PA Consulting Group

# State of Wisconsin Department of Administration Division of Energy

## Focus on Energy Statewide Evaluation

*Business Programs Impact Evaluation Report—Fiscal Year 2006*

Final: March 2, 2007

Evaluation Contractor: PA Government Services Inc.

Prepared by: Miriam L. Goldberg, J. Ryan Barry, Peter LeMoine, and Tammy Kuiken; KEMA Inc.

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*Business Programs Impact Evaluation Report*

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Acknowledgment: Ralph Prahl, Prahl & Associates, contributed critical review and analysis.

*This report is the property of the State of Wisconsin, Wisconsin Department of Administration, Division of Energy, and was funded through the Wisconsin Focus on Energy program.*

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# 1. EXECUTIVE SUMMARY

## 1.1 INTRODUCTION

This report presents the results of the Fiscal Year 2006 (FY06) statewide Focus on Energy Business Programs Impact Evaluation. The principal objective of the impact evaluation was to determine the energy and demand savings attributable to the program. The analysis calculates a set of adjustment factors that are used to determine FY06 evaluation verified gross and net energy savings for the statewide Focus on Energy Business Program and Wisconsin Public Service Business Programs.[1] Since the start of the program, the evaluation team has implemented eight rounds of data collection and document review to estimate net energy savings for Business Programs. The general impact evaluation approach has remained consistent using similar methods, protocols, and instruments.

## 1.2 KEY INDICATORS PRESENTED

Overall the Business Programs' achieved kWh, kW, and therm realization rates of 70 percent, 68 percent, and 51 percent, respectively. The realization rate is the ratio of achieved attributable savings to gross reported savings. The increases in the FY06 kWh and kW realization rates compared with FY05 are statistically significant at the 95 percent level of confidence.

- FY06 net verified energy savings amounted to 90,389,205 kWh/year, 18,757 kW/year, and 4,353,232 therms/year for Focus; and 2,286,934 kWh/year, 480 kW/year, and 11,958 therms/year for WPS. These are the energy savings that would not have occurred in the absence of the programs.
- Attribution rates increased dramatically in FY06. Attribution is the fraction of verified gross that is attributable to the program; that is the fraction of verified gross savings that would not have occurred without the program. This includes effects of program attributable energy efficiency measures implemented outside the program, where these effects are well documented. Compared with the previous fiscal year, the FY06 kWh and kW attribution factors increased by 21.8 and 22.4 percentage points, respectively. These increases are largely due to a change in methodology for CFL attribution and an increase in industrial attribution. CFL attribution is now determined using a market-based approach that includes free-ridership and spillover. The increase in industrial attribution may also be partly explained by a methodological change. In FY06, a large portion of industrial savings from prescriptive lighting measures were transferred to Channel Lighting. These projects have a tendency to have lower attribution rates. The increase in the therms attribution factors was not statistically significant at the 95 percent level of confidence.

[1] The statewide Focus on Energy Business Program and Wisconsin Public Service Business Programs began joint administration in FY06. In this report the joint programs will be referred to as the Business Programs. If program specification is necessary, the statewide Focus on Energy Business Program and Wisconsin Public Service Business Programs will be referred to separately as Focus and WPS, respectively.

- FY06 gross savings adjustment factors for kWh, kW, and therms are 98.5 percent, 97.9 percent, and 96.7 percent, respectively. The gross savings adjustment factor adjusts gross reported savings for installation rates, tracking system data entry errors, and errors in gross savings calculations including corrections to input assumptions. These high results indicate the program is accurately and appropriately calculating and reporting gross energy savings in WATTS.

### 1.2.1 Comparison across Years

Figures 1-1 through 1-3, show the gross savings, attribution and realization rates over time. These charts incorporate eight rounds of impact evaluation data collection (earlier fiscal years received multiple rounds of data collection) going back to the start of the program in April 2001. A cross-hatched bar in the charts indicates the increase or decrease of the adjustment factor compared to the previous fiscal year's result is statistically significant at the 95 percent level of confidence.

The Business Programs have been continuously evolving since inception. Many of these changes have resulted in methodological changes over the years that may have affected the trends in adjustment factors that may not reflect improvements or declines in program effectiveness. Three such changes in FY06 are with regards to CFLs. These changes had a significant effect on the kWh and kW adjustment factors for the Agriculture and Commercial sectors,[2] as well as the Business Programs overall.

1. Energy savings values for CFLs are deemed in FY06. The only potential adjustment for gross savings is based on the quantity of bulbs installed; that is, there is no other engineering adjustment for CFLs. In previous rounds other engineering adjustments have been made, such as, adjustments for actual delta watts and operating hours. The non-deemed methods used last round resulted in Agriculture and Commercial CFL ONLY kWh gross savings adjustment factors of 43 percent and 63 percent, respectively. [3] These were much lower than their non-CFL counterparts. The deemed values were developed with input from evaluation and are based on data collection in prior impact evaluations. Therefore the deeming method has resolved a prior source of discrepancy.

2. The attribution estimation method for CFLs changed in FY06 from one based on self-reported program response to market-based methods. The most current attribution factor calculated by the Residential evaluation team was used for all CFLs. This attribution rate is 100 percent.[4] This is a substantial increase compared to the CFL attribution factors calculated in FY05 with self-reported program response methods. Last round the self-reported program response

[2] Results by sector and channel are provided in Section 3: Energy Savings Results.

[3] FY05 CFL ONLY kW gross savings adjustment factors for Agriculture and Commercial were 54 percent and 65 percent, respectively.

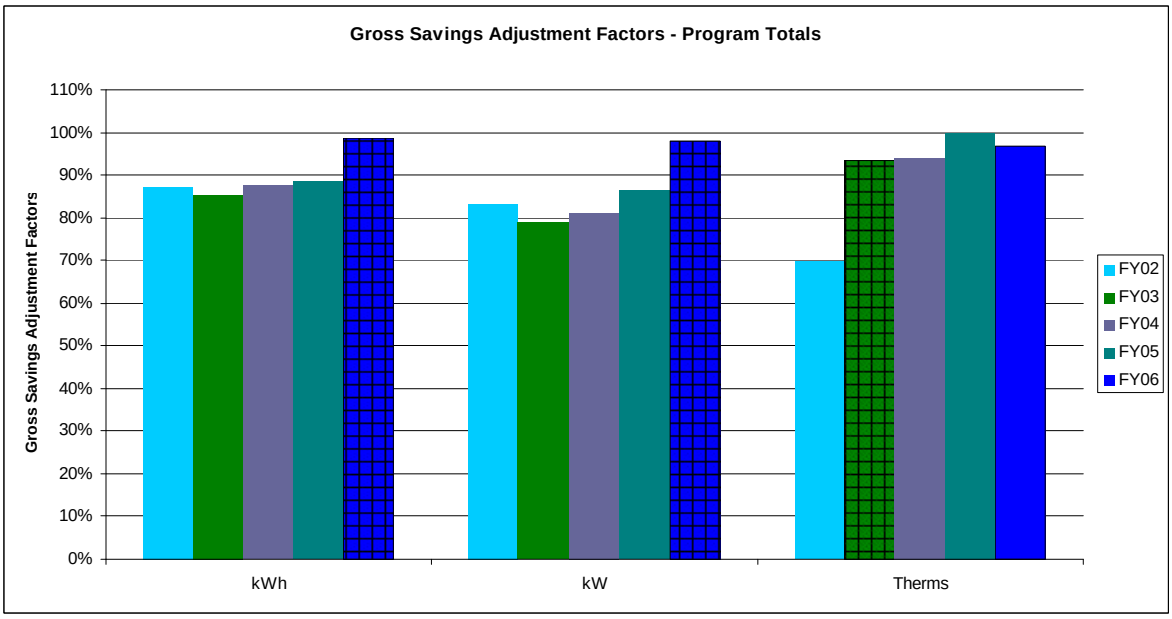
[4] "FY04/05 Net-to-Gross Savings Adjustments for CFLs Rewarded through the ENERGY STAR Products Program," memorandum to Oscar Bloch, Wisconsin DOA, dated January 11, 2006 (Revised Draft).

methods resulted in Agriculture and Commercial CFL ONLY kWh attribution adjustment factors of 69 percent and 57 percent, respectively.[5]

3. In FY06 all CFL savings tracked in the Rebate Database are being credited to the Channel Lighting sector. Therefore these CFLs are not used to calculate the adjustment factors for the Agriculture and Commercial sectors.

When the CFL effect is removed; that is, comparing only adjustment factors calculated with only non-CFL measures, there is no statistical difference between FY05 and FY06 gross savings adjustment factors for Agriculture and Commercial. This is also true for three of the four attribution adjustment factors for Agriculture and Commercial. The Agriculture sector's kW attribution adjustment factor increase is statistically significant at the 95 percent level of confidence. In sum the dramatic increase in kWh and kW gross savings adjustment factors for Agriculture, Commercial, and the program overall are primarily a result of methodological changes and secondarily to improvements in program effectiveness.

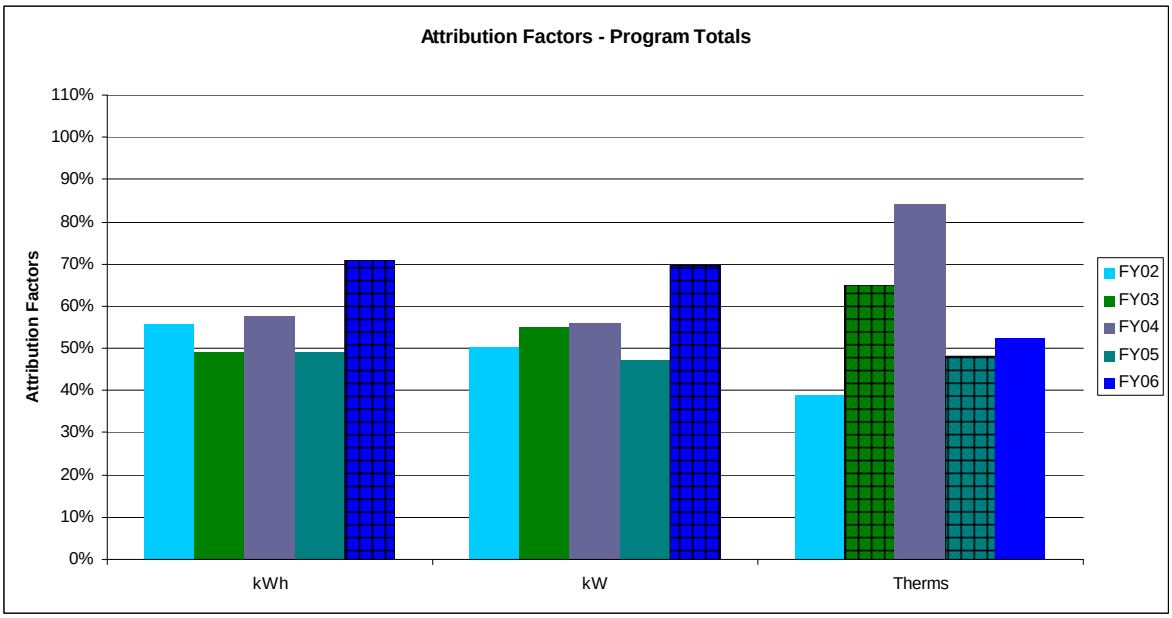
**Figure 1-1. Gross Savings Adjustment Factors by Energy Unit[a]**
**Comparison across Fiscal Years**




[a] As Differences over time reflect some methodological changes. FY06 increases in kWh and kW adjustment factors are primarily due to methodological changes.

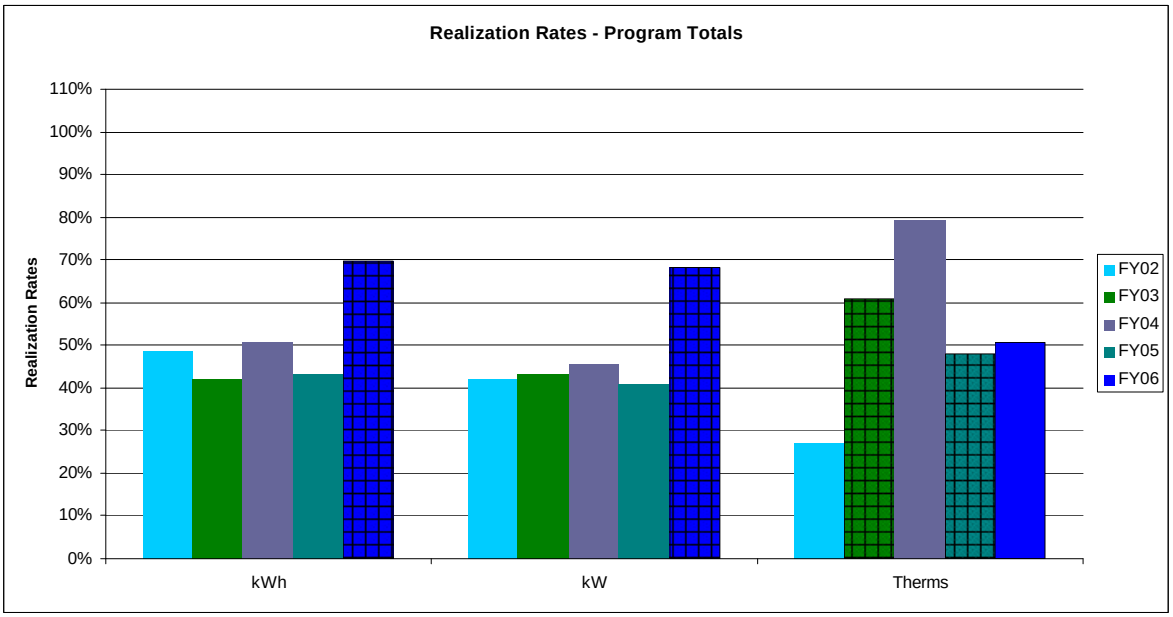
[5] FY05 CFL ONLY kW attribution factors from Agriculture and Commercial were 67 percent and 55 percent, respectively.

**Figure 1-2. Attribution Factors by Energy Unit[a]**
**Comparison across Fiscal Years**




[a] As Differences over time reflect some methodological changes. FY06 increases in kWh and kW adjustment factors are primarily due to methodological changes.

**Figure 1-3. Realization Rates by Energy Unit[a]**
**Comparison across Fiscal Years**




[a] As Differences over time reflect some methodological changes. FY06 increases in kWh and kW adjustment factors are primarily due to methodological changes.

### 1.2.2 Reasons for Discrepancies between Verified and Tracked Savings

The Table 1-1 shows the discrepancies between verified gross savings and tracking gross savings between the previous round (FY05, round 1) and this round (FY06) of evaluation.

The table shows that the number of adjustments made has decreased substantially from the previous round.

**Table 1-1. Discrepancies between Verified and Tracking Gross Savings**

| Discrepancy | Measures | | | |
|---|---|---|---|---|
| | FY05, Round 1 | | FY06 | |
| | Number | Percent | Number | Percent |
| Not installed in any quantity | 2 | 1% | 3 | 2% |
| Verified gross savings matches documented gross savings, but doesn't match tracking gross savings | 4 | 2% | 1 | 1% |
| Due to lack of documentation, verified gross savings calculated independently of tracking gross savings | 24 | 14% | 6 | 3% |
| Verified gross savings doesn't match documented gross savings | 84 | 48% | 22 | 13% |
| Verified gross savings is within 10% of tracking gross savings | 3 | 2% | 0 | 0% |
| Verified gross savings is more than 10% larger than tracking gross savings | 47 | 27% | 3 | 2% |
| Verified gross savings is more than 10% smaller than tracking gross savings | 39 | 22% | 20 | 11% |
| At least one discrepancy found for at least one applicable energy unit[a] | 89 | 51% | 26 | 15% |
| No discrepancy found for at least one applicable energy unit (verified gross savings matches tracking) | 110 | 63% | 165 | 94% |
| **Total engineering sample[b]** | **176** | | **183** | |

[a] As a measure may have more than one type of discrepancy, this does not equal the sum of the number of measures above.

[b] As a measure may have more than one applicable energy unit, this does not equal the sum of the number of measures with at least one discrepancy and no discrepancy immediately above.

The proportion of reviewed measures that were not installed in any quantity or had the wrong value entered in the program tracking database is approximately the same in this round as it was in the previous round. However, the proportion of projects calculated independently as a result of a lack of documentation dropped from 14 percent to 3 percent in this round.

Overall, the proportion of reviewed measures with at least one discrepancy for at least one applicable energy unit (kWh, kW, therms) decreased from 51 percent to only 15 percent between the previous round and this round. In addition, the proportion of reviewed measures for which no discrepancy was found for at least one applicable energy unit increased from 63 percent to 94 percent between these two rounds.

## 1.3 METHODS

KEMA uses the statistical procedure of ratio estimation to develop estimates of evaluation verified gross and net impacts. There are two basic steps to the process.

1. Verify energy savings in a sample of participating customers. For a sample of customers that installed energy efficient equipment during FY06, KEMA estimated actual energy savings under current conditions. For the larger custom projects that accounted for a significant portion of total tracked savings, KEMA conducted detailed energy reviews of how tracking gross savings were calculated. Program tracking data, program documentation, and customer interviews by an energy

engineer were part of the engineering reviews. For smaller projects a telephone interview was used to collect information on measure installation and program attribution.

2. Expand sample results to the population of customers. The sample results obtained in Step 1 are expanded to the population by calculating the ratios of verified-to-reported and attributable-to-verified for the sample. These ratios are then applied to the population.

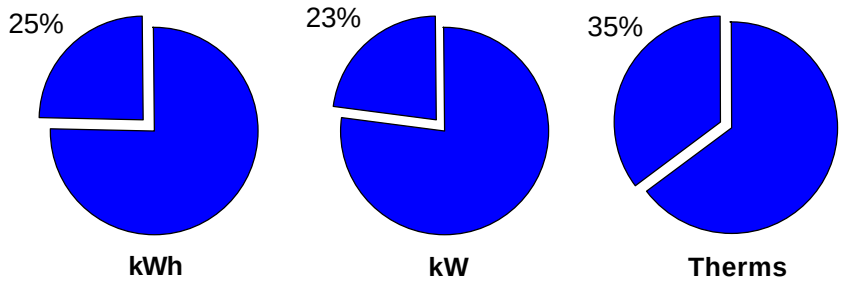
The adjustment factors estimated from the data collection and analysis include:

- Gross savings adjustment factor: This factor adjusts tracking gross savings for installation and changes based on the engineering review. Applying the gross savings adjustment factor to tracking gross savings produces the estimate of verified gross savings.
- Attribution factor: This factor adjusts verified gross savings for program attribution.
- Realization rate: This factor combines the gross savings adjustment factor and the attribution factor. (It is the ratio of net savings to tracking gross savings.)

The adjustment factors shown in the above charts are based on the data from eight rounds of data collection and documentation review. This current evaluation covers FY06 (July 1, 2005, through June 30, 2006).

During this round of data collection KEMA, obtain a total of 396 sample completes (320 CATI completes and 76 engineering completes). Figure 1-4 shows the percentage of population savings included in this round's sample.

**Figure 1-4. Percent of FY06 Tracking Gross Savings Included in Sample[6]**




[6] The percentage of tracking gross savings included in the sample are based solely on the data collected by KEMA and the KEMAFRAME. The implemented measures allocated to Itron for analysis are not included in Figure 1-4.

# 2. INTRODUCTION

This report presents the results of the Fiscal Year 2006 (FY06) statewide Focus on Energy Business Programs Impact Evaluation. The principal objective of the impact evaluation was to determine the energy and demand savings attributable to the program. The analysis calculates a set of adjustment factors that are used to determine FY06 evaluation verified gross and net energy savings for the statewide Focus on Energy Business Program and Wisconsin Public Service Business Programs.[7] Since the start of the program, the evaluation team has implemented eight rounds of data collection and document review to estimate net energy savings for Business Programs. The general impact evaluation approach has remained consistent using similar methods, protocols, and instruments.

In this section we summarize the evaluation approach and describe the organization of the remainder of the report.

## 2.1 OVERVIEW OF APPROACH

KEMA uses the statistical procedure of ratio estimation to develop estimates of evaluation verified gross and net impacts. There are two basic steps to the process.

1. ***Verify energy savings in a sample of participating customers.*** For a sample of customers that installed energy efficient equipment during FY06, KEMA estimated actual energy savings under current conditions. For the larger custom projects that accounted for a significant portion of total tracked savings, KEMA conducted detailed energy reviews of how tracking gross savings were calculated. Program tracking data, program documentation, and customer interviews by an energy engineer were part of the engineering reviews. For smaller projects a telephone interview was used to collect information on measure installation and program attribution.

2. ***Expand sample results to the population of customers.*** The sample results obtained in Step 1 are expanded to the population by calculating the ratios of verified-to-reported and attributable-to-verified for the sample. These ratios are then applied to the population.

The adjustment factors estimated from the data collection and analysis include:

- **Gross savings adjustment factor**: This factor adjusts tracking gross savings for installation and changes based on the engineering review. Applying the gross savings adjustment factor to tracking gross savings produces the estimate of verified gross savings.

[7] The statewide Focus on Energy Business Program and Wisconsin Public Service Business Programs began joint administration in FY06. In this report the joint programs will be referred to as the Business Programs. If program specification is necessary, the statewide Focus on Energy Business Program and Wisconsin Public Service Business Programs will be referred to separately as Focus and WPS, respectively.

- **Attribution factor**: This factor adjusts verified gross savings for program attribution.
- **Realization rate**: This factor combines the gross savings adjustment factor and the attribution factor. (It is the ratio of net savings to tracking gross savings.)

## 2.2 ORGANIZATION OF REPORT

Section 3 of the report presents a summary of the adjustments factors presented in this report followed by the energy savings results. The FY06 results are provided for kWh, kW, and therms by sector/channel and the Business Program overall. A statistical comparison of adjustment factors across years is also provided. After the adjustment factor results are a series of tables showing the application of adjustment factors to gross reported savings and a discussion of the discrepancies between gross reported and verified savings.

Section 4 of the report presents a more detailed discussion of the impact evaluation approach. This section includes adjustment factor definitions, sampling plan, and a brief description of major changes to the impact evaluation since the last report.

Following Section 4 is a series of appendices containing:

A. Series of tables and charts showing the FY06 installation and engineering adjustment factors.

B. Detailed sample design tables showing various components of the sample design.

C. Brief process write-up on the Agriculture Supplier surveys.

D. Discussion on the exploration of the supplier effect on attribution conducted using results of the Agriculture Supplier Survey and the General Supplier Survey.

E. Discussion on the incorporation of Non-CFL spillover with the existing attribution calculation.

F. Survey instruments (engineering, CATI, agricultural supplier, and general supplier).

# 3. ENERGY SAVINGS RESULTS

The primary objective of this evaluation is to calculate energy and demand savings attributable to the program for FY06. This section of the report provides a brief description of the impact evaluation's key indices, the results of the FY06 adjustment factor analysis, a statistical comparison of adjustment factors across years illustrated with a series of bar charts, a discussion of the discrepancies between gross and tracked energy savings, and the application of adjustment factors to gross reported savings.

## 3.1 DESCRIPTION OF KEY INDICES

The impact analysis determines the energy and demand savings attributable to the programs.

*Direct impacts* are the energy and demand savings of projects that have been implemented through the programs and are tracked by them.

*Indirect impacts* are energy and demand savings attributable to the programs but not tracked by them. These impacts result from market effects attributable to the programs.

The program reports its estimate of the gross savings due to each tracked measure. The gross savings is the difference between customers' energy use with the tracked measure(s) installed and what usage would have been without the measure(s). The impact analysis for a measure, group of measures, sector, or program area determines two key adjustment factors to the program-reported gross savings:

1. The gross savings adjustment factor. This is the ratio of gross savings as verified by the evaluation to the program-reported savings.
2. The attribution factor. This is the ratio of the total savings attributable to the program to the total tracked savings.

Both these factors are determined at the sector and channel level.

The gross savings adjustment factor for each sector is determined by selecting a sample of completed projects from the sector and conducting an engineering review of the program savings estimates for those projects. The sampling and review process is described in Section 4 – General Approach.

The attribution factor is determined by one of two methods:

- Market sales-based methods rely on aggregate data on total sales of a particular technology in Wisconsin, and compare this sales volume with a baseline estimate of the volume that would have been sold in the absence of the program. The accuracy of these methods depends on the completeness and accuracy of the sales data as well as the validity of the baseline estimate.
- Self-reported program response methods rely on responses to survey questions asking end users and/or vendors what they would have done in the absence of the program support. The accuracy of estimates based on self-reported data depends on the ability (and likely inclination) of the respondent to give accurate

answers, as well as on the validity of the statistical sampling and estimation process.

The impact analysis works from the savings estimates tracked by the Business Programs. The analysis provides the following information:

- Savings estimates by program as reported in the program tracking systems (WATTS and the Rebates database).
- Gross savings adjustment factors.
- Attribution adjustment factors.
- Verified gross savings developed by applying the gross adjustment factors to the savings estimates from the program tracking system.
- Verified net savings developed by applying the attribution adjustment factors to the verified gross savings.

The gross savings and attribution adjustment factors will be re-estimated based on new data collection following the end of the next fiscal year. The FY06 adjustment factors reported in this document will be used for further impact evaluation reporting until the next revised estimates are developed.

## 3.2 RESULTS

This section provides the results of the FY06 impact evaluation. The results are provided by the overall program and each sector/channel for kWh, kW, and therms. The results are presented in the following order.

1. Gross savings adjustment factor. This factor combines the installation rate and the engineering verification factor. It is the product of the Installation Rate and the Engineering Verification Factor.
2. Attribution factor. This factor adjusts verified gross savings for program attribution.
3. Realization rate. This factor simply combines the effect of all adjustment factors.

The installation rate and engineering verification factors, the components of the gross savings adjustment factor, are provided in Appendix A. The installation rate adjusts the gross savings for non-installation and the engineering verification factor adjusts gross savings for changes based on the engineering review.

### 3.2.1 FY06 Results Tables

The FY06 adjustment factors are provided in the tables below with indicators of statistical precision, the standard errors, and sample sizes. The adjustment factors are calculated using a SAS® macro provided by SAS for ratio estimation by domains. The procedure also returns the standard error of the estimate. The standard error is calculated using two methods.

The first method recognizes the sample as drawn from a finite population: the measures installed within the analysis period (July 1, 2005–June 30, 2006) with associated energy impacts in the program-tracking database. This calculation uses the Finite Population Correction (FPC) factor. This factor is a reduction to the calculated variance that accounts for the fact that a relatively large fraction of the population of interest has been observed directly and is not subject to uncertainty. It is appropriate to apply precision statistics, such as confidence intervals, based on the standard error calculated in this manner when quantifying the results of the program during the study period only.

The second calculation treats the population of interest as essentially infinite. Thus, the measures installed to date and the sample selected from them is regarded as random instances of a virtually infinite number of measures that could have been installed under the program. In this case, the FPC is not included. It is appropriate to apply standard errors calculated in this manner when applying the verification factors developed from this study to tracked savings from other years to estimate verified savings in those years.

In this report, the sampling frame includes all measure installed within the analysis period (July 1, 2005–June 30, 2006) with energy impacts associated with the program-tracking database. We use the FPC when applying the calculated adjustment factors to that period. We would not use the FPC when applying these adjustment factors to savings outside the analysis period; for example energy savings associated with measures installed in FY07. In the results tables in the next section these standard errors are labeled “Extrapolated.”

### 3.2.2 Comparison across Years Charts

Following the presentation of the FY06 adjustment factor estimates in the tables are three charts showing the same adjustment factors overtime. A separate chart is provided for kWh, kW, and therms. These charts incorporate eight rounds of impact evaluation data collection (earlier fiscal years received multiple rounds of data collection) going back to the start of the program in April 2001. A cross-hatched bar in the charts indicates the increase or decrease of the adjustment factor compared to the previous fiscal year’s result is statistically significant at the 95 percent level of confidence.

The Business Programs have been continuously evolving since inception. Many of these changes have resulted in methodological changes over the years that may have affected the trends in adjustment factors that may not reflect improvements or declines in program effectiveness. Three such changes in FY06 are with regards to CFLs. These changes had a significant effect on the kWh and kW adjustment factors for the Agriculture and Commercial sectors, as well as the Business Programs overall.

1. Energy savings values for CFLs are deemed in FY06. The only potential adjustment for gross savings is based on the quantity of bulbs installed; that is, there is no other engineering adjustment for CFLs. In previous rounds other engineering adjustments have been made, such as, adjustments for actual delta watts and operating hours. The non-deemed methods used last round resulted in Agriculture and Commercial CFL ONLY kWh gross savings adjustment factors of

43 percent and 63 percent, respectively. [8] These were much lower than their non-CFL counterparts.

2. The attribution estimation method for CFLs changed in FY06 from one based on self-reported program response to market-based methods. The most current attribution factor calculated by the Residential evaluation team was used for all CFLs. This attribution rate is 100 percent.[9] This is a substantial increase compared to the CFL attribution factors calculated in FY05 with self-reported program response methods. Last round the self-reported program response methods resulted in Agriculture and Commercial CFL ONLY kWh attribution adjustment factors of 69 percent and 57 percent, respectively.[10]
3. In FY06 all CFL savings tracked in the Rebates Database are being credited to the Channel Lighting sector. Therefore, these CFLs are not used to calculate the adjustment factors for the Agriculture and Commercial sectors.

Figure 3-4 and Figure 3-8 show an apples-to-apples FY05-FY06 comparison of Agriculture and Commercial sector kWh and kW adjustment factors with CFLs removed from the FY05 estimate. When the CFL effect is removed there is no statistical difference between FY05 and FY06 electric gross savings adjustment factors for Agriculture and Commercial. This is also true for three of the four electric attribution adjustment factors for Agriculture and Commercial. The Agriculture sector's kW attribution adjustment factor increase is statistically significant at the 95 percent level of confidence. In sum the dramatic increase in kWh and kW gross savings adjustment factors for Agriculture, Commercial, and the program overall are primarily a result of methodological changes and secondarily to improvements in program effectiveness.

## 3.3 GROSS SAVINGS ADJUSTMENT FACTORS BY SECTOR/CHANNEL

Table 3-1 shows the FY06 gross savings adjustment factors by sector and channel. The gross savings adjustment factors combine the installation rates and the engineering verification factors to adjust the tracking estimate of gross savings. The gross savings adjustment factors for electric savings are particularly high this fiscal year, ranging from 93 to 104 percent. The adjustment factors for therms are also high ranging from 88 to 102 percent.

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[8] FY05 CFL ONLY kW gross savings adjustment factors for Agriculture and Commercial were 54 percent and 65 percent, respectively.

[9] "FY04/05 Net-to-Gross Savings Adjustments for CFLs Rewarded through the ENERGY STAR Products Program," memorandum to Oscar Bloch, Wisconsin DOA, dated January 11, 2006 (Revised Draft).

[10] FY05 CFL ONLY kW attribution factors from Agriculture and Commercial were 67 percent and 55 percent, respectively.

**Table 3-1. Gross Savings Adjustment Factors by Sector/Channel**
**Based on Samples from Participants Who Installed a Measure during FY06**

| Segment | kWh | | | kW | | | Therms | | |
|---|---|---|---|---|---|---|---|---|---|
| | Gross Savings Adjustment | Standard Error[a] | | Gross Savings Adjustment | Standard Error[a] | | Gross Savings Adjustment | Standard Error[a] | |
| | | Jul05-Jun06 | Extrap-olated | | Jul05-Jun06 | Extrap-olated | | Jul05-Jun06 | Extrap-olated |
| Agriculture | 104% | 4.5% | 4.6% | 93% | 6.4% | 6.5% | 96% | 2.1% | 2.4% |
| Commercial | 97% | 1.7% | 2.0% | 98% | 1.5% | 1.5% | 97% | 1.5% | 1.8% |
| Industrial | 99% | 0.8% | 0.9% | 99% | 0.7% | 0.8% | 102% | 2.5% | 3.6% |
| Institutional | 96% | 1.8% | 2.2% | 98% | 0.9% | 1.3% | 88% | 5.2% | 6.1% |
| Channel EHCI | 96% | 1.8% | 1.9% | 99% | 1.2% | 1.2% | 92% | 0.8% | 0.8% |
| Channel Lighting | 98% | 1.1% | 1.1% | 98% | 1.2% | 1.2% | 98% | 2.0% | 2.1% |
| Business Programs Overall | 99% | 0.7% | 0.7% | 98% | 0.9% | 0.9% | 97% | 2.0% | 2.4% |

[a] The standard errors shown are conservative; they are calculated using an approximation that overstates the standard error.

Figure 3-1 through Figure 3-3 show the gross savings adjustment factors by sector and channel overtime for kWh, kW, and therms. The kWh and kW gross savings adjustment factors increase significantly in FY06 for Agriculture and Commercial sectors as well as for the program overall.

The slight increases and decreases in FY06 for Industrial and Institutional kWh and kW gross savings adjustment factors from the previous year were not statistically at the 95 percent level of confidence. The electric gross savings adjustment factors for these sectors continue to be high and not a reason for concern.

**Figure 3-1. kWh Gross Savings Adjustment Factors by Sector/Channel**
**Comparison across Years**

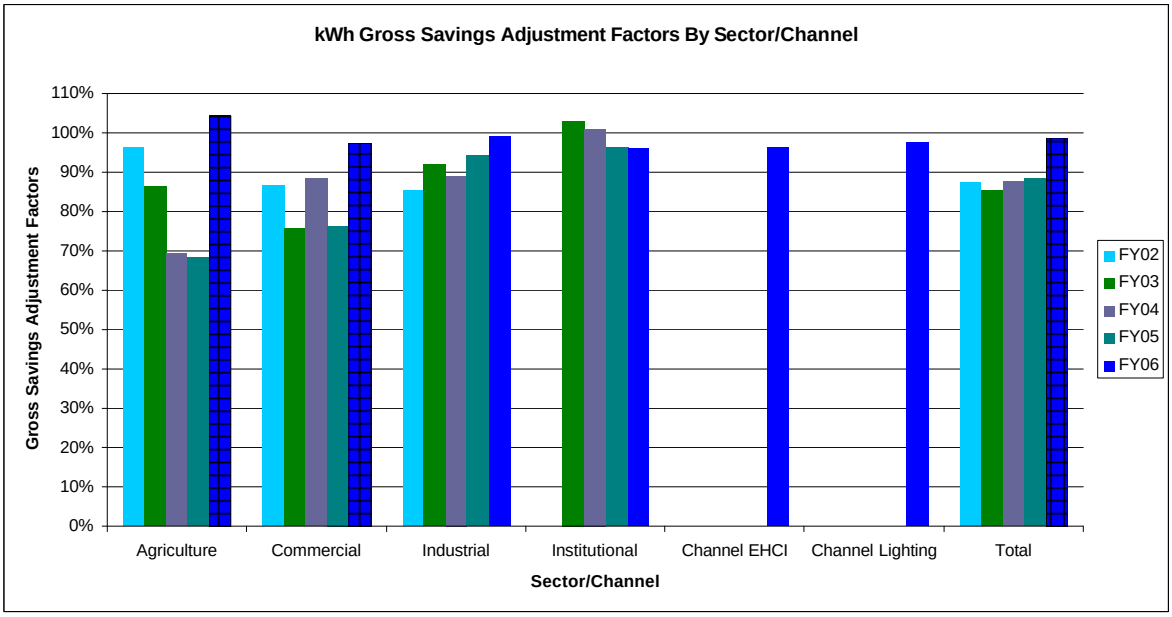


**Figure 3-2. kW Gross Savings Adjustment Factors by Sector/Channel Comparison across Years**

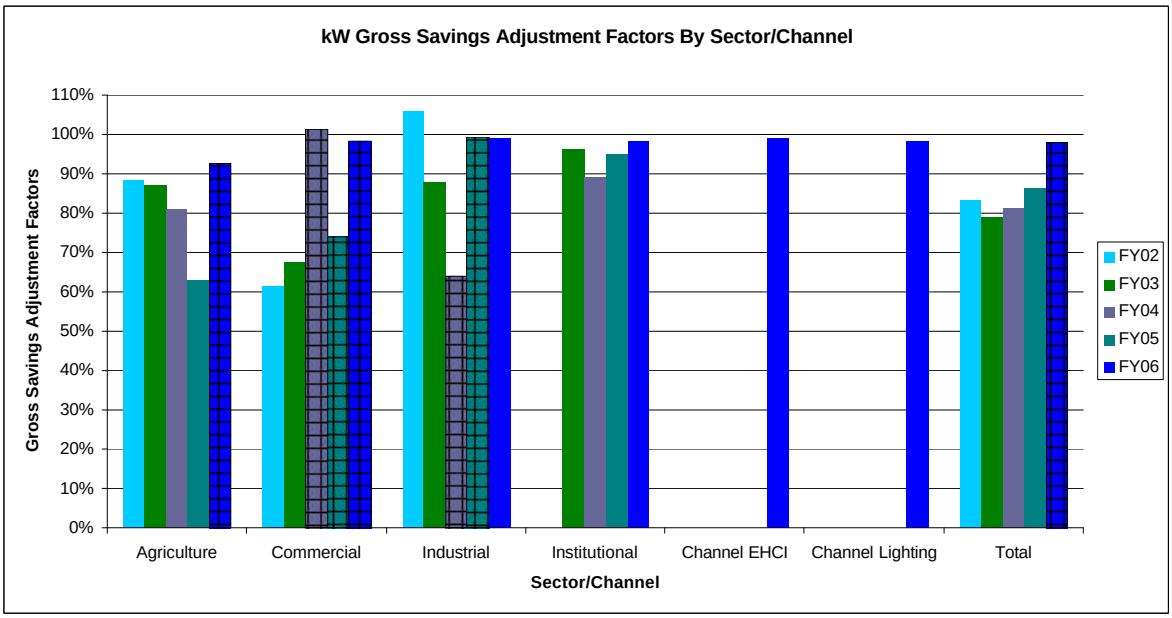
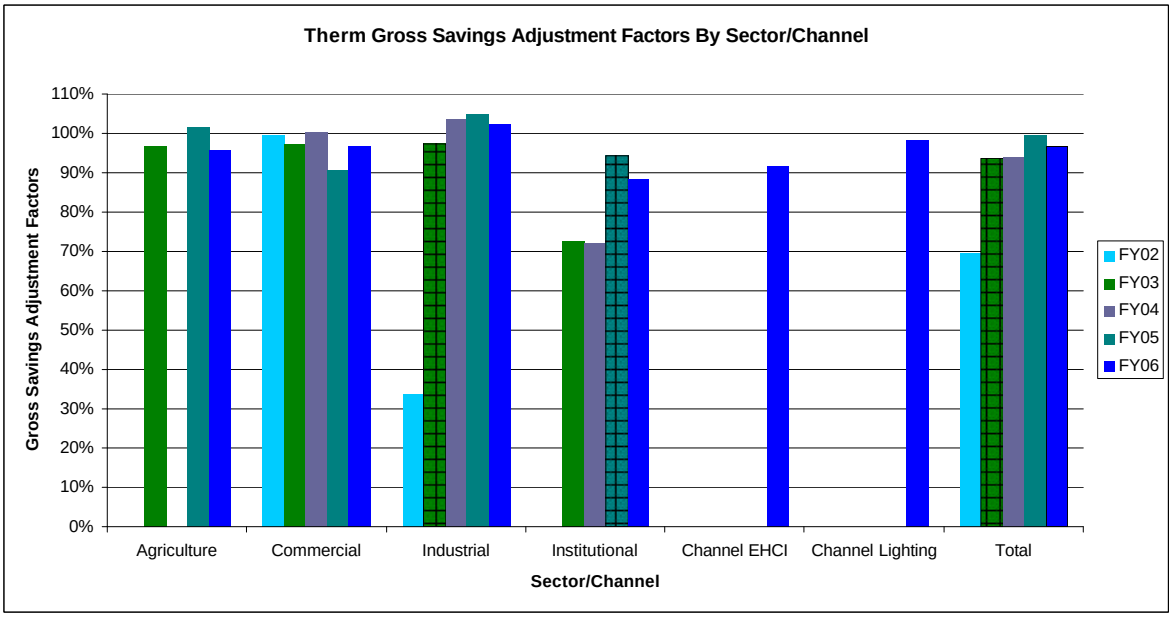


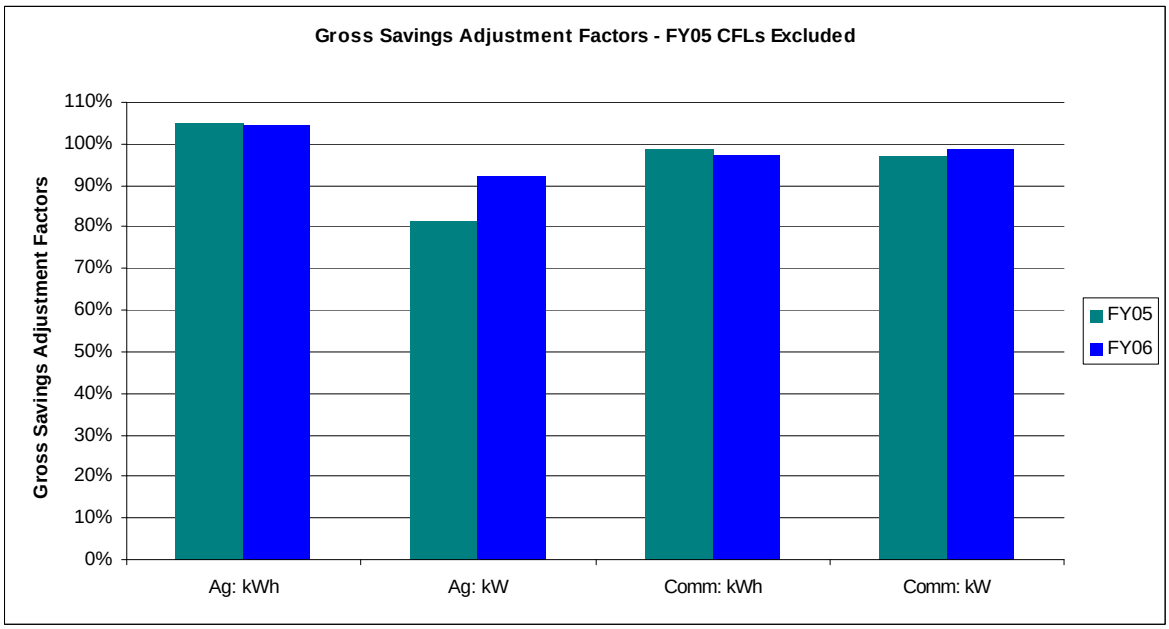

**Figure 3-3. Therm Gross Savings Adjustment Factors by Sector/Channel Comparison across Years[a]**




[a] For the agriculture segment, the FY04 adjustment factor for therms was estimated with inadequate accuracy. Hence, the results are essentially uninformative and they are not reported. In part, the agriculture segment savings adjustment factor for therms was difficult to estimate with adequate accuracy because many of the agriculture segment therms savings (both tracking and verified) were negative due to fuel switching (from electricity to gas).

The large increases in Agriculture and Commercial gross savings adjustment factors for kWh and kW are driven largely by the aforementioned change to deemed values for CFLs. The FY05 adjustment factors shown above in Figure 3-1 and Figure 3-2 for Agriculture and Commercial include CFLs. In the previous impact evaluation the Agriculture CFL ONLY gross savings adjustment factors for kWh and kW were 43 percent and 54 percent, respectively. For Commercial the CFL ONLY gross savings adjustment factors were 63 percent and 65 percent, respectively. As shown below in Figure 3-4, when CFLs are removed from the FY05 analysis we have a much different result. The differences between FY05 and FY06 gross savings adjustment factors are not statistically significant at the 95 percent level of confidence.

**Figure 3-4. Gross Savings Adjustment Factors**
**Agriculture and Commercial Non-CFLs**




## 3.4 ATTRIBUTION FACTORS BY SECTOR/CHANNEL

The FY06 attribution factors by sector and channel are provided in Table 3-2. The FY06 attribution factors for the program overall are 71 percent, 70 percent, and 53 percent for kWh, kW, and therms, respectively.

**Table 3-2. Attribution Factors by Sector/Channel**
**Based on Samples from Participants Who Installed a Measure during FY06**

| | kWh | | | | kW | | | | Therms | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Attribution | Standard Error | | | Attribution | Standard Error | | | Attribution | Standard Error | |
| Segment | n | Adjustment Factor | Jul05-Jun06 | Extrap-olated | n | Adjustment Factor | Jul05-Jun06 | Extrap-olated | n | Adjustment Factor | Jul05-Jun06 | Extrap-olated |
| Agriculture | 71 | 51% | 3.0% | 3.4% | 65 | 45% | 3.7% | 4.1% | 19 | 60% | 9.5% | 10.9% |
| Commercial | 45 | 60% | 8.4% | 10.9% | 30 | 58% | 8.6% | 9.6% | 39 | 51% | 8.7% | 11.9% |
| Industrial | 48 | 80% | 6.4% | 7.2% | 43 | 77% | 6.4% | 7.1% | 27 | 37% | 8.9% | 12.6% |
| Institutional | 36 | 65% | 8.1% | 9.6% | 28 | 58% | 5.4% | 6.9% | 51 | 58% | 6.6% | 8.2% |
| Channel EHCI | 15 | 37% | 6.2% | 6.3% | 7 | 43% | 5.7% | 5.8% | 21 | 85% | 7.0% | 7.1% |
| Channel Lighting | 121 | 72% | 10.4% | 10.5% | 118 | 75% | 9.9% | 10.0% | 6 | 63% | 23.5% | 24.2% |
| Business Programs Overall | 336 | 71% | 4.6% | 4.9% | 291 | 70% | 4.4% | 4.6% | 163 | 53% | 7.0% | 8.6% |

Figure 3-5 through Figure 3-7 show the attribution factors by sector and channel overtime for kWh, kW, and therms. The kWh and kW attribution adjustment factors for the Industrial sector increased from 43 percent to 80 percent and 38 percent to 77 percent, respectively. These increases are statistically significant at the 95 percent level of significance. No other sector experiences a statistically significant change from the previous year. The dramatic increase in the Industrial sector's electric attribution factors are most likely a consequence of the following contributing factors.

- The program is determined to increase attribution levels. They have requested and received numerous evaluation reports and presentations focusing on methods to improve attribution (i.e., Measure Review; Delivery Review; End-use Specific Attribution Factors; Behind-the-Scenes Look at Attribution). The potential transition to net savings goals may have intensified this interest.
- In FY06, a large portion of industrial savings from prescriptive lighting measures were transferred to Channel Lighting. Nearly all of these projects are non-CFLs and have a tendency to have lower attribution rates.
- The Energy Advisor survey provides energy advisors the opportunity to record various aspects of their interaction with the customer. It serves as a reminder to target projects that may not have occurred without their efforts. It also provides the Energy Advisor with a clear understanding of what evaluation is looking at to determine program attribution.
- The Energy Advisor survey provides evaluation with additional information to be considered as part of the impact evaluation. KEMA found these surveys had little effect on the implementation of the participant interview. This is largely a result of the majority of contacts being very informed regarding their projects. In general, the contacts knew exactly what they were talking about and no major contradictions were noted by KEMA engineers performing the interviews. The surveys are helpful in cases were the contact is no longer with the company or if the contact is further up the company hierarchy and not involved in the day-to-day operation of the equipment.
- Energy advisors are gaining a better understanding and appreciation for program attribution.

Therm attribution rates did not change for any sector compared with FY05.

**Figure 3-5. kWh Attribution Factors by Sector/Channel Comparison across Years**

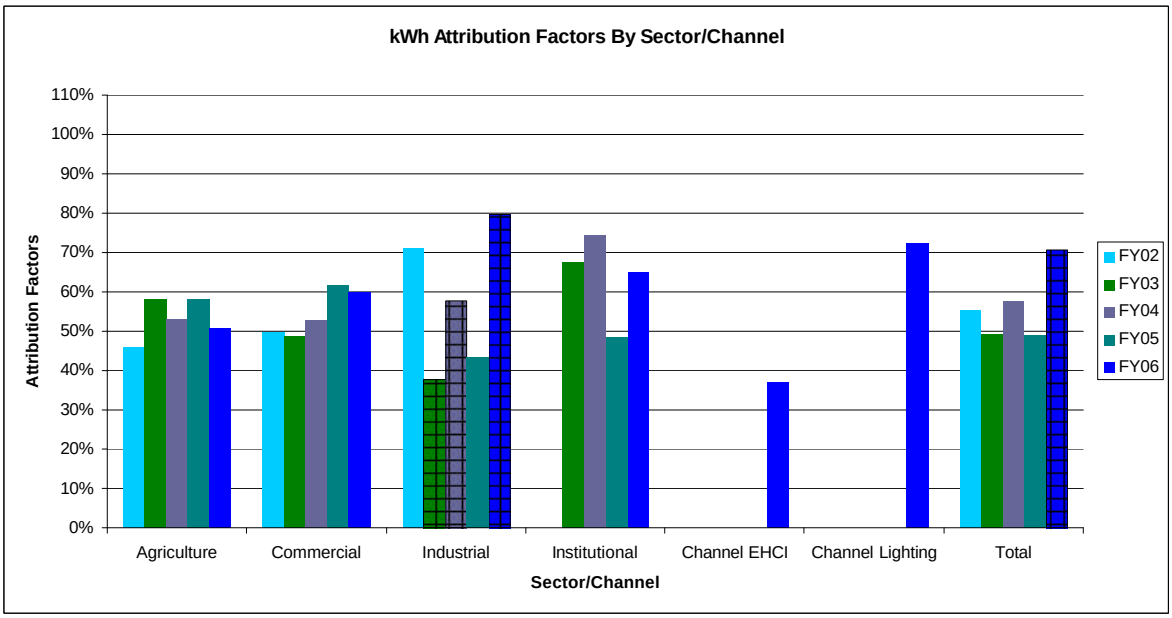



**Figure 3-6. kW Attribution Factors by Sector/Channel Comparison across Years**

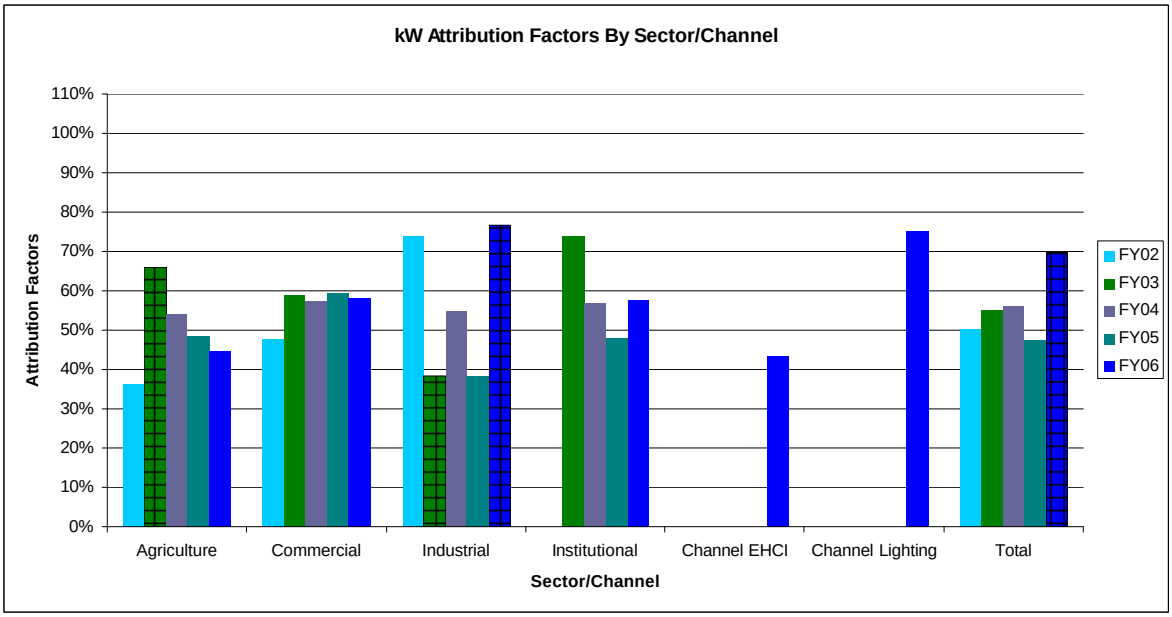
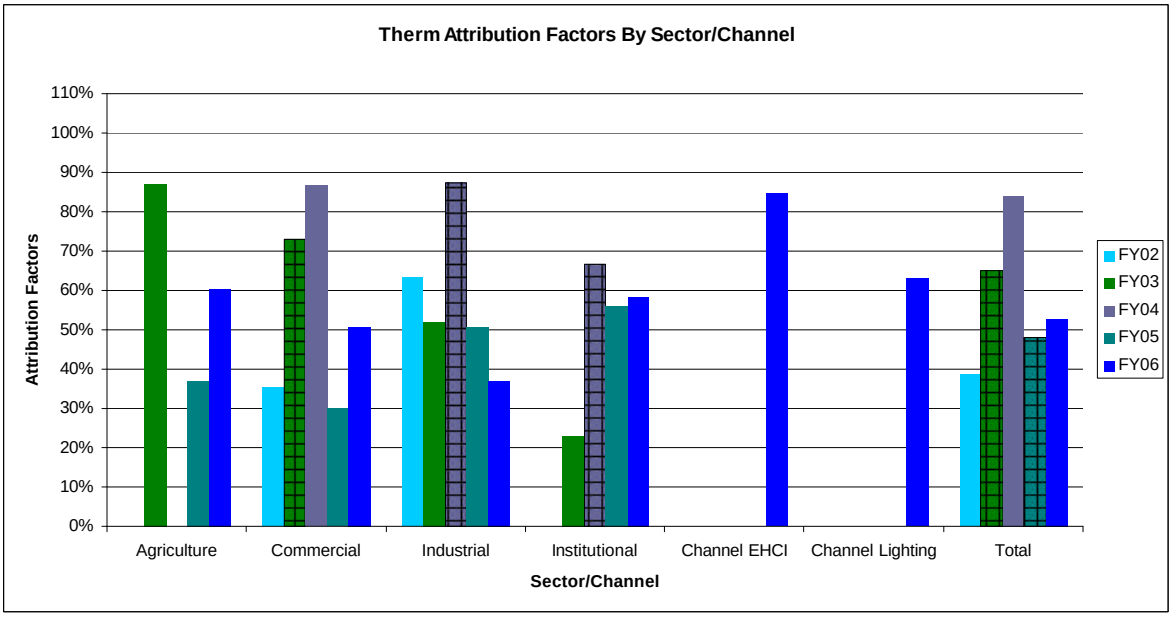


**Figure 3-7. Therm Attribution Factors by Sector/Channel Comparison across Years[a]**

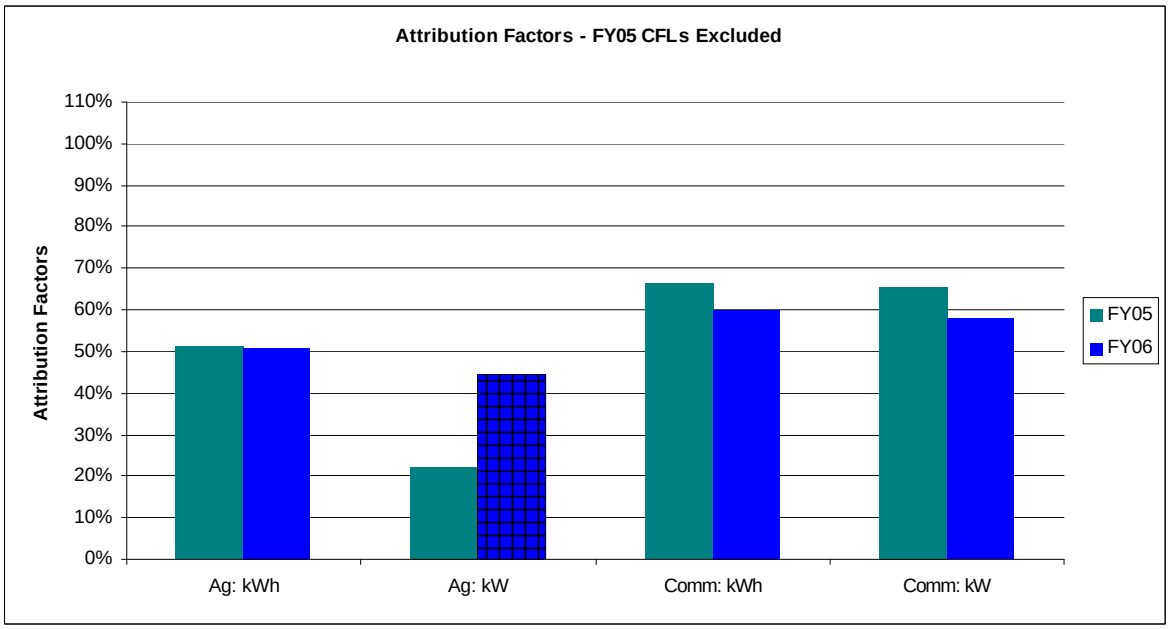



[a] For the agriculture segment, the FY04 adjustment factor for therms was estimated with inadequate accuracy. Hence, the results are essentially uninformative and they are not reported. In part, the agriculture segment savings adjustment factor for therms was difficult to estimate with adequate accuracy because many of the agriculture segment therms savings (both tracking and verified) were negative due to fuel switching (from electricity to gas).

Although Figures 3-5 and 3-6 show no statistically significant changes in the Agriculture and Commercial sector attribution adjustment factors for kWh and kW, it is worth a closer look in light of the major changes in the handling of CFLs. As mentioned above, in FY05 Agriculture and Commercial sector adjustment factors are calculated with CFLs, while in FY06 CFLs are included in the Channel Lighting adjustment factors. When CFLs are removed from the calculation of the FY05 attribution factors there is a statistically significant change for only one of the four factors. The Agriculture sector's kW attribution adjustment factor increase from 22 percent to 45 percent is statistically significant at the 95 percent level of confidence. The low FY05 kW attribution was likely an anomaly,[11] the higher FY06 results are inline with the kWh results and appears to be on track.

[11] FY05 kW attribution is based on 15 customers with low attribution results. The corresponding FY05 kWh attribution is much higher and driven largely by high attribution for three customers with large kWh savings and zero kW savings.

**Figure 3-8. Attribution Factors**
**Agriculture and Commercial Non-CFLs**




## 3.5 REALIZATION RATES BY SECTOR/CHANNEL

Table 3-3 shows the FY06 realization rates by sector and channel. The realization rates combine the effect of the gross savings adjustment factors and the attribution factors.

**Table 3-3. Realization Rates by Sector/Channel**
**Based on Samples from Participants Who Installed a Measure during FY06**

| Segment | Realization Rate | Standard Error[a] Jul05-Jun06 | Standard Error[a] Extrap-olated | Realization Rate | Standard Error[a] Jul05-Jun06 | Standard Error[a] Extrap-olated | Realization Rate | Standard Error[a] Jul05-Jun06 | Standard Error[a] Extrap-olated |
|---|---|---|---|---|---|---|---|---|---|
| Agriculture | 53% | 3.9% | 4.3% | 41% | 4.5% | 4.8% | 58% | 9.2% | 10.5% |
| Commercial | 58% | 8.3% | 10.7% | 57% | 8.5% | 9.5% | 49% | 8.5% | 11.6% |
| Industrial | 79% | 6.4% | 7.1% | 76% | 6.4% | 7.1% | 38% | 9.2% | 13.0% |
| Institutional | 62% | 7.8% | 9.3% | 57% | 5.3% | 6.9% | 52% | 6.6% | 8.1% |
| Channel EHCI | 36% | 6.0% | 6.2% | 43% | 5.6% | 5.7% | 78% | 6.4% | 6.5% |
| Channel Lighting | 71% | 10.2% | 10.3% | 74% | 9.8% | 9.8% | 62% | 23.1% | 23.8% |
| Business Programs Overall | 70% | 4.5% | 4.8% | 68% | 4.3% | 4.6% | 51% | 6.9% | 8.4% |

[a] The standard errors shown are conservative; they are calculated using an approximation that overstates the standard error.

Figure 3-9 through Figure 3-11 show the realization rates by sector and channel overtime for kWh, kW, and Therms.

**Figure 3-9. kWh Realization Rates by Sector/Channel Comparison across Years**

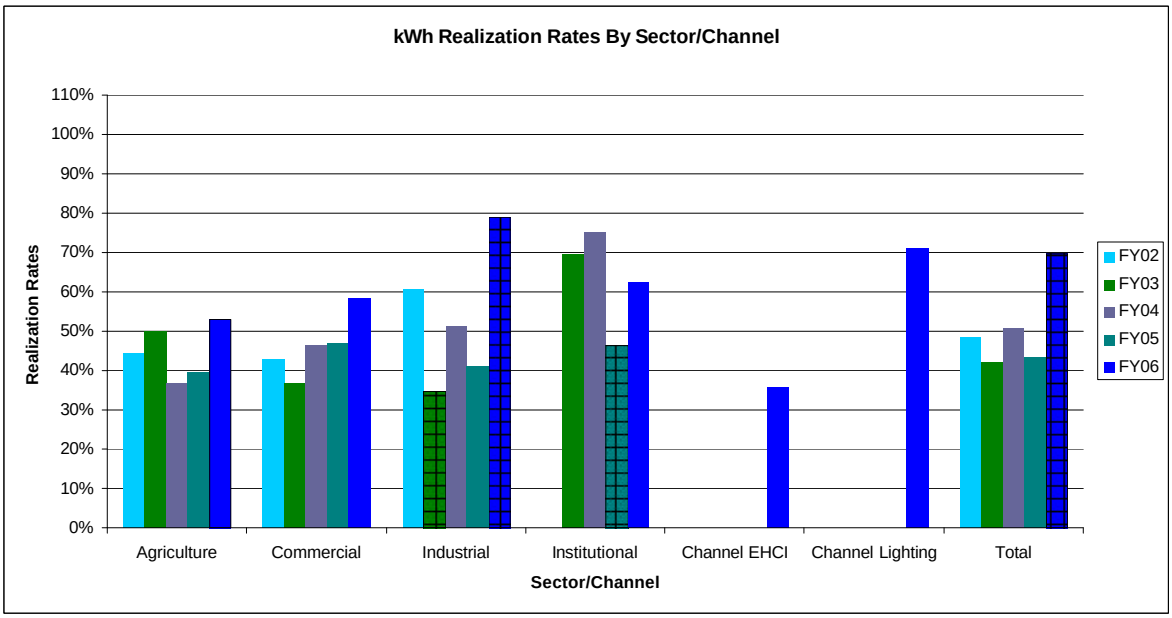



**Figure 3-10. kW Realization Rates by Sector/Channel Comparison across Years**

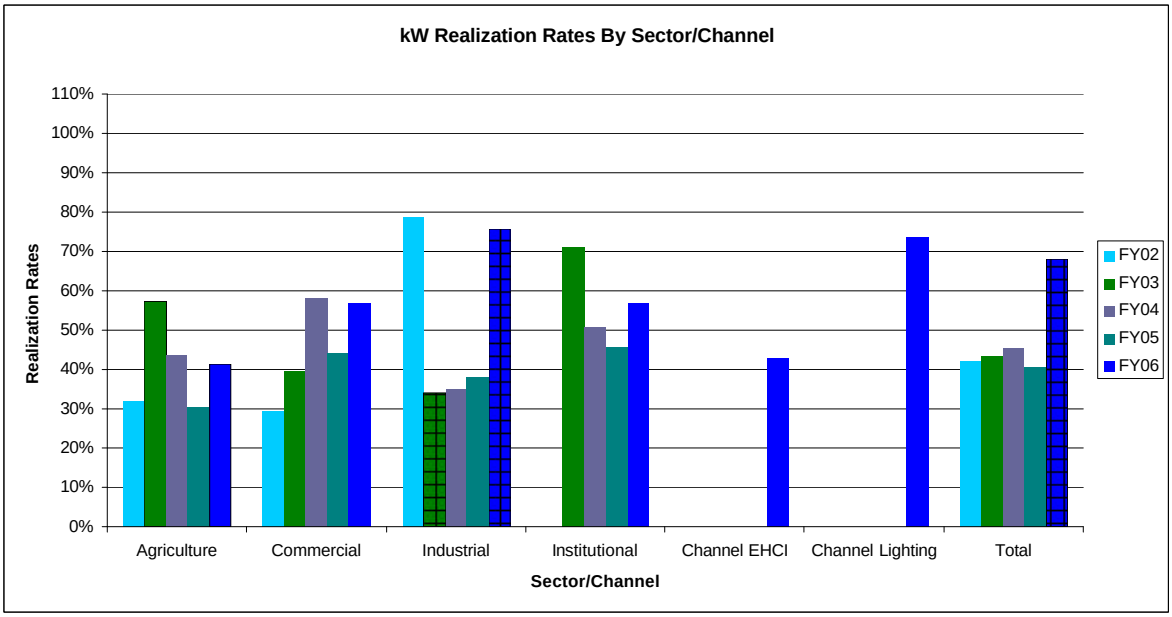
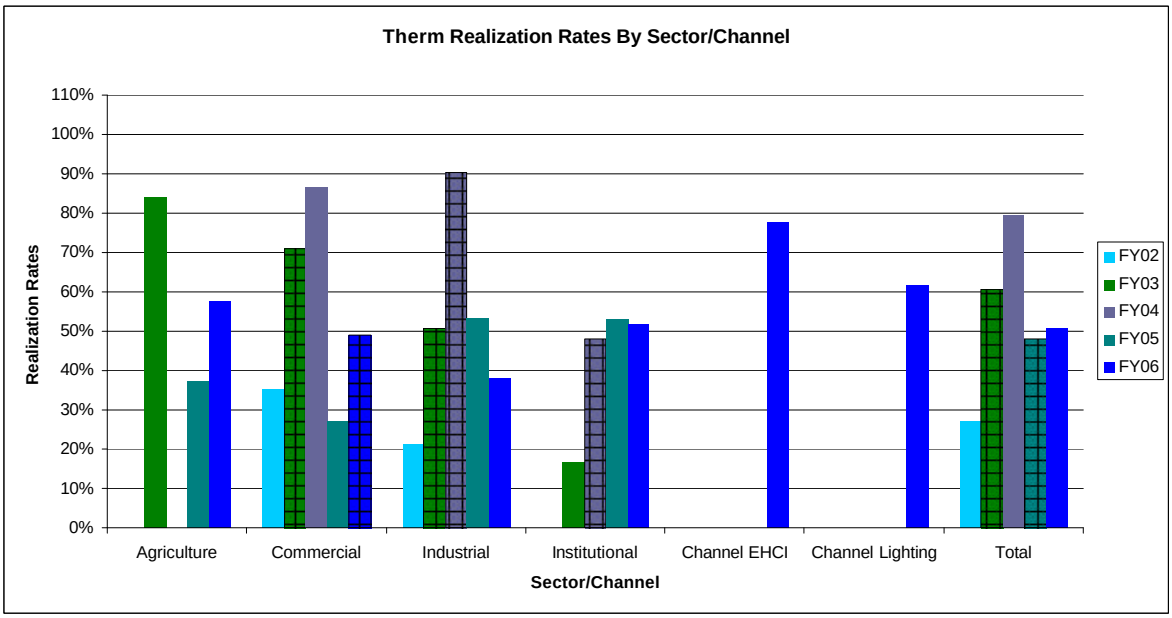


**Figure 3-11. Therm Realization Rates by Sector/Channel Comparison across Years[a]**




[a] For the agriculture segment, the FY04 adjustment factor for therms was estimated with inadequate accuracy. Hence, the results are essentially uninformative and they are not reported. In part, the agriculture segment savings adjustment factor for therms was difficult to estimate with adequate accuracy because many of the agriculture segment therms savings (both tracking and verified) were negative due to fuel switching (from electricity to gas).

## 3.6 ENGINEERING VERIFICATION FINDINGS

The engineering review determined the verified gross savings for each measure reviewed in the engineering sample.[12] An evaluation engineer conducted a review of the energy savings estimates for each project installed by customers that were part of the engineering sample and completed a telephone survey. The engineer used information from the telephone survey and the project paperwork to determine whether the reported savings were reasonable.

The review had two main components:

*Evaluation of the calculation parameters.* The engineer reviewed the parameters used in the energy savings equations to determine whether they were reasonable. Some parameters (i.e., motor power, operating hours) were verified through information gathered from the site contact over the telephone. Other parameters were verified using secondary sources (i.e., light fixture wattage, cooling degree days).

*Evaluation of the calculation method.* The engineer reviewed the method used to calculate the energy savings. Most energy savings estimates can be calculated in a variety of ways and still produce reasonable, though not equal, energy savings

[12] All measures that are reviewed by an engineer on the evaluation team are considered part of the engineering sample.

values. The engineer reviewed the method used for each project to ensure that it followed the general conventions of energy savings calculations and could produce a reasonably accurate result.

For some measures, the engineering review process produced an energy savings estimate that differed from the estimate reported by the program. The program savings estimate was judged "reasonable" if the engineering estimate was within 10 percent of the program estimate. For example, suppose a prescriptive lighting project was installed and the prescriptive savings and operating hours assumptions were used for the program energy savings estimate. The engineer collected the actual operating hours of the lights during the telephone survey and used that value, not the prescriptive estimate, to estimate the energy savings resulting from that measure. If the calculated energy savings were within 10 percent of the program prescriptive estimate, the program estimate was deemed "reasonable" and the verified gross energy savings were set equal to the program savings. If the calculated savings were greater than 10 percent different from the program prescriptive estimate the verified gross energy savings were set equal to the engineering review estimate.[13]

Table 3-4, Table 3-5, and Table 3-6 show the degree of difference between the program savings estimate and the verified savings estimate for each project that was part of the engineering review. For the majority of the measures installed, the program savings values were a reasonable estimate of the verified project savings.

**Table 3-4. Degree of Difference between Program and Verified kWh Savings**

| Percent Change | # of Projects | | |
|---|---|---|---|
| | Verified > Reported | Verified < Reported | Total |
| Not Installed | N/A | N/A | 1 |
| None | N/A | N/A | 115 |
| 10% to 20% | 0 | 1 | 1 |
| 20% to 30% | 0 | 0 | 0 |
| 30% to 50% | 0 | 6 | 6 |
| 50% to 100% | 0 | 3 | 3 |
| 100% or Greater | 1 | 1 | 2 |
| **Total** | **1** | **11** | **128** |

[13] Calculated savings less than 10 percent different from the program were also set to engineering review estimate if one of the three potential energy unit (kWh, kW, therms) calculations for the same measure was 10 percent different from the engineering review estimate.

**Table 3-5. Degree of Difference between Program and Verified kW Savings**

| Percent Change | # of Projects | | |
|---|---|---|---|
| | Verified > Reported | Verified < Reported | Total |
| Not Installed | N/A | N/A | 1 |
| None | N/A | N/A | 79 |
| 10% to 20% | 0 | 0 | 0 |
| 20% to 30% | 0 | 0 | 0 |
| 30% to 50% | 0 | 2 | 2 |
| 50% to 100% | 0 | 2 | 2 |
| 100% or Greater | 1 | 1 | 2 |
| **Total** | **1** | **5** | **86** |

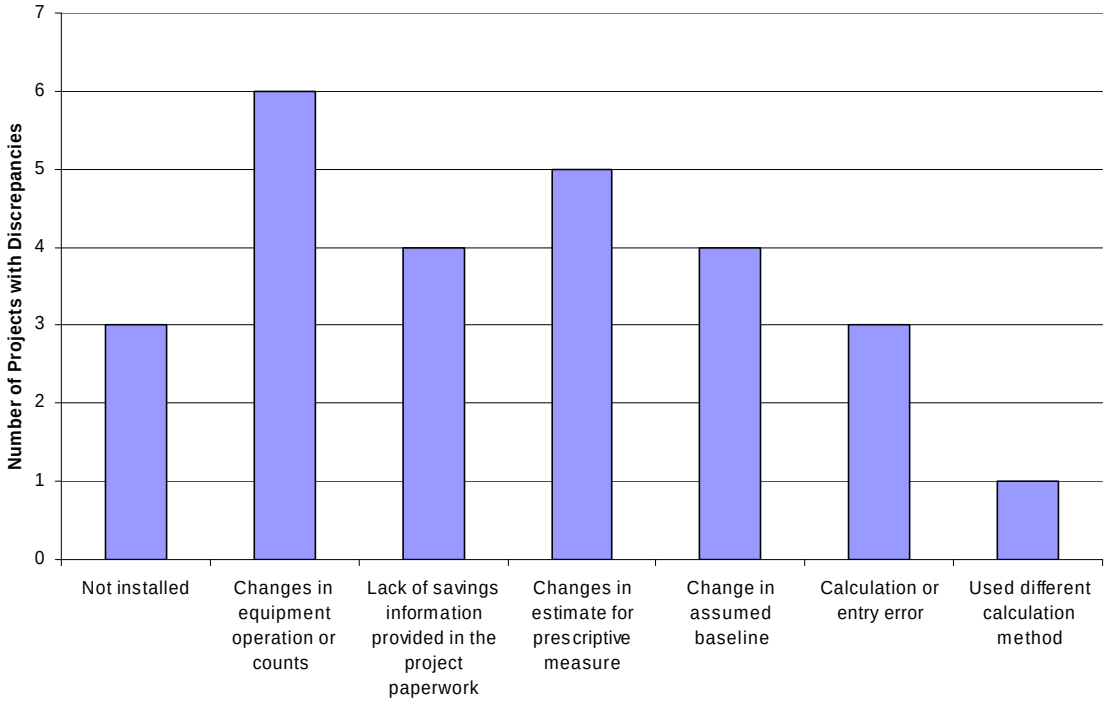
**Table 3-6. Degree of Difference between Program and Verified Therm Savings**

| Percent Change | # of Projects | | |
|---|---|---|---|
| | Verified > Reported | Verified < Reported | Total |
| Not Installed | N/A | N/A | 2 |
| None | N/A | N/A | 66 |
| 10% to 20% | 0 | 3 | 3 |
| 20% to 30% | 0 | 0 | 0 |
| 30% to 50% | 0 | 1 | 1 |
| 50% to 100% | 1 | 4 | 5 |
| 100% or Greater | 0 | 2 | 2 |
| **Total** | **1** | **10** | **79** |

Most of the adjustments to the program energy savings estimates resulted in a decrease in energy savings.

Figure 3-12 and Table 3-7 display the number of sample projects in which KEMA adjusted the savings estimate. There were 26 such instances out of a sample of 183 measures. Eleven of the 26 discrepancies were attributable to either changes in equipment operation or counts or changes in an estimate for a prescriptive measure. This level of discrepancy is to be expected; it constitutes the primary justification for evaluations of this type.

**Figure 3-12. Number of Projects with Discrepancies between Program and Verified Savings**




In four cases, the information provided for a given customer did not include enough information about the project or its parameters to allow the savings to be recreated. In all four cases, the verified savings were calculated based on the information that could be collected through conversations with the site contact or from secondary sources. Four other cases had adjustments because of changes in the assumed baseline and three had changes because of a calculation or data entry error. Three cases were not installed and one case was adjusted because of a result calculated using a different method.

Table 3-7 shows a more detailed description of the discrepancies between the program and verified savings for each category in Figure 3-12.

**Table 3-7. Detailed Description of Discrepancies between Program and Verified Savings**

| Discrepancies | # of Projects | | |
|---|---|---|---|
| | Verified > Tracked | Verified < Tracked | Total |
| Not installed | | | |
| Equipment was not installed in any quantity | N/A | N/A | 3 |
| Changes in equipment operation or counts | | | |
| Change in equipment count | 0 | 3 | 3 |
| Change in equipment operation | 1 | 1 | 2 |
| Change in equipment installed | 0 | 1 | 1 |
| Lack of savings information provided in the project paperwork | | | |
| Not enough information to recreate savings estimate | 1 | 3 | 4 |
| Changes in estimate for prescriptive measure | | | |
| Change in operating hours | 0 | 4 | 4 |
| Change in control assumption | 1[a] | 0 | 1 |
| Change in assumed baseline | | | |
| Changed to account for measure interactions | 0 | 3 | 3 |
| Used standard efficiency for natural replacement | 0 | 1 | 1 |
| Calculation or entry error | | | |
| Verified savings equal to other savings in the documentation | 0 | 1 | 1 |
| Calculated savings to replace the same piece of equipment twice | 0 | 2 | 2 |
| Used different calculation method | | | |
| Used different calculation method | 0 | 1 | 1 |
| **Total** | **2** | **20** | **26** |

[a] Verified kWh savings were less than tracked and verified kW savings were greater than tracked.

Table 3-8 summarizes the sources of discrepancies found between verified gross savings and program estimates for all measures in the engineering sample in a slightly different manner.[14] Table 3-8 also compares the results for FY06 to the results for FY05.

**Table 3-8. Discrepancies between Verified and Tracking Savings**

| Discrepancy | Measures | | | |
|---|---|---|---|---|
| | FY05, Round 1 | | FY06 | |
| | Number | Percent | Number | Percent |
| Not installed in any quantity | 2 | 1% | 3 | 2% |
| Verified gross savings matches documented gross savings, but doesn't match tracking gross savings | 4 | 2% | 1 | 1% |
| Due to lack of documentation, verified gross savings calculated independently of tracking gross savings | 24 | 14% | 6 | 3% |
| Verified gross savings doesn't match documented gross savings | 84 | 48% | 22 | 13% |
| Verified gross savings is within 10% of tracking gross savings | 3 | 2% | 0 | 0% |
| Verified gross savings is more than 10% larger than tracking gross savings | 47 | 27% | 3 | 2% |
| Verified gross savings is more than 10% smaller than tracking gross savings | 39 | 22% | 20 | 11% |
| At least one discrepancy found for at least one applicable energy unit[a] | 89 | 51% | 26 | 15% |
| No discrepancy found for at least one applicable energy unit (verified gross savings matches tracking) | 110 | 63% | 165 | 94% |
| **Total engineering sample[b]** | **176** | | **183** | |

[14] Discrepancies shown in Table 3-8 reflect only the discrepancies for measures that were part of the engineering review and not measures that were part of the computer-aided telephone interview (CATI).

[a] As a measure may have more than one type of discrepancy, this does not equal the sum of the number of measures above.

[b] As a measure may have more than one applicable energy unit, this does not equal the sum of the number of measures with at least one discrepancy and no discrepancy immediately above.

The table shows the discrepancies between verified gross savings and tracking gross savings between the previous round (FY05, round 1) and this round (FY06) of evaluation. The table shows that the number of adjustments made has decreased substantially from the previous round.

The proportion of reviewed measures that were not installed in any quantity or had the wrong value entered in the program tracking database is approximately the same in this round as it was in the previous round. However, the proportion of projects calculated independently as a result of a lack of documentation dropped from 14 percent to 3 percent in this round.

The proportion of measures and energy unit combinations that received an adjustment decreased from 48 percent to 13 percent. The proportion that received a decrease in energy savings dropped from 22 percent to 11 percent and the proportion that received an increase in energy savings dropped from 27 percent to 2 percent.

Overall, the proportion of reviewed measures with at least one discrepancy for at least one applicable energy unit (kWh, kW, therms) decreased from 51 percent to only 15 percent between the previous round and this round. In addition, the proportion of reviewed measures for which no discrepancy was found for at least one applicable energy unit increased from 63 percent to 94 percent between these two rounds.

## 3.7 EVALUATED TRACKED ENERGY IMPACTS[15]

For FY06 (July 1, 2005, through June 30, 2006) Table 3–9a gives tracking and verified gross savings and net savings by sector and channel, Focus Business Programs overall, the WPS Business Programs, and combined Focus and WPS Business Programs.

The estimates of the adjustment factors by sector and channel reported above are used to calculate verified gross savings and net savings for this time period. Multiplying tracking gross savings by the gross savings adjustment factor (which is the product of the installation rate and the engineering verification factor) yields verified gross savings. Multiplying verified gross savings, in turn, by the attribution factor yields net savings. (Net savings may also be obtained by multiplying tracking gross savings by the realization rate.)

[15] Tables in this section include all program-reported gross savings credited to Focus and WPS. This includes the Focus portion of the Focus-WE joint measures provided to Itron in the "ItronFrame." Further discussion of the "ItronFrame" is provided in the next section of the report.

**Table 3–9a. All Business Programs: Tracked Energy Impacts**
**FY06 (July 1, 2005–June 30, 2006)**

| Sector/Program | kWh | | | kW | | | Therms | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net |
| *Rebate Billed to Focus* | | | | | | | | | |
| Agriculture | 10,380,773 | 10,844,886 | 5,506,946 | 2,569 | 2,379 | 1,060 | 169,600 | 162,261 | 97,784 |
| Commercial | 25,106,632 | 24,456,341 | 14,684,599 | 3,487 | 3,434 | 1,986 | 1,390,483 | 1,344,736 | 682,452 |
| Industrial | 40,020,465 | 39,609,605 | 31,577,174 | 6,895 | 6,827 | 5,225 | 5,135,468 | 5,261,531 | 1,951,784 |
| Schools & Government | 15,117,681 | 14,511,006 | 9,412,191 | 4,444 | 4,373 | 2,528 | 2,586,683 | 2,287,500 | 1,334,962 |
| Channel EHCI-Agriculture | 3,206 | 3,089 | 1,144 | 2 | 2 | 1 | 2,482 | 2,275 | 1,927 |
| Channel EHCI-Commercial | 710,322 | 684,315 | 253,511 | 664 | 658 | 285 | 287,520 | 263,569 | 223,256 |
| Channel EHCI-Industrial | 14,316 | 13,792 | 5,109 | 1 | 1 | 1 | 16,674 | 15,285 | 12,947 |
| Channel EHCI-Schools & Government | 11,629 | 11,203 | 4,150 | 4 | 4 | 2 | 59,924 | 54,932 | 46,530 |
| Channel Lighting-Agriculture | 5,834,805 | 5,708,084 | 4,135,403 | 1,487 | 1,462 | 1,098 | 1,594 | 1,566 | 984 |
| Channel Lighting-Commercial | 21,817,902 | 21,344,056 | 15,463,382 | 5,930 | 5,831 | 4,377 | 978 | 961 | 604 |
| Channel Lighting-Industrial | 12,576,234 | 12,303,100 | 8,913,374 | 2,861 | 2,813 | 2,111 | 0 | 0 | 0 |
| Channel Lighting-Schools & Government | 501,190 | 490,305 | 355,217 | 111 | 109 | 82 | 0 | 0 | 0 |
| Channel Motors & VSDs-Agriculture[b] | 412 | 430 | 218 | 0 | 0 | 0 | 0 | 0 | 0 |
| Channel Motors & VSDs-Commercial[b] | 99,835 | 97,249 | 58,392 | 2 | 2 | 1 | 0 | 0 | 0 |
| Channel Motors & VSDs-Industrial[b] | 21,941 | 21,716 | 17,312 | 2 | 2 | 1 | 0 | 0 | 0 |
| Channel Motors & VSDs-Schools & Government[b] | 1,737 | 1,668 | 1,082 | 0 | 0 | 0 | 0 | 0 | 0 |
| CTT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **otal FY06, Focus (July 1, 2005 to June 30, 2006)** | **132,219,080** | **130,100,845** | **90,389,205** | **28,459** | **27,896** | **18,757** | **9,651,405** | **9,394,616** | **4,353,232** |
| *Rebate Billed to WPS* | | | | | | | | | |
| Agriculture | 1,817,887 | 1,899,163 | 964,380 | 489 | 453 | 202 | 0 | 0 | 0 |
| Commercial | 530,945 | 517,193 | 310,544 | 90 | 88 | 51 | 24,013 | 23,223 | 11,786 |
| Industrial | 716,591 | 709,234 | 565,409 | 154 | 152 | 116 | 0 | 0 | 0 |
| Schools & Government | 49,870 | 47,869 | 31,049 | 3 | 3 | 1 | 0 | 0 | 0 |
| Channel EHCI-Commercial | 7,058 | 6,800 | 2,519 | 6 | 6 | 3 | 222 | 204 | 172 |
| Channel Lighting-Agriculture | 5,898 | 5,770 | 4,180 | 2 | 1 | 1 | 0 | 0 | 0 |
| Channel Lighting-Commercial | 324,425 | 317,379 | 229,935 | 87 | 86 | 64 | 0 | 0 | 0 |
| Channel Lighting-Industrial | 241,874 | 236,621 | 171,428 | 56 | 55 | 41 | 0 | 0 | 0 |
| Channel Lighting-Schools & Government | 1,184 | 1,158 | 839 | 0 | 0 | 0 | 0 | 0 | 0 |
| Channel Motors & VSDs-Commercial[b] | 11,372 | 11,077 | 6,651 | -1 | -1 | 0 | 0 | 0 | 0 |
| **Total FY06, WPS (July 1, 2005 to June 30, 2006)** | **3,707,104** | **3,752,264** | **2,286,934** | **885** | **844** | **480** | **24,235** | **23,426** | **11,958** |
| **Grand Total FY06, Focus+WPS (July 1, 2005 to June 30, 2006)** | **135,926,184** | **133,853,109** | **92,676,139** | **29,345** | **28,739** | **19,237** | **9,675,640** | **9,418,043** | **4,365,190** |

[a] Tracking gross savings for measures installed during FY06 are from two versions of the WATTS database. The two versions of the WATTS database used are: (1) WATTS database as synchronized on July 25, 2006: measures installed in FY06 included in the sampling frame; and (2) WATTS database as synchronized on November 1, 2006: measures installed in FY06 not included in the sampling frame.

[b] As stated above, we did not target any completes in Channel Motors. Therefore, we applied the sector-level adjustment factors associated to the measures in this channel.

Tables 3–9b through 3–9e provide tracking and verified gross savings and net savings by program and for Business Programs overall for FY05 (July 1, 2004, through June 30, 2005), FY04 (July 1, 2003, through June 30, 2004), FY03 (July 1, 2002, through June 30, 2003), and FY02 (program start through June 30, 2002), respectively. Adjustment factors determined from earlier rounds of similar data collection and analysis are used to calculate verified gross savings and net savings for FY02 through FY05.[16]

**Table 3–9b. All Business Programs: Tracked Energy Impacts**
**FY05 (July 1, 2004–June 30, 2005)**

| | | kWh | | | kW | | | Therms | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Segment** | **Sector/Program** | **Tracking Gross[a]** | **Verified Gross** | **Net** | **Tracking Gross[a]** | **Verified Gross** | **Net** | **Tracking Gross[a]** | **Verified Gross** | **Net** |
| Agriculture | Agriculture | 14,244,991 | 9,730,390 | 5,646,141 | 3,512 | 2,214 | 1,068 | 260,686 | 265,167 | 97,724 |
| Commercial | Commerical | 40,145,376 | 30,703,691 | 18,924,532 | 8,816 | 6,529 | 3,871 | 1,016,982 | 920,509 | 275,191 |
| Industrial | Industrial | 58,349,519 | 54,991,909 | 23,884,373 | 8,614 | 8,571 | 3,277 | 4,109,725 | 4,317,925 | 2,185,886 |
| Institutional | Schools & Government | 16,832,970 | 16,195,436 | 7,808,119 | 4,145 | 3,934 | 1,891 | 1,803,444 | 1,700,791 | 954,720 |
| | Channel Lighting-Agriculture[b] | 312,579 | 0 | 0 | 79 | 0 | 0 | 225 | 0 | 0 |
| | Channel Lighting-Commercial[b] | 2,390,318 | 0 | 0 | 683 | 0 | 0 | 66 | 0 | 0 |
| | EE Products | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Existing Buildings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | General Industrial[c] | 9,704,474 | 0 | 0 | 1,140 | 0 | 0 | 134,682 | 0 | 0 |
| | Industry of the Future | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | New Buildings[d] | 293,503 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Small Retail & Services | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Water - Waste Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total FY05 (July 1, 2004 to June 30, 2005)** | | **142,273,730** | **111,621,427** | **56,263,165** | **26,989** | **21,248** | **10,107** | **7,325,810** | **7,204,392** | **3,513,521** |

[a] Tracking gross savings for measures installed during FY05 are from two separate extracts from the Focus tracking system. The two versions of the Focus tracking database used are: (1) STAR database as synchronized on January 17, 2005: measures installed during the first half of FY05 and included in the FY05 sampling frame; and (2) WATTS database as synchronized on November 1, 2006: measures installed in FY05 not included in the sampling frame.

[b] The WATTS database includes measures in the lighting channel for FY05, however, the program confirmed that savings for channels did not start until October 2005.

[c] The tracking gross savings associated with "General Industrial" were also associated with "Industrial." Therefore, these savings were evaluated as part of the industrial segment and the "General Industrial" verified gross (and net) savings are set to zero.

[d] Adjustment factors were generated only for programs/sectors that were known to exist.

[16] FY05: *Business Programs Impact Evaluation Report–Year 4, Round 1, June 1, 2005.*
FY04: *Business Programs Impact Evaluation Report–Year 3, Round 1, June 17, 2004.*
FY03: *Business Programs Impact Evaluation Report–Contract Year 2 Complete, January 14, 2004*.
FY02: *Volume III, Impact Evaluation of the Business Programs Comprehensive Report, December 23, 2002.*

**Table 3–9c. All Business Programs: Tracked Energy Impacts**
**FY04 (July 1, 2003–June 30, 2004)**

| Segment | Sector/Program | kWh | | | kW | | | Therms | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net |
| Agriculture/Business Programs Overall[b] | Production Agriculture | 8,355,974 | 5,796,265 | 3,073,926 | 1,815 | 1,473 | 794 | 62,016 | 58,394 | 49,142 |
| Agriculture | Agriculture | 7,654,233 | 5,309,491 | 2,815,775 | 1,728 | 1,403 | 756 | 5,333 | 5,022 | 4,226 |
| Commercial | Commercial | 42,898,833 | 37,837,194 | 19,906,541 | 9,503 | 9,629 | 5,514 | 588,261 | 589,498 | 509,922 |
| Industrial | Industrial | 78,319,217 | 69,713,833 | 40,260,298 | 11,731 | 7,524 | 4,113 | 9,770,274 | 10,127,720 | 8,828,403 |
| Institutional | Schools & Government | 18,563,254 | 18,727,009 | 13,893,139 | 3,956 | 3,517 | 2,010 | 2,553,857 | 1,835,976 | 1,225,277 |
| | EE Products | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Existing Buildings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Industry of the Future | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | MM Renewables | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | New Buildings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Pilot - General Industrial | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Small Retail & Services | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Water - Waste Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total FY04 (July 1, 2003 to June 30, 2004)** | | **155,791,511** | **137,383,791** | **79,949,678** | **28,734** | **23,545** | **13,188** | **12,979,741** | **12,616,609** | **10,616,970** |

[a] Tracking gross savings for measures installed during FY04 are from two separate extracts from the Focus tracking system. The two versions of the Focus tracking database used are: (1) STAR database as synchronized on January 20, 2004: measures installed during the first half of FY04 and included in the FY04 sampling frame; and (2) WATTS database as synchronized on November 1, 2006: measures installed in FY04 not included in the sampling frame.

[b] The Business Programs overall adjustment factors for therms were used because the agriculture segment adjustment factors (with the exception of the installation rate) for therms were estimated with inadequate accuracy.

**Table 3–9d. All Business Programs: Tracked Energy Impacts**
**FY03 (July 1, 2002–June 30, 2003)**

| Segment | Sector/Program | kWh | | | kW | | | Therms | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net |
| Agriculture | Agriculture | 7,785,645 | 6,716,282 | 3,905,035 | 1,980 | 1,722 | 1,134 | 60,906 | 58,897 | 51,166 |
| Commercial | Commercial | 0 | 0 | 0 | 0 | 0 | 0 | 938 | 914 | 666 |
| Commercial | Existing Buildings | 16,332,823 | 12,357,439 | 5,995,214 | 3,033 | 2,048 | 1,206 | 729,198 | 710,168 | 517,602 |
| Commercial | New Buildings | 500,166 | 378,426 | 183,594 | 197 | 133 | 78 | 222,294 | 216,493 | 157,790 |
| Commercial | Pilot - Commercial | 278,178 | 210,470 | 102,110 | 37 | 25 | 15 | 10,666 | 10,388 | 7,571 |
| Commercial | Small Retail & Services | 30,974,155 | 23,435,093 | 11,369,540 | 8,385 | 5,660 | 3,334 | 266,418 | 259,465 | 189,110 |
| Industrial | General Industrial | 49,974,712 | 46,053,342 | 17,363,524 | 7,026 | 6,190 | 2,378 | 1,490,593 | 1,451,245 | 755,266 |
| Industrial | Industrial | 2,553,294 | 2,352,944 | 887,132 | 498 | 439 | 168 | 94,049 | 91,566 | 47,654 |
| Industrial | Pilot - General Industrial | 3,058,760 | 2,818,748 | 1,062,755 | 448 | 395 | 152 | 219,482 | 213,688 | 111,209 |
| Industrial | Water - Waste Water | 6,455,315 | 5,948,785 | 2,242,875 | 851 | 750 | 288 | 3,100 | 3,018 | 1,571 |
| Institutional | Government | 6,177,040 | 6,371,227 | 4,303,723 | 1,365 | 1,313 | 971 | 91,275 | 66,240 | 15,287 |
| Institutional | Schools | 6,906,206 | 7,123,316 | 4,811,754 | 983 | 945 | 699 | 1,612,075 | 1,169,921 | 270,002 |
| Institutional | Schools & Government | 817,478 | 843,177 | 569,561 | 274 | 263 | 195 | 41,327 | 29,992 | 6,922 |
| EE Products | EE Products | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Industries of the Future | Industry of the Future | 15,691,186 | 14,262,206 | 9,899,931 | 1,638 | 1,628 | 1,182[b] | 1,235,975 | 1,235,975 | 833,046 |
| Renewables | MM Renewables | 0 | 0 | 0 | 0 | 0 | 0 | 701,849 | 678,278 | 677,718 |
| **Total FY03 (July 1, 2002 to June 30, 2003)** | | **147,504,958** | **128,871,457** | **62,696,745** | **26,714** | **21,512** | **10,618** | **6,780,145** | **6,196,249** | **3,642,577** |

[a] Tracking gross savings for measures installed during FY03 are from three separate extracts from the Focus tracking system. The three versions of the Focus tracking database used are: (1) STAR database as synchronized on January 7, 2003: measures installed during the first half of FY03 and included in the sampling frame for the first half of FY03; (2) STAR database as synchronized on July 10, 2003: measures installed during the second half of FY03 and included in the sampling frame for the second half of FY03, and (3) WATTS database as synchronized on November 1, 2006: measures installed in FY03 not included in either FY03 sampling frames.

[b] The Industries of the Future segment attribution adjustment factor for kWh was used to calculate net kW because the attribution adjustment factor kW is suppressed to preserve confidentiality.

**Table 3–9e. All Business Programs: Tracked Energy Impacts**
**FY02 (Program start–June 30, 2002)**

| Segment | Sector/Program | kWh | | | kW | | | Therms | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net | Tracking Gross[a] | Verified Gross | Net |
| Agriculture/Commerical[b] | Agriculture | 993,447 | 957,662 | 438,982 | 282 | 249 | 91 | 1,319 | 1,316 | 466 |
| Commercial | Existing Buildings | 5,544,182 | 4,799,946 | 2,390,906 | 922 | 567 | 270 | 135,114 | 134,806 | 47,692 |
| Commercial | Government | 461,295 | 399,372 | 198,932 | 55 | 34 | 16 | 3,997 | 3,988 | 1,411 |
| Commercial | Pilot - Commercial | 1,647,891 | 1,426,683 | 710,646 | 405 | 249 | 118 | 90,224 | 90,018 | 31,847 |
| Commercial | Schools | 4,099,112 | 3,548,858 | 1,767,726 | 1,787 | 1,098 | 523 | 418,326 | 417,372 | 147,661 |
| Commercial | Schools & Government | 1,079,469 | 934,564 | 465,517 | 280 | 172 | 82 | 177,258 | 176,854 | 62,568 |
| Commercial | Small Retail & Services | 1,967,208 | 1,703,135 | 848,351 | 768 | 472 | 225 | 267,178 | 266,568 | 94,308 |
| Industrial | General Industrial | 13,083,660 | 11,179,260 | 7,937,940 | 2,099 | 2,223 | 1,648 | 727,413 | 244,577 | 154,766 |
| Industrial | Industrial | 1,409,330 | 1,204,194 | 855,049 | 1,126 | 1,193 | 884 | 76,104 | 25,588 | 16,192 |
| Industrial | Industry of the Future | 528,654 | 451,705 | 320,738 | 65 | 68 | 51 | 0 | 0 | 0 |
| Industrial | MM Renewables | 0 | 0 | 0 | 0 | 0 | 0 | 984,201 | 330,916 | 209,401 |
| Industrial | Pilot - General Industrial | 3,264,560 | 2,789,385 | 1,980,629 | 336 | 356 | 264 | 91,080 | 30,624 | 19,378 |
| Industrial | Water - Waste Water | 1,163,789 | 994,393 | 706,078 | 344 | 364 | 270 | 160 | 54 | 34 |
| New Buildings | New Buildings | 2,608,160 | 2,608,160 | 143,279 | 1,034 | 1,034 | 46 | 53,914 | 53,914 | 0 |
| Programs overall | Unknown | 981 | 858 | 476 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total FY02 (Program Start to June 30, 2002)** | | **37,851,738** | **32,998,176** | **18,765,248** | **9,503** | **8,079** | **4,487** | **3,026,288** | **1,776,594** | **785,725** |

[a] Tracking gross savings for measures installed during FY02 prior to January 1, 2002, and included in the FY02, round 1, frame were provided by the program. The remaining tracking gross savings for measures installed during FY02 are from three separate extracts from the Focus tracking system: (1) STAR database as synchronized on April 13, 2002: measures installed between January 1, 2002, and March 31, 2002, and included in the FY02, round 2, sampling frame; (2) STAR database as synchronized on July 11, 2002: measures installed between April 1, 2002, and June 30, 2002, and included in the FY02, round 3, sampling frame; and (3) WATTS database as synchronized on November 1, 2006: measures installed during FY02 not included in any of the three FY02 sampling frames.

[b] The commercial segment adjustment factors for therms were used because agriculture segment adjustment factors for therms were not available.

Table 3–9f summarizes tracking and verified gross savings and net savings for Business Programs overall for the program through FY06 (program start through June 30, 2006).

**Table 3–9f. All Business Programs: Tracked Energy Impacts**
**Program to Date (Program start–June 30, 2006)**

| Fiscal Year | kWh | | | kW | | | Therms | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tracking Gross | Verified Gross | Net | Tracking Gross | Verified Gross | Net | Tracking Gross | Verified Gross | Net |
| *Rebate Billed to Focus* | | | | | | | | | |
| 2002 (Program start to June 30, 2002) | 37,851,738 | 32,998,176 | 18,765,248 | 9,503 | 8,079 | 4,487 | 3,026,288 | 1,776,594 | 785,725 |
| 2003 (July 1, 2002 to June 30, 2003) | 147,504,958 | 128,871,457 | 62,696,745 | 26,714 | 21,512 | 10,618 | 6,780,145 | 6,196,249 | 3,642,577 |
| 2004 (July 1, 2003 to June 30, 2004) | 155,791,511 | 137,383,791 | 79,949,678 | 28,734 | 23,545 | 13,188 | 12,979,741 | 12,616,609 | 10,616,970 |
| 2005 (July 1, 2004 to June 30, 2005) | 142,273,730 | 111,621,427 | 56,263,165 | 26,989 | 21,248 | 10,107 | 7,325,810 | 7,204,392 | 3,513,521 |
| 2006 (July 1, 2005 to June 30, 2006) | 132,219,080 | 130,100,845 | 90,389,205 | 28,459 | 27,896 | 18,757 | 9,651,405 | 9,394,616 | 4,353,232 |
| **Total Focus (Program start to June 30, 2006)** | **615,641,017** | **540,975,696** | **308,064,041** | **120,400** | **102,279** | **57,157** | **39,763,389** | **37,188,460** | **22,912,025** |
| *Rebate Billed to WPS* | | | | | | | | | |
| 2006 (July 1, 2005 to June 30, 2006) | 3,707,104 | 3,752,264 | 2,286,934 | 885 | 844 | 480 | 24,235 | 23,426 | 11,958 |
| **Grand Total, Focus+WPS (Program start to June 30, 2006)** | **619,348,121** | **544,727,960** | **310,350,975** | **121,286** | **103,123** | **57,637** | **39,787,624** | **37,211,886** | **22,923,983** |

# 4. GENERAL APPROACH

The broad approach of the impact evaluation fieldwork was similar to that used in the past. For the majority of the work we used approaches, protocols, and instruments developed in the evaluation work conducted so far. However changes in the program have resulted in some significant modification to the impact evaluation methodology. This section discusses these changes following general descriptions of the adjustment factors used in this analysis, reporting format and a discussion of this round's sample design.

## 4.1 APPROACH AND DEFINITIONS

The evaluation team has implemented eight rounds of data collection and a document review to estimate net energy savings for Business Programs. Each evaluation has included a telephone survey of Wisconsin Focus on Energy (Focus) Business Programs participants who installed measures in the appropriate time frame. Table 4-1 shows the fiscal year and the implementation time period for measures included in each round. Some fiscal years have included multiple rounds of data collection. The most recent round included measures installed between July 1, 2005, and June 30, 2006, according to the Business Programs' tracking system (WATTS and rebates databases).[17] This is the first Focus impact evaluation to cover an entire fiscal year of implemented measures.

**Table 4-1. Eight Rounds of Impact Evaluation Data Collection**

| Impact Evaluation Round | Fiscal Year of Implementation | Implementation Time Period[a] |
|---|---|---|
| 1 | 2001-2002 | April 2001 - December 2001 |
| 2 | 2002 | January 2002 - March 2002 |
| 3 | 2002 | April 2002 - June 2002 |
| 4 | 2003 | July 2002 - December 2002 |
| 5 | 2003 | January 2003 - June 2003 |
| 6 | 2004 | July 2003 - December 2003 |
| 7 | 2005 | July 2004 - December 2004 |
| 8 | 2006 | July 2005 - June 2006 |

[a]Partners included in the sample frame for each round are those with implementation completed in the indicated time period

The survey addresses measure installation and characteristics (e.g., quantities, equipment efficiencies, operating hours), program attribution, and program process issues, among other topics. Each evaluation has also included an engineering review of program documentation on how the tracking gross savings were calculated, where the tracking

[17] In the WATTS database, a measure is the level data is recorded in the WATTSMeasures table. Each measure is assigned a "WATTSMeasureID" which is synonymous to the "recid" or recommendation assigned in the former database, STAR. Gross savings estimates are provided in the WATTS database at the measure level. Typically, a measure is a single energy-saving measure. In the rebates database, the measures are: compact fluorescent lightbulbs, clothes washers, dishwashers, indoor "lighting fixtures," outdoor "lighting fixtures," torchieres, and refrigerators.

gross savings are the gross savings reported in the WATTS and rebate databases. Finally, each evaluation has included on-site measurement at some participant sites to verify measure information and provide actual measured or metered data to support gross energy savings estimates.[18] The results of the survey, engineering review, and on-site data are combined to create several adjustment factors described below.

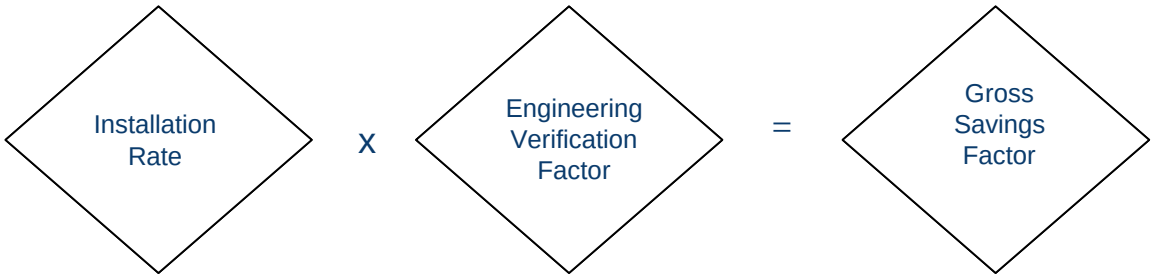
### 4.1.1 Adjustment Factors Defined

The adjustment factors estimated from the data collection and analysis are as follows:

- Installation rate: This factor adjusts the tracking estimate of gross savings for noninstallation, but does not correct for any other errors in the tracking estimate. It is the estimated fraction of tracking gross savings corresponding to measures actually installed. (For calculation of the installation rate, a measure is identified as either installed or not. Adjustments to the number of units installed for a particular measure are included in the engineering verification factor, not in the installation rate.)
- Engineering verification factor: This factor adjusts the tracking estimate of gross savings, after the application of the installation rate, to create verified gross savings. It is the estimated ratio of verified gross savings to tracking gross savings corresponding to measures actually installed. Verified gross savings used to estimate this ratio are based on the results of an engineering review, which includes a review of how tracking gross savings were calculated and interviews with participants. For a given measure, verified gross savings may be higher or lower than the tracking estimate of gross savings for a variety of reasons, including the wrong data were entered in the program tracking database; survey responses indicating differences in the quantities installed, equipment efficiencies, and/or operating hours; and mistakes in the calculation of the tracking estimate. Details on the discrepancies are provided in the form of comments on individual measures to the Business Programs team. (The engineering verification factor includes any correction to the numbers of units installed for a particular measure.)
- Gross savings adjustment factor: As shown in Figure 4-1 this factor combines the installation rate and the engineering verification factor. (It is the ratio of verified gross savings to tracking gross savings.)

[18] No on-site measurement was conducted by the statewide evaluation team for this round of review. However evaluation did utilize on-site data and reports provided by the Focus M&V team.

**Figure 4-1. Gross Savings Adjustment Factor Calculation**




- Attribution factor: This factor adjusts verified gross savings for program attribution. It is the estimated proportion of verified gross savings attributable to the Focus Business Programs or the ratio of net savings to verified gross savings. Net savings used to estimate the attribution factor are calculated in one of two methods. The choice between the market-based and self-reported approaches is based on the White Paper Net-to-Gross Method Selection Framework for Evaluating Focus on Energy Program developed by the Focus evaluation team (March 2006). Based on the criteria laid out in the white paper it was determined that a market-based approach would be used only for CFLs; all other technologies would continue to use self-reported approaches.

  1. *Self-reported program response* methods determine attribution to the program on a measure-by-measure or an end use-by-end use basis using participant self-reported information about their plans and intentions. The calculation includes adjustments for the efficiency, quantity, and timing of measures that the participant may have installed in the absence of the program.[19]

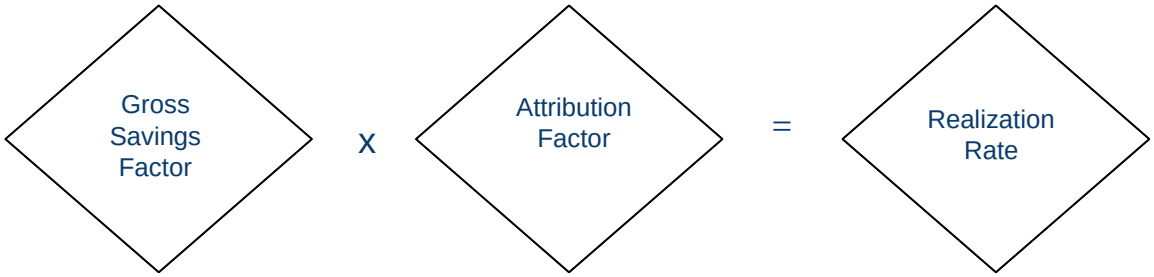
  2. *Market sales-based* methods were added to the Business Programs impact evaluation for FY06. This method relies on aggregate sales data in total sales of a particular technology in Wisconsin. Sales volume data are compared with a baseline estimate of the volume that would have been sold in the absence of the program. Beginning with the FY06 impact evaluation, the attribution factor for CFLs is determined using a market-based approach conducted jointly for the Business and Residential programs. This research is planned for the second half of FY07. For the purposes of this report, the most current attribution factor calculated by the Residential evaluation team will be used for all CFLs. This attribution rate is 100 percent.[20]

- Realization rate: As shown in Figure 4-2 this factor combines the gross savings adjustment factor (i.e., the installation rate and the engineering verification factor) and the attribution factor. (It is the ratio of net savings to tracking gross savings.)

[19] More details on the calculation are presented in *Volume III, Impact Evaluation of the Business Programs Comprehensive Report*, December 23, 2003.

[20] "FY04/05 Net-to-Gross Savings Adjustments for CFLs Rewarded through the ENERGY STAR Products Program," memorandum to Oscar Bloch, Wisconsin DOA, dated January 11, 2006 (Revised Draft).

**Figure 4-2. Realization Rate Calculation**




### 4.1.2 Reporting Format

Each of the adjustment factors defined in the previous section is calculated separately for each energy unit (kWh, kW, and therms) in combination with each sector and channel as well as for Business Programs overall. The sectors and channels used in this analysis are:

- **Sectors**: Agriculture; Commercial; Industrial; and Schools & Government.
- **Channels**: Efficient Heating & Cooling Initiative; and Channel Lighting.[21]

Separate adjustment factors were not calculated for WPS because of the small sample sizes in most of the WPS strata. More information on the sampling plan is provided below in this section.

In previous impact evaluation reports a separate series of adjustment factors were provided for compact fluorescent light bulbs (CFL) and non-CFL. These results were particularly meaningful because all CFL savings in the Rebates Database were credited to the Agriculture and Commercial sectors and historically CFLs have accounted for more than half of the Agriculture and Commercial sectors' electric savings. Changes in the manner the program calculates and reports CFL savings shifted the emphasis of these comparisons to the non-CFL component addressed in the previous section. Therefore we did not repeat this portion of the analysis. These changes include:

- Starting in FY06 all CFL savings tracked in the Rebates Database are being credited to the Channel Lighting sector. Therefore these CFLs are not used to calculate the adjustment factors for the Agriculture and Commercial sectors.
- Energy savings values for CFLs are deemed in FY06. The only potential adjustment to gross energy savings is based on the quantity of bulbs installed; that is, there is no other engineering adjustment for CFLs.
- A market-based approach was used to determine the attribution factor for CFLs. As mentioned above the current market-based attribution factor calculated by the Residential Evaluation team was used for all CFLs. This factor is 100 percent.
- CFL/non-CFL adjustment factors will be calculated in the End-Use Specific Attribution Factors study planned for March 2007.

[21] Adjustment Factors were not calculated for the Motors & VSDs Channel because only fifteen customers installed measures in FY06 through this channel.

The adjustment factors shown in the tables in the results section are based on data from the most recent round of data collection and documentation review. This round covers FY06 (July 1, 2005, through June 30, 2006). The calculation of the adjustment factors uses appropriate weights corresponding to the sampling rate within each stratum. The main objective in designing the sample drawn in the most recent round was to provide the best possible estimates for each of the sectors and channels.

### 4.1.3 Sampling

The FY06 adjustment factors are based on the most recent round of data collection and documentation review, which covers energy efficiency measures installed during FY06. In this round, data were collected from and documentation was reviewed for a random sample of participants who installed measures in FY06. This determination is made based on the "implementeddate" variable entered in the WATTS database. If "implementeddate" is on or between July 1, 2005, and June 30, 2006, then the measure is considered to have been installed during FY06. This is the first round of impact evaluation data collection to cover an entire year of implementation. At most previous rounds have covered six months of implementation. The evaluation budget was not increased to accommodate this change.

*A. WE ENERGIES SAMPLE COORDINATION*

Prior to designing the Business Programs' sample, the Focus evaluation team first needed to establish the sampling frame. In previous evaluations this was simply the measures installed during the period of analysis, in this case FY06. However, this round required an additional step and level of coordination. Similar to the joint Focus-WPS activity in the WPS service territory, Focus and We Energies[22] (WE) are jointly administering programs in the WE service territory. The joint Focus-WE effort is more complicated to integrate with the impact evaluation for two primary reasons. First, the WE programs are being evaluated by a separate evaluation contractor hired by WE[23]; and second, WE is requiring their evaluation contractor to use the WE tracking database, iAvenue.

The difficulties of using two separate program tracking databases, WATTS and iAvenue, were exacerbated by the WATTS measure identifiers not being entered into iAvenue at the end of the fiscal year as planned. The absence of these identifiers prohibits the databases from linking to each other. That is, a measure or customer in WATTS cannot easily be matched up with its corresponding entry in iAvenue. This linking is critical to the evaluation process and the PSC's request that customers are not contacted by both evaluation teams and that measures are not double counted. Upon learning the identifier had not been entered into iAvenue, Itron/SFMC proposed a "contingency plan" to reduce the potential for customers to be contacted more than once or double counted. According to this plan Itron/SFMC would use WATTS for their sampling frame. The Focus evaluation team divided the customers that installed projects into the following sampling frames.

- ITRONFRAME: Customers in the WE service territory that installed ONLY measures with electric savings (not including CFLs entered in the Rebates Database) in FY06.

[22] We Energies Nonresidential Prescriptive Rebate and Comprehensive Agriculture Programs.

[23] Itron/Shel Feldman Management Consulting (SFMC).

- KEMAFRAME: Customers in WE service territory that install measures with electric and gas savings (including CFLs entered in the Rebates Database) and all other measures installed outside of the WE service territory.

This process was designed to ensure that customers would not be called by both evaluation teams and there would be no double counting. Table 4-2 shows the distribution of the statewide program's energy saving in the two frames. Roughly 80 percent of statewide program's kWh and kW savings were included in the KEMAFRAME. All statewide therm savings are in the KEMAFRAME.

**Table 4-2. FY06 KEMA and Itron Sampling Frames**

| Energy Unit | Sampling Frame | | Total |
|---|---|---|---|
| | KEMA | Itron | |
| **kW** | 23,021 | 5,388 | 28,409 |
| **kWh** | 104,936,092 | 27,038,963 | 131,975,055 |
| **Therms** | 9,651,405 | - | 9,651,405 |

The Focus evaluation team used the KEMAFRAME for its analysis and sent the ITRONFRAME to Itron/SFMC on July 26, 2006. In November 2006, KEMA learned that Itron did not use ITRONFRAME as its sampling frame but instead developed a frame from iAvenue. Itron was not able to link all the measures in its frame to the measures in ITRONFRAME. This had significant consequences on the statewide evaluation's ability to use the data collected by Itron. The PSC directed the statewide evaluation to utilize the Itron data in a reasonable manner given the limitations of the data.

The following process was undertaken to incorporate the Itron data.

- Itron provided KEMA with its sample data at the measure level with the WATTS measure level identifier, WATTSMeasureID. Itron needed the WATTS measure level identifiers to confirm its sample pulled from iAvenue only included participants in ITRONFRAME. This confirmation was necessary to reduce the likelihood of (1) double counting and (2) a customer being contacted by both evaluation teams.

- KEMA combined Itron's participant survey and engineering review data files with ITRONFRAME using WATTSMeasureID. KEMA had a difficult time lining up measures in the three data files. In the end there were seven measures in the Itron sample that did not match with measures in ITRONFRAME. Four were in KEMAFRAME and three more had no match in either frame.

- The Itron sample accounts for 10 percent of Focus kW savings in ITRONFRAME. The sample includes measures with engineering review data, participant survey data or both. Itron attempted to complete participant interviews with each participant that received an engineering review. The statewide analysis only used data for which both the engineering and participant survey data were available. There are 28 measures with both participant and engineering data accounting for roughly 4 percent of the electric savings in ITRONFRAME.

- The statewide evaluation uses the Itron data to adjust savings in WATTS. Therefore it's critical the measure level data in Itron's sample is correctly matched with the measure level data in WATTS (ITRONFRAME). More specifically, the

measure that Itron reviewed and discussed with the participant must be the same measure provided to Itron in ITRONFRAME. If we are not confident in the match then we run the risk of making adjustments in WATTS to a measure based on information collected for a different measure. KEMA implemented a final test prior to including any of the Itron data in the statewide analysis. This test included a manual comparison of the energy savings data in the Itron data with those in the WATTS database (ITRONFRAME). This resulted in four additional measures being removed from the statewide analysis.

- In the absence of a WATTS based sampling frame for the Itron data, KEMA explored many options to calculate weights for the Itron data. KEMA decided to stratify ITRONFRAME using the same methodology used for KEMAFRAME. This methodology is described below in section *B Sample Design*. KEMA then collapsed each ITRONFRAME stratum with a stratum in the KEMAFRAME based on the components of the stratification.

## *B. SAMPLE DESIGN*[24]

The main objective in designing the sample was to provide the best possible estimates for each of the four primary sectors (agriculture, commercial, industrial, and institutional) and channels (ECHI, Lighting, and Motors & VSDs). In addition WPS/non-WPS was added as a stratification variable to ensure WPS measures are represented in the sample. The WPS evaluation funds were used to ensure a sample of WPS measures larger than might have been selected at random if these measures were simply considered as part of the general Focus program. The small population of WPS projects inhibited the estimation of meaningful adjustment factors for WPS by itself. The WPS sample points were combined with the Focus sample points to calculate an aggregate set of adjustment factors by sector and channel.

In general the evaluation team attempts to devoted equal evaluation resources to the fieldwork and analysis for each Focus Business Programs sector. The actual allocation is determined after reviewing the gross savings and mix of measures installed by each sector. The addition of the channels in FY06 adds a new dynamic to the sampling process. These measures tend to be smaller and can be verified at a relatively low cost. Smaller projects have a smaller incremental improvement on the accuracy of the adjustment factors; therefore additional resources are not usually allocated to complete interviews with customers that installed small projects. The exception is if there are a large number of customers who installed the same type of small projects.

The fieldwork sample has two components: an engineering sample and a computer-assisted telephone interview (CATI) sample. Participants selected for the engineering sample receive an expert interview and their implemented measures undergo an engineering review. Participants selected for the CATI sample receive a telephone interview only. The CATI-only assignment is primarily for small simple projects.

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[24] The information presented in this section reflects the sample KEMA developed using KEMAFRAME. The Itron sample and ITRONFRAME are not included in the tables and figures. Additional information regarding the Itron sample is provided in Appendix B.

A detailed description of the steps in the sample selection process as follows:[25]

1. All customers are classified as WPS or non-WPS depending on whether at least one of the measures they installed during FY06 was entirely or partially funded by WPS.

2. All measures implemented during the previous 12 months are assigned to analysis categories based on the size, type, and complexity of the project. The initial analysis categories are condensed into similar cost groups that become sampling strata.

3. The sampling strata within each sector/channel are divided into engineering and CATI. The cases drawn for the engineering sample receive both gross savings verification and net-to-gross (attribution) analysis. Cases drawn for the CATI sample receive only telephone interviews for net-to-gross analysis and installation confirmation. Unlike previous rounds, CFL-only respondents in the CATI no longer receive the net-to-gross question sequence. A market-based method is now used to determine attribution for CFL-only participants.

   Each participant is given a customer size designation of "Very Small" or "Not Very Small." "Not Very Small" participants account for at least 0.05 percent of the total program avoided costs savings for FY06. The remaining customers were designated as "Very Small," with eleven exceptions. Eleven participants were further designated as "Large" participants. These participants accounted for at least 5 percent of their sector/channels avoided cost goal for the fiscal year.

   a. All "Large" participants were assigned to the engineering sample.
   b. All "Not Very Small" participants that installed at least one custom project were assigned to the engineering sample
   c. The remaining participants were assigned to the CATI sample. These are "Not Very Small" participants that did not install a custom project and all the "Very Small" participants.

4. Within each sector or high-level stratum, we allocate the engineering sample based on contribution to Business Programs gross savings and likely variance of the gross savings adjustment factor, balanced by unit evaluation cost. That is, sampling cells are sampled at a higher rate if they have greater expected variability of gross savings adjustment factor but are sampled at a lower rate if they have higher analysis cost per unit. The engineering sample is selected to optimize the accuracy of the adjustment factors for a fixed data collection and analysis budget, subject to the allocations across sectors/channels described above.

   As indicated, the sample is stratified by the resource acquisition sectors/channels as well as by analysis categories. The sampling procedure allocates sample in proportion to the total savings (measured by estimated avoided cost) for the projects in each stratum, times the projected relative variability of gross savings adjustment, divided by the square root of the average evaluation cost per project

[25] See Appendix B for detailed tables showing the distribution of the frame and sample by strata. These tables also show characteristics used to divide the frame into our 72 sampling strata.

for that analysis category. That is, larger projects and those with greater relative variability are more likely to be in the sample, but their sampling rate is reduced somewhat because larger projects are more expensive to analyze. Some adjustments to the samples are made to ensure coverage of all three types of energy units (kWh, kW, and therms) and all programs that had activity. An oversample of about 50 percent is taken to allow for partners that will not respond to attempted contacts within the field period. As shown in the Appendix B tables the majority of "Not Very Small" strata did not have enough population to oversample by 50 percent.

5. Within each sector/channel, CATI surveys are allocated to the CATI-only strata proportional to the stratum-projected savings. In previous rounds for strata with sufficiently small numbers of implemented projects, cases from the engineering strata that were not drawn for the engineering sample may also be included in the CATI sample. In this round all engineering sample participants remained in the engineering sample. Thus, while some partners do not respond, the impact analysis attempts to contact all or nearly all of the larger projects for inclusion in both the gross and net-to-gross analyses or in the net-to-gross analysis only.

Table 4-3 indicates how the completed sample was distributed by sector and channel. For all sectors, a relatively large proportion of the participants who installed measures with the Not Very Small classification during FY06 are in the samples.

**Table 4-3. FY06, Population, and Sample By Primary Segment**

| Tracking Avoided Cost | Population or Sample | Number of Participants Who Installed a Measure | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture | Commercial | Industrial | Institutional | Channel EHCI | Channel Lighting | Business Programs Overall |
| Not Very Small | Population | 26 | 65 | 100 | 93 | 4 | 49 | 337 |
| | Sample | 9 | 27 | 43 | 33 | 1 | 4 | 117 |
| Very Small | Population | 908 | 899 | 103 | 272 | 294 | 10398 | 12874 |
| | Sample | 57 | 38 | 15 | 36 | 21 | 115 | 282 |
| **Total** | **Population** | **934** | **964** | **203** | **365** | **298** | **10447** | **13211** |
| | **Sample** | **66** | **65** | **58** | **69** | **22** | **119** | **399** |

[a]Fifteen participants in Channel Motors & VSD were not included in the analysis. These particupants accounted for only 0.03% of total program avoided cost.

A summary of the target and achieved sample sizes for the most recent round of data collection and documentation review are indicated in Table 4-4. The total number of target completes, 389, was exceeded with 399 completes. We exceeded the Not Very Small engineering target by four and the Very Small CATI by 56. However we missed the Not Very Small CATI target by 50. As shown in Table 4-4, we attempted to complete 92 surveys with the 144 Not Very Small CATI participants. We exhausted all the Not Very Small strata in the CATI sample; that is, we attempted to completed a survey with all 144 participants and completed 42 surveys. After exhausting the Not Very Small strata we attempted to collect additional completes in the Very Small strata; by definition these are smaller projects.

**Table 4-4. FY06 Sample Allocation and Disposition**

| Tracking Avoided Cost | Survey Type | # Participants | | | Strata Exhausted |
|---|---|---|---|---|---|
| | | Frame | Target | Complete | |
| Very Small | CATI | 12,889 | 226 | 282 | 48% |
| Not Very Small | CATI | 144 | 92 | 42 | 100% |
| Not Very Small | ENG | 193 | 71 | 75 | 50% |
| **Total** | | **13,226** | **389** | **399** | |

Figure 4-3 shows the percentage of population savings included in the sample. These percentages are smaller than those obtained last round 41 percent, 30 percent, and 42 percent for kWh, kW, therms, respectively. However this is the first round of data collection to include an entire fiscal year of measure implementation. With a smaller budget this round and the additional of the channels[26] among other additions to the analysis we anticipated a lower proportion of savings in our sample. Table 4-5 also shows the percentage of tracking gross savings included in the sample by the Tracking Avoided Cost classification. It also presents the distribution of savings by these two groups in the populations. The Not Very Small group accounts for the overwhelming majority of electric and therm savings.

The table shows that the Very Small sample is small compared to the population contribution to total savings. This lower sampling rate reflects the lower levels of uncertainty associated with these projects. The lower uncertainty stems from simpler projects, deemed savings, and the non-survey-based CFL attribution estimate.

**Figure 4-3. Percent of Tracking Gross Savings Included in Sample**

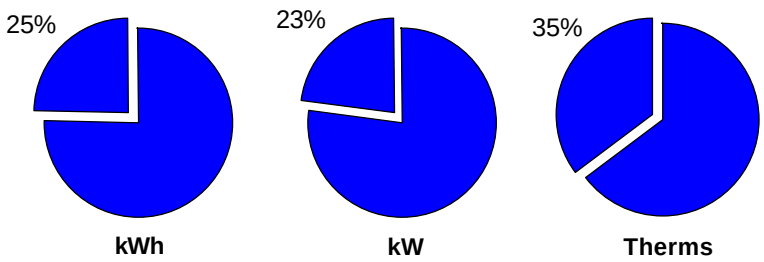



**Table 4-5. Percentage of FY06, Tracking Gross Savings Included in the Sample**

| Tracking Avoided Cost | Population | | | Sample | | |
|---|---|---|---|---|---|---|
| | kWh | kW | Therms | kWh | kW | Therms |
| Very Small | 37% | 44% | 16% | 2.0% | 2.1% | 1.9% |
| Not Very Small | 63% | 56% | 84% | 22.8% | 20.9% | 33.2% |
| **Total** | **100%** | **100%** | **100%** | **24.8%** | **22.9%** | **35.1%** |

[26] Sample is designed to obtain results for each sector and energy unit. The addition of two channels to the analysis required a wider distribution of resources.

## 4.2 SUMMARY OF MAJOR CHANGES

Although the general approach of the impact evaluation fieldwork was similar to that used in the past. Changes in the program have resulted in some significant modification to the impact evaluation methodology and process. Below is a summary of the major changes since last round.

It's important to appreciate these methodological changes especially when interpreting the comparisons across years. Statistical tests consider the sample design but do not consider programmatic and methodological changes, such as the program's move to deemed savings or changes in the calculation of attribution rate adjustment factors.

Major changes affecting to the impact evaluation methodology this round include:

- *Joint Focus-WPS 10 MW Business Programs Evaluation.* Evaluation of WPS 10 MW Business Programs is conducted jointly with this evaluation. WPS evaluation funds were used primarily to ensure adequate samples of measures installed as part of the joint program in the WPS service territory.
- *Joint Focus-WE 55 MW Programs.* Coordination with We Energies evaluation team, Itron/SFMC, hired to evaluate the WE 55 MW Programs. Data collected by Itron as part of its evaluation of the joint Focus-WE programs was incorporated into the statewide analysis.
- *Addition of Channels.* In addition to the four primary sectors (Agriculture, Commercial, Industrial, Schools & Government) adjustment factors were also calculated for the Efficient Heating and Cooling Channel and the Lighting Channel.
- *CFL Savings Credited to Channel Lighting.* In FY06 all CFLs recorded in the Rebates Database were credited to the Lighting Channel. In previous years, these measures were credited to the Agriculture and Commercial sectors, depending on the sector identified by the customer on the instant or mail-in rebate form.
- *Market-Based Method for CFLs.* Beginning with the FY06 impact evaluation, the attribution factor for CFLs is determined using a market-based approach conducted jointly for the Business and Residential programs.
- *Deemed Measures.* The following measures used deemed values for estimates of energy savings.
  - CFL fixture
  - CFL screw in
  - High efficiency motor
  - LED exit sign
  - Low-flow, pre-rinse sprayer
  - Steam trap repair/replacement
- *Energy Advisor Survey.* Incorporated the program's Energy Advisor (five questions) survey for large custom projects in the engineering sample. The five questions are:

1. Briefly explain how you (Energy Advisor) got involved with the customer and project.
2. Briefly explain your understanding of the largest customer barriers preventing the project's implementation.
3. Briefly explain what type of assistance you provided to the customer with regards to this project.
4. Briefly describe how this assistance overcame the customer's barriers.
5. Are there any potential future customer actions resulting from your involvement on the project.

- *Agriculture Supplier Survey.* KEMA conducted surveys with agricultural suppliers who sold energy-efficient equipment and services to customers in the Agriculture sector during FY06. A detailed discussion is provided in Appendix C.
- *Supplier Effect on Attribution.* Exploration of the supplier effect on attribution was conducted using results of the Agriculture Supplier Survey and the General Supplier Survey. A detail explanation is provided in Appendix D.
- *Participant Spillover.* Inclusion of participant spillover effects for Non-CFLs in the attribution estimates based on the *Participant Spillover Savings Study* (December 22, 2005) (see Appendix E). CFL participant spillover is included as part of the CFL market-based attribution approach.
- *WATTS replaces STAR.* This impact evaluation was the first to use the program's new tracking database, WATTS. This database is a marked improvement over its predecessor, STAR.

## *APPENDIX A: OTHER ADJUSTMENT FACTORS*

Appendix A provides the FY06 installation rate and engineering verification factors and the statistical comparison across years. These factors are provided in the appendix instead of the main body of the report because the combined effect is reported as the gross savings adjustment factor.

Tables A–1 and A–2 give the installation rates and engineering verification factors by sector and channel.

**Table A–1. Installation Rates by Sector/Channel**
**Based on Samples from Participants Who Installed a Measure during FY06**

| | kWh | | | | kW | | | | Therms | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Standard Error | | | | Standard Error | | | | Standard Error | |
| Segment | n | Installation Rate | Jul05-Jun06 | Extrap-olated | n | Installation Rate | Jul05-Jun06 | Extrap-olated | n | Installation Rate | Jul05-Jun06 | Extrap-olated |
| Agriculture | 71 | 100% | <0.1% | <0.1% | 65 | 100% | <0.1% | <0.1% | 19 | 96% | 2.1% | 2.4% |
| Commercial | 47 | 99% | 0.8% | 0.8% | 32 | 98% | 1.5% | 1.5% | 40 | 99% | 1.2% | 1.2% |
| Industrial | 48 | 100% | <0.1% | 0.1% | 43 | 100% | <0.1% | <0.1% | 27 | 100% | <0.1% | <0.1% |
| Institutional | 36 | 100% | <0.1% | 0.0% | 28 | 100% | <0.1% | <0.1% | 53 | 97% | 1.7% | 1.9% |
| Channel EHCI | 15 | 98% | 1.8% | 1.9% | 7 | 99% | 1.2% | 1.2% | 21 | 100% | <0.1% | <0.1% |
| Channel Lighting | 122 | 100% | 0.1% | 0.1% | 119 | 100% | 0.1% | 0.1% | 6 | 99% | 1.0% | 1.0% |
| Business Programs Overall | 339 | 100% | 0.1% | 0.1% | 294 | 100% | 0.2% | 0.2% | 166 | 99% | 0.6% | 0.6% |

**Table A–2. Engineering Verification Factors by Sector/Channel**
**Based on Samples from Participants Who Installed a Measure during FY06**

| | kWh | | | | kW | | | | Therms | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Standard Error | | | | Standard Error | | | | Standard Error | |
| Segment | n | Engineering Verification Factor | Jul05-Jun06 | Extrap-olated | n | Engineering Verification Factor | Jul05-Jun06 | Extrap-olated | n | Engineering Verification Factor | Jul05-Jun06 | Extrap-olated |
| Agriculture | 16 | 104% | 4.5% | 4.6% | 15 | 93% | 6.4% | 6.5% | 3 | 100% | <0.1% | <0.1% |
| Commercial | 16 | 98% | 1.5% | 1.8% | 10 | 100% | <0.1% | <0.1% | 10 | 98% | 1.0% | 1.3% |
| Industrial | 25 | 99% | 0.8% | 0.9% | 22 | 99% | 0.7% | 0.8% | 21 | 102% | 2.5% | 3.6% |
| Institutional | 15 | 96% | 1.8% | 2.2% | 13 | 98% | 0.9% | 1.3% | 17 | 91% | 5.1% | 6.0% |
| Channel EHCI | 15 | 98% | 0.2% | 0.2% | 7 | 100% | <0.1% | <0.1% | 21 | 92% | 0.8% | 0.8% |
| Channel Lighting | 121 | 98% | 1.1% | 1.1% | 118 | 98% | 1.2% | 1.2% | 6 | 99% | 1.8% | 1.8% |
| Business Programs Overall | 208 | 99% | 0.6% | 0.7% | 185 | 98% | 0.87% | 0.89% | 78 | 98% | 2.0% | 2.4% |

Figures A–1 through A–6 provide a comparison across years for the installation rates and engineering verification factors by sector and channel. The gross savings adjustment factors discussed earlier are a product of the installation rates and the engineering verification factors.

**Figure A–1. kWh Installation Rates by Sector/Channel Comparison across Years**

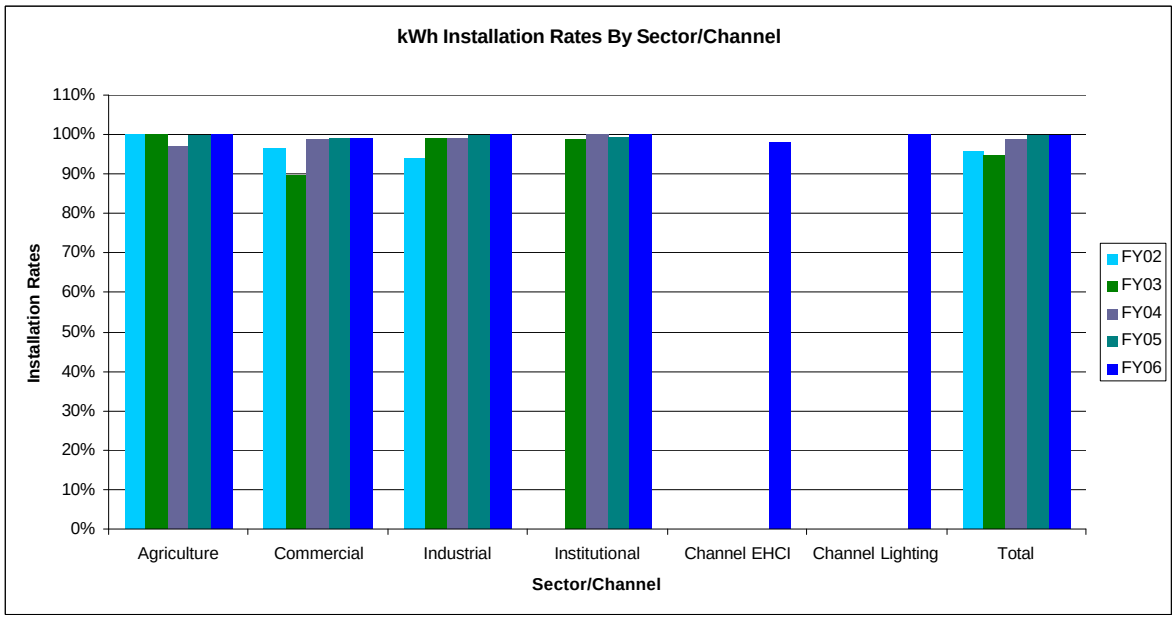



**Figure A–2. kW Installation Rates by Sector/Channel Comparison Across Years**

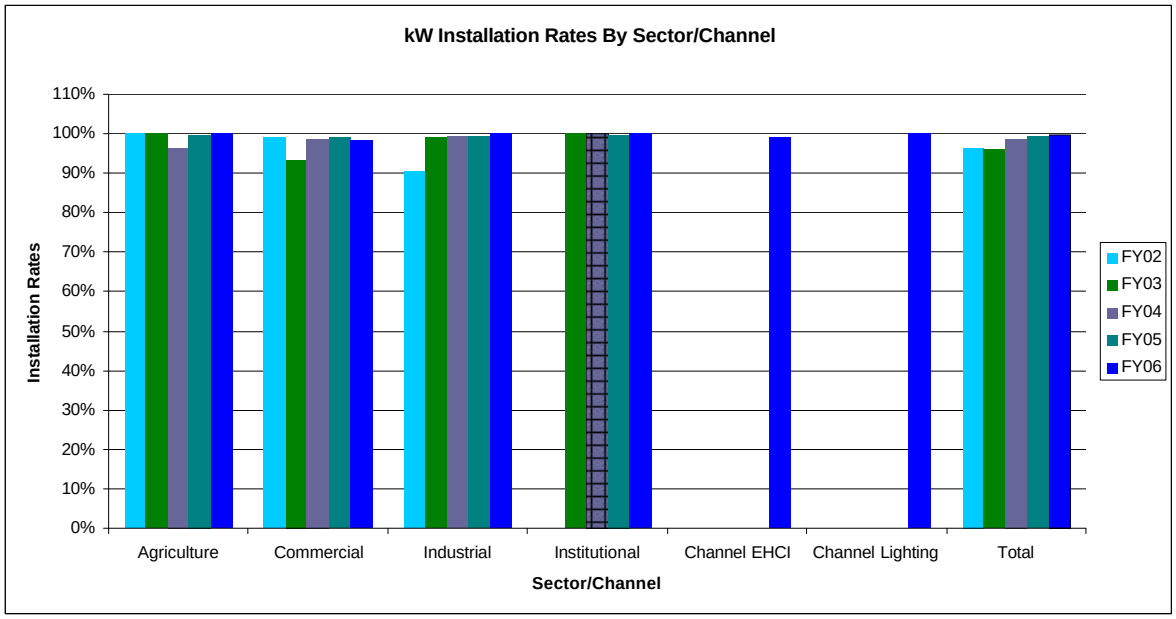


**Figure A–3. Therm Installation Rates by Sector/Channel Comparison across Years**

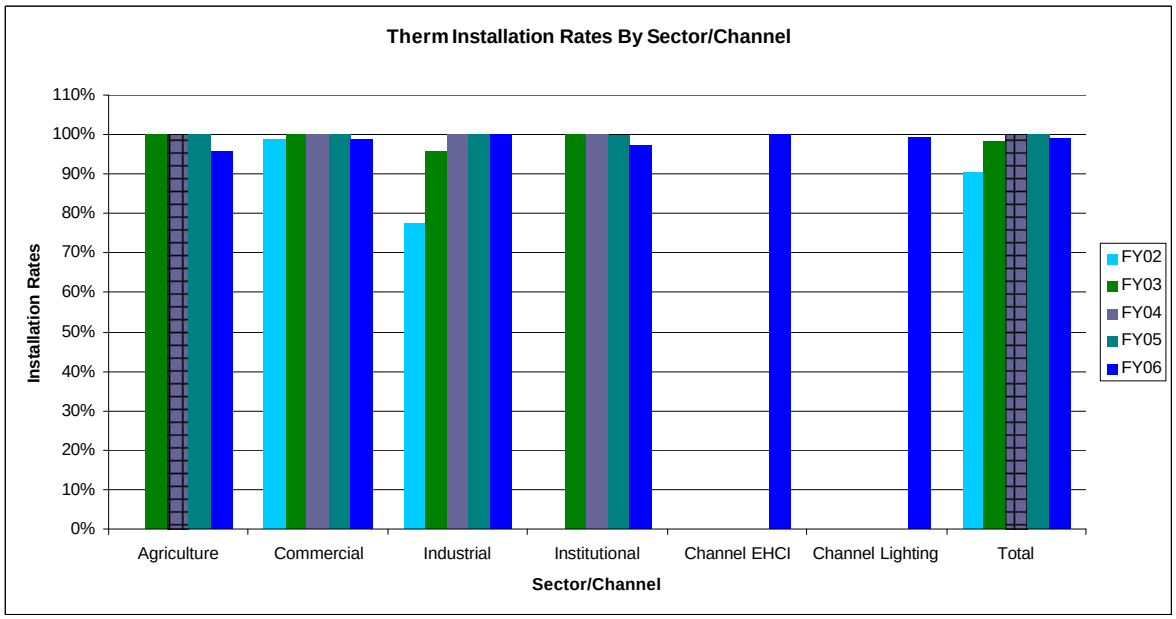



**Figure A–4. kWh Engineering Verification Factors by Sector/Channel Comparison across Years**

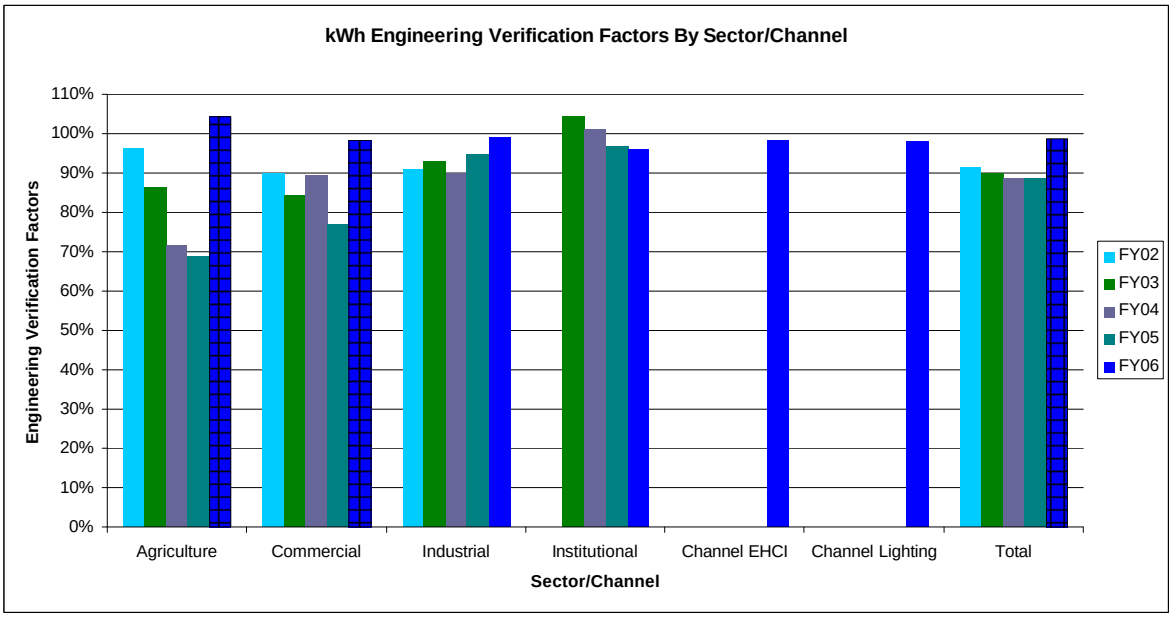


**Figure A–5. kW Engineering Verification Factors by Sector/Channel Comparison across Years**

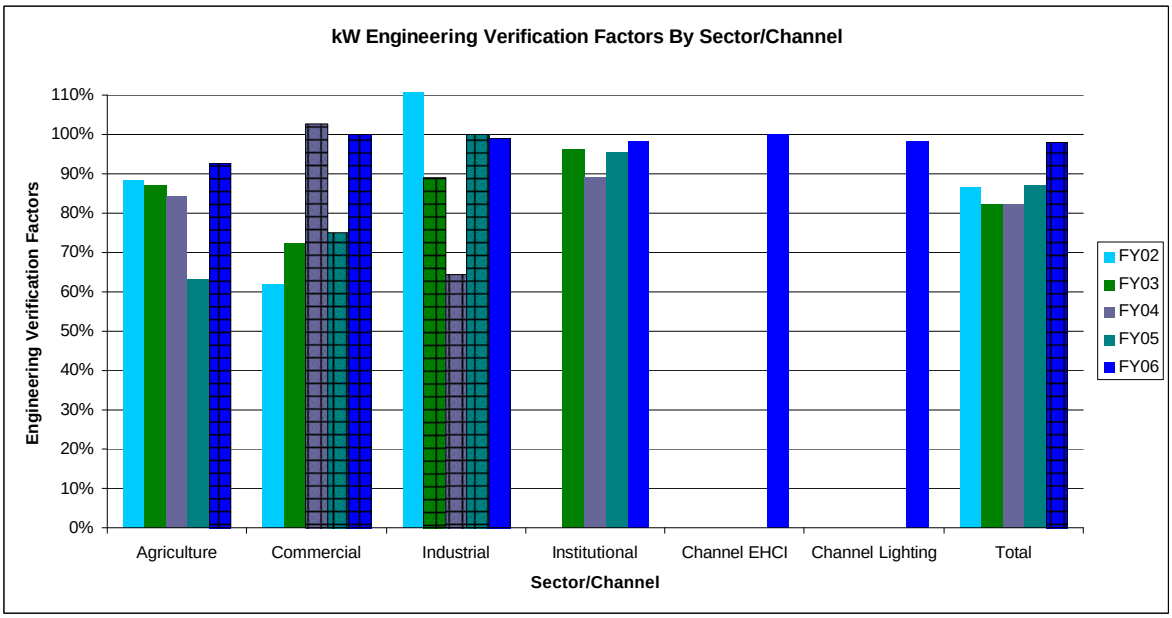
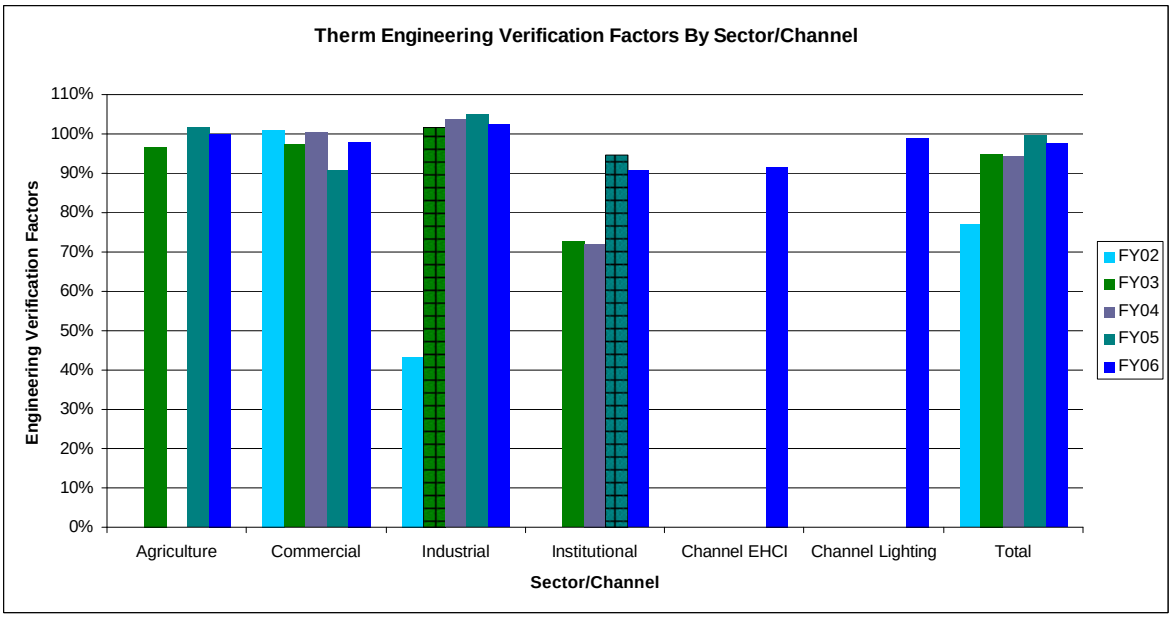



**Figure A–6. Therm Engineering Verification Factors by Sector/Channel Comparison across Years[a]**




[a] For the agriculture segment, the FY04 adjustment factor for therms was estimated with inadequate accuracy. Hence, the results are essentially uninformative and they are not reported. In part, the agriculture segment savings adjustment factor for therms was difficult to estimate with adequate accuracy because many of the agriculture segment therms savings (both tracking and verified) were negative due to fuel switching (from electricity to gas).

# APPENDIX B: DETAILED SAMPLING TABLES

## B.1 KEMAFRAME

### Table B–1. Sample Disposition by Strata

| Territory | Sector | Survey Type | Custom/ Prescriptive/ Large | Therms/ No Therms | Evaluation Cost | Stratum | # Participants Population | Target | Complete | Strata Status |
|---|---|---|---|---|---|---|---|---|---|---|
| **Very Small** | | | | | | | | | | |
| Non-WPS | Agriculture | CATI | Custom | No Therms | Mid | 1 | 38 | 7.2 | 7 | Available |
| Non-WPS | Agriculture | CATI | Custom | Therms | Mid | 2 | 45 | 7.7 | 9 | Available |
| Non-WPS | Agriculture | CATI | Custom | Therms | High | 3 | 6 | 2.0 | 2 | Exhausted |
| Non-WPS | Agriculture | CATI | Prescriptive | No Therms | Low | 6 | 283 | 22.1 | 25 | Available |
| Non-WPS | Agriculture | CATI | Prescriptive | Therms | Low | 7 | 38 | 3.8 | 4 | Exhausted |
| Non-WPS | Channel EHCI | CATI | Prescriptive | No Therms | Low | 11 | 36 | 0.5 | 1 | Available |
| Non-WPS | Channel EHCI | CATI | Prescriptive | Therms | Low | 12 | 247 | 15.9 | 19 | Available |
| Non-WPS | Channel Lighting | CATI | Prescriptive | No Therms | Low | 16 | 10,241 | 84.8 | 110 | Available |
| Non-WPS | Channel Lighting | CATI | Prescriptive | Therms | Low | 17 | 124 | 0.6 | 3 | Exhausted |
| Non-WPS | Channel Motors & VSDs | CATI | Prescriptive | No Therms | Low | 20 | 15 | 0.0 | 0 | Exhausted |
| Non-WPS | Commercial | CATI | Custom | No Therms | Mid | 21 | 10 | 1.1 | 2 | Exhausted |
| Non-WPS | Commercial | CATI | Custom | Therms | Mid | 22 | 86 | 7.9 | 9 | Available |
| Non-WPS | Commercial | CATI | Custom | Therms | High | 23 | 2 | 0.2 | 0 | Exhausted |
| Non-WPS | Commercial | CATI | Prescriptive | No Therms | Low | 26 | 290 | 6.8 | 10 | Exhausted |
| Non-WPS | Commercial | CATI | Prescriptive | Therms | Low | 27 | 408 | 11.5 | 13 | Available |
| Non-WPS | Industrial | CATI | Custom | No Therms | Mid | 31 | 17 | 2.1 | 3 | Available |
| Non-WPS | Industrial | CATI | Custom | Therms | Mid | 32 | 15 | 2.1 | 3 | Available |
| Non-WPS | Industrial | CATI | Prescriptive | No Therms | Low | 35 | 49 | 4.0 | 7 | Available |
| Non-WPS | Industrial | CATI | Prescriptive | Therms | Low | 36 | 15 | 1.5 | 1 | Exhausted |
| Non-WPS | Schools & Government | CATI | Custom | No Therms | Mid | 39 | 12 | 1.4 | 1 | Exhausted |
| Non-WPS | Schools & Government | CATI | Custom | Therms | Mid | 40 | 104 | 13.8 | 14 | Exhausted |
| Non-WPS | Schools & Government | CATI | Custom | Therms | High | 41 | 4 | 1.0 | 1 | Exhausted |
| Non-WPS | Schools & Government | CATI | Prescriptive | No Therms | Low | 44 | 77 | 7.5 | 8 | Available |
| Non-WPS | Schools & Government | CATI | Prescriptive | Therms | Low | 45 | 69 | 4.2 | 10 | Exhausted |
| WPS | Agriculture | CATI | Custom | Either | Mid | 8 | 9 | 2.3 | 2 | Available |
| WPS | Agriculture | CATI | Prescriptive | Either | Low | 9 | 489 | 7.5 | 8 | Available |
| WPS | Channel EHCI | CATI | Prescriptive | Either | Low | 13 | 11 | 0.8 | 1 | Exhausted |
| WPS | Channel Lighting | CATI | Prescriptive | Either | Low | 19 | 33 | 2.7 | 2 | Exhausted |
| WPS | Commercial | CATI | Custom | Either | Mid | 28 | 4 | 0.4 | 1 | Available |
| WPS | Commercial | CATI | Prescriptive | Either | Low | 30 | 99 | 1.7 | 3 | Exhausted |
| WPS | Industrial | CATI | Prescriptive | Either | Low | 38 | 7 | 0.5 | 1 | Exhausted |
| WPS | Schools & Government | CATI | Custom | Either | Mid | 46 | 2 | 0.3 | 1 | Available |
| WPS | Schools & Government | CATI | Prescriptive | Either | Low | 47 | 4 | 0.2 | 1 | Available |
| | | | | | | ***Total Very Small*** | 12,889 | 226 | 282 | |
| **Not Very Small** | | | | | | | | | | |
| Non-WPS | Agriculture | CATI | Prescriptive | No Therms | Low | 4 | 3 | 1.6 | 1 | Exhausted |
| Non-WPS | Agriculture | CATI | Prescriptive | Therms | Low | 5 | 3 | 1.7 | 1 | Exhausted |
| Non-WPS | Agriculture | ENG | Custom | No Therms | Mid | 48 | 3 | 0.6 | 1 | Available |
| Non-WPS | Agriculture | ENG | Custom | No Therms | High | 49 | 1 | 0.2 | 1 | Exhausted |
| Non-WPS | Agriculture | ENG | Custom | Therms | Mid | 50 | 6 | 1.2 | 1 | Available |
| Non-WPS | Agriculture | ENG | Custom | Therms | High | 51 | 5 | 1.1 | 2 | Available |
| Non-WPS | Channel EHCI | CATI | Prescriptive | Therms | Low | 10 | 3 | 2.0 | 1 | Exhausted |
| Non-WPS | Channel EHCI | ENG | Large | Therms | Low | 54 | 1 | 1.0 | 0 | Exhausted |
| Non-WPS | Channel Lighting | CATI | Prescriptive | No Therms | Low | 14 | 35 | 23.5 | 1 | Exhausted |
| Non-WPS | Channel Lighting | CATI | Prescriptive | Therms | Low | 15 | 8 | 5.4 | 2 | Exhausted |
| Non-WPS | Commercial | CATI | Prescriptive | No Therms | Low | 24 | 14 | 9.3 | 5 | Exhausted |
| Non-WPS | Commercial | CATI | Prescriptive | Therms | Low | 25 | 11 | 7.4 | 5 | Exhausted |
| Non-WPS | Commercial | ENG | Custom | No Therms | Mid | 55 | 10 | 2.7 | 4 | Available |
| Non-WPS | Commercial | ENG | Custom | Therms | Mid | 56 | 20 | 5.7 | 7 | Available |
| Non-WPS | Commercial | ENG | Custom | Therms | High | 57 | 1 | 0.7 | 1 | Exhausted |
| Non-WPS | Commercial | ENG | Large | No Therms | Low | 58 | 1 | 1.0 | 1 | Exhausted |
| Non-WPS | Commercial | ENG | Large | No Therms | Mid | 59 | 2 | 2.0 | 1 | Exhausted |
| Non-WPS | Commercial | ENG | Large | Therms | Mid | 60 | 2 | 2.0 | 1 | Exhausted |
| Non-WPS | Industrial | CATI | Prescriptive | No Therms | Low | 33 | 18 | 9.8 | 8 | Exhausted |
| Non-WPS | Industrial | CATI | Prescriptive | Therms | Low | 34 | 6 | 3.5 | 2 | Exhausted |
| Non-WPS | Industrial | ENG | Custom | No Therms | Mid | 62 | 28 | 9.5 | 10 | Available |
| Non-WPS | Industrial | ENG | Custom | Therms | Mid | 63 | 34 | 17.4 | 18 | Available |
| Non-WPS | Industrial | ENG | Large | Therms | Mid | 64 | 3 | 3.0 | 1 | Exhausted |
| Non-WPS | Industrial | ENG | Large | Therms | High | 65 | 1 | 1.0 | 0 | Exhausted |
| Non-WPS | Schools & Government | CATI | Prescriptive | No Therms | Low | 42 | 4 | 2.7 | 2 | Exhausted |
| Non-WPS | Schools & Government | CATI | Prescriptive | Therms | Low | 43 | 24 | 16.1 | 10 | Exhausted |
| Non-WPS | Schools & Government | ENG | Custom | No Therms | Mid | 67 | 6 | 2.1 | 3 | Available |
| Non-WPS | Schools & Government | ENG | Custom | Therms | Mid | 68 | 47 | 12.9 | 13 | Available |
| Non-WPS | Schools & Government | ENG | Custom | Therms | High | 69 | 10 | 2.6 | 3 | Available |
| Non-WPS | Schools & Government | ENG | Large | Therms | Mid | 70 | 1 | 1.0 | 1 | Exhausted |
| WPS | Agriculture | ENG | Custom | Either | Mid | 52 | 3 | 0.6 | 1 | Exhausted |
| WPS | Agriculture | ENG | Custom | Either | High | 53 | 2 | 0.3 | 1 | Available |
| WPS | Channel Lighting | CATI | Prescriptive | Either | Low | 18 | 6 | 3.0 | 1 | Exhausted |
| WPS | Commercial | CATI | Prescriptive | Either | Low | 29 | 3 | 2.0 | 1 | Exhausted |
| WPS | Commercial | ENG | Custom | Either | Mid | 61 | 1 | 0.5 | 1 | Exhausted |
| WPS | Industrial | CATI | Prescriptive | Either | Low | 37 | 6 | 4.0 | 2 | Exhausted |
| WPS | Industrial | ENG | Custom | Either | Mid | 66 | 4 | 1.6 | 2 | Available |
| WPS | Schools & Government | ENG | Custom | Either | Mid | 71 | 1 | 0.6 | 1 | Exhausted |
| | | | | | | ***Total Not Very Small*** | 337 | 163 | 117 | |
| | | | | | | ***FY06 Total*** | 13,226 | 389 | 399 | |

## Table B–2. Fraction of Frame Savings in Sample by Strata

| Territory | Sector | Survey Type | Custom/ Prescriptive/ Large | Therms/ No Therms | Evaluation Cost | Stratum | Fraction of Round Frame Total Reported Gross Savings | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Frame | | | Sample | | |
| | | | | | | | kWh | kW | Therms | kWh | kW | Therms |
| **Very Small** | | | | | | | | | | | | |
| Non-WPS | Agriculture | CATI | Custom | No Therms | Mid | 1 | 1.1% | 1.1% | 0.0% | 0.2% | 0.2% | 0.0% |
| Non-WPS | Agriculture | CATI | Custom | Therms | Mid | 2 | 0.8% | 0.9% | 0.6% | 0.2% | 0.2% | 0.2% |
| Non-WPS | Agriculture | CATI | Custom | Therms | High | 3 | 0.3% | 0.2% | 0.1% | 0.0% | 0.0% | 0.1% |
| Non-WPS | Agriculture | CATI | Prescriptive | No Therms | Low | 6 | 3.2% | 4.4% | 0.0% | 0.2% | 0.3% | 0.0% |
| Non-WPS | Agriculture | CATI | Prescriptive | Therms | Low | 7 | 0.5% | 0.8% | 0.1% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Channel EHCI | CATI | Prescriptive | No Therms | Low | 11 | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Channel EHCI | CATI | Prescriptive | Therms | Low | 12 | 0.3% | 0.9% | 2.0% | 0.0% | 0.0% | 0.1% |
| Non-WPS | Channel Lighting | CATI | Prescriptive | No Therms | Low | 16 | 20.4% | 25.1% | 0.0% | 0.2% | 0.2% | 0.0% |
| Non-WPS | Channel Lighting | CATI | Prescriptive | Therms | Low | 17 | 0.1% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Channel Motors & VSDs | CATI | Prescriptive | No Therms | Low | 20 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Commercial | CATI | Custom | No Therms | Mid | 21 | 0.2% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Commercial | CATI | Custom | Therms | Mid | 22 | 0.6% | 0.7% | 1.9% | 0.0% | 0.0% | 0.2% |
| Non-WPS | Commercial | CATI | Custom | Therms | High | 23 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Commercial | CATI | Prescriptive | No Therms | Low | 26 | 1.6% | 1.2% | 0.0% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Commercial | CATI | Prescriptive | Therms | Low | 27 | 0.2% | 0.6% | 3.8% | 0.0% | 0.0% | 0.1% |
| Non-WPS | Industrial | CATI | Custom | No Therms | Mid | 31 | 0.8% | 0.7% | 0.0% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Industrial | CATI | Custom | Therms | Mid | 32 | 0.1% | 0.1% | 0.9% | 0.0% | 0.1% | 0.2% |
| Non-WPS | Industrial | CATI | Prescriptive | No Therms | Low | 35 | 1.4% | 1.4% | 0.0% | 0.2% | 0.2% | 0.0% |
| Non-WPS | Industrial | CATI | Prescriptive | Therms | Low | 36 | 0.0% | 0.0% | 0.8% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Schools & Government | CATI | Custom | No Therms | Mid | 39 | 0.3% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Schools & Government | CATI | Custom | Therms | Mid | 40 | 0.6% | 0.7% | 3.5% | 0.2% | 0.1% | 0.5% |
| Non-WPS | Schools & Government | CATI | Custom | Therms | High | 41 | 0.1% | 0.0% | 0.2% | 0.0% | 0.0% | 0.1% |
| Non-WPS | Schools & Government | CATI | Prescriptive | No Therms | Low | 44 | 1.7% | 0.7% | 0.0% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Schools & Government | CATI | Prescriptive | Therms | Low | 45 | 0.1% | 0.1% | 1.3% | 0.0% | 0.0% | 0.2% |
| WPS | Agriculture | CATI | Custom | Either | Mid | 8 | 0.3% | 0.6% | 0.0% | 0.1% | 0.2% | 0.0% |
| WPS | Agriculture | CATI | Prescriptive | Either | Low | 9 | 1.1% | 1.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| WPS | Channel EHCI | CATI | Prescriptive | Either | Low | 13 | 0.0% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% |
| WPS | Channel Lighting | CATI | Prescriptive | Either | Low | 19 | 0.7% | 0.7% | 0.0% | 0.1% | 0.1% | 0.0% |
| WPS | Commercial | CATI | Custom | Either | Mid | 28 | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% |
| WPS | Commercial | CATI | Prescriptive | Either | Low | 30 | 0.2% | 0.3% | 0.2% | 0.0% | 0.0% | 0.0% |
| WPS | Industrial | CATI | Prescriptive | Either | Low | 38 | 0.2% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% |
| WPS | Schools & Government | CATI | Custom | Either | Mid | 46 | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% |
| WPS | Schools & Government | CATI | Prescriptive | Either | Low | 47 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | | | | | | ***Total Very Small*** | 37.2% | 43.7% | 15.8% | 2.0% | 2.1% | 1.9% |
| **Not Very Small** | | | | | | | | | | | | |
| Non-WPS | Agriculture | CATI | Prescriptive | No Therms | Low | 4 | 0.3% | 0.2% | 0.0% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Agriculture | CATI | Prescriptive | Therms | Low | 5 | 0.2% | 0.1% | 0.1% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Agriculture | ENG | Custom | No Therms | Mid | 48 | 0.3% | 0.3% | 0.0% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Agriculture | ENG | Custom | No Therms | High | 49 | 0.2% | 0.0% | 0.0% | 0.2% | 0.0% | 0.0% |
| Non-WPS | Agriculture | ENG | Custom | Therms | Mid | 50 | 0.3% | 0.1% | 0.7% | 0.1% | 0.1% | 0.0% |
| Non-WPS | Agriculture | ENG | Custom | Therms | High | 51 | 0.8% | 0.6% | 0.1% | 0.2% | 0.1% | 0.2% |
| Non-WPS | Channel EHCI | CATI | Prescriptive | Therms | Low | 10 | 0.0% | 0.2% | 0.7% | 0.0% | 0.0% | 0.3% |
| Non-WPS | Channel EHCI | ENG | Large | Therms | Low | 54 | 0.0% | 0.0% | 0.6% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Channel Lighting | CATI | Prescriptive | No Therms | Low | 14 | 5.9% | 6.8% | 0.0% | 0.2% | 0.2% | 0.0% |
| Non-WPS | Channel Lighting | CATI | Prescriptive | Therms | Low | 15 | 3.0% | 4.2% | 0.4% | 0.6% | 0.7% | 0.0% |
| Non-WPS | Commercial | CATI | Prescriptive | No Therms | Low | 24 | 2.3% | 1.3% | 0.0% | 0.7% | 0.4% | 0.0% |
| Non-WPS | Commercial | CATI | Prescriptive | Therms | Low | 25 | 1.7% | 2.2% | 1.6% | 0.9% | 1.1% | 0.7% |
| Non-WPS | Commercial | ENG | Custom | No Therms | Mid | 55 | 2.3% | 1.6% | 0.0% | 0.8% | 0.6% | 0.0% |
| Non-WPS | Commercial | ENG | Custom | Therms | Mid | 56 | 2.9% | 1.3% | 3.1% | 1.1% | 0.7% | 2.0% |
| Non-WPS | Commercial | ENG | Custom | Therms | High | 57 | 0.8% | 0.0% | 0.4% | 0.8% | 0.0% | 0.4% |
| Non-WPS | Commercial | ENG | Large | No Therms | Low | 58 | 2.3% | 0.0% | 0.0% | 2.3% | 0.0% | 0.0% |
| Non-WPS | Commercial | ENG | Large | No Therms | Mid | 59 | 1.9% | 2.7% | 0.0% | 1.1% | 0.8% | 0.0% |
| Non-WPS | Commercial | ENG | Large | Therms | Mid | 60 | 0.8% | 0.2% | 3.1% | 0.1% | 0.0% | 1.9% |
| Non-WPS | Industrial | CATI | Prescriptive | No Therms | Low | 33 | 3.5% | 3.5% | 0.0% | 1.5% | 1.8% | 0.0% |
| Non-WPS | Industrial | CATI | Prescriptive | Therms | Low | 34 | 0.4% | 0.4% | 1.2% | 0.3% | 0.3% | 0.4% |
| Non-WPS | Industrial | ENG | Custom | No Therms | Mid | 62 | 13.0% | 8.6% | 0.0% | 6.0% | 3.5% | 0.0% |
| Non-WPS | Industrial | ENG | Custom | Therms | Mid | 63 | 6.0% | 4.1% | 22.3% | 0.4% | 0.2% | 12.9% |
| Non-WPS | Industrial | ENG | Large | Therms | Mid | 64 | 0.9% | 0.1% | 16.2% | 0.0% | 0.0% | 4.9% |
| Non-WPS | Industrial | ENG | Large | Therms | High | 65 | 0.0% | 0.0% | 9.7% | 0.0% | 0.0% | 0.0% |
| Non-WPS | Schools & Government | CATI | Prescriptive | No Therms | Low | 42 | 0.8% | 0.7% | 0.0% | 0.2% | 0.1% | 0.0% |
| Non-WPS | Schools & Government | CATI | Prescriptive | Therms | Low | 43 | 0.1% | 0.1% | 10.6% | 0.1% | 0.0% | 5.2% |
| Non-WPS | Schools & Government | ENG | Custom | No Therms | Mid | 67 | 1.2% | 2.2% | 0.0% | 1.0% | 0.9% | 0.0% |
| Non-WPS | Schools & Government | ENG | Custom | Therms | Mid | 68 | 3.9% | 3.3% | 8.6% | 0.8% | 1.6% | 2.8% |
| Non-WPS | Schools & Government | ENG | Custom | Therms | High | 69 | 1.4% | 1.5% | 1.8% | 0.2% | 0.1% | 0.4% |
| Non-WPS | Schools & Government | ENG | Large | Therms | Mid | 70 | 0.8% | 6.0% | 0.1% | 0.8% | 6.0% | 0.1% |
| WPS | Agriculture | ENG | Custom | Either | Mid | 52 | 0.3% | 0.4% | 0.0% | 0.1% | 0.1% | 0.0% |
| WPS | Agriculture | ENG | Custom | Either | High | 53 | 0.2% | 0.2% | 0.0% | 0.1% | 0.0% | 0.0% |
| WPS | Channel Lighting | CATI | Prescriptive | Either | Low | 18 | 0.7% | 0.8% | 0.0% | 0.2% | 0.2% | 0.0% |
| WPS | Commercial | CATI | Prescriptive | Either | Low | 29 | 0.4% | 0.2% | 0.1% | 0.1% | 0.0% | 0.1% |
| WPS | Commercial | ENG | Custom | Either | Mid | 61 | 0.4% | 0.0% | 0.2% | 0.4% | 0.0% | 0.2% |
| WPS | Industrial | CATI | Prescriptive | Either | Low | 37 | 2.1% | 2.2% | 0.0% | 1.0% | 1.1% | 0.0% |
| WPS | Industrial | ENG | Custom | Either | Mid | 66 | 0.7% | -0.1% | 2.1% | 0.1% | 0.1% | 0.4% |
| WPS | Schools & Government | ENG | Custom | Either | Mid | 71 | 0.2% | 0.0% | 0.5% | 0.2% | 0.0% | 0.5% |
| | | | | | | ***Total Not Very Small*** | 62.8% | 56.3% | 84.2% | 22.8% | 20.9% | 33.2% |
| | | | | | | ***FY06 Total*** | 100% | 100% | 100% | 25% | 23% | 35% |

## B.2 ITRONFRAME

### Table B–3. Sample Disposition by Strata

| Sector | Custom/ Prescriptive/ Large | Therms/ No Therms | Stratum | # Participants Population | # Participants Complete |
|---|---|---|---|---|---|
| **Very Small** | | | | | |
| Agriculture | Custom | No Therms | 72 | 15 | 2 |
| Agriculture | Prescriptive | No Therms | 73 | 117 | 7 |
| Channel EHCI | Prescriptive | No Therms | 74 | 18 | 0 |
| Channel Lighting | Prescriptive | No Therms | 76 | 296 | 3 |
| Channel Motors & VSDs | Prescriptive | No Therms | 77 | 5 | 0 |
| Commercial | Custom | No Therms | 79 | 4 | 0 |
| Commercial | Prescriptive | No Therms | 81 | 45 | 0 |
| Industrial | Custom | No Therms | 83 | 6 | 0 |
| Industrial | Prescriptive | No Therms | 85 | 75 | 1 |
| Schools & Government | Custom | No Therms | 87 | 12 | 0 |
| Schools & Government | Prescriptive | No Therms | 89 | 58 | 0 |
| | | | ***Total Very Small*** | 651 | 13 |
| **Not Very Small** | | | | | |
| Channel Lighting | Prescriptive | No Therms | 75 | 27 | 0 |
| Commercial | Custom | No Therms | 78 | 4 | 0 |
| Commercial | Prescriptive | No Therms | 80 | 21 | 0 |
| Industrial | Custom | No Therms | 82 | 10 | 0 |
| Industrial | Prescriptive | No Therms | 84 | 21 | 4 |
| Schools & Government | Custom | No Therms | 86 | 4 | 0 |
| Schools & Government | Prescriptive | No Therms | 88 | 3 | 0 |
| | | | ***Total Not Very Small*** | 90 | 4 |
| | | | ***FY06 Total*** | 741 | 17 |

### Table B–4. Fraction of Frame (ITRONFRAME) Savings in Sample by Strata

| Sector | Custom/ Prescriptive/ Large | Therms/ No Therms | Stratum | Fraction of Round Frame Total Reported Gross Savings: Frame kWh | Frame kW | Frame Therms | Sample kWh | Sample kW | Sample Therms |
|---|---|---|---|---|---|---|---|---|---|
| **Very Small** | | | | | | | | | |
| Agriculture | Custom | No Therms | 72 | 0.4% | 0.4% | na | 0.0% | 0.1% | na |
| Agriculture | Prescriptive | No Therms | 73 | 1.5% | 2.0% | na | 0.1% | 0.2% | na |
| Channel EHCI | Prescriptive | No Therms | 74 | 0.1% | 0.7% | na | 0.0% | 0.0% | na |
| Channel Lighting | Prescriptive | No Therms | 76 | 18.1% | 21.3% | na | 0.4% | 0.5% | na |
| Channel Motors & VSDs | Prescriptive | No Therms | 77 | 0.1% | 0.1% | na | 0.0% | 0.0% | na |
| Commercial | Custom | No Therms | 79 | 0.3% | 0.8% | na | 0.0% | 0.0% | na |
| Commercial | Prescriptive | No Therms | 81 | 3.4% | 3.3% | na | 0.0% | 0.0% | na |
| Industrial | Custom | No Therms | 83 | 1.6% | 1.1% | na | 0.0% | 0.0% | na |
| Industrial | Prescriptive | No Therms | 85 | 9.5% | 11.0% | na | 0.2% | 0.2% | na |
| Schools & Government | Custom | No Therms | 87 | 1.3% | 1.8% | na | 0.0% | 0.0% | na |
| Schools & Government | Prescriptive | No Therms | 89 | 4.6% | 3.0% | na | 0.0% | 0.0% | na |
| | | | ***Total Very Small*** | 41.0% | 45.5% | na | 0.8% | 1.1% | na |
| **Not Very Small** | | | | | | | | | |
| Channel Lighting | Prescriptive | No Therms | 75 | 15.5% | 18.1% | na | 0.0% | 0.0% | na |
| Commercial | Custom | No Therms | 78 | 2.8% | 2.9% | na | 0.0% | 0.0% | na |
| Commercial | Prescriptive | No Therms | 80 | 12.8% | 2.8% | na | 0.0% | 0.0% | na |
| Industrial | Custom | No Therms | 82 | 9.1% | 8.0% | na | 0.0% | 0.0% | na |
| Industrial | Prescriptive | No Therms | 84 | 13.1% | 14.7% | na | 2.7% | 3.2% | na |
| Schools & Government | Custom | No Therms | 86 | 3.6% | 4.6% | na | 0.0% | 0.0% | na |
| Schools & Government | Prescriptive | No Therms | 88 | 2.1% | 3.4% | na | 0.0% | 0.0% | na |
| | | | ***Total Not Very Small*** | 59.0% | 54.5% | na | 2.7% | 3.2% | na |
| | | | ***FY06 Total*** | 100% | 100% | na | 4% | 4% | na |

## *APPENDIX C: AGRICULTURE SUPPLIER SURVEYS*

To enhance the FY06 impact evaluation, KEMA conducted surveys with agricultural suppliers who sold energy-efficient equipment and services to customers in the Agriculture sector during FY06. The purpose of this exercise was twofold:

- Specifically, we gathered additional data to explore the supplier effect on program attribution in the Agriculture sector. Due to the nature of business relationships in the sector, additional input from suppliers is of particular importance.
- While the primary purpose of the supplier surveys was to explore the supplier effect on program attribution for the sector, we also collected process-related data. Our understanding of business relationships in the Agriculture sector is based on information from the sector, and this survey helps us better understand these relationships.

The agricultural supplier survey is a specially tailored version of an existing general supplier survey, and it has been standard practice to interview suppliers in the course of evaluating Focus. The supplier interview is used in the assessment of program attribution for implemented measures where the influence of Focus was not directly on an end user but on a supplier who, in turn, influenced the end user to implement the measure. The agricultural supplier survey collects general supplier-customer relationship information and information specifically about program influence related to particular implemented measures.

The decision to interview the supplier is based on the information the program provides on the nature of the program's involvement with the customer and the supplier.[27] Based on our understanding of the agriculture market and how the program works with it, we determined that it would be worthwhile to assess supplier influence comprehensively for this sector. Therefore, we attempted to interview all suppliers listed by sector customers who were in the customer survey sample frame. Out of the 102 suppliers on this list, KEMA completed surveys with 54.

Appendix C discusses the rationale and methodology for conducting these supplier surveys and summarizes KEMA's process findings. The FY07 Detailed Evaluation Plans do not state that we planned to report this process data; however, we thought it worthwhile to also collect and report on process information that could enhance our understanding of the agriculture supplier-customer relationship.

Appendix D explains how the supplier interviews were used to explore the supplier effect on attribution in the agriculture and commercial sectors. Again, assessing supplier influence in the program is not a new effort. The agricultural supplier survey is based on an existing general supplier survey, and other sectors have had the opportunity in the past to have supplier influence included in evaluations of their sectors. We do not report on

[27] Each sector provides the evaluation team with the program attribution sequence to be used for each customer. If the sector selects "Program ally delivered a VARIETY OF SERVICES AS A RESULT OF the services the ally received directly from Focus" and provides the necessary contact information for the supplier, then the evaluation team conducts a supplier survey in addition to a customer survey.

Commercial sector supplier process findings because the supplier sample size for that survey was too small.

## C.1 RATIONALE FOR CONDUCTING AGRICULTURE SUPPLIER SURVEYS

For Agriculture program participants, we would ideally conduct supplier surveys for all projects that were implemented through an agricultural supplier. However, to make this effort affordable, the sample size of participating customers was reduced, and each supplier surveyed was interviewed about one project only. The rationale for taking this approach with the Agriculture sector is as follows:

- Customers in all sectors may have close relationships with suppliers and follow their supplier's suggestions. However, the agricultural market is different in that a large fraction of customers have a general agricultural supplier who takes care of all their needs, including some business processes. As a result, in this market there's a greater potential for the supplier to recommend a product and offer a (post-incentive) price and have the customer unaware of Focus. The supply relationship could extend to prescriptive measures where the program doesn't know much about the relationship, as well as custom cases where it is more likely to.
- Because of this supply structure, it is possible to develop a standard set of questions that would apply to all suppliers. This would be more challenging in other sectors.
- Interviewing suppliers based on a sample of projects is more efficient than developing a separate sample of agricultural suppliers. Using this approach avoids new sample development costs as well as the costs of separate analysis since the attribution analysis remains at the customer level. In addition, it is often easier to get suppliers to respond to an interview request at all and to respond more accurately when it includes questions about a specific project or customer rather than asking only about general practices.
- The agriculture sector is small and relatively tightly defined. It contributes a relatively small portion of total program savings. In past year's attribution for roughly half of the Agriculture sector's savings has been determined via the CFL market analysis. These conditions allow us to test this approach in a limited context, with little risk that the necessary reduction in customer sample size will jeopardize the accuracy of overall BP effectiveness.

## C.2 SUPPLIER SAMPLE METHODOLOGY

### C.2.1 Overview of Methodology

Interviewing suppliers served two purposes.

1. To give the program process feedback from suppliers in a unique sector.
2. To explore the supplier effect on program attribution.

In an ideal world, we would have interviewed suppliers about all projects completed by their customers who took customer surveys so that—on a project level—we would have

perfectly overlapping data on program attribution. However, as with any survey, we had limited time and resources. Given the short timeframe, we could not wait for customer surveys to be completed, and then survey their suppliers. Furthermore, suppliers could not be expected to answer questions about all projects for all customers. For example, one supplier did eleven projects for five different customers in our sample.

Given these constraints, suppliers were interviewed about one randomly selected project they completed for a customer who was in the customer survey sample frame. This approach provided meaningful attribution data from supplier surveys using limited resources. A detailed discussion of the supplier attribution analysis is provided in the next appendix.

### C.2.2 Who is in the supplier sample?

The sample of suppliers we attempted to speak with was provided to KEMA by Focus. KEMA gave Focus a list of Agriculture customers in the customer survey (CATI and engineering) sample frames. Focus then provided KEMA with a list of suppliers who sold energy-efficient services to these customers. As shown in Table C–1, for FY06, KEMA interviewed 54 of the 102 unique agricultural suppliers

Many suppliers had multiple customers in the sample frames, who in turn also implemented multiple energy-efficiency measures. Prior to calling a supplier, surveyors were required to take two steps. First, randomly choose one project to interview the supplier about. Second, check to see if the Energy Advisor that helped the customer implement that project filled out an Energy Advisor Survey[28] for the project. If there was an accompanying Energy Advisor Survey then the surveyor reviewed the survey to inform their supplier interview. Interviewers asked the supplier to state in their own words what influence the program had on their decision to offer the customer the specific services at the time they did, and then probed the supplier using the information from the customer's Energy Advisor Survey if they filled one out for the project.

### C.2.3 Supplier Survey Disposition

Before analyzing the supplier data, suppliers in the supplier sampling frame were divided into five categories:

1. Completed supplier and customer survey (same customer): supplier was questioned about a project they did for a customer, who also completed a customer survey.
2. Completed supplier and customer survey (different customer): supplier had a customer who completed a survey, but the supplier was questioned about a project for a customer who did not complete a survey.
3. Completed supplier survey only: supplier was questioned about a project they did for a customer, but none of the supplier's customers completed a survey.
4. Supplier not surveyed and customer survey completed: supplier survey was not completed, but the supplier had a customer who completed a survey.

[28] A description of this instrument is provided in Section 4.2 Summary of Major Changes.

5. Supplier not surveyed and customer not surveyed: supplier survey was not completed and none of the supplier's customers completed a survey.

Table C–1 shows that 26 percent of completed supplier surveys focused on a project for a customer who also completed a customer survey (those in category one). Suppliers in this group accounted for 26 percent of all projects done by suppliers in the pool of suppliers with whom we completed surveys. If a supplier was in category one, we have overlapping attribution data with a customer relevant to one project they completed for that customer.

The process results reported in this appendix include all agriculture supplier surveys regardless of whether or not a customer survey was completed for an associated customer. That is, if a supplier was *not* in category one in Table C–1 and we completed a survey with them, we did not have overlapping attribution data from a customer, but we still reported their responses to process questions (process reporting also included those in category one).

**Table C–1. Agricultural Supplier Survey Disposition**

| | % Completes | | |
|---|---|---|---|
| **Supplier category** | **Suppliers** | **Customers** | **Projects** |
| 1. *Completed supplier survey*: also completed customer survey - same customer | 26% | 30% | 26% |
| 2. *Completed supplier survey*: completed customer survey with differnent customer | 22% | 30% | 34% |
| 3. *Completed supplier survey*: no customer survey completed | 52% | 39% | 39% |
| **Total Counts** | **54** | **164** | **307** |
| | **% Not surveyed** | | |
| 4. *Supplier not surveyed*: completed customer survey | 38% | 52% | 58% |
| 5. *Supplier not surveyed*: no customer survey completed | 63% | 48% | 42% |
| **Total Counts** | **48** | **87** | **195** |
| **Grand Totals (Completes+Not Surveyed)** | **102** | **251** | **502** |

## C.3 PROCESS-RELATED FINDINGS

In order to gain suppliers perspectives on program attribution, and to better understand the role of suppliers in agricultural customers' decisions to install energy-efficient equipment, KEMA surveyed agricultural suppliers on three topics. KEMA asked suppliers questions about their interaction with Focus, what they thought their business would be like without Focus, and project-specific questions, including program attribution questions (what they think the customer would have done without Focus). This section discusses results only from first two parts of the survey (process questions). Project specific questions pertain largely to program attribution, which is the subject of Appendix D.

### C.3.1 Interaction with Focus on Energy

In the first section of the supplier survey, KEMA asked agricultural suppliers about their interaction with Focus. Below, we discuss how suppliers use Focus, what they think of Focus, and what they think their business would be like without the program.

### a. HOW SUPPLIERS USE FOCUS

Not surprisingly, Agricultural suppliers' primary interaction with Focus is to sell products to customers that get rebates from the program. Many suppliers take advantage of other services provided by Focus. As shown in Table C–2, about half (52 percent) of suppliers said they used Focus marketing materials to help promote energy-efficient products and services, and 44 percent said they had received technical assistance or training from Focus. About half (54 percent) also said that Focus has added some or much new information or improvement to what they provide customers about energy efficiency (aside from information about incentives). On average, suppliers have been involved with Focus for about four years.

**Table C–2. How Suppliers Use Focus**

| Questions about supplier interaction with Focus | (n) |
|---|---|
| **S3:** Supplier said they had been involved with Focus | (52) |
| Mean (yrs) | 4.3 |
| **S4**: Supplier said company has | (54) |
| Sold products to customers that receive financial incentives from Focus | 96% |
| Received customer leads from Focus | 28% |
| Used Focus marketing materials | 52% |
| Received technical assistance or training from Focus | 44% |
| Been introduced to new energy-efficient technologies by Focus | 30% |

### b. WHAT SUPPLIERS THINK OF FOCUS

Suppliers said that the program has played a very important financial role in their ability to sell energy-efficient products and services (see Table C–3). They also said that Focus' role as an information conduit and educator, while still important, is modestly so in comparison to its financial role. Over half of respondents said the program is somewhat or very important in endorsing or legitimizing energy-efficient products, and over two-thirds said Focus rebates were somewhat or very helpful in convincing customers to implement energy-efficient measures.

**Table C–3. What Suppliers Think of Focus**

| Questions about supplier interaction with Focus | (n) |
|---|---|
| **S5**: Supplier said that aside from information about incentives, Focus has added | (54) |
| No or little new information or improvement to what they provide customers about energy-efficiency | 46% |
| Some or much new information or improvement to what they provide customers about energy-efficiency | 54% |
| **S7:** Importance of Focus in endorsing or legitimizing the energy-efficient products supplier sells | (53) |
| Not important at all | 11% |
| 2 | 13% |
| 3 | 23% |
| 4 | 32% |
| Very important | 21% |
| **S8:** Helpfulness of Focus financial incentives in convincing customers to implement energy-efficient measures | (52) |
| Not at all helpful | 4% |
| 2 | 4% |
| 3 | 23% |
| 4 | 31% |
| Very helpful | 38% |

### *c. WITHOUT FOCUS ON ENERGY*

In the second section of the agricultural supplier survey, KEMA asked suppliers questions about what they thought their business would be like without Focus. Almost two-thirds of those interviewed said the services they provide would not be different if Focus or something similar had not existed since April 2001 (see Table C–4).

We asked suppliers who did *not* say their services would be the same (27 respondents total, includes respondents who did not know if their services would be the same) whether their sales volume of energy-efficient services would be different; 85 percent of respondents in this group said it would be lower (responses varied from “slightly” to 50 percent lower).

Of those who said their services and products *would be* different (20 respondents total), 61 percent agreed or strongly agreed that, without the program, certain energy-efficient projects they do for customers would not be economically feasible. A majority (81 percent) of respondents in this group agreed or strongly agreed that Focus helps legitimize the energy-efficient services and products they sell.

**Table C–4. Supplier Services without Focus**

| **Questions about what supplier's business would be like without Focus** | (n) |
|---|---|
| **W1a**: Would the services and products supplier provides be different without Focus | (53) |
| Yes | 36% |
| No | 64% |
| **W4:** Without Focus, certain energy-efficient projects supplier does for customers would not be economically feasible | (20) |
| Strongly agree | 0% |
| 2 | 27% |
| 3 | 12% |
| 4 | 38% |
| Strongly disagree | 23% |
| **W5:** Focus helps legitimize energy-efficient products and services | (20) |
| Strongly agree | 0% |
| 2 | 12% |
| 3 | 8% |
| 4 | 46% |
| Strongly disagree | 35% |

[a] Suppliers who responded 'no' to W1a were not asked W4-W5 (one supplier responed 'don't know').

### C.3.2 Conclusion—Process Findings

In summary, agricultural suppliers like the program and want it to continue. They also believe that Focus plays a vital financial role in their ability to sell energy-efficient products and services. Focus marketing materials and other informational services provided by the program have also been helpful to suppliers' efforts to sell energy-efficient products and services.

Most suppliers think their businesses would not be any different in the absence of the program, but a non-trivial number, about a third, would *not* be offering the same services without Focus. A strong majority of suppliers also believe they would sell less energy-efficient services without the program.

## *APPENDIX D: SUPPLIER EFFECT ON ATTRIBUTION*

### D.1.1 Overview

For this evaluation round, KEMA explored the possibility of integrating supplier data into Program Attribution estimates. This task included sampling and collection of supplier data[29] and an elaborate quantitative analysis of these data in conjunction with the data collected with the partner[30] surveys. The results of this exploration were not incorporated into the estimation of program attribution. The standard partner-only estimation method used in previous impact evaluations was employed. This Appendix explains the steps KEMA followed to analyze the possible integration of supplier interviews into the attribution estimates; and a discussion of why KEMA decided not to include the results of this analysis in the attribution estimates.

KEMA interviews suppliers where the program indicated that it worked primarily with the supplier and therefore the customer may be unaware of program involvement. The supplier interview is used in the assessment of program attribution for implemented measures where the influence of Focus was not directly on an end user but on a supplier who, in turn, influenced the end user to implement the measure. This interview has been a long-standing part of the data collection process. The General Supplier Survey is provided in Appendix I.

Eligibility for a supplier interview is based on the information the program provides on the nature of the program's involvement with the partner and the supplier[31]. Based on our understanding of the Agriculture sector market and how the program works with it, we determined that it would be worthwhile to assess supplier influence comprehensively for this sector. A discussion of the rationale and methodology for conducting these specially tailored supplier surveys and a summary of KEMA's process findings were provided in Appendix C. The Agricultural Supplier Survey is provided in Appendix H.

This appendix describes the methodologies employed in the exploratory exercise into the estimation of supplier attribution. The integration process is slightly different for the Agriculture and Commercial Sectors. This is a result of differences in data collection for the two sectors. As mentioned above KEMA conducted a comprehensive assessment of supplier influence in the Agriculture Sector; while only assessing supplier influence for the eight Commercial customers identified by the Commercial Sector as "Program ally delivered a VARIETY OF SERVICES AS A RESULT OF the services the ally received directly form Focus".

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[29] A detailed discussion of the supplier survey sampling is provided in Appendix C.

[30] In this appendix, a business customer that installed an energy efficiency measure with the help of the program is referred to as a partner.

[31] Each sector provides the evaluation team with the program attribution sequence to be used for each partner. If the sector selects "Program ally delivered a VARIETY OF SERVICES AS A RESULT OF the services the ally received directly from Focus" and provides the necessary contact information for the supplier, then the evaluation team attempts to conduct a supplier survey in addition to a partner survey. This program attribution sequence was not selected by the Industrial or Schools & Government Sectors.

The supplier interview includes a sequence of questions nearly identical to those asked of partners in the program attribution section of the partner survey. The following sections explain the calculations used to investigate incorporating these questions for the Agriculture and Commercial Sectors.

### D.1.2 Methodology for Integrating Agriculture Sector Partner and Supplier Data

In the Agriculture sector, respondents (partners and suppliers) were grouped into three categories:

- Partners – responded to the attribution survey that KEMA conducted with partners that installed the energy efficiency equipment.
- Suppliers – responded to the attribution survey that KEMA conducted with suppliers, about projects that do NOT have a corresponding partner survey.
- Composite - responded to the attribution survey that KEMA conducted with suppliers, about projects that have a corresponding partner survey.

First, the survey responses for the above groups were analyzed as follows:

(1) **Partner-only attribution estimates.** These estimates are calculated using the same partner survey questions and algorithms used in previous rounds; that is, this is the same participant program attribution calculation in use since the initial impact evaluation.

The steps for calculating partner-only attribution estimates are:

a. Determine attribution $a_{pk}$ for each partner k using the standard method for the partner survey responses.

b. Aggregate to full population estimate $A_p$ based on the partner sample design and completed sample.

(2) **Supplier-only attribution estimates.** These estimates use the supplier survey questions to calculate attribution using similar methods as partner survey for supplier surveys that do not have a corresponding partner survey. This method uses the highest attribution response to question P4 [*If your company had NOT been involved with Focus, how likely is it that you would have offered the same energy efficiency services and/or technologies to the customer?*] or P5 [*If your company had NOT been involved with Focus, how likely do you think the customer would have been to accept these energy efficiency measures (i.e., proceed with the project)?*] as the starting point in the attribution calculation.

A detailed discussion of the supplier survey sampling is provided in Appendix C.

The steps for calculating supplier-only attribution estimates are:

a. Using the supplier survey responses for individual projects, determine attribution $a_{sk}$ for the project reported on by each supplier *k*, using analysis similar to the partner method.

Attribution is estimated according to whichever was less likely to occur without the program, the supplier offering the measure (P4) or the customer accepting it (P5).

b. Aggregate to full population estimate $A_s$.

i. For supplier *s*, the project selection probability for each project *k* is $1/J_s$, where $J_s$ is the number of projects for supplier *s*.

ii. Supplier inclusion probability is *n/N*, where *n* is the number of suppliers with completed surveys reporting on individual projects and *N* is the total number of suppliers in the universe we targeted.

iii. Weight $w_{sk}$ for the project *k* reported on by supplier *s* is *N/(nJ)*.

iv. Use ratio estimation with $As = S_s\, w_{sk}\, G_{sk}\, a_{sk} / \Sigma S_s\, w_{sk}\, G_{sk}$ , where $G_{sk}$ = gross savings for project *k,* supplier *s*.

(3) **Composite attribution estimates.** These attribution estimates were calculated in cases where KEMA collected survey responses from the partner and from the supplier for the same project.

The steps for calculating composite partner/supplier attribution estimates are:

a. Calculate a composite attribution $a_{ck}$.

i. If the partner reported the supplier had little or no influence on the decision to implement the project, estimate attribution based only on the partner's answers:
$a_{ck} = a_{pk}$

ii. If the partner reported the supplier had some influence on the decision, the attribution rate is the highest of the attribution rates estimated from partner response to question Z13 [*If you had not received help from the Focus on Energy Program, how likely would you have been to undertake the energy efficiency improvements?*], or from supplier response to questions P4 and P5.

iii. Complete the project-level attribution assessment using the methodology applied to partner attribution surveys.

*a. INTEGRATION*

KEMA integrated the three groups of attribution estimates described above. The integrated attribution estimates combine the results of the three sets of attribution estimates detailed above.

The steps for calculating final integrated attribution estimates are:

a. Calculate two adjustment ratios using the set of projects that have both supplier and partner responses, using partner weights to calculate the averages.

   i. $Ratio_{c/p}$ = average($a_c$)/average($a_p$)

   ii. $Ratio_{c/s}$ = average($a_c$)/average($a_s$)

b. Apply the adjustment ratios to the two stand-alone estimates.

   *i.* $A'_p = Ratio_{c/p} A_p$

   ii. $A'_s = Ratio_{c/s} A_s$

c. Average the two adjusted estimates to produce the final estimate.

d. Calculate standard errors.

   i. Calculate partner attribution estimates, supplier attribution estimates, and composite attribution estimates standard errors using ratio estimation standard error formulas.

   ii. For each adjusted estimate *A'*

   $RSE(A') \sim sqrt\ [(RSE(R))^2 + (RSE(A))^2]$

e. Analyze standard errors to determine estimate quality. Compare new ratios to partner-only ratios and investigate inconsistent and unexpected results.

### D.1.3 Methodology for Integrating Commercial Sector Partner and Supplier Data

In the commercial cases, there are eight partners for which supplier surveys were determined to be appropriate[32]. Supplier surveys were completed with four of them. The steps for calculating integrated attribution estimates for the commercial respondent are:

(1) For the four cases with both partner and supplier surveys, calculate the partner stand-alone $a_{pk}$ and the composite attribution $a_{ck}$ as described for the Agricultural sector.

(2) Calculate the ratio of average composite to average partner-only attribution: $Ratio_{c/p}$ = average($a_c$)/average($a_p$)

[32] The appropriateness of these eight Commercial customers was determined by whether the "Program ally delivered a VARIETY OF SERVICES AS A RESULT OF the services the ally received directly from Focus" program attribution sequence was selected by the sector.

(3) Apply this ratio to adjust the partner-only attribution for the four cases that do not have supplier surveys. This imputation is statistically sound because it has a minor effect on the overall standard error.

(4) Calculate commercial attribution using the imputed or direct composite attribution in place of the partner stand-alone for the eight cases where supplier surveys were indicated, applying standard (partner-only) weighting and aggregation procedures.

(5) Analyze standard errors to determine estimate quality. Compare new ratios to partner-only ratios and investigate inconsistent and unexpected results.

### D.1.4 Conclusions

This was the first exploratory analysis to incorporate supplier attribution into the calculation of program attribution.

A comparison of the integrated results with the standard partner-only results leads us to conclude that this method needs additional refinement before including it as part of the final reported attribution estimates. Thus, the attribution results used in this report follow the standard partner-only methodology that has been used in all prior program rounds.

The primary reasons KEMA decided not to use the integrated results are:

a. The standard errors for the integrated estimates were substantially higher than the standard errors obtained with the standard methodology. This is an indication that, as a group, suppliers exhibit more variability in their opinions of program influence than partners do.

b. The attribution estimates were inconsistent.

   KEMA had anticipated the effects of the partner/supplier attribution integration would result in minor increases in program attribution across the board for the Agriculture and Commercial Sectors, but this was not the case. The results were a mix of slight increases and decreases, and one large decrease. Utilizing the integrated partner/supplier information produces particularly inconsistent and unreliable estimates of attribution for therms. A close look at the data reveals this is due in part to the smaller sampling sizes for therms estimates and projects with negative therms savings.

c. Based on the interviews KEMA conducted with customers and suppliers, we have no evidence that an integrated approach would yield attribution estimates that are substantially different from those based on partner-only responses.

All of the above points to the need for more exploratory analysis, including methodology and sampling changes. KEMA will discuss with the PSC and the Program the possibility of continuing with this effort during the development of FY08 evaluation plans.

## *APPENDIX E: NON-CFL PARTICIPANT SPILLOVER EFFECTS*

Another change to the impact evaluation for FY06 is the inclusion of participant spillover effects for non-CFLs in the attribution estimates. The *Participant Spillover Savings Study*[33] provides a basis for calculating the nonCFL spillover rate. We calculate this rate as the new savings in the current year per unit of tracked savings in a prior year. This rate represents first-year savings implemented in the current year due to all prior program years. This rate is:

0.08% for kWh

0.11% for kW

0.002% for therms.

[33] "*Business Programs: Participant Spillover Savings Study*," State of Wisconsin, Department of Administration, December 22, 2005.

## Business Programs
## Detailed Implementing Partner Short-term Follow-up Questionnaire – qejun06

**GENERAL INTERVIEWER INSTRUCTIONS**

- IF THE INTERVIEW INSTRUCTIONS ARE UNCLEAR, ASK!!! (OF COURSE, WE THINK THEY ARE CLEAR AND UNAMBIGUOUS.) IF YOU DON'T ASK AND SOMETHING APPEARS AMISS, WE WILL ASK.
- RECORD ANSWERS TO ALL QUESTIONS, EVEN IF THE QUESTION SEEMS TO BE A REPEAT OF AN EARLIER QUESTION. (IF YOU THINK WE'RE MISTAKENLY ASKING THE SAME QUESTION AGAIN, LET US KNOW AND WE'LL CHECK INTO IT.)
- WE WELCOME SURVEY IMPROVEMENTS. PLEASE LET US KNOW HOW WE MAY IMPROVE THE SURVEY.

DO NOT READ THE LIST OF RESPONSES UNLESS INSTRUCTED TO DO SO. AND JUST TO BE CLEAR, WHEN READING LISTS, NEVER READ "DON'T KNOW" OR "REFUSED."

MOST QUESTIONS REQUIRE THAT YOU **CIRCLE** A RESPONSE NUMBER. USE CIRCLES, NOT Xs OR CROSSOUTS.

SOME QUESTIONS REQUIRE YOU TO RECORD VERBAL RESPONSES. THESE RESPONSES NEED NOT BE VERBATIM. SUMMARIZE WHERE POSSIBLE. **WRITE LEGIBLY**.

IF NECESSARY TO RECORD NOTES IN MARGINS, INDICATE CLEARLY TO WHAT QUESTION THEY APPLY, WRITE LEGIBLY AND **BE SPECIFIC**.]

MANY QUESTIONS HAVE SKIP PATTERNS INDICATED NEXT TO THE RESPONSES. QUESTIONS THAT MIGHT BE SKIPPED ARE EASILY IDENTIFIED AS THEY ARE INDENTED FROM THE LEFT MARGIN. **FOLLOW SKIP PATTERNS PROPERLY**.

CERTAIN QUESTIONS **REQUIRE** RESPONSES TO BE CIRCLED OR RECORDED SPECIFICALLY BY Recid OR END-USE SYSTEM. THESE QUESTIONS EITHER HAVE RESPONSES IN TABLES WITH COLUMNS FOR INDIVIDUAL Recids OR END-USE SYSTEMS, OR ASK YOU TO DIFFERENTIATE RESPONSES BY Recid.

IF RESPONSES ARE *NOT* IN TABLES AND YOU ARE NOT ASKED TO DIFFERENTIATE RESPONSE BY Recid OR END-USE SYSTEM, IT IS NOT CRITICAL TO DO SO.

IT MAY BE NECESSARY TO INTERVIEW MORE THAN ONE PERSON AS ONE PERSON MAY NOT BE ABLE TO ANSWER ALL QUESTIONS. FOR THAT REASON

CONTACT INFORMATION, INCLUDING DATES CALLED AND TO BE CALLED, SHOULD BE MAINTAINED BY THE INTERVIEWER.

TRY TO COMPLETE THE ENTIRE INTERVIEW. DISCONTINUE IF INTERVIEWEE BECOMES ANNOYED, BUT FIRST TRY TO SCHEDULE A TIME AT WHICH IT CAN BE COMPLETED.

**BEFORE** THE INTERVIEW, THE FOLLOWING **MUST BE PREPARED**:

1. INTERVIEWER NAME: _____
2. FROM THE ENGINEERING REVIEW SPREADSHEET
   - <STRATA>: _____
   - <PROGRAM>/S (LIST ALL PROGRAMS THE COMPANYID IS ASSOCIATED WITH): _____
   - <COMPANYID>: _____
   - <COMPANY> NAME: _____
3. FILL IN THE RECID TABLE (VERIFIY MEASURE INSTALLATION SECTION) WITH INFORMATION INCLUDED IN THE ENGINEERING REVIEW SPREADSHEET: <STREETADDRESS, UNLESS MISSING THEN ADDRESS1>; <CITY, UNLESS MISSING THEN CITY1>; DESCRIPTION OF THE RECID BASED ON <CNAME>, <DESCRIPTION>, AND <DETAILED_DESCRIPTION>; AND <RECID>. THE CURRENT TABLE ACCOMMODATES A LIMITED NUMBER OF RECIDS. IF NECESSARY, ADD ROWS TO THE TABLE OR PRINT ADDITIONAL COPIES OF THE TABLE.
4. SEE THE START OF EACH SECTION OF THE SURVEY FOR ADDITIONAL PRE-SURVEY PREP INSTRUCTIONS:

**INFORMED RESPONDENT**

[PRE-SURVEY PREP:

1. FAMILARIZE YOURSELF WITH THE CONTACT INFORMATION PROVIDED IN THE ENGINEERING REVIEW SPREADSHEET. ESPECIALLY PHONE NUMBERS, FIRSTNAME#, LASTNAME#:
   - PHONE NUMBERS: MNPHONE, PHONE#, ALTPHONE#, ALTPHONETYPE#
   - INFORMATION ON EACH CONTACT (#): MAINCONT#=1, FIRSTNAME#, LASTNAME#, POSITION#, TITLE#, EMAIL#, CONTACTID#
   - FAX NUMBERS: MNFAX, FAX#
   - ADDITIONAL EMAIL: MNEMAIL

I1. Hello, may I please speak with [WORK THROUGH CONTACT NAMES PROVIDED (<FIRSTNAME#, LASTNAME# >) AND SUBSEQUENTLY OBTAINED]?

Contact available ..... [SKIP TO I2] 1
Contact currently unavailable ..... [ARRANGE CALL BACK] 2
No contact ..... 3

I1b. I'd like to speak with the person responsible for facility management such as energy-efficiency or productivity improvements or the purchase of energy-using equipment.

[RECORD NAME] _____
Person responsible for facility management available ..... 1
Person responsible for facility management currently unavailable ..... [ARRANGE CALL BACK] 2
No person responsible for facility management ..... [SKIP TO I7] 3
Don't know ..... [SKIP TO I7] -97
Refused ..... [SKIP TO I7] -98

I2. Hello, my name is _____ and I'm calling from KEMA on behalf of the Wisconsin Department of Administration for the Focus on Energy Program.

[IF this respondent was a participant in the FOCUS customer satisfaction study then say… "You or someone at your company may have recently participated in a customer satisfaction survey sponsored by the program."]

I would like to ask you a few questions regarding [AN/SOME] energy efficiency improvement[S] your organization recently made. This is not a sales or marketing call. We're calling to help the Focus on Energy Program, which either helped your organization with [THIS/THESE] energy efficiency improvement[S] or the company that supplied the improvement[S].

Focus on Energy is required by the state of Wisconsin to conduct this type of research. Your responses will be kept entirely confidential.

I4. According to Focus on Energy records, sometime between July 1, 2005 and June 30, 2006, your organization…[SEE THE RECID TABLE IN THE VERIFY MEASURE INSTALLATION SECTION FOR THE <SAMPLE DATA> REFERRED TO HERE] made the following energy efficiency improvement[/S]:

At < <STREETADDRESS> in <CITY>, Wisconsin: [LIST ALL IMPROVEMENTS I.E., DESCRIPTIONS BASED ON <CNAME>s, ETC. AT THIS ADDRESS]

[IF A SECOND LOCATION] At < STREETADDRESS> in <CITY>, Wisconsin: [LIST ALL IMPROVEMENTS I.E., DESCRIPTIONS BASED ON <CNAME>s, ETC. AT THIS ADDRESS]

Are you familiar with your organization's decision to make [THIS/THESE] energy efficiency improvement[/S]?

Yes (all or some)[RECORD NAME BELOW THEN SKIP TO NEXT SECTION] 1
RESPONDENT NAME
//i4r//:_____
No ..... 2
Don't know ..... –97
Refused..... –98

I6. Do you know who is likely to be familiar with your organization's decision to make [THIS/THESE] energy efficiency improvement[/S]?

Yes..... [RECORD NAME BELOW THEN START OVER AGAIN WITH I1] 1
ADDITIONAL CONTACTS //i6ac1-x//:
_____
_____
_____
No ..... 2
Don't know ..... -97
Refused..... -98

I6b.[CHECK TO MAKE SURE ALL CONTACTS HAVE BEEN TRIED.]

Not all contacts have been tried..... [START OVER AGAIN WITH I1] 1
All contacts have been tried..... 2

I7. Thank you very much for your time today. Those are all the questions I have.

NO ONE FAMILIAR WITH DECISION[END INTERVIEW] 1

**VERIFY MEASURE INSTALLATION**

[PRE-SURVEY PREP
DETERMINE PHRASING: y0, y1c, y1d, y2

- y0: ONLY 1 OR MORE THAN 1 ENERGY EFFICIENCY IMPROVEMENT (I.E., RECID). SEE THE RECID TABLE BELOW.
- y1c, y2: BE AWARE THAT DURING THE SURVEY YOU WILL HAVE TO SPECIFY THE ENERGY EFFICIENCY IMPROVEMENT(S). SEE THE RECID TABLE BELOW.]

y0. First, I want to confirm the energy efficiency improvements[S] I named earlier [WAS/WERE] made.

[SEE y1c AND y1d IN RECID TABLE.]

y2. [IF y1c = "no"]

We understood the [DESCRIPTION BASED ON <CNAME>, ETC.] to have been completed. Can you tell me if that improvement is being installed now and when it will be completed?

[RECORD RESPONSE y2_d] _____
_____
_____
_____
_____
Don't know .....-97
Refused.....-98

[IF LAST RECID, CONTINUE ON TO NEXT SECTION, ELSE START AGAIN AT QUESTION y1c.]

Recid Table

| <STREET ADDRESS> | <CITY > | DESCRIPTION BASED ON <CNAME>, <MEASUREKIND>, | y1c1-6 | <RECID> | recid# |
|---|---|---|---|---|---|
| y1c.: "At"_____ | "in"_, Wisconsin | Has the following energy efficiency improvement or something similar to it been made:_____ | | | |
| | | | | | |
| | | | Yes……1<br>No……2<br>Don't know…-97<br>Refused……..-98 | | 1 |
| | | | Yes……1<br>No……2<br>Don't know…-97<br>Refused……..-98 | | 2 |
| | | | Yes……1<br>No……2<br>Don't know…-97<br>Refused……..-98 | | 3 |
| | | | Yes……1<br>No……2<br>Don't know…-97<br>Refused……..-98 | | 4 |
| | | | Yes……1<br>No……2<br>Don't know…-97<br>Refused……..-98 | | 5 |
| | | | Yes……1<br>No……2<br>Don't know…-97<br>Refused……..-98 | | 6 |

**ENGINEERING REVIEW**

[PRE-SURVEY PREP:

er1. For each installed recid for which documentation was provided for the energy savings estimates in the program tracking system (i.e., inst_kwh, inst_kw, inst_thms), specify the "baseline" ***the program*** used to calculate ***inst_kwh, inst_kw, inst_thms***. I suppose it's possible for a single recid to have more than one type of baseline, in which case, specify all that apply.

| Program "baseline" for inst_kwh, inst_kw, inst_thms | Recid #1 (er1_1) | Recid #2 (er1_2) | Recid #3 (er1_3) | Recid #4 (er1_4) |
|---|---|---|---|---|
| What was there | 1 | 1 | 1 | 1 |
| Standard efficiency or according to code | 2 | 2 | 2 | 2 |
| Other [SPECIFY BELOW] | 3 | 3 | 3 | 3 |
| No documentation provided for inst_kwh, inst_kw, inst_thms | 4 | 4 | 4 | 4 |

er1o. Other baseline:

Recid #1 (er1o_1): _____

_____

Recid #2 (er1o_2): _____

_____

Recid #3 (er1o_3): _____

_____

Recid #4 (er1o_4): _____

_____

er2. For each installed recid, specify the "baseline" ***you*** used to calculate verified gross installed savings. If something was there and it is being replaced, regardless of whether or not it "needed" to be replaced, the plan is to use as the baseline "what was there." If it is not a replacement situation, the plan is to use as the baseline standard efficiency or according to code. Please discuss with Valy any deviations from this plan. Thanks. Here too I suppose it's possible for a single recid to have more than one type of baseline, in which case, specify all that apply.

| Your "baseline" | Recid #1 (er2_1) | Recid #2 (er2_2) | Recid #3 (er2_3) | Recid #4 (er2_4) |
|---|---|---|---|---|
| Replacement situation: What was there < standard efficiency or according to code | 1 | 1 | 1 | 1 |
| Replacement situation: What was there = standard efficiency or according to code | 2 | 2 | 2 | 2 |
| Replacement situation: What was there > standard efficiency or according to code | 3 | 3 | 3 | 3 |
| Not a replacement situation: Standard efficiency or according to code | 4 | 4 | 4 | 4 |
| Other [DISCUSS WITH VALY AND SPECIFY BELOW] | 5 | 5 | 5 | 5 |

er2o. Other baseline:

Recid #1 (er2o_1): _____

_____

Recid #2 (er2o_2): _____

_____

Recid #3 (er2o_3): _____

_____

Recid #4 (er2o_4): _____

_____

PREPARE QUESTIONS TO BE ASKED BASED ON THE REVIEW OF THE DOCUMENTATION IN ORDER TO VERIFY ENERGY SAVINGS. FOR EXAMPLE,

- QUANTITIES,
- EQUIPMENT EFFICIENCIES,
- OPERATING HOURS,
- AND OTHERASSUMPTIONS IT IS MOST IMPORTANT TO ASK THE CUSTOMER ABOUT

REGARDING EQUIPMENT REPLACED, IF ANY, AND EQUIPMENT INSTALLED.

ADDITIONAL SURVEY INSTRUCTIONS:

1. ASK THE ENGINEERING REVIEW QUESTIONS ONLY FOR THOSE RECIDS THAT WERE IN FACT IMPLEMENTED.

   IF NO RECIDS WERE IN FACT IMPLEMENTED, SKIP TO IMPRESSION OF FOCUS SECTION.

2. IF THE RESPONDENT CANNOT ANSWER SOME OF THE ENGINEERING REVIEW QUESTIONS, FIND OUT WHO CAN. FINISH THE SURVEY WITH THE CURRENT RESPONDENT AND THEN ASK THE NEW RESPONDENT THE REMAINING ENGINEERING REVIEW QUESTIONS.
   [RECORD NEW ENGINEERING REVIEW RESPONDENT(S):]

   _____

   _____

   _____

DETERMINE PROGRAM IMPACT ON DECISION TO INSTALL (NET-TO-GROSS)

[PRE-SURVEY PREP:

1. DETERMINE APPROPRIATE VERSION OF THIS SECTION
    - ALTERNATIVE VERSIONS EXIST FOR THE FOLLOWING
        - Received only Instant Incentives
        - Program Ally delivered ONLY Focus Financial Assistance (Financial assistance mechanisms analogous to Instant Incentives)
        - Program Ally delivered a variety of services as a result of the services the ally received directly from Focus
    - ELSE USE THIS VERSION]

"Now, I want to ask questions about your satisfaction with the energy efficiency improvements, and about your decisions to go forward with them. [IF NECESSARY, LIST Recids] [IF MULTIPLE Recids] Where your answers differ between the improvements, please let me know."

z1. Are you satisfied with the performance of the energy efficiency improvements I named earlier? Why not?

Yes.....1
No .....2
[DESCRIBE WHY NOT z1_d]
_____
_____
__
Don't know .....-97
Refused.....-98

z1b. [IF HOMETOWN ENERGY CHECK-UP] The Focus on Energy Program conducted an energy check up of your building and provided you with a list of recommendations to save energy and a coupon for doubling incentives.

[IF Recids INCLUDE CFLS and PRE-RINSE SPRAYERS, ALSO SAY] The Focus on Energy Program also gave you some CFLs and [a/#] high pressure pre-rinse sprayer[s] for free.

[IF Recids INCLUDE CFLS AND NOT PRE-RINSE SPRAYERs, ALSO SAY] The Focus on Energy Program also gave you some CFLs for free.

[IF Recids INCLUDE PRE-RINSE SPRAYERS AND NOT CFLS, ALSO SAY] The Focus on Energy Program also gave you s [a/#] high pressure pre-rinse sprayer[s] for free.

z2. Is there anything else you think the Focus on Energy Program might have done that would have increased your satisfaction with the performance of [NOT WITH PROGRAM PARTICIPATION] those improvements?

Yes.....1
[DESCRIBE z2_d]
_____
_____
No .....2
Don't know .....-97
Refused.....-98

z3. What first made your organization start thinking about installing these improvement(s) at this facility?
[DESCRIBE z3_d, BEING SURE TO IDENTIFY TO WHAT Recids RESPONSES APPLY]
_____
_____
____
Don't know .....-97
Refused.....-98

z4. Will you consider installing similar energy efficiency improvements in the future in this or other facilities? Why not?
Yes.....1
No ..... [SKIP TO z7] 2
[DESCRIBE WHY NOT z4_d]
_____
_____
_____
____
Don't know ..... [SKIP TO z7] -97
Refused..... [SKIP TO z7] -98

z6. Will you consider installing similar improvements in the future without assistance from the Focus on Energy Program? Why not?
Yes.....1
No .....2
[DESCRIBE WHY NOT z6_d]
_____
_____
_____
____
Don't know .....-97
Refused.....-98

z7. Before you installed these improvement(s), had your organization installed any similar improvements at this or any other facility without receiving services like those from the program? What type of improvements?

Yes.....1

[DESCRIBE TYPE z7_d]

_____

_____

_____

____

No .....2

Don't know .....-97

Refused.....-98

z8. Did the Focus on Energy Program provide your organization with any new information for the improvement(s) I named earlier?

Yes.....1

[DESCRIBE INFO z8_d, BEING SURE TO IDENTIFY TO WHAT Recids RESPONSES APPLY]

_____

_____

_____

_____

No .....2

Don't know .....-97

Refused.....-98

z9. Had your organization considered making the energy efficiency improvement(s) before receiving help from the program?

| RESPONSE | Recid#1 z9_1 | Recid#2 z9_2 | Recid#3 z9_3 | Recid#4 z9_4 |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | [SKIP TO z12]<br>2 | [SKIP TO z12]<br>2 | [SKIP TO z12]<br>2 | [SKIP TO z12]<br>2 |
| Don't know | [SKIP TO z12]<br>-97 | [SKIP TO z12]<br>-97 | [SKIP TO z12]<br>-97 | [SKIP TO z12]<br>-97 |
| Refused | [SKIP TO z12]<br>-98 | [SKIP TO z12]<br>-98 | [SKIP TO z12]<br>-98 | [SKIP TO z12]<br>-98 |

z10. At what point in your plan to install these improvement(s) did your organization begin discussing them with Focus on Energy Program representatives? Would you say it was…

| RESPONSE | Recid#1<br>z10_1 | Recid#2<br>z10_2 | Recid#3<br>z10_3 | Recid#4<br>z10_4 |
|---|---|---|---|---|
| Clearly before the start of planning | 1 | 1 | 1 | 1 |
| About the same time as the start of planning | 2 | 2 | 2 | 2 |
| Just after planning had begun | 3 | 3 | 3 | 3 |
| Long after planning had begun | 4 | 4 | 4 | 4 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z11. Had you researched the costs of these improvement(s) before being contacted initially by the program?

| RESPONSE | Recid#1 z11_1 | Recid#2 z11_2 | Recid#3 z11_3 | Recid#4 z11_4 |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | 2 | 2 | 2 | 2 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z12. [IF FINANCIAL ASSISTANCE FROM FOCUS OF ANY KIND WAS AWARDED FOR A RECID.] About what percentage of the total costs—that is, all financial assistance plus the costs not covered by financial assistance— of installing these improvements would you say the Focus on Energy Program helped cover? [IF RESPONDENT IS UNABLE TO BREAK OUT FINANCIAL ASSISTANCE BY RECID THEN ENTER THE COMBINED PERCENTAGE IN THE APPROPRIATE COLUMNS. NOTE: IT'S POSSIBLE TO HAVE BOTH A MIX OF COMBINED AND BY RECID RESULTS]

| RESPONSE | Recid#1 z12_1 | Recid#2 z12_2 | Recid#3 z12_3 | Recid#4 z12_4 |
|---|---|---|---|---|
| [RECORD %] | _____% | _____% | _____% | _____% |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z13. [PARTICIPATION HERE REFERS TO ANY & ALL ASSISTANCE PROVIDED BY PROGRAM]
If you had not received help from the Focus on Energy Program, how likely would you have been to undertake the energy efficiency improvements? Would you say you would have been…

| RESPONSE | Recid#1 z13_1 | Recid#2 z13_2 | Recid#3 z13_3 | Recid#4 z13_4 |
|---|---|---|---|---|
| Very likely | 1 | 1 | 1 | 1 |
| Somewhat likely | 2 | 2 | 2 | 2 |
| Not very likely | 3 | 3 | 3 | 3 |
| Very unlikely | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 |
| Don't know | [SKIP TO z20a] -97 | [SKIP TO z20a] -97 | [SKIP TO z20a] -97 | [SKIP TO z20a] -97 |
| Refused | [SKIP TO z20a] -98 | [SKIP TO z20a] -98 | [SKIP TO z20a] -98 | [SKIP TO z20a] -98 |

z14. Without the program's assistance, how different might the timing have been for these improvements? Would you say you would have undertaken them at the same time, earlier, or later?

| RESPONSE | Recid#1 z14_1 | Recid#2 z14_2 | Recid#3 z14_3 | Recid#4 z14_4 |
|---|---|---|---|---|
| Same time | [SKIP TO z16] 1 | [SKIP TO z16] 1 | [SKIP TO z16] 1 | [SKIP TO z16] 1 |
| Earlier | [SKIP TO z16] 2 | [SKIP TO z16] 2 | [SKIP TO z16] 2 | [SKIP TO z16] 2 |
| Later | 3 | 3 | 3 | 3 |
| Don't know | [SKIP TO z16] -97 | [SKIP TO z16] -97 | [SKIP TO z16] -97 | [SKIP TO z16] -97 |
| Refused | [SKIP TO z16] -98 | [SKIP TO z16] -98 | [SKIP TO z16] -98 | [SKIP TO z16] -98 |

z15. How many months later? [TRY TO GET A NUMBER]

| RESPONSE | Recid#1 z15_1 | Recid#2 z15_2 | Recid#3 z15_3 | Recid#4 z15_4 |
|---|---|---|---|---|
| [RECORD # OF MONTHS] | _____ | _____ | _____ | _____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z16. Without the Focus on Energy Program's assistance, how different would the energy efficiency of the equipment be for these improvements? Would you say you would have used the same efficiency, lesser efficiency, or greater efficiency?

| RESPONSE | Recid#1 z16_1 | Recid#2 z16_2 | Recid#3 z16_3 | Recid#4 z16_4 |
|---|---|---|---|---|
| Same | [SKIP TO z18] 1 | [SKIP TO z18] 1 | [SKIP TO z18] 1 | [SKIP TO z18] 1 |
| Lesser | 2 | 2 | 2 | 2 |
| Greater | [SKIP TO z18] 3 | [SKIP TO z18] 3 | [SKIP TO z18] 3 | [SKIP TO z18] 3 |
| Not applicable | [SKIP TO z18] 4 | [SKIP TO z18] 4 | [SKIP TO z18] 4 | [SKIP TO z18] 4 |
| Don't know | [SKIP TO z18] -97 | [SKIP TO z18] -97 | [SKIP TO z18] -97 | [SKIP TO z18] -97 |
| Refused | [SKIP TO z18] -98 | [SKIP TO z18] -98 | [SKIP TO z18] -98 | [SKIP TO z18] -98 |

z17e. [IF THE DATA CAN BE COLLECTED PER Z17e IMMEDIATELY BELOW, GO FOR IT. IF NOT, USE THE ALTERNATIVE Z17c THAT FOLLOWS.] What equipment efficiencies do you think you would have used? [PROBE FOR TECHNICAL DETAIL ON EQPT EFFICIENCY]

| RESPONSE | Recid#1 z17e_1 | Recid#2 z17e_2 | Recid#3 z17e_3 | Recid#4 z17e_4 |
|---|---|---|---|---|
| [RECORD EFFIC.] | _____% | _____% | _____% | _____% |
| [RECORD OTHER DETAILS] | z17_1d | z17_2d | z17_3d | z17_4d |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

[NOTE THE RECID NUMBER WITH ANY RECORDED DETAILS]

_____

_____

_____

_____

_____

z17c. How much lower? [READ LIST—DON'T ACCEPT A RESPONSE UNTIL FINISHED READING LIST]

| RESPONSE | Recid#1 z17c_1 | Recid#2 z17c_2 | Recid#3 z17c_3 | Recid#4 z17c_4 |
|---|---|---|---|---|
| Standard efficiency or according to code | 1 | 1 | 1 | 1 |
| Slightly higher than standard efficiency | 2 | 2 | 2 | 2 |
| About midway between standard and the high efficiency that was used | 3 | 3 | 3 | 3 |
| Or slightly lower than the high efficiency that was used | 4 | 4 | 4 | 4 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z18. [ASK ONLY FOR RECIDS INSTALLABLE IN VARYING QUANTITIES, E.G., LIGHTS, MOTORS]
Without the program's assistance, how different would the quantities be for the number of units installed for these improvements? Would you say you would have installed the same quantity, fewer, or more?

| RESPONSE | Recid#1 z18_1 | Recid#2 z18_2 | Recid#3 z18_3 | Recid#4 z18_4 |
|---|---|---|---|---|
| Same | [SKIP TO z20] 1 | [SKIP TO z20] 1 | [SKIP TO z20] 1 | [SKIP TO z20] 1 |
| Fewer | 2 | 2 | 2 | 2 |
| More | 3 | 3 | 3 | 3 |
| Don't know | [SKIP TO z20] -97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 |
| Refused | [SKIP TO z20] -98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 |

z19. What percentage of the equipment you actually installed would you have installed instead?
[IF z18 = "More (3)," PERCENTAGE SHOULD BE >100%.]

| RESPONSE | Recid#1 z19_1 | Recid#2 z19_2 | Recid#3 z19_3 | Recid#4 z19_4 |
|---|---|---|---|---|
| [RECORD %] | [SKIP TO z20] _____% | [SKIP TO z20] _____% | [SKIP TO z20] _____% | [SKIP TO z20] _____% |
| Don't know | [SKIP TO z20] -97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 |
| Refused | [SKIP TO z20] -98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 |

z20a. What would your organization have done if it had not participated in the Focus on Energy Program [IF HOMETOWN ENERGY CHECK UP, ALSO SAY that is, if it had not received the energy check-up and related services]?
[RECORD RESPONSE, IDENTIFY TO WHAT RECID(s) RESPONSE APPLIES] _____
z20a_1 [Recid#1] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_2 [Recid#2] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_3 [Recid#3] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_4 [Recid#4] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20. [CONFIRMATION QUESTION]
Could you describe in your own words what influence the Focus on Energy Program [IF HOMETOWN ENERGY CHECK-UP AND NOT ASKED z20a, ALSO SAY —that is, the energy check-up and related services—had on your decision to undertake these specific energy efficiency improvements at the time you did?

[DESCRIBE, BEING SURE TO IDENTIFY TO WHAT RECIDs RESPONSES APPLY. IF RESPONSE IS INCONSISTENT WITH RESPONSES PREVIOUSLY GIVEN, IN PARTICULAR, Z13, ASK ABOUT INCONSISTENCY AND TRY TO RESOLVE.]
z20_1 [Recid#1] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20_2 [Recid#2] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20_3 [Recid#3] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20_4 [Recid#4] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

**END-USER COSTS**

[PRE-SURVEY PREP:

1. GROUP RECIDs WHERE THEY APPLY TO SAME PHYSICAL SYSTEM OR END-USE TYPE SO QUESTIONS CAN BE ASKED BY END-USE SYSTEM.
    - PREPARE DESCRIPTION OF SYSTEM BY CIRCLING THE APPROPRIATE END-USE SYSTEM CODE (1-5) IN THE SECOND COLUMN. (CODE 6, MIXED, IS NOT SELECTED PRIOR TO THE SURVEY. IT IS DISUCSSED IN ADDITIONAL SURVEY PREP BELOW. EACH END-USE CODE SHOULD BE USED ONLY ONCE.]
    - COMPLETE COLUMN 3
    - COMPLETE COLUMN 4

        REWARD AMOUNT BY MEASURE IS PROVIDED IN THE ENGINEERING WORKBOOK.

DURING SURVEY PREP:

1. IN THE THIRD COLUMN, CROSS OFF ANY RECIDS NOT INSTALLED.
2. FOR EACH END-USE WITH AT LEAST ONE RECID INSTALLED, PROCEED TO ASK THE QUESTIONS IN THIS SECTION.
3. IF (1) THE ENERGY EFFICIENCY IMPROVEMENTS INSTALLED AFFECTED MORE THAN ONE END-USE AND (2) DURING THE SURVEY THE RESPONDENT IS UNABLE TO ANSWER THE QUESTIONS SEPARATELY BY END-USE, BUT CAN ANSWER THE QUESTIONS FOR A COMBINATION OF END-USES, CHANGE THE END-USE SYSTEM DESCRIPTION CODE FOR THE END-USES IN THE COMBINATION IN COLUMN 2 BELOW TO 6, MIXED. PROCEED TO ASK THE QUESTIONS FOR THE COMBINATION OF END-USES AND REFER TO ALL END-USES IN THE COMBINATION IN THE END-USE SYSTEM DESCRIPTION. FOR EXAMPLE, IF THE COMBINATION IN THE END-USES CONSISTS OF LIGHTING SYSTEM AND MANUFACTURING PROCESS,

END-USE SYSTEM DESCRIPTION = "LIGHITNG SYSTEM AND MANUFACTURING PROCESS."]

**END-USE SYSTEM TABLE**

| COLUMN 1 | COLUMN 2 | COLUMN 3 | COLUMN 4 |
|---|---|---|---|
| END-USE SYS# | CIRCLE APPROPRIATE END-USE SYSTEMDESCRIPTION CODE (1-6) | SPECIFY ASSOCIATED Recids AS "#1", "#2", ETC. PER THE EARLIER RECID TABLE | SUM OFALL FINANCIAL ASSISTANCE $ GIVEN FOR Recids |
| 1 | u1a. Lighting System 1<br>HVAC System 2<br>Building shell 3<br>Manufctrg process 4<br>Other 5<br>Mixed 6 | u1a_1. | u1a_2. |
| 2 | u2a. Lighting System 1<br>HVAC System 2<br>Building shell 3<br>Manufctrg process 4<br>Other 5<br>Mixed 6 | u2a_1. | u2a_2. |
| 3 | u3a. Lighting System 1<br>HVAC System 2<br>Building shell 3<br>Manufctrg process 4<br>Other 5<br>Mixed 6 | u3a_1. | u3a_2. |
| 4 | u4a. Lighting System 1<br>HVAC System 2<br>Building shell 3<br>Manufctrg process 4<br>Other 5<br>Mixed 6 | u4a_1. | u4a_2. |

"Now I have a few questions about the cost of the energy efficiency improvements installed."

[REPEAT FOLLOWING SERIES OF QUESTIONS FOR EACH END-USE SYSTEM]

u#aa. Did your organization HAVE TO make the [END USE SYSTEM DESCRIPTION] change[S] that we've been discussing? [IF THE RESPONDENT IS UNCLEAR RE WHAT IS MEANT BY "HAVE TO," READ THE FOLLOWING EXAMPLE: For example, had to replace failing equipment, or needed to increase capacity. ]

| RESPONSE | END-USE SYS#1 u1aa. | END-USE SYS#2 u2aa. | END-USE SYS#3 u3aa. | END-USE SYS#4 u4aa. |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | 2 | 2 | 2 | 2 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

[IF NOT AWARDED FINANCIAL ASSISTANCE FROM FOCUS SKIP TO u#prec; ELSE IF AWARDED FINANCIAL ASSISTANCE FROM FOCUS FOR END-USE SYSTEM, FIRST SAY:]

"According to our records, your organization was awarded $_____ [SUM OF ALL FINANCIAL ASSISTANCE $ GIVEN FOR RECIDs ASSOCIATED WITH END-USE SYSTEM] of financial assistance from Focus on Energy for energy efficiency improvements to your [END-USE SYSTEM DESCRIPTION]."

u#prec. Was your organization awarded financial assistance from a source other than Focus on Energy for the [END-USE SYSTEM DESCRIPTION] energy efficiency improvement[S] made?

| RESPONSE | END-USE SYS#1 u1prec. | END-USE SYS#2 u2prec. | END-USE SYS#3 u3prec. | END-USE SYS#4 u4prec. |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | 2 [SKIP TO u#b] | 2 [SKIP TO u#b] | 2 [SKIP TO u#b] | 2 [SKIP TO u#b] |
| Don't know | -97 [SKIP TO u#b] | -97 [SKIP TO u#b] | -97 [SKIP TO u#b] | -97 [SKIP TO u#b] |
| Refused | -98 [SKIP TO u#b] | -98 [SKIP TO u#b] | -98 [SKIP TO u#b] | -98 [SKIP TO u#b] |

u#c. About how much was that other financial assistance?

| RESPONSE | END-USE SYS#1 u1c. | END-USE SYS#2 u2c. | END-USE SYS#3 u3c. | END-USE SYS#4 u4c. |
|---|---|---|---|---|
| [RECORD OTHER FINANCIAL ASSISTANCE TO NEAREST DOLLAR] | $_____ | $_____ | $_____ | $_____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

// Only respondents that did not "have to" make the change (u#aa=2) will be asked u#b – u#d.//

u#b. [IF u#aa = 2 ASK, ELSE SKIP TO u#e] What was the approximate total cost,—that is, all financial assistance plus costs not covered by financial assistance— of the [END-USE SYSTEM DESCRIPTION] energy efficiency improvement[S] made?

| RESPONSE | END-USE SYS#1 u1b. | END-USE SYS#2 u2b. | END-USE SYS#3 u3b. | END-USE SYS#4 u4b. |
|---|---|---|---|---|
| [RECORD COSTS TO NEAREST DOLLAR] | $_____ | $_____ | $_____ | $_____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

u#d. About how much of this total cost was equipment costs?

| RESPONSE | END-USE SYS#1 u1d. | END-USE SYS#2 u2d. | END-USE SYS#3 u3d. | END-USE SYS#4 u4d. |
|---|---|---|---|---|
| [RECORD COSTS TO NEAREST DOLLAR] | $_____ | $_____ | $_____ | $_____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

// Only respondents that did "have to" make the change (u#aa=1) will be asked u#e – u#glo, all others will be skipped to next section.//

u#e. [IF u#aa = 1 ASK u#e, ELSE SKIP TO r18] So, your organization had to make the change[S] and would have incurred costs as a result. What effect did the energy efficiency improvement[S] that we've been discussing have on these costs? Did these energy efficiency improvement[S] increase, decrease, or leave the same the total cost [S] of the changes made?

| RESPONSE | END-USE SYS#1 u1e. | END-USE SYS#2 u2e. | END-USE SYS#3 u3e. | END-USE SYS#4 u4e. |
|---|---|---|---|---|
| Increase | 1 | 1 | 1 | 1 |
| Decrease | 2 | 2 | 2 | 2 |
| Leave the same | 3 [SKIP TO r18] | 3 [SKIP TO r18] | 3 [SKIP TO r18] | 3 [SKIP TO r18] |
| Don't know | -97 [SKIP TO r18] | -97 [SKIP TO r18] | -97 [SKIP TO r18] | -97 [SKIP TO r18] |
| Refused | -98 [SKIP TO r18] | -98 [SKIP TO r18] | -98 [SKIP TO r18] | -98 [SKIP TO r18] |

u#f. Did the energy efficiency improvement[S] to the [END-USE SYSTEM DESCRIPTION] increase, decrease, or leave the same the equipment costs of the changes made to the [END-USE SYSTEM DESCRIPTION]?

| RESPONSE | END-USE SYS#1 u1f. | END-USE SYS#2 u2f. | END-USE SYS#3 u3f. | END-USE SYS#4 u4f. |
|---|---|---|---|---|
| Increase | 1 | 1 | 1 | 1 |
| Decrease | 2 [SKIP TO u#flo] | 2 [SKIP TO u#flo] | 2 [SKIP TO u#flo] | 2 [SKIP TO u#flo] |
| Leave the same | 3 [SKIP TO u#g] | 3 [SKIP TO u#g] | 3 [SKIP TO u#g] | 3 [SKIP TO u#g] |
| Don't know | -97 [SKIP TO u#g] | -97 [SKIP TO u#g] | -97 [SKIP TO u#g] | -97 [SKIP TO u#g] |
| Refused | -98 [SKIP TO u#g] | -98 [SKIP TO u#g] | -98 [SKIP TO u#g] | -98 [SKIP TO u#g] |

u#fhi. About how much more were the total equipment costs?

| RESPONSE | END-USE SYS#1 u1fhi. | END-USE SYS#2 u2fhi. | END-USE SYS#3 u3fhi. | END-USE SYS#4 u4fhi. |
|---|---|---|---|---|
| [RECORD COSTS TO NEAREST DOLLAR] | $_____ [SKIP TO u#g] | $_____ [SKIP TO u#g] | $_____ [SKIP TO u#g] | $_____ [SKIP TO u#g] |
| Don't know | -97 [SKIP TO u#g] | -97 [SKIP TO u#g] | -97 [SKIP TO u#g] | -97 [SKIP TO u#g] |
| Refused | -98 [SKIP TO u#g] | -98 [SKIP TO u#g] | -98 [SKIP TO u#g] | -98 [SKIP TO u#g] |

u#flo. About how much less were the total equipment costs?

| RESPONSE | END-USE SYS#1 u1flo. | END-USE SYS#2 u2flo. | END-USE SYS#3 u3flo. | END-USE SYS#4 u4flo. |
|---|---|---|---|---|
| [RECORD COSTS TO NEAREST DOLLAR] | $_____ | $_____ | $_____ | $_____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

u#g. Did the energy efficiency improvement[S] to the [END-USE SYSTEM DESCRIPTION] increase, decrease, or leave the same the labor costs of the changes made to the [END-USE SYSTEM DESCRIPTION]?

| RESPONSE | END-USE SYS#1 u1g. | END-USE SYS#2 u2g. | END-USE SYS#3 u3g. | END-USE SYS#4 u4g. |
|---|---|---|---|---|
| Increase | 1 | 1 | 1 | 1 |
| Decrease | 2 [SKIP TO u#glo] | 2 [SKIP TO u#glo] | 2 [SKIP TO u#glo] | 2 [SKIP TO u#glo] |
| Leave the same | 3 [SKIP TO r18] | 3 [SKIP TO r18] | 3 [SKIP TO r18] | 3 [SKIP TO r18] |
| Don't know | -97 [SKIP TO r18] | -97 [SKIP TO r18] | -97 [SKIP TO r18] | -97 [SKIP TO r18] |
| Refused | -98 [SKIP TO r18] | -98 [SKIP TO r18] | -98 [SKIP TO r18] | -98 [SKIP TO r18] |

u#ghi. About how much more were the total labor costs?

| RESPONSE | END-USE SYS#1 u1ghi. | END-USE SYS#2 u2ghi. | END-USE SYS#3 u3ghi. | END-USE SYS#4 u4ghi. |
|---|---|---|---|---|
| [RECORD COSTS TO NEAREST DOLLAR] | $_____ [SKIP TO r18] | $_____ [SKIP TO r18] | $_____ [SKIP TO r18] | $_____ [SKIP TO r18] |
| Don't know | -97 [SKIP TO r18] | -97 [SKIP TO r18] | -97 [SKIP TO r18] | -97 [SKIP TO r18] |
| Refused | -98 [SKIP TO r18] | -98 [SKIP TO r18] | -98 [SKIP TO r18] | -98 [SKIP TO r18] |

u#glo. About how much less were the total labor costs?

| RESPONSE | END-USE SYS#1 u1glo. | END-USE SYS#2 u2glo. | END-USE SYS#3 u3glo. | END-USE SYS#4 u4glo. |
|---|---|---|---|---|
| [RECORD COSTS TO NEAREST DOLLAR] | $_____ | $_____ | $_____ | $_____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

**IMPRESSION OF FOCUS**

r18. [IF

- Received only Instant Incentives
- Program Ally delivered ONLY Focus Financial Assistance (Financial assistance mechanisms analogous to Instant Incentives)
- Program Ally delivered a variety of services as a result of the services the ally received directly from Focus]

Are you familiar with the Focus on Energy Program for businesses and other organizations?

Yes..... [SKIP TO im3] 1
No .....[SKIP TO ESTABLISHMENT DATA SECTION] 2
Don't know..... [SKIP TO ESTABLISHMENT DATA SECTION] -97
Refused.....[SKIP TO ESTABLISHMENT DATA SECTION] –98

im0. [READ IF r18 NOT ASKED AND RECID IMPLEMENTED. IF NO RECIDS IMPLEMENTED SKIP TO im3] "So far, my questions have focused on your organization's interactions with Focus on Energy regarding those energy efficiency improvements that you have implemented.

From now on, when answering my questions, please consider all your organization's interactions with the program. That is, please consider interactions with Focus on Energy regarding any energy efficiency improvement—whether implemented or not—as well as any other interactions with the program."

im3. I'd like to know your overall impression of the Focus on Energy Program, based on anything you may have seen or heard. On a scale of 1 to 5, where 5 means Very Positive and 1 means Very Negative, what is your overall impression of Focus on Energy? Please give me a number between 1 and 5 to tell me your overall impression.

1 (very negative) ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
5 (very positive) ..... 5
Don't know ..... -97
Refused ..... -98

**PROGRAM SERVICES: OVERALL**

o10. Using a scale of 1 to 5, where 1 means not at all satisfied and 5 means very satisfied, how satisfied is your organization with the Focus on Energy Program?

1 (not at all satisfied) ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
5 (very satisfied) ..... 5
Don't know ..... [SKIP TO NEXT SECTION] -97
Refused ..... [SKIP TO NEXT SECTION] -98

o11. Why do you say that? [ACCEPT MULTIPLE RESPONSES.] //o11_1-o11_17, o11_96-o11_98//

- Positive Responses
  - Just liked the Program overall ..... 1
  - The Program is professionally handled and well promoted ..... 2
  - Happy with the results ..... 3
  - Liked the money ..... 4
  - Liked the savings ..... 5
  - Liked the information ..... 6
  - Liked the Program rep/was knowledgeable ..... 7
- Negative Responses
  - Program operations
    - Didn't like the service ..... 8
    - Poor communications ..... 9
    - Too many people involved/too bureaucratic ..... 10
    - Process took too long ..... 11
  - Technical quality
    - Unhappy with calculations/bad information ..... 12
    - Incomplete audit ..... 13
  - Unfamiliar with FOCUS ..... 14
  - Incentive amount too low ..... 15
  - Problems with contractor ..... 16
  - General negative ..... 17
- Other [SPECIFY, o11_o] ..... 96

_____

_____

- Don't know ..... -97
- Refused ..... -98

**ESTABLISHMENT DATA**

[PRE-SURVEY PREP:

1. DETERMINE PHRASING: MANY QUESTIONS

ONLY 1 OR MORE THAN 1 LOCATION AT WHICH ENERGY EFFICIENCY IMPROVEMENTS (I.E., RECIDS) WERE MADE

IF ONLY POSSIBLE 1 LOCATION (SEE VERIFY MEASURE INSTALLATION, RECID TABLE), THEN YOU CAN PREPARE THIS SECTION OF THE SURVEY ACCORDINGLY:

- d0a: FACILITY (NOT FACILITIES)
- d3: SPECIFY ADDRESS: <STREET ADDRESS> IN <CITY>, WISCONSIN
- d4, d7, d8, d9, d6: THIS LOCATION (NOT THESE LOCATIONS)

OTHERWISE, THE CORRECT PHRASING WILL HAVE TO WAIT UNTIL YOU LEARN FROM THE SURVEY THE NUMBER OF LOCATIONS AT WHICH ENERGY EFFICIENCY IMPROVEMENTS WERE MADE

- d0a: FACILIT(Y/IES)
- d3, d4, d7, d8, d9, d6: THIS/THESE LOCATION/S

ADDITIONAL SURVEY INSTRUCTONS:

1. IF NO RECIDS WERE IN FACT IMPLEMENTED, SKIP TO THE NEXT SECTION. ]

d0a. The next questions I have for you are about the facilit[Y/IES] at which your organization made the energy efficiency improvement[S] we discussed earlier.

d3. What is the principal activity of your organization at…

[ADDRESS OF SINGLE FACILITY:_____] OR THIS LOCATION/THESE LOCATIONS]?

[IF CAN'T QUICKLY MATCH RESPONSE WITH ITEM ON LIST, RECORD RESPONSE FOR LATER MATCHING.] //d3_g//

_____

Agricultural: e.g., production crops, livestock, agricultural services..... [SKIP TO d7] 1
Water or wastewater treatment facility..... [SKIP TO d7] 2
**Industrial: manufacturing/industrial process**.....3
Warehouse nonrefrigerated..... [SKIP TO d7] 4
Warehouse refrigerated..... [SKIP TO d7] 5
Education: including preschool, daycare ..... [SKIP TO d7] 6
Food service: e.g., restaurant, bar, fast food, cafeteria..... [SKIP TO d7] 7
Food sales: e.g., grocery store ..... [SKIP TO d7] 8
Enclosed mall..... [SKIP TO d7] 9
Strip mall ..... [SKIP TO d7] 10
Retail excluding enclosed or strip mall: e.g., auto dealership, showroom, store..... ..... [SKIP TO d7] 11
Public order and safety: including courthouse, probation office, jail ..... [SKIP TO d7] 12
Nursing home/Assisted living (Skilled nursing) ..... [SKIP TO d7] 13
Lodging: e.g., hotel/motel/inn/resort, dormitory/fraternity/sorority..... [SKIP TO d7] 14
Lodging: residential ..... [SKIP TO d7] 15
Health care inpatient: e.g., hospital ..... [SKIP TO d7] 16
Health care outpatient: e.g., doctor/dentist office, clinic ..... [SKIP TO d7] 17
Laboratory..... [SKIP TO d7] 18
Religious worship ..... [SKIP TO d7] 19
Public assembly: incl. theater, nightclub, library, museum, gym, bowling alley ..... ..... [SKIP TO d7] 20
Service: e.g., auto service/repair, dry cleaner/laundromat, repair shop, post office..... ..... [SKIP TO d7] 21
Office/Professional: including bank, government ..... [SKIP TO d7] 22
Other [SPECIFY d3_o]_____ _____[SKIP TO d7] 23
Don't know ..... [SKIP TO d7] -97

Refused..... [SKIP TO d7] -98

d4. Briefly describe what is done at [THIS/THESE] location[S]. [ACCEPT MULTIPLE RESPONSES.] //d4_1-d4_7, d4_96-d4_98//

Textile manufacturing.....1
Wood manufacturing.....2
Plastics manufacturing.....3
Food manufacturing.....4
Metal manufacturing .....5
Goods manufacturing.....6
Assembly .....7
Other [SPECIFY. d4_o].....96
_____
_____
__
Don't know.....-97
Refused .....-98

d7. How many full-time employees work for your organization at [THIS/THESE] location[S]?

[RECORD NUMBER OF EMPLOYEES]_____
Don't know .....-97
Refused.....-98

d8. How many part-time employees work for your organization at [THIS/THESE] location[S]?

[RECORD NUMBER OF EMPLOYEES]_____
Don't know .....-97
Refused.....-98

d9. What is the total enclosed square footage of the space your organization occupies at [THIS/THESE] location[S]? Your best estimate is fine.

[RECORD # SQ FT] ..... _____
Don't know .....-97
Refused.....-98

d6. At [THIS/THESE] location[S], does your organization [READ LIST]…

Own all of the space it occupies? .....1
Lease all of the space it occupies?.....2
Or own some and lease some of the space it occupies? .....3
Don't know .....-97
Refused.....-98

d16. Does your organization operate at a single location, at multiple locations, or is it a franchise organization?
Single location.....[SKIP TO NEXT SECTION] 1
Multiple locations—not including franchise organization.....2
Franchise organization.....3
Don't know.....-97
Refused.....-98

d17. Is your organization headquartered in Wisconsin?
Yes.....1
No.....2
Don't know.....-97
Refused.....-98

**FINAL SECTION**

n12. We may want to call you at a later date to ask you a few additional questions. Would that be OK?
Yes.....1
No.....2
Don't know.....-97
Refused.....-98

Thank you for your time and cooperation.

INTERVIEWER: IMMEDIATELY UPON COMPLETION OF THE INTERVIEW, REVIEW COMPLETED SURVEY INSTRUMENT FOR THE FOLLOWING:

- SKIP PATTERNS HAVE BEEN CORRECTLY FOLLOWED. CORRECT AS NECESSARY.

- RESPONSES TO OPEN-ENDED QUESTIONS ARE (1) PERTINENT TO THE QUESTION ASKED AND (2) SUFFICIENTLY COMPLETE FOR SOMEONE OTHER THAN THE INTERVIEWER TO UNDERSTAND. CORRECT AS NECESSARY.

### SPECIAL NET-TO-GROSS SEQUENCE FOR PROGRAM ALLY DELIVERED SERVICES

[Use this program attribution sequence if program selected:

- o Program Ally delivered a variety of services as a result of the services the ally received directly from Focus

Information obtained during the supplier interview will be inserted below in questions: z5, z6, z7, z9, z10, z11, z13, z14, z16, and z18.

In place of [SERVICE] insert ALL services provided by the program ally/ contractor. Be careful to include all services. In the past, program ally/ contractors have worked with utilities to provide packages of services. These packages should be included as part of the services provided to the customer.

In place of [NAME OF CONTRACTOR] insert name of the program ally/ contractor]

## DETERMINE PROGRAM IMPACT ON DECISION TO INSTALL (NET-TO-GROSS)

"Now, I want to ask questions about your satisfaction with the energy efficiency improvements, and about your decisions to go forward with them. [IF NECESSARY, LIST Recids] [IF MULTIPLE Recids] Where your answers differ between the improvements, please let me know."

z1. Are you satisfied with the performance of the energy efficiency improvement[S] I named earlier? Why not?

Yes.....1
No .....2
[DESCRIBE WHY NOT z1_d] _____
_____
Don't know .....-97
Refused.....-98

z2a. Had the contractor that installed your energy efficient improvements provided energy efficiency improvements to your company before your organization made the(se) recent energy efficiency improvement(s)?

Yes.....1
No .....2
Don't know .....-97
Refused.....-98

z2b. How would you describe the services this contractor offers?

[RECORD DESCRIPTION]
Don't know .....-97
Refused.....-98

z3. What first made your organization start thinking about making [THIS/THESE] improvement[S]?

[DESCRIBE z3_d, BEING SURE TO IDENTIFY TO WHAT Recids RESPONSES APPLY]

_____

_____

____

Don't know .....-97
Refused.....-98

z4. Will you consider making similar energy efficiency improvements in the future in any facility? Why not?

Yes.....1
No ..... [SKIP TO z7] 2
[DESCRIBE WHY NOT z4_d] _____

_____

_____

____

Don't know ..... [SKIP TO z7] -97
Refused..... [SKIP TO z7] -98

z6. Will you consider making similar improvements in the future without [SERVICE]? Why not?

Yes .....1
No.....2
[DESCRIBE WHY NOT z6_d]

_____

__

_____

_____

____

Don't know.....-97
Refused .....-98

z7. Before you made [THIS/THESE] improvement[S], had your organization made any similar improvements at any facility without receiving [SERVICE]? What type of improvements?

Yes.....1
[DESCRIBE TYPE z7_d]

_____

__

_____

_____

____

No .....2
Don't know .....-97
Refused.....-98

z9. Had your organization considered making the energy efficiency improvement: [RECID# <CNAME>] before learning [SERVICE] was available?

| RESPONSE | Recid#1 z9_1 | Recid#2 z9_2 | Recid#3 z9_3 | Recid#4 z9_4 |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | [SKIP TO z12] 2 | [SKIP TO z12] 2 | [SKIP TO z12] 2 | [SKIP TO z12] 2 |
| Don't know | [SKIP TO z12] -97 | [SKIP TO z12] -97 | [SKIP TO z12] -97 | [SKIP TO z12] -97 |
| Refused | [SKIP TO z12] -98 | [SKIP TO z12] -98 | [SKIP TO z12] -98 | [SKIP TO z12] -98 |

z10. At what point in your planning to make this improvement did your organization learn [SERVICE] was available? Would you say it was…[READ LIST]

| RESPONSE | Recid#1 z10_1 | Recid#2 z10_2 | Recid#3 z10_3 | Recid#4 z10_4 |
|---|---|---|---|---|
| Before the start of planning | 1 | 1 | 1 | 1 |
| About the same time as the start of planning | 2 | 2 | 2 | 2 |
| Just after planning started | 3 | 3 | 3 | 3 |
| Long after planning started | 4 | 4 | 4 | 4 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z11. Had you researched the cost of this improvement before learning [SERVICE] was available?

| RESPONSE | Recid#1 z11_1 | Recid#2 z11_2 | Recid#3 z11_3 | Recid#4 z11_4 |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | 2 | 2 | 2 | 2 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

[ASK ONLY IF RECEIVED FINANCIAL ASSISTANCE]

z12. About what percentage of the total costs—that is, the financial assistance plus the additional costs paid by your organization—of making this improvement would you say the financial assistance covered? [IF RESPONDENT IS UNABLE TO BREAK OUT FINANCIAL ASSISTANCE BY RECID THEN ENTER THE COMBINED PERCENTAGE IN THE APPROPRIATE COLUMNS. NOTE: IT'S POSSIBLE TO HAVE BOTH A MIX OF COMBINED AND BY RECID RESULTS]

| RESPONSE | Recid#1 z12_1 | Recid#2 z12_2 | Recid#3 z12_3 | Recid#4 z12_4 |
|---|---|---|---|---|
| [RECORD %] | _____% | _____% | _____% | _____% |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z13. If you had not received [SERVICE], how likely would you have been to undertake this energy efficiency improvement? Would you say you would have been…

| RESPONSE | Recid#1 z13_1 | Recid#2 z13_2 | Recid#3 z13_3 | Recid#4 z13_4 |
|---|---|---|---|---|
| Very likely | 1 | 1 | 1 | 1 |
| Somewhat likely | 2 | 2 | 2 | 2 |
| Not very likely | 3 | 3 | 3 | 3 |
| Very unlikely | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 |
| Don't know | [SKIP TO z20a] –97 | [SKIP TO z20a] -97 | [SKIP TO z20a] -97 | [SKIP TO z20a] -97 |
| Refused | [SKIP TO z20a] –98 | [SKIP TO z20a] -98 | [SKIP TO z20a] -98 | [SKIP TO z20a] -98 |

z14. Without the [SERVICE], how different might the timing have been for this improvement? Would you say you would have undertaken it at the same time, earlier, or later?

| RESPONSE | Recid#1 z14_1 | Recid#2 z14_2 | Recid#3 z14_3 | Recid#4 z14_4 |
|---|---|---|---|---|
| Same time | [SKIP TO z16] 1 | [SKIP TO z16] 1 | [SKIP TO z16] 1 | [SKIP TO z16] 1 |
| Earlier | [SKIP TO z16] 2 | [SKIP TO z16] 2 | [SKIP TO z16] 2 | [SKIP TO z16] 2 |
| Later | 3 | 3 | 3 | 3 |
| Don't know | [SKIP TO z16] –97 | [SKIP TO z16] –97 | [SKIP TO z16] -97 | [SKIP TO z16] -97 |
| Refused | [SKIP TO z16] -98 | [SKIP TO z16] –98 | [SKIP TO z16] -98 | [SKIP TO z16] -98 |

z15. How many months later? [TRY TO GET A NUMBER]

| RESPONSE | Recid#1 z15_1 | Recid#2 z15_2 | Recid#3 z15_3 | Recid#4 z15_4 |
|---|---|---|---|---|
| [RECORD # OF MONTHS] | _____ | _____ | _____ | _____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z16. Without the [SERVICE], how different would the energy efficiency of the equipment be for this improvement? Would you say you would have used the same efficiency, lesser efficiency, or greater efficiency?

| RESPONSE | Recid#1 z16_1 | Recid#2 z16_2 | Recid#3 z16_3 | Recid#4 z16_4 |
|---|---|---|---|---|
| Same | [SKIP TO z18] 1 | [SKIP TO z18] 1 | [SKIP TO z18] 1 | [SKIP TO z18] 1 |
| Lesser | 2 | 2 | 2 | 2 |
| Greater | [SKIP TO z18] 3 | [SKIP TO z18] 3 | [SKIP TO z18] 3 | [SKIP TO z18] 3 |
| Not Applicable | [SKIP TO z18] 4 | [SKIP TO z18] 4 | [SKIP TO z18] 4 | [SKIP TO z18] 4 |
| Don't know | [SKIP TO z18] -97 | [SKIP TO z18] -97 | [SKIP TO z18] -97 | [SKIP TO z18] -97 |
| Refused | [SKIP TO z18] -98 | [SKIP TO z18] -98 | [SKIP TO z18] -98 | [SKIP TO z18] -98 |

z17c. How much lower? [READ LIST—DON'T ACCEPT A RESPONSE UNTIL FINISHED READING LIST]

| RESPONSE | Recid#1 z17c_1 | Recid#1 z17c_2 | Recid#1 z17c_3 | Recid#1 z17c_4 |
|---|---|---|---|---|
| Standard efficiency or according to code | 1 | 1 | 1 | 1 |
| Slightly higher than standard efficiency | 2 | 2 | 2 | 2 |
| About midway between standard and the high efficiency that was used | 3 | 3 | 3 | 3 |
| Or slightly lower than the high efficiency that was used | 4 | 4 | 4 | 4 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z18. [ASK ONLY FOR RECIDS INSTALLABLE IN VARYING QUANTITIES, E.G., LIGHTS, MOTORS]
Without the [SERVICE], how different would the quantity be for this improvement? Would you say you would have installed the same quantity, fewer, or more?

| RESPONSE | Recid#1 z18_1 | Recid#2 z18_2 | Recid#3 z18_3 | Recid#4 z18_4 |
|---|---|---|---|---|
| Same | [SKIP TO z20] 1 | [SKIP TO z20] 1 | [SKIP TO z20] 1 | [SKIP TO z20] 1 |
| Fewer | 2 | 2 | 2 | 2 |
| More | 3 | 3 | 3 | 3 |
| Don't know | [SKIP TO z20] -97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 |
| Refused | [SKIP TO z20] -98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 |

z19. What percentage of the equipment you actually installed would you have installed instead?
[IF z18 = "Fewer (2)," PERCENTAGE SHOULD BE 0-99. IF z18 = "More (3)," PERCENTAGE SHOULD BE >100%.]

| RESPONSE | Recid#1 z19_1 | Recid#2 z19_2 | Recid#3 z19_3 | Recid#4 z19_4 |
|---|---|---|---|---|
| [RECORD %] | _____% | _____% | _____% | _____% |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

[IF LAST RECID, SKIP TO z20, ELSE START AGAIN AT QUESTION z9.]

z20a. What would your organization have done if it had not participated in the program?
[RECORD RESPONSE, IDENTIFY TO WHAT RECID(s) RESPONSE APPLIES] _____
z20a_1 [Recid#1] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_2 [Recid#2] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_3 [Recid#3] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_4 [Recid#4] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20. [CONFIRMATION QUESTION]
Could you describe in your own words what influence the program had on your decision to undertake these specific energy efficiency improvements at the time you did?

[DESCRIBE, BEING SURE TO IDENTIFY TO WHAT RECIDs RESPONSES APPLY. IF RESPONSE IS INCONSISTENT WITH RESPONSES

PREVIOUSLY GIVEN, IN PARTICULAR, Z13, ASK ABOUT INCONSISTENCY AND TRY TO RESOLVE.]

z20_1 [Recid#1] _____

_____

_____

_____

Don't know.....-97
Refused.....-98

z20_2 [Recid#2] _____

_____

_____

_____

Don't know.....-97
Refused.....-98

z20_3 [Recid#3] _____

_____

_____

_____

Don't know.....-97
Refused.....-98

z20_4 [Recid#4] _____

_____

_____

_____

Don't know.....-97
Refused.....-98

## SPECIAL NET-TO-GROSS SEQUENCE FOR INSTANT INCENTIVES AND PROGRAM ALLY ONLY FINANCIAL ASSISTANCE

[Use this program attribution sequence if program selected:

- Received only Instant Incentives
- Program Ally delivered ONLY Focus Financial Assistance (Financial assistance mechanisms analogous to Instant Incentives)]

## DETERMINE PROGRAM IMPACT ON DECISION TO INSTALL (NET-TO-GROSS)

"Now, I want to ask questions about your satisfaction with the energy efficiency improvements, and about your decisions to go forward with them. [IF NECESSARY, LIST Recids [IF MULTIPLE Recids] Where your answers differ between the improvements, please let me know."

z1. Are you satisfied with the performance of the energy efficiency improvement[S] I named earlier? Why not?

Yes.....1
No .....2
[DESCRIBE WHY NOT z1_d]

_____

_____

Don't know .....-97
Refused.....-98

prez3a. Is your organization aware that it received a discount on the cost of [THIS/THESE] improvement[s]?

Yes..... [SKIP TO z3] 1
No .....2
Don't know.....-97
Refused.....-98

prez3b. According to Focus on Energy records, your organization received the following discounts:

| | recid# 1<br>prez3b_1 | recid# 2<br>prez3b_2 | recid# 3<br>prez3b_3 | recid # 4<br>prez3b_4 |
|---|---|---|---|---|
| cname | | | | |
| Discount | | | | |

z3. What first made your organization start thinking about making [THIS/THESE] improvement[S]?

[DESCRIBE z3_d, BEING SURE TO IDENTIFY TO WHAT Recids RESPONSES APPLY]

_____

_____

Don't know .....-97
Refused.....-98

z4. Will you consider making similar energy efficiency improvements in the future in any facility? Why not?

Yes.....1
No ..... [SKIP TO z7] 2

[DESCRIBE WHY NOT z4_d]

_____

_____

Don't know ..... [SKIP TO z7] -97
Refused..... [SKIP TO z7] -98

z6. Will you consider making similar improvements in the future without a discount? Why not?

Yes .....1
No.....2

[DESCRIBE WHY NOT z6_d]

_____

_____

Don't know.....-97
Refused .....-98

z7. Before you made [THIS/THESE] improvement[S], had your organization made any similar improvements at any facility without receiving a discount? What type of improvements?

Yes.....1

[DESCRIBE TYPE z7_d]

_____

_____

No .....2
Don't know .....-97
Refused.....-98

z9. Had your organization considered making the energy efficiency improvement: [RECID# <CNAME>] before learning a discount was available?

| RESPONSE | Recid#1 z9_1 | Recid#2 z9_2 | Recid#3 z9_3 | Recid#4 z9_4 |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | [SKIP TO z12] 2 | [SKIP TO z12] 2 | [SKIP TO z12] 2 | [SKIP TO z12] 2 |
| Don't know | [SKIP TO z12] -97 | [SKIP TO z12] -97 | [SKIP TO z12] -97 | [SKIP TO z12] -97 |
| Refused | [SKIP TO z12] -98 | [SKIP TO z12] -98 | [SKIP TO z12] -98 | [SKIP TO z12] -98 |

z10. At what point in your planning to make this improvement did your organization learn a discount was available? Would you say it was…[READ LIST]

| RESPONSE | Recid#1 z10_1 | Recid#2 z10_2 | Recid#3 z10_3 | Recid#4 z10_4 |
|---|---|---|---|---|
| Before the start of planning | 1 | 1 | 1 | 1 |
| About the same time as the start of planning | 2 | 2 | 2 | 2 |
| Just after planning started | 3 | 3 | 3 | 3 |
| Long after planning started | 4 | 4 | 4 | 4 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z11. Had you researched the cost of this improvement before learning a discount was available?

| RESPONSE | Recid#1 z11_1 | Recid#2 z11_2 | Recid#3 z11_3 | Recid#4 z11_4 |
|---|---|---|---|---|
| Yes | 1 | 1 | 1 | 1 |
| No | 2 | 2 | 2 | 2 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z12. About what percentage of the total costs—that is, the discount plus the additional costs paid by your organization—of making this improvement would you say the discount covered? [IF RESPONDENT IS UNABLE TO BREAK OUT FINANCIAL ASSISTANCE BY RECID THEN ENTER THE COMBINED PERCENTAGE IN THE APPROPRIATE COLUMNS. NOTE: IT'S POSSIBLE TO HAVE BOTH A MIX OF COMBINED AND BY RECID RESULTS]

| RESPONSE | Recid#1 z12_1 | Recid#2 z12_2 | Recid#3 z12_3 | Recid#4 z12_4 |
|---|---|---|---|---|
| [RECORD %] | _____% | _____% | _____% | _____% |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z13. If you had not received a discount, how likely would you have been to undertake this energy efficiency improvement? Would you say you would have been…

| RESPONSE | Recid#1 z13_1 | Recid#2 z13_2 | Recid#3 z13_3 | Recid#4 z13_4 |
|---|---|---|---|---|
| Very likely | 1 | 1 | 1 | 1 |
| Somewhat likely | 2 | 2 | 2 | 2 |
| Not very likely | 3 | 3 | 3 | 3 |
| Very unlikely | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 | [SKIP TO z20a] 4 |
| Don't know | [SKIP TO z20a] –97 | [SKIP TO z20a] -97 | [SKIP TO z20a] -97 | [SKIP TO z20a] -97 |
| Refused | [SKIP TO z20a] –98 | [SKIP TO z20a] -98 | [SKIP TO z20a] -98 | [SKIP TO z20a] -98 |

z14. Without the discount, how different might the timing have been for this improvement? Would you say you would have undertaken it at the same time, earlier, or later?

| RESPONSE | Recid#1 z14_1 | Recid#2 z14_2 | Recid#3 z14_3 | Recid#4 z14_4 |
|---|---|---|---|---|
| Same time | [SKIP TO z16] 1 | [SKIP TO z16] 1 | [SKIP TO z16] 1 | [SKIP TO z16] 1 |
| Earlier | [SKIP TO z16] 2 | [SKIP TO z16] 2 | [SKIP TO z16] 2 | [SKIP TO z16] 2 |
| Later | 3 | 3 | 3 | 3 |
| Don't know | [SKIP TO z16] –97 | [SKIP TO z16] –97 | [SKIP TO z16] -97 | [SKIP TO z16] -97 |
| Refused | [SKIP TO z16] -98 | [SKIP TO z16] –98 | [SKIP TO z16] -98 | [SKIP TO z16] -98 |

z15. How many months later? [TRY TO GET A NUMBER]

| RESPONSE | Recid#1 z15_1 | Recid#2 z15_2 | Recid#3 z15_3 | Recid#4 z15_4 |
|---|---|---|---|---|
| [RECORD # OF MONTHS] | _____ | _____ | _____ | _____ |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z16. Without the discount, how different would the energy efficiency of the equipment be for this improvement? Would you say you would have used the same efficiency, lesser efficiency, or greater efficiency?

| RESPONSE | Recid#1 z16_1 | Recid#2 z16_2 | Recid#3 z16_3 | Recid#4 z16_4 |
|---|---|---|---|---|
| Same | [SKIP TO z18] 1 | [SKIP TO z18] 1 | [SKIP TO z18] 1 | [SKIP TO z18] 1 |
| Lesser | 2 | 2 | 2 | 2 |
| Greater | [SKIP TO z18] 3 | [SKIP TO z18] 3 | [SKIP TO z18] 3 | [SKIP TO z18] 3 |
| Not applicable | [SKIP TO z18] 4 | [SKIP TO z18] 4 | [SKIP TO z18] 4 | [SKIP TO z18] 4 |
| Don't know | [SKIP TO z18] -97 | [SKIP TO z18] -97 | [SKIP TO z18] -97 | [SKIP TO z18] -97 |
| Refused | [SKIP TO z18] -98 | [SKIP TO z18] -98 | [SKIP TO z18] -98 | [SKIP TO z18] -98 |

z17c. How much lower? [READ LIST—DON'T ACCEPT A RESPONSE UNTIL FINISHED READING LIST]

| RESPONSE | Recid#1 z17c_1 | Recid#1 z17c_2 | Recid#1 z17c_3 | Recid#1 z17c_4 |
|---|---|---|---|---|
| Standard efficiency or according to code | 1 | 1 | 1 | 1 |
| Slightly higher than standard efficiency | 2 | 2 | 2 | 2 |
| About midway between standard and the high efficiency that was used | 3 | 3 | 3 | 3 |
| Or slightly lower than the high efficiency that was used | 4 | 4 | 4 | 4 |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

z18. [ASK ONLY FOR RECIDS INSTALLABLE IN VARYING QUANTITIES, E.G., LIGHTS, MOTORS]
Without the discount, how different would the quantity be for this improvement? Would you say you would have installed the same quantity, fewer, or more?

| RESPONSE | Recid#1 z18_1 | Recid#2 z18_2 | Recid#3 z18_3 | Recid#4 z18_4 |
|---|---|---|---|---|
| Same | [SKIP TO z20] 1 | [SKIP TO z20] 1 | [SKIP TO z20] 1 | [SKIP TO z20] 1 |
| Fewer | 2 | 2 | 2 | 2 |
| More | 3 | 3 | 3 | 3 |
| Don't know | [SKIP TO z20] - 97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 | [SKIP TO z20] -97 |
| Refused | [SKIP TO z20] - 98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 | [SKIP TO z20] -98 |

z19. What percentage of the equipment you actually installed would you have installed instead?
[IF z18 = "Fewer (2)," PERCENTAGE SHOULD BE 0-99. IF z18 = "More (3)," PERCENTAGE SHOULD BE >100%.]

| RESPONSE | Recid#1 z19_1 | Recid#2 z19_2 | Recid#3 z19_3 | Recid#4 z19_4 |
|---|---|---|---|---|
| [RECORD %] | _____% | _____% | _____% | _____% |
| Don't know | -97 | -97 | -97 | -97 |
| Refused | -98 | -98 | -98 | -98 |

[IF LAST RECID, SKIP TO z20, ELSE START AGAIN AT QUESTION z9.]

z20a. What would your organization have done if it had not received the discount?
[RECORD RESPONSE, IDENTIFY TO WHAT RECID(s) RESPONSE APPLIES] _____
z20a_1 [Recid#1] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_2 [Recid#2] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_3 [Recid#3] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20a_4 [Recid#4] _____
_____
_____
_____
Don't know.....-97
Refused.....-98

z20. [CONFIRMATION QUESTION]
Could you describe in your own words what influence the discount had on your decision to undertake these specific energy efficiency improvements at the time you did?

[DESCRIBE, BEING SURE TO IDENTIFY TO WHAT RECIDs RESPONSES APPLY. IF RESPONSE IS INCONSISTENT WITH RESPONSES PREVIOUSLY GIVEN, IN PARTICULAR, Z13, ASK ABOUT INCONSISTENCY AND TRY TO RESOLVE.]

z20_1 [Recid#1] _____
_____
_____
_____

Don't know.....-97
Refused.....-98

z20_2 [Recid#2] _____
_____
_____
_____

Don't know.....-97
Refused.....-98

z20_3 [Recid#3] _____
_____
_____
_____

Don't know.....-97
Refused.....-98

z20_4 [Recid#4] _____
_____
_____
_____

Don't know.....-97
Refused.....-98

## Implementing Partners Short-term Follow-up Simple Net-to-Gross Survey

Survey house instructions:

- When programming the survey, it is critical the question numbers remain the same. (We are also "manually" delivering a similar version of this survey to some program participants and we will combine the data from both surveys to produce a single set of results.)
- Please provide us all the data, not only the completes, as we're interested in some of the disposition codes (in particular, initial refusal and mid-interview terminate).
- Phone numbers are in the fields phone1, phone2, and phone3.
- Contact names (cont1-3) are not necessarily paired with a phone number. That is, for example, cont1 is not necessarily found at or only found at phone1.
- Do not read the list of responses unless instructed to do so ([READ LIST]). And just to be clear, when reading lists, never read "don't know' or "refused."

**INFORMED RESPONDENT**

I1. Hello, may I please speak with [WORK THROUGH CONTACT NAMES IN SAMPLE DATA (<cont1>, <cont2>, <cont3>) AND SUBSEQUENTLY OBTAINED]?

Contact available ..... [SKIP TO I2] 1
Contact currently unavailable ..... [ARRANGE CALL BACK] 2
No contact ..... 3

I1b. I'd like to speak with the person responsible for facility management such as energy-efficiency or productivity improvements or the purchase of energy-using equipment.

Person responsible for facility management available [RECORD NAME. ] ..... 1
Person responsible for facility management currently unavailable ..... [RECORD NAME AND ARRANGE CALL BACK] 2
No person responsible for facility management ..... [SKIP TO I7] 3
Don't know ..... [SKIP TO I7] -97
Refused ..... [SKIP TO I7] -98

I2. Hello, my name is _____ and I'm calling from _____ on behalf of the Wisconsin Department of Administration for the Focus on Energy Program.

[If participant in FOCUS customer satisfaction study {custsat= 1} then insert… "You or someone at your company may have recently participated in a customer satisfaction survey sponsored by the program."]

I would like to ask you a few questions regarding <I2txta>. This is not a sales or marketing call. We're calling to help the Focus on Energy Program, which <I2txtb>. Focus on Energy is required by the state of Wisconsin to conduct this type of research. Your response will be kept entirely confidential.

//

(1) sample data: <I2txta>

if <xunit>=WPS: <I2txta>= the free compact fluorescent light bulbs you received from Focus on Energy and Wisconsin Public Service

if <cflqty> equals 1, i.e., from cfl database: <I2txta>=the compact fluorescent light bulb or CFL your organization recently purchased and for which it received a rebate of up to $2

else if <cflqty> is greater than 1: <I2txta>=the [cflqty] compact fluorescent light bulbs or CFLs your organization recently purchased and for which it received a rebate of up to $2 on each bulb

else: <I2txta>=[ansome] energy efficiency improvement[s] your organization recently made

(2) sample data: <I2txtb>

If <xunit>=WPS: <12txtb>=was responsible for distributing these bulbs, improve its services and help organizations in the state of Wisconsin—like yours—save energy

if <cflqty> is greater than or =1: <l2txtb>=paid for the rebate, improve its services and help organizations in the state of Wisconsin—like yours—save energy

else: <l2txtb>= either helped your organization with <thiese> energy efficiency improvement<s> or the company that supplied the improvement<s>

//

l4. [IF cf=1 SKIP TO l4cf] According to Focus on Energy records, sometime between July 1st, 2005 and June 30th, 2006, your organization made the following energy efficiency improvement<s>:

<lc1cnall>
<lc2cnall>
<lc3cnall>
<lc4cnall>
<lc5cnall>
<lc6cnall>
<lc7cnall>
<lc8cnall>.

Are you familiar with your organization's decision to make <thiese> energy efficiency improvement<s>?

Yes (all or some) ..... [SKIP TO y0] 1
No ..... [SKIP TO l6] 2
Don't know ..... [SKIP TO l6] –97
Refused..... [SKIP TO l6] –98

l4cf According to Focus on Energy records, sometime between July 1st, 2005 and June 30th, 2006, your organization <l4txt>

Yes (all or some) ..... [SKIP TO y0] 1
No ..... 2
Don't know ..... –97
Refused..... –98

//Sample data: <l4txt>

IF <xunit>=WPS: <l4txt>= received [cflqty] free compact fluorescent light bulbs from Focus on Energy and Wisconsin Public Service. Do you remember your organization receiving these compact fluorescent light bulbs?

ELSE if cflqty =1: <l4txt>= purchased a compact fluorescent light bulb at [store] and received a [instmail] rebate of up to $2. Are you familiar with your organization's decision to purchase this CFL?

if cflqty> 1: <l4txt>= purchased [cflqty] compact fluorescent light bulbs at [store] and received a [instmail] rebate of up to $2 on each bulb. Are you familiar with your organization's decision to purchase these CFLs?//

l6. Do you know who is likely to <l6txt>?

Yes.....[RECORD NAME AND START OVER AGAIN WITH l1] 1
No .....2
Don't know .....-97
Refused.....-98

//Sample data: <l6txt>

if <xunit>=WPS: <l6txt>= remember receiving these CFLs

if <cflqty> equals =1: <l6txt>= be familiar with your organization's decision to purchase this CFL

if <cflqty> is greater than 1: <l6txt>= be familiar with your organization's decision to purchase these CFLs

else <l6txt>= be familiar with your organization's decision to make <thiese> energy efficiency improvement<s>//

l6b.[CHECK TO MAKE SURE ALL CONTACTS HAVE BEEN TRIED.]
Not all contacts have been tried .....[START OVER AGAIN WITH l1] 1
All contacts have been tried .....2

l7. Thank you very much for your time today. Those are all the questions I have.
No one familiar with decision.....[END INTERVIEW] 1

**VERIFY MEASURE INSTALLATION**

//
Notes:

- All respondents answer these questions

  All respondents come to this section y0 from the previous section (1 Informed Respondent)

- FYI, during previous versions of this survey roughly 90 percent of respondents were asked about only one energy efficiency improvement and approximately.

//

y0. "First, I want to confirm the <y0txt>."

//Sample data: <y0txt>

if <cflqty> equals =1: <y0txt>= compact fluorescent light bulb or CFL I just referred to has been installed

if <cflqty> is greater than 1: <y0txt>= compact fluorescent light bulbs or CFLs I just referred to have been installed

else <y0txt>= energy efficiency improvement[/S] I just named [WAS/WERE] made//

//

Survey house instructions:

The example shown is for 1 hvac energy efficiency improvement.

For hvac, this series (hcy1c_x-hcy1dm_x) must be repeated # times. [KEMA TO PROVIDE SURVEY FIRM WITH NUMBER OF TIMES THE SEQUENCE NEEDS TO BE REPEATED BY ENDUSE CATEGORY]

Where changes need to be made are highlighted.

//

hcy1c_1. //This skip is only necessary for the first energy efficiency improvement in an end use series// [IF <hc>=(equals)1, ELSE SKIP TO lty1c_1] [INTERVIEWER: IF THIS SCREEN IS BLANK, CHOOSE "BLANK SCREEN" BELOW]<hcloccn1>?

Yes ..... 1
//hcy1c_2: Change SKIP TO from "hcy1c_2" to "lty1c_1"//
No ..... [SKIP TO hcy1c_2] 2
Don't know ..... [SKIP TO hcy1c_2] -97
Refused ..... [SKIP TO hcy1c_2] –98
BLANK SCREEN ..... [SKIP TO lty1c_1] 00

hcy1q_1 Our records show that you installed <hcqy1> of these energy efficiency improvements. Is this correct?

Yes .....[SKIP TO hcy1e_1] 1
No.....2
Don't know.....-97
Refused .....–98

hcy1qr_1 How many of these energy efficiency improvements did you install? [RECORD # INSTALLED, PROBE FOR BEST ESTIMATE]

_____

Don't know .....-97
Refused .....–98

[IF measure is prescriptive {pcfinal = P} THEN ASK hcy1e_1; ELSE SKIP TO hcy1c_2]

hcy1e_1 You installed high efficiency equipment with the help of Focus. Without the services you received from Focus, including the financial assistance, what type of equipment would you *most likely* have installed… [READ ALL BEFORE ACCEPTING ANSWER]

As high efficiency as you did install.....1
Standard efficiency .....2
Less efficient than standard .....3
Between standard and the high efficiency you did install .....4
Would not have done anything.....5
Don't know.....-97
Refused .....–98

//

KEMA TO PROVIDE SURVEY FIRM WITH NUMBER OF TIMES THE SEQUENCE NEEDS TO BE REPEATED BY ENDUSE CATEGORY

Survey house instructions:

Essentially identical series' to that described above for hvac must be created for each of the remaining end uses:

- lighting: lt, # times
- manufacturing process: mp, # times
- building shell: bs, # time
- other: or, # time

Where changes need to be made based on the end use are highlighted below.

//

//

Notes:

- Either the end uses listed above (hc, lt, mp, bs, or) OR cf, which follows, is relevant for a respondent

//

hcy1c_1. //This skip is only necessary for the first energy efficiency improvement in an end use series// [IF <hc>=(equals)1, ELSE SKIP TO lty1c_1] <hcloccn1>?

Yes ..... 1

//hcy1c_2 (i.e., the number of times the series is repeated): Change SKIP TO from "hcy1c_2" to "lty1c_1." In the case of other, change SKIP TO for the last series from "ory1c_2" to z0.//

No ..... [SKIP TO hcy1c_2] 2

Don't know ..... [SKIP TO hcy1c_2] -97

Refused ..... [SKIP TO hcy1c_2] –98

BLANK SCREEN ..... [SKIP TO lty1c_1] 00

hcy1q_1 Our records show that you installed <hcqy1> of these energy efficiency improvements. Is this correct?

Yes ..... [SKIP TO hcy1e_1] 1

No ..... 2

Don't know ..... -97

Refused ..... –98

hcy1qr_1 How many of these energy efficiency measures did you install? [RECORD # INSTALLED, PROBE FOR BEST ESTIMATE]

_____

Don't know ..... -97

Refused ..... –98

[IF measure is prescriptive {pcfinal = P} THEN ASK hcy1e_1; ELSE SKIP TO hcy1c_2]

hcy1e_1 You installed high efficiency equipment with the help of Focus. Without the services you received from Focus, including the financial assistance, what type of equipment would you *most likely* have installed… [READ ALL BEFORE ACCEPTING ANSWER]

As high efficiency as you did install ..... 1

Standard efficiency ..... 2

Less efficient than standard ..... 3

Between standard and the high efficiency you did install ..... 4

Would not have done anything ..... 5

Don't know ..... -97

Refused ..... –98

//

Notes:

- this y sequence (started with first y sequence above) is new for CFL database

//

cfy1c_1. [IF <cf>^=1 SKIP TO z0] <cfloccn1>?

Yes ..... 1
No ..... [SKIP TO cf1] 2
Don't know ..... [SKIP TO cf0a] -97
Refused ..... [SKIP TO cf0a] –98

//Sample data: <cfloccn1>

if <xunit>WPS: <cfloccn1> = Are any of the <cflqty> CFLs your organization received sometime between July 1st, 2005 and June 30th, 2006 from Focus on Energy and Wisconsin Public Service, currently installed?

ELSE if cflqty = 1: <cfloccn1> = Is the CFL your organization purchased sometime between July 1st, 2005 and June 30th, 2006 at [store] and for which it received a [instmail] rebate of up to $2, currently installed?

ELSE if cflqty > 1: <cfloccn1> = Are any of the <cflqty> CFLs your organization purchased sometime between July 1st, 2005 and June 30th, 2006 at [store] and for which it received a [instmail] rebate of up to $2, currently installed?//

**ENGINEERING REVIEW: CFL DATABASE ONLY**

//

Notes:

Only CFL database (cf=1) that have at least one of the rebated CFLs currently installed answer these questions

- These respondents come to this section er1 from the previous section cfy1c_1
- cfy1c_1 or if other end use in the previous section (2 Verify Measure Installation) handles this skip for all other respondents

//

er1. [IF cflqty=1 SKIP TO er2soa] About how many of these compact fluorescent light bulbs or CFLs are currently installed?

[RECORD NUMBER OF CFLS <= cflqty]
Don't know..... [SKIP TO cf0a] -97
Refused..... [SKIP TO cf0a] –98

er2oa. [IF <er1>=1 SKIP TO er2soa] When you installed these CFLs, did you most often remove a CFL or a light bulb that was not a CFL?

CFL ..... [SKIP TO cf1] 1
Light bulb that was not a CFL ..... 2
Don't know..... -97
Refused..... -98

er2ob. On average, was the wattage of the light bulbs you replaced with these CFLs [READ LIST]…

About 75 watts..... [SKIP TO er3ia] 1
Less than 75 watts..... 2
Or more than 75 watts ..... 3
Don't know..... [SKIP TO er3ia] -97
Refused..... [SKIP TO er3ia] -98

er2oc. On average, what was the wattage of the light bulbs you replaced with these CFLs?

[RECORD WATTAGE]
Don't know ..... -97
Refused..... -98

er3ia. On average, is the wattage of the <er1> CFLs you installed [READ LIST]…
About 20 watts.....[SKIP TO er4] 1
Less than 20 watts.....2
Or more than 20 watts.....3
Don't know.....[SKIP TO er3ic] -97
Refused.....[SKIP TO er4] -98

er3ib. On average, what is the wattage of the <er1> CFLs you installed?
[RECORD WATTAGE].....[SKIP TO er4]
Don't know.....-97
Refused.....[SKIP TO er4] -98

er3ic. Do you recall from the CFL packaging, the wattage of the light bulbs most of the <er1> CFLs you installed were designed to replace?
[RECORD NUMBER OF WATTS]
Don't know.....-97
Refused.....-98

er4. My next few questions are about the fixtures in which you installed the <er1> CFLs. Specifically, the number of hours these fixtures are on. When answering these questions, please keep in mind the number of hours a fixture is on is not necessarily the same as the number of hours the facility is open.

For most of these fixtures, is the number of hours the fixture is on during a week about the same all year round?
Yes.....1
No.....[SKIP TO er6ha] 2
Don't know.....[SKIP TO cf1] -97
Refused.....[SKIP TO cf1] -98

er5ha. On average, these fixtures are on during a typical week [READ LIST]…
About 70 hours, which would be about 10 hours a day including weekend days.....[SKIP TO cf1] 1
Less than 70 hours a week.....2
Or more than 70 hours a week.....3
Don't know.....[SKIP TO cf1] -97
Refused.....[SKIP TO cf1] -98

er5hb. On average, how many hours are these fixtures on during a typical weekDAY?
[RECORD NUMBER OF HOURS 1-24]
Don't know.....[SKIP TO cf1] -97
Refused.....[SKIP TO cf1] -98

er5hc. On average, how many hours are these fixtures on during a typical weekend—that is, Saturday and Sunday combined?
[RECORD NUMBER OF HOURS 1-48] [SKIP TO cf1]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

er6ha. For the majority of months, on average, these fixtures are on during a typical week [READ LIST]…
About 70 hours, which would be about 10 hours a day including weekend days ..... [SKIP TO er7] 1
Less than 70 hours a week..... 2
Or more than 70 hours a week ..... 3
Don't know ..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er6hb. For the majority of months, on average, how many hours are these fixtures on during a typical weekDAY?
[RECORD NUMBER OF HOURS 1-24]
Don't know..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

er6hc. For the majority of months, on average, how many hours are these fixtures on during a typical weekEND—that is, Saturday and Sunday combined?
[RECORD NUMBER OF HOURS 1-48]
Don't know..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

er7. How many months remain—that is, are not included in this majority?
[RECORD NUMBER OF MONTHS, 1-6]
Don't know ..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er8ha. For these remaining months, on average, these fixtures are on during a typical week [READ LIST]…
About 70 hours, which would be about 10 hours a day including weekend days ..... [SKIP TO cf1] 1
Less than 70 hours a week..... 2
Or more than 70 hours a week ..... 3
Don't know ..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er8hb. For the remaining months, on average, how many hours are these fixtures on during a typical weekDAY?

[RECORD NUMBER OF HOURS 1-24]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] –98

er8hc. For the remaining months, on average, how many hours are these fixtures on during a typical weekEND—that is, Saturday and Sunday combined?
[RECORD NUMBER OF HOURS 1-48][SKIP TO cf1]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1]-98

er2soa.When you installed this CFL, did you remove a CFL or a light bulb that was not a CFL?
CFL ..... [SKIP TO cf1] 1
Light bulb that was not a CFL ..... 2
Don't know.....-97
Refused.....-98

er2sob.Was the wattage of the light bulb you replaced with this CFL [READ LIST]…
About 75 watts..... [SKIP TO er3sia] 1
Less than 75 watts..... 2
Or more than 75 watts ..... 3
Don't know..... [SKIP TO er3sia] -97
Refused..... [SKIP TO er3sia] -98

er2soc.What was the wattage of the light bulb you replaced with this CFL?
[RECORD WATTAGE]
Don't know .....-97
Refused.....-98

er3sia. Is the wattage of the CFL you installed [READ LIST]…
About 20 watts..... [SKIP TO er4s] 1
Less than 20 watts..... 2
Or more than 20 watts ..... 3
Don't know..... [SKIP TO er3sic] -97
Refused..... [SKIP TO er4s] -98

er3sib. What is the wattage of the CFL you installed?
[RECORD WATTAGE] [SKIP TO er4s]
Don't know .....-97
Refused..... [SKIP TO er4s] -98

er3sic. Do you recall from the CFL packaging, the wattage of the light bulb the CFL you installed was designed to replace?

[RECORD NUMBER OF WATTS]
Don't know .....-97
Refused.....-98

er4s. My next few questions are about the fixture in which you installed the CFL. Specifically, the number of hours this fixture is on. When answering these questions, please keep in mind the number of hours a fixture is on is not necessarily the same as the number of hours the facility is open.

Is the number of hours the fixture is on during a week about the same all year round?
Yes.....1
No ..... [SKIP TO er6sha] 2
Don't know..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er5sha.This fixture is on during a typical week [READ LIST]…
About 70 hours, which would be about 10 hours a day including weekend days ..... [SKIP TO cf1] 1
Less than 70 hours a week.....2
Or more than 70 hours a week .....3
Don't know ..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er5shb.How many hours is this fixture on during a typical weekDAY?
[RECORD NUMBER OF HOURS 1-24]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

er5shc.How many hours is this fixture on during a typical weekend—that is, Saturday and Sunday combined?
[RECORD NUMBER OF HOURS 1-48] [SKIP TO cf1]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

er6sha.For the majority of months, this fixture is on during a typical week [READ LIST]…

About 70 hours, which would be about 10 hours a day including weekend days ..... [SKIP TO er7s] 1
Less than 70 hours a week.....2
Or more than 70 hours a week .....3
Don't know ..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er6shb.For the majority of months, how many hours is this fixture on during a typical weekDAY?

[RECORD NUMBER OF HOURS 1-24]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

er6shc.For the majority of months, how many hours is this fixture on during a typical weekEND—that is, Saturday and Sunday combined?

[RECORD NUMBER OF HOURS 1-48]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

er7s. How many months remain—that is, are not included in this majority?

[RECORD NUMBER OF MONTHS, 1-6]
Don't know ..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er8sha.For these remaining months, on average, this fixture is on during a typical week [READ LIST]…

About 70 hours, which would be about 10 hours a day including weekend days ..... [SKIP TO cf1] 1
Less than 70 hours a week.....2
Or more than 70 hours a week .....3
Don't know ..... [SKIP TO cf1] -97
Refused..... [SKIP TO cf1] -98

er8shb.For the remaining months, how many hours is this fixture on during a typical weekDAY?

[RECORD NUMBER OF HOURS 1-24]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] –98

er8shc.For the remaining months, how many hours is this fixture on during a typical weekEND—that is, Saturday and Sunday combined?
[RECORD NUMBER OF HOURS 1-48][SKIP TO cf1]
Don't know ..... [SKIP TO cf1] -97
Refused ..... [SKIP TO cf1] -98

**CFL DATABASE ONLY**

//

Notes:

Only CFL database (cf=1) that do not have all their rebated CFLs currently installed (including unknown # installed) answer these questions

- These respondents as well as respondents that have all currently installed come to this section (cf0a or cf1) from either cfy1c_1 (2 Verify Measure Installation) or the previous section (3 Engineering Review: CFL Database Only)

  From cf1, respondents that have all currently installed are skipped over this section

- cfy1c_1 or if not other end use (2 Verify Measure Installation) handles this skip for all other respondents (not CFL database)

//

[Create:

- if cfy1c_1=2 then er1not=cflqty
  else er1not=cflqty-er1]

cf0a. <cf0atxt>
Yes.....1
No ..... [SKIP TO cf3b] 2
Don't know..... [SKIP TO z0] -97
Refused..... [SKIP TO z0] –98

//Sample data: <cf0atxt>

if cflqty=1 AND <xunit>WPS: <cfloccn1> = Do you intend to install this CFL in one of your fixtures?

ELSE if cflqty=1: <cf0atxt>=Did you purchase this CFL for your use—that is, to be installed in one of your fixtures?

if cflqty>1: <cf0atxt>= Were most of the <cflqty> CFLs purchased for your use—that is, to be installed in your fixtures?

ELSE if cflqty>1 AND <xunit>WPS: <cfloccn1> = Do you intend to install these CFLs in one of your fixtures?

//

cf0b.Can you tell me anything at all about the status of <these> CFL<s>?
[RECORD RESPONSE] [SKIP TO z0]

//Sample data:

- if cflqty=1
  - <thiese>=this
  - <s>=
- if cflqty>1
  - <thiese>= these
  - <s>= s

cf1. [IF er1not=0 SKIP TO z0. IF er1not=1 SKIP TO cf1s] My next questions are about the <er1not> compact fluorescent light bulbs or CFLs that are not currently installed. How many of these CFLs were installed in your fixtures, but have since been removed?

[RECORD NUMBER OF CFLs <= er1not]
Don't know.....-97
Refused.....–98

[Create:

- cf1lft=er1not-cf1
- if cf1>0, cf2txt=the remaining <cf1lft> CFLs

  else cf2txt=them]

Notes:

- Handling cf1lft=0 in the skip]

cf2. [IF cf1lft=1 SKIP TO cf2s. IF cf1lft=0 SKIP TO z0] How many of <cf2txt> will be installed at some future date in your fixtures?

[RECORD NUMBER OF CFLs <=cf1lft]
Don't know.....-97
Refused.....–98

[Create:

- cf2lft=cf1lft-cf2
- if cf2>0 or cf1>0 then cf3atxt= remaining]

cf3a. [If cf2lft=0 SKIP TO z0] So, the <cf3atxt> < cf2lft> [CFLS WERE/CFL WAS] not purchased for your use.

cf3b. [IF cflqty=1 OR cf2lft=1 SKIP TO cfs3b] For what purpose were they purchased? [MULTIPLE RESPONSE]

Resale ..... [SKIP TO z0] 1
Give away..... [SKIP TO z0] 2
Other [SPECIFY] ..... [SKIP TO z0] 3
Don't know..... [SKIP TO z0] -97
Refused..... [SKIP TO z0] –98

//Start of cf questions for er1not=1//

cf1s. My next questions are about the compact fluorescent light bulb or CFL that is not currently installed. Was this CFL installed in one of your fixtures, but has since been removed?

Yes..... [SKIP TO z0] 1
No .....2
Don't know.....-97
Refused.....–98

cf2s. Will this CFL be installed at some future date in one of your fixtures?

Yes..... [SKIP TO z0] 1
No .....2
Don't know..... [SKIP TO z0] -97
Refused..... [SKIP TO z0] –98

cf3sa. So, this CFL was not purchased for your use.

cf3sb. For what purpose was it purchased? [MULTIPLE RESPONSE]

Resale .....1
Give away.....2
Other [SPECIFY] .....3
Don't know.....-97
Refused.....–98

//Notes:

- Respondents who have installed a measure answer these questions

  All respondents come to this section z0 from either cy1c_1 or other end use (2 Verify Measure Installation; not CFL database) or the previous section (4 CFL Database Only)

  From z0, respondents who have not installed a measure are skipped over this section

CFL only customers are no longer asked the NTG sequence. Residential Program's market based methods are now used for Business Programs. NonCFL rebates database customers are still asked this sequence.

- The net-to-gross questions are slightly different for:
  - Received only Instant Incentives
  - cfl database
  - Received "only free pre-rinse sprayer"(apparently schools/government)
  - Received variety of services from Program ally, beginning in q_ejun06 we are sending all Ag thru this sequence (these customers should also receive General Supplier Survey/or Ag Dealer Survey).

Solution:

- srprez1a-z8: All, differences handled via skips and sample data both provided and created on the fly
- prez9-orz20a: All but cfl database. Received only Instant Incentives or "only free pre-rinse sprayer" differences handled via sample data provided (I don't think any of this has to be created on the fly)
- precfz9-cfz20a: cfl database

/FYI: Sample data

If attrib=1 (received only instant incentives or program ally delivered only Focus financial incentives)

ntg5=a discount from the Focus on Energy Program
ntg6=a discount from the Focus on Energy Program
eeia= made the recent energy efficiency improvement
ntg7=a discount like that from the program
ntg9=learning a discount was available
ntg10=learn a discount was available
ntg11=learning a discount was available
ntg12=discount

IF hcfin>0 THEN ntg13_20=a discount of [hcfin];

ELSE ntg13_20=a discount

ntg14pls=the discount from the Focus on Energy Program

If attrib=2 (cfl-rebates database)

ntg5=a rebate
ntg6=a rebate
ntg7=a rebate like that from the program
ntg9=learning a rebate was available
ntg10=learn a rebate was available
ntg11=learning a rebate was available

ntg12= rebate

IF hcfin>0 THEN ntg13_20=a rebate of [hcfin];

ELSE ntg13_20=a rebate

ntg14pls=the rebate from the Focus on Energy Program

If attrib=0 (aware of Focus)
ntg5=services from the Focus on Energy Program
ntg6=assistance from the Focus on Energy Program
eeia= made the recent energy efficiency improvement
ntg7=services like those from the program
ntg9=receiving help from the program
ntg10=begin receiving help from the Focus on Energy Program
ntg11=receiving help from the program
ntg12=financial assistance

IF hcfin>0 THEN ntg13_20=help and financial assistance of [hcfin];

ELSE ntg13_20=help

ntg14pls=the Focus on Energy Program's help

If attrib=3 (received "only free pre-rinse sprayer," could be used for other free equipment)
ntg5=the equipment free from the Focus on Energy Program
ntg6=receiving the equipment free from the Focus on Energy Program
eeia=made the recent energy efficiency improvement
ntg7=the equipment free
ntg9=learning it could get the equipment for free from the program
ntg10=learn it could get the equipment for free from the Focus on Energy Program
ntg11=learning it could get the equipment for free from the program
ntg12={i.e., blank, this question (orz12) is skipped. To skip this question, set orfin=0. orfin is only used in this question.}
ntg13_20=the equipment for free
ntg14pls=receiving the equipment for free from the Focus on Energy Program

If attrib=4 (Received variety of services from Program ally)
ntg5=the services from [the contractor] and the financial assistance from the Focus on Energy Program
ntg6=services from [the contractor] and financial assistance from the Focus on Energy Program
eeia= made the recent energy efficiency improvement
ntg7=services like those from [the contractor] and financial assistance from the Focus on Energy Program

ntg9= receiving services from [the contractor] and financial assistance from the Focus on Energy Program
ntg10=begin receiving services from [the contractor] and financial assistance from the Focus on Energy Program
ntg11= receiving services from [the contractor] and financial assistance from the Focus on Energy Program
ntg12=financial assistance

IF hcfin>0 THEN ntg13_20= services from [the contractor] and financial assistance of [hcfin];

ELSE ntg13_20=services from [the contractor] and financial assistance

ntg14pls= services from [the contractor] and financial assistance from the Focus on Energy Program

//

[# is the number of times the Verify Measure Installation sequence is repeated for each enduse.

Create

- hcyes = number of hcy1c_1-#=1
- ltyes = number of lty1c_1-#=1
- mpyes = number of mpy1c_1-#=1
- bsyes = 1 if bsy1c_#=1
- oryes = number of ory1c_1-#=1
- y1cyes=hcyes+ltyes+mpyes+bsyes+oryes
- if y1cyes>1 then
    - eeiz0= energy efficiency improvements you just confirmed your organization recently made
    - alth=these
    - als=s

- if y1cyes= 1 then
    - eeiz0= energy efficiency improvement you just confirmed your organization recently made
    - alth=this
    - als=
- if hcyes>1 then
    - hcany=any of
    - hcs=s
    - hcwmst=most of
    - hcth=these

    - hcfor=for most of these improvements
    - hcav=On average, about
    - hcavhw=On average, how
    - hcy=ies

- if hcyes=1 then
    - hcany=
    - hcs=
    - hcwmst=
    - hcth=this
    - hcfor=
    - hcav=About
    - hcavhw=How
    - hcy=y

- if hcyes>=1 then hcfinlst=<hcfintxt>

  Create a similar set of variables using ltyes, mpyes, bsyes, and oryes.

- notoryes=hcyes+ltyes+mpyes+bsyes
- if notoryes>=1 then ortxt = remaining
- if cflqty=1 or er1=1
    - eeiz0=compact fluorescent light bulb or CFL your organization recently installed
    - alth=this
    - als=
    - eeia=installed the CFL
    - cfth=the CFL
    - cfa=a CFL
- if er1>1
    - eeiz0=<er1> compact fluorescent light bulbs or CFLs your organization recently installed
    - alth=these
    - als=s
    - eeia=installed the <er1> CFL
    - cfth=the <er1> CFLs
    - cfa=CFLs]

z0. [IF (cf^=1 AND y1cyes<1) SKIP TO r18. IF cf=1 SKIP TO ucfprec] Now, I have a few questions about your satisfaction with the <eeiz0>.

srprez1a. [IF attrib=0 OR attrib=2 OR attrib=3 SKIP TO z1] Is your organization aware that it received a discount on the cost of <alth> energy efficiency improvement<als>?

Yes .....1
No.....2
Don't know.....-97
Refused .....-98

srprez1b. According to Focus on Energy Program records,

<hcfinlst>

[AND] <ltfinlst>

[AND] <mpfinlst>

[AND] <bsfinlst>

[AND] <orfinlst>

z1. Is your organization satisfied with the performance of <alth> energy efficiency improvement<als>?

Yes.....1
No .....2
Don't know.....-97
Refused.....-98

[IF attrib=4 ASK z2 and z3; ELSE SKIP TO z4]

z2. Had the contractor that installed your energy efficient improvements provided energy efficiency improvements to your company before your organization <eeia> <als>?

Yes.....1
No .....2
Don't know .....-97
Refused.....-98

z3. How would you describe the services this contractor offers?
[RECORD DESCRIPTION]
Don't know.....-97

z4. Will your organization consider making similar energy efficiency improvements in the future at the same or another facility?

Yes.....1
No ..... [SKIP TO z7] 2
Don't know ..... [SKIP TO z7] -97
Refused..... [SKIP TO z7] –98

z6. Will your organization consider making similar improvements in the future without <ntg6>?

Yes .....1
No.....2

Don't know.....-97
Refused.....-98

z7. Before your organization <eeia> <als> that we've been discussing, had your organization made similar improvements at the same or another facility without receiving <ntg7>?
Yes.....1
No.....2
Don't know.....-97
Refused.....-98

z8. [IF attrib =1 OR 2 SKIP TO prez9.] Did the Focus on Energy Program provide your organization with any new information on the energy efficiency improvement<als>?
Yes.....1
No.....2
Don't know.....-97
Refused.....-98

prez9. My next questions are about your organization's decision to go forward with the energy efficiency improvement<als> you confirmed earlier that it made.

//

Survey house instructions:

The series of questions hcz9-hcz20a below must essentially be repeated for each of the remaining end uses (example shown is hvac):

- lighting, lt
- manufacturing process, mp
- building shell, bs
- <ortxt> (other), or

  In the case of other, change (ELSE) SKIP TO "ltz9" to u0

Where changes need to be made based on the end use are highlighted below.

//

hcz9. [IF hcyes=0 SKIP TO ltz9, IF hcyes>=1 AND srprez1a = 2, -97, OR –98 SKIP TO hcz12] Had your organization considered making <hcany> the hvac energy efficiency improvement<hcs> before <ntg9>?

Yes ..... 1
No ..... [SKIP TO hcz12] 2
Don't know ..... [SKIP TO hcz12] -97
Refused ..... [SKIP TO hcz12] -98

hcz10. At what point in the planning for making <hcwmst> <hcth> improvement<hcs> did your organization <ntg10>? Would you say <hcfor>…[READ LIST]

Before the start of planning ..... 1
About the same time as the start of planning ..... 2
Just after planning started ..... 3
Or long after planning started ..... 4
Don't know ..... -97
Refused ..... -98

hcz11. Had your organization researched the cost<hcs> of making <hcwmst> <hcth> improvement<hcs> before <ntg11>?

Yes ..... 1
No ..... 2
Don't know ..... -97
Refused ..... -98

hcz12. [IF hcfin>0, ELSE SKIP TO hcz13] About what percentage of the total cost –that is, all financial assistance plus the costs not covered by financial assistance—of making the hvac energy efficiency improvement<hcs> did the <ntg12> from the Focus on Energy Program cover?

[RECORD PERCENTAGE 1-100]
Don't know ..... -97
Refused ..... -98

hcz13. If your organization had not received<ntg13_20> from the Focus on Energy Program, how likely would it have been to make <hcwmst> the hvac energy efficiency improvement<hcs>? Would you say <hcfor> the likelihood would have been…[READ LIST]

Very likely ..... 1
Somewhat likely ..... 2
Not very likely ..... 3
Or very unlikely ..... [SKIP TO hcz20a] 4
Don't know ..... [SKIP TO hcz20a] -97
Refused ..... [SKIP TO hcz20a] -98

hcz14. Without<ntg14pls>, how different would the timing have been for making <hcwmst> <hcth> improvement<hcs>? Would you say <hcfor> the timing would have been…[READ LIST]

About the same .....[SKIP TO hcz16] 1
Earlier .....[SKIP TO hcz16] 2
Or later .....3
Don't know ..... [SKIP TO hcz16] -97
Refused..... [SKIP TO hcz16] -98

hcz15. <hcav> how many months later? [TRY TO GET A NUMBER] [RECORD NUMBER OF MONTHS]

Don't know .....-97
Refused .....-98

hcz16. Without <ntg14pls>, how different would the energy efficiency have been for <hcwmst> the hvac improvement<hcs>? Would you say <hcfor> the efficiency would have been the… [READ LIST]

Same .....[SKIP TO hcz18] 1
Lower .....2
Or higher .....[SKIP TO hcz18] 3
Don't know ..... [SKIP TO hcz18] -97
Refused..... [SKIP TO hcz18] -98

hcz17c. <hcavhw> much lower? [READ LIST—DON'T ACCEPT A RESPONSE UNTIL FINISHED READING LIST]

Standard efficiency or according to code .....1
Slightly higher than standard efficiency .....2
About midway between standard and the high efficiency that was used.....3
Or slightly lower than the high efficiency that was used .....4
Don't know .....-97
Refused .....-98

hcz18. Without <ntg14pls>, how different would the quantit<hcy> have been for <hcwmst> the hvac energy efficiency improvement<hcs>? Would you say <hcfor> the quantit<hcy> would have been the…[READ LIST]

Same ..... [SKIP TO ltz9] 1
Smaller.....2
Larger ..... [SKIP TOltz9] 3
Or it doesn't make sense to talk about quantity .....
..... [SKIP TO ltz9] 4
Don't know ..... [SKIP TO ltz9] -97
Refused..... [SKIP TO ltz9] -98

hcz19_sm. About what percentage of <hcth> improvement<hcs> would your organization have made without <ntg14pls>?

[RECORD PERCENTAGE 0-99] ..... [SKIP TO ltz9]
Don't know ..... [SKIP TO ltz9]-97
Refused ..... [SKIP TO ltz9]-98

hcz20a. What would your organization have done if it had not received <ntg13_20> from Focus on Energy?
[RECORD RESPONSE]
Don't know.....-97
Refused.....-98

**END-USER COSTS**

//

Notes:

Respondents who have installed a measure, with the exception of "only free pre-rinse sprayers," as well as CFL database and not installed answer these questions

- These respondents as well as "only free pre-rinse sprayers" come to this section (u0 or ucfprec) from the previous section (5 Determine Program Impact on Decision to Install (Net-to-gross))

  From u0, "only free pre-rinse sprayer" (ps=1) is skipped over this section

- z0 (5 Determine Program Impact on Decision to Install (Net-to-gross)) handles this skip for the remaining respondents (not CFL database and not installed)

FYI, Sample data

hcfin01 = 1 if awarded financial assistance from Focus for hvac energy efficiency improvements

analogous variables: ltfin01, mpfin01, bsfin01, orfin01

if cflqty=1 then

ucf0txt=compact fluorescent light bulb or CFL

cfqper=

cfqav=About
cfp= the CFL

if cflqty>1 then

ucf0txt=<cflqty> compact fluorescent light bulbs or CFLs

cfqper=per CFL

cfqav=On average, about

cfp=one of these CFLs

//

[no free pre-rinse sprayers this round]

u0. [IF ps=1 THEN SKP TO r18. IF cf=1 THEN SKIP TO ucfprec.] Now, I have a few questions about the cost of the energy efficiency improvement<als> your organization recently made that we've been discussing.

//

Survey house instructions:

The series of questions uhcaa-uhcglo below must essentially be repeated for each of the remaining end uses (example shown is hvac).

Changes that need to be made based on the end use are highlighted and shown in the table below.

| | hvac | lighting | manufacturing process | building shell | other |
|---|---|---|---|---|---|
| question numbers, sample data | hc | lt | mp | bs | or |
| skip | ultaa | umpaa | ubsaa | uoraa | b1 |
| changes to | to the hvac system | to lighting | to the manufacturing process | to the building shell | |
| end use | hvac | lighting | manufacturing process | building shell | <ortxt> |
| uxxaa,uxxe, uxxf, uxxg | uhcaa, uhce, uhcf,uhcg | analogous to uhcaa, uhce, uhcf, uhcg | analogous to uhcaa, uhce, uhcf, uhcg | analogous to uhcaa, uhce, uhcf, uhcg | uoraa, uore, uorf, uorg |

//

uhcaa. [IF hcyes>=1, ELSE SKIP TO ultaa] Did your organization HAVE TO make changes to the hvac system? [IF THE RESPONDENT IS UNCLEAR RE WHAT IS MEANT BY "HAVE TO," READ THE FOLLOWING EXAMPLE: For example, had to replace failing equipment or needed to increase capacity. ]

uoraa. [IF oryes>=1, ELSE SKIP TO r18] Did your organization HAVE TO make the <ortxt> change<ors> to the systems that we've been discussing? [IF THE RESPONDENT IS UNCLEAR RE WHAT IS MEANT BY "HAVE TO," READ THE

FOLLOWING EXAMPLE: For example, had to replace failing equipment or needed to increase capacity. ]

Yes ..... 1
No ..... 2
Don't know ..... -97
Refused ..... -98

[READ] <hcfintxt>.

uhcprec. Was your organization awarded financial assistance from a source other than Focus on Energy for <hcth> energy efficiency improvement<hcs>?

Yes ..... 1
No ..... [SKIP TO uhcb] 2
Don't know ..... [SKIP TO uhcb] -97
Refused ..... [SKIP TO uhcb] -98

uhcc. About how much was that <u>other</u> financial assistance?

[RECORD OTHER FINANCIAL ASSISTANCE TO THE NEAREST DOLLAR]
Don't know ..... -97
Refused ..... -98

**[Create**

- **if hcfin01=1 OR uhcprec=1 then hctot = —that is, all financial assistance plus costs not covered by financial assistance—**
- else hctot=

Similarly create lttot, mptot, bstot, and ortot]

uhcb. [IF uhcaa ^=2 SKIP TO uhce] What was the approximate total cost <hctot> of the hvac energy efficiency improvement<hcs> recently made that we've been discussing?

[RECORD COSTS TO THE NEAREST DOLLAR]
Don't know ..... -97
Refused ..... -98

uhcd. About how much of this total cost was equipment costs?

[RECORD COSTS TO THE NEAREST DOLLAR]
Don't know ..... -97
Refused ..... -98

uhce. [IF uhcaa ^=1 SKIP TO ultaa] So, your organization had to make changes to the hvac system and would have incurred costs as result. What effect did the energy efficiency improvement<hcs> to the hvac system that we've been discussing have on these costs? Did these energy efficiency improvement<hcs> increase, decrease, or leave the same the total cost <hctot> of the changes made to the hvac system?

uore. [IF uoraa ^=1 SKIP TO r18] So, your organization had to make the <ortxt> change<ors> and would have incurred costs as a result. What effect did the <ortxt> energy efficiency improvement<ors> that we've been discussing have on these costs? Did these energy efficiency improvement<ors> increase, decrease, or leave the same the total cost <ortot> of the <ortxt> changes made?

Increase .....1
Decrease .....2
Leave the same ..... [SKIP TO ultaa] 3
Don't know..... [SKIP TO ultaa] -97
Refused ..... [SKIP TO ultaa] -98

uhcf. Did the energy efficiency improvement<hcs> to the hvac system increase, decrease, or leave the same the total equipment costs of the changes made to the hvac system?

uorf. Did the <ortxt> energy efficiency improvement<ors> increase, decrease, or leave the same the total equipment costs of the <ortxt> changes made?

Increase .....1
Decrease.....[SKIP TO uhcflo] 2
Leave the same..... [SKIP TO uhcg] 3
Don't know ..... [SKIP TO uhcg] -97
Refused..... [SKIP TO uhcg] -98

uhcfhi. About how much more were total equipment costs?
[RECORD COSTS TO THE NEAREST DOLLAR][SKIP TO uhcg]
Don't know ..... [SKIP TO uhcg] -97
Refused ..... [SKIP TO uhcg] -98

uhcflo. About how much less were total equipment costs?
[RECORD COSTS TO THE NEAREST DOLLAR]
Don't know .....-97
Refused .....-98

uhcg. Did the energy efficiency improvement<hcs> to the hvac system increase, decrease, or leave the same the total labor costs of the changes made to the hvac system?

uorg. Did the <ortxt> energy efficiency improvement<ors> increase, decrease, or leave the same the total labor costs of the <ortxt> changes made?

Increase .....1
Decrease.....[SKIP TO uhcglo] 2
Leave the same..... [SKIP TO ultaa] 3
Don't know ..... [SKIP TO ultaa] -97
Refused..... [SKIP TO ultaa] -98

uhcghi. About how much more were total labor costs?
[RECORD COSTS TO THE NEAREST DOLLAR][SKIP TO ultaa]
Don't know ..... [SKIP TO ultaa] -97
Refused ..... [SKIP TO ultaa] -98

uhcglo. About how much less were total labor costs?
[RECORD COSTS TO THE NEAREST DOLLAR]
Don't know .....-97
Refused .....-98

//cfl data base end-user cost questions.//

ucfprec. [IF cf^=1 SKIP TO r18] Now, I have a few questions about the cost of the <ucf0txt> your organization recently purchased that we've been discussing. Was your organization awarded financial assistance other than the up to $2 rebate<cfqper> for the purchase of < thiese> CFL<s>?
Yes .....1
No..... [SKIP TO ucfd] 2
Don't know..... [SKIP TO ucfd] -97
Refused ..... [SKIP TO ucfd] -98

ucfc. <cfqav> how much was that <u>other</u> financial assistance<cfqper>?
[RECORD OTHER FINANCIAL ASSISTANCE TO THE NEAREST DOLLAR]
Don't know .....-97
Refused.....-98

**[Create**

- **if ucfprec=1 then cftot = and the other financial assistance**
- else cftot= ]

ucfd. <cfqav> how much did <cfp> cost? Include in this cost the up to $2 rebate <cftot> <cfqper>?
[RECORD COSTS TO THE NEAREST DOLLAR]
Don't know.....-97
Refused .....-98

**IMPRESSION OF FOCUS**

//

Notes:

All respondents answer these questions

Respondents come to this section r18 from z0 (5 Determine Program Impact on Decision to Install (Net-to-gross); not CFL database and not installed) or the previous section (7 Influence and Information Sources; installed as well as CFL database and not installed)

//

r18. [IF unaware ^=1 SKIP TO im0] Are you familiar with the Focus on Energy Program for businesses and other organizations?

Yes ..... [SKIP TO im3] 1
No ..... [SKIP TO d0a] 2
Don't know..... [SKIP TO d0a] -97
Refused ..... [SKIP TO d0a] –98

im0. [IF y1cyes<1 SKIP TO im3]"So far, my questions have focused on your organization's interactions with Focus on Energy regarding energy efficiency improvements that your organization has implemented.

From now on, when answering my questions, please consider all your organization's interactions with the program. That is, please consider interactions with Focus on Energy regarding any energy efficiency improvement—whether implemented or not—as well as any other interactions with the program."

im3. I'd like to know your overall impression of the Focus on Energy Program, based on anything you may have seen or heard. On a scale of 1 to 5, where 5 means Very Positive and 1 means Very Negative, what is your overall impression of Focus on Energy? Please give me a number between 1 and 5 to tell me your overall impression.

1 (very negative) ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
5 (very positive) ..... 5
Don't know..... -97
Refused ..... -98

**PROGRAM SERVICES: OVERALL**

//

Notes:

Respondents familiar with Focus, with the exception of CFL database, answer these questions

- These respondents as well as CFL database and familiar with Focus come to this section o10 from the previous section (10 Program Service: Financial Assistance)

From o10, CFL database (and familiar with Focus) are skipped over this section

- r18 (9 Impression of Focus) handles this skip for the remaining respondents (not familiar with Focus)

//

o10. [IF cf=1 THEN SKIP TO d0a] Using a scale of 1 to 5, where 1 means not at all satisfied and 5 means very satisfied, how satisfied is your organization with the Focus on Energy Program?

1 (not at all satisfied) ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
5 (very satisfied) ..... 5
Don't know..... [SKIP TO d0a] -97
Refused..... [SKIP TO d0a] -98

o11. Why do you say that? [ACCEPT MULTIPLE RESPONSES.] //o11_1-o11_17, o11_96-o11_98//

- Positive Responses
  - Just liked the Program overall ..... 1
  - The Program is professionally handled and well promoted ..... 2
  - Happy with the results ..... 3
  - Liked the money ..... 4
  - Liked the savings ..... 5
  - Liked the information ..... 6
  - Liked the Program rep/was knowledgeable ..... 7
- Negative Responses
  - Program operations
    - Didn't like the service ..... 8
    - Poor communications ..... 9
    - Too many people involved/too bureaucratic ..... 10
    - Process took too long ..... 11
  - Technical quality
    - Unhappy with calculations/bad information ..... 12
    - Incomplete audit ..... 13
  - Unfamiliar with FOCUS ..... 14
  - Incentive amount too low ..... 15
  - Problems with contractor ..... 16
  - General negative ..... 17
- Other [SPECIFY, o11_o] ..... 96

_____

_____

- Don't know ..... -97
- Refused ..... -98

**ESTABLISHMENT DATA**

//

Notes:

All respondents answer these questions

Respondents come to this section d0a from r18 (9 Impression of Focus; not familiar with Focus), o10 (11 Program Services: Overall; CFL database and familiar with Focus), or the previous section (12 Lasting Effects of Participation; not CFL database and familiar with Focus)

//

[Create

- if locont =1 or y1cyes=1 or cflqty=1 or er1=1 then
  - <fies>=
  - loc=<locone>
  - locth=this location

- else <fies>=or facilities]

d0a. [IF (cf^=1 AND y1cyes<1) OR (cf=1 AND cfy1c_1=2, -97, or –98) SKIP TO n12]
The final questions I have for you are about the facility <fies> at which your organization <eeia><als> that we've been discussing.

d0b. [IF locont =1 or y1cyes=1 or cflqty=1 or er1=1, SKIP TO d3] <d0btxt> your organization make these energy efficiency improvements at more than one location?

Yes.....1
No .....2
Don't know.....-97
Refused.....-98

[Create

- if d0b=1,-97,-98 then
  - loc=these locations
  - locth=these locations

- if d0b=2 then
  - loc=this location
  - locth=this location]

d3. What is the principal activity of your organization at <loc>

Agricultural: e.g., production crops, livestock, agricultural services..... [SKIP TO d7] 1
Water or wastewater treatment facility..... [SKIP TO d7] 2
**Industrial: manufacturing/industrial process**.....3
Warehouse nonrefrigerated..... [SKIP TO d7] 4
Warehouse refrigerated..... [SKIP TO d7] 5
Education: including preschool, daycare ..... [SKIP TO d7] 6
Food service: e.g., restaurant, bar, fast food, cafeteria..... [SKIP TO d7] 7
Food sales: e.g., grocery store ..... [SKIP TO d7] 8
Enclosed mall..... [SKIP TO d7] 9
Strip mall ..... [SKIP TO d7] 10
Retail excluding enclosed or strip mall: e.g., auto dealership, showroom, store.....
..... [SKIP TO d7] 11
Public order and safety: including courthouse, probation office, jail ..... [SKIP TO d7] 12
Nursing home/Assisted living (Skilled nursing) ..... [SKIP TO d7] 13
Lodging: e.g., hotel/motel/inn/resort, dormitory/fraternity/sorority..... [SKIP TO d7] 14
Lodging: residential ..... [SKIP TO d7] 15
Health care inpatient: e.g., hospital ..... [SKIP TO d7] 16
Health care outpatient: e.g., doctor/dentist office, clinic ..... [SKIP TO d7] 17
Laboratory..... [SKIP TO d7] 18
Religious worship ..... [SKIP TO d7] 19
Public assembly: incl. theater, nightclub, library, museum, gym, bowling alley .....
..... [SKIP TO d7] 20
Service: e.g., auto service/repair, dry cleaner/laundromat, repair shop, post office.....
..... [SKIP TO d7] 21
Office/Professional: including bank, government ..... [SKIP TO d7] 22
Other [SPECIFY d3_o] ..... [SKIP TO d7] 23
Don't know ..... [SKIP TO d7] -97
Refused..... [SKIP TO d7] -98

d4. Briefly describe what is done at <locth>.[ACCEPT MULTIPLE RESPONSES]
//d4_1-d4_7, d4_96-d4_98//

Textile manufacturing.....1
Wood manufacturing.....2
Plastics manufacturing.....3
Food manufacturing.....4
Metal manufacturing .....5
Goods manufacturing.....6
Assembly.....7
Other [SPECIFY d4_o].....96
Don't know.....-97
Refused .....-98

d7. How many full-time employees work for your organization at<locth>?
[RECORD NUMBER OF EMPLOYEES]_____
Don't know .....-97
Refused.....-98

d8. How many part-time employees work for your organization at<locth>?
[RECORD NUMBER OF EMPLOYEES]_____
Don't know .....-97
Refused.....-98

d9. What is the total enclosed square footage of the space your organization occupies at <locth>? Your best estimate is fine.
[RECORD # SQ FT] ..... _____
Don't know .....-97
Refused.....-98

d6. At <locth>, does your organization [READ LIST]
Own all of the space it occupies? .....1
Lease all of the space it occupies?.....2
Or own some and lease some of the space?.....3
Don't know .....-97
Refused.....-98

d16a. [IF locont >1, SKIP TO d16b] Does your organization operate at a single location, at multiple locations, or is it a franchise organization?
Single location ..... [SKIP TO n12] 1
Multiple locations—not including franchise organization ... [SKIP TO d17] 2
Franchise organization ..... [SKIP TO d17] 3
Don't know..... [SKIP TO d17] -97
Refused ..... [SKIP TO d17] -98

d16b. Is your organization a franchise organization?
Yes.....1
No .....2
Don't know .....-97
Refused.....-98

d17. Is your organization headquartered in Wisconsin?
Yes.....1
No .....2
Don't know.....-97
Refused.....-98

**FINAL SECTION**

n12. We may want to call you at a later date to ask you a few additional questions. Would that be OK?

Yes.....1
No .....2
Don't know.....-97
Refused.....-98

**END** **"THANK YOU FOR YOUR TIME AND COOPERATION."**

## *APPENDIX H: AGRICULTURAL SUPPLIER SURVEY*

Interviewer Name: _____

Supplier (Company) Name: _____

Contact Name: _____

Contact Phone Number: _____

Contact Log:

| Call # | Date | Time | Disposition (i.e.: Complete, Left Message) |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

Customer-Project Info:

| COMBID | Customer (Company) Name | Type of Project |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

If Energy Advisor Survey was provided, please review prior to contacting supplier.

Hi, my name is _____ and I'm calling from KEMA Inc. on behalf of the Wisconsin Department of Administration for the Focus on Energy Program. I'd like to ask you a few questions about your company's involvement with the Focus on Energy Program. According to program records Focus on Energy has helped your company supply energy efficiency improvements to farms in Wisconsin. This is not a marketing call. Focus on Energy is required by state law to conduct this type of research. Your responses will be kept confidential. The survey should take about 10 minutes.

[SET UP CALL BACK IF CURRENTLY UNAVAILABLE

_____
_____
_____

Note to interviewer: Only read lists when instructed to do so. Never read "Don't Know" and "Refused." If applicable, review the Energy Advisor Survey for each project prior to administering this survey.]

**INTERACTION WITH FOCUS ON ENERGY**

S1. What type of products and services do you offer your customers? [DO NOT READ LIST. ACCEPT MULTIPLES. If necessary, record verbatim and code following interview, new codes may be needed.]

_____
_____
_____
_____

Lighting ..... 1
Lighting installation ..... 2
Water heating ..... 3
Space heating ..... 4
Refrigeration ..... 5
Efficient motors ..... 6
Variable speed drives on vacuum pumps ..... 7
Heat recovery systems ..... 8
Ventilation fans ..... 9
Fan installation ..... 10
Route sales for supplies (chemicals, filters, buckets, etc.) ..... 11
Equipment repair ..... 12
Equipment preventative maintenance ..... 13
New parlor construction ..... 14
Other ..... 15
(Don't know) ..... -97
(Refused) ..... -98

S2a. How has your company been involved with Focus on Energy? [Contacts were provided by Focus; however if respondent is unaware of Focus or their company's

involvement with Focus then ask to speak with someone familiar with Focus and their company's involvement with Focus. ]

_____

_____

Don't know .....-97
Refused.....-98

S2b. What sources have you used to obtain information on energy efficient technologies?

_____

_____

Don't know .....-97
Refused.....-98

S2c. Have you or anyone at your company received education or training on energy efficient technologies?

Yes.....1
No .....[SKIP TO S3] 2
Don't know ..... [SKIP TO S3] -97
Refused..... [SKIP TO S3] -98

S2d. Where was this training (these classes) held?

_____

_____

Don't know.....-97
Refused .....-98

S3. How long has your company been involved with Focus on Energy?

_____[RECORD NUMBER OF YEARS]

Don't know .....-97
Refused.....-98

S4. Has your company…[READ LIST. ACCEPT MULTIPLE RESPONSES]

Sold products to customers that receive rebates or other financial incentives from Focus to purchase energy-efficient products and services? .....1
Received customer leads from Focus?.....2
Used Focus marketing materials to help promote energy efficiency products and services?.....3
Received technical assistance or training from Focus? .....4
Been introduced to new energy-efficient technologies by Focus?.....5
Received any other assistance from Focus? [RECORD].....6
Don't know .....-97
Refused.....-98

S5a. Aside from information about rebates and other financial incentives, how much has the Focus on Energy program added to or improved the information you provide to your customers about energy-efficient products and services? Would you say that Focus has provided…[READ LIST. ACCEPT ONE RESPONSE]

No new information or improvement? ..... [SKIP TO S6] 1
Little new information or improvement? ..... [SKIP TO S6] 2
Some new information or improvement? ..... 3
Much new information or improvement? ..... 4
Don't know ..... [SKIP TO S6] -97
Refused ..... [SKIP TO S6] -98

S5b. Briefly describe the new or improved information you received from Focus?

_____

_____

Don't know ..... -97
Refused ..... -98

S6. Again excluding financial incentives, how much has Focus on Energy helped you to convince customers to implement energy efficient measures, on a scale of one to five, where one is "not at all helpful" and five is "very helpful"?

Not at all helpful ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
Very helpful ..... 5
Don't know ..... -97
Refused ..... -98

S7. How important has Focus on Energy been in helping to endorse or legitimize the energy-efficient products you sell? Use a scale of one to five, where 5 indicates "very important" and one indicates "not important at all"?

Not important at all ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
Very important ..... 5
Don't know ..... -97
Refused ..... -98

S8. Now thinking ONLY of Focus on Energy customer rebates and other financial incentives, on a scale of one to five where one is "not at all helpful," and five is "very helpful," how helpful have the incentives been at convincing customers to implement energy-efficient measures.

Not at all helpful .....1
2.....2
3.....3
4.....4
Very helpful .....5
Don't know .....-97
Refused.....-98

**WITHOUT FOCUS ON ENERGY**

W1a. If the statewide Focus program or something similar had NOT existed since April 2001, would the services (products) you provide customers be different than they are today?

Yes.....1
No .....[SKIP TO P1] 2
Don't know .....[SKIP TO W2a] -97
Refused.....[SKIP TO W2a] -98

W1b.How would the services you provide be different?

_____

_____

Don't know .....-97
Refused.....-98

W2a. If the statewide Focus program or something similar had NOT existed since April 2001, would your company's sales volume of energy efficient equipment be different than they are today?

Yes.....1
No .....[SKIP TO W3] 2
Don't know ..... [SKIP TO W3] -97
Refused..... [SKIP TO W3] -98

W2b.How would your company's sales volume be different?

_____

_____

Don't know .....-97
Refused.....-98

On a scale of one to five, where one means "strongly disagree" and five means "strongly agree," how strongly do you agree with each of the following statements

W3. Without the existence of the statewide Focus program or something similar, the energy efficiency related services I provide customers would be about the same.

Strongly disagree.....1
2 .....2
3 .....3
4 .....4
Strongly agree .....5
Don't know.....-97
Refused .....-98

W4. Without the existence of the statewide Focus program or something similar, certain energy efficiency projects I do for customers would not be economically feasible.

Strongly disagree.....1
2 .....2
3 .....3
4 .....4
Strongly agree .....5
Don't know.....-97
Refused .....-98

W5. The statewide Focus program helps legitimize energy-efficient products and services.

Strongly disagree.....1
2 .....2
3 .....3
4 .....4
Strongly agree .....5
Don't know.....-97
Refused .....-98

**PROJECT SPECIFIC QUESTIONS**

Now I'm going to ask you a few questions about one of your customers that received help from the Focus on Energy Program sometime between July 1, 2005 and June 30, 2006.

[Surveyors: Most suppliers have multiple projects, so randomly choose one project to interview the supplier about. Mention the name of customer and give project information to help the supplier remember the project. If the supplier does not remember this customer/project then continue with this sequence referring to the type of measures included in this project.]

P1a. Prior to this project had your company worked with this customer?

Yes.....1
No .....[SKIP TO P2a] 2
Don't know .....[SKIP TO P2a] -97
Refused.....[SKIP TO P2a] -98

P1b. How long have you had a working relationship with this customer?

[RECORD NUMBER OF YEARS]_____
Don't know .....-97
Refused .....-98

P1c. Prior to this project had your company installed(sold) energy efficiency improvements to this customer?

Yes .....1
No.....2
Don't know.....-97
Refused .....-98

P2a. Was this customer referred to your company by a Focus Energy Advisor?

Yes.....1
No .....2
Don't know .....-97
Refused.....-98

P2c. How would you characterize your role with this customer?

_____
_____
____
Don't know .....-97
Refused.....-98

P3. About what percent of your business with this customer involves transportation related agricultural products and services?
[RECORD PERCENT]..... _____
(Don't know) .....-97
(Refused) .....-98

P4. If your company had NOT been involved with Focus, how likely is it that you would have offered the same energy efficiency services and/or technologies to the customer.
[READ LIST]
Very likely.....1
Somewhat likely .....2
Not very likely.....3
Very unlikely.....4
Don't know .....-97
Refused.....-98

P5. If your company had NOT been involved with Focus, how likely do you think the customer would have been to accept these energy efficiency measures (i.e., proceed with the project)?
Very likely.....1
Somewhat likely .....2
Not very likely.....3
Very unlikely.....[SKIP TO P12] 4
Don't know .....[SKIP TO P12] -97
Refused.....[SKIP TO P12] -98

P6. Without the existence of Focus, how would the timing of the project have been affected? Would you say that the project would most likely have been undertaken…
[READ LIST]
Same time .....[SKIP TO P8] 1
Earlier.....[SKIP TO P8] 2
Later .....3
Don't know..... [SKIP TO P8] -97
Refused..... [SKIP TO P8] -98

P7. How many months later?
_____[RECORD NUMBER OF MONTHS]
Don't know.....-97
Refused .....-98

P8. Without the existence of Focus, how do you believe the level of efficiency achieved by the project would have been affected? Would the equipment efficiency have been… [READ LIST]

Same.....[SKIP TO P10] 1
Lesser .....2
Greater .....[SKIP TO P10] 3
Don't know.....[SKIP TO P10] -97
Refused.....[SKIP TO P10] -98

P9. High efficiency equipment was installed as part of this project. Without the existence of Focus what type of equipment do you believe this customer would most likely installed… [READ LIST]

As high efficiency as they did install.....1
Standard efficiency .....2
Less efficient than standard .....3
Between standard and the high efficiency they did install.....4
Would not have done anything.....5
Don't know.....-97
Refused .....-98

P10. [ASK ONLY IF QUANTITY IS APPLICABLE TO PROJECT (i.e.: lighting projects)] Without the existence of Focus, would you say that the quantity installed would most likely have been… [READ LIST]

Same.....[SKIP TO P12] 1
Fewer .....2
More .....3
Don't know.....[SKIP TO P12] -97
Refused.....[SKIP TO P12] -98

P11. What percent of the quantity installed would have been installed?

_____[RECORD PERCENT.
IF P10=2 THEN P11 SHOULD BE BETWEEN 0 AND 99.
IF P10=3 THEN P11 SHOULD BE GREATER THAN 100.]
Don't know.....-97
Refused .....-98

P12. [CONFIRMATION QUESTION]
Could you describe in your own words what influence the program had on your decision to offer your customers these specific energy efficiency improvements at the time you did?

_____
_____
_____
_____

Don't know.....-97
Refused.....-98

Those are all the questions I have for you today. Thank you for your time and cooperation.

## *APPENDIX I: GENERAL SUPPLIER SURVEY*

Interviewer Name: _____

Supplier (Company) Name: _____

Contact Name: _____

Contact Phone Number: _____

Contact Log:

| Call # | Date | Time | Disposition (i.e.: Complete, Left Message) |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

Customer-Project Info:

| COMBID | Customer (Company) Name | Type of Project |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

If Energy Advisor Survey was provided, please review prior to contacting supplier.

Hi, my name is _____ and I'm calling from KEMA Inc. on behalf of the Wisconsin Department of Administration for the Focus on Energy Program. I'd like to ask you a few questions about your companies involvement with the Focus on Energy Program. According to program records Focus on Energy has helped your company supply energy efficiency improvements to businesses in Wisconsin. This is not a marketing call. Focus on Energy is required by state law to conduct this type of research. Your responses will be kept confidential. The survey should take about 10 minutes.

[SET UP CALL BACK IF CURRENTLY UNAVAILABLE

_____
_____
_____

Note to interviewer: Only read lists when instructed to do so. Never read "Don't Know" and "Refused." If applicable, review the Energy Advisor Survey for each project prior to administering this survey.]

**INTERACTION WITH FOCUS ON ENERGY**

S1. What type of services do you offer your customers?

_____
_____
_____
_____
_____
_____

Don't know .....-97
Refused.....-98

S2. How has your company been involved with Focus on Energy? [Contacts were provided by Focus; however if respondent is unaware of Focus or their company's involvement with Focus then ask to speak with someone familiar with Focus and their company's involvement with Focus. ]

_____
_____

Don't know .....-97
Refused.....-98

S3. How long has your company been involved with Focus on Energy?

_____[RECORD NUMBER OF YEARS]

Don't know .....-97
Refused.....-98

S4. Has your company…[READ LIST. ACCEPT MULTIPLE RESPONSES]

Sold products to customers that receive rebates or other financial incentives from Focus to purchase energy-efficient products and services? .....1
Received customer leads from Focus?.....2
Used Focus marketing materials to help promote energy efficiency products and services?.....3
Received technical assistance or training from Focus? .....4
Been introduced to new energy-efficient technologies by Focus?.....5
Received any other assistance from Focus? [RECORD].....6
Don't know .....-97
Refused.....-98

S5a. Aside from information about rebates and other financial incentives, how much has the Focus on Energy program added to or improved the information you provide to your customers about energy-efficient products and services? Would you say that Focus has provided…[READ LIST. ACCEPT ONE RESPONSE]

No new information or improvement?.....[SKIP TO S6] 1
Little new information or improvement?.....[SKIP TO S6] 2
Some new information or improvement? .....3
Much new information or improvement?.....4
Don't know ..... [SKIP TO S6] -97
Refused..... [SKIP TO S6] -98

S5b. Briefly describe the new or improved information you received from Focus?

_____

_____

Don't know .....-97
Refused.....-98

S6. Again excluding financial incentives, how much has Focus on Energy helped you to convince customers to implement energy efficient measures, on a scale of one to five, where one is "not at all helpful" and five is "very helpful"?

Not at all helpful .....1
2.....2
3.....3
4.....4
Very helpful .....5
Don't know .....-97
Refused.....-98

S7. How important has Focus on Energy been in helping to endorse or legitimize the energy-efficient products you sell? Use a scale of one to five, where 5 indicates "very important" and one indicates "not important at all"?

Not important at all ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
Very important ..... 5
Don't know ..... -97
Refused ..... -98

S8. Now thinking ONLY of Focus on Energy customer rebates and other financial incentives, on a scale of one to five where one is "not at all helpful," and five is "very helpful," how helpful have the incentives been at convincing customers to implement energy-efficient measures.

Not at all helpful ..... 1
2 ..... 2
3 ..... 3
4 ..... 4
Very helpful ..... 5
Don't know ..... -97
Refused ..... -98

**WITHOUT FOCUS ON ENERGY**

W1a. If the statewide Focus program or something similar had NOT existed since April 2001, would the services (products) you provide customers be different than they are today?

Yes ..... 1
No ..... [SKIP TO P1] 2
Don't know ..... [SKIP TO W2a] -97
Refused ..... [SKIP TO W2a] -98

W1b. How would the services you provide be different?

_____

_____

Don't know ..... -97
Refused ..... -98

W2a. If the statewide Focus program or something similar had NOT existed since April 2001, would your company's sales volume of energy efficient equipment be different than they are today?

Yes ..... 1
No ..... [SKIP TO W3] 2
Don't know ..... [SKIP TO W3] -97
Refused ..... [SKIP TO W3] -98

W2b. How would your company's sales volume be different?

_____

_____

Don't know .....-97
Refused.....-98

On a scale of one to five, where one means "strongly disagree" and five means "strongly agree," how strongly do you agree with each of the following statements

W3. Without the existence of the statewide Focus program or something similar, the energy efficiency related services I provide customers would be about the same.

Strongly disagree.....1
2 .....2
3 .....3
4 .....4
Strongly agree .....5
Don't know.....-97
Refused .....-98

W4. Without the existence of the statewide Focus program or something similar, certain energy efficiency projects I do for customers would not be economically feasible.

Strongly disagree.....1
2 .....2
3 .....3
4 .....4
Strongly agree .....5
Don't know.....-97
Refused .....-98

W5. The statewide Focus program helps legitimize energy-efficient products and services.

Strongly disagree.....1
2 .....2
3 .....3
4 .....4
Strongly agree .....5
Don't know.....-97
Refused .....-98

**PROJECT SPECIFIC QUESTIONS**

Now I'm going to ask you a few questions about one of your customers that received help from the Focus on Energy Program sometime between July 1, 2005 and June 30, 2006.

[Mention name of customer and project information that will help the supplier remember the project. If the supplier does not remember this customer/project then continue with this sequence referring to the type of measures included in this project.

If more than one customer/project then indicate when responses are different.]

P1. Prior to this project had your company worked with this customer?

Yes.....1
No .....[SKIP TO P3] 2
Don't know ..... [SKIP TO P3] -97
Refused..... [SKIP TO P3] -98

P2. Prior to this project had your company installed (sold) energy efficiency improvements to this customer?

Yes .....1
No.....2
Don't know.....-97
Refused .....-98

P3. Was this customer referred to your company by a Focus Energy Advisor?

Yes.....1
No .....2
Don't know .....-97
Refused.....-98

P4. If your company had NOT been involved with Focus, how likely is it that you would have offered the same energy efficiency services and/or technologies to the customer. [READ LIST]

Very likely.....1
Somewhat likely .....2
Not very likely.....3
Very unlikely.....4
Don't know .....-97
Refused.....-98

P5. If your company had NOT been involved with Focus, how likely do you think the customer would have been to accept these energy efficiency measures (i.e., proceed with the project)?

Very likely.....1
Somewhat likely.....2
Not very likely.....3
Very unlikely.....[SKIP TO P12] 4
Don't know.....[SKIP TO P12] -97
Refused.....[SKIP TO P12] -98

P6. Without the existence of Focus, how would the timing of the project have been affected? Would you say that the project would most likely have been undertaken… [READ LIST]

Same time.....[SKIP TO P8] 1
Earlier.....[SKIP TO P8] 2
Later.....3
Don't know..... [SKIP TO P8] -97
Refused..... [SKIP TO P8] -98

P7. How many months later?

_____[RECORD NUMBER OF MONTHS]
Don't know.....-97
Refused.....-98

P8. Without the existence of Focus, how do you believe the level of efficiency achieved by the project would have been affected? Would the equipment efficiency have been… [READ LIST]

Same.....[SKIP TO P10] 1
Lesser.....2
Greater.....[SKIP TO P10] 3
Don't know.....[SKIP TO P10] -97
Refused.....[SKIP TO P10] -98

P9. High efficiency equipment was installed as part of this project. Without the existence of Focus what type of equipment do you believe this customer would most likely installed… [READ LIST]

As high efficiency as they did install.....1
Standard efficiency.....2
Less efficient than standard.....3
Between standard and the high efficiency they did install.....4
Would not have done anything.....5
Don't know.....-97
Refused.....-98

P10. [ASK ONLY IF QUANTITY IS APPLICABLE TO PROJECT (i.e.: lighting projects)] Without the existence of Focus, would you say that the quantity installed would most likely have been… [READ LIST]

Same.....[SKIP TO P12] 1
Fewer .....2
More .....3
Don't know.....[SKIP TO P12] -97
Refused.....[SKIP TO P12] -98

P11. What percent of the quantity installed would have been installed?

_____[RECORD PERCENT.
IF P10=2 THEN P11 SHOULD BE BETWEEN 0 AND 99.
IF P10=3 THEN P11 SHOULD BE GREATER THAN 100.]
Don't know.....-97
Refused .....-98

P12. [CONFIRMATION QUESTION]
Could you describe in your own words what influence the program had on your decision to offer your customers these specific energy efficiency improvements at the time you did?

_____
_____
_____
_____
Don't know.....-97
Refused.....-98

Those are all the questions I have for you today. Thank you for your time and cooperation.