



Focus on Energy

Territory-Wide Programs Offered in the Wisconsin Public Service Territory Calendar Year 2013 Evaluation Report

September 19, 2014

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Executive Summary

Focus on Energy, Wisconsin utilities' statewide energy efficiency and renewable resources program portfolio, provides incentives to participating customers who install cost-effective, energy-saving projects. Each of the investor-owned utilities in Wisconsin, including the Wisconsin Public Service Corporation (WPS), provides funding to support the portfolio.

As a result of a 2008 agreement with the Citizens Utility Board (CUB), WPS provided additional funds that supported Territory-Wide programs offered in the WPS service territory. From calendar year (CY) 2009 to CY 2013, these programs offered supplementary incentives to WPS customers on top of those provided through the statewide Focus on Energy programs. Through these programs, Focus on Energy tested creative approaches to target hard-to-reach customer segments and generate more comprehensive energy-saving retrofits. The Territory-Wide programs were designed to increase WPS customer participation in the Focus on Energy statewide programs and do not represent additional or distinct sources of energy and demand savings.

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(PSC) approved and oversaw the implementation of the Territory-Wide programs. Additionally, the PSC contracted with the Evaluation Team (comprising Cadmus and St. Norbert's College Strategic Research Institute) to evaluate both the Focus on Energy statewide programs and the Territory-Wide programs during the current (CY 2011 – CY 2014) quadrennial cycle.

This Executive Summary contains the Evaluation Team's findings from its impact and process evaluations of the CY 2013 Territory-Wide programs. Since CY 2013 was the final year of Territory-Wide program operations, the Evaluation Team also presents the energy and demand savings calculated during the CY 2011 and CY 2012 evaluations, as well as the aggregate energy and demand savings achieved from CY 2011 through CY 2013 (i.e., the evaluated program cycle).

Summary of Findings

The Territory-Wide portfolio in CY 2013 and throughout the evaluation cycle was cost-effective and achieved high levels of customer satisfaction. In general, the Territory-Wide portfolio achieved increasingly substantial energy and demand savings from year to year.

The Evaluation Team determined three types of energy and demand savings:

- 1. Gross savings:** The unadjusted, reported change in energy consumption and/or demand that results from program-related actions taken by participants who receive incentives.
- 2. Verified gross savings:** Changes in energy consumption and/or demand verified by an independent evaluation team that are based on reviews of energy-efficiency and renewable energy projects and engineering calculations used to estimate savings.
- 3. Verified net savings:** Savings that are directly attributable to program efforts and would not have occurred in the program's absence. These savings take into account program freeridership and spillover. Freeridership occurs when customers who would have implemented an energy-saving project without the influence of the program are awarded program incentives for that project. Spillover occurs when participants adopt additional energy-saving behaviors or products as a result of a program's initial influence.



First-Year Annual Savings

First-year annual savings represent the energy and demand savings achieved in the first year after the equipment was installed or the service was performed. Table 1 lists CY 2013 gross, verified gross, and verified net first-year annual savings by market segment.

Table 1. CY 2013 Gross, Verified Gross, and Verified Net Savings by Segment, First-Year Annual

Savings Type	Unit	Residential	Nonresidential	Total
Gross	kWh	753,516	34,450,597	35,204,112
	kW	201	6,414	6,615
	therms	225,952	579,170	805,122
Verified Gross	kWh	903,759	34,483,544	35,387,302
	kW	249	6,419	6,669
	therms	115,548	579,195	694,743
Verified Net	kWh	809,010	21,275,439	22,084,448
	kW	226	4,269	4,496
	therms	107,325	416,169	523,494

Table 2 lists CY 2011, CY 2012, and CY 2013 verified net first-year annual savings by market segment. The Evaluation Team determined CY 2011 and CY 2012 first-year annual savings during previous evaluations.

Table 2. CY 2011, CY 2012, and CY 2013 Verified Net Savings by Segment, First-Year Annual

Calendar Year	Unit	Residential	Nonresidential	Total
2011	kWh	970,507	7,548,130	8,518,637
	kW	238	1,662	1,900
	therms	184,158	88,091	272,249
2012	kWh	685,593	23,503,179	24,188,772
	kW	138	3,053	3,191
	therms	105,107	158,037	263,144
2013	kWh	809,010	21,275,439	22,084,448
	kW	226	4,269	4,496
	therms	107,325	416,169	523,494
Total	kWh	2,465,110	52,326,748	54,791,857
	kW	602	8,984	9,587
	therms	396,590	662,297	1,058,887

Life-Cycle Savings

Life-cycle savings represent the aggregate energy savings that accrue throughout the lifetimes of implemented measures. Table 3 lists CY 2013 gross, verified gross, and verified net life-cycle savings by market segment.

Table 3. CY 2013 Gross, Verified Gross, and Verified Net Savings by Segment, Life-Cycle

Savings Type	Unit	Residential	Nonresidential	Total
Gross	kWh	12,887,866	435,180,183	448,068,049
	therms	5,244,793	5,759,758	11,004,551
Verified Gross	kWh	15,728,203	435,613,712	451,341,915
	therms	2,636,924	5,760,125	8,397,049
Verified Net	kWh	14,008,512	269,111,137	283,119,649
	therms	2,468,932	4,041,672	6,510,603

Table 4 lists CY 2011, CY 2012, and CY 2013 verified net life-cycle savings by market segment. The Evaluation Team determined CY 2011 and CY 2012 life-cycle savings during previous evaluations.

Table 4. CY 2011, CY 2012, and CY 2013 Verified Net Savings by Segment, Life-Cycle

Calendar Year	Unit	Residential	Nonresidential	Total
2011	kWh	13,421,776	98,786,032	112,207,808
	therms	3,890,251	1,295,496	5,185,747
2012	kWh	5,143,545	319,127,872	324,271,417
	therms	1,638,138	1,931,451	3,569,589
2013	kWh	14,008,512	269,111,137	283,119,649
	therms	2,468,932	4,041,672	6,510,603
Total	kWh	32,573,833	687,025,041	719,598,874
	therms	7,997,321	7,268,619	15,265,939



Customer Participation

Table 5 lists the number of unique CY 2013 customers by program, segment, and portfolio.

Table 5. CY 2013 Unique Customers by Segment, Program, and Portfolio

Segment	Program	Number of Unique Customers
Residential	Home Performance Bonus	528
	Assisted Home Performance Bonus	97
	Energy Bundle Bonus	6
	Trade Ally Bonus Bid	17
	Total	648
Nonresidential	Nonresidential Energy Bundle Bonus	106
	Schools and Government	90
	Small Business Platinum Package	324
	Smart Farms	350
	Nonresidential Trade Ally Bonus Bid	342
	Total	1,212
Portfolio Total		1,860

Cost-Effectiveness of the Territory-Wide Program Portfolio

The Evaluation Team conducted a benefit-cost analysis that included the savings, benefits, and costs from all Territory-Wide and associated statewide program measures implemented in the WPS service territory in CY 2013. In the current quadrennial cycle, the Program Administrator—with PSC approval—has elected to use a third-party cost-effectiveness calculator for program planning purposes. For an effective comparison of program performance and expectations, it is critical that the planning and evaluation approaches are consistent. Therefore, the Evaluation Team used the same calculator—a modified Total Resource Cost (TRC) test—for this and every calendar year Territory-Wide program evaluation.

Table 6 lists the cost-effectiveness test inputs and results for CY 2013. To calculate these costs, the Evaluation Team used information about CY 2013 program costs provided by Wipfli, the Fiscal Agent for Focus on Energy. The program costs encompass all of the costs associated with operating the efficiency programs, such as administration and delivery costs; however, incentive costs are not included, as they are deemed transfer payments. The Evaluation Team also used financial benefits associated with achieved electric and gas savings and separately calculated the financial benefits associated with avoided emissions.

Table 6. CY 2013 Territory-Wide Program TRC Test Inputs and Final Benefit/Cost Ratio

Test Input	Amount / Result
Incentives ¹	\$5,316,693
Program Costs	\$2,160,128
Incremental Measure Costs	\$16,152,719
Total Costs for TRC Test	\$18,312,846
Electric Benefits	\$17,933,285
Gas Benefits	\$5,397,168
Emissions Benefits	\$6,876,976
Total Benefits for TRC Test	\$30,207,429
TRC Benefit/Cost Ratio	1.65
TRC Net Benefits	\$11,894,582

¹ Incentives are not included in the TRC test calculation.

The CY 2013 Territory-Wide program portfolio was cost-effective, with a benefit-cost ratio of 1.65. The program portfolio has been cost-effective throughout the evaluation cycle, achieving benefit-cost ratios of 2.07 and 1.54 in CY 2011 and CY 2012, respectively.

Introduction

Focus on Energy, Wisconsin utilities' statewide energy efficiency and renewable resources program, encourages eligible residents and businesses to install cost-effective energy efficiency and renewable energy projects. Focus on Energy receives funding from each of the investor-owned utilities in Wisconsin, including the Wisconsin Public Service Corporation (WPS).

In 2008, WPS reached an agreement with the Citizens Utility Board (CUB) to increase funding specifically for its customers who participated in energy efficiency and renewable energy programs. These additional funds from WPS supported two types of programs:

- Territory-Wide programs, which offered bonus incentives to WPS customers on top of those provided by existing Focus on Energy programs
- Community Pilot programs, which offered additional energy efficiency opportunities to three municipalities in WPS territory—Brillion, Allouez, and Plover

The Territory-Wide programs were designed to increase customer participation in the Focus on Energy Programs in the WPS territory. Through these programs, Focus on Energy tested creative approaches to target hard-to-reach customer segments and generate more comprehensive energy saving retrofits. The Community Pilot offerings were designed so Focus on Energy could test the effectiveness of new tools, technologies, and approaches, including the use of new rates and the provision of special equipment to its participants.

For both the Territory-Wide programs and the Community Pilot programs, Focus on Energy was responsible for administration (through the Program Administrator) and delivery (through the Program Implementer), including distribution of incentives. From 2011 through 2013, CB&I (Chicago Bridge & Iron Company, formerly Shaw Environmental & Infrastructure, Inc.) administered the programs. Prior to 2011, the Wisconsin Energy Conservation Corporation (WECC) administered the programs.

The Public Service Commission of Wisconsin (PSC)—which approved the Territory-Wide programs for the years 2009 through 2013—also oversaw the programs and guided the Program Administrator and the Program Implementer. In November 2011, the PSC contracted with the Evaluation Team (comprising Cadmus and St. Norbert College Strategic Research Institute) to evaluate both the Focus on Energy programs and the Territory-Wide programs during the current (2011-2014) quadrennial cycle.

This report contains the Evaluation Team's findings from its impact and process evaluations of the CY 2013 Territory-Wide programs. Since CY 2013 was the final year of Territory-Wide program operations, the Evaluation Team also presents the energy and demand savings calculated during the CY 2011 and CY 2012 evaluations, as well as the aggregate energy and demand savings achieved from CY 2011 through CY 2013 (i.e., the evaluated program cycle).

CY 2013 Evaluation

The Evaluation Team investigated the energy-saving performance of the CY 2013 Territory-Wide programs—four residential and five nonresidential programs that were offered in WPS territory in addition to the Focus on Energy statewide programs. The Evaluation Team had previously conducted impact evaluations of Territory-Wide programs that were offered in CY 2011 and CY 2012. Some programs that were not available in CY 2013 contributed savings in earlier years. For example, the Heating Equipment Bonus was available only in CY 2011 and the Renewable Energy Bonus only in CY 2012.

Table 1 lists the evaluated Territory-Wide programs by calendar year.

Table 1. Residential and Nonresidential Territory-Wide Programs Offered in WPS Territory

CY 2013 Residential	CY 2013 Nonresidential
Home Performance Bonus (HP)	Nonresidential Energy Bundle Bonus (NEBB)
Assisted Home Performance Bonus (AHP)	Nonresidential Trade Ally Bonus Bid (NTABB)
Energy Bundle Bonus (EBB)	Schools and Government (S&G)
Trade Ally Bonus Bid (TABB)	Small Business Platinum Package (SBPP)
	Smart Farms (SF)
CY 2012 Residential	CY 2012 Nonresidential
Home Performance Bonus	Nonresidential Energy Bundle Bonus
Assisted Home Performance Bonus	Nonresidential Renewable Energy Bonus (NREB)
Energy Bundle Bonus	Schools and Government
Renewable Energy Bonus (REB)	
CY 2011 Residential	CY 2011 Nonresidential
Home Performance Bonus	Nonresidential Energy Bundle Bonus
Energy Bundle Bonus	Nonresidential Renewable Energy Bonus
Heating Equipment Bonus (HEB)	

Overview of CY 2013 Evaluation Activities

Table 2 illustrates the Evaluation Team’s cross-cutting activities for the CY 2013 evaluation.

Table 2. CY 2013 Evaluation Activities by Territory-Wide Program

CY 2013 Territory- Wide Program	Evaluation Activity							
	Program Administrator Interview	Program Implementer Interviews	Trade Ally Interviews	Nonparticipant Survey	Participant Survey	Materials Review	Savings Determination	Attribution Analysis
Residential Segment								
Home Performance Bonus	1	3	3	70	65	Census	Census	7
Assisted Home Performance Bonus					40	Census	Census	N/A
Energy Bundle Bonus	N/A	N/A	N/A	N/A	N/A	N/A	Census	N/A
Trade Ally Bonus Bid	N/A	N/A	N/A	N/A	N/A	N/A	Census	N/A
Nonresidential Segment								
Energy Bundle Bonus	1	13	5	N/A	41	Census	Census	5
Schools and Government	1	5		N/A	40	Census	Census	2
Smart Farms	1	4		N/A	44	Census	Census	2
Small Business Platinum Package	1	1		N/A	N/A	Census	Census	N/A
Trade Ally Bonus Bid	2	N/A	5	N/A	N/A	Census	Census	N/A
Total	7	26	13	70	230	N/A	N/A	16

Process Evaluation Methodology

Stakeholder Interviews

The Evaluation Team interviewed the Program Administrator and Program Implementer for each program. Topics covered in the interviews included their roles and responsibilities, program design and performance, customer marketing and outreach, customer and Trade Ally satisfaction, and lessons learned.

Trade Ally Interviews

The Evaluation Team interviewed 13 Trade Allies—eight who worked across the Territory-Wide programs and five who won a Trade Ally Bonus Bid award. Topics covered in these interviews were Trade Ally outreach and promotion to customers, program barriers, effectiveness of program administration and delivery, satisfaction, and lessons learned.

Participant Customer Surveys

The Evaluation Team surveyed 230 customers. These surveys assessed the participants' awareness, decision-making, satisfaction with program elements, freeridership and spillover activities, and demographics.

Nonparticipant Customer Survey

The Evaluation Team surveyed 70 residential WPS customers who did not participate in any Focus on Energy programs in CY 2013. These surveys assessed the nonparticipants' awareness and understanding of Focus on Energy and its program offerings, satisfaction with Focus on Energy and WPS, future plans for energy efficiency upgrades, and demographics.

Materials Review

The Evaluation Team reviewed materials for each program or bonus (such as program manuals) to determine if they included what are considered industry best practices for energy efficiency program administration, implementation, and delivery.

Impact Evaluation Methodology

Savings Review

The Evaluation Team collected, reconciled, and evaluated measure-level implementation data from SPECTRUM, the Focus on Energy database, that were attributable to the Territory-Wide programs during CY 2013.

Data Collection and Organization

The Evaluation Team conducted these steps to collect and organize measure-level implementation data from the SPECTRUM database:

- Step 1: Identified and Merged SPECTRUM Measure-Level Data Reports.** In SPECTRUM, the "Measure Flat File Report" is populated with measure-level implementation data according to the appropriate date ranges, programs, and funding sources. The funding sources are Focus on Energy, WPS Stipulation, and The Joyce Foundation. (The Joyce Foundation funding source is outside the scope of this evaluation and was therefore removed.) In order to maintain the integrity of the data attributable to the two other funding sources, the Evaluation Team downloaded each data range and funding source into a separate workbook and, in each, added a categorical field describing if the funding source was the WPS Stipulation. The Evaluation Team then merged and loaded the two workbooks into a single Structured Query Language (SQL) database.
- Step 2: Identified and Applied Application Connections.** The Evaluation Team gathered additional data from SPECTRUM that indicated any connections between rebate applications for WPS-specific bonus incentives and installed measures that received Focus on Energy funding. The Evaluation Team then loaded these data into the SQL database (created in Step 1) in order to create additional categorical fields. For every record in the SQL database, the Evaluation

Team created a binary connection field for the bonus incentives offered through each of these Territory-Wide programs—Trade Ally Bonus Bid, Schools and Government, Small Business Platinum Package, and Smart Farms—to the installed measures. For the Energy Bundle Bonus and a portion of the Small Business Platinum Package records, the Evaluation Team only included energy-saving measures connected at the project level to Territory-Wide bonus incentive measures.

- **Step 3: Collected Measure-Level Data by Program.** After establishing the funding sources and connection fields, the Evaluation Team collected measure-level data by program. It then reconciled these data and applied gross- and net-savings adjustments to determine annual and life-cycle *ex post* verified gross and verified net savings.

Gross, Verified Gross, and Verified Net Savings

The Evaluation Team conducted the following steps to determine gross, verified gross, and verified net savings:

- **Step 1: Identified *Ex Ante* Gross Savings.** The Evaluation Team reviewed the data collected from the SPECTRUM implementation database to check for entry errors, inconsistencies, and any other potential errors. Data reported in SPECTRUM were reconciled through collaboration with the Program Administrator. The Evaluation Team then used the reconciled data to identify annual and life-cycle *ex ante* reported gross savings attributable to the Territory-Wide programs administered in WPS territory.
- **Step 2: Determined *Ex Post* Verified Gross Savings.** The Evaluation Team applied gross-savings adjustments (determined through site visits, telephone surveys, and a billing analysis) calculated during its evaluation of Focus on Energy's statewide programs to determine annual and life-cycle *ex post* verified gross savings.¹ For the subsequent evaluation of the Territory-Wide programs administered in WPS territory, the Evaluation Team mapped measures and measure groups identified in Step 1 to appropriate gross-savings adjustments determined during the statewide evaluation.
- **Step 3: Determined Verified Net Savings.** The Evaluation Team determined verified net savings using net-to-gross (NTG) ratios, which were calculated using freeridership and spillover estimates identified during the statewide evaluation or, wherever possible, through self-report data from WPS-specific surveys.² The Evaluation Team applied NTG ratios to the *ex post* verified gross savings from Step 2 to determine annual and life-cycle verified net savings attributable to the Territory-Wide programs administered in WPS territory. NTG ratios are presented by measure and measure group in Appendix A.

¹ Cadmus. *Focus on Energy Calendar Year 2013 Evaluation Report Volume II*. May 15, 2014. Available online at: https://focusonenergy.com/sites/default/files/FOC_XC_%20CY%2013%20Evaluation%20Report_Volume%20II.pdf.

² NTG = 1 – Freeridership + Spillover

Attribution Analysis

The Evaluation Team conducted the following activities to identify the influence of Territory-Wide bonus incentives on participant freeridership and NTG.

Research Hypothesis

The Evaluation Team hypothesized that enhanced incentives and project assistance offered through the Territory-Wide programs affected participant decision-making such that there was lower freeridership and, depending on reported spillover savings, higher NTG among WPS customers than among all other utility customers.³ In other words, the Evaluation Team hypothesized that enhanced incentives and project assistance effectively lowered participant freeridership since more WPS customers than other utility customers would attribute their participation to program offerings.

Data Collection and Organization

To analyze differences in participant freeridership, spillover, and NTG between WPS customers who received enhanced incentives through the Territory-Wide programs and all other utility customers who participated in the statewide Focus on Energy programs, the Evaluation Team conducted the following steps to collect and organize data:

- Step 1: Identified Territory-Wide Programs for Analysis.** The Evaluation Team reviewed the delivery method for each Territory-Wide program to determine which would be suitable for the attribution analysis. Most importantly, the Evaluation Team considered the participants' ability to attribute decisions about participation to incentives and other program offerings such as project assistance. For example, the Evaluation Team did not conduct an attribution analysis for the Trade Ally Bonus Bid program since that program did not explicitly offer or deliver enhanced incentives directly to WPS customers. The Evaluation Team conducted attribution analyses for these Territory-Wide programs—Home Performance Bonus, Nonresidential Energy Bundle Bonus, Schools and Government, and Smart Farms.
- Step 2: Determined Connections between Territory-Wide Programs and Statewide Focus on Energy Programs.** Each Territory-Wide program offered enhanced incentives or extra project assistance to WPS customers in addition to those offered through the statewide programs. For example, WPS customers who received enhanced incentives through the Schools and Government Program may have installed energy-saving measures through either the statewide Focus on Energy Business Incentive or Small Business programs. Table 3 shows the Territory-Wide programs in the attribution analysis and the statewide Focus on Energy programs connected to each one. The connections presented in this table represent connections based on

³ To calculate freeridership for both the Territory-Wide and statewide program participants, the Evaluation Team asked customers to attribute the timing and extent of their incented project work to the entire package of incentives; the Evaluation Team did not ask—nor did it require—WPS customers to attribute their program participation to the portion of incentives funded by WPS.

projects completed in CY 2013 (i.e., projects identified in SPECTRUM) and do not necessarily reflect all possible connections based on the programs' customer eligibility requirements.

Table 3. CY 2013 Territory-Wide Programs and Connected Focus on Energy Statewide Programs

Territory-Wide Program	Connected Focus on Energy Statewide Program(s)
Home Performance Bonus	Home Performance with ENERGY STAR Program
Nonresidential Energy Bundle Bonus	Business Incentive Program, Chain Stores and Franchises, Renewable Energy Competitive Incentive Program, Small Business Program
Schools and Government	Business Incentive Program, Small Business Program
Smart Farms	Business Incentive Program

- Step 3: Collected and Organized Program Participant Survey Data.** The Evaluation Team determined that responses to freeridership and spillover questions *administered uniformly across all evaluation surveys* would serve as the basis for the attribution analysis. The freeridership questions asked respondents—both WPS and other utility customers—to attribute the timing and extent of their incented project work to the entire package of incentives or project assistance offered through the programs, regardless of funding source. None of the freeridership questions presented in the Territory-Wide surveys specified that WPS had offered enhanced incentives or additional project assistance. This allowed the Evaluation Team to compare responses from both the Territory-Wide program surveys and the statewide Focus on Energy program surveys.

For each set of connected programs identified in Table 3, the Evaluation Team collected self-report freeridership and spillover data from program surveys conducted during the Territory-Wide program evaluation and from the evaluations of each connected statewide program. Then, for each set of connected programs, the Evaluation Team pooled all survey respondent data and identified each respondent as either “WPS” or “other.” Therefore, for each attribution analysis, the pool of WPS respondents included all respondents to the Territory-Wide program survey and any other WPS respondents who were included in the statewide evaluations’ randomly selected participant samples.

Attributing the Impact of Enhanced Incentives on Freeridership and NTG

For each attribution analysis, the Evaluation Team conducted the following steps to identify the impact of enhanced incentives on freeridership and NTG:

- Step 1: Calculated NTG for Each Respondent.** For each set of connected programs, the Evaluation Team used self-report freeridership and spillover savings estimates to calculate NTG for each respondent in the sample.⁴

⁴ Freeridership = Freeridership Savings / Total Customer Savings; Spillover = Spillover Savings / Total Customer Savings; NTG = 1 – Freeridership + Spillover.

- Step 2: Determined Sample Groups for Granular Analysis.** For each set of connected programs, the Evaluation Team subdivided the respondent data, including calculated NTG estimates, into smaller sample group stratifications. Each attribution analysis involved one general sample, with all respondents from the Territory-Wide and connected statewide programs, and between one and six additional sample groups defined by various criteria such as home size, home age, or sector.⁵ The Evaluation Team incorporated the additional sample groups in order to determine differences in freeridership and NTG between WPS and other utility customers who shared similar home characteristics or who operated in similar economic sectors.
- Step 3: Calculated Freeridership, Spillover, and NTG by Respondent Type.** For each attribution sample group, the Evaluation Team calculated separate freeridership, spillover, and NTG estimates for enhanced incentive recipients and all other Focus on Energy program participants. First, it aggregated freeridership, spillover, and program energy savings. Then, it calculated separate freeridership, spillover, and NTG estimates for WPS enhanced incentive recipients and all other Focus on Energy program participants according to the following equations:

$$\text{Freeridership} = \frac{\sum(\text{Freeridership Energy Savings})}{\sum(\text{Program Energy Savings})}$$

$$\text{Spillover} = \frac{\sum(\text{Spillover Energy Savings})}{\sum(\text{Program Energy Savings})}$$

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

- Step 4: Determined Significant Differences in Freeridership and NTG.** The Evaluation Team then used a two-sample t-test procedure to determine if the observed differences in freeridership and NTG between respondent types were statistically significant at the 90% level of confidence. Statistically significant differences indicated that enhanced incentives had a significant impact on program freeridership and/or NTG.

⁵ The Evaluation Team presents sample groups for each attribution analysis in detail in the program evaluation sections.

Portfolio-Level Findings

Impact Evaluation Findings

In this section, the Evaluation Team presents first-year annual and life-cycle verified net savings achieved through the Territory-Wide programs administered in the WPS service territory,⁶ as well as a summary of portfolio-level attribution analysis findings. First, the Evaluation Team presents first-year annual verified net savings by program, segment (residential or nonresidential), and calendar year. Then the Evaluation Team presents life-cycle verified net savings by program, segment, and calendar year. Finally, the Evaluation Team summarizes portfolio-level attribution analysis findings.

Summary of First-Year Annual Verified Net Savings

The evaluated program cycle (CY 2011 through CY 2013) achieved total net annual savings and demand reductions of 54,791,857 kWh, 9,587 kW, and 1,058,887 therms. The Evaluation Team presents these savings by program, segment, and calendar year in Table 4 and Table 5.

Table 4 presents net first-year annual savings by residential program from CY 2011 through CY 2013 and from the evaluated program cycle. Gray cells indicate when programs were not offered. Figure 1 shows the net first-year annual savings by residential program for the evaluated program cycle.

Table 5 presents net first-year annual savings by nonresidential program for the same period. Figure 2 shows the net first-year annual savings by nonresidential program for the evaluated program cycle.

Summary of Life-Cycle Verified Net Savings

Throughout the evaluated program cycle (CY 2011 through CY 2013) the Territory-Wide programs achieved net life-cycle savings of 719,598,874 kWh and 15,265,939 therms. The Evaluation Team presents these savings by program, segment, and calendar year in Table 6 and Table 7.

Table 6 presents net life-cycle savings by residential program from CY 2011 through CY 2013 and the evaluated program cycle. Figure 3 shows net life-cycle savings by residential program for the evaluated program cycle.

Table 7 presents net life-cycle savings by nonresidential program from CY 2011 through CY 2013, and the evaluated program cycle. Figure 4 shows net life-cycle savings by nonresidential program for the evaluated program cycle.

⁶ This section presents savings achieved by Territory-Wide programs in CY 2011, CY 2012, CY 2013, and the evaluated program cycle (i.e., CY 2011 through CY 2013). The Evaluation Team calculated CY 2011 and CY 2012 savings during prior evaluations; it presents CY 2013 savings by program in subsequent sections of this report.

Table 4. Summary of Net First-Year Annual kWh, kW, and Therm Savings by Residential Program¹

Program	CY 2011			CY 2012			CY 2013			Total		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
HP	106,445	54	91,027	95,837	59	71,788	570,639	181	76,514	772,921	294	239,329
AHP				1,653	1	1,018	57,962	21	17,865	59,615	22	18,883
EBB	115,907	13	10,479	565,304	68	31,786	108,790	3	12,946	790,001	84	55,211
REB				22,799	10	515				22,799	10	515
TABB							71,618	22	0	71,618	22	0
HEB	748,155	171	82,652							748,155	171	82,652
Total	970,507	238	184,158	685,593	138	105,107	809,010	226	107,325	2,465,110	602	396,590

¹Columns do not sum to totals due to rounding.

Figure 1. Net First-Year Annual kWh, kW, and Therm Savings by Residential Program, CY 2011 – CY 2013

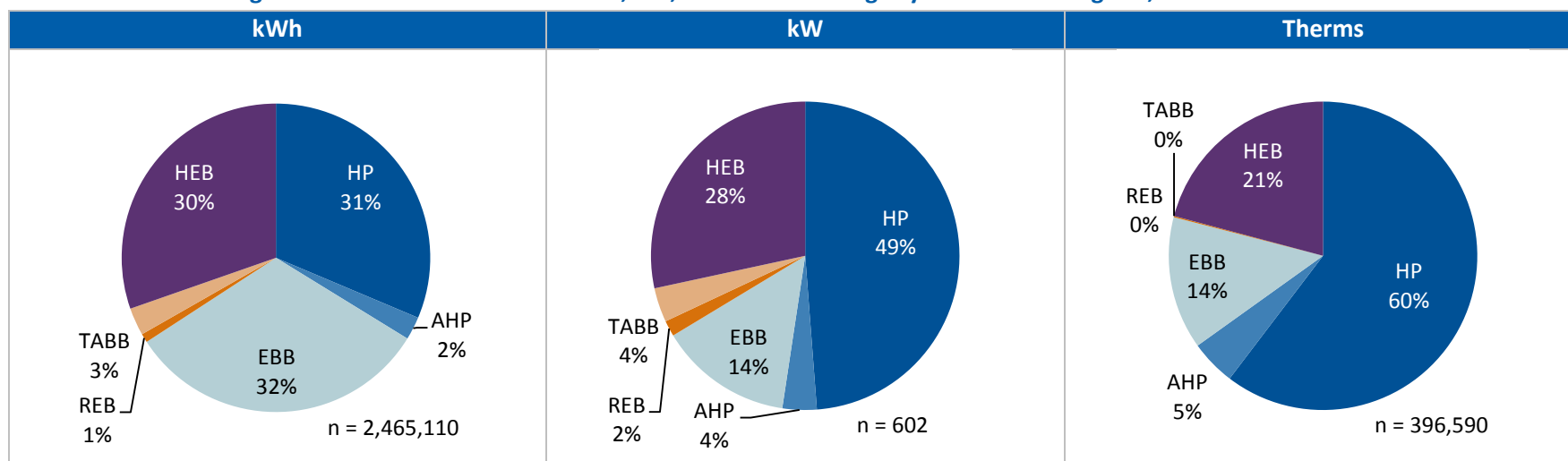
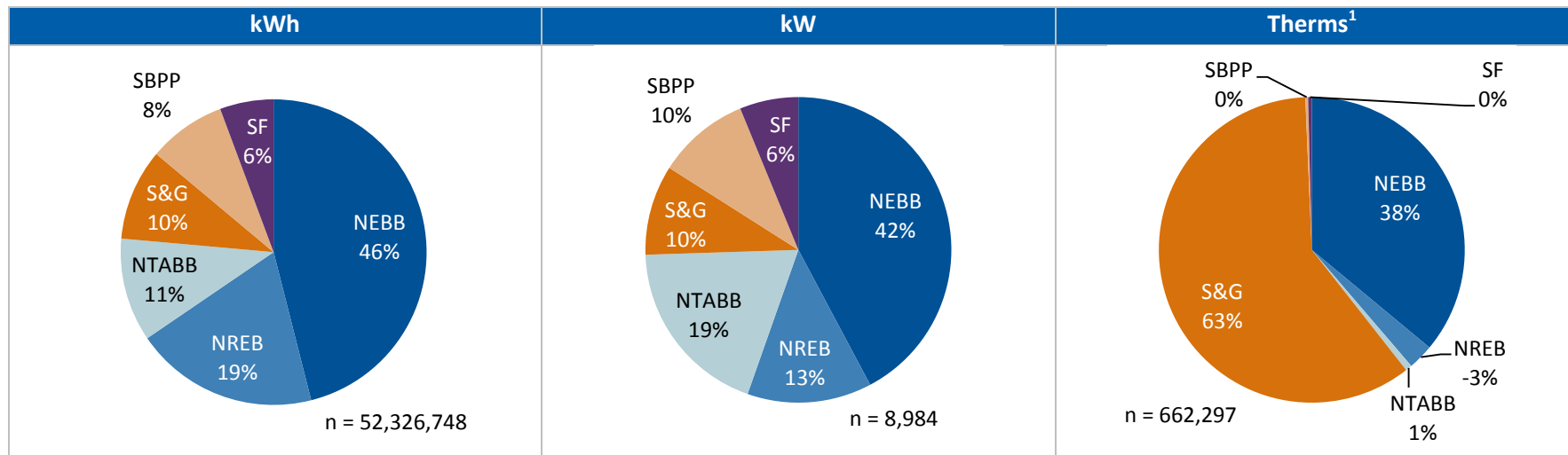


Table 5. Summary of Net First-Year Annual kWh, kW, and Therm Savings by Nonresidential Program

Program	CY 2011			CY 2012			CY 2013			Total		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
NEBB	6,420,907	1,515	88,091	13,880,371	1,693	120,548	3,791,827	585	43,608	24,093,105	3,793	252,247
NREB	1,127,223	147	0	9,038,846	1,036	-18,884				10,166,069	1,183	-18,884
NTABB							5,727,519	1,716	4,800	5,727,519	1,716	4,800
S&G				583,962	324	56,373	4,480,367	532	363,017	5,064,329	856	419,390
SBPP							4,306,119	879	2,090	4,306,119	879	2,090
SF							2,969,607	557	2,654	2,969,607	557	2,654
Total	7,548,130	1,662	88,091	23,503,179	3,053	158,037	21,275,439	4,269	416,169	52,326,748	8,984	662,297

Figure 2. Net First-Year Annual kWh, kW, and Therm Savings by Nonresidential Program, CY 2011 – CY 2013



¹Nonresidential Renewable Energy Bonus (NREB) therm savings are negative (-3%); as a result, the figure is not to scale.

Table 6. Summary of Net Life-Cycle kWh and Therm Savings by Residential Program¹

Program	CY 2011		CY 2012		CY 2013		Total	
	kWh	Therms	kWh	Therms	kWh	Therms	kWh	Therms
HP	2,659,437	2,275,624	1,482,676	1,231,016	10,609,254	1,807,669	14,751,367	5,314,309
AHP			16,153	12,220	916,537	417,659	932,690	429,879
EBB	1,036,319	92,713	3,188,736	384,602	1,356,307	243,604	5,581,362	720,919
REB			455,980	10,300			455,980	10,300
TABB					1,126,413	0	1,126,413	0
HEB	9,726,020	1,521,914					9,726,020	1,521,914
Total	13,421,776	3,890,251	5,143,545	1,638,138	14,008,512	2,468,932	32,573,833	7,997,321

¹Columns do not sum to totals due to rounding.

Figure 3. Net Life-Cycle kWh and Therm Savings by Residential Program, CY 2011 – CY 2013

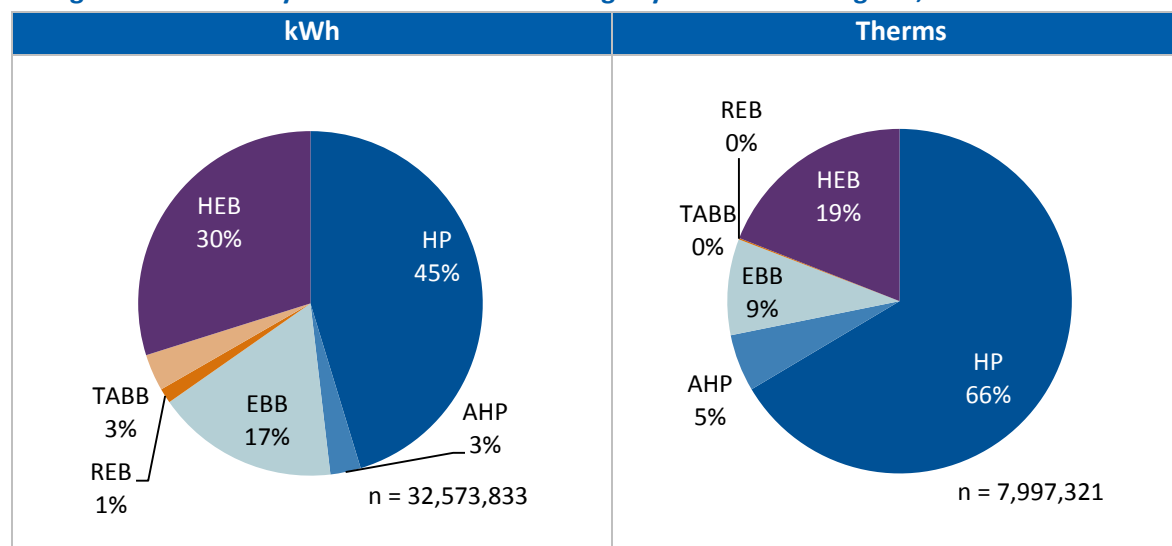
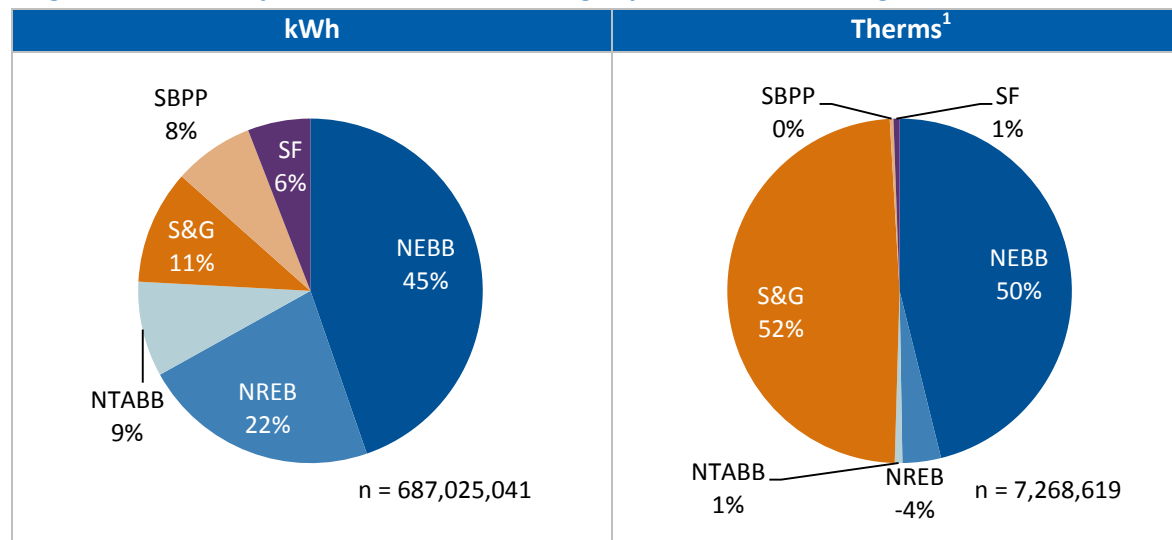


Table 7. Summary of Net Life-Cycle kWh and Therm Savings by Nonresidential Program

Program	CY 2011		CY 2012		CY 2013		Total	
	kWh	Therms	kWh	Therms	kWh	Therms	kWh	Therms
NEBB	81,877,691	1,295,496	174,552,236	1,618,250	50,605,368	699,912	307,035,295	3,613,658
NREB	16,908,341	0	135,732,965	-283,260			152,641,306	-283,260
NTABB					61,428,223	56,064	61,428,223	56,064
S&G			8,842,671	596,461	64,787,095	3,214,117	73,629,766	3,810,578
SBPP					51,815,865	27,131	51,815,865	27,131
SF					40,474,586	44,448	40,474,586	44,448
Total	98,786,032	1,295,496	319,127,872	1,931,451	269,111,137	4,041,672	687,025,041	7,268,619

Figure 4. Net Life-Cycle kWh and Therm Savings by Nonresidential Program, CY 2011 – CY 2013



¹Nonresidential Renewable Energy Bonus (NREB) therm savings are negative (-4%); as a result, the figure is not to scale.

Summary of Attribution Analysis Findings

The Evaluation Team conducted attribution analyses to determine the impact on participant freeridership and NTG from enhanced incentives and project assistance offered to WPS customers through these Territory-Wide programs:

- Home Performance Bonus
- Nonresidential Energy Bundle Bonus
- Schools and Government
- Smart Farms

Across all attribution analyses and sample groups, estimated freeridership was consistently lower among WPS customers who received enhanced incentives than among all other participants. Due to fluctuations in reported spillover savings between customer types and across sample groups, there was no similar trend for calculated NTG in any of the attribution analyses.

Table 8 presents calculated freeridership, spillover, and NTG by program, sample group, and customer type (i.e., “WPS” or “other”). For details regarding the steps taken to calculate NTG, please see the Attribution Analysis methodology section above.

Table 8. Freeridership, Spillover, and NTG by Program, Sample Group, and Customer Type

Program	Sample Group	Freeridership		Spillover		NTG	
		WPS	Other	WPS	Other	WPS	Other
Home Performance Bonus	General	3.96%	12.05%	0.50%	3.50%	96.54%	91.44%
	Small Homes	6.49%	14.32%	0.54%	4.01%	94.05%	89.68%
	Large Homes	1.23%	4.01%	0.54%	1.87%	99.31%	97.87%
	Old Homes	3.94%	6.54%	0.45%	4.77%	96.51%	98.24%
	New Homes	4.01%	26.03%	0.59%	0.27%	96.58%	74.24%
	Low - Middle Income	3.47%	14.39%	0.33%	6.03%	96.85%	91.64%
	High Income	5.32%	10.59%	0.90%	0.83%	95.58%	90.25%
Nonresidential Energy Bundle Bonus	General	26.48%	41.01%	3.70%	25.21%	77.22%	84.21%
	Agriculture	3.24%	98.07%	0.00%	0.24%	96.76%	2.17%
	Commercial	11.52%	19.60%	3.08%	6.52%	91.56%	86.92%
	Industrial	22.87%	25.18%	32.05%	0.00%	109.18%	74.82%
	Schools & Government	29.83%	52.52%	0.00%	61.06%	70.17%	108.54%
Schools and Government	General	23.16%	41.01%	2.92%	25.21%	79.76%	84.21%
	Schools & Government	27.03%	52.52%	0.19%	61.06%	73.16%	108.54%
Smart Farms	General	22.49%	41.01%	3.51%	25.21%	81.03%	84.21%
	Agriculture	13.59%	98.07%	0.54%	0.24%	86.95%	2.17%

The Evaluation Team used a two-sample t-test procedure to determine if the observed differences in freeridership and NTG were statistically significant at the 90% level of confidence. Among schools and government sector respondents in the Nonresidential Energy Bundle Bonus analysis, the difference in NTG was statistically significant. In that case, the significant difference in NTG between WPS and all other customers resulted primarily from substantial spillover savings reported by non-WPS customers. As with the other sample groups, freeridership was lower among WPS customers than among all other program participants.

None of the other differences in NTG or freeridership was statistically significant at the 90% confidence level. In other words, the Evaluation Team cannot conclude with at least 90% confidence that enhanced incentives or project assistance offered through the Home Performance Bonus, Nonresidential Energy Bundle Bonus, Schools and Government, and Smart Farms Territory-Wide programs significantly affected participant freeridership. However, the data presented in Table 8 are still consistent with the hypothesis that enhanced incentives lower freeridership; across all analyses and sample groups, the Evaluation Team calculated lower freeridership among WPS participants than all other participants. For some sample groups, particularly the agriculture sector, the lack of statistical significance could reflect a small sample size rather than a true lack of difference.⁷

Process Evaluation Findings

The purpose of the CY 2013 process evaluation was to gather feedback about the Territory-Wide programs regarding the effectiveness of delivery and implementation, customer awareness, customer and Trade Ally satisfaction and to identify any lessons learned that Focus on Energy could apply to other programs. In this section, the Evaluation Team presents the CY 2013 process evaluation findings by residential and nonresidential segment.

Residential Segment Level Findings

For the CY 2013 process evaluation of the Territory-Wide residential programs, the Evaluation Team collected information and perspectives from the Program Implementer, Program Administrator, customers, and Trade Allies. This section summarizes process evaluation findings across two of the residential bonus offerings—the Home Performance Bonus and the Assisted Home Performance Bonus.

Coordination and Delivery with Associated Focus on Energy Programs

The bonus incentives available to WPS residential customers through the Territory-Wide programs were in addition to standard Focus on Energy incentives. Table 9 shows the residential Territory-Wide

⁷ The Evaluation Team presents details about sample groups, including definitions and sample sizes, in the individual program evaluation sections.

offerings available to WPS customers and the associated Focus on Energy programs that coordinated with the bonus offerings.⁸

Table 9. Residential Territory-Wide Offerings and Associated Focus on Energy Programs

Territory-Wide Offering	Associated Focus on Energy Program
Home Performance Bonus	Home Performance with ENERGY STAR Program
Assisted Home Performance Bonus	Assisted Home Performance with ENERGY STAR Program
Residential Energy Bundle Bonus	Multifamily Energy Savings Program
Residential Trade Ally Bonus Bid	Residential Rewards Program

The Program Implementer delivered the Home Performance Bonus and Assisted Home Performance Bonus to WPS participants in conjunction with the Home Performance with ENERGY STAR Program and the Assisted Home Performance with ENERGY STAR Program. These programs and bonuses relied on Trade Allies to conduct home energy assessments, recommend energy-saving retrofits, and install measures for customers. Customers did not complete any additional paperwork to receive the bonus incentive. Bonus funding was available on a first-come first-served basis for projects.

Program Implementer staff described some complications with distributing the bonus incentives on a first-come first-served basis. When funding was close to running out, the Program Implementer encouraged Trade Allies to complete projects and submit paperwork. According to Program implementer staff, fluctuations in the number of projects submitted each month made it difficult to predict how many projects Trade Allies would submit. One Program Implementer staff member said that they were expecting 40 or 50 projects and instead received 90. Trade Allies submitted more projects than the available funding could accommodate, so the Program Implementer secured additional funding from the Program Administrator to cover most, but not all, of the remaining projects.

Two of the three interviewed Trade Allies described frustrations about the uncertainty regarding funding availability and that project funding had run out. Both said they had to pay part or all of the bonus incentives promised to some of their customers. One commented, “That bonus actually ended up costing my company thousands of dollars.” As a result, he said his company had significantly scaled back its involvement with the Home Performance with ENERGY STAR Program in 2014.

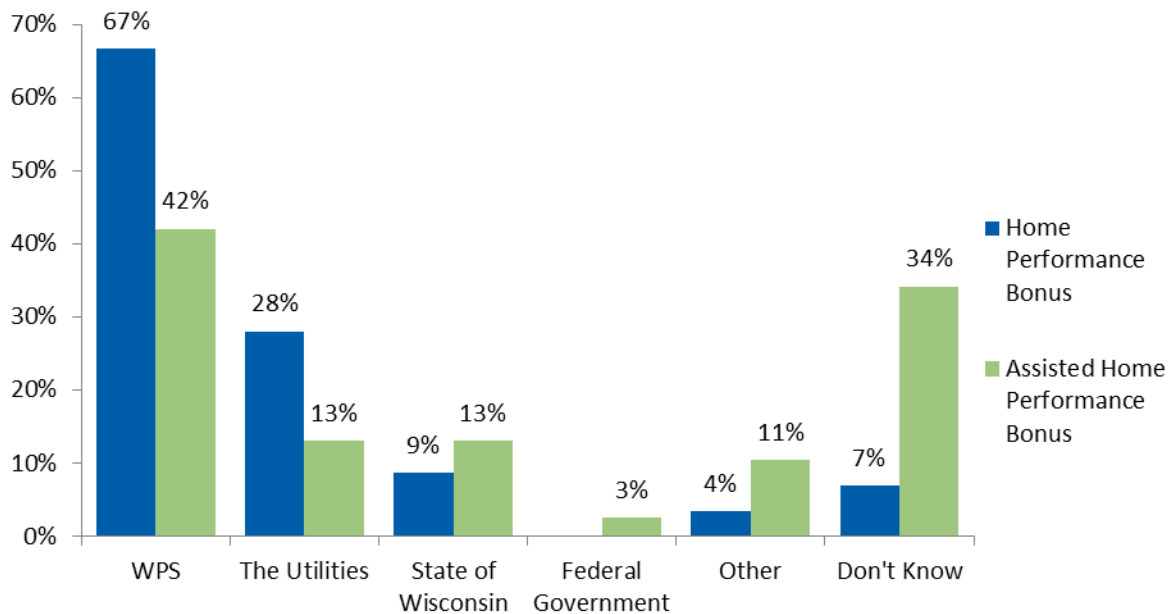
The Program Implementer suggested it may have been able to gauge when funds would be depleted by establishing a reservation system in which Trade Allies informed it of planned projects.

⁸ The Evaluation Team did not conduct a separate process evaluation of the residential and nonresidential Energy Bundle Bonus and Trade Ally Bonus Bid because there was little difference in how these offerings were designed, managed, and delivered between the residential and nonresidential segments. As a result, the Energy Bundle Bonus and Trade Ally Bonus Bid process findings are presented only in the nonresidential segment-level findings section.

Customer Awareness and Understanding

To explore with which entity customers associated Focus on Energy, the Evaluation Team asked participant customer survey respondents who they thought sponsored Focus on Energy. As Figure 5 shows, the top entity respondents cited was WPS, followed by the utilities and the State of Wisconsin.

Figure 5. Who Residential Customers Thought Sponsored Focus on Energy



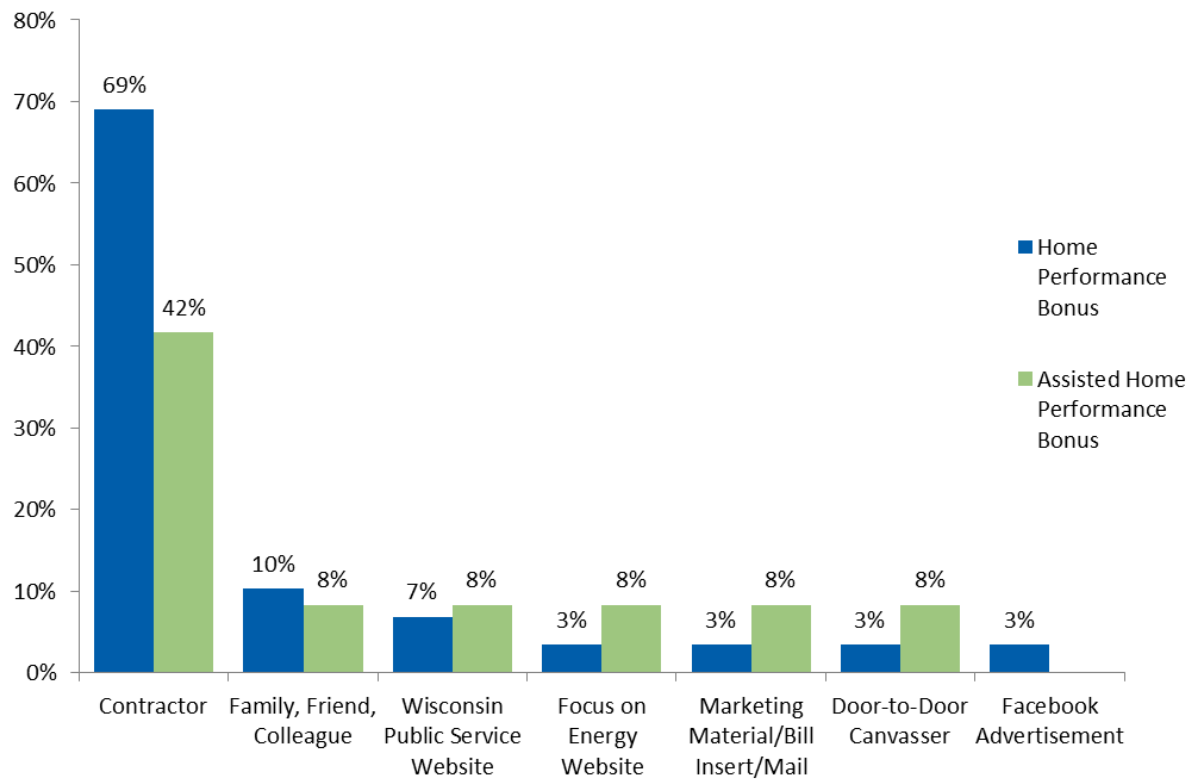
Source: Home Performance Bonus and Assisted Home Performance Bonus Participating Customer Survey, A3: “Part of our research is to determine if customers are aware of who sponsors these programs. Can you tell me who sponsors Focus on Energy?” (Home Performance Bonus n=57; Assisted Home Performance Bonus n=38; multiple responses allowed)

In the surveys of participating customers, the Evaluation Team asked if respondents were familiar with the bonus incentive available for WPS customers. Respondents indicated low awareness—nearly half of Home Performance Bonus respondents (31 out of 64) and 70% of Assisted Home Performance Bonus respondents (28 out of 40) said they were unfamiliar with the bonus incentive.

Home Performance Bonus respondents indicated greater awareness than the Assisted Home Performance Bonus respondents. This may be attributed to the differences in incentive payment; Home Performance Bonus participants received a refund check but Assisted Home Performance Bonus participants were given a discount on their invoice from the Trade Ally. Low awareness for both sets of participants may also be because marketing materials did not differentiate between the two types of awards available (the standard Focus on Energy incentive and the Bonus incentive) so some customers may not have realized they received an additional discount.

The Evaluation Team asked respondents who were familiar with the Bonus how they first heard about it (Figure 6). Participants of both Home Performance Bonus and Assisted Home Performance Bonus most frequently heard about the bonus from their contractor. This matches statements from the Program Implementer and the Trade Allies that both programs relied on Trade Allies as the primary delivery channel and source of Program information.

Figure 6. Residential Customer Sources of Awareness



Source: Home Performance Bonus and Assisted Home Performance Bonus Participating Customer Survey, I1: “Are you familiar with the bonus incentive for WPS customers in the Home Performance with ENERGY STAR/Assisted Home Performance with ENERGY STAR Program? This bonus doubles the normal incentive.”
(Home Performance Bonus n=29; Assisted Home Performance Bonus n=12.)⁹

Customer Decision-Making

To explore the influence of the Home Performance Bonus on customer decision-making, the Evaluation Team asked respondents who said they were aware of the Bonus how important it was in their decision to participate in the Home Performance with ENERGY STAR Program. All indicated the Bonus was “very

⁹ The Evaluation Team surveyed 70 Home Performance Bonus and 40 Assisted Home Performance Bonus customers. Not all respondents answered every question; therefore, sample size varies by survey question.

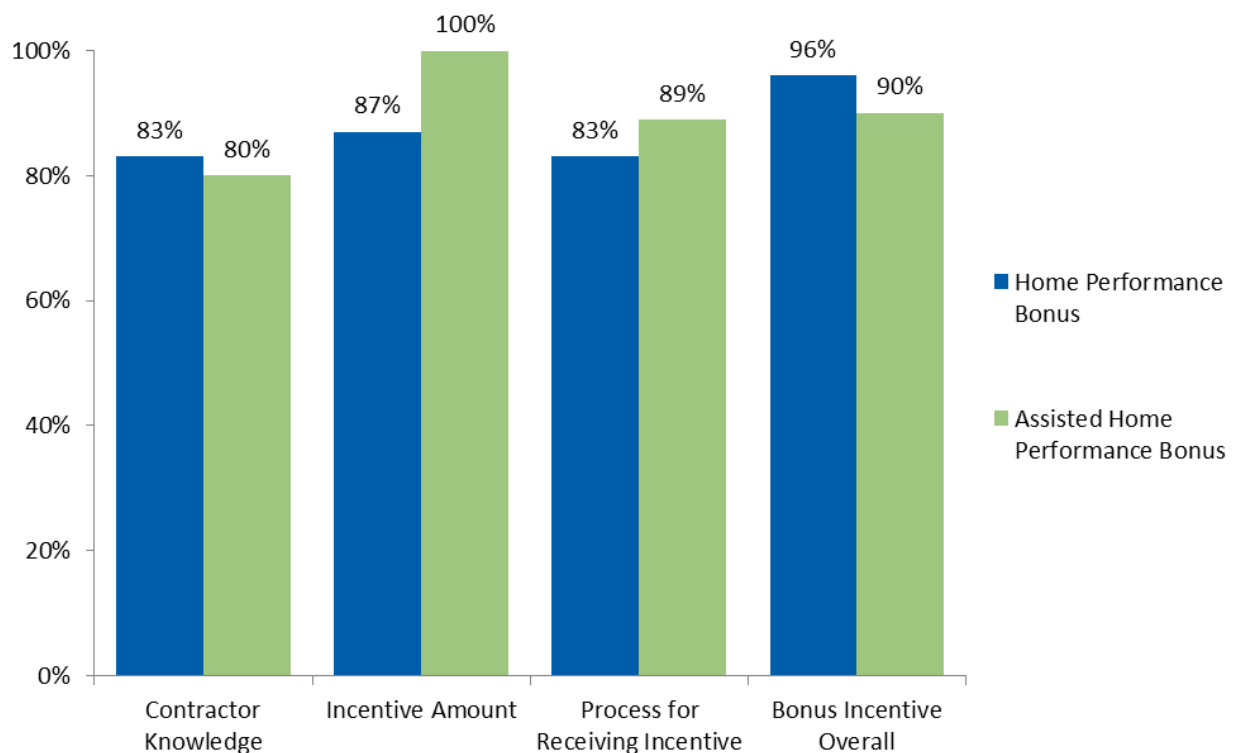
important” (94%, or 29 out of 31) or “somewhat important” (6%, or 2 out of 31) in their decision. The Evaluation Team also asked these respondents if they would have made more, less, or the same energy-saving improvements without the Bonus. Seventy-one percent of respondents (22 out of 31) said they would have made fewer improvements without the Bonus.

Participant Satisfaction

Customer Satisfaction

The Evaluation Team asked participating customers how satisfied they were with Focus on Energy’s programs. As Figure 7 shows, the majority of Home Performance Bonus and Assisted Home Performance Bonus participants said they were “very satisfied” with the Bonus and Bonus elements.

Figure 7. Percentage of Respondents “Very Satisfied” with the Bonus and Bonus Elements



Source: Home Performance Bonus and Assisted Home Performance Bonus Participating Customer Survey, SAT1, SAT3, SAT 4, SAT 6: “How satisfied would you say you are with the [PROGRAM ELEMENT]? Would you say you are...?” (Home Performance Bonus n=23; Assisted Home Performance Bonus n≥8)

Trade Ally Satisfaction

The Evaluation Team also asked how satisfied Trade Allies were with the Home Performance Bonus and Assisted Home Performance Bonus. All three Trade Allies replied with different satisfaction ratings: “very satisfied,” “not too satisfied,” and “not at all satisfied.” The Trade Ally who was “not at all

satisfied” said it was because of the uncertainty regarding the availability of Bonus funding and because funding ran out earlier than anticipated. The Trade Ally who was “not too satisfied” said it was because he thought customers would have completed projects without the additional incentives.

Nonparticipant Customer Survey

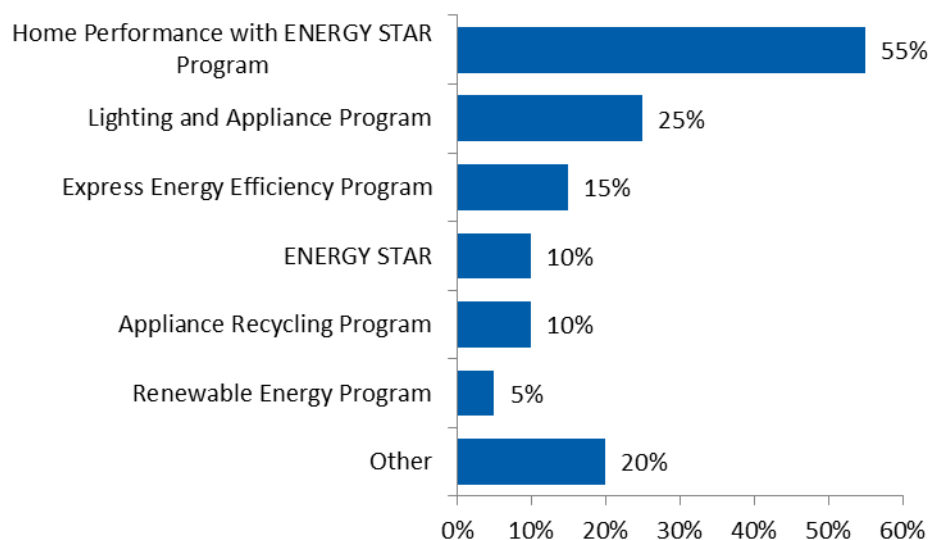
The Evaluation Team completed 70 surveys with nonparticipant residential customers in the WPS territory to explore their awareness and understanding of Focus on Energy and its program offerings, satisfaction with Focus on Energy and WPS, future plans for energy efficiency upgrades, and demographics. Not all respondents answered every question; therefore, the sample size varied for each survey question.

Customer Awareness and Understanding

Nonparticipants’ awareness of available rebates or incentives was low. Nearly three-quarters of respondents (50 out of 70) were not aware of any rebates or incentives available for making energy efficiency upgrades in their home.

The Evaluation Team asked respondents who were aware of rebates or incentives to name the programs or incentives about which they had seen or heard information. As Figure 8 shows, over half said they had heard about the Home Performance with ENERGY STAR Program.

Figure 8. Nonparticipant Awareness of Incentive Programs

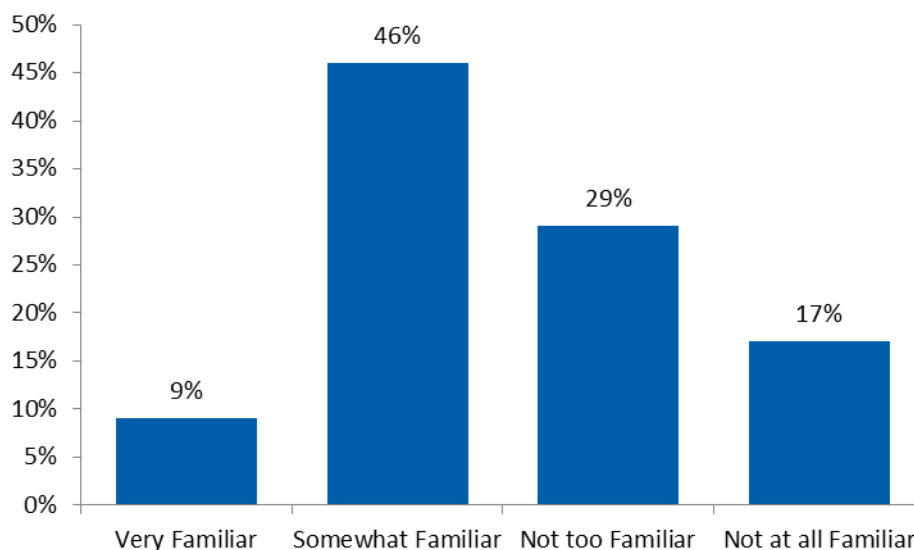


Source: Nonparticipant Customer Survey, A2: “What programs or incentives have you seen information on or heard about?” (n=20; multiple responses allowed)

The Evaluation Team asked all respondents to rate their level of familiarity with Focus on Energy. As Figure 9 shows respondents most commonly said they were “somewhat familiar” with Focus on Energy (46%, or 32 out of 70). Few respondents (9%, or 6 out of 70) said they were “very familiar” with Focus on

Energy. Nearly half said they were “not too familiar” (20 out of 70) or “not at all familiar” (12 out of 70) with Focus on Energy.

Figure 9. Nonparticipant Level of Familiarity with Focus on Energy



Source: Nonparticipant Customer Survey, A5: “How familiar are you with Focus on Energy? Would you say ...?” (n=70)

To explore with which entities nonparticipant customers associated Focus on Energy, the Evaluation Team asked two questions of respondents who said they were “very familiar,” “somewhat familiar,” or “not too familiar” with Focus on Energy—who they thought operated or sponsored Focus on Energy and who they thought funded Focus on Energy’s offerings. Most of these respondents said they did not know who sponsored (60%, or 35 out of 58) or funded (64%, or 37 out of 58) Focus on Energy.

A majority of the respondents who could provide a response (74%, or 17 out of 23) said that the utilities sponsored or operated Focus on Energy (57% cited WPS specifically, 17% cited utilities generally). Respondents also said that sponsors or operators of Focus on Energy were:

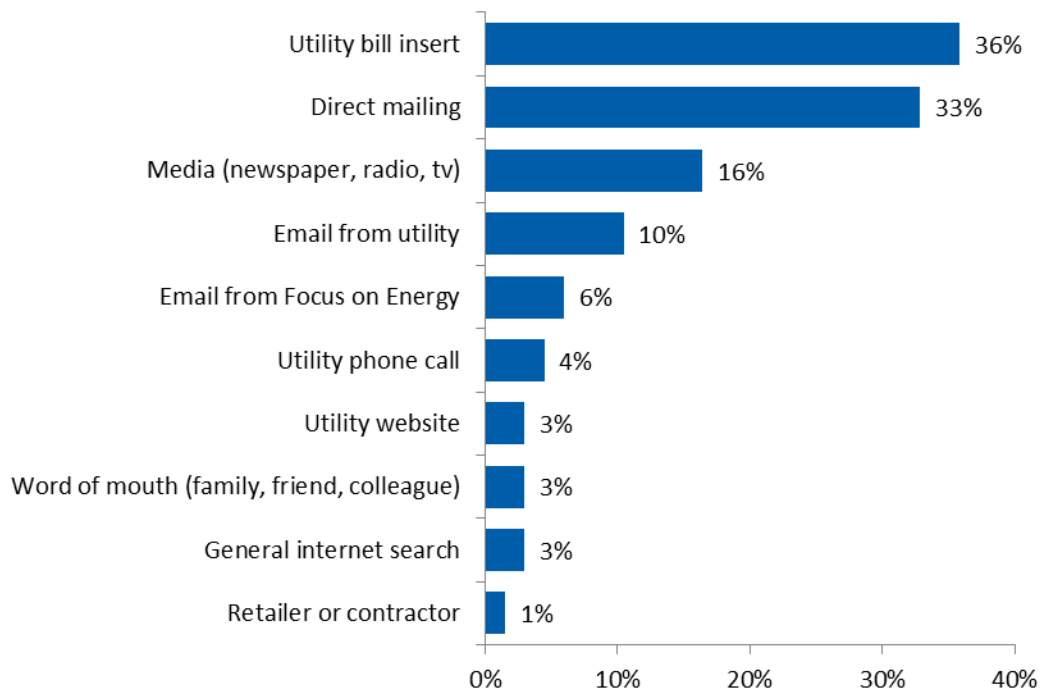
- The state (22%, or 5 out of 23)
- Private industry (9%, or 2 out of 23)
- Ratepayers (4%, or 11 out of 23)
- The Public Service Commission (4%)
- The federal government (4%)

When asked how Focus on Energy's offerings are funded, customers responded similarly. Over half of those who could provide a response (12 out of 21) said that the utilities funded Focus on Energy (38% cited WPS specifically, 19% cited utilities generally). They also cited:

- The state (38%, or 8 out of 21)
- Ratepayers (14%, or 3 out of 21)
- The federal government (14%)
- Taxpayer dollars (5%, or 1 out of 21)
- Donations (5%)
- Local government (5%)

The Evaluation Team asked all respondents about the best way to inform them about support available to help them increase energy efficiency in their homes. As Figure 10 shows, respondents most frequently cited utility bill inserts (36%, or 24 out of 67), direct mailing (33%, or 22 out of 67), and media (newspaper, radio, or tv) (16%, or 11 out of 67) as the preferred sources of information about energy-efficiency support.

Figure 10. Nonparticipant Preferred Information Sources for Energy-Efficiency Information



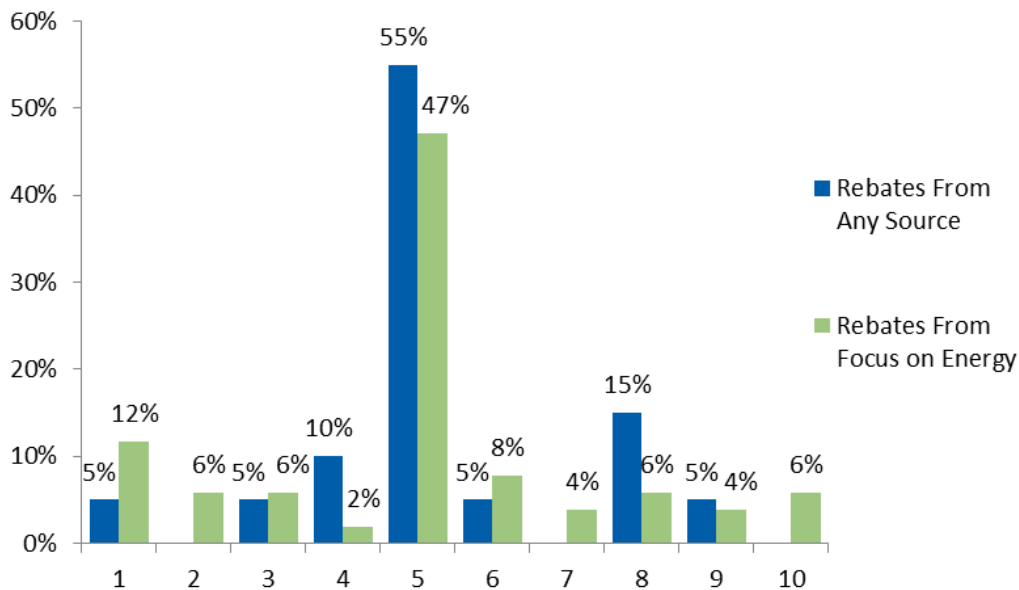
Source: Nonparticipant Customer Survey, D5: "What is the best way to inform you about support available to increase energy-efficiency in your home?" (n=67)

Customer Satisfaction

The Evaluation Team asked customers to rate their satisfaction using a 10-point scale, with 1 being extremely dissatisfied and 10 being extremely satisfied with the following (Figure 11):

- Rebates, incentives, and offerings available from any source for making energy efficiency improvements in their home
- Rebates, incentives, and offerings available from Focus on Energy for making energy efficiency improvements in their home

Figure 11. Nonparticipant Rebate Satisfaction Ratings

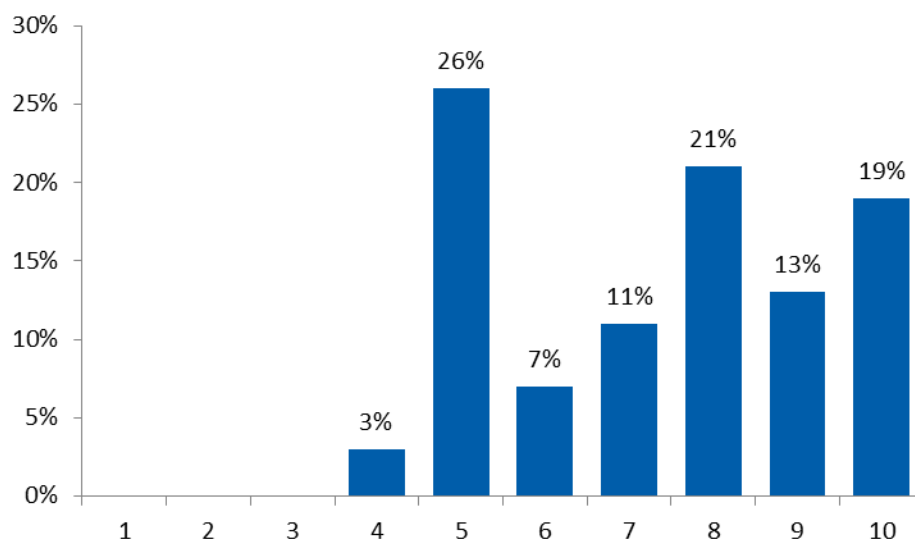


Source: Nonparticipant Customer Survey, B1 and B2: "Using a scale of 1 to 10, with 1 being extremely dissatisfied, 5 being neutral, and 10 being extremely satisfied, can you describe how satisfied you are with..." (Any source n=20; Focus on Energy n=58)

As Figure 11 shows, most respondents indicated neutral satisfaction with the rebates, incentives, and offerings from both sources. Respondents gave an average satisfaction rating of 5.3 for offerings from any source and a rating of 5.0 with the offerings from Focus on Energy.

The Evaluation Team also asked respondents to rate their satisfaction with WPS using a similar 10-point scale, as shown in Figure 12.

Figure 12. Nonparticipant WPS Satisfaction Ratings



Source: Nonparticipant Customer Survey, B4: “Using a scale of 1 to 10, with 1 being extremely dissatisfied, 5 being neutral, and 10 being extremely satisfied, how would you describe your satisfaction with WPS?” (n=70)

As Figure 12 shows, customers indicated high overall satisfaction with WPS, with an average rating of 7.4. Despite respondents’ neutral satisfaction with the rebates, incentives, and offerings, 80% of respondents (52 out of 65) said that they “somewhat agree” or “strongly agree” that the availability of incentives and offerings to help them save energy increases their satisfaction with WPS.

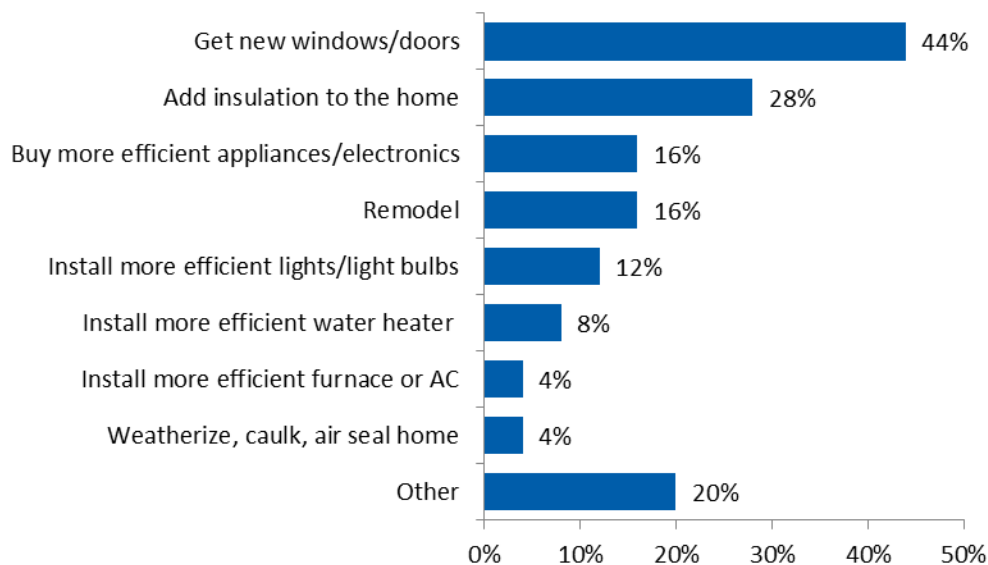
Customer Motivations and Future Plans for Home Upgrades Impacting Energy Usage

Thirty-six percent of respondents (25 out of 69) said they had specific plans in 2014 to make changes to their home that would impact their energy use. As shown in Figure 13, the top four changes cited were installing new windows or doors (44%, or 11 out of 25), adding insulation (28%, or 7 out of 25), buying more efficient appliances or electronics (16%, or 4 out of 25), and remodeling their home (16%).

The Evaluation Team asked respondents what would encourage or motivate them to implement options that were more energy efficient when making changes in their home. The top three motivations were:

- Incentives or rebates (60%, or 31 out of 52)
- Help with understanding the possibilities (21%, or 11 out of 52)
- Information about where to buy energy-efficient equipment (12%, or 6 out of 52)

Figure 13. Nonparticipant Plans in 2014 for Home Upgrades Impacting Energy Usage



Source: Nonparticipant Customer Survey, D5: “What type of changes are you planning to make?”
(n=25; multiple responses allowed)

Nonresidential Segment Level Findings

For the CY 2013 nonresidential process evaluation, the Evaluation Team collected information and perspectives from the Program Administrator, Program Implementer, Trade Allies, and customers.

The Evaluation Team surveyed customers of three offerings—the Nonresidential Energy Bundle Bonus, Smart Farms Program, and Schools and Government Program. Therefore, customer satisfaction and awareness findings are applicable only to these bonuses and programs.

Coordination and Delivery with Associated Focus on Energy Programs

The coordination and delivery of the Territory-Wide bonuses and programs with standard Focus on Energy programs available to nonresidential customers varied:

- The Nonresidential Energy Bundle Bonus, Smart Farms Program, and Schools and Government Program offered WPS customers bonus incentives on top of the standard Focus on Energy program incentives.
- The Small Business Platinum Package offered an additional incentive package, focused on light-emitting diodes (LEDs), only to WPS customers.
- The Trade Ally Bonus Bid Program offered incentives directly to Trade Allies for projects they completed for WPS customers who participated in specific Focus on Energy programs.

Table 10 shows the nonresidential Territory-Wide offerings available to WPS customers and the associated Focus on Energy programs.

Table 10. Nonresidential Territory-Wide Offerings and Associated Focus on Energy Programs

Territory-Wide Offering	Associated Focus on Energy Program(s)
Nonresidential Energy Bundle Bonus	Business Incentive Program, Chain Stores and Franchises, Renewable Energy Competitive Incentive Program, Small Business Program
Schools and Government Program	Business Incentive Program, Small Business Program
Smart Farms Program	Business Incentive Program
Small Business Platinum Package	Small Business Program
Nonresidential Trade Ally Bonus Bid Program	Business Incentive Program, Small Business Program, Chain Stores and Franchises Program, Renewable Energy Competitive Incentive Program

Focus on Energy designed the Nonresidential Energy Bundle Bonus, Smart Farms Program, and Schools and Government Program to foster relationships between Energy Advisors and customers, with less emphasis on Trade Allies as a delivery channel. Although Trade Ally interviewees said they did promote these programs and offerings to their WPS customers, most said they directed customers to work with Energy Advisors.

Program Implementer staff said that the relationship-building and additional support that Energy Advisors provided to customers was the primary benefit of the Smart Farms and Schools and Government programs. Findings from the customer surveys support this belief—for example, most respondents who participated in these two programs said that working with an Energy Advisor was important in their decision to install energy-efficient equipment.

The Program Administrator and Program Implementers explained that although this increased support was valuable for engaging hard-to-reach customer segments, the program design and delivery model required substantial investment of time, staff involvement, and understanding of these program offerings. For example, a Program Implementer staff member explained that Energy Advisors had to be familiar with all of the incentives available through the Territory-Wide programs (including the Energy Bundle Bonus), the Business Incentive Program (including limited duration special incentive offerings), and the Small Business Program. He suggested that if Focus on Energy offered similar programs in the future, it should streamline the incentive process and offer incentives through one program, such as the Business Incentive Program.

Some Program Implementer staff who worked with the Energy Bundle Bonus thought that encouraging more Trade Ally involvement could alleviate the strain on resources if Focus on Energy offered a similar program in the future. However, they also said it was difficult to engage Trade Allies since most specialize in one or two services and are not inclined to work with their competitors. To increase Trade Ally involvement, Focus on Energy would likely still need Energy Advisor support to coordinate Trade Allies and encourage them to work together. One Trade Ally suggested that Focus on Energy should

consider providing a bounty incentive to Trade Allies who refer customers to Trade Allies in other specialties to encourage them to work together.

Program Administrator staff, Program Implementer staff (including Energy Advisors), and Trade Allies also reported difficulty navigating complicated eligibility requirements of some offerings and described the impact of these eligibility restrictions:

- Although some Large Energy Users were eligible for the Energy Bundle Bonus if one of their facilities had a qualifying rate class, the Program Implementer explained that determining which customers were eligible was difficult. Because it did not want to encourage potentially ineligible customers to participate, the Program Implementer did no promotion and no Large Energy Users customers received an Energy Bundle Bonus in 2013.
- Since the Energy Bundle Bonus was available only to WPS customers, Focus on Energy limited exposure to the Bonus on its website. Customers had to navigate to a separate Focus on Energy page for WPS customers; there was no direct link from the main Focus on Energy website. In addition, although the Bonus was available only to WPS customers, many Energy Advisors work across the state. Energy Advisors suggested that promoting the Bonus would have been easier if it had been available to all customers statewide.
- No Trade Ally Bonus Bid award winners achieved their initial energy-savings targets. One reason Trade Ally interviewees cited was the difficulty of finding eligible customers. A few Trade Allies said they worked with large industrial customers, gas customers, and non-WPS customers whom they thought would be eligible for the Program but later found were not eligible.

Program and Bonus Materials

The Evaluation Team reviewed the materials for each program or bonus for the inclusion of documents considered industry best practices for energy efficiency program administration, implementation, and delivery. As Table 11 shows, most of the Territory-Wide programs were missing some of the materials considered industry best practices. However, the Evaluation Team recognized this may be because these were limited, short-term offerings that were coordinated closely with standard Focus on Energy Programs.

Table 11. Presence of Program Materials Considered Industry Best Practices

Program Materials Considered Best Practices	Energy Bundle Bonus	Schools and Government Program	Smart Farms Program	Trade Ally Bonus Bid Program
Program manual, handbook, and/or implementation plan	-	v	v	v
Process flowcharts and organizational charts	-	v	v	v
Presence of data collection protocols and QA/QC protocols	v	-	-	✓
Training materials for program staff	-	✓	✓	-
Application and rebate forms, customer contracts, and agreements	✓	✓	✓	✓
Training materials for Trade Allies	-	-	-	✓
Marketing Plan	-	v	v	-

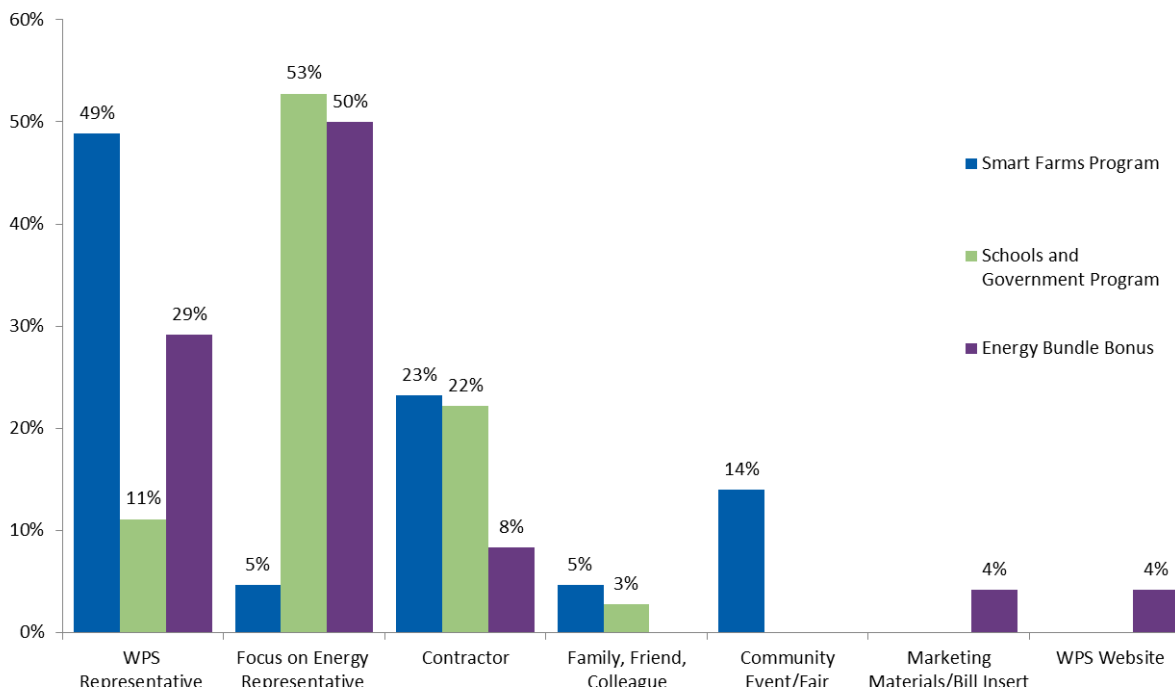
Key: ✓=present, v= partially present, - = not present

Customer Awareness and Understanding

When asked how they first heard about the program in which they participated, customer survey respondents most commonly said they heard from a representative of either WPS or Focus on Energy (see Figure 14). Customer respondents of the Smart Farms Program most commonly said they heard from a WPS representative, whereas customers from the Schools and Government Program and Energy Bundle Bonus most commonly said they heard from a Focus on Energy representative.

Despite the Smart Farms Program and Schools and Government Program being Energy-Advisor driven, with no formal Trade Ally outreach, nearly one-quarter of respondents said they heard about the programs from their contractor.

Figure 14. How Nonresidential Participants Learned of the Program or Bonus



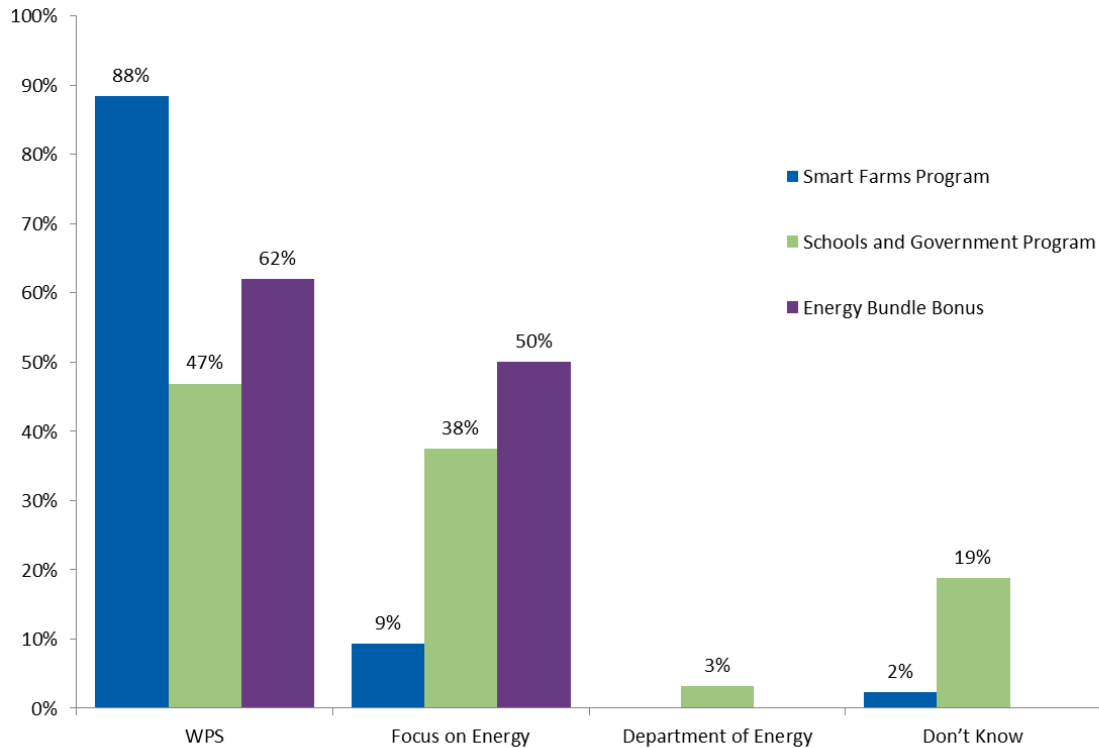
Source: Territory-Wide Nonresidential Participant Customer Surveys; “How did you first hear about the Program?” (Energy Bundle Bonus n=24; Smart Farms Program n=43; Schools and Government Program n=36)¹⁰

Although most customer respondents said they heard about the program or bonus from a representative of either WPS or Focus on Energy, it was unclear exactly which was the source. According to the Program Implementer for both the Schools and Government Program and Smart Farms Program, the connection between Focus on Energy and WPS was not clearly defined for customers. Program Implementer staff explained that some customers who contacted them believed they were contacting WPS representatives.

Similarly, as Figure 15 shows, 88% of Smart Farms Program customers, 47% of Schools and Government Program customers, and 62% of Energy Bundle Bonus customers said they thought that WPS sponsored the program or bonus in which they participated. Customers may have assumed they were speaking to WPS staff in part because the program materials (and Program Implementer staff) referred to these programs as the WPS Smart Farms Program and WPS Schools and Government Program.

¹⁰ The Evaluation Team surveyed 41 Energy Bundle Bonus customers, 44 Smart Farms Program customers, and 40 Schools and Government Program customers. Not all respondents answered every question; therefore, sample size varies by survey question.

Figure 15. Who Customers Thought Sponsored the Program or Bonus

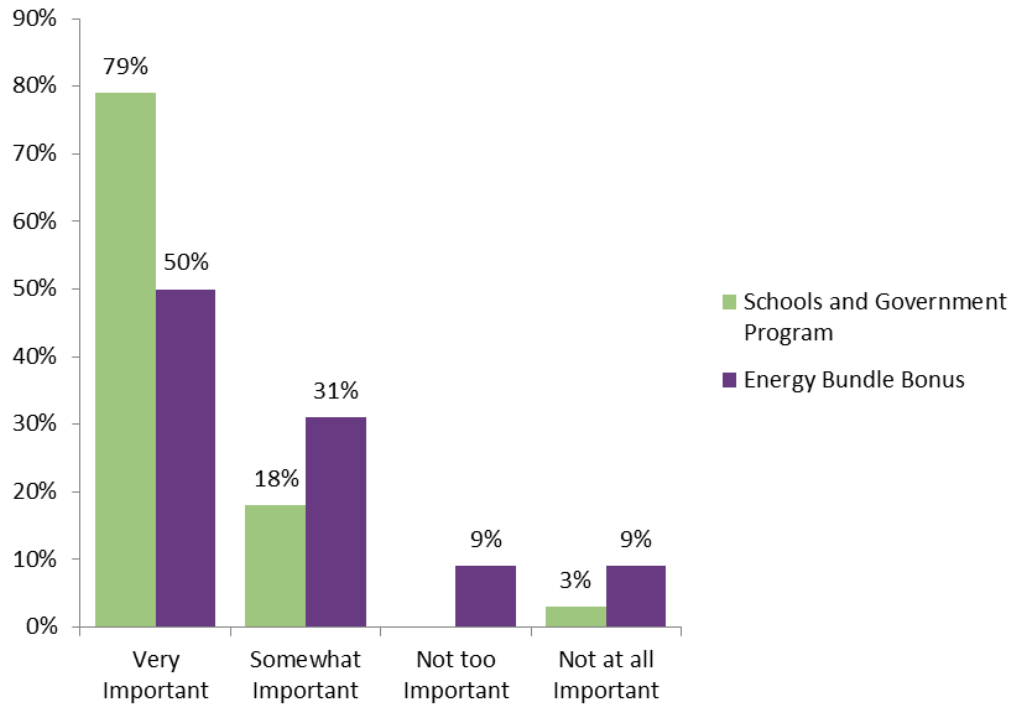


Source: Territory-Wide Nonresidential Participant Customer Surveys: “Who sponsored the Program?”
 (Energy Bundle Bonus n=16, Smart Farms Program n=43; Schools and Government Program n=32;
 multiple responses allowed)

Customer Decision-Making

The Evaluation Team asked Schools and Government Program and Energy Bundle Bonus participants about the importance of the additional incentive available through the program or bonus in their decision to install multiple types of energy-saving equipment. As Figure 16 shows, the majority of customers who participated in both offerings said the incentive was “somewhat important” or “very important” in their decision to install the equipment.

Figure 16. Importance of Additional Incentives in Customer Decisions



Source: Territory-Wide Nonresidential Participant Surveys: “How Important was the incentive in your decision to install multiple types of equipment?” (Schools and Government Program=38; Energy Bundle Bonus=32)

The Evaluation Team also asked respondents if they would have purchased the equipment without the additional incentive. Responses differed between the two offerings. Most Schools and Government Program participant respondents (61%, or 20 out of 33) said they would not have purchased the equipment without the incentive, but most Energy Bundle Bonus participants (63%, or 19 out of 30) said they would have purchased the equipment.

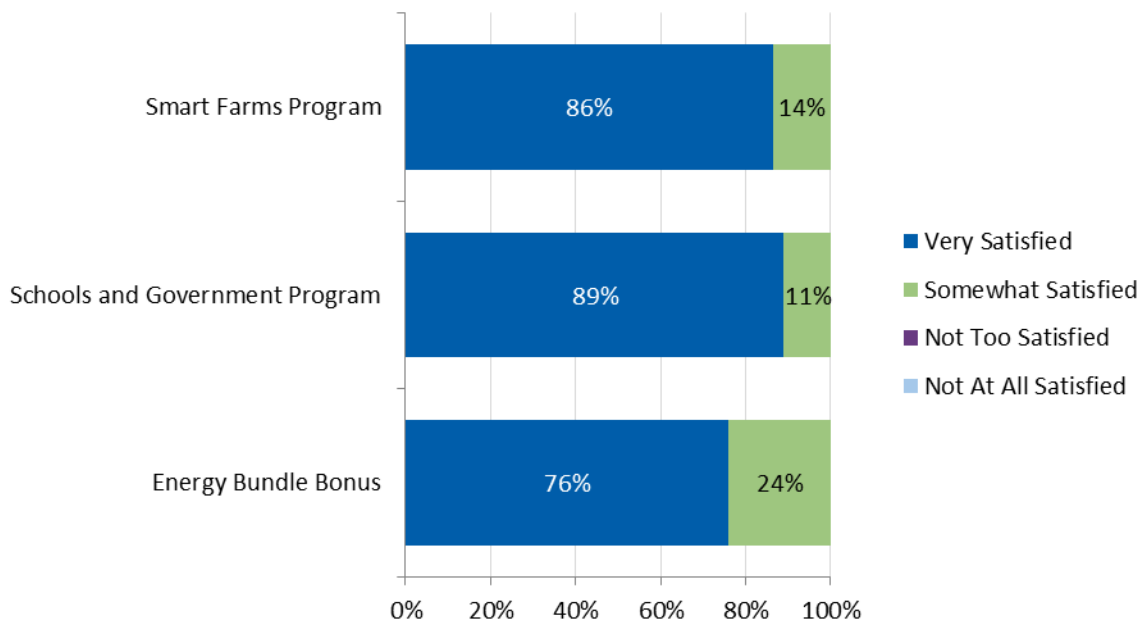
Participant Satisfaction

The Evaluation Team asked both customers and Trade Allies about their satisfaction with the Territory-Wide programs.

Customer Satisfaction

The Evaluation Team asked participant survey respondents how satisfied they were with the program or bonus in which they participated. Respondents indicated high satisfaction with the programs overall—across all three programs, the majority of participants said they were “very satisfied,” and no participants expressed any dissatisfaction (see Figure 17).

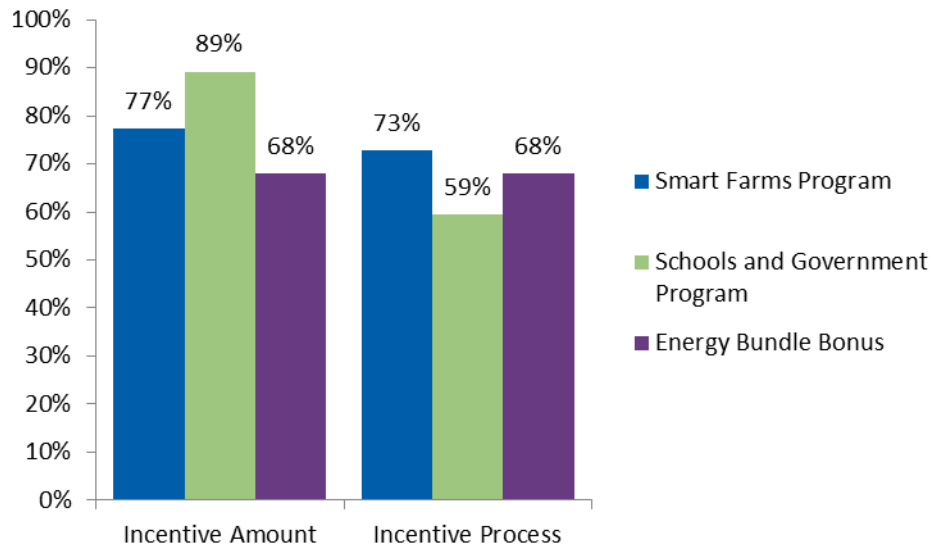
Figure 17. Participant Satisfaction with the Program or Bonus Overall



Source: Territory-Wide Nonresidential Participant Customer Surveys; “How would you rate your experience with the Program overall? Would you say you are...?” (Energy Bundle Bonus n=25; Smart Farms Program n=44, Schools and Government Program n=36)

As Figure 18 shows, the majority of customers also indicated they were “very satisfied” with both the incentive amount and the process for receiving the incentive. Respondents indicated slightly lower satisfaction with the process for receiving the incentive—those who said they were “not too satisfied” or “not at all satisfied” with the incentive process cited too much paperwork, staff time required to complete paperwork, and the incentive process taking too long as reasons. However, despite the slightly lower satisfaction of those few customers, all respondents still indicated high satisfaction overall.

Figure 18. Percentage of Respondents “Very Satisfied” with the Incentive Amount and Process

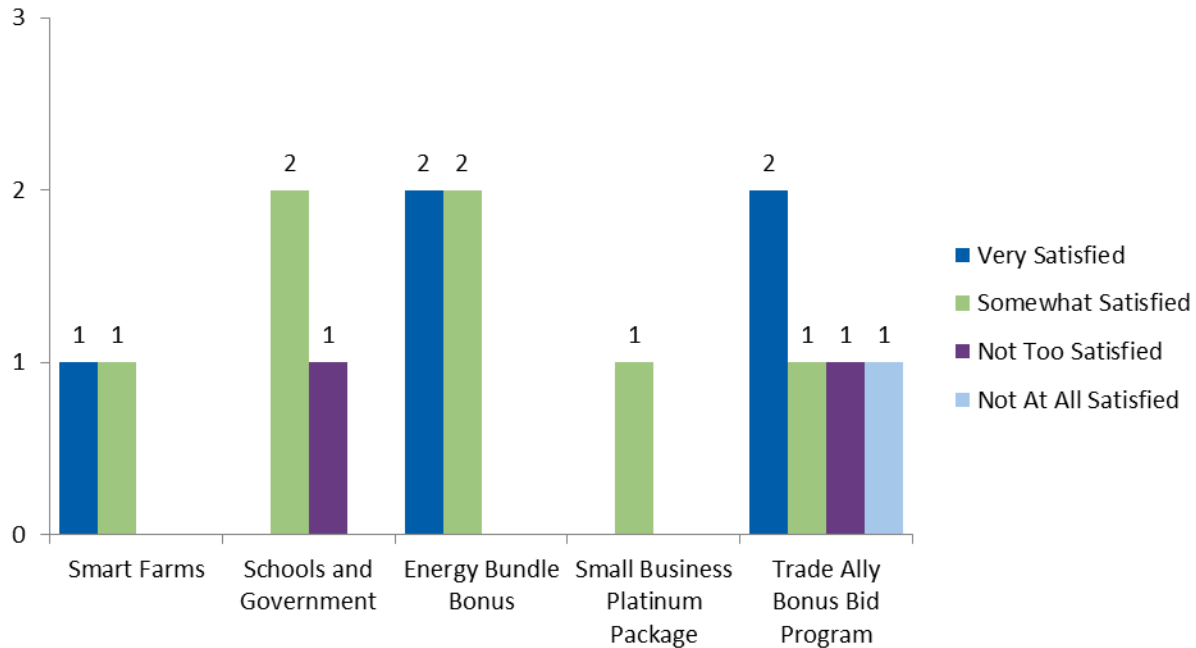


Source: Territory-Wide Nonresidential Participant Customer Surveys; “Would you say you are very satisfied, somewhat satisfied, not too satisfied, or not at all satisfied with the amount of the incentive you received from the program?” and “How satisfied would you say you are with the process for receiving the program incentives? Would you say you are...?” (Energy Bundle Bonus n=25; Smart Farms Program n=44; Schools and Government Program n=37)

Trade Ally Satisfaction

The Evaluation Team asked Trade Allies to rate their level of satisfaction with each program or bonus with which they had worked. As Figure 19 shows, the majority of Trade Allies said they were “somewhat satisfied” or “very satisfied.”

Figure 19. Trade Ally Satisfaction Ratings



Source: Territory-Wide Portfolio Trade Ally Interview Guide Q17 and Trade Ally Bonus Bid Program Trade Ally interview Guide Q14: "Overall, how satisfied were you with your experience with the Program? Would you say...(n=10)"

Cost-Effectiveness Findings

To assess the cost-effectiveness of the Territory-Wide programs, the Evaluation Team used a modified Total Resource Cost (TRC) test, which includes the value of displaced emissions. Through this analysis, the Evaluation Team determined the savings, benefits, and costs of both Territory-Wide measures and Focus on Energy measures for which WPS customers received bonus incentives.¹¹

The equation used for the TRC is:

$$TRC = \frac{(Value\ of\ Net\ Saved\ Energy + Value\ of\ Displaced\ Emissions)}{(Program\ Costs\ Exclusive\ of\ Incentives + Net\ Incremental\ Measure\ Cost)}$$

The inputs to the TRC ratio are discussed in more detail in the following sections.

¹¹ The Evaluation Team used this approach because the available data for CY 2013 were insufficient to determine incremental participation resulting from the Focus on Energy activities in the WPS territory.

Value of Net Saved Energy

The Evaluation Team calculated the value of net saved energy as the product of net energy saved and the utility-avoided cost. In the case of energy efficiency and renewable energy programs, avoided cost is the incremental (or marginal) cost to a utility for additional energy and capacity required if the utility has to generate or purchase from another source rather than pay for the measures that offset this demand.

To calculate electric energy avoided costs for the CY 2013 evaluation, the Evaluation Team used an annualization forecast avoided cost model. The forecast relied on the Midcontinent Independent Transmission System Operator, Inc. (MISO), forecast of Locational Marginal Pricing (LMP) for the years 2016, 2021, and 2026. The PSC established the nonelectric energy avoided costs in a January 13, 2012, PSC Order, docket 5-GF-191 (PSC REF#:158228).¹²

The Evaluation Team applied a line loss factor of 8% to account for distribution losses. Table 12 shows the avoided cost assumptions used for the cost-effectiveness test in CY 2013.

Table 12. CY 2013 Avoided-Cost Assumption

Attribute	Result
Electric Energy (\$/kWh)	0.414–0.561
Electric Capacity (\$/kW-year)	114.3
Gas (\$/therms)	1.005
Avoided Cost Inflation	0%
Real Discount Rate	2%
Line Loss	8%

Program Costs

The program costs encompass all of the costs associated with operating the efficiency programs (such as administration and delivery costs); however, incentive costs are not included in the TRC test, as they are deemed transfer payments and are imbedded in the incremental measure cost. The Fiscal Agent, Wipfli, provided the CY 2013 program costs to the Evaluation Team. Table 13 lists the CY 2013 program and incentive cost values used for the cost-effectiveness test.

¹² Public Service Commission of Wisconsin. *Quadrennial Planning Process: Reconsideration of Goals, Energy Avoided Costs, and Environmental and Economic Research Development Program Funding Levels*. 5-GF-191. January 13, 2012. Available online: http://www.psc.wi.gov/apps35/ERF_view/viewdoc.aspx?docid=158228.

Table 13. Program Cost

Cost Category	Cost
Incentive Cost	\$5,316,693
Administrative Cost	\$436,394
Delivery Cost	\$1,723,734
Total Non-Incentive Program Cost	\$2,160,128

Incremental Measure Costs

The gross incremental costs are the additional costs incurred as a result of purchasing efficient equipment that exceeds a baseline nonqualified product. With the notable exception of renewable energy measures, the gross incremental cost values used in this evaluation came from the Focus on Energy *Benefit-Cost Analysis CY 2009 Evaluation Report*.¹³

The Evaluation Team used an approach consistent with that used in the CY 2011 and CY 2012 Focus on Energy evaluations. It assessed the renewable energy projects according to the actual project cost values specified in the program tracking databases. However, the gross incremental costs, similar to the energy-savings values used in the cost-effectiveness tests, required the application of attribution factors to account for freeridership. The Evaluation Team calculated new NTG ratios based on CY 2013 Focus on Energy program data.

Table 14 lists the CY 2013 total measure net incremental costs used for the cost-effectiveness test.

Table 14. Net Incremental Measure Cost

	Cost
Net Incremental Cost	\$16,152,719

Emissions Benefits

The emissions benefits require three key parameters—life-cycle net energy savings, emissions factors, and the dollar value of the displaced emissions. Emissions factors are simply the rate at which the criteria pollutants are emitted per unit of energy and are most often expressed in tons of pollutant per energy unit—electric is in tons/megawatt hour (MWh) and gas is in tons/megatherm (MThm). The product of the emissions factor and the net life-cycle energy savings is the total weight of air pollutant displaced by the program. The product of the total tonnage of pollutant displaced and the dollar value of the displaced emissions per ton is therefore the avoided emissions benefit.

¹³ PA Consulting Group and KEMA, Inc. *Focus on Energy Benefit-Cost Analysis CY 2009 Evaluation Report*. Submitted to the Public Service Commission of Wisconsin. November 24, 2009. Available online: <http://www.focusonenergy.com/about/evaluation-reports>

The Evaluation Team used emissions factors and allowance prices from the 2013 Wisconsin Focus on Energy evaluation report.¹⁴ The electric emissions factors were updated from the 2012 Wisconsin Focus on Energy evaluation report according to the methodology suggested in the report, *Focus on Energy Evaluation Emission Factors Update*,¹⁵ and found to have either remained unchanged for 2013 or changed very little. Table 15 lists the emissions factors and allowance prices used for the evaluation.

Table 15. Emissions Factors and Allowance Prices

Service Fuel Type	CO ₂	NO _x	SO ₂
Electric Emissions Factor (Tons/MWh)	0.8300	0.0012	0.0008
Gas Emissions Factor (Tons/MThm)	5.85	N/A	N/A
Allowance Price (\$/Ton)	\$30.00	\$4.10	\$1.08

The Evaluation Team obtained the allowance prices for the nitrogen oxide (NO_x) and sulfur dioxide (SO₂) emissions from the Energy Information Administration (EIA).¹⁶ It used the carbon dioxide (CO₂) emissions price established under PSC Order, docket 5-GF-191 (PSC REF#:137513), which states, “A levelized carbon value of \$30 per ton shall be used in the benefit/cost modeling of energy efficiency programs.”¹⁷ Table 16 lists the emissions benefits for all programs by segment.

Table 16. Emissions Benefits by Segment

Program Year	Residential	Nonresidential	Total
CY 2013 Emissions Benefits	\$610,804	\$6,266,171	\$6,876,976

TRC Test Inputs and Results

Table 17 lists the TRC test results for CY 2013. The Evaluation Team conducted the test using the “Focus on Energy Cost-Effectiveness Calculator” created by Green Energy Economics Group, Inc. The Focus on Energy website contains details on the processes used for calculating the cost-effectiveness of the energy portfolio.¹⁸

¹⁴ Focus on Energy. May 15, 2014. *Calendar Year 2013 Evaluation Report: Volume I*. Available online: https://focusonenergy.com/sites/default/files/FOC_XC_%20CY%2013%20Evaluation%20Report_Volume%20I.pdf

¹⁵ PA Consulting Group. *Focus on Energy Evaluation Emission Factors Update*. December 22, 2009.

¹⁶ More information available online: <http://www.eia.gov/todayinenergy/detail.cfm?id=4830>

¹⁷ Public Service Commission of Wisconsin. *Memo: Quadrennial Planning Process. Phase Two- Evaluation Issues*. 5-GF-191. August 2, 2010. Available online: http://psc.wi.gov/apps35/ERF_view/viewdoc.aspx?docid=137513

¹⁸ PA Consulting Group and KEMA, Inc. *Focus on Energy Benefit-Cost Analysis CY 2009 Evaluation Report*. Submitted to the Public Service Commission of Wisconsin. November 24, 2009. Available online: <http://www.focusonenergy.com/about/evaluation-reports>

Table 17. Territory-Wide Program TRC Test Inputs and Final Benefit/Cost Ratio

Test Input ¹	Result
Incentives*	\$5,316,693
Program Costs	\$2,160,128
Incremental Measure Costs	\$16,152,719
Total Costs for TRC Test	\$18,312,846
Electric Benefits	\$17,933,285
Gas Benefits	\$5,397,168
Emissions Benefits	\$6,876,976
Total Benefits for TRC Test	\$30,207,429
TRC Benefit/Cost Ratio	1.65
TRC Net Benefits	\$11,894,582

¹Incentives are not included in the calculation of the TRC.

Outcomes and Recommendations

Based on the Evaluation Team’s segment- and portfolio-level findings, this section presents high-level outcomes and recommendations. Since the Territory-Wide programs administered in the WPS territory ended in December 2013, recommendations are intended for future Focus on Energy programs and not specifically for the Territory-Wide programs.

Outcome 1: The enhanced incentives and project assistance offered through the Territory-Wide programs affected program participation such that there was lower freeridership among WPS participants than among other participants in the Focus on Energy statewide programs. However, observed differences in freeridership were not statistically significant at the 90% level of confidence.

In the freeridership battery of questions, which the Evaluation Team administered uniformly across all surveys, the Evaluation Team did not ask WPS customers to attribute their program participation specifically to enhanced incentives funded by WPS. Rather, it asked all survey respondents to attribute their program participation to the entire package of offered incentives. Across all sample groups and attribution analyses,¹⁹ the freeridership data are consistent with the hypothesis that providing additional incentives to WPS customers lowered participant freeridership. At the same time, the NTG data are inconsistent due to fluctuations in reported spillover savings. The Evaluation Team cannot confirm the overall hypothesis with at least 90% confidence.

While the results were not statistically significant, the majority of survey respondents who participated in and were aware of the Home Performance Bonus, Energy Bundle Bonus, and Schools and Government programs indicated the incentives were “very important” or “somewhat important” in their decisions to install energy-saving equipment. In addition, the majority of Home Performance Bonus

¹⁹ The Evaluation Team conducted attribution analyses for these Territory-Wide programs: Home Performance Bonus, Nonresidential Energy Bundle Bonus, Schools and Government, and Smart Farms.

respondents said they would have made fewer improvements without the Bonus. Nearly half of Home Performance Bonus respondents said they were not familiar with the Bonus. However, customers may have assumed that the Bonus was part of the standard Home Performance with ENERGY STAR Program since program materials did not emphasize the Bonus as a separate incentive and since the Evaluation Team did not specify marginal incentive contributions from WPS during surveys. Customer knowledge and awareness of program design and incentive structure is not necessarily a prerequisite for higher incentives to have an impact on customer decision-making.

While most Schools and Government Program respondents said they would not have purchased the equipment without the incentive, the majority of Energy Bundle Bonus respondents said they would have purchased the equipment.

Recommendation: If enhanced incentives are to be included in future programs, program planners could set up the incentives so they can test if increased incentives lead to lower freeridership and/or increased participation. For example, planners could implement a limited-time offer that increased the incentive for part of a year and then look at differences between the higher-incentive group and the normal incentive group. This testing would indicate if keeping the enhanced incentive is worthwhile—if the higher incentive does not have the assumed effect, it should be discontinued. If it does, it could be used as a portfolio balancing tool.

Outcome 2: A necessary aspect of analyzing Territory-Wide program data is to track down information regarding connections between bonus incentive applications and Focus on Energy incentive applications.

Under the current structure of SPECTRUM, users are able to determine that connections exist between applications, but they cannot necessarily determine the specific nature of the connections. Rather, users must make an inference from additional information sometimes stored in the name of the application and more frequently stored as a measure for one of the connected applications. When a regular pattern of measures is recorded in the data entry process, it becomes somewhat easier to determine the connected applications and their nature by making moderately complex “Advanced Find” queries in SPECTRUM. Note that this process is separate from the “Measure Flat File Report” where measure data are displayed.

Recommendation: If similar enhanced incentives are offered again in the WPS or another utility’s service territory, the Program Administrator and Program Implementers should consider creating additional fields in the SPECTRUM database that explicitly describe the application connections.

Outcome 3: Residential customers are likely to make energy-related upgrades in their homes in the next year, but their lack of awareness of rebates for energy-saving projects may prevent them from making energy-efficient upgrades and participating in Focus on Energy programs.

Thirty-six percent of nonparticipant residential customer survey respondents said they had specific plans in 2014 to make changes to their home that would impact energy use. The top motivation these

respondents cited for making changes that would be energy efficient was an incentive or rebate; however, nearly three-quarters said they were not aware of any rebates or incentives available for making energy efficiency upgrades in their home. Customers may be more willing to invest in energy-efficient options when making changes in their home if they are aware of the rebates and incentives available to them.

Recommendation: Greater communication and outreach efforts may be necessary to increase customer awareness of rebates available through Focus on Energy and to encourage customers to make upgrades that are energy efficient. Consider targeting customers who are already considering upgrading their homes by designing displays to promote Focus on Energy incentive opportunities at home improvement stores or working with local governments to distribute Focus on Energy program materials at local permitting offices. Also ensure that Trade Allies have the resources they need to promote programs to their residential customers.

Outcome 4: The Territory-Wide programs offered in the WPS territory achieved a high level of participant satisfaction.

All respondents across residential and nonresidential programs said they were “somewhat satisfied” or “very satisfied” with the bonus or program overall. Compared to residential customers, some nonresidential customers indicated slightly lower satisfaction with the process for receiving the incentive (citing burdensome paperwork requirements), but this is not uncommon for any program that requires customers to complete paperwork and this did not lower overall customer satisfaction.

Outcome 5: Customers indicated low awareness of the three Territory-Wide bonus offerings in which they participated.

In the surveys of both residential and nonresidential participating customers, the Evaluation Team asked if respondents were familiar with the bonus incentive available for WPS customers. Respondents indicated low awareness—70% of Assisted Home Performance Bonus respondents, nearly half of Home Performance Bonus respondents, and over a quarter of Energy Bundle Bonus respondents said they were unfamiliar with the bonus incentive despite having received it.

For the Home Performance Bonus and Assisted Home Performance Bonus, the low awareness may be because marketing materials did not differentiate between the two types of awards (the standard Focus on Energy incentive and the bonus incentive available to WPS customers); therefore, customers may not have realized that they received an additional incentive specific to WPS customers.

Assisted Home Performance Bonus customers were also less aware of the discount than the Home Performance Bonus customers. This may be attributed to differences in the incentive payment, where the Assisted Home Performance Bonus participants received a direct discount from the Trade Ally on their invoice instead of a refund check like the Home Performance Bonus participants.

Outcome 6: Many WPS customers associate Focus on Energy and the Territory-Wide offerings with WPS, which has the potential to impact customer satisfaction with and perceptions of WPS.

Many participants believed that WPS sponsored Focus on Energy and the Territory-Wide offerings:

- When asked who they thought sponsored Focus on Energy, residential customer participant and nonparticipant respondents most frequently cited WPS and the utilities as the sponsors of Focus on Energy.
- When asked who they thought sponsored the program or bonus in which they participated, 88% of Smart Farms Program customers, 47% of Schools and Government Program customers, and 50% of Energy Bundle Bonus customers said they thought WPS sponsored the program or bonus.
- Two of the nonresidential offerings were clearly branded as WPS offerings in program materials, and Program Implementer staff stated that some customers who contacted them believed they were contacting WPS representatives.

This close customer association between Focus on Energy and WPS seems to have benefited WPS—for example, 80% of nonparticipant residential respondents (52 out of 65) said they “somewhat agree” or “strongly agree” that the availability of incentives and offerings to help them save energy increases their satisfaction with WPS. Potential exists to build upon customer satisfaction with Focus on Energy to increase or maintain customer satisfaction with WPS.

Recommendation: Continue efforts to maintain and increase customer satisfaction with Focus on Energy, especially on delivering quality customer service. Ensuring high-quality customer service is important to maintaining the positive reputation of both Focus on Energy and the utilities. The Evaluation Team’s findings indicate that a thorough understanding of which parties sponsor or administer programs is not a prerequisite for high satisfaction.

Outcome 7: Complicated eligibility requirements created challenges for the implementation and delivery of some nonresidential Territory-Wide programs and bonuses. These challenges may have limited the reach of the offerings in certain customer segments but did not appear to create customer dissatisfaction.

Program Administrator staff, Program Implementer staff (including Energy Advisors), and Trade Allies reported difficulty navigating complicated eligibility requirements. For example, programs and bonuses were restricted to WPS territory, most (but not all) customers of the Large Energy Users Program were ineligible for the incentives, and winners of the Trade Ally Bonus Bid Award were restricted to working with specific customer segments.

However, despite the challenges that the Program Implementer, Program Administrator, and Trade Allies faced, customers still indicated high satisfaction with the programs and bonuses overall.

Outcome 8: Implementing the Territory-Wide offerings and coordinating with associated Focus on Energy programs required substantial Program Implementer investment of staff resources and understanding of program offerings for Energy Advisor-driven nonresidential offerings.

Program Implementer staff said that the relationship-building and additional support that Energy Advisors provided to customers was the primary benefit of the Smart Farms and Schools and Government programs and helped Focus on Energy engage hard-to-reach customer segments. However, they also said that encouraging these comprehensive energy-saving projects required considerable engagement from Energy Advisors. Program Implementer staff therefore considered these two programs, as well as the Energy Bundle Bonus, to be resource-intensive.

Coordinating the various incentives offered in these programs and their associated Focus on Energy statewide programs was also complicated. For example, Energy Advisors had to be familiar with all of the incentives available through the Business Incentive Program (including limited duration special incentive offerings), Small Business Program, Energy Bundle Bonus, and either the Smart Farms Program or Schools and Government Program.

Recommendation: Although customers appreciated the high level of investment in customer support, which likely helped Focus on Energy engage hard-to-reach customer segments, future programs that take a similar approach need to assess the cost-effectiveness of this type of customer support.

Options for reducing complexity in similar future program offerings include:

- **Consolidating offerings within one program.** To reduce complexity and Energy Advisor investment, one Program Implementer staff member suggested that, if Focus on Energy offered similar programs in the future, it should streamline the incentive process and offer and approve incentives through a single program, such as the Business Incentive Program.
- **Offering uniform programs statewide.** These programs were complex due to their short duration, special eligibility requirements, and coordination with existing Focus on Energy Programs statewide. If programs similar to the Territory-Wide programs were offered statewide, some of this complexity might be reduced, requiring less investment from Program Implementer staff.

Utilizing a program delivery model like the Business Incentive Program, as some Program Implementer staff suggested, might help reduce Energy Advisor investment. Opportunities exist to enhance Trade Ally involvement in future efforts to encourage these hard-to-reach customer segments to undertake more comprehensive energy-saving projects. These opportunities involve more formal outreach and training for Trade Allies on these types of programs, fostering their investment in these programs, and building on their existing customer relationships. However, encouraging such involvement would likely still require Energy Advisor support to coordinate Trade Allies, encourage them to work together, and help them navigate program requirements.

CY 2013 Residential Segment Evaluation Findings

In CY 2013, the following four Territory-Wide programs were available to the residential segment in the WPS territory:

- Home Performance Bonus (HP)
- Assisted Home Performance Bonus (AHP)
- Energy Bundle Bonus (EBB)
- Trade Ally Bonus Bid (TABB)

Table 18 lists the gross, verified gross, and verified net first-year annual savings for these four residential Territory-Wide programs. Differences between gross and verified gross savings result from the application of realization rates. Differences between verified gross and verified net savings result from the application of NTG ratios, which are presented by measure in Appendix A.

Table 18. Gross, Verified Gross, and Verified Net Savings by Residential Program, First-Year Annual¹

Program	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
HP	435,695	139	190,182	588,188	188	79,877	570,639	181	76,514
AHP	59,297	21	17,962	57,962	21	17,865	57,962	21	17,865
EBB	150,162	4	17,807	149,246	4	17,807	108,790	3	12,946
TABB	108,362	37	0	108,362	37	0	71,618	22	0
Total	753,516	201	225,952	903,759	249	115,548	809,010	226	107,325

¹Columns do not sum to the totals due to rounding.

Table 19 lists the gross, verified gross, and verified net life-cycle savings for the four residential programs. Demand reductions, represented by kW savings, do not accrue over time and, therefore, the Evaluation Team did not include them in the analysis of life-cycle savings.

Table 19. Gross, Verified Gross, and Verified Net Savings by Residential Program, Life-Cycle¹

Program	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
HP	8,167,030	4,494,824	11,025,490	1,887,826	10,609,254	1,807,669
AHP	926,473	418,530	916,537	417,659	916,537	417,659
EBB	1,933,071	331,439	1,924,884	331,439	1,356,307	243,604
TABB	1,861,292	0	1,861,292	0	1,126,413	0
Total	12,887,866	5,244,793	15,728,203	2,636,924	14,008,512	2,468,932

¹Columns do not sum to the totals due to rounding.

The savings presented in Table 19 were achieved by a total of 648 residential segment participants. Table 20 shows the number of unique participants by program.

Table 20. Unique Residential Segment Customers by Program

Program	Unique Customers
Assisted Home Performance	528
Home Performance	97
Energy Bundle Bonus	6
Trade Ally Bonus Bid	17
Total	648

In the sections that follow, the Evaluation Team presents evaluation findings by residential program. Each section includes:

- A program summary
- A program-level evaluation activity summary
- Impact evaluation findings
- Process evaluation findings
- Outcomes and recommendations

Home Performance with ENERGY STAR® Bonus

Through the Home Performance Bonus (the Bonus), Focus on Energy offered an additional incentive specifically for customers in the WPS territory who participated in the statewide Home Performance with ENERGY STAR® Program (the Program). During CY 2013, these participants automatically received an additional refund for 33% of project costs—on top of the 33% discount off the contractor’s invoice as part of the statewide Focus on Energy Home Performance with ENERGY STAR Program—for eligible weatherization improvements completed in CY 2013, up to a combined maximum of \$3,700.²⁰

Conservation Services Group (CSG) implemented both the Bonus and the Program.

Table 21 lists the Bonus’ first-year annual and life-cycle verified net savings by calendar year.²¹ The Evaluation Team had calculated the first-year annual and life-cycle savings for CY 2011 and CY 2012 during prior evaluations. Verified net savings changed from year to year in correlation with fluctuations in participation, with the highest level of program participation occurring in CY 2013.

Table 21. Home Performance Bonus Verified Net Savings Summary

Calendar Year	First-Year Annual			Life-Cycle	
	kWh	kW	Therms	kWh	Therms
2011	106,445	54	91,027	2,659,437	2,275,624
2012	95,837	59	71,788	1,482,676	1,231,016
2013	570,639	181	76,514	10,609,254	1,807,669
Total	772,921	294	239,329	14,751,367	5,314,309

Program-Level Evaluation Activities

As Table 22 shows, for the CY 2013 evaluation, the Evaluation Team conducted data collection activities to support these impact and process evaluation tasks—energy and demand savings determination, attribution analysis, stakeholder interviews, participant customer surveys, and a materials review.

²⁰ Improvements were for air sealing, attic insulation, exterior wall insulation, sill box insulation, and interior foundation insulation.

²¹ In some cases, although projects were completed in CY 2013 (as the Bonus required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Table 22. Home Performance Bonus Data Collection Activities and Sample Sizes

Activity	Sample Size (n)
Energy and Demand Savings Determination	Census
Attribution Analysis ¹	98
Stakeholder Interviews	4
Trade Ally interviews	3
Participant Customer Surveys	65
Materials Review	Census

¹The attribution analysis sample size represents the number of unique survey respondents who installed non-SMP insulation measures—66 WPS customers who received the additional refund and 32 who were not WPS customers.

Impact Evaluation Findings

In total, the CY 2013 Bonus awarded enhanced incentives to 528 WPS customers. These customers installed 5,794 measures, including direct install measures offered through the Home Performance with ENERGY STAR Program. Table 23 lists the number of unique participating customers who installed each measure, as well as the number of installations completed by measure, in CY 2013.

Table 23. Home Performance Bonus Participation by Measure

Measure	Customers ¹	Measures Installed
Air Sealing, Project Based	479	541
CFL, Non PI Direct Install, 14 Watt	210	1044
CFL, Non PI Direct Install, 19 Watt	164	763
CFL, Non PI Direct Install, 23 Watt	170	809
CFL, Non PI Direct Install, 9 Watt	91	399
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	6	7
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	38	44
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	12	19
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	87	169
Insulation, Non PI Direct Install, 6' pipe, NG	1	1
Insulation, Project Based, Attic	463	516
Insulation, Project Based, Foundation	130	147
Insulation, Project Based, Sillbox	343	392
Insulation, Project Based, Wall	228	249
Project Completion	528	610
Showerhead, Non PI Direct Install, 1.5 gpm, Electric	6	7
Showerhead, Non PI Direct Install, 1.5 gpm, NG	64	77
Total		5,794

¹Indicates the number of unique customers who installed each measure; most participating customers installed multiple measures and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure. Differences between gross and verified gross savings resulted from the Evaluation Team's application of realization rates calculated through the billing analysis of the CY 2013 Home Performance with ENERGY STAR Program.²²

Since the Bonus delivered enhanced incentives to WPS customers who participated in the statewide Program, the Evaluation Team applied realization rates calculated during the statewide evaluation to savings achieved through the Bonus. The Evaluation Team applied a realization rate of 135% to all measure-level kWh and kW savings and 42% to all measure-level therm savings. Most of the energy savings achieved through the Bonus in CY 2013 were therm savings; therefore, the MMBtu-equivalent weighted average realization rate was 52.2%. Table 24 presents weighted average realization rates for the CY 2013 Bonus.

Table 24. Weighted Average Realization Rates for the Home Performance Bonus

Savings Type	Realization Rate
kWh	135.0%
kW	135.0%
Therms	42.0%
MMBtu-Equivalent Weighted Average (Excludes kW)	52.2%

Differences between verified gross and verified net savings resulted from the Evaluation Team's application of NTG adjustments. NTG adjustments came from survey data the Evaluation Team collected for all insulation measures that WPS participants installed through the Home Performance Bonus during CY 2013; for all other measures, the Evaluation Team applied the NTG adjustments calculated during the statewide Home Performance with ENERGY STAR Program evaluation. Table 25 presents weighted average NTG adjustments for the CY 2013 Bonus.

Table 25. Weighted Average Freeridership, Spillover, and NTG¹

Item	Weighted Average
Freeridership	4.4%
Spillover	0.4%
NTG	96.0%

¹ Weighted averages for freeridership, spillover, and NTG are calculated separately.

Table 26 lists CY 2013 first-year annual savings by measure, and Table 27 lists the CY 2013 life-cycle savings by measure.

²² Cadmus. *Focus on Energy Calendar Year 2013 Evaluation Report, Volume II*. May 15, 2014. Available online: https://focusonenergy.com/sites/default/files/FOC_XC_%20CY%2013%20Evaluation%20Report_Volume%20II.pdf.

Table 26. Home Performance Bonus First-Year Annual Savings by Measure¹

Measure	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Air Sealing, Project Based ²	0	0	0	0	0	0	0	0	0
CFL, Non PI Direct Install, 14 Watt	45,781	5	0	61,804	7	0	61,804	7	0
CFL, Non PI Direct Install, 19 Watt	27,108	2	0	36,595	3	0	36,595	3	0
CFL, Non PI Direct Install, 23 Watt	39,461	5	0	53,272	6	0	53,272	6	0
CFL, Non PI Direct Install, 9 Watt	11,805	1	0	15,937	2	0	15,937	2	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	1,686	0	0	2,276	0	0	2,276	0	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	0	0	490	0	0	206	0	0	206
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	2,002	0	0	2,702	0	0	2,702	0	0
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	0	0	794	0	0	333	0	0	333
Insulation, Non PI Direct Install, 6' pipe, NG	0	0	4	0	0	2	0	0	2
Insulation, Project Based, Attic ²	0	61	0	0	82	0	0	79	0
Insulation, Project Based, Foundation ²	0	0	0	0	0	0	0	0	0
Insulation, Project Based, Sillbox ²	0	0	0	0	0	0	0	0	0
Insulation, Project Based, Wall ²	0	66	0	0	89	0	0	85	0
Project Completion ²	304,237	0	187,372	410,721	0	78,696	393,171	0	75,334
Showerhead, Non PI Direct Install, 1.5 gpm, Electric	3,615	0	0	4,880	0	0	4,880	0	0
Showerhead, Non PI Direct Install, 1.5 gpm, NG	0	0	1,523	0	0	639	0	0	639
Total	435,695	139	190,182	588,188	188	79,877	570,639	181	76,514

¹Columns do not sum to the totals due to rounding.

²The program implementer records kWh and therm savings achieved from prescriptive air sealing and insulation measures under the "Project Completion" measure name.

Table 27. Home Performance Bonus Life-Cycle Savings by Measure¹

Measure	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Air Sealing, Project Based ²	0	0	0	0	0	0
CFL, Non PI Direct Install, 14 Watt	307,185	0	414,699	0	414,699	0
CFL, Non PI Direct Install, 19 Watt	197,017	0	265,972	0	265,972	0
CFL, Non PI Direct Install, 23 Watt	295,882	0	399,441	0	399,441	0
CFL, Non PI Direct Install, 9 Watt	79,193	0	106,911	0	106,911	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	13,113	0	17,703	0	17,703	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	0	4,160	0	1,747	0	1,747
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	15,343	0	20,712	0	20,712	0
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	0	5,730	0	2,407	0	2,407
Insulation, Non PI Direct Install, 6' pipe, NG	0	43	0	18	0	18
Insulation, Project Based, Attic ²	0	0	0	0	0	0
Insulation, Project Based, Foundation ²	0	0	0	0	0	0
Insulation, Project Based, Sillbox ²	0	0	0	0	0	0
Insulation, Project Based, Wall ²	0	0	0	0	0	0
Project Completion ²	7,215,918	4,466,619	9,741,490	1,875,980	9,325,254	1,795,823
Showerhead, Non PI Direct Install, 1.5 gpm, Electric	43,379	0	58,561	0	58,561	0
Showerhead, Non PI Direct Install, 1.5 gpm, NG	0	18,271	0	7,674	0	7,674
Total	8,167,030	4,494,824	11,025,490	1,887,826	10,609,254	1,807,669

¹Columns do not sum to the totals due to rounding.

²The program implementer records kWh and therm savings achieved from prescriptive air sealing and insulation measures under the "Project Completion" measure name.

Attribution

The Evaluation Team hypothesized that enhanced incentives offered through the Bonus affected participant decision-making such that there was lower freeridership and, depending on reported spillover savings, higher NTG among WPS customers than among all other participants in the statewide Program. Therefore, the Evaluation Team analyzed the differences in calculated freeridership and NTG between WPS participants who received additional incentives through the Bonus and all other participants in the Home Performance with ENERGY STAR Program.

First, the Evaluation Team collected participant and self-report freeridership and spillover data from the Home Performance with ENERGY STAR Program survey conducted during the statewide evaluation as well as from the Home Performance Bonus survey. The Evaluation Team utilized these data to calculate NTG ($1 - \text{Freeridership} + \text{Spillover}$) for each respondent in the sample.

To determine differences in freeridership and NTG between WPS and other utility customers with similar characteristics, the Evaluation Team divided respondent data between Bonus incentive recipients and all other participants, and then into seven smaller sample groups defined by home size, home age, and income.²³ Table 28 presents the seven sample groups with definitions and populations for each.

Table 28. Attribution Analysis Sample Groups

Sample Group	Definition	Sample Size		
		WPS	Other	Total
General	All respondents who own a single-family, detached home	66	32	98
Small Homes	Respondents whose homes are less than 2,000 square feet	36	23	59
Large Homes	Respondents whose homes are 2,000 square feet or larger	26	8	34
Old Homes	Respondents whose homes were built before 1970	40	21	61
New Homes	Respondents whose homes were built in 1970 or later	26	11	37
Low - Middle Income	Respondents whose 2012 household income was less than \$75,000	37	16	53
High Income	Respondents whose 2012 household income was \$75,000 or higher	27	13	40

For each sample group, the Evaluation Team calculated separate freeridership, spillover, and NTG estimates for Bonus recipients and all other participants. Estimated freeridership was lower among Bonus recipients than all other participants across all sample groups.

²³ Since some respondents refused or did not know how to answer certain survey questions, some sample group pairings (e.g., small and large homes) do not include all 98 respondents included in the general sample.

Likewise, calculated NTG was higher among Bonus recipients than all other participants across all sample groups, except “Old Homes.” Table 29 presents calculated freeridership, spillover, and NTG for each sample group.

Table 29. Freeridership, Spillover, and NTG by Customer Type and Sample Group

Sample Group	Freeridership		Spillover		NTG	
	WPS	Other	WPS	Other	WPS	Other
General	3.96%	12.05%	0.50%	3.50%	96.54%	91.44%
Small Homes	6.49%	14.32%	0.54%	4.01%	94.05%	89.68%
Large Homes	1.23%	4.01%	0.54%	1.87%	99.31%	97.87%
Old Homes	3.94%	6.54%	0.45%	4.77%	96.51%	98.24%
New Homes	4.01%	26.03%	0.59%	0.27%	96.58%	74.24%
Low - Middle Income	3.47%	14.39%	0.33%	6.03%	96.85%	91.64%
High Income	5.32%	10.59%	0.90%	0.83%	95.58%	90.25%

The Evaluation Team then used a two-sample t-test procedure to determine if the observed differences in freeridership and NTG were statistically significant (at the 90% level of confidence). Table 30 presents these findings for each of the seven sample groups.

None of the observed differences in freeridership and NTG was found to be statistically significant. In other words, the enhanced incentives offered to WPS customers did not significantly impact freeridership or NTG for any of the customer segments. However, the data presented in Table 30 and discussed in the Customer Decision-Making section below are still consistent with the hypothesis that enhanced incentives lower freeridership. For some sample groups, the lack of statistical significance could reflect small sample size rather than a true lack of difference.

Table 30. Statistical Significance of Observed Differences in Freeridership and NTG

Sample Group	Freeridership		Statistically Significant?	NTG		Statistically Significant?
	T-Statistic	P-Value		T-Statistic	P-Value	
General	1.30	0.2020	No	-0.20	0.9856	No
Small Homes	0.89	0.3791	No	0.24	0.8156	No
Large Homes	1.01	0.3423	No	-0.15	0.8832	No
Old Homes	0.10	0.9210	No	1.07	0.2933	No
New Homes	1.61	0.1371	No	-1.60	0.1377	No
Low - Middle Income	1.34	0.1956	No	0.22	0.8310	No
High Income	0.40	0.6894	No	-0.29	0.7733	No

Process Evaluation Findings

The purpose of the CY 2013 process evaluation was to gather information about the Bonus regarding:

- Effectiveness of delivery and implementation processes
- Customer awareness, decision-making, and satisfaction

Furthermore, the Evaluation Team conducted the process evaluation to determine if there were any lessons learned that Focus on Energy could apply to other programs in the future.

The Evaluation Team interviewed the Program Administrator, Program Implementer, and Trade Allies, and surveyed a sample of participant customers (see Table 22).

Home Performance Bonus Management and Delivery

This section describes the Evaluation Team's assessment of the management and delivery aspects of the Bonus.

The Program Administrator was responsible for Bonus design, management, and reporting. The Program Implementer was responsible for Bonus outreach and marketing, managing the budget, processing applications, and sending payments to eligible customers.

The Program Implementer delivered the Bonus to WPS participants in conjunction with the Home Performance with ENERGY STAR Program. Both the Program and the Bonus relied on Trade Allies to conduct home energy assessments, make recommendations for energy-saving retrofits, and install the measures for customers. Program participants in the WPS territory did not need to complete any additional paperwork and they automatically received the additional 33% refund through the Bonus. The project funding was available for customers on a first-come first-served basis.

The delivery and implementation of the Home Performance with ENERGY STAR Program differed from the Bonus in one distinct way. Trade Allies provided the original 33% of costs for installing measures through the Home Performance with ENERGY STAR Program as a direct discount on the customer's bill. For the Bonus, the Program Implementer mailed a separate check for an additional 33% of costs directly to participants in the WPS territory who completed installation of air sealing and insulation through the Program.

In the interview, Program Implementer staff described some complications in distributing the Bonus refunds on a first-come first-served basis. The Program Implementer anticipated having enough funding for the Bonuses to last through the fall of 2013. As the funds came close to exhaustion, the Program Implementer emailed Trade Allies to let them know. However, after the Program Implementer reached out to Trade Allies, the Program Administrator offered additional funding to provide more Bonuses through 2013. The Program Implementer accepted the additional funding and informed Trade Allies that more bonus funding had become available.

When funding was close to running out again in late fall of 2013, the Program Implementer again sent emails to Trade Allies to encourage them to complete projects and submit paperwork. However, Trade

Allies submitted significantly more projects than had been submitted in prior months and more the Bonus could accommodate. According to Program implementer staff, fluctuations in the number of projects coming in were difficult to predict. One Program Implementer staff member said that they were expecting 40 or 50 projects and received 90 during the time that funding ran out. The Program Implementer secured additional funding from the Program Administrator to cover most, but not all, of these remaining projects.

Two of the three Trade Allies the Evaluation Team interviewed described frustrations about the uncertainty regarding funding availability and that project funding had run out. Both said they had to pay part or all of the bonus incentives promised to some of their customers. One commented, “That bonus actually ended up costing my company thousands of dollars.” As a result, he said his company had significantly scaled back its involvement with the Home Performance with ENERGY STAR Program in 2014.

A Program Implementer staff member said they may have more accurately gauged when Bonus funds would be depleted by establishing a reservation system in which Trade Allies informed the Program Implementer of planned projects.

Program Materials

The Evaluation Team reviewed Home Performance Bonus materials for the inclusion of documents considered industry best practices for energy efficiency program administration, implementation, and delivery (Table 31). These materials explained the Home Performance with ENERGY STAR Program and provided additional references to the Bonus available in the WPS territory. The Program Administrator and Program Implementer did not develop unique materials for the Bonus.

Table 31. Presence of Home Performance Bonus Materials

Program Materials Considered Best Practices	Present in 2013	Material Title or Description
Program manual, handbook, and/or implementation plan	✓	Focus on Energy Home Performance with ENERGY STAR and Assisted Home Performance with ENERGY STAR operations manuals both include sections that explain the Home Performance Bonus.
Process flowcharts and organizational charts.	✓	
Presence of data collection protocols and quality assurance/quality control (QA/QC) protocols	✓	
Training materials for program staff (e.g., program managers, account executives, engineers, support staff)	✓	Inspector QA/QC training PowerPoint presentation
Application and rebate forms, customer contracts, and agreements	N/A	WPS customers who participate in the Home Performance with ENERGY STAR and Assisted Home Performance with ENERGY STAR Programs automatically receive the bonus incentive.
Educational materials for Trade Allies	✓	Program fact sheet available for Trade Allies.
Marketing plan	✓	

Key: ✓=present, v= partially present, - = not present

Marketing and Outreach

As in the Home Performance with ENERGY STAR Program, the Bonus relied primarily on Trade Allies to inform WPS customers of the additional refund. The Program Implementer reached out to Trade Allies by sending an e-mail explaining the Bonus, conducting a webinar, and developing printed materials.

In addition to marketing the Home Performance with ENERGY STAR Program across Wisconsin, the Program Administrator provided funding for marketing and outreach about the Bonus to customers in the WPS territory. These efforts involved:

- Newspaper advertisements
- Online banner ads
- Direct mailings (postcards and letters) to WPS customers

When asked how aware they thought customers were of the Bonus, the Program Implementer said most homeowners contacted Trade Allies because they needed work performed on their home, not because they had heard about the Home Performance with ENERGY STAR Program or the Bonus. The Program Implementer thought most customers who participated heard about the Bonus through their contractor.

Customer Experience

The Evaluation Team surveyed 65 participant customers about their awareness of the Bonus, sources of information, decision-making, and satisfaction with the Bonus overall. Given the small number of respondents who were aware of the Bonus, findings from the questions regarding sources of customer awareness and customer satisfaction are directional only and not meant to be representative of the entire Bonus participant population.

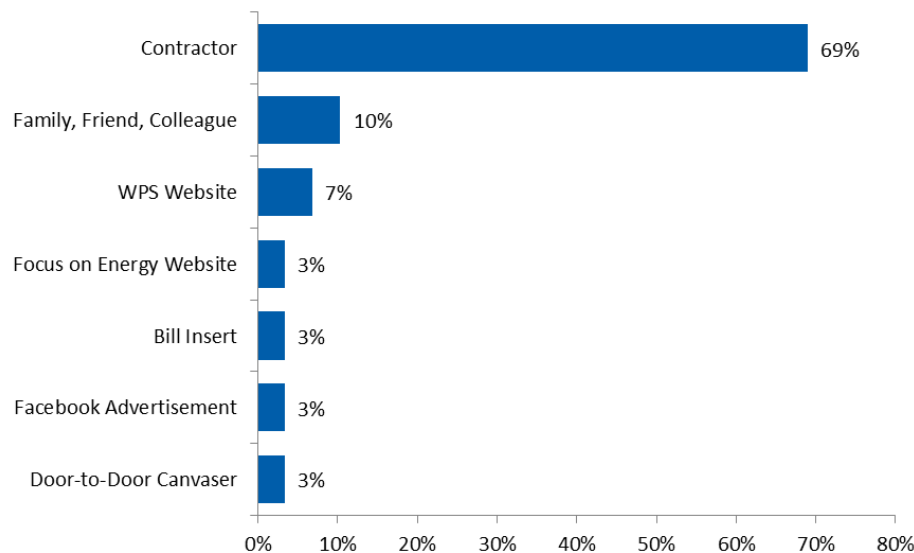
Customer Awareness

Customers indicated low awareness of the Bonus, despite receiving a separate check in addition to the Home Performance with ENERGY STAR Program discount on the contractor's invoice. Over half (34 out of 65) of respondents said they were not familiar with the refund available to WPS customers.

Sources of Awareness

When asked how they first heard of the Bonus available to WPS customers, the majority of respondents (69%, or 20 out of 29) said they heard about it from their contractor. Others heard about it from friends, family, or colleagues (10%, or 3 out of 29) or from the WPS website (7%, or 2 out of 29) (as shown in Figure 20). One respondent each also reported hearing about the Bonus from the Focus on Energy website, a Facebook advertisement, a door-to-door canvasser, and a bill insert.

Figure 20. How Participants First Heard About the Bonus Incentive for WPS Customers



Source: Home Performance Bonus/Assisted Home Performance Bonus Participant Customer Survey, I2: "How did you first hear about the bonus incentive for WPS customers?" (n=29)

Customer Decision-Making

To better understand the influence of the Bonus on customer decision-making, the Evaluation Team asked the respondents who said they were aware of the Bonus how important it was in their decision to

participate in the Home Performance with ENERGY STAR Program. All indicated the Bonus was “very important” (94%, or 29 out of 31) or “somewhat important” (6%, or 2 out of 31) in their decision.

The Evaluation Team also asked these respondents if they would have made more, less, or the same energy-saving improvements without the Bonus. Seventy-one percent of respondents (21 out of 31) said they would have made fewer improvements without the Bonus.

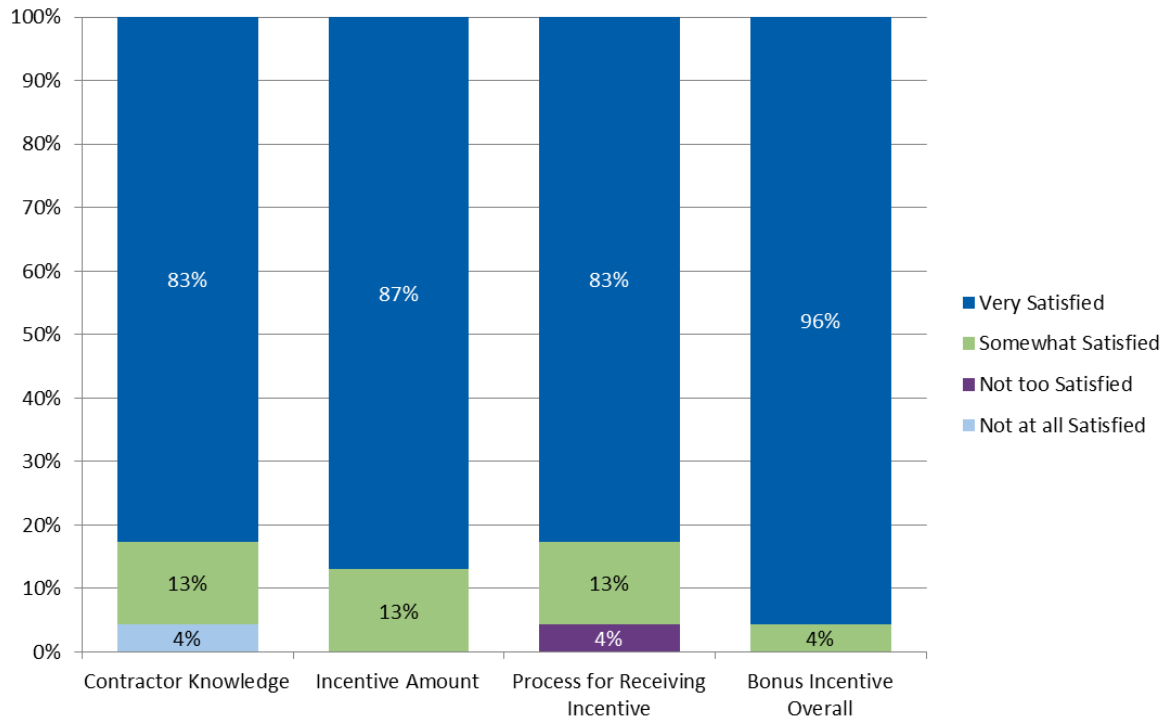
Customer Satisfaction

The Evaluation Team asked respondents who were aware of the Bonus to rate their satisfaction with the Bonus overall and with its elements. As Figure 21 shows, overall, customers indicated high levels of satisfaction with the Bonus:

- All respondents were satisfied with the amount of the incentive they received and with their overall experience with the Bonus.
- Twenty-two out of 23 respondents surveyed (96%) said they were “somewhat satisfied” or “very satisfied” with their contractor’s level of knowledge about the additional refund received through the Bonus and with the process for receiving it.²⁴

²⁴ In the Home Performance Bonus/Assisted Home Performance Bonus Participant Customer Survey, the Evaluation Team referred to the refund available through the Bonus as a “bonus incentive.” For purposes of clarity and consistency, the Evaluation Team refers here to the “bonus incentive” as the “refund.”

Figure 21. Customer Satisfaction Ratings



Source: Home Performance Bonus/Assisted Home Performance Bonus Participant Customer Survey, SAT1, SAT3, SAT4, and SAT6: “Would you say you were very satisfied, somewhat satisfied, not at all satisfied, or not too satisfied with...?” (n=23)

Only two participants indicated they were “less than satisfied” with Bonus elements and they provided the following comments:

- The participant who indicated they were “not at all satisfied” with the process said that the contractor filled out the paperwork incorrectly so he or she never received the additional refund.
- Another participant who was “not at all satisfied” with the contractor’s level of knowledge about the additional refund said the contractor did not file the paperwork in a timely manner and that he or she also had to pay the contractor before receiving the refund.

Outcomes

Outcome 1: The Home Performance Bonus affected participation in the Home Performance with ENERGY STAR Program such that there was lower freeridership and higher NTG among WPS participants than among other participants. However, observed differences in freeridership and NTG were not statistically significant at the 90% level of confidence.

Across all sample groups, the freeridership and NTG data are consistent with the hypothesis that providing additional incentives to WPS customers had a positive impact on participant freeridership and NTG. However, the hypothesis cannot be confirmed with at least 90% confidence.

Outcome 2. The additional marketing and outreach conducted directly to WPS customers to promote the Bonus may not have been necessary to encourage participation.

Focus on Energy allocated additional funding to market the Bonus; these funds covered newspaper and online advertisements to targeted customers in the WPS territory. According to the Program Implementer, however, most homeowners contacted Trade Allies because they needed work done on their home and then learned of the Program and the Bonus through the Trade Ally. The Evaluation Team's survey of Bonus participants supported this finding—65% of respondents who were aware of the additional refund said they learned about it through their contractor.

Continuing to build and support a strong Trade Ally network may be more successful in fostering customer awareness of and participation in programs such as the Home Performance Bonus and the Home Performance with ENERGY STAR Program than increasing direct advertising to customers.

Outcome 3. The Bonus may have benefited from a reservation system for bonus incentive funding.

Because the Program Implementer offered funding to cover the refund on a first-come first-served basis and had difficulty anticipating the number of projects to be completed, the Program could not fund all projects. According to the Program Implementer, some customers thought funding was still available and were frustrated that they did not receive the refund after submitting paperwork to the Home Performance with ENERGY STAR Program. Trade Allies also described frustrations about the uncertainty regarding funding availability and that project funding had run out. The Program Implementer suggested that a reservation system for projects in progress may have made it easier to anticipate when Bonus funding would run out and to communicate that information to Trade Allies.

Assisted Home Performance ENERGY STAR® Bonus

Focus on Energy offered the Bonus to customers in the WPS territory who participated in the Assisted Home Performance with ENERGY STAR Program. WPS customers whose income ranged from 60% to 80% of the state median income were eligible to receive an additional 15% off the cost of eligible air sealing and insulation improvements. When the Bonus was added to the 75% incentive for Assisted Home Performance with ENERGY STAR Program, WPS customers could receive as much as 90% off their weatherization improvement costs, up to a maximum of \$3,500.

The Program Implementer was Conservation Services Group (CSG).

Table 32 lists the Bonus' first-year annual and life-cycle verified net savings by calendar year.²⁵ WPS did not offer the Bonus until CY 2012. The Evaluation Team calculated first-year annual and life-cycle savings for CY 2012 during prior evaluations. Energy and demand savings are higher in CY 2013 due to a substantial increase in participation.

Table 32. Assisted Home Performance Bonus Verified Net Savings Summary

Calendar Year	First-Year Annual			Life-Cycle	
	kWh	kW	Therms	kWh	Therms
2012	1,653	1	1,018	16,153	12,220
2013	57,962	21	17,865	916,537	417,659
Total	59,615	22	18,883	932,690	429,879

Program-Level Evaluation Activities

As Table 33 shows, for the CY 2013 evaluation, the Evaluation Team conducted data collection activities to support these impact and process evaluation tasks—energy and demand savings determination, stakeholder interviews, participant customer surveys, and a materials review.

²⁵ In some cases, although projects were completed in CY 2013 (as the Bonus required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Table 33. Assisted Home Performance Bonus Data Collection Activities and Sample Sizes

Activity	Sample Size (n)
Energy and Demand Savings Determination	Census
Stakeholder Interviews ¹	4
Trade Ally Interviews ²	3
Participant Customer Surveys	40
Materials Review ³	Census

¹ The Evaluation Team conducted stakeholder interviews in conjunction with the stakeholder interviews for the Home Performance Bonus.

² The Evaluation Team conducted Trade Ally interviews in conjunction with the Trade Ally interviews for the Home Performance Bonus.

³ Since the program materials for the Home Performance Bonus and the Assisted Home Performance Bonus overlap, the Evaluation Team did not conduct a separate review for the Assisted Home Performance Bonus. See the Program Materials section in the Home Performance Bonus report for materials review for both programs.

Impact Evaluation Findings

In total, the CY 2013 Bonus awarded enhanced incentives to 97 WPS customers. These customers installed 1,165 measures, including direct install measures offered through the Assisted Home Performance with ENERGY STAR Program's home energy assessment. Table 34 lists the number of unique participating customers who installed each measure, as well as the number of installations completed by measure, in CY 2013.

Table 34. Assisted Home Performance Bonus Participation by Measure

Measure	Customers ¹	Measures Installed
Adjustment Measure	1	1
Air Sealing, Project Based	95	95
CFL, Non PI Direct Install, 14 Watt	37	215
CFL, Non PI Direct Install, 19 Watt	38	186
CFL, Non PI Direct Install, 23 Watt	41	219
CFL, Non PI Direct Install, 9 Watt	17	112
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	2	2
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	22	22
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	4	6
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	34	58
Insulation, Non PI Direct Install, 6' pipe, NG	2	3
Insulation, Project Based, Attic	88	88
Insulation, Project Based, Wall	27	27
Project Completion	97	97
Showerhead, Non PI Direct Install, 1.5 gpm, Electric	1	2
Showerhead, Non PI Direct Install, 1.5 gpm, NG	28	32
Total		1,165

¹ Indicates the number of unique customers who installed each measure; most participating customers installed multiple measures and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure

The Evaluation team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs determined through its evaluation of the statewide CY 2013 Assisted Home Performance with ENERGY STAR Program. Since the Bonus delivered enhanced incentives to WPS customers who participated in the statewide Program, the Evaluation Team applied ISRs calculated during the statewide evaluation to gross savings achieved through the Bonus. It calculated a realization rate for each measure by fuel type, and then it calculated a weighted average realization rate for each fuel type based on savings achieved per measure.²⁶

Table 35 presents weighted average realization rates for the CY 2013 Bonus.

**Table 35. Weighted Average Realization Rates
for the Assisted Home Performance Bonus**

Savings Type	Realization Rate
kWh	97.8%
kW	99.4%
Therms	99.5%
MMBtu-Equivalent Weighted Average (Excludes kW)	99.3%

Differences between verified gross and verified net savings resulted from the Evaluation Team's application of NTG adjustments. In keeping with general program policies for energy efficiency programs that serve low-income customers, the Evaluation Team applied a deemed NTG adjustment of 100% for all measures delivered through the Assisted Home Performance Bonus.

Table 36 lists CY 2013 first-year annual savings by measure, and Table 37 lists CY 2013 life-cycle savings by measure.

²⁶ Realization rate = verified gross savings / gross savings

Table 36. Assisted Home Performance Bonus First-Year Annual Savings by Measure¹

Measure	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Adjustment Measure	232	0	96	232	0	96	232	0	96
Air Sealing, Project Based ²	0	0	0	0	0	0	0	0	0
CFL, Non PI Direct Install, 14 Watt	9,793	1	0	9,402	1	0	9,402	1	0
CFL, Non PI Direct Install, 19 Watt	5,925	1	0	5,688	1	0	5,688	1	0
CFL, Non PI Direct Install, 23 Watt	10,155	1	0	9,750	1	0	9,750	1	0
CFL, Non PI Direct Install, 9 Watt	3,477	0	0	3,338	0	0	3,338	0	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	509	0	0	455	0	0	455	0	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	0	0	246	0	0	220	0	0	220
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	572	0	0	512	0	0	512	0	0
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	0	0	269	0	0	240	0	0	240
Insulation, Non PI Direct Install, 6' pipe, NG	0	0	33	0	0	33	0	0	33
Insulation, Project Based, Attic ²	0	10	0	0	10	0	0	10	0
Insulation, Project Based, Wall ²	0	7	0	0	7	0	0	7	0
Project Completion ²	27,916	0	16,690	27,916	0	16,690	27,916	0	16,690
Showerhead, Non PI Direct Install, 1.5 gpm, Electric	718	0	0	669	0	0	669	0	0
Showerhead, Non PI Direct Install, 1.5 gpm, NG	0	0	628	0	0	585	0	0	585
Total	59,297	21	17,962	57,962	21	17,865	57,962	21	17,865

¹Columns do not sum to the totals due to rounding.

²The program implementer records kWh and therm savings achieved from prescriptive air sealing and insulation measures under the "Project Completion" measure name.

Table 37. Assisted Home Performance Bonus Life-Cycle Savings by Measure¹

Measure	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Adjustment Measure	5,795	2,401	5,795	2,401	5,795	2,401
Air Sealing, Project Based ²	0	0	0	0	0	0
Bonus, Application Completion Award	0	0	0	0	0	0
Bonus, Project Completion - WPS TW	0	0	0	0	0	0
CFL, Non PI Direct Install, 14 Watt	69,386	0	66,617	0	66,617	0
CFL, Non PI Direct Install, 19 Watt	44,922	0	43,130	0	43,130	0
CFL, Non PI Direct Install, 23 Watt	80,105	0	76,909	0	76,909	0
CFL, Non PI Direct Install, 9 Watt	25,454	0	24,438	0	24,438	0
Energy Assessment Fee	0	0	0	0	0	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	2,543	0	2,275	0	2,275	0
Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	0	1,462	0	1,308	0	1,308
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	2,861	0	2,560	0	2,560	0
Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	0	1,872	0	1,675	0	1,675
Insulation, Non PI Direct Install, 6' pipe, NG	0	396	0	396	0	396
Insulation, Project Based, Attic ²	0	0	0	0	0	0
Insulation, Project Based, Wall ²	0	0	0	0	0	0
Project Completion ²	686,791	404,863	686,791	404,863	686,791	404,863
Showerhead, Non PI Direct Install, 1.5 gpm, Electric	8,618	0	8,023	0	8,023	0
Showerhead, Non PI Direct Install, 1.5 gpm, NG	0	7,536	0	7,016	0	7,016
Total	926,473	418,530	916,537	417,659	916,537	417,659

¹Columns do not sum to the totals due to rounding.

²The program implementer records kWh and therm savings achieved from prescriptive air sealing and insulation measures under the "Project Completion" measure name.

Process Evaluation Findings

The Assisted Home Performance Bonus ran in conjunction with the Home Performance Bonus. The Evaluation Team's process findings and conclusions apply to both bonuses and are reported in the Home Performance Bonus section. In this section, the Evaluation Team discusses the exceptions, which are based on the surveys with Assisted Home Performance Bonus participants.

Assisted Home Performance Bonus Management and Delivery

Like the Home Performance Bonus (delivered with the Home Performance with ENERGY STAR Program), the Program Implementer delivered the Assisted Home Performance Bonus in conjunction with the Assisted Home Performance with ENERGY STAR Program. However, unlike the Home Performance Bonus, for which the Program Implementer sent a refund check directly to the customer, the Assisted Home Performance Bonus provided an additional discount off the customer's invoice from the Trade Ally. The Program Implementer then reimbursed the contractor for the total amount discounted by the Program and the Bonus.

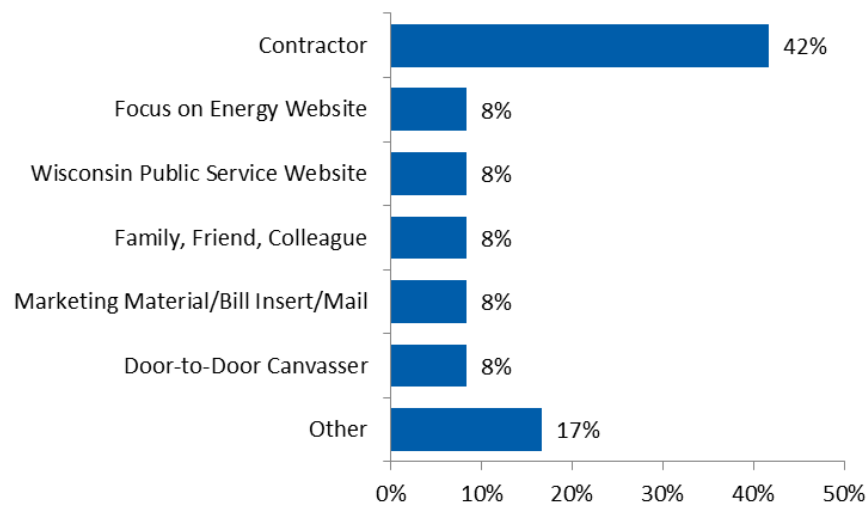
Customer Experience

The Evaluation Team surveyed 40 participants about their awareness of the Bonus. The Evaluation Team also asked only those who were aware of the Bonus where they heard about it and how satisfied they were with the Bonus and its delivery. Given the small number of respondents who were aware of the Bonus, findings from the questions regarding sources of customer awareness and customer satisfaction are directional only and not meant to be representative of the entire Bonus participant population.

Customer Awareness

Seventy percent of respondents (28 out of 40) said they were not familiar with the discount available to WPS customers. Of those who were, 33% (five out of 12) said they heard about it from their contractor (see Figure 22).

Figure 22. Sources of Customer Awareness

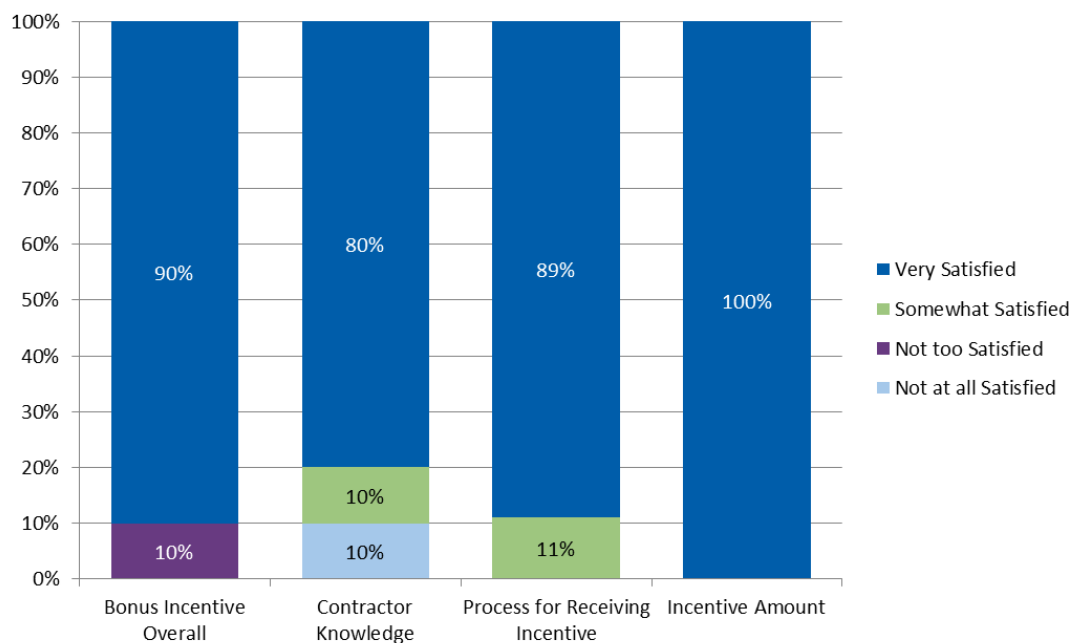


Source: Home Performance Bonus/Assisted Home Performance Bonus Participant Customer Survey, I2: "How did you first hear about the bonus incentive for WPS customers?" (n=12)

Customer Satisfaction

The Evaluation Team asked respondents to rate their satisfaction with the Bonus. As Figure 23 shows, most customers indicated high satisfaction with the Bonus.

Figure 23. Customer Satisfaction Ratings



Source: Home Performance Bonus/Assisted Home Performance Bonus Participant Customer Survey, SAT1, SAT3, SAT4, and SAT6: "Would you say you were very satisfied, somewhat satisfied, not at all satisfied, or not too satisfied with..."? (n≥8)

All customers were satisfied with the discount amount and the process for receiving it.²⁷ Assisted Home Performance Bonus respondents indicated slightly lower satisfaction with the contractor’s knowledge and with the discount overall than the Home Performance Bonus respondents. However, 100% (10 out of 10) of Assisted Home Performance Bonus respondents who could provide a response said they were “very satisfied” with the discount amount, compared to 90% (28 out of 31) of Home Performance Bonus respondents.

Outcomes

Outcome 1: Most customers were not aware that they had received an additional Home Performance Bonus discount.

Assisted Home Performance Bonus customers were less aware of the discount than the Home Performance Bonus customers. Of the 40 participants surveyed, only 12 (30%) said they were aware of the discount available to WPS customers. This may be attributed to the differences in incentive payment, where the Assisted Home Performance Bonus participants received a direct discount from the Trade Ally on their invoice instead of a refund check like the Home Performance Bonus participants.

Another reason may be that marketing materials for the Bonus did not emphasize the two types of awards available to WPS customers who, therefore, may not have realized that they received an additional discount specific to WPS customers.

²⁷ In the Home Performance Bonus/Assisted Home Performance Bonus Participant Customer Survey, the Evaluation Team referred to the additional discount available through the Bonuses as a “bonus incentive.” For purposes of clarity and consistency, the Evaluation Team refers here to the “bonus incentive” as the “discount” and as a “refund” in the Home Performance Bonus report section, to reflect the difference in payment processes between the two bonuses.

Residential Energy Bundle Bonus

Customers in the Wisconsin Public Service (WPS) territory who participated in select Focus on Energy programs could also receive the Energy Bundle Bonus (the Bonus). Customers had to complete two or more additional energy efficiency and renewable energy projects on unrelated energy-using systems.²⁸ The amount of the Bonus increased with each additional project customers installed—up to double the standard Focus on Energy incentive for five or more energy-saving projects—with a cap of 75% of project costs and not to exceed \$25,000 per project site.

To be eligible for the Residential Energy Bundle Bonus, customers had to have completed projects through the Multifamily Energy Savings Program. The Program Implementer for each Focus on Energy program was responsible for managing the Bonus for any eligible customers. Franklin Energy implemented the Multifamily Energy Savings Program.

The Evaluation Team conducted a full program evaluation, including both impact and process evaluation activities, for the Energy Bundle Bonus. For the purposes of this evaluation, the Evaluation Team presents separate impact findings for the residential and nonresidential segments. However, as the segment delivery process did not differ, the Evaluation Team has combined the process findings. See the Nonresidential Energy Bundle Bonus section for combined process findings regarding both the Residential Energy Bundle Bonus and Nonresidential Energy Bundle Bonus. Here, the Evaluation Team presents impact findings for all residential projects completed through the Energy Bundle Bonus for customers who participated in the Multifamily Energy Savings Program.

Table 38 lists the Bonus' first-year annual and life-cycle verified net savings by calendar year for the residential segment.²⁹ (The Evaluation Team presents Nonresidential Energy Bundle Bonus impact findings in a separate section.) The Evaluation Team had calculated first-year annual and life-cycle savings for CY 2011 and CY 2012 during prior evaluations.

²⁸ Focus on Energy defined unrelated projects as those projects that improve the efficiency of separate energy-using systems in the facility. For example, installing a water heater and LED lighting were considered two unrelated projects. However, installing LED lighting and lighting controls were not considered unrelated projects, since they do not improve efficiency of separate energy-using systems in the facility.

²⁹ In some cases, although the project was completed in CY 2013 (as the Bonus required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Table 38. Residential Energy Bundle Bonus Savings Summary

Calendar Year	First-Year Annual			Life-Cycle	
	kWh	kW	Therms	kWh	Therms
2011	115,907	13	10,479	1,036,319	92,713
2012	565,304	68	31,786	3,188,736	384,602
2013	108,790	3	12,946	1,356,307	243,604
Total	790,001	84	55,211	5,581,362	720,919

Impact Evaluation Findings

In total, the CY 2013 Residential Energy Bundle Bonus awarded payments to six WPS residential customers. These customers installed 889 measures, including direct install measures that were offered through the Multifamily Direct Install Program. Over half of the measures were lighting-related. Table 39 lists the number of unique participating customers who installed each measure, as well as the number of installations completed by measure, in CY 2013.

Table 39. Residential Energy Bundle Bonus Participation by Measure

Measure	Customers ¹	Measures Installed
Adjustment Measure	1	1
Boiler, >= 90% AFUE, NG	1	1
Boiler, Hot Water, Modulating, >=90% AFUE, 6300 MBH	1	14
CFL, Direct Install, 13 Watt	1	3
CFL, Direct Install, 14 Watt	1	131
Clothes Washer, Common Area, NG, ENERGY STAR	1	16
DHW Plant Replacement	1	7
Dishwasher, Electric, ENERGY STAR	1	86
Faucet Aerator, Direct Install, 1.5 gpm, Bathroom, Electric	1	38
Faucet Aerator, Direct Install, 1.5 gpm, Kitchen, Electric	1	16
Insulation, Direct Install, 3' Pipe, Electric	1	15
LED Fixture, Replacing 70-100 Watt HID, Exterior	3	389
LED, Exit Sign, Retrofit	1	21
Refrigerator, ENERGY STAR	1	86
Showerhead, Direct Install, 1.5 gpm, Electric	1	36
Water Heater, >= 0.67 EF, Storage, NG	1	28
Water Heater, Not Otherwise Specified	1	1
Total		889

¹Indicates the number of unique customers who installed each measure; most participating customers installed multiple measures and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs determined through its evaluation of these statewide programs—Multifamily Energy Savings Program and Multifamily Direct Install Program. Since the Bonus delivered measures to WPS customers who participated in these statewide programs,

the Evaluation Team applied the ISRs—weighted by energy savings (MMBtu) attributable to each statewide program—to savings achieved through the residential Energy Bundle Bonus. The Evaluation Team calculated a realization rate for each measure by fuel type, and then it calculated a weighted average realization for each fuel type based on savings achieved per measure.³⁰ Table 49 presents weighted average realization rates for the CY 2013 Bonus.

Table 40. Weighted Average Realization Rates for the Residential Energy Bundle Bonus

Savings Type	Realization Rate
kWh	99.4%
kW	99.6%
Therms	100.0%
MMBtu-Equivalent Weighted Average (excludes kW)	99.9%

Differences between verified gross and verified net savings resulted from the Evaluation Team’s application of weighted NTG adjustments determined through its evaluation of the same two statewide programs. Table 41 presents weighted average NTG adjustments for CY 2013.

Table 41. Weighted Average Freeridership, Spillover, and NTG¹

Item	Weighted Average
Freeridership	27.3%
Spillover	0.0%
NTG	72.7%

¹Weighted averages for freeridership, spillover, and NTG are calculated separately.

³⁰ Realization rate = verified gross savings / gross savings

Table 42 lists CY 2013 first-year annual savings by measure, and Table 43 lists CY 2013 life-cycle savings by measure.

Table 42. Residential Energy Bundle Bonus Bid Program First-Year Annual Savings by Measure¹

Measure	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Adjustment Measure	1	0	0	1	0	0	1	0	0
Boiler, >= 90% AFUE, NG	0	0	8,903	0	0	8,903	0	0	5,522
Boiler, Hot Water, Modulating, >=90% AFUE, 6300 MBH	0	0	5,007	0	0	5,007	0	0	5,007
CFL, Direct Install, 13 Watt	115	0	0	111	0	0	111	0	0
CFL, Direct Install, 14 Watt	5,044	1	0	4,892	1	0	4,892	1	0
Clothes Washer, Common Area, NG, ENERGY STAR	21,296	1	510	21,296	1	510	13,209	0	317
DHW Plant Replacement	0	0	1,113	0	0	1,113	0	0	690
Dishwasher, Electric, ENERGY STAR	4,816	1	95	4,816	1	95	2,987	1	59
Faucet Aerator, Direct Install, 1.5 gpm, Bathroom, Electric	4,024	0	0	3,823	0	0	3,823	0	0
Faucet Aerator, Direct Install, 1.5 gpm, Kitchen, Electric	3,518	0	0	3,342	0	0	3,342	0	0
Insulation, Direct Install, 3' Pipe, Electric	1,926	0	0	1,926	0	0	1,926	0	0
LED Fixture, Replacing 70-100 Watt HID, Exterior	75,855	0	0	75,855	0	0	47,049	0	0
LED, Exit Sign, Retrofit	5,964	1	0	5,964	1	0	3,699	0	0
Refrigerator, ENERGY STAR	9,804	1	0	9,804	1	0	9,804	1	0
Showerhead, Direct Install, 1.5 gpm, Electric	19,199	0	0	18,815	0	0	18,815	0	0
Water Heater, >= 0.67 EF, Storage, NG	-1,400	0	700	-1,400	0	700	-868	0	434
Water Heater, Not Otherwise Specified	0	0	1,479	0	0	1,479	0	0	917
Total	150,162	4	17,807	149,246	4	17,807	108,790	3	12,946

¹Columns do not sum to the totals due to rounding.

Table 43. Residential Energy Bundle Bonus Bid Program Life-Cycle Savings by Measure¹

Measure	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Adjustment Measure	263,552	0	263,552	0	163,468	0
Boiler, >= 90% AFUE, NG	0	178,060	0	178,060	0	110,442
Boiler, Hot Water, Modulating, >=90% AFUE, 300 MBH	0	100,142	0	100,142	0	100,142
CFL, Direct Install, 13 Watt	689	0	668	0	668	0
CFL, Direct Install, 14 Watt	25,218	0	24,461	0	24,461	0
Clothes Washer, Common Area, NG, ENERGY STAR	298,144	7,146	298,144	7,146	184,924	4,432
DHW Plant Replacement	0	15,582	0	15,582	0	9,665
Dishwasher, Electric, ENERGY STAR	67,424	1,324	67,424	1,324	41,820	821
Faucet Aerator, Direct Install, 1.5 gpm, Bathroom, Electric	36,218	0	34,407	0	34,407	0
Faucet Aerator, Direct Install, 1.5 gpm, Kitchen, Electric	35,184	0	33,425	0	33,425	0
Insulation, Direct Install, 3" Pipe, Electric	28,890	0	28,890	0	28,890	0
LED Fixture, Replacing 70-100 Watt HID, Exterior	834,405	0	834,405	0	517,539	0
LED, Exit Sign, Retrofit	47,712	0	47,712	0	29,593	0
Refrigerator, ENERGY STAR	117,648	0	117,648	0	117,648	0
Showerhead, Direct Install, 1.5 gpm, Electric	191,988	0	188,148	0	188,148	0
Water Heater, >= 0.67 EF, Storage, NG	-14,000	7,000	-14,000	7,000	-8,683	4,342
Water Heater, Not Otherwise Specified	0	22,185	0	22,185	0	13,760
Total	1,933,071	331,439	1,924,884	331,439	1,356,307	243,604

¹Columns do not sum to the totals due to rounding.

Residential Trade Ally Bonus Bid Program

Focus on Energy launched the Trade Ally Bonus Bid Program (the Program) in August 2012 to generate energy savings, reduce energy costs, and increase market competitiveness by providing monetary awards directly to prequalified Trade Allies who identified and installed energy efficiency projects for customers in the WPS territory. Trade Allies bid competitively through a reverse auction on a dollar-per-kilowatt (\$/kWh)-saved award for expected projects.

CB&I was both the Program Administrator and Program Implementer. In October 2012, CB&I executed the first of four reverse auctions and allocated award dollars to a total of 12 winning Trade Allies based on the lowest \$/kWh bid for each auction. Trade Allies were responsible for identifying customers and implementing energy-savings projects. After Trade Allies completed projects, they applied to the Program to receive their award dollars. Customers could take advantage of any Focus on Energy and WPS Territory-Wide incentives for which they were eligible.

The Evaluation Team conducted a full program evaluation, including both impact and process evaluation activities, for the Trade Ally Bonus Bid Program. For the purposes of this evaluation, the Evaluation Team presents separate impact findings for the residential and nonresidential segments. However, as the segment delivery process did not differ, the Evaluation Team has combined the process findings. See the Nonresidential Trade Ally Bonus Bid Program section for combined process findings regarding both the Residential Trade Ally Bonus Bid Program and Nonresidential Trade Ally Bonus Bid Program. Here, the Evaluation Team presents impact findings for all residential projects completed through the Energy Bundle Bonus for customers who participated in the Multifamily Energy Savings Program and Residential Rewards Program.

Table 44 lists the Program's first-year annual and life-cycle verified net savings by calendar year for the residential segment.³¹ (The Evaluation Team presents Nonresidential Trade Ally Bonus Bid Program findings in a separate section.) No residential customers participated in CY 2012 or earlier.

³¹ In some cases, although the project was completed in CY 2013 (as the Program required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Table 44. Residential Trade Ally Bonus Bid Program Savings Summary

Calendar Year	First-Year Annual			Life-cycle	
	kWh	kW	Therms	kWh	Therms
2013	71,618	22	0	1,126,413	0

Impact Evaluation Findings

In total, the CY 2013 Program delivered 36 measures to 16 WPS residential customers. Table 45 lists the number of unique participating customers who installed each measure, as well as the number of installations completed by measure, in CY 2013.

Table 45. Residential Trade Ally Bonus Bid Program Participation by Measure

Measure	Customers ¹	Measures Installed
Solar Photovoltaic (PV)	15	15
T8 4L 4', HPT8 or RWT8, Replacing T12HO 2L 8', BF <= 0.78, Parking Garage	1	21
Total		36

¹Indicates the number of unique customers who installed each measure.

Energy and Demand Savings by Measure

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs determined through its evaluation of these statewide programs—Multifamily Energy Savings and Residential Rewards. Since the Program delivered measures to WPS customers who participated in these statewide programs, the Evaluation Team applied the ISRs—weighted by energy savings (MMBtu) attributable to each statewide program—to savings achieved through the residential Trade Ally Bonus Bid Program. The Evaluation Team calculated a realization rate for each measure by fuel type, and then it calculated a weighted average realization rate for each fuel type based on savings achieved per measure.³²

Realization rates for CY 2013 were 100% across kWh and kW estimates. The Program did not achieve any therm savings.

Differences between verified gross and verified net savings resulted from the Evaluation Team's application of weighted NTG adjustments determined through its evaluation of the same two statewide programs. Table 46 presents weighted average NTG adjustments for CY 2013.

³² Realization rate = verified gross savings / gross savings

Table 46. Weighted Average Freeridership, Spillover, and NTG¹

Item	Weighted Average
Freeridership	33.9%
Spillover	0.0%
NTG	66.1%

¹Weighted averages for freeridership, spillover, and NTG are calculated separately.

Table 47 lists CY 2013 first-year annual savings by measure, and Table 48 lists CY 2013 life-cycle savings by measure.

Table 47. Residential Trade Ally Bonus Bid Program First-Year Annual Savings by Measure

Measure	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Solar PV	83,351	34	0	83,351	34	0	46,607	19	0
T8 4L 4', HPT8 or RWT8, Replacing T12HO 2L 8', BF <= 0.78, Parking Garage	25,011	3	0	25,011	3	0	25,011	3	0
Total	108,362	37	0	108,362	37	0	71,618	22	0

Table 48. Residential Trade Ally Bonus Bid Program Life-Cycle Savings by Measure

Measure	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Solar PV	1,667,021	0	1,667,021	0	932,142	0
T8 4L 4', HPT8 or RWT8, Replacing T12HO 2L 8', BF <= 0.78, Parking Garage	194,271	0	194,271	0	194,271	0
Total	1,861,292	0	1,861,292	0	1,126,413	0

CY 2013 Nonresidential Segment Evaluation Findings

In CY 2013, the following five Territory-Wide programs were available to the nonresidential segment in the WPS territory:

- Nonresidential Energy Bundle Bonus (NEBB)
- Schools and Government Program (S&G)
- Smart Farms Program (SF)
- Small Business Platinum Package (SBPP)
- Nonresidential Trade Ally Bonus Bid Program (NTABB)

Table 49 presents the gross, verified gross, and verified net first-year annual savings for these five nonresidential programs. Differences between gross and verified gross savings result from the application of realization rates. Differences between verified gross and verified net savings result from the application of NTG ratios, which are presented by measure group in Appendix A.

Table 49. Gross, Verified Gross, and Verified Net Savings by Nonresidential Program, First-Year Annual¹

Program	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
NEBB	7,409,490	1,134	66,855	7,409,490	1,134	66,855	3,791,827	585	43,608
S&G	8,196,857	1,129	500,618	8,196,857	1,129	500,618	4,480,367	532	363,017
SF	5,886,950	1,020	3,569	5,919,898	1,025	3,594	2,969,607	557	2,654
SBPP	5,079,509	1,036	2,466	5,079,509	1,036	2,466	4,306,119	879	2,090
NTABB	7,877,790	2,095	5,663	7,877,790	2,095	5,663	5,727,519	1,716	4,800
Total	34,450,597	6,414	579,170	34,483,544	6,419	579,195	21,275,439	4,269	416,169

¹Columns do not sum to the totals due to rounding.

Table 50 lists the gross, verified gross, and verified net life-cycle savings for these five nonresidential programs. Demand reductions, represented by kW savings, do not accrue over time and, therefore, the Evaluation Team did not include them in the analysis of life-cycle savings.

Table 50. Gross, Verified Gross, and Verified Net Savings by Nonresidential Program, Life-Cycle¹

Program	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
NEBB	97,284,516	1,063,021	97,284,516	1,063,021	50,605,368	699,912
S&G	111,813,060	4,537,858	111,813,060	4,537,858	64,787,095	3,214,117
SF	81,283,037	60,742	81,716,566	61,109	40,474,586	44,448
SBPP	61,122,115	32,003	61,122,115	32,003	51,815,865	27,131
NTABB	83,677,454	66,133	83,677,454	66,133	61,428,223	56,064
Total	435,180,183	5,759,758	435,613,712	5,760,125	269,111,137	4,041,672

¹Columns do not sum to the totals due to rounding.

The savings presented Table 50 were achieved by a total of 1,212 nonresidential segment participants, as shown in Table 51.

Table 51. Unique Nonresidential Segment Customers by Program

Program Name	Unique Customers
Nonresidential Energy Bundle Bonus	106
Schools and Government	90
Smart Farms	350
Small Business Platinum Package	324
Nonresidential Trade Ally Bonus Bid	342
Total	1,212

In the sections that follow, the Evaluation Team presents a summary of evaluation findings by nonresidential program, which includes:

- A program summary
- A program-level evaluation activity summary
- Impact evaluation findings
- Process evaluation findings
- Outcomes and recommendations

Nonresidential Energy Bundle Bonus

Customers in the Wisconsin Public Service (WPS) territory who participated in select Focus on Energy programs could also receive the Energy Bundle Bonus (the Bonus). Customers had to complete two or more additional energy efficiency and renewable energy projects on “unrelated energy-using systems.”³³ The amount of the Bonus increased with each additional project customers installed—up to double the standard Focus on Energy incentive for five or more energy-saving projects—with a cap of 75% of project costs and not to exceed \$25,000 per project site.

To be eligible, customers had to have completed projects through one of these nonresidential Focus on Energy programs:

- Business Incentive Program
- Chain Stores and Franchises Program
- Large Energy Users Program
- Renewable Energy Competitive Incentive Program
- Small Business Program³⁴

The Program Implementer for each Focus on Energy program was responsible for managing the Bonus for any eligible customers. Franklin Energy implemented the Business Incentive Program, including Renewable Energy Competitive Incentive Program customers eligible through the Business Incentive Program, and the Chain Stores and Franchises Program. Leidos (formerly SAIC) implemented the Large Energy Users Program, including Renewable Energy Competitive Incentive Program (RECIP) customers eligible through the Large Energy Users Program.

For the purposes of this evaluation, the Evaluation Team presents separate impact findings for the residential and nonresidential segments. However, as the segment delivery process did not differ, the Evaluation Team has combined the process findings. See the Residential Energy Bundle Bonus section for impact findings for customers who participated in the Multifamily Energy Savings Program.

³³ Focus on Energy defined “unrelated projects” as those projects that improve the efficiency of separate energy-using systems in the facility. For example, installing a water heater and LED lighting were considered two unrelated projects. However, installing LED lighting and lighting controls were not considered unrelated projects, since they do not improve efficiency of separate energy-using systems in the facility.

³⁴ Small Business Program free or gold packages counted as one system eligible for the Energy Bundle Bonus. In order to qualify for the Energy Bundle Bonus, however, Small Business Program customers also had to install measures through one of the other eligible Focus on Energy programs. As a result, the Program Implementer for the Small Business Program (Staples & Associates, Inc.) was not responsible for implementing the Energy Bundle Bonus for its customers.

Table 52 lists the Bonus' first-year annual and life-cycle verified net savings by calendar year for the nonresidential segment.³⁵ The Evaluation Team had calculated first-year annual and life-cycle savings for CY 2011 and CY 2012 during prior evaluations.

Table 52. Nonresidential Energy Bundle Bonus Program Savings Summary

Calendar Year	First-Year Annual			Life-Cycle	
	kWh	kW	Therms	kWh	Therms
2011	6,420,907	1,515	88,091	81,877,691	1,295,496
2012	13,880,371	1,693	120,548	174,552,236	1,618,250
2013	3,791,827	585	43,608	50,605,368	699,912
Total	24,093,105	3,793	252,247	307,035,295	3,613,658

Program-Level Evaluation Activities

For the CY 2013 evaluation, as Table 53 shows, the Evaluation Team conducted data collection activities to support these impact and process evaluation tasks—energy and demand savings determination, attribution analysis, stakeholder interviews, participant customer surveys, and a materials review.

Table 53. Nonresidential Energy Bundle Bonus Data Collection Activities and Sample Sizes

Activity	Sample Size (n)
Stakeholder Interviews	14
Participant Customer Surveys	41
Materials Review	Census
Energy and Demand Savings Determination	Census
Attribution Analysis ¹	163

¹ Attribution analysis sample size represents the number of unique survey respondents who installed non-SMP measures—61 WPS customers who received the additional incentive and 102 who were not WPS customers.

Impact Evaluation Findings

In total, the CY 2013 Bonus awarded payments to 106 WPS customers. These customers installed 14,727 measures, including direct install measures that were offered through the Focus on Energy Chain Stores and Franchises Program. For each measure group, Table 54 lists the number of unique participating customers who installed at least one measure from the group, as well as the number of measure installations completed, in CY 2013.

³⁵ In some cases, although the project was completed in CY 2013 (as the Bonus required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Table 54. Nonresidential Energy Bundle Bonus Participation by Measure Group

Measure Group	Customers ¹	Measures Installed
Agriculture	47	334
Boilers & Burners	10	14
Building Shell	1	1
Compressed Air, Vacuum Pumps	1	2
Domestic Hot Water	8	21
Food Service	8	23
HVAC	28	340
Lighting	76	12,124
Other	101	1,126
Process	1	1
Refrigeration	12	698
Renewable Energy	1	1
Vending & Plug Loads	11	42
Total		14,727

¹Indicates the number of unique customers who installed at least one measure from each measure group; most participating customers installed measures from multiple measure groups and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure Group

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure group. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs determined through its evaluation of these statewide programs—Business Incentive, Chain Stores and Franchises, Renewable Energy Competitive Incentive Program Business Incentive, and Small Business.³⁶

Since the Bonus delivered measures to WPS customers who participated in these statewide programs, the Evaluation Team applied the ISRs—weighted by energy savings (MMBtu) attributable to each statewide program—to savings achieved through the nonresidential Energy Bundle Bonus. The Evaluation Team calculated a realization rate for each measure group by fuel type, and then it calculated a weighted average realization rate for each fuel type based on savings achieved per measure group.³⁷

Realization rates for CY 2013 were 100% across kWh, kW, and therm estimates.

Differences between verified gross and verified net savings resulted from the Evaluation Team's application of weighted NTG adjustments. NTG adjustments for all non-standard marketing practices (SMP) measures came from freeridership and spillover scores the Evaluation Team calculated using data from the Energy Bundle Bonus survey; for all SMP measures, the Evaluation Team applied weighted NTG

³⁶ Although some Large Energy Users Program customers were eligible for the Energy Bundle Bonus, no Large Energy Users customers received the bonus in 2013.

³⁷ Realization rate = verified gross savings / gross savings

adjustments that were calculated during the statewide evaluation. Table 55 presents weighted average NTG adjustments for CY 2013.

Table 55. Weighted Average Freeridership, Spillover, and NTG

Item	Weighted Average
Freeridership	44.5%
Spillover	1.7%
NTG	54.1%

¹Weighted averages for freeridership, spillover, and NTG are calculated separately.

Table 56 lists CY 2013 first-year annual savings by measure group, and Table 57 lists CY 2013 life-cycle savings by measure group.

Table 56. Nonresidential Energy Bundle Bonus First-Year Annual Savings by Measure Group¹

Measure Group	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Agriculture	1,289,249	214	930	1,289,249	214	930	995,578	165	718
Boilers & Burners	96,888	0	29,221	96,888	0	29,221	62,374	0	18,811
Building Shell	0	0	1,539	0	0	1,539	0	0	1,188
Compressed Air, Vacuum Pumps	40,127	7	12,600	40,127	7	12,600	30,987	6	9,730
Domestic Hot Water	14,918	4	2,090	14,918	4	2,090	8,230	2	1,153
Food Service	31,187	4	6,409	31,187	4	6,409	16,037	2	3,296
HVAC	1,001,107	156	14,066	1,001,107	156	14,066	619,970	97	8,711
Lighting	4,000,191	609	0	4,000,191	609	0	1,327,894	202	0
Other	31,241	6	0	31,241	6	0	24,125	5	0
Process	132,702	35	0	132,702	35	0	102,475	27	0
Refrigeration	677,622	87	0	677,622	87	0	523,270	67	0
Renewable Energy	30,592	12	0	30,592	12	0	31,724	12	0
Vending & Plug Loads	63,666	0	0	63,666	0	0	49,164	0	0
Total	7,409,490	1,134	66,855	7,409,490	1,134	66,855	3,791,827	585	43,608

¹Columns do not sum to the totals due to rounding.

Table 57. Nonresidential Energy Bundle Bonus Life-Cycle Savings by Measure¹

Measure Group	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Agriculture	15,369,142	13,950	15,369,142	13,950	11,868,291	10,772
Boilers & Burners	1,453,320	583,880	1,453,320	583,880	935,604	375,885
Building Shell	0	38,475	0	38,475	0	29,711
Compressed Air, Vacuum Pumps	601,910	189,000	601,910	189,000	464,804	145,949
Domestic Hot Water	173,227	24,209	173,227	24,209	95,570	13,356
Food Service	343,154	75,970	343,154	75,970	176,453	39,064
HVAC	15,157,397	137,537	15,157,397	137,537	9,386,746	85,174
Lighting	50,083,842	0	50,083,842	0	16,625,707	0
Other	31,241	0	31,241	0	24,125	0
Process	2,654,040	0	2,654,040	0	2,049,491	0
Refrigeration	10,209,471	0	10,209,471	0	7,883,913	0
Renewable Energy	611,831	0	611,831	0	634,469	0
Vending & Plug Loads	595,940	0	595,940	0	460,194	0
Total	97,284,516	1,063,021	97,284,516	1,063,021	50,605,368	699,912

¹Columns do not sum to the totals due to rounding.

Attribution

The Evaluation Team hypothesized that enhanced incentives offered through the Bonus affected participant decision-making such that there was lower freeridership and, depending on reported spillover savings, higher NTG among WPS customers than among all other participants in the connected statewide programs. Therefore, the Evaluation Team analyzed the differences in calculated freeridership and NTG between WPS participants who received additional incentives through the Bonus and all other participants in these Focus on Energy statewide programs—Business Incentive, Chain Stores and Franchises, RECIP-Business Incentive, and Small Business.

First, the Evaluation Team collected participant and self-report freeridership and spillover data from program surveys conducted during the statewide evaluation as well as from the WPS Energy Bundle Bonus survey. The Evaluation Team utilized these data to calculate NTG ($1 - \text{Freeridership} + \text{Spillover}$) for each respondent in the sample.

To determine differences in freeridership and NTG between WPS and other utility customers with similar characteristics, the Evaluation Team divided respondent data between Bonus recipients and all other participants, and then into five smaller sample groups defined by sector.³⁸ Table 58 presents the five sample groups with definitions and population for each.

Table 58. Attribution Analysis Sample Groups

Sample Group	Definition	Sample Size		
		WPS	Other	Total
General	All respondents who installed non-SMP measures	61	102	163
Agriculture	Respondents in the agriculture sector	7	6	13
Commercial	Respondents in the commercial sector	18	62	80
Industrial	Respondents in the industrial sector	9	15	24
Schools & Government	Respondents in the schools and government sector	8	19	27

For each sample group, the Evaluation Team calculated separate freeridership, spillover, and NTG estimates for Bonus recipients and all other participants. Estimated freeridership was consistently lower among Bonus recipients than all other participants across all sample groups. Due to fluctuations in calculated spillover between customer types and across sample groups, there was no similar trend for calculated NTG. Table 59 presents calculated freeridership, spillover, and NTG for each sample group.

³⁸ Respondents self-identified their sectors during the evaluation surveys; the smaller sample groups do not individually or collectively include all 163 respondents from the general sample.

Table 59. Freeridership, Spillover, and NTG by Customer Type and Sample Group

Sample Group	Freeridership		Spillover		NTG	
	WPS	Other	WPS	Other	WPS	Other
General	26.48%	41.01%	3.70%	25.21%	77.22%	84.21%
Agriculture	3.24%	98.07%	0.00%	0.24%	96.76%	2.17%
Commercial	11.52%	19.60%	3.08%	6.52%	91.56%	86.92%
Industrial	22.87%	25.18%	32.05%	0.00%	109.18%	74.82%
Schools & Government	29.83%	52.52%	0.00%	61.06%	70.17%	108.54%

The Evaluation Team then used a two-sample t-test procedure to determine if the observed differences in freeridership and NTG were statistically significant (at the 90% level of confidence). Table 60 presents these findings for each of the five sample groups.

Table 60. Statistical Significance of Observed Differences in Freeridership and NTG

Sample Group	Freeridership		Statistically Significant?	NTG		Statistically Significant?
	T-Statistic	P-Value		T-Statistic	P-Value	
General	-1.36	0.1769	No	1.54	0.1255	No
Agriculture	1.34	0.2064	No	-1.26	0.2343	No
Commercial	-0.33	0.7416	No	0.19	0.8508	No
Industrial	-1.08	0.2914	No	-0.70	0.5044	No
Schools & Government	-0.44	0.6657	No	1.80	0.0861	Yes

Among schools and government sector respondents, the observed difference in NTG was found to be statistically significant. However, the significant difference in NTG between WPS customers who received the Bonus and other participants results primarily from the substantial spillover savings reported among the other participants. None of the other observed differences in freeridership or NTG was found to be statistically significant.

In other words, the enhanced incentives offered through the Bonus did not significantly impact freeridership for any of the customer segments. However, the data presented in Table 60 are still consistent with the hypothesis that enhanced incentives lower freeridership. For some sample groups, the lack of statistical significance in observed differences could reflect small sample size rather than a true lack of difference.

Process Evaluation Findings

The purpose of the CY 2013 process evaluation was to gather feedback regarding the effectiveness of the delivery and implementation of the Bonus, customer awareness and satisfaction, and to determine if there were any lessons learned that Focus on Energy could apply to other programs. The Evaluation Team conducted stakeholder interviews with the Program Administrator and Program Implementers and surveyed a selection of participant customer (see Table 53).

Energy Bundle Bonus Design, History, and Goals

The Bonus provided eligible nonresidential and multifamily customers (owner or managers of apartments or condo buildings with four or more units) with an additional incentive on top of the standard custom and prescriptive incentives available through select Focus on Energy programs. The amount of the Bonus incentive increased with each additional measure, up to double the standard Focus on Energy program incentive (a 100% incentive bonus) for five or more measures.

Table 61 shows the bonus incentive increments for completed projects.

Table 61. Bonus Incentive Increments

Number of Eligible Projects Completed	Bonus Incentive Amount
1	Standard Focus on Energy incentive
2	Up to 25% bonus
3	Up to 50% bonus
4	Up to 75% bonus
5 or more	Up to 100% bonus

Customers were not eligible for the Bonus if their facility was on a CP rate, which excluded most Large Energy Users Program customers.³⁹ Although some Large Energy Users customers were eligible for the Bonus because one of their facilities was in a qualifying rate class, the Program Implementer explained that eligibility was difficult to determine. As a result, the Program Implementer did not promote the Bonus to its customers and no Large Energy Users Program customers received an Energy Bundle Bonus in CY 2013.

Energy Bundle Bonus Management and Delivery

This section describes the various Bonus management and delivery aspects the Evaluation Team assessed.

Bonus Management

The Program Administrator was responsible for Bonus design, incentive approvals, data tracking, and reporting. The Program Implementers of each program were responsible for marketing and outreach, application and incentive processing, incentive payments, data management and reporting, and implementation and delivery of the Bonus to their customers.

³⁹ To be eligible for the Large Energy Users Program, customers must have a monthly energy demand greater than 1,000 kilowatts. CP rates comprise large commercial and industrial facilities with monthly energy demand greater than 1,000 kilowatts.

Bonus Delivery and Implementation

Energy Advisors were the primary delivery channel for the Bonus. They informed their customers and Trade Allies about the Bonus, provided technical consulting, and completed application paperwork for customers.

Trade Allies were also involved in the delivery of the Bonus; however, the Program Administrator and Program Implementers believed Trade Ally engagement was low. They acknowledged that some Trade Allies promoted the Bonus to their customers and encouraged these customers to complete multiple projects, but they believed most customers who received the Bonus worked with Energy Advisors. An Energy Advisor for the Multifamily Energy Savings Program commented, “The volume [of projects completed] without Energy Advisor involvement is slim to none, so Energy Advisor involvement is what’s informing customers.”

One Program Implementer staff member said that delivering the Bonus needed considerable engagement from Energy Advisors and was therefore resource-intensive. According to this individual, “It typically takes a lot of Energy Advisor involvement to identify improvements and coordinate all the different parties to receive these energy bundle [bonuses]...” He acknowledged that encouraging more Trade Ally involvement in the Bonus could alleviate the strain on resources.

For example, the Bonus would be more effective if Trade Allies specializing in different systems or technologies worked together to achieve deeper energy savings; however, Program Implementer staff members believed most of these Trade Allies were not interested in coordinating with other Trade Allies or bringing in competitors to help customers take advantage of the Bonus. They also explained that Trade Allies who ran smaller businesses specializing in only one or a few services or systems were less willing or able to identify energy-saving opportunities on more than one energy-using system.

Bonus stakeholder interviewees offered two suggestions for improving Trade Ally engagement:

- Concentrate on those Trade Allies who already have the internal resources and interest in identifying multiple energy efficiency measures.
- Simplify the Bonus to encourage Trade Ally engagement.

Materials Review

The Evaluation Team reviewed the Bonus materials for the inclusion of documents considered industry best practices for energy efficiency program administration, implementation, and delivery (Table 62). The Bonus did not have most of the materials that are considered best practices. However, the Evaluation Team recognized this may be because the Bonus was a limited, short-term offering that provided an incentive on top of standard Focus on Energy programs.

Table 62. Presence of Energy Bundle Bonus Materials

Program Materials Considered Best Practices	Present in CY 2013	Material Title or Description
Program manual, handbook, and/or implementation plan	-	
Process flowcharts and organizational charts	-	
Presence of data collection protocols and quality assurance/quality control (QA/QC) protocols	v	The Business Incentive Program operations manual mentions data collection protocols for the Bonus.
Training materials for program staff (e.g., program managers, account executives, engineers, support staff)	-	
Application and rebate forms, customer contracts, and agreements	✓	Bonus application, pledge form
Training materials for Trade Allies	-	
Marketing Plan	-	

Key: ✓=present, v= partially present, - = not present

Marketing and Outreach

Marketing and outreach for the Bonus varied by Focus on Energy program and by Program Implementer.

Outreach to Customers

Program Implementer staff for the Business Incentive Program, Chain Stores and Franchises Program, and Multifamily Energy Savings Program said they relied primarily on Energy Advisors to contact and explain the Bonus to customers. For Business Incentive Program and Multifamily Energy Savings Program customers, Energy Advisors provided a pledge form and Bonus application but no additional marketing materials. For Chain Stores and Franchises Program customers, the Program Implementer marketed the Bonus to customers via direct mailings, which included the following Bonus materials:

- Bonus flyer
- Bonus pledge form
- A business reply postcard to indicate interest in the Bonus
- Personalized letter explaining the Bonus (for convenience stores and gas stations only)

The Program Implementer for the Large Energy Users Program did not conduct any outreach or marketing about the Bonus to its customers in CY 2013.

In addition to Focus on Energy's outreach and marketing, WPS Utility Account Executives also informed customers about the Bonus.

Program Implementer staff believed customers varied in their awareness of the Bonus and suggested Focus on Energy or WPS should have conducted additional marketing and outreach to promote Bonus incentives and raise customer awareness. Staff from both the Program Implementer and the Program Administrator explained that since the Bonus was not available statewide, Focus on Energy had to limit exposure on its website. There was no direct link on the main Focus on Energy website so customers had to look for and navigate to a separate page for WPS customers. According to one Energy Advisor, this made promoting the Bonus more difficult. In addition, some Energy Advisors who worked with the Bonus also worked with customers outside the WPS territory and suggested that marketing and conducting outreach to customers would have been easier if the Bonus had been available statewide.

Outreach to Trade Allies

The Program Implementers conducted minimal outreach to Trade Allies to inform them of the Bonus available to their WPS customers. According to the Program Implementers, most Trade Allies learned about the Bonus from Energy Advisors and other Program Implementer staff with whom they had existing relationships.

Customer Experience

The Evaluation Team surveyed 41 nonresidential participant customers about their awareness of the Bonus, sources of that awareness, and satisfaction with the Bonus. Not all respondents answered all questions in the survey; therefore, sample size varies for each question.

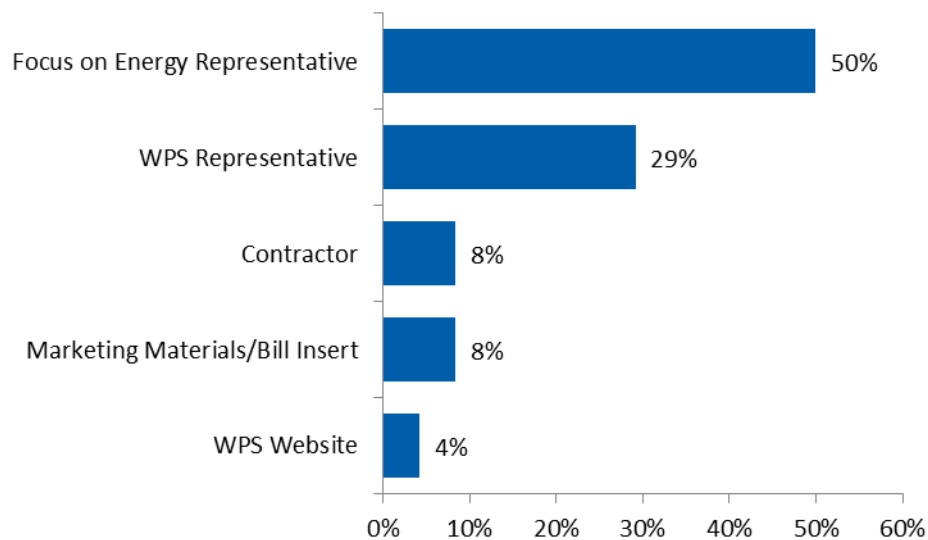
Customer Awareness

When asked if they were aware of the Bonus, 27% of respondents (11 out of 41) said they were not aware. Of the 16 respondents who were aware of the Bonus and were able to provide a response, 50% thought WPS sponsored the Bonus (8 out of 16), 38% thought Focus on Energy sponsored the Bonus (6 out of 16), and 13% thought that both WPS and Focus on Energy sponsored the Bonus (2 out of 16).

Sources of Awareness

The Evaluation Team asked customers who were aware of the Bonus how they first heard of it, as shown in Figure 24. Respondents most frequently heard about the Bonus from a Focus on Energy representative (50%, or 12 out of 24) or a WPS representative (29%, or 7 out of 24). They also reported hearing about the Bonus from a contractor, marketing materials or a bill insert, or the WPS website.

Figure 24. How Customers First Heard of the Energy Bundle Bonus



Source: Energy Bundle Bonus Customer Survey, K2:

“How did you first hear about the Energy Bundle Bonus Program Incentive?” (n=24)

Customer Decision-Making

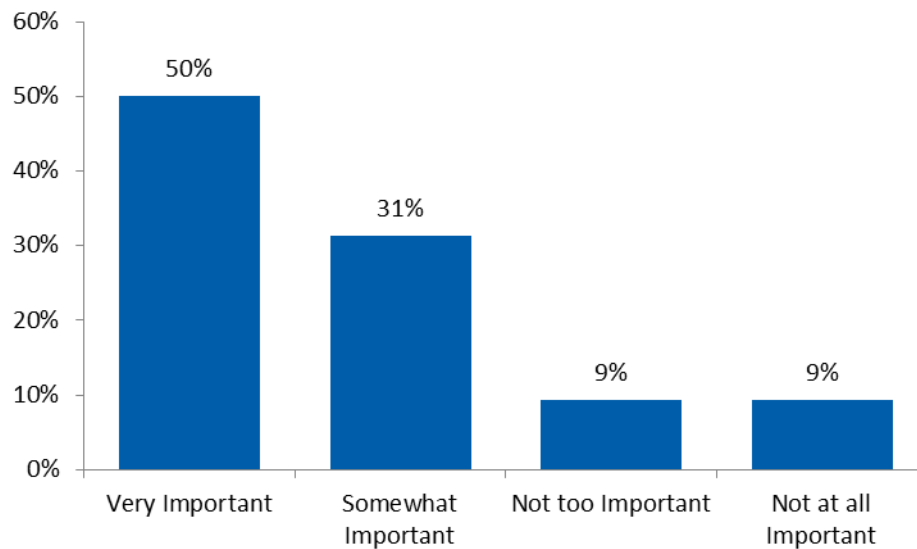
To explore the influence of the Bonus in customer decision-making, the Evaluation Team asked respondents:

- How important the increasing incentive from the Energy Bundle Bonus was in their decision to install multiple types of equipment.
- Whether or not they would have purchased energy-saving equipment without the Energy Bundle Bonus.

Customers gave conflicting responses about the importance of the Bonus in their decision-making. As Figure 25 shows, 81% of respondents (26 out of 32) reported that the Bonus’ increasing incentive was “somewhat important” or “very important” in their decision to install multiple types of equipment. In contrast, 59% of respondents (19 out of 32) said they would still have purchased the energy-saving equipment without the Bonus.⁴⁰

⁴⁰ The Evaluation Team asked these questions separately from the questions used to determine freeridership.

Figure 25. Importance of the Energy Bundle Bonus Incentive in Customer Decision to Install Multiple Measures

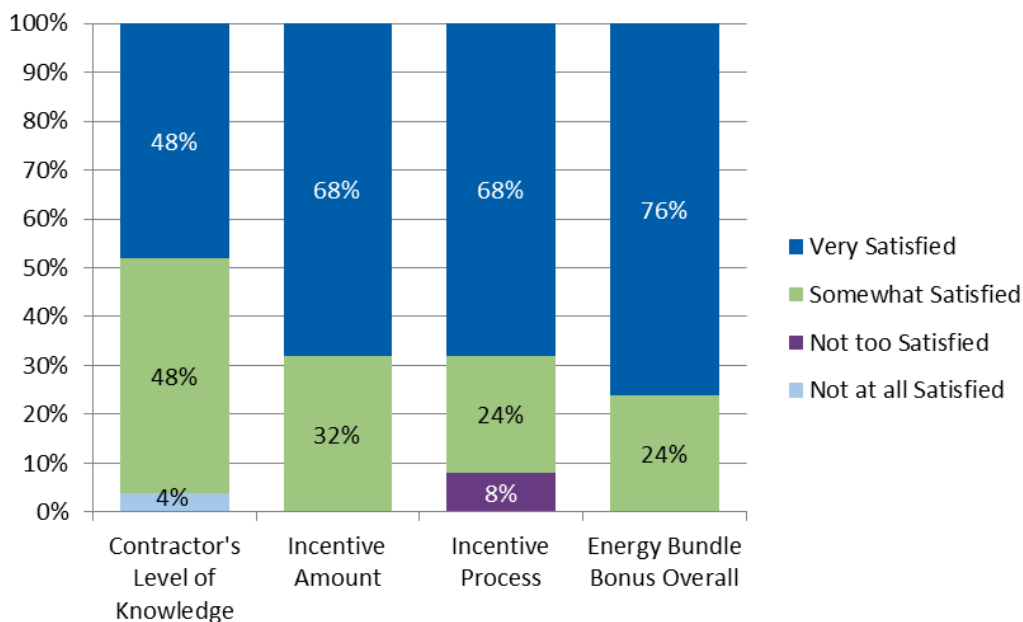


Source: Energy Bundle Bonus Customer survey, J7: “How important was the increasing incentive from the Energy Bundle Bonus in your decision to install multiple types of equipment? Was it...” (n=28)

Customer Satisfaction

As Figure 26 shows, respondents were satisfied with the Bonus. All were satisfied with both the incentive amount and their experience with Bonus overall, but they indicated slightly lower satisfaction with their contractor’s level of knowledge about the Bonus and the process for receiving the Bonus payment.

Figure 26. Customer Satisfaction Ratings



Source: Energy Bundle Bonus Customer Survey, SAT1, SAT3, SAT5, SAT7: "How satisfied are you with [INSERT BONUS ELEMENT]. Would you say you are very satisfied, somewhat satisfied, not too satisfied, or not at all satisfied?" (n=25).

One customer who was "not at all satisfied" with the contractor's level of knowledge about the Bonus said the contractor did not know about the Bonus.

Two customers who were "not too satisfied" with the incentive process cited these reasons:

- "The check took very long and the account was lost in the paper shuffle."
- "Too much paperwork, too many approvals, [and] too much time needed for approval."

Outcomes

Outcome 1: The Energy Bundle Bonus affected program participation such that there was lower freeridership among WPS participants than among other participants. However, observed differences in freeridership were not statistically significant at the 90% level of confidence.

Across all sample groups, the freeridership data are consistent with the hypothesis that providing additional incentives to WPS customers had a positive impact on participant freeridership. However, the hypothesis cannot be confirmed with at least 90% confidence.

Outcome 2: Complicated eligibility requirements made promoting the Bonus to customers difficult for the Program Implementers.

Program Implementer staff for the Business Incentive Program, Chain Stores and Franchises Program, and the Multifamily Energy Savings Program said they or WPS should have conducted additional marketing and outreach to customers in order to increase awareness and engagement with the Bonus. However, Program Implementer staff described these issues with customer eligibility as a challenge to promoting the Bonus to their customers:

- The Bonus was available only to WPS customers; however, many Energy Advisors work across the state.
- Since the Bonus was available only to WPS customers, Focus on Energy limited exposure to the Bonus on its website. Customers had to navigate to a separate Focus on Energy page for WPS customers; there was no direct link from the main Focus on Energy website. Energy Advisors suggested that promoting the Bonus would have been easier if it had been available to all customers statewide.
- Most Large Energy Users were not eligible for the Bonus. Although some were eligible if they had a facility in a qualifying rate class, the Large Energy Users Program Implementer explained that it was difficult to determine which customers were eligible, even if their facility had a qualifying rate class. Because it did not want to encourage potentially ineligible customers to participate, the Program Implementer did no promotion; no Large Energy Users customers received a Bonus in 2013.

Outcome 3: If the Bonus were offered in the future, sufficient resources would need to be allocated for either direct Energy Advisor assistance to customers or increased resources for promoting the Bonus to Trade Allies and encouraging them to work together to identify comprehensive energy-saving projects.

In CY 2013, Energy Advisors were the primary delivery channel for the Bonus. They informed their customers and Trade Allies about the Bonus, provided technical consulting, and completed application paperwork for customers. Program Implementer staff said that delivering the Bonus required considerable engagement from Energy Advisors, making Bonus delivery and implementation resource-intensive.

Trade Allies were also involved in the delivery of the Bonus; however, the Program Administrator and Program Implementers believed Trade Ally engagement was low. The Program Implementers did not conduct any formal marketing or outreach to inform Trade Allies of the Bonus and only 8% of customer survey respondents (2 out of 25) said they first learned of the Energy Bundle Bonus from a Trade Ally.

Some Program Implementer staff thought that encouraging more Trade Ally involvement could alleviate the strain on resources if Focus on Energy offered the Energy Bundle Bonus in the future. However, Program Implementer staff also said it was difficult to engage Trade Allies since most specialize in one or two services and are not inclined to work with their competitors. To increase Trade Ally involvement, Focus on Energy would likely still need Energy Advisor support to coordinate Trade Allies and encourage them to work together. In the portfolio-level Trade Ally interviews, one Trade Ally suggested that Focus

on Energy should consider providing a direct referral incentive to Trade Allies to encourage them to work together (see portfolio-level findings section).

Smart Farms Program

Focus on Energy offered bonus incentives through the Smart Farms Program (the Program) to agricultural customers in the Wisconsin Public Service (WPS) territory. The bonus was in addition to the standard incentives available from the Focus on Energy Business Incentive Program.

Customers who met the Program prerequisites (WPS agricultural or food processing customers in a small business rate class) were eligible for a free energy assessment, assistance with identifying installation contractors, and financial incentives for energy efficiency projects. These customers could receive total incentives (a combination of Focus on Energy incentives and Smart Farms Program bonus incentives) up to \$250/kW, \$0.08/kWh, and \$0.80/therm (double the Business Incentive Program custom incentive), 60% of project costs, or \$10,000 per project, whichever was less.

Franklin Energy was the Program Implementer.

Table 63 lists the Program's first-year annual and life-cycle verified net savings by calendar year.⁴¹ The Program launched in August 2012, but customers did not complete projects until CY 2013. Therefore, there are no verified net savings attributable to the Program before CY 2013.

Table 63. Smart Farms Program Savings Summary

Calendar Year	First-Year Annual			Life-Cycle	
	kWh	kW	Therms	kWh	Therms
2013	2,969,607	557	2,654	40,474,586	44,448

Program-Level Evaluation Activities

As Table 64 shows, for the CY 2013 evaluation, the Evaluation Team conducted impact and process data collection activities to support these impact and process evaluation tasks—energy and demand savings determination, attribution analysis, stakeholder interviews, participant customer surveys, and a materials review.

⁴¹ In some cases, although the project was completed in CY 2013 (as the Program required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Table 64. Smart Farms Program Data Collection Activities and Sample Sizes

Activity	Sample Size
Energy and Demand Savings Determination	Census
Attribution Analysis ¹	169
Stakeholder Interviews	5
Participant Customer Surveys	44
Materials Review	Census

¹Attribution analysis sample size represents the number of unique survey respondents who installed non-standard market practice (SMP) measures—67 WPS customers who received the additional incentive and 102 who were not WPS customers.

Impact Evaluation Findings

In total, the CY 2013 Program awarded bonus payments to 350 WPS customers. These customers installed 5,068 measures. For each measure group, Table 65 lists the number of unique participating customers who installed at least one measure from the group, as well as the number of measure installations completed, in CY 2013.

Table 65. Smart Farms Program Participation by Measure Group

Measure Group	Customers ¹	Measures Installed
Agriculture	102	513
Boilers & Burners	2	2
Domestic Hot Water	2	2
HVAC	17	285
Lighting	93	4,266
Total		5,068

¹Indicates the number of unique customers who installed at least one measure from each measure group; most participating customers installed measures from multiple measure groups and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure group. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs that had been determined through its evaluation of the statewide Business Incentive Program.

Since the Program delivered measures to WPS customers who participated in the statewide Business Incentive Program, the Evaluation Team applied the ISRs from the statewide evaluation to savings achieved through the Smart Farms Program. The Evaluation Team calculated a realization rate for each measure group by fuel type, and then it calculated a weighted average realization rate for each fuel type based on savings achieved per measure group.⁴² Table 66 presents weighted average realization rates for the CY 2013 Program.

Table 66. Weighted Average Realization Rates for the Smart Farms Program

Savings Type	Realization Rate
kWh	100.6%
kW	100.5%
Therms	100.7%
MMBtu-Equivalent Weighted Average (excludes kW)	100.6%

Differences between verified gross and verified net savings resulted from the Evaluation Team's application of weighted NTG adjustments. NTG adjustments for all non-SMP measures came from freeridership and spillover scores the Evaluation Team calculated using data from the Smart Farms Program survey; for all SMP measures, the Evaluation Team applied weighted NTG adjustments calculated during the statewide evaluation. Table 67 presents weighted average NTG adjustments for CY 2013.

Table 67. Weighted Average Freeridership, Spillover, and NTG¹

Item	Weighted Average
Freeridership	50.8%
Spillover	1.4%
NTG	50.6%

¹ Weighted averages for freeridership, spillover, and NTG are calculated separately.

Table 68 lists CY 2013 first-year annual savings by measure group, and Table 69 lists CY 2013 life-cycle savings by measure group.

⁴² Realization rate = verified gross savings / gross savings

Table 68. Smart Farms Program First-Year Annual Savings by Measure Group¹

Measure	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Agriculture	1,769,923	311	1,768	1,794,408	316	1,792	1,453,925	256	1,452
Boilers & Burners	0	0	1,548	0	0	1,548	0	0	997
Domestic Hot Water	5,463	2	253	5,463	2	253	4,426	1	205
HVAC	510,111	168	0	510,111	168	0	413,319	136	0
Lighting	3,601,454	539	0	3,609,916	540	0	1,097,937	164	0
Total	5,886,950	1,020	3,569	5,919,898	1,025	3,594	2,969,607	557	2,654

¹Columns do not sum to the totals due to rounding.

Table 69. Smart Farms Program Life-Cycle Savings by Measure Group

Measure Group	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Agriculture	22,721,325	26,520	23,035,652	26,887	18,664,708	21,785
Boilers & Burners	0	30,427	0	30,427	0	19,588
Domestic Hot Water	81,945	3,795	81,945	3,795	66,396	3,075
HVAC	7,747,178	0	7,747,178	0	6,277,175	0
Lighting	50,732,589	0	50,851,791	0	15,466,307	0
Total	81,283,037	60,742	81,716,566	61,109	40,474,586	44,448

Attribution

The Evaluation Team hypothesized that enhanced incentives offered through the Program affected participant decision-making such that there was lower freeridership and, depending on reported spillover savings, higher NTG among WPS customers than among all other participants in the connected statewide program. Therefore, the Evaluation Team analyzed the differences in calculated freeridership and NTG between WPS participants who received additional incentives through the Program and all other participants in the statewide Focus on Energy Business Incentive Program.

First, the Evaluation Team collected participant and self-report freeridership and spillover data from the Business Incentives Program survey conducted during the statewide evaluation as well as from the Smart Farms Program survey. For each respondent in the sample, the Evaluation Team utilized these data to calculate NTG (1 – Freeridership + Spillover).

To determine differences in freeridership and NTG between WPS and other utility customers with similar characteristics, the Evaluation Team divided respondent data between Program bonus incentive recipients and all other participants, and then into one additional sample group comprised of respondents in the agriculture sector.⁴³ Table 70 presents the two sample groups with definitions and population for each.

Table 70. Attribution Analysis Sample Groups

Sample Group	Definition	Sample Size		
		WPS	Other	Total
General	All respondents who installed SMP measures	67	102	169
Agriculture	Respondents in the agriculture sector	32	6	38

For each sample group, the Evaluation Team calculated separate freeridership, spillover, and NTG estimates for Program bonus incentive recipients and all other participants. Estimated freeridership was lower and calculated NTG was higher among bonus incentive recipients than all other participants across both sample groups. Table 71 presents calculated freeridership, spillover, and NTG for each sample group.

Table 71. Freeridership, Spillover, and NTG by Customer Type and Sample Group

Sample Group	Freeridership		Spillover		NTG	
	WPS	Other	WPS	Other	WPS	Other
General	22.49%	41.01%	3.51%	25.21%	81.03%	84.21%
Agriculture	13.59%	98.07%	0.54%	0.24%	86.95%	2.17%

The Evaluation Team then used a two-sample t-test procedure to determine if the observed differences in freeridership and NTG were statistically significant (at the 90% level of confidence). Table 72 presents these findings for each of the sample groups.

None of the observed differences in freeridership or NTG was found to be statistically significant. In other words, the enhanced incentives offered through the Program did not significantly impact freeridership for either of the customer segments. However, the data presented in Table 72 are still consistent with the hypothesis that enhanced incentives lower freeridership. For the agriculture sector sample group, the lack of statistical significance in observed differences could reflect small sample size rather than a true lack of difference.

⁴³ Respondents self-identified their sectors during the evaluation surveys; the smaller sample group does not individually include all 169 respondents from the general sample.

Table 72. Statistical Significance of Observed Differences in Freeridership and NTG

Sample Group	Freeridership		Statistically Significant?	NTG		Statistically Significant?
	T-Statistic	P-Value		T-Statistic	P-Value	
General	1.07	0.2842	No	0.72	0.4733	No
Agriculture	1.35	0.2283	No	-1.29	0.2479	No

Process Evaluation Findings

The purpose of the CY 2013 process evaluation was to gather feedback about the Smart Farms Program offered in the WPS territory regarding the effectiveness of its delivery and implementation, customer awareness and satisfaction, and if there were any lessons learned that Focus on Energy could apply to other programs. The Evaluation Team conducted stakeholder interviews with the Program Administrator and Program Implementer and participant customer surveys (see Table 70).

Smart Farms Program Design, History, and Goals

The Program, which launched in August 2012, offered bonus incentives and project assistance services to agricultural customers of WPS that included:

- A free onsite energy assessment, including recommendations for energy-saving projects
- Assistance with identifying installation contractors
- Identification of incentive opportunities available through Focus on Energy
- Paperwork assistance

According to the Program Implementer, in order to obtain incentives customers were directed to either the Business Incentive Program or the Small Business Program, depending on which program was more lucrative for customers and appropriate for their project needs. However, only customers who installed measures through the Business Incentive Program were eligible for the additional Smart Farms Program bonus incentive.

Customers who installed measures through the Business Incentive Program were eligible to receive bonus incentives on top of this program's standard custom and prescriptive incentives. These customers could receive total incentives (a combination of Focus on Energy incentives and Smart Farms Program bonus incentives) up to \$250/kW, \$0.08/kWh, and \$0.80/therm (double the Business Incentive Program custom incentive), 60% of project costs, or \$10,000 per project, whichever was less. Smart Farms Program customers were also eligible for the Energy Bundle Bonus available from Focus on Energy to WPS customers, but these incentives did not count against the Smart Farms Program's incentive cap.

To increase participation, the Program Implementer offered an additional limited-duration bonus incentive for projects completed between January 2013 and July 31, 2013. This increased the project incentive cap to 75% of project costs up to \$20,000.

Program Goals and Performance

The Program had no formal energy-savings goals. However, the Program Administrator and Program Implementer worked together to establish Program targets against which the Program Implementer could measure performance. As Table 73 shows, the Program Implementer achieved more than double its goal for completed projects. However, it fell short of its goal for facilities assessments, completing only 61% of the goal of 500 assessments.

Table 73. Smart Farms Program Achievements

Achievement	Goal	Completed	Percentage of Goal
Facility Assessments	500	305	61%
Projects Completed	250	519	208%

Program Management and Delivery

This section describes the various Program management and delivery aspects the Evaluation Team assessed.

Program Management

The Program Administrator was responsible for Program design, management, and reporting. The Program Implementer was responsible for customer outreach and marketing, incentive processing, and bonus incentive payment. Energy Advisors also provided energy assessments, assisted customers with Program paperwork, and calculated incentive estimates for customers.

Since the Smart Farms Program incentive was in addition to the Business Incentive Program incentive, the Business Incentive Program Implementer was responsible for initial approval for these custom projects.

Coordination with Associated Focus on Energy Programs

A Program Implementer staff member said that coordinating the various incentives offered in the Smart Farms Program and the associated Focus on Energy statewide programs was complicated. He explained that Energy Advisors had to be familiar with all of the incentives available through the Smart Farms Program, the Business Incentive Program (including limited duration special incentive offerings), and the Energy Bundle Bonus. Energy Advisors factored all of these offerings into incentive calculations, and the Program Implementer processed and approved applications and incentive payments for the Business Incentive Program, the Smart Farms Program, and the Energy Bundle Bonus.

A Program Implementer staff member suggested that, if Focus on Energy offered the Smart Farms Program or a similar program in the future, it should streamline the process and offer incentives through only one program, such as the Business Incentive Program.

Program Delivery and Implementation

In contrast to the Business Incentive Program, which relied primarily on Trade Allies to deliver it, the Smart Farms Program was driven by Energy Advisors who were responsible for:

- Establishing one-on-one relationships with agricultural customers.
- Assisting customers in identifying comprehensive energy-saving opportunities within their facilities.

According to Program Implementer staff, Energy Advisors, as generalists, were better equipped to identify a broad range of energy-saving opportunities than were Trade Allies, who were more likely to specialize in fewer services or systems. As one staff member said, “When Energy Advisors are out there they [look] at everything and give that customer all the areas where they could save... Trade Allies go out and see [the customer] just about lighting, just about refrigeration; they don’t explain to the customer there could be different options in the facility.”

Both Program Implementer and Program Administrator staff thought that the relationship-building and additional support Energy Advisors provided to customers was the primary benefit of the Program, helping Focus on Energy engage this hard-to-reach customer segment. Customer survey responses support this belief. When asked how important the energy assessment and working with an Energy Advisor were in their decision to implement energy-saving measures through the Program, the majority of customers indicated that both the assessment (91%, 40 out of 44) and working with an Energy Advisor (95%, 42 out of 44) were “somewhat important” or “very important” in their decision.

Although the Program also offered assistance to customers in identifying and contacting installation contractors, Program Implementer staff explained that most customers chose not to take advantage of this service. According to one staff member, most customers had their “go-to” Trade Allies with whom they chose to work on projects. As the Program Implementer described, “They already know that John [is going to] take care of this and Gary [is taking] care of this... [We] offered [to help them contact Trade Allies], but it didn’t really happen...”

Program Materials

The Evaluation Team reviewed the Program materials for the inclusion of documents considered industry best practices for energy efficiency program administration, implementation, and delivery. As Table 74 lists, most Program materials were partially present or comprehensive documentation was missing.

Table 74. Presence of Smart Farms Program Materials

Program Materials Considered Best Practices	Present 2013	Comments
Program manual, handbook, and/or implementation plan	v	Program has a work plan, though not a comprehensive Program manual.
Process flowcharts and organizational charts	v	Program process flowchart/map; program team identified in budget (does not include an organizational chart)
Presence of data collection protocols and quality assurance/quality control (QA/QC) protocols	-	QA is referenced in the work plan, though no specific protocols are described.
Training materials for program staff (e.g., program managers, account executives, engineers, support staff)	✓	Incentive review process for Smart Farms and Schools and Government Program PowerPoint; includes figures where relevant to show processes in SharePoint and excel. Also have PowerPoint kickoff presentation for Energy Advisors.
Application and rebate forms, customer contracts, and agreements	✓	Bonus application forms
Training materials for Trade Allies	-	
Marketing plan	v	No official marketing plan, but marketing is discussed in the Program work plan.

Key: v=present, v= partially present, - = not present

Marketing and Outreach

Outreach to Customers

The Program relied on Energy Advisors and Program Implementer staff for customer outreach through these methods:

- Direct mail, including a postcard mailer with business reply card to indicate Program interest
- Follow-up phone calls with Program customers
- Community events (e.g., the WPS Farm Show and local trade shows)

According to Program Implementer staff, WPS agricultural Account Representatives and WPS Farm Rewire Program staff also informed customers about the Program and generated facility assessment leads for Energy Advisors.

Marketing materials contained both WPS and Focus on Energy branding and referred to the Program as the WPS Smart Farms Program. Since the Program was available only to WPS customers, and the Program Implementer referred to it as the WPS Smart Farms Program, Program Implementer staff believed that most customers associated the Program with WPS rather than Focus on Energy. According to a Program Implementer staff member, “[there were] times when [a customer] called us and thought we were from WPS...” Customer survey findings support this belief.

To explore with which entity customers associated the Smart Farms Program, the Evaluation Team asked respondents who they thought sponsored the Program. Eighty-eight percent of respondents (38 out of 43) thought WPS sponsored the Smart Farms Program.

Outreach to Trade Allies

Program Implementer staff explained that some Trade Allies learned about the Program from Energy Advisors with whom they had an existing relationship. The Program Implementer acknowledged that some of these Trade Allies also reached out to their customers to inform them about the available incentive opportunities. Although the Program was designed to foster direct relationships between Energy Advisors and customers, the Program Implementer thought they could have made more effort, possibly through a webinar, to inform Trade Allies of the Program.

Customer Experience

The Evaluation Team surveyed 44 participant customers about the source of their awareness of and their satisfaction with the Program. Not all respondents answered all survey questions; therefore, sample size varies for each question.

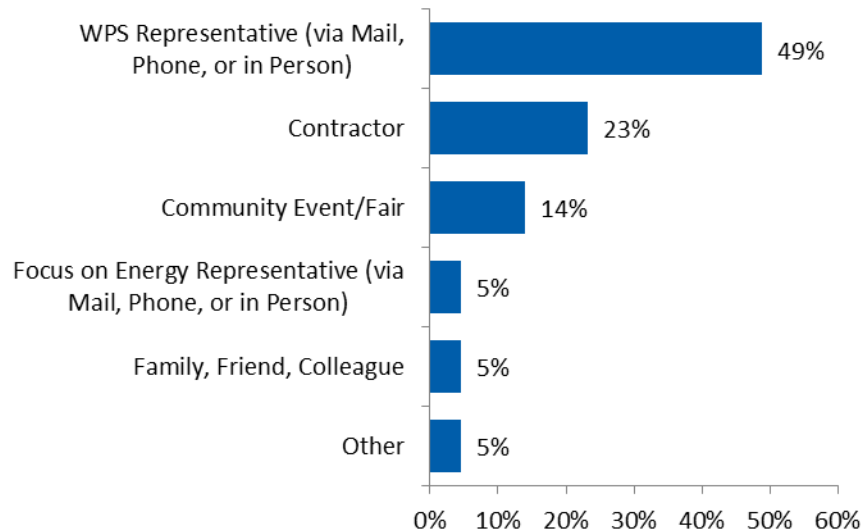
Sources of Awareness

The Evaluation Team asked customers how they first heard of the Program. As Figure 27 shows, respondents most frequently said they heard about the Program through a WPS representative (49%, or 21 out of 43 respondents) followed a contractor (23%, or 10 out of 43) or at a community event or fair (14%, or 6 out of 43).

Of the 21 customers who said they heard about the Program from WPS:

- Six said they heard from WPS Farm Rewire Program staff.
- Seven said they heard through a letter from WPS.
- Eight said they heard from Program staff or a WPS Energy Advisor.⁴⁴

Figure 27. How Participants First Heard About the Program



Source: Smart Farms Program Participant Customer Survey,
K2: “How did you first hear about the Smart Farms Program?” (n=43)

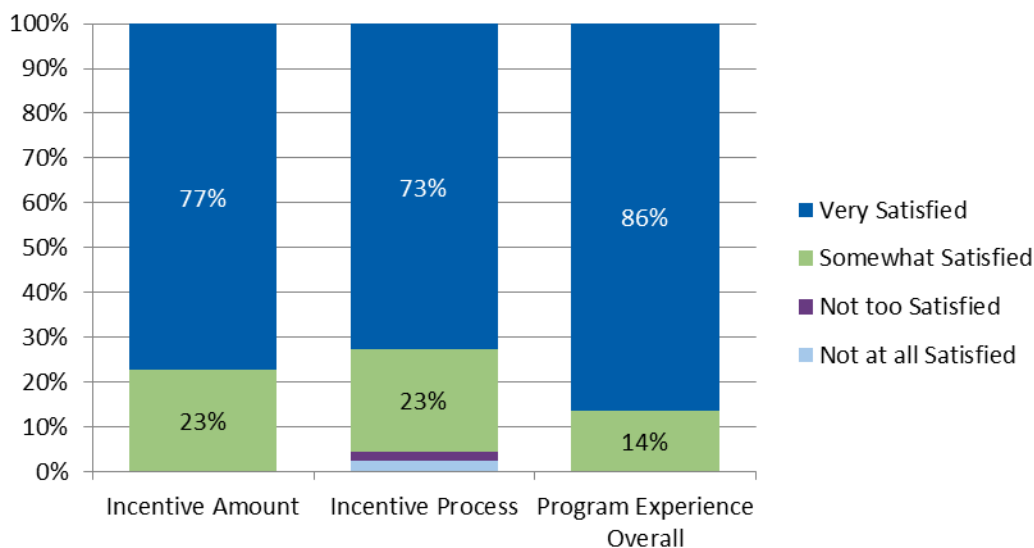
Customer Satisfaction

The Evaluation Team asked respondents to rate their satisfaction with the Program. As Figure 28 shows, most reported being satisfied with the Program, the incentive amount, and the incentive process. Although the majority of respondents rated satisfaction highly overall, they indicated slightly lower satisfaction with the incentive amount and incentive process than with their overall experience.

When asked why they were “less than satisfied,” two of the respondents who were “less than satisfied” with the incentive process said that it involved too much paperwork and the process took too long.

⁴⁴ Although these customers said they heard from Program staff or a WPS Energy Advisors, all Smart Farms Program staff and Energy Advisors were affiliated with Focus on Energy, not WPS. It is unclear if customers heard from WPS representatives or Focus on Energy representatives.

Figure 28. Customer Satisfaction Ratings



Source: Smart Farms Program Participant Customer Survey, M1, M3, and M5: “Would you say you were very satisfied, somewhat satisfied, not at all satisfied, or not too satisfied with...?” (n=44)

Outcomes

Outcome 1: The enhanced incentives offered through the Smart Farms Program affected program participation such that there was lower freeridership among WPS participants than among other participants. However, observed differences in freeridership were not statistically significant at the 90% level of confidence.

Across both sample groups, the freeridership data are consistent with the hypothesis that providing additional incentives to WPS customers had a positive impact on participant freeridership. However, the hypothesis cannot be confirmed with at least 90% confidence.

Outcome 2: Smart Farms Program customers associate the Program with WPS more than they do with Focus on Energy.

Thirty-eight out of 43 (88%) survey respondents thought that WPS sponsored the Program. In addition, 49% of respondents said they heard about the Program from a WPS representative. According to the Program Implementer, some customers who contacted Program staff believed they were WPS representatives. This may be because the Program, like all of the Territory-Wide programs, was available only to WPS customers and the Program materials and the Program Implementer referred to it as the WPS Smart Farms Program.

Outcome 3: Implementing the Smart Farms Program and coordinating with associated Focus on Energy programs required substantial Program Implementer staff resource investment, involvement, and understanding of Program offerings.

The Program Implementer said that coordinating the various incentives offered in the Smart Farms Program and the associated Focus on Energy statewide programs was complicated. For example:

- Energy Advisors had to be familiar with all of the incentives available through the Business Incentive Program (including limited duration special incentive offerings), as well as the Smart Farms Program and the Energy Bundle Bonus.
- Energy Advisors factored all of these offerings into incentive calculations; applications and incentive payments were processed and approved through both the Smart Farms Program and the Business Incentive Program.

Program Implementer staff suggested that, if Focus on Energy offered the Smart Farms Program or a similar program in the future, they should streamline the incentive process and offer incentives through only one program, such as the Business Incentive Program.

Schools and Government Program

Beginning in CY 2012, Focus on Energy offered a pilot grant competition and bonus incentives through the Schools and Government Program (the Program) to schools, school districts, and government agencies in the Wisconsin Public Service (WPS) territory.

For the grant competition, a working group consisting of the Program Administrator, Program Implementer, and a WPS staff member selected 25 winners, each of whom received \$25,000 for completing energy-saving projects.

For the bonus incentive component of the Program, WPS customers could receive double the standard Business Incentive Program incentives, covering up to 60% of project costs, or \$25,000, for projects with an expected energy savings of \$500 per year or more. Franklin Energy was the Program Implementer.

Table 75 lists the Program's first-year annual and life-cycle verified net savings by calendar year.⁴⁵ The Program was launched in July 2012; therefore, there are no CY 2011 savings, and the Program achieved CY 2012 savings only between July and December 2012. The Evaluation Team had calculated first-year annual and life-cycle savings for CY 2012 during a prior evaluation.

Table 75. Schools and Government Program Savings Summary

Calendar Year	First-Year Annual			Life-Cycle	
	kWh	kW	Therms	kWh	Therms
2012	583,962	324	56,373	8,842,671	596,461
2013	4,480,367	532	363,017	64,787,095	3,214,117
Total	5,064,329	856	419,390	73,629,766	3,810,578

Program-Level Evaluation Activities

As Table 76 shows, for the CY 2013 evaluation, the Evaluation Team conducted data collection activities to support these impact and process evaluation tasks—energy and demand savings determination, attribution analysis, stakeholder interviews, participant customer surveys, and a materials review.

⁴⁵ In some cases, although the project was completed in CY 2013 (as the Program required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Table 76. Schools and Government Program Data Collection Activities and Sample Sizes

Activity	Sample Size (n)
Energy and Demand Savings Determination	Census
Attribution Analysis ¹	160
Stakeholder Interviews	6
Participant Customer Surveys	40
Materials Review	Census

¹Attribution analysis sample size represents the number of unique survey respondents who installed non-standard market practice (SMP) measures—58 WPS customers who received the additional incentive and 102 who were not WPS customers.

Impact Evaluation Findings

In total, the CY 2013 Program awarded bonus payments to 90 WPS customers. These customers installed 30,653 measures, including direct install measures offered through the Small Business Program. For each measure group, Table 77 lists the number of unique participating customers who installed at least one measure from the group, as well as the number of measure installations completed, in CY 2013.

Table 77. Schools and Government Participation by Measure Group

Measure Group	Customers ¹	Measures Installed
Agriculture	1	1
Boilers & Burners	36	205
Building Shell	2	2
Domestic Hot Water	6	202
Food Service	6	11
HVAC	34	331
Laundry	2	3
Lighting	73	27,634
Motors & Drives	1	1
Other	84	2,182
Pools	1	1
Process	5	11
Refrigeration	4	16
Vending & Plug Loads	14	51
Waste Water Treatment	2	2
Total		30,653

¹Indicates the number of unique customers who installed at least one measure from each measure group; most participating customers installed measures from multiple measure groups and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure Group

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure group. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs determined through its evaluation of these statewide programs—Business Incentive Program and Small Business Program.

Since the Program delivered measures to WPS customers who participated in these statewide programs, the Evaluation Team applied the ISRs—weighted by energy savings (MMBtu) attributable to each statewide program—to savings achieved through the Schools and Government Program. The Evaluation Team calculated a realization rate for each measure group by fuel type, and then it calculated a weighted average realization for each fuel type based on savings achieved per measure group.⁴⁶

Realization rates for CY 2013 were 100% across kWh, kW, and therm estimates.

Differences between verified gross and verified net savings resulted from the Evaluation Team’s application of weighted NTG adjustments. NTG adjustments for all non-SMP measures came from freeridership and spillover scores the Evaluation Team calculated using data from the Schools and Government survey; for all SMP measures, the Evaluation Team applied weighted NTG adjustments calculated during the statewide evaluation. Table 78 presents weighted average NTG adjustments for CY 2013.

Table 78. Weighted Average Freeridership, Spillover, and NTG¹

Item	Weighted Average
Freeridership	35.3%
Spillover	1.4%
NTG	66.1%

¹Weighted averages for freeridership, spillover, and NTG are calculated separately.

Table 79 lists CY 2013 first-year annual savings by measure group, and Table 80 lists CY 2013 life-cycle savings by measure group.

⁴⁶ Realization rate = verified gross savings / gross savings

Table 79. Schools and Government First-Year Annual Savings by Measure Group¹

Measure Group	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Agriculture	31,339	0	0	31,339	0	0	24,995	0	0
Boilers & Burners	535,114	0	235,757	535,114	0	235,757	344,490	0	151,773
Building Shell	0	0	3,029	0	0	3,029	0	0	2,416
Domestic Hot Water	4,927	0	1,970	4,927	0	1,970	3,929	0	1,571
Food Service	25,687	4	1,873	25,687	4	1,873	20,487	3	1,494
HVAC	1,077,861	60	250,992	1,077,861	60	250,992	859,663	48	200,182
Laundry	1,131	0	6,998	1,131	0	6,998	902	0	5,582
Lighting	4,363,006	814	0	4,363,006	814	0	1,504,921	281	0
Motors & Drives	40,259	46	0	40,259	46	0	32,109	37	0
Other	61,570	12	0	61,570	12	0	49,106	10	0
Pools	47,456	0	0	47,456	0	0	37,849	0	0
Process	631,966	48	0	631,966	48	0	504,034	38	0
Refrigeration	36,310	4	0	36,310	4	0	28,960	3	0
Vending & Plug Loads	78,363	0	0	78,363	0	0	62,500	0	0
Waste Water Treatment	1,261,869	141	0	1,261,869	141	0	1,006,422	112	0
Total	8,196,857	1,129	500,618	8,196,857	1,129	500,618	4,480,367	532	363,017

¹Columns do not sum to the totals due to rounding.

Table 80. Schools and Government Life-Cycle Savings by Measure Group¹

Measure Group	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Agriculture	470,085	0	470,085	0	374,923	0
Boilers & Burners	11,062,080	2,634,152	11,062,080	2,634,152	7,121,438	1,695,789
Building Shell	0	68,275	0	68,275	0	54,454
Domestic Hot Water	51,192	26,798	51,192	26,798	40,829	21,373
Food Service	281,858	21,538	281,858	21,538	224,800	17,178
HVAC	16,478,380	1,724,330	16,478,380	1,724,330	13,142,568	1,375,264
Laundry	2,259,456	62,765	2,259,456	62,765	1,802,062	50,059
Lighting	50,127,911	0	50,127,911	0	17,290,501	0
Motors & Drives	603,885	0	603,885	0	481,637	0
Other	61,570	0	61,570	0	49,106	0
Pools	711,840	0	711,840	0	567,738	0
Process	9,479,497	0	9,479,497	0	7,560,509	0
Refrigeration	554,362	0	554,362	0	442,139	0
Vending & Plug Loads	742,910	0	742,910	0	592,519	0
Waste Water Treatment	18,928,035	0	18,928,035	0	15,096,326	0
Total	111,813,060	4,537,858	111,813,060	4,537,858	64,787,095	3,214,117

¹Columns do not sum to the totals due to rounding.

Attribution

The Evaluation Team hypothesized that enhanced incentives offered through the Program affected participant decision-making such that there was lower freeridership and, depending on reported spillover savings, higher NTG among WPS customers than among all other participants in the connected statewide programs. Therefore, the Evaluation Team analyzed the differences in calculated freeridership and NTG between WPS participants who received additional incentives through the Program and all other participants in the Focus on Energy's statewide Business Incentives and Small Business programs.

First, the Evaluation Team collected participant and self-report freeridership and spillover data from program surveys conducted during the statewide evaluation as well as from the Program survey. The Evaluation Team utilized these data to calculate NTG ($1 - \text{Freeridership} + \text{Spillover}$) for each respondent in the sample.

To determine differences in freeridership and NTG between WPS and other utility customers with similar characteristics, the Evaluation Team divided respondent data between Program bonus incentive recipients and all other participants, and then into one additional sample group comprised of respondents in the schools and government sector.⁴⁷ Table 81 presents the five sample groups with definitions and population for each.

Table 81. Attribution Analysis Sample Groups

Sample Group	Definition	Sample Size		
		WPS	Other	Total
General	All respondents who installed non- SMP measures	58	102	160
Schools & Government	Respondents in the schools and government sector	24	19	43

For both sample groups, the Evaluation Team calculated separate freeridership, spillover, and NTG estimates for Program bonus incentive recipients and all other participants. Estimated freeridership was lower among bonus incentive recipients than all other participants across both sample groups. Due to substantial differences in calculated spillover between customer types and across the two sample groups, there was no similar trend for calculated NTG. Table 82 presents calculated freeridership, spillover, and NTG for each sample group.

Table 82. Freeridership, Spillover, and NTG by Customer Type and Sample Group

Sample Group	Freeridership		Spillover		NTG	
	WPS	Other	WPS	Other	WPS	Other
General	23.16%	41.01%	2.92%	25.21%	79.76%	84.21%
Schools & Government	27.03%	52.52%	0.19%	61.06%	73.16%	108.54%

⁴⁷ Respondents self-identified their sectors during the evaluation surveys; the smaller sample group does not individually include all 160 respondents from the general sample.

The Evaluation Team then used a two-sample t-test procedure to determine if the observed differences in freeridership and NTG were statistically significant (at the 90% level of confidence). Table 83 presents these findings for each of the five sample groups.

None of the observed differences in freeridership and NTG was found to be statistically significant. In other words, the enhanced incentives offered through the Program did not significantly affect freeridership or NTG for either of the customer segments. However, the data presented in Table 83 are still consistent with the hypothesis that enhanced incentives lower freeridership. For the schools and government sector sample group, the lack of statistical significance in observed differences could reflect small sample size rather than a true lack of difference.

Table 83. Statistical Significance of Observed Differences in Freeridership and NTG

Sample Group	Freeridership		Statistically Significant?	NTG		Statistically Significant?
	T-Statistic	P-Value		T-Statistic	P-Value	
General	0.31	0.7539	No	0.77	0.4434	No
Schools & Government	0.47	0.6429	No	1.59	0.1280	No

Process Evaluation Findings

The purpose of the CY 2013 process evaluation was to gather feedback about the Program regarding the effectiveness of its delivery and implementation, customer awareness and satisfaction, and to determine if there were any lessons learned that Focus on Energy could apply to other programs. The Evaluation Team conducted stakeholder interviews with the Program Administrator and Program Implementer and participant customer surveys (see Table 76Table 22).

Schools and Government Program Design, History, and Goals

The Program, which launched in July 2012, offered financial incentives and Energy Advisors' support to eligible customers (schools, school districts, and government agencies) in the WPS territory. The Program involved two main offerings—a pilot grant competition and a bonus incentive.

Pilot grant competition. In August 2012, a working group consisting of the Program Administrator, Program Implementer, and a WPS staff member selected 25 winners (12 schools and 13 governments) to receive a \$25,000 grant toward completing energy-saving projects. The Program required that customers complete applications and submit a short proposal. The Program Administrator, Program Implementer, and WPS staff member weighted project selection on factors such as potential projects and energy savings and commitment to moving projects forward.

Grant winners worked with an Energy Advisor from Focus on Energy who conducted facility assessments, recommended projects, and helped customers develop action plans for completing energy-saving projects. The Program Implementer required grant winners to sign letters of commitment, benchmark their facilities' energy use against other jurisdictions, and designate energy teams. Energy Advisors worked with facility maintenance staff to create energy teams, and they served as team members. The energy team then identified, prioritized, and implemented the energy-saving

projects. Energy teams were also encouraged to adopt energy policies—formal agreements to achieve target energy savings.

Grant winners were eligible for incentives through several Focus on Energy programs—the Business Incentive Program, Small Business Program, and the Territory-Wide Schools and Government bonus incentive and Energy Bundle Bonus (the latter two are available only to WPS customers). Grant winners completed projects and used the grant funding toward the remaining costs of energy efficiency projects that other Focus on Energy incentives did not cover.

Bonus incentive. School and government customers in the WPS territory were eligible to receive bonus incentives on top of the standard custom and prescriptive incentives available through the Business Incentive Program. These customers could receive total incentives (a combination of Focus on Energy incentives and Schools and Government Program bonus incentives) up to \$250/kW, \$0.08/kWh, and \$0.80/ therm (double the Business Incentive Program custom incentive), 60% of project costs, or \$25,000 per project, whichever was less. To be eligible, customers reviewed project details with an Energy Advisor and benchmarked their facility (if they had not already done so). Customers were also eligible for a facility assessment to identify potential energy-saving projects.

Energy Advisors said they directed customers to either the Business Incentive Program or the Small Business Program, depending on which was more lucrative for customers and appropriate for their project needs. However, only customers who installed measures through the Business Incentive Program were eligible for the Schools and Government Program bonus incentive.

Schools and Government Program customers were also eligible for the Focus on Energy’s Energy Bundle Bonus, available to WPS customers. Incentives from the Energy Bundle Bonus did not count against the Schools and Government Program incentive cap.

To increase participation, the Program Implementer offered a limited-duration increase in incentives for projects completed between January 2013 and July 31, 2013. This special offering increased the project incentive cap to 75% of project costs up to \$50,000.

Program Changes

The Program Implementer initially planned to end the Program in March 2013. However, because most schools and governments must go through several layers of approval to implement projects and therefore require longer project timelines, the Program Implementer extended the Program deadline to December 2013. Program Implementer staff explained that school and government customers often do not have readily available funding and must obtain board and budget approval to implement projects. A staff member also said projects in schools usually must be completed during the summer when school is not in session. They suggested that if Focus on Energy offered the Program again, it should consider running the Program over more than one year to better accommodate the schedules of school and government customers.

Program Goals and Performance

The Program had no formal energy-savings goals. However, the Program Administrator and Program Implementer worked together to establish Program targets against which the Program Implementer could measure performance. As Table 84 shows, the Program Implementer completed all of its achievement goals for the Schools and Government Program.

Table 84. Schools and Government Program Achievements

Achievement	Goal	Completed	Percentage of Goal
Facility Assessments ¹	100	123	123%
Facilities Benchmarked	100	238	238%
Projects Completed	100	357	357%
Publicized Success Stories	40	91	228%
Pilot Customer Commitments	24	27	113%
Energy Teams Developed	25	27	108%
Energy Policies Adopted	5	7	140%

¹ The Program Implementer could perform assessments and benchmarks for multiple sites for one customer. Therefore, although 90 customers participated, the Program Implementer conducted more than 90 assessments and benchmarks.

Program Management and Delivery

This section describes the various Program management and delivery aspects the Evaluation Team assessed.

Program Management

The Program Administrator was responsible for Program design, management, and reporting. The Program Implementer was responsible for customer outreach and marketing, incentive processing, and bonus incentive payment. Both the Program Administrator and Program Implementer, along with a staff member from WPS, were responsible for selecting the pilot grant winners.

Since the Schools and Government Program bonus incentive was in addition to the Business Incentive Program, Business Incentive Program Implementer staff were responsible for project preapproval and incentive approval. After that approval, Schools and Government Program Implementer staff approved the bonus incentives.

Program Delivery and Implementation

In contrast to the Business Incentive Program, which relied primarily on Trade Allies, the Schools and Government Program was driven by Energy Advisors who provided a variety of services and assistance to customers, including:

- Conducting facility assessments

- Identifying potential energy-saving projects
- Benchmarking customer facilities
- Guiding customers in energy team development and serving on energy teams
- Calculating incentive estimates for customers and completing Program paperwork

Program Implementer and Program Administrator staff stated that the relationship-building and additional support Energy Advisors provided to customers was the primary Program benefit and helped Focus on Energy engage this hard-to-reach customer segment. One Program Implementer staff member described the “relationships that have been developed with these customers and the trust they have with Focus on Energy... knowing they have this person at Focus on Energy they can contact...” as one of the most successful components of the Program.

Although recognizing the advantages and importance, Program Implementer staff acknowledged that the Program was resource-intensive due to the investment of Energy Advisors’ time. As one Program Implementer staff member described, “It takes a lot of... hands-on work, spending so much time with these customers. The labor dollars probably weren’t enough.”

The Program Implementer had originally planned to encourage more customers, not only grant winners, to develop energy teams. However, Energy Advisors did not have enough time or resources to encourage greater participation. As a result, the Program Implementer did not actively encourage customers who did not win a grant to develop energy teams.

Program Implementer staff acknowledged that after the Program’s discontinuation, customers would receive less support. For example, Energy Advisors would likely no longer be able to serve on energy teams. As one Program Implementer staff member said, “We won’t have the manpower to give them all that attention like we do with the [Schools and Government] Program...”

Program Materials

As Table 85 shows, most Program materials were partially present, but comprehensive documentation was missing in several areas.

Table 85. Presence of Schools and Government Program Materials

Program Materials Considered Best Practices	Present 2013	Comments
Program manual, handbook, and/or implementation plan.	v	Program has a work plan, though not a comprehensive Program manual.
Process flowcharts and organizational charts.	v	Program process flowchart/map; Program team identified in budget (does not include an organizational chart).
Presence of data collection protocols and quality assurance/quality control (QA/QC).	-	QA is referenced in the work plan, though no specific protocols are described.
Training materials for program staff (e.g., program managers, account executives, engineers, support staff).	✓	Incentive review process for Smart Farms and Schools and Government Program PowerPoint. Includes figures where relevant to show processes in SharePoint and Excel.
Application and rebate forms, customer contracts, and agreements.	✓	Application form.
Training materials for Trade Allies	-	
Marketing plan.	v	No official marketing plan, but marketing is described in the Program work plan.

Key: ✓ = present, v = partially present, - = not present

Marketing and Outreach

Outreach to Customers

The Program Implementer's marketing and outreach activities focused primarily on informing eligible customers about the Program. The Program Implementer mailed all eligible customers the following materials to promote the Program:

- An invitation letter, introducing Program offerings, including the pilot grant competition
- A double bonus coupon, informing customers of a limited-duration offering for double the incentive

The Program also relied on Energy Advisors to reach out to customers. Energy Advisors reported contacting customers by phone and in person to encourage their participation.

WPS Account Executives, who had existing relationships with many school and government customers, also informed their customers about the Program. Program Implementer staff believed that customer engagement benefited from the involvement of WPS Account Executives because of the trust they had built with customers over time. One Program Implementer staff member said that this involvement "probably helped us tremendously as far as getting the word out [to customers]."

Although Program Implementer staff thought they had generally been successful at reaching most school and government customers, one acknowledged they could have been more effective with small government customers. He said small governments may not have dedicated staff to make energy

decisions, which made it difficult to reach the correct person. In addition, he said that these customers often have not developed relationships with WPS Account Executives.

Outreach to Trade Allies

The Program Implementer had planned no formal outreach or marketing activities for engaging Trade Allies with the Program. Energy Advisors said they promoted the Program with Trade Allies with whom they had existing relationships. They believed that many Trade Allies also learned of the Program through their customers. Program Implementer staff members said that after learning of the Program, some Trade Allies promoted it to their customers.

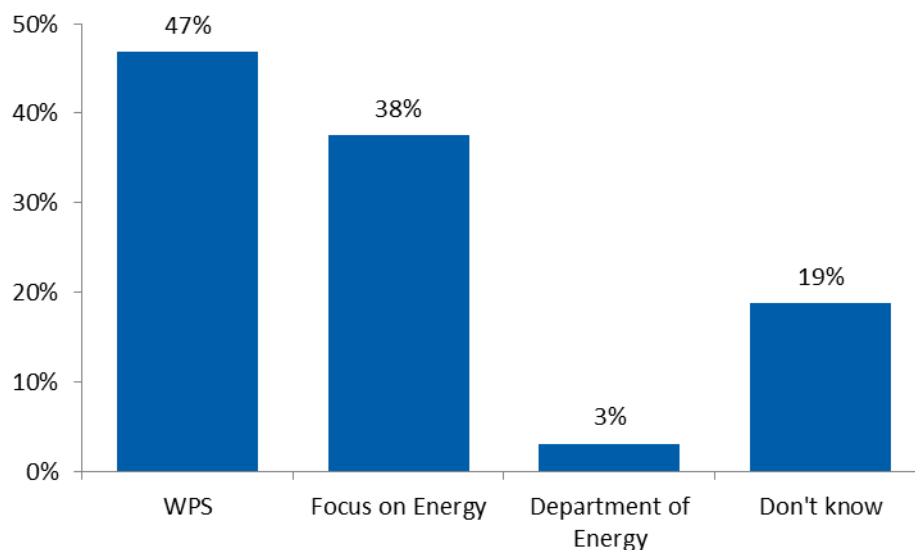
Customer Experience

The Evaluation Team surveyed 40 participant customers about their awareness of the Program and the pilot competition, decision-making, and satisfaction with the Program and its elements. Not all respondents answered all questions in the survey; therefore, sample size varies for each question.

Customer Awareness

The Evaluation Team asked customers who they thought sponsored the Program. As Figure 29 shows, customers most frequently cited WPS as the sponsor (47%, or 15 out of 32). They also cited Focus on Energy (38%, or 12 out of 32) and the U.S. Department of Energy (3%, or 1 out of 32). Nineteen percent of respondents (6 out of 32) did not know who sponsored the Program.

Figure 29. Who Customers Thought Sponsored the Schools and Government Program



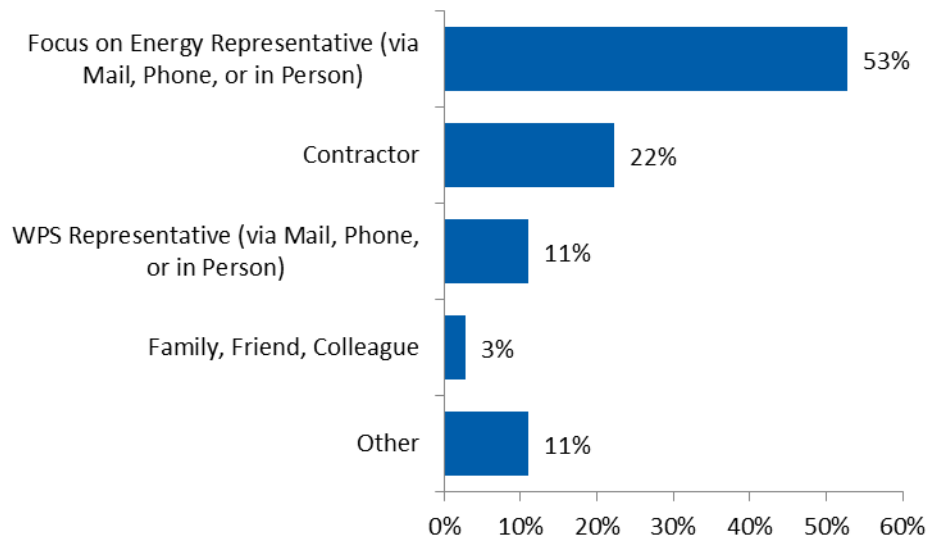
Source: Schools and Government Participant Customer Survey, J2: “Can you tell me who sponsored the Schools and Government Program?” (n=32; multiple responses allowed)

Sources of Program Awareness

The Evaluation Team asked respondents how they first heard of the Program. As Figure 30 shows, respondents most frequently said they heard about the Program through a Focus on Energy

representative (53%, or 19 out of 36). They also said they first heard about the Program through their contractor (22%, or 8 out of 36), a WPS representative (11%, or 4 out of 36), and a family, friend, or colleague (3%, or 1 out of 36).

Figure 30. Sources of Customer Awareness



Source: Schools and Government Participant Customer Survey, K2:
 “How did you first hear about the Schools and Government Program?” (n=36)

Pilot Competition Awareness

When the Evaluation Team asked respondents who did not win a grant if they were aware of the pilot competition for a \$25,000 grant, respondents reported low awareness. Most (78%, or 18 out of 23) said they were unaware of the pilot competition.

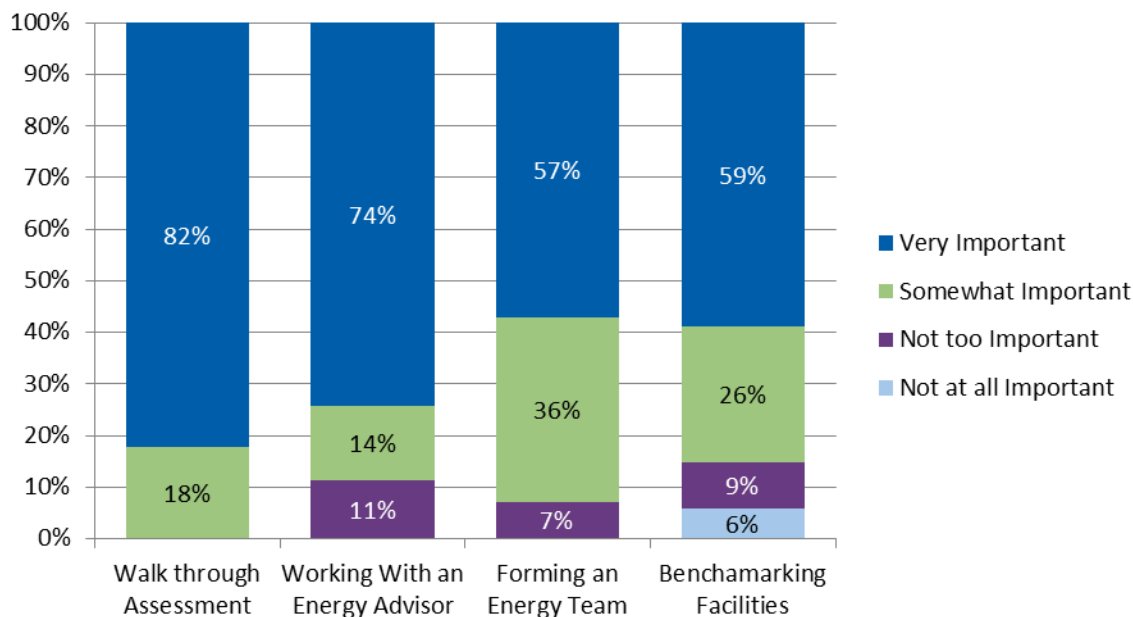
The Evaluation Team then asked the respondents who were aware of the pilot competition why they did not apply. Of those, one said not enough staff time to complete the application, another did not think the facility would qualify, and another indicated a lack of knowledge of the pilot program.

Customer Decision-Making

To understand the influence of the Program on customer decision-making, the Evaluation Team asked respondents to rate the importance of various Program elements in their decision to install energy-saving equipment. The majority of respondents said the incentives available through the Program were somewhat important (18%, or 7 out of 38) or very important (79%, or 30 out of 38) in their decision to install multiple types of equipment. Additionally, 61% of respondents (20 out of 33) said they would have not have purchased the energy-saving equipment without the incentives available through the Program.

Figure 31 shows respondents' ratings of the importance of non-incentive Program elements. All 17 respondents who received the walk-through assessment, and who provided a response, said it was "somewhat important" or "very important" in their decision to install energy-saving equipment. Respondents ascribed slightly lesser importance to the other Program elements, but a majority rated all Program elements "very important."

Figure 31. Importance of Program Elements in Customer Decision-Making



Source: Schools and Government Participant Customer Survey, M1, M3, M5, and M7: "How important was the [PROGRAM ELEMENT] to your decision to implement the energy-saving measures we've been discussing? Would you say they were were..." (n≥14)

Working with an Energy Advisor

Most respondents (88%, or 31 out of 35) said that working with an Energy Advisor was "somewhat important" or "very important" in their decision to install energy-efficient equipment. Three participants who said working with an Energy Advisor was "not too important" cited these reasons:

- The engineering office handled project details.
- The jurisdiction decided to move forward with the project prior to Energy Advisor involvement.
- The facility had only one visit from an Energy Advisor over two years.

Forming an Energy Team

The Evaluation Team asked only the pilot winners about the importance of forming an energy team. The majority of respondents (93%, or 13 out of 14) rated forming an energy team as "somewhat important" or "very important" in their decision to install energy-saving equipment. These respondents appreciated the knowledge, expertise, and support of the energy teams. They said that energy teams helped the

jurisdiction identify and prioritize energy-saving projects, as well as validate the decisions their jurisdiction made to reduce energy costs.

Customers provided positive feedback about working with energy teams, including:

- “As a team we were able to receive information that helped to prioritize the biggest payoff for the community.”
- “The [energy] team was more supportive and was the key to driving the projects and getting funding.”
- “Without [the energy team] we would not have any idea about the best solution in lighting.”

Two respondents (one who said forming an energy team was “not too important,” another who said it was “somewhat important”) said they would have done projects without the energy team. Another respondent, who said forming an energy team was “somewhat important”, said that he or she would have “figured out the possibilities without the energy team.”

Facility Benchmarking

Respondents provided a range of ratings regarding the importance of benchmarking their facilities. Eighty-five percent of respondents (29 out of 34) said that benchmarking their facility was “somewhat important” or “very important.” They said that benchmarking allowed them to compare their energy consumption with other schools and governments, helped their jurisdiction focus on the most appropriate and significant energy-saving projects, and persuaded decision-makers, such as school boards, to make energy-saving upgrades.

Comments from respondents included:

- “After benchmarking we were able to focus on the most energy savings and payback on our projects.”
- “[Benchmarking] gave us a good indication where we stack up with other school district facilities and [provided] validation for expenses.”
- “[Benchmarking] helped to persuade the board to do the measures.”

Fifteen percent of respondents (5 out of 34) said benchmarking was “not too important” or “not at all important.” These five respondents said that their facility was not benchmarked, that they were unaware of benchmarking, or that they had already done benchmarking through another company.

Program Impact on Future Energy-Saving Decisions

Finally, the Evaluation Team asked respondents if their Program participation would affect their jurisdiction’s ongoing energy decision-making. Eighty-seven percent of respondents (33 out of 38) said that having worked with the Program would affect future decision-making.

When asked how their Program participation would affect decisions, several respondents explained that after developing relationships with WPS and Focus on Energy representatives, they planned to contact

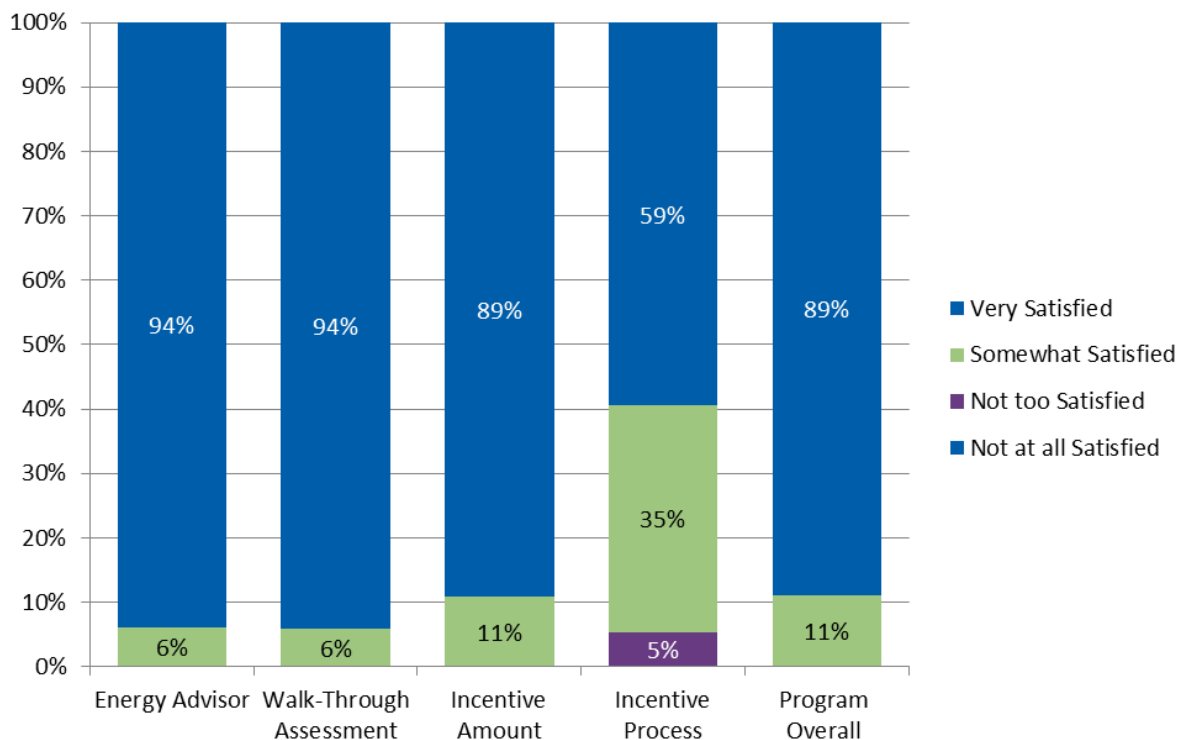
them in the future for further assistance and guidance in identifying energy-saving projects and opportunities. Respondents also said that participating in the Program increased their awareness and understanding of energy-saving options, drove them to look for other energy-efficient options, and encouraged them to do more projects in the future.

Customer Satisfaction

The Evaluation Team asked respondents to rate their satisfaction with the Program. Overall, customers indicated high satisfaction with the Program. As Figure 32 shows, all respondents who could provide a response said they were “somewhat satisfied” or “very satisfied” with their experience working with an Energy Advisor, the walk-through assessment, the incentive amount, and the Program overall.

Compared to other Program elements, customers indicated lower satisfaction with the process for receiving the incentive. Five percent (2 out of 37) said they were not too satisfied with the incentive process. Both respondents cited too much paperwork as their reason for being less than satisfied. One respondent also cited the amount of staff time involved in the incentive process.

Figure 32. Customer Satisfaction Ratings



Source: Schools and Government Participant Customer Survey: Source: Schools and Government Participant Customer Survey, N1, N3, N5, N7, and N9: “How satisfied would you say you were with [PROGRAM ELEMENT]? Would you say you were...” (n≥17)

Outcomes

Outcome 1: The enhanced incentives offered through the Schools and Government Program affected program participation such that there was lower freeridership among WPS participants than among other participants. However, observed differences in freeridership were not statistically significant at the 90% level of confidence.

Across both sample groups, the freeridership data are consistent with the hypothesis that providing additional incentives to WPS customers had a positive impact on participant freeridership. However, the hypothesis cannot be confirmed with at least 90% confidence.

Outcome 2: Customers were highly satisfied with the Program and substantial investment in customer support and assistance likely helped the Program engage this hard-to-reach segment and encourage their commitment to energy efficiency in schools and government facilities.

Most respondents (88%, or 31 out of 35) said that working with an Energy Advisor was “somewhat important” or “very important” in their decision to install energy-efficient equipment. Respondents explained that the support provided through the Program helped them prioritize energy-saving projects, persuaded decision-makers to move forward with projects, and moved projects forward. Customers valued the relationships they developed with Focus on Energy and WPS staff and planned to seek their guidance and technical assistance in the future.

Recommendation: Enhanced communication and support may be required to keep participants engaged and continue engaging this sector in the future.

Encouraging new schools and government customers to participate in Focus on Energy programs and make energy-efficient upgrades may require continued Energy Advisor and Program support. The Program Implementer may also want to consider dedicating some resources to keeping these Program participants engaged, such as helping them maintain their energy teams.

Outcome 3: Few of the customers who did not win a grant were aware of the opportunity, and those who were cited a lack of resources or lack of information as their barrier to applying. This might indicate that more outreach and/or grant application support was necessary.

Small Business Platinum Package

Through the Small Business Platinum Package Program (the Program), launched in September 2013, Focus on Energy offered WPS customers who participated in the Small Business Program an additional incentive package designed to drive the installation of LED measures. Eligible customers were nonchain business customers with an average monthly electricity demand less than 100 kW who had not previously participated in the Small Business Program. Customers paid \$295 for the Platinum Package and received installation of LED measures,⁴⁸ as well as the standard measures available to Small Business Program customers through the Free and Gold packages.

The Program Implementer was Staples & Associates, Inc.

Table 86 lists the Program's first-year annual and life-cycle verified net savings by calendar year.⁴⁹ The Program was launched in CY 2013; therefore, there are no verified net savings attributable to the Platinum Package in prior calendar years.

Table 86. Small Business Platinum Package Program Savings Summary

CY Year	First-Year Annual			Life-Cycle	
	kWh	kW	Therms	kWh	Therms
2013	4,306,119	879	2,090	51,815,865	27,131

Program-Level Evaluation Activities

As Table 87 shows, for the CY 2013 evaluation, the Evaluation Team conducted impact and process data collection activities to support these impact and process evaluation tasks—energy and demand savings determination and stakeholder interviews.

Table 87. Small Business Platinum Package Program Data Collection Activities and Sample Sizes

Activity	Sample Size (n)
Energy and Demand Savings Determination	Census
Stakeholder Interviews	2

⁴⁸ LED measures available through the Platinum Package Included various LED lamps (replacing incandescents, not CFLs), LED troffer replacements of T8 or T12, 3- and 4-lamp fixtures, dimmer switches for LED lamps or troffers, and 4' T8 lamps replacing 8' T12 lamp fixtures (2- and 4-lamp).

⁴⁹ In some cases, although the project was completed in CY 2013 (as the Platinum Package required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

Impact Evaluation Findings

In total, the CY 2013 Small Business Platinum Package Program awarded bonus payments to 324 WPS customers. These customers installed 47,554 measures, including domestic hot water direct install measures such as faucet aerators and pipe insulation that were offered through the Small Business Program. For each measure group, Table 88 lists the number of unique participating customers who installed at least one measure from the group, as well as the number of measure installations completed, in CY 2013.

Table 88. Small Business Platinum Package Participation by Measure Group

Measure Group	Customers ¹	Measures Installed
Domestic Hot Water	144	1,292
Lighting	322	46,058
Refrigeration	19	179
Vending & Plug Loads	22	25
Total		47,554

¹ Indicates the number of unique customers who installed at least one measure from each measure group; most participating customers installed measures from multiple measure groups and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure group. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs determined through its evaluation of the statewide Focus on Energy Small Business Program.

Since the Platinum Package delivered measures to WPS customers who participated in the statewide Small Business Program, the Evaluation Team applied the ISRs from the statewide evaluation to savings achieved through the Platinum Package. The Evaluation Team calculated a realization rate for each measure group by fuel type, and then it calculated a weighted average realization rate for each fuel type based on savings achieved per measure group.⁵⁰

Realization rates for CY 2013 were 100% across kWh, kW, and therm estimates.

⁵⁰ Realization rate = verified gross savings / gross savings

Differences between verified gross and verified net savings resulted from the Evaluation Team's application of weighted NTG adjustments determined through the same statewide program. Table 89 presents weighted average NTG adjustments for CY 2013.

Table 89. Weighted Average Freeridership, Spillover, and NTG¹

Item	Weighted Average
Freeridership	15.2%
Spillover	0.0%
NTG	84.8%

¹ Weighted averages for freeridership, spillover, and NTG are calculated separately.

Table 90 lists CY 2013 first-year annual savings by measure group, and Table 91 lists CY 2013 life-cycle savings by measure group.

Table 90. Small Business Platinum Package First-Year Annual Savings by Measure Group¹

Measure	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Domestic Hot Water	34,515	0	1,751	34,515	0	1,751	29,260	0	1,484
Lighting	4,949,417	1,030	715	4,949,417	1,030	715	4,195,835	873	606
Refrigeration	56,385	6	0	56,385	6	0	47,800	5	0
Vending & Plug Loads	39,192	0	0	39,192	0	0	33,225	0	0
Total	5,079,509	1,036	2,466	5,079,509	1,036	2,466	4,306,119	879	2,090

¹Columns do not sum to the totals due to rounding.

Table 91. Small Business Platinum Package Life-Cycle Savings by Measure Group¹

Measure Group	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Domestic Hot Water	488,764	24,853	488,764	24,853	414,347	21,069
Lighting	60,015,891	7,150	60,015,891	7,150	50,878,070	6,061
Refrigeration	225,540	0	225,540	0	191,200	0
Vending & Plug Loads	391,920	0	391,920	0	332,248	0
Total	61,122,115	32,003	61,122,115	32,003	51,815,865	27,131

¹Columns do not sum to the totals due to rounding.

Process Evaluation Findings

The purpose of the CY 2013 process evaluation was to gather information about the Platinum Package regarding the effectiveness of delivery and implementation processes and to determine if there were any lessons learned that Focus on Energy that could apply to other programs in the future. The Evaluation Team conducted stakeholder interviews with staff from the Program Administrator and Program Implementer (see Table 88).

Small Business Platinum Package Design, History, and Goals

The Platinum Package, a short-term additional offering through the Small Business Program, was designed to drive the installation of emerging LED technology in the WPS territory. Due to the success of the Platinum Package in encouraging both customer and Trade Ally participation, Focus on Energy decided to offer a similar package, with incentives for purchasing and installing LEDs, to Small Business Program customers statewide in CY 2014.

Platinum Package Management and Delivery

Management and delivery of the Platinum Package were the same as for the Small Business Program—Trade Allies recruited customers, conducted energy assessments, enrolled customers in the Platinum Package, and installed measures. The Program Implementer, including Energy Advisors, oversaw delivery of the Platinum Package and provided training and support to Trades Allies.

Program Implementer staff said that despite having only six months to roll out the Platinum Package, integrating it into the existing Small Business Program was relatively straightforward and required minimal changes, such as updating the iPad-based program tool to include Platinum Package measures. Due to the limited scope of Platinum Package offering, the Program Implementer staff said they could deliver this short-term offering in the WPS territory through the existing network of Trade Allies who were involved in the Small Business Program with limited additional training on LED technology. They believed the Platinum Package had been effective in driving Trade Ally participation and noted as an example that Trade Allies travelled from the Milwaukee area to the WPS territory to deliver the Platinum Package.

Program Materials

The Evaluation Team reviewed the Platinum Package materials for the inclusion of documents considered industry best practices for energy efficiency program administration, implementation, and delivery. The Evaluation Team determined that the Program Implementer developed comprehensive program materials for the Small Business Program. Although these materials were relevant to the Platinum Package, since it was offered as an additional short-duration package on top of the existing program offerings with little difference in program delivery and implementation, most of these materials did not specifically reference the Platinum Package. In addition to general Small Business Program materials, the Program Implementer provided a Platinum Package summary to Trade Allies, including eligible measures, incentive level, installation maximums, and a description of how to use the

Energy SnapShot™ tool (a tablet-based tool used to record data during the assessments) for the Platinum Package.

Marketing and Outreach

The Program Implementer conducted outreach and marketing activities directed toward both customers and Trade Allies.

To inform customers about the Platinum Package, in October 2013, the Program Implementer mailed a targeted letter to restaurants and bars in the WPS territory, informing them of the opportunities available through the Platinum Package.

To promote the Platinum Package to Trade Allies, the Program Implementer first e-mailed all Trade Allies in Wisconsin to inform them of the Platinum Package. The e-mail included a frequently asked questions factsheet about the new offering. Energy Advisors then followed up with phone calls to Trade Allies they worked with in the WPS territory.

Nonresidential Trade Ally Bonus Bid Program

Focus on Energy launched the Trade Ally Bonus Bid Program (the Program) in August 2012 to generate energy savings, reduce energy costs, and increase market competitiveness by providing monetary awards directly to prequalified Trade Allies who identified and installed energy efficiency projects for customers in the WPS territory. Trade Allies bid competitively through a reverse auction on a dollar-per-kilowatt (\$/kWh)-saved award for expected projects.⁵¹

CB&I was both the Program Administrator and Program Implementer. In October 2012, CB&I executed the first of four reverse auctions and allocated award dollars to a total of 12 winning Trade Allies based on the lowest \$/kWh bid for each auction. Trade Allies were responsible for identifying customers and implementing energy-savings projects. After Trade Allies completed projects, they applied to the Program to receive their award dollars. Customers could take advantage of any Focus on Energy and WPS Territory-Wide incentives for which they were eligible.

Table 92 lists the Program's first-year annual and life-cycle verified net savings by calendar year for the nonresidential segment.⁵² (The Evaluation Team presents Residential Trade Ally Bonus Bid Program findings in a separate section.) One customer participated in CY 2012. However, no projects were completed until CY 2013, so no energy or demand savings are attributable to the program for CY 2012.

Table 92. Nonresidential Trade Ally Bonus Bid Program Savings Summary

Calendar Year	First-Year Annual			Life-cycle	
	kWh	kW	Therms	kWh	Therms
2013	5,727,519	1,716	4,800	61,428,223	56,064

Program-Level Evaluation Activities

As Table 93 shows, for the CY 2013 evaluation, the Evaluation Team conducted data collection activities to support these impact and process evaluation tasks—energy and demand savings determination, stakeholder interviews, participant customer surveys, and a materials review.

⁵¹ A reverse auction is a type of auction in which the role of the buyer and seller are reversed, with the primary objective to drive down prices. The sellers compete to provide a good or service and prices decrease until no seller is willing to make a lower bid.

⁵² In some cases, although the project was completed in CY 2013 (as the Program required), some projects completed at the end of the year were approved by the Program Administrator in early 2014. As a result, program accounting records contain some payments in CY 2014. Note that all savings identified as CY 2013 in this report are attributable to projects completed during that calendar year.

**Table 93. Nonresidential Trade Ally Bonus Bid Program
Data Collection Activities and Sample Sizes**

Activity	Sample Size (n)
Energy and Demand Savings Determination	Census
Stakeholder Interviews	2
Participant Trade Ally Interviews	5
Materials Review	Census

Impact Evaluation Findings

In total, the CY 2013 Program delivered 53,030 measures, including direct install measures offered through the Small Business Program, to 342 WPS customers. For each measure group, Table 94 lists the number of unique participating customers who installed at least one measure from the group, as well as the number of measure installations completed, in CY 2013.

Table 94. Nonresidential Trade Ally Bonus Bid Program Participation by Measure Group

Measure Group	Customers ¹	Measures Installed
Compressed Air, Vacuum Pumps	1	1
Domestic Hot Water	118	1,288
Lighting	324	50,378
Other	342	1,119
Refrigeration	22	206
Renewable Energy	3	3
Vending & Plug Loads	31	35
Total		53,030

¹Indicates the number of unique customers who installed each measure; most participating customers installed multiple measures and the column therefore will not total to the individual customer count.

Energy and Demand Savings by Measure Group

The Evaluation Team determined gross, verified gross, and verified net first-year annual and life-cycle savings by measure group. Differences between gross and verified gross savings resulted from the Evaluation Team's application of verified installation quantities as well as ISRs determined through its evaluation of these statewide programs—Business Incentives, Chain Stores and Franchises, RECIP-Business Incentive, RECIP-Large Energy Users, and Small Business.

Since the Program delivered measures to WPS customers who participated in these statewide programs, the Evaluation Team applied the ISRs—weighted by energy savings (MMBtu) attributable to each statewide program—to savings achieved through the nonresidential Trade Ally Bonus Bid Program. The

Evaluation Team calculated a realization rate for each measure group by fuel type, and then it calculated a weighted average realization rate for each fuel type based on savings achieved per measure group.⁵³

Realization rates for CY 2013 were 100% across kWh, kW, and therm estimates.

Differences between verified gross and verified net savings resulted from the Evaluation Team's application of weighted NTG adjustments determined through its evaluation of the same five statewide programs. Table 95 presents weighted average NTG adjustments for CY 2013.

Table 95. Weighted Average Freeridership, Spillover, and NTG¹

Item	Weighted Average
Freeridership	27.1%
Spillover	0.1%
NTG	73.0%

¹Weighted averages for freeridership, spillover, and NTG are calculated separately.

Table 96 lists CY 2013 first-year annual savings by measure group, and Table 97 lists CY 2013 life-cycle savings by measure group.

⁵³ Realization rate = verified gross savings / gross savings

Table 96. Nonresidential Trade Ally Bonus Bid Program First-Year Annual Savings by Measure Group¹

Measure Group	Gross			Verified Gross			Verified Net		
	kWh	kW	Therms	kWh	kW	Therms	kWh	kW	Therms
Compressed Air, Vacuum Pumps	1,190	0	0	1,190	0	0	737	0	0
Domestic Hot Water	21,245	0	5,663	21,245	0	5,663	18,010	0	4,800
Lighting	7,515,084	1,415	0	7,515,084	1,415	0	5,379,063	1,013	0
Other	1,523	0	0	1,523	0	0	1,523	0	0
Refrigeration	64,890	7	0	64,890	7	0	55,010	6	0
Renewable Energy	216,704	672	0	216,704	672	0	224,722	697	0
Vending & Plug Loads	57,155	0	0	57,155	0	0	48,453	0	0
Total	7,877,790	2,095	5,663	7,877,790	2,095	5,663	5,727,519	1,716	4,800

¹Columns do not sum to the totals due to rounding.

Table 97. Nonresidential Trade Ally Bonus Bid Program Life-Cycle Savings by Measure Group¹

Measure Group	Gross		Verified Gross		Verified Net	
	kWh	Therms	kWh	Therms	kWh	Therms
Compressed Air, Vacuum Pumps	17,843	0	17,843	0	11,062	0
Domestic Hot Water	256,564	66,133	256,564	66,133	217,501	56,064
Lighting	78,236,344	0	78,236,344	0	55,999,137	0
Other	1,523	0	1,523	0	1,523	0
Refrigeration	259,560	0	259,560	0	220,040	0
Renewable Energy	4,334,071	0	4,334,071	0	4,494,432	0
Vending & Plug Loads	571,550	0	571,550	0	484,528	0
Total	83,677,454	66,133	83,677,454	66,133	61,428,223	56,064

¹Columns do not sum to the totals due to rounding.

Process Evaluation Findings

The purpose of the CY 2013 process evaluation was to gather information about the Program regarding Trade Ally satisfaction and awareness, to assess the effectiveness of delivery and implementation processes, and to determine if there were any lessons learned that Focus on Energy could apply to other programs. The Evaluation Team conducted interviews with three members of the Program Administrator/Implementer staff and five of the 12 Trade Allies who won an auction award.

Trade Ally Bonus Bid Program Design, History, and Goals

Only prequalified, currently registered (or in the process of becoming registered) Focus on Energy Trade Allies, who were located and/or provided energy-related services in the WPS territory, could participate in the auctions. Trade Allies had to submit a prequalification application form to the Program Administrator/Implementer and demonstrate the following eligibility criteria:

- Financial viability to meet program requirements
- Past project experience in developing and implementing energy efficiency projects
- Proposed project implementation strategy

Trade Allies bid competitively in any of four auctions on a \$/kWh-saved award by stating a target for energy savings in kWh they expected their projects could deliver within one year. For example, a Trade Ally with a winning bid of \$.02 per kWh on a \$100,000 auction was responsible for delivering 5,000,000 kWh in eligible energy-savings projects to earn the full award. The twelve winning Trade Allies then sold and delivered energy efficiency projects to customers in the WPS territory. Upon completion of the projects, the Trade Allies submitted post-application paperwork and the Program Administrator/Implementer paid the bonus on savings delivered by those projects.

The Program targeted three eligible customer segments:

- **Small Industrial:** Manufacturing companies up to 1,000 kilowatt demand
- **Main Street:** “Micro Commercial Buildings”—must meet one of the following characteristics to qualify:
 - businesses that have less than 30 employees
 - less than \$2 million in annual revenue
 - under 500 kilowatt demand
- **Renewable Energy:** Residential or nonresidential customer renewable energy projects (biomass, biogas, geothermal, solar photovoltaic [PV], solar thermal, or wind technologies)

Table 98 shows the number of winners for each customer type and award amount per auction.

Table 98. Trade Ally Bonus Bid Program Auction Awards Winners¹

	Customer Type	Award Amount	Number of Winners
Auction 1	Main Street/Small Industrial	\$300,000	2
Auction 2	Renewable Energy	\$300,000	1
Auction 3	Main Street/Small Industrial	\$100,000	6
Auction 4	Renewable Energy	\$125,000	4

¹ Focus on Energy provided 13 Trade Ally Bonus Bid awards. One Trade Ally won two awards; therefore, a total of twelve unique Trade Allies participated in the Program.

Customers could take advantage of any standard Focus on Energy and Territory-Wide incentives for which they were eligible. The Program winners' customers applied for these Focus on Energy Programs:

- Small Business Program
- Business Incentives Program
- Chain Stores and Franchises Program
- Renewable Energy Competitive Incentive Program
- Multi-family Energy Savings Program
- Residential Renewable Energy Program

A Program Administrator/Implementer staff member explained that allowing the bonus to cover Small Business Program co-pays may have led to issues with freeridership. He believed that the financial incentive to participate in the Small Business Program was low enough (customers paid co-pays between \$129 and \$295) that most customers would have participated in the Small Business Program without an additional incentive from a Trade Ally. As Table 99 shows, the majority of participants and energy savings, and over half of the incentives, for the Trade Ally Bonus Bid came from the Small Business Program.

Table 99. Proportion of Trade Ally Bonus Bid Participants, Incentives, and Savings from the Small Business Program

Item	Small Business Program Total	Trade Ally Bonus Bid Total	Proportion from Small Business Program
Unique Participants	271	342	79.24%
Incentives (\$)	\$ 224,558.88	\$ 399,947.16	56.15%
Savings (MMBtu)	19,564.56	27,445.29	71.29%

A few Trade Ally interviewees said that the majority of their business related to the Program came from the Small Business Program, and they offered a contrary opinion of the importance of the incentive. These Trade Allies explained that in some cases passing on a portion of the Program incentive to cover Small Business Program co-pays was the final piece that encouraged customers to participate. The Trade Allies said that these customers would have been unwilling to participate even with the minimal co-pay amount for direct install measures. As one Trade Ally said about his Small Business Program customers,

“I wouldn’t have been able to move fence-sitters forward [without the Program]. Some people look at standard incentives and with a little more money it’s a mind changer.”

Program Goals and Performance

The Program did not involve any formal performance metrics. In addition, the Program’s design did not require accountability metrics for the winning Trade Allies to ensure that they delivered the savings declared in their bids. None of the participating Trade Allies achieved their initial target energy reductions.

Trade Allies set their own energy-savings targets through the reverse auction and had one year to complete projects and claim incentives through the Program. Both Trade Allies and Program Administrator/Implementer staff said that the energy-savings awards may have been too large. They suggested that Focus on Energy could help Trade Allies achieve targets, and make the opportunity available to more Trade Allies, by offering smaller awards to a greater number of Trade Allies.

Some Trade Allies also said they needed more than a year to find customers and complete projects. One explained that “cultivating a system of jobs takes a while. People need more time to plan... and some [projects] develop slower... It’s hard to find projects and install [them] in a year.” He suggested Focus on Energy provide more time—at least a year and a half—for Trade Allies to find customers and complete the energy-savings projects.

Program Management and Delivery

This section describes the various Program management and delivery aspects the Evaluation Team assessed.

Program Management

The Program Administrator also acted as the Program Implementer. Program Administrator/Implementer staff were responsible for Trade Ally communication and outreach, auction management, application processing, data management, and project tracking. During the summer of 2013, the Program Administrator/Implementer brought on additional staff to process applications and incentive payments and conduct additional Trade Ally outreach.

Program Delivery and Implementation

The Program Administrator/Implementer executed the reverse auction through an online platform and allocated awards to the Trade Allies with the lowest bids. The reverse auction had predetermined starting bid amounts and bid decrement limitations (see Table 100). This ensured that award dollars were distributed to numerous prequalified Trade Allies. As the Program was not customer-facing, Focus on Energy relied on Trade Allies to promote it to customers.

Table 100. Bid Ceiling and Decrement Amounts

	Energy Reduction	Units
Bid Price Ceiling	\$0.15	\$/kWh
Minimum Bid Decrement	\$0.0025	\$/kWh

A few Trade Allies commented that initially they were confused about how the auction and bidding process worked but said it was easier to understand after additional explanation from Focus on Energy staff and a trial run of the online reverse auction. A few Trade Allies also found the auction unfair to Trade Allies who did not win an award. They thought that Focus on Energy should provide a bonus incentive to all Trade Allies instead of awarding only a few.

Once Trade Allies completed projects, they submitted post-application paperwork to the Program Administrator/Implementer, which distributed awards directly to Trade Allies as they completed projects. The Program Administrator/Implementer permitted, but did not require, Trade Allies to share the incentive with customers.

In August 2013, after following up with Trade Allies on the status of their projects, the Program Administrator/Implementer determined that most of them would not complete enough projects by the Program deadline to earn the full award. Although there were no penalties for not achieving target energy reductions, the Program Administrator/Implementer did reduce the amount of the awards for most Trade Allies, based on the number of projects they believed they could complete.

Program Administrator/Implementer staff thought that Trade Allies may not have set realistic goals when bidding in the auction, explaining that Trade Allies may have aimed to be the lowest bidders without considering whether or not they could achieve target energy savings. The Evaluation Team's findings from Trade Ally interviews support this belief.

When asked how they chose their bids, several Trade Allies said that even though they knew the bids were too low to realistically achieve energy-savings targets, they continued to bid lower because they had already spent so much time to prepare for the auction. Participation required that Trade Allies complete paperwork, download online auction software, participate in a pre-auction trial run, and bid in the final auction. A few Trade Allies said that any incentive award, however small, was better for their company and customers than no award.

Program Materials

The Evaluation Team reviewed the Program materials for the inclusion of documents considered industry best practices for energy efficiency program administration, implementation, and delivery (see Table 101).

Table 101. Presence of Trade Ally Bonus Bid Program Materials

Program Materials Considered Best Practices	Present in 2013	Comments
Program manual, handbook, and/or implementation plan	v	A "program guidelines" document exists, which described the program delivery and requirements; however, it is tailored to Trade Ally applicants, not staff who managed the Program.
Process flowcharts and organizational charts	v	There are no organization charts; however, the "program guidelines" document does contain a process flowchart to describe the auction and bonus application processes.
Presence of data collection protocols and quality assurance/quality control (QA/QC) protocols	✓	
Training materials for program staff (e.g., program managers, account executives, engineers, support staff)	-	No training materials exist for Program staff.
Application and rebate forms, customer contracts, and agreements	✓	Bonus application forms are easily accessible on the Program website. Trade Allies were required to submit simple forms attached with associated Focus on Energy application.
Educational/training materials for Trade Allies	✓	Program Administrator/Implementer provided a webinar for auction award winners to introduce the Program and explain its processes.
Marketing plan	-	

Key: ✓=present, v= partially present, - = not present

Marketing and Outreach

The Program Administrator/Implementer initially e-mailed Trade Allies to inform them of the Program, but Program Administrator/Implementer staff explained that the e-mail list was incomplete and not limited to Trade Allies working in the WPS territory. The Program Administrator/Implementer later followed up via a phone call to the most active Trade Allies in the WPS territory to encourage their participation in the Program. After the auction, the Program Administrator/Implementer also presented a webinar for award winners to explain the Program, timeline, and processes.

Two Trade Allies said that they first heard about the Program through an e-mail from Focus on Energy, but that they initially ignored the e-mail. These Trade Allies said that they also received a follow-up call from Focus on Energy and that conversation spurred their interest in participating in the auction. One Trade Ally recalled hearing about the Program only through a phone call from Focus on Energy, another recalled hearing about it in person from a Focus on Energy representative, and a third heard about it through an e-mail tailored to Wisconsin solar providers.

Trade Ally Experience

The Evaluation Team interviewed five of twelve unique Trade Ally Bonus Bid Program auction award winners.

Program Impact on Trade Ally Business Practices

Trade Allies offered no consensus as to whether or how participating in the Program had altered their business practices. Some said the Program had limited impact on their business practices or outreach to customers:

- Two Trade Allies (one of whom did not complete any projects through the Program) said the Program had not impacted their business practices or volume of work. They did not promote the Program to customers or share any awards received.
- Another Trade Ally said he did not promote the Program to customers but did subtract a portion of the award he received as a line item on the customer's invoice. Other than concentrating more on WPS customers than on other Focus on Energy customers, he said he did not change his business practices during his participation in the Program.

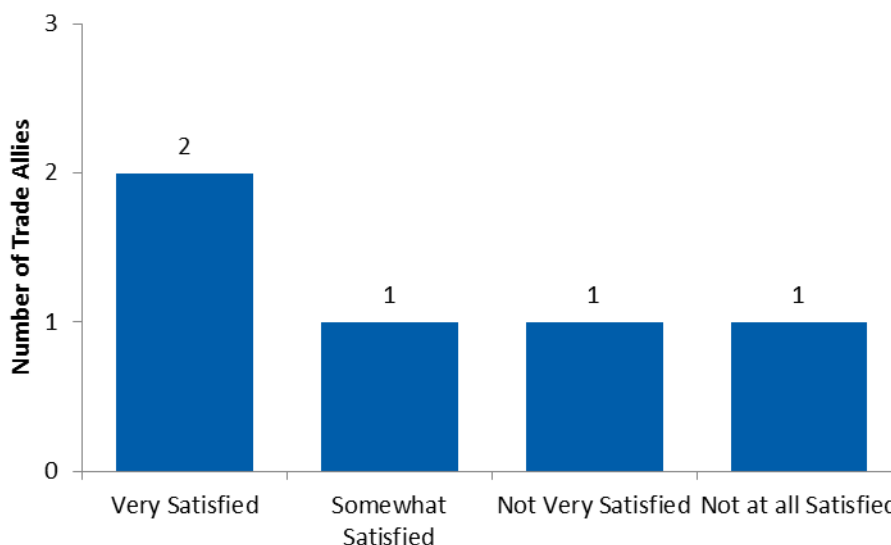
Other Trade Allies participated more actively and described several ways they used the Program to engage customers and promote their business:

- One Trade Ally said he passed on most of his award to customers for completing eligible energy-savings projects. This Trade Ally did not direct outreach to new customers; he said he contacted existing customers who previously may not have had the money for projects to let them know about the bid and funding opportunity. He acknowledged that his company "didn't change anything drastically—just looked a little bit harder for savings when customers called."
- Another Trade Ally said he did not inform customers that his company had won a Program award, but he used the award to waive a portion of the Small Business Program co-pay to encourage otherwise reluctant customers to install energy efficiency equipment. As a result of the increased business, he said his company was able to employ two additional fulltime equipment installers for the year. Although he did not always pass on his award to customers, he said he promoted energy efficiency projects and Focus on Energy in the WPS territory more because of the Program. He estimated that his sales for the year had increased by 30%, adding that because of the Program he "made more money last year than ever made before [and] did more energy-saving projects than ever before."

Trade Ally Satisfaction

The Evaluation Team asked Trade Allies to rate their satisfaction with the Program. As Figure 33 shows, the Trade Allies' satisfaction ratings were distributed across the range of options, with two indicating they were "very satisfied."

Figure 33. Trade Ally Bonus Bid Program Satisfaction Ratings



Source: Trade Ally interview Guide Q14: “Overall, how satisfied were you with your experience with the Trade Ally Bonus Bid Program? Would you say...” (n=5)

Trade Allies who were “very satisfied” or “somewhat satisfied” with the Program said they appreciated the direct communication with Focus on Energy and liked the simplified application paperwork compared to other Focus on Energy programs.

- A few Trade Allies said they liked having a single point of contact for questions regarding the Program. They also liked the monthly tracking report and progress update, which kept them informed of their progress and application status. As one Trade Ally commented, “[There was] no 1-800 number. I liked that. I liked having a single person I could call who knew a lot.”
- A few Trade Allies also commented that they appreciated the simplified paperwork over the application forms for other Focus on Energy programs. When describing the application forms, one Trade Ally remarked that the paperwork was “a piece of cake....even I could do it! I don’t even know how to change copier paper. That’s how easy [it was to complete paperwork].”

The two Trade Allies who were “not too satisfied” or “not at all satisfied” with their experience with the Program described issues with finding eligible customers to complete projects:

- One Trade Ally explained that most of his customers were large industrial customers and therefore were not eligible for the Program. This Trade Ally initially thought more of his customers would be eligible, but he discovered after accepting the award that most were not.
- Another Trade Ally said that many of his customers had natural gas and thus were not eligible for the Program. He said there may have been a few customers with small projects that were eligible. However, he thought the incentive would not have made a difference to his customers and was too low to justify the hassle of participating and filling out paperwork. He did not think

this program was appropriate for business and commented, “that we had \$100,000 to sell and we couldn’t sell it has to be telling you something...obviously we weren’t the right fit for it.”

- Both Trade Allies said that although they may have had otherwise eligible customers, most of these customers were not located in the WPS territory. One Trade Ally suggested that Focus on Energy should have provided a list of eligible customers to winning Trade Allies to make it easier for them to identify customers.

Outcomes

Outcome 1. Implementing a reverse auction may require a higher level of direct communication with Trade Allies due to its complexity.

Although the Program Administrator/Implementer e-mailed Trade Allies to inform them of the Program, follow-up phone calls were required to spur Trade Allies’ interest in participating in the auction. A few Trade Allies said they were initially confused about how the auction and bidding process worked, but after additional explanation from the Program Administrator/Implementer and a trial run of the online reverse auction, the process was easier to understand.

A few Trade Allies also had difficulty determining customer eligibility and finding eligible customers to complete projects. These Trade Allies said they did not realize before accepting their awards that many of their customers—industrial and natural gas customers—would be ineligible.

Outcome 2. Energy-savings targets may have been unreasonably large in the timeframe allotted for Trade Allies to complete projects.

No Trade Allies achieved their initial energy-savings targets. They explained that it was difficult to find customers and complete projects to reach target energy savings within a year. Both Trade Allies and Program Administrator/Implementer staff suggested that if Focus on Energy were to offer an auction again, it should offer smaller awards to more Trade Allies. Trade Allies and Program Administrator/Implementer staff also suggested that the Program allow more time for Trade Allies to complete projects.

Outcome 3. The Program Administrator/Implementer did not make Trade Allies accountable for providing realistic bids and completing projects, which may have contributed to Trade Allies not achieving target energy-savings reductions.

The Program Administrator/Implementer did not penalize Trade Allies for not reaching target energy savings. Even though some Trade Allies knew the incentive bids were too low to realistically complete projects, they continued to make low bids because of the preparation time they had already committed.

Outcome 4. Trade Allies appreciated having a single point of contact who provided additional support and communication about the Program.

The Program Administrator/Implementer explained that it had dedicated staff to the Program for Trade Ally coordination. Trade Allies who were satisfied with the Program appreciated the additional communication from Program representatives. Specifically, they liked the monthly progress reports and having a single point of contact for questions regarding the Program.

Appendix A. Net-to-Gross Ratios by Measure and Measure Group

Table A-1 lists net-to-gross (NTG) ratios by measure for each residential segment program and Table A-2 lists NTG ratios by measure group for each nonresidential segment program. Wherever data were available from Territory-Wide program surveys, the Evaluation Team calculated NTG using self-report freeridership and spillover savings estimates. In all other cases, the Evaluation Team applied NTG ratios, weighted by CY 2013 MMBtu savings, calculated during the evaluation of Focus on Energy's statewide programs. All measures in the Assisted Home Performance (AHP) program, which serves low income customers, have a deemed NTG ratio of 1.00.

Table A-1. Residential Segment NTG Ratios by Program and Measure

Program	Measure	NTG Ratio	Source
HP	Air Sealing, Project Based	1.00	Statewide Evaluation
	CFL, Non PI Direct Install, 14 Watt	1.00	Statewide Evaluation
	CFL, Non PI Direct Install, 19 Watt	1.00	Statewide Evaluation
	CFL, Non PI Direct Install, 23 Watt	1.00	Statewide Evaluation
	CFL, Non PI Direct Install, 9 Watt	1.00	Statewide Evaluation
	Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	1.00	Statewide Evaluation
	Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	1.00	Statewide Evaluation
	Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	1.00	Statewide Evaluation
	Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	1.00	Statewide Evaluation
	Insulation, Non PI Direct Install, 6' pipe, NG	0.96	Survey
	Insulation, Project Based, Attic,	0.96	Survey
	Insulation, Project Based, Foundation,	0.96	Survey
	Insulation, Project Based, Sillbox	0.96	Survey
	Insulation, Project Based, Wall,	0.96	Survey
	Project Completion	0.96	Statewide Evaluation
	Showerhead, Non PI Direct Install, 1.5 gpm, Electric	1.00	Statewide Evaluation
	Showerhead, Non PI Direct Install, 1.5 gpm, NG	1.00	Statewide Evaluation
AHP	Adjustment Measure	1.00	Deemed
	Air Sealing, Project Based	1.00	Deemed
	CFL, Non PI Direct Install, 14 Watt	1.00	Deemed
	CFL, Non PI Direct Install, 19 Watt	1.00	Deemed
	CFL, Non PI Direct Install, 23 Watt	1.00	Deemed
	CFL, Non PI Direct Install, 9 Watt	1.00	Deemed
	Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, Electric	1.00	Deemed
	Faucet Aerator, Non PI Direct Install, 1.5 gpm, Kitchen, NG	1.00	Deemed
	Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, Electric	1.00	Deemed

Program	Measure	NTG Ratio	Source
	Faucet Aerator, Non PI Direct Install, 1.0 gpm, Bathroom, NG	1.00	Deemed
	Insulation, Non PI Direct Install, 6' pipe, NG	1.00	Deemed
	Insulation, Project Based, Attic	1.00	Deemed
	Insulation, Project Based, Wall	1.00	Deemed
	Project Completion	1.00	Deemed
	Showerhead, Non PI Direct Install, 1.5 gpm, Electric	1.00	Deemed
	Showerhead, Non PI Direct Install, 1.5 gpm, NG	1.00	Deemed
EBB	Adjustment Measure	0.62	Statewide Evaluation
	Boiler, >= 90% AFUE, NG	0.62	Statewide Evaluation
	Boiler, Hot Water, Modulating, >=90% AFUE, 6300 MBH	1.00	Statewide Evaluation
	CFL, Direct Install, 13 Watt	1.00	Statewide Evaluation
	CFL, Direct Install, 14 Watt	1.00	Statewide Evaluation
	Clothes Washer, Common Area, NG, ENERGY STAR	0.62	Statewide Evaluation
	DHW Plant Replacement	0.62	Statewide Evaluation
	Dishwasher, Electric, ENERGY STAR	0.62	Statewide Evaluation
	Faucet Aerator, Direct Install, 1.5 gpm, Bathroom, Electric	1.00	Statewide Evaluation
	Faucet Aerator, Direct Install, 1.5 gpm, Kitchen, Electric	1.00	Statewide Evaluation
	Insulation, Direct Install, 3' Pipe, Electric	1.00	Statewide Evaluation
	LED Fixture, Replacing 70-100 Watt HID, Exterior	0.62	Statewide Evaluation
	LED, Exit Sign, Retrofit	0.62	Statewide Evaluation
	Refrigerator, ENERGY STAR	1.00	Statewide Evaluation
	Showerhead, Direct Install, 1.5 gpm, Electric	1.00	Statewide Evaluation
	Water Heater, >= 0.67 EF, Storage, NG	0.62	Statewide Evaluation
	Water Heater, Not Otherwise Specified	0.62	Statewide Evaluation
TABB	Solar Photovoltaic (PV)	0.56	Statewide Evaluation
	T8 4L 4', HPT8 or RWT8, Replacing T12HO 2L 8', BF <= 0.78, Parking Garage	1.00	Statewide Evaluation

Table A-2. Nonresidential Segment NTG Ratios by Program and Measure Group

Program	Measure Group	NTG Ratio	Source
NEBB	Agriculture	0.77	Survey
	Boilers & Burners	0.64	Statewide Evaluation
	Building Shell	0.77	Survey
	Compressed Air, Vacuum Pumps	0.77	Survey
	Domestic Hot Water	0.55	Survey
	Food Service	0.51	Survey
	HVAC	0.62	Survey
	Lighting	0.33	Statewide Evaluation
	Other	0.77	Survey
	Process	0.77	Survey
	Refrigeration	0.77	Survey
	Renewable Energy	1.04	Statewide Evaluation
	Vending & Plug Loads	0.77	Survey
NTABB	Compressed Air, Vacuum Pumps	0.62	Statewide Evaluation
	Domestic Hot Water	0.85	Statewide Evaluation
	Lighting	0.72	Statewide Evaluation
	Other	1.00	Statewide Evaluation
	Refrigeration	0.85	Statewide Evaluation
	Renewable Energy	1.04	Statewide Evaluation
	Vending & Plug Loads	0.85	Statewide Evaluation
S&G	Agriculture	0.80	Survey
	Boilers & Burners	0.64	Statewide Evaluation
	Building Shell	0.80	Survey
	Domestic Hot Water	0.80	Survey
	Food Service	0.80	Survey
	HVAC	0.80	Survey
	Laundry	0.80	Survey
	Lighting	0.34	Statewide Evaluation
	Motors & Drives	0.80	Survey
	Other	0.80	Survey
	Pools	0.80	Survey
	Process	0.80	Survey
	Refrigeration	0.80	Survey
	Vending & Plug Loads	0.80	Survey
	Waste Water Treatment	0.80	Survey

Program	Measure Group	NTG Ratio	Source
SBPP	Domestic Hot Water	0.85	Statewide Evaluation
	Lighting	0.85	Statewide Evaluation
	Refrigeration	0.85	Statewide Evaluation
	Vending & Plug Loads	0.85	Statewide Evaluation
SF	Agriculture	0.81	Survey
	Boilers & Burners	0.64	Statewide Evaluation
	Domestic Hot Water	0.81	Survey
	HVAC	0.81	Survey
	Lighting	0.30	Statewide Evaluation

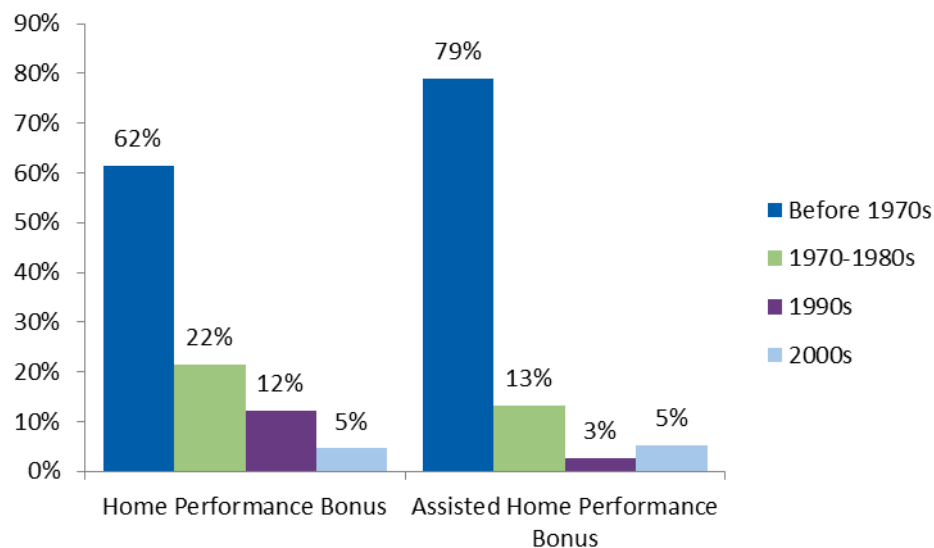
Appendix B: Customer Survey Demographics

Residential Participant Customer Demographics

Some participant characteristics varied and some were similar between the Home Performance Bonus and Assisted Home Performance Bonus. For example, the majority of participants in both programs owned their own homes and lived in homes built before 1970. Energy-efficiency programs that offer incentives for weatherization retrofits often target older homes, and homeownership is typically expected among participants.

As shown in Figure B-1, the most common home vintage for both programs was “before 1970s.” More Assisted Home Performance Bonus participants lived in pre-1970 homes than Home Performance Bonus participants. More Home Performance Bonus participants lived in 1970s-1990s homes than Assisted Home Performance Bonus participants.

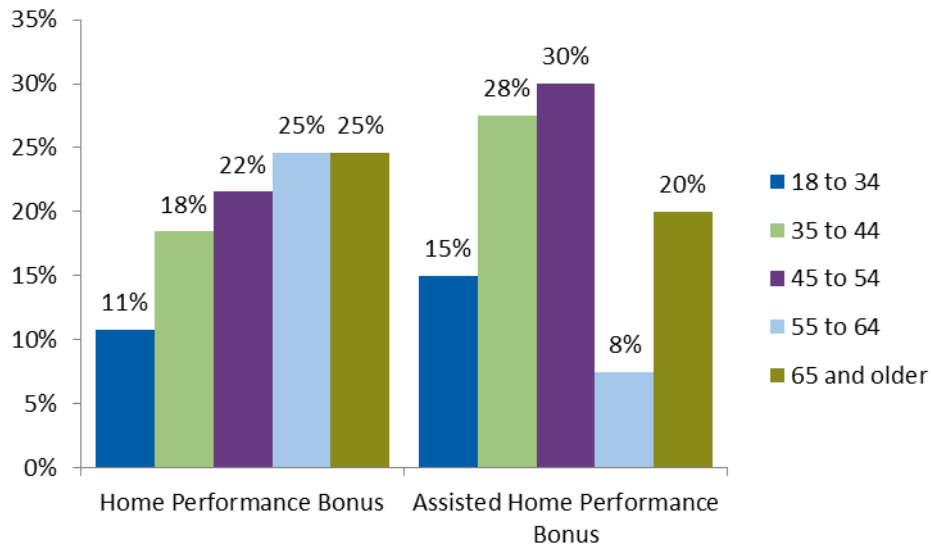
Figure B-1. Participant Home Vintage by Program



Source: Home Performance Bonus and Assisted Home Performance Bonus Participating Customer Survey, J8: “About when was your home first built?”
(Home Performance Bonus n=65; Assisted Home Performance Bonus n=38)

As shown in Figure B-2, the ages of participants of both residential programs varied with no age category exceeding 30%. Although the sample size was too small to be statistically representative, 50% of Home Performance Bonus participants were age 54 and younger compared to 73% of Assisted Home Performance Bonus participants. This indicates that the target audience for the Assisted Home Performance Bonus may be younger than the audience for the Home Performance Bonus.

Figure B-2. Participant Age by Program

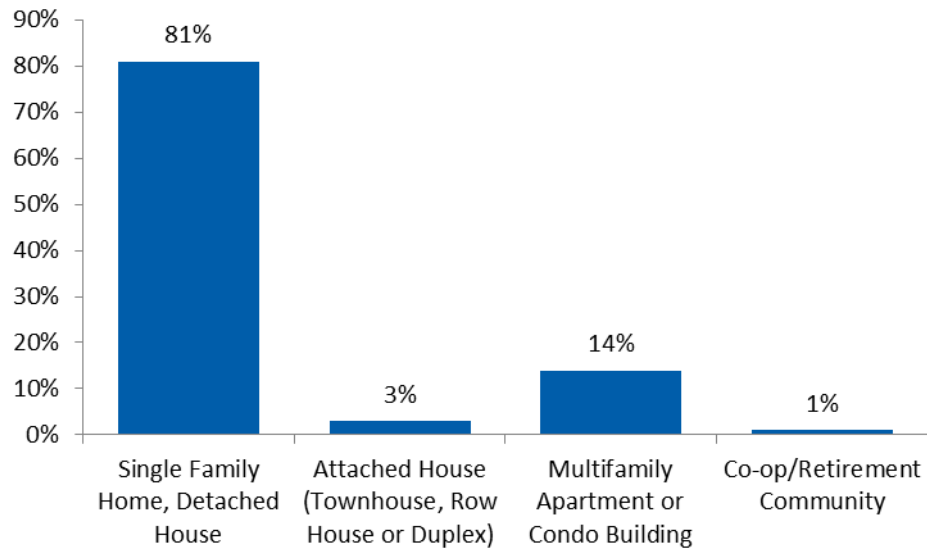


Source: Home Performance Bonus and Assisted Home Performance Bonus Participating Customer Survey, J14: “Which of the following categories best represents your age?”
(Home Performance Bonus n=65; Assisted Home Performance Bonus n=40)

Residential Nonparticipant Customer Survey Demographics

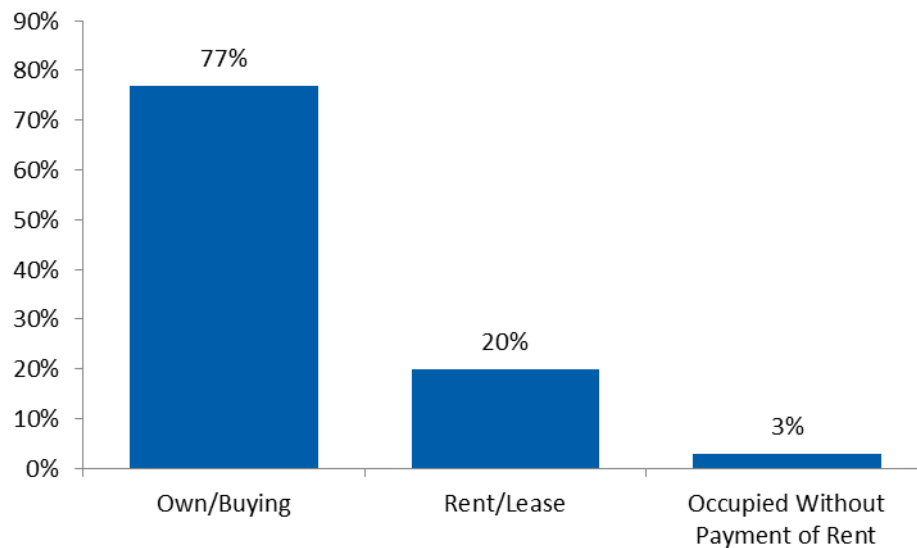
While nonparticipant characteristics were somewhat varied, there were some common traits shared by a majority of nonparticipants. As Figure B-3 and Figure B-4 show, a majority of nonparticipants lived in single family homes (81%, or 57 out of 70) and own or are buying their homes (77%, or 53 out of 69).

Figure B-3. Nonparticipant Housing Type



Source: Nonparticipant Customer Survey, E1: “What type of home do you live in?” (n=70)

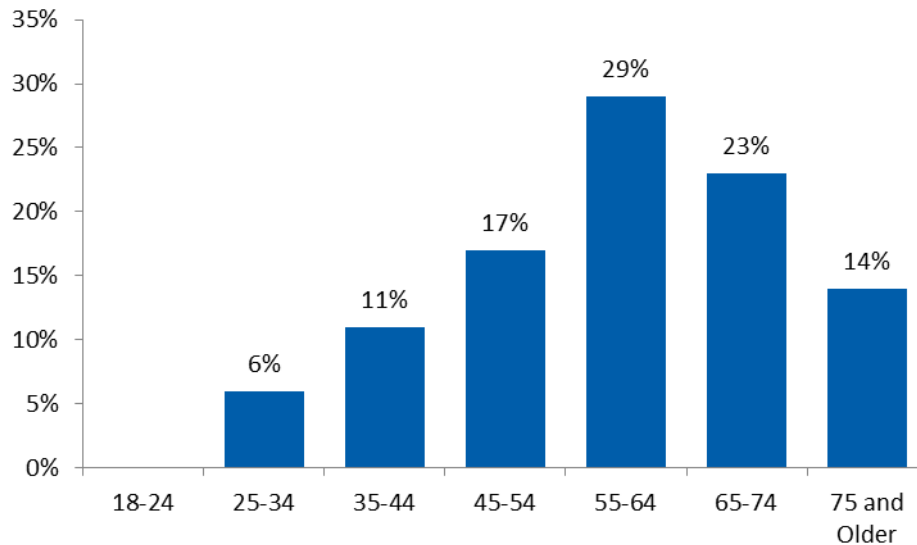
Figure B-4. Nonparticipant Home Ownership



Source: Nonparticipant Customer Survey, E2: “Do you or members of your household own this home or do you rent?” (n=69)

As Figure B-5 demonstrates, the majority of nonparticipants (66%, or 46 out of 70) were age 55 and older.

Figure B-5. Nonparticipant Age



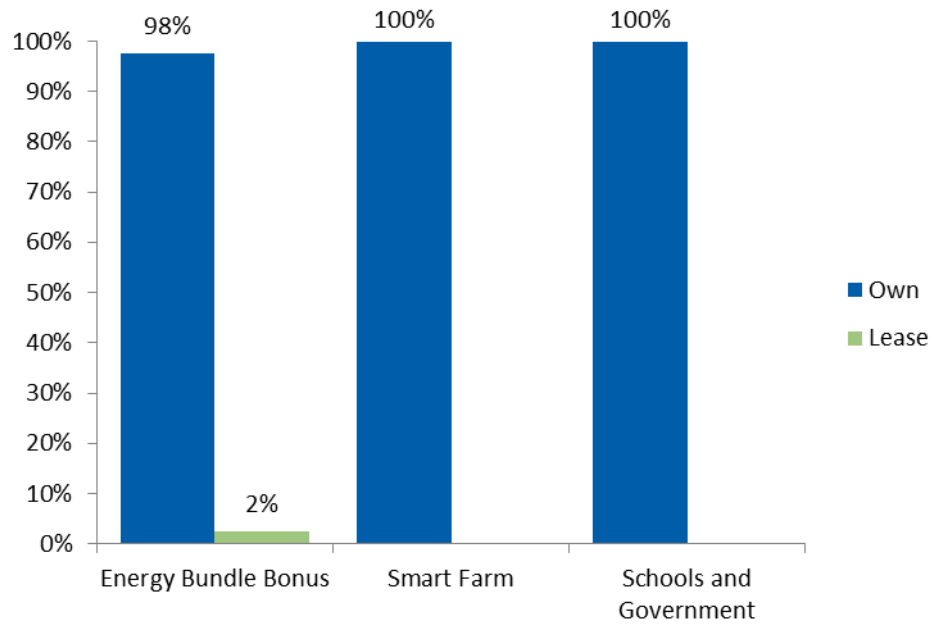
Source: Nonparticipant Customer Survey, E5: “Which of the following categories best describes your age?” (n=70)

Nonresidential Participant Customer Demographics

Nonresidential respondents represented many industry sectors, but most were from either the agricultural (47%) or schools and government (46%) sectors. Six percent represented the commercial sector, and 1% represented the industrial sector.

Almost all nonresidential respondents owned rather than leased their facilities. As Figure B-6 shows, all of the Smart Farms and Schools and Government programs owned their facilities. Only one Energy Bundle Bonus respondent leased their facilities.

Figure B-6. Owned Versus Leased Space in Nonresidential Programs



Source: Territory-Wide Nonresidential Participant Customer Surveys “Does your organization lease or own the facility?” (Energy Bundle Bonus n=41; Smart Farms n=44; Schools and Government n=38)

Appendix C: Survey Instruments

This appendix is provided separately from this document. The separate appendix includes the following residential and nonresidential segment surveys:

Residential Sector

- Home Performance with ENERGY STAR Bonus and Assisted Home Performance with ENERGY STAR Bonus
- Nonparticipant Customer Survey

Nonresidential Sector

- Energy Bundle Bonus
- Smart Farms Program
- Schools and Government Program

Each survey in this appendix includes:

- Table outlining the researchable questions the survey investigates
- Sample of the script surveyors used to interview participants

Special text indicates the following throughout all of the survey scripts:

- Green text: Interviewer instructions
- Red text: CATI programming instructions