

State of Wisconsin Public Service Commission of Wisconsin

Focus on Energy Evaluation

*Residential Evaluation: ACES RHEEP Pilot
Results*

Final Report: April 28, 2009

Evaluation Contractor: PA Consulting Group Inc

Prepared by: Kimberly Bakalars, Pam Rathbun, Bryan Ward, and
Jeremy Kraft, PA Consulting Group

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Liaison Contact: Dr. David Sumi
PA Consulting Group Inc.
6410 Enterprise Lane, Suite 300
Madison, WI 53719
Tel: +1 608 443 2700
Fax: +1 608 661 5181
E-mail: David.Sum@paconsulting.com

Prepared by: Kimberly Bakalars, Pam Rathbun, Bryan Ward, and Jeremy Kraft,
PA Consulting Group

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1. INTRODUCTION

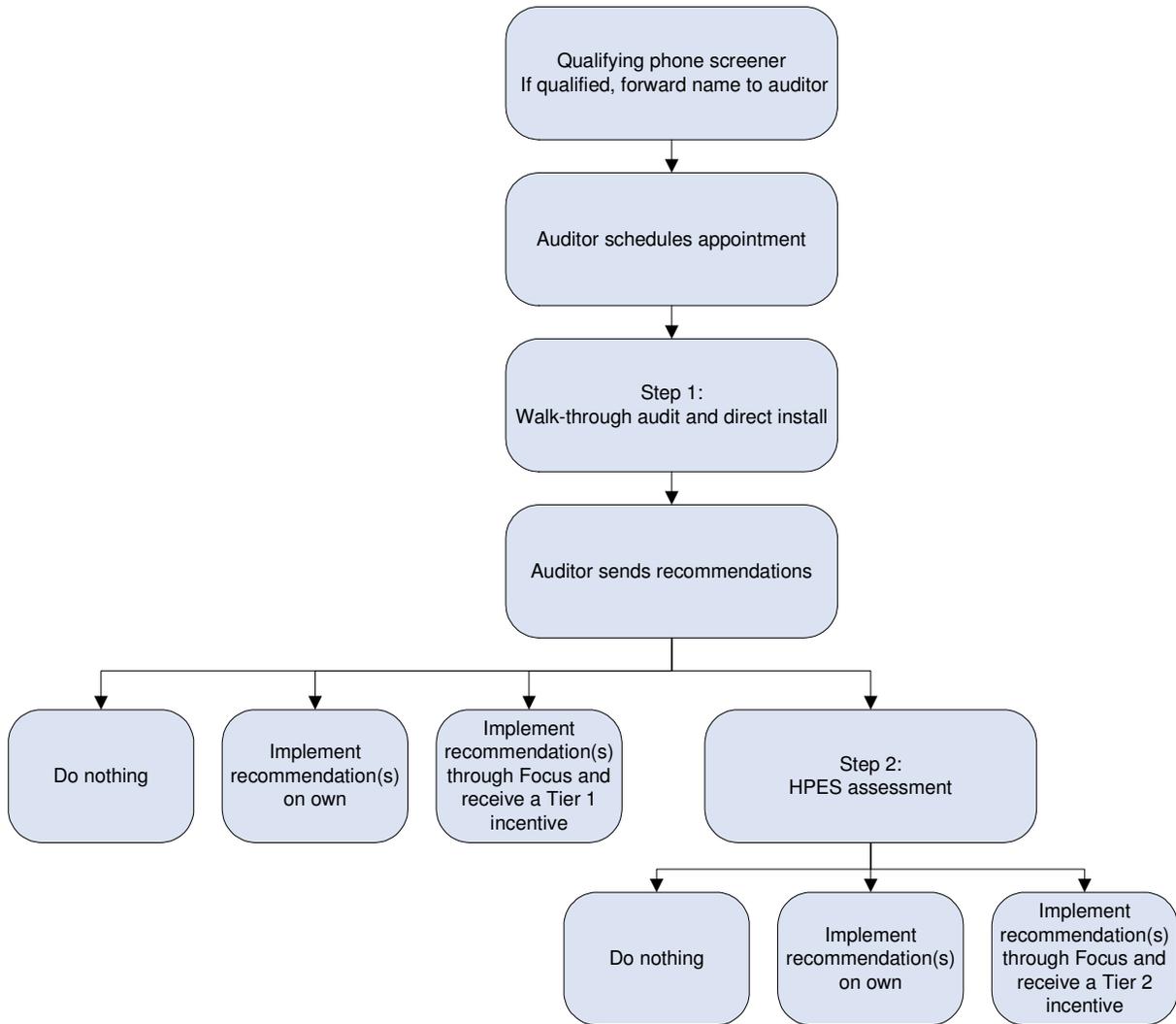
This report summarizes the results of primary data collection conducted by PA Consulting Group (PA) in 2009 for the Residential Housing Energy Evaluation program pilot (RHEEP) evaluation.

1.1 PROGRAM OVERVIEW

In 2008, the Apartment and Condo Efficiency Services program (ACES) developed a pilot program for two- and three-unit rental buildings not currently served under ACES, integrating program design components from the ACES Whole Building program and the Home Performance with ENERGY STAR® program. The pilot program targeted non-owner occupied two- or three-unit buildings, flats, duplexes, and cooperative housing including co-ops and fraternity and sorority buildings in the Madison metropolitan and Oshkosh areas. The program was designed to increase building and equipment efficiency and affect the timing of these improvements, which include accelerating the retirement of mechanical equipment.

The pilot was promoted at apartment association meetings and shows, tenant resource associations, neighborhood associations, co-op boards, through press releases, and on campuses in the target areas. The pilot also offered a \$50 referral bonus to renters who convinced their landlords to participate in the walk-through audit and direct install portion of the pilot. Figure 1-1 graphically presents the participation process, which is discussed in more detail following the figure.

Figure 1-1. Residential Housing Energy Evaluation Program Pilot Participation Process



Landlords completed a brief qualifying phone screening prior to being accepted into the program. The pilot consisted of two steps:

1. The first step was a walk-through audit that included a direct install component. The walk-through audit identified potential opportunities to increase the efficiency of the unit; identified equipment that could be upgraded or serviced and provided incentive forms for that equipment; identified solutions to other building problems such as ice dams, window condensation, drafts, etc.; directly installed CFLs in fixtures and low volume/high pressure showerheads and facet aerators; and informed the owner about other Focus offerings. After the walk-through audit, landlords were provided with an audit report, a list of Home Performance consultants (see Step 2), and a RHEEP incentive application. Savings were claimed from the direct install component of the initial audit.

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2. The second step was to motivate the owner to follow through with a complete Home Performance with ENERGY STAR assessment. The owner would pay the standard cost of this assessment (less a \$75 incentive), which provided the owner with a list of available increased and/or bonus incentives for installed measures and an additional bonus for completing air sealing and at least one other building shell measure recommended as a result of the Home Performance assessment.

The pilot used two different delivery approaches to determine which achieved the program goals most effectively. Once screened for eligibility, Focus on Energy forwarded landlord contact information to staff in the Madison and Oshkosh areas. In the Madison metropolitan area, the walk-through audit and direct install (Step 1) were completed by a member of the ACES existing buildings team. In Oshkosh, the audit and direct install were completed by a Home Performance with ENERGY STAR independent consultant. In both areas, the goal was to have staff encourage the owner to participate in the full program that required the complete Home Performance assessment to obtain increased incentives (Step 2).

The pilot goal was to complete walk-through audits and direct installs (Step 1) in 200 units during the pilot period (March 1, 2008, through the end of 2008) on a first come, first served basis. Between June 24 and December 12, 2008, 32 rental property owners/managers participated in the pilot program. These 32 owners/managers represented 69 properties (approximately 140 to 150 units) that received the walk-through audit. As discussed in Chapter 2, only one of the 32 owners/managers we talked with went on to receive a Home Performance assessment and installed some of the recommended improvements (Step 2). An additional seven owners/managers made some of the recommended improvements from the walk-through audit (Step 1) without receiving the Home Performance assessment.

1.2 EVALUATION METHODOLOGY

The primary objective of the evaluation was to assess the overall effectiveness of the pilot design. Given the differences in the student rental markets in these two cities, it was difficult for the evaluation to assess definitively whether one delivery method was more effective in terms of recruiting participants, completing audits, moving owners to take additional action, moving owners to a full Home Performance assessment, and securing completed jobs as a result of the assessment. However, the evaluation of the pilot program addressed a number of researchable questions in the two pilot areas.

- Is there a market for a program of this type among 2- to 3-unit rental buildings and co-ops?
- What are the barriers to getting a Home Performance assessment and/or installing efficiency improvements?
- Is the pilot effectively screening participants for attribution?
- Can the program achieve energy savings in this underserved market (both prescriptive and custom)?
- What percent of landlords who participate in Step 1 move forward with Step 2? What percent actually install additional equipment as part of Step 2?
- What aspects of the program worked best or need improvement?
- Can this program be expanded to other areas?

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- If participation in the pilot is low, we can alter our approach, as discussed below, and call a sample of nonparticipants to determine barriers to participation and the types of services that would be of interest to this market.

To address these researchable questions, PA conducted three primary evaluation tasks.

1. In-depth interviews with ACES and Home Performance with ENERGY STAR program managers and the primary field staff in the Madison and Oshkosh areas. These interviews were used to gain an understanding of the different marketing and delivery processes used in each area and any barriers staff are facing in getting participation across the two steps.
2. A review of the tracking database to assess key information on potential participants.
3. In-depth interviews with participating landlords in the Madison and Oshkosh areas. As the number of participating landlords was relatively small, we attempted to reach each of them for the interview. These interviews covered all phases of the program: the walk-through audit, direct install, and Home Performance with ENERGY STAR assessment.

There were initial plans to also speak with nonparticipants if the program participation was low. However, all the property owners who qualified for the program participated in the program. Those who did not qualify were primarily outside of the pilot area or occupied part of the property.

1.2.1 Program staff interviews

Six in-depth interviews were conducted among ACES and Home Performance with ENERGY STAR program managers, program staff responsible for screening landlords and processing program documentation, and with the primary field staff in the Madison and Oshkosh areas.

The interview was structured around a topic guide (please see Appendix A) to ensure that key topics were covered during the conversation. We also explored issues outside of the guide when they were mentioned by the respondent. Feedback from program staff was included in relevant sections to inform or support each finding.

1.2.2 Program tracking database review

PA reviewed the ACES HP pilot lead tracking database and landlord screening document used during the screening interviews with interested landlords. This was partially done in conjunction with the call to the program staff responsible for screening interested landlords. An overview of current and suggested tracking fields can be found in Appendix C.

1.2.3 Participant interviews

Between June 24 and December 12, 2008, 32 rental property owners/managers participated in the pilot program. These 32 owners/managers represented 69 properties that received the walk-through audit. Walk-through audits at seven of these properties were conducted by the Oshkosh-based auditor and 62 were conducted by the Madison-based auditor. PA planned to complete interviews with 15 to 20 owners/managers as part of this evaluation.

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PA consultants conducted qualitative, in-depth interviews with 19 of the 32 rental property owners/managers between March 9 and March 17, 2009. These 19 owners/managers represented 41 of the 69 properties. Participants were contacted multiple times in an attempt to complete an interview.

PA staff spoke with participants that received audits from both the Madison-based auditor and the Oshkosh-based auditor. PA was able to speak with both of the Oshkosh participants and found no discernable differences between responses from the two geographies; therefore, results are not broken out by auditor. However, it is worth noting that only two of the 32 participants were from the Oshkosh area, but one of them did complete the Home Performance with ENERGY STAR assessment using the same auditor who performed the walk-through audit.

The interview was structured around an approved topic guide (please see Appendix B) to ensure that key topics were covered during the conversation. Issues not covered by the guide were explored when they were mentioned by the participant.

When reviewing the contents of this report, it is important to remember that these results are qualitative in nature and are meant to explore the range of experiences, opinions, and behaviors of owners/managers. The responses represent their opinions and perceptions of how the program operated, which may not necessarily reflect the intent of the program. The sample size and interview structure were not designed for quantitative analysis. Because of the qualitative nature, not all questions were asked of each respondent. In most cases, the number of respondents answering the question is indicated in the text.

1.3 ORGANIZATION OF THIS REPORT

Chapter 2 summarizes the key findings of the evaluation of the pilot program as follows:

- Characteristics of pilot participants
- Program interest and eligibility
- Program awareness and reasons for participating
- Experience with the walk-through audit
- Home Performance with ENERGY STAR assessment
- Satisfaction with the program.

Chapter 3 presents conclusions and recommendations. Appendix A contains the program staff interview protocol, Appendix B contains the participating landlord interview protocol, and Appendix C contains a list of suggested additions to the program tracking database. Appendix D contains our suggestions for a restructured audit report.

2. KEY FINDINGS

2.1 CHARACTERISTICS OF PILOT PARTICIPANTS

Overall, the respondents interviewed were experienced professionals in the rental apartment market that managed a small number of properties. Of the 19 interviews, all but three identified themselves as the owner of the rental property; three participants identified themselves as the rental manager. Seventeen respondents had more than 10 years experience owning or managing rental property and everyone had more than seven years experience.

However, the respondents interviewed did not typically manage a large number of properties. One respondent managed eight other 2–3 unit properties and another was employed by a property management company that managed more than 130 properties. All other respondents managed four or fewer 2–3 unit properties. Few respondents (four of the nineteen) managed larger properties with more than three units. Respondents did not have long-term improvement plans in place for their properties and often made improvements to properties either as needed or when tenants vacated. For the majority of the units, the tenants were responsible for paying the utility bills.

With one exception, all of the respondents that PA interviewed were the primary person responsible for the decision to participate in the program. One respondent took over the role of property manager shortly after the walk-through audits were completed and was only able to report about the impact of the recommendations.

2.2 PROGRAM INTEREST AND ELIGIBILITY

Interested landlords contacted Focus on Energy (Focus) to inquire about information on the program. At that time they were screened for eligibility and additional information was gathered. Landlords were not eligible to participate in the pilot if their building was outside the designated pilot area or a participating utility area, if they occupied a unit in the building, or if they intended to sell the property within two years.

During the screening call additional information was collected including the type of fuel used for heating, who pays the utility bills, how they heard about the program, reasons for interest in the pilot, willingness to provide access to billing data and be available to accompany the auditor, accessibility of the attic space, previous participation in any programs, and plans for improvements. This information was passed on to the auditors who contact the interested landlords to schedule a walk-through audit.

2.3 PROGRAM AWARENESS AND REASONS FOR PARTICIPATING

The program reached its target audience through a variety of channels. The primary channel for hearing about the program was local rental housing industry organizations such as the Southwest Wisconsin Apartment Association or the Madison Landlord Council. These association meetings were attended by the local auditor as well as program staff. Newsletters from these associations also contained information about the program and how to participate. These newsletters were most likely to be mentioned during the screening process as how landlords learned about the program.

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Respondents also stated that they heard about the program from WECC, the Focus on Energy website, Torrance Kramer, personal contacts at Focus on Energy, Wisconsin Public Service mailers, Madison Gas & Electric mailers, and a referral from a tenant. Two respondents reported that they came across information for the program while actively searching out rebates for improvements they intended to make.

When asked why they participated in the program, the most frequent reason given was access to the free equipment provided and installed as part of the walk-through audit. The other common reason for participation was that respondents wanted to learn how they could increase the energy efficiency of their properties. They framed this as “doing their part” to conserve energy or wanting to lower energy bills. Respondents also stated they participated in order to gather additional information regarding available rebates or because of positive experiences in the past with Focus on Energy staff and programs (which was usually at larger properties).

At properties where tenants paid the utility bills, respondents talked about wanting to pass along savings to tenants, either to increase tenant retention or to use as a selling point with prospective tenants. Although the pilot was initially designed to target landlords who paid the utility bills, or at a minimum the heat bills, the majority of pilot participants interviewed did not pay the utility bills—their tenants did. The lack of good information regarding who pays the utility bills makes it difficult to successfully target the landlords who pay the bills for participation in the program.

2.4 EXPERIENCE WITH THE WALK-THROUGH AUDIT

All respondents verified that they had the walk-through audit done at their property. The length of time for the walk-through audit varied from 20 minutes to 2 hours per unit, with most respondents reporting about 1 hour per unit. Twelve of the nineteen respondents felt the length of time the auditor took was adequate while three thought the auditor took more time than necessary or expected. One respondent added that he appreciated that the auditor kept the disruption to tenants to a minimum.

Program staff expressed concern about the amount of time the audits were taking. Auditors said that they attempted to keep the audit to one hour per unit on average. The length of the audit varied depending on the amount of measurements required and the number of questions from landlords or tenants. Program staff indicated that they had discovered that there some miscommunication to walk-through participants about the level of the incentives being offered to participants who also have an assessment done (Tier 2). Efforts have been made by program staff to ensure that information about the incentive levels is accurately communicated in the future. There is some expectation that this may result in a higher proportion of walk-through audit participants having the assessment done.

2.4.1 Reaction to recommendations

Fourteen of nineteen respondents were satisfied and used terms such as "thorough," "reasonable," and "accurate" to describe the recommendations.

All respondents recalled that written recommendations were provided to them after the audit. Fourteen of the nineteen respondents were satisfied with the written recommendations. Respondents who were satisfied used terms such as "thorough," "reasonable," and "accurate"

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to describe the recommendations. Of the four respondents who were dissatisfied with the written recommendations, one thought there was too much information provided and three did not think there was enough. These three expected to see more information on windows, heat loss, costs, and payback so they could make better decisions.

- "There is not a lot you can do with a 1920s building. Good amount of detail but much of it was not practical."
- "I did not find them comprehensible. I did not understand them as I'm not familiar with the terms so there was not much value to me."
- "I was disappointed as it lacked an action plan, specific costs. I need to know how much it would cost out-of-pocket."
- "A little too much information—about 10 pages. I stopped reading after the first paragraph."

We asked respondents what suggestions they had for improving the written recommendations. Eight had no suggestions. Another seven thought there were no improvements to be made. They felt the recommendations were already "excellent," "competent and detailed," and "very thorough." The five who suggested improvements offered the following ideas:

- "More information regarding cost, payback, etc."
- "More actionable items and more detail about specifics."
- "Maybe just bullet points for the recommendations and contact information so landlords could call back with questions. Or ask how much detail landlords would prefer."
- "It contained information that I don't think I would use (model numbers, size, etc). May be useful to the program but not to me."
- "All recommendations could have been on one recap sheet per address."

2.4.2 Changes made as a result of the recommendations

While all respondents recalled receiving recommendations, only seven of the nineteen respondents could recall the specific recommendations made by the auditor. Another eight did not recall the recommendations without a reminder, and four could only recall some of the recommendations even with a reminder.

Eight of the nineteen respondents reported implementing at least one of the audit recommendations. These improvements included installing windows, weatherstripping, insulation, furnaces, water heaters, dishwashers, and lighting. However, most did not receive an incentive through a Focus on Energy program. The most common improvements made fell under "building shell" which is not eligible for incentives until after the Home Performance with ENERGY STAR assessment. Others did not realize their equipment qualified for incentives.

- In Madison, a landlord replaced two furnaces, three water heaters, and insulation in October of 2008 through Project Home. Project Home did another audit and covered the cost of the equipment. For this landlord the incentive from Project Home was very influential.

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- One landlord replaced a water heater upon failure at his location. He was not sure if it qualified so he never applied for an incentive.
- Another landlord replaced two dishwashers with ENERGY STAR models. She did not realize there may be incentives available.
- One landlord changed out lighting fixtures, caulked, and changed furnace filters. However, they have not yet applied for a lighting incentive as they are still installing fixtures. They will apply once all the fixtures are installed.

Two respondents received a Track 1 incentive for Boiler Tune and Clean. One of these respondents said that he did not routinely schedule that activity prior to his audit, although he said he would have it done if there were performance issues with the unit. We did not get feedback from the other respondent on the influence of the program.

One respondent (in the Oshkosh area) went on to Step 2 and had a Home Performance assessment done. As a result of the assessment, this respondent added insulation and installed a new door with assistance from a Focus on Energy program. He received a Tier 2 incentive and indicated that seeing the infrared image showing heat loss, as well as the incentive, was influential in his decision to install the equipment.

2.4.3 Influence of the audit recommendations

The audit recommendations "pushed" those who were on the fence.

When asked if they had considered making the improvements before having the walk-through audit, four respondents said yes, two thought they probably had, and two said no. Two of the respondents who had considered making the improvements prior to the walk-through were already focusing more on conserving energy and like the idea of energy efficient equipment. Another respondent said, "I was considering improvements, but the auditor provided the push that I needed."

Four respondents felt the recommendations were very influential in their decision to install the equipment. They appreciated the explanation of the cost savings and it gave them the push they needed. The recommendations were somewhat influential for three of the respondents who were already contemplating the action. The recommendations had very little influence on one respondent who does the updates as part of yearly maintenance.

When asked what they would have done in the absence of the RHEEP program, two felt they would have done the same work, four felt they may have done something similar but it would have taken them longer, and two would not have done anything if not for the program.

Respondents were asked what they felt was the most important feature of the RHEEP program that influenced them to implement the new equipment. Responses were similar across those who answered:

- "Talking with Richard."
- "Having the opportunity to ask questions during the walk-through."
- "The recommendations."

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- "The third party recommendations from Richard."
- "The fact that there was a physical inspection that drew my attention to the deficiencies in the building."

Other influences outside the program included the desire to save money on utility bills (for themselves and tenants), the desire to save energy, equipment failure, and damage by tenants.

2.4.4 Follow-up contact from auditor

After the recommendations were delivered, 13 of 16 respondents we discussed this with received some type of follow-up contact from the auditor in the form of an email or phone call.

- "Richard called back a week or so later to talk about the program."
- "Richard provided website information on door and window weatherization as well as a follow-up email in January to see if I was considering the boiler. That was a very welcome email."
- "Richard called to verify that I received the recommendations."
- "Doug called me to see if I had any questions and asked me to call once I had the work done."

Of the three respondents who did not receive a follow up contact from the auditor, one said it would not have made a difference in their decision. However, another said, "new incentive information or a reminder would help convince me that changes are worthwhile."

Auditors did not have a standard or consistent process for follow-up with walk-through participants. The auditors said they were selective about who they followed-up with, usually targeting those who they felt were most receptive to installing additional measures or most in need of installing them.

2.4.5 Barriers to implementing recommendations

Respondents are balancing costs of installing recommended equipment with incoming rent and tenant disruptions in upgrade decisions.

Barriers to implementing audit recommendations are not new. Ten respondents cited the cost of purchasing the equipment and having the work done. Five cited timing issues (including how and when they schedule improvements, higher priorities, and lack of time since the audit). Two would need more information on the costs and benefits before implementing the changes, and two mentioned the disruption to their tenants.

- "I have the best intentions but it hasn't been that long since the audit."
- "We would need to tear up floors or walls to insulate."
- "Upfront cost is the major reason that recommendations weren't followed."

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- "I really wanted to replace windows, but it's too expensive¹."
- "I don't know the costs and benefits."
- "I do not make any changes until something breaks."
- "We have not had the time yet to do them, and we have to have enough rent payments to cover the cost."
- "Funding issues. The insulation and windows are both major expenses due to the age of the buildings (one is in a historic district). It doesn't make sense for me to do one without the other."
- "Basically budget issues and timing. I schedule all work for September each year."

When asked if they were planning to implement any of the recommendations, responses were mixed but over half (11 of 17) were still considering implementing at least some of the recommendations in the future. Two said they will definitely be updating equipment, specifically boilers. The other four do not have any plans to implement any recommendations. Those who are still considering implementing the recommendations will do them as they can, when the funds are available, upon failure, or on their typical maintenance schedules.

Interviews with auditors confirmed that the cost of implementing the equipment was typically a barrier. However, they felt that it often takes the landlords some time to make the decision and they have it on their to-do lists for several months, as can be seen from the respondent comments above.

2.4.6 Suggestions for improvements to the walk-through audit

Respondents agreed that short of higher incentives there was not much more the program could do to improve the walk-through audit.

When asked if they had suggestions for how the program could have better encouraged installation of the recommended equipment, respondents agreed that short of higher incentives there was not much the program could do to address the barriers although one respondent continued to mention providing better information on the associated costs.

- "Better incentives—especially for windows."
- "The rebates are not enough compared to the cost to install. My tenants don't see it as value added and the improvements don't increase the incoming rent."
- "A 50 percent rebate on the increased cost of energy efficient equipment. I want to be fair—meet me half way."
- "Provide better incentives and details about cost."

¹ The program does not provide rebates for windows.

2.4.7 Experience with the direct install component

Tenants are happy with the high quality low-flow showerheads.

Under the direct install component of the RHEEP program the auditor installed CFLs, low-flow showerheads, and kitchen and bath aerators during the walk-through audit. All respondents remembered the direct install equipment brought by the auditor and to the best of their knowledge believe that all equipment is still installed. One respondent went as far as having the tenants sign a letter agreeing to leave the CFLs in the units to ensure they remained installed.

Seven respondents have not received any feedback on the direct install equipment from tenants. However, 12 have actually received positive feedback, especially on the showerheads and the reduction in utility bills. One landlord thought the showerhead was better quality than what she had purchased for her own home.

- "Tenants are thankful as they pay the electric bills. The auditor also provided useful advice to tenants individually."
- "I used to hear all the time from single family residents that they didn't like the low-flow showerheads. I'm most impressed that tenants are happy with them. It defeats the purpose if they take them out."
- "One of our tenants mentioned that she was really excited that the equipment was available and provided."
- "They liked the showerheads and thanked us for making energy efficient improvements."

The auditors have been satisfied with the equipment as well, saying that it is good quality and they have not had any failures.

2.4.8 Prior installation of direct install equipment

Respondents were asked if they installed CFLs, low-flow showerheads, or faucet aerators at any rental properties before they participated in the RHEEP program. Seven of the nineteen respondents had not previously installed any of the equipment. Ten had previously installed equipment, but few of these said it was standard practice. Three of the respondents tried to install efficient equipment as they could. Two of them only installed CFLs in common areas so they did not disappear.

Prior to talking with the auditor, ten of the respondents knew that showerheads came in different ranges of efficiency levels. The majority of those who did not know about the range of levels learned about them from the auditor. "At the walk-through I became wiser on the variations of the low flow showerheads."

2.4.9 Program impact on installation of direct install equipment

Direct installation is getting equipment into units earlier than planned.

If the free measures had not been available through the RHEEP program, about half of the respondents said they would have installed the efficient equipment anyway. However, most would not have done it at the time of the direct install. They would have waited until the current equipment failed. A couple of the respondents would not have installed CFLs in the tenant units had it not been for receiving them free through the program. "There are now CFLs in tenant spaces that would not have been there. I only used them in common areas."

This is also supported by responses to another question regarding previous plans to install the equipment. Only three respondents were planning to install the CFLs, showerheads, or aerators before learning that they could get them for free through the program. Replacements with efficient equipment were likely to take place as they were needed except for one respondent who upgrades the showerheads every five years and another who was implementing the upgrades as part of a bathroom project.

On a scale of 0 to 10, with 0 representing not at all likely and 10 representing very likely, respondents rated their likelihood of purchasing the same equipment if they had not received it at no cost through the RHEEP program. There was a wide range of responses which often varied by equipment type. A couple of respondents said they would have done the exact same thing (10)—especially for CFLs—but there were others who would not do the CFLs without the program because the tenants take them. Four respondents were at the “not at all likely” end of the scale for all equipment as the direct install equipment is more expensive than what they would normally put in.

Respondents were also asked to describe the impact of the program in their own words. Responses were fairly evenly split between whether or not they would have installed CFLs and aerators without the direct install, but respondents were only half as likely to say they would have installed the low-flow showerheads without the direct install.

- "I have been replacing incandescents with CFLs for a while now. However, the walk-through did a pretty comprehensive job replacing them."
- "I might have replaced the light bulbs in the hallway but as a landlord, I don't see my tenant's light bulbs as my responsibility."
- "I have been installing CFLs in common areas but really haven't been able to provide them to tenants. I would have when they vacated so this allowed me to speed up the process. I wouldn't have touched the water saving equipment. Tenants might complain."
- "We don't replace the bulbs with CFLs anymore as they too expensive and walk off with tenants. However, low flow showerheads and aerators we do replace as needed."
- "The measures were a real benefit. I would have installed them eventually but the auditor did them all at once."

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- "It depends on the efficiency available and the pricing. We might have done them eventually—we decide on each piece at turnover and the price of the efficient equipment—the program helped us install these earlier."
- "The program had a huge impact. They were provided free, which was great for my tenants and encouraged me to learn about the equipment. That rippled into my personal life as well."

2.5 HOME PERFORMANCE WITH ENERGY STAR ASSESSMENT

There were two different approaches taken by the auditors when discussing the Home Performance assessment. One chose to highlight and emphasize the long-term benefits of the assessment including documented energy savings, increased efficiency, lower costs, and more comfortable tenants. The other put more emphasis on the more detailed testing and recommendations as well as the higher incentives available. Both discussed these benefits at the time of the walk-through audit. With the written recommendations they also provided a list of Home Performance contractors who could do the assessment.

Fourteen of the nineteen respondents recall the auditor recommending a Home Performance with ENERGY STAR (Home Performance) assessment. Of these 14, 13 recalled the proposed benefits. Six of these mentioned the difference in incentives available if they had the assessment done. Two mentioned the additional equipment used for more comprehensive testing.

- "I realize that there are some incentives not available unless you have the assessment done."
- "It is a more detailed assessment that uses better equipment for the testing."

Eight of the respondents remembered the auditor providing them with information on Home Performance consultants available for the assessment—two of them specified a referral back to the Focus website.

Only two of the respondents attempted to contact a contractor about having a Home Performance assessment done. One respondent thought it was too expensive. "I had already spent my budget and wouldn't be able to afford the recommendations." For the one respondent in Oshkosh who had an assessment done, the auditor came back and conducted the assessment himself. This respondent said the assessment cost him about \$400 and he will probably do an assessment at his other three properties as well. This respondent said the most impressive part of the assessment on this property was the camera showing the heat loss. That really brought it home for him. He did the assessment at this location because he pays the utility bills. However, even though the tenants pay the utility bills at the other locations, he is considering the assessment at the others because he thinks if the tenants are more comfortable and saving money they will stay, or it will be a selling point for new tenants.

There were four respondents who had considered or are still considering having the Home Performance assessment done. One felt it was too expensive, one could not justify the payback period of the recommendations, another would consider if the energy loss was bad enough, and another still needed to research the costs and available contractors.

For respondents who were not considering the Home Performance assessment, many cited the expense as a reason. Of respondents who did not cite expense as the reason, two said

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they had already had an assessment done through another source in the recent past, two said they already know what they need to address, and one did not have the time based on the length of the walk-through audit.

- "I considered but talked with a contractor and the building is too old. The payback period just wouldn't make it worthwhile."
- "I'm not considering it. We are squeaking by as it is. We can't afford the assessment nor any of the recommendations I know it would make."
- "I'm in the building trades and already understand the weak points in my buildings. I didn't feel the additional assessment was worth the money."

The auditors indicated that feedback from landlords suggests that it is not always the cost of the assessment that is the deterrent, but the cost of the work that is recommended as a result of the assessment.

2.5.1 Suggestions for encouraging an assessment

Respondents felt the audit was so thorough that they already had enough actions to implement without going through the full assessment.

The main suggestion for encouraging the assessment was to lower the cost to do one. Eight of the respondents could not get past the initial cost of the assessment, even before they got to the cost of implementing the recommendations. One mentioned that they had an assessment done for free by MG&E in the past. In some cases the respondents felt the walk-through was so thorough that there was no need for the additional assessment—they had enough to implement already. But there were a couple of interesting suggestions. One respondent thought tying more of the incentives directly to the assessment (even more than they are now) would force landlords to more seriously consider the assessment. However, he was not a big fan of his own suggestion. The other respondent recommended that the program make it easier for landlords to identify costs and contractors to save them some time.

- "Provide more assistance with the cost or reduce the cost. For that money, I could replace a window that I know needs replacing."
- "We don't have the budget for the assessment (which we know is a good thing). Even more important is that we don't have the budget for any of the changes that we know the assessment would recommend."
- "I had it done with MG&E years ago and it was free."
- "If Focus on Energy feels it is necessary they could tie the incentives directly to the assessment. I would hate to see that restriction though."
- "Have a list of contractors with a pricing range for each so I don't have to do all the research before I can budget or decide to go ahead with the assessment."
- "We felt the walk-through was very thorough—no stone unturned."

2.6 SATISFACTION WITH THE PROGRAM

Respondents appreciated and learned from personal contact with and advice from the auditor.

Overall, participants were very satisfied with the program. Given that the only initial investment on their part was time spent with the auditor, this is not surprising. Ten of the nineteen participants stated that the walk-through audit was the part of the program that worked best for them as it gave them detailed, building-specific advice. They appreciated the direct contact with the contractor and the advice he gave.

- "We really liked the direct contact with Doug so we could discuss the pros and cons."
- "I appreciated another perspective on the equipment besides that of the retailer and the advice of the auditor on sizing of equipment based on his experience."
- "Having an outside person come in and look at things. Sometimes we're too close and don't realize what else we can do."

Three participants said that the direct install equipment was the best aspect and two other participants said helping their tenants save on their energy bills was what worked best for them.

2.6.1 Perceived benefits of participation

Twelve of the 19 participants said they had not yet directly realized any benefit at their property from their participation in the program. Of these, six stated that any benefit would be realized directly by their tenants, as they are the ones paying the utility bills.

Other participants stated that benefits were an increased awareness of possible cost savings and being able to say that the units are more "green." Only one participant stated that he had seen direct cost savings on his own bill as a benefit of participation.

2.6.2 Suggested program improvements

Respondents would increase the rebates or the amount of direct install equipment available.

Again, participants were very happy with what the program provided. When asked about possible improvements to the program, five of the 19 participants stated that they could not think of anything to change. "You guys really have a handle on energy-type things."

Eight of the participants stated that increased rebates for equipment or more free direct install equipment would improve the program. Specifically, participants mentioned a larger rebate for the Home Performance with ENERGY STAR assessment, for windows, and for programmable thermostats. One participant also requested additional light bulbs be installed as part of the walk-through audit. Additionally, one participant requested that the walk-through audit be shortened or notification be given as to how long the audit would last. Another participant requested more information about benefits "down the line."

2.6.3 Intentions to participate in the future or recommend to others

No participants interviewed had plans to participate in the program at other properties. However, this was not due to program dissatisfaction; typically, all of their 2- to 3-unit properties within the program area had already been involved in the program. In fact, 13 of the 19 participants interviewed said that they either already have or would recommend the program to other property managers of 2–3 unit buildings. A few had already participated in Focus on Energy programs for larger units. One respondent was surprised and happy to see that this program was available for the smaller unit buildings as he thinks this is a good program.

2.6.4 Ideal program for 2–3 unit buildings

Tenant outreach would be a welcome addition to the program.

Participants were asked to talk about what kind of program they feel is needed for rental managers of 2–3 unit buildings. Of course many landlords would like to see free equipment and services. Two of the participants talked about the need for greater tenant involvement.

- “They need programs available directly to tenants. Tenants need to be involved with an outreach program that educates them. Otherwise, they continue to blame the landlord for the high bills, never realizing their contribution or affect.”
- “Have some incentive or directive to help landlords shift energy costs to tenants. I'm required to keep the thermostat at 67 degrees. If tenants pay the heat, it'll be much lower and there will be a big energy savings.”

Other participants said that smaller buildings do not have the efficiencies of scale or large common areas to make an impact in energy savings. Therefore, managers of smaller rental properties need additional funding and rebates. One participant suggested a 50 percent co-pay for the increased cost of an energy efficient measure. Another participant suggested increased rebates for windows.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS

There are multiple variables that influence when and how the landlords make their decisions on installing energy efficient equipment. There will always be a small group who will do nothing, no matter what is recommended or available to them. However, a larger number of landlords are interested in saving energy and lowering utility bills, even if their tenants are responsible for payment. A few landlords view the energy efficient equipment as a benefit to them not for the direct savings, but for marketing, sales, and tenant retention.

Based on the program staff interviews and 19 interviews with landlords that PA conducted, conclusions are presented below in response to the original researchable issues.

Is there a market for a program of this type among 2- or 3-unit rental buildings and co-ops?

Over 10 percent of renter-occupied housing units in Madison are in 2- or 3-unit rental buildings (over 4,000 units), and the proportion is even higher in Oshkosh. While the opportunity was high, participation in the pilot was not as high as anticipated, especially in the Oshkosh area. It is unclear whether this is due to a lack of interest on the part of landlords, or whether the program was not effective in getting the message out.

Auditors indicated that they did follow up with all landlords who expressed interest in the pilot and passed the screening criteria. They completed the initial walk-through audit and direct install with almost all of these landlords. Those who were screened out were primarily either outside of the pilot areas or were owner-occupied.

Among those who did participate, satisfaction with the program was high. Landlords appreciated the direct install equipment and personal contact with the auditors and the opportunity to ask questions. The Home Performance assessment was a harder sell to landlords already under capital constraints.

In order to determine if response was due to a lack of interest or due to the types of marketing efforts, we would need to collect additional information on who received the marketing messages and talk with these nonparticipants to determine why they had not participated in the pilot. We would also need to analyze the data collected as part of the screening survey to determine what marketing methods are more successful.

What are the barriers to getting a Home Performance assessment and/or installing efficiency improvements?

The primary barriers to installing energy efficiency improvements are the cost of the equipment and timing issues. The primary barriers to having the Home Performance assessment done are the cost of the assessment and the cost of the equipment that will be recommended after the assessment. Respondents felt the walk-through audit report was thorough and provided them with enough actions to implement without going through the full assessments. Many have plans to follow up on the recommendations but will need to wait until they have sufficient funds or the unit is vacant.

Is the pilot effectively screening participants for attribution?

The screening questionnaire asked respondents whether they consider energy efficiency when they do maintenance or upgrades, if they have done anything with Focus before now, whether they have any major improvements planned for this building in the next two years, and what their top two reasons are for wanting to participate in the program. However, this information is not recorded in the pilot database so it is unclear how people were screened out for these questions.

As part of the participant interview, we asked a number of questions about program attribution. If the free direct install measures had not been available through the pilot, about half of the respondents said they would have installed some of the equipment eventually, although not at that same time and not necessarily of the same type or quantity. Some would have waited until the existing equipment failed. Only three landlords said they had actual plans to install some of the equipment before learning about the program.

Can the program achieve energy savings in this underserved market (both prescriptive and custom)?

Eight of the nineteen respondents said that they did install at least some of the recommended equipment, although almost none of it was installed through a Focus program. Also, it is not clear whether that equipment would have qualified. Some of these respondents who installed equipment said they did not realize that there were incentives available, even though auditors reported providing the 2- to 3-unit incentive application with the recommendations.

What percent of landlords who participate in Step 1 move forward with Step 2? What percent actually install additional equipment as part of Step 2?

To date, only one of the landlords moved from Step 1 to Step 2. That same landlord installed equipment as a result of the assessment. It has been difficult to move landlords past Step 1 for several reasons. Some felt the audit was so thorough that they already had enough information on actions to implement without going through the full assessment. Others just could not justify the cost of the assessment just to find out there was more they would need to do.

What aspects of the program worked best or need improvement?

Respondent thought the best part of the program was the personal contact with and advice from the auditor. They were also very satisfied with the quality of the equipment. A few who suggested improvements mentioned notifying them about how long the audit will last, providing costs along with Home Performance contractor names, and providing higher incentives for equipment.

Can this program be expanded to other areas?

There was definite interest in the program from landlords outside the pilot areas. According to ACES staff, there were landlords who were screened out because they were outside of the pilot areas. The Oshkosh auditor also mentioned interest in Fond du Lac. ACES staff are rolling the program out to other areas of the state where they feel they have adequate infrastructure in place to support the pilot.

3.2 RECOMMENDATIONS

Based on the tracking database review, in-depth interviews with program staff, and in-depth interviews with landlords, PA has the following recommendations for the Residential Housing Energy Evaluation program pilot (RHEEP).

Increase tenant involvement in the program.

This would be used to support the marketing effort as well as increase possible uptake by landlords. One of the disappointments of the program was the lack of effectiveness of the \$50 offer to college students if they referred the landlord to the program and the landlord followed through and completed an audit. Only one case of tenant referral has been confirmed for the pilot program.

Offer education and outreach to tenants on how to take control of their bills by reducing usage. This would include additional marketing to tenants in the form of flyers or at student gatherings, similar to the approach used with landlords and association meetings. More exposure to tenants would likely increase the effectiveness of the \$50 incentive effort.

A few landlords commented that they still have issues with tenants removing efficient equipment or something as simple as leaving the windows open in the winter, which usually defeats the purpose of the landlord installing energy efficient equipment. Although some believe it is worth the cost to install the energy-saving equipment, they are hesitant to do so if their tenants will negate the savings by their own actions.

Enhance marketing to landlords with additional benefits of participating.

There are marketing opportunities from participating in RHEEP that landlords can use to retain or attract tenants. If tenants pay the utility bills, participation in the RHEEP program increases tenant comfort and assists them with decreasing their utility bills. Landlords like to use participation as a "green" sales tool. They also feel they can leverage the installed equipment as a tool to retain current tenants or attract new tenants, as a few have admitted to doing. Take the opportunity to highlight those benefits in new marketing materials.

Refine the walk-through audit process and report.

Although program staff and auditors were concerned about the length of the audit process, almost all the landlords we spoke with appreciated the personal contact and opportunity to ask questions and learn more about the equipment and energy savings potential. Program staff and auditors worked together initially to develop the audit procedures and data sheet. We recommend that they meet again to determine what additional efficiencies can be gained in the process now that they have the experience of conducting audits. As suggested by program staff, a review of other program options, such as incentives to auditors for getting landlords to complete a HPES assessment, should be considered. The program could also explore options for reducing or expanding the walk-through audit depending on program goals.

Once the audit format is decided, a review of the audit report should be conducted. To reduce misunderstandings regarding the incentive levels, the purpose of the audit, and the benefit of the HPES assessment, an easy-to-read template should be developed to consistently report audit recommendations. An example of a revised audit report, based on the current format,

3. Conclusions and Recommendations...

can be found in Appendix D. To address the miscommunication issues that arose last year, and to better outline the differences between Tier level incentives that are available, the audit report should be restructured to specifically address energy efficiency improvements in three categories. These three categories include behavior modifications that cost little or nothing to implement, Track 1 improvements that are eligible for Track 1 incentives, and Track 2 improvements that are eligible for Track 2 incentives only after an HPES assessment is completed. Track 1 improvements eligible for additional incentives once the HPES assessment is completed should be noted. This revised audit report would facilitate the follow-up communication recommended later in this section.

Increase the amount of information recorded in the tracking database.

PA believes it would be beneficial to record more of the screening information in the tracking database. If there is one person primarily responsible for screening interested landlords, an Access form could be used as the outline for the screening interview and data could be captured directly using that form. If all the information from the screening was captured, the program would have efficient access to information regarding number of ineligible landlords and reasons for ineligibility, effectiveness of marketing, reasons for interest which could influence marketing adjustments, and possible expansion opportunities into areas not currently served by the program. A list of suggestions is provided in Appendix C.

For instance, if all of the interested landlords who had called in the past had been recorded, the program manager could use this to decide where to expand the program. That list could serve as a starting point for marketing to that area, as any eligible landlords have already expressed interest in participating.

Set up a more formal follow-up process with participating landlords.

A difficulty encountered with the pilot was moving participants from the walk-through audit to the Home Performance assessment or from the audit to taking recommended measures through a Focus program. And repeatedly the issue of landlords misunderstanding the program offerings was evident. Although a revised audit report will improve the information communicated to landlords, more is needed to persuade them to move from the audit to the HPES assessment. One program staff interviewed suggested follow-up calls with participants. Although that was done in some cases, it was not done consistently with all participants.

If the pilot wants to encourage the assessment, the follow-up contacts should be made by Home Performance staff who can best explain the benefits of the assessment, not the auditor. If the pilot wants to encourage implementation of recommended improvements, a follow-up call by either the auditor or other program staff would be a good opportunity to answer questions, remind participants about available incentives, and help convince landlords to install some of the recommended equipment.

Regardless of who conducts the follow-up call, we recommend waiting for a few months after the audit to make the first follow-up call. Based on interviews with participating landlords, it is possible that landlords are a bit overwhelmed by the amount of information they receive and need some time to process it and consider the most appropriate improvements to make. They also need time to research the costs, benefits and equipment available. Therefore, additional follow-up calls may be warranted six to eight months after the audit.

APPENDIX A: PROGRAM STAFF INTERVIEW PROTOCOL

Introduction

Hello, my name is [PA CONSULTANT NAME] from PA Consulting Group and I'm calling in regards to the Focus on Energy Apartment and Condominium Efficiency Services program. May I please talk with [CONTACT NAME]?

We have spoken with landlords who participated in the Rental Housing Energy Efficiency Program (RHEEP) for 2–3 unit buildings and would like to get your opinion of the program. The feedback we receive from program staff will be included in a report on the pilot effort. Your responses will be reported in aggregate with other program staff responses.

Context and Decision Making

- C1 What is your title?

- C2. What is your role in the ACES 2-3 unit program?

- C3. Could you walk me through the program approach (including marketing, contacts, tracking system, walk-through audit, recommendations/follow up, assessment)?

- C4. Were there any differences in program approach based on geography (Madison vs. Oshkosh)?

- C5. It is our understanding that the program considered offering a \$50 incentive to students who referred landlords to the program? How did this work as a marketing/referral effort? What were the benefits/disadvantages?

- C6. What was the motivation behind the two tier levels of incentives? How have those worked so far?

Audit Recommendations

- A1 How did landlords qualify for the 2–3 unit ACES audit? How were they contacted once they qualified? Who was responsible for scheduling?

- A2 About how long were the walk-through audits expected to last? Was there any information provided to landlords ahead of time about the audit (timing, tenant disruption, what was covered)

- A3 Is there a checklist of items to cover during the walk-thru? Is that always followed?

- A4 Is there a template or standard format for providing written recommendations?

- A5 Are there priorities to the recommendations? Are there any items that are more important than others?

- A6 Do you think any improvements could be made to the written recommendations?

- A7 What is the typical communication process for getting the written recommendations back to the landlord?

- A8 What do you see as the main barriers for landlords to implementing the audit recommendations?

- A9 Did you follow up with the landlords after the recommendations? What was the nature of the follow-up?

- A11 What types of issues do you come across when performing a walk-thru audit?

- A12 What do you think of the quality of the direct install equipment?

A13 Have you received any feedback from the landlords this equipment? (PROBE FOR SPECIFIC POSITIVE/NEGATIVE FEEDBACK)

A14 Can you please describe in your own words what impact, if any, you think the Apartment and Condominium Efficiency Services Program has on landlord decisions to install/receive energy efficient equipment?

Home Performance Assessment

HP1 Did you recommend that all landlords have a Home Performance with ENERGY STAR® assessment done?

HP2 What do you communicate as the benefits of having a Home Performance with ENERGY STAR assessment? PROBE: Anything else?

HP3 What type of information do you provide for Home Performance assessments? (consultant name, contact info, pricing, testing)?

HP4 What do you think prevents landlords from taking the next step and having the Home Performance assessment done?

HP5 (Does the thoroughness of the walk-thru audit have any impact? Does it detract from the need for Home Performance assessment?)

HP6 If any of your landlords had a Home Performance assessment done – how did you convince them to do so?

Other

O1. Our understanding is that all interested landlords within the pilot area participated in a walk-through audit. Is that a correct characterization of participation? What other information do you have about the participation levels now?

	Interest in info	Walk-thru audit	Home Performance
Madison		30	0
Oshkosh		2	0 (1 not in database)

O2 Overall, what aspects of the Apartment and Condominium Efficiency Services Program do you think work the best?

O3. What did not happen as intended? What areas are in most need of improvement?

O4 A major goal of the program is to encourage rental managers to install recommended improvements. How could the program better encouraged or enabled them to do this?

O5 Another goal of the program is to encourage rental managers to have a Home Performance with ENERGY STAR assessment done. How could the program better encouraged or enabled them to do this?

O6 What type of program do you think is needed for rental managers of 2–3 unit buildings? (PROBE TO SEE IF THEY THINK THEY FACE DIFFERENT TYPES OF BARRIERS THAN LARGER RENTAL MANAGERS)

O7 What changes are being put into place for this contract year?

Thank and terminate

APPENDIX B: PARTICIPATING LANDLORD INTERVIEW PROTOCOL

This qualitative in-depth interview protocol will be used to interview landlords who received a walk-through audit and direct installation of CFLs and water saving devices through the Apartment and Condominium Efficiency Services program. The interviews will be conducted and analyzed by PA consultants.

The objectives of the qualitative in-depth interview research with landlords are to address a number of researchable issues:

- Is there a market for a program of this type among 2- and 3-unit rental buildings and co-ops?
- What are the barriers to installing efficiency improvements recommended during the Phase I walk-through audit?
- Did landlords install any recommended efficiency improvements on their own, and if so, what role did the program play in their decision to do this on their own (spillover)?
- For those landlords that installed recommended measures and received an incentive, what role did the program play in their decision to do this (attribution)?
- What are the barriers to moving to the next phase and requesting a Home Performance assessment?
- What aspects of the pilot program worked best, need improvement?
- How could the pilot program be improved to increase installation of recommended measures?

CONTACT NAME: _____

CONTACT PHONE: _____

AUDITOR: _____

ADDRESS: _____ DATE: _____ DI/OTHER MEASURES: _____

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Introduction

Hello, my name is [PA CONSULTANT NAME] from PA Consulting Group and I'm calling on behalf of the Focus on Energy Apartment and Condominium Efficiency Services program. May I please talk with [CONTACT NAME]?

According to the information I have, you participated in this program for your rental building(s) at [ADDRESS(ES)] [on DATE/between the dates of DATE RANGE].

I would like to ask you some questions about your experiences with the program. This will help the program manager to determine how the program could be improved to serve rental properties like yours.

Under the Apartment and Condominium Efficiency Services Program [CONTRACTOR NAME] conducted a walk-through audit to identify potential opportunities to increase the efficiency of your equipment and your building, identify solutions to any building problems, and install CFLs and water saving measures. Is this correct? (NOTE: VERIFY DI MEASURES AND REVISE AS NEEDED)

Were you personally involved in the decision of whether or not to participate in this program?

Was anyone else within or outside your organization involved in the decision of whether to participate in this program?

(IF SOMEONE ELSE INVOLVED) Who else was involved in the decision of whether to participate in the program at this location? How are they affiliated with this property and what was their role in the decision?

Name _____

Title _____

Phone Number _____

Probe for Role _____

(IF R WAS INVOLVED IN THE DECISION, CONTINUE; ELSE TERMINATE AND DIAL ONE OF THE DECISION MAKERS)

Context and Decision Making

How many 2–3 unit rental properties do you own/manage in Wisconsin? Where are they located? Do you own/manage any rental properties with more than three units?

How long have you owned/managed rental property in Wisconsin?

How did you hear about the Apartment and Condominium Efficiency Services Program? Anywhere else?

Why did you decide to participate in the Apartment and Condominium Efficiency Services Program? Any other reasons?

Audit Recommendations

As part of the program, [CONTRACTOR NAME] conducted a walk-through audit to identify potential opportunities to increase the efficiency of your equipment and your building and identify solutions to any building problems. Is this correct? (IF NOT CORRECT, CLARIFY WHAT DID HAPPEN)

About how long did the walk-through audit last? Did the length feel adequate to you? (PROBE FOR IF THE AUDIT TOOK TOO LONG)

Did [CONTRACTOR NAME] provide you with written recommendations for changes you could make to increase the efficiency of your equipment and building(s), or to solve any building problems?

What was your reaction to the written recommendations? PROBE: about the specificity of the information and the amount of detail.

Did the written recommendations give you more information and detail than you expected, about what you expected, or less than you expected?

How could [CONTRACTOR NAME] have improved the written recommendations he provided you with?

Do you recall what improvements [CONTRACTOR NAME] recommended?

(PROBE AS NEEDED) [CONTRACTOR NAME] recommended that you make the following improvements to the building(s) at [ADDRESS] - [READ RECOMMENDATIONS]

Did you implement any of these recommendations?

(IF IMPLEMENTED) What did you implement and when did you do this? (IF MORE THAN 1 PROPERTY) At which property(s)?

(IF IMPLEMENTED) Did you implement [ACTION] through a Focus on Energy program? If so, what program?

(IF IMPLEMENTED) Had you considered implementing [ACTION] before you talked with [CONTRACTOR NAME]? (PROBE TO UNDERSTAND WHAT THEY HAD BEEN CONSIDERING DOING AND FOR HOW LONG THEY HAD BEEN CONSIDERING IT.)

(IF IMPLEMENTED) Were [CONTRACTOR's] recommendations very, somewhat or not at all influential in your decision to implement [ACTION]? Why do you say that?

(IF IMPLEMENTED) What would you have done (and when would you have done it) if you have not participated in the Apartment and Condominium Efficiency Services Program?

(IF IMPLEMENTED) What was the most important feature of the Apartment and Condominium Efficiency Services Program that influenced you to implement [ACTION]?

(IF IMPLEMENTED) What was the most important reason outside the program that influenced you to implement [ACTION]?

(IF IMPLEMENTED AND WENT THROUGH OTHER FOCUS PROGRAM] Was the incentive you received through the [PROGRAM] very, somewhat or not at all influential in your decision to implement [ACTION]? Why do you say that?

Do you recall whether [CONTRACTOR NAME] or anyone else from the Apartment and Condominium Efficiency Services Program followed up with you after you received the recommendations? (IF YES) PROBE TO UNDERSTAND NATURE AND TIMING OF THE FOLLOW-UP

(IF NO AND DID NOT IMPLEMENT) Would you have been more likely to implement the recommendations if someone had followed up with you? Why or why not?

(NOT IMPLEMENTED @ ALL PROPERTIES) Why haven't you implemented any of the recommendations? (PROBE TO UNDERSTAND EVERYTHING THAT IS HOLDING THEM BACK. ALSO PROBE TO SEE IF THEY FELT THE RECOMMENDATIONS WERE CREDIBLE, FEASIBLE, ETC.)

(NOT IMPLEMENTED @ ALL PROPERTIES) Do you plan to follow through with any recommendations? If so, what do you hope to do and when do you think this might happen?

Home Performance Assessment

Did [CONTRACTOR NAME] recommend that you have a Home Performance with ENERGY STAR[®] assessment done for this building?

Do you recall what [CONTRACTOR NAME] said were the benefits of having a Home Performance with ENERGY STAR assessment? PROBE: Anything else?

Did [CONTRACTOR NAME] provide you with names of any Home Performance assessment consultants that you could contact?

(IF PROVIDED WITH NAMES) Did you attempt to contact a Home Performance assessment consultant?

(IF NOT CONTACTED HOME PERFORMANCE ASSESSMENT CONSULTANT) Have you considered having a Home Performance assessment done?

Why do/don't you want to have a Home Performance assessment done? (PROBE SPECIFICALLY TO UNDERSTAND WHETHER THEY FELT THE INITIAL AUDIT REPORT CONTAINED ALL THE INFORMATION THEY NEEDED AND/OR WHETHER THE COST OF THE ASSESSMENT WAS A BARRIER. ANY OTHER BARRIERS?)

Direct Install Measures

According to the program records, you received [quantity] [measures] at your property/properties through the Apartment and Condominium Efficiency Services Program. (PROBE TO GET CORRECT INFORMATION IF NEEDED)

As far as you know, are these still installed? (IF NOT, WHY NOT?)

Have you received any feedback from your tenants on this equipment? (PROBE FOR SPECIFIC POSITIVE/NEGATIVE FEEDBACK)

Before you participated in this program, had you installed CFLs, low-flow showerheads or faucet aerators at any of your other rental properties? (FOR EACH MEASURE, PROBE TO UNDERSTAND IF THIS WAS STANDARD PRACTICE, HOW MANY INSTALLED AND WHEN, IF THIS WAS THROUGH ANOTHER PROGRAM)

Were you planning to install any of this equipment before learning that you could get them installed at no cost from the Apartment and Condominium Efficiency Services Program?

(IF YES) PROBE ON WHAT EFFICIENCY/QTY THEY HAD BEEN PLANNING, HOW LONG THEY HAD BEEN PLANNING THIS, WHEN THEY PLANNED TO ACTUALLY DO IT

How would you describe the working condition of the old equipment? Was it in good, fair, poor, on non-working condition? (GET CONDITION OF EACH TYPE)

(IF NEVER INSTALLED LOW-FLOW SHOWERHEADS) Prior to talking with [CONTRACTOR NAME] did you know that showerheads came in different ranges of efficiency levels? How did you first learn that they came in different efficiency levels?

If the free [measure type] had not been available through the Apartment and Condominium Efficiency Services Program, would you have purchased any of this on your own for this property/properties at the same time or at a later date? (PROBE FOR IMPACT OF PROGRAM ON TIMING, EFFICIENCY, AND QUANTITY)

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is that you would have bought the same [measure type] if you had not received it at no cost through the Apartment and Condominium Efficiency Services Program?

Can you please describe in your own words what impact, if any, [CONTRACTOR NAME] and the Apartment and Condominium Efficiency Services Program had on your decision to install/receive [measure type] at the time you did?

Incentivized Boiler Measures (Boiler Tune & Clean, Steam Trap Radiator Replace or Repair)

According to the program records, this property also received an incentive for [measure] through the Apartment and Condominium Efficiency Services Program. (PROBE TO GET CORRECT INFORMATION IF NEEDED)

Before you participated in this program, when was the last time that you had a [measure] done? (ALSO PROBE TO UNDERSTAND REGULARITY OF PRACTICE)

Were you planning to have a [measure] done before learning that you could get this done through the Apartment and Condominium Efficiency Services Program?

(IF YES) PROBE ON HOW LONG THEY HAD BEEN PLANNING THIS, WHEN THEY PLANNED TO ACTUALLY DO IT

If the incentive for [measure type] had not been available through the Apartment and Condominium Efficiency Services Program, would you have done this on your own for this rental property at the same time? (PROBE FOR IMPACT OF PROGRAM ON TIMING, EFFICIENCY AND QUANTITY)

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is that you would have got a [measure] if you had not received an incentive through the Apartment and Condominium Efficiency Services Program?

Can you please describe in your own words what impact, if any, [CONTRACTOR NAME] and the Apartment and Condominium Efficiency Services Program had on your decision to have a [measure] at the time you did?

Other

Overall, what aspects of the Apartment and Condominium Efficiency Services Program worked the best for you?

What benefits, if any, have you realized at this property as a result of participating in Apartment and Condominium Efficiency Services Program?

How could the program be improved to better meet your needs?

(IF NOT INSTALLED ALL RECOMMENDATIONS) A major goal of the program is to encourage rental managers to install recommended improvements. How could the program have better encouraged or enabled you to do this?

Another goal of the program is to encourage rental managers to have a Home Performance with ENERGY STAR assessment done. How could the program have better encouraged or enabled you to do this?

Would you consider participating or have you already participated in the Apartment and Condominium Efficiency Services Program at other 2–3 unit rental buildings? (PROBE FOR WHAT WAS DONE AND WHEN IT WAS DONE)

Have you recommended the program to others?

What of program do you think is needed for rental managers of 2–3 unit buildings? (PROBE TO SEE IF THEY THINK THEY FACE DIFFERENT TYPES OF BARRIERS THAN LARGER RENTAL MANAGERS)

When do you typically make improvements to your rental property? (PROBE TO SEE IF WAIT UNTIL UNIT IS VACANT, MAKE THEM AS NEEDED, HAVE SOME TYPE OF PLANNING HORIZON IN YEARS, ETC.)

What is your job title?

Thank and terminate

APPENDIX C: SUGGESTED TRACKING DATABASE FIELDS

The following table provides a list of suggested fields for the tracking database and recommended uses or reason for inclusion. The database fields marked with an asterisk (*) are part of the screener **and** are currently recorded in the tracking database. The remaining fields are part of the screener but are not systematically tracked.

Table C-1. Fields from RHEEP Landlord Phone Screening

Database fields	Reason for inclusion
Date of screening *	Status information
Utility release sent *	Status information
Landlord name *	Contact information
Business	Use to collect information on management company, single owner, etc
Mailing address *	Contact information
Phone number *	Contact information
Email *	Contact information
Installation address *	Contact information
Number of units	Eligibility flag Better information on success against program targets
Tenant or owner occupied	Eligibility flag
Utility company	Eligibility flag
Heating fuel	Provide to Auditor for walk-through
Natural gas provider	Eligibility flag
Who pays heat	Program interest and marketing
Who pays electric	Program interest and marketing
Who pays water	Program interest and marketing
First heard *	Program interest and marketing
Two reasons for interest	Program interest and marketing
Agreement for Pre/Post billing data release	Eligibility flag
Available for walk-through	Eligibility flag
Has incandescents	Provide to Auditor for walk-through
Replaceable SH/Aerators	Provide to Auditor for walk-through
Accessible/viewable attic	Provide to Auditor for walk-through
Approve tenant interviews	Provide to Auditor for walk-through

Database fields	Reason for inclusion
Awareness of EE issues	Estimation of program influence
Consider EE in mtnc/upgrades	Estimation of program influence
Prior FOE participant	Program interest and marketing
Prior Weatherization	Estimation of program influence
Major improvement planned	Estimation of program influence
Plans to sell in next 2 yrs	Eligibility flag
Plans to rent in next 2 yrs	Eligibility flag
Results (Qualified or Not) *	Status information
Reason disqualified	Provides a quick view of disqualification reasons
Date released to field *	Status information
Date of walk-through audit *	Status information
Type/quantity of direct install equipment	Tracked separately but could be combined with this tracking database
Date audit report sent *	Status information
Full HPES assessment *	Status information
Date of HPES assessment *	Status information
Notes *	Record other pertinent information

APPENDIX D: SAMPLE RESTRUCTURED AUDIT REPORT

As mentioned in the recommendations section of the report, a restructured audit report may aid in communicating the first energy efficiency steps the landlord can take as a result of the audit and more clearly outline the benefits of the HPES assessment. An example of a revised audit report is shown below.

Dear [LANDLORD]

I have attached the data collection form that I used during my site visit at [ADDRESS] along with the Incentive Application form that you will need to use to apply for incentives. After work is completed, please fill out this form and return it to Focus on Energy as instructed on the form to receive your Focus on Energy incentive. Incentives for different measures can be applied for at different times as they are completed. I have also attached a list of Home Performance with ENERGY STAR (HPES) consultants who can conduct the more detailed HPES assessment.

The report below outlines the recommendations based on the walk-through audit at your property. Recommendations are divided into three categories, (1) Behavioral modifications, (2) Improvements qualifying for Track 1, and (3) Improvements qualifying for Track 2.

(1) Behavioral modifications:

Actions that cost little to nothing to implement, are not eligible for incentives through Focus on Energy, but can still save energy.

- *Reduce water heater temperature.* The water temperature in this unit was measured at 129 degrees Fahrenheit at the time of the site visit. I recommend regularly monitoring the temperatures and keeping them at no higher than 125 degrees Fahrenheit in the future. This is a health and safety issue as scalding can occur within seconds at temperatures over 125 degrees.
- *Encourage tenants to use compact florescent light bulbs.*
- *Consider using photocell, motion detector, or timer controls for exterior lights.*
- *Replace dryer ductwork.* At the time of the site visit the dryer ductwork for both units was all or part flexible plastic that should be replaced with metal.
- *Weather strip windows and doors.*

(2) Improvement qualifying for Track 1 incentives:

These incentives are available under Track 1 of the attached incentive form. Some of the Track 1 improvements are eligible for higher incentives with the completion of a HPES assessment and those are indicated with an asterisk.

- (*) *Furnace tune & clean.* The high efficiency furnace appears to be in good condition. The unit in place is estimated to be about 90% efficient. The furnaces should have a

regular tune and clean as recommended by the manufacturer and the furnace filter should be changed regularly.

- (*) *Replace the water heaters* with high efficiency (EF=0.64 or better) power vented unit(s) upon failure or as desired. The units now in place are estimated to be about 63% efficient. There are units (tanked or tankless) available that are rated at 90% efficient.
- *Choose ENERGY STAR rated units when the appliances are replaced.*

(3) Improvements qualifying for Track 2 incentives:

Have a Home Performance with ENERGY STAR consultant conduct a thorough efficiency assessment of your building to get more complete information and higher incentives. The improvements listed below are the top priority item for increasing energy efficiency in this building but are only eligible for incentives once a HPES assessment is completed.

- *Air seal and insulate the attic spaces.* The main attic of this building was marginally insulated (R13) and is in need of major air sealing. Open partition walls were visible from the attic access hatch and the attic should be thoroughly examined for more air sealing issues. Once air sealing is completed, insulation can be increased up to about R50 with loose-fill cellulose. There is a second attic section that is over the front of the first floor only. This attic was not accessed during the site visit but it is assumed to be marginally or not insulated. This attic space may be able to be dense-packed with cellulose.
- *Dense pack exterior walls.* At the time of the site visit it could not be determined if there was insulation in the walls of this building. No visual access was available for either floor. If/where not insulated these exterior walls should be dense-packed using cellulose insulation. This will help to air seal and insulate these walls.

Why do I need a Home Performance with ENERGY STAR assessment if I had the audit?

The HPES assessment uses specialized equipment to assess in more detail the potential energy savings at each unit. Please note the differences in the incentives available between the Track 1 assessment (that I performed) and the Track 2 assessment that a Home Performance with ENERGY STAR consultant will do for you (for a fee). This information is indicated in the "Apartment & Condo 2 & 3 Unit Incentive Application" that is attached.

I hope this information will help you make the decisions necessary to implement energy savings projects. Please also be certain that you understand the tax benefits of capital improvements. Feel free to contact me with questions or concerns.

[Auditor contact information]