You are almost finished! These last few questions are about your household. This information will be kept strictly confidential and will be used for research purposes only. **You can skip any question.**

F1. In what kind of home were the smart device(s) or home upgrade(s) added?

1. Single-family home (a stand-alone house)
2. Mobile home/manufactured home
3. Attached house with 1 to 3 units (townhouse, row house, or duplex)
4. Apartment or condo building with 4 or more units
5. Retirement community or housing co-operative
6. Public housing
7. Student housing
8. Additional dwelling unit (ADU)/mother-in-law suite (separate living space on the same lot as a single-family home)
9. Something else **[SPECIFY]**
10. Don't know **[EXCLUSIVE]**

F2. Which of these ranges includes your age?

1. 18-29
2. 30-39
3. 40-49
4. 50-59
5. 60-69
6. 70-79
7. 80 or older
99. Prefer not to answer **[EXCLUSIVE]**

F3. What language(s) are spoken regularly in your household? By "household," we mean all people living in your home, including children and adults. Select all that apply.

1. English
2. Spanish
3. Hmong
4. Chinese (Cantonese, Mandarin, other)
5. Russian
6. Something else **[SPECIFY]**
99. Prefer not to answer **[EXCLUSIVE]**

F4. **[13 = 2-6]** Was there enough language translation support from Focus on Energy, such as language assistance or in-person help, to help you participate in the program?

1. Yes
2. No
98. Don't know **[EXCLUSIVE]**

F5. **[F4=2]** Did you receive language translation support from somewhere else?

1. Yes
2. No
98. Don't know **[EXCLUSIVE]**

F6. **[F5=1]** From who?

1. **[OPEN TEXT]**

G. Closing

G1. On occasion, Focus on Energy may want to contact a customer to learn more about their participation experience. **Please click on the box below if you prefer NOT to be contacted by a program manager.**

1. Do NOT contact me

G2. Do you have any additional comments or experiences you would like to share with Focus on Energy?

1. **[OPEN TEXT]**

G3. To make sure we send the \$20 gift card to the correct email address, please provide your name and preferred email address below:

1. First Name:

2. Email:

[END OF SURVEY MESSAGE] This completes the survey. Your responses are very important to Focus on Energy. We appreciate your participation and thank you for your time. Please allow two-three weeks for delivery of the \$20 gift card from "Tango.com."

Have a good day.

Focus on Energy Instant Discount Program Participating Food Service Distributor Interview Guide

Interviewee Name:	
Interviewee Organization:	
Interviewee Title:	
Date of Interview:	
Interviewer Name:	

Research Objectives	Corresponding Question Sections
Company background, market reach, and customer base	Sections 0 and B
Distributors’ expectations, satisfaction, and desired changes	Section 0
Baseline/NTG for stocking/upselling	Section D, E, F
Closing	Section G

Audience: Food service distributors participating in the Instant Discount Program

Purpose: This research seeks to gather information (baseline, program expectations) from food service distributors who offer discounts through the Focus on Energy Instant Discount Program. These in-depth interviews will be conducted by Cadmus staff. Interviews will be scheduled in advance of the call via email. The interview will take between 30 and 45 minutes. This information will be included in the email invitation.

Target: 10 completes

Draft Initial Email Communication from Implementor

To: **[EMAIL]**
 From: **[YOUREMAIL]**
 Subject: Help Strengthen Focus on Energy’s Instant Discount Program

Hello **[NAME]**,

Thank you for participating in Focus on Energy’s Instant Discount Program. As we continue to establish this program, feedback from program partners in the food service industry is essential to making this a strong program that works well for businesses like yours. We would greatly appreciate it if you would help by participating in a phone interview to share your feedback.

Focus on Energy is working with Cadmus, an independent research firm, to conduct phone interviews with program food service distributors. Any feedback or information you share is kept confidential unless you ask for Focus on Energy to follow up with you.

The interview should take approximately **30 to 45 minutes**, and we are offering a **\$150 electronic gift card** in appreciation of your time and insights.

If you would like to schedule a time to participate, please choose a time that's convenient for you following this link:

[LINK TO CALENDAR WITH AVAILABILITY]

Or email Erica Fry (erica.fry@cadmusgroup.com) and a member of the Cadmus team will reach out to coordinate a time to conduct the interview. If they do not hear from you, a member of the Cadmus team may reach out by phone or email.

If Cadmus does contact you, we would very much appreciate it if you would take the time to answer their questions. Your feedback will help to strengthen our program and ensure we are supporting our program partners. If there is someone else at your organization we should contact instead, please provide their contact information.

Sincerely,

[Name]

[Email]

[Phone Number]

[Firm]

Email Invitation from Cadmus

To: **[EMAIL]**

From: **[YOUREMAIL]**

Subject: Focus on Energy's Instant Discount Program

Hello **[NAME]**,

My name is Erica Fry and I work with Cadmus, a national research firm working with **Focus on Energy** to gather distributor feedback on the **Instant Discount Program**. **[Xx days ago/last week]** you should have received an email from **[IMPLEMENTER]** notifying you of a study we are conducting for the Focus on Energy Instant Discount Program. I'm reaching out to request your participation in a brief interview to share your feedback about Focus on Energy's Instant Discount Program.

The interview takes about **30–45 minutes**, and we're offering a **\$150 electronic gift card** as a thank-you for your time.

If you're willing to participate, please click the link below to schedule some time:

[LINK TO CALENDAR WITH AVAILABILITY]

If none of these times work, feel free to reply to this email to schedule a time that works best for you. If someone else at your organization would be the right contact, we'd appreciate it if you could point us in their direction

Finally, if you have any questions about the validity of this email or the interview, please contact Mitch Horrie at the Public Service Commission of Wisconsin (608-267-3206 or mitch.horrie@wisconsin.gov).

I appreciate your time and help with this. We hope to connect with you soon!

Best regards,
Erica Fry
The Cadmus Group

Calendar Invite

To: **[EMAIL]**

From: **[YOUREMAIL]**

Subject: Interview about Focus on Energy Instant Discount Program

Hello **[NAME]**,

Thank you for agreeing to speak with me about Focus on Energy's Instant Discount Program. Our call is scheduled for **[INSERT TIME AND DATE OF CALL]** and will take about 30 to 45 minutes.

As previously mentioned, we will ask about your experience with the Instant Discount Program so far and your expectations about the program. Your responses in this interview will be kept confidential unless you indicate that you would like Focus on Energy to follow up with you. As a thank you, we will send you a \$150 electronic gift card upon completion of the interview.

You can join the call either from your computer (by clicking on the link below) or by calling the number provided.

If you need to reschedule, please let me know.

Thank you. I look forward to speaking with you.

**[NAME
SIGNATURE]**

A. Introduction and Interviewee Details

Hello **[FIRSTNAME]**. This is **[INTERVIEWER NAME]** from Cadmus. Thank you for making the time to speak with me today. For the Instant Discount Program evaluation, Cadmus is conducting interviews with distributors selling qualified food service equipment through the program.

The purpose of these interviews is to collect feedback about your early experiences with the program, hear your expectations or concerns, and learn about your stocking practices. We will use the information you provide to inform our understanding of the program so we can provide well-rounded and balanced observations and recommendations. Any references to your responses will be completely anonymized to maintain you and your company's confidentiality. The interview will take about 30 to 45 minutes. As I mentioned in the initial invitation, we will send you a \$150 e-gift card upon completion of the interview as a thank you for your time and feedback.

A1. May I have your permission to record this call?

As you know, Focus on Energy recently launched the Instant Discount Program for the food service industry in April 2024. Your feedback is very important to ensuring that the launch is working well for customers, contractors, and program partners like yourself.

A2. To start, please tell me about your role at **[COMPANYNAME]**?

1. Has your role changed in the past year?

A3. What is your role working with the Instant Discount Program?

B. Company Background and Motivations for Participating

Next, I have general questions about **[COMPANYNAME]**.

B1. What types of food service equipment does **[COMPANYNAME]** sell?

1. **[RECORD VERBATIM]**

B2. Does your company sell food service equipment outside of Wisconsin?

B3. **[IF B2=YES]** Approximately what proportion of your food service equipment is sold in Wisconsin?

1. **[RECORD PERCENTAGE]**

B4. I'd like to talk about your typical customer mix; in other words, the proportion of customers that are contractors vs. business owners or managers. What proportion of your Food service equipment sales (in dollars) are to: **[RECORD PERCENTAGE FOR EACH]**

1. Contractors

2. Retailers

3. Business owners or managers
4. Public institutions, such as school districts or local governments
5. Residential customers
6. Other [Please specify]

B5. **[IF B4=3]** What would you say are the most common business types you serve?

B6. Are you able to estimate the percentage of your customers that are regular or repeat customers? **[PROMPT FOR PERCENTAGE AND RECORD RESPONSE]**

B7. Before participating in Focus on Energy’s Midstream and Instant Discount Programs, how familiar were you with the benefits of energy-efficient kitchen equipment, specifically, those that are ENERGY STAR certified? Would you say you were:

1. Very familiar
2. Somewhat familiar
3. Neutral (neither familiar, nor unfamiliar)
4. Not too familiar
5. Not at all familiar

B8. In general, on a scale of 1 to 5 where 1 is not at all comfortable and 5 is very comfortable, how comfortable do you think your staff is with selling high-efficiency equipment that is eligible for the Instant Discount Program? **[RECORD ANSWERS IN THE TABLE BELOW]**

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B9. **[IF B8 RESPONSE IS <3]** What areas are they uncomfortable with?

1. **[RECORD VERBATIM]**

B10. On the same scale from 1 to 5, where 1 is not at all comfortable and 5 is very comfortable, how comfortable do you think your customers are with high-efficiency equipment that is eligible for the Instant Discount Program? **[RECORD ANSWERS IN THE TABLE BELOW]**

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B11. **[IF B10 RESPONSE IS <4]** What are they uncomfortable with?

1. **[RECORD VERBATIM]**

B12. What types of equipment are you selling through the new Instant Discount Program? **[INTERVIEWERS, MARK WITH A ‘Y’ ALL THAT ARE MENTIONED]**

Equipment	Natural Gas	Electric
Combination Oven		
Convection Oven, Full size		
Demand Control Kitchen Ventilation		
Dishwasher (could be undercounter; door-type; single and multi-tank; pot, pan, utensil).		
Fryer		
Griddle		
Rack oven (single, double)		
Steamer		
Equipment	Electric	
Freezer (solid or glass door, electric only)		
Hot Food Holding Cabinet		
Ice machine		
Refrigerator		

C. Program Expectations, Satisfaction, and Desired Changes

C1. When you became a participating distributor with the Instant Discount Program, what were the main benefits you expected from participating? **[ASK AS OPEN-ENDED AND MARK OFF THE CATEGORIES BELOW IF MENTIONED]**

1. Ability to provide discounts
2. Stay competitive in the market
3. Customer satisfaction/loyalty
4. Increase sales of high-efficiency equipment **[PROBE FOR SPECIFIC TYPES]**
5. Increased awareness/knowledge of efficient equipment
6. Training opportunities **[WHAT TYPES OF TRAINING?]**
7. Other **[PLEASE SPECIFY]**

C2. Now that you are participating, are you experiencing the benefits that you expected? **[INTERVIEWER, REFER TO THE EXPECTATIONS IN C1]** Please explain.

C3. So far, on a scale of 1 to 5 where 1 is not at all satisfied and 5 is very satisfied, how satisfied are you with the level of communication from the Instant Discount Program staff?

1. Not at all satisfied
2. Dissatisfied
3. Neither satisfied nor dissatisfied
4. Satisfied
5. Very satisfied

C4. **[IF C3<3]** How could communication be improved?

1. **[RECORD VERBATIM]**

C5. During training for the program, you would have received some training materials from program staff. On a scale of 1 to 5 where 1 is not at all easy and 5 is very easy, how easy was it to understand the program information that you've received from Focus on Energy?

[RECORD IN TABLE BELOW]

Material	1. Not at all easy	2. Somewhat difficult	3. Neither easy nor difficult	4. Somewhat easy	5. Very easy	Refused to answer/Don't know
C5.1. Distributor Training						
C5.2. Distributor Process Guide						

C6. **[IF ANY C5 RESPONSES ARE <4]** How could the materials be changed to improve the reader's understanding?

C7. On a scale of 1 to 5 where 1 is not at all easy and 5 is very easy, how easy was it to:

1. Confirm the eligibility of a product?
2. Confirm the eligibility of a customer?
3. Submit claims through the IRIS portal? **[RECORD IN TABLE BELOW]**

Material	1. Not at all easy	2. Somewhat difficult	3. Neither easy nor difficult	4. Somewhat easy	5. Very easy	Preferred not to answer/Don't know
C7.1. Product Eligibility						
C7.2. Customer Eligibility						
C7.3. Claim Submissions through IRIS						

C8. **[IF ANY C7 RESPONSES ARE <4]** How could the process/portal be improved?

C9. On a scale of 1 to 5 where 1 is very dissatisfied and 5 is very satisfied, how satisfied are you with: **[RECORD IN TABLE BELOW]**

Program Aspect	1. Very dissatisfied	2. Somewhat dissatisfied	3. Neither satisfied nor dissatisfied	4. Somewhat satisfied	5. Very satisfied	Preferred not to answer/Don't know
C9.1. Timeliness of reimbursement for incentive payments						
C9.2. Distributor spiff						
C9.3. Participation requirements (paperwork)						
C9.4 Setting up/managing point-of-sale system to collect the required data						
C9.5. Time required to participate in the program						
C9.6. Incentive/discount levels						
C9.7. Support from Focus on Energy						
C9.8. The IRIS portal						
C9.9. Overall IDP Program.						

C10. Can you explain more about your concerns with **[ASK ABOUT EACH ISSUE IN C9 THAT IS <4]**?

C11. So far, on a scale of 1 to 5 where 1 is not at all easy and 5 is very easy, how easy or difficult is it to submit claims through the portal?

C12. When you enrolled for the program, you would have received two marketing materials, a Food Service Customer Flyer, and a Food Service Equipment Flyer. On a scale of 1 to 5 where 1 is not at all easy and 5 is very easy, how helpful have you found these materials in spreading awareness of the program?

C13. **[IF NOT ALREADY MENTIONED]** Are there efficient commercial kitchen equipment that is not eligible for incentives that you think should be included in the program?

1. Yes
2. No

- C14. **[IF C13= YES]** What types of equipment? Can you give an example?
- C15. **[IF C13= YES]** Approximately what is the percentage of efficient commercial kitchen equipment not covered by the program?

D. Stocking Practices

Now I'd like to ask you a couple questions about your company's typical stocking practices of high efficiency equipment since you started participating in the Focus on Energy Instant Discount program **[ASK ABOUT EACH EQUIPEMNT TYPE IN THE TABLE BELOW]**.

- D1. For all **[EQUIPMENT TYPE]** approximately how **[EQUIPMENT TYPE]** does your company normally keep available in stock? **[RECORD NUMBER VERBATIM IN TABLE BELOW; RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**
- D2. Of those **[EQUIPMENT TYPE]**, how many are high-efficiency units that qualify for the Focus on Energy Instant Discount program? **[RECORD NUMBER OF UNITS OR A PERCENTAGE OF TOTAL STOCK VERBATIM IN TABLE BELOW; RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**
- D3. If the program training, marketing and per-unit incentive were not available, how many program-qualifying high-efficiency would you stock? **[RECORD NUMBER OF UNITS OR A PERCENTAGE OF TOTAL STOCK VERBATIM IN TABLE BELOW; RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

Equipment Type	D1. Total equipment stock (all efficiency levels)	D2. Proportion stock that is program-qualifying (units or percentage)	D3. Proportion of stock that would be program-qualifying without program. (units or percentage)
1. Convection Oven			
2. Demand Control Kitchen Ventilation			
3. Dishwasher			
4. Fryer			
5. Griddle			
6. Rack oven (single, double)			
7. Steamer			
8. Freezer (solid or glass door, electric only)			
9. Hot Food Holding Cabinet			

10. Ice machine			
11. Refrigerator			

D4. How important was the Focus on Energy Instant Discount program on your stocking decisions related to program-eligible equipment? Use a 1 to 5 scale, where 1 means not at all important, and 5 means very important. **[RECORD FOR EACH EQUIPMENT TYPE]**

Equipment Type	1. Not at all important	2. Not too important	3. Neutral	4. Somewhat important	5. Very important	Don't know
1. Convection Oven						
2. Demand Control Kitchen Ventilation						
3. Dishwasher						
4. Fryer						
5. Griddle						
6. Rack oven (single, double)						
7. Steamer						
8. Freezer (solid or glass door, electric only)						
9. Hot Food Holding Cabinet						
10. Ice machine						
11. Refrigerator						

D5. What else do you think Focus can do to help your company stock more high-efficiency equipment?

[RECORD VERBATIM]

E. Promotional Practices

Now I'd like to ask you a few questions about your company's typical promotional practices of high efficiency equipment since you started participating in the Focus on Energy Instant Discount program **[ASK ABOUT EACH EQUIPMENT TYPE IN THE TABLE BELOW]**.

E1. In situations where you are recommending **[EQUIPMENT TYPE]**, about what percent of the time are you currently recommending high-efficiency equipment that is program-qualifying? **[RECORD PERCENTAGE VERBATIM IN TABLE BELOW; REPEAT FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

E2. For **[EQUIPMENT TYPE]**, what percent of the time would you have recommended the program-qualifying equipment had the Focus on Energy Instant Discount program not been available in 2024 or 2025? **[RECORD PERCENTAGE IN TABLE BELOW; REPEAT FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

Equipment Type	E1. Percent of time currently recommending program-qualifying equipment	E2. Percent of time would have recommended program-qualifying equipment had the program not been available.
1. Convection Oven		
2. Demand Control Kitchen Ventilation		
3. Dishwasher		
4. Fryer		
5. Griddle		
6. Rack oven (single, double)		
7. Steamer		
8. Freezer (solid or glass door, electric only)		
9. Hot Food Holding Cabinet		
10. Ice machine		
11. Refrigerator		

E3. How important were the following factors of the program on your ability to upsell program-qualified equipment to contractors? For each equipment type, please rate how important the program factors are using a 1 to 5 scale, where 1 means not at all important, and 5 means very important. **[RECORD FOR EACH EQUIPMENT TYPE]**

1. Program incentives from the Focus Instant Discount program
2. The spiffs provided to your company
3. Focus Instant Discount program marketing or training

Equipment Type	1. Program incentives from the Focus Instant Discount program	2. The spiffs provided to your company	3. Focus Instant Discount program marketing or training
1. Convection Oven			
2. Demand Control Kitchen Ventilation			

3. Dishwasher			
4. Fryer			
5. Griddle			
6. Rack oven (single, double)			
7. Steamer			
8. Freezer (solid or glass door, electric only)			
9. Hot Food Holding Cabinet			
10. Ice machine			
11. Refrigerator			

E4. Do you typically present equipment recommendations to contractors or buyers?

1. **[IF YES]** How?
2. **[IF NO]** Why not?

E5. **[IF E4=1]** What percent of time does your company make any recommendations to contractors or buyers?

1. **[RECORD VERBATIM]**

E6. What else do you think Focus on Energy can do to help promote or help sell more energy-efficient equipment?

1. **[RECORD VERBATIM]**

F. Pricing Practices

F1. On average, what percentage of the instant discount is passed on to the buyer for the **[EQUIPMENT TYPE]**, either directly or indirectly? **[RECORD PERCENTAGE VERBATIM IN TABLE BELOW, FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

Equipment Type	F1. Percentage of the instant rebate that is passed on to the buyer
1. Convection Oven	
2. Demand Control Kitchen Ventilation	
3. Dishwasher	
4. Fryer	

5. Griddle	
6. Rack oven (single, double)	
7. Steamer	
8. Freezer (solid or glass door, electric only)	
9. Hot Food Holding Cabinet	
10. Ice machine	
11. Refrigerator	

G. Closing

- G1. Is there anything we haven't discussed that you'd like to share with me about Focus on Energy or the Instant Discount Program?
- G2. Would you like Focus on Energy to follow up with you regarding anything that we have discussed?
1. Yes
 2. No
- G3. Would you please confirm your email address, so we can send you your e-gift card?
1. [Email address]

Thank you for your input. We appreciate your time. Have a nice day.

Focus on Energy Instant Discount Program Participating HVAC Distributor Interview Guide 2025

Interviewee Name:	
Interviewee Organization:	
Interviewee Title:	
Date of Interview:	
Interviewer Name:	

Research Objectives		Corresponding Question Sections
Company background		Sections 0 and B
Distributors’ experiences, satisfaction, and desired changes		Section C
NTG for stocking/upselling/pricing		Section D, E, F
Sales and Market Share		Section G
Closing		Section G

Audience: HVAC distributors participating in the Instant Discount Program

Purpose: This research seeks to gather information (program satisfaction) from HVAC distributors who offer discounts through the Focus on Energy Instant Discount Program.

These in-depth interviews will be conducted by Cadmus staff. Interviews will be scheduled in advance of the call via email. The interview will take between 30 and 45 minutes. This information will be included in the email invitation.

Target: 10 completes

Draft Initial Email Communication from Implementor

To: **[EMAIL]**
 From: **[YOUREMAIL]**
 Subject: Help Strengthen Focus on Energy’s Instant Discount Program

Hello **[NAME]**,

Thank you for participating in Focus on Energy’s Instant Discount Program.

It has been a year since Focus on Energy transitioned residential HVAC equipment to the **Instant Discount Program**. As we continue to refine and grow the program, your ongoing, candid feedback is incredibly valuable to help improve the program and its partnership with partnering market actors, such as yourself.

Focus on Energy is partnering with Cadmus, an independent research firm, to conduct **30–45 minute** phone interviews and gather input from participating distributors. Your insights help ensure the program continues to meet your needs and supports your business effectively. As a thank-you for your time, Cadmus is offering a **\$150 electronic gift card** for participating in the interview.

If you're willing to participate, please click the link below to schedule some time with Cadmus:

[LINK TO CALENDAR WITH AVAILABILITY]

If Cadmus does not hear from you directly, a Cadmus team member may follow up by phone or email. If none of the times in the link work for you, please contact Erica Fry at Cadmus (Erica.Fry@cadmusgroup.com) so Cadmus staff can find a time that is convenient for you.

All feedback is confidential and only shared in an anonymized summary form. If someone else at your organization would be better suited for this conversation, please feel free to forward this message or send us their contact information.

Thank you for your continued partnership and support of the Instant Discount Program.

Sincerely,

[Name]

[Email]

[Phone Number]

[Firm]

Email Invitation from Cadmus

To: **[EMAIL]**

From: **[YOUREMAIL]**

Subject: Focus on Energy's Instant Discount Program

Hello **[NAME]**,

My name is Erica Fry and I work with Cadmus, a national research firm working with Focus on Energy to gather distributor feedback on the Instant Discount Program. **[Xx days ago/last week]** you should have received an email from [implementer] notifying you of a study we are conducting for the Focus on Energy Instant Discount Program. I'm reaching out to request your participation in a brief interview to share your feedback about Focus on Energy's **Instant Discount Program. [Last year, your feedback about the program was incredibly helpful. We're hoping to learn if feedback has changed now that the program has been operating for over a year].**

The interview takes about **30–45 minutes**, and we're offering a **\$150 electronic gift card** as a thank-you for your time.

If you're willing to participate, please click the link below to schedule some time:

[LINK TO CALENDAR WITH AVAILABILITY]

If none of these times work, feel free to reply to this email to schedule a time that works best for you. If someone else at your organization would be the right contact, we'd appreciate it if you could point us in their direction.

Finally, if you have any questions about the validity of this email or the interview, please contact Mitch Horrie at the Public Service Commission of Wisconsin (608-267-3206 or mitch.horrie@wisconsin.gov).

Thanks again for your time and support. We hope to connect with you soon!

Best regards,

Erica Fry
The Cadmus Group

Calendar Invite

To: **[EMAIL]**

From: **[YOUREMAIL]**

Subject: Interview about Focus on Energy Instant Discount Program

Hello **[NAME]**,

Thank you for agreeing to speak with me about Focus on Energy's Instant Discount Program. Our call is scheduled for **[INSERT TIME AND DATE OF CALL]** and will take about 30 to 45 minutes.

As previously mentioned, we will ask about your experience with the Instant Discount Program so far. Your responses in this interview will be kept confidential unless you indicate that you would like Focus on Energy to follow up with you. As a thank you, we will send you a \$150 electronic gift card upon completion of the interview.

You can join the call either from your computer (by clicking on the link below) or by calling the number provided.

If you need to reschedule, please let me know.

Thank you. I look forward to speaking with you.

**[NAME
SIGNATURE]**

A. Introduction and Interviewee Details

Hello **[FIRSTNAME]**. This is **[INTERVIEWER NAME]** from Cadmus. Thank you for making the time to speak with me today. For the Instant Discount Program evaluation, Cadmus is conducting interviews with distributors selling qualified HVAC equipment through the program.

The purpose of these interviews is to collect feedback about your experiences with the program, hear your concerns, and learn about your stocking practices. We will use the information you provide to inform our understanding of the program so we can provide well-rounded and balanced observations and recommendations. Any references to your responses will be completely anonymized to maintain you and your company’s confidentiality. The interview will take about 30 to 45 minutes. As I mentioned in the initial invitation, we will send you a \$150 e-gift card upon completion of the interview as a thank you for your time and feedback.

A1. May I have your permission to record this call?

As you may recall, Focus on Energy launched the Instant Discount Program last year and transitioned HVAC incentives from a downstream model, where rebates are paid directly to end-users, to a midstream design, where discounts are passed through distributors to contractors and end users. Now that the program has been in place for a year, your feedback is especially important in helping us understand how well this structure is working for customers, contractors, and program partners like you.

A2. To start, please tell me about your role at **[COMPANYNAME]**? **[INTERVIEWER, IF WE INTERVIEWED THIS PERSON LAST YEAR, SEE THEIR ROLE IN THE DOCUMENT ‘2024 IDP INTERVIEWEES’ AND ASK IF THEIR SPECIFIC ROLE HAS CHANGED].**

1. Has your role changed in the past year?

A3. **[IF INTERVIEWED LAST YEAR]** Has your role working with the Instant Discount Program changed in the last year?

A4. **[IF NOT INTERVIEWED LAST YEAR]** What is your role working with the Instant Discount Program?

B. Company Background and Motivations for Participating

Next, I have general questions about **[COMPANYNAME]**.

B1. **[IF NOT INTERVIEWED LAST YEAR]** What type of HVAC equipment does **[COMPANYNAME]** sell? **[RECORD VERBATIM]**

1. **[IF INTERVIEWED LAST YEAR]** Has the type of HVAC equipment that **[COMPANYNAME]** sells changed from last year?

B2. **[IF NOT INTERVIEWED LAST YEAR]** Does your company sell HVAC equipment outside of Wisconsin?

1. **[IF B2=YES]** Approximately what proportion of your HVAC equipment is sold in Wisconsin? **[RECORD PERCENTAGE]**

- B3. **[IF NOT INTERVIEWED LAST YEAR]** I'd like to talk about your typical customer mix; in other words, the proportion of customers that are contractors vs. business owners or managers. What proportion of your HVAC equipment sales (in dollars) are to: **[RECORD PERCENTAGE FOR EACH]**
 1. Contractors.
 2. Retailers.
 3. Residential customers.
 4. Business owners or managers.

- B4. **[IF INTERVIEWED LAST YEAR]** Has your customer mix changed from last year **[REPEAT LAST YEAR'S RESPONSE]**?

- B5. What would you say are the most common business types you serve?
[RECORD VERBATIM]

- B6. In general, on a scale of 1 to 5 where 1 is not at all comfortable and 5 is very comfortable, how comfortable do you think your staff is with selling high-efficiency gas equipment, such as furnaces and boilers, that is eligible for the Instant Discount Program? **[RECORD ANSWERS IN THE TABLE BELOW]**
 1. Not at all comfortable
 2. Somewhat uncomfortable
 3. Neither comfortable nor uncomfortable
 4. Somewhat comfortable
 5. Very comfortable

- B7. **[IF B6 RESPONSE IS <3]** What areas are they uncomfortable with?
[RECORD VERBATIM]

- B8. On the same scale of 1 to 5, where 1 is not at all comfortable and 5 is very comfortable, how comfortable do you think your staff is with selling heat pump equipment that is eligible for the Instant Discount Program? **[RECORD ANSWERS IN THE TABLE BELOW]**
 1. Not at all comfortable
 2. Somewhat uncomfortable
 3. Neither comfortable nor uncomfortable
 4. Somewhat comfortable
 5. Very comfortable

- B9. **[IF B8 RESPONSE IS <3]** What areas are they uncomfortable with?
[RECORD VERBATIM]

B10. On the same scale of 1 to 5, where 1 is not at all comfortable and 5 is very comfortable, how comfortable do you think your contractors are with high-efficiency gas equipment, such as furnaces or boilers, that is eligible for the Instant Discount Program? **[RECORD ANSWERS IN THE TABLE BELOW]**

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B11. **[IFB8 B10 RESPONSE IS <3]** What are they uncomfortable with?
[RECORD VERBATIM]

B12. On the same scale of 1 to 5, where 1 is not at all comfortable and 5 is very comfortable, how comfortable do you think contractors are with heat pump equipment? **[RECORD ANSWERS IN THE TABLE BELOW]**

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B13. **[IFB8 B12 RESPONSE IS <3]** What are they uncomfortable with?
[RECORD VERBATIM]

B14. Using the same 1-to-5 scale, how comfortable do you think your customers (contractors) are with switching a home or business from gas to electric HVAC equipment, such as switching from a gas furnace to heat pump? **[RECORD ANSWERS IN THE TABLE BELOW]**

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B15. What types of equipment are you selling through the Instant Discount Program?

1. Natural Gas Furnaces
2. Natural Gas Boilers
3. Air-Source Heat Pumps
4. Ductless Heat Pumps
5. Other **[RECORD VERBATIM]**

- B16. Are your staff/sales teams educated about which equipment is eligible and rebate details?
1. Yes
 2. No

C. Program Experiences, Satisfaction, and Desired Changes

- C1. **[IF NOT INTERVIEWED LAST YEAR]** What were your expectations before enrolling in the Instant Discount program? **[OPEN ENDED]**
1. Did the program meet your expectations? Why/why not? **[RECORD VERBATIM]**
- C2. **[IF INTERVIEWED LAST YEAR]** What were your expectations for the Instant Discount program this year? **[OPEN ENDED]**
1. Did the program meet your expectations? Why/why not? **[RECORD VERBATIM]**
- C3. What are the main benefits you have experienced from participating in the Instant Discount Program? **[ASK AS OPEN-ENDED AND MARK OFF THE CATEGORIES BELOW IF MENTIONED]**
1. Ability to provide discounts
 2. Stay competitive in the market
 3. Customer satisfaction/loyalty
 4. Increase sales of high-efficiency equipment **[Probe for specific types]**
 5. Increased awareness/knowledge of efficient equipment
 6. Training opportunities **[What types of training?]**
 7. I have experienced no benefits so far
 8. Other **[PLEASE SPECIFY]**
- C4. **[IF NOT INTERVIEWED LAST YEAR]** Did you have any concerns about participating in the program? **[ASK AS OPEN-ENDED]**
1. **[IF C4=YES]** Was there a reason for these concerns? **[RECORD VERBATIM]**
- C5. **[IF INTERVIEWED LAST YEAR]** Do you have any ongoing concerns about participating in the program?
1. **[IF C5=YES]** What are those concerns?
- C6. On a scale of 1 to 5 ,where 1 is not at all satisfied and 5 is very satisfied, how satisfied are you with the level of communication from the Instant Discount Program staff?
1. Not at all satisfied
 2. Dissatisfied
 3. Neither satisfied nor dissatisfied
 4. Satisfied
 5. Very satisfied

C7. **[IF C6<4]** How could gaps in communication be improved?

[RECORD VERBATIM]

C8. On a scale of 1 to 5 where 1 is not at all easy and 5 is very easy, how easy was it to:

1. Confirm the eligibility of a product?
2. Confirm the eligibility of a customer?
3. Submit claims through the IRIS portal? **[RECORD IN TABLE BELOW]**

Material	1. Not at all easy	2. Somewhat difficult	3. Neither easy nor difficult	4. Somewhat easy	5. Very easy	Preferred not to answer/Don't know
C8.1. Product Eligibility						
C8.2. Customer Eligibility						
C8.3. Claim Submissions through IRIS						

C9. **[IF ANY C8 RESPONSES ARE <4]** How could the process/portal be improved?

C10. On a scale of 1 to 5 where 1 is very dissatisfied and 5 is very satisfied, how satisfied are you with: **[RECORD IN TABLE BELOW]**

Program Aspect	1. Very dissatisfied	2. Somewhat dissatisfied	3. Neither satisfied nor dissatisfied	4. Somewhat satisfied	5. Very satisfied	Preferred not to answer/Don't know
C10.1. Timeliness of reimbursement for incentive payments						
C10.2. Distributor spiff						
C10.3. Participation requirements (paperwork)						
C10.4. Time required to participate in the program						
C10.5. Discount levels						
C01.6. Support from Focus on Energy						
C10.7. Overall IDP Program.						

- C11. **[IF ANY C10 RESPONSES ARE <4]** How could the **[EACH C10 RESPONSE THAT IS <4]** be improved?
- C12. Thinking about contractor awareness, on a scale of 1 to 5, where 1 is *not* aware and 5 is *very* aware, how aware would you say contractors are of the Focus on Energy discount through the Instant Discount Program?
1. Not aware
 2. Somewhat unaware
 3. Neither/nor
 4. Somewhat aware
 5. Very aware
- C13. **[SKIP IF C12=5]** What else do you think Focus on Energy can do to increase contractor awareness?
- C14. Has the program changed your relationship with contractors?
1. **[IF YES]** How?

D. Stocking Practices

Now I'd like to ask you a few questions about your company's typical stocking practices of high efficiency equipment since you started participating in the Focus on Energy Instant Discount program **[ASK ABOUT EACH EQUIPMENT TYPE IN THE TABLE BELOW]**.

- D1. For all **[EQUIPMENT TYPE]** approximately how **[EQUIPMENT TYPE]** does your company normally keep available in stock? **[RECORD NUMBER VERBATIM IN TABLE BELOW; RECORD FOR EACH EQUIPMENT TYPE THEY SELL THROUGH THE IDP (B15) IN TABLE BELOW]**
- D2. Of those **[EQUIPMENT TYPE]**, how many are high-efficiency units that qualify for the Focus on Energy Instant Discount program? **[RECORD NUMBER OF UNITS OR A PERCENTAGE OF TOTAL STOCK VERBATIM IN TABLE BELOW; RECORD FOR EACH EQUIPMENT TYPE THEY SELL THROUGH THE IDP (B15) IN TABLE BELOW]**
- D3. If the program training, marketing and per-unit incentive were not available, how many program-qualifying high-efficiency **[EQUIPMENT TYPE]** would you stock? **[RECORD NUMBER OF UNITS OR A PERCENTAGE OF TOTAL STOCK VERBATIM IN TABLE BELOW; RECORD FOR EACH EQUIPMENT TYPE THEY SELL THROUGH THE IDP (B15) IN TABLE BELOW]**

Equipment Type	D1. Total equipment stock (all efficiency levels)	D2. Proportion stock that is program-qualifying (units or percentage)	D3. Proportion of stock that would be program-qualifying without program. (units or percentage)
1. Natural Gas Furnaces			
2. Natural Gas Boilers			
3. Air-Source Heat Pumps			
4. Ductless Heat Pumps			
5. Other			

D4. How important was the Focus on Energy Instant Discount Program on your stocking decisions related to program-eligible equipment? Use a 1 to 5 scale, where 1 means not at all important, and 5 means very important. **[RECORD FOR EACH EQUIPMENT TYPE THEY SELL THROUGH THE IDP (B15)]**

Equipment Type	1. Not at all important	2. Not too important	3. Neutral	4. Somewhat important	5. Very important	Don't know
1. Natural Gas Furnaces						
2. Natural Gas Boilers						
3. Air-Source Heat Pumps						
4. Ductless Heat Pumps						
10. Other						

D5. What else can Focus do to help your company stock more energy-efficient equipment?

- [RECORD VERBATIM]**

E. Promotional Practices

Now I'd like to ask you a few questions about your company's typical promotional practices of high efficiency equipment since you started participating in the Focus on Energy Instant Discount program **[ASK ABOUT EACH EQUIPMENT TYPE IN THE TABLE BELOW]**.

- E1. In situations where you are recommending **[EQUIPMENT TYPE]**, about what percent of the time are you currently recommending high-efficiency equipment that is program-qualifying? **[RECORD PERCENTAGE VERBATIM IN TABLE BELOW; REPEAT FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

- E2. For **[EQUIPMENT TYPE]**, what percent of the time would you have recommended the program-qualifying equipment had the Focus on Energy Instant Discount program not been available in 2024 or 2025? **[RECORD PERCENTAGE IN TABLE BELOW; REPEAT FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

Equipment Type	E1. Percent of time currently recommending program-qualifying equipment	E2. Percent of time would have recommended program-qualifying equipment had the program not been available.
1. Natural Gas Boilers		
2. Natural Gas Boilers		
3. Air-Source Heat Pumps		
4. Ductless Heat Pumps		
5. Other		

- E3. How important were the following program factors on your ability to upsell program-qualified equipment to contractors? For each equipment type, please rate how important the program factors are using a 1 to 5 scale, where 1 means not at all important, and 5 means very important. **[RECORD FOR EACH EQUIPMENT TYPE]**

1. Program incentives from the Focus on Energy Instant Discount Program
2. The spiffs provided to your company
3. Focus on Energy Instant Discount Program marketing or training

Equipment Type	1. Program incentives from the Focus Instant Discount program	2. The spiffs provided to your company	3. Focus Instant Discount program marketing or training
1. Natural Gas Furnaces			
2. Natural Gas Boilers			
3. Air-Source Heat Pumps			
4. Ductless Heat Pumps			
5. Other			

- E4. Do you typically present equipment recommendations to contractors or buyers?

1. **[IF YES]** How?
2. **[IF NO]** Why not?

- E5. **[SKIP IF E4=NO]** What percent of time does your company make any recommendations to contractors or buyers?

1. **[RECORD VERBATIM]**

E6. What else do you think Focus on Energy can do to help promote or help sell more energy-efficient equipment?

1. **[RECORD VERBATIM]**

F. Pricing Practices

F1. On average, what percentage of the instant discount is passed on to the buyer for the **[EQUIPMENT TYPE]**, either directly or indirectly? **[RECORD PERCENTAGE VERBATIM IN TABLE BELOW; REPEAT FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

Equipment Type	F1. percentage of the instant rebate that is passed on to the buyer
1. Natural Gas Furnaces	
2. Natural Gas Boilers	
3. Air-Source Heat Pumps	
4. Ductless Heat Pumps	
5. Other	

G. Sales & Market Share

G1. Let’s discuss how many units you have sold through the Focus on Energy’s Instant Discount Program in 2025. According to our records, Focus on Energy has processed **[2025 quantity]** **[EQUIPMENT TYPE]** from **[COMPANY NAME]** through **[date]**. If Focus on Energy’s Instant Discount Program had not existed during 2025, what is your best estimate of how many of these sales would have occurred? Feel free to let us know when questions are “Not Applicable” as appropriate. **[ENTER INTO TABLE BELOW G2]**

G2. Have you sold any program-qualifying units in 2025 that did not go through Focus on Energy’s Instant Discount Program? **[ENTER INTO TABLE BELOW]**

G3. Are all of the **[EQUIPMENT TYPE]** you sell that meet program requirements eligible for the program or are only certain brands/manufacturers eligible? **[ENTER INTO TABLE BELOW]** **[REFERRING TO NON-PARTICIPATING BRANDS/MANUFACTURERS, IF APPLICABLE]**

Equipment Type	CY 2025 sales (quantity) through the Focus on Energy’s	G1. What is your best estimate of how many of these sales would have	G2. Did you sell any program qualifying units in Wisconsin during 2025 that didn’t go through	G3. Are all of the [EQUIPMENT TYPE] you sell that meet program requirements eligible for the program or are only

Instant Discount Program for each type of equipment.	occurred during 2025 if Focus on Energy's Instant Discount Program did not exist? [ALLOW NUMBERS OR PERCENT]	Focus on Energy's Instant Discount Program? [IF 'YES' ASK HOW MANY UNITS; RECORD]	certain brands/manufacturers eligible? [IF 'only certain brands' ASK WHICH BRANDS/MANUFACTURERS ARE NOT ELIGIBLE, WHY THEY ARE NOT ELIGIBLE, AND HOW MANY THEY'VE SOLD IN 2025; RECORD]
1. Natural Gas Furnaces	[2025 SALES NGF] [EQUIPMENT TYPE NGF]		
2. Natural Gas Boilers	[2025 SALES NGB] [EQUIPMENT TYPE NGB]		
3. Air-Source Heat Pumps	[2025 SALES ASHP] [EQUIPMENT TYPE ASHP]		
4. Ductless Heat Pumps	[2025 SALES DHP] [EQUIPMENT TYPE DHP]		
5. Other	[2025 SALES OTH] [EQUIPMENT TYPE OTH]		

G4. Next, please rate how important participating in the Instant Discount Program has been on your 2025 sales of the following high-efficiency equipment in Wisconsin. Please let us know if it was not at all important, not too important, neutral, somewhat important, or very important.

Equipment Type	1. Not at all important	2. Not too important	3. Neutral	4. Somewhat important	5. Very important
1. Natural Gas Furnaces					
2. Natural Gas Boilers					
3. Air-Source Heat Pumps					
4. Ductless Heat Pumps					
5. Other					

G5. When you answered **[G1%]** as your best estimate of how many of these **[EQUIPMENT TYPE]** sales would have occurred during 2025 if Focus on Energy’s Instant Discount Program did not exist, I would interpret that to mean that the Program was not very important. However, you indicated that the Program was very important on your 2025 sales in Wisconsin. Can you explain why there is this difference? **[ENTER INTO TABLE BELOW]**

Equipment Type	<p>INTERVIEWER INSTRUCTIONS: IF G1 REPORTED AS A NUMBER THEN [G1]÷[2025 SALES] [EQUIPMENT TYPE] = G1% ELSE [G1] = G1% ASK G5 FOR EACH EQUIPMENT TYPE WHERE G1%>70% AND G4 = 5</p>	<p>G5. When you answered [G1%] as your best estimate of how many of these [EQUIPMENT TYPE] sales would have occurred during 2025 if Focus on Energy’s Instant Discount Program did not exist, I would interpret that to mean that the Program was not very important. However, you indicated that the Program was very important on your 2025 sales in Wisconsin. Can you explain why there is this difference? [RECORD VERBATIM RESPONSE]</p>
1. Natural Gas Furnaces	<p>ASK G5 IF [G1.1]÷[2025 SALES NGS] [EQUIPMENT TYPE NGS] > 0.7 OR IF [G1.1] > 70%; AND G4.1 = 5</p>	
2. Natural Gas Boilers	<p>ASK G5 IF [G1.2]÷[2025 SALES NGB] [EQUIPMENT TYPE NGB] > 0.7 OR IF [G1.2] > 70%; AND G4.2 = 5</p>	
3. Air-Source Heat Pumps	<p>ASK G5 IF [G1.3]÷[2025 SALES ASHP] [EQUIPMENT TYPE ASHP] > 0.7 OR IF [G1.3] > 70%; AND G4.3 = 5</p>	
4. Ductless Heat Pumps	<p>ASK G5 IF [G1.4]÷[2025 SALES DHP] [EQUIPMENT TYPE DHP] > 0.7 OR IF [G1.4] > 70%; AND G4.4 = 5</p>	
5. Other	<p>ASK G5 IF [G1.5]÷[2025 SALES OTH] [EQUIPMENT TYPE OTH] > 0.7 OR IF [G1.5] > 70%; AND G4.5 = 5</p>	

G6. Approximately what percent of your total **[EQUIPMENT TYPE]** sales are program eligible?

G7. I'm interested to hear your thoughts about the Wisconsin market share of program eligible **[EQUIPMENT TYPE]**. Do you know, or can you estimate, what percent of total Wisconsin sales of **[EQUIPMENT TYPE]** are program eligible? **[ENTER INTO TABLE BELOW]**

Equipment Type	G6. Approximately what percent of your total [EQUIPMENT TYPE] sales are program eligible??	G7. What percent of total Wisconsin sales of [EQUIPMENT TYPE] are program eligible?
1. Natural Gas Furnaces		
2. Natural Gas Boilers		
3. Air-Source Heat Pumps		
4. Ductless Heat Pumps		
5. Other		

G8. Thinking ahead to 2026, can you estimate what percent of your **[EQUIPMENT TYPE]** sales will be high efficiency? **[ENTER INTO TABLE BELOW]**

G9. Would that estimate change if the Focus on Energy Instant Discount Program would end after 2025? **[IF YES, ASK HOW? ENTER INTO TABLE BELOW]**

Equipment Type	CY 2025 sales (quantity) through the Focus on Energy's Midstream Equipment Program for each type of equipment.	G8. What is your best prediction of the percent of [EQUIPMENT TYPE] sales for 2026 that will be high efficiency? [ALLOW NUMBERS OR PERCENT]	G9. What is your best prediction of the percent of [EQUIPMENT TYPE] sales for 2026 that would be high efficiency if the Focus on Energy Midstream Equipment program would end after 2025?
1. Natural Gas Furnaces	[2025 SALES NGF] [EQUIPMENT TYPE NGF]		
2. Natural Gas Boilers	[2025 SALES NGB] [EQUIPMENT TYPE NGB]		
3. Air-Source Heat Pumps	[2025 SALES ASHP] [EQUIPMENT TYPE ASHP]		
4. Ductless Heat Pumps	[2025 SALES DHP] [EQUIPMENT TYPE DHP]		
5. Other	[2025 SALES OTH] [EQUIPMENT TYPE OTH]		

G10. Are you able to approximate your company’s share of all [EQUIPMENT TYPE] equipment sold in Wisconsin? [IF NEEDED: PROMPT TO GUESS OR ASK IF THEY ARE A SMALL/MED/LARGE PLAYER]

Equipment Type	G10. Are you able to approximate your company’s share of all [EQUIPMENT TYPE] equipment sold in Wisconsin?
1. Natural Gas Furnaces	
2. Natural Gas Boilers	
3. Air-Source Heat Pumps	
4. Ductless Heat Pumps	
5. Other	

H. Closing

- H1. Is there anything we haven’t discussed that you’d like to share with me about Focus on Energy or the Instant Discount Program?

- H2. Would you like Focus on Energy to follow up with you regarding anything that we have discussed?
 - 1. Yes
 - 2. No

- H3. Would you please confirm your email address, so we can send you your e-gift card?
 - 1. [Email address]
 - 2. No gift card

Thank you for your input. We appreciate your time. Have a nice day.

Focus on Energy Instant Discount Program Participating Contractor Interview Guide 2025

Interviewee Name:	
Interviewee Organization:	
Interviewee Title:	
Date of Interview:	
Interviewer Name:	

Research Objectives	Corresponding Question Sections
Company background	Sections A and B
Contractor awareness and satisfaction with the Instant Discount Program	Section C
NTG for stocking/upselling/pricing	Section D, E, F
Desired Changes/Additions	Section G
Closing	Section H

Audience: Contractors participating in the Instant Discount Program

Purpose: This research seeks to gather information from contractors who install products that are eligible for the Focus on Energy Instant Discount Program.

These in-depth interviews will be conducted by Cadmus staff. Interviews will be scheduled in advance of the call via email. The interview will take between 30 and 45 minutes. This information will be included in the email invitation.

Target: 10 completes

Draft Initial Email Communication from Implementor

To: **[EMAIL]**

From: **[YOUREMAIL]**

Subject: Help Strengthen Focus on Energy’s Instant Discount Program

Hello **[NAME]**,

As a contractor who has installed **[EQUIPMENT TYPE]** purchased through **Focus on Energy’s Instant Discount Program**, your business plays an important role in the success of this program. Focus on Energy has asked Cadmus, a national research firm, to gather feedback from contractors who are participating in this program to help guide its evolution.

We value your opinion and invite you to tell us about your experience. Your response to this interview will help Focus on Energy design and deliver programs to serve you better. As compensation for your time, Cadmus will send you a **\$150 e-gift card** upon completion of the interview.

The interview should take around **30 minutes**. To schedule the call, please follow the link below. If none of the options work with your schedule, please reply to Erica Fry at Cadmus (Erica.Fry@cadmusgroup.com) to offer an alternative. If there is someone else at your company we should contact instead, please provide the contact information.

[LINK TO CALENDAR WITH AVAILABILITY].

We appreciate your time and help with this. As a reminder, any feedback or information you share is kept confidential.

If you have any questions about the validity of this email or the interview, please contact Mitch Horrie at Public Service Commission of Wisconsin (608-267-3206 or mitch.horrie@wisconsin.gov).

Sincerely,

[Name]

[Email]

[Phone Number]

[Firm]

Email Invitation from Cadmus

To: **[EMAIL]**

From: **[YOUREMAIL]**

Subject: Reminder: We'd Appreciate Your Feedback on Focus on Energy's Instant Discount Program

Hello **[NAME]**,

I hope you're doing well! My name is Erica Fry and I am an Associate with the Cadmus Group, a national research company doing research on behalf of Focus on Energy. I'm following up on a message you must have received from **[IMPLEMENTER]** about participating in a short interview to share your feedback on **Focus on Energy's Instant Discount Program**.

As a contractor who has installed **[EQUIPMENT TYPE]** through the program, your experience is incredibly valuable in helping Focus on Energy better understand what's working well and where improvements can be made. The interview takes just **30 minutes**, and we're offering a **\$150 e-gift card** to thank you for your time.

We'd love to schedule a time that works for you. Please let us know by choosing one of the time slots following the link below:

[LNK TO TIMES AND DATES OF AVAILABILITY].

If none of these times are convenient, feel free to suggest an alternative, or let us know if there's someone else at your company we should contact instead. As a reminder, all feedback will remain confidential and only be used in summary form.

If you have any questions or would like to verify this request, you're welcome to reach out to Mitch Horrie at the Public Service Commission of Wisconsin at (608) 267-3206 or mitch.horrie@wisconsin.gov.

Thanks again. We hope to hear from you soon!

Best regards,

[Name]

[Email]

[Phone Number]

[Firm]

Calendar Invite

To: **[EMAIL]**

From: **[YOUREMAIL]**

Subject: Interview about Focus on Energy Instant Discount Program

Hello **[NAME]**,

Thank you for agreeing to speak with me about **Focus on Energy's Instant Discount Program**. Our call is scheduled for **[INSERT TIME AND DATE OF CALL]** and will take about **30 minutes**.

As previously mentioned, we will ask about your experience with the Instant Discount Program so far. Your responses in this interview will be kept confidential unless you indicate that you would like Focus on Energy to follow up with you. As a thank you, we will send you a **\$150 electronic gift card** upon completion of the interview.

You can join the call either from your computer (by clicking on the link below) or by calling the number provided.

If you need to reschedule, please let me know.

Thank you. I look forward to speaking with you.

[NAME]

[SIGNATURE]

A. Introduction and Interviewee Details

Hello **[FIRSTNAME]**. This is **[INTERVIEWER NAME]** from Cadmus. Thank you for making the time to speak with me today. For the Instant Discount Program evaluation, Cadmus is conducting interviews with contractors selling qualified HVAC equipment through the program.

The purpose of these interviews is to collect feedback about your experiences with the program, hear your concerns, and learn how Focus on Energy can improve the Instant Discount Program. We will use the information you provide to inform our understanding of the program so we can provide well-rounded and balanced observations and recommendations. Any references to your responses will be completely anonymized to maintain you and your company's confidentiality. The interview will take about 30 minutes. As I mentioned in the initial invitation, we will send you a \$150 e-gift card upon completion of the interview as a thank you for your time and feedback.

A1. May I have your permission to record this call?

As you may recall, about a year ago Focus on Energy launched the Instant Discount Program, transitioning HVAC incentives from a downstream model to a midstream design, where discounts are passed through distributors to contractors and customers. Now that this new version of the program has been in place for a year, your feedback is especially important in helping us understand how well this structure is working for customers, contractors, and program partners like you.

A2. To start, please tell me about your role at **[COMPANYNAME]**?

1. Has your role changed in the past year?

A3. What is your role working with the Instant Discount Program?

B. Company Background and Motivations for Participating

Next, I have general questions about **[COMPANYNAME]**.

B1. What types of equipment does **[COMPANYNAME]** install? **[RECORD VERBATIM]**

B2. I'd like to talk about your typical customer mix; in other words, the clients for whom you purchase and install equipment. What proportion of your HVAC equipment sales (in dollars) are to: **[RECORD PERCENTAGE FOR EACH]**

1. Residential customers.
2. Business owners or managers
3. Public Institutions

B3. Are you able to estimate the percentage of your customers that are regular or repeat customers?
[RECORD VERBATIM]

B4. In general, on a scale of 1-to-5 where 1 is not comfortable at all and 5 is very comfortable, how comfortable do you think your staff is with selling and installing high-efficiency natural gas

equipment that is eligible for the Instant Discount Program, such as boilers and furnaces?

[RECORD ANSWERS IN THE TABLE BELOW]

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B5. **[IF B4 RESPONSE IS <3]** What are they uncomfortable with? **[RECORD VERBATIM]**

B6. Using the same 1-to-5 scale, how comfortable do you think your staff is with selling and installing heat pump equipment that is eligible for the Instant Discount Program? **[RECORD ANSWERS IN THE TABLE BELOW]**

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B7. **[IF B6 RESPONSE IS <3]** What are they uncomfortable with?

1. **[RECORD VERBATIM]**

B8. In general, on a scale of 1 to 5 where 1 is not at all comfortable and 5 is very comfortable, how comfortable do you think your customers are with high-efficiency natural gas equipment, such as boilers and furnaces, that is eligible for the Instant Discount Program? **[RECORD ANSWERS IN THE TABLE BELOW]**

1. Not at all comfortable
2. Somewhat uncomfortable
3. Neither comfortable nor uncomfortable
4. Somewhat comfortable
5. Very comfortable

B9. **[IF B8 RESPONSE IS <3]** What are they uncomfortable with?

1. **[RECORD VERBATIM]**

B10. Using the same 1-to-5 scale, how comfortable do you think your customers are with switching from gas to electric HVAC equipment, such switching from a gas furnace to heat pump? **[RECORD ANSWERS IN THE TABLE BELOW]**

C. Program Awareness and Satisfaction

C1. How do you/your staff learn about the instant discounts provided by Focus on Energy? Select all that apply.

1. Distributor - invoice
2. Distributor - verbal or counter materials
3. Distributor - website
4. Focus on Energy staff
5. Focus on Energy's website
6. Customer
7. Didn't know Focus on Energy provided the discount
8. Other: specify
98. Don't know

C2. **[ASK IF C1≠ 2]** When you purchased **[EQUIPMENT TYPE]** from your distributor, did someone tell you about the Focus on Energy instant discount?

1. Yes
2. No
98. Don't know

C3. What types of equipment are you selling through the new Instant Discount Program?

1. Natural Gas Furnaces
2. Natural Gas Boilers
3. Air-Source Heat Pumps
4. Ductless Heat Pumps
5. Other **[RECORD VERBATIM]**

C4. Has the Instant Discount Program changed how you sell energy efficient equipment to their customers?

1. **[IF C4=YES]** How?

C5. Compared to the downstream incentive of the previous program, is the instant discount more or less helpful in selling equipment? **[RECORD VERBATIM]**

C6. On a scale of 1 to 5 where 1 is very dissatisfied and 5 is very satisfied, how satisfied are you with:
[READ EACH ITEM LISTED IN TABLE BELOW AND RECORD IN THE TABLE]

Material	1. Very dissatisfied	2. Somewhat dissatisfied	3. Neither satisfied nor dissatisfied	4. Somewhat satisfied	5. Very satisfied	Did not answer/Don't know
C6.1. Participation requirements (paperwork)						

C6.2. Discount levels						
C6.3 Confirming equipment eligibility						
C6.4. Overall experience with the IDP Program.						

C7. What else do you think Focus on Energy can do to increase contractor awareness?

1. **[IF YES]** How?

C8. Do you work with multiple distributors? **[YES/NO]**

1. **[IF C8=YES]** Do all of the distributors you work with participate in the Instant Discount Program?
 - (1) All
 - (2) Some
2. **[IF C8.1=SOME]** Does the distributor’s participation in the program affect who you purchase equipment from? In other words, are you more likely to use the participating distributor because they participate?

C9. Have you started working with some distributors because they participate in the program? Or have you stopped working with distributors because they do not participate?

1. Or, are you working with distributors more or less because they do or don’t participate in the program?

C10. What has gone well working with distributors through the new Instant Discount Program?

1. And what has not gone well in your relationship with distributors?

D. Stock Available

Now I’d like to talk about the impact the available equipment stock from distributors has on the equipment you select for your client’s projects.

D1. When you are looking to install high-efficiency equipment for a project, and it is not in stock at the any distributor or otherwise available on a reasonable timeline, what percent of the time would you:

[RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW; PERCENTAGES FROM D1.1, D1.2, D1.3 SHOULD TOTAL TO 100% FOR EACH EQUIPMENT TYPE]

1. Delay your project **[0-100%]**
2. Select a lower-efficiency model **[0-100%]**
3. Select a high-efficiency model (equivalent to Instant Discount Program qualifying equipment) from a non-participating distributor **[0-100%]**

98. Don't know

Equipment Type	D1.1 Delay your project [0-100%]	D1.2 Select a lower-efficiency model [0-100%]	D1.3 Select IDP qualifying equivalent model from non-participating distributor [0-100%]
1. Natural Gas Furnaces			
2. Natural Gas Boilers			
3. Air-Source Heat Pumps			
4. Ductless Heat Pumps			
5. Other			

E. Promotional Practices and Upselling

E1. Can you describe your company’s promotional, upselling, and marketing practices relating to high-efficiency equipment?

E2. How important was your distributor’s promotion and recommendation of program-eligible equipment on your overall sale of qualifying equipment? Use a scale of 1 to 5 where 1 is not at all important and 5 is very important. **[RECORD FOR EACH EQUIPMENT TYPE]**

Equipment Type	1. Not at all important	2. Not too important	3. Neutral	4. Somewhat important	5. Very important	Don't know
1. Natural Gas Furnaces						
2. Natural Gas Boilers						
3. Air-Source Heat Pumps						
4. Ductless Heat Pumps						
5. Other						

E3. In situations where you are selling **[EQUIPMENT TYPE]**, about what percent of the time are you currently recommending the high-efficiency equipment that is program qualifying? **[RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

E4. For **[EQUIPMENT TYPE]** equipment, what percent of the time would you have recommended the program-qualifying high-efficiency equipment had the program not been available in 2024 or 2025? **[RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

Equipment Type	E3. In situations where you are selling [EQUIPMENT TYPE], about what percent of the time are you currently recommending the high-efficiency equipment?	E4. For [EQUIPMENT TYPE] equipment, what percent of the time would you have recommended the high-efficiency equipment had the program not been available in 2024 or 2025?
1. Natural Gas Furnaces		
2. Natural Gas Boilers		
3. Air-Source Heat Pumps		
4. Ductless Heat Pumps		
5. Other		

F. Pricing Practices

F1. Does the instant discount impact the final price paid by the buyer for the **[EQUIPMENT TYPE]** equipment? **[RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

1. Yes
2. No
98. Don't know

F2. On average, what percentage of the instant discount is passed on to the buyer for the **[EQUIPMENT TYPE]**, either directly or indirectly? **[RECORD FOR EACH EQUIPMENT TYPE IN TABLE BELOW]**

Equipment Type	F1. Does the instant discount impact the final price paid by the buyer for the [EQUIPMENT TYPE] equipment?	F2. On average, what percentage of the instant discount is passed on to the buyer for the [EQUIPMENT TYPE], either directly or indirectly?
1. Natural Gas Furnaces		
2. Natural Gas Boilers		
3. Air-Source Heat Pumps		
4. Ductless Heat Pumps		
5. Other		

G. Desired Changes

G1. Are there efficient **[EQUIPMENT TYPE]** models that are not eligible for incentives that you think should be included in the program?

1. **[IF G1=YES]** What types of equipment? Can you give an example?
2. **[IF G1=YES]** Approximately what is the percentage of efficient equipment not covered by the program?

G2. **[IF NOT ALREADY MENTIONED]** Do you feel the current program incentives are sufficient to encourage customers to choose program-eligible equipment? Specifically, do you think that customers who would not have chosen the equipment without the instant discounts are deciding to invest in energy-efficient equipment because of these discounts?

1. **[IF G2=YES]** How much of the incremental cost of efficient vs. standard equipment do you think incentives need to cover to maintain these sales of program equipment? In other words, how much more, percentagewise, do you think these customers are willing to pay for efficient products?
2. **[IF G2=NO]** How much do you think discounts need to change, percentagewise, in order to encourage customers to choose program-eligible equipment? Which equipment would this apply to?

G3. If you could choose one thing for Focus on Energy to change about the program to improve it, what would it be? **[RECORD VERBATIM]**

1. Are there any other changes you would suggest that you haven't already mentioned?

H. Closing

- H1. Is there anything we haven't discussed that you'd like to share with me about Focus on Energy or the Instant Discount Program?
- H2. Would you like Focus on Energy to follow up with you regarding anything that we have discussed?
 1. Yes
 2. No
- H3. Would you please confirm your email address, so we can send you your e-gift card?
 1. [Email address]

Thank you for your input. We appreciate your time. Have a nice day.

Wisconsin Focus on Energy – Historical Heat Pump Participant Survey

Estimated launch date: Summer/Fall 2025

This survey is designed for residential customers who have previously received a Focus on Energy rebate for purchasing and installing heat pumps through the Heating and Cooling offering.

Goals:

Research Objectives	Corresponding Question Numbers
Awareness and Motivations	A
Experience and Benefits	B
Equipment Information	C
Trade Ally Experience	D
Demographic Information	E

Target Quota:

- Based on number of participants of second half of 2023 and first half of 2024

Variables to be Pulled into Survey

- **[YEAR] = YEAR OF INSTALLATION**
- **[FIRSTNAME] = CUSTOMER FIRST NAME**
- **[LASTNAME] = CUSTOMER LAST NAME**
- **[EMAIL] = CUSTOMER EMAIL**
- **[UTILITY] = CUSTOMER UTILITY**
- **[MEASURE] = KIND OF HP DERIVED FROM THIS DATA [AIR-SOURCE HEAT PUMP, DUCTLESS HEAT PUMP]**
- **[QUANTITY] = NUMBER OF MEASURE INSTALLED (NUMERIC)**

Email Invitation

To: [EMAIL]

From: Focus on Energy: Heat Pump Feedback

Subject: Share feedback about your heat pump and you could win \$150

Dear [FIRSTNAME],

We're reaching out to learn more about your experience with the heat pump you installed in [YEAR] and the rebate you received from the Focus on Energy Heating and Cooling offering. Your insights can help shape the future of Focus on Energy heat pump programs in Wisconsin.

Click the link below to take the survey.

[auto-generated link]

All responses are confidential and used only for research purposes. As our thanks for completing the survey, you will have the opportunity to enter a drawing to win a \$150 gift card.

If you have problems with the survey link, please contact the survey coordinator, Daniela Stevens, via email at Daniela.Stevens@Cadmusgroup.com. If you would like to confirm the validity of the research effort, please contact Mitch Horrie at the Public Service Commission of Wisconsin at (608) 267-3206 or mitch.horrie@wisconsin.gov.

Thank you for helping us build smarter, more responsive energy programs across the state. We truly appreciate your time and experience.

Warm regards,

[NAME]

[SIGNATURE]

Reminder Invitation: [SEND ONE WEEK AFTER FIRST]

To: [EMAIL]

From: There is still time to share you feedback: Focus on Energy Heat Pump

Subject: There's still time to give Focus on Energy feedback

Dear [FIRSTNAME AND LASTNAME],

We recently invited you to tell us about your experience with your heat pump. We would still love to hear from you; **your input is very important to us!** We use the information from participants like you to continue to improve our programs.

Please take about 10 minutes to complete our survey. **As our thanks for completing the survey, you will have the opportunity to enter a drawing to win a \$150 gift card.**

Just click the link below to get started.

[auto-generated link]

Your responses will be kept confidential and only used for research purposes.

If you have problems with the survey link, please contact the survey coordinator, Daniela Stevens, via email at Daniela.Stevens@Cadmusgroup.com. If you would like to confirm the validity of the research effort, please contact Mitch Horrie at the Public Service Commission of Wisconsin at (608) 267-3206 or mitch.horrie@wisconsin.gov.

We hope you will take this opportunity to have your voice heard. Thank you in advance for your time and for sharing your experiences.

Best regards,
[NAME]
[SIGNATURE]

Survey Introduction

Thank you for participating in Focus on Energy's Heat Pump Survey. For the purposes of this survey, please focus your responses on your experience purchasing a heat pump. Your feedback is very important to us and will help us improve our programs for customers like you. Your responses are confidential and will be used for research purposes only. When you complete the survey, you can enter a drawing to win a \$150 gift card.

A. Awareness and Motivation

- A1. Our records show that you installed a [MEASURE] in [YEAR]. Do you remember having that installed in your home? [FORCE RESPONSE]
1. Yes
 2. No [THANK AND TERMINATE]
 99. Don't know [THANK AND TERMINATE]
- A2. [IF A1=YES] Is the heat pump still installed in your home? [FORCE RESPONSE]
1. Yes
 2. No
 99. Don't know [THANK AND TERMINATE]
- A3. [IF A2=2] Why did you remove the heat pump?
1. [OPEN-ENDED RESPONSE]

[IF A2=2 ASK: SECTION A, SECTION D AND SECTION E QUESTIONS]

[IF A2=1 ASK: ALL THE REST OF THE SURVEY]

- A4. Why did you install new HVAC equipment?
1. My old system was not working but repairable
 2. My old system was not working and not repairable
 3. My old system was working but aging
 4. My old system was working but not efficient
 5. I built a new home
 6. I wanted to switch from gas to electric heating
- A5. Other (please specify): ()
- A6. Select and rank the 3 most important factors that motivated you to purchase your heat pump .[OFFER RANKING OF TOP 3. RANDOMIZE LIST EXCEPT FOR OTHER AT THE BOTTOM.]
1. Saving energy / reducing energy waste / being more energy efficient
 2. Reducing energy costs / lowering bill
 3. Good for the environment /tackles climate change

4. Increase home comfort
5. Recommendation from a friend / relative
6. Recommendation from a contractor / dealer
7. Cash / rebate / incentive payment
8. Advertisement about heat pumps [newspaper, radio, online, etc.]
9. Other. (please specify): **[SPECIFY: _____]**

A7. When purchasing your new heat pump, did you consider other types of equipment, such as a **[IF MEASURE = ASHP “GAS FURNACE AND CENTRAL AIR CONDITIONER” OR IF MEASURE = DUCTLESS HP “ROOM AIR CONDITIONER”]?**

1. Yes, I considered a **[OPTION TO INSERT TEXT]**
2. No
99. Don't know

A8. **[IF MEASURE = ASHP] Our records indicate that you purchased an air-source heat pump. Why did you choose the air-source heat pump instead of the other equipment?**
[OPEN-ENDED RESPONSE]

A8. How much research did you do about heat pumps before deciding to purchase one? (Select one)

1. None
2. A little (glanced at a few resources or asked someone briefly)
3. A moderate amount (spent time comparing options, reading or watching content)
4. A lot (conducted in-depth comparisons, reviewed technical information, explored multiple sources)

A9. **[SKIP IF A8=1]** Which of the following resources did you consult about the pros and cons of heat pumps before deciding to install a heat pump? (Select all that apply)

1. The Focus on Energy heat pump buying guide
2. HVAC contractor or installer
3. Friends, family, or neighbors
4. Manufacturer websites
5. Utility or Focus on Energy website
6. YouTube videos or online tutorials
7. Online forums (e.g., Reddit, HVAC Talk)
8. Consumer review sites (e.g., ENERGY STAR, HomeAdvisor, Google reviews)
9. Social media (e.g., Facebook groups, Instagram, NextDoor)
10. Government or nonprofit energy efficiency websites
11. I didn't consult any resources
12. Other (please specify): _____

A10. **[IF A9=1]** How helpful was the Focus on Energy heat pump buying guide in helping you buy your heat pump?

1. Very helpful
2. Somewhat helpful
3. Neither helpful/nor unhelpful
4. Somewhat unhelpful
5. Not at all helpful

A11. [IF A10>3] How could Focus on Energy heat pump buying guide have been more helpful in helping you buy your heat pump? [OPEN ENDED]

A12. [IF PARTICIPANT SELECTS MORE THAN 1 CHOICE IN A9] What was the single most helpful resource you consulted to learn about the pros and cons of heat pumps? (Select one)

1. The Focus on Energy heat pump buying guide
2. HVAC contractor or installer
3. Friends, family, or neighbors
4. Manufacturer websites
5. Utility or Focus on Energy website
6. YouTube videos or online tutorials
7. Online forums (e.g., Reddit, HVAC Talk)
8. Consumer review sites (e.g., ENERGY STAR, HomeAdvisor, Google reviews)
9. Social media (e.g., Facebook groups, Instagram, NextDoor)
10. Government or nonprofit energy efficiency websites
11. The one I specified: _____

A14. Before or at the time of installation, were you aware that your heat pump system might be eligible for a federal tax credit?

1. Yes
2. No
3. Don't know

A15. Did you receive a federal tax credit for installing your heat pump system?

1. Yes
2. No

Don't know

B. Equipment Information

- B1. Did the new heat pump replace existing heating or cooling equipment?
1. Yes, replaced both heating and cooling
 2. Yes, replaced heating only
 3. Yes, replaced cooling only
 4. No, the heat pump did not replace an existing heating or cooling system
- B2. **[IF B1=1, 2, OR 3]** What type of equipment did the new heat pump replace? Select all that apply. **[ALLOW MORE THAN 1 RESPONSE]**
1. **[SHOW IF B1=1 OR 3]** Central Air Conditioner
 2. **[SHOW IF B1=1 OR 3]** Room/Window Air Conditioner
 3. **[SHOW IF B1=1 OR 3]** Air Source Heat Pump
 4. **[SHOW IF B1=1 OR 3]** Geothermal (Ground Source) Heat Pump
 5. **[SHOW IF B1=1 OR 3]** Ductless (Minisplit) Air Conditioner
 6. **[SHOW IF B1=1 OR 3]** Ductless (Minisplit) Heat Pump
 7. **[SHOW IF B1=1 OR 2]** Natural Gas Furnace
 8. **[SHOW IF B1=1 OR 2]** Electric Resistance Heat (Baseboard or Electric Furnace)
 9. Other **[SPECIFY: _____]**
 99. Don't know
- B3. **[IF MEASURE = ASHP]** Does your air-source heat pump use a backup heating source for really cold days?
1. Yes
 2. No
 99. Don't know
- B4. **[IFB3=1]** What type of backup heat does your system use?
1. Furnace – Natural gas
 2. Furnace – Propane/LP
 3. Electric baseboard heat
 4. Boiler
 5. Other **[OPEN ENDED RESPONSE]**
 99. Don't know
- B5. **[IF B4=1 OR 2]** How old, approximately, is the furnace that you are using for supplemental heat?
1. New, I installed it at the same time as the air-source heat pump
 2. **[OPEN ENDED NUMERIC RESPONSE 1-99]** Years
 99. Don't know
- B6. In the colder months, what temperature is your thermostat usually set to?
1. Below 65°F
 2. 65–67°F
 3. 68–70°F
 4. 71–73°F

5. 74°F or higher

B7. [IF B3=1] Because your heat pump uses a backup heating source, there is a switchover temperature, which is the outdoor temperature at which the heat pump switches to the backup heating source. Did your contractor explain the switchover temperature when they installed your heat pump?

1. Yes
2. No
3. Don't know

B8. Do you know what your outdoor switchover temperature is set to?

1. Yes
2. No

B9. [IF B77=1] Did you set your outdoor switchover temperature or did your contractor?

1. I set it up
2. My contractor set it up
99. Don't know

B10. [IF B97=2] Are you able to adjust the switchover temperature?

1. Yes
2. No
3. Don't know

B11. [IF MEASURE =DUCTLESS HP] During the coldest days of the year, at what temperature do you make the switch from your ductless heat pump to your back up system?

1. Above 40° F
2. 31–40°F
3. 21–30°F
4. 11–20°F
5. 0–10°F
6. Below 0°F
7. I don't switch, I use the heat pump only
8. Don't know

B12. Did you have to upgrade your electrical system when you installed your heat pump?

1. Yes
2. No
3. Don't know

B13. [IF B11B12=1] What type of electrical upgrade did you complete as part of your heat pump installation? (Select all that apply)

1. Panel upgrade (e.g., replacing a 100-amp panel with a 200-amp panel)
2. Circuit or wiring upgrade
3. New dedicated line for the heat pump
4. Other (please specify): _____
5. Don't know

- B14. **[IF B11=1]** How did the electrical upgrade impact your overall experience with installing the heat pump?
1. It delayed installation because of labor or material availability/scheduling challenges.
 2. It added extra cost to the project.
 3. It required shutting down electricity in my home,
 4. It gave me confidence my home is better prepared for future upgrades.
 5. It did not impact my experience.
 6. Other (please specify): _____
- B15. **[IF B11=1]** How did the electrical upgrade affect your total project cost?
1. It added a significant cost
 2. It added a small additional cost
 3. It had no impact on cost
- B16. Did you have to install other equipment at the same time as your heat pump, such as a thermostat?
1. Yes
 2. No
 3. Don't remember/Prefer not to answer
- B17. **[IFB16=1]** What other equipment did you install?
1. **[OPEN-ENDED RESPONSE]**
 2. Don't remember

C. Experience and Benefits

- C1. When you first started using your heat pump, did you experience a learning curve to figure out how to use it? (Select all that apply)
1. No, learning how to use it was simple
 2. How to use the thermostat to control heating and cooling
 3. How long it takes the heat pump to heat or cool a space
 4. The difference between heating and cooling modes
 5. How to use or understand energy-saving settings (e.g., eco mode)
 6. How to maintain or clean the system (e.g., filters)
 7. How the system behaves in cold weather
 8. Understanding electricity usage or utility bills
 9. Getting used to the airflow or noise
 10. Other (please specify): **[OPEN TEXT]**
- C2. On a scale of 1 to 5, how easy or difficult was it to learn how to use your heat pump system? (1 = Very difficult, 5 = Very easy)
1. Very difficult
 2. Somewhat Difficult
 3. Neutral
 4. Somewhat Easy

5. Very easy

C3. What resources, if any, did you use to learn how to operate the system? (Select all that apply)

1. Installer or contractor guidance
2. User manual or product documentation
3. Online videos or tutorials
4. Manufacturer website
5. Customer support hotline
6. Friends or family
7. Social media
8. I didn't use any resources
9. Other (please specify): _____

C4. Before using your heat pump, which of the following benefits did you expect?
(Select all that apply)

1. Improved indoor comfort (more consistent temperatures)
2. Quieter operation compared to your previous system
3. Better indoor air quality
4. Improved humidity control
5. Enhanced safety (no combustion, reduced carbon monoxide risk)
6. Reduced maintenance needs
7. Increased home value
8. Greater control through a smart thermostat or app
9. Peace of mind from using a more environmentally friendly system
10. Other (please specify): _____
11. I did not have specific expectations

C5. Since using your heat pump, which of the following benefits have you actually experienced?
(Select all that apply)

1. Improved indoor comfort
2. Quieter operation compared to your previous system
3. Better indoor air quality
4. Improved humidity control
5. Enhanced safety
6. Reduced maintenance needs
7. Increased home value
8. Greater control through a smart thermostat or app
9. Peace of mind from using a more environmentally friendly system
10. Other (please specify): _____
11. I have not experienced benefits

C6. **[IF B2 = furnace & IF A4≠ new home]** How has your electric bill changed during the *summer* months since installing your heat pump?

1. Increased
2. Decreased
3. Stayed roughly the same
99. Don't know

C7. [IF B2 = furnace & IF A4 ≠ new home] How has your combined electric and gas bill changed during the *winter* months since installing your heat pump?

1. Increased
2. Decreased
3. Stayed roughly the same
99. Don't know

C8. [IF C6 OR C7 = 1 OR 2] How do you feel about the changes to your electric bill since installing your heat pump?

1. I'm pleasantly surprised
2. I expected the change and I'm satisfied
3. I expected the change but I'm dissatisfied
4. The change was unexpected and I'm concerned

C9. Have you experienced any challenges operating your heat pump? (Select all that apply)

1. Difficulty maintaining desired temperature
2. Confusion about settings or controls
3. Noise issues
4. High energy bills
5. Uneven temperature across rooms
6. Short cycling (turning on and off frequently)
7. Backup heat issues
8. Maintenance concerns
9. Integration/compatibility with existing systems
10. Other (please specify):
11. I have not experienced any challenges

C10. Overall, on a scale of 1 to 5 where 1 is very dissatisfied and 5 is very satisfied, how satisfied are you with your heat pump?

1. Very dissatisfied
2. Dissatisfied
3. Neither/nor
4. Satisfied
5. Very satisfied

D. Trade Ally Experience

D1. Did you work with a contractor to install your heat pump?

1. Yes
2. No, I installed it myself [SKIP TO E1]
3. No, someone I know installed it for me [SKIP TO E1]
99. Don't know [SKIP TO E1]

- D2. **[IF D1=1]** Did your contractor talk to you about the pros and cons of installing a heat pump system? This could include things like how heat pumps work, what kinds of homes they work well in, or any limitations to expect.
1. Yes
 2. No
 - Don't know
- D3. **[IF D1=1]** Did your contractor provide any training on how to use your heat pump?
1. Yes
 2. No
 - Don't know
- D4. **[IF D1=1]** Did your contractor discuss how your energy bills might change after installing the heat pump?
1. Yes
 2. No
 3. Don't know
- D5. **[IF D1=1]** How helpful was the contractor in helping you decide whether a heat pump was a good fit for your home?
1. Very helpful
 2. Somewhat helpful
 3. Neither/nor
 4. Somewhat unhelpful
 5. Not at all helpful
- D6. **[IF D1=1]** How did you find the contractor who installed your heat pump? **[RANDOMIZE LIST EXCEPT FOR OTHER AND DON'T KNOW]**
1. Used the same contractor previously
 2. Called Focus on Energy/ Focus on Energy's website, i.e. 'Find a Trade Ally Contractor' link
 3. Focus on Energy or Utility representative
 4. Referral from family / friend / word of mouth
 5. Retailer / store – Home Depot, Lowes, etc.
 6. Social media from Focus on Energy
 7. Social media other than Focus on Energy
 8. Contractor advertising
 9. Personal research
 10. Other **[SPECIFY: _____]**
 99. Don't know
- D7. **[IF D1=1]** Please rank your top 3 reasons for choosing your contractor, with 1 being the most important **[DRAG-AND-DROP OR DROPDOWN MENU STYLE, RANDOMIZED]**.
1. Reputation / Referral
 2. Trustworthiness
 3. Technical knowledge
 4. Pricing and affordability
 5. Availability
 6. Location

7. Focus on Energy affiliation
- 8.
9. Other [SPECIFY: _____]
99. Don't know

D8. **[IF D1=1]** On a scale from 1 to 5, where 1 means "Very easy" and 5 means "Very difficult," how easy was it to find a contractor who you felt was knowledgeable about heat pumps?

1. Very difficult
2. Somewhat difficult
3. Neither easy nor difficult
4. Somewhat easy
5. Very easy

D9. **[IF D8<3]** Please share what was difficult about finding a contractor:
[OPEN ENDED]

D10. **[IF D1=1]** From a scale of 1 to 5 where 1 is very dissatisfied and 5 very satisfied, how would you rate the experience of working with the contractor who installed your heat pump?

1. Very dissatisfied
2. Somewhat dissatisfied
3. Neither satisfied nor unsatisfied
4. Somewhat satisfied
5. Very satisfied
99. Don't know

D11. **[IF D10= 1 OR 2]** Can you tell us what made the experience of working with the contractor less than satisfactory?

1. **[OPEN-ENDED RESPONSE]**

E. Demographics and Household Information

The last few questions are for statistical purposes only. You can skip any question you do not wish to answer.

E1. Is the building where the heat pump was installed the building you live in for most of the year?

1. Yes
2. No

E2. Is the heat pump the main heating and cooling source for your home?

1. Yes
2. No

E3. **[IF E2 = NO]** What is the main type of fuel you use to **heat your home**?

1. Natural Gas

2. Oil
3. Propane
4. Electricity
5. Wood
6. Other [SPECIFY: _____]
99. Don't know

E4. What type of home do you live in?

1. Mobile / manufactured home
2. Single-family home, detached house
3. Attached house townhouse, row house, or duplex
4. Multifamily apartment or condo building with 4 or more units
5. Co-op/retirement community
6. Other [SPECIFY: _____]
99. Prefer not to answer

E5. Do you or members of your household own or rent this home?

1. Own
2. Rent
3. Other [SPECIFY: _____]
99. Prefer not to answer

E6. [IF E5 = 2 OR 3] How is your electric utility bill paid?

1. Your utility bills you directly
2. Your maintenance fees or rent includes utility costs
3. Your bill is split evenly between units within the complex
4. Other [SPECIFY: _____]
99. Don't know

E7. [IF E5 = 2 OR 3] How is your gas utility bill paid?

1. Your utility bills you directly
2. Your maintenance fees or rent includes utility costs
3. Your bill is split evenly between units within the complex
4. You don't have natural gas service
5. Other [SPECIFY: _____]
99. Don't know

E8. What is the highest level of school that you have completed?

1. Less than 9th grade
2. 9th to 12th grade; no diploma
3. High school graduate [including GED]
4. Some college, no degree
5. Associate's degree
6. Bachelor's degree
7. Graduate or professional degree
99. Prefer not to answer

F. Closing

- F1. Finally, we would like to confirm where to send your prize if you are selected as a \$150 gift card winner. Please enter a name and email address below. The gift card winners will be selected and notified within two weeks after this survey closes. You may leave this blank if you do not want to be included in the drawing.
1. FIRST AND LASTNAME:
 2. EMAIL:

Thank you. We appreciate your help with this survey. Have a nice day.

You will be added into the drawing for a \$150 gift card.

To learn about additional opportunities to save energy and money in your home, please visit focusonenergy.com.