



State of Wisconsin Public Service Commission of Wisconsin

Focus on Energy Evaluation

*WPS Territory-wide
Efficient Heating Bonus Program*

December 17, 2010

Evaluation Contractor: Tetra Tech

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Tetra Tech



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1. EXECUTIVE SUMMARY

1.1 OVERVIEW

The residential WPS Territory-wide Heating Equipment Bonus program is an enhancement to the Focus Efficient Heating & Cooling (EHC) program. The goal of the Heating Equipment Bonus program is to increase the market share of high efficiency furnaces with ECMs and modulating boilers within the WPS service territory by offering an additional bonus to customers in the WPS territory to install the program-qualifying equipment. This objective is addressed by assessing the program's influence on contractors and customers, determining how the program has affected contractors' business practices, and understanding customers' decision-making processes.

This report documents the results of the Track 2 and 3 program evaluation, which focused on data collection and process evaluation for this program. Two primary data collection activities were conducted as part of this evaluation: 26 in-depth interviews with participating contractors and 282 surveys with program participants. The participant and contractor sample were stratified, at minimum, by territories (WPS and non-WPS territories).

The results presented within this report are based on self-report data. The preliminary Track 1 memorandum¹ provided program analysis using market-based data (specifically, the Furnace and Air Conditioning Tracking (FACTS) data provided by the Energy Center of Wisconsin) as well as program participation data. Findings from this memorandum are incorporated within this report where applicable. The Track 1 analysis will be updated with more recent FACTS and participation data in December 2010.

1.2 KEY FINDINGS

This section documents the key findings presented within the report.

- The WPS Heating Equipment Bonus program has exceeded its participation goals. A comparison of the WPS and Focus rates indicates that the program itself may not be responsible for the high participation rate for ECM furnaces; however, the WPS territory has outperformed Focus in terms of the therms goals, which may be a result of increased boiler sales in that territory that could be attributed to the program.
- Contractors working in the WPS territory believe the additional WPS incentive positively impacted their ability to sell high efficiency furnaces with ECMs. They would like to see the WPS Bonus program be offered statewide. However, the participant surveys tell an opposite story. WPS customers said the program is less influential on their decision-making processes in that the WPS bonus was not the most influential factor in purchasing the equipment.
- While monetary rebates are important to selling high efficiency equipment, contractors believe the federal tax credit is the most important factor driving sales. Contractors are unsure of how their sales of high-efficiency furnaces and boilers will be affected when the tax credit is no longer available. Participants' rating of the level

¹ Carrie Koenig and Laura Schauer, Tetra Tech. *Heating Equipment Bonus Program Track 1 Preliminary Analysis Results*. October 13, 2010.



of influence the federal tax credit had on their decision-making processes contradicted contractors' perspectives. They rated the tax credit as being only slightly more influential than the Focus rebate and, if applicable, the WPS bonus.

- Not surprisingly, the financial offerings are increasingly more influential in participants' purchasing decisions when they build upon each other. The more financial incentives that are provided, the greater the influence.
- Overall, the contractors were significantly more influential in participants' purchasing decisions than were the financial benefits. WPS customers are less likely to rate their contractor as being influential than are customers outside of the WPS territory.
- Program-qualifying modulating boilers continue to face initial cost barriers; it is more expensive equipment that continues to remain out of reach even with the additional WPS bonus and the federal tax credit.
- While not strictly a WPS Territory-wide program issue, it is worthwhile to note that contractors commented on their need for the program to advertise more to the customer population. Having literature to provide to customers is essential for sales. This was also something mentioned by customers as they were not aware of the program until it was mentioned to them by the contractor. We should note that outreach was scaled back in 2010 due budget issues. The program also provided cooperative advertising funds so that contractors could increase their advertising of the program. Only two contractors took advantage of this offer.

1.3 RECOMMENDATIONS

- **Continue offering the additional bonus for modulating boilers.** One of the objectives of the program is to increase the sales of furnaces with ECM motors and modulating boilers. Based on the FACTS data and the participant responses, the bonus appears to be most effective as a motivator for boiler customers to install program-qualifying equipment.
- **Reassess the offerings for ECM furnaces after the updated Track 1 analysis, if the program were to continue.** While the bonus appears to be assisting boiler customers, the participant data indicates the bonus may not be the determining factor in purchasing decisions. However, the additional federal funding available makes it difficult to fully understand the true influence of the additional WPS bonus. If the program continues, the Track 1 report will be updated later this year, which may provide additional insight as to whether the bonus is indeed influencing the purchasing of ECM furnaces.
- **Take into account the discontinuation of the tax credit in future program planning.** The report discusses the difficulty of assessing the effectiveness of the increased bonus with the offering of the federal tax credit (ending this year). Contractors question what will happen with the HVAC market when the tax credit discontinues. Future program planning efforts should assume that the removal of the tax credit will downshift the market to some extent, which should be considered in program design efforts.
- **Consider offering additional program and advertising material to contractors.** As designed, the program is using the contractors as the means of promoting the program. If this continues, it will be essential that contractors obtain material they can



provide to customers that provides information about the program, the benefits of efficient equipment, and the breakdown of the equipment that qualifies.

- **Maintain communication with contractors regarding program changes.** Contractors indicate the program is continually changing. Therefore, making sure contractors have up-to-date material, understand what forms need to be completed and are aware of any program changes will only ensure the program's success.
- **Continue outreach to new contractors.** In addition to supporting existing contractors, getting additional contractors involved in the program is important. Additional contractors will enhance the awareness and support of the program as well as increase participation in the program. As more contractors are added to the program, more customers are reached.



2. INTRODUCTION

This report presents the results of the Track 2 and Track 3 evaluation efforts for the WPS Territory-wide Heating Equipment Bonus program. The analysis is based on results from in-depth interviews with HVAC contractors and surveys with program participants in 2010.

The primary objective of this evaluation effort is to understand to what level, if at all, the additional bonus offered through the Heating Equipment Bonus program influenced the sales of high efficiency furnaces with electronically commutated motors (ECMs) and boilers in the WPS territory. This objective is addressed by assessing the program's influence on contractors and customers, determining how the program has affected contractors' business practices, and understanding customers' decision-making processes.

The remainder of this section provides a background of the program and the methodology employed for the evaluation. This section is followed by a review of the key findings and recommendations.

2.1 BACKGROUND

The residential Heating Equipment Bonus program is an enhancement to the Focus Efficient Heating & Cooling (EHC) program. The goal of the Heating Equipment Bonus program is to increase the market share of high efficiency furnaces with ECMs and modulating boilers within the WPS service territory.

According to program documentation, hypothesized barriers to the sale of high efficiency furnace and boiler equipment are the incremental cost (assessed at \$700 for ECM furnaces and \$1,000 for boilers) and lack of contractor awareness and/or understanding about the technology or Focus on Energy's programs.² To overcome these market barriers, the program provides a heating equipment bonus to participating households in addition to the cash-back reward provided by Focus on Energy. The bonus is provided to offset a greater portion of the incremental cost than that provided through Focus on Energy. Table 2-1 details the equipment, equipment requirements, and reward amounts promoted through the programs.

² Wisconsin Public Service. *Community Based Pilot Plan*. July 1, 2009.



Table 2-1. WPS Heating Equipment Bonus Program Offerings

Equipment	Requirements	Focus on Energy Cash-back Reward	WPS Heating Equipment Bonus	Total Reward
Gas furnace	<ul style="list-style-type: none"> • 90% AFUE or greater • Variable-speed motor/ECM • Multiple stages of firing • Purchase electricity from WPS 	\$150	\$250	\$400
Natural gas hot water boiler	<ul style="list-style-type: none"> • 90% AFUE or greater • Modulating burner • Outdoor-air reset control • Purchase natural gas from WPS 	\$400	\$200	\$600

Source: http://www.focusonenergy.com/Incentives/Residential/Cash-Back_Rewards/Efficient_Heating_Cooling/Default.aspx.

In 2010, customers were also eligible to receive an additional \$200 from the State Energy Efficient Appliance Rebate Program (SEEARP) for both the high efficiency ECM furnaces and the high efficiency boilers. The SEEARP program was closed on May 6, 2010, as funds were expended.

The Heating Equipment Bonus program provides outreach to participating contractors and distributors through marketing materials and in-person outreach from Focus on Energy staff. The program also provides participating contractors with cooperative advertising funds. These funds are to be used to promote the program and advertise the incentives.

2.2 METHODOLOGY

This section documents the study methodology. Embedded in the discussion are the researchable issues addressed by each activity.

Note that the activities detailed and analyzed within this report are based on self-report data. A market-based assessment can also be completed using the Furnace and Air Conditioning Tracking (FACTS) data provided by the Energy Center of Wisconsin and the program database. This market-based assessment was completed as part of the Track 1 activities and reported in October 2010³. Where applicable, the results from the market assessment are included within this report; however, the Track 2 and 3 activities are primarily process evaluation driven and based on self-report data.

2.2.1 Contractor interviews

The WPS Heating Equipment Bonus program is primarily a supply-side driven program. As a result, the evaluation first focused on contractors' experiences with the program and their perceptions of the impact the additional incentive had on their sales practices. The evaluation plan called for 10–20 qualitative surveys with participating HVAC contractors. A total of 26

³ Carrie Koenig and Laura Schauer, Tetra Tech. *Heating Equipment Bonus Program Track 1 Preliminary Analysis Results*. October 13, 2010.



contractor interviews were actually completed. The number of interviews is higher than stated in the evaluation plan as additional interviews were needed to probe deeper into issues identified through initial interviews.

The evaluation team developed the interview guide around the following researchable issues. These issues were defined based on interviews with program staff and a review of program documentation.

- Effectiveness of outreach efforts to contractors and their use of program materials
- Issues with eligibility requirements
- Contractors' perceptions of effective components of the program and the steps taken to raise awareness of the program
- Contractor's perceptions of how different funding sources affected program participation
- Barriers to greater success of the program
- Dynamics in the marketplace (including Focus interventions) affecting the recent increases in the market share of ECMs.

A. *SAMPLING STRATEGY*

Each record in the program tracking database lists the contractor who installed the equipment. We aggregated contractors from the participant database and selected contractors who installed a furnace or boiler measure through the EHC program. The database also includes a utility flag that indicates where the customer receives their utility service. We used this flag to categorize whether the contractor serves WPS, non-WPS, or both WPS and non-WPS customers.

The sample was stratified by territory and equipment type rebated (furnace and boiler equipment). The territories are categorized below.

- **Contractors working in the WPS territory only.** These participating contractors serve only customers in the WPS territory. Talking with these contractors allowed us to understand how the additional bonus affects their ability to sell the high-efficient ECM furnaces and modulating boilers.
- **Contractors working in the non-WPS territory only.** These participating contractors work only in areas other than the WPS territory. Interviewing these contractors allowed us to evaluate the experiences of contractors that cannot offer the additional bonus and qualitatively assess the relative importance of the WPS bonus.
- **Contractors working in both the WPS and non-WPS territories.** This group was perhaps the most useful to speak with as they were able to discuss their experiences with the program (and additional rebate levels) when selling equipment to WPS customers compared with non-WPS customers.

We randomly selected contractors from the program database and reviewed the distribution to ensure that the sample was representative of contractors with various levels of activity in this WPS EHC program. The sample consists of contractors that served a high number of



projects (greater than 20), a medium number of projects (five to 20), and a low number of projects (fewer than five).

This sampling plan deviates slightly from the evaluation plan as the plan called for a split between historic versus new contractors. The modified sampling approach was more in line with the researchable issues.

B. SUMMARY OF CONTRACTORS INTERVIEWED

Table 2-2 provides a summary of the contractors interviewed as part of this evaluation effort. The majority of contractors we spoke with operate in both WPS and non-WPS territories (13). There was value in speaking with those that operate in both territories as it provided an opportunity to ask them to compare their experiences with both levels of incentive offerings.

Few WPS-only contractors were interviewed; however, the majority of the program population consisted of non-WPS only, or WPS and non-WPS contractors.

Table 2-2. Breakdown of Contractors in Population and Interviewed

Territory	Total in Population	Total Surveyed	Projects		
			<5	5–20	>20
WPS only	47	2	2	-	-
Non-WPS only	656	11	6	3	2
WPS and non-WPS	415	13	3	2	8

The interviews are weighted more heavily toward contractors' sales of high-efficiency furnaces with ECMs than boilers. As Table 2-3 shows, we spoke with 25 contractors regarding their furnaces and 12 regarding boilers. Recognizing the low representation of contractors' experiences with boilers, the final six interviews attempted to reach contractors that sold boilers.

Table 2-3. Breakdown of Contractors Interviewed by Measure

Territory	Total	Furnaces Only	Boilers Only	Both Furnaces and Boilers
WPS only	2	1	1	0
Non-WPS only	11	8	0	3
WPS and non-WPS	13	5	0	8

2.2.2 Participant survey

To assess customers' experiences with the program and identify the influence of the additional incentive on customers' decisions, the evaluation plan proposed interviews with 140 program participants. We increased the completion target to 280 to incorporate an additional stratification, as discussed below. The objectives of participant research were to address the following researchable issues:

- Customer motivations for participating in the program including what affect, if any, available rebates had on their decision to purchase the program eligible equipment



- Satisfaction with customers' experience with the program and interaction with contractors
- Difference in participation levels and/or market share between the WPS and non-WPS territories
- Effectiveness of the incentive levels and impact of the additional WPS bonus funds compared to the Focus incentive level to encourage customers to purchase high-efficiency equipment
- Level of contractor's influence on customers' decision to install high-efficiency equipment

A. *SAMPLING STRATEGY*

The participant sample was obtained from WECC's tracking database of participants in the EHC program. Participants that received a furnace or boiler from January 1, 2010, through August 30, 2010, were included in the sampled population.

We randomly sampled program participants within four stratifications. These stratification, listed below, account for territory (WPS versus non-WPS territory) and measure type (ECM furnace and boiler).

1. Customers that installed a furnace located in the non-WPS territory
2. Customers that installed a furnace located in the WPS territory
3. Customers that installed a boiler located in the non-WPS territory
4. Customers that installed a boiler located in the WPS territory.

The DEP only included the territory stratification; however, we incorporated into the final research plan the measure type stratification. This stratification was added as the bonus values and incremental costs vary by ECM furnaces and boilers. Therefore, we believed it would be beneficial to estimate participant experiences and decision-making processes by measure type.

There were a handful of participants where the program database indicated that they received both a furnace and a boiler; 24 out of 17,102 participants, accounting for less than one percent of the population. We excluded these customers that indicated they received a furnace and a boiler from the eligible sample. The survey focused on one measure, and there was concern that these customers' responses may have been systematically different from the responses of other participants.

One complicating factor in the evaluation's ability to assess the relative impact of the WPS bonus was the SEEARP incentive offered to customers in 2010. Although both the general Focus and WPS territories received the SEEARP incentive, the inclusion of the funds makes it difficult to tease out the specific financial impact the WPS bonus had on customers' decisions. The SEEARP incentive was offered at the same time the additional WPS bonus was offered. Additionally, it was only available for a limited time, which may have encouraged customers to purchase equipment more-so than the WPS bonus. Therefore, it was important to attempt to identify the impact of the SEEARP incentives in addition to the WPS funded



bonus and standard Focus incentive. SEEARP recipients were flagged and used for additional analysis.

We spoke with 282 participants that participated in the program in 2010. These surveys were completed between October 4, 2010, and October 16, 2010, achieving an overall response rate of 66 percent. The response rate, broken out by strata, can be found in Appendix A.

Table 2-4. Breakdown of Program Participants Interviewed

Measure	Non-WPS Territory	WPS Territory	Total
Furnace	72	70	142
Boiler	75	65	140
Total	147	135	282

Because the groups were not sampled in equal proportion, we weighted the results by stratification. Weights were derived by dividing the population totals by the number of completed surveys by the four stratification groups (WPS furnace customers, non-WPS furnace customers, WPS boiler customers, and non-WPS boiler customers). Analyses throughout the report represent weighted data.

The final versions of the data collection documents are included as appendices to this report.



3. PROCESS EVALUATION FINDINGS

This section highlights the key findings resulting from the process evaluation efforts with contractors and participants. We should note that the contractor research relied on self-report, not market-based data. Additionally, the contractor research is qualitative, not quantitative, in nature. Therefore, it is not possible to make any statistical conclusions regarding the effectiveness of additional heating equipment bonus provided through the WPS Territory-wide Initiative based on the contractor interviews.

This section first summarizes the key findings, followed by a description of the influence of the bonus and other funding sources had on the sales and the decision-making process, contractor experiences with the program, satisfaction with the program and opportunities for improvement, and market share of ECM furnaces.

3.1 KEY FINDINGS

The key findings from the contractor interviews and participant surveys are as follows:

- The WPS Heating Equipment Bonus program has exceeded its participation goals. A comparison of the WPS and Focus rates indicates that the program itself may not be responsible for the high participation rate for ECM furnaces; however, the WPS territory has outperformed Focus in terms of the therms goals, which may be a result of increased boiler sales in that territory that could be attributed to the program.
- Contractors working in the WPS territory believe the additional WPS incentive positively impacted their ability to sell high efficiency furnaces with ECMs. They would like to see the WPS Bonus program be offered statewide.
- However, the participant surveys tell an opposite story. WPS customers said the program is less influential on their decision-making processes in that the WPS bonus was not the most influential factor in purchasing the equipment.
- While monetary rebates are important to selling high efficiency equipment, contractors believe the federal tax credit is the most important factor driving sales. Contractors are unsure of how their sales of high-efficiency furnaces and boilers will be affected when the tax credit is no longer available. Again, participants' rating of the level of influence the federal tax credit had on their decision-making processes contradicted contractors' perspectives.
- Not surprisingly, the financial offerings are increasingly more influential in participants' purchasing decisions when they build upon each other. The more financial incentives that are provided, the greater the influence.
- Overall, the contractors were significantly more influential in participants' purchasing decisions than were the financial benefits. WPS customers are less likely to rate their contractor as being influential than are customers outside of the WPS territory.
- Program-qualifying modulating boilers continue to face initial cost barriers; it is more expensive equipment that continues to remain out of reach even with the additional WPS bonus and the federal tax credit.
- While not strictly a WPS Territory-wide program issue, it is worthwhile to note that contractors commented on their need for the program to advertise more to the



customer population. Having literature to provide to customers is essential for sales. This was also something mentioned by customers as they were not aware of the program until it was mentioned to them by the contractor. We should note that outreach was scaled back in 2010 due budget issues. Additionally, although the program provided cooperative advertising, only two contractors took advantage of this opportunity.

3.2 INFLUENCE OF THE HEATING EQUIPMENT BONUS ON SALES AND PURCHASING DECISIONS

The WPS Heating Equipment Bonus has been very successful in terms of meeting net savings goals. While the programs' kWh and kW progress is in line with the Focus territory, the WPS Heating Equipment program surpassed the Focus program in its therms goals.

The Heating Equipment Bonus program is one of the most successful programs in the WPS Territory-wide portfolio of programs when reviewing its achievement of savings against its goals. As of the October 2010 monthly report distributed by WECC, the program reached 117 percent of its kW, 113 percent of its kWh, and 314 percent of its net therms goals⁴.

This progress is not unique to the WPS territory; the Focus EHC program also exceeded its goals. As of the October 2010 monthly report, the Focus program reached 135 percent of its kW, 122 percent of its kWh, and 119 percent of its net therms goals. The similarity of each programs' electric achievement may indicate that the relative success of the WPS territory-wide program is related to factors other than the heating equipment bonus (e.g. SEEARP funds and federal tax credit).

However, the WPS Heating Equipment Bonus program has substantially exceeded the Focus territory in terms of percent of net therms impacts achieved (314 percent versus 119 percent, respectively). The primary driver of this increase is most likely the boiler sales rebated through the Heating Equipment Bonus program.

One potential explanation of the significantly higher percentage of net savings achieved in the WPS territory is the goals established for the program. If the established goals were set low, then we would expect to see the program exceed its goals by a higher rate. This does not appear to be the case; in fact, the WPS territory's therms goals were aggressive when compared with the Focus program's kW and kWh goals (Table 3-1).

Table 3-1. Net Target through December 31, 2010

Territory	WPS	Focus	Ratio of WPS to Focus Net Savings Target
kWh	936,155	5,197,476	18%
kW	207	1,473	14%
Therms	145,996	537,393	27%

⁴ Wisconsin Energy Conservation Corporation, *Wisconsin Focus on Energy, Wisconsin Public Service Territory-wide Programs, Monthly Performance Report, September 2010*. October 18, 2010.



The Track 1⁵ memorandum provided some analysis that showed boiler participation rates increased within the WPS territory at a faster rate than the rest of the state. This analysis does provide some indication that the WPS Heating Equipment Bonus program may be influencing the sales of high-efficiency modulating boilers despite barriers related to the higher initial cost of boilers than ECM furnaces.

Customers generally were aware that they were purchasing high-efficiency equipment or equipment with ECM furnaces; however, fewer participants were aware that equipment came in different efficiency levels.

One question that came up when developing the study was whether customers knew that they were purchasing high-efficiency equipment or furnaces with ECM motors. The latter point was particularly relevant as it spoke to their explicit decision to purchase furnaces with ECM motors; with the high-efficiency furnace market transformed, it is the ECM motor that is the key measure promoted through the program.

There is indication that the customers served outside the WPS territory were less educated than WPS customers regarding high-efficiency furnaces. As shown in Table 3-2, 58 percent of customers outside of WPS said they were aware furnaces with ECMs were more efficient prior to the program, compared with 70 percent of participants in the WPS territory. There was no significant difference by territory in the percentage of customers aware that they had actually purchased a furnace with an ECM motor; approximately 85 percent of participants in both territories were aware that their furnace included an ECM motor (Table 3-2).

Table 3-2. Awareness of Efficiency and Purchase of ECM Motor

Territory	Equipment	Aware Purchased a Furnace with an ECM Motor (T1)		Aware ECM Motors is More Efficient Prior to Participation (T2)	
		Percentage	n	Percentage	n
Non-WPS	Furnace	85.9%	n=71	58.0%	n=69
WPS	Furnace	83.8%	n=68	69.6%	n=69

WPS customers who purchased furnaces were slightly more likely to indicate that their contractor provided them with different options during the recommendation process, although the difference is not statistically significant⁶. Seventy-seven percent of WPS customers said their contractor presented them with the option to purchase a furnace with and without an ECM motor, compared with 73 percent of participants outside of the WPS territory. This difference may be driven by the sales behaviors of contractors serving both WPS and non-WPS territories.

Interviewers asked participants why they decided to purchase the high-efficiency equipment rather than less efficient equipment. Verbatim responses were captured and categorized. The primary driver for purchasing the high-efficiency equipment was to save money on their energy bill and/or save energy. Participants outside of the WPS territory were most likely to mention this as a reason (Table 3-3).

⁵ Carrie Koenig and Laura Schauer, Tetra Tech. *Heating Equipment Bonus Program Track 1 Preliminary Analysis Results*. October 13, 2010.

⁶ Significance at the 90 percent confidence interval.



Depending on the territory and equipment type, between a quarter and a third of respondents said that they wanted high efficiency equipment regardless of the program offerings. Additionally, only 15 to 29 percent of customers said they purchased the program-qualifying equipment because the rebate made it more affordable. This latter point was mentioned more frequently by participants receiving furnaces. As we will discuss further below, the rebate is not a primary driver of participants' purchasing decisions. Additionally, boilers are more costly than furnaces and the relative incremental cost covered by the program incentive is lower than for furnaces.

Few respondents said they installed the equipment because it needed to be replaced (or was replaced on failure). This is not indicative that the program promoted early replacement, however, as the question focused on reasons for purchasing program-qualifying equipment, not purchasing equipment in general.

Table 3-3. Reason for Purchasing Program Qualifying Equipment (T3)

	Non-WPS Furnace (n=72)	WPS Furnace (n=70)	Non-WPS Boiler (n=75)	WPS Boiler (n=65)
Save money on energy bill	59.7%	44.3%	53.3%	40.1%
Wanted higher efficiency option regardless	31.9%	25.7%	29.3%	33.8%
Save energy	30.6%	32.8%	42.6%	36.8%
Rebate made affordable	29.2%	21.4%	14.6%	18.4%
Other	9.7%	11.4%	8.0%	9.4%
Contractor encouragement	8.3%	10.0%	8.0%	9.4%
Environmental reasons	6.9%	5.7%	2.6%	9.4%
Most sensible option at the time	6.9%	2.9%	0.0%	1.5%
Wanted an upgrade	4.2%	1.4%	1.3%	1.5%
Equipment needed to be replaced	2.8%	4.3%	0.0%	4.5%
Long-term investment	2.8%	2.9%	1.3%	1.5%
Equipment is more efficient	1.4%	2.9%	1.3%	1.5%

Based on customer survey results, the WPS increased incentive does not appear to be a driving factor to move customers to purchase high-efficiency furnaces. In fact, WPS customers are less likely than customers in the rest of the state to attribute high importance on the total available incentives in their purchasing decisions. This is inconsistent with contractors' perspective, which sees the additional incentive as important in their ability to sell high-efficiency furnaces with ECM motors.

According to the program theory, the increased incentive should drive a higher demand for high-efficiency furnaces with ECMs and modulating boilers. The logic is that the additional bonus increases the proportion of incremental cost related to the high-efficiency equipment, thereby minimizing the first cost barrier.

An analysis of the program database and FACTS data does indicate that the sales of high-efficiency ECM furnaces and boilers have increased and that they have increased to a greater extent in the WPS territory when compared with the rest of the state. However, the



report also recognizes there are other funding sources influencing the sales of the equipment. This issue is discussed further in this report.

This study assessed the influence of the rebate from the customers' perspective using a cross-sectional analysis of WPS and non-WPS program participants. These responses are based on self-report, and while we recognize there could be bias in the self-report process, we would expect the bias to be consistent between the two territories. Differences could be due to difference in program design between the two territories, the fact that there is more program publicity in the WPS territory, or that customers in the WPS territory have a higher income level or another factor that was not identified throughout our research.

Surprisingly, participants that received the WPS bonus were *less* likely to say that the bonus influenced their decision on their selection of the program-qualifying equipment (Table 3-4). WPS bonus incentive recipients were almost twice as likely as those in the non-WPS territory to indicate the available rebates had no influence on their selection of program-qualifying equipment. The mean influence reported by furnace purchasers outside of the WPS territory is significantly higher than the influence reported by those that received a WPS bonus incentive for their furnace (6.6 compared with 5.4, respectively).

The boiler recipients' perception of the influence of the rebates was similar between the two territories. And, although the incremental cost of the boiler is reportedly higher than the incremental cost of the furnace, the influence of the rebate for the boilers was the same as the furnaces reported by non-WPS participants.

Table 3-4. Influence of Rebates on Selection of Equipment (P4)

	Non-WPS Furnace (n=72)	WPS Furnace (n=70)	Non-WPS Boiler (n=74)	WPS Boiler (n=64)
0 No influence	12.5%	21.4%	13.5%	12.6%
2	2.8%	2.9%	4.1%	3.1%
3	2.8%	7.1%	4.1%	4.6%
4	1.4%	0.0%	2.6%	1.5%
5	12.5%	14.3%	9.4%	18.7%
6	1.4%	2.9%	4.1%	3.1%
7	12.5%	15.7%	9.4%	9.5%
8	23.6%	17.2%	18.9%	18.7%
9	8.3%	5.7%	14.8%	12.6%
10 High influence	22.2%	12.8%	18.9%	15.6%
Mean	6.6	5.4	6.4	6.2

Supporting this data, WPS participants were more likely to say they were just as likely to purchase program-qualifying equipment if the rebate had not been available (Table 3-5). Again, the WPS furnace respondents differ in the analysis, with the responses from non-WPS furnace purchasers and all boiler purchasers indicating similar levels of influence of the rebate on their decisions. There could be contractor influence (e.g., their ability to “upsell”) that is influencing these results.

However, we also see from this table that WPS purchasers were somewhat less likely to indicate that they would have purchased the equipment at that time than the non-WPS



participants (differences are not statistically significant at the 90 percent confidence interval). This is true for both furnaces with ECM motors and boilers, although more so for the furnaces. The Track 1 analysis did conclude that the WPS rebate may have accelerated the purchases of the high-efficiency equipment. This analysis supports that hypothesis.

Table 3-5. Likelihood of Purchasing Equipment without Financial Assistance (T8a, T12)

	Non-WPS Furnace		WPS Furnace		Non-WPS Boiler		WPS Boiler	
Just as likely to purchase program-qualifying equipment (T10)	63.4%	(n=71)	71.0%	(n=69)	62.1%	(n=74)	63.0%	(n=62)
Respondent would have purchased a furnace/boiler without any rebate at the same time (T8a)	88.4%	(n=69)	80.3%	(n=66)	84.6%	(n=65)	71.1%	(n=59)

Contractors also mentioned that the rebates encouraged participants to replace their equipment early; however, they referenced the SEEARP rebate in this context rather than the WPS bonus. The SEEARP rebate had a time element tied to it, as the program would be discontinued once the funds were depleted. Several contractors believed that the limited time the SEEARP program was available pushed some to make the decision to purchase program-qualifying equipment earlier.

Contractors do not necessarily agree with customers' perspectives that the incentive is not an influential component of the program. WPS contractors believe the additional bonus made it easier to sell program-qualifying equipment. In fact, they would like to see the program expanded outside of the WPS territory.

These contractors believe it is easier for customers to justify the cost of the equipment with the extra bonus. As one contractor indicated, it is a "no brainer" for customers in the WPS territory. Customers receive a more efficient piece of equipment at a price closer to standard efficiency equipment. Contractors from the WPS territory said that their customers are more likely to purchase the furnaces with the ECM equipment as a result of the additional incentive.

Some non-WPS contractors also echoed this sentiment. To assist in their ability to sell ECM furnaces and modulating boilers, they said they would like to see higher incentives for the equipment. One non-WPS contractor provided thoughts on how much more the rebate should be by saying the incentive would have to be almost doubled in order to help in the sales efforts. The WPS bonus does just that; it nearly doubles the incentive available to customers within that territory.

The modulating boilers were mentioned by several contractors as still being extremely costly and not affordable, even with the extra bonus. The combined Focus and WPS boiler rebate is \$200 more than the rebate for high-efficiency furnaces with ECMs. But even this increased incentive value is not sufficient according to these contractors who believe that the rebate needs to be higher to have a greater impact on their ability to up-sell to high-efficiency modulating boilers.



3.3 INFLUENCE OF OTHER FUNDING SOURCES ON SALES AND PURCHASING DECISIONS

Several contractors stated that the federal tax credit played a more influential role in customers' decision-making processes. Participant responses do not support this hypothesis.

Customers have access to a number of rebates and offerings that help to offset the cost of installing high-efficiency equipment. One such offering is the federal tax credit offered through the American Reinvestment and Recovery Act, which credits customers up to 30 percent of total project cost for a total of \$1,500.

Three WPS contractors believe the tax credit was the biggest factor in customers' decisions to purchase program-qualifying equipment. One of these contractors said that the rebate was the "icing on the cake" and that it was really the tax credit that pushed his customers to purchase the program-supported equipment.

The majority of WPS customers (93 percent) said that they already applied or planned on applying for the federal tax credit. This percentage is significantly more than the 80 percent of non-WPS participants that said they planned on receiving the federal tax credit. These differences may indicate that WPS customers are either better educated about their offerings or that the contractors are more likely to inform them about the tax credit.

We see the same trend in the influence of this financial incentive as we saw with the program incentives. Furnace participants in the WPS territory were significantly less likely to say the tax credit was influential in their purchasing decisions than participants in the rest of the state. WPS furnace participants rated the influence of the federal tax credit an average of 5.7 (with 10 being extremely influential), compared with non-WPS furnace participants whose average rating of the influence of the federal tax credit is 7.0. Again, there is little difference on the influence of the decision to purchase boilers by territory.

Table 3-6. Influence of Tax Credit on Purchase of Equipment (P6)

	Non-WPS Furnace (n=57)	WPS Furnace (n=58)	Non-WPS Boiler (n=50)	WPS Boiler (n=51)
0 No influence	8.8%	19.0%	13.9%	17.7%
2	1.8%	6.9%	2.0%	0.0%
3	5.3%	3.5%	6.1%	5.7%
4	0.0%	1.7%	0.0%	3.8%
5	15.8%	8.6%	16.1%	10.0%
6	1.8%	6.9%	2.0%	5.7%
7	8.8%	12.1%	12.0%	10.0%
8	21.1%	13.8%	13.9%	12.0%
9	7.0%	13.8%	6.1%	7.7%
10 High influence	29.8%	13.8%	28.0%	27.3%
Mean	7.0	5.7	6.4	6.2

Customers had a different perspective than contractors. The tax credit was only slightly more influential than the rebates in participants purchasing decisions. Table 3-7 compares the



average influence of the two funding sources. The difference in influence is greatest for furnace recipients, although still not substantially higher.

Table 3-7. Mean Scores for Influence on Decision to Purchase Equipment (P4, P6, T4)

	Non-WPS Furnace		WPS Furnace		Non-WPS Boiler		WPS Boiler	
	Mean	n	Mean	n	Mean	n	Mean	n
Mean influence of rebates (P4)	6.6	72	5.4	70	6.4	74	6.2	64
Mean influence of tax credit (P6)	7.0	57	5.7	58	6.4	50	6.3	51

It is the rebates working together, not separately, which influence the participants' purchasing decisions.

In addition to the Focus and WPS bonuses, Wisconsin residents were also eligible to receive a \$200 incentive through the SEEARP rebates⁷. This additional funding source complicated the study, as it was difficult to disentangle the relative impact of the WPS bonus when other credits and incentives are available to the customers as well. The analysis used key variables and interviews with contractors to attempt to address this issue and identify the relative influence of each of the different sources of funding.

Contractors believe these additional funds were able to help customers purchase quality equipment and also save on their fuel bills. The more incentives that are offered, the more likely customers are to consider and actually purchase the equipment.

Contractors agree the three rebates together had more of an impact than each one individually. We asked contractors to rate the relative importance of the three rebate sources on participants' decision to purchase the high-efficiency equipment. All but one contractor said that the relative importance of each source was the same, but that it was the combined funds that made the difference. Several contractors mentioned that the combination of the rebates covered the entire incremental cost of the high-efficiency furnace with ECM motors.

Only one WPS contractor rated the WPS bonus higher. This contractor indicated the WPS Bonus helped improve the chances that he could up-sell to high-efficiency equipment.

We attempted to assess the relative impact of each individual incentive (i.e., SEEARP, Focus on Energy, WPS) from the customers' perspectives as well. We gave respondents hypothetical situations where they only received a portion of their rebates to see if their decision to purchase equipment would be any different.

Overall, customers were already in the market to purchase a furnace/boiler regardless of the program. The majority of customers that received all three incentives (Focus, WPS, and SEEARP) said they were going to purchase a furnace or boiler regardless of the rebates available.

⁷ SEEARP funds were only eligible to be used for permanent residences.



However, these customers were not as likely to purchase program-qualifying equipment without the incentives. And each time the incentive declined, the percentage that would purchase program-qualifying equipment declined slightly as well. WPS boiler customers were much less likely than furnace customers to purchase program-qualifying equipment without the WPS and SEEARP incentives.

Table 3-8. Impact of Incentives for Customers Receiving Focus, WPS, and SEEARP funds (T9a, T9b, T9c, T9d)

	WPS Furnace	WPS Boiler
Purchase a furnace/boiler at the same time without SEEARP funds (Percent indicating yes to T9a)	97.1%	91.4%
Unweighted n	35	34
Just as likely to purchasing ECM furnace/modulating boiler without SEEARP funds (T9b)	88.9%	83.2%
Unweighted n	36	35
Purchase a furnace/boiler at the same time without SEEARP or WPS funds (Percent indicating yes to T9c)	85.7%	90.6%
Unweighted n	35	31
Just as likely to purchasing ECM furnace/modulating boiler without SEEARP and WPS funds (T9d)	88.6%	79.3%
Unweighted n	35	34

We asked participants who received only Focus and WPS funds (no SEEARP funds) if they would have purchased the equipment at the same time without the WPS funds. Unlike the above analysis, which showed a vast majority would have purchased the equipment without the SEEARP funds, only three-quarters of respondents said they would have purchased a furnace at the same time without the WPS funds (Table 3-9). Again, the likelihood to purchase the program-qualifying equipment decreased when removing the additional funding.

Table 3-9. Impact of Incentives for Customers Receiving Focus and WPS funds (T10a, T10b)

	WPS Furnace	WPS Boiler
Purchase a furnace/boiler at the same time without WPS funds (Percent indicating yes to T10a)	76.9%	100.0%
Unweighted n	26	12
Just as likely to purchasing ECM furnace/modulating boiler without WPS funds (T10b)	71.4%	84.9%
Unweighted n	28	13

More than simply illustrating the impact of the different rebate sources, these analysis show the importance of the incentives combined. The greater the total value of the rebates available to customers, the more influence they have on the purchasing decisions. With that said, the relative likelihood to purchase equipment without any incentives is still high, corroborating the perspective that the influence of the rebates is relatively low in their purchasing decisions.



3.4 CONTRACTOR EXPERIENCES AND INFLUENCES

The majority of participants received information and assistance from their contractor. WPS participants were more likely to receive assistance completing the program application than the non-WPS participants.

Contractors proved to be a source of information for participants. The majority of program participants said the contractor discussed the energy savings potential of the new equipment and showed participants how to adjust the heating temperature for the equipment (Table 3-10). Contractors also took the time to demonstrate to participants how to maintain the new equipment.

Customers purchasing boilers in the WPS territory generally reported having less interaction or receiving less information from contractors than the other participants. For example, only 60 percent of WPS boiler recipients said their contractor discussed adjusting their temperature throughout the day to maximize energy savings, compared with 75 percent of boiler recipients in non-WPS territory and over 85 percent of furnace recipients. WPS boiler customers were also less likely to have received literature on energy saving measures and have contractors demonstrate how to maintain the new equipment.

Table 3-10. Percentage Indicating “Yes” to Experiences with Contractor (E2)

	Non-WPS Furnace		WPS Furnace		Non-WPS Boiler		WPS Boiler	
	Percent Yes	n	Percent Yes	n	Percent Yes	n	Percent Yes	n
Contractor gave literature on home energy saving measures	68.2%	66	73.3%	60	70.1%	67	61.5%	57
Contractor demonstrated how to maintain new equipment	93.1%	72	87.0%	69	86.3%	73	84.1%	63
Contractor discussed adjusting temperature throughout day to maximize energy savings	85.5%	69	87.0%	69	75.4%	69	60.2%	63
Contractor demonstrated how to adjust heating temperature	86.1%	72	90.0%	70	78.7%	75	80.1%	65
Contractor discussed energy savings of new equipment	94.3%	70	90.9%	66	87.8%	74	93.8%	63

In addition to receiving information and guidance on savings through the equipment, the majority of participants said their contractor assisted them in completing their applications. Participants in the WPS territory were slightly more likely to indicate their contractors filled out the rebate applications than those customers in the non-WPS territory (not statistically significant at the 90 percent confidence level). In addition, WPS contractors were statistically significantly more likely to review the application with their customers.

Table 3-11. Percentage Indicating Yes to Application Process

Territory	Indicated Contractor Filled Out Application (P7)		Indicated Contractor Reviewed Application with Respondent (P8)	
Non-WPS	94.2%	n=129	80.5%	n=123
WPS	97.0%	n=140	90.0%	n=134



Even more so than the financial benefits, participants indicated that the contractors they worked with influenced their purchasing decisions. This finding underscores the importance of marketing to and engaging the contractor market.

As with most supply-side programs, consumers rely on the contractors' recommendations when purchasing HVAC equipment. This is not surprising as contractors are the first point of contact for most participants and the primary means of awareness of the program (mentioned by over two-thirds of program participants). The program was designed to have the contractors promote the program; therefore, we would expect customers to hear about the program through their contractor. Additionally, as described above, the majority of participants receive information and services through their contractor that influences customers' decisions.

Contractors confirmed that a significant portion of their customers are not aware of the program prior to their interactions with the contractor. Of the eight WPS contractors that answered this question, six contractors indicated less than half of their customers are aware of the program and three these indicated only 10 percent know about the program. (Contractors that work in both territories indicated no differences in customer awareness of the program by territory.)

Therefore, it is not surprising to see that the participants rated the influence of the contractors fairly high on their decision to install high-efficiency equipment. Table 3-12 presents the mean influence of the rebates, tax credit, and contractor on participants' decision to purchase the equipment. Contractors influence ratings were significantly higher than the financial incentives. The difference is most extreme for those that purchased furnaces in WPS territory (mean contractor rating a full point higher than the financial incentives) and the non-WPS boilers (mean contractor rating 1.5 points higher than the financial incentives).

Table 3-12. Mean Scores for Influence on Decision to Purchase Equipment (P4, P6, T4)

	Non-WPS Furnace		WPS Furnace		Non-WPS Boiler		WPS Boiler	
	Mean	n	Mean	n	Mean	n	Mean	n
Mean influence of rebates (P4)	6.6	72	5.4	70	6.4	74	6.2	64
Mean influence of tax credit (P6)	7.0	57	5.7	58	6.4	50	6.3	51
Mean influence of contractor (T4)	7.4	70	6.7	69	7.9	74	7.0	62

This data again shows that the WPS participants claim to be less influenced by external factors (such as the rebate and contractors) than the non-WPS participants are to make their purchasing decisions. The WPS participants rated the influence of the contractor significantly lower than participants throughout the rest of the state did.

Recognizing the importance of their role on the customers, contractors mentioned advertising and marketing within the contractor market as well as the need for additional sales materials as areas for program improvement.

A number of contractors mentioned that they thought the program should market more to the contractor base. Discussions with WECC indicate that they do have targeted marketing



initiatives to contractors, but those initiatives are relatively minimal. Given the significant program uptake this year, the emphasis on the contractor market was not necessary.

Contractors in both territories thought additional program material would be useful in their sales efforts for program-qualifying equipment. Contractors receive information regarding the program but are looking for more specific materials they can either leave with the customer or assist in the up-selling of high-efficiency equipment. For example, one contractor suggested the program develop a small brochure that the contractor can attach to their estimate that would explain the program and the equipment to customers. This additional collateral will also support contractors' recommendations and detail the equipment that is available and the rebates associated with each.

Contractors also suggested the program provide tools that detail "hard numbers" regarding the benefit of installing program-qualifying equipment. For example, one contractor mentioned the usefulness of having customer-presentable technical materials to support their recommendations (the boiler was the equipment being discussed in this context). He envisioned a document that compares the energy use of boilers of different ages in different types of housing and related savings for installing a program-qualifying high-efficiency modulating boiler. Another contractor also mentioned that having some sort of calculator available to determine a return on investment would be useful. While these documents may exist, the fact that contractors mentioned the items as things that would be useful, indicates they are unaware of the fact that they are available or that the documents are not in a format that is useful.

There is no one concrete indicator as to why program influence is reportedly lower in WPS territory; however, demographics may play a role in this.

The data clearly indicate a lower level of program influence in the WPS territory than in the rest of the state. This finding begs the question of why that is the case. It is not reasonable to assume that the additional incentive is having an adverse affect on the program; therefore, there must be other factors that are affecting these participants' perceptions.

One potential explanation for the WPS participants' lack of reliance on the funds or information is the differences in customer demographics. A review of the survey data shows that the customer demographics are relatively similar by territory with the exception of income. WPS participants are more likely to have higher income levels than are participants in the rest of the state (13.7 percent compared with 5.9 percent with incomes of \$150,000 or more, respectively).

Another potential explanation is that WPS participants are more likely to research all funding sources and options on their own. As discussed above, WPS customers were significantly more likely to research and apply for the federal tax credit than the rest of the state.

3.5 SATISFACTION WITH THE PROGRAM AND OPPORTUNITIES FOR IMPROVEMENT

Participant experiences in the program have been overwhelmingly positive. The program is straightforward for customers and participants have had positive experiences with contractors. Although over half of participants indicated no changes were needed to the program, some suggestions for program improvement include additional advertising of the



program (mentioned by both participants and contractors) and additional incentives, specifically for customers purchasing boilers.

Program satisfaction ratings were high among contractors and participants. The performance of the new equipment was a source of the positive feedback along with the ease and quality of the program.

WPS contractors indicated satisfaction with the program as said they want to be a part of the program in the future as it is a benefit in their sales. Overall, customers are satisfied with their experiences with the program as well. They were asked to rate their satisfaction on a zero to 10 scale with zero being “very dissatisfied” and 10 being “very satisfied.” When looking at furnace customers, WPS customers were less likely to indicate they were very satisfied in the program (rating of a ten) than non-WPS customers and overall slightly less satisfied with the program overall. WPS boiler customers were just as satisfied with the program as the non-WPS boiler customers with no meaningful difference between the two territories.

Table 3-13. Overall Program Satisfaction Rating (T13)

	Non-WPS Furnace (n=72)	WPS Furnace (n=69)	Non-WPS Boiler (n=74)	WPS Boiler (n=65)
0 Very dissatisfied	0.0%	0.0%	0.0%	1.5%
4	1.4%	0.0%	0.0%	0.0%
5	2.8%	4.3%	4.1%	1.5%
6	0.0%	1.5%	4.1%	1.5%
7	5.6%	4.3%	2.6%	6.0%
8	11.1%	11.6%	12.2%	12.4%
9	11.1%	20.3%	14.8%	13.9%
10 Very satisfied	68.1%	58.0%	62.1%	63.2%
Mean	9.28	9.16	9.16	9.14

Participants were also asked to rate their satisfaction with a number of items relating to the program. On a scale of one to 10 with one being “not at all satisfied” and 10 being “very satisfied,” participants in both territories rated the operation of the new equipment the highest. Customers in the WPS territory rated the rebate amount lower than those customers in the non-WPS territory.

Table 3-14. Mean Satisfaction Ratings for Program Related Items (E3)

	Non-WPS Furnace		WPS Furnace		Non-WPS Boiler		WPS Boiler	
	Mean	n	Mean	n	Mean	n	Mean	n
Rebate amount	8.69	70	8.18	68	8.61	74	8.58	64
Amount of time to receive rebate	8.95	66	8.64	66	9.03	72	8.63	60
Operation of new equipment	9.43	69	9.27	67	9.26	62	9.28	60
Amount of rebate paperwork	9.08	71	8.61	66	8.86	74	8.71	62
Information explaining program	8.84	69	8.19	67	8.44	72	8.57	63



One of the reasons for dissatisfaction ratings related to the \$1,500 tax incentive. Several program participants mentioned they thought the \$1,500 was part of this process. Other reasons for WPS customer dissatisfaction regarding the program had to do the steps involved and the length of time it took to receive the rebates and the desire to receive more information regarding the program.

Two WPS contractors mentioned how the program is always changing and, therefore, they are unsure of what forms need to be completed. One of these contractors felt the paperwork was too time-consuming for the contractors to have to fill out so if there was a way to streamline that process, it would be easier for contractors to participate.

Although program participants and contractors voiced satisfaction with the program, they mentioned the rebate levels and availability and advertising as two areas for program improvements.

When asked what improvement could be made to the program, over half of participants in both territories indicate no changes were needed. These customers are satisfied with the program as it stands. They thought the program was easy (almost seamless to some), they had a pleasant experience with the contractor, and the rebates were as they expected.

Participants most frequently mentioned the need for more awareness or advertising of the program and higher rebate values as improvements the program could make (Table 3-15). As expected, customers that purchased boilers were most likely to mention higher rebates as a means for improvement, most likely due to the high initial cost.

Table 3-15. Suggested Changes to the Program (T15)

	Non-WPS Furnace (n=72)	WPS Furnace (n=70)	Non-WPS Boiler (n=75)	WPS Boiler (n=65)
None	69.5%	55.7%	57.5%	54.1%
More awareness and advertising for program	9.7%	14.3%	8.0%	3.0%
More rebates	9.7%	5.7%	10.7%	16.9%
Other	4.2%	15.7%	5.4%	19.9%
Not familiar enough to make a suggestion	1.4%	2.9%	6.7%	0.0%
Extending to other appliances	1.4%	2.9%	2.6%	0.0%
Extending the program length	1.4%	0.0%	2.6%	1.5%
Satisfied as is	1.4%	1.4%	1.3%	0.0%
Make cut-off dates more clear and fair	1.4%	0.0%	1.3%	1.5%
More consistent rebate amounts	0.0%	0.0%	2.6%	3.0%
Make program more simple and efficient	0.0%	1.4%	1.3%	0.0%

Contractors substantiated customers' recommendations for higher incentives for boilers. They commented that the program-qualifying boiler is expensive and raising the bonus would help offset some of that cost. Contractors that operate in the WPS territory also said they would like to be able to offer the additional bonus to customers outside of the WPS territory. They



see how the bonus has helped in their sales efforts and would like to extend that to more of their territory.

Additionally, contractors also agree with customers' perspective regarding additional advertising, which will only serve to increase sales of the program-qualifying equipment. While offering or increasing the incentive will help increase sales, advertising the program will get the word out and make customers aware of the program, equipment, and the available incentives. In addition, if Focus on Energy is involved in the marketing messages, customers may be more likely to listen to the message, as it is not just coming from the contractor trying to sell their equipment.

3.6 MARKET SHARE OF ECM FURNACES

One of the research objectives of the contractor study was to review the dynamics in the market place (including Focus interventions) that are attribute to the recent increase in the ECM furnace market share. The FACTS data showed an increase in the sales of ECM furnaces in both WPS and non-WPS territories over last year. This question series attempted to inform those FACTS statistics.

Contractors provided a number of reasons why they believe the ECM furnace sales increased this year:

- **Federal tax incentive.** Contractors mentioned the federal tax incentive as the reason for the increase in the ECM furnace market share. While the available rebates have had some impact, the contractors interviewed believe that the federal tax credit is driving the increase in ECM furnace sales. The tax credit will end this year and it is unclear to contractors what the impact the removal of the tax credit will be on the sales of ECM furnaces. There is some thought that the high-efficient equipment may not be as popular.
- **Promotion of equipment through social service programs.** One contractor in the WPS territory mentioned social programs that are providing similar equipment for free as a reason for the increase in the equipment. The state weatherization program is providing ECM furnaces to program participants, although the evaluation team does not have data readily available to determine if the installation rate of those furnaces has increased over years.
- **Non-program offerings.** Two other contractors in the WPS territory mentioned that manufacturers are offering their own incentives and warranties to promote their ECM furnaces. These contractors conclude these non-program offerings may be driving sales.
- **Customer awareness of the benefit of ECM furnaces.** Several contractors believe the increase in sales is attributable to customers' increased knowledge in the benefit of these furnaces and their desire to install the best equipment for the best value. With the economy how it is, price is important, but value is more important. The contractors believe that customers are more likely to take the time to understand what is available and what they can do to save money.

Only one contractor (working in a non-WPS territory) indicated that the ECM furnace market share has seen no increase. He explained how they look at the situation from the contractors'

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standpoint and conversations with their customers. He indicated people could not afford their house payments so they are not going to install this high-end equipment.



4. SUMMARY AND CONCLUSIONS

4.1 SUMMARY

The program has exceeded its participation goals; however, the additional bonus that is offered in the WPS territory may not be the determining factor for customers installing ECM furnaces. There was a greater uptake of customers purchasing program-qualifying boilers in the WPS territory, which may be a result of the additional bonus. The market-based assessment that was completed as part of the Track 1 activity for the program provided some analysis that showed boiler participation rates increased within the WPS territory at a faster rate than the rest of the state despite barriers related to the higher initial cost of boilers than ECM furnaces.

While contractors working in the WPS territory believe the additional incentive impacts their ability to sell program-qualifying equipment, WPS customers feel otherwise. Participants indicated the program is less influential in their decision-making process.

However, as one would expect, the more financial incentives that are available, the more significant they become. Each incentive individually does not have enough to influence participants in their decision-making process. This is particularly the case for program-qualifying boilers. Even with the additional incentive, due to the high cost of the equipment, the boilers remain out of reach for many.

The majority of participants reported hearing about the program from a contractor and receiving information and assistance from them. WPS participants were more likely to receive assistance completing the program application than the non-WPS participants. In addition, rather than financial rewards as contractor thought, customers indicated that it is the contractors they worked with that most influenced their purchasing decision. WPS customers, however, were less likely to rate their contractor as influential.

While monetary rebates were important in assisting contractors' sales, contractors believe that the federal tax credit played a more important role in customers' decision-making process. Contractors are unsure how their sales of high-efficiency furnaces and boilers will be affected once the federal tax credit is no longer available.

With the uncertainty of sales next year, contractors indicated that it may be worthwhile to increase advertising of the program. Having literature to provide customers is essential for their sales. Customers support this as well as it was through the contractors that they became aware of the program.

4.2 RECOMMENDATIONS

This section details recommendations for the Efficient Heating Bonus program based on the key process evaluation findings documented in this report.

Continue offering the additional bonus for modulating boilers. One of the objectives of the program is to increase the sales of furnaces with ECM motors and modulating boilers. Based on the FACTS data and the participant responses, the bonus appears to be most effective as a motivator for boiler customers to install program-qualifying equipment.



Reassess the offerings for ECM furnaces after the updated Track 1 analysis, if the program were to continue. While the bonus appears to be assisting boiler customers, the participant data indicates the bonus may not be the determining factor in purchasing decisions. However, the additional federal funding available makes it difficult to fully understand the true influence of the additional WPS bonus. At this point the program may be discontinued into the next program year, which may reduce the need for and usefulness of additional research. However, should the program move forward, we recommend that the Track 1 report be updated later this year, which may provide additional insight as to whether the bonus is further influencing the purchasing of ECM furnaces.

Take into account the discontinuation of the tax credit in future program planning. We have discussed at length the difficulty of assessing the effectiveness of the increased bonus with the offering of the federal tax credit (ending this year) and the previous SEEARP funds offerings. Although program progress continues to be strong, contractors question what will happen with the HVAC market when the tax credit discontinues. Future program planning efforts should assume that the removal of the tax credit will downshift the market to some extent, which may warrant the continuation of programs such as the WPS Heating Equipment Bonus program.

Consider offering additional program and advertising material to contractors. As designed, the program is using the contractors as the means of promoting the program. If this continues, it will be essential that contractors obtain material they can provide to customers that provides information about the program, the benefits of efficient equipment, and the breakdown of the equipment that qualifies.

Maintain communication with contractors regarding program changes. Contractors indicate the program is continually changing. Therefore, making sure contractors have up-to-date material, understand what forms need to be completed, and are aware of any program changes will only ensure the program's success.

Continue outreach to new contractors. In addition to supporting existing contractors, getting additional contractors involved in the program is important. Additional contractors will enhance the awareness and support of the program as well as increase participation in the program. As more contractors are added to the program, more customers are reached.



APPENDIX A: PARTICIPANT SURVEY RESPONSE RATE

Below is the response rate for the participant data collection effort.

Table A-1. Program Participant Response Rate

	Non-WPS Furnace	WPS Furnace	Non-WPS Boiler	WPS Boiler	Total
Starting sample	135	115	114	115	479
Ineligible	9	1	1	2	13
Bad numbers	13	6	9	10	38
Adjusted sample	113	108	104	103	428
Refusals	11	12	6	10	39
Unable to contact (e.g., incapable/incoherent)	0	0	0	1	1
Active sample	31	23	28	25	107
Completes	72	70	75	65	282
Response rate (completes/adjusted sample)	64%	65%	72%	63%	66%



APPENDIX B: CONTRACTOR IDI GUIDE

Interview Objectives:

- Effectiveness outreach efforts to contractors and understand their use of program materials
- Issues with eligibility requirements
- Contractors' perceptions of effective components of the program and the steps taken to raise awareness of the program
- Contractor's perceptions of how different funding sources affected program participation
- Barriers to greater success of the program
- Dynamics in the marketplace (including Focus interventions) affecting the recent increases in the market share of ECMs.

Introduction

Hello, my name is [interviewer name], and I am calling on behalf of the Focus on Energy Program to talk to you about your experiences as a contractor with the Efficient Heating & Cooling program, Focus's residential HVAC program. This should take about 30 minutes of your time. Is this a good time to talk?

This interview will focus on your company's experience with the Focus Efficient Heating and Cooling program. Could I confirm that you provide services as part of this program to home owners (including new construction)? [YES/NO. IF SAY NO, ATTEMPT TO REACH APPROPRIATE CONTACT.]

According to our records, you have installed ECM furnaces/boilers through the program. Is that correct? Do you recall your participation with the Efficient Heating & Cooling program through Focus on Energy?

Contractor Firmographics

- F1 What is your primary role(s) in the supply and delivery of HVAC equipment to the residential market? (e.g., manufacturer, manufacturer representative, wholesale distributor, Engineer, Contractor, Energy Services Firm, Other?)
- F2 Could you please tell me about the types of energy efficient equipment you sell/specify for residential customers?
- F3 What percentage of your business is:
Planned Equipment Replacement? _____%
New Equipment Purchases (for new buildings) _____%
Failed/Emergency Equipment Replacement _____%
Other (specify)_____%
- F4 Where does your company primarily work? Within the WPS territory, the rest of the state or both?



Overview of Participation and Process

- P1 Could you describe for me your participation in Focus on Energy's Efficient Heating & Cooling (EHC) program? Probe for reasons why contractor participates.
- P2 When did you first get involved with the Efficient Heating & Cooling program? Why did you decide to get involved?
- P3 How did you first hear about the EHC program? (DO NOT PROMPT. CIRCLE ALL THAT APPLY)
- a. Through Focus on Energy contact (including face to face)
 - b. Received marketing material (mailing or email)
 - c. Attended workshop or training seminar and learned about the program
 - d. Through a manufacturer/supply house
 - e. Learned about the program at trade show
 - f. Saw/heard ads for the program (Where? _____)
 - g. Attended a program-sponsored information session
 - h. Focus on Energy Website
 - i. Business Colleague
 - j. Business Customer
 - k. Do not recall
- P4 Do you expect your participation/involvement in the program to increase, decrease or stay the same in the next 12 months? Why?
- P5 What could the program do to make you sell more ECM furnaces / modulating boilers?
- P6 What is the primary benefit you receive from the EHC program?
- P7 Do you work with any other Focus on Energy programs outside of the residential HVAC program? [IF YES] Which ones?

Customer interactions

- C1 About what percent of your customers are participants in the Efficient Heating & Cooling program? What percent of your customers already know about the program before you tell them about it? How do they find out about the program? Does this differ by territory?
- C2 What are the primary reasons why customers typically want to participate in the program? What factors most influence purchasing decisions? Have you noticed any differences in territory?
- C3 When talking with customers about the different incentives/rebates, how did you refer to them? Did you mention each incentive and the source or lump them together and provide a total?



- C4 In 2010, the State of Wisconsin offered additional funds as part of the State Energy Efficient Appliance Rebate program. Did you participate in this program? How effective do you believe those additional funds were in encourage customers to install high efficiency ECM furnaces and boilers?
- C5 On a scale of 1 to 5 with 1 being “not at all important” and 5 being “very important” how important were each of the incentives in customer participation?
 - Focus on Energy Cash-back reward (\$150 per furnace, \$400 per boiler)
 - WPS Heating Equipment Bonus (\$250 per furnace, \$200 per boiler)
 - SEEARP rebate (\$200)
- C6 Do you find high efficiency equipment easy or difficult to sell and why are there “lost opportunities” for the program (e.g., projects that are not high efficiency that could have been)?
- C7 [IF SERVE BOTH TERRITORIES] Do you find there is a difference in your ability to sell high-efficiency equipment to WPS customers than non-WPS customer? If so, why? (Probe for impact from the additional bonus)
- C8 What tools are available from Focus that help you sell high efficiency equipment to residential customers? Are there additional types of technical assistance, sales tools or marketing materials you would like Focus to provide to help you sell high efficiency equipment to customers?

Program Specifics

- E1 What is your involvement with the rebate portion of the program? What is working well about the rebate process from the customer’s point of view? Your point of view? How would you like to see the rebate process improved?
- E2 Are the customer rebates offered through the program adequate? How would you like to see the rebate structure revised? What changes would you make to the equipment and services that receive rebates through the program?
- E3 On a scale of 1 to 5 where 1 is ‘very difficult’ and 5 is ‘not at all difficult’, how would you rate the program’s administrative burden (e.g., application requirements and rebate processing) for you? Why do you give this ranking?

Recommendation and Installation Practices

- R1 One of the purposes of the program is to encourage customers to purchase a higher efficiency of equipment (specifically ECM furnaces) than they would otherwise purchase. Do you feel the program is accomplishing this? How could the program be more effective?
- R2 Please think for a moment about your customers that do not participate in the program. Do your recommendations and/or installation practices differ for non-participating customers? Please explain.



- R3 Had you not been involved with the Focus on Energy program, do you believe your recommendation and/or installation practices would be different with these non-participating customers than they are today? How or why not?
- R4 The ECM furnace market share has increased in recent months. Why do you think this is?

Program Material Use (comment: We don't offer education in classes. We talk about benefits/ changes in meetings & in conversations. I doubt they'll recognize that they've been "educated.")

- T1 Have you received education or information from Focus on Energy and/or the Efficient Heating & Cooling program?
- T2 What type of education or information have you received?
- T3 Has this education or information influenced your recommendations or installation practices?
- T4 [IF YES] How has it influenced your activities?

Satisfaction

- S1 Have you had any complaints or problems regarding the installation or operation of the new equipment/services incentivized through the program?
- S2 (If complaints) What were the complaints or problems?
- S3 Would you participate in this program again in the future?
- S4 What changes, if any, to the program would you recommend?
- S5 Has your experience with the Focus program(s) had any impact on your installation practices? If yes, how so?

Wrap-up

Those are all the questions I have for you. Do you have anything else you would like to discuss with me?

If I have any further questions, would it be okay if I contact you?

Record email address:

Thank you for your time.



APPENDIX C: PARTICIPANT QUESTIONNAIRE

Interview Objectives:

- How and when participants heard about the program
- Customer motivations for participating in the program including what affect, if any, available rebates had on their decision to purchase the program eligible equipment
- Satisfaction with customers' experience with the program and interaction with contractors
- Difference in participation levels and/or market share between the WPS and non-WPS territories
- Effectiveness of the incentive levels and impact of the additional WPS bonus funds to encourage customers to purchase high-efficiency equipment
- Level of contractor's influence on customers' decision to install high-efficiency equipment

Introduction

C1 Hello, my name is *[interviewer name]*, and I'm calling on behalf of the Focus on Energy Efficient Heating & Cooling program. May I speak with *[named respondent]*?

1 Yes

2 No *[If named respondent is not available: ask for another adult who is familiar with the household's recent furnace/boiler purchases.]*

C2 I'm with Tetra Tech, an independent research firm. We are speaking with households about the Efficient Heating & Cooling program offered by the Wisconsin's Focus on Energy program. Our records indicate your household participated in this program. Do you recall participating in this program?

1 Yes *[SKIP TO INTRO2]*

2 No

C3 *[IF C2=2]* You may have participated around *[date]*. Through this program, you could have received equipment such as a high efficiency furnace with electronically commutated motors (ECMs) or modulating boiler. Do you recall receiving this equipment through the program?

1 Yes *[SKIP TO INTRO2]*

2 No



C4 [IF C3=2] Is it possible that someone else in your household would be familiar with the program?

- 1 Yes
- 2 No [THANK AND TERMINATE]
- 8 Don't know [THANK AND TERMINATE]
- 9 Refused [THANK AND TERMINATE]

C5 May I please speak with that person?

- 1 Yes [BEGIN THE SURVEY AGAIN (C2) WITH NEW R]
- 2 No [THANK AND TERMINATE]
- 8 Don't Know [THANK AND TERMINATE]
- 9 Refused [THANK AND TERMINATE]

Great, thank you. First, I'd like to assure you that I'm not selling anything; I'd just like to ask your opinion about this program. Your responses will be kept confidential. For quality and training purposes this call will be recorded.

I'm with Tetra Tech, an independent research firm. We are talking to customers to understand their views on energy use, and participation in Focus energy efficiency program. I'm not selling anything; I'd just like to ask you some questions about your experience with the Efficient Heating & Cooling program offered by Focus on Energy. The information that you provide will help to improve the program.

C6 Could you please confirm that you received one or more rebates for a [ECM furnace/modulating boiler] through the program?

[For furnaces: The high efficiency furnace came with a variable speed drive or electronically commutated motor (ECMs).]

- 1 Yes
- 2 No [SPECIFY: What is incorrect?]
- 8 DON'T KNOW

[IF INCORRECT AND DIDN'T RECEIVE REBATE FOR [FURNACE/BOILER], THANK AND TERMINATE]

C7 Were you personally involved in the decision of whether or not to purchase the [ECM furnace/boiler] that you received through the Efficient Heating & Cooling program?

- 1 Yes
- 2 No



C7a May I speak with the person who made this decision?

- 1 Yes
- 2 No [THANK AND TERMINATE]

Source of Program Information

P1 How did you hear about the rebate for the [ECM furnace/modulating boiler] available through the Efficient Heating & Cooling program?

[DO NOT READ; SELECT ALL THAT APPLY]

- 1 Through Focus on Energy contact
- 2 Through a contractor
- 3 Through our builder
- 4 Saw/heard ads for the program (Where? _____)
- 5 Focus on Energy website
- 6 Friend/family
- 7 Other (specify)
- 8 Don't know/ recall

P2a [IF P1<>CONTRACTOR] Did the contractor that you purchased the [ECM furnace/modulating boiler] from mention that you could receive an incentive, bonus or other funding if you purchased the equipment?

- 1 Yes [SPECIFY: What did they discuss?]
- 2 No
- 8 Don't know

P2b [If Yes to P2a] What incentives, bonuses or other funding did they tell you about?

[DO NOT READ; SELECT ALL THAT APPLY]

Interviewer note: if the R mentions Focus on Energy, ask if they know what program

*[If R says "ARRA" ask them to explain; will you be receiving a rebate check or will you be filing for a tax credit?]*a

- 1 Do not recall
- 2 Focus on Energy
- 3 Focus on Energy, EHC program
- 4 Focus on Energy, WPS bonus program
- 5 Stimulus rebate
- 6 Dealer
- 7 Manufacturer
- 8 Local government
- 9 State tax credits
- 10 Federal tax credits
- 11 Other (specify)
- 12 Don't know/ recall



P3 Did you know about the rebate(s) before it was mentioned to you by the contractor?

- 1 Yes, all
- 2 Yes, some
- 3 No
- 8 Don't know

P4 How much influence did the rebate(s) have in your selection of the [ECM furnace/ modulating boiler] you installed? Please rate on a 0 to 10 scale, where 0 is no influence and 10 is high influence.

- _____ 0 to10
- 88 Don't know

P5 Will you be applying for a tax credit when you file your 2010 taxes?

- 1 Yes
- 2 No SKIP TO P7
- 8 Don't know SKIP TO P7

P6 Thinking about this tax credit, how much influence did this have on your decision to purchase the [ECM furnace/ modulating boiler]? Please rate on a 0 to 10 scale, where 0 is no influence and 10 is high influence.

- _____ 0 to10
- 88 Don't know

P7 In order to receive the rebates, an application needed to be completed and signed. Did the contractor fill out the application form for you to sign?

- 1 Yes
- 2 No
- 8 Don't know

P8 Did the contractor review the application form with you?

- 1 Yes
- 2 No
- 8 Don't know



Experience With The Program

E1 In addition to the installation contractor, who else did you interact with as part of the program? *[DO NOT READ; SELECT ALL THAT APPLY]*

- 1 Focus on Energy staff
- 2 No one else
- 3 Other *[SPECIFY]*

E2 Through your experience of purchasing this equipment did the contractor...
[READ LIST; RECORD YES, NO, DON'T KNOW]

- a. Give you any brochures or literature about ways you can save energy in your home?
- b. Show you how to maintain your new equipment?
- c. Discuss adjusting your heating temperature at different times of the day in order to save energy?
- d. Show you how to adjust your heating temperature?
- e. Discuss with you the potential energy savings you might realize by installing energy efficient [ECM furnace/boiler]?

E3 I am going to read a list to you. Please rate your level of satisfaction for each item related to the program using a scale of 0 to 10 where 0 is not at all satisfied and 10 is very satisfied. I'll follow-up with a question on why you rated it the way you did. How satisfied were you with the . . . ? *[READ AND ROTATE LIST]*

- a. Rebate amount
- b. Amount of time it took to receive the rebate
- c. *[IF E1=1]* Interactions with Focus on Energy program staff
- d. The operation of the new equipment
- e. The amount of paperwork required to receive the rebate
- f. Information explaining the program

E4 *[For each item in E3 rated <=4]* You said you were dissatisfied with [insert item]. Why do you say that?

[RECORD VERBATIM RESPONSE]



Decision-making Processes

[if furnace] As part of the program, you received a furnace with an electronically commutated motor (ECM) or variable speed motor. Together, this equipment is more efficient than a furnace without an ECM motor.

[FOR BOILERS] As part of the program, you received a boiler with modulating burner and outdoor air reset control. Together, this equipment is more efficient than a regular boiler.

T1 [if furnace] Were you aware you purchased a furnace with an ECM motor?
[FOR BOILERS] Were you aware you purchased a modulating boiler?

- 1 Yes
- 2 No

T2 [FOR BOILERS] Did you know that boiler came in different levels of efficiency prior to purchasing yours through the program?
[FOR FURNACES] Were you aware that furnaces with an ECM are more efficient prior to purchasing yours through the program?

- 1 Yes
- 2 No
- 8 Don't know

T3a [FOR BOILERS] Were you presented different options to purchase a non-modulating boiler or did the contractor just present you with the modulating boiler?
[FOR FURNACES] Were you presented with options to purchase a furnace with without an ECM motor, or did the contractor just present you with the furnace including the ECM motor?

- 1 Yes
- 2 No
- 8 Don't know

T3 [FOR BOILERS] Why did you decide to purchase the modulating boiler rather than the less efficient equipment?
[FOR FURNACES] Why did you decide to purchase the high efficiency ECM furnace rather than a furnace without an ECM motor or a less efficient furnace?
[SELECT ALL THAT APPLY]

- 1 The rebate made it affordable
- 2 The information from the contractor really encouraged the equipment
- 3 To save money on energy bill
- 4 To save energy
- 5 Environmental reasons
- 6 Knew wanted to purchase high efficiency anyway
- 7 Other *[SPECIFY]*



T4 How much influence did your contactor have in your selection of the [ECM furnace/modulating boiler] you installed? Please rate on a 0 to 10 scale, where 0 is no influence and 10 is high influence.

_____ 0 to 10
88 Don't know

T5 How old was the equipment you replaced? (record age in years using a whole number)

_____ Age of equipment
88 Don't know

T6 At the time you were making the decision to participate, did you have any concerns about participating in the program?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

T6b [T6 = 1] What were those concerns? [DO NOT READ. INDICATE ALL THAT APPLY]

- 1 Equipment purchase cost
- 2 Equipment Installation cost
- 3 Equipment operating cost
- 4 Payback/taking too long to recover the cost of installing the equipment
- 5 Reputation of contractor or brand of equipment
- 6 Reliability of equipment
- 7 Speed of installation
- 8 Accommodating the equipment/fitting equipment into available space
- 9 Construction needed in house to install the equipment
- 10 Whether would actually receive bonus as advertised
- 11 Choosing the right equipment
- 12 Other [SPECIFY _____]



T7a At what point in your decision to purchase a [ECM furnace/ modulating boiler] were you when you found out about the rebate offered through the program? *[READ LIST AND INDICATE RESPONSE]*

- 1 Had you already been thinking about purchasing some type of [ECM furnace/boiler]
- 2 Began collecting information about [ECM furnace/boiler]
- 3 Decided to buy a [ECM furnace/boiler]
- 4 Already installed the [ECM furnace/boiler]
- 5 Other *[SPECIFY]*
- 8 Don't know

T8a You received an incentive for [TOTAL REBATE]. Had you not received that incentive would you have purchased [a furnace/a boiler] at that same time?

- 1 Yes
- 2 No
- 8 Don't know

T8b Would you have purchased a [furnace/boiler] within a year?

- 1 Yes
- 2 No
- 8 Don't know

T8c What impact, if any, did the rebate you received have on your decision to purchase the [ECM furnace/modulating boiler] at the time you did? *[RECORD RESPONSE]*

ASK T9 SERIES IF RECEIVED FOCUS, SEEARP AND WPS BONUS

T9a *[IF RECEIVED SEEARP AND WPS BONUS AND FOCUS BONUS]* $\$$ [SEEARP value] of the rebate you received was through the State Energy Efficiency Appliance Rebate Program. Had you not received the $\$$ [SEEARP value] and the incentive was $\$$ [fill with total rebate amt minus SEEARP] would you have purchased [a furnace/a boiler] at that same time?

- 1 Yes
- 2 No
- 8 Don't know



T9b What is the likelihood that you would have purchased the same high-efficiency [ECM furnace/ modulating boiler] if the rebate would have been \$[fill with total rebate amt minus SEEARP]?

- 1 Just as likely
- 2 Less likely
- 3 Not at all likely
- 8 Don't know

T9c IF RECEIVED SEEARP AND WPS BONUS AND FOCUS BONUS] Another component of the rebate you received was through WPS. The value was [WPS Bonus]. Had you not received those funds and the incentive would have been \$[fill with total rebate amt minus SEEARP AND WPS] would you have purchased [a furnace/a boiler] at that same time?

- 1 Yes
- 2 No
- 8 Don't know

T9d IF RECEIVED SEEARP AND WPS BONUS AND FOCUS BONUS] Do you think you would have been just as likely, less likely, or not at all likely to purchase the same high-efficiency [ECM furnace/ modulating boiler] if the rebate would have been \$[fill with total rebate amt minus SEEARP AND WPS]?

- 1 Just as likely
- 2 Less likely
- 3 Not at all likely
- 8 Don't know

SKIP TO T12

ASK T10 SERIES IF RECEIVED FOCUS AND WPS BONUS BUT NOT SEEARP

T10a [IF RECEIVED WPS BONUS AND FOCUS BONUS] \$[WPS value] of the rebate you received was through WPS funding. Had you not received the \$[WPS value] and the incentive was \$[fill with total rebate amt minus WPS] would you have purchased [a furnace/a boiler] at that same time?

- 1 Yes
- 2 No
- 8 Don't know



T10b Do you think you would have been just as likely, less likely, or not at all likely to purchase the same high-efficiency [ECM furnace/ modulating boiler] if the rebate would have been \$[fill with total rebate amt minus WPS]?

- 1 Just as likely
- 2 Less likely
- 3 Not at all likely
- 8 Don't know

SKIP TO T12

ASK T11 SERIES IF RECEIVED FOCUS AND SEEARP BUT NOT WPS

T11a [IF RECEIVED SEEARP INCENTIVE AND FOCUS INCENTIVE] \$[SEEARP value] of the rebate you received was through the State Energy Efficiency Appliance Rebate Program. Had you not received the \$[SEEARP value] and the incentive was \$[fill with total rebate amt minus SEEARP] would you have purchased [a furnace/a boiler] at that same time?

- 1 Yes
- 2 No
- 8 Don't know

T11b Do you think you would have been just as likely, less likely, or not at all likely to purchase the same high-efficiency [ECM furnace/ modulating boiler] if the rebate would have been \$[fill with total rebate amt minus SEEARP]?

- 1 Just as likely
- 2 Less likely
- 3 Not at all likely
- 8 Don't know

ASK T12 OF EVERYONE

T12 Do you think you would have been just as likely, less likely, or not at all likely to purchase the same high-efficiency [ECM furnace/ modulating boiler] if you had not received any rebate or financial assistance?

- 1 Just as likely
- 2 Less likely
- 3 Not at all likely
- 8 Don't know

T13 Using the same 0 to 10 scale, with 0 being very dissatisfied and 10 being very satisfied, please tell me how satisfied you are overall with the program?

_____ 0 to 10
88 Don't Know



T13a Why do you rate your overall level of satisfaction a *[SHOW RESPONSE]*?

[RECORD VERBATIM RESPONSE]

T14 What benefits, if any, have you realized in your home as a result of purchasing the [ECM furnace/boiler] through the program?

[DO NOT READ; INDICATE ALL THAT APPLY]

- 1 Reduced energy costs
- 2 Increased comfort
- 3 Increased safety
- 4 Better understanding of energy efficient options
- 5 Better understanding of maintenance issues
- 6 Helping the environment
- 7 No benefits
- 8 Other *[SPECIFY]*

T15 What changes to the program would you recommend?

[RECORD VERBATIM RESPONSE]

T16 Have you recommended the program to others?

- 1 Yes
- 2 No

Housing and Demographics

D1a We are almost finished. I just have a few additional questions about your household to make sure we are getting a representative sample of participants.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 9 Refused



D1b In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

D2 Including yourself, how many people currently live in your home year-round?

- _____ People
- 88 Don't know
- 99 Refused

(If D2=1)

D2a Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18–24 years old
- 3 25–34 years old
- 4 35–44 years old
- 5 45–54 years old
- 6 55–64 years old
- 7 65 or older
- 8 Don't know
- 9 Refused

(If D2>1)

D2b How many are in the following age groups? (TOTAL SHOULD EQUAL D2)

- ___ 5 years old or younger
- ___ 6 to 18 years old
- ___ 18–24 years old
- ___ 25–34 years old
- ___ 35–44 years old
- ___ 45–54 years old
- ___ 55–64 years old
- ___ 65 or older



D3 Are you currently. . . ?

- 1 Married
- 2 Widowed
- 3 Divorced
- 4 Separated
- 5 Never married
- 9 Refused

D4 What is the highest level of school you completed or the highest degree you received?

- 1 1 To 11
- 2 12th Grade No Diploma
- 3 High School Graduate or Equivalent (GED)
- 4 Some College or Technical School but No Degree
- 5 Associate/2-Year Degree In College (includes Technical School)
- 6 Bachelor's Degree (BA, AB, BS)
- 7 Master's Degree (MA, MS, MENG, MED, MSW, MBA)
- 8 Professional School (MD, DDS, DVM, LLB, JD)
- 9 Doctorate Degree (PHD, EDD)
- 10 Don't know
- 11 Refused

D5 How much does your household pay for monthly rent/mortgage?

- _____ Dollars
- 7777 Not applicable
- 8888 Don't know
- 9999 Refused

D6 Which category best describes your total household income in 2009 before taxes?
Please stop me when I get to the appropriate category.

- 1 \$9,999 or less
- 2 \$10,000 to less than \$15,000
- 3 \$15,000 to less than \$20,000
- 4 \$20,000 to less than \$30,000
- 5 \$30,000 to less than \$40,000
- 6 \$40,000 to less than \$50,000
- 7 \$50,000 to less than \$75,000
- 8 \$75,000 to less than \$100,000
- 9 \$100,000 to less than \$150,000
- 10 \$150,000 or more
- 98 Don't know
- 99 Refused



D7 GENDER *[RECORD, DO NOT ASK]*

- 1 Male
- 2 Female

[Thank you for your time. Do you have any questions or comments?]