IMPACT AND PROCESS EVALUATION OF 2011 (PY4) AMEREN ILLINOIS COMPANY WARM NEIGHBORS COOL FRIENDS (MODERATE INCOME) PROGRAM

Final

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1. **EXECUTIVE SUMMARY**

This report presents results from the evaluation of the first program year of the Ameren Illinois Company’s (AIC) Act On Energy Moderate Income Program or “Warm Neighbors Cool Friends” (WNCF) program for Program Year (PY) 4 (June 2011 to May 2012). The WNCF program began in PY3 as a pilot program. During PY4, AIC launched WNCF as a formal program, as part of the Home Energy Performance (HEP) program, and expanded the geographic areas where services were offered. More specifically, the program expanded from the Decatur area to the Peoria tri-county area, St. Louis Metro East area, and the Quincy-Macomb area.

The expected savings from this program were 0.4% of the overall PY4 portfolio of electric savings and 3% of PY4 portfolio therm savings. To support the evaluation, we conducted the following research: a review of program materials and program tracking data, and interviews with program administrators, implementation staff, trade allies, and AIC staff. Our quantitative research efforts included participant surveys with a census of program participants.

### Impact Results

The team performed an impact assessment for the WNCF program. Overall, the WNCF program achieved 255 MWh, 0.2 MW, and 108,409 therms in PY4 (see Table 1). Based on the program design and discussions with both AIC and ICC staff, the evaluation team applied a Net-To-Gross Ratio (NTGR) of 1. This is due to the fact that the program is only provided to qualified participants who fall within 200% and 300% of the federal poverty level guidelines for household size and otherwise need grant funds to cover the costs of the measures. As such, the program participants are unlikely to have installed many of the measures offered through the program without assistance. As a result, ex post gross impacts and ex post net impacts are identical.

Ex post net savings were higher than ex ante net savings estimates because the net-to-gross ratios applied for planning purposes derived from the values as outlined by the Illinois Commerce Commission in the Order for docket 10-0568 are lower than the EMV NTGR of 1.0.

<table>
<thead>
<tr>
<th>Program</th>
<th>Ex Ante Net Impacts</th>
<th>Ex Post Net Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MW a</td>
<td>MWh</td>
</tr>
<tr>
<td>Moderate Income</td>
<td>–</td>
<td>288</td>
</tr>
<tr>
<td>Net Realization Rate</td>
<td>n/a</td>
<td>0.99</td>
</tr>
</tbody>
</table>

*a Conservation Services Group (CSG), the implementer, is not required to track demand savings.

Note: Net Realization Rate = Ex Post Value / Ex Ante Value.

### Process Results

The process evaluation findings are summarized below:

- **Participants are very satisfied with the Program.** Responses from surveyed participants indicate a high degree of satisfaction with various components of the program, including the professionalism and services offered by Energy Advisors, as well as other program components (i.e., on-site consultation reports, time it took to schedule, measures installed, etc.). However, opportunities exist to improve satisfaction with the work conducted as well...
Executive Summary

as the amount of time taken to schedule a consultation from receipt of application.

- **There were early challenges in recruiting participants across geographic areas.** The program encountered some early challenges regarding program participation and uptake across the four geographic areas served. We note, however, that program rollout to each area was staggered over the program year, and not all areas had 12 months to recruit participants.
2. **Introduction**

This report presents results from the evaluation of the first program year of the AIC’s Act On Energy Moderate Income or WNCF Program for PY 4 (June 2011 to May 2012). The WNCF program began in PY3 as a pilot program. During PY4, the pilot became a formal program as part of the HEP program and staff began offering services beyond the Decatur area and into the Peoria tri-county area, St. Louis Metro East area, and the Quincy-Macomb area.

The WNCF program is similar to the Home Energy Performance (HEP) program and is a home diagnostic and whole-house retrofit program but focuses on serving AIC customers who do not qualify for low-income weatherization assistance, but cannot afford to pay market prices for energy efficiency retrofit improvements to their homes. The target market is existing homes heated by a fuel source (electricity or natural gas) provided by AIC and owned by customers with a household income between 200% and 300% of the federal poverty level guidelines for household size.

Implemented by Conservation Services Group (CSG), the program performs no-cost energy audits for targeted customers, who are referred to CSG by the Energy Assistance Foundation (EAF), a nonprofit organization funded through donations by AIC employees and customers. The EAF is also a key contributor of program funds. In particular, the program requires customers to pay a small portion of the overall project cost (the greater of $500 or 10% of the total project cost, in addition to any amount not covered by program incentives). EAF grants then fund up to $3,000 to cover the remainder of the project cost after program incentives are applied.

The involvement of the EAF in participant intake and outreach is also of note in that it differentiates the WNCF Program from other home performance offerings. In particular, customers who are interested in participating in the Program submit their application to the foundation which screens the customers for income eligibility. If the customers are eligible, EAF then passes on this information to CSG to schedule an appointment.

Once a participant enters the program, several measures are installed at the time of the on-site consultation. These measures include CFLs and/or water conservation savings measures. Homeowners then receive a custom report with a work order of recommended energy efficiency improvements that they are encouraged to install by contracting with CSG in addition to actions they can perform themselves. CSG then subcontracts the work to be performed to selected HEP and HVAC allies.

Based upon the survey responses of participants, we are able to characterize the participant population. We found that almost all respondents live in single-family detached homes (99%) and that the number of occupants within a household ranges from one to six individuals. Over 80% of the homes receiving services have gas water heaters, and 34% use electric space heaters. Over three quarters of the respondents have some college degree or higher (76%), and one-third (33%) are 60 years or older.
3. **Evaluation Methods**

3.1 **Data Sources and Analytical Methods**

The assessment of the PY4 AIC Moderate Income (WNCF) program included both process and impact analyses. The PY4 program evaluation engaged in the following tasks to develop impact findings and process recommendations.

<table>
<thead>
<tr>
<th>Task</th>
<th>PY4 Impact</th>
<th>PY4 Process</th>
<th>Forward Looking</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Material Review</td>
<td>√</td>
<td>√</td>
<td></td>
<td>Assess program implementation effectiveness and provide recommendations for improvement</td>
</tr>
<tr>
<td>Program Staff In-Depth Interviews</td>
<td></td>
<td>√</td>
<td></td>
<td>Understand program design, implementation, and evaluation priorities</td>
</tr>
<tr>
<td>Market Actor / Program Ally Interviews</td>
<td></td>
<td>√</td>
<td></td>
<td>Review program implementation successes and challenges, in addition to understanding barriers to participation for both contractors and participants</td>
</tr>
<tr>
<td>Participant Survey</td>
<td>√</td>
<td>√</td>
<td></td>
<td>Information regarding program awareness, satisfaction, and participant verification.</td>
</tr>
</tbody>
</table>

3.1.1 **Process Analysis**

Process evaluation efforts included a review of program materials, in-depth interviews with program staff and implementation contractors, trade ally interviews, and a quantitative participant survey.

The evaluation team conducted a quantitative telephone survey of program participants and interviews with the AIC Residential Administrator, the EAF, and participating trade allies. These efforts focused on the efficacy of program processes, gathered feedback regarding program incentive levels, and assessed participant satisfaction and other relevant process issues. We attempted a census of participants for the participant survey, which was designed to verify the installation of energy savings measures installed as part of the program.

**Program Manager and Implementer Interviews**

The evaluation team conducted an interview with the WNCF AIC program manager and an interview with the CSG Program Manager in PY4 to understand the program’s design, implementation, and evaluation priorities.

**Market Actor Interviews**

The evaluation team conducted five in-depth telephone interviews with the WNCF staff and program allies in PY4. For the Moderate Income Program, these program allies include CSG auditors in the field (n=2), the EAF program coordinator (n=1), and program allies (n=2).
selected market actors based upon feedback from program implementation staff. These interviews reviewed program implementation successes and challenges, in addition to understanding barriers to participation for both contractors and participants.

The evaluation team developed a program implementation and application model based upon our understanding of the program intervention and delivery. The models are provided in Appendix A.

**Telephone Surveys**

The evaluation team implemented Computer-Assisted Telephone Interviewing (CATI) telephone surveys with the WNCF Program participants. The survey was fielded in late August through early September, 2012 and used to gather data to support the estimation of the installation of measures, and collect other information useful for the process evaluation.

3.1.2 **IMPACT ANALYSIS**

The impact analysis used data from the quantitative telephone surveys and program databases to support gross impact analysis. Below we outline the impact evaluation approaches for the WNCF program.

**Gross Impacts**

The program-tracking database provides ex ante gross savings at the participant and measure level. The evaluation team took two steps to calculate ex post gross savings for the HEP and ESHP programs.

The first step was to assess whether the program-tracking database used the per-unit electric and gas savings values based upon the Illinois Commerce Commission Order for Docket 10-0568. The program database does not provide per-unit fixed electric and gas savings values by measure, rather they provide a total savings value across all quantities installed. In order to compare these values, we divided the total savings in the database by the quantity to arrive at per-unit values. This exercise allowed us to determine whether the program tracking database was using per-unit electric and gas savings values consistent with the Order for Docket 10-0568. For the two measures in which the per-unit savings were inconsistent, the approved value was assigned. (See Appendix C for a measure-level comparison of per-unit values.) Additionally, for insulation and air sealing, the program-tracking database does not contain measures by heating fuel type and presence of air conditioning. However, the per-unit savings values are based on this differentiation. We used other information in the database to determine heating fuel type and presence of air conditioning and appropriately assign the per-unit value.

The second step was to verify participation. The participant survey that we fielded incorporated a measure verification battery with the understanding that the Technical Reference Manual may not be completed in time to support impact analysis for these programs. Ultimately, we did not apply the survey-derived verification rates for the Instant Savings Measures and instead used the in-service rates from the Statewide TRM (a synonymous value with a different name). For shell measures, we used survey data to verify installation. The result of the verification effort identified

1 This occurred for faucet aerators and programmable thermostats. In each case, the value assigned by the evaluation team was higher savings.
few (4) survey respondents who indicated that they had not had installed shell measures. For these respondents, we verified installation by requesting documentation of installation of these measures for these participants from AIC.

Table 3 provides the in-service rates applied for Instant Savings Measures (ISMs) based on the State of Illinois Energy Efficiency Technical Reference Manual.²

<table>
<thead>
<tr>
<th>Measure</th>
<th>In-Service Rate</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFLs (15W, 20W and 23W)</td>
<td>0.97</td>
<td>In-Service Rate for Direct Install, pp. 428</td>
</tr>
<tr>
<td>Faucet Aerators</td>
<td>0.95</td>
<td>In-Service Rate for Direct Install, pp. 408</td>
</tr>
<tr>
<td>Showerheads</td>
<td>0.98</td>
<td>In-Service Rate for Direct Install, pp. 414</td>
</tr>
<tr>
<td>Programmable Thermostats</td>
<td>1.00</td>
<td>In-Service Rate for Direct Install, pp. 387</td>
</tr>
</tbody>
</table>

For the shell measures of insulation and air sealing, we reviewed invoices that included equipment payment and certificates of completion signed by homeowners to verify installation for sampled participants. This review indicated that all our survey respondents had had the measures installed as expected and the verified participation rate for insulation and air sealing was a 1.0.

Using the Order-approved per unit energy savings and the quantity from the program tracking database along with the verified participation results (from the participant survey or TRM), we used Equation 1 to calculate ex post gross savings,

\[ \text{Ex Post Gross Savings} = \text{Per Unit Savings} \times \text{Claimed Quantity Installed} \times \text{Verified Participation Rate} \]

**Equation 1. Ex Post Gross Savings Calculation**

**Demand Impacts**

There were no per-unit electric and gas kW savings values designated in Illinois Commerce Commission Order for Docket 10-0568. As such, the evaluation team calculated demand savings by applying coincidence factors³ to the calculated ex post gross kWh savings. Because CSG is not required to track kW savings in the program-tracking database, ex ante kW savings values are zeroes in the database.

The coincidence factors came from two sources. The PY3 HEP and HVAC program evaluation reports developed by The Cadmus Group contained coincidence factors for DHW, shell, and lighting measures. (As per Cadmus, kW demand savings were calculated by multiplying energy reduction estimates by the appropriate end-use coincidence factor.) For ENERGY STAR appliances that were part of our spillover measures, we calculated the kW using the algorithms in the Statewide TRM.

The coincidence factors are outlined in the table below.

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³ In this case, coincidence factors represent the portion of the kWh savings (across 8,760 hours of the year) that occurs during the typical peak period for AIC. Conferring with AIC indicated that non-holiday weekdays for hours ending 4, 5, and 6 PM in June, July, and August are the appropriate hours to use. We averaged these 198 hours in the 2011 End-use load shapes to obtain the coincidence factors for PY4.
### Net Impacts

The evaluation team applied a net-to-gross ratio of 1.0. The evaluation team discussed and reached agreement with the ICC and AIC staff given our understanding of program design and targeted customers. This is due to the fact that the program is targeted to participants who fall within 200% and 300% of the federal poverty level guidelines for household size. As such, the program participants are unlikely to have installed many of the measures offered through the program without assistance. As a result, ex post gross impacts and ex post net impacts are identical.

### 3.2 Sampling and Survey Completes

#### Telephone Survey

Table 5 presents, for the database population of 275 unique households, the number of households by each measure group and the related MBTU savings. Table 5 also presents the same information for the 250 unique households in the sample frame after eliminating duplicates, participants where no consultations were conducted, and participants with invalid telephone numbers. Finally, Table 5 shows the same information for the 67 completed surveys. Note that we attempted a census of the participant population in PY4 based on the program tracking database extract from August 3, 2012. To ensure that we received a sufficient number of completes by measure type, we prioritized modules in the sample by 1) air heat pump, 2) thermostat, 3) central air conditioners, and 4) furnaces.

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Database Population</th>
<th>Sample Frame</th>
<th>Completed Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Households</td>
<td>MBTU Savings</td>
<td>Households</td>
</tr>
<tr>
<td><strong>CFLs</strong></td>
<td>237</td>
<td>353</td>
<td>230</td>
</tr>
<tr>
<td><strong>Faucet Aerators</strong></td>
<td>185</td>
<td>32</td>
<td>178</td>
</tr>
<tr>
<td><strong>Showerheads</strong></td>
<td>180</td>
<td>336</td>
<td>173</td>
</tr>
<tr>
<td><strong>Air Sealing</strong></td>
<td>173</td>
<td>5,188</td>
<td>167</td>
</tr>
<tr>
<td><strong>Insulation</strong></td>
<td>172</td>
<td>3,308</td>
<td>166</td>
</tr>
<tr>
<td><strong>Furnace</strong></td>
<td>124</td>
<td>2,206</td>
<td>121</td>
</tr>
<tr>
<td><strong>Air Conditioner</strong></td>
<td>45</td>
<td>278</td>
<td>44</td>
</tr>
<tr>
<td><strong>Thermostat</strong></td>
<td>36</td>
<td>264</td>
<td>35</td>
</tr>
</tbody>
</table>

**Table 5: Coincidence Factors Applied for kW Estimates**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Coincidence Factor</th>
<th>Source</th>
</tr>
</thead>
</table>
### Project Type

<table>
<thead>
<tr>
<th>Database Population</th>
<th>Sample Frame</th>
<th>Completed Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Heat Pump</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>Total (Unique Households)</td>
<td>275</td>
<td>12,025</td>
</tr>
</tbody>
</table>

### Survey Response Rates

The survey response rate is the number of completed interviews divided by the total number of potentially eligible respondents in the sample. We calculated the response rate using the standards and formulas set forth by the American Association for Public Opinion Research (AAPOR). We chose to use AAPOR Response Rate 3 (RR3), which includes an estimate of eligibility for these unknown sample units. The formulas used to calculate RR3 are presented below. The definitions of the letters used in the formulas are displayed in the Survey Disposition tables below.

\[
E = \frac{I + R + NC}{I + R + NC + e}
\]

\[
RR3 = \frac{I}{I + R + NC + (E*U)}
\]

We also calculated a cooperation rate, which is the number of completed interviews divided by the total number of eligible sample units actually contacted. In essence, the cooperation rate gives the percentage of participants who completed an interview out of all of the participants with whom we actually spoke. We used AAPOR Cooperation Rate 1 (COOP1), which is calculated as:

\[
COOP1 = \frac{I}{I + R}
\]

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Table 6. WNCF Survey Dispositions

<table>
<thead>
<tr>
<th>Disposition</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed Interviews (I)</td>
<td>67</td>
</tr>
<tr>
<td>Eligible Non-Interviews</td>
<td>69</td>
</tr>
<tr>
<td>Refusals (R)</td>
<td>26</td>
</tr>
<tr>
<td>Mid-Interview terminate (R)</td>
<td>4</td>
</tr>
<tr>
<td>Respondent never available (NC)</td>
<td>39</td>
</tr>
<tr>
<td>Language Problem (NC)</td>
<td>0</td>
</tr>
<tr>
<td>Not Eligible (e)</td>
<td>46</td>
</tr>
<tr>
<td>Fax/Data Line</td>
<td>2</td>
</tr>
<tr>
<td>Non-Working</td>
<td>34</td>
</tr>
<tr>
<td>Wrong Number</td>
<td>5</td>
</tr>
<tr>
<td>Business/Government</td>
<td>5</td>
</tr>
<tr>
<td>Cell Phone</td>
<td>0</td>
</tr>
<tr>
<td>No Eligible Respondent</td>
<td>0</td>
</tr>
<tr>
<td>Duplicate Number</td>
<td>0</td>
</tr>
<tr>
<td>Unknown Eligibility Non-Interview (U)</td>
<td>68</td>
</tr>
<tr>
<td>Not dialed/worked</td>
<td>0</td>
</tr>
<tr>
<td>No Answer</td>
<td>29</td>
</tr>
<tr>
<td>Answering Machine</td>
<td>37</td>
</tr>
<tr>
<td>Busy</td>
<td>1</td>
</tr>
<tr>
<td>Call Blocking</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Participants in Sample</strong></td>
<td>250</td>
</tr>
</tbody>
</table>

The following table provides the response and cooperation rates.

Table 7. WNCF Survey Response and Cooperation Rates

<table>
<thead>
<tr>
<th>AAPOR Rate</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Rate (RR3)</td>
<td>36%</td>
</tr>
<tr>
<td>Cooperation Rate</td>
<td>69%</td>
</tr>
</tbody>
</table>
4. Results and Findings

4.1 Process Findings

4.1.1 Program Modifications

The WNCF Program underwent significant changes in PY4. In PY3, the program was offered as a pilot in the Decatur area. During PY4, the pilot program became a formal program and expanded the geographic areas where services were offered to the Peoria tri-county area, St. Louis Metro East area, and the Quincy-Macomb area, in addition to the Decatur area.

Along with this geographic expansion, program participation and savings goals also increased. To support the transition from a pilot to program, CSG hired additional staff (two project coordinators), leveraged existing HEP staff, and selected additional HEP and HVAC program allies through an RFP process to support the program.

Further, during the course of PY4, the program offerings also changed to support achievement of participation goals. In particular, program changes were made because the grant program could not spend more than an average of $1,650 of EAF grant funds per home and still meet their participation goals and remain within budget, and staff found that the average cost per participant for a retrofit was larger than expected at the start of the program. According to program staff, one reason for this larger than expected cost was that most participating homes required a new furnace. As a result, CSG took steps to revise the measures offered per home, with the following changes:

- In December 2011, the program offered only 14.5 SEER air conditioning units (as opposed to 16 or greater initially) to decrease the cost to each home. The program prioritized all shell measures first, and then sized HVAC equipment to Manual J\(^5\) load calculations to reduce equipment size. Finally, the program removed the cap on air sealing incentives.

- In January 2012, the program eliminated air conditioners from measures covered by EAF grant funds (though participants could still obtain the AC incentive), and increased the furnace incentive from $600 to $800.

- In April 2012, the program was able to reduce the Energy Assistance Foundation (EAF) contribution per home to $2057; but the reduction was not enough to reach the goal of 300 homes (requiring $1650 per home).

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\(^5\) Air Conditioning Contractors of America (ACCA)'s Manual J is the industry standard residential load calculation method, required by most building codes around the country.
4.1.2 PROGRAM IMPLEMENTATION

Program Staff and Allies

The WNCF program provides services to program participants offered by a variety of groups, including CSG Energy Advisors, pre-selected Home Energy Performance (HEP) and HVAC Program trade allies, and Energy Assistance Foundation (EAF) staff who certify income eligibility and contribute program funds for program offerings. Throughout the program year, the WNCF Program continued to expand the number of CSG program staff and program contractors to offer services in distinct geographic areas.

- **CSG Program Staff:** Four CSG “Energy Advisors” conduct on-site consultations as well as marketing and outreach. The WNCF Program has two Project Coordinators who help to schedule and refer contractors to participants, as well as perform all on-site consultations. Energy Advisor staff are utilized for testing assistance.

- **Program Allies:** The WNCF Program pre-selected six contractors from the HEP and HVAC program to retrofit homes. To select contractors, CSG issued RFPs to HEP and HVAC program allies. Selected contractors, as part of their participation in the HEP program, are required to be Building Performance Institute (BPI) certified.

- **Energy Assistance Foundation:** EAF is a contributor to the WNCF Program. EAF provides up to a $3,000 maximum contribution (average of $1,650 per home). EAF funds may be used to cover necessary measures as well as health and safety measure costs not covered by the Program. In addition, EAF receives and screens program applications for income eligibility.

4.1.3 PROGRAM PARTICIPATION

Participating Customers

In PY4, out of a total population of 275 participants, the Program provided measures to 263 participants.\(^6\) Notably, for the WNCF Program, participation is limited to the amount of grant funds available. Aside from cost related constraints, program staff noted that the program was not able to reach their goal of 300 participants due to two primary factors: 1) many homes were disqualified due to deficiencies in housing stock, and 2) lack of sufficient income qualified participants in the target geographic areas. Program staff took steps to resolve these two issues by incorporating quality assurance (QA) site visits in advance of conducting consultations, and hiring an additional project coordinator in September 2011.

Program participants install a variety of measures through the Program. Table 8 provides an overview of households that received measures and the total number of measures received. As expected, the majority of participants received ISMs, while fewer participants received a variety of retrofit measures.

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\(^6\) Note that 12 customers received audits but did not receive direct install measures or incentivized measures.
Table 8: Overview of PY4 Participation by Measure Category

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Database Population</th>
<th>% of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Households</td>
<td>Measures</td>
</tr>
<tr>
<td>CFLs</td>
<td>237</td>
<td>2,259</td>
</tr>
<tr>
<td>Faucet Aerators</td>
<td>185</td>
<td>273</td>
</tr>
<tr>
<td>Showerheads</td>
<td>180</td>
<td>215</td>
</tr>
<tr>
<td>Air Sealing</td>
<td>173</td>
<td>527,673 (CFM)</td>
</tr>
<tr>
<td>Insulation</td>
<td>172</td>
<td>492,213 (SF)</td>
</tr>
<tr>
<td>Furnace</td>
<td>124</td>
<td>129</td>
</tr>
<tr>
<td>Air Conditioner</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Thermostat</td>
<td>36</td>
<td>67</td>
</tr>
<tr>
<td>Air Heat Pump</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Participation by Geographic Area

As noted above, the WNCF Program expanded from the Decatur region, to Metro-East, Peoria, and Macomb-Quincy areas. In PY4, program staff noted that the largest success of PY4 was the program’s expansion to new areas. This geographic expansion began in August 2011 and delivery was staggered into each area over the program year. Table 9 summarizes participation by geographic area. For example, Peoria tended to have higher program uptake, while Decatur and Macomb-Quincy had trouble attracting participants.

Table 9: Participation by Geographic Area

<table>
<thead>
<tr>
<th>Area</th>
<th>Consultation &amp; Retrofit</th>
<th>Consultation only</th>
<th>Retrofit only</th>
<th>Total</th>
<th>Launch Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decatur</td>
<td>2</td>
<td>8</td>
<td>1</td>
<td>11</td>
<td>PY3</td>
</tr>
<tr>
<td>East Saint Louis</td>
<td>36</td>
<td>40</td>
<td>0</td>
<td>76</td>
<td>September, 2011</td>
</tr>
<tr>
<td>Macomb-Quincy</td>
<td>20</td>
<td>16</td>
<td>1</td>
<td>37</td>
<td>October, 2011</td>
</tr>
<tr>
<td>Peoria</td>
<td>114</td>
<td>22</td>
<td>3</td>
<td>139</td>
<td>August, 2011</td>
</tr>
<tr>
<td>Total</td>
<td>172</td>
<td>86</td>
<td>5</td>
<td>263</td>
<td></td>
</tr>
</tbody>
</table>

Levels of Participation and Conversion Rates

The participation experience varies somewhat across participants. The majority of participants (65%) received an on-site consultation where they received Instant Savings Measures (ISMs) and installed retrofit measures through a participating contractor. Thirty-three percent of participants received an on-site consultation and ISMs, but no retrofit measures were installed (see Table 10).

Table 10. Overview of Participation by Services Received

<table>
<thead>
<tr>
<th>Participant Type</th>
<th>Number of Participants</th>
<th>% of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation &amp; Retrofit</td>
<td>172</td>
<td>65%</td>
</tr>
<tr>
<td>Consultation Only (receives ISMs)</td>
<td>86</td>
<td>33%</td>
</tr>
<tr>
<td>Other*</td>
<td>5</td>
<td>2%</td>
</tr>
<tr>
<td>Total**</td>
<td>263</td>
<td>100%</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Participant Type</th>
<th>Number of Participants</th>
<th>% of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>*According to program staff, there were no Retrofit Only participants, all participants receive a consultation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Note that there were 275 participants overall, but these additional 12 participants received no measures.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Program staff noted that a certain percentage of on-site consultation participants do not proceed with the follow-up retrofit measures for various reasons, mostly due to disqualifying deficiencies in the existing home structure (vermiculite, combustion safety issues, gas leaks, knob and tube wiring, broken windows, etc). The disqualification of homes tended to be concentrated within certain regions that were targeted, specifically the Metro St. Louis area.

Table 11 provides an overview of conversions from on-site consultation only to on-site consultation and retrofit customers by geographic area. Notably, Decatur and East Saint Louis areas have the lowest conversion rates. The Decatur rate may improve when more projects come in, and the East Saint Louis rate is consistent with program staff interviews that indicate a high degree of disqualified homes.

### Table 11. Conversion Rate by Geographic Area

<table>
<thead>
<tr>
<th>Geographic Area</th>
<th>Conversion Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decatur</td>
<td>20%</td>
</tr>
<tr>
<td>East Saint Louis</td>
<td>47%</td>
</tr>
<tr>
<td>Macomb-Quincy</td>
<td>56%</td>
</tr>
<tr>
<td>Peoria</td>
<td>84%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>67%</strong></td>
</tr>
</tbody>
</table>

Note: Conversion Rate = Number of consultation and retrofit participants / the total number of participants who received a consultation (either consultation only or consultation and retrofit).

Survey respondents who had completed an on-site consultation but not a retrofit were asked what their reasons were for not completing energy retrofits through the program. Respondents provided a variety of reasons, including not requiring additional improvements, project cost, and homes disqualified due to needed repairs or improvements.

---

7 Disqualifying factors make participating homes either unsafe to work in (i.e., vermiculite and combustion safety/gas leaks). Additionally, broken windows would disqualify a home from shell measures, as any impact shell measures would provide would be limited prior to installing windows.
Table 12. Reasons for Not Completing Home Energy Upgrades

<table>
<thead>
<tr>
<th>Reasons for not completing energy upgrades (n=10)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>My home does not require any energy improvements</td>
<td>4</td>
</tr>
<tr>
<td>Project cost</td>
<td>3</td>
</tr>
<tr>
<td>My home needs repairs or improvements before I can get upgrades through the program</td>
<td>2</td>
</tr>
<tr>
<td>Not aware of program</td>
<td>1</td>
</tr>
<tr>
<td>Other: Never received a completed work order</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

To increase the number of homes that received retrofits from applications and audits, program implementers enlisted Quality Assurance inspectors to help conduct testing on a limited basis for homes in advance of their participation. This was an important step given that the program application process does allow potential participants to document any structural repairs that may need to be made to their home (i.e., knob and tube wiring, asbestos, etc.). In addition, program staff is working to better target existing housing stock to ensure that program participants can receive retrofits and are not disqualified due to ineligible homes. As part of this effort, program staff indicated that they plan to market to a different region in the Metro East St. Louis territory to identify eligible housing stock in PY5.

4.1.4 **MARKETING AND OUTREACH**

According to program staff, the WNCF Program is primarily promoted to targeted participants through the following activities:

- Word of mouth from program participants to friends, family, and colleagues
- Outreach to organizations that serve participants (i.e., churches, senior centers, community programs)
- General direct mail to AIC customers based on median income by census block
- Utility bill inserts

Consistent with the marketing strategy, overall, our survey results show that 45% of respondents heard about the program through a friend, relative, or colleague followed by a direct mail letter. Responses to these questions were open-ended.
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Figure 2. Participants Heard about WNCF Program (Multiple Responses)

As part of the survey, we also asked respondents to share some of the best ways for AIC to inform their customers about the WNCF program. Overall, respondents indicated that AIC letters, bill inserts, and emails were the best way to increase awareness of the Program (see Figure 3).

Figure 3. Best Ways for AIC to Inform You About the Program (Multiple Response)

Consistent with findings regarding participation, marketing and outreach efforts had different levels of effectiveness across different geographic areas. According to program staff, Peoria participation was substantial and met expectations. However, participation in East Saint Louis and Quincy failed to meet expectations.

While we acknowledge that moderate income populations are difficult to identify and recruit to
programs, further research should be considered to understand barriers with non-participants.

There are various approaches AIC and CSG could consider to increase program participation. However, based upon discussions with AIC, there are no plans to grow the number of participants per year. As such, the evaluation team does not make any recommendations for this area.

4.1.5 PROGRAM SATISFACTION

Overall, satisfaction with the program is high. Table 13 provides an overview of respondent satisfaction with various program components. Based upon their responses, 85% of respondents were satisfied with the program overall (providing a score of 8 to 10 from a scale of 0 to 10, where 0 is dissatisfied and 10 is satisfied). Respondents were most satisfied with the explanation they received regarding the program participation process (mean score of 9.2) and the time it took to complete the on-site consultation (mean score of 9.2). Notably, program participants were less satisfied with the amount of time it took from completing an application to receiving an audit. This is not surprising given that there was a backlog in program applications².

² According to AIC program staff, the back log will continue to exist due to limited funding.
Table 13. Satisfaction with Program Components

<table>
<thead>
<tr>
<th>Program Components</th>
<th>Don't Know</th>
<th>0 to 4 (Dissatisfied)</th>
<th>5 to 7 (Neutral)</th>
<th>8 to 10 (Satisfied)</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program overall (n=67)</td>
<td>1%</td>
<td>3%</td>
<td>10%</td>
<td>85%</td>
<td>8.9</td>
</tr>
<tr>
<td>The explanation you received about the program’s participation process (n=67)</td>
<td>1%</td>
<td>1%</td>
<td>4%</td>
<td>93%</td>
<td>9.2</td>
</tr>
<tr>
<td>The time it took to complete the consultation (n=67)</td>
<td>0%</td>
<td>3%</td>
<td>6%</td>
<td>91%</td>
<td>9.2</td>
</tr>
<tr>
<td>The consultation report in helping you understand your home's energy usage (n=67)</td>
<td>3%</td>
<td>1%</td>
<td>10%</td>
<td>85%</td>
<td>9.1</td>
</tr>
<tr>
<td>The quality of the work completed at your home (n=54)</td>
<td>0%</td>
<td>2%</td>
<td>11%</td>
<td>87%</td>
<td>9.1</td>
</tr>
<tr>
<td>The consultation report in helping you understand where energy improvement could be made in your home (n=67)</td>
<td>3%</td>
<td>3%</td>
<td>9%</td>
<td>85%</td>
<td>8.9</td>
</tr>
<tr>
<td>The amount of time it took between when you completed an application and when the consultation was done (n=67)</td>
<td>0%</td>
<td>7%</td>
<td>10%</td>
<td>82%</td>
<td>8.8</td>
</tr>
</tbody>
</table>

As part of the telephone surveys conducted with program participants, the evaluation team also asked respondents about their satisfaction with the measures installed through the Program (see Figure 4). Overall, each measure offered received a mean satisfaction score greater than 8, based on a scale from 0 to 10 where 0 to 4 is dissatisfied and 8 to 10 is satisfied. All of the respondents were satisfied with central AC units with a mean score of 9.8. Respondents were least satisfied with programmable thermostats, showerheads, and faucet aerators, respectively.⁹

⁹ Note that to reduce the burden on survey respondents, we removed shell measure satisfaction. However, questions regarding additional benefits can inform findings regarding the positive effects of these upgrades.
There were a variety of reasons why respondents indicate that they were dissatisfied with certain measures. These included a different preference for bulbs (i.e., wanted “daylight bulbs”), while others indicated that the faucet aerators and showerheads were not an improvement or did not provide sufficient amounts of water. Additionally, a few participants noted that their faucet aerators were broken or broke during installation.\footnote{According to AIC program staff, AIC replaced these measures.}

We also assessed the level of satisfaction with those program staff members in direct contact with participating customers. Table 14 provides an overview of respondent satisfaction with the project coordinators and installers. Over 81\% of respondents were satisfied with both types of staff, indicating a score of 8 or higher from a scale of 0 to 10 where 0 to 4 is dissatisfied and 8 to 10 is satisfied. Respondents were most satisfied with the Project Coordinator professionalism (mean score of 9.6) and quality of work, followed the professionalism of the installer (mean score of 8.7).\footnote{Note that we did not ask program participants to provide their satisfaction scores for EAF staff, as program participants may not easily recognize this entity based upon their experience with the program.}

### Table 14. Satisfaction with Program Staff

<table>
<thead>
<tr>
<th>Program Components</th>
<th>Don’t Know</th>
<th>0 to 4 (Dissatisfied)</th>
<th>5 to 7 (Neutral)</th>
<th>8 to 10 (Satisfied)</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>The professionalism of the Project Coordinator (n=67)</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>99%</td>
<td>9.6</td>
</tr>
<tr>
<td>The quality of work performed by the Project Coordinator (n=67)</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>96%</td>
<td>9.4</td>
</tr>
</tbody>
</table>
Program Ally Satisfaction

Program allies communicated that they were satisfied with the program overall, and rated communication with program staff highly. However, program allies indicated that there was room for improvement in terms of the measure offerings and the program marketing approach.

One respondent remarked that while the incentives were useful, they had hoped for more incentives for furnaces. Furnaces are difficult to install, especially in older houses, which can increase cost and eat into their profit margin. Interviews with program allies also indicate that they had generally done very few projects through the program within the last six months, and did not expect this to change. Because few projects had been conducted, program ally respondents noted that the program does not provide the profit margins that they normally seek for other projects. One program ally noted that they had completed more jobs through the program when the program had offered incentives on both a furnace and air conditioning units.

Program allies offered the following opportunities for improvement, should additional funds become available. We have incorporated these findings for completeness, but understand that AIC should consider employing the following program ally suggestions as they see fit.

- **Incorporate additional measures.** Moderate income houses are often in need of many different measures, but cannot afford them. For example, most houses in which the contractor installs a new furnace could also use a new air conditioner, or may need extensive weatherization. However, the customer does not have a sufficient credit score to take out a loan to pay for all of the additional important measures.

- **Include comfort measures.** Many houses could greatly benefit from less expensive measures like a humidifier, or a better air filter, though they do not have the disposable income to obtain these themselves. The evaluation team notes that these additional measures may actually increase the energy usage of the home, rather than decrease.

- **Hire more auditors.** According to program allies, one auditor team covers a large area, and if the auditor is not in the respondent’s area, then the respondent gets fewer referrals. Program allies noted that the current auditing team is doing an excellent job, but are spread too thin to take advantage of all of the interest in the market. The evaluation team notes that CSG has hired many program staff during the program cycle.

- **Provide faster payments.** According to program allies, it typically takes 45-60 days or longer to receive payment from AIC for a project. One reason for this is that the contractor must wait until any other contractors who are also working on a particular house have submitted their paperwork to AIC before payment goes out. According to AIC staff, the delay is because the program performs 100% QA/test out verification on the project before payment.

Program Benefits and Barriers

Table 15 provides survey respondents’ reasons for participating in the program. The most
frequently mentioned reasons are: 1) saving money on their energy bill (33%), 2) making their home more comfortable (30%), and 3) the fact that the projects were inexpensive (19%).

### Table 15: Respondent Reasons for Participating in Program (Multiple Response)

<table>
<thead>
<tr>
<th>Reason Provided</th>
<th>% of Respondents (n=67)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save money on energy/electric/gas bill</td>
<td>33%</td>
</tr>
<tr>
<td>Make your home more comfortable</td>
<td>30%</td>
</tr>
<tr>
<td>It was inexpensive</td>
<td>19%</td>
</tr>
<tr>
<td>Needed help/financial assistance to get measures/improvements</td>
<td>16%</td>
</tr>
<tr>
<td>Reduce energy consumption</td>
<td>12%</td>
</tr>
<tr>
<td>Opportunity to make home improvements</td>
<td>6%</td>
</tr>
<tr>
<td>Improve the environment: cleaner air, etc.</td>
<td>6%</td>
</tr>
<tr>
<td>The available incentives/ grants</td>
<td>4%</td>
</tr>
<tr>
<td>Qualified for program</td>
<td>4%</td>
</tr>
<tr>
<td>commended/positive experience with similar program(s)</td>
<td>4%</td>
</tr>
<tr>
<td>Increase the value of your home</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
</tbody>
</table>

The survey also asked respondents to assess the impact of the program on their home by a change in utility bill, air quality, and interior temperature. Overall, the majority of respondents indicated that their utility bill was lower than before (67%) and their interior temperature was more comfortable than before (81%). In terms of air quality, 48% of respondents indicated that the air quality of the home was better than before (see Figure 5).
The evaluation team also asked survey respondents to consider barriers to potential WNCF participants. Overall, 24% of the respondents noted that a barrier is lack of awareness of the program (24%), inability to afford the program (12%), and eligibility due to income level or qualification of housing stock (9% and 4%, respectively).

Table 16. Perceived Barriers to Customers for Participating in the Program

<table>
<thead>
<tr>
<th>Perceived Barriers</th>
<th>% of Respondents (n=67)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>34%</td>
</tr>
<tr>
<td>Not aware of the program</td>
<td>24%</td>
</tr>
<tr>
<td>Can’t afford it</td>
<td>12%</td>
</tr>
<tr>
<td>Ineligible for program income level</td>
<td>9%</td>
</tr>
<tr>
<td>Ineligible for program/house does not qualify</td>
<td>4%</td>
</tr>
<tr>
<td>Concerned that program is ‘a scam’</td>
<td>4%</td>
</tr>
<tr>
<td>Application process is burdensome</td>
<td>3%</td>
</tr>
<tr>
<td>Concerns about contractor professionalism</td>
<td>1%</td>
</tr>
<tr>
<td>Not enough follow through</td>
<td>1%</td>
</tr>
<tr>
<td>Not receiving all measures offered</td>
<td>1%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

According to program staff, there are a number of challenges for attracting potential participants. One is that the target participant does not qualify for low-income programs or government assistance or does not seek out a program that serves their income range. Another challenge is...
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that potential participants think that the program is “too good to be true.” This is supported somewhat by survey respondents (n=3) who felt that potential participants would be concerned that the program is a “scam.”

Respondents were also asked to identify the benefits of participating in the program (see Table 17). Primary benefits fell into four main areas: 1) improved comfort/performance of systems in home, 2) lower utility bills, 3) measures/improvements installed, and 4) the grants, rebates, or incentives provided. A review of HEP and MI marketing collateral indicates that marketing collateral aligns with the perceived benefits that respondents indicated through the survey.

Table 17. Primary Benefits to Participating in Program (Multiple Response)

<table>
<thead>
<tr>
<th>Benefits</th>
<th>% of Respondents (n=67)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>7%</td>
</tr>
<tr>
<td>Improved comfort/performance of systems in home</td>
<td>25%</td>
</tr>
<tr>
<td>Lower utility bills</td>
<td>25%</td>
</tr>
<tr>
<td>Measures/improvements installed i.e., insulation, furnace</td>
<td>22%</td>
</tr>
<tr>
<td>Grants, rebates or incentives</td>
<td>21%</td>
</tr>
<tr>
<td>Needed assistance/made home improvements affordable</td>
<td>13%</td>
</tr>
<tr>
<td>Saving energy/more efficient home</td>
<td>10%</td>
</tr>
<tr>
<td>Information/tips about improving home’s efficiency</td>
<td>7%</td>
</tr>
<tr>
<td>Price of services</td>
<td>7%</td>
</tr>
<tr>
<td>Increased value of home</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>n/a</strong></td>
</tr>
</tbody>
</table>

While AIC has no plans to grow this program, a survey with participating customers indicated that there are some opportunities to improve the program. Table 18 provides a list of improvement suggestions made by survey respondents.

Table 18. Participant Improvement Suggestions (Multiple Response)

<table>
<thead>
<tr>
<th>Suggestions for improvement</th>
<th>% of Respondents (n=67)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No improvements needed</td>
<td>14%</td>
</tr>
<tr>
<td>Provide better marketing and outreach</td>
<td>28%</td>
</tr>
<tr>
<td>Provide more accurate/detailed information about program/eligibility</td>
<td>16%</td>
</tr>
<tr>
<td>Provide everything that was promised (i.e., cover ACs)</td>
<td>16%</td>
</tr>
<tr>
<td>Expand the program to cover more measures/areas of the home</td>
<td>12%</td>
</tr>
<tr>
<td>Document change in usage pre and post installation</td>
<td>9%</td>
</tr>
<tr>
<td>Improve contractor communication, professionalism</td>
<td>7%</td>
</tr>
</tbody>
</table>
Participant suggestions for improvement include providing better marketing and outreach, providing more accurate and detailed information about program and eligibility criteria, and providing air conditioner units (e.g., some participants may not have received air conditioner units based upon revisions to measure offerings during the program year).

### Program Database

Overall, the program tracking database captures an adequate level of information. However, there are areas of improvement for the program tracking database. The program tracking database could benefit from incorporating the following items:

- **Savings values by end-use type rather than rolling the value into an end-use category for shell measures.** The program currently rolls up savings values by participant for shell measures, which does not provide the granular detail of the heating and air conditioning type for the participant’s household. For example, for wall insulation, the database measure code is “Wall Insulation - R-0 to R-11”; however, per-unit savings values are at a more granular level, such as “Wall Insulation - R-0 to R-11 – Electric Heat Pump,” or “Wall Insulation - R-0 to R-11 – Electric Resistance,” etc.

- **Revised faucet aerator savings values (see impact section below which outlines the difference in values).** The current per-unit savings values used for gross savings values do not reflect the per-unit fixed savings values for the program (see impact section below which outlines the difference in values). We acknowledge that going forward AIC and CSG will revise savings values to reflect the TRM values and revisions to current savings values are no longer needed going forward.

Finally, we suggest that AIC and CSG develop a data dictionary for the program database to ensure that values provided for each variable are clearly understood. We understand that AIC and CSG may review the database in a different software package rather than the Excel files received by the evaluation team. To facilitate review during evaluation, a data dictionary for the variables included in the Excel files would facilitate these efforts.

## 4.2 Impact Results

The team performed an impact assessment for the WNCF program. As described in Section Error! reference source not found., Evaluation Methods, we calculated ex post gross impact estimates for the program by adjusting program tracking database ex ante gross values in two ways: 1) an assessment of per-unit savings values used in the program database if those values were
consistent with the per-unit fixed values; and if found, a subsequent adjustment to the savings values, and 2) application of the in-service rate applied from the Technical Reference Manual in the case of Instant Savings Measures and verification of invoices, equipment payment and certificates of completion signed by homeowners to confirm installation and in the case of shell and HVAC measures. We outline these adjustments below.

### 4.2.1 Per-Unit Savings Adjustment

The evaluation team compared the per-unit savings values provided in the program tracking database to the per-unit fixed deemed savings values. Because the program database per-unit values were not provided specifically, we calculated them by dividing the gross savings value by the quantity of the measure installed. The per-unit savings values provided in the program database were consistent with the per-unit fixed order deemed savings values except in the case of faucet aerators and attic insulation. We acknowledge that per CSG’s contract the program tracking database uses measure values that were received prior to March 1, 2012. Going forward, CSG will incorporate TRM values.

- **Attic Insulation:** The database does not provide measure by heating fuel type and presence of air conditioning for shell measures (i.e., whether the insulation was installed in a home with an electric heat pump, electric resistance, natural gas heat with electric AC, etc.). Because of this, we cannot assess whether the deemed savings applied to the quantity of measures installed reflects the per unit savings value found in the Illinois Commerce Commission Docket # 10-0568. However, the program tracking database kWh savings values do not correspond to the sum of the per-unit values found in the ICC Docket. The realization rate between the per-unit fixed order calculated savings and program database tracked savings is 1.03 for attic insulation measures.

- **Faucet Aerators.** The program tracking savings values for faucet aerators underestimate program savings as the per-unit savings values that we calculated by taking the gross savings and dividing by the quantity are lower than the per-unit fixed values for faucet aerators in the Illinois Commerce Commission Docket # 10-0568.

We provide a table in Appendix B that provides a per-unit comparison between the program tracking database and the ICC Docket # 10-0568.

### 4.2.2 In-Service Rate Adjustments

Savings were decreased from ex ante gross savings values to ex post gross savings values as a result of in-service rate adjustments that reduced the quantity of measures installed and used within the participants’ households. In-service rates were applied from the Technical Reference Manual for ISMs for direct install measures. The evaluation team reviewed invoices that included information regarding equipment payment and certificates of completion signed by homeowners to confirm installation of shell and HVAC measures for sampled participants.

Table 19 provides a summary of in-service rate adjustments by measures for the WNCF program.

<table>
<thead>
<tr>
<th>Measure Type</th>
<th>Measure Type</th>
<th>Measures</th>
<th>Verified Measures</th>
<th>Verification Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>15W CFL</td>
<td>1,162</td>
<td>918</td>
<td>0.969</td>
</tr>
</tbody>
</table>

Table 19: In-Service Rates Results by Measure
## Results and Findings

<table>
<thead>
<tr>
<th>Measure Type</th>
<th>Measure Type</th>
<th>Measures</th>
<th>Verified Measures</th>
<th>Verification Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install</td>
<td>20W CFL</td>
<td>685</td>
<td>589</td>
<td>0.969</td>
</tr>
<tr>
<td>Install</td>
<td>23W CFL</td>
<td>412</td>
<td>264</td>
<td>0.969</td>
</tr>
<tr>
<td>Install</td>
<td>Faucet aerator</td>
<td>273</td>
<td>150</td>
<td>0.95</td>
</tr>
<tr>
<td>Install</td>
<td>Low-flow showerhead</td>
<td>215</td>
<td>103</td>
<td>0.98</td>
</tr>
<tr>
<td>Incentive</td>
<td>Air sealing (incentive)(^a)</td>
<td>173(^a)</td>
<td>171(^a)</td>
<td>1.00</td>
</tr>
<tr>
<td>Incentive</td>
<td>Attic Insulation (R-11 to R-38)(^a)</td>
<td>172(^a)</td>
<td>171(^a)</td>
<td>1.00</td>
</tr>
<tr>
<td>Incentive</td>
<td>Attic Insulation (R-19 to R-49)(^a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incentive</td>
<td>Wall insulation (R-0 to R-11)(^a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incentive</td>
<td>Programmable Thermostat</td>
<td>67</td>
<td>67</td>
<td>1.00</td>
</tr>
<tr>
<td>New HVAC Equipment</td>
<td>Furnace 95% or more AFUE</td>
<td>129</td>
<td>129</td>
<td>1.00</td>
</tr>
<tr>
<td>New HVAC Equipment</td>
<td>Central AC &lt;16 SEER Replaces SEER 10 or Less</td>
<td>35</td>
<td>32</td>
<td>1.00</td>
</tr>
<tr>
<td>New HVAC Equipment</td>
<td>Central AC 16+ SEER Replaces SEER 10 or Less</td>
<td>10</td>
<td>10</td>
<td>1.00</td>
</tr>
<tr>
<td>New HVAC Equipment</td>
<td>Air Source Heat Pump</td>
<td>3</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>New HVAC Equipment</td>
<td>Gas Boiler</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

\(^a\) Unit represents projects rather than measures.
4.2.3 GROSS IMPACTS

As noted in the Methodology section, ex post gross savings are calculated using the following equation:

\[ \text{Ex Post Gross Savings} = \text{Per Unit Savings} \times \text{Claimed Quantity Installed} \times \text{In-Service Rate} \]

Table 20 provides a summary of gross impact results. The ex post gross savings values are lower because of the in-service rate adjustments.

### Table 20. WNCF Program Gross Impacts

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ex Ante Gross Impacts kWh</th>
<th>kW</th>
<th>Therm</th>
<th>Ex Post Gross Impacts kWh</th>
<th>kW</th>
<th>Therm</th>
<th>Gross Realization Rate kWh</th>
<th>kW</th>
<th>Therm</th>
</tr>
</thead>
<tbody>
<tr>
<td>60W to 15W CFL</td>
<td>44,156</td>
<td>-</td>
<td>-</td>
<td>42,787</td>
<td>2.4</td>
<td>0</td>
<td>0.97</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>75W to 20W CFL</td>
<td>32,195</td>
<td>-</td>
<td>-</td>
<td>31,197</td>
<td>1.7</td>
<td>0</td>
<td>0.97</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>100 W to 23W CFL</td>
<td>27,192</td>
<td>-</td>
<td>-</td>
<td>26,349</td>
<td>1.5</td>
<td>0</td>
<td>0.97</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Faucet aerators</td>
<td>990</td>
<td>288</td>
<td></td>
<td>1,787</td>
<td>0.2</td>
<td>593</td>
<td>1.81</td>
<td>2.06</td>
<td></td>
</tr>
<tr>
<td>Showerheads</td>
<td>7,581</td>
<td>3,104</td>
<td></td>
<td>7,429</td>
<td>163.4</td>
<td>3,042</td>
<td>0.98</td>
<td>-</td>
<td>0.98</td>
</tr>
<tr>
<td>Attic insulation (R-11 to R-38)</td>
<td>32,755</td>
<td>12,858</td>
<td></td>
<td>32,903</td>
<td>13.3</td>
<td>12,937</td>
<td>1.00</td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>Attic insulation (R-19 to R-49)</td>
<td>-</td>
<td>-</td>
<td></td>
<td>399</td>
<td>0.2</td>
<td>145</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wall insulation (R-0 to R-11)</td>
<td>19,073</td>
<td>18,455</td>
<td></td>
<td>19,075</td>
<td>7.7</td>
<td>18,459</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Air sealing</td>
<td>18,191</td>
<td>51,258</td>
<td></td>
<td>18,191</td>
<td>7.3</td>
<td>51,262</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Air Source Heat Pump</td>
<td>17,635</td>
<td>-</td>
<td>-</td>
<td>17,635</td>
<td>2.3</td>
<td>-</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Programmable Thermostats</td>
<td>6,596</td>
<td>2,412</td>
<td></td>
<td>6,596</td>
<td>-</td>
<td>2,412</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Central AC</td>
<td>81,335</td>
<td>-</td>
<td>-</td>
<td>81,335</td>
<td>60</td>
<td>-</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Central heater - Furnace</td>
<td>-</td>
<td>22,059</td>
<td></td>
<td>0.0</td>
<td>22,059</td>
<td></td>
<td>-</td>
<td>-</td>
<td>1.00</td>
</tr>
<tr>
<td>Total</td>
<td>287,698</td>
<td>0</td>
<td>110,434</td>
<td>285,684</td>
<td>260</td>
<td>110,908</td>
<td>0.99</td>
<td>n/a</td>
<td>0.98</td>
</tr>
</tbody>
</table>

* Ex post gross impacts = Gross Realization Rate * ‘Adjusted’ Ex Ante Gross Savings.

Note that we adjusted ex ante gross values by taking the program tracking gross savings by measure and dividing that value by the quantity installed to identify the heating type and presence of AC units. From there, we applied the fixed per-unit values specified in the ICC Order for Docket 10-0568 to the quantity installed.
4.2.4 **Net Impacts**

The program is targeted to participants who are within 200% and 300% of the federal poverty level guidelines for household size. As such, the program participants are unlikely to have installed many of the measures offered through the program without assistance from the program. As a result, ex post gross impacts are identical to ex post net impacts. We used the EMV NTGR of 1.0 based upon discussions with AIC and ICC prior to the evaluation plan being finalized.

Table 21 provides a comparison of next ex ante savings and net ex post savings values.

**Table 21: PY4 Net Savings for WNCF**

<table>
<thead>
<tr>
<th>End-Use</th>
<th>Ex Ante Net Savings</th>
<th>Ex Post Net Savings</th>
<th>Net Realization Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NTGR kWh kW Therm</td>
<td>NTGR kWh kW Therm</td>
<td></td>
</tr>
<tr>
<td>60W to 15W CFL</td>
<td>1 44,156 0 0</td>
<td>1 42,787 2 0</td>
<td>0.97 - -</td>
</tr>
<tr>
<td>75W to 20W CFL</td>
<td>1 32,195 0 0</td>
<td>1 31,197 2 0</td>
<td>0.97 - -</td>
</tr>
<tr>
<td>100W to 23W CFL</td>
<td>1 27,192 0 0</td>
<td>1 26,349 1 0</td>
<td>0.97 - -</td>
</tr>
<tr>
<td>Faucet aerators</td>
<td>1 990 0 288</td>
<td>1 1,787 0 593</td>
<td>1.81 - 2.06</td>
</tr>
<tr>
<td>Showerheads</td>
<td>1 7,581 0 3,104</td>
<td>1 7,429 163 3,042</td>
<td>0.98 - 0.98</td>
</tr>
<tr>
<td>Attic insulation (R-11 to R-38)</td>
<td>1 32,755 0 12,858</td>
<td>1 32,903 13 12,937</td>
<td>1.00 - 1.01</td>
</tr>
<tr>
<td>Attic insulation (R-19 to R-49)</td>
<td>1 0 0 0</td>
<td>1 399 0 145</td>
<td>- - -</td>
</tr>
<tr>
<td>Wall insulation (R-0 to R-11)</td>
<td>1 19,073 0 18,455</td>
<td>1 19,075 8 18,459</td>
<td>1.00 - 1.00</td>
</tr>
<tr>
<td>Air sealing</td>
<td>1 18,191 0 51,258</td>
<td>1 18,191 7 51,262</td>
<td>1.00 - 1.00</td>
</tr>
<tr>
<td>Air Source Heat Pump</td>
<td>1 17,635 0 0</td>
<td>1 17,635 2 0</td>
<td>1.00 - -</td>
</tr>
<tr>
<td>Programmable Thermostats</td>
<td>1 6,596 0 2,412</td>
<td>1 6,596 n/a 2,412</td>
<td>1.00 - 1.00</td>
</tr>
<tr>
<td>Central AC</td>
<td>1 81,335 0 0</td>
<td>1 81,335 60 0</td>
<td>1.00 - -</td>
</tr>
<tr>
<td>Central heater</td>
<td>1 0 0 22,059</td>
<td>1 0 0 22,059</td>
<td>- - 1.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1 287,698 0 110,434</td>
<td>1 285,684 260 110,908</td>
<td>0.99 - 1.00</td>
</tr>
</tbody>
</table>

- a Realization Rate = Ex Post Net Value / Ex Ante Net Value
- b Ex ante NTGRs are from program tracking records
4.3 **Inputs for Future Program Planning**

We performed no evaluation activities in PY4 that were focused on future programs.
A. APPENDIX - IMPLEMENTATION MODEL

The evaluation team created an implementation model for the Moderate Income Program (Warm Neighbors Cool Friends) evaluated in PY4. An implementation model is a graphic presentation of the intervention—what occurs and who undertakes the functional activities of the program. The model is displayed using a multi-level Visio document that has various functions in its rows, and key stakeholders and populations in its columns. We determined the functions, stakeholders, and processes through a review of the available program documentation and further refined them based on interviews with program staff. This model does not attempt to assess the effects of the program.

The model is organized by function and the stakeholders involved.

- **Functions** represent the discrete functions inherent to the program. These functions include program administration and design, marketing and outreach, education, service delivery, and evaluation. Service delivery encompasses activities that are directed towards intervention recipients and, for this model, is a catchall for any activity not included in the other functions.

- **Stakeholders** include the various providers who are involved in program delivery or receive program services. Stakeholders include the customer, the program allies selected to become program “installers,” the Energy Assistance Foundation (EAF), Conservation Services Group (CSG), and AIC.

For Moderate Income, key program functions include:

- **Program Administration and Design**: EAF, CSG, and AIC all play a role in program design, but CSG is the main facilitator and driver of design, budget, and incentive structure. CSG is also responsible for managing administrative activities and recording projects in the central program database.

- **Marketing & Outreach**: EAF, CSG, and AIC all have a role in marketing and outreach to customers. However, only CSG and AIC promote the program to program allies, the pool of contractors from whom the project installers are eventually selected, and who may also make some customers aware of the program.

- **Education**: Note that educational efforts for program contractors operate from the Home Energy Performance (HEP) program. However, because CSG selected a handful of contractors from the HEP program allies to participate in the Moderate Income program, we include education efforts within this model. CSG is the main driver and implementer of the education efforts aimed at local contractors interested in participating as program allies or installers. AIC approves education strategies CSG submits.

- **Service Delivery (Customer Facing Activities)**: At first, the customer and EAF work together to determine program eligibility and complete the program application, which EAF passes on to CSG. Next, CSG contacts the customer, audits the home, installs ISMs, produces a scope of work, and coordinates installers to provide the customer with the selected measures.

- **Service Delivery (Fund Collection and Disbursement)**: EAF is invoiced monthly by CSG for their contributions to each project. Project Coordinators collect funds from the participant, and submit completed paperwork to CSG administrative staff for processing. Once
Appendix - Implementation Model

processed, contractors are paid, and EAF is invoiced for their portion of the project. The combination of these monies is used to pay the installers.

- **Service Delivery (QA/QC and Reporting):** Throughout the retrofit, the CSG Project Coordinator oversees the installations, monitors participant satisfaction, and organizes any necessary corrective courses of action. The Energy Coordinator inspects 100% of the final installations.

Below we provide the Moderate Income Program implementation model. In addition, we include an “Application Process Flow Model” that documents points at which customer-based records are generated and tracked.
### PY4 Moderate Income Implementation Model

<table>
<thead>
<tr>
<th>Income-qualified Customers</th>
<th>Selected Program Allies (“Installers”)</th>
<th>EAF</th>
<th>CSG</th>
<th>AIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manage development of program design, budget and incentive structure</td>
<td>Manage administrative activities</td>
<td>Receive monthly reports</td>
<td>Record projects in database</td>
</tr>
<tr>
<td></td>
<td>Enroll with CSG directly</td>
<td>Promote program to market actors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Market program to customers</td>
<td>Create and manage development of marketing collateral</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receive BPI certification training</td>
<td>Sponsor &amp; incentivize BPI certification and building science training</td>
<td>Approve BPI training and reimbursement concept</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receive program-specific training</td>
<td>Schedule &amp; deliver orientations and program updates</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receive enrichment training</td>
<td>Market &amp; deliver enrichment e.g., building science</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Decide to participate</td>
<td>Maintain program hotline and provide information</td>
<td>Schedule audit</td>
<td>Conduct audit, Install ISMs</td>
</tr>
<tr>
<td></td>
<td>Request audit &amp; submit application</td>
<td>Review application, provide to CSG</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receive audit, ISM measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop scope of work with Project Coordinator</td>
<td>Develop Scope of Work &amp; report with customer</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select EE Measures</td>
<td>Refer to HEP, HVAC, ARP or REEP programs (if appropriate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sign contract</td>
<td>Select &amp; schedule installers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Install measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contribute funds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contribute funds</td>
<td>Collect funds &amp; pay installers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receive payment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oversee installations; monitor satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inspect 100% of final installations</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 22 provides a comparison of the ICC per-unit fixed values from ICC Docket # 10-0568 to the calculated per-unit values from the program tracking database. The evaluation team calculated per-unit values by taking the gross savings values in the program tracking database and dividing them by the quantity installed.

### Table 22: PY4 Per-Unit Comparison (Database to Per Unit Values)

<table>
<thead>
<tr>
<th>End-Use</th>
<th>Measure Type</th>
<th>Different Value?</th>
<th>Deemed Per Unit Fixed Values from ICC Docket</th>
<th>Program Database Per Unit Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>kWh</td>
<td>therms</td>
</tr>
<tr>
<td>CFLs</td>
<td>15W CFL</td>
<td></td>
<td>38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20W CFL</td>
<td></td>
<td>47</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23W CFL</td>
<td></td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Faucet aerators</td>
<td>Electric</td>
<td>X</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural gas</td>
<td>X</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Showerheads</td>
<td>Electric</td>
<td></td>
<td>361</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural gas</td>
<td></td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Attic insulation</td>
<td>Electric - Heat pump</td>
<td></td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>(R-11 to R-38)</td>
<td>Electric Resistance</td>
<td></td>
<td>1.24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electric AC only</td>
<td></td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Gas Heat w Electric AC</td>
<td></td>
<td>0.22</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>Natural Gas Heat w No AC</td>
<td></td>
<td></td>
<td>0.09</td>
</tr>
<tr>
<td>Attic insulation</td>
<td>Electric - Heat pump</td>
<td></td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>(R-19 to R-49)</td>
<td>Electric Resistance</td>
<td></td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electric AC only</td>
<td></td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Gas Heat w Electric AC</td>
<td></td>
<td>0.11</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>Natural Gas Heat w No AC</td>
<td></td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>Wall insulation</td>
<td>Electric Heat pump</td>
<td></td>
<td>0.97</td>
<td></td>
</tr>
<tr>
<td>(R-0 to R-11)</td>
<td>Electric Resistance</td>
<td></td>
<td>2.51</td>
<td></td>
</tr>
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## Appendix - Program Tracking and Fixed Order Per Unit Comparison

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<tr>
<th>End-Use</th>
<th>Measure Type</th>
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<th>Deemed Per Unit Fixed Values from ICC Docket</th>
<th>Program Database Per Unit Values</th>
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<td>16+ SEER Replaces SEER 10 or less</td>
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<td>16+ SEER Replaces SEER Greater 10 or less</td>
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<td>Greater than or equal 95% AFUE Furnace</td>
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C. APPENDIX - DATA COLLECTION INSTRUMENTS

Participant Survey

Ameren Warm Neighbors Cool Friends (WNCF) Participant Phone Survey

August 2012

Survey Overview

(This is a telephone survey that will be targeted to 270 of the 275 WNCF participants.12 We will use a census approach and anticipate collecting data from at least 70 participants. The survey will gather information regarding awareness of the program, satisfaction, preferred methods for receiving energy efficiency information, key demographics, as well as number of measures received and installed. The survey will also assess barriers to home energy improvements.)

Introduction

Hello, my name is ________ and I am calling from Opinion Dynamics, an independent research firm, on behalf of Ameren Illinois. We’re calling recent participants in the Warm Neighbors Cool Friends Weatherization Program to learn about their experience and satisfaction with the program. Ameren Illinois will use this information to improve their programs to benefit customers. I want to assure you that this is not a sales call and your answers will be strictly confidential. This survey will just take about 15 minutes of your time.

(IF NECESSARY: The Warm Neighbors Cool Friends program provides an in-home audit, instant saving upgrades like CFL bulbs, financial assistance for weatherization measures like insulation, and may help replace older inefficient heating and cooling units.)

May I speak with [CONTACT NAME] or someone in your household who is familiar with the Warm Neighbors Cool Friends Program?

C1. Are you currently talking to me on a regular landline phone or a cell phone?
   1. Regular landline phone
   2. Cell Phone
   8. (Don’t know)
   9. (Refused)

[ASK IF C1 = 2; ELSE GO TO SURVEY START]

C2. Are you currently in a place where you can talk safely and answer my questions?
   1. Yes

____________________________________________________________________

12 Program records show that five participants did not receive an audit, but did receive grants. They will be removed from the sample frame.
2. No [Schedule call back]
8. (Don’t know) [Schedule call back]
9. (Refused) [Schedule call back]

**Screeners**

S1. Our records show your household participated in the Warm Neighbors Cool Friends program. Is that correct? [IF NECESSARY: The Warm Neighbors Cool Friends program provides an in-home audit, instant saving upgrades like CFL bulbs, financial assistance for weatherization measures like insulation, and may help replace older, inefficient heating and cooling units.]

1. Yes
2. No, did not participate [THANK AND TERMINATE “Thank you. We do not have any more questions for you today.”]
8. (Don’t know)
9. (Refused) [THANK AND TERMINATE “Thank you. We do not have any more questions for you today.”]

[ASK IF S1=98]

S2. Is there someone else in your household who might be more familiar with the Warm Neighbors Cool Friends Program?

1. Yes [ASK TO SPEAK WITH THAT PERSON]
2. No [THANK AND TERMINATE]
8. (Don’t know) [THANK AND TERMINATE]
9. (Refused) [THANK AND TERMINATE]

[THANK AND TERMINATE: “Thank you. We do not have any more questions for you today.”]

S3. [IF S2=1], READ “Hello, my name is _________ and I am calling from Opinion Dynamics, an independent research firm, on behalf of Ameren Illinois. We’re calling recent participants in the Warm Neighbors Cool Friends Weatherization Program to learn about their experience and satisfaction with the program. Our records show your household participated in the Warm Neighbors Cool Friends program. I want to assure you that this is not a sales call and your answers will be strictly confidential. This survey will just take about 15 minutes of your time. Is now a good time?” (IF NECESSARY: The Warm Neighbors Cool Friends program provides an in-home audit, instant saving upgrades like CFL bulbs, financial assistance for weatherization measures like insulation, and may help replace older inefficient heating and cooling units.)]

1. Yes [CONTINUE]
2. No [THANK AND TERMINATE]
8. (Don’t know) [THANK AND TERMINATE]
9. (Refused) [THANK AND TERMINATE]

[THANK AND TERMINATE: “Thank you. We do not have any more questions for you today.”]

**Program Awareness**

PA1. Where did you first hear about the Warm Neighbors Cool Friends Program? [OPEN END,
MULTIPLE RESPONSE, SELECT UP TO 4

01. (Energy Assistance Foundation)
02. (Ameren/ActOnEnergy website)
03. (Email from Ameren or ActOnEnergy)
04. (Other Ameren or ActOnEnergy source)
05. (Internet search engine, such as Google, Bing or Yahoo)
06. (A friend, relative or colleague)
07. (Contractor/ Program Ally)
08. (Neighborhood associations)
09. (A letter in the mail)
10. (A Postcard)
11. (Door flyer/hanger)
12. (Radio ad)
13. (Print Article)
14. (Home Show)
15. (A public event)
00. (Other, please specify)
98. (Don’t Know)
99. (Refused)

PA2. What are the best ways for Ameren to inform you about the energy efficiency programs it offers residential customers? [MULTIPLE RESPONSE; UP TO 3]

01. (Ameren/ActOnEnergy website)
02. (A friend, relative or colleague)
03. (Contractor)
04. (Neighborhood associations)
05. (Bill Inserts)
06. (A letter in the mail)
07. (A Postcard)
08. (Door flyer)
09. (Email from Ameren or ActOnEnergy)
10. (Print Advertisement)
11. (Home Show)
12. (A public event)
13. (Energy Assistance Foundation)
14. (Other, please specify)
98. (Don’t Know)
99. (Refused)

[SKIP IF PA1=2,3 OR 4]

PA3. And in general, do you consider Ameren a resource for energy efficiency information?

1. Yes
2. No
8. (Don’t know)
9. (Refused)

Program Processes
Appendix - Data Collection Instruments

[ASK ALL]

PP1. Why did you decide to participate in this program? [RECORD ALL THAT APPLY]
   01. (Save money on energy/electric/gas bill)
   02. (Reduce energy consumption)
   03. (Make your home more comfortable)
   04. (Increase the value of your home)
   05. (Improve the environment: cleaner air, etc.)
   06. (The available incentives/ grants)
   07. (It was inexpensive)
   08. (Other [Specify])
   98. (Don’t know)
   99. (Refused)

Energy Education

E1. What best describes your knowledge of home energy improvements BEFORE participating in this program?
   1. I had no knowledge
   2. I had very little knowledge
   3. I had some knowledge
   4. I had a lot of knowledge
   8. (Don’t know)
   9. (Refused)

E2. On a scale from 0 to 10, where 0 is “NOT increased at all,” and 10 is “increased A LOT,” how much has your KNOWLEDGE of home energy improvements INCREASED as a result of participating in this program? [0-10, 98=Don’t know, 99=Refused]

Barriers to Home Improvements

[ASK SECTION IF GRANT_FLAG=0]

B1. Our records show that you have not made any home energy improvements through the program since your home energy audit was completed. Is that correct?
   1. Yes
   2. No
   3. (Completed home energy improvements but not through the program)
   8. (Don’t know)
   9. (Refused)

[ASK IF B1=1, ELSE SKIP TO CH1]

B2. Why haven’t you completed any home energy upgrades through the program? [OPEN END; Multiple Responses Up to 5]
   01. (Project cost)
   02. (Too busy/ Too much time)
   03. (My home needs repairs or improvements before I can get upgrades through the program)
   04. (The savings are not worth the effort)
B3. What energy upgrades, if any, have been completed at your home since it received an energy audit? [OPEN END; Multiple Responses Up to 5]

00. (Other: Specify)
96. (None)
98. (Don’t know)
99. (Refused)

Channeling

[ASK ALL]

CH1. Do you recall learning about other Ameren Illinois energy-saving programs through your participation in the Warm Friends Cool Neighbors program?

1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK IF CH1=1, ELSE SKIP TO MEAS]

CH2. Which other Ameren Illinois programs did you learn about? [Multiple Response Up to 2]

01. (Old/inefficient refrigerator or freezer recycling; “Appliance Recycling Program”)
02. (Energy efficient lighting; “Lighting Program”)
00. (Other: Specify)
98. (Don’t know)
99. (Refused)

[ASK IF CH2<98]
Appendix - Data Collection Instruments

CH4. In which of the other programs have you participated? [Multiple Response Up to 3]

01. (Old/inefficient refrigerator or freezer recycling; “Appliance Recycling Program”)
02. (Energy efficient lighting; “Lighting Program”)
00. (Other; Specify)
96. (None)
98. (Don’t know)
99. (Refused)

Measure Verification

MEAS. Now I have some questions about some of the energy saving upgrades installed in your house through the program.

CFL Measure Verification
[ASK SECTION IF CFLFLAG=1]

CFL1. Our records show that you had the following free CFLs installed in your house during the audit.
[READ IN 60WQT] 60 watt equivalent CFLs (14w)
[READ IN 75WQT] 75 watt equivalent CFLs (19w)
[READ IN 100WQT] 100 watt equivalent CFLs (23w)
[READ IN CFLQT] Total number of bulbs:

Is this correct?
1. Yes
2. No, quantity incorrect
3. (Did not receive any CFL bulbs at all) [SKIP TO FA1]
8. (Don’t know) [SKIP TO FA1]
9. (Refused) [SKIP TO FA1]

[ASK IF CFL1=2]

CFL1A. Are you able to tell me how many bulbs of each wattage type you received?
1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK IF CFL1A=1]

CFL2. How many of each type of free CFL were installed during the audit? (READ LIST IF NECESSARY)
CFL2A. 60 watt equivalent (14w CFL) [NUMERIC OPEN END]
CFL2B. 75 watt equivalent (19w CFL) [NUMERIC OPEN END]
CFL2C. 100 watt equivalent (23w CFL) [NUMERIC OPEN END]

[ASK IF CFL1A<>1]

CFL2D. How many CFLs, in total, were installed during the audit? [NUMERIC OPEN END]
Appendix - Data Collection Instruments

[SKIP TO FA1 IF CFL2A/B/C ALL EQUAL DK/REFUSED/NONE OR CFL2D EQUALS DK/REFUSED/NONE]

[CREATE VERIFIED CFL TOTAL AND CFLS BY WATTAGE]

CFL3. Are all of the CFLs still installed?
   1. Yes
   2. No
   8. (Don’t know) [SKIP TO FA1]
   9. (Refused) [SKIP TO FA1]

[SKIP TO CFL7 IF CFL3=1]

[ASK IF CFL1A=1 AND CFL3=2,8,9]

CFL4. How many of each type of CFL are STILL INSTALLED?
   (IF NEEDED: The numbers you have given don’t agree with the number you said have been
   installed.)
   (PREVIOUS VALUES)
   (60 watt equivalent (14w) [READ IN <VQ60W>]
   (75 watt equivalent (19w) [READ IN <VQ75W>]
   (100 watt equivalent) [READ IN CFL <VQ100W>])
   (Unknown) [READ IN CFL2d_4]
   CFL4A. 60 watt equivalent (14w) [NUMERIC OPEN END: SHOULD NOT EXCEED <VQ60W>]
   CFL4B. 75 watt equivalent (19w) [NUMERIC OPEN END: SHOULD NOT EXCEED <VQ75W>]
   CFL4C. 100 watt equivalent (23w) [NUMERIC OPEN END: SHOULD NOT EXCEED <VQ100W>]

[CALCULATE VERIFIED INSTALLED CFL TOTAL]

[ASK IF CFL1A=2,8,9]

CFL4D. How many CFLs, in total, are still in installed?[NUMERIC OPEN END: SHOULD NOT
   EXCEED <VTOTACFL>]
   96. (None are installed)
   98. (Don’t know)
   99. (Refused)

CFL5. Why did you remove the CFLs?
   00. [OPEN END]
   98. (Don’t know)
   99. (Refused)

CFL6. What did you do with the CFLs that are not installed?
   1. (Stored them for future use)
   2. (Stored them to give to someone else later)
   3. (Stored them to dispose of later)
   4. (Recycled them)
   5. (Threw them away in the garbage)
   6. (Gave them to someone else)
   7. (Other, specify)
   98. (Don’t know)
99. (Refused)

[ASK IF VERIFIEDINSTALLED CFLS>0]

CFL7. Did the CFLs installed during the energy audit replace standard incandescent bulbs or older CFLs?
1. (Incandescent Standard)
2. (CFLs)
3. (Both)
8. (Don’t know)
9. (Refused)

CFL11. On a scale from 0 to 10, where 0 is “extremely dissatisfied” and 10 is “extremely satisfied”, how would you rate your overall satisfaction with the CFLs that you received? [0-10, 98=DON’T KNOW, 99=REFUSED]

[ASK IF CFL11 <6]

CFL12. Why did you give this rating?
1. [OPEN END]
98. (Don’t know)
99. (Refused)

Faucet Aerator Measure Verification

[ASK SECTION IF FA_FLAG=1]

FA1. Our records indicated that you had [FAQUANT] free faucet aerator(s) installed in your home during the audit, is that correct?
1. Yes
2. No, quantity incorrect
3. (No, aerators were installed at all.) [SKIP TO SH1]
8. (Don’t know) [SKIP TO SH1]
9. (Refused) [SKIP TO SH1]

[ASK IF FA1=2]

FA2. How many free faucet aerators did you have installed in your home during the audit? [NUMERIC OPEN END, 1-90]
96. (None)
98. (Don’t know)
99. (Refused)

FA3. Are all of the faucet aerators you received through the program still installed?
1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK IF FA3=2, ELSE SKIP TO FA9]

FA4. How many of the faucet aerators are still installed?
96. (None)
98. (Don’t know)
99. (Refused)
Appendix - Data Collection Instruments

FA5. Why did you remove the faucet aerators?
   00. [OPEN END]
   98. (Don’t know)
   99. (Refused)

FA9. On a scale from 0 to 10, where 0 is “extremely dissatisfied” and 10 is “extremely satisfied”, how would you rate your overall satisfaction with the faucet aerators you received? [0-10, 98=DON’T KNOW, 99=REFUSED]

[ASK IF FA9 <6]
FA10. Why did you give this rating?
   2. [OPEN END]
   98. (Don’t know)
   99. (Refused)

High Efficiency Showerhead Measure Verification
[ASK SECTION IF SH_FLAG=1]

SH1. Our records indicated [SHQUANT] free high efficiency showerhead(s) were installed in your home during the audit, is that correct?
   1. Yes
   2. No
   3. (No, showerheads were installed at all.) [SKIP TO AS1]
   8. (Don’t know) [SKIP TO AS1]
   9. (Refused) [SKIP TO AS1]

[ASK if SH1=2]
SH2. How many high efficiency showerheads were installed when the auditor assessed your home? [NUMERIC OPEN END, 1-90]
   96. (None)
   98. (Don’t know)
   99. (Refused)

SH4. Are all of the high efficiency showerheads you had installed through the program still installed in your home?
   1. Yes
   2. No
   8. (Don’t know)
   1. 9. (Refused)

[ASK IF SH4=2, ELSE SKIP TO SH10]
SH5. How many of the high efficiency showerheads are still installed in your home?
   0. (None)
   98. (Don’t know)
   99. (Refused)

SH6. Why did you remove [some of] the high efficiency showerheads?
Appendix - Data Collection Instruments

00. [OPEN END]
98. (Don’t know)
99. (Refused)

SH10. On a scale from 0 to 10, where 0 is “extremely dissatisfied” and 10 is “extremely satisfied”, how would you rate your overall satisfaction with the high efficiency showerheads you received? [0-10, 98=DON’T KNOW, 99=REFUSED]

[ASK IF SH10<6]
SH11. Why did you give this rating?
1. [OPEN END]
98. (Don’t know)
99. (Refused)

Air Sealing Measure Verification

[ASK SECTION IF AIRSEAL_FLAG=1]
AS1. Our records indicate that you had air sealing improvements such as caulk, spray foam, weather stripping or duct upgrades completed in your home through the program. Is that correct?
1. Yes
2. No
8. (Don’t know)
9. (Refused)

[SKIP IF AS1=2,8,9]
AS2. Are the air sealing measures still in place?
1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK IF AS2=2]
AS3. What air sealing measures were removed? [OPEN END, 98=DON’T KNOW, 99=REFUSE]

Insulation Measure Verification

[ASK SECTION IF Insulat_FLAG=1]
IN1. Our records indicate that you had insulation work done on ceilings, walls, floors OR in your attic through the program. Is that correct?
1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK IF IN1=1]
IN2. Through the program you could have received insulation upgrades such as wall, attic, ceiling, and basement insulation. Which types of insulation upgrades did you receive? [MULTIPLE RESPONSE, UP TO 3]
1. (Wall)
Appendix - Data Collection Instruments

2. (Attic)
3. (Ceiling)
4. (Basement)
5. (Rim joist)
6. (Knee wall)
00. (Other insulation specify: _____)
98. (Don’t know)
99. (Refused)

Programmable Thermostat Verification

[ASK SECTION IF therm_FLAG=1]
PT1. Our records indicate that there was a programmable thermostat installed through the program, is that correct?
   1. Yes
   2. No
   8. (Don’t know)
   9. (Refused)

[ASK IF PT1=1]
PT2. Is the programmable thermostat still installed?
   2. 1. Yes
   3. 2. No
   4. 8. (Don’t know) [SKIP TO NEXT SECTION]
   9. (Refused) [SKIP TO NEXT SECTION]

[SKIP IF PT2=1]
PT3. Why did you remove the programmable thermostat? [OPEN END]
   8. (Don’t know)
   9. (Refused)

[ASK IF PT1=2, ELSE SKIP TO PT5a]
PT5. Why wasn’t the programmable thermostat installed? [OPEN END]
   8. (Don’t know)
   9. (Refused)

[ASK IF PT1=1, ELSE SKIP TO PT7]]
PT5a. Did the programmable thermostat replace a manual thermostat?
   5. 1. Yes
   6. 2. No
   7. 8. (Don’t know)
Appendix - Data Collection Instruments

9. (Refused)

PT6. Is the programmable thermostat programmed?

8. 1. Yes
9. 2. No
10. 8. (Don’t know) [SKIP TO NEXT SECTION]

9. (Refused) [SKIP TO NEXT SECTION]

PT7. On a scale from 0 to 10, where 0 is “extremely dissatisfied” and 10 is “extremely satisfied”, how would you rate your overall satisfaction with the programmable thermostat you received? [0-10, 98=DON’T KNOW, 99=REFUSED]

[ASK IF PT7<6]
PT8. Why did you give this rating?
1. [OPEN END]
98. (Don’t know)
99. (Refused)

CAC Measure Verification

[ASK SECTION IF CAC_FLAG=1]
CA1. Our records indicated that there was a central air conditioning unit installed through the program, is that correct?
1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK IF CA1=1]
CA2. Is the central air conditioning unit still installed?

11. 1. Yes
12. 2. No
13. 8. (Don’t know) [SKIP TO NEXT SECTION]

9. (Refused) [SKIP TO NEXT SECTION]

[SKIP TO CA4 IF CA2=1]
CA3. Why did you remove the central air conditioning unit? [OPEN END]

8. (Don’t know)
9. (Refused)

[ASK IF CA1= 2, ELSE SKIP TO CA5]
CA4. Why wasn’t the central air conditioning unit installed? [OPEN END]
Appendix - Data Collection Instruments

8. (Don’t know)
9. (Refused)

[SKIP TO NEXT SECTION IF CA1=2]
CA5. On a scale from 0 to 10, where 0 is “extremely dissatisfied” and 10 is “extremely satisfied”, how would you rate your overall satisfaction with the central air conditioning unit you received? [0-10, 98=DON'T KNOW, 99=REFUSED]

[ASK IF CA5<6]
CA6. Why did you give this rating?
   1. [OPEN END]
   98. (Don’t know)
   99. (Refused)

Air Sourced Heat Pump Measure Verification
ASK SECTION IF HEATPUMP_FLAG=1
HP1. Our records indicated that there was an air heat pump installed through the program, is that correct?
   1. Yes
   2. No
   8. (Don’t know) [SKIP TO F1]
   9. (Refused) [SKIP TO F1]

[ASK IF HP1=1]
HP2. Is the air heat pump still installed?
   14. 1. Yes
   15. 2. No
   16. 8. (Don’t know) [SKIP TO NEXT SECTION]
      9. (Refused) [SKIP TO NEXT SECTION]

[SKIP TO HP5 IF HP2=1]
HP3. Why did you remove the air heat pump? [OPEN END]
   8. (Don’t know)
   9. (Refused)

[ASK IF HP1= 2, ELSE SKIP TO HP5]
HP4. Why wasn’t the air heat pump installed? [OPEN END]
   8. (Don’t know)
   9. (Refused)

[SKIP TO NEXT SECTION IF HP1=2]
HP5. On a scale from 0 to 10, where 0 is “extremely dissatisfied” and 10 is “extremely satisfied”, how would you rate your overall satisfaction with the air heat pump you received? [0-10, 98=DON'T KNOW, 99=REFUSED]
Appendix - Data Collection Instruments

[ASK IF HP5<6]

HP6. Why did you give this rating?
   1. [OPEN END]
   98. (Don’t know)
   99. (Refused)

Furnace Measure Verification

[ASK SECTION IF FURNACE_FLAG=1]

F1. Our records indicated that there was a furnace installed through the program, is that correct?
   1. Yes
   2. No
   8. (Don’t know)
   9. (Refused)

[ASK IF F1=1]

F2. Is the furnace still installed?
   17. 1. Yes
   18. 2. No
   19. 8. (Don’t know) [SKIP TO NEXT SECTION]
   9. (Refused) [SKIP TO NEXT SECTION]

[SKIP TO F5 IF F2=1]

F3. Why did you remove the furnace? [OPEN END]
   8. (Don’t know)
   9. (Refused)

[ASK IF F1=2, ELSE SKIP TO F5]

F4. Why wasn’t the furnace installed? [OPEN END]
   8. (Don’t know)
   9. (Refused)

[SKIP TO NEXT SECTION IF F1=2]

F5. On a scale from 0 to 10, where 0 is “extremely dissatisfied” and 10 is “extremely satisfied”, how would you rate your overall satisfaction with the furnace you received? [0-10, 98=DON’T KNOW, 99=REFUSED]

[ASK IF F5<6]

F6. Why did you give this rating?
   1. [OPEN END]
   98. (Don’t know)
   99. (Refused)

Program Satisfaction
[ASK ALL]

SAT1. Please think about your experience with the Warm Neighbors Cool Friends program. On a scale of 0 to 10 where 0 is ‘extremely dissatisfied’ and 10 is ‘extremely satisfied’, how satisfied were you with program overall? [INDICATE NUMBER 0 THROUGH 10, 98=DON’T KNOW, 99=REFUSED]

[ASK IF SAT1 <6]

SAT1a. Why did you give this rating? (OPEN END) [PROBE FOR SPECIFICS]

SAT2. Using the same scale where 0 is ‘extremely dissatisfied’ and 10 is ‘extremely satisfied’ how satisfied were you with... [INDICATE NUMBER 0 THROUGH 10, 98=DON’T KNOW, 99=REFUSED]

a. The amount of time it took between when you completed an application and when the audit was done
b. The professionalism of the Project Coordinator who audited your home
c. The time it took to complete the audit
d. The quality of work performed by the Project Coordinator who audited your home
e. The audit report in helping you understand your home’s energy usage

f. The audit report in helping you understand where energy improvements could be made in your home

[ASK IF GRANT_FLAG=1]
g. The professionalism of the installer who completed your home energy improvements
h. The quality of the work completed at your home

[ASK ALL]

SAT3. Using the same scale where 0 is ‘extremely dissatisfied’ and 10 is ‘extremely satisfied’ how satisfied were you the explanation you received about the program’s participation process? [INDICATE NUMBER 0 THROUGH 10, 98=DON’T KNOW, 99=REFUSED]

[ASK IF SAT3<6]

SAT4. Can you please explain which part of the participation process was not clearly explained to you?

00. OPEN END
98. (Don’t know)
99. (Refused)

SAT5. From your perspective, what if anything, could be done to improve the program?

00. OPEN END
96. (No/nothing)
98. (Don’t know)
99. (Refused)

SAT6. Can you think of any reasons why people might not participate in this program?
Additional Program Benefits

Now I would like to ask you some questions about other changes you may have experienced as a result of participating in the program.

BE1. Do you think that your utility bills are now higher, lower, or the same as what they would have been if you had not participated in the program?

   1. Higher
   2. Lower
   3. The same
   4. (Too early to tell)
   8. (Don’t know)
   9. (Refused)

BE2. Thinking about your home’s interior temperature, would you say your home is more, less, or as comfortable as it was before you participated in the program?

   1. (More comfortable than it was before participation)
   2. (Less comfortable than it was before participation)
   3. (As comfortable as it was before participation)
   98. (Don’t know)
   99. (Refused)

BE3. Would you say the air quality in your home is better, the same, or worse than it was before you participated in the program?

   1. (Better than it was before you participated)
   2. (Worse than it was before you participated)
   3. (The same as it was before you participated)
   98. (Don’t know)
   99. (Refused)

BE4. Aside from those you may have already mentioned, what have been the main benefits of participating in the program? [OPEN END; UP TO 5]

   1. (Grants, rebates or incentives)
   00. (Other: specify_______)
   96 (None)
   98 (Don’t Know)
   99 (Refused)

Demographics
We’re almost finished. I just have a few questions about your household. These are for background purposes only.

D1. What type of house do you live in? Is it a ....?
   1. Single Family Detached Home (No common walls)
   2. Single Family Attached Home (Townhouse or Duplex)
   00. Other, specify
   98. (Don’t know)
   99. (Refused)

D2. Do you or members of your household own this home or do you rent?
   1. Own/Buying
   2. Rent/Lease
   3. (Occupied without payment of rent)
   00. Other, specify
   8. (Don’t know)
   9. (Refused)

D3. Counting yourself, how many people normally live in your household on a fulltime basis. (IF NECESSARY “Please include everyone who lives in your home whether or not they are related to you and BUT EXCLUDE anyone who is just visiting or children who may be away at college or in the military.

[NUMERIC OPEN END]
98. (Don’t know)
99. (Refused)

[ASK D7 IF D2=2 OR 3]

D4. Do you pay your utility bill directly to your utility company or are your utilities included in your rent or condo fee?
   1. Pay directly to utility company
   2. Utilities included in rent or condo fee
   3. (Pay some utilities directly and some are included in rent or condo fee)
   4. (Paid for in some other way)
   8. (Don’t know)
   9. (Refused)

[ASK D4=3]

D4a. Which utilities do you pay directly to the utility company? [MULTIPLE RESPONSE, UP TO 3]
   1. Natural gas
   2. Electricity
   00. (Other: specify)
   98. (Don’t know)
   99. (Refused)
Appendix - Data Collection Instruments

D5. Is your water heater gas or electric?
   1. (Gas)
   2. (Electric)
   8. (Don’t know)
   9. (Refused)

D6. Do you use a space heater, and if so, is it gas or electric?
   1. (Gas)
   2. (Electric)
   3. (Do not use a space heater)
   8. (Don’t know)
   9. (Refused)

D7. What is the highest level of education that the head of household has completed so far?
   1. Less than ninth grade
   2. Ninth to twelfth grade (no diploma)
   3. High school graduate (includes GED)
   4. Some college, No degree
   5. Associates degree
   6. Bachelors degree
   7. Graduate or professional degree
   8. (Don’t know)
   9. (Refused)

D8. In what year were you born?
   00. [NUMERIC OPEN END; 1912-1999]
   9999. (Refused)

D9. Which category best describes your total household income in 2011, before taxes? Please stop me when I get to the appropriate category.
   1. Less than $15,000
   2. $15,000 to less than $20,000
   3. $20,000 to less than $30,000
   4. $30,000 to less than $40,000
   5. $40,000 to less than $50,000
   6. $50,000 to less than $75,000
   7. $75,000 to less than $100,000
   8. $100,000 to less than $150,000
   9. $150,000 or more
   98. (Don’t know)
   99. (Refused)

CLOSING. We appreciate the information that you have provided. This information is valuable to understanding the effects of the program. Would you be willing to have your individual responses shared with Ameren Illinois and the Illinois Commerce Commission to
assist them in making decisions about future programs?

1. Yes
2. No
8. (Don’t know)
9. (Refused)

On behalf of Ameren Illinois, thank you for your responses. We are now finished with the survey.
EAF Interview Guide

Ameren Illinois Evaluation:
Residential Moderate Income “Warm Neighbors Cool Friends” Program

EAF Program Staff In-Depth Interview Guide

July 2012

Name of Interviewee: __________________________  Date: ________________
Title: __________________ Company: ____________________________

[Note to Reviewer] The Interview Guide is a tool to guide process evaluation interviews with utility staff and implementation contractors. The guide helps to ensure the interviews include questions concerning the most important issues being investigated in this study. Follow-up questions are a normal part of these types of interviews. Therefore, there will be sets of questions that will be more fully explored with some individuals than with others. The depth of the exploration with any particular respondent will be guided by the role that individual played in the program’s design and operation, i.e., where they have significant experiences for meaningful responses. The interviews will be audio taped and transcribed.

We will conduct an interview with one Energy Assistance Foundation staff member to understand any issues related to customer enrollment, participation and incentive disbursement as well as coordination with CSG and AIC.

Introduction

Hi, may I please speak with [NAME FROM LIST]?
My name is ________ and I’m calling from Opinion Dynamics. We are part of the team conducting the evaluation of Ameren Illinois’ residential energy efficiency programs and we’re currently in the process of conducting follow-up PY4 interviews with program managers and key staff in order to get updated information about any changes to the Warm Neighbors Cool Friends Weatherization program. The questions will likely take about 30 minutes to complete. Is this a good time to talk? [IF NOT, SCHEDULE A CALL BACK.]

Background

1. First, how are the Warm Neighbors Cool Friends and Moderate Income program different if at all?
   a. Could you describe your role in the program?

13 “An energy audit is provided to targeted customers, with several measures installed by the energy advisor at the time of the audit. The energy advisor produces a custom report with a work order of recommended energy efficiency improvements that the homeowner is encouraged to install by contracting with CSG. The work is performed by CSG subcontractors selected from the HEP and HVAC programs. Customers are required to pay a small portion of the overall project cost and the EAF grants funds to cover the remainder of the project cost after program incentives are applied. According to the PY4 Implementation Plan, participants cover “The greater of $500 or 10% of the total project cost, in addition to any amount not covered by program incentives or EAF grant funds.”
b. What are your responsibilities?

2. Can you describe how the Energy Assistance Foundation mission relates to the Moderate Income program?
   a. Why did EAF decide to partner with AIC/CSG to implement the program?
   b. What about the EAF positions your organization to work with the target market?
   c. What other program services do you provide? Is it to a similar market?

3. Aside from AIC and CSG what other organizations are involved in this program, if any?
   Could you describe their roles?
   a. What are the responsibilities?
   b. At what stage in program delivery are they the most active?
   c. Who do they coordinate or interact with?
      i. Probe for: implementation team, customers, program allies, others

Overall Perspective

4. In general, what would say were the program’s biggest successes in PY4? What were the reasons for these successes?

5. In general, what would say were the biggest surprises, if any, associated with the program in PY4? Please describe them.

6. In general, what would say were the biggest challenges, if any, associated with the program in PY4? Please describe them.

Program Design and Implementation

7. Have there been any changes to program design or implementation in PY4 from PY3?
   a. Please describe these changes.
   b. Why were these changes made?
   c. How did these changes affect program design or implementation?

8. Do you anticipate any changes to program design or implementation in PY5?

Program Goals and Objectives

9. Does EAF have program goals associated with the Moderate Income program? What are they?
10. Has the program met its goals for PY4? If no, which goals do were hard to accomplish? Why?
11. Do you track these goals?

Program Staff

12. Could you describe the roles and positions of any new staff that was hired in PY4 for the program?
    a. What are the positions?
    b. What are the responsibilities?
    c. How have these supported the programs?
    d. Are there any plans to hire new staff?

Marketing and Outreach

13. Please describe the key marketing and promotional efforts for the program in PY4. [PROBE
FOR TARGET AUDIENCES, CLARITY OF MARKETING MESSAGES, MARKETING SOURCES AND CHANNELS.
   a. How do customers become aware of the program?

14. Do you think the level of marketing and promotion of the program has been appropriate so far? Do you think promotional efforts are successful? [PROBE FOR ROLE IN INCREASING PARTICIPATION AND AWARENESS.] Do you think they reach the right audience? Is there anything you would do differently? If so, what?

Program Ally Participation
15. Can you describe how program allies are selected for the program?
16. Can you describe the role program allies play in implementing the program?

Customer Participation
17. Can you describe the eligibility criteria for participants? Are there any barriers to eligibility that you encounter while administering the program? (Probe for disqualifications, electric households, etc.)
   a. Does EAF cover the cost for upgrades to qualify a home for participation?
18. What do you see as the main barriers to participation in the program in PY4? What actions has the program taken to overcome those barriers?
19. Could you walk me through the typical steps that occur between a customer first coming into contact with the program and the customer application being passed on to CSG for audit scheduling?
   a. After that, when does EAF come into contact again with the customer?
20. How well has the participation process and program requirements been explained to customers?
   a. In your opinion, have there been any areas in the program requirements or points in the participation process that have created confusion or concern among PY4 customers or participants?
   b. Has the program made any changes as a result of these issues?
   c. How do these issues compare to PY3? Are they similar or different?
21. In your opinion, what are barriers to installation of incentivized shell or HVAC measures after receiving an audit, if any?
   a. What percentage of customers who receive audits would you estimate go on to install incentivized shell or HVAC measures?14
   b. (Probe for disqualification issues)
22. Please walk me through the reimbursement process. It is our understanding that the participant pays $500 or 10% of the cost of the retrofit (whichever is higher) after incentives are deducted from the project. EAF then covers the remainder of these costs. Is this correct?
   a. To whom do you submit funding or reimburse?
      i. Directly to CSG?
      ii. To contractors/program allies?
      iii. To customers?

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14 WH stated that for the MI program “There are a certain percentage of audit participants who do not proceed with the follow up work for various reasons, mostly due to disqualifying deficiencies in the existing structure (knob and tube wiring, combustion safety issues, broken windows, etc. Conversion rate is 70-80%).
b. Are there any challenges that you have encountered in administering reimbursements?

Attribution

23. Are there any other programs in the market that offer similar services as the program to the same target market? If so, please describe (what services offered, what market, name, etc.).

Opportunities for Program Improvement and Evaluation Priorities

24. Aside from what we’ve talked about so far, are there any other areas where the program could improve to create a more effective program for customers and help increase energy and demand impacts? [For each suggestion ask:] a. How would this specifically accomplish either objective? b. Are there any inherent limitations with implementing this change?

25. Are there any other process-related issues you would like to see explored in this evaluation?

26. Do you have any other final comments or suggestions for us?

Thank you very much for taking the time to assist us with this evaluation. Your contribution is a very important part of the process. Do you mind if we follow-up with you by phone or e-mail later, if additional questions arise?
Energy Advisors Interview Guide

Ameren Illinois Evaluation:
Residential Home Energy Performance [HEP, ESHP, MI] Program

HEP: Energy Advisor
ESHP: Air Sealing Energy Advisor
MI: Project Coordinator
In-Depth Interview Guide

July 2012 Final

Name of Interviewee: ___________________________ Date: ____________
Title: __________________ Company: ____________________________

[Note to Reviewer] The Interview Guide is a tool to guide process evaluation interviews with implementation contractors. The guide helps to ensure the interviews include questions concerning the most important issues being investigated in this study. Follow-up questions are a normal part of these types of interviews. Therefore, there will be sets of questions that will be more fully explored with some individuals than with others. The depth of the exploration with any particular respondent will be guided by the role that individual played in the program’s design and operation, i.e., where they have significant experiences for meaningful responses. The interviews will be audio taped and transcribed.

This guide will be used to conduct interviews with 2 CSG Energy Advisors for HEP, 1 CSG Air Sealing Energy Advisor for ESHP and 2 CSG Project Coordinators for Moderate Income. These interviews review program implementation successes and challenges, in addition to understanding barriers to participation for both contractors and participants. The guide attempts to elicit insights into program design, implementation, strengths and weaknesses. The guide also addresses questions of attribution regarding other programs that are operating in this field to develop an appropriate NTG battery for our participant survey.

Introduction

Hi, may I please speak with [NAME FROM LIST]?

My name is ________ and I’m calling from Opinion Dynamics. We are part of the team conducting the evaluation of Ameren Illinois’ residential energy efficiency programs and we’re currently in the process of conducting follow-up interviews with program staff in order to get updated information on the residential [READ IN BASED UPON SAMPLE Home Energy Performance, Electric Space Heat Pilot, Moderate Income] program. The questions will likely take about 20 minutes to complete. Is this a good time to talk? [IF NOT, SCHEDULE A CALL BACK.]

S1. Our records indicate that you conduct audits for the [READ IN PROGRAM NAME]. Is this correct?

S2. Do you conduct audits for any other programs?

Background
Appendix - Data Collection Instruments

27. Could you describe your role in the program?
   a. What are your responsibilities?
   b. How long have you been an Energy Advisor/Project Coordinator?
   c. How long have you been in the energy efficiency industry?

Overview

28. Could you walk me through a typical process of auditing the home starting from when you first arrive at the home up to the point that a project is completed?
   a. Probe for:
      i. installing the measures
      ii. creating the recommendations report
      iii. [MI ONLY] overseeing contractor work, if applicable
      iv. [MI ONLY] QA / QC efforts
      v. [MI ONLY] determining customer satisfaction at the close of a project
      vi. [MI ONLY] coordinating incentive payments with EAF

29. What would you say are the challenges associated with the auditing (and air sealing) stage?
   a. Probe for:
      i. testing
      ii. installing the direct install measures
      iii. paperwork
      iv. reports
   b. Are there any opportunities for improvement?

Participant Perception

30. Based on your conversations with home-owners, what would you say most motivates them to participate in this program?

31. Are there typical concerns home-owners have around any of the program processes:
   a. The audit of their home?
   b. The installation of the free measures?
   c. The recommendations report?
   d. The rebates for additional measures?

32. How do you think homeowners view the free measures that are installed?
   a. Are there any that they appear to like or dislike more than the others?

Participant Awareness and Knowledge of Home Energy Efficiency

33. How would you describe homeowner awareness or knowledge of home energy efficiency? What makes you say this?
   a. What areas do homeowners appear to have the most awareness or knowledge about?
   b. What areas do homeowners appear to have the least awareness or knowledge about?
   c. Are there aspects of home energy efficiency that are difficult to explain or discuss?
      i. If so, can you think of any ways this process may be improved?

Implementation Challenges and Surprises

34. Is there anything you find routinely challenging about working with homeowners in this
program? If so, please describe it.

35. Is there anything you find surprising about working with homeowners in this program? If so, please describe it.

36. What are the biggest challenges to completing high quality work for the program?
   a. Which aspects of the job require the most time?
   b. Which aspects of the job require the most expertise?
   c. Which aspects of the program require most explanation to the home-owners?

Barriers

37. Based on your knowledge of the market and the way the program is marketed, can you think of anything that may keep contractors from participating in the program? What makes you say this?

38. Based on your knowledge of the market and the way the program is marketed, can you think of anything that may keep eligible Ameren customers from requesting an audit? What makes you say this?

20.

39. Based on your conversations with homeowners, what would you guess might most often keep them from acting on the report recommendations? What makes you say this?
   a. Can you think of any ways that homeowners might be further motivated to act on the recommendations?
   b. Can you think of any ways to improve the process by which participants are channeled into other programs for water heater and HVAC rebates, or refrigerator recycling?

[ASK IF HEP/ESHP PARTICIPANTS ONLY]

40. Do you ever review the online list of program allies with the homeowner?

Training (for Development of the Home Building Science Market)

41. Are you BPI-certified?
   [If yes:]
   a. What BPI certifications do you have?
   b. Did you have these BPI certifications before you became an Energy Advisor for CSG?
   c. Could you describe any BPI or other home energy efficiency training you received since becoming an Energy Advisor?

42. How satisfied were you with the training received for the program?

43. Based on your experience as an Energy Advisor/Project Coordinator including the homes you’ve audited and [ASK IF HEP/ESH: any feedback you’ve received from CSG’s QA/QC inspectors], is there anything you would suggest CSG adds to its training or mentoring activities for Energy Advisors going forward?
   a. About how many homes did you audit before you felt fully competent as an Advisor or is it still a learning process?
   b. What are the most challenging aspects to doing a home audit well?
Other Programs in the Market

44. Can you think of any other programs in the market that provide similar services or otherwise support home energy audits and upgrades?
   [If yes:]
   a. What are they?
   b. Do you know if Ameren customers have access to them?
   c. How do participants in these other programs finance the audit and upgrades?

Opportunities for Program Improvement

45. Aside from what we’ve talked about so far, are there any other areas where the program could improve to create a more effective program for customers and achieve further energy savings?
46. Do you have any other final comments or suggestions for us?

Thank you very much for taking the time to assist us with this evaluation. Your contribution is a very important part of the process. Do you mind if we follow-up with you by phone or e-mail later, if additional questions arise?
Program Ally Interview Guide

Ameren Illinois Evaluation:

Residential Home Energy Performance HEP, ESHP and MI Program

Program Ally In-Depth Interview Guide

August 2012 - FINAL

Name of Interviewee: _________________________ Date: ______________

Title: __________________ Company: ___________________________

[Note to Reviewer] The Interview Guide is a tool to guide process evaluation interviews with Program Allies. The guide helps to ensure the interviews include questions concerning the most important issues being investigated in this study. Follow-up questions are a normal part of these types of interviews. Therefore, there will be sets of questions that will be more fully explored with some individuals than with others. The depth of the exploration with any particular respondent will be guided by the role that individual played in the program’s design and operation, i.e., where they have significant experiences for meaningful responses. The interviews will be audio taped and transcribed.

This guide will be used to conduct interviews with 10 Program Allies. The sample of program allies will be selected based upon the number of projects completed in PY4, in addition to their participation across the HEP and Moderate Income programs. These interviews review program implementation successes and challenges, in addition to understanding barriers to participation for both contractors and participants. The guide attempts to elicit insights into program design, implementation, strengths and weaknesses. The guide also explores satisfaction with training, program information, application processes and the program’s impact on their business. The guide also addresses questions of attribution regarding other programs that are operating in this field to develop an appropriate NTG battery for our participant survey.

4.3.1  

[NOTES TO INTERVIEWER]

1. AIC notes “The ESHP pilot program is very small and only in specific geographical locations, as such program allies are likely unfamiliar with the program. We suggest removing references to ESHP.” So references to the ESHP program have been removed, yet the program may still come up in the interview. In most cases, allies who are represented in ESHP jobs will consider themselves to have participated in the HEP program instead.

2. We would like to complete a total of 10 interviews using this approach:
   - 4 interviews with high volume HEP (and ESHP) program allies
   - 4 interviews with low volume HEP (and ESHP) program allies
   - 2 interviews with Moderate Income (“Warm Neighbors Cool Friends”) allies

   Since some allies work in both programs and since there are fewer MI program allies generally, use the beginning of the interview to establish whether or not the ally is a MI ally and so collect that information first. After we have two interviews completed with MI allies, we can move on to focusing on HEP data collection.
Appendix - Data Collection Instruments

Introduction

Hi, may I please speak with [NAME FROM LIST]?

My name is _________ and I’m calling from Opinion Dynamics on behalf of Ameren and the [READ IN: Home Energy Performance, Warm Neighbors Cool Friends] program. We would like to talk with you for about 30 minutes to get your perspective and feedback for program improvement. Is this a good time to talk? [IF NOT, SCHEDULE A CALL BACK.]

Screener

[Ask all]

47. We’d like to talk to a person in your business that has the most experience with the program. Would you be that person? [IF NOT GET A NAME AND TRY TO SCHEDULE A CALL BACK.]

48. Program records show that you are an active Ameren Program Ally and that you submit jobs to the [READ IN: Home Energy Performance, Warm Neighbors Cool Friends] program(s). Is that correct?

Participation in the Market

[Ask all]

49. Could you describe your business and your role in it?
   a. How long have you worked at/ owned [business name]?
   b. Have you always had the same job responsibilities? (Probe for whether program/training impacted change in job responsibilities)
   c. [If not] How long have you been doing what you are doing now?

50. Could you describe your client base?
   a. Who do you typically serve: residential or commercial clients?
      i. [ASK IF COMMERCIAL] About what percent of your jobs are residential?
   b. What counties do you primarily serve?
      i. Do you tend to perform different work or serve different types of clients in different counties?
      ii. [if so] Please describe these differences

Program Participation

Expectations

[Ask all]

51. Program records indicate that you started as a residential Program Ally on [Insert date]
   Does that sound about right? (If not, collect approximate start date)
   a. Has participating in the program met your expectations? Please explain why you say
52. Could you describe any program training you received either to become a Program Ally or since becoming one? 

*Listen for:*


b. **Spring HEP Contractor Meetings** with Energy Federation Inc who supplies products such as spray foams, bath fans, light bulbs, aerators etc. Program updates were provided including an extensive discussion on ActOnEnergy Materials and Installation standards as well as there was a presentation on ASHRAE 62.2 ventilation standards by AOE Southern Account Manager Paul Englert
   i. May 20th, Peoria
   ii. May 21st, Decatur
   iii. April 3rd, Metro East
   iv. April 4th in Marion

c. **Sales Trainings:** May 22nd and May 23rd ActOnEnergy hosted sales training, on identifying the consumer type & needs and tailoring interactions to best educate the consumer and ultimately close the sale for an energy efficiency improvement.
   i. May 22nd, Double Tree Hotel, Collinsville (Metro East)
   ii. May 23rd, Best Western Ashland House, Morton

d. **On Line Basic Building Science**

e. **On Line HVAC Training**

f. **BPI Training:**
   i. John Logan college, near Carbondale,
   ii. Southwest IL Community College Campus, in the metro east.

53. Are you BPI-certified?

*If yes:*

  d. What BPI certifications do you have?
  e. Did you have these BPI certifications before you became a Program Ally?
  f. How likely is it that you would have sought out these/this BPI certifications(s) if not for the support of the program? Please use a scale where 0 is ‘not at all likely’ and 10 is ‘very likely’.
  g. How about other employees within your business: How many of them have BPI certifications?
     i. When did they get certified?

54. Based on your experience as a Program Ally, is there anything you would suggest CSG or Ameren add to the training activities going forward? What makes you say this?

**Impact on Business**

*Ask all*

55. In the last six months, about what percentage of your residential jobs have been for the
Appendix - Data Collection Instruments

Ameren [READ IN: Home Energy Performance, Warm Neighbors Cool Friends program(s)]?
   a. Do you see this percentage changing at all over the next six months?
   b. [If so] How and why?
   c. What are the main types of jobs you do for the program?
   d. [ASK IF ALLY DOES AIR SEALING AND INSULATION JOBS:] How do the air sealing jobs and insulation jobs you do for the program differ?
      i. Is one typically easier to complete?
      ii. Are the customers different?
      iii. Any other differences you notice?

56. How do you typically get program jobs: by referral from the program, or through your own efforts?
   a. About what percent of program jobs do you get from an audit provided by the program?
   b. About what percent of the program jobs do you get through either the website or through program staff?
   c. About what percent of the program jobs do you get through your own efforts?

57. Aside from anything we have already discussed, what are the ways the [Read in: HEP, WNCF] program has affected your business in the last six months?
   a. Have you hired more staff to be able to complete Ameren program work?
   b. Have you invested in new tools or equipment?
   c. Have you or other staff received other non-program training in residential energy efficiency?
   d. Have you marketed yourself as an energy efficiency or green contractor?
   e. Have you expanded your service area?
   f. Have the number of jobs increased?
   g. Have you started auditing homes for energy efficiency?

Similar Programs in the Market

[Ask all]

58. Are you aware of any other home energy performance programs or initiatives in the market, either in Ameren service territory or in nearby regions?
   a. What are they?
   b. Where are they?
   c. Do you know what upgrades or retrofits they support or promote?
   d. Do you know the other programs well enough to be able to compare Ameren’s program to these others?
   e. [If so] What are the key differences between these programs and the Ameren program?
   f. How do these other programs affect your business?
   g. What percent of your residential business jobs/revenues are associated with these other programs/initiatives?
   h. Do your Ameren customers use these programs (e.g., rebates) to help finance their home energy upgrade projects?

Barriers to Contractor Participation

[Ask ESHP / HEP ALLIES ONLY]
My next few questions have to do with Program Ally participation.

59. [Ask of high volume allies] What do you think are the main reasons some Program Allies do not participate in the HEP program more than they do?
   a. What do you think it would take to get these allies to submit more jobs to the HEP program?
   b. Do you think there are certain types of allies for whom participating in the HEP program is more difficult than for others?
      i. If yes, why?

60. [Ask of high volume allies] Is it possible for you to participate in the HEP program even more than you currently do? What has to happen for you to submit more jobs through the program?

61. [Ask of lower volume allies] What keeps you from submitting more jobs to the HEP program than you currently do?
   a. Do you think there are certain types of allies for whom participating in the program is more difficult than for others?
      i. If yes, why?

Participant Awareness and Knowledge of Home Energy Efficiency

62. How would you describe homeowner awareness or knowledge of home energy efficiency? What makes you say this?
   d. What areas do homeowners appear to have the most awareness or knowledge about?
   e. What areas do homeowners appear to have the least awareness or knowledge about?
   f. Are there aspects of home energy efficiency that are difficult to explain or discuss?

Barriers to Customer Participation

[Ask all]

My next few questions have to do with customer participation.

63. Please describe any messaging or marketing approaches you believe motivate homeowners to complete energy efficiency upgrades projects on their homes.

64. Generally speaking, what keeps homeowners from making energy upgrades to their homes?

[Ask if Program Ally participates outside of referrals]

65. In cases in which you’ve made contact with Ameren customers who did not receive audits through the program, what are the main reasons they might not go ahead with work you
that could be rebated through the program?
  a. Can you think of any ways that homeowners might be further motivated to act on energy efficiency upgrades through the program?

[Ask all]

66. Do you tell your customers about other Ameren residential programs?
  a. [If so] Which ones?

Program Component Satisfaction

[Ask all]

Now I am going to ask about your satisfaction with a few program features, please tell me your level of satisfaction using a scale where 0 is ‘not satisfied at all’ and 10 ‘is completely satisfied’.

67. How satisfied are you with:
  a. The program overall?
  b. The training activities in which you participated?
  c. The communication with program staff?
  d. The program paperwork?
  e. The program incentive levels? [Note to interviewer: Be aware that incentive levels are dropping, as such feedback should be separated by PY4 and PY5 incentive levels for a better cross reference.]
  f. The program measures and upgrades for which the programs give incentives?
  g. The program’s marketing approach?

Opportunities for Program Improvement

[Ask all]

68. Can you think of any ways that the program might encourage more participation among Ameren customers with electrically-heated homes?
69. Aside from anything you’ve already suggested, are there other areas where the program could improve to create a more effective program for customers and achieve further energy savings?
70. Do you have any other final comments or suggestions for us?

Thank you very much for taking the time to assist us with this evaluation. Your contribution is a very important part of the process. Do you mind if we follow-up with your by phone or e-mail later, if additional questions arise?