EVALUATION OF THE 2005 UI HELPS AND WRAP LOW-INCOME WEATHERIZATION PROGRAMS: FINAL REPORT

FINAL

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Submitted to:
The United Illuminating Company
Northeast Utilities
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Submitted by:
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1 Executive Summary

This report summarizes the key findings and recommendations of the Process Evaluation of the 2005 UI Helps and Weatherization Residential Assistance Partnership (WRAP) low-income weatherization programs sponsored by the United Illuminating Company (UI) and Northeast Utilities – Connecticut Light and Power (NU-CL&P), respectively. The programs are operated with funds provided by the Connecticut Energy Efficiency Fund (CEEF); these funds are generated by a public benefits charge added to customers’ electric bills. The process evaluation was conducted by Nexus Market Research, Inc. (NMR) and its subcontractor, Eastham Associates. The evaluation focuses on procedures and results from the 2005 program year, which is the same as the calendar year. The NMR team also acknowledges the recent program changes of which we are aware.

The main objectives of the process evaluation include:
- Assessing program goals and objectives
- Identifying the degree to which program implementers understand the goals and objectives
- Explaining how the programs measure progress toward goals and objectives
- Describing program planning and implementation procedures and processes
- Identifying the drivers and barriers to effective program implementation
- Assessing the adequacy of current program delivery modes
- Assessing coordination of the programs with other weatherization programs in Connecticut
- Determining if program resources and training are adequate to implement the program
- Identifying program strengths and weaknesses
- Recommending improvements in program design, marketing, outreach, and implementation

1.1 Research Activities

The NMR team completed five tasks in support of this process evaluation, summarized below.

**Demographic analysis:** The demographic analysis describes the number and characteristics of households eligible for UI Helps and WRAP. To the extent possible, the analysis compares the demographic characteristics of eligible and participating households. Data sources include the 2000 Census of Population and Housing, program tracking databases, and the Connecticut Department of Social Services (DSS)/United States Department of Energy (DOE) weatherization program tracking database.

**Participant survey:** The participant survey, conducted by telephone, provides an in-depth analysis of customers’ experiences and satisfaction with the UI Helps and WRAP programs. It also includes an assessment of why customers decide to participate in the program, as well as the demographic characteristics of participants. The NMR team surveyed 414 randomly selected individuals, including 202 UI Helps participants and 212 WRAP participants.
Review of program documents: The review of program documents focuses on the identification of the intended program goals, objectives, and procedures, as well as the degree to which marketing materials adequately inform potential participants about the programs. The review also assesses customer satisfaction as documented in program follow-up surveys. Reviewed documents include program implementation manuals and procedural maps, utility and DSS contracts with community action agencies (CAAs) and Competitive Resources, Inc. (CRI), program budgets, marketing materials, application forms, and customer follow-up surveys.

In-depth interviews: The NMR team conducted in-depth interviews with 52 different individuals representing the following: program administrators and implementers, program partners, other energy-related programs, and social-service programs, among others. These interviews address a wide range of topics, but focus most specifically on: program goals and objectives; planning and implementation procedures; coordination among utility-sponsored low-income weatherization and energy programs, additional weatherization programs, and complimentary social-service programs; drivers and barriers to program participation and goal achievement; and program strengths and weaknesses.

Comparisons with Programs in Other States: Part of the analysis involved a review of “best practice” low-income programs in other states, including program structure, sources and levels of funding, energy savings achieved, and lessons learned.

1.2 Findings and Recommendations Related to Current Programs

The evaluation activities demonstrate that the UI Helps and WRAP programs accomplish their goals of reducing customers’ energy use and bills despite limited program resources and a great demand for services to help low-income customers mitigate rising energy costs (Section 3). Participants, furthermore, report high levels of satisfaction with and appreciation for the programs (Section 7.4 and Appendix B: Participant Survey Report).

Neither program, however, represents “best practice” among low-income weatherization programs. While some participants in both programs receive comprehensive services (e.g., insulation, refrigerators) that have a large impact on their energy use and bills, most participants receive measures with relatively minor impacts (e.g., compact fluorescent lights and portable fixtures, faucet aerators, and showerheads) (Section 3.4.1 and Appendix A: The Demographic Analysis Report). Along with rising energy costs and overly optimistic customer expectations, the relatively small impact of most measures on energy use reduces levels of participant satisfaction with energy savings (Section 7.4 and Appendix B: Participant Survey Report). Both programs, furthermore, could take additional steps to improve program delivery and their ability to measure progress toward and actually achieve program goals.

The NMR team makes 28 recommendations that we believe require relatively minor enhancements on the part of both programs in order to improve program delivery, goal measurement and achievement, and customer satisfaction within the current program’s design.

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1 Examples of interviewees include, but are not limited to, representatives of utility arrearage forgiveness and matching payment programs, CAA weatherization and energy-assistance directors, crew members and subcontractors who conduct energy audits and/or measures installations, staff members at both DSS and 2-1-1 Infoline.
In this executive summary, we review the subset of these recommendations that the NMR team believes are most critical. Each of the 26 recommendations is discussed in detail in the full report and in Section 9. The 15 key recommendations are summarized as follows:

**Program Structure and Delivery**

1. Currently, UI Helps staff members measure cost effectiveness using the Electric System Benefit-cost ratio test (electric b/c test). WRAP measures cost effectiveness using the electric b/c test and the Total Resource Test (TRT). The program staffs at each utility argue that DPUC and ECMB directives regarding cost-effectiveness justify UI’s decision to use the electric b/c test and WRAP’s decision to use both tests. In addition, the DPUC and ECMB have directed the programs to offer increasingly similar services throughout the state.

   Because these tests essentially define program goals—and in turn influence program structure and delivery—the NMR team recommends that the utilities seek clarification from the ECMB and the DPUC about which cost-effectiveness test(s) to report (Section 3.4.2). Such a clarification would also help planners identify ways to move towards program convergence and reduce the substantial differences that currently exist between UI Helps and WRAP.

2. Although UI Helps serves Bridgeport customers who are clients of Action for Bridgeport Community Development (ABCD), the program does not currently use ABCD as an implementation vendor. For this reason, Bridgeport area residents who participate in the DSS/DOE program do not receive the same services as their counterparts served by the Community Action Agency of New Haven (CAA-NH).

   *The NMR team recommends that UI Helps and DSS pursue options for offering the ABCD clients of the DSS/DOE program the same leveraged services as those living in the area served by CAA-NH* (Section 6.9.2).

3. Participation rates for WRAP are lowest in SWCT, the region of the state with the most severe grid congestion and where the high cost-of-living can increase the economic hardships faced by low-income households. In addition, recent difficulties at the entire ABCD agency make it unlikely that their weatherization department will be in the position to increase services to SWCT. In the past, WRAP has asked other CAAs to implement some multi-family projects in SWCT.

   *The NMR team recommends that WRAP continue to draw on the other CAAs to supplement the work of ABCD and consider the feasibility of using both CAAs and private vendors to implement WRAP services in SWCT* (Section 8.2 and Appendix A: Demographic Analysis Report).
Coordination with other Weatherization Assistance Programs

4. Although New Haven area residents served by the DSS/DOE weatherization program may also receive UI Helps services, there is currently little direct coordination (e.g., mutually agreed upon procedures for when and how to offer leveraged services) between UI Helps and the DSS/DOE program. UI Helps and the DSS/DOE leave coordination to the staff members at the CAA-NH.

The NMR team recommends that UI Helps and the DSS/DOE program staffs jointly consider ways in which they can more closely coordinate programs in the future. Staff members from both programs have already expressed an interest in renewing their relationship (Sections 4.3.2 and 6.9.3).

Targeting and Outreach

5. In 2006, UI Helps staff raised the eligibility cutoff from 150% of the federal poverty level (FPL, $24,135 for a three-person household) to 60% of state median income (SMI, $43,344 for a three-person household), and WRAP staff raised the eligibility cutoff from 200% ($32,180 for a three-person household) of the FPL to 60% of the SMI. This decision means that over one-third of households in the UI service territory and one-fourth of the households in the CL&P service territory are eligible for program services. It may also have the unintended consequence of limiting participation by the most vulnerable households in the state because the newly eligible moderate income households will likely be more proactive in seeking services and be better able to maneuver through application and enrollment processes.

The NMR team recommends that UI Helps and WRAP reduce eligibility to 150% of FPL (200% of FPL for the elderly and disabled), the criteria used for the Connecticut Energy Assistance Program (CEAP) and the DSS/DOE weatherization program. We further recommend that UI and CL&P work with the ECMB and DPUC to develop programs to serve households with incomes between 150% of FPL and 60% of SMI (i.e., with incomes between $24,135 and $43,344 for a three-person household). A possible option for such a program includes providing a partial subsidy toward the cost of weatherization and a loan option for the amount not covered. Examples of similar programs include the Assisted Home Performance Programs in New York and Wisconsin (Sections 6.1).

6. Nearly all interviewees agree that UI Helps and WRAP should provide cost-effective electric savings and reduce customer’s electricity bills. Electrically heated homes provide the programs with the best opportunity for achieving substantial electricity and bill savings.

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2 It has been suggested that reducing eligibility may make it difficult to enroll enough people in WRAP to provide the CAAs with a consistent body of work. One possible solution to this potential difficulty is for WRAP to gain access to the DSS energy-assistance applications and recipient lists, which would occur if the energy assistance application were accepted as an application for WRAP; this is recommendation #9.
The NMR team recommends that UI Helps and WRAP specifically target electrically heated homes, and provide them with the most comprehensive suite of cost-effective electric measures currently allowed under each program’s guidelines. This approach should be most vigorously applied in Southwest Connecticut (SWCT) in order to help reduce grid congestion in that region of the state. This recommendation applies to the current program; a different course of action would be required if the DPUC and ECMB directed the programs to be completely fuel neutral, with no targeting of any fuel type (Section 3).

7. Although the WRAP staff reaches proportionate numbers of Spanish-speaking households, a comparison of Census and participant survey information suggests that both programs generally are not reaching proportionate numbers of non-English speaking households.

The NMR team recommends increasing outreach to non-English-speaking groups by working with immigrant advocacy organizations or associations representing particular ethnic or linguistic groups. Such outreach should include Eastern Europeans, and UI Helps staff members should additionally step up existing outreach to the Spanish-speaking community. The utilities and CAAs should also regularly discuss any changes they notice in the demographic or social characteristics of people seeking any form of assistance from the agencies (Section 6.4).

Internal Program Changes

8. The CAAs cite staff turnover at the WRAP unit as the primary difficulty they have communicating with the program. Furthermore, staff turnover forces remaining employees to take on new duties and ultimately slows delivery of services to customers.

For this reason, the NMR team recommends that the WRAP unit convert all full-time contract positions into full-time permanent positions (Section 6.9.1).

9. Given that some people must fill out as many as three different forms—each containing similar information—to sign up for energy assistance, DSS weatherization, and utility weatherization, the NMR team recommends that UI Helps and WRAP also consider accepting the DSS energy-assistance application as an application for utility-based weatherization (Sections 6.9.3 and 10.2.2). The program could still use an analogous application to enroll participants who have chosen not to participate in the energy-assistance program.

Quality Control

10. Currently, the CAAs, CRI, and WRAP staffs inspect a certain percentage of homes served by UI Helps and WRAP. Included in this percentage, however, are visits to the homes of participants who have experienced problems. UI Helps staff members do not conduct inspections at this time because they do not find it to be cost effective given that the program spends an average of about $140 in measure and labor costs per household.
The NMR team recommends that the program staffs and/or their implementation vendors inspect a randomly selected sample of households, excluding those who have complained, toward the sample quota unless they have previously been selected for inspection. However, given UI’s limited expenditures per household and that CRI and the Community Action Agency of New Haven conduct inspections of UI Helps’ work, we do not consider it necessary for UI Helps staffs to conduct additional inspections under the current program design (Section 6.10.1).

11. Participants in both programs indicate only lackluster satisfaction with program-induced energy savings. Furthermore, the few dissatisfied participants often cite continued high bills as the reason for their dissatisfaction.

The NMR team recommends that the program staffs direct the implementation vendors to provide customers with realistic appraisals of the impact the services will have on their bills. This would involve teaching customers how to read the energy-use sections of their bills, explaining the impact that rate increases will have on energy bills even if the customers are using less energy, and helping participants understand how much energy other products in their homes use (e.g., big screen televisions). Together, this would help the customer to develop a realistic expectation of the impact of the program on their energy bills (Section 7.4).

12. Although products failures are rare, about 14% of UI Helps and 9% of WRAP participants have experienced difficulties with at least one compact fluorescent light bulb (CFL) or and lighting fixture. However, most customers receive more than one CFL and many receive more than one lamp, so the actual product failure overall rate may be low. In addition, the companies indicate that they are installing high quality lighting products, such as those that have been tested by the Program for Evaluation and Analysis of Residential Lighting (PEARL). Therefore, the CFL failure rates may fall within acceptable standards. However, the pin-based bulbs used in fixtures are costly to replace, especially to low-income households.

The NMR team recommends offering a replacement pin-based CFL with each fixture (Section 6.10.5).3

Future Evaluation

13. The NMR team believes that the reported estimates of current energy savings for the UI Helps and WRAP programs may be somewhat high. It is also possible that, because many customers are underemployed or retired, participants may actually use products for more hours than the general population, perhaps increasing savings.

The NMR team recommends conducting an impact analysis in order to verify the actual achieved energy savings of UI Helps and WRAP (Section 3.4).

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3 WRAP staff members report that they have already implemented this recommendation.
1.3 Findings and Recommendations for Longer-Term Options

The NMR team believes that the above 13 recommendations would improve the UI Helps and WRAP programs and could be implemented within the current programs’ design. Some evaluation team members and several additional interviewees have indicated an interest, however, in taking both UI Helps and WRAP in new directions. These directions would involve providing a comprehensive suite of services to the most vulnerable households in the state in order to lead to substantial reductions in their energy use and resulting energy bills. The final two recommendations, therefore, address the policy alternatives facing UI Helps and WRAP and an additional evaluation activity to help improve overall coordination of energy-related assistance in Connecticut. Please note that the recommendations listed here summarize the broader discussion of alternative program designs and broader program coordination in the Next Steps section.

14. Given stable budgets and the high demand for services, UI Helps and WRAP staff members must continually decide if the programs will provide modest services to larger numbers of eligible households, or provide more substantial services to a smaller number of eligible households. The NMR team recommends considering the implications of pursuing one of three policy alternatives: 1) providing limited, cost-effective services to the greatest number of households, 2) providing comprehensive services to a small number of very vulnerable households, or 3) allocating most resources to comprehensive services for very vulnerable households, but also providing limited services to some clients (Section 10.2).

15. Over $80 million is spent annually in Connecticut on energy assistance, weatherization, and arrearage forgiveness programs targeting low-income households. However, there is little direct coordination or mutual understanding of these programs and the overall budget available for them. While this evaluation has focused only on the utility-sponsored weatherization programs, the NMR team recommends an inquiry into how the entire suite of statewide efforts to address the energy needs of low-income households could be coordinated. Such an examination would involve UI and NU, CAsA and other social-service providers, DSS, municipal utilities, representatives of fuel banks, fuel-oil companies, other low-income advisory boards, and perhaps the state legislature, among other parties (Sections 6.9 and 10.2.3).
2 Evaluation Overview

This report summarizes the key findings and recommendations of the Process Evaluation of the 2005 UI Helps and WRAP low-income weatherization programs sponsored by UI and NU-CL&P, respectively. The programs are operated with funds provided by the CEEF; these funds are generated by a public benefits charge added to customers’ electric bills. The process evaluation was conducted by NMR and its subcontractor, Eastham Associates. The evaluation focuses on procedures and results from the 2005 program year, which is the same as the calendar year. The NMR team also acknowledges the recent program changes of which we are aware.

The main objectives of the process evaluation include:

- Assessing program goals and objectives
- Identifying the degree to which program implementers understand the goals and objectives
- Explaining how the programs measure progress toward goals and objectives
- Describing program planning and implementation procedures and processes
- Identifying the drivers and barriers to effective program implementation
- Assessing the adequacy of current program delivery modes
- Assessing coordination of the programs with other weatherization programs in Connecticut
- Determining if program resources and training are adequate to implement the program
- Identifying program strengths and weaknesses
- Recommending improvements to program design, marketing, outreach, and implementation

The NMR team completed five tasks in support of this process evaluation, summarized below:

Demographic analysis: The demographic analysis describes the number and characteristics of households eligible for UI Helps and WRAP. To the extent possible, the analysis compares the demographic characteristics of eligible and participating households. Data sources include the 2000 Census of Population and Housing, program tracking databases, and the DSS/DOE weatherization program tracking database.

Participant survey: The participant survey, conducted by telephone, provides an in-depth analysis of customers’ experiences and satisfaction with the UI Helps and WRAP programs. It also includes an assessment of why customers decided to participate in the program, as well as the demographic characteristics of participants. The NMR team surveyed 414 randomly selected individuals, including 202 UI Helps participants and 212 WRAP participants.

Review of program documents: The review of program documents focuses on the identification of the intended program goals, objectives, and procedures, as well as the degree to which marketing materials adequately inform potential participants about the programs. The review also assessed customer satisfaction as documented in program follow-up surveys. Reviewed documents include program implementation manuals and procedural maps, utility and
DSS contracts with CAAs and CRI, program budgets, marketing materials, application forms, and customer follow-up surveys.

**In-depth interviews:** The NMR team conducted in-depth interviews with 52 different individuals representing the following: program administrators and implementers, program partners, other energy-related programs, and social-service programs, among others. These interviews serve as the foundation of the evaluation and, as such, address a wide range of topics, but focus most specifically on: program goals and objectives; planning and implementation procedures; coordination among utility-sponsored low-income weatherization and energy programs, additional weatherization programs, and complimentary social service programs; drivers and barriers to program participation and goal achievement; and program strengths and weaknesses. Although the original evaluation plan called for approximately 60 interviews, the final number of completed interviews is less for the following reasons:

1. An unexpected number of energy auditors were also energy measure installers, fulfilling more than one interview slot
2. Lack of contact information for non-participating landlords
3. Reluctance of small landlords to participate in the evaluation

The NMR team was also unable to interview four individuals as planned because they left their organization or company. Three of these individuals worked for NU and one for a partnering organization. In their place, NMR interviewed equally knowledgeable “alternates” with the exception of a substitute Yankee Gas representative. Despite having scheduled an interview with the Yankee Gas representative whom we knew would soon be leaving NU, this individual left earlier than expected, a day before the scheduled interview. NMR interviewed two alternate individuals instead; however, in our estimation neither had the same depth of knowledge as the individual who left the company. For this reason, we have limited information to share about the current Yankee Gas perspective on the WRAP program and coordination and interaction between the electric and gas utilities regarding low-income weatherization.

The entire UI Helps and WRAP Evaluation Team would like to acknowledge the time and effort interviewees gave to this project. Many interviews lasted for at least three hours, and some interviewees participated in more than one interview. Furthermore, interviewees also helped coordinate interviews with their individual staff members, subcontractors working for the CAAs, or colleagues and provided follow-up information to the NMR team.

Because of the focused approach of UI Helps, the ten interviewees with specific knowledge about it offer very few criticisms of the program, although six of them say that they believe UI Helps should offer more comprehensive services and coordinate more closely with the DSS and Southern Connecticut Gas (SCG) programs than they currently do. In contrast, interviewees know more about WRAP and demonstrate a greater range of opinions about the program, precisely because of the program’s greater breadth of services to many customers and higher levels of coordination with other energy-related assistance programs and social-service organizations. It is also the case that the more complex nature of the WRAP program, its wider service area, and its close relationship with other programs means that the NMR team interviewed more people with direct knowledge about the WRAP program than the UI Helps.
program. For these reasons, the majority of the interviewee comments, and therefore program findings and recommendations, deal more specifically with the WRAP program, although some also address the UI Helps program.

Comparisons with Programs in Other States: Part of the analysis involved a review of “best practice” low-income programs in other states, including program structure, sources and levels of funding, energy savings achieved, and lessons learned.

Based on the results of these research activities, the NMR team makes a series of recommendations that amount to relatively minor enhancements to the current UI Helps and WRAP programs. In addition, at the end of this document, the NMR team also describes possible “Next Steps”—potential alternatives for program design and implementation that could help UI Helps and WRAP address the more complex concerns facing the programs. Such concerns include the comprehensiveness of services, program cost-effectiveness and accountability, fuel neutrality, and coordination with other energy-related assistance programs, among others, that require careful consideration of tradeoffs and priorities. Resolution of these broader issues would likely necessitate more sweeping changes that would take the programs in new directions. Changes on this scale would require participation and coordination among the utilities, the Energy Conservation Management Board (ECMB), and the Department of Public Utility Control (DPUC) as well as other energy-related assistance programs and program implementers.

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4 For example, only CAA-NH had in-depth knowledge of the UI Helps program. ABCD knew a little about UI Helps, because of its location in Bridgeport. The other three CAAs did not comment at all about UI Helps.
3 Program Description, Theory, and Logic

The UI Helps and WRAP programs are funded through the Connecticut Energy Efficiency Fund. The programs directly install energy-saving measures in the homes of low-income customers in order to reduce participants’ energy usage and lower—or limit increases in—their energy bills. Neither program charges household residents for any of the services provided, although WRAP charges a $100 co-pay to landlords when the program replaces refrigerators owned by landlords. The remainder of this section includes an in-depth description of both UI Helps and WRAP and the theory and logic behind the programs.

3.1 UI Helps Program Description, Theory, and Logic

According to program staff members and implementers, the primary goal of the UI Helps program is to reduce electricity use. UI Helps accomplishes this goal by directly installing cost-effective electric saving measures in the homes of low-income UI customers. In addition to saving energy, the program has other intended outcomes, namely reducing participants’ electricity bills and making their homes more comfortable. As one UI Helps staff member explains, “Anytime I’m getting cost-effective energy savings, the customer is saving 17 to 18 cents per kWh.” The program also educates participants on other ways to save energy in an effort to achieve additional electricity savings. If customers adopt some of the suggestions, the program may also indirectly yield natural gas and oil savings as well. Finally, by saving energy the program also reduces greenhouse gas emissions associated with electricity generation and with the burning of natural gas and fuel oil.

In 2005, UI Helps staff considered a household to have low income status if it had an annual income at or below 150% of the FPL ($24,135 for a three-person household). Now UI Helps also serves households with annual incomes at or below 60% of SMI ($43,344 for a three-person household), which is approximately 270% of FPL.

UI Helps participants may be eligible to receive CFLs, fixtures, showerhead, aerators, and weather stripping, among other measures. Refrigerators and room air conditioners may also be replaced. However, the direct install component of UI Helps focuses exclusively on measures that produce cost-effective electric savings as determined by the electric b/c test. This focus reflects four underlying issues:

1. UI is solely an electric company.
2. The entire UI territory is considered to be in the critical or constrained area for electric grid congestion.
3. UI Helps does not directly coordinate with any natural gas utilities at this time.
4. The budget for UI Helps is typically about $900,000, or $19 per eligible household based on the 2005 income criterion (150% of FPL) and $10 per household based on the current criterion (60% of SMI).

5 See Section 3.4 for a description of the electric b/c test and the TRT.
6 As explained more in Section 6.9.5, there is no direct coordination between UI Helps and SCG, which serves approximately the same territory. The CAA-NH and CRI currently do most of the coordination of the SCG and UI low-income programs.
For these reasons, UI Helps installs far more lighting products than any other measures, although the program will install water heating and space heating measures in homes that use electricity for these purposes. Because of its focus on lighting measures, some interviewees characterize UI Helps as a “light bulb program.” A staff member explains why UI Helps has decided to focus on CFLs:

Because we are very serious about following regulatory goals in terms of meeting cost-effectiveness from an electric perspective, there are very few options for a direct-install program such as this, given there’s not much electric heat out there. We get what we can on water heating [although] some questions might arise on persistence—how often people remove aerators, showerheads, etc. This is really a lighting program and the regulatory boundaries and budgets define it as such.

UI Helps currently uses two vendors, CAA-NH and CRI, to implement its programs. As discussed in more detail in Section 6.2, UI serves most participants (estimated at 90% by a staff member) through neighborhood canvassing, which essentially involves technicians showing up at a customer’s home and offering them UI Helps services. A few customers receive UI Helps services through referrals by CAA-NH from the DSS/DOE weatherization program. Finally, a small number of remaining customers contact UI Helps directly or are referred by the UI Call Center to the program. After verifying eligibility, the customer names are sent usually to CRI, which then sets up an appointment to provide the participant with eligible measures. UI Helps staff has informed NMR that the program will likely be scheduling somewhat more appointments as part of a concerted effort to increase participation among those clients referred to the program.

UI Helps serves owner- and renter-occupied housing units as well as those in single-family homes and small, medium, and large multifamily buildings. Historically, however, UI Helps had not generally provided services to master-metered, multifamily rental properties. The program staff wanted to keep the services with occupants who paid electric bills and did not want to run the risk of using residential Conservation and Load Management (C&LM) funds in commercial buildings. UI Helps staff has informed NMR, however, that the program will serve more multifamily buildings in 2006 by using funds from the UI Helps and Small Business programs.

3.2 WRAP Program Description, Theory, and Logic

The primary goal of the WRAP program is to reduce all energy use, but especially the use of electricity. The program accomplishes this goal by directly installing energy conservation and efficiency measures in the homes of low-income CL&P customers, some of whom may also be customers of Yankee Gas, Connecticut Natural Gas (CNG), or SCG. The direct installation of measures and the customer education components are designed not only to save energy but also to reduce participants’ energy bills and make their homes more comfortable. WRAP also includes a customer education component that involves participants pledging to take additional, cost-free steps to save energy. One WRAP staff member views the education component as vital to achieving long-term energy savings: “We have measures that will help that household, like insulation, the big ticket measures will help that household a long, long way—along with education. When they can see that their bills are going down because of what they’re doing, that
is very beneficial, and I think we’ve accomplished what one of our main objectives is.” Finally, reduced energy use also reduces greenhouse gas emissions.

In 2005 WRAP staff considered a household to be low income if it had an annual income at or below 200% of the FPL ($32,180 for a three-person household). It currently will serve households with annual incomes at or below 60% of SMI ($43,344 for a three-person household), which is approximately 270% of FPL. WRAP generally installs measures similar to those offered by UI Helps, but will implement water heating and space heating measures in non-electrically heated homes. In its partnership with DSS, WRAP will occasionally replace entire heating systems, including those burning delivered fuels. The gas companies will be charged for the installation of at least some natural gas measures.

WRAP directly installs both electric and non-electric conservation measures. This aspect of WRAP reflects the following:

1. NU includes both CL&P, an electric company, and Yankee Gas, a natural gas company; each company contributes money to the WRAP program
2. CNG and SCG, natural gas companies, are partners in WRAP. CNG contribute funds to the program, while SCG reimburses WRAP for gas-related services conducted in the homes of its customers.
3. WRAP partners directly and closely with the DSS/DOE weatherization program, which must be fuel blind by federal and state law
4. WRAP has an historic “whole house” mission, which continues primarily in Subprogram 1, the DSS/DOE leverage program.
5. The overall budget for WRAP is typically around $5.6 million, with CL&P contributing $5 million and Yankee Gas and CNG each contributing about $300,000; this translates into $28 per eligible household based on 2005 income criteria (200% of FPL), or $19 per household based on current income criteria (60% of SMI).

The NMR team has found that the WRAP program staff is in the process of assessing the degree to which the program will continue to offer non-electric measures. All WRAP unit staff members and other NU staff members we interviewed believe that WRAP should and will continue to offer non-electric measures. However, those involved in supervising, planning, and implementing WRAP are currently trying to agree on the correct balance of measures that will help the program achieve cost-effective electric savings while not losing the social benefits provided by installing non-electric measures. A WRAP staff member explains this reassessment in detail:

I want to see … much more focus on the profile of customers that we’re looking at and how to maximize the performance on the specific electric measures or gas measures and really maximize that, because I think we can improve our savings if we look at the project a little bit differently. Or if we can find … the right mix that is the ideal project and then have a multitude of them. If we have a heating system in there or insulation, that will take the cost-effectiveness away from what we’d like to see, but there should be a balance.
Based on our interviews, it appears that CL&P intends to achieve this balance largely through emphasizing certain Subprograms (see description of Subprograms below) and measures—such as CFLs, lamps, room air conditioners, and refrigerators.

WRAP relies on five CAAs to implement the program:
1. ACCESS Agency (ACCESS), headquartered in Willimantic
2. ABCD, headquartered in Bridgeport
3. CAA-NH (which also provides UI Helps services), headquartered in New Haven
4. Community Renewal Team (CRT), headquartered in Hartford, and
5. New Opportunities of Waterbury (NOW), headquartered in Waterbury.

The WRAP program is currently divided into four major Subprograms, and they are delivered by the same five CAAs that provide services to the DSS/DOE weatherization program. Although these Subprograms are explained in more detail in Section 6.3, we offer a brief discussion of them here.

**Subprogram 1:** This Subprogram leverages resources—funds and labor—with the DSS/DOE weatherization program. Together, the two programs can generally serve the whole house and provide most measures identified through a fuel-blind energy audit given to all participants in the DSS/DOE program.

**Subprogram 2:** The participants enter this Subprogram by filling out a WRAP application. Although the list of measures WRAP pays for in Subprogram 2 is nearly identical to the list in Subprogram 1, participants in Subprogram 2 do not receive a full energy audit and they also do not receive DSS/DOE services. Therefore, Subprogram 2 participants receive less comprehensive services than those in Subprogram 1. In place of the full audit, the CAA crew or subcontractor conducts a walk-through analysis of the house, and identifies which measures they can install. Most measures can be installed on the same day. Occasionally, the crew or subcontractor will recommend that more in-depth measures be installed; this occurs at a later date.

**Subprogram 3:** This Subprogram predominantly serves entire multifamily complexes, whether owner or individually metered. The WRAP program administrator, together with the property manager and a representative of the CAA weatherization staff, will decide what measures to install in the building. Measures are installed in housing units as well as common areas.

**Subprogram 4:** WRAP serves many of its participants through a neighborhood canvass approach. WRAP and the CAA decide on a neighborhood and canvass it over a period that usually lasts about two days. Only measures that can be easily installed in a short amount of time (e.g., CFLs, aerators, etc.) are installed during the events, although the CAA crew or subcontractors will often leave a WRAP application so that the customer can receive more extensive services if needed.
WRAP serves owner- and renter-occupied housing units, as well as single-family and multifamily homes. However, owner-occupied, single-family homes are more commonly served in Subprograms 1 and 2, while renter-occupied, multifamily homes are more commonly served in Subprograms 3 and 4. WRAP does not use funds from Small Business programs to serve master-metered, multifamily buildings.

3.3 Additional Program Goals and Outcomes

The 52 people interviewed as part of this evaluation nearly unanimously recognize energy savings as a major goal of both UI Helps and WRAP. Most interviewees also mention saving customers’ money and/or reducing their energy bills. Some interviewees, however, named additional program goals or outcomes. Here we summarize these additional goals and outcomes.

3.3.1 Financial Goals and Outcomes

One commonly stated additional goal is to help low-income households in a broader financial sense. Some typical statements on this topic include the following:

We are helping needy families that are financially strapped while at the same time reducing load on the grid and saving kWh.

The more dollars we can spend … translates into materials in people’s homes, making that home more energy efficient, freeing up more money that they can spend on other things, not spending it on energy costs.

Particularly now with … the high cost of fuel … people are burdened generally. But, when you have people that are fixed and low income, it’s critical. [It can] be a life-changing … decision that they have to make in terms of what gets paid and what doesn’t get paid.

Another goal involves the increased likelihood that customers will actually pay their bills. Similar goals include reducing the amount by which customers are in arrears and lessening their dependence on the energy-assistance program. One interviewee commenting on WRAP summarizes these goals:

Most of the clientele that … get WRAP services are energy-assistance clients; they are receiving federal subsidies and in need of some assistance. So it stands to reason that the more you can reduce their dependence on energy consumption and reduce their bills, theoretically, the lower the public subsidy would be and the less dependent they would be or need they would have for the public subsidy. And, the more likely CL&P would be able to be paid for the consumption of electricity and CNG for the consumption of natural gas.

3.3.2 Social Goals and Outcomes

Some interviewees note that the programs seek to achieve broader social outcomes as well. One interviewee argues, “Not only do they improve [customers’] lives financially, but the inability to pay utility bills is a major reason why people … move from apartment to apartment, and kids switch schools, and absenteeism for kids is also [reduced]. There are other spillover benefits.”

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7 See Appendix A, “Demographic Analysis Report.”
Numerous interviewees describe the psychological and emotional benefit that customers receive by participating in these programs. As one WRAP unit member describes, “My heart just goes out to these people, because I’m thinking, here’s the landlord, he’s reaping in the benefits, but he doesn’t want to help these people that are low income. And so I feel it helps them and it puts them in a peace of mind … because somebody else [i.e., CL&P through the WRAP program] cares about them … because the landlord’s not caring about them.” Likewise, a CAA crew member tells the story of an elderly woman he served through WRAP. He says, “I had one client … we [served] her house and … she cried for … half an hour because she’d never [received] anything for free.”

The programs also address health and safety issues. All participants receive materials discussing lead paint safety and abatement and mold and moisture concerns, along with other educational materials. Furthermore, when the programs make homes less drafty or replace unsafe appliances or heating equipment, they are improving the health and safety of participants. For example, participants may no longer need to heat with electric space heaters or use their ovens to heat their homes because the furnaces or boilers are not working.

The last social outcome relates to the people who plan and implement the programs. Program administrators, weatherization directors, intake staff, energy auditors, CAA crew members, and contractors are clearly proud of the services they offer. One person says, “I get a lot of satisfaction out of doing it. Most customers don’t know what to expect because they’re not savvy about energy conservation. By the time we’ve left, they are more savvy. It’s an enjoyable feeling.” In fact, the NMR staff was struck by just how committed utility and CAA/CRI staff members and subcontractors are to the programs. Importantly, this was equally true of those WRAP unit members who are contracted workers and not permanent NU employees.

### 3.4 Measuring Progress toward Goals and Objectives

Because they are sponsored by electric utilities charged with reducing energy use, both UI Helps and WRAP consider the electric b/c test when measuring progress toward their goal of providing cost-effective electric savings. Because WRAP also installs measures that yield non-electric savings, that program also considers the TRT. The 2006 C&LM plan describes the two tests in the following manner:

The Electric System Test compares the present value of future program electric system savings to present Fund expenditures. The Total Resource Test compares the present value of future electric system and other customer savings to the total of the conservation expenditures and customer costs necessary to implement the programs. While certain programs may have low [benefit cost ratios] when assessed by the Electric System Test, the Total Resource Test provides a comprehensive measure of the overall economic impact since such programs may often have some value that is not recognized in the Electric System Test such as fossil fuel or water savings, or other types of non-electric benefit[s] not captured in the electric system test.8

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8 CL&P and UI (2005), page 250.
As the description makes clear, the TRT explicitly takes into account non-electric benefits and costs, making it the more appropriate choice for programs, such as WRAP, that yield significant non-electric savings, such as those from fossil fuels and water.

In addition to cost-effectiveness tests, the programs also consider the following when measuring progress toward goals: number and type of measures installed, budget spent, number of housing units served, estimated energy savings, and CFM reduction when a blower-door test is used. Table 3–1 summarizes key program accomplishments in 2005. The substantial differences between the two programs regarding non-electric savings, comprehensiveness of services, and implementation methods underlie their different accomplishments. Although the accomplishments serve to demonstrate how different the two programs are from each other, the extent to which the programs differ necessitates caution when comparing the results of the two programs. Therefore, we discuss the accomplishments of the two programs separately.

UI Helps served 8,308 households in 2005, spending an average of $178 per household (including administrative costs). The program installed 80,150 measures, or about ten measures per household. The program predominantly distributed lighting products. The program staff estimates that the average customer saves about 681 kWh annually. Collectively, the measures installed yield lifetime savings of 20,441 MWh and demand savings of 582 kW. The program achieves an electric b/c ratio of 1.7.

WRAP served about 9,830 households in 2005, spending an average of $590 per household (including administrative costs). The program installed 264,803 measures, or about 27 measures per household. WRAP installed more non-lighting than lighting measures. The program staff estimates that the average participant saves 890 kWh annually, 54 CCF in natural gas, and 48 gallons of oil. However, because not all participants receive natural gas- or oil-related measures, the natural gas and oil savings are actually higher for the subset of customers who heat water and/or space with these fuels. Collectively, WRAP measures are responsible for lifetime savings of 107,178 MWh and demand savings of 703 kW. In 2005, WRAP achieved an electric b/c ratio of 0.88, but staff expects the program to achieve an electric b/c ratio of 1.12 and a TRT ratio of 2.12 in 2006.

In short, the UI Helps and WRAP programs follow a similar logic: provide customers with energy-saving measures in order to reduce energy use and lower customers’ energy bills. However, UI and CL&P have designed very different programs to fulfill this logic. A comparison of the “Program Convergence” estimates in Table 3–1, Rows Y and Z illustrate the impact of programmatic differences on the number of customers served. If WRAP were to adopt the UI Helps approach, its participation rates would jump from 9,830 to an estimated 32,704 (233% increase). Alternatively, if UI Helps were to adopt the WRAP approach, the number of customers served would decrease from 8,308 to an estimated 2,497 (70% decrease).
### Table 3–1: Key Program Accomplishments, 2005

<table>
<thead>
<tr>
<th>Row</th>
<th>Measure</th>
<th>UI Helps</th>
<th>WRAP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Measurements of Progress Toward Goals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Budget</td>
<td>$1,473,399&lt;sup&gt;a&lt;/sup&gt;</td>
<td>$5,800,000&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>B</td>
<td>Number of Households Served</td>
<td>8,308&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9,830&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>C</td>
<td>Cost per Household Served (A ÷ B)</td>
<td>$177.35</td>
<td>$590.03</td>
</tr>
<tr>
<td>D</td>
<td>Number of Measures Installed</td>
<td>80,150&lt;sup&gt;b&lt;/sup&gt;</td>
<td>264,803&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>E</td>
<td>Average Number of Measures per Household (D ÷ B)</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>F</td>
<td>Lighting Measures</td>
<td>97&lt;sup&gt;b&lt;/sup&gt;</td>
<td>29&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>G</td>
<td>Non-lighting Measures</td>
<td>3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>71&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Electric Benefits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Reported Annual kWh Savings</td>
<td>5,658,000&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8,752,471&lt;sup&gt;e&lt;/sup&gt;</td>
</tr>
<tr>
<td>I</td>
<td>Annual kWh Savings per Household (H ÷ B)</td>
<td>681</td>
<td>890</td>
</tr>
<tr>
<td>J</td>
<td>Lifetime MWh Savings</td>
<td>20,441&lt;sup&gt;a&lt;/sup&gt;</td>
<td>107,178&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>K</td>
<td>Lifetime kWh Savings per Household (J ÷ B)</td>
<td>2,460</td>
<td>10,903</td>
</tr>
<tr>
<td>L</td>
<td>Cost per Annual kWh Saved (C ÷ I)</td>
<td>$0.26</td>
<td>$0.66</td>
</tr>
<tr>
<td>M</td>
<td>Cost per Lifetime kWh Saved (C ÷ K)</td>
<td>$0.27</td>
<td>$0.05</td>
</tr>
<tr>
<td>N</td>
<td>Demand Savings, kW</td>
<td>582&lt;sup&gt;a&lt;/sup&gt;</td>
<td>703&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>O</td>
<td>Electric b/c ratio</td>
<td>1.7&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.88&lt;sup&gt;de&lt;/sup&gt;</td>
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<tr>
<td><strong>Non-Electric Benefits</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>P</td>
<td>Natural Gas-Heated Households Served</td>
<td>n/a</td>
<td>2,770&lt;sup&gt;c&lt;/sup&gt;</td>
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<tr>
<td>Q</td>
<td>Annual CCF Natural Gas Savings</td>
<td>n/a</td>
<td>149,710&lt;sup&gt;e&lt;/sup&gt;</td>
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<td>R</td>
<td>Annual CCF Savings per Natural Gas Household (Q ÷ P)</td>
<td>n/a</td>
<td>54</td>
</tr>
<tr>
<td>S</td>
<td>Lifetime CCF Natural Gas Savings</td>
<td>n/a</td>
<td>1,815,423&lt;sup&gt;e&lt;/sup&gt;</td>
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<td>T</td>
<td>Oil-Heated Households Served</td>
<td>n/a</td>
<td>3,735&lt;sup&gt;c&lt;/sup&gt;</td>
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<td>U</td>
<td>Annual Gallons of Fuel Oil Savings</td>
<td>n/a</td>
<td>180,805&lt;sup&gt;e&lt;/sup&gt;</td>
</tr>
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<td>V</td>
<td>Annual Gallons of Fuel Saving per Oil Household</td>
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<td>48</td>
</tr>
<tr>
<td>W</td>
<td>Lifetime Gallons of Fuel Oil Savings</td>
<td>n/a</td>
<td>3,091,518&lt;sup&gt;e&lt;/sup&gt;</td>
</tr>
<tr>
<td>X</td>
<td>TRT (includes electric and non-electric benefits and costs)</td>
<td>n/a</td>
<td>1.58&lt;sup&gt;de&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Program Convergence Estimates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>Participation if both programs followed UI Helps Model</td>
<td>8,308&lt;sup&gt;b&lt;/sup&gt;</td>
<td>32,704&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Z</td>
<td>Participation if both programs followed WRAP Model</td>
<td>2,497&lt;sup&gt;i&lt;/sup&gt;</td>
<td>9,830&lt;sup&gt;i&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

n/a Not applicable  
<sup>b</sup> UI Helps program tracking database, 2005  
<sup>c</sup> WRAP program tracking database, 2005  
<sup>e</sup> CL&P Savings Report 01-1205, provided by NU to NMR on 3-9-2005  
<sup>f</sup> Because UI did not report its expected electric b/c ratio in 2005, we report the estimated 2006 ratio.  
<sup>g</sup> WRAP expected to achieve an electric b/c ratio of 1.12 and a TRT of 2.12 in 2006.  
<sup>h</sup> 2005 budget divided by $177.35, the amount spent by UI Helps in 2005.  
<sup>i</sup> 2005 budget divided by $590.03, the amount spent by WRAP in 2005

Based on the method described in Row I of Table 3–1, UI Helps saves an estimated 681 kWh per household annually, and WRAP saves an estimated 890 kWh per household annually. These estimates are reported energy savings, not verified savings. Given that most households participating in UI Helps receive only CFLs (an average of nine per household) and that just four percent of participating households heat with electricity, it is possible that the program staffs’ estimates of electric savings are somewhat high. Yet, it may also be that the characteristics of participants—including greater likelihood than the general population to be underemployed
and/or elderly—might mean that they have higher use of lighting products because they tend to be home during the day more frequently than non-low-income customers. The electric savings reported for WRAP initially appear more reasonable, because 30% of participants heat with electricity, making them eligible for a wider range of services that may result in substantial savings; without verification, however, WRAP staff also cannot be certain of the program’s actual achieved energy savings. The program could verify energy savings through an impact analysis, which goes beyond the scope of the current evaluation.

Using the unverified savings estimates, the NMR team further estimated current annual bill savings for participating households. (Table 3–2) To do this, we also collected the following information:

- Average year-to-date electricity and natural gas prices from the Energy Information Administration (EIA),
- Current (October 2) fuel oil prices from the Connecticut Office of Policy and Management (OPM), and

Based on this information, the NMR team estimates that UI Helps currently saves participants about $111 annually in electric bill savings. Table 3–2 summarizes the electric, natural gas, and fuel oil savings for WRAP participants heating with each fuel.9 Based on information in the APPRISE study, we estimate that the average households served by WRAP saves $98 a year on its electric bill due to lighting measures. The average household heating with electricity saves an additional $155 in electric water and space heating measure, for a total of $252 annually. WRAP participants heating with natural gas save a total of $197, split nearly evenly between electricity savings due to lighting measures and natural-gas savings due to water and space heating measures. WRAP participants heating with fuel oil save a total of $211 annually, $98 from electric bill savings and $114 from fuel oil savings. Again, we caution that these estimates are based on reported savings only; a future impact analysis could verify actual savings, which may be higher or lower than described here.

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9 We did not develop fuel-specific estimates for UI Helps, because the program provides only electric savings measures.
Table 3–2: Estimated Average Annual Bill Savings per WRAP Householda

<table>
<thead>
<tr>
<th>Row</th>
<th>Measure</th>
<th>WRAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Electricity Price, $/kWhb</td>
<td>$0.1625</td>
</tr>
<tr>
<td>B</td>
<td>Estimated kWh Savings from lighting measuresc</td>
<td>600</td>
</tr>
<tr>
<td>C</td>
<td>Non-heating related Electric Bill Savings (A × B)</td>
<td>$97.50</td>
</tr>
<tr>
<td>D</td>
<td>Annual Heating-Related kWh Savings per Electrically Heated Household</td>
<td>945</td>
</tr>
<tr>
<td>E</td>
<td>Current Annual Heating-Related Electric Bill Savings (A × D)</td>
<td>$154.56</td>
</tr>
<tr>
<td>F</td>
<td>Total Bill Savings, Electrically Heated Households (C + E)</td>
<td>$252.06</td>
</tr>
<tr>
<td>G</td>
<td>Natural Gas Price, $/CCFd</td>
<td>$1.84</td>
</tr>
<tr>
<td>H</td>
<td>Annual CCF Savings per Natural Gas-Heated Household</td>
<td>54</td>
</tr>
<tr>
<td>I</td>
<td>Current Annual Gas Bill Savings (G × H)</td>
<td>$99.36</td>
</tr>
<tr>
<td>J</td>
<td>Total Bill Savings, Natural Gas-Heated Households (C + I)</td>
<td>$196.86</td>
</tr>
<tr>
<td>K</td>
<td>Fuel Oil Price, $/Gallone</td>
<td>$2.36</td>
</tr>
<tr>
<td>L</td>
<td>Annual Gallons of Oil Saved per Oil-Heated Household</td>
<td>48</td>
</tr>
<tr>
<td>M</td>
<td>Current Annual Oil Bill Savings (K × L)</td>
<td>$113.86</td>
</tr>
<tr>
<td>N</td>
<td>Total Bill Savings, Oil-Heated Households (C + M)</td>
<td>$211.36</td>
</tr>
</tbody>
</table>

a UI Helps does not provide non-electric savings, and NMR does not have an accurate count of the number of electrically heated homes served by UI Helps. UI Helps participants currently save about $111 on their electric bills annually.

3.4.1 Measure Installation over Time

The NMR team analyzed measure installation over time in order to identify and assess any changes in program emphasis. The information presented in Table 3–3 confirms that the UI Helps program focuses almost exclusively on the installation of lighting materials and has done so since 2002. The percentage of lighting measures was highest in 2002 (99%) and lowest in 2004 (93%), when the program served a higher than usual number of electric heating customers. The number of measures installed by UI Helps increased by 126% between 2004 and 2005.

Table 3–3: UI Helps Percentage of Installations by Measure Type, 2002 to 2005a

<table>
<thead>
<tr>
<th>Measure Type</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Measures</td>
<td>41,002</td>
<td>33,884</td>
<td>35,425</td>
<td>80,150</td>
</tr>
<tr>
<td>Appliances</td>
<td>0%</td>
<td>0%</td>
<td>&lt;1%</td>
<td>1%</td>
</tr>
<tr>
<td>Envelope</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Lighting</td>
<td>99%</td>
<td>98%</td>
<td>93%</td>
<td>97%</td>
</tr>
<tr>
<td>Water Heating</td>
<td>1%</td>
<td>2%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Misc.</td>
<td>&lt;1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

a Number may not sum to 100% due to rounding.
In contrast to UI Helps, WRAP installs a wider range of measures, with envelope measures—including the more typical weatherization measures such as caulking, weather-stripping, and door sweeps—accounting for the majority of installations. (Table 3–4) However, the WRAP installation data point to a gradual change in emphasis from envelope measures to lighting measures. More specifically, the percentage of envelope measures installed has dropped from a high of 86% in 2000 to a low of 61% in 2005, while the percentage of lighting measures installed has increased from 5% in 1999 to 29% in 2005. Although lower now than in 1999 and 2000, the number of overall WRAP measures has increased steadily since 2003.

| Table 3–4: WRAP Percentage of Installations by Measure Type, 2003 to 2005a |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                | 1999  | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   |
| Appliances     | <1%    | <1%    | 1%     | 1%     | 1%     | <1%    | 1%     |
| Envelope       | 85%    | 86%    | 75%    | 68%    | 68%    | 73%    | 61%    |
| Heating        | 1%     | 0%     | 1%     | 1%     | 1%     | <1%    | <1%    |
| Lighting       | 5%     | 7%     | 13%    | 20%    | 20%    | 17%    | 29%    |
| Water Heating  | 4%     | 5%     | 9%     | 9%     | 10%    | 9%     | 9%     |
| Misc.          | 6% b   | 1%     | 2%     | 1%     | <1%    | <1%    | 1%     |

a Number may not sum to 100% due to rounding.

b The 1999 WRAP tracking database lists an unusually high number of “miscellaneous” measures.

As described more in the Demographic Analysis Report, the typical household participating in UI Helps in 2005 received lighting products, although five percent also received aerators, four percent received a refrigerator, and four percent received a showerhead. About four percent of UI Helps participants received refrigerators, and two percent received at least one common weatherization measure (e.g. caulking, weather-stripping, or door sweeps). The typical household participating in WRAP received one or more large table lamps (70%), a faucet aerator (64%), and a showerhead (53%). Most WRAP participants also received CFLs, but the WRAP database does not allow us to determine the exact percentage. About 16% of WRAP participants receive refrigerators and 30% receive at least one weatherization measure.

### 3.4.2 Regulatory Directives for Measuring Program Effectiveness

The UI Helps program design reflects a strict adherence to achieving cost-effective electric savings as measured by the electric b/c test. The WRAP program, in contrast, also considers the TRT. The staffs of both programs tell us that the ECMB and DPUC regulations justify their decisions to use either the electric b/c test or the TRT. However, the DPUC and ECMB members we interviewed usually could not name the cost-effectiveness test they want the utilities to use for UI Helps and WRAP. Most name a general “benefit-cost” test. A few say that the programs are held accountable based on qualitative descriptions of the benefits to participants; these interviewees do not mention cost-effectiveness tests at all, even when prompted to do so. In short, the evaluation has made clear that there is a good deal of confusion over exactly what the regulatory mandates are for measuring the program cost-effectiveness of UI Helps and WRAP.

For this reason, the NMR team asked a member of the Evaluation Team for assistance in identifying the regulatory documents that specify which tests the programs should be using. The team member pointed us to a 2004 DPUC document that provides guidance on cost-effectiveness tests for all C&LM programs. In the paragraph cited below, we have italicized the portions most
relevant to UI Helps and WRAP; we include the entire paragraph, however, to provide the appropriate context for the italicized statements:

The Department supports the *Electric System Test as the primary test* and the basis for screening programs to determine if they are cost-effective, and thus for deciding if a program should receive regulatory support. The Department also recognizes the value of TRT in measuring the total economic benefit of C&LM programs, and will include TRT as a component of the Companies’ performance goals, as described below. Including TRT as a component of the Companies’ performance goals *provides appropriate incentives for the Companies’ efforts in providing programs that have significant non-electric benefits.* Examples of these programs are Low-Income programs, PRIME audits for industrial customers, and Residential New Construction. With reduced C&LM budgets in the coming years, the Department believes that actively marketing non-electric benefits is a way of leveraging scarce C&LM dollars by emphasizing the cost-effectiveness of projects when non-electric benefits are included. *The Companies correctly point out that the primary goal in SWCT is kWh and peak kW reduction.* The C&LM fund has been an important tool in the effort to improve reliability in SWCT. As explained below, the goal of reducing kW in SWCT will also be included as a component of the performance matrix.10

The document later summarizes as follows: “Including other program performance measures in addition to kWh saved in the incentive mechanism provides a more precise quantitative target for supplementary goals, such as targeting SWCT or including all fuel savings in low-income housing retrofits.”11

Additionally, the recently passed “Energy Independence Act” refers to testing C&LM programs based on “energy savings and system benefits, including mitigation of federally mandated congestion charge.”12 The act specifically allows the gas companies—including WRAP partners Yankee Gas, CNG, and SCG—to consider savings from “more than one fuel source” in their cost-effectiveness tests.13

In summary, the existing regulatory language gives UI and CL&P the freedom to use the TRT to measure the effectiveness of low-income programs, and recognizes that such programs can be designed in a way as to achieve non-electric savings. The language, however, does not appear to mandate the use of the TRT or broader energy savings. Furthermore, current regulation stresses electric savings and reducing grid congestion, particularly in SWCT. In other words, the regulations do not provide clear guidance on the exact test to which UI and CL&P are held accountable. Each company can point to regulatory language that supports its decision to focus on either the electric b/c test or the TRT.

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As we have stated earlier, the fact that the utilities stress different measures of cost-effectiveness has led them to develop quite different programs. This decision, however, is contrary to another directive from the DPUC. One interviewee explains, “The DPUC has been moving in the direction of demanding combined programs from the companies or real justifications for differences.” In other words, CL&P and UI are supposed to be offering relatively similar C&LM programs, but UI Helps and WRAP currently do not fit this description.

This is not to say that the programs have not adopted some similar practices. One interviewee says, “What I’ve seen happening is that WRAP has taken on some of the programs that UI has done like the neighborhood canvassing, because WRAP never used to do that, [but] they do it now.” Furthermore, UI Helps has started to serve more master-metered, multifamily rental units, something WRAP has done since at least 1999 (the first year for which we have program data). In general, though, the programs are still very different. Voicing a concern of many, one interviewee argues, “I don’t think it’s fair because there are clients in certain parts of the state that are not getting the same services … as in other parts of the state.”

The NMR team concludes that the current lack of clear direction from the DPUC and ECMB on what factors they consider most heavily when evaluating UI Helps and WRAP in large part explains the continued differences between the two programs.

### 3.4.3 Differences in how CAAs and WRAP Measure Progress

The utility and CAA program staffs generally agree that WRAP is designed to save energy. However, the evaluation activities have identified a discrepancy regarding the measurement of progress toward WRAP goals. On one hand, the utilities and regulators are more likely to look at cost-effectiveness and energy savings than other metrics to measure progress toward program goals. Staff members at CRI, the private vendor working for UI Helps, also seem to think in terms of cost-effective electric savings; CRI staff members actively monitor their progress toward this goal using the UI Enernet system. The CAAs, on the other hand, tend to stress goal achievement in terms of the number of units served and budget spent. In fact, the CAAs generally define their goal as installing as many measures as possible in the most units as possible within their budget.

The CAAs’ focus on the number of units served and budget spent likely comes from three sources. First, UI Helps and WRAP generally do not ask the CAAs to pay attention to the achieved energy savings or cost-effectiveness. Instead, the programs generally tell the CAAs what measures they can install, in which situations they can install them, and in what quantities. The CAAs—as well as UI Helps and WRAP—assume that these directives ensure that the programs will achieve cost-effective energy savings.

The second reason reflects the primary mission of CAAs to deliver social services to low and moderate income people. Because social outcomes are usually difficult to measure, it is often assumed that program activities yield desired goals. For example, CAAs probably do not measure whether the Meals on Wheels program actually improves the nutrition of program participants. Instead, it is typically assumed that, if the participants eat the meals, their nutrition will improve. The same logic applies to UI Helps and WRAP: if you serve as many households as possible and give each the greatest number of measures allowed under program rules and
budget, the program will achieve its desired energy savings. The fact that the CRI staff espouses a different idea of goal measurement than the CAA staffs do offers further evidence for this argument. CRI staff provides energy-efficiency services beyond UI Helps. As a for-profit vendor in the business of providing energy savings, CRI is more attuned to UI Help’s focus on cost-effective electric savings and the need to measure its progress according to this goal.

The third source of the CAAs’ focus on the number of units served derives from the WRAP program’s historical attention to the number of units served as well as the measures installed. This focus, however, is currently in transition. The WRAP unit is increasing its, “awareness of … the business side of what we do, and the right things to focus on. It’s not just about customers served. So that’s been a big change of focus.”

WRAP partners have recognized that a change is underway toward a more “business-like” approach. One person dates the increased business approach to the so called “raid” of the C&LM fund in 2003, and argues that the change has its “pluses and negatives.” Another interviewee argues that the focus on cost-effectiveness by both WRAP and UI Helps reflects an increasing corporate concern with the bottom line:

Maybe because it’s a different … period that we’re living in because I even see it in other meetings that I go to [with the utilities]. The whole feeling is answer to the investors and making sure that the bottom line profit margin is kept. As long as they can get the rate payers to pay for the stuff then it’s OK, but if it’s going to cost the investors anything, then it’s a different issue.

Staff members at NU identify another potential reason for this “cultural” shift within WRAP. WRAP was originally formed more than 25 years ago. Although CL&P always had some involvement in and oversight of WRAP, the program was not always a part of the NU system.

When WRAP actually became a part of NU, it was housed first in the Community Relations department, which runs arrearage forgiveness (NU Start, Matching Payment) and financial management (Money Matters) programs, among others. Unlike these other programs, WRAP was funded by C&LM funds. In 2003, the WRAP unit was physically moved to the same location as the other C&LM-funded programs. NU moved the WRAP offices in order to facilitate planning and house all of the C&LM projects in one location, although the program is still connected to Community Relations by a dotted line on the NU organization chart. The move has also had the effect of increasing the degree to which WRAP is held to the same standards of cost-effective electric savings as other C&LM programs. In other words, WRAP has seen a shift from a social services orientation to one that takes business needs into account to a greater degree. However, the program has not completely lost its “societal benefit” orientation:

It is clearly a high priority and a focus here [in C&LM] that we're looking at cost effectiveness…. And, there's just a whole different mindset in terms of attention to the expenditures and the savings that we get from the expenditures. But, at the same time I think that's why we still wanted to have this dotted line [to Community Relations] and still have a community feel to the program because you are dealing with social service agencies, state agencies and that whole societal benefit.
The immediate challenge for the WRAP unit is to accomplish its more “business-like” focus on cost-effective electric savings within its current CAA delivery system. It has done this largely through program planning and design, including the measures offered, how many of each measure can be installed, and the number of people served through each Subprogram. For example, in 2005, WRAP staff members allowed the replacement of room air conditioners in SWCT to reduce peak demand where the electricity grid is most congested. Some WRAP unit members are also encouraging serving more customers through Subprograms 3 and 4, which are typically more cost-effective from an electricity standpoint than Subprograms 1 and 2. WRAP staff members then communicate to the CAAs, via weatherization directors’ meeting or other direct communications, the reason for additional measures or increased focus on certain Subprograms. The weatherization directors have followed the new directives from WRAP, but without a concomitant change in what they view as their goals. In other words, they are still going to install as many measures as they can in as many units as they can within the budget, but they will do so following WRAP’s new guidelines about which measures are allowed, how many of each measure they can install, and when to install measures via Subprograms 3 and 4.

3.5 Goal Compatibility and Prioritization

During the Kickoff meeting and at a meeting to discuss the in-depth interviews, it became apparent that individuals involved with the programs prioritize goals differently. Some people prioritize cost-effective electric savings, and expand this to include natural gas savings for WRAP when the measures were chargeable to Yankee Gas, CNG, or SCG. Others prioritize helping low-income households pay their energy bills. For this reason, NMR specifically asked interviewees about these goals, and whether they were complementary or in conflict. We probed rather strongly on this question, asking interviewees to think explicitly about fuel neutrality and other issues that could affect their answers.

Similar to the Evaluation Team, most interviewees argue that the programs actually accomplish both goals: they achieve cost-effective electric savings and they make it easier for needy households to pay their bills. CAA Weatherization Directors and CRI staff members strongly adhere to this position, arguing, “I think they work hand-in-hand. One goal is not sacrificed at the expense of the other.” One weatherization director, however, acknowledges a potential conflict: “If you’re going to be replacing a heating system that is oil or gas, those aren’t necessarily going to translate into cost-effective electricity savings, but they will help people save on oil, be more comfortable and maybe have money to use to turn around and help pay their electric bill.”

Utility staff members are more likely to see a potential conflict between the two goals. Based on our interviews, it appears that, on a personal basis, many utility staff members think the programs should focus on helping needy households pay their energy bills. Yet, they also recognize that UI Helps and WRAP have limited funding and that UI and CL&P have regulatory directives for implementing cost-effective electric measures. One UI Helps staff member states, “I don’t think it’s realistic if one expands the customer concept to low-income stabilization.” The interviewee goes on to explain that their budget is “meager” and that they must abide by regulatory directives for cost-effective electric savings.
3.5.1 Implications of Prioritization Goals Differently

Like many of the interviewees, the NMR team acknowledges that the cost-effectiveness goal—measured by either the electric b/c test or the TRT—can be compatible with the goal to help stabilize low-income customers by making it easier for them to pay their bills. Any amount of energy savings reduces costs to the customer, whether a few cents per month or hundreds of dollars per year. However, the team also finds tension between the goals, in two ways. First, some cost-effective savings (e.g., CFLs, faucet aerators, showerheads) may not bring about substantial bill savings for individual households. Second, providing measures with greater savings in homes where they are not cost-effective—from the standpoint of the test being used by the particular program—may substantially lower bills, but such installations may also limit the number of people overall who can be served, thereby reducing the amount of electricity saved by the programs. We explain each in more detail below.

First, most customers are primarily receiving simple measures—CFLs, aerators, etc.—that have been found to be cost-effective based on the electric b/c test for UI Helps as well as the TRT for WRAP. However, such measures have a relatively small impact on each monthly bill, even though long-term cumulative savings may be substantial.\(^\text{14}\) It is not reasonable, then, to expect that UI Helps and WRAP services will make it easier for low-income households to pay their bills, particularly those households who are hundreds or thousands of dollars in arrears. This is especially true given rate increases—although bills are lower than they would be without the program, customers continue to pay about the same amount, or even more, per month than they did before receiving services.

Second, it is not cost-effective under the electric b/c test for either UI or CL&P to install heating-related measures with substantial savings—attic or sidewall insulation, new heating systems—in non-electrically heated homes. These measures, furthermore, are usually expensive to install. Offering these services to the same number of households the programs now serve would require a substantial increase in budget. For example, the NMR team now estimates that WRAP and the DSS/DOE program collectively spend about $3,325 on the average household participating in Subprogram 1. Given the stability of the UI Helps and WRAP budgets and the limited C&LM funds, such substantial budget increases are unlikely. Alternatively, spending an increased portion of the current stable budget on these measures limits the number of people overall who can receive services. As a result, the programs may not be able to install as many cost-effective electric measures as they would have given a larger budget. UI and CL&P, therefore, could potentially reduce actual electric savings and find their electric b/c ratios falling below one if they were to provide substantial heating measures in non-electrically heated homes.\(^\text{15}\)

UI Helps and WRAP are aware of these tensions. However, because of their differing understandings of how the ECMB and the DPUC judge program effectiveness, the program staffs have responded to the tension in divergent ways: UI Helps staff focuses exclusively on cost-effective electric savings, even if the measures will have minimal impact on customer bills, while WRAP staff attempts to be both cost effective and have a greater impact on customer bills.

\(^{14}\) See Appendix A “Demographic Analysis Report” for more on measure savings.

\(^{15}\) The same argument also applies to cost-effectiveness and natural gas savings from the perspective of the gas utilities, but we have limited the comparison to electricity for the sake of simplicity.
4 DSS Energy-Assistance and Weatherization-Assistance Programs

Utility-sponsored weatherization assistance programs complement DSS administered bill payment and weatherization assistance programs. (See summary in Table 4–1) We explain these programs below.

Table 4–1: Summary of State of Connecticut Energy and Weatherization Assistance Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Funding Source</th>
<th>CT Eligibility</th>
<th>Regularity of Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEAP</td>
<td>Federal LIHEAP via DHHS</td>
<td>150% of FPL, 200% of FPL for elderly or disabled; no more than $10,000 in liquid assets</td>
<td>Every year</td>
</tr>
<tr>
<td>CHAP</td>
<td>State or federal sources</td>
<td>60% of SMI; no more than $10,000 in liquid assets</td>
<td>When available</td>
</tr>
<tr>
<td>Weatherization</td>
<td>Federal DOE</td>
<td>Receiving energy assistance, up to 200% of FPL</td>
<td>Every year</td>
</tr>
</tbody>
</table>

4.1 Energy Assistance

The CEAP provides bill payment assistance to homeowners with incomes of less than 150% of FPL ($24,135 for a family of three) and 200% of FPL ($32,180) for the elderly or disabled; participants cannot have liquid assets of more than $10,000. The CHAP provides bill payment assistance to households between 150% of FPL (200% for eligible elderly) and 60% of SMI ($43,344) when additional federal or state funds are available, as was the case in the 2006 Federal Fiscal Year (FFY, which runs October 1 through September 30, 2006). According to DSS, they have received additional funds to run CHAP five of the last seven years. Renters are eligible for the programs if they pay their own heat or if at least 30% of their income goes to pay rent. Renters cannot have liquid assets of more than $7,000.

In FFY 2006, approximately 64,000 households received assistance through CEAP. Average CEAP benefits ranged from $400 to $675, depending on a household’s income and family size. Eligible renters whose heat is included with rent could receive $240 to $270. In addition to the basic benefits, CEAP recipients who depleted their basic benefits were eligible for up to three additional $400 payments known as Crisis and Safety Net payments. In FFY 2006, about 12,000 households received assistance through CHAP. The basic CHAP benefit was $300. CHAP recipients could receive one additional Crisis payment of $200.

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17 This limits the eligibility of renters in some types of subsidized housing because their artificially low rent may not come to 30% of their income.
Funding for both programs in most years is entirely provided by the federal Low Income Home Energy Assistance Program (LIHEAP). For FY 2006, Connecticut received $65 million in LIHEAP funds.

DSS contracts with CAAs to sign up households to receive energy assistance. CAAs utilize a network of 120 volunteer sign-up sites to assist in taking applications. After contacting a CAA office or volunteer site to find out how to apply for energy assistance, most clients apply by appointment. They must bring proof of income and liquid assets to the appointment. The intake staff enters the client’s information into a computer-based form, prints the application, and has the client sign it. Alternatively, intake staff will visit the homes of homebound persons. In very rare emergency cases, intake staff will take information over the phone to hasten review, but the client must still sign the application for it to be considered complete.

The CAAs review energy-assistance applications and notify the clients by mail if they have been approved for energy assistance. A payment for electricity or natural gas is made directly by the CAA to the utility and credited to the customer’s account, while a payment for deliverable fuels is made only after a delivery has occurred. An assistance payment is made regardless of whether or not the client has also made any payments toward the account.

4.2 Weatherization Assistance

The DSS/DOE weatherization program is funded by the Weatherization Assistance Program block grant from the DOE. Households with incomes up to 150% of FPL (200% of FPL if someone in the household is elderly or disabled) that participate are eligible for DSS/DOE weatherization. CHAP recipients are usually not eligible for DSS/DOE weatherization. The program provides comprehensive weatherization services to both owner- and renter-occupied units, but landlords are expected to pay 20% of the measure costs—between $30 and $250 per unit. For the most part, housing units can receive DSS/DOE weatherization only once, although units served before September 30, 1993 can be re-weatherized under certain conditions.

According to the FFY 2005 State Weatherization Plan, the DSS expected to weatherize 725 units with a total program budget of about $2.5 million. The program spent an average of $3,473 per unit, of which about $2,672 per unit (76%) went to materials and labor; the remainder went to various administrative costs and training. The estimated average cost of materials and labor to be spent on homes in FFY 2006 is $2,825.

By state statute, an application for energy assistance is also an application for DSS/DOE weatherization. Therefore, the CAA determines eligibility for both programs from the single energy-assistance application. The agencies, likewise, notify clients in the same mailed package of their eligibility for energy assistance and weatherization. If the client wants weatherization, they must mail back a form—typically a yellow postcard—to the CAA. Importantly, renters must get their landlords to sign the card, indicating approval for their rental units to receive services. Once the agencies receive the yellow cards, the person goes onto the weatherization waitlist, which is usually the stack of yellow cards but sometimes is a computerized list.

Typically, customers receive weatherization on a first-come, first-served basis. However, the state follows federal guidelines by prioritizing households with members under six or who are
elderly or disabled. Households paying more than $2,000 toward energy bills are also given priority. Although approximately 64,000 households receive CEAP benefits each year, the DOE grant to DSS is only about $2.5 to $3 million annually, enough to weatherize about 800 homes a year, or fewer than two percent of CEAP recipients annually.

Each of the CAAs actually receives hundreds of yellow cards each year, although thousands are sent out. Some of the cards come from units that have already been weatherized by the DSS/DOE program, and are no longer eligible for services. The majority of cards, however, come from households living in eligible units. As a result, the DSS/DOE weatherization waitlists are quite long. We discuss the actual procedures guiding the waitlist and weatherization services in Section 6.3.2.

Because weatherization assistance funds are limited in all states, 44 states plus the District of Columbia (DC) transfer LIHEAP funds to weatherization. The LIHEAP statute allows states to transfer up to 15% of their allocation (and up to 25% with a federal waiver) for this purpose. We return to this issue in Section 10.

4.3 Enrolling in Utility-Based Programs

UI Helps and WRAP have different procedures for enrolling DSS energy-assistance and weatherization customers into their programs. In addition, the CAAs handle WRAP applications in different ways. Here we describe how CAAs help to enroll energy-assistance and weatherization clients into WRAP and UI Helps.

4.3.1 CAA-Assisted Enrollment in WRAP

Approximately four percent of WRAP participants in 2005 (i.e., Subprogram 1 participants) took part in the program because CAAs provided them with DSS/DOE weatherization services. As one weatherization director says, “Every state weatherization job is touched by WRAP,” meaning through the Subprogram 1 partnership. This statement holds for most DSS/DOE weatherization recipients as long as they meet two additional criteria: they must also be customers of CL&P, and the home cannot have been served by WRAP within the previous 18 months. If the client meets these two additional eligibility requirements—each determined by the CAA—then they will almost always receive WRAP Subprogram 1 services, except in the rare case when the home does not need measures that only WRAP offers.

CAA-assisted enrollment in Subprogram 2 requires both the CAA and the client to take additional steps beyond signing up for energy assistance. Many CAA clients first hear about WRAP when signing up for energy assistance. While taking the energy-assistance application, the CAAs, including non-weatherizing ones and volunteer sites, will often encourage clients to sign up for the WRAP program. Depending on the agency and the client, the CAAs may then give the client a WRAP application or provide them with the information to call WRAP to find out more about the program. The CAAs may then help clients fill out the WRAP application, or the client could choose to take the application home and fill it out later. Customers either give

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18 Theoretically, a client who received WRAP Subprogram 2 services within 18 months would not need most of the measures that WRAP offers in Subprogram 1. WRAP will consider partnering with DSS on such homes in emergency situations, typically involving heating systems.
the WRAP application back to the agency, which then mails it to WRAP, or the customer can mail it to WRAP on their own. WRAP will decide if the customer is eligible for Subprogram 2.

The CAAs may also tell clients about WRAP when notifying them about eligibility for the energy-assistance program. Two of the CAAs enclose a WRAP application with the letter sent to energy-assistance clients who are not eligible for DSS/DOE weatherization but are eligible for WRAP. Clients falling into this group include those who live in housing units that have previously been weatherized by the state program or who receive CHAP. These clients can also return the application to the CAA, or the customer can send it directly to WRAP, which will then decide if they are eligible for Subprogram 2. Likewise, one CAA has sent WRAP the list of CHAP recipients so that WRAP can target these households for future WRAP Subprogram 2 marketing.

DSS energy assistance and weatherization are only tangentially related to WRAP Subprograms 3 and 4. When out on jobs, the CAAs may notice neighborhoods or buildings that they believe might benefit from WRAP Subprogram 3 and 4 services, and they tell WRAP about these potential targets.

4.3.2 CAA Assisted Enrollment in UI Helps

UI Helps and CAA-NH follow different procedures for enrolling DSS/DOE weatherization clients into the utility program, largely because UI Helps does not use an application and has more stringent requirements for cost-effective electric savings. CAA-NH staff members identify DSS/DOE weatherization clients who could benefit from UI Helps services. The agency has UI Helps verify client eligibility before offering leveraged services. Once verified by UI Helps as eligible, the CAA will provide approved UI Helps measures to that household as a supplement to DSS/DOE services. UI Helps does not currently partner with ABCD in Bridgeport, so there is no enrollment of DSS/DOE weatherization clients into UI Helps from that area.19

The choice of the CAA-NH to rely on UI Helps to verify approval of clients somewhat limits the households receiving these piggybacked services. One UI Helps staff member explains, “Customers of DOE weatherization are combined with UI Helps in most all cases…. However, it’s not always the case that we get all their LIHEAP customers. Canvassing is much easier for them since the lead list is all set up [by UI Helps], so [CAA-NH is] less likely to send us lists for approval as it’s more work.”

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19 According to UI Helps they do not contract with ABCD because the CAA was not willing to work with the Enernet system within UI’s budget.
5 Marketing and Outreach

According to the 2005 proposed budget, WRAP staff expected to spend $25,000 of its $5 million budget on program marketing; UI Helps staff did not budget any funds for marketing in 2005 largely because its dominant neighborhood canvass approach does not require additional marketing and in order to limit inquiries into the program by people who are not eligible.\(^{20}\)

WRAP program and NU Community Relations marketing staffs produce a WRAP brochure (see below for its uses) that is typically updated to reflect changes in eligibility standards. The brochure, therefore, was revised in the fall of 2005 when WRAP eligibility was increased to 60% of SMI. At this time, the program and marketing staffs took the opportunity also to make a key revision to the WRAP brochure. They decided to replace the water faucet on the front of the brochure with a CFL because the latter draws the connection more immediately to energy savings than the faucet does. (Figure 5–1)

Figure 5–1: 2005 WRAP Brochure Revision
(Former brochure shown on left in English; current brochure shown on right in Spanish)

\(^{20}\) CL&P and UI (2004)
UI Helps and WRAP market the two programs in similar ways, with WRAP drawing on a slightly larger set of marketing techniques due to the application process of Subprogram 2 and the landlord outreach necessary for Subprogram 3.

Similar methods of marketing and outreach include:
- Customer mailings and company websites
- Referrals from other utility departments or programs
- Implementation vendor referrals
- 2-1-1 Infoline referrals to the programs
- Press releases
- Community outreach
- Word of mouth

WRAP also utilizes newspaper and radio advertising, and one of the CAAs conducts additional marketing of the WRAP program.

5.1 Customer Mailings and Company Websites
Both UI and NU use customer newsletters to market their low-income weatherization programs. UI Helps is marketed in the Source newsletter sent to all UI customers. NU markets WRAP in its Neighbors newsletter, sent to elderly customers, and the HelpLine newsletter, sent to all hardship coded customers. HelpLine is printed in both English in Spanish, while Neighbors is printed only in English.21

NU conducts two other types of mailings to market WRAP. First, a WRAP program is mentioned on at least one bill insert each year. Second, the WRAP program mails program brochures and applications—both of which are printed in English and Spanish—to hardship-coded customers and to areas of the state that have had lower levels of participation in the past. WRAP program and marketing staff members rate the direct mailings as one of the most effective forms of marketing, surpassed only by community outreach and word of mouth.

Finally, UI includes links and contact information for UI Helps on its website, while WRAP contact information—including the program’s toll-free number—are listed on the CL&P, Yankee Gas, and CNG websites. Neither the WRAP nor UI Helps program staffs believe that many customers first learn about the programs through the website.

5.2 Referrals from Other Utility Departments and Programs
UI’s Call Center and NU’s Community Relations departments will often refer customers to the low-income weatherization programs. Sometimes these referrals serve more to identify clients than as marketing efforts. For example, UI Helps reviews the lists of participants taking part in Credit and Collections programs; UI Helps may eventually send these names to CAA-NH or CRI to receive program services, often through an appointment model. Likewise, WRAP will target direct mailings to people participating in Community Relations programs.

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21 NU conducted a bilingual survey of customers eligible to receive the Neighbors newsletter; the results indicated there is not currently a great demand for a Spanish version of the newsletter.
Sometimes, though, these other programs actually market UI Helps and WRAP. The other utility program staffs tell their participants about UI Helps and WRAP and provide customers with contact information for the programs. Furthermore, the NU Money Matters program not only tells customers about WRAP, but at least one person leading these money management workshops encourages program participants to fill out a WRAP application while at the workshop. One workshop leader notes, “Sometimes you’ll have somebody in the audience who has had [WRAP] done. They’ll … get up and … say, ‘I recommend it because I had it done.’” It is also worth noting that WRAP will give Community Relations lists of its participants to help the department in its program recruitment and marketing.

At this point in time, the programs have mixed success with turning referrals from other utility departments into actual households served. UI Helps reports, “Historically we have gotten 15%-20%” of the people referred through the arrearage forgiveness and matching payment programs to actually participate in UI Helps. More recently UI Helps is trying “to get that [participation rate from these referrals] to 70%-80% this year. It’s a key point, especially with rate shock.” Partly because of the greater emphasis in serving people who have been identified by monitoring the arrearage-forgiveness and matching-payment programs participant lists, UI Helps expects to serve 5,000 households in 2006, compared to the approximately 8,300 homes served in 2005.\(^{22}\)

WRAP does not currently track how people who apply first heard about the program, but utility staffs from both departments believe that the efforts of Community Relations to market WRAP contributes positively to WRAP participation. For Money Matters, it works best when customers fill out the application at the workshop; otherwise, they often forget to contact the program or to send the application into WRAP.

### 5.3 CAA Referrals and Marketing

The CAAs also promote the UI Helps and WRAP programs to the thousands of clients entering their agencies each year seeking energy or weatherization assistance. The energy-assistance directors and intake staff members we interviewed estimate that between 50% and 80% of all the agency’s clients are seeking energy-related assistance, although most of these clients also make use of other CAA services. As noted above in Section 4.3, the CAAs will tell customers about the programs and either help them sign up for WRAP, refer them to UI Helps, or encourage them to contact the programs for more information. They also inform WRAP about buildings and neighborhoods that are possibly good candidates for Subprogram 3 and 4 services.

Some of the CAAs view WRAP as a part of the package of services available to low-income households. As a result, they usually include program brochures at intake sites with other literature about the programs available through the agency. One CAA office also stocked issues of the HelpLine newsletter that included a story about the WRAP program. Energy-assistance intake staffs at the various CAAs often have WRAP brochures and information on hand as well. Some of the CAA staff members will also tell customers who live in units previously weatherized by the DSS/DOE program to apply for WRAP because the utility program will re-weatherize after 18 months.

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\(^{22}\) CL&P and UI (2005)
Only one agency, however, conducts its own, independent outreach for the WRAP program. ACCESS, which conducts weatherization services in Eastern Connecticut, actively promotes WRAP Subprogram 2 in an effort to increase the number of households served in its region and create a more consistent workload over the course of the year (see Section 6.9.1 for more on consistent workload). The energy and weatherization staffs develop and place advertisements for the WRAP program in free and fee-charging newspapers throughout Eastern Connecticut. They also promote WRAP when giving talks in senior and community centers about the energy-assistance and weatherization programs available through the agency. As an added incentive, ACCESS offers a $10 gift certificate to local discount or grocery stores to anyone who fills out a WRAP application; the agency pays for the gift certificate with the $10 finder’s fee that the program pays to all of the agencies for each application they generate that results in a completed WRAP services. ACCESS funds the advertising through the funds generated by providing WRAP program services. These marketing efforts have succeeded in increasing the number of homes ACCESS serves through WRAP Subprogram 2. ACCESS reports that the agency took in 557 WRAP applications in 2005, accounting for 88% of the 633 WRAP Subprogram 2 jobs completed by the agency.23

5.4 2-1-1 Infoline

Both WRAP and UI Helps partner with the 2-1-1 Infoline (now referred to as just 2-1-1) service operated by the United Way. According to the service’s website, “2-1-1 is an integrated system of help via the telephone—a single source for information about community services, referrals to human services, and crisis intervention.”24 Clients generally access the service by dialing 2-1-1; a customer representative then works with the client to identify his or her needs and what programs or services may be of use to them. 2-1-1 then gives the client contact information for the appropriate programs and services, but it is up to the client to contact them.25 Individual customer-service representatives can speak English, Spanish, and/or Portuguese. They use a telephone interpreter service for other languages. 2-1-1 also has Teletypewriter (TTY) and Telecommunication Device for the Deaf (TTD) capabilities.

The 2-1-1 database lists many of the programs and services offered by NU and UI, including WRAP and UI Helps as well as arrearage forgiveness and matching payment programs, among others. Therefore, a client calling with concerns about her house would answer screening questions to determine if she is eligible for UI Helps or WRAP. 2-1-1, however, does not actually enroll people in utility or other programs. Instead, they only refer clients to programs. For example, if a 2-1-1 staff member determines that a client is likely eligible for WRAP or UI Helps, the staff member will give the client contact information for the program and/or the appropriate CAA.

In 2005, utility assistance ranked second (just behind housing/shelter assistance and just before substance abuse) in the number of service requests through 2-1-1. (Table 5–1) The total number of service requests was 453,837. Most utility calls, however, center on bill payment assistance,

23 Data provided by ACCESS. According to the WRAP database, ACCESS served 668 people through Subprogram 2 in 2005.
24 http://www.infoline.org/AboutUs/Default.asp
25 More recently Infoline 2-1-1 has instituted a comprehensive website containing all the information on their database and using similar search tools. See http://www.infoline.org
emergency fuel deliveries, energy assistance, and how to avoid service shut-offs. Rarely does someone call specifically about weatherization assistance. 2-1-1 customer-service representatives, however, will almost always tell such callers about UI Helps and WRAP, provided the client is eligible for the programs. 2-1-1, therefore, actually engages in a good deal of program marketing to the subset of the population requesting energy-related services.

### Table 5–1: 2-1-1 Infoline Top Ten Service Requests, 2005

<table>
<thead>
<tr>
<th>Service Requested</th>
<th>Number of Times Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>453,837</td>
</tr>
<tr>
<td>Housing/Shelter</td>
<td>39,781</td>
</tr>
<tr>
<td><strong>Utility Assistance</strong></td>
<td><strong>38,989</strong></td>
</tr>
<tr>
<td>Substance Abuse Services</td>
<td>34,978</td>
</tr>
<tr>
<td>Legal Services</td>
<td>23,666</td>
</tr>
<tr>
<td>Health and Human Services Information</td>
<td>16,097</td>
</tr>
<tr>
<td>Information Services</td>
<td>14,436</td>
</tr>
<tr>
<td>Food</td>
<td>13,876</td>
</tr>
<tr>
<td>Outpatient Mental Health Care/Counseling</td>
<td>13,576</td>
</tr>
<tr>
<td>Helpline Counseling</td>
<td>12,092</td>
</tr>
<tr>
<td>Government Income Programs</td>
<td>11,758</td>
</tr>
</tbody>
</table>


Not all 2-1-1 marketing is free of charge to UI and NU. As partners, the utilities also help fund 2-1-1. Furthermore, NU additionally contributes funds to advertising campaigns that encourage Connecticut residents to contact 2-1-1 to find out more about energy assistance, utility payment programs, and weatherization opportunities in the state. In recent years, this broader energy-assistance campaign has included placing advertisements on buses throughout the state during the heating season.

### 5.5 Use of Print and Radio Media

UI Helps and WRAP staffs issue press releases about their program activities that community newspapers generally turn into articles at no cost to the programs. Newspapers will also sometimes run feature stories about the programs. In fact, one housing authority manager tells the NMR team that he first heard about UI Helps by reading a story highlighting the program’s new multifamily efforts and the services provided to another housing authority. A utility marketing staff member argues, “I think that’s a better way, to actually have it incorporated into a column rather than paying for ad space.”

WRAP also pays for advertising space, however, in daily and weekly newspapers, typically during December and January. Some of these newspapers have an almost state-wide audience, while others are targeted to particular towns, or to particular language, ethnic, or racial groups. Newspaper advertisements are printed in both English and Spanish, with Spanish papers being most commonly targeted in SWCT.
WRAP also runs radio advertisements in both English and Spanish during December. Most of these advertisements run on AM stations, and tend to target Spanish-speaking audiences.

### 5.6 Community Outreach

Both UI Helps and WRAP program staffs engage in active outreach to particular groups who are more likely to be eligible for the programs or who work with eligible households. One NU staff member believes that utility outreach to educate the CAAs about how to enroll people in WRAP provides the most effective marketing for the program. Some additional examples of community outreach cited in the interviews or marketing materials include the following:

- Publicizing UI Helps at senior centers
- Describing WRAP services at meetings of landlord, housing authority, and small business associations
- Promoting UI Helps through direct outreach to the administrator of the Section 8 voucher programs to target landlords accepting such vouchers
- Cold-calling landlords and housing authorities to encourage them to receive building-wide services from UI Helps or WRAP
- Meeting with CAAs’ intake staffs prior to the energy-assistance season to describe WRAP and explain how to help agency clients to sign up for the program

Currently, UI Helps staff members report that they conduct outreach to the administrator of the Section 8 voucher program. A participating housing authority in the WRAP service-territory suggests an additional way of reaching out to landlords with tenants using Section 8 vouchers. His housing authority, like others, administers the Section 8 voucher program. This means that they send a reimbursement check every month to landlords who accept the vouchers from the tenants. Importantly, many of these landlords have only a few rental units or have units dispersed over a wide area. The housing authority employee suggested that the programs may want to include program marketing materials geared to landlords in the envelope containing the voucher reimbursement check.

### 5.7 Word of Mouth

Word of mouth serves as the final marketing method named by interviews. Households may look into the program if a friend, family member, or other acquaintance tells them about the program after participating in it or after being exposed to other forms of program marketing. Satisfied customers and people trusted by the potential participant provide the best word-of-mouth marketing. As one service installer notes, “[Participants] are head over heels [for the program]. It’s free—they love that idea. When they find something for free, they want to tell their neighbors.” He further explains that when customers learn that the free services will also help save them money, “they love it even more.”

Linguistically and culturally isolated groups likely rely more heavily on word-of-mouth marketing than other groups. One interviewee describes providing another type of social service to a hearing-impaired client; soon after, the interviewee saw a marked increase in deaf clients, because the original one had told other hearing-impaired acquaintances about the service.

Both UI Helps and WRAP staff members name word-of-mouth marketing as one of the most effective ways of bringing customers into the program. As we discuss again in the
recommendations section, the utilities may be able to use this form of marketing to increase participation among some demographic groups.

5.8 Customer Recall of how they Learned about Programs

The NMR team asked survey respondents how they had actually first heard of the UI Helps or WRAP programs. Due to the prevalence of the neighborhood canvassing strategy, 51% of UI Helps participants report that they first heard about the program when someone came to their house. (Table 5-2) Nine percent of UI Helps respondents first heard about the program through utility mailings, and six percent by word of mouth. Reflecting its broader marketing efforts, WRAP participants hear about the program in more diverse ways; 27% mention someone coming to their house, 22% mention a utility mailing, newsletter, or bill insert, 13% mention a CAA or CRI, and 7% mention word of mouth. We also asked respondents if they had heard about the program in any other way. The majority (83%) had not heard about the program through any additional means. Those who had heard about the program in some other way had typically received mailings or received a visit from at their house.

| Table 5-2: How First Heard about Program  
(All Respondents) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Respondents</strong></td>
<td><strong>UI Helps</strong></td>
<td><strong>WRAP</strong></td>
</tr>
<tr>
<td>Someone came to my house</td>
<td>51%</td>
<td>27%</td>
</tr>
<tr>
<td>Mailing or bill insert from my electric company</td>
<td>9%</td>
<td>22%</td>
</tr>
<tr>
<td>CAA or CRI</td>
<td>4%</td>
<td>13%</td>
</tr>
<tr>
<td>Word of Mouth</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Heating or Energy or fuel-assistance program</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Social Services or Government Agency</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Electric company</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Newspaper</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Landlord/Management</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>211, Infoline</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Natural gas company</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Internet</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Advertisement on bus</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Television</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Fuel oil company</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Don't know/don't remember</td>
<td>19%</td>
<td>13%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Program participants, however, have a difficult time remembering the name of the program that provided their weatherization services. Roughly two-thirds of respondents cannot recall the name of the program in which they participated. (Table 5–3) However, 18% of UI Helps respondents mention “UI Helps” or “UI” and 22% of CL&P respondents mention either “CL&P” or “WRAP.” Remaining responses include energy assistance and weatherization or the names of individual CAAs.

<table>
<thead>
<tr>
<th>Table 5–3: Recollection of Program Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>----------------------------------------</td>
</tr>
<tr>
<td>UI HELPS</td>
</tr>
<tr>
<td>CL&amp;P, Connecticut Light &amp; Power</td>
</tr>
<tr>
<td>WRAP</td>
</tr>
<tr>
<td>UI, United Illuminating</td>
</tr>
<tr>
<td>A particular CAA</td>
</tr>
<tr>
<td>Weatherization</td>
</tr>
<tr>
<td>Energy assistance</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td>Number of Respondents</td>
</tr>
</tbody>
</table>

Landlords, housing authorities, and property managers find out about the programs in diverse ways. Landlords with just one or a few units participating in the programs typically learn about them when the tenant or a CAA or CRI staff member asks for the landlord’s permission to have the unit weatherized. Such landlords generally know very little about the programs and refused to be interviewed or failed to respond to our requests for interviews.

Landlords and managers of larger complexes are more likely to learn about the programs from program staff members offering them building-wide services. Other managers first become aware of the programs when working as staff or maintenance crew members at other complexes. Still others hear about the programs at housing authority or landlord association meetings from either program staff members or other participants. Finally, as mentioned above, one housing authority property manager learned about the UI Helps program through a newspaper article highlighting another property that had received UI Helps services. Landlords and property managers argue that continued outreach to housing authority and landlord associations, as well as continued success stories in the press, would be effective marketing tools, at least for building-wide services.
6 Program Procedures

UI Helps and WRAP, in coordination with program partners, have developed a series of procedures designed to:

- Achieve program goals
- Facilitate communication and data sharing between program partners
- Provide high quality service
- Ensure accuracy in invoicing, reimbursement, and data tracking

This section of the report describes these procedures, including more in-depth discussions of program procedures and enrollment processes.

6.1 Eligibility

UI Helps and WRAP staffs typically base program eligibility requirements on either the DSS energy-assistance program or the DSS/DOE weatherization assistance program. In particular, for most of 2005, UI Helps set program eligibility in 2005 at 150% of FPL, matching the DSS income criterion for the CEAP portion of energy assistance. At this level, approximately 47,700 households were eligible for UI Helps. (Table 6–1) WRAP set its 2005 eligibility at 200% of FPL, which matched the criterion DSS then used for weatherization assistance in households with elderly or disabled individuals. About 176,000 households were eligible for WRAP at this level. However, in the fall of 2005, DSS reinstated the CHAP portion of energy assistance and set eligibility at 60% of SMI; UI Helps and WRAP each followed suit, matching the reinstated CHAP criterion. Currently, approximately 92,046 households (about one out of three) are eligible for UI Helps and 267,147 (about one out of four) are eligible for WRAP. Eligibility for UI Helps, therefore, has nearly doubled and that for WRAP has increased by about 50%.

Table 6–1: Estimated Eligible Households at Various Income Criteria

<table>
<thead>
<tr>
<th>Income Criteria</th>
<th>UI Helps – 265,081 households</th>
<th>WRAP – 981,206 households</th>
</tr>
</thead>
<tbody>
<tr>
<td>150% FPL</td>
<td>47,693</td>
<td>119,315</td>
</tr>
<tr>
<td>200% FPL</td>
<td>66,281</td>
<td>176,001</td>
</tr>
<tr>
<td>60% SMI</td>
<td>92,046</td>
<td>267,147</td>
</tr>
</tbody>
</table>

a Method derived from Census data on the number of individuals at each level of poverty and the average size of households at 100% of the FPL.

b Calculation based on SMI as reported in the Census. Because the median household income reported in the Census is based on households of all sizes, our method implicitly accounts for varying family size.

Although eligibility has increased, WRAP and UI Helps staff members expect that their budgets will remain relatively stable at $5,000,000 and $900,000, respectively, excluding any emergency or additional funds added by the DPUC over the course of the program year. As a result, as shown in Table 6–2, the programs have less money to spend per eligible household.

The stable budget and the increase in the number of eligible households raise questions about which households will receive services. The program staffs argue that they raised eligibility to match the CHAP program, and that the higher eligibility level allows them to serve a wider range of households who may have a difficult time keeping up with their energy bills, particularly
given recent rate increases. Furthermore, moderate-income households, some interviewees argue, are not well served by any C&LM programs, because they are too wealthy for low-income programs but do not have the disposable income, for example, to pay even for rebated ENERGY STAR® appliances, lighting, or homes. Opening UI Helps and WRAP to such households gives them the opportunity to take part in CEEF programs, into which they have contributed money through the public benefits charge on their electric bills. The decision to raise eligibility for UI Helps and WRAP, however, may also have the unintended consequence of serving fewer of the most vulnerable households in the state, particularly those served in application- and appointment-based approaches. This is because moderate-income people tend to be more proactive and better able to maneuver through application and enrollment processes than is the case with their more vulnerable counterparts that may have very low education levels or have a learning or mental disability. Therefore, it is likely that moderate-income households will apply earlier and follow the process through to completion at greater rates than the most vulnerable households. Because of the “first-come, first-served” nature of WRAP and the DSS/DOE program, there might not be enough money left to serve vulnerable households who apply later or need more hand-holding by DSS, CAA, or program staffs to complete the application process.

### Table 6–2: Dollars Available per Eligible Household

<table>
<thead>
<tr>
<th>Proposed Budget</th>
<th>UI Helps</th>
<th>WRAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>$900,000</td>
<td>$19</td>
<td>$42</td>
</tr>
<tr>
<td>$5,000,000</td>
<td>$14</td>
<td>$28</td>
</tr>
</tbody>
</table>

#### 6.2 UI Helps Program Enrollment and Delivery

Customers enter the UI Helps program in one of four ways. First, customers may self-refer to UI Helps by calling the UI Call Center or the UI Helps program staff. UI Helps program staff members check to see if such customers are hardship coded or if they have previously been served by the program. If the customer is not hardship coded and has not already received program services, UI Helps staff members will directly ask the customer if the household meets income eligibility guidelines. Second, UI Helps staff members track and review customers participating in arrearage forgiveness or matching payment programs, and attempt to provide UI Helps services to income-qualified customers. Third, the CAA-NH refers customers who have participated in the DSS/DOE weatherization program and who could also use services provided through UI Helps. The Neighborhood Canvassing Track serves as the final—but most common—way that customers enter the UI Helps program. UI Helps staff members identify neighborhoods for such events by locating areas with a concentration of hardship-coded customers in a given town or zip code. Then the program expands the list to the surrounding area and excludes any commercial buildings or large master-metered buildings, or customers who have received program services within the past two years. After identifying customers who likely qualify for the program and noting those who heat with electricity (identified by annual electricity usage of at least 6,500 kWh), UI Helps staff members assign each customer a project code and sends the “lead” lists to either CAA-NH or CRI.
The results of the participant survey indicate that participants recall entering the program in each of these ways. (Table 6–3) Seventy-one percent of UI Helps respondents believe they entered the program when someone visited their home, most likely during a neighborhood canvass. Others report that someone had telephoned them (7%), indicating that they were served via a UI Helps or DSS/DOE weatherization appointment. Additional participants completed an application at a CAA office (7%), pointing to a CAA referral from DSS/DOE weatherization. The three percent of respondents who called the program likely represent self-referrals to UI Helps. One individual recalls sending back an application in the mail to sign up for UI Helps. This person is likely confusing the UI Helps program with the state “yellow card” indicating the desire to receive weatherization assistance. Finally, 11% of respondents do not recall how they entered the program.

<table>
<thead>
<tr>
<th>Table 6–3: How UI Helps Participants Enrolled in the Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Respondents; n=202)</td>
</tr>
<tr>
<td>Someone visited my home or apartment</td>
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<tr>
<td>Someone telephoned me</td>
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<tr>
<td>I filled out an application at an agency.</td>
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<tr>
<td>Over the telephone</td>
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<tr>
<td>I mailed back an application given to me by my electric utility</td>
</tr>
<tr>
<td>Do not recall how I ended up participating</td>
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The UI Helps program provides tiered services to customers based on the uses of electricity in the home. Customers with general electric service used primarily for lighting and operating home appliances are eligible for lighting measures and sometimes for refrigerator or room air conditioner replacement. Customers who also heat water with electricity receive measures targeted at water heating, such as low-flow showerheads, aerators, and water pipe insulation. Finally, customers who heat their homes with electricity are additionally eligible for weatherization services, including air sealing, insulation, caulking, and door sweeps, among others. Both CAA-NH and CRI provide services to those with general electric service and water heating, but in 2005 CRI provided most of the services to electrically heated homes. UI Helps has informed the NMR team that CAA-NH will soon start installing more electric heating measures. In addition, CRI exclusively serves UI Helps participants living in the Bridgeport area, because UI does not currently partner with ABCD, the CAA serving that area.26

Program delivery occurs in two primary ways. CRI and CAA-NH will set up appointments for services with the customers who enter the program through self referral, the DSS/DOE program, or other referrals. UI Helps requests that CRI and CAA-NH complete services within five to ten days of customer approval, but the program is very flexible about that turnaround period. The turnaround usually occurs in a matter of days. Customers served through the DSS/DOE program are served according to CAA-NH’s waitlist procedures. According to the participant survey, 17% of the 202 UI Helps respondents recall being served through an appointment; almost all found it very easy to identify a convenient time for the appointment. As discussed earlier, UI Helps staff members want to increase the percentage of customers participating in the program who were originally referred by Credit and Collections. This will increase the number of UI

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26 UI Helps staff members indicate an interest in partnering in the future with ABCD.
Helps participants served via appointments, even though the program will still serve more customers through the canvass.

The procedures are different for neighborhood canvassing. CAA-NH and CRI, after receiving names from UI Helps, set a time period for canvassing the area. Historically, CAA-NH and CRI have notified customers of their intention to serve the area with a postcard mentioning the dates they will be working or informing residents that they would soon be in the neighborhood. UI Helps staff members report that such mailings now occur less frequently than in the past, but both CAA-NH and CRI say that they still do at least some pre-event notification mailings. During canvassing, CAA-NH or CRI staff members will knock on doors and introduce themselves as representing UI and the UI Helps program. They will provide a brief explanation of the services they are offering and ask for permission to provide them.

The technicians follow similar procedures for installing measures in both the appointment- and canvass-based approaches. After receiving permission to enter the home, the technician will install lighting and water heating measures, and often electric heating measures, during this first visit. If the customer is eligible for electric heating measures, but had not been identified as such by UI on the canvassing lead list, such measures are installed at a later date by appointment with CRI. Homes heated with electricity also receive a blower-door test, which one technician states really helps him explain to customers why their electric bills are so high. Customers also receive pamphlets with energy savings tips. The technician will also gather relevant information on the age, brand, model number, and size of refrigerators and room air conditioners. The information is sent to UI Helps staff members, who decide whether or not the housing unit is eligible for replacement. If it is, UI Helps staff will order the appliance to be delivered to the customer.

With the exception of the refrigerators and room air conditioners, which UI Helps staff members order, CAA-NH and CRI invoice UI Helps for the measures installed. For DSS/DOE clients, the CAA-NH will charge allowable measures to UI Helps, usually lighting products and sometimes electric water heating measures. UI Helps will also pay for electric space-heating measures if CAA-NH obtains prior approval. A staff member at UI Helps explains, “Customers of DOE weatherization are combined with UI Helps. In most all cases, CAA[-NH] gets $900 [in materials costs only] per house so an extra $100 is useful.”

Both CRI and CAA-NH staffs input tracking information and measures installed directly into the UI Enernet tracking system. The tracking system includes kWh and monetary savings assumptions for each measure installed. When CAA-NH and CRI staffs invoice UI Helps for work, the materials must match those listed in the UI Enernet system.
6.3 WRAP Enrollment and Delivery

WRAP participants take part in one of four Subprograms. Table 6–4 lists participation by Subprogram. No single Subprogram served a majority of WRAP participants in 2005. Instead, more participants (41%) were served by Subprogram 4, typically the most cost-effective of the four Subprograms, based on the electric b/c test. Another 30% of participants were served through Subprogram 2, the WRAP application method. Subprogram 3, the building-wide, multifamily program, served one-fourth of participants. The remaining four percent of WRAP participants received services through Subprogram 1, which leverages resources with the DSS/DOE weatherization.

| Table 6–4: Participation in WRAP by Subprogram |
|-----------------------------------------------|--------|
| Overall                                       | 9,830  |
| Subprogram 1 – DSS leverage                   | 387    |
| Subprogram 2 – WRAP application               | 2,951  |
| Subprogram 3 – Multifamily                    | 2,465  |
| Subprogram 4 – Neighborhood Canvass           | 4,027  |

<table>
<thead>
<tr>
<th>Subprogram</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subprogram 1 – DSS leverage</td>
<td>4%</td>
</tr>
<tr>
<td>Subprogram 2 – WRAP application</td>
<td>30%</td>
</tr>
<tr>
<td>Subprogram 3 – Multifamily</td>
<td>25%</td>
</tr>
<tr>
<td>Subprogram 4 – Neighborhood Canvass</td>
<td>41%</td>
</tr>
</tbody>
</table>

*a Based on the number of records in the 2005 tracking database.

As discussed in more detail below, customers enter the WRAP program in a variety of ways. They can be served via the DSS/DOE program, fill out a WRAP application, be enrolled by their landlord through Subprogram 3, or participate in a neighborhood canvass event. Table 6–5 summarizes the ways in which customers recall enrolling in WRAP. Nearly half (46%) recall participating when someone from the program visited their home, indicating participation in Subprogram 4 and, possibly, Subprogram 3. Twenty-four percent of WRAP customers mailed back an application sent to them by WRAP, the main method of enrollment in Subprogram 2. Eleven percent of participants in each program completed an application at a CAA office. Other customers (3%) report being signed up through their landlord, indicating participation in Subprogram 3. Others say that someone telephoned them (2%) or that they signed up over the phone (2%). Thirteen percent of participants do not recall how they entered the program.

<table>
<thead>
<tr>
<th>Table 6–5: How WRAP Participants Enrolled in the Program</th>
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<tbody>
<tr>
<td>(All Respondents; n=212)</td>
</tr>
<tr>
<td>Someone visited my home or apartment</td>
</tr>
<tr>
<td>I mailed back an application given to me by my electric utility</td>
</tr>
<tr>
<td>I filled out an application at an agency.</td>
</tr>
<tr>
<td>Through my landlord/management</td>
</tr>
<tr>
<td>Someone telephoned me</td>
</tr>
<tr>
<td>Over the telephone</td>
</tr>
<tr>
<td>Do not recall how I ended up participating</td>
</tr>
</tbody>
</table>

In the following sections, we describe the implementation of each WRAP Subprogram.

6.3.1 Subprogram 1: DSS/DOE Weatherization Leverage

WRAP Subprogram 1 serves households living in all housing types—single family or multifamily, owner-occupied or rental. It is NMR’s understanding that any unit in the CL&P service area that is weatherized under the DSS/DOE program is automatically approved for
WRAP services, unless the customer has received WRAP services in the prior 18-month period. The WRAP unit does not generate work orders or require prior approval of participants or measures installed under Subprogram 1, unless the unit will receive WRAP measures totaling more than $1,500. WRAP staff members also must give prior approval for refrigerator and heating system replacements.

Every participant in the DSS/DOE weatherization program receives a comprehensive energy audit. Current audit procedures are based on techniques and software developed by Conservation Services Group (CSG). WRAP purchased the software for DSS and each of the agencies and has funded auditor training for the new software.

All of the CAAs have auditors on staff; every weatherization director is trained as an auditor, and each CAA retains at least one staff member who is a trained energy auditor regularly working in the field. ACCESS and CRT also have contractors who are trained as auditors, while currently only staff members at the other three agencies provide audits. ABCD may consider using contractors as auditors in the near future, in response to financial difficulties at the agency and within the department that have led to layoffs of weatherization staff.

Before setting up an appointment, the CAA is responsible for verifying eligibility for DSS/DOE weatherization, which they typically do by reviewing the customer’s energy-assistance application. Once eligibility is verified, the CAA or contracted auditor sets up an appointment to conduct an audit in each client’s home.

The audit process often begins as soon as the auditor arrives at the customer’s home. As one auditor explains, “When I walk out of the van and I’m walking up to the house, first of all, I’m observing the exterior siding and the windows and the roof line…. I’m doing a quick visual observation of this and just trying to get some information.” After introducing herself or himself to the client and entering the home, the auditor and customers fill out some paperwork and answer a questionnaire about the characteristics of the households and its members, as well as their energy use and behavior. Customers must show the auditor energy bills at this time. The auditor will also ask the customer to point out any particular concerns she or he may have, such as colder or draftier parts of the home. The auditors then complete a series of other tasks, although the order in which they do them varies by auditor and agency.

**Energy Conservation and other Educational Materials:** The auditor gives the participant materials on other ways to save energy, lead safety and abatement, and mold and moisture. Some auditors give the clients this information while filling out the paperwork and questionnaire so that the customer will have time to review and ask questions of the auditor at the end of the appointment. Other auditors give them the information after the audit is completed; they argue that by this time, the customer has followed them around during the audit and has a better idea of general energy conservation theory and of questions to ask the auditor about saving energy. According to WRAP follow-up surveys, 74% of Subprogram 1 participants recall receiving energy education materials.

**Energy Audit:** The audit covers the entire house, and follows a set of procedures that facilitate the identification of the efficiency measures the home needs. The auditor checks the heating
system, windows, and duct work, among other things. They also gather information on the age, brand, model number, and size of the refrigerator for possible replacement by WRAP. The audit always includes a blower-door test, except in rare cases where such a test could create or exacerbate health problems (e.g., when asbestos or a drop ceiling is present). One weatherization director, who also conducts audits, finds that the combination of a blower-door test with a smoke pencil provides the customer with a strong visual idea of why their energy bills are so high or their home is cold and drafty in the winter.

Post-Audit Discussion: After conducting the audit, the auditor will discuss his or her initial findings with the client. As one explains, “I always go over my notes with them before I leave and I explain around five times, from the time I get there to the time I leave, that all I can do is propose these items. I tell them what I’m proposing and explain to them that we have to await approval for these items.”

Currently, every auditor uses a paper form listing the information that is later entered into the CSG computerized audit program. Not one auditor takes a laptop, tablet computer, or personal digital assistance (PDA) on the audit. Some initially tried this approach, but did not find it practical to haul a computer up to an attic or wise to leave it alone on a customer’s kitchen table. Auditors also experienced problems with the software that slowed the audit down or made it impossible to complete. Others never even tried to take a computer along, and have always relied on a paper form.

Because they do not take the computer with them, auditors enter the audit data into the CSG program after returning to the office. The software will produce a list of final recommendations. A CAA staff member then sets up the installation with the appropriate contractor or work crew. For three of the agencies, crew members install most of the measures; these agencies hire contractors for more specialized work, typically including attic and sidewall insulation, heating systems clean-test-and-tune, and heating system replacement. The other two CAAs hire contractors for all installations.

The staffs at the five CAA or their subcontractors order all materials and supplies for Subprogram 1 except refrigerators, which WRAP staff orders. All materials ordered by the CAA staffs must meet DSS/DOE and WRAP standards of quality and energy efficiency, depending on the measure and who will reimburse the CAA for its installation. The CAA staffs and subcontractors typically have a stockpile of at least some measures, such as CFLs, aerators, weather stripping, and other relatively inexpensive materials. However, all windows, doors, heating systems, and refrigerators must be ordered as needed.

The DSS/DOE program and WRAP fund an overlapping but somewhat different list of measures. The CAA staffs charge the measures allowed only under DSS/DOE to that program and the measures allowed only under WRAP to that program. By WRAP and DSS design, the CAA staffs have a good deal of flexibility in deciding whom they charge for the measures that

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27 The auditor mentioning this stressed that he would not leave an expensive laptop alone in any house, not just one in which low-income people live.

28 ABCD may soon be relying more heavily on subcontractors to install WRAP Subprogram 2 measures, again reflecting recent layoffs in the weatherization department due to financial difficulties.
both programs fund. This leads to some slight variations in invoicing decisions between CAAs. Some CAA staffs “maximize WRAP,” charging whatever they can to the utility program because its budget is larger than the DSS/DOE budget. Other CAA staffs consider the DSS/DOE average cost of materials per unit served ($807 in FFY 2006); if the cost of measures needed in a home exceeds the average—and it often does—the CAAs will charge what they can to WRAP in order to bring the amount closer to the DSS/DOE per-unit average cost. Finally, some CAA staffs look at the remaining budget for each program and decide where best to charge the measures.

The CAA staff members are supposed to bill WRAP as projects are completed, but they often send invoices in batches once or twice a month. After verifying that all measures are allowed under program guidelines, WRAP program staff members reimburse the CAAs for the measures. Invoices are currently sent electronically and followed up with paper copies. The CAA staffs will also notify WRAP of clients who have refrigerators eligible for replacement. After verifying that the refrigerator is eligible, WRAP staff members will order the refrigerator and have it delivered to the customer, typically within two months of the date of the audit.

### 6.3.2 DSS/DOE Weatherization Waitlist

As mentioned in Section 4.2, the DSS/DOE weatherization program cannot provide services to all households requesting weatherization assistance. There simply is not enough money to serve all eligible households who request weatherization services. For this reason, the agencies consistently have quite lengthy weatherization waitlists. These waitlists are, in fact, shorter than they could be because the majority of people receiving energy assistance each year never return the yellow card that is required to indicate the household’s desire to receive weatherization.²⁹ The DSS/DOE program will always have waitlists unless program funds are increased substantially or the program institutes new policies for greatly limiting eligibility for weatherization services.

As mentioned earlier, the agencies prioritize weatherizing households with members who are under six years old, who are elderly, or who are disabled.³⁰ Eligible households with energy bills exceeding $2,000 annually also receive priority. Some agencies report that they are able to serve the most vulnerable households about a year after receiving their yellow card; other agencies report that even these individuals usually wait more than a year to receive DSS/DOE weatherization services. Each agency is also required to weatherize households throughout its service area. One weatherization director explains that this means that residents of the largest city within his service territory wait at least two years for service, while those living in other parts of the service area are usually served in about a year. When asked to describe the “worst-case scenario,” most weatherization directors and/or the DSS indicate that a vulnerable household might wait two years for service, and a non-vulnerable household might wait three or four years for service.

²⁹ The agencies will serve a client who needs an emergency heating system replacement even if that person did not return their yellow card.

³⁰ The Demographic Analysis Report (Appendix A) shows that 64% of all households weatherized by the DSS/DOE program in the 2004-2005 program year were considered vulnerable based on these three criteria. This ranged from a low of 53% in CRT’s service territory to 75% in ABCD’s service territory.
Because many energy-assistance recipients receive assistance every year, some of them return the yellow weatherization card multiple times. The agencies deal with re-applicants in different ways. Some prioritize households from whom they have received yellow cards two or more years in a row. Others just toss the second card, but preserve the client’s existing spot on the waitlist from the year (or two) before.

In addition, being on the waitlist does not guarantee that a client will one day receive services. Federal guidelines state that households must be eligible for weatherization at the time of receiving it, not at the time the person originally applied for energy assistance and sent in their yellow card. When a client enters the top of the waitlist, they must still be receiving energy assistance and/or have an income that falls at or below 150% of FPL (or 200% for elderly or disabled). Likewise, if a person moves and the agency cannot track them down, they will not be served. Finally, the agencies may find that the client lives in a home that has previously received DSS/DOE weatherization services and cannot be re-weatherized.

Our interviews made clear that at least some WRAP unit members were surprised to hear that clients of the DSS program usually wait a year or more for services. After all, WRAP staff members are not responsible for signing people up for the DSS program or for deciding when they get served. Instead, WRAP staff essentially reimburses the CAAs for the measures it has agreed to fund. Yet, the length of the DSS/DOE waitlist may affect WRAP in three key ways.

First, customer satisfaction could possibly be lower for WRAP Subprogram 1 if participants are angry about the length of time they have to wait to receive services. However, the NMR team finds no evidence for this; instead, the WRAP follow-up surveys and Subprogram 1 respondents to the participant survey are just as satisfied as participants in other Subprograms.31

Second, CAA and volunteer-site intake staff members who sign people up for energy assistance know that clients will receive WRAP Subprogram 2 weatherization far more quickly than DSS/DOE weatherization. Therefore, some intake workers strongly encourage people to sign up for WRAP so that they will receive weatherization services in a timely manner. In other words, the DSS waitlist may be boosting participation in WRAP Subprogram 2. It is also the case, however, that the official WRAP guidelines state that households eligible for DSS/DOE weatherization should be switched from Subprogram 2 to Subprogram 1. We return to this topic below in Section 6.3.6.

Third, another implication of the DSS/DOE program waitlist from a utility perspective is that energy and money are not being saved. Clients waiting for services will continue to use excessive amounts of energy that result in high bills, while Yankee Gas, CNG, and CL&P fail to achieve immediate energy savings from these homes.

6.3.3 Subprogram 2: The WRAP Application
Like Subprogram 1, WRAP Subprogram 2 serves households living in all housing types—single family and multifamily, owner-occupied and rental. Participants in Subprogram 2 enter the

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31 See Section 7.4 on the Customer Experience for more on customer satisfaction.
program by filling out a WRAP application. They may have received the application in the following ways:

- WRAP staff members send an application to those customers who are hardship coded in the NU customer database.
- The agencies sometimes also generate WRAP applications, either by having clients pick up and/or fill out the WRAP application at the CAA office or by mailing WRAP applications to clients with their energy-assistance eligibility letters. The CAAs receive a $10 finder’s fee for each WRAP application they generate that results in completed WRAP services.
- Still other customers call the 2-1-1 Infoline, find out about WRAP, and then call the WRAP program or CAA to request an application.
- Finally, WRAP and some CAAs market the WRAP program, prompting some customers to call and request an application.

A WRAP staff member estimates that between 35% and 40% of all WRAP applications are generated through the efforts of the CAAs.

All applications for WRAP, even those generated by the CAAs, go to the WRAP unit for approval. If the application is not approved, the individual is notified through a phone call or letter. If WRAP needs landlord approval or additional information from the client, a staff member will notify the landlord or client through a phone call or letter. If an application is approved, WRAP staff creates a work order with contact and relevant housing information and mails it to the CAA. The CAA staff or its contractor then sets up an appointment with the participant, typically within the required three-month limit set by WRAP, but circumstances such as work load or tight finances could push it to as much as six months. Following WRAP guidelines, the CAA staff or contractor generally serves customers on a first-come-first-served basis, with some variation based on where the household is located. In particular, in order to cut down on travel time, the CAA staff or contractor may wait to serve an individual household until a few other work orders have come in from the same area. Because the agencies are able to serve all WRAP clients within a few months of receiving the work orders, neither agency nor program staffs consider there to be “waitlist” for WRAP services.

Depending on the CAA, the characteristics of the home, and the overall workload, between one and three installers will go to the appointment. The installers will be either CAA crew members or subcontractors. As with the energy audit, installers then have some flexibility in the order in which they complete the remaining walk-through tasks. If more than one installer is present, they will divide the tasks to provide services more efficiently. The tasks involved are as follows:

**Initial “Fact Finding” Conversation with the Client:** Subprogram 2 services always begin with the installer talking with the customer about the household’s energy use and any energy-related problems the household is aware of or concerned about.

**Energy Conservation Education and Client Plan of Action:** The installer gives the client a booklet that lists easy and generally no-cost ways that the customer can save energy. The installer and the client generally review this information together. The customer will identify the steps the household already follows and which the household is willing to adopt. The installer
and the client develop a Client Plan of Action that involves the client agreeing to take usually three additional, no-cost, energy-saving steps on his or her own. According to WRAP follow-up surveys, 91% of Subprogram 2 participants recall receiving energy education materials.

**Walk-through Analysis:** The installer walks through the home and visually identifies measures the client is eligible to receive under WRAP Subprogram 2. In keeping with its WRAP contract, the CAA crew member or subcontractor will install nearly all measures on the same day as the walkthrough. Only refrigerators or items that must be “special ordered” are installed at later dates. It is important to note that, with the exception of the audit, WRAP offers nearly the same suite of measures under Subprogram 2 as it does under Subprogram 1. However, because Subprogram 2 participants do not also receive DSS/DOE weatherization, overall, they receive a less comprehensive suite of services than do Subprogram 1 participants.

**Refrigerators Analysis:** As in Subprogram 1, the installer will take information on the age, brand, model number, and size of the refrigerator. They pass this information onto the weatherization director or other office staff member who makes a preliminary judgment as to the eligibility of the unit.

After completing services, the installer lists all measures installed on the work order provided by WRAP. At the end of the appointment, the installer shows the list to the client who must sign the work order. Upon completing services, the CAA staffs send this signed work order with a list of all measures installed to WRAP with their monthly billings. WRAP staff members will then reimburse the CAAs for the measures installed. The CAA staffs currently mail the work orders and invoices to WRAP staff, which then enters them into the WRAP tracking system.

The CAA staffs are responsible for purchasing all materials for Subprogram 2, with the exception of refrigerators. The CAA staffs and subcontractors keep most WRAP measures in stock so that the materials are readily available for installation on the day of the walk-through. Subcontractors working with CAAs typically order their own materials, although others draw from the CAA stock.

Finally, the CAA staffs enclose a list in their monthly billing packages of customers who potentially have eligible refrigerators. WRAP staff members then verifies each unit’s eligibility and orders the refrigerator. The customer usually receives the refrigerator within six weeks of the walkthrough, but it may occasionally be two months.

**6.3.4 Subprogram 3: Multifamily Focused Projects**

WRAP Subprogram 3 differs from all other Subprograms in two ways. First, it services entire multifamily buildings and complexes in which at least 75% of the residents are eligible for WRAP services through Subprogram 2. Second, WRAP works directly with landlords, housing authorities, and property managers to decide whether or not the buildings will receive services and what services will be provided. Tenants need not apply to energy assistance or WRAP to receive services, and a few recipients may not actually be eligible for either program.

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32 Some interviewees indicate that the computerized audit may one day be used in Subprogram 2. It is our understanding that none of the five CAAs is currently using the audit software for Subprogram 2.
33 WRAP has recently started scanning the work orders into the tracking system.
WRAP staff members use five methods to identify properties for participation in Subprogram 3.

1. WRAP staff may notice that they are receiving many applications for Subprogram 2 from a particular building or complex.
2. It may be clear from the customer database that many hardship-coded residents live in particular buildings or complexes.
3. The CAA staffs may identify potential buildings for inclusion in the program.
4. The WRAP staff may use its knowledge of low-income housing to approach property managers, housing authorities, or landlords about participating.
5. Building managers or owners may approach WRAP about providing services to their units; this often happens when WRAP has previously served properties owned or managed by the individual or company.

Once a building or complex is identified for potential inclusion in Subprogram 3, WRAP must contact the owner or manager to find out if he or she is interested in participating and if 75% of their tenants meet the WRAP eligibility requirements. Once a building is deemed to be eligible, a WRAP staff member, the property manager, and CAA weatherization staff examine the site to determine what measures should be installed. Diverse measures can be installed through Subprogram 3. According to WRAP staff members, lighting measures are usually installed in Subprogram 3 projects, about one-half of the projects receive refrigerators, and 30%-40% have some type of insulation installed. WRAP does minimal caulking, door sweeps, and weather stripping in these homes because so many of the doors open into interior hallways.

Unlike for the other Subprograms, WRAP orders all the light fixtures for Subprogram 3 projects. The materials are delivered to the site. The CAA staff hires the electrician unless the entire building is being renovated, in which case the management company will hire their own electrician. CAA employees or contractors install any additional measures.

### 6.3.4.1 Room Air Conditioners and Refrigerators

The Evaluation Team was interested in knowing how landlords address room air conditioners and refrigerators. The interview data clearly show that most of the owners of large rental properties already participating in UI Helps and WRAP own refrigerators, but do not own room air conditioners. All owners interviewed allow tenants to install room air conditioners. The housing authorities and landlords do not make the tenant pay an extra fee if the tenant pays for electricity, but tenants may have to pay an extra charge if electricity is included in their rent. Please note that this assessment applies only to large, multifamily units that have already participated in the programs. They may or may not be representative of all large complexes that could participate in either WRAP Subprogram 3 or in UI Helps.

### 6.3.4.2 Subprogram 3 as a Commercial and Industrial Project

Some people argue that “Subprogram 3 is unique…. It’s more like a C&I project to me in terms of their going into common areas and changing out fluorescent fixtures. They’re really looking at the building, and then they’re also looking at the individual residential customer dwelling.” This C&I-like quality of Subprogram 3 has raised criticisms that the program is using residential C&LM funds to implement what are really C&I projects, at least in the subset of buildings in which the owner pays for heat and/or electricity. In fact, this criticism underlies UI’s previous
reluctance to serve master-metered, multifamily buildings. Now UI Helps is beginning to serve such buildings with a mixture of UI Helps and Small Business Program funds to provide services to these housing units. Based on our interviews, WRAP provides services to multifamily buildings no matter who pays for electricity or heat.

Many of the large multi-family complexes with high concentrations of low-income residents are non-profit or public housing authorities. Of the 35 Subprogram 3 projects in 2005, seven were housing authority sites. In fact, the housing authorities we interviewed universally told us that rents are far below market price and increases must be approved by boards and by the federal Department of Housing and Urban Development (HUD). Therefore, rent increases are often infrequent, small and do not cover rising energy costs, let alone pay for building-wide energy efficiency improvements. Instead, housing authorities only install efficiency measures when an existing product fails or breaks.

The remaining 28 sites served were owner or property management sites. At least some of these sites accept Section 8 vouchers and/or charge relatively low rents. Many of them are also on tight budgets that limit their ability to take proactive action to increase energy efficiency. Yet, it would seem that their for-profit status lends legitimacy to the argument that these Subprogram 3 projects should not be served with residential C&LM funds. When asked directly about the appropriateness of using residential funds for Subprogram 3 work, a WRAP unit member responds that serving such buildings ultimately helps the residents, not the management companies:

I haven't seen a complex receive these services from the WRAP program, and [then] push the low income out and push in middle income…. I've seen buildings that are kept … low income because that is … where low-income people live. And when you have a management company this is not getting rich off low-income property, … I don't feel that they should be penalized.

6.3.5 Subprogram 4: The Neighborhood Canvass
WRAP Subprogram 4—the Neighborhood Canvass—operates similarly to the UI Helps program. Typically, WRAP staff members identify low-income neighborhoods in which many residents are hardship coded or are eligible for WRAP services. They also try to find neighborhoods with high concentrations of multifamily buildings in order to increase the potential number of people served. With minor exceptions, anyone living in the neighborhood can receive services, even if they are above the income guidelines for WRAP participation. At times, WRAP will exclude certain streets or complexes where many residents probably have higher incomes (e.g., condominium complexes). Over the course of time, WRAP tries to serve neighborhoods across the CL&P territory.

Once an area has been identified for services, WRAP and CAA staffs set up dates to hold the neighborhood canvassing event, and they notify customers of the upcoming “blitz” through letters and occasionally community newspapers. WRAP staff members also usually let the local police and fire department know of the event so that, if customers call with concerns about
strangers showing up at their doors offering free services, the police and fire departments can assure the customers that the people are there for legitimate reasons.

On the day of the events, the CAAs and, usually, some WRAP staff members go to the neighborhood and provide “abbreviated” services, focusing on CFLs and portable fixtures, although the program has more recently been offering refrigerators and room air conditioners in order to increase program participation during summer months. Customers are also supposed to receive energy education, although WRAP follow-up surveys indicate that only 51% of Subprogram 4 participants actually recall talking with the installer about other ways to save energy. If the CAA or WRAP staff members identify homes that may be eligible for further WRAP services, they will leave a WRAP application with the customer.

The CAAs order materials for the canvassing events, which WRAP reimburses through normal invoicing procedures.

6.3.6 Switching from Subprogram 2 to Subprogram 1

About 10 to 15 customers per year are “switched over” from Subprogram 2 to Subprogram 1. This occurs when a Subprogram 2 client is found to be eligible for DSS weatherization—sometimes when the installation crew is already at the home—so that he or she can ultimately receive more comprehensive services. When this happens, WRAP staff no longer holds the CAA to the requirement to serve the client within 90 days of receiving the original work order.

NMR initially became concerned that such clients would fall to the bottom of the DSS/DOE waitlist, giving up immediate—and admittedly less comprehensive—Subprogram 2 services for Subprogram 1 services on some unknown future date. However, this does not appear to be the case. Instead, once the CAA staff discovers that the client is eligible for DSS/DOE weatherization, it schedules an audit with the customer instead of providing them with the Subprogram 2 services. This may mean that customer has to wait more than 90 days to receive the audit and have services completed, but she or he is not put on the DSS/DOE waitlist.

It also appears, however, that the CAAs and WRAP are not always switching over all the people who could be moved to Subprogram 1. In fact, there is insufficient funding in the DSS/DOE weatherization program to serve all the WRAP applicants who could be switched over. According to the 2005 database, 57% of WRAP Subprogram 2 participants had at least applied for energy assistance. While at least some of these households may not be eligible for DSS/DOE weatherization, it would seem that a sizable portion of these participants could probably have been switched over to the more comprehensive Subprogram 1.34 Such a systematic action, however, would have swelled the already extensive DSS/DOE waitlists; alternatively, it could mean that people already on the DSS/DOE waitlist would be passed over to serve the potentially hundreds of clients switching over from Subprogram 2 to Subprogram 1. Therefore, NMR does not believe that it is advisable for WRAP or CAA staffs to adhere closely to the “switch over” guideline. Instead, the program should continue to follow its practice of serving these households under Subprogram 2. One staff member explains, “If [the CAAs] have the work

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34 Reasons for ineligibility could include: being between 150% FPL and 60% of SMI, living in a house that has previously received DSS/DOE weatherization, and some energy-assistance applicants may not have been approved to receive it.
order, they are to do WRAP services on the Subprogram 2 … because receiving WRAP services for Subprogram 2 does not disqualify [clients] from receiving DSS services.”

6.3.7 Setting Appointments for Subprograms 1 and 2
Both Subprograms 1 and 2 rely on an appointment-based system. According to the participant survey, 42% of the 212 WRAP respondents recall being served by appointment. Almost all of them found it very easy to find a convenient time for the appointment. Some CAAs have their office staffs set up the appointment, while others have the auditor make the appointment with the client. Auditors, installers, and subcontractors prefer to schedule daily appointments in close proximity to each other in order to cut down on travel time between appointments and to ensure that they arrive for appointments on time. Furthermore, for those who use more than one installation crew, scheduling their appointments close to each other geographically allows the crews to help each other out if one finishes early or comes across a particularly challenging job. This reasonable approach to scheduling has one drawback; customers in more isolated areas or areas with fewer participants may end up waiting longer to receive services than those in areas with a greater number of participants.

All people who schedule appointments note that they sometimes have difficulties setting them up. First, customers often forget that they signed up for weatherization assistance; this is true not only of the DSS/DOE weatherization clients who have been on a long waitlist, but even some WRAP participants forget that they applied for the program just a few weeks earlier. Upon explaining the process of “signing up” for weatherization and the reason for the service, the client usually recalls sending in the yellow card or WRAP application. Second, customers who are left messages may not return the calls. Each person setting appointments follows somewhat different procedures for attempting to make contact with such clients, but the methods generally center on making repeated calls at different times of the day. One agency will even send a final letter telling the client that if they do not respond by a particular day, their name will be removed from the waitlist. Third, some clients have busy schedules, are on vacation, or have difficulty getting time off work. Such clients will be served, but they may have to wait for an appointment. Very occasionally, especially during the busy winter season, the auditor or installer will agree to do a weekend visit. This is more common for contractors than for CAA crew members.

Once they have been contacted, a few clients may say they have changed their minds or that they do not want the services until the fall or winter. The appointment setter will usually stress to the client the year-round benefits of the services and the need for the agencies to install measure throughout the year because the demand for services is so high. People receiving energy assistance are actually required to accept weatherization services, and weatherization directors will sometimes remind them of this requirement. Most clients will end up accepting services, although a very few will simply refuse to participate.

6.4 Non-English Speaking Clients
According to the Census, English is the primary language spoken at home among nearly 79% of the Census households (Table 6–6). Spanish is the second most common language; eight percent of households primarily speak Spanish. For this reason, UI Helps, WRAP, and implementation vendor staffs make a concerted effort to reach the Spanish-speaking population. As mentioned earlier, nearly all marketing materials are available in English and Spanish. Furthermore, every
CAA has at least one weatherization staff member who speaks Spanish, and Spanish-speaking staff members at NU and UI are available to serve as translators if needed.

### Table 6–6: Primary Language Spoken at Home

(All Survey Respondents; All Households)

<table>
<thead>
<tr>
<th>Language</th>
<th>Participant Survey</th>
<th>Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI Helps</td>
<td>WRAP</td>
</tr>
<tr>
<td>English</td>
<td>92%</td>
<td>86%</td>
</tr>
<tr>
<td>Spanish</td>
<td>3%</td>
<td>11%</td>
</tr>
<tr>
<td>Other Indo-European</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Asian and Pacific Islands</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents or Units</strong></td>
<td>186</td>
<td>206</td>
</tr>
</tbody>
</table>

*Results may not sum to 100% due to rounding.*

The Census data indicate that the remaining 13% of the state’s population speaks a wide variety of other languages. Some of the more common ones include Polish, Portuguese, Italian, Chinese, and French or French Patois. Program field staffs and intake workers do come across people who do not speak English or Spanish. Quite a few respondents name the Polish-speaking population of New Britain, and others mention pockets of additional languages, typically associated with individual communities or apartment complexes. However, according to program and CAA staffs, no other single language group is large enough to justify spending additional program dollars on translating marketing materials or hiring interpreters who can be available if the programs need them. It is worth noting that individuals working for WRAP in May and June of 2005 spoke not only English and Spanish, but also Lithuanian, Chinese, Hindi, and Gujarati (an Indian language).

Regardless of what non-English language clients are speaking, communication and translation occur in five primary ways. First, if the agency or contractor has prior knowledge that the client speaks primarily Spanish, it will send one of its Spanish-speaking auditors or crew members to the home. Second, if no Spanish-speaking crew member is available, the agency or contractor will have a Spanish-speaking office worker call the client ahead of time to explain the services and what will be happening during the audit or installations. Third, program or agency staff members may try to “get by,” particularly if they are at the individual’s home and can point to things and demonstrate what needs to be done. “Getting by” can also work on the phone if the client speaks at least some English or the person fielding the call speaks a bit of the client’s language. Fourth, if the client speaks the same language as another agency or program staff member, the person fielding the call or visiting the client’s home will attempt to contact their colleague to serve as a translator. Finally, the non-English speaking individual will often have someone at the home—often a teenage or adult child—to translate for them. The agencies and the utilities do not currently subscribe to a tele-interpreter service, although 2-1-1 Infoline regularly uses such a service.

Program staff members—particularly those fielding phone calls—also have very occasional interactions with people who are hearing or speech impaired. Usually such individuals use a telephone relay service. The hearing or speech impaired person uses a TTY machine to
communicate with the relay service, who then translates for the person on the other end of the line. One CAA staff member recently had his first experience with a video relay service. A hearing-impaired client had a video phone set up with a relay service; he signed into the relay service, which then translated for the agency staff member. Hearing-impaired clients may sometimes have interpreters at their home at the time of service, while some can read lips. Otherwise, hearing- and speech-impaired clients communicate in the same way as staff members do with non-English speaking, hearing clients.

Although the programs make a concerted effort to serve the Spanish-speaking population, one UI Helps staff member voices concern that the program is not reaching as many Spanish-speaking residents as it could. Furthermore, the programs recognize that it can be difficult to serve clients who speak neither English nor Spanish, but they cannot identify any other language groups large enough to target. For these reasons, it is likely that the programs probably are not adequately serving people who do not speak English or Spanish.

Results from the participant survey seem to confirm the concern voiced by the one UI Helps staff member that the program is not reaching as many Spanish-speaking residents as it could. (Table 6–6) Although the Census finds that 11% of households in UI’s service territory speak primarily Spanish, only 3% of UI Helps respondents report speaking Spanish primarily. In addition, of the 19 surveys that the NMR team conducted in Spanish, only four were with UI Helps participants. The results also suggest that both programs are not serving the non-English, non-Spanish speaking population as well as they should.

The NMR team recognizes, however, that we also conducted surveys only in English and Spanish. Just like the UI Helps and WRAP staffs, we did not believe there would be sufficient representation of any other single language to justify the additional time and expense related to survey translation and implementation in additional languages. For this reason, 18 surveys could not be completed because of language difficulties, accounting for two percent of the 913 telephones that were answered—including the 414 respondents—when fielding the survey. Four of these individuals indicated that they spoke a separate Eastern European language (Polish, Russian, Slovakian, or Ukrainian) and another six had what appeared to be Eastern European surnames. This suggests that at least some people from Eastern Europe currently participate in the programs and may be a group to include in future outreach efforts.

### 6.5 Individual Rental Units

Renters who wish to participate in WRAP and UI Helps, as well as the DSS/DOE weatherization program must first receive the permission of their landlord. Each of the programs provides tenants with forms for the landlords to sign. UI Helps and the DSS/DOE program deliver these forms through the CAAs or CRI. The CAAs will provide a landlord-permission form to clients applying for WRAP Subprogram 2 through the agency, while WRAP sends the form directly to clients applying through the utility.

Until recently, UI Helps generally served only those rental units in which the tenant paid for electricity; the program replaced refrigerators and room air conditioners only if the tenant owned them. In contrast, the DSS/DOE and WRAP programs will provide the same services to a housing unit no matter whether it is owner- or renter-occupied or who pays the utility bills. All
program administrators state that they must receive landlord permission before performing any services in the house, even installing CFLs. One implementer, however, reports that “Landlord permission [is] required for anything permanent. Light bulbs and aerators—no; door sweeps, insulation—yes. Anything to do with weatherization, then landlord permission is required.”

UI Helps and WRAP program and implementation vendor staffs are usually successful in winning over landlords who call them to find out more about the programs. None of the CAA, CRI, or utility staff members keep track of landlords who refuse to participate in UI Helps or WRAP, in part because they usually secure the permission of all landlords they actually talk to about the program. One CAA staff member states, “[Landlords are] not cooperative. [We’ve] really got to work with them…. They ask ‘what’s the catch?’ But once you talk to them, it’s no problem.” The story may be different, however, for landlords who simply refuse to sign the form; their tenants will probably stop pursuing services. As one program staff member explains, “[Landlords] are not a driver; not sure I’d call them a barrier, just an issue…. It leads to some missed opportunities. It’s a barrier to participation for the customer.”

The DSS/DOE program and, occasionally, the WRAP refrigerator program have more difficulty securing permission even when they talk directly to the landlord. This is because the programs require relatively modest co-payments that some landlords refuse to pay. More specifically, WRAP requires a $100 landlord co-payment when replacing refrigerators owned by the landlord, accounting for about seven to eight percent of the refrigerators replaced by WRAP Subprograms 1 and 2. The DSS/DOE program requires a 20% landlord co-payment, ranging from $30 to $250. While WRAP staff typically secures landlord approval, the CAAs are less successful in getting landlords to agree to the co-pay. Given their workload and the length of the waitlists, the agencies do not always take the time to convince reluctant landlords to cooperate. As a result, rentals units are served less frequently than owner-occupied units in the DSS/DOE weatherization program and, therefore, in WRAP Subprogram 1. (Table 6–7)

Table 6–7: Owner-Renter Status of WRAP Subprogram 1 and 2 Participants

<table>
<thead>
<tr>
<th>Subprogram</th>
<th>N Participants</th>
<th>% Owner</th>
<th>% Renter</th>
<th>% Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subprogram 1</td>
<td>387</td>
<td>74%</td>
<td>26%</td>
<td>0%</td>
</tr>
<tr>
<td>Subprogram 2</td>
<td>2,951</td>
<td>45%</td>
<td>55%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

*Owner-renter status is unknown for 60% of all WRAP participants, 76% of WRAP Subprogram 2 participants, and 100% of WRAP Subprogram 4 participants. Given Subprogram 3’s focus on multifamily buildings, it is likely that most of the participants are renters. Subprogram 4 would include a mixture of owners and renters.

Finally, the DSS/DOE program, by state statute, also requires that participating landlords sign an agreement not to raise rents for two years after receiving services, “unless the landlord/property owner can document that the increase is due to factors other than the weatherization assistance performed.” One critic, however, notes, “But there is zero enforcement” of the rule not to raise rents. WRAP and UI Helps do not require landlords to sign agreements about rent increases.

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35 Please note that because we were not able to interview any landlords of individual rental units served by the program, we can provide no guidance regarding how many of them pay for utilities or own refrigerators or room air conditioners.

6.6 Paying CAAs and CRI for Measures

As mentioned above, the CAA and CRI staffs or their subcontractors generally purchase the materials and supplies used by the programs. They then invoice WRAP or UI Helps for materials and labor. In addition, WRAP pays the CAAs (including the seven CAAs that do not provide weatherization services; Section 6.9.2) a $10 finder’s fee for each application they generate that results in a completed WRAP Subprogram 2 job. UI Helps and WRAP, therefore, are revenue-generating activities for the CAAs.

For the most part, the CAA, CRI, and their subcontractors’ staffs assert that the amount they are paid for each measure is sufficient to cover their costs. We heard two major complaints, however, about the process. First, even though he recognizes that WRAP has been increasing its reimbursement rates, one weatherization director believes that WRAP still pays too little for certain measures. This means that he has to buy what he considers to be inferior products that will not last long. He ties this to the fact that WRAP will re-weatherize a home after 18 months; he argues that the DSS/DOE will pay more for some products because they very rarely re-weatherize homes. Second, one weatherization director says that providing services on a cost-reimbursement basis places a financial hardship on his agency and that he would like to recommend options to provide advance funding for work that was expected to be done. The other directors did not feel that the current reimbursement procedures caused financial hardships to their agencies.

6.7 Use of the CAAs to Deliver Services

Although NU contracts only with CAAs to deliver WRAP services, UI contracts with one CAA and one private vendor, CRI, to deliver UI Helps services. UI Helps decided to contract with CRI in part because it believed that historically the private vendor was better able to provide certain measures—especially heating ones—in a timely and high quality fashion. The decision also reflected the fact that UI Helps and ABCD do not currently partner (in part over a disagreement regarding pricing and the requirement to use the Enernet system), and the program needed a vendor to provide services in the Bridgeport area. However, given that UI Helps has decided to use at least one private vendor to deliver services, the NMR team asked interviewees their opinions about potentially using other vendors beyond the CAAs.

Just one person we interviewed argues strongly that the programs should entirely break their relationship with the CAAs and use only private vendors to deliver UI Helps and WRAP. This person believes that the CAAs are slow and inefficient, and that some of the weatherization work is of poor quality. As a result, they are unable to provide quality services as quickly as clients need them. The NMR team interviewed additional people who also voiced criticisms of the CAAs, generally arguing that the agencies are slow, inefficient, and reluctant to change. However, none of these additional individuals fully embraces the idea that UI Helps and WRAP should stop working with the CAAs and contract solely with private vendors. These individuals—as well as the many strong CAA supporters—believe that the CAAs are deeply embedded within the low-income community and serve as a bridge between the community and the utility-based weatherization programs.
6.8 Program-Related Training

Before being hired by the utility or CAA, potential staff members and contractors are expected to have an existing skill set suited to the position. CAA crew members, for example, are expected not only to have some knowledge of simple home maintenance, but they should also have strong interpersonal skills and be able to work as members of a team. When choosing a contractor, the CAAs look for a company with a proven track record of providing high quality energy-efficiency and weatherization-related work.

Staff members at the CAAs and utilities say that most training occurs “on-the-job”; they learn by doing. Yet, it is also the case that all program partners and implementers provide staff and contractor training. Not only will they send their staffs to training workshops, conferences, and classes “on the clock,” they will also pay for the expenses associated with training. The type of training received, however, depends on the roles and responsibilities of the individual staff member or contractor.

Generally, the DSS/DOE weatherization program and the CAAs pay for, or at least subsidize, program-related training of their crew, auditors, and subcontractors. They pay for these trainings using Training and Technical Assistance (T&TA) funds from the DOE grant. Most training focuses on the technical aspects of weatherization work, such as how to install new measures and improve current installation techniques. The trainings sometimes also address customer service issues, including the social benefits of the program and how best to interact with clients. Weatherization directors and office staff members often receive administrative training in addition to technical and customer service training. The DSS staff will also occasionally hold its own trainings for the CAAs and their subcontractors. The training classes typically do not grant special certifications or licenses to the attendees; auditor training, as discussed below, is an exception. As a result, the CAAs generally hire subcontractors to perform work that requires certifications or licenses, such as heating system repair and replacement.

Likewise, subcontractors to CRI and CAA pay for their staff members to receive a wide variety of technical training related to weatherization and energy efficiency. Unlike the training most CAA crew members receive, technicians often obtain special certifications or licenses after completing training courses. The extensive nature of their training reflects the fact that these private companies install a wide variety of energy efficiency measures through multiple programs, not just UI Helps and WRAP. In fact, it is because of their special skills that UI and the CAAs have contracted with these companies to participate in the implementation of low-income weatherization programs.

Utility staff training is also tied closely to individual roles and responsibilities. NU and UI will train appropriate staff members and contracted workers on customer service, the use of the program tracking system, and sometimes on the technical aspects of weatherization, if needed for their job. Generally, however, the utilities expect their permanent staff and contracted workers already to have attained the necessary skills before being hired or to learn them on the job.

Although WRAP does not generally subsidize training of CAA crew or contractors, the program recently paid for all training of weatherization directors, CAA auditors and crew, and utility staff members to become certified to use the new CSG audit software. The program partners
recognize that WRAP spent a significant amount of money on these trainings. One says, “The investment they made in the new energy audit software was considerable. And that was certainly a big help to us.” Furthermore, one CAA crew installer and auditor explains that the auditor training also helps him in his work as an installer: “There’s a theoretical side [to the auditor training] and there’s a practical side to it…. And being an [installer] before you become an auditor … helps a great deal. But also, you can take a lot of the information that you learn in the auditor training and apply that back to the energy conservation.”

Interviewees almost universally agree that the training they receive is adequate for their program-related duties. The DSS staff, however, has expressed an interest in partnering more closely with the utilities regarding future CAA staff and subcontracting training, as the skills they gain through DSS/DOE training are also applied to the WRAP and UI Helps programs.

6.9 Coordination and Communication with Program Partners

The delivery of UI Helps and WRAP requires careful coordination and strong communication among the many program partners. In this section, we discuss current program coordination and communication, as well as some suggestions made by interviewees for future improvements.

6.9.1 CAAs and CRI

UI and NU coordinate UI Helps and WRAP by providing the vendors with a series of guidelines on how to implement the programs. These guidelines allow the vendors a great deal of flexibility in actually carrying out the program, but they also lead to inconsistent programs and services. For example, only one CAA engages in independent program marketing, which contributes to higher participation rates in its service territory. Likewise, UI Helps and WRAP staffs provide guidelines about what measures to install and in which situations, but the actual details of implementing these guidelines are left to the CAA staffs.37 While the implementation vendors appear to appreciate having some flexibility to tailor the programs to their individual agency and customer needs, the CAA weatherization directors implementing WRAP sometimes argue that they would like clearer guidance on how to implement changes to program procedures and the measures offered. Some interviewees would like to see the program delivery and procedures standardized across all vendors, as well as between UI Helps and WRAP.

Program and implementation vendor staff members are in very frequent communication with each other. Especially during the winter heating season, at least one WRAP unit member is in almost daily communication with at least one CAA weatherization staff member. Other times, WRAP and CAA staffs may communicate on a weekly or less frequent basis, especially during the summer and if no problems arise. CRI staff members also report being in almost daily contact with someone from UI Helps, either via phone or e-mail. CAA-NH staff notes that they also talk regularly with UI Helps and have program staff members’ telephone and beeper numbers. However, WRAP and UI Helps staffs have little direct contact with any of the subcontractors who work for the CAAs.

37 WRAP Subprogram 1 serves as an exception. The CAAs install measures based entirely on the results of the computerized audit analysis.
One WRAP staff member believes that frequent and effective communication increases the quality of services and the commitment to the program. The interviewee explains, “If you love the program, you get other people to love the program too. And the way you do that is you have to be able to reach the people that are really running the program. I try to reach the CAAs, the key people there. And the key people there [are] reaching the contractors.”

Both programs also have frequent meetings with their partners. UI Helps staff has monthly conference calls or face-to-face meetings with its implementation vendors, while DSS and WRAP staffs hold meetings with the CAA weatherization directors about every four to six weeks. The meetings provide the partners an opportunity to discuss issues or concerns that have come up, review program changes, and make suggestions.

Regular attendees at the DSS/WRAP weatherization directors’ meeting include:

- One or more staff members from WRAP,
- One or more staff members from DSS, and
- Weatherization directors or their designates.

Most of the regular attendees find the meetings to be effective, although two weatherization directors offered specific ideas for improvements to the meetings. One weatherization director would like people with the power to authorize changes to attend the meetings. He says, “Sometimes the right people are not there that you need the answer from. Sometimes I have questions that I don’t get answers [on] right away. Or, [I’m told], ‘I don’t know but I’ll get back to you’… The people you need the answers from, those are the ones that should be at the meeting.” Another director argues that written and circulated agendas and minutes could increase the effectiveness of the meetings and the program. In fact, both of these weatherization directors believe that program changes need to be written down to avoid confusion and misunderstandings about new courses of action. One explains, “Certain things need to put in writing so that we know it’s out there, so we don’t have any, ‘Didn’t I talk to you about that?’ …. Those are things they need to address more.”

Although some interviewees have mentioned turnover at UI Helps and the CAAs, the WRAP partners—the DSS and all five CAAs—mention that they find the WRAP unit’s reliance on contracted workers to be frustrating. In fact, turnover at WRAP is often named as a program weakness or a challenge to effective communication. The following quotations are illustrative:

The only thing I would recommend is that CL&P would fund the WRAP unit more adequately to do the job.

They’re getting rid of too many people at WRAP…. I don’t think it’s WRAP; it’s Northeast that hires these people on a contractual basis for one year. And after the person gets geared up and learns the program, they get rid of them. And then we got to start over again with a new staff. That’s a big, big problem with me.

I could never understand how you take a person who just learned their job or got good at it, and say, “I’m sorry. We have to part ways.” I could never understand that. But despite
that, I think there has not been a problem with … the level of understanding of that staff. That’s a very positive thing.

Other partners argue that WRAP staff turnover made the already difficult transition to the CSG audit software even more challenging. One interviewee explains, “It was compounded by the fact that a few … people at WRAP left who were key to the software and contact with the software designer.” Utility staff members argue that the current rules limiting how many weeks contracted workers can work for NU mean that the WRAP unit—and NU more generally—frequently train and then quickly lose dedicated, high-quality workers. It also means that permanent staff and remaining contract workers must take on additional duties while NU identifies replacement contracted workers, and these workers learn their new roles and responsibilities. Finally, one WRAP staff member says that it makes it difficult for the unit to function as a team when some members get benefits, such as health care and vacation time, while others do not.

In contrast, weatherization staffing at the CAAs is generally more stable. Of the five CAAs, one weatherization director has been with his agency for three years, and another for five years. The other three have been with the agency for twenty or more years. Permanent weatherization staff members have been with their agencies for at least 18 months; many have been with their agencies much longer.38 While the recent layoffs at ABCD do not constitute “turnover,” the transition from a reliance on a crew to the greater use of subcontractors could temporarily lengthen the agency’s turnaround time on both DSS/DOE and WRAP work, as both the remaining staff members and subcontractors get used to their new roles and responsibilities.

The agencies voice one additional complaint about program coordination: they say that WRAP in particular suffers from an inconsistent workload over the course of the year. The WRAP workload is so heavy in October through December that some agencies stop providing DSS/DOE weatherization services until January, although one agency reports that they focus almost entirely on DSS/DOE work from January through March. In contrast, WRAP work in the summer months is often slow, causing one contractor to lay off staff members in the summer of 2004. DSS/DOE work, however, does not slow down in the summer months, mainly because they are working with a continuous waitlist.

The causes of the inconsistency include delayed DPUC approval of the UI Helps and WRAP budgets, the need to spend budgets by December 31, the lack of customer interest in weatherization in the summer, and the fact that program marketing efforts are often timed to coincide with the marketing of the energy-assistance program. Only the last of these reasons is under the direct control of either UI Helps or WRAP staff members. All of the factors, however, affect the application- and appointment-based approach of WRAP more acutely than they do UI Helps’ focus on neighborhood canvassing. WRAP is currently attempting to address the problem with summer mailings and by offering both refrigerators and room air conditioners through Subprogram 4.

38 In contrast, the agencies experience more turnover with energy-assistance workers. The pay is usually not competitive, and the job is typically seasonal. Energy assistance directors note that intake workers are typically a mixture of seasoned veterans and new staff each fall.
Overall, the CAAs, CRI, and the utility staffs report having very positive relationships. WRAP and UI Helps program staffs are pleased with the quality of work performed by the implementation vendors. Despite earlier concerns, UI is currently negotiating with CAA-NH to provide services to more of the programs’ electric heating customers. The partners of both programs all report that they occasionally do not see eye to eye, but they have been able to work through their difficulties and breakdowns in communication. For example, the transition to the new CSG software was challenging for WRAP, DSS, and agency staffs. Not only did auditors have to learn new procedures and how to use the software, but the computer program had some bugs that caused it to freeze or lose information. After some rough spots centering on whom to call with software problems and how to fix them, the software issues have largely been resolved, and the agencies have decided to conduct the audit using a paper form and input the information into the computer later.

6.9.2 Non-Weatherizing CAAs and the WRAP Program

Connecticut has 12 CAAs. Each of them used to provide weatherization services. However, when federal funding of the Weatherization Assistance Program was reduced nationwide, the DSS lost 50% of its weatherization budget. In response to the reduction in funds, the DSS consolidated weatherization services to five agencies in order to increase program effectiveness. Now, the non-weatherizing CAAs take energy-assistance applications and send the yellow weatherization cards to eligible energy-assistance applicants. The applicants either return the cards to the non-weatherizing CAA or mail them directly to the weatherizing CAA that covers their area. They also take part in signing people up for WRAP.

We interviewed two energy-assistance directors in non-weatherizing CAAs. They appear to be following procedures similar to those of the weatherizing CAAs for helping energy-assistance clients apply to WRAP. Each of them reports that intake staff tells energy-assistance clients about WRAP and has applications on hand to give them to interested clients. If the client wants help, the energy-assistance intake staff will help fill out a WRAP application. The client can send the application back to WRAP themselves, or sometimes the agency will do it for them.

While following standard WRAP application procedures, the non-weatherizing CAAs have only occasional and inconsistent direct communication with WRAP. When asked to describe WRAP’s relationship with the non-weatherizing CAAs, one WRAP unit member explains, “It's not as good as we would like it.... But we try to keep the door open.” The energy-assistance directors at two non-weatherizing agencies seem to agree with this assessment. When asked to describe their relationship with WRAP, one asserts, “Pretty much non-existent.” When asked if they frequently interact with WRAP, one energy-assistance director responds, “Not really, occasionally. CL&P will call me to ask if we could do an application right away for WRAP. Other than that, not a heck of a lot.” WRAP staff members have indicated that they plan to pursue closer relationships with the non-weatherizing CAAs in the near future.

Furthermore, while WRAP staff members indicate they try to meet with energy-assistance directors during off-peak times (i.e., summer months) to discuss the WRAP application process and how to improve participation in the areas covered by the non-weatherizing agencies, neither director we interviewed recalls having such meetings. WRAP also says that non-weatherizing agencies are invited to weatherization directors meetings and that “They do come.... I think
their departments are represented very well.” The energy-assistance directors do not agree. While one of the energy-assistance directors has been invited to the meetings, this individual had not recently attended the meeting. The other director does not recall ever being invited to the meetings, although the director has only been with the agency for just a couple of years. This director and the energy-assistance staff do meet with the staff at the agency that provides weatherization services in their region.

WRAP also reports that it pays the non-weatherizing CAAs the $10 finder’s fee when they send in applications that result in a completed WRAP Subprogram 2 job. Although neither director had ever heard of the finder’s fee, this could be explained by turnover in the CAA staff or the possibility that checks are sent directly to the financial department, bypassing energy assistance.

The one other significant finding regarding non-weatherizing CAAs is that some of them have very positive relationships with the weatherizing CAAs and some do not. Here, at least, everyone is in agreement. All parties involved agree that the relationships between one of the agencies we interviewed and the weatherizing CAAs are not good, and this leads to low participation rates. All parties also agree that the relationships between the other non-weatherizing agency and the weatherizing CAAs are very good, contributing to higher than usual participation rates.

### 6.9.3 DSS Energy-Assistance and Weatherization Programs

The DSS/DOE program leverages resources with both UI Helps and WRAP. UI Helps limits its contributions to electric-savings measures and households served by CAA-NH. UI Helps staff leaves all coordination and leveraging up to the CAA-NH. At this point in time, there is no direct communication between the DSS and UI Helps staffs about the relationship between the two programs. They do not have joint meetings, and there is no active coordination of measures or reimbursement rates between them. However, both DSS and UI Helps staff members have expressed an interest in renewing their relationship.

WRAP and the DSS/DOE program closely coordinate services, jointly deciding which program will pay for which measures and how best to leverage the resources of both programs and the CAAs. WRAP will pay for the installation of measures in homes receiving leveraged Subprogram 1 services that primarily lead to natural gas or fuel oil savings. DSS and WRAP staff members regularly have joint meetings with the CAAs. DSS and utility staff members also meet one-on-one at least once a year, and they are in regular e-mail and phone contact with each other. DSS and WRAP staff members, as well as the CAA weatherization directors, assert that the partnership between DSS and WRAP works well.

This does not mean, however, that there is not room for improvement. DSS staff would like to hold more joint inspections of Subprogram 1 work with WRAP as it did before downsizing following the C&LM funding volatility of 2003 and the relocation of the WRAP unit to New Britain. One weatherization director would like to see WRAP allow them to do a blower-door test in Subprogram 2. He would also like the WRAP and DSS/DOE programs to use the same product specifications and reimbursement rates for all measures each will fund, although he and WRAP unit members note that they have made progress on this already.
Interviewees, particularly those working in social-service delivery or energy-assistance intake, suggest that WRAP accept the energy-assistance application as an application for the utility-based program, similar to the current procedures for DSS/DOE weatherization. Advocates of this approach believe that filling out multiple applications and forms for energy assistance, DSS/DOE weatherization assistance, and WRAP Subprogram 2 creates too many hurdles for clients and forces them to submit similar information more than once. Some clients, particularly those with learning or mental disabilities, will simply not complete all the steps, meaning that they may not receive all the services available to them. If all energy-related programs relied on a single application, it would be easier for clients to enter the system and receive all the services that they need. We return to the issue of a single application in Section 10.2.2.

6.9.4 Overall Coordination of Energy-Related Assistance Programs

Representatives of the various energy-related assistance programs argue that they communicate regularly and have positive relationships. However, there is no one individual, organization, or group that provides clear guidance on how the suite of energy-related assistance programs should be coordinated; therefore, the effectiveness of coordination efforts vary between the utilities and among program implementation vendors (i.e., CAAs and CRI). While some interviewees argue that the current approach provides flexibility to tailor program coordination and implementation to the particular needs of clients or specific organizations, others assert that the lack of coordination leads to ineffective delivery of the entire suite of energy-related assistance services. Ultimately, they say, it is the clients who suffer. We also note that the representatives of the various programs providing weatherization and energy assistance to low-income households are not generally aware of the totality of resources available for energy-related assistance.

Moreover, one interviewee asserts that a system is needed to coordinate a wide range of utility and social-service programs that could be used to provide energy-related services. The envisioned coordination would go beyond energy-assistance and weatherization and would include arrearage forgiveness and matching payment programs, emergency fuel services (e.g., Operation Fuel), home improvement loan programs (e.g., Connecticut Housing Investment Fund or CHIF) and other social service and welfare programs that allow some funds to be used for energy and heating-related uses in particular circumstances (e.g., Temporary Aid to Needy Families or TANF):

I think it ought to be that you go into a household, and [the household is assisted by] someone [who] is knowledgeable about potential conservation resources…. [The person assisting the household would] say, “Here’s the package we can put together for you.” And that’s exactly what we don’t do. We don’t have that level of expertise to say, outside of our particular program … that there may be other resources out there—in energy assistance and weatherization, not even considering the other kinds of programs that may be out there for housing rehab, loans for homeowners, etc.

Because it addresses multiple programs funded by other organizations, this very important issue of broader coordination of all energy-related assistance programs goes beyond the scope of the current process evaluation of the UI Helps and WRAP programs. However, the NMR team recognizes that there is a need for clearer guidance on the best ways to effectively coordinate energy-related assistance services. We return to the issue in Section 10.
6.9.5 Other Utility-Based Programs

As described above, both UI Helps and WRAP have close relationships with other programs and departments within each utility, including the call centers, arrearage forgiveness and matching payment programs, and money management workshops. These programs market UI Helps and WRAP directly to their participants and provide the weatherization programs with lists of clients. Likewise, UI Helps and WRAP staffs will refer customers to these other programs directly or via lists of participants. The relationship between WRAP and NU Community Relations staffs is especially strong, with one interviewee saying, “Anything that we do here—I mean [it’s as] if we were joined at the hip—we talk about WRAP.” The closeness of the relationship between WRAP and Community Relations in part reflects the fact that WRAP used to be housed with the Community Relations department. It does not appear that moving WRAP to the C&LM offices has had a negative impact on this relationship.

Because Yankee Gas is a part of the NU system, it also has a fairly close and positive relationship with WRAP. WRAP staff also coordinates directly with CNG and SCG, which are WRAP partners. In the field, the CAA staffs implement WRAP measures and invoice WRAP for all gas-, electricity-, and oil-saving measures. The WRAP unit then charges the appropriate gas company for measures installed in the homes with natural gas service. However, the WRAP unit reports that CL&P usually pays for some of the gas measures because the gas budgets are so small, totaling about $900,000 annually, including the portion of SCG’s budget that is not leveraged with the WRAP program. The CL&P WRAP budget is typically about $5 million.

The WRAP staff members have one major complaint regarding how the CAAs coordinate resources between WRAP and the DSS/DOE program: they believe that the CAAs should be charging more gas measures to WRAP to be paid by the gas-utility programs. Instead, they say, the CAAs are using too much of their DSS/DOE program budget to pay for gas-saving measures that could be charged to the natural gas companies. This limits the services the CAAs can provide to other homes being weatherized by the DSS/DOE program.

CAA-NH and CRI implement both UI Helps and the low-income programs run by SCG. However, at this time UI and SCG staffs leave the coordination of the programs completely up to the implementation vendors. Such coordination is generally not problematic when CAA-NH is implementing DSS/DOE services. As an agency staff member explains, “At one house, they will charge so much to DOE or SCG for their eligible measures and charge so much to UI Helps for their eligible measures; [they] mostly have different measures eligible anyway.” For other weatherization work, however, CRI and CAA-NH often visit the same house twice, once for gas and once for electric. They would prefer to conduct one visit and install what is needed at that time. As one staff member explains, “We’ve tried to get coordination between electric and gas utility weatherization programs. We’ve been shooting for it all along, but it’s a utility decision. It would save on service charges by doing all measures in one visit. We would really love to see this.” Such coordination would have to address the fact that SCG’s low-income weatherization budget is generally about $300,000 annually. This may mean that fewer gas customers receive

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39 The three natural gas utilities have recently expanded their C&LM budgets, but they have not allocated additional funds to low-income weatherization.
coordinated UI Helps – SCG services, or it may mean that UI Helps would pay for some natural gas savings measures, as CL&P currently does through the WRAP program.

6.10 Quality Control

Inspections and customer follow-up surveys serve as the primary ways in which the programs insure the quality of the services they provide. In addition, UI Helps and WRAP staff members use their program tracking databases to help track progress toward goals as well as to verify the measures installed and cross check them with implementation vendor invoices. Below we discuss inspections, customer follow-up surveys, and data tracking procedures in more detail.

6.10.1 Inspections

According to the State Weatherization Plan, the CAA staffs must inspect 100% of units served by the DSS/DOE weatherization program. Staff members at each of the agencies as well as DSS report that this happens in practice as well as in theory. An agency staff member will visually inspect the work conducted via the DSS/DOE program, which integrates resources with WRAP Subprogram 1. The DOE mandates that DSS staff must randomly inspect at least five percent of the housing units served by the state weatherization program. The DSS staff usually inspects closer to 10% of units, including inspections that result from customer complaints.

WRAP guidelines require that the CAA staffs inspect three percent of the households served through the program. The CAAs must inspect all jobs that receive more than $1,500 in WRAP services, which count toward their three percent. As one weatherization director explains, “I know that if the job exceeds $1,500 in total that I need to go out and do an inspection, which I do…. And that satisfies the three percent that they want us to do, usually. And then I also, by doing inspections on DSS … I’m also looking at WRAP … at the same time, so really those numbers are higher than the three percent.” The CAAs will also inspect homes when problems are reported. The CAAs became aware of problems when the customer contacts the agency or WRAP to complain or request a repair, or when follow-up surveys identify some discrepancy or complaint. Subcontractors working for the CAAs on the WRAP program also conduct their own inspections of work completed by their crews.

Members of the WRAP unit additionally inspect between three and five percent of homes served under Subprogram 2, including those randomly selected for inspection and those resulting from customer complaints. WRAP also inspects all Subprogram 3 installations. WRAP does not currently inspect Subprogram 4 work.

The CAA-NH and CRI conduct visual inspections of all work completed through UI Helps. UI does not conduct independent inspections of homes served by the program because, “for a $100 job it’s not worth it. So, we rely on telephone surveys.”

6.10.2 CAA Follow-Up Surveys

UI Helps and WRAP guidelines do not currently require implementation vendors to conduct follow-up surveys with clients. As a result, three of the agencies as well as CRI conduct independent surveys of customers participating in UI Helps and WRAP, but two agencies do not. The follow-up surveys conducted by the three CAAs and CRI take one of two forms. First, some agencies as well as CRI give customers a survey at the time of the inspection. An agency staff
member explains, “We give clients an in-house questionnaire on professionalism, courtesy, cleanup, etc…. So we get feedback from clients.” Another says, “When the auditor goes to the home, that auditor gives the individual … a survey form in the very, very beginning. And, the client is to use that form to evaluate the work that is done by everybody who comes into their home, from the auditors to the subcontractors to the staff that answers the phone to the last gentleman that goes to the house to do the inspection.” Second, the agencies and CRI also conduct follow-up via telephone surveys. Two of the agencies and CRI actually attempt to call each customer, reaching about 50% to 80% of them.

The agencies and CRI use both the paper and telephone surveys to verify that customers have received services, and for WRAP, that the measures the customer remembers receiving are those listed on the work order filled out by the installation crew. They also allow the agencies to receive feedback on the professionalism of the staff providing in-house services. The follow-up surveys can also trigger inspections. One weatherization director says, “If they’re not happy, I’m not happy. If they’re not happy, well I go see them, or I go inspect the work and see what the problem is. It depends on the nature of the complaint. But, 98% are totally happy”

6.10.3 Description of Utility Follow-Up Surveys
UI Helps and WRAP staff both conduct follow-up surveys with program participants. UI Helps staff calls customers and asks them to rate the service staff, products, expected energy savings, and satisfaction on a one-to-ten scale. They also ask customers if they have additional comments to make. WRAP staff sends a paper survey to all customers participating in Subprograms 1 and 2 and some in Subprograms 3 and 4. The program uses the survey to verify that customers received the measures that the CAAs charged to WRAP and to gauge customer satisfaction with each of the individual products. The survey also includes five questions asking the customer to rate the installers on different aspects of program delivery. Finally, a space is provided for customer comments. We report on the findings from these follow-up surveys in Section 7.

6.10.4 Sharing Results of Inspections and Follow-up Surveys
Some program administrators and implementers track the results of inspections and follow-up surveys electronically, while most—including UI Helps and WRAP—keep only hard copies of surveys or notes. Furthermore, the interviews indicate that there is little systematic sharing of the results between organizations, with one exception. CRI reports that it provides UI Helps with monthly summaries on the results of its telephone and paper follow-up surveys. Otherwise, it appears that the CAAs, subcontractors, utilities, and DSS share only the general results of inspections and surveys—and these results are overwhelmingly positive. Negative results get shared only when the DSS, agencies, or the utility believes that the nature of the program requires action on the part of the other parties.

6.10.5 Complaints and Problems
The CAAs, CRI, WRAP, and DSS staffs all indicate that the programs receive very few complaints from customers. Furthermore, inspections and follow-up surveys also identify few problems. Likewise, landlords and housing authorities also indicate that they had only a few problems with measures, typically with lighting measures.
Some of the other common complaints and problems include:
- Need to readjust door sweeps or weather stripping so the door will close more easily
- Program implementers were late for appointments
- Program implementers did not clean up after themselves
- Client did not receive expected measures, typically windows or a refrigerator

The customer survey generally supports these results. Only eight percent of all respondents to the participant survey report that they had concerns with or complaints about the programs. Of these, however, only three percent actually contacted the program to voice their concern or complaint. Their concerns included not getting desired measures, continued high bills, and products breaking or not functioning correctly.

Eighty-two percent of respondents to the participant survey indicate that no products broke or required fixing, or that everything is working just fine. Twelve percent of all participants (14% for UI Helps and 9% for WRAP), however, mention that light bulbs broke, and another four percent said that fixtures stopped working. We do not know, however, if just one or more of their CFLs or fixtures stopped working, so actual lighting product failure rates could be small, given that most households receive multiple lighting products. It is also the case that the programs specify that the implementation vendors install products that have been tested by PEARL. Two percent or fewer respondents identified problems with other measures.

In short, it appears that the quality of work is generally high and that most customers are not experiencing problems. The failure of lighting products, however, appears to be an infrequent but persistent problem. A few interviewees point out that the failure of a pin-based CFL in a fixture provided by the programs often means that the fixture is taken out of service. More specifically, clients often have a difficult time locating replacements, and when they do find them, the replacements are often out of their price range. These clients will typically stop using the fixture and may even throw out portable fixtures. One weatherization director indicates that he will replace bulbs if they fail within a year of participation, but he does not believe he can justify replacing CFLs that fail beyond that time period. Another says that he has suggested giving clients an extra pin-based bulb, but the programs will have to decide if this is a cost-effective solution to the program. Finally, some people may say that UI Helps and WRAP can address these concerns when re-weatherizing a home after 18 months, but this assumes that the client participates in the program again at that time, which may not regularly be the case.

### 6.10.6 Program Tracking Databases

UI Helps staff tracks program data and progress using the UI Enernet system. This is a UI system-wide database. It includes customer contact information, payments, energy usage, and participation in various UI programs, including UI Helps. When CAA-NH or CRI completes work in a particular household, the implementation vendor staff uses a password to access the Enernet system. The fields the vendor will fill include: the customer contact information and account number, whether the client was served by CAA-NH or CRI, what measures the client received, and in what quantities. The system then automatically fills in other information such as

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40 In fact, NMR has recently learned that WRAP has adopted this recommendation.
the amount that CAA-NH or CRI will be paid for each measure, and the expected energy savings associated with each installation.

Each line in the database represents a measure, not a customer, so the database must be aggregated by account number to determine what measures a particular customer received. Once entered, UI Helps and implementation vendors staffs can easily use the Enernet system to track their progress toward various goals, including number of customers served and measures installed, but also kWh and kW savings.

The NMR team utilized the UI Helps tracking database in order to identify potential respondents to the participant survey. We found the database to be thorough and to include necessary contact information on nearly all participants. The thorough nature of the database reflects the fact that UI Helps staff members usually generate a “lead list” that it then gives to one of its implementation vendors to use for neighborhood canvassing or appointment setting. Alternatively, UI Helps staff verifies the eligibility of all DSS/DOE participants referred by CAA-NH staff to receive supplemental services. Therefore, before CAA-NH or CRI staffs enter the field, UI Helps staff members have already pulled the customer’s account number and contact information. The UI Helps database, however, does not track any demographic data on participants, largely because it is difficult to collect such information through the neighborhood canvassing approach. The lack of these data makes it difficult for UI Helps to identify any potential gaps in the population that they serve.

The WRAP tracking system involves two connected databases: one devoted to participant information and demographic characteristics and the other to measure installation. The fields listed in the participant database include: customer and landlord contact information, which agency served the customer, and through which Subprogram. It notes whether the household is renter- or owner-occupied and the primary fuels used for heating water and space. The customer portion of the database also includes information on current and past participation in energy assistance, household income, household size, and the presence of children, seniors, or handicapped individuals. The measure portion of the database lists the measures installed and in what quantities, as well the amount of money WRAP will reimburse the agency for the measure. It also includes information to calculate electric and non-electric benefits.

The NMR team made use of the participant database to identify potential survey respondents. We found the database to include exemplary contact information—name, address, phone number, and electric account number—on Subprogram 1 and 2 participants; as with UI Helps, the quality of these data reflect the fact that WRAP or the CAAs verify the customer electric account number and contact information before going to the residence to perform services. Furthermore, the demographic information—number and characteristics of residents, monthly income, whether the applicant owns or rents the home, etc.—on Subprogram 2 participants is also quite good, reflecting the fact that WRAP requires such information on the Subprogram 2 application. However, the database lacked contact information for many Subprogram 3 and 4 participants, especially those living in master-metered buildings. This in part reflects the fact that WRAP staff members do not generate any “lead lists” for either Subprogram 3 or 4. The agencies simply enter the field and serve whom they can; this method is not conducive to
gathering customer contact or demographic information. The NMR team believes that the failure to gather customer contact information can negatively affect the program’s ability to conduct effective quality control primarily because WRAP cannot contact a true random sample of participants. Furthermore, the lack of demographic information limits the program’s ability to identify gaps in the population it serves. It should be noted that WRAP staff members believe that at least some of the demographic information may be available from other NU customer databases, such as the CS-2 system.

The NMR team identified one other difficulty with the WRAP tracking system: one cannot easily get a complete listing of all the measures installed in all of the homes participating in the program. More specifically, the program cannot provide a spreadsheet that lists all 9,830 customers participating in 2005 and the measures each of them had installed. In contrast, WRAP is able to pull the measures installed in any individual home and the number of households receiving each measure. Therefore, the shortcoming of not being able to provide a spreadsheet listing all measures installed in all participating homes is problematic from an evaluation perspective, but it does not affect quality control procedures.

It is also worth noting that NU is currently engaged in an effort to integrate the numerous data tracking procedures and software used throughout the NU system. WRAP will eventually be brought into this new system. Indications are that the system will more closely resemble the UI Enernet system and facilitate the identification of customer contact information and the measures installed throughout all participating households. It will also allow direct access by implementation vendors.

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41 We should note that WRAP does have landlords or property managers provide a building wide estimate of demographic information for Subprogram 3, but the NMR team did not always find these estimates to be reliable.
7 Participant Experience and Satisfaction

The NMR team relied on three methods to gauge how customers describe their experience in UI Helps and WRAP and their level of satisfaction with it. First, we conducted a telephone survey with 414 households who participated in 2005, 202 from UI Helps and 212 from WRAP. Because not every respondent was asked every question, the sample sizes reported in the tables below change based on the question or topic being addressed. Second, we analyzed data from the customer follow-up surveys conducted in 2005 by UI Helps (n=232) and WRAP (n=493). Finally, we asked participating landlords about their program experience and satisfaction with the measures installed and expected or achieved energy savings. In this section, we summarize the results of these three methods by relevant topic.

7.1 Reasons for Participating

Most people—including landlords and property managers of multifamily buildings—participate in UI Helps or WRAP for financial reasons. Landlords and property managers tell us that they decide to participate to save the complex and residents money. Most of them want to install energy conservation measures, but their budgets do not allow for building-wide upgrades. Participating in WRAP and UI Helps allows them to make substantial upgrades in a short period of time for no additional cost, unless they receive WRAP refrigerators.

Household residents also cite financial considerations among the reasons they decided to participate. (Table 7–1) One-third of WRAP respondents and 19% of UI Helps respondents say they participated in the programs because they “wanted help paying their utility bills.” Twenty-eight percent of UI Helps respondents and 19% of WRAP respondents participated because they “wanted to reduce their utility bill,” and another 28% of UI Helps respondents and 16% of WRAP respondents “wanted to learn how to save energy.” The differences in the stated reasons for participating may reflect the closer ties between the WRAP and DSS weatherization program; participants first enter the latter program by signing up for energy assistance to help pay their utility bills.

<table>
<thead>
<tr>
<th>Number of Respondents</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wanted help paying utility bills</td>
<td>19%</td>
<td>37%</td>
<td>26%</td>
</tr>
<tr>
<td>Wanted to reduce utility bill</td>
<td>28%</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>Wanted to learn how to save energy</td>
<td>28%</td>
<td>16%</td>
<td>23%</td>
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</tbody>
</table>
7.2 Understanding of and Expectations for Program

Forty percent of survey respondents believe that the sponsors offer the programs in order to “save me or my household energy.” (Table 7–2) One-fourth also mention lower energy bills, followed by 17% who mention saving the sponsors energy, and 15% who mention saving Connecticut energy. The responses indicate that most respondents have a clear understanding of the major goals of the program. However, 17% of respondents do not know why UI and CL&P offer these programs. Responses are generally similar for UI Helps and WRAP.

<p>| Table 7–2: Top Five Reasons Named for why Sponsors offer Program |
| (All Respondents; Multiple Response) |</p>
<table>
<thead>
<tr>
<th>Number of Respondents</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
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<tbody>
<tr>
<td>To save me or my household energy</td>
<td>36%</td>
<td>44%</td>
<td>40%</td>
</tr>
<tr>
<td>To lower my energy bills</td>
<td>23%</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>To save the program or company energy</td>
<td>20%</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>To save Connecticut/the state energy</td>
<td>18%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>19%</td>
<td>17%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Both landlords and survey respondents expect the programs to provide measures that will help save them money by lowering energy bills. Participants also frequently cite receiving light bulbs and making their home feel more comfortable. Most interviewees and survey respondents did not have prior concerns about participating, although one housing authority property manager had been unhappy with WRAP services delivered at a former worksite. He views his current participation in WRAP as a “test case.” This individual is generally satisfied with his current WRAP services; although he believes it is taking longer than it should to receive their refrigerators through the program.

7.3 Interactions with Program Implementation Staffs

Nearly all program participants had very positive experiences with program implementation staffs, including CAA intake workers, auditor/installer, and contractors. Of the respondents who recall interacting with these program implementers, 70% or more rate them as very polite, very helpful, and very knowledgeable—that is, a five on a one-to-five scale. (Table 7–3) Most remaining respondents gave a rating of four on each question. In addition, 74% of those served by a contractor are very satisfied with the quality of their work.

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<thead>
<tr>
<th>Table 7–3: Ratings of Program Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Respondents</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Polite</td>
</tr>
<tr>
<td>Helpful</td>
</tr>
<tr>
<td>Knowledgeable</td>
</tr>
</tbody>
</table>

The UI Helps and WRAP customer follow-up surveys also point to positive interactions with program implementers. Ninety-nine percent of the 232 UI Helps respondents to follow-up surveys give service people a rating of nine or ten on a one-to-ten scale for promptness and for proficiency and courteousness. Likewise, 93% or more of the 493 respondents to WRAP follow-
up surveys indicate that the installer behaved in a professional manner, showed up on time, and cleaned up after himself or herself.

Landlords and property managers are also very pleased with the quality of work. They have generally experienced very few problems. Problems mentioned include delays in receiving refrigerators or lighting products that prematurely failed. While some are still waiting for their refrigerators, all report that WRAP or UI Helps resolved problems with lighting and other products quickly and to their satisfaction.

7.4 Program Satisfaction

The majority of respondents (64%) are very satisfied with the program overall and another 21% are “satisfied.” (Table 7–4) Sixty-eight percent of WRAP participants are “very satisfied” (68%) and 61% of UI Helps participants are “very satisfied.” The perceived lack of energy savings or continued high utility bills serves as the primary reason for dissatisfaction. Likewise 91% of respondents to the UI Helps follow-up surveys rate their program experience overall with a nine or ten on a one-to-ten scale.

<table>
<thead>
<tr>
<th>Number of Respondents</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>4%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>22%</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>61%</td>
<td>68%</td>
<td>64%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>6%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Participants report that the most-liked aspect of the program is that it lowers their bills (23%), followed by the service being free (20%), saving energy (13%), and improving comfort (12%). More than two-thirds of respondents say they “like everything” when asked to identify what they do not like about the program. However, 7% say the program did not reduce their utility bills.
More than two-thirds of respondents are “very satisfied” with the products and services provided by the program; another 20% are “satisfied.” (Table 7–5) Those few respondents who are dissatisfied with the products and services primarily mention issues or concerns with light bulbs. Some also think that their bills remain too high. Ninety-three percent of respondents to the UI Helps follow-up surveys indicate with a rating of nine or ten that they believe the products and services will meet their expectations.

### Table 7–5: Satisfaction with Products and Services
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfied</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very satisfied</td>
<td>67%</td>
<td>68%</td>
<td>68%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>20%</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

More than one-third of respondents are very satisfied with the level of electricity savings and 18% are “satisfied.” (Table 7–6) However, 14% of respondents are “dissatisfied.” Forty-one percent of WRAP participants and 31% of UI Helps participants are “very satisfied” with electricity savings. This difference in satisfaction likely reflects the greater breadth of services offered by WRAP and the greater frequency in which the WRAP program serves electrically heated homes. Nearly all respondents who are dissatisfied with their electricity savings cite the lack of savings, high bills, and rate increases. Ninety-four percent of respondents to the UI Helps follow-up survey rate with a nine or ten their likelihood of saving money as a result of the programs.

### Table 7–6: Satisfaction Rating for Electricity Savings
(Respondents who pay Electricity bill)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>7%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>7%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>15%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>22%</td>
<td>13%</td>
<td>18%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>31%</td>
<td>41%</td>
<td>36%</td>
</tr>
<tr>
<td>Don't know</td>
<td>16%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Number of Respondents 201, 206, 407
Twenty-nine percent of respondents are “very satisfied” with the level of heating fuel savings, and 16% are “satisfied.” (Table 7–7) However, 11% of respondents are dissatisfied. Over one-third (34%) of WRAP participants and one-fourth (25%) of UI Helps participants are “very satisfied” with heating fuel savings. Most respondents are dissatisfied with the heating fuel savings due to the lack of savings and high bills. Several respondents also mention that they would like more comprehensive services.

Table 7–7: Satisfaction Rating for Heating Fuel Savings
(Respondents who pay Heating bill)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>4%</td>
<td>14%</td>
<td>8%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>4%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Neither dissatisfied</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>21%</td>
<td>10%</td>
<td>16%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>25%</td>
<td>34%</td>
<td>29%</td>
</tr>
<tr>
<td>Don't know</td>
<td>32%</td>
<td>31%</td>
<td>32%</td>
</tr>
<tr>
<td>Refused</td>
<td>4%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>135</td>
<td>102</td>
<td>237</td>
</tr>
</tbody>
</table>

Table 7–8 summarizes satisfaction by WRAP Subprogram for these same four measures. The findings indicate that most respondents in all Subprograms are “very satisfied” (i.e., rated the program with a five on a one-to-five scale) with the program overall and with its products and services. Participants in all Subprograms, however, are less satisfied with electricity and heating-fuel savings. Furthermore, participants in Subprograms 3 and 4 are less satisfied with the products and services and energy savings than are those served by Subprogram 1 and 2. This likely reflects the fact that participants in Subprogram 3 and 4 usually receive less comprehensive services than those in Subprogram 1 and 2. The results, however, are not altogether consistent. In particular, respondents participating in both Subprograms 3 and 4 give the highest rating to the program overall, but the lowest ratings for satisfaction with products and services and energy savings. These individuals may be demonstrating their gratitude for the free services even though they are less enthusiastic about program measures and impacts.

Table 7–8: Percentage of Very Satisfied Respondents for Various Measures by WRAP Subprogram
(Respondents to each satisfaction question by Subprogram)

<table>
<thead>
<tr>
<th>Subprogram</th>
<th>Program Overall</th>
<th>Products and Services</th>
<th>Electricity Savings</th>
<th>Heating Fuel Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Result</td>
<td>n</td>
<td>Result</td>
</tr>
<tr>
<td>One</td>
<td>22</td>
<td>67%</td>
<td>22</td>
<td>70%</td>
</tr>
<tr>
<td>Two</td>
<td>67</td>
<td>69%</td>
<td>67</td>
<td>74%</td>
</tr>
<tr>
<td>Three</td>
<td>33</td>
<td>61%</td>
<td>33</td>
<td>69%</td>
</tr>
<tr>
<td>Four</td>
<td>59</td>
<td>69%</td>
<td>59</td>
<td>66%</td>
</tr>
<tr>
<td>Three and Four</td>
<td>25</td>
<td>71%</td>
<td>25</td>
<td>57%</td>
</tr>
<tr>
<td>Two and Four</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Overall</td>
<td>212</td>
<td>68%</td>
<td>212</td>
<td>68%</td>
</tr>
</tbody>
</table>

* Respondents rating satisfaction with a five on a one-to-five scale. Number of respondents reported instead of percentage when sample size falls below ten.
7.5 Open-ended Comments about the Programs

The telephone and program follow-up surveys each provide respondents the opportunity to make additional comments about the programs. In keeping with the generally positive feedback participants give about the programs, those choosing to comment typically thanked or praised the program. Forty-four percent of respondents to the UI Helps follow-up survey say the program was good or everything is OK, 15% praise the installer, and 13% acknowledge or like using the lights or bulbs distributed through the program. (Table 7–9) Among the few complaints received, most focus on the lights not being bright enough (5%), the fact that the bulbs did not fit in fixtures (3%), and bulb failure (2%).

Table 7–9: Comments by Survey Respondents about UI Helps
(base – respondents to UI Helps follow-up survey, n=232; multiple response)

<table>
<thead>
<tr>
<th>Positive comments</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good job/everything OK--program (general)</td>
<td>44%</td>
</tr>
<tr>
<td>Installer good/helpful/professional</td>
<td>15%</td>
</tr>
<tr>
<td>Like/now using lights/bulbs</td>
<td>13%</td>
</tr>
<tr>
<td>Saving money/energy from products installed</td>
<td>4%</td>
</tr>
<tr>
<td>Like weatherization materials/want more</td>
<td>2%</td>
</tr>
<tr>
<td>Need more bulbs/will buy more</td>
<td>2%</td>
</tr>
<tr>
<td>Thank you</td>
<td>1%</td>
</tr>
<tr>
<td>Negative comments</td>
<td></td>
</tr>
<tr>
<td>Lights not bright enough</td>
<td>5%</td>
</tr>
<tr>
<td>Bulbs did not fit in fixtures</td>
<td>3%</td>
</tr>
<tr>
<td>Bulbs burned out/broken</td>
<td>2%</td>
</tr>
<tr>
<td>Neutral comment</td>
<td></td>
</tr>
<tr>
<td>Have not received bill/waiting to see if will save</td>
<td>3%</td>
</tr>
</tbody>
</table>
Likewise, about one-third of WRAP respondents express gratitude that the program exists, 24% comment that the program was helpful or good, and 21% offer praise for the installers who came to their home. (Table 7–10) Six percent of respondents like the measures installed, with some naming the lighting products or refrigerators specifically. Nearly 5% note that the audit provided them with good energy savings ideas or that the program provided them with a bill decrease, energy savings, or warmer home. Complaints about the program are few and focus on denied requests or unfulfilled expectations for a replacement refrigerator through the program (2%) or that the installer left a mess in the home (2%).

Table 7–10: Comments by Survey Respondents about WRAP
(Multiple response, n=493)

<table>
<thead>
<tr>
<th>Positive comments</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thank you</td>
<td>32%</td>
</tr>
<tr>
<td>Good job/helpful program (general)</td>
<td>24%</td>
</tr>
<tr>
<td>Installer good/helpful/professional</td>
<td>21%</td>
</tr>
<tr>
<td>Noticed bill decrease/energy savings/warmer home</td>
<td>3%</td>
</tr>
<tr>
<td>Gave good energy saving ideas</td>
<td>2%</td>
</tr>
<tr>
<td>Like measures/appliances (general)</td>
<td>3%</td>
</tr>
<tr>
<td>Like lamps/bulbs</td>
<td>2%</td>
</tr>
<tr>
<td>Like refrigerator</td>
<td>1%</td>
</tr>
<tr>
<td>Installers cleaned up</td>
<td>1%</td>
</tr>
<tr>
<td>Refrigerator request denied/did not receive</td>
<td>2%</td>
</tr>
<tr>
<td>Installers left mess</td>
<td>2%</td>
</tr>
<tr>
<td>Wanted more information</td>
<td>1%</td>
</tr>
<tr>
<td>Measures did not give enough energy savings</td>
<td>1%</td>
</tr>
<tr>
<td>Neutral comment</td>
<td></td>
</tr>
<tr>
<td>Was not present at audit</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 7–11 lists the types of feedback provided by respondents to the participant survey. Very few chose to provide additional comment. Of those who did, most report being satisfied with the program or offering some form of praise. The next most common response was that respondents still had high electric bills. Other feedback included specific program suggestions, such as providing bulbs that work with dimmers and offering more stylish fixtures.

Table 7–11: Overall Feedback
(All Respondents)

<table>
<thead>
<tr>
<th>Number of Respondents</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Respondents</td>
<td>39</td>
<td>42</td>
<td>81</td>
</tr>
<tr>
<td>Satisfied with program, praise, etc</td>
<td>36%</td>
<td>46%</td>
<td>41%</td>
</tr>
<tr>
<td>Still have a high electric bill</td>
<td>21%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Program suggestions</td>
<td>13%</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>Program should advertise more, I would like more info about programs, etc</td>
<td>18%</td>
<td>9%</td>
<td>14%</td>
</tr>
<tr>
<td>Need more weatherization work done</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
</tr>
</tbody>
</table>
8 Demographic Analysis: Comparison of Data from Census, Program Tracking Databases, and Participant Survey

This section compares demographic data collected from the Census, tracking databases, and the participant survey in order to assess the differences between participants and the general population of Connecticut. The following characteristics are compared:

- Participant Eligibility
- Type of Home
- Heating Fuel
- Owner-renter status
- Household size
- Birth Location
- Race
- Education

The section complements the Demographic Analysis Report (see Appendix A), which contained only limited demographic information on participants. As we explain more fully in that document, program administrators and implementers are not consistently tracking demographic characteristics on participants, limiting our ability to compare data for all participants to the Census.42 The Evaluation Team indicated a desire for additional demographic data on participants that would allow for the identification of groups that may not be served as well as they could be by the programs.

In order to at least partially fill this information gap, the NMR team compares demographic information collected during the participant survey with Census and program tracking data. We recognize that data from the survey is subject to participation bias—the data represent only those people who are available and have the time to answer the survey. However, the NMR team worked hard to increase response rates, which improves how well the surveyed households reflect all participants. Furthermore, we have weighted the survey data to more accurately reflect all participating households in the state.43 In this section, we point out the data that may indicate survey bias as opposed to gaps in who is being served by the programs.

As discussed in the Participant Survey Report, the NMR team surveyed 414 individuals, although not every respondent answered each question. Furthermore, the Census removes “Don’t Know” and “Refused” responses from its results; we have done the same in order to increase comparability. As a result, the reported number of respondents varies for each question.

The NMR team offers a final caution about comparability. The survey included only participants in the WRAP or UI Helps programs; areas served by municipal utilities were not included. However, data for areas served by municipal utilities—representing just four percent of all

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42 Appendix A “Demographic Analysis Report” includes information on WRAP Subprogram 2. In this overall report, we do not highlight these data, because Subprogram 2 participants make up just 30% of customers served by WRAP and, as the Demographic Analysis Report makes clear, are not representative of all WRAP participants.

43 See Appendix B “Participant Survey Report” for more detail.
households in the state—are included in Connecticut state totals. Therefore, the overall results from the participant survey are not directly comparable to the overall results from the Census data. The results for each utility area, however, are directly comparable.

8.1 Eligibility of Participants

As mentioned above, eligibility for UI Helps and WRAP centers on having income at or below a certain cutoff criteria or being a customer of the UI or of CL&P. The income criteria, developed by the federal government, are graduated by family size. The information in Table 8–1 summarizes the income criteria by household size for program eligibility in 2005 and 2006.

<table>
<thead>
<tr>
<th>Household Size</th>
<th>150% - UI Helps, 2005</th>
<th>200% - WRAP, 2005</th>
<th>60% - Both Programs, 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>$14,355</td>
<td>$19,140</td>
<td>$26,832</td>
</tr>
<tr>
<td>Two</td>
<td>$19,245</td>
<td>$25,660</td>
<td>$35,088</td>
</tr>
<tr>
<td>Three</td>
<td>$24,135</td>
<td>$32,180</td>
<td>$43,344</td>
</tr>
<tr>
<td>Four</td>
<td>$29,025</td>
<td>$38,700</td>
<td>$51,601</td>
</tr>
<tr>
<td>Five</td>
<td>$33,915</td>
<td>$45,220</td>
<td>$59,857</td>
</tr>
<tr>
<td>Six</td>
<td>$38,805</td>
<td>$51,740</td>
<td>$68,113</td>
</tr>
<tr>
<td>Seven</td>
<td>$43,695</td>
<td>$58,260</td>
<td>$69,661</td>
</tr>
<tr>
<td>Eight+</td>
<td>$48,585</td>
<td>$64,780</td>
<td>$71,209</td>
</tr>
</tbody>
</table>

* Provided by UI Helps and WRAP in preparation for the Kickoff Meeting

We asked respondents to the participant survey to indicate their annual household income in 2005 as well as their household size. This enabled us to provide estimates of the percentage of respondents who fall into and outside of program requirements. The information in Table 8–2, which is read horizontally, confirms that most households fall within the eligible income criteria for their household size based on the standards in place for most of 2005 (150% of the FPL for UI Helps and 200% of the FPL for WRAP, as denoted by the unshaded cells in the table). Many of the remaining households fall within 60% of the SMI, the criterion that went into effect in late 2005 (the cells shaded in gray). However, a few respondents report incomes that exceed eligibility criteria (the yellow shaded cells of the table). Such households could live in multifamily buildings served by WRAP Subprogram 3 or either programs’ neighborhood canvass approach. These modes of program delivery allow households with higher incomes to participate, as long as most households in the area are eligible. However, other explanations are possible. It may also be the case that participants experienced an increase in their income after program participation. Some may also have found it difficult to remember their income on the spot during the telephone survey, or may have exaggerated it in order to provide a socially desirable response.
Table 8–2: Survey Respondent Household Size by Income Range\(^a\)
(All Respondents not answering “don’t know” or who refused to answer)

<table>
<thead>
<tr>
<th></th>
<th>Less than $20,000</th>
<th>$20,000 - $29,999</th>
<th>$30,000 - $39,999</th>
<th>$40,000 - $49,000</th>
<th>$50,000 - $59,999</th>
<th>$60,000 - $69,999</th>
<th>$70,000 or more</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI Helps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>73%</td>
<td>4%</td>
<td>6%</td>
<td>10%</td>
<td>2%</td>
<td>4%</td>
<td>2%</td>
<td>50</td>
</tr>
<tr>
<td>Two</td>
<td>47%</td>
<td>12%</td>
<td>9%</td>
<td>6%</td>
<td>12%</td>
<td>3%</td>
<td>12%</td>
<td>34</td>
</tr>
<tr>
<td>Three</td>
<td>33%</td>
<td>30%</td>
<td>4%</td>
<td>11%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>27</td>
</tr>
<tr>
<td>Four</td>
<td>36%</td>
<td>21%</td>
<td>21%</td>
<td>14%</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
<td>14</td>
</tr>
<tr>
<td>Five</td>
<td>25%</td>
<td>13%</td>
<td>0%</td>
<td>0%</td>
<td>13%</td>
<td>13%</td>
<td>38%</td>
<td>8</td>
</tr>
<tr>
<td>Six</td>
<td>33%</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>33%</td>
<td>3</td>
</tr>
<tr>
<td>Seven</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>Eight+</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>Overall</td>
<td>51%</td>
<td>14%</td>
<td>7%</td>
<td>9%</td>
<td>6%</td>
<td>4%</td>
<td>8%</td>
<td>138</td>
</tr>
<tr>
<td>WRAP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>85%</td>
<td>11%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>69</td>
</tr>
<tr>
<td>Two</td>
<td>62%</td>
<td>19%</td>
<td>15%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>28</td>
</tr>
<tr>
<td>Three</td>
<td>57%</td>
<td>17%</td>
<td>17%</td>
<td>4%</td>
<td>0%</td>
<td>4%</td>
<td>0%</td>
<td>23</td>
</tr>
<tr>
<td>Four</td>
<td>0%</td>
<td>27%</td>
<td>27%</td>
<td>18%</td>
<td>9%</td>
<td>0%</td>
<td>18%</td>
<td>12</td>
</tr>
<tr>
<td>Five</td>
<td>30%</td>
<td>40%</td>
<td>10%</td>
<td>0%</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
<td>10</td>
</tr>
<tr>
<td>Six</td>
<td>33%</td>
<td>0%</td>
<td>33%</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4</td>
</tr>
<tr>
<td>Seven</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>Eight+</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>Overall</td>
<td>63%</td>
<td>16%</td>
<td>11%</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
<td>148</td>
</tr>
</tbody>
</table>

\(^a\) The percentage of respondents in each income bracket is displayed for each household size. Thus the table should be read horizontally, rather than vertically.

**Key**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets current and former eligibility requirements</td>
<td></td>
</tr>
<tr>
<td>Meets current eligibility requirements</td>
<td></td>
</tr>
<tr>
<td>Exceeds current eligibility requirements</td>
<td></td>
</tr>
</tbody>
</table>
8.2 Participation Rates

Based on our estimates, UI Helps served about 17% of the eligible population in 2005, and WRAP served about six percent of the eligible population. (Table 8–3) It is important to note that our methods cannot accurately account for people who have been served by the programs in the past 18 months and were therefore not eligible to receive services in 2005. However, given the large numbers of eligible households and the relatively small numbers of participants, it is unlikely that accounting for prior participation would greatly affect estimates of the percentage of eligible households served. The differences in participation rates between the two programs reflect the fact that WRAP offers a greater breadth of services to a relatively small number of eligible clients, while UI Helps provides more focused services to a greater number of eligible clients. Furthermore, interviewees who characterize UI Helps as a “light-bulb program” also argue that the high participation rate belies the fact that the program does very little to reduce customers’ energy bills.

Table 8–3: Estimated Eligible and Participating Households Using 2005 Criteria

<table>
<thead>
<tr>
<th></th>
<th>Eligiblea</th>
<th>Participants</th>
<th>Percentage of Eligiblec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>223,734</td>
<td>18,401</td>
<td>8%</td>
</tr>
<tr>
<td>UIb</td>
<td>47,693</td>
<td>8,308</td>
<td>17%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>176,001</td>
<td>9,830</td>
<td>6%</td>
</tr>
<tr>
<td>ABCD</td>
<td>19,981</td>
<td>542</td>
<td>3%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>28,447</td>
<td>2,138</td>
<td>8%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>1,562</td>
<td>71</td>
<td>5%</td>
</tr>
<tr>
<td>CRT</td>
<td>78,609</td>
<td>4,274</td>
<td>5%</td>
</tr>
<tr>
<td>NOW</td>
<td>47,402</td>
<td>2,593</td>
<td>5%</td>
</tr>
</tbody>
</table>

a UI based on 150% of FPL and WRAP based on 200% of FPL. Connecticut is based on the same of eligible and participating households in both programs.
b Based on the number of individual accounts listed in the 2005 tracking database.
c Based on records in the database. The CAA was not listed for 212 of these records.

The percentage of eligible households served, however, varied by CAA service territory. Three of the five agencies implementing WRAP served five percent of the eligible households in 2005. One agency, ACCESS, served eight percent of eligible households, while ABCD served three percent of eligible households. We have identified four circumstances that could help explain differences in participation by CAA service area. First, as described in Section 5.3, ACCESS is the one agency that engages in independent marketing of the WRAP program. Other agencies argue that they do not have the time or resources to engage in active program marketing, although they will encourage energy-assistance clients to apply for WRAP.

Second, as discussed in Section 6.9.2, each of the five weatherizing agencies serves clients who get energy assistance from within their agency but also clients who receive energy assistance from one of the seven non-weatherizing agencies. As we explained earlier, the relationship between these agencies can affect WRAP participation levels. A positive relationship increases participation rates among clients of non-weatherizing agencies, while a negative relationship decreases it. When relationships are not strong, the weatherizing staff may have greater difficulty getting referrals and necessary contact and eligibility information from the non-
weatherizing agencies. ACCESS has a very strong relationship with the non-weatherizing Thames Valley Community Council for Community Action. In contrast, there is general agreement that the relationship between ABCD and the non-weatherizing agencies of Norwalk Economic Opportunity Now, Inc. (NEON) and CTE in Stamford are strained.

The third situation reflects procedures for appointment scheduling (see Section 6.3.7) and the degree to which the service territories of the weatherization agencies overlap with those of WRAP and UI Helps. The five agencies are generally headquartered within the community with the highest concentration of low-income people in their weatherization service territory. For three of these agencies—ACCESS, CRT, and NOW—their WRAP service area generally overlaps with their DSS/DOE service areas, with the exception of towns with municipal utilities. The same is not true of ABCD and CAA-NH; most of their customers purchase electricity and gas from UI and SCG, respectively, so only a small portion of households in their weatherization areas can receive WRAP services. This increases the challenges they face in scheduling WRAP work; they always have to travel relatively long distances—in an area with heavy traffic congestion—to serve WRAP customers. This situation does not greatly affect participation rates at CAA-NH because the portion of their territory served by CL&P is so small that they have overcome the difficulties of scheduling and traveling to WRAP homes. However, CL&P provides electricity to 146,801 customers in ABCD’s service territory, of which 19,981 are eligible for WRAP. With so many more people to serve and the challenges of traveling on I-95 from Bridgeport to Norwalk and Stamford, ABCD has not been fully able to overcome the challenges of serving a WRAP population that differs from the majority of the agency’s clients for energy assistance, DSS/DOE weatherization and other social service programs.

The financial procedures of agencies also affect participation. ACCESS and NOW, for example, have some direct control over the revenues generated through the WRAP program. This allows ACCESS to have its gift certificate promotion discussed in Section 5.3. In other agencies, including CRT, invoicing procedures and revenues are managed by a financial department. At ABCD, the financial department will not allow the weatherization program to buy supplies for WRAP until there is surplus money in their WRAP account. When the budget gets low, ABCD must serve enough households under Subprogram 1 and be reimbursed for the measures charged to WRAP in order to create enough budget surplus to buy supplies for homes served under Subprogram 2. This arrangement can limit their ability to provide WRAP services.

Finally, the way in which agencies handle WRAP applications also affects participation. In particular, some agencies, including ACCESS and CRT, will automatically send WRAP applications to energy-assistance recipients who are above the income cutoffs from DSS/DOE weatherization. This practice likely increases the number of WRAP applications filled out by energy-assistance recipients. Likewise, having energy-assistance clients fill out WRAP applications while signing up for energy-assistance also increases WRAP participation.

The maps presented in Figure 8–1 and Figure 8–2 show that the programs are serving people throughout the state, but they are really only reaching a small portion of the eligible population. One group, however, appears to be systematically overlooked: low-income households living in higher income communities. These individuals are likely not as exposed to program marketing, and they may also be more reluctant to participate in a low-income program.
Figure 8–1: Percentage of Eligible Households Served by Zip Code
Figure 8–2: Percentage of Eligible Households Served by Zip Code, New Haven and Hartford Insets
8.3 Housing Unit

Renters make up a greater percentage of the households eligible for WRAP than do homeowners and an even higher percentage for UI Helps. (Table 8–4) However, responses to the surveys suggest that UI Helps participants are more likely to be home owners (55% of respondents vs. 67% of eligible households). This finding reflects the fact that, until recently, UI Helps did not generally serve master-metered, rental units. However, the program has recently started serving such units. WRAP survey respondents are much more likely to be renters (72% of respondents vs. 58% of eligible households). This is due to the fact that Subprograms 3 and 4 target multifamily, renter-occupied housing units, even as Subprogram 1 serves more homeowners and Subprogram 2 serves a proportionate number of owners and renters. (Table 6–7)

<table>
<thead>
<tr>
<th>Table 8–4: Housing Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Survey Respondents; All Eligible Housing Units)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant Survey</th>
<th>Eligible Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI</td>
</tr>
<tr>
<td>UI Helps</td>
<td>55%</td>
</tr>
<tr>
<td>WRAP</td>
<td>72%</td>
</tr>
<tr>
<td>Overall</td>
<td>63%</td>
</tr>
<tr>
<td>I rent my home</td>
<td>55%</td>
</tr>
<tr>
<td>I own my home</td>
<td>43%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
<tr>
<td>Number of Respondents or Units</td>
<td>202</td>
</tr>
</tbody>
</table>

Single-family homes are more common in the largely suburban to rural CL&P service territory, than in the smaller and urban UI service territory. (Table 8–5) Two-to-four unit buildings are more common in the UI service territory than in the CL&P service territory. Both programs are disproportionately likely to serve customers who reside in larger buildings; 26% of survey respondents live in buildings with 20 or more units compared to 8% of the Census households. In contrast, only one-third of survey respondents reside in a single-family home or a town house, compared to nearly two-thirds of all households. This most likely reflects the fact that a greater proportion of eligible households are renters, and renters are more likely to live in large multifamily housing than are homeowners.44

<table>
<thead>
<tr>
<th>Table 8–5: Type of Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Survey Respondents; All Occupied Housing Units)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant Survey</th>
<th>Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI</td>
</tr>
<tr>
<td>Single-family house or town house</td>
<td>43%</td>
</tr>
<tr>
<td>2 to 4 unit building</td>
<td>18%</td>
</tr>
<tr>
<td>5 to 19 unit building</td>
<td>13%</td>
</tr>
<tr>
<td>20 or more unit building</td>
<td>25%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
</tr>
<tr>
<td>Number of Respondents or Units</td>
<td>186</td>
</tr>
</tbody>
</table>

44 See Appendix A “Demographic Analysis Report” for more detail.
Urban areas are more likely to be served by the natural gas distribution network. It is not surprising, therefore, that more households in UI’s highly urban service territory heat with natural gas than do households in CL&P’s service territory. (Table 8–6) Households in CL&P’s territory are more likely to heat with oil than with any other fuel. Both programs, however, disproportionately serve homes heated with electricity and natural gas. Oil-heated homes appear to be under-served, although evidence from the 2005 CL&P Residential Appliance Saturation Study (RASS) indicates that this may not be the case (see below). Thirty-nine percent of survey respondents use natural gas and 26% use electricity compared to 29% and 15% of the Census population, respectively. In contrast, 33% of survey respondents use oil compared to 52% of the Census population.

<table>
<thead>
<tr>
<th>Table 8–6: Primary Heating Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Survey Respondents; All Occupied Housing Units)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Natural gas</td>
</tr>
<tr>
<td>Heating oil</td>
</tr>
<tr>
<td>Electricity</td>
</tr>
<tr>
<td>Bottled gas</td>
</tr>
<tr>
<td>Some other fuel</td>
</tr>
<tr>
<td>Number of Respondents or Units</td>
</tr>
</tbody>
</table>

The fuel used to heat homes differs not only by region of the state but also by owner-renter status. (Table 8–7) Owners are much more likely to heat with oil than are renters. Renters, on the other hand, are somewhat more likely to heat with natural gas and far more likely to heat with electricity. Given that more renters are eligible for the programs, it would initially seem that the eligible homes would rely disproportionately on electric heat. However, electric heated homes make up a rather small percentage of all homes that meet program income requirements. This is especially true in the UI area where only one-in-five renters heat with electricity and just four percent of owners heat with electricity.

Five factors explain why the programs disproportionately serve natural gas- and electrically heated homes. First, renters are more likely to heat with natural gas and electricity, in part because these two fuels are more commonly found in multifamily housing than in single-family housing. Second, UI Helps and WRAP build service and marketing lists from their own customers, often targeting those who are in arrears. For UI this means electric customers, and for WRAP this means electric and natural gas customers. Third, electric-heating customers may self-select into the programs by calling the companies about their bills and/or the programs. Fourth, natural gas is more readily available in urban areas where most participants live. Finally, RASS data indicate that low-income households are the least likely to heat with oil: only 52% of RASS respondents making less than $50,000 per year used oil heat, compared to 61% of those with incomes at or above $50,000.45

<table>
<thead>
<tr>
<th>Heating Fuel</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
<th>UI</th>
<th>CL&amp;P</th>
<th>CT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Own Rent</td>
<td>Own Rent</td>
<td>Own Rent</td>
<td>Own Rent</td>
<td>Own Rent</td>
<td>Own Rent</td>
</tr>
<tr>
<td>Oil</td>
<td>48% 15%</td>
<td>56% 27%</td>
<td>51% 22%</td>
<td>57% 24%</td>
<td>64% 33%</td>
<td>63% 31%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>38% 55%</td>
<td>30% 30%</td>
<td>35% 42%</td>
<td>37% 51%</td>
<td>22% 34%</td>
<td>25% 38%</td>
</tr>
<tr>
<td>Electricity</td>
<td>12% 27%</td>
<td>9% 42%</td>
<td>10% 35%</td>
<td>4% 21%</td>
<td>10% 28%</td>
<td>9% 27%</td>
</tr>
<tr>
<td>Bottled Gas</td>
<td>2% 1%</td>
<td>4% 2%</td>
<td>3% 1%</td>
<td>1% 3%</td>
<td>2% 3%</td>
<td>2% 3%</td>
</tr>
<tr>
<td>Other</td>
<td>0% 0%</td>
<td>2% 0%</td>
<td>1% 0%</td>
<td>1% 1%</td>
<td>2% 1%</td>
<td>2% 1%</td>
</tr>
<tr>
<td>Number of</td>
<td>90 110 54</td>
<td>130 143 234</td>
<td>160,988 103,978 674,973 305,851 869,742 431,928</td>
<td>respondents or units</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.4 Household Composition

The participant survey respondents are less likely than all households in the state and each service territory to have children living in them. (Table 8–8) Twenty-seven percent of survey respondents report that there are children under 18 living in the home, compared to 35% of Census households. The proportion of respondents who have children living with them is especially low for WRAP (24% of respondents vs. 35% of Census households). This finding is particularly unexpected because 57% of homes participating in WRAP Subprogram 2 have children living in them. In contrast to children, a relatively proportionate 22% of households have seniors living in them compared to 25% of Census households. Seniors are somewhat under-represented in UI Helps households (21% of respondents vs. 27% of Census households).

Table 8–8: Percentage of Households with Children and Seniors

<table>
<thead>
<tr>
<th></th>
<th>Participant Survey</th>
<th>Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI Helps</td>
<td>WRAP</td>
</tr>
<tr>
<td>Children &lt; 18 years old</td>
<td>29%</td>
<td>24%</td>
</tr>
<tr>
<td>Seniors &gt; 65 years old</td>
<td>21%</td>
<td>23%</td>
</tr>
<tr>
<td>Number of Respondents or Households</td>
<td>202</td>
<td>212</td>
</tr>
</tbody>
</table>

The NMR team believes that the nature of telephone surveys in general and the length of this survey in particular limited the participation of households with children. Respondents with children are more likely to be busy and not have the time to answer telephone surveys, particularly one that typically took 20 minutes to answer. In fact, during monitoring, the NMR team personally heard two respondents (of the three interviews monitored that day) who refused to continue because the survey was taking too long, and they needed to attend to their children or grandchildren. While the survey firm calls such people back to attempt to complete the interview, the respondents’ behavior indicates that households with children find it more difficult to participate in telephone surveys than do those without children.
8.5 Other Household Information

Survey respondents are more likely to have been born in a US territory (such as Puerto Rico), and less likely to have been born in Connecticut; 13% of surveyed participants were born in a US territory compared to 3% of Census respondents. (Table 8–9) In comparison, 47% of surveyed respondents were born in Connecticut compared to 57% of Census respondents. Respondents served by UI Helps are also disproportionately likely to have been born in another state. Slightly fewer participants than state residents overall were born in another country.46

<table>
<thead>
<tr>
<th>Where Born</th>
<th>Participant Survey</th>
<th>Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI Helps</td>
<td>WRAP</td>
</tr>
<tr>
<td>Connecticut</td>
<td>48%</td>
<td>47%</td>
</tr>
<tr>
<td>Other state</td>
<td>34%</td>
<td>29%</td>
</tr>
<tr>
<td>US Territory</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>Another Country</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>180</td>
<td>195</td>
</tr>
<tr>
<td>or People</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is likely that the Census undercounts foreign-born persons and that foreign-born persons are less likely to participate in UI Helps and WRAP. Reasons for lower participation rates in both the Census and the utility programs include visa status, fear of deportation, language difficulties, and fear of authority, among others.

---

46 It is likely that the Census undercounts foreign-born persons and that foreign-born persons are less likely to participate in UI Helps and WRAP. Reasons for lower participation rates in both the Census and the utility programs include visa status, fear of deportation, language difficulties, and fear of authority, among others.
As discussed in the Demographic Analysis Report (see Appendix A), if a household is headed by a person identifying as a racial and ethnic minority, the household has a good chance (usually 30% or more) of being eligible for UI Helps or WRAP. However, a greater number of white households than minority households are actually eligible for the program because there are simply more white households in the state overall, even among the low-income population. The findings in Table 8–10 suggest that, in reality, the programs are serving a disproportionately high percentage of households headed by someone who self-identifies as black—30% of surveyed participants are black, although such households make up only 14% of all eligible households. In contrast, those identifying their race as white are underserved by the programs—51% of survey participants are white, although such households make up 75% of all eligible households. In keeping with the language finding, Hispanic households also appear to be somewhat underserved by UI Helps.

**Table 8–10: Race of Eligible and Participating Households**

(All Survey Respondents; All Eligible Households)

<table>
<thead>
<tr>
<th>Participant Survey</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
<th>Eligible Households Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI</td>
<td>CL&amp;P</td>
<td>CT</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>47%</td>
<td>55%</td>
<td>51%</td>
<td>63%</td>
</tr>
<tr>
<td>Black</td>
<td>36%</td>
<td>23%</td>
<td>30%</td>
<td>23%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8%</td>
<td>14%</td>
<td>11%</td>
<td>15%</td>
</tr>
<tr>
<td>Asian</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Some other race</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>More than one race</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Number of Respondents or Households</strong></td>
<td>172</td>
<td>193</td>
<td>365</td>
<td>291,266</td>
</tr>
</tbody>
</table>
The NMR team has developed three hypotheses to explain why white households are not participating in rates that are proportionate to their percentage of the eligible population. The first is that the neighborhood canvass approach and WRAP Subprogram 3 capture more minority participants because they explicitly target low income, largely urban neighborhoods and/or multifamily housing complexes. For complex social, economic, and cultural reasons, low-income white households are less likely than low-income minority households to live in such areas. To test this hypothesis, we analyzed racial participation by WRAP Subprogram, combining the non-white, non-Hispanic population into one category due to small sample sizes.\textsuperscript{47} The findings indicate only partial support for our hypothesis. (Table 8–11) Subprogram 3, which targets urban multifamily complexes, clearly serves the largest percentage of minority households. However, white households remain under-represented in all other Subprograms as well, which suggests that other factors are also at work.

<table>
<thead>
<tr>
<th></th>
<th>SP1</th>
<th>SP2</th>
<th>SP3</th>
<th>SP4</th>
<th>SP 3 and 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>63%</td>
<td>56%</td>
<td>35%</td>
<td>55%</td>
<td>84%</td>
</tr>
<tr>
<td>Non-White, Non-Hispanic</td>
<td>38%</td>
<td>44%</td>
<td>65%</td>
<td>45%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>19</td>
<td>63</td>
<td>31</td>
<td>52</td>
<td>20</td>
</tr>
</tbody>
</table>

\textsuperscript{a} An additional five respondents took part in Subprograms 2 and 4; four of the five were white, and the other was non-white.

Other evaluation findings lend support to the second and third hypotheses. The second is that the WRAP program targets some of its marketing to newspapers, television, and radio geared toward racial and ethnic minority groups. The third hypothesis is that some eligible people do not want to receive services from programs targeted to low-income people, as mentioned by staff members at UI Helps, WRAP, and the CAAs. It may be that it is not as socially acceptable among white households, particularly those living in somewhat higher income areas, to participate in programs targeted to low-income people. When asked why WRAP has difficulty serving low-income people living in higher income areas, one interviewee explains that some people “don’t want to stand out.” As an example, he explains that people do not want their neighbors to see a CAA truck parked in the driveway.

\textsuperscript{47} We do not have comparable data on whether UI Helps participants were served via neighborhood canvass or by appointment.
The programs are more likely to serve households headed by someone who has a high school degree (38% of participants vs. 28% of state residents aged 25 or older) and less likely to serve households who are headed by people without a college degree (10% of participants and 31% of state residents aged 25 or older). (Table 8–12) This finding is expected, given that educational attainment is often the strongest predictor of income—in other words, low-income people often have relatively low education levels.

**Table 8–12: Highest Level of Education**
(All Survey Respondents; All residents 25 years and older)

<table>
<thead>
<tr>
<th></th>
<th>Participant Survey</th>
<th>Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI Helps</td>
<td>WRAP</td>
</tr>
<tr>
<td>Eighth grade or less</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Some high school but no diploma</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>High school diploma or GED</td>
<td>39%</td>
<td>37%</td>
</tr>
<tr>
<td>Some college, but no degree</td>
<td>18%</td>
<td>23%</td>
</tr>
<tr>
<td>Associate's or technical school degree</td>
<td>6%</td>
<td>11%</td>
</tr>
<tr>
<td>Bachelor's degree or Higher</td>
<td>16%</td>
<td>6%</td>
</tr>
<tr>
<td>Number of Respondents or People</td>
<td>182</td>
<td>195</td>
</tr>
</tbody>
</table>
9 Conclusions and Recommendations

This process evaluation of the UI Helps and WRAP low-income weatherization program addresses a wide range of issues related to the planning and implementation of UI Helps and WRAP. The evaluation activities confirm that UI Helps and WRAP are generally operating as designed. The program implementers and their subcontractors generally follow the guidelines set forth by UI Helps and WRAP regarding:

- Timeliness of service
- Which measures can be installed and in which homes
- Reimbursement and invoicing procedures
- Quality control mechanisms

The evaluation activities also make clear that participants—including landlords or property managers of buildings that have received comprehensive services—are highly satisfied with the two programs and extremely grateful for the services. A few customers voice less satisfaction because they have not realized expected energy savings, or a measure—typically a lighting product—has failed.

In short, we find that the programs are generally operating as designed and achieving desired results. Both programs offer measures that help reduce electricity demand and avert costs the consumers would have incurred without them. UI Helps achieves these goals by focusing on cost-effective electric savings, based on the electric b/c test, while WRAP also reduces demand for other fuels, achieving cost-effectiveness based on the TRT. Neither program, however, represents “best practice” among low-income weatherization programs. While some participants in both programs receive comprehensive services (e.g., insulation, refrigerators) that have a large impact on their energy use and bills, most participants receive measures with relatively minor impacts (e.g., CFLs and portable lighting fixtures, faucet aerators, and showerheads). Along with rising electricity rates and overly optimistic customer expectations, the relatively small impact of most measures on energy use reduces levels of participant satisfaction with energy savings. Both programs, furthermore, could take additional steps to improve program delivery and their ability to achieve and measure progress toward program goals.

9.1 Program Recommendations

Most of the recommendations discussed here could be characterized as minor enhancements that could be implemented within the current programs’ design. Alternative approaches to the current programs that would involve substantial program changes are address in Section 10 “Next Steps.”

9.1.1 Program Structure

Clarity regarding measures of cost-effectiveness: The extent to which UI and NU should use the electric b/c test or the TRT to assess the cost-effectiveness of the UI Helps and WRAP programs is not clear in directives from the ECMB and DPUC. In addition, the DPUC and ECMB have directed the programs to offer increasingly similar services throughout the state.
1. Because these tests essentially define program goals—and in turn influence program structure and delivery—the NMR team recommends that the utilities seek clarification from the ECMB and the DPUC about which cost-effectiveness test(s) to report. Such a clarification would also help planners identify ways to move toward program convergence and reduce the substantial differences that currently exist between UI Helps and WRAP.

Providing Leveraged Services to clients of DSS/DOE program in Bridgeport Area:
Although UI Helps serves Bridgeport customers who are clients of ABCD, the program does not currently use ABCD as an implementation vendor. For this reason, Bridgeport area residents who participate in the DSS/DOE program do not receive the same services as their counterparts served by CAA-NH.

2. The NMR team recommends that UI Helps and DSS pursue options for offering the ABCD clients of the DSS/DOE program the same leveraged services as those living in the area served by CAA-NH.

Increasing WRAP Participation in SWCT: Participation rates for WRAP are lowest in SWCT, the region of the state with the most severe grid congestion and where the high cost-of-living can increase the economic hardships faced by low-income households. In addition, recent difficulties at the entire ABCD agency make it unlikely that their weatherization department will be in the position to increase services to SWCT. In the past, WRAP has asked other CAAs to implement some multi-family projects in SWCT. Moreover, UI Helps contracts with both a CAA and a private vendor to implement program services.

3. The NMR team recommends that WRAP continue to draw on the other CAAs to supplement the work of ABCD and consider the feasibility of using both CAAs and private vendors to implement WRAP services in SWCT.

Using dual funding sources to serve master-metered multifamily housing: WRAP currently uses residential C&LM funds to serve master-metered multifamily buildings that some critics believe should be served by commercial and industrial C&LM funds. UI Helps currently uses a mixture of funds from their residential low-income program and their commercial and industrial small business program to install measures in master-metered, multifamily housing.

4. The NMR team recommends that WRAP consider the feasibility of following UI Helps’ approach to serving master-metered, multifamily housing. Ultimately, whether or not to use residential or other funds to serve master-metered, multi-family buildings is a policy decision. As such, the NMR team recommends that the DPUC provide guidance to WRAP and UI Helps administrators regarding which source of funds the programs should use to serve master-metered, multifamily housing.

9.1.2 Coordination with other Energy-Related Assistance Programs

Coordination with the DSS/DOE Weatherization Program
Interviewees generally describe the relationship between WRAP and the DSS/DOE weatherization program as a “partnership,” noting that the two programs not only leverage funds
but also coordinate the measures offered and which program will pay for them. The DSS and WRAP also regularly hold joint meetings with the CAAs. In contrast, although residents of the New Haven area served by the DSS/DOE program may also receive UI Helps services, there is currently little direct coordination (e.g., mutually agreed upon procedures for when and how to offer leveraged services) between UI Helps and the DSS/DOE program. Instead, the two programs leave the coordination to CAA-NH.

5. The NMR team recommends that UI Helps and the DSS/DOE program staffs jointly consider ways in which they can more closely coordinate programs in the future. Staff members from both programs have already expressed an interest in renewing their relationship.

Coordination with other UI or NU low-income assistance programs: The representatives of the various utility programs assisting low-income customers report that they regularly communicate with each other, share participant lists, and assist each other in outreach and marketing.

6. Given the very close and regular communication and coordination between these departments, the NMR team has no further recommendations on ways to improving the relationships between UI and CL&P departments.

Coordination with gas-utility programs: Both programs leverage resources with the much smaller natural gas low-income weatherization programs. CNG, SCG, and Yankee Gas are WRAP partners, and each coordinates with WRAP concerning which utility will pay for which measures. In addition, CNG and Yankee Gas contribute funds to the WRAP budget, while SCG reimburses WRAP for gas-related services performed in the homes of its customers. In contrast, SCG and UI Helps do not usually directly coordinate services, leaving the coordination up to CAA-NH and CRI.

7. The NMR team recommends that UI Helps and SCG program planners consider more closely coordinating program delivery in homes served by both utilities and jointly paying for the technician’s visit to these homes. Closer coordination could improve the efficiency of program delivery for customers and implementation vendors.

Coordination with non-weatherizing CAAs: Currently, the utility weatherization programs do not have much direct contact with the seven non-weatherizing CAAs in Connecticut, likely reducing the understanding that newer agency staff members have of the UI Helps and WRAP programs and their effectiveness at referring individuals to the program. Non-weatherization staff members, furthermore, have a general understanding of WRAP and do help sign clients up for the program, but they also do not believe that they have a very close working relationship with WRAP. In addition, the strength and quality of relationships between the five weatherizing agencies and the other seven agencies varies widely, partially explaining different participation rates across the state.
8. For these reasons, the NMR team recommends that WRAP staff members foster closer relationships with the non-weatherizing CAAs in order to boost participation in some under-served regions of the state, particularly SWCT. For example, WRAP staff could make certain that the energy-assistance directors from non-weatherizing CAAs know about Weatherization Director’s meetings, and could diligently encourage them to attend. WRAP staff members have informed NMR that they currently plan to pursue closer relationships with the non-weatherizing CAAs in the near future.

9.1.3 Targeting and Outreach

Eligibility Criteria: Both programs have recently expanded eligibility from 150% of FPL ($24,135 for a three-person household) for UI Helps and 200% of FPL ($32,180 for a three-person household) for WRAP to 60% of SMI ($43,344 for a three-person household), doubling the number of households eligible for UI Helps (from 47,693 to 92,046) and increasing by one-half (51%) the number of households eligible by WRAP (from 176,001 to 267,147). This decision, however, may have the unintended consequence of serving fewer vulnerable households in the state, particularly those served in application and appointment-based approaches. This is because moderate-income people tend to be more proactive and better able to maneuver through application and enrollment processes than are their more vulnerable counterparts. Therefore, it is likely that moderate-income households will apply earlier and follow the process through to completion at greater rates than the most vulnerable households. Because of the “first-come, first-served” nature of WRAP and the DSS/DOE program, there might not be enough money left to serve vulnerable households who apply later or need more hand-holding by DSS, CAA, or program staffs to complete the application process. Lowering eligibility to 150% of FPL (i.e., 47,693 for UI Helps and 119,315 for WRAP) would increase the likelihood that the programs are serving the lowest income households in Connecticut.

9. The NMR team recommends that UI Helps and WRAP reduce eligibility to 150% of FPL (200% of FPL for the elderly and disabled), the criteria used for CEAP and the DSS/DOE weatherization program. We further recommend that UI and CL&P work with the ECMB and DPUC to consider the viability of developing programs to serve households with incomes between 150% of FPL to 60% of SMI. A possible option for such a program includes providing a partial subsidy towards the cost of weatherization and a loan option for the amount not covered. Examples of similar programs include the Assisted Home Performance Programs in New York and Wisconsin.

Prioritize services to electrically heated homes: There is general agreement among program planners and administrators that both UI Helps and WRAP should strive to achieve cost-effective electric savings and help to reduce customer energy bills. Providing weatherization services to electrically heated homes provides the programs with the opportunity to more readily achieve both goals. Currently, about 4% of UI Helps participants and 31% of WRAP participants heat with electricity.

48 It has been suggested that reducing eligibility may make it difficult to enroll enough people in WRAP to provide the CAAs with a consistent body of work. One possible solution to this potential difficulty is for WRAP to gain access to the DSS energy-assistance applications and recipient lists, as the program would if it accepted the energy assistance application as an application for WRAP.
10. The NMR team recommends that UI Helps and WRAP specifically target electrically heated homes, and provide them with the most comprehensive suite of cost-effective electric measures currently allowed under each program’s guidelines. This approach should be most vigorously applied in SWCT in order to reduce grid congestion in that region of the state. This recommendation applies to the current program; a different course of action would be required if the DPUC and ECMB directed the programs to be completely fuel neutral, with no targeting of any fuel type.

Non-English speakers: The participant survey indicates that both programs serve a disproportionately low number of non-English speaking households. More specifically, WRAP has largely been successful at securing the participation of Spanish speakers, but not speakers of other non-English languages. UI Helps has difficulty reaching all non-English speakers, including Spanish speakers. The participant survey suggests that speakers of various Eastern European languages are included among program participants. The participant survey further suggests that speakers of various Eastern European languages are included among current program participants. Of the 913 people contacted by telephone (including the 414 respondents), just 18 could not answer the survey because of language problems. Of these 18 people, four report speaking an Eastern European language (Polish, Russian, Slovakian, and Ukrainian) and six others have what appear to be Eastern European surnames. Program and CAA staffs also note that small but noticeable percentages of participants speak either Polish or Russian.

11. Based on these findings, the NMR team recommends increasing outreach to non-English-speaking groups by working with immigrant advocacy organizations or associations as well as church and other key community groups representing particular ethnic or linguistic groups. Such outreach should include Eastern Europeans, and UI Helps staff members should additionally step up existing outreach to the Spanish-speaking community. At this time, however, we do not believe that any single language is spoken by a large enough portion of the eligible population to necessitate widespread marketing using print or recorded materials in languages other than English and Spanish.

In addition, the agencies and the utilities do not currently use a tele-interpreter service for fielding calls from non-English speaking clients, although the 2-1-1 Infoline regularly uses a tele-interpreter service.

12. The NMR team recommends that UI and NU consider the cost and feasibility of subscribing to a tele-interpreter service to help serve clients of all departments and programs who do not speak English or other languages spoken by utility staff members.

Low-income residents of wealthy areas. The evaluation also finds that the programs have a difficult time reaching low-income households in relatively higher income communities. Sixty-six percent of WRAP participants are served through the multifamily Subprogram 3 or the neighborhood canvass Subprogram 4, while nearly all UI Helps participants are served via neighborhood canvassing. These approaches target urban neighborhoods with large concentrations of low-income households. Some interviewees also argue a small number of people are reluctant or embarrassed to receive services from a low-income program.
13. The NMR team recommends that both programs seek to improve outreach to low-income households living in higher income areas, which could include issuing press releases to smaller community papers and making targeted visits to social-service agencies, food banks, and housing authorities serving these communities. While these are low-cost activities, they may increase program costs and potentially lower program cost-effectiveness. Yet, such outreach could also be effective in reaching previously underserved groups.

**Outreach to landlords:** Both programs currently conduct outreach to landlords and property managers, who make the ultimate decision about whether or not rental units will be served by UI Helps or WRAP. This includes speaking to landlord associations, cold-calling landlords of eligible buildings, and, for UI Helps, communicating with Section 8-voucher administrator. One of the housing authority managers we interviewed suggests that the programs could insert marketing materials in the Section 8 voucher reimbursement checks sent to many landlords with low-income residents. The marketing materials could help alleviate some of their concerns and lead to greater participation among renters. We recognize that it may have the unintentional result of increasing landlord free-ridership, but it would also have the intended result of serving more low-income renters.

14. The NMR team recommends that UI Helps and WRAP staff members should consider the feasibility and potential strengths and weaknesses of inserting marketing materials in the Section 8 voucher reimbursement checks sent to many landlords with low-income residents.

**9.1.4 Internal Program Changes**

WRAP program partners argue that high staff turnover at the program serves as the biggest impediment to effective program coordination and communication. The turnover reflects WRAP’s reliance on contract workers who stay with the program for about a year.

15. The NMR team recommends that the WRAP unit convert all full-time contract positions into full-time permanent positions. It is important to note that agency staffs emphasize—and the NMR team confirms—that the contract staff members at NU have been highly committed to the program despite the fact that they are hired as temporary workers.

The agencies and their subcontractors say it is difficult to respond to an inconsistent workload over the course of the year. An inconsistent workload can lead to staffing problems and tensions between the DSS/DOE program and utility programs when agencies serve one program’s clients more than the other’s. WRAP is more susceptible to timing issues because of its greater use of applications and appointments as opposed to the neighborhood canvassing approach favored by UI Helps. WRAP staff members are currently attempting to address the problem by conducting some summer mailings and offering both refrigerators and room air conditioners through the neighborhood canvass Subprogram.

16. The NMR team recommends that WRAP continue its current efforts to improve the year-round availability of work.
Collection of participant contact and demographic information: The UI Helps, WRAP, and implementation vendor staffs do not currently collect adequate demographic information for use in identifying potential gaps in the population served. WRAP program and implementation vendor staffs also do not collect customer contact information on participants in Subprogram 3 and 4.

17. The NMR team recommends that both programs consider having installers or technicians gather customer contact and demographic information through a brief questionnaire at the time of service. Key information to request includes, but is not limited to: name, phone number, address, household size and composition, whether the household rents or own, and primary language spoken. Some of this information may already be available in company-wide customer databases, such as the UI Enernet system or the NU CS-2 system. The program staffs should then use this information not only in their current quality control efforts but also to ensure that the programs are adequately serving the entire eligible population.

Provide the CAAs with the means to track progress toward energy-savings and cost-effectiveness goals: As social-service organizations, the CAAs providing WRAP services generally measure progress toward program goals in terms of the number of units served, measures installed, and budget expended. They rarely consider actual energy savings or cost-effectiveness, in part because WRAP does not require them to do so. CAA-NH and CRI currently have the ability to track energy-savings and cost-effectiveness goals through the UI Enernet system, and this appears to have contributed at least to CRI’s greater attention to these goals. The CAAs do not currently have the same access to the WRAP tracking database, although NU has informed NMR that an on-going effort to build an NU system-wide database system will make it possible to give the CAAs access to this information in the future.

18. In the interim, the NMR recommends that WRAP program administrators emphasize the importance of the savings information that is presented to the CAAs and continue to discuss the information on an on-going basis.

All program partners and the utilities provide funding for program-related training of staffs and subcontractors. CAA staff members typically receive training related to the technical aspects of weatherization as well as customer service. Subcontractors to CRI or the CAAs provide their staffs with training on a wide range of weatherization and energy-efficiency issues, reflecting the fact that these companies provide energy efficiency services beyond UI Helps and WRAP. CRI and the subcontractors’ staff members often have special licenses or certifications. Most utility training is the “on-the-job” type, although some staff members will be sent to weatherization, information technology, and customer-service related training on an as needed basis.

WRAP recently paid for the training of all auditors, DSS staff members, and WRAP staff members on the use of the new CSG audit software. However, the utilities and DSS generally do not leverage training resources or offer any joint training to the CAAs or their subcontractors.
19. The NMR team recommends that UI Helps, WRAP, and the DSS pursue future opportunities for jointly training CAA staffs and subcontractors, as the same auditors and technicians typically provide services to all three programs.

Homes served by UI Helps and WRAP are eligible to receive services again after 18 months, which appears to be an adequate amount of time between services.

20. Therefore, the NMR team recommends that UI Helps and WRAP retain their current 18 month waiting periods. This recommendation applies to the programs as currently designed and implemented.

Use the energy-assistance application as application for utility weatherization programs:
Some people must fill out as many as three different forms—each containing similar information—to sign up for energy assistance, DSS weatherization, and utility weatherization, making it more difficult for households to receive the full range of services for which they are eligible.

21. Therefore, the NMR team recommends that UI Helps and WRAP also consider accepting the DSS energy-assistance application as an application for utility-based weatherization. The program could still use an analogous application to enroll participants who have chosen not to participate in the energy-assistance program (See Section 10.2.2 below for additional discussion).

9.1.5 Quality Control Mechanisms
Finally, the NMR has five recommendations related to quality control procedures and that could help to improve customer satisfaction.

Inspections: Currently, the CAAs, CRI, and WRAP staffs inspect a certain percentage of homes served by UI Helps and WRAP. Included in this percentage, however, are visits to the homes of participants who have experienced problems. UI Helps staff members do not conduct inspections at this time because they do not find it to be cost effective given that the program spends an average of about $140 in measure and outside labor costs per household.

22. The NMR team recommends that the program staffs and/or their implementation vendors inspect a randomly selected sample of households, excluding those who have complained, toward the sample quota unless they have previously been selected for inspection. However, given UI’s limited expenditures per household and that CRI and the Community Action Agency of New Haven conduct inspections of UI Helps’ work, we do not consider it necessary for UI Helps staffs to conduct additional inspections under the current program design.

More effective sharing of quality control findings: All program implementation vendors, the DSS, and WRAP inspect UI Helps and WRAP installations. Some vendors as well as WRAP and UI Helps also conduct follow-up surveys with at least some clients. Currently, the results of CAA, DSS, and utility inspections and follow-up surveys are not shared with other program partners unless there are problems that require action on the part of other parties.
23. The NMR team recommends that the program partners develop a way of sharing the results of their inspections and follow-up surveys. Such sharing would provide a more complete understanding of what customers value about the program as well as the nature of their complaints. The results could also be used in reports filed with the DPUC, ECMB, and the DOE.

Continued high bills: While highly satisfied with the programs overall and with the products and services offered, participants voice only moderate levels of satisfaction with the electricity savings and other fuel savings they have seen after participating in the programs. Furthermore, when individuals cite reasons for dissatisfaction with the programs overall or with products and services, they often name continued high bills. The NMR team recognizes that UI Helps and WRAP reduce both energy usage and bills from what they would have been had the customer not participated in the program. However, customers—particularly those having trouble making ends meet—focus almost exclusively on how much they pay for energy, not how much they use.

24. The NMR team recommends that the program staffs direct the implementation vendors to provide customers with realistic appraisals of the impact the services will have on their bills. This would involve teaching customers how to read the energy-use sections of their bills, explaining the impact that rate increases will have on energy bills even if the customers are using less energy, and helping participants understand how much energy other products in their homes use (e.g., big screen televisions). Together, this would help the customer to develop a realistic expectation of the impact of the program on their energy bills.49

Pin-based CFLs: The most frequently voiced complaint concerns difficulties with the premature failure of CFLs and fixtures (14% of UI Helps participants and 9% of WRAP participants). Because most customers receive more than one CFL and many receive more than one fixture, the actual product failure rates, however, may be low. Still, the replacement of pin-based CFLs used in the fixtures given out by both programs are sometimes difficult to find and usually expensive, particularly for low-income households.

25. For this reason, the NMR team recommends offering a replacement pin-based CFL with each fixture. WRAP staff members report that they have already adopted this recommendation.

Bulk purchase of additional measures: UI Helps and WRAP currently have entered into purchase agreements with companies to buy refrigerators for the low-income programs. This allows UI Helps and WRAP to buy the products at discounted prices and to have a greater degree of control over which brands and models of products are being purchased.

49 NU indicates that they already discuss how to read energy bills in their Money Matters workshops. While many of these participants also receive WRAP services, not all of them do. Furthermore, it is likely that having a person explain the bills to them one-on-one in the customer’s home will have a greater effect than in a more “classroom” type setting.
26. Because this approach appears to have been successful regarding refrigerators, *the NMR team recommends that UI Helps and WRAP consider entering into agreements to buy additional products in bulk in order to reduce material costs and exert greater control over the products being installed in participants’ homes.*

**Client expectations for additional measures**: Some clients are upset because they are not eligible to receive some of the more highly prized measures, particularly refrigerators. Although the programs have instructed auditors and installers not to tell clients that they will be receiving certain measures before final approval, some auditors and installers tell NMR that they give the clients an idea of what products they may be eligible to receive. Clients will often hear only the part about being eligible to receive the measure.

27. *Therefore, the NMR team recommends that UI Helps, WRAP, and CAA and CRI staff members stress to the auditors and installers the importance of not giving clients any indication about the measures they might receive at a future date, pending approval. It serves only to raise expectations, and can ultimately lower program satisfaction if the expectation is not met.*

**9.1.6 Future Evaluation**

**Need for an impact analysis**: UI Helps and WRAP rely on reported energy savings to determine program effectiveness. However, the reported electric savings for UI Helps (681 kWh per household) may be high, given that the program primarily distributes CFLs and provides heating-related services to just four percent of participating households. The reported savings for WRAP (890 kWh per household) may be more accurate, given the greater breadth of services and the fact that 30% of participating households heat with electricity, but this cannot be confirmed without an impact analysis.

28. The NMR team believes that the reported estimates of current energy savings for the UI Helps and WRAP programs may be somewhat high. It is also possible that, because many customers are underemployed or retired, participants may actually use products for more hours than the general population, perhaps increasing savings. *The NMR team recommends conducting an impact analysis in order to verify the actual achieved energy savings of UI Helps and WRAP.*
10 Next Steps

Over the course of the evaluation, the NMR team identified six broader themes or issues raised during the evaluation that we believe would require more than minor enhancements to the current programs in order to be adequately addressed. These six themes can be summarized as follows:

1. **Program Budgets, Eligibility, and Comprehensiveness of Services**: The programs are limited in scope by the amount of funds budgeted per household served. In 2006, however, both programs expanded the number of households eligible for services, although program budgets remained stable. The stable budgets and increased number of eligible households lead to questions about potential tradeoffs between serving a greater or lesser number of eligible households and the comprehensiveness of services provided.

2. **Program Goals**: There is a general consensus that UI Helps and WRAP can fulfill goals related to cost-effectiveness while helping to stabilize low- and moderate-income households by making it easier for them to pay their utility bills and making their homes safer and more comfortable. It is also clear from the interviews, however, that interviewees differ on the relative importance of these goals and the best way to achieve them. In addition, the current level of per-household funding provided under the UI program, and to a lesser extent the CL&P program, suggests that the bill savings achieved provide only modest benefits to participating households, in contrast to more comprehensive weatherization programs, such as the one administered by the DSS.

3. **Program Effectiveness and Accountability**: Within the utilities and on the ECMB and the DPUC, interviewees have varying understandings of current directives for accountability and measuring program effectiveness. This confusion leads to differences between the UI Helps and WRAP programs and fuels confusion about what are and what should be the programs’ goals.

4. **Program Coordination and Leveraging**: Throughout the interview process, program implementers and policy officials repeatedly stressed the need to develop a stronger and more coherent program to help serve low-income households and reduce energy consumption. Of specific concern were issues related to developing clear program goals and objectives, coordinating the delivery of state and utility weatherization programs, and leveraging weatherization with social services and housing programs. At this time, however, no single body attempts to coordinate these services in any coherent manner. This contributes to differences in the delivery of weatherization services between programs and among CAAs.

5. **Program Convergence**: It is our understanding that the DPUC and ECMB have directed UI and CL&P to make their conservation programs more similar. Currently, the programs are quite different.
6. **Program Delivery**: Some interviewees suggest that the current system of “grandfathering” in existing CAAs without competitive bids should be reexamined and that program delivery should be put out to bid. This option should be viewed in context of the overall set of programs that deliver energy-assistance and weatherization services. It is possible that there are economies of scale that could be obtained by reducing the number of CAAs providing services to the programs. At the same time it is possible that the savings achieved by changing vendors will not offset reduced opportunities to integrate the delivery of services to low-income households.

The six themes described above are clearly interrelated. Directives regarding cost-effectiveness tests may alter program goals and the services provided. Altered budgets may improve or worsen the coordination among the various energy-related assistance programs as well as with other social-service programs.

In this section, we first compare the relative level of funding for weatherization in Connecticut with the funding levels of other states and summarize the weatherization programs in six states that have public-benefit funded weatherization programs. As we will see, the amount of funding is commonly the major difference between programs offering more comprehensive services and those offering more limited services. We then describe three alternative approaches to the current UI Helps and WRAP programs. We conclude by discussing the implications of each approach and the actions by various parties that are needed to bring any of them to fruition.

### 10.1 Programs in Other States

All weatherization programs struggle with similar issues of coordination, integration, scope of services delivered, outreach to the most vulnerable households, and timely delivery of services. Even states with relatively high resource levels reach only small percentages of eligible households. In this section, we first examine weatherization program funding in other states. We then provide descriptions of weatherization programs in six states that have comparable climates or programs to those in Connecticut. In summary, we can make the following observations:

- One of the primary differences among states is the amount of funding per eligible household. States with higher funding levels tend to have more comprehensive programs.
- A key funding difference is that most states transfer funds from LIHEAP to supplement their weatherization budgets; Connecticut does not.
- There is no “one-size-fits-all” formula for providing DOE and utility-sponsored weatherization. Some states integrate all weatherization services at the state level and provide them on a “fuel-blind” basis; others require that the funds be used only for measures relating to the fuel that generates the funds. Some states see LIHEAP as the application portal for weatherization, while others have separate application procedures for weatherization.
10.1.1 Weatherization Program Funding in All States

During the course of the study, there were suggestions that the Connecticut weatherization programs—including DSS/DOE, UI Helps, and WRAP—could, like programs in surrounding states, provide more comprehensive services. In general, the information presented in Table 10–1 through Table 10–4 below show that such expanded services are not possible under current Connecticut program budgets, at least without greatly reducing the number of households served.\(^{50}\) (See also the discussion in Section 3 on alternative program approaches.)

Table 10–1 lists the state sources of funds for weatherization. In FY 2005, all sources of funds provided approximately $745 million for weatherization, of which DOE weatherization provided $233 million, transfer of LIHEAP funds to weatherization $236 million, public-benefit funds $149 million and utility funds $128 million.\(^{51}\)

\(^{50}\) Please note that state weatherization programs provided the information contained in these tables in a survey conducted by the National Association of State Community Services Program (NASCSP). We use the data from this survey because it provides the only comparable information on all U.S. states. However, the NASCSP data may not match those provided in other reports or by other sources.

\(^{51}\) The LIHEAP legislation allows state to transfer up to 15% of total funds to weatherization (25% with a federal waiver).
Final Report: Evaluation of UI Helps and WRAP Low-Income Weatherization Programs

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Table 10–1: Weatherization Funds by State (FY 2005)
State
Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Dist. Columbia
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
N. Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming
Totals

DOE
$2,767,449
$1,813,767
$1,138,751
$2,079,513
$6,322,844
$5,504,036
$2,759,107
$577,217
$749,216
$2,592,639
$2,940,956
$204,993
$1,942,077
$14,349,500
$6,580,199
$5,011,292
$2,175,587
$4,548,384
$2,427,976
$3,081,589
$2,992,926
$6,968,249
$15,257,442
$10,100,643
$1,655,581
$6,029,907
$2,623,349
$2,501,138
$925,040
$1,515,114
$5,125,246
$1,634,730
$21,818,047
$4,176,834
$2,589,151
$15,009,117
$2,602,794
$3,078,771
$14,772,357
$1,161,108
$1,783,179
$1,925,053
$4,199,886
$5,599,993
$2,086,136
$1,283,358
$4,751,384
$4,642,533
$3,225,843
$9,768,947
$1,179,511
$232,550,459

Federal
LIHEAP
Transfer
$835,000
$1,000,000
$1,229,691
$1,906,358
$22,447,438
$4,490,922
$0
$400,000
$999,008
$3,859,747
$2,677,363
$0
$1,942,077
$16,313,465
$4,740,931
$5,184,900
$2,256,022
$3,540,645
$1,151,986
$4,816,834
$773,220
$7,000,000
$8,500,000
$6,149,575
$0
$0
$2,695,829
$2,282,876
$0
$500,000
$3,607,000
$1,488,000
$32,241,788
$4,343,072
$2,107,079
$16,917,856
$1,081,926
$3,437,911
$19,990,900
$1,750,000
$1,802,597
$1,542,561
$2,151,351
$7,703,606
$2,309,000
$0
$5,445,547
$5,697,581
$2,519,804
$11,196,390
$1,470,540
$236,498,396

State
Total
$3,602,449
$2,813,767
$2,368,442
$3,985,871
$28,770,282
$9,994,958
$2,759,107
$977,217
$1,748,224
$6,452,386
$5,618,319
$204,993
$3,884,154
$30,662,965
$11,321,130
$10,196,192
$4,431,609
$8,089,029
$3,579,962
$7,898,423
$3,766,146
$13,968,249
$23,757,442
$16,250,218
$1,655,581
$6,029,907
$5,319,178
$4,784,014
$925,040
$2,015,114
$8,732,246
$3,122,730
$54,059,835
$8,519,906
$4,696,230
$31,926,973
$3,684,720
$6,516,682
$34,763,257
$2,911,108
$3,585,776
$3,467,614
$6,351,237
$13,303,599
$4,395,136
$1,283,358
$10,196,931
$10,340,114
$5,745,647
$20,965,337
$2,650,051
$469,048,855

PBF
$0
$0
$0
$0
$0
$0
$7,273,399
$0
$3,500,000
$0
$0
$0
$4,844,753
$0
$0
$0
$0
$0
$1,700,000
$1,600,000
$21,215,000
$5,000,000
$0
$0
$0
$1,274,371
$0
$2,621,272
$953,398
$13,671,113
$0
$3,660,426
$0
$0
$6,976,875
$0
$8,900,000
$20,645,515
$1,100,000
$0
$0
$0
$0
$0
$2,100,000
$0
$0
$0
$41,484,767
$0
$148,520,889

Utility
$0
$0
$869,861
$0
$99,056,964
$2,700,000
$0
$0
$0
$0
$1,430,000
$0
$2,225,000
$0
$567,303
$4,814,744
$0
$361,418
$882,584
$0
$716,885
$0
$0
$3,956,177
$0
$500,000
$0
$0
$1,454,000
$0
$0
$0
$0
$0
$0
$780,000
$0
$0
$0
$0
$0
$0
$0
$2,098,850
$0
$49,344
$0
$5,452,255
$0
$0
$0
$127,915,385

Total
$0
$0
$869,861
$0
$99,056,964
$2,700,000
$7,273,399
$0
$3,500,000
$0
$1,430,000
$0
$2,225,000
$4,844,753
$567,303
$4,814,744
$0
$361,418
$882,584
$1,700,000
$2,316,885
$21,215,000
$5,000,000
$3,956,177
$0
$500,000
$1,274,371
$0
$4,075,272
$953,398
$13,671,113
$0
$3,660,426
$0
$0
$7,756,875
$0
$8,900,000
$20,645,515
$1,100,000
$0
$0
$0
$2,098,850
$0
$2,149,344
$0
$5,452,255
$0
$41,484,767
$0
$276,436,274

Federal +
State
$3,602,449
$2,813,767
$3,238,303
$3,985,871
$127,827,246
$12,694,958
$10,032,506
$977,217
$5,248,224
$6,452,386
$7,048,319
$204,993
$6,109,154
$35,507,718
$11,888,433
$15,010,936
$4,431,609
$8,450,447
$4,462,546
$9,598,423
$6,083,031
$35,183,249
$28,757,442
$20,206,395
$1,655,581
$6,529,907
$6,593,549
$4,784,014
$5,000,312
$2,968,512
$22,403,359
$3,122,730
$57,720,261
$8,519,906
$4,696,230
$39,683,848
$3,684,720
$15,416,682
$55,408,772
$4,011,108
$3,585,776
$3,467,614
$6,351,237
$15,402,449
$4,395,136
$3,432,702
$10,196,931
$15,792,369
$5,745,647
$62,450,104
$2,650,051
$745,485,129

Source: Annual Weatherization Survey conducted by the National Association of State Community Services
Program. Connecticut budget numbers are expected 2005 expenditures as reported in the 2006 C&LM plan
submitted to the DPUC in the fall of 2005.

Nexus Market Research


Table 10–2 lists per capita spending for weatherization by state. Connecticut ranks 29th out of 50 states and DC. In general, states with higher rankings transfer funds from LIHEAP to the DOE weatherization program; in FY 2005, 44 states plus the District of Columbia transferred funds from LIHEAP to weatherization. The states with higher rankings also tend to be among the coldest states in the nation; the presence of DC in the top ten and the fact that Michigan ranks 22nd (behind Nevada) serve as exceptions to this trend. In addition, some of the states with higher rankings than Connecticut also provide a higher per capital level of utility/public-benefit fund spending for weatherization. Connecticut ranks 11th out of 30 states and DC that provide public-benefit funds.
# Table 10–2: Weatherization Funds per Household At or Below Sixty Percent of State Median Income (FY 2005)

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th># Households</th>
<th>60% Median</th>
<th>DOE LIHEAP</th>
<th>PBF + Utility</th>
<th>Fed/PBF/ Utility Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wisconsin</td>
<td>501,600</td>
<td>$19.48</td>
<td>$22.32</td>
<td>$41.80</td>
<td>$82.70</td>
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<td>Maine</td>
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<td>$38.69</td>
<td>$63.44</td>
<td>$13.65</td>
</tr>
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<td>3</td>
<td>Montana</td>
<td>92,000</td>
<td>$28.51</td>
<td>$29.30</td>
<td>$57.82</td>
<td>$13.85</td>
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<td>4</td>
<td>North Dakota</td>
<td>65,800</td>
<td>$39.35</td>
<td>$32.02</td>
<td>$71.37</td>
<td>$0.00</td>
</tr>
<tr>
<td>5</td>
<td>Dist. Columbia</td>
<td>75,000</td>
<td>$10.12</td>
<td>$13.50</td>
<td>$23.62</td>
<td>$47.30</td>
</tr>
<tr>
<td>6</td>
<td>Vermont</td>
<td>52,100</td>
<td>$24.63</td>
<td>$0.00</td>
<td>$24.63</td>
<td>$41.25</td>
</tr>
<tr>
<td>7</td>
<td>Alaska</td>
<td>48,500</td>
<td>$37.40</td>
<td>$20.62</td>
<td>$58.02</td>
<td>$0.00</td>
</tr>
<tr>
<td>8</td>
<td>Iowa</td>
<td>278,500</td>
<td>$17.99</td>
<td>$18.62</td>
<td>$36.61</td>
<td>$17.29</td>
</tr>
<tr>
<td>9</td>
<td>Wyoming</td>
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<td>$0.00</td>
<td>$23.83</td>
<td>$41.25</td>
</tr>
<tr>
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<td>Massachusetts</td>
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<td>$10.39</td>
<td>$10.43</td>
<td>$20.82</td>
<td>$31.62</td>
</tr>
<tr>
<td>11</td>
<td>Idaho</td>
<td>119,800</td>
<td>$16.21</td>
<td>$16.21</td>
<td>$32.42</td>
<td>$50.99</td>
</tr>
<tr>
<td>12</td>
<td>South Dakota</td>
<td>75,900</td>
<td>$25.36</td>
<td>$20.32</td>
<td>$45.69</td>
<td>$0.00</td>
</tr>
<tr>
<td>13</td>
<td>Minnesota</td>
<td>451,900</td>
<td>$22.35</td>
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<td>$35.96</td>
<td>$41.03</td>
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<tr>
<td>14</td>
<td>Oregon</td>
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<td>$9.73</td>
<td>$18.43</td>
<td>$25.18</td>
</tr>
<tr>
<td>15</td>
<td>California</td>
<td>3,115,500</td>
<td>$2.03</td>
<td>$7.21</td>
<td>$9.23</td>
<td>$31.79</td>
</tr>
<tr>
<td>16</td>
<td>Pennsylvania</td>
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<td>$25.68</td>
<td>$40.94</td>
</tr>
<tr>
<td>17</td>
<td>Ohio</td>
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<td>$23.72</td>
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<tr>
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<td>Colorado</td>
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<td>$11.28</td>
<td>$25.11</td>
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</tr>
<tr>
<td>19</td>
<td>Rhode Island</td>
<td>131,800</td>
<td>$8.81</td>
<td>$13.28</td>
<td>$22.09</td>
<td>$30.43</td>
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<tr>
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<td>Illinois</td>
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<td>$13.76</td>
<td>$25.85</td>
<td>$52.44</td>
</tr>
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<td>Nevada</td>
<td>169,700</td>
<td>$5.45</td>
<td>$0.00</td>
<td>$5.45</td>
<td>$24.01</td>
</tr>
<tr>
<td>22</td>
<td>Michigan</td>
<td>987,700</td>
<td>$15.45</td>
<td>$8.61</td>
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<td>$50.99</td>
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<td>New Hampshire</td>
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<td>$14.85</td>
<td>$4.90</td>
<td>$19.76</td>
<td>$29.10</td>
</tr>
<tr>
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<td>Washington</td>
<td>548,800</td>
<td>$8.46</td>
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<td>$18.84</td>
<td>$28.78</td>
</tr>
<tr>
<td>25</td>
<td>Utah</td>
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<td>$13.62</td>
<td>$15.07</td>
<td>$28.69</td>
<td>$28.69</td>
</tr>
<tr>
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<td>New Jersey</td>
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<td>$6.53</td>
<td>$4.90</td>
<td>$11.43</td>
<td>$27.81</td>
</tr>
<tr>
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<td>Nebraska</td>
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<td>$14.83</td>
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<td>$28.36</td>
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<tr>
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<td>New York</td>
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<td>$16.63</td>
<td>$15.70</td>
<td>$32.33</td>
<td>$28.11</td>
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<td>$7.53</td>
<td>$19.85</td>
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<td>$10.73</td>
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<td>$24.46</td>
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<td>$8.32</td>
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<td>Kentucky</td>
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<td>$7.55</td>
<td>$17.24</td>
<td>$18.01</td>
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<tr>
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<td>New Mexico</td>
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<td>$8.20</td>
<td>$17.21</td>
<td>$17.21</td>
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<tr>
<td>34</td>
<td>Kansas</td>
<td>267,200</td>
<td>$8.14</td>
<td>$8.44</td>
<td>$16.59</td>
<td>$26.69</td>
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<tr>
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<td>Virginia</td>
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<td>$7.24</td>
<td>$8.30</td>
<td>$15.53</td>
<td>$28.78</td>
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<td>$12.14</td>
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<td>Missouri</td>
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<td>$9.86</td>
<td>$10.68</td>
</tr>
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<td>$10.37</td>
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<td>North Carolina</td>
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<td>$5.16</td>
<td>$10.12</td>
<td>$10.12</td>
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<td>Oklahoma</td>
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<td>$9.96</td>
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<td>$3.73</td>
<td>$3.39</td>
<td>$7.12</td>
<td>$8.94</td>
</tr>
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<td>$2.14</td>
<td>$6.64</td>
<td>$8.28</td>
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<td>South Carolina</td>
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<td>$8.07</td>
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<td>$6.47</td>
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<td>$4.79</td>
<td>$4.79</td>
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<td>$4.02</td>
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<td>101,900</td>
<td>$2.01</td>
<td>$0.00</td>
<td>$2.01</td>
<td>$2.01</td>
</tr>
</tbody>
</table>

**Totals:** 28,168,700 $8.26 $8.40 $16.65 $9.81 $26.47

Source: Annual Weatherization Survey conducted by the National Association of State Community Services Program. Connecticut budget numbers are expected 2005 expenditures as reported in the 2006 C&LM plan submitted to the DPUC in the fall of 2005.

Note: The ceiling for DOE weatherization services is 125% of the FPL unless the state ceiling for LIHEAP is higher. A state is allowed to set its eligibility ceiling at up to 60% of the SMI. For comparison purposes, we are using the maximum federal ceiling rather than the state level ceiling.
Within the Northeast region, as shown in Table 10–3 and Table 10–4, Connecticut has the lowest per capita level of spending for weatherization. This is because most of states in the region either transfer funds from LIHEAP and/or have relatively higher levels of utility/public-benefit spending. Of note: Connecticut’s utility/public-benefit spending ($19.85) is higher than the region’s average of $12.83.

### Table 10–3: Weatherization Funds for Northeastern States (FY 2005)

<table>
<thead>
<tr>
<th>State</th>
<th>Federal</th>
<th>State</th>
<th>PBF</th>
<th>Utility</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOE</td>
<td>LIHEAP Transfer</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td>$2,759,107</td>
<td>$0</td>
<td>$2,759,107</td>
<td>$7,273,399</td>
<td>$10,032,506</td>
</tr>
<tr>
<td>Maine</td>
<td>$3,081,589</td>
<td>$4,816,834</td>
<td>$7,898,423</td>
<td>$1,700,000</td>
<td>$9,598,423</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>$6,968,249</td>
<td>$7,000,000</td>
<td>$13,968,249</td>
<td>$21,215,000</td>
<td>$35,183,249</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>$1,515,114</td>
<td>$500,000</td>
<td>$2,015,114</td>
<td>$953,398</td>
<td>$27,38</td>
</tr>
<tr>
<td>New Jersey</td>
<td>$5,125,246</td>
<td>$3,607,000</td>
<td>$8,732,246</td>
<td>$13,671,113</td>
<td>$22,403,359</td>
</tr>
<tr>
<td>New York</td>
<td>$21,818,047</td>
<td>$52,241,788</td>
<td>$54,059,835</td>
<td>$2,660,426</td>
<td>$57,720,261</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>$14,772,357</td>
<td>$19,990,900</td>
<td>$34,763,257</td>
<td>$20,645,515</td>
<td>$55,408,772</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>$1,161,108</td>
<td>$1,750,000</td>
<td>$2,911,108</td>
<td>$1,100,000</td>
<td>$4,011,108</td>
</tr>
<tr>
<td>Vermont</td>
<td>$1,283,358</td>
<td>$0</td>
<td>$1,283,358</td>
<td>$49,344</td>
<td>$149,344</td>
</tr>
<tr>
<td>Totals</td>
<td>$58,484,175</td>
<td>$69,906,522</td>
<td>$128,390,697</td>
<td>$72,318,851</td>
<td>$200,758,892</td>
</tr>
</tbody>
</table>

Source: Annual Weatherization Survey conducted by the National Association of State Community Services Program.

### Table 10–4: Weatherization Funds per Household At or Below Sixty Percent of State Median Income, Northeastern States (FY 2005)

<table>
<thead>
<tr>
<th>State</th>
<th>Households</th>
<th>Federal Funds</th>
<th>PBF + Utility Funds</th>
<th>Fed/PBF/Utility Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60% Median</td>
<td>DOE</td>
<td>LIHEAP</td>
<td>Combined</td>
</tr>
<tr>
<td>Connecticut</td>
<td>366,400</td>
<td>$7.53</td>
<td>$0.00</td>
<td>$7.53</td>
</tr>
<tr>
<td>Maine</td>
<td>124,500</td>
<td>$24.75</td>
<td>$38.69</td>
<td>$63.44</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>670,900</td>
<td>$10.39</td>
<td>$10.43</td>
<td>$20.82</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>102,000</td>
<td>$14.85</td>
<td>$4.90</td>
<td>$19.76</td>
</tr>
<tr>
<td>New Jersey</td>
<td>785,200</td>
<td>$6.53</td>
<td>$4.59</td>
<td>$11.12</td>
</tr>
<tr>
<td>New York</td>
<td>2,053,300</td>
<td>$10.63</td>
<td>$15.70</td>
<td>$26.33</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>1,353,500</td>
<td>$10.91</td>
<td>$14.77</td>
<td>$25.68</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>131,800</td>
<td>$8.81</td>
<td>$13.28</td>
<td>$22.09</td>
</tr>
<tr>
<td>Vermont</td>
<td>52,100</td>
<td>$24.63</td>
<td>$0.00</td>
<td>$24.63</td>
</tr>
<tr>
<td>Totals</td>
<td>5,639,700</td>
<td>$10.37</td>
<td>$12.40</td>
<td>$22.77</td>
</tr>
</tbody>
</table>

Source: Annual Weatherization Survey conducted by the National Association of State Community Services Program.

### 10.1.2 Descriptions of other State Weatherization Programs

While a complete review of programs in other states is beyond the scope of this report, the following provides a discussion of weatherization programs in Massachusetts, New Jersey, New York, Rhode Island and Wisconsin. These states were selected for one or more of the following reasons: they have relatively similar climate conditions to Connecticut; they have supplemental public-benefit resources available to support weatherization; and/or they have adopted program structures that differ from Connecticut’s. In addition, we included California, because it has the largest utility-funded weatherization program in the country, accounting for 36% of all utility/public-benefit funds spent in FY 2005.
10.1.2.1 California

Administration: The California Department of Community Services and Development manages the delivery of DOE/LIHEAP-transfer funds and contracts with local CAAs to deliver these services. Utility/public-benefit funds are delivered directly by the state’s investor-owned utilities, which in turn contract with local vendors, including CAAs and other non-profits, as part of an RFP process to deliver services directly to eligible households. The delivery of services is generally not coordinated with local CAAs providing DOE weatherization services. Total spending was approximately $128 million in FY 2005 of which $99 million was utility/public-benefit funds.

Eligibility/Benefits: Households with incomes up to 60% of SMI are eligible for DOE and 200% of FPL for utility benefits. In FY 2005, the average DOE/LIHEAP grant was $1,521 per household served and the average utility/public-benefit grant was $1,242 per household served.

Enrollment Procedures: The utility companies perform extensive outreach to identify eligible customers. The utilities execute outreach contracts with community-based organizations with specific emphasis on targeting “hard-to-reach” households. Clients are also identified through automatic enrollment in other programs sharing similar eligibility requirements as well as more traditional marketing methods (e.g., bill inserts, mailings, phone solicitations, and public workshops).

Fuel Blindness: Weatherization services in California are not provided on a fuel-blind basis; instead, services follow the fuel that generated the weatherization funds. In addition, only utility providers that offer both natural gas and electricity coordinate the delivery of services. Utility weatherization services include minor envelope repair, infiltration reduction, water-saving measures, and replacement of major appliances such as heaters and air conditioning units. Replacement of these units, however, is limited to only low-income property owners.

10.1.2.2 Massachusetts

Administration: The Massachusetts State Division of Housing and Community Development manages the delivery of DOE and LIHEAP-transfer funds. Electric and natural gas public-benefit funds are managed directly by CAAs as part of an umbrella contract between the CAAs and the utilities. The CAAs conduct an annual bid process for contractors to provide direct installation of measures. All providers, vendors, technical consultants, and utilities meet monthly to discuss program issues. In addition, a subgroup meets periodically with gas and electric utilities to discuss best practices. Total spending was $35.2 million in FY 2005, of which approximately $21 million was utility/public-benefit funds.

Eligibility/Benefits: Households with annual incomes of up to 200% of FPL are eligible to receive services supported by DOE and LIHEAP-transfer funds, and households with up to 60% of SMI are eligible to receive utility-sponsored weatherization. With the exception of emergency services, the current wait between application and receipt of service for federal/state weatherization and utility weatherization is about four months. In FY 2005, the average DOE/LIHEAP grant was $2,655 per household served and the average utility/public-benefit grant was $2,303 per household served.
Multi-family Procedures: The program requires landlord co-payments for rented multifamily housing. In buildings with 25 or fewer units, the percent match required of landlords or property managers varies by utility and the number of units. In addition, the program pays for 100% of efficiency measures for the low-income residents of buildings in which at least 50% of the residents are considered low income. Efficiency measures for non low-income occupants of these buildings cannot be paid for from low-income funds. For buildings with more than 25 units, the landlord match is negotiated on an individual basis.

Enrollment Procedures: LIHEAP is the primary entry point for weatherization and utility services. Households sign up for weatherization through a single application. A statewide advertising campaign, “Energy Bucks,” is also supported to help recruit applicants for LIHEAP and both DOE and utility weatherization.

Fuel Blindness: CAAs integrate the delivery of resources based on primary heating source and electric consumption. Households residing in areas serviced by investor-owned utilities and that heat with natural gas can receive up to $4,500 for heating system replacement and energy efficiency measures, excluding appliance replacement. National Grid customers using at least 10 kWh per day and all households served by other electric utilities are eligible to receive electric measures including appliance replacement, efficiency measures, and heating system replacement for delivered fuels (heating oil and propane). The state weatherization program also includes emergency heating system repair and replacement during the winter months, funded by LIHEAP-transfer funds.

10.1.2.3 New Jersey

Administration: The New Jersey Department of Community Affairs manages the delivery of DOE and LIHEAP-transfer funds. The New Jersey Board of Public Utilities manages the state public-benefit fund. The weatherization portion of the fund is delivered directly as the “Comfort Partners Program” by the seven participating investor-owned utilities. Total spending was approximately $22.4 million in FY 2005, of which $13.7 million was in utility/public-benefit funds. The Department of Community Affairs has just started a pilot program with Comfort Partners to integrate DOE weatherization with utility weatherization.

Eligibility/Benefits: Households with incomes up to 175% of FPL are eligible for DOE and utility weatherization. The DOE program targets households with high energy burdens, households with children under six years of age, the elderly and disabled, while Comfort Partners targets those with high energy bills and payment troubles. In FY 2005, the average DOE/LIHEAP grant was $6,444 per household served and the average utility/public-benefit fund grant was $2,475 per household served.

Enrollment Procedures: Outreach is primarily provided through utility bill inserts and by having vendors—who are selected through an RFP process—pursue leads from utility-provided lists of payment-troubled and high-usage customers. LIHEAP is the primary entry point for DOE weatherization.
**Fuel Blindness:** Utility funds are not made available on a fuel-blind basis. In addition to DOE weatherization benefits, utility benefits include: general weatherization, water-heater replacement, insulation, and limited door, window and furnace replacement.

10.1.2.4 New York

**Administration:** The New York State Division of Housing and Community Renewal Administration manages the delivery of DOE and LIHEAP-transfer funds. Local non-profit agencies, including housing and CAAs, provide direct delivery of these services. The New York State Research and Development Authority (NYSERDA) manages the public-benefit fund covering all areas of the state except Nassau and Suffolk Counties (which are covered by the Long Island Power Authority). Total spending was approximately $58 million in FY 2005 of which $3.7 million was in utility/public-benefit funds.

**Eligibility/Benefits:** Households with incomes up to 60% of SMI are eligible for DOE weatherization. In FY 2005, the average DOE/LIHEAP grant was $4,413 per household served. In addition, NYSERDA is currently managing the following pilot programs providing additional services to low-income households:

- **EmPower New York,** which provides supplemental electric measures for DOE-eligible households, including refrigerator replacement, lighting and insulation. The average cost per household is $1,588 and the average annual bill reduction is $250. Households with incomes below 60% of SMI or enrolled in utility low-income payment assistance programs are eligible for services.

- **Assisted Home Performance Program,** a co-pay program providing up to 50% of the first $10,000 of energy-efficiency improvements for households with incomes between 60% and 80% of SMI. Non-grant funds can be borrowed from the state energy-efficiency loan program at a subsidized rate of five percent below current market rates. Households with incomes below 60% of SMI are usually covered by DOE weatherization and EmPower; however, according to New York State officials, there are circumstances in which these lower-income households may be served through Assisted Home Performance. The average cost per household of the Assisted Home Performance Program was $3,540 and the average bill reduction was $540.

- **Assisted Multi-Family Building Program,** which provides similar services as the Assisted Home Performance Program referenced above. Additional measures allowed under the multi-family program include: zone heating and cooling systems, common area efficiency improvements and energy education for building management and tenants. Building-owner participation is required; the building assessment and scope of work is negotiated individually with each owner or property manager. The average cost per household was $1,526 and the average bill reduction was $364.

**Fuel Blindness:** All three NYSERDA programs as well as the DOE/LIHEAP program are provided on a fuel-blind basis.
10.1.2.5 Rhode Island

Administration: The Rhode Island Energy Office manages DOE/LIHEAP transfer and utility/public-benefit funds. The office contracts directly with CAAs to deliver services to DOE and utility funds for eligible households. Total spending was approximately $4 million, of which $1.1 million was in utility/public-benefit funds.

Eligibility/Benefits: Households with annual incomes of up to 60% of SMI are eligible. Funds are primarily used for one- to four-unit buildings. In FY 2005, the average DOE/LIHEAP grant was $3,252 per household served and the average utility/public-benefit grant was $1,005 per household served.

Enrollment Procedures: LIHEAP acts as the primary entry point for weatherization, and CAAs are encouraged to sign up households for weatherization as part of the LIHEAP application process. Some agencies are considered to be more “aggressive” than others in signing up households. The waitlist varies from a few months in some rural parts of the state to several years in the city of Providence.

Fuel Blindness: Program funds are not made available on a fuel-blind basis. All households receive comprehensive weatherization, with local agencies integrating DOE and utility funds, where appropriate.

10.1.2.6 Wisconsin

Administration: The Wisconsin Department of Administration administers DOE/LIHEAP transfer and utility/public-benefit funds. The state contracts out the delivery of these funds to non-profit agencies and local units of government. Total spending was approximately $65 million, of which $41 million was in utility/public-benefit funds.

Eligibility/Benefits: Households with annual incomes of up to 150% of FPL are eligible for weatherization. For rental housing, a minimum 15% contribution is expected from building owners of master-metered buildings. If the building is not master-metered, then no contribution is expected from units that are occupied by eligible households (those with incomes of 150% of FPL or less). In FY 2005, the average DOE/LIHEAP grant was $2,235 per household served and the average utility/public-benefit grant was $4,383 per household served.

Enrollment Procedures: Eligible households sign up for weatherization as part of their LIHEAP application. Because of the large numbers of applications for energy assistance during the winter months, agencies are not expected to provide supplemental social service counseling during this period.

Fuel Blindness: Public-benefit funds are collected by the utilities but made available to eligible households on a fuel-blind basis. All households receive comprehensive weatherization including heating system repair and replacement.

Other Programs: Wisconsin also offers a second program, Targeted Home Performance with ENERGY STAR, requiring a 10% co-pay from households with incomes between 150% and 200% of FPL to receive energy efficiency improvements. Rental properties occupied by eligible households also qualify, provided landlords agree to pay an energy assessment fee of $150 plus...
the 10% co-pay. Similar to the regular weatherization program, Targeted Home Performance pays for: insulation; upgrade/installation of furnaces; air conditioners, water heaters, and other appliance replacement; and health and safety measures. The average participant contribution in 2004-2005 was $528 out of a total average expenditure of $5,866. According to the Department of Administration, the match portion is often paid for by the household’s local utility.

### 10.1.3 Comparative Energy Savings

Although an impact analysis does not fall under the scope of the current evaluation, while reviewing programs in other states, the NMR team found an impact analysis conducted for the weatherization programs in Ohio. This impact analysis includes a comparison of verified energy savings resulting from weatherization programs in other states and across the nation. The NMR team has included these tables below.

The verified natural gas savings reported in Table 10–5 range from a low of 145 therms (141 CCF) in Vermont to 324 therms (316 CCF) in Ohio, based on the 1994 study. Most of the studies find gas savings to fall between 150 therms and 200 therms. Because the table summarizes savings from the entire DOE weatherization program for natural gas, we have not compared them to the energy savings resulting from the less comprehensive UI Helps and WRAP Subprogram 2 through 4. We do not have estimate from the comparable Connecticut DSS/DOE – WRAP Subprogram 1 program.

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th># Units Analyzed</th>
<th>Pre-Use (therms)</th>
<th>Savings (therms)</th>
<th>% Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio</td>
<td>2003</td>
<td>1,825</td>
<td>1,290</td>
<td>268</td>
<td>21%</td>
</tr>
<tr>
<td>National</td>
<td>1989</td>
<td>3,873</td>
<td>1,334</td>
<td>173</td>
<td>13%</td>
</tr>
<tr>
<td>Oak Ridge National Meta Evaluation</td>
<td>1993-2003</td>
<td>n/a</td>
<td>1,330</td>
<td>305</td>
<td>23%</td>
</tr>
<tr>
<td>Colorado</td>
<td>1994</td>
<td>3,431</td>
<td>1,230</td>
<td>185</td>
<td>15%</td>
</tr>
<tr>
<td>Illinois</td>
<td>2003</td>
<td>2,056</td>
<td>1,551</td>
<td>198</td>
<td>13%</td>
</tr>
<tr>
<td>Iowa</td>
<td>2004</td>
<td>633</td>
<td>1,194</td>
<td>295</td>
<td>25%</td>
</tr>
<tr>
<td>Kansas</td>
<td>1993</td>
<td>165</td>
<td>1,283</td>
<td>191</td>
<td>15%</td>
</tr>
<tr>
<td>North Dakota</td>
<td>1992</td>
<td>182</td>
<td>1,200</td>
<td>160</td>
<td>13%</td>
</tr>
<tr>
<td>Ohio</td>
<td>1994</td>
<td>2,209</td>
<td>1,395</td>
<td>324</td>
<td>23%</td>
</tr>
<tr>
<td>Vermont</td>
<td>1998-2000</td>
<td>25</td>
<td>1,116</td>
<td>145</td>
<td>13%</td>
</tr>
<tr>
<td>Washington</td>
<td>1997</td>
<td>71</td>
<td>852</td>
<td>230</td>
<td>27%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>2001-2003</td>
<td>8,252</td>
<td>1040</td>
<td>156</td>
<td>15%</td>
</tr>
</tbody>
</table>

*Source Khawaja et al. (2006)*
The verified electric savings reported in Table 10–6 range from a low of 1,472 kWh in Ohio in 2003 to a high of 2,153 based on a national study conducted by the Oak Ridge National Laboratory. The other two estimates were 1,830 kWh from a national study (the exact source is not cited) and 2,002 from a previous Ohio study conducted in 1994. Again, we do not have comparable estimates on services performed in electrically heated homes from UI Helps, WRAP, or the DSS/DOE program. However, the overall average electric savings for all UI Helps participants is approximately 681 kWh and for WRAP participants is 890.

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th># Units</th>
<th>Pre-Use (kWh)</th>
<th>Savings (kWh)</th>
<th>% Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio</td>
<td>2003</td>
<td>213</td>
<td>22,282</td>
<td>1,473</td>
<td>6.6%</td>
</tr>
<tr>
<td>National</td>
<td>1989</td>
<td>426</td>
<td>14,972</td>
<td>1,830</td>
<td>12.2%</td>
</tr>
<tr>
<td>Oak Ridge National Meta Evaluation</td>
<td>1993-2003</td>
<td>n/a</td>
<td>19,919</td>
<td>2,153</td>
<td>10.8%</td>
</tr>
<tr>
<td>Ohio</td>
<td>1994</td>
<td>150</td>
<td>21,542</td>
<td>2,002</td>
<td>9.3%</td>
</tr>
</tbody>
</table>

* Source Khawaja *et al.* (2006)

### 10.1.4 Lessons Learned from Other States

Many of the issues addressed in this report are also concerns in other states: administration, eligibility and benefit levels, enrollment procedures, fuel blindness, and coordination with other programs. Yet, the various states examined respond to these issues in diverse ways; as such, there is no “one-size-fits-all” delivery system for weatherization. (Table 10–7 and Table 10–8) Some program components that differ from the current delivery of UI Helps and WRAP programs include the following:

- Simplifying the application process by having a single form to apply for energy assistance, DOE weatherization, and utility weatherization
- Requiring a periodic bid process to increase the options for local program delivery
- Delivering services on a fuel-neutral basis to expand the types of measures that can be delivered to a household
- Providing a higher level of benefits per recipient household in exchange for serving a lower number of households per weatherization dollar.
### Table 10–7: Selected Program Characteristics from State Examples

<table>
<thead>
<tr>
<th>Program</th>
<th>Eligibility</th>
<th>Fuel Neutral</th>
<th>Enrollment Process</th>
<th>Local Contractors: Utility/PBF</th>
<th>Local Contractors: DOE/LIHEAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>60% SMI/200% FPLa</td>
<td>No</td>
<td>Separate</td>
<td>Mix</td>
<td>CAAs</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>60% SMIb</td>
<td>No</td>
<td>Consolidated</td>
<td>CAAs</td>
<td>CAAs</td>
</tr>
<tr>
<td>New Jersey</td>
<td>175% FPL</td>
<td>No</td>
<td>Separate</td>
<td>Private for-profit</td>
<td>CAAs</td>
</tr>
<tr>
<td>New York</td>
<td>60% SMI</td>
<td>Yes</td>
<td>Separate</td>
<td>Mix</td>
<td>Non-profits</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>60% SMI</td>
<td>No</td>
<td>Consolidated</td>
<td>CAAs</td>
<td>CAAs</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>150% FPL</td>
<td>Yes</td>
<td>Consolidated</td>
<td>Non-profits</td>
<td>Non-profits</td>
</tr>
<tr>
<td>CL&amp;P WRAP</td>
<td>60% SMI</td>
<td>Yes</td>
<td>Separate</td>
<td>CAAs</td>
<td>CAAs</td>
</tr>
<tr>
<td>UI Helps</td>
<td>60% SMI</td>
<td>No</td>
<td>Separate</td>
<td>Mix</td>
<td>CAAs</td>
</tr>
</tbody>
</table>

a California eligibility is 60% of SMI for the state program and 200% of FPL for utility programs.
b The eligibility ceiling for Massachusetts DOE Weatherization is 200% of the FPL and 60% of SMI for utility/PBF Weatherization.

### Table 10–8: Estimated Program Budget Data from State Examples

<table>
<thead>
<tr>
<th>Program</th>
<th>Average DOE/LIHEAP Grant</th>
<th>Average Utility/PBF Grant</th>
<th>WAP/LIHEAPb</th>
<th>Utility/PBF</th>
<th>Total Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>$1,521</td>
<td>$1,242</td>
<td>$28,770,282</td>
<td>$99,056,964</td>
<td>$127,827,246</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>$2,664</td>
<td>$2,303</td>
<td>$13,968,249</td>
<td>$21,215,000</td>
<td>$35,183,249</td>
</tr>
<tr>
<td>New Jersey</td>
<td>$6,444</td>
<td>$2,475</td>
<td>$8,732,246</td>
<td>$13,671,113</td>
<td>$22,403,359</td>
</tr>
<tr>
<td>New York</td>
<td>$4,413</td>
<td>$1,588</td>
<td>$54,059,835</td>
<td>$3,660,426</td>
<td>$57,720,261</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>$3,252</td>
<td>$1,005</td>
<td>$2,911,108</td>
<td>$1,100,000</td>
<td>$4,011,108</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>$2,425</td>
<td>$4,383</td>
<td>$20,965,337</td>
<td>$41,484,767</td>
<td>$62,450,104</td>
</tr>
<tr>
<td>CL&amp;P WRAP</td>
<td>$2,825</td>
<td>$590</td>
<td>$1,761,482</td>
<td>$5,800,000</td>
<td>$7,561,482</td>
</tr>
<tr>
<td>UI Helps</td>
<td>$2,825</td>
<td>$177</td>
<td>$997,625</td>
<td>$1,473,399</td>
<td>$2,471,024</td>
</tr>
</tbody>
</table>

Source: National Association of State Community Services 2005 Weatherization Annual Survey, evaluation reports and phone discussions with state and local Weatherization staff.
a The numbers should be seen as illustrative and not necessarily additive between state and utility programs; in some cases households will only receive services from one or the other funding source.
b WAP = Weatherization Assistance Program
c DSS/DOE weatherization budget allocated proportionately to the number of households served by the DSS/DOE program in each utility’s service territory.

While these six programs may demonstrate “best practices,” our comparison makes clear that UI Helps and WRAP have modest programs compared to the others considered in this study. In particular, these other programs have prioritized the social-service aspects of low-income weatherization programs over achieving cost-effective energy savings. As a result, they serve fewer households per dollar of funds available but provide more substantial savings for the households receiving services.

### 10.2 Recommended Next Steps

As Section 10.1 demonstrates, low-income weatherization programs are designed and implemented in diverse ways across the nation. Each program, however, must decide if it is going to offer a wide range of comprehensive services to a small number of households or a limited number of services to more households. This section discusses program options raised by the analysis of programs in other states as well as suggestions made by interviewees on ways...
to strengthen the delivery of program services and more closely integrate the UI Helps and WRAP programs.

10.2.1 Set Program Goals and Objectives

It is important to note that there is a consistent interest expressed in trying to serve as many low-income households as possible, and universal agreement that weatherization can help to increase the affordability of energy for low-income households. However, program staffs and policy officials differ as to the extent of energy efficiency services that should be made available. These alternate goals that could drive the shape of the programs include the following:

1. **Provide cost-effective services to the greatest number of households, thereby limiting services primarily to lighting, and secondarily to the replacement of room air conditioners and refrigerators.**

   This approach maximizes the number of households served and focuses on the most cost-effective measures for maximum kWh savings. At the same time it also provides limited savings per household and thereby has only modest benefit in terms of helping to increase the affordability of energy for low-income households. The UI Helps program and WRAP Subprogram 4 largely reflect this approach, although some participants may receive more comprehensive measures. On average, such services cost about $138 per household, based on 2005 UI Helps incentive and outside services expenditures. Table 10–9 illustrates how such an approach might affect the number of households served. If the programs were to spend an average of $138 per household served, UI Helps participation would remain stable, while WRAP participation would increase from 9,830 to 37,159 (based on the 2005 budget for incentives and outside services and participation rates). Programs focused on electric savings, moreover, could be closely coordinated with the recently expanded natural gas conservation programs, potentially increasing the number of measures installed in homes served by both electricity and gas.

2. **Provide only comprehensive weatherization, including heating system repair and replacement, insulation, appliances and lighting measures and target those services to the most vulnerable households with higher energy burdens, including the frail elderly, the disabled, and families with young children.**

   This approach, currently used in the joint DSS/DOE weatherization – WRAP Subprogram 1 (387 participants in 2005), would significantly increase the affordability of energy for those households receiving benefits. However, without a substantial increase in the current budget, this approach would also result in a significant reduction in the number of households served. The estimates presented in Table 10–9 assume an average expenditure of $3,325 per household that could be served by UI Helps and WRAP. Approximately 840 of these households would receive integrated services in which the DSS/DOE program would contribute $2,825 and the utility program the remaining $500—the current arrangement between WRAP Subprogram and the DSS/DOE program.
1. However, the utility programs would then pay the entire $3,325 for all additional households served, unless DSS/DOE funding was increased as part of a transfer of LIHEAP funds. Moreover, all other WRAP Subprograms and the UI Helps neighborhood canvass approach would be eliminated and their funds used to provide comprehensive services. Closer coordination with the recently expanded gas programs could free up additional UI Helps and WRAP funds that could be used to provide comprehensive services to homes heated with electricity or oil. The effect of this approach would be to reduce the number of UI Helps customers served from 8,308 to 602 (based on 2005 budget and participation rates) and WRAP customers from 9,830 to 1,997 (based on 2005 budget and participation rates).

3. A combined approach, in which a smaller portion of the budget would be set aside to provide limited, fuel-specific services to other households, but most of the budget would go to providing comprehensive services as described in Scenario 2.

This approach would represent a compromise between the first two options. WRAP, with its four Subprograms, currently represents a similar compromise, but the preferred approach described by some interviewees places greater emphasis on targeting and delivering comprehensive services to the most vulnerable households in the state. In the example offered in Table 10–9, we assume that 75% of the program budget would be spent on targeted, comprehensive services—including leveraging resources with the DSS/DOE program. The remaining budget would be allocated to the provision of limited services. Based on such assumptions, UI Helps would serve an estimated 2,591 households, of which 516 would receive targeted services. WRAP would serve an estimated 10,901 households, with 1,611 receiving targeted services. Again, closer coordination with natural gas programs could increase the possible number of households receiving comprehensive services through UI Helps and WRAP.

| Table 10–9: Estimated Number of Households Served under Alternative Program Scenarios |
|----------------------------------------|----------------|----------------|
|                                       | UI Helps       | WRAP           |
| **2005 Actual Program Data**          |                |                |
| A. 2005 Incentives and Outside Services | $1,145,398     | $5,128,000     |
| B. 2005 Households Served             | 8,308          | 9,830          |
| C. Average $/Household (A ÷ B)        | $138           | $522           |
| **Alternative Scenarios**              |                |                |
| Scenario 1: Limited Program (A ÷ $138)| 8,308          | 37,159         |
| Scenario 2: Comprehensive Program (A ÷ $3,325) | 602          | 1,997          |
| Scenario 3: Total Serveda              | 2,591          | 10,901         |
| Targeted Comprehensive Services        | 516            | 1,611          |
| Non-targeted Limited Services          | 2,075          | 9,290          |

a These estimates assume that 75% of the UI Helps and WRAP budget would be spent on targeted, comprehensive services. The remainder would be spent on non-targeted, limited services.

Although WRAP also spends $500 for Subprogram 2 and offers similar measures as in Subprogram 1, Subprogram 2 participants do not receive the substantial $2,825 DSS/DOE contribution. The DSS/DOE contribution is what allows Subprogram 1 to be a far more comprehensive program than Subprogram 2.
Table 10–10 summarizes estimates of energy bill savings per household for the current programs and for Scenarios 1 and 2. As discussed in Section 3.4, NMR developed estimates of bill savings derived from the current UI Helps and WRAP program by calculating per-household energy savings and bill reductions based on each program’s reported energy savings by fuel type and current energy prices for each fuel. We reviewed three additional studies of weatherization programs—from New Jersey, Ohio, and Wisconsin—to develop estimates of energy savings resulting from more comprehensive programs, as well as the portion of electricity savings attributed primarily to the installation of CFL bulbs and fixtures. Under the modest program of Scenario 1, the average household would see electric bill savings of approximately $111 (developed from the current UI Helps program); the household would not see any natural gas or fuel oil savings unless these fuel sources contributed funds to the program. In contrast, the comprehensive program of Scenario 2 would yield savings of $325 annual for electric heated households, $466 for natural gas-heated households, and $442 for oil-heated households. Because the bill savings from Scenario 1 are based on the reported—not verified—savings of the UI Helps program, the bill differences between the two scenarios could be even greater.

### Table 10–10: Estimated Average Annual Bill Savings per Household

<table>
<thead>
<tr>
<th>Current Programs vs. Alternative Scenarios</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scenario</strong></td>
</tr>
<tr>
<td>Current UI Helps</td>
</tr>
<tr>
<td>Current WRAP: Total Savings, Electrically Heated Homes</td>
</tr>
<tr>
<td>Current WRAP: Total Savings, Gas Heated Homes</td>
</tr>
<tr>
<td>Current WRAP: Total Savings, Oil-Heated Homes</td>
</tr>
<tr>
<td>Scenario 1: Estimated Electric Bill Savings, all households</td>
</tr>
<tr>
<td>Scenario 2: Electrically Heated Homes</td>
</tr>
<tr>
<td>Scenario 2: Gas-Heated Homes</td>
</tr>
<tr>
<td>Scenario 2: Oil-Heated Homes</td>
</tr>
</tbody>
</table>

* Based on all households served, no matter heating source.

* Based on the current UI Helps Program. Non-targeted savings for Scenario 3 would equal the estimated savings for Scenario 1.

* Based on 2,000 kWh for all participating households; similar electric usage reported in Khawaja et al. (2006). Per-household savings for the targeted portion of Scenario 3 equal the estimated per-household savings for Scenario 2.

* Assumes 600 kWh electric savings and 200 CCF natural gas savings; similar gas usage reported in Khawaja et al. (2006).

* Assumes 600 kWh electric savings and 146 gallons of oil; oil usage equals assumed natural gas, but has been converted from CCF to gallons.

The estimated savings reported here are annual savings; in actuality, winter bills would be much higher than summer bills. Given that many of the participants have few cash reserves, an annual bill savings of hundreds of dollars could help them pay their bills through the winter months and avoid falling into arrears and even having service shut-off in the spring time.

Table 10–11 provides “sample” program elements that might, in practice, be included in the three alternative program designs derived from the three strategies described above. The program elements are illustrative and are not meant to serve as program recommendations. There are three programmatic changes that could be necessary if one of these alternative program designs is selected.

The first programmatic change involves eligibility requirements. The current eligibility criterion of 60% of SMI makes the most sense if UI Helps and WRAP are to focus primarily on the installation of a limited number of fuel-specific, cost-effective measures.\textsuperscript{54} In contrast, if the programs are to provide more comprehensive services, they will most likely have to limit eligibility and perhaps target services within that eligible population.\textsuperscript{55}

The second programmatic change concerns cost-effectiveness tests. Program design and cost-effectiveness tests must be compatible. If the ECMB and DPUC clearly direct the programs to focus on securing cost-effective electric savings, then UI Helps and WRAP should adopt programs that install lighting products, refrigerators, and room air conditioners through a neighborhood canvass and/or whole-building approach. Alternatively, a directive to use the TRT could lead to the installation of more comprehensive services through an appointment-based approach.

The third programmatic change concerns re-weatherization of homes that have already received services. Because the programs only have enough funds to reach a very small percentage of the eligible population, the current DSS/DOE program permits re-weatherization only of those units originally served before 1995, and in that case only for measures that were not available at that time. If UI Helps and WRAP decide to adopt more comprehensive approaches, they would most likely have to adopt the DSS/DOE practice, except in the case of heating system emergencies or major changes in the measures allowed through the program. It may be possible, however, to re-enter rental units after a period of time to provide new fixtures, CFLs, and other portable measures as previous tenants may have taken these measures with them when they moved to a new home.

\textsuperscript{54} By fuel-specific we mean that the electric companies would pay only for electric measures, and the natural gas companies for gas measures. Because Connecticut does not currently collect conservation fees from oil companies, measures primarily aimed at oil savings would not be installed.

\textsuperscript{55} Note that one WRAP staff member argues that this could be most effectively done through marketing and not by limiting eligibility.
<table>
<thead>
<tr>
<th>Sample Program 1: Limited Services</th>
<th>Sample Program 2: Comprehensive Targeted Services</th>
<th>Sample Program 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eligibility</strong></td>
<td>60% SMI</td>
<td>150% FPL plus meets other vulnerability criteria, including:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• At risk for homelessness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Frail elderly or disabled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Young children</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150% FPL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Persons in targeted groups who are on waitlists for services</td>
</tr>
<tr>
<td>Enrollment Process</td>
<td>Areas and buildings determined by utility in consultation with vendors</td>
<td>Application process coordinated with energy assistance and DSS/DOE</td>
</tr>
<tr>
<td>Waitlist</td>
<td>None</td>
<td>Application process coordinated with energy assistance and DSS/DOE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Areas and buildings determined by utility in consultation with vendors</td>
</tr>
<tr>
<td>Waitlist</td>
<td>Joint utility-DSS/DOE waitlist, with shorter wait times due to coordinated services</td>
<td>Yes, but targeting services to the most vulnerable would limit length</td>
</tr>
<tr>
<td>Delivery approach</td>
<td>Multiple:</td>
<td>Appointment</td>
</tr>
<tr>
<td></td>
<td>• Neighborhood Canvas</td>
<td>Appointment</td>
</tr>
<tr>
<td></td>
<td>• Multi-family buildings</td>
<td>Multiple:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Neighborhood Canvas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Multi-family buildings</td>
</tr>
<tr>
<td>Fuel Targeted</td>
<td>Primarily electric, but also natural gas if gas contributes to program budget</td>
<td>Fuel neutral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fuel neutral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primarily electric, but also natural gas if gas contributes to program budget</td>
</tr>
<tr>
<td>Comprehensiveness</td>
<td>Cost-effective measures based on fuel source</td>
<td>Whole house weatherization</td>
</tr>
<tr>
<td></td>
<td>• Electric only if no gas $</td>
<td>Whole house weatherization</td>
</tr>
<tr>
<td></td>
<td>• Electric and gas if gas $</td>
<td>Cost-effective measures based on fuel source</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Electric only if no gas $</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Electric and gas if gas $</td>
</tr>
<tr>
<td>Cost-effectiveness Test</td>
<td>Based on fuel source</td>
<td>TRT</td>
</tr>
<tr>
<td></td>
<td>• Electric b/c test</td>
<td>TRT</td>
</tr>
<tr>
<td></td>
<td>• TRT if gas contributions</td>
<td>Based on fuel source</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Electric b/c test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• TRT if gas contributions</td>
</tr>
<tr>
<td>Sample Program 1: Limited Services</td>
<td>Sample Program 2: Comprehensive Targeted Services</td>
<td>Sample Program 3</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Coordination with DSS/DOE</td>
<td>Minor coordination</td>
<td>Subprogram A: Targeted Comprehensive Services</td>
</tr>
<tr>
<td></td>
<td>• Cost-effective measures depending on fuel type</td>
<td>• Cost-effective measures depending on fuel type</td>
</tr>
<tr>
<td></td>
<td>• Average utility contribution same as for non-DSS/DOE households</td>
<td>• Measures are fuel neutral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• All program offer same suite of measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Total sharing of lists of who served by each program</td>
</tr>
<tr>
<td>Coordination with other energy-related programs</td>
<td>Lead lists generated through:</td>
<td>Subprogram B: Non-targeted Limited Services</td>
</tr>
<tr>
<td></td>
<td>• Other utility programs targeting low income</td>
<td>Minor coordination</td>
</tr>
<tr>
<td></td>
<td>• Energy-assistance participants not eligible for DSS/DOE</td>
<td>• Cost-effective measures depending on fuel type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Average utility contribution same as for non-DSS/DOE households</td>
</tr>
<tr>
<td>Program delivery</td>
<td>Competitive bidding (CAAs or private vendors)</td>
<td>Fully coordinated with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Energy assistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other utility programs targeting low income</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cash assistance programs that allow use of funds for weatherization</td>
</tr>
<tr>
<td>Re-weatherization</td>
<td>18 months</td>
<td>Fully coordinated with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Energy assistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other utility programs targeting low income</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cash assistance programs that allow use of funds for weatherization</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subprogram A: Targeted Comprehensive Services</th>
<th>Subprogram B: Non-targeted Limited Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Measures are fuel neutral</td>
<td>• Cost-effective measures depending on fuel type</td>
</tr>
<tr>
<td>• All program offer same suite of measures</td>
<td>• Average utility contribution same as for non-DSS/DOE households</td>
</tr>
<tr>
<td>• Total sharing of lists of who served by each program</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- The elements provided in the table serve only as samples of what the programs might look like. The details of any alternative to current programs would need to be developed by program planners, administrators, the ECMB and DPUC, and program partners.
10.2.2 Coordinate Enrollment in Weatherization Services

Many of the program managers express frustration with the current application system requiring applicants to fill out multiple forms in order to receive state energy assistance, state weatherization, and utility weatherization. For example, an individual client who wants energy assistance, DSS/DOE weatherization, and WRAP Subprogram 2 weatherization has to fill out three different forms to receive all these services: 1) energy-assistance application, 2) Weatherization “yellow card” expressing desire to receive DSS/DOE services, and 3) WRAP application. The current system reflects the lack of program delivery coordination and an attempt by the DSS and CAAs to limit the waiting list for services.

A “one-stop” shopping approach should be established in which households sign up for energy assistance, DSS/DOE weatherization, and utility weatherization at the same time. A coordinated enrollment process would be a fairer system than the current approach, which allows some households to “fall between the cracks,” while others receive full benefits because they were sufficiently aware to complete multiple applications. The application process should be addressed in tandem with any changes made to program benefit levels. Please note that the utilities could still use this same or a similar application to enroll people in the program who do not apply for energy assistance. The application could be mailed with marketing materials or in response to requests for utility weatherization services.

10.2.3 Integrate Weatherization with Social and Housing Services

One theme repeated throughout the interviews is that weatherization should be more integrated with social services and housing programs. Since many of the households receiving weatherization are extremely low income, this could represent a further opportunity to help stabilize these households by increasing their financial well-being.

Program directors in several states agree that weatherization should be a key component of this effort, working in concert with other programs including Food Stamps, Earned Income Tax Credit and job training. Most argue, however, that LIHEAP is better suited to act as the social service coordination point since it has greater resources and it is the initial point of contact for most weatherization-eligible households. This is the approach taken in Massachusetts, for example. Households that sign up for LIHEAP are screened at the same time for eligibility for Food Stamps and other social services. Lead paint abatement concerns are identified during the weatherization inspection.

Several energy-assistance and weatherization directors suggest that the CAAs are not always linking households to related social services on a systematic basis through the weatherization

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56 Note that a client who is supposed to receive DSS/DOE weatherization in theory should not have a need to sign up for WRAP Subprogram 2. However, the long waitlist for DSS/DOE services means that many LIHEAP recipients apply to WRAP to receive its more limited weatherization services while waiting for the comprehensive services of DSS/DOE.

57 As noted in the Final Report, Connecticut energy-assistance coordinators estimate that between 50% and 80% of the clients of their particular agency receive energy assistance.
program but are exploring options to do so in the future.\textsuperscript{58} It is also possible that the agencies do not have sufficient resources to provide case management services for all weatherization-recipient households, especially during the winter sign-up period when they see large numbers of applicants during a relatively short period of time.

Nevertheless, there is significant potential to help large numbers of very vulnerable households by providing them with “one-stop” comprehensive services. The core rationale for providing CAAs with non-competitive bid contracts for offering DSS/DOE and utility weatherization services is that they have the capacity to provide complementary services to help strengthen households and move them out of poverty. Because the NMR team did not evaluate how well the CAAs coordinate the delivery of social services, we are not currently in the position to say if they are currently providing this service. It appears that such an evaluation would be valuable, given that a number of interviewees have raised concerns about the adequacy of current social-service coordination.

\section*{10.3 Next Step: Conclusions}

High energy prices are placing an increasing burden on low-income households in Connecticut as well as the rest of the nation. Weatherization can play an important role in helping to increase the affordability of energy for low-income households by helping to reduce the overall amount of energy needed to stay warm during the winter heating season and maintain electric service during the rest of the year.

Connecticut is fortunate to be able to offer comprehensive energy-related assistance: LIHEAP, DSS/DOE weatherization, UI Helps, WRAP, recently expanded natural gas programs, and various arrearage forgiveness and money-management programs, among others. In fact, these programs collectively spend almost $80 million annually on energy-related assistance to low-income households. Yet, service providers and decision-makers routinely express a lack of understanding of the entire budget available for energy-related assistance, how the programs work in total, and how they could be better integrated to improve outcomes, reduce arrearages and service shut-offs, and improve efficiencies. Furthermore, the lack of centralized coordination of the suite of energy-related assistance programs leads to inconsistent delivery of services across the state. Other states also wrestle with such coordination, with some, (e.g. Wisconsin and Massachusetts) choosing to centralize at least some of the programs in order to serve clients more efficiently.

In Connecticut, program expenditures for weatherization in particular are modest and provide modest benefits to most recipients. Unfortunately, there are no easy ways to fulfill the opportunities identified in this report. The options for improvement include the following:

1. \textit{Increasing the scope and targeting of weatherization service}, which could significantly help increase the affordability of energy and housing overall for some of the state’s most vulnerable households, including the disabled, frail elderly, and very low-income

\textsuperscript{58} Some agencies, but not all, are currently using the Human Service Infrastructure (HSI) software program for centralized client intake. In these cases, a client might be told that she or he is eligible for other programs, but they must still apply directly to those other programs.
households with young children. Many of these households are at risk of homelessness and institutionalization. Increasing the affordability of energy for these households through weatherization and comprehensive energy assistance could make a significant difference in their ability to stay in their homes.

Without a significant increase in funding, however, this approach would decrease the number of households receiving modest benefits and could result in somewhat lower electric savings if the programs expanded to include DSS/DOE-services to all participating households. While funding strategies for weatherization were not a part of the scope of this study, several options could be considered to fund more comprehensive services, similar to those in states with higher funding levels. These other options include: providing a higher level of support from natural gas utilities, increasing the share of C&LM funds going to low-income weatherization, and transferring funds from LIHEAP to DSS/DOE weatherization.59 In addition, while it is not possible to create a public-benefit fund for heating oil, Vermont does this in an indirect way by adding a half percent sales tax to heating oil sales; these funds can only be used for weatherization.

2. **Maintaining the current scope of weatherization services**, which provide cost-effective electricity savings according to the electric b/c test. While the savings are not usually substantial for each household, the measures installed do lower the energy bills of program participants. Furthermore, the current programs allow the utilities to serve relatively large numbers of eligible households. In addition, a small group of participants also receives more comprehensive services that bring about substantial energy and bill savings.

However, the current lack of targeting means that the programs also miss the opportunity to provide more substantial weatherization services to many of the most vulnerable households in the state.

3. **Developing a comprehensive plan to address opportunities to provide leveraged weatherization services with other social-service programs**. The DSS, ECMB, CAAs and utilities would have to work together to develop such a plan. Many of the households applying for weatherization have other needs that could be addressed through programs managed by CAAs and other social-service organizations. Closer coordination could provide an opportunity to help improve their lives. However, the utilities are currently not in the position to develop or administer such a comprehensive social-service plan. Instead, increasing the level of coordination with other low-income programs would require direction from the low-income energy advisory board, the state, and possibly including legislation. Given such a mandate from the state government, UI and CL&P could be important supporting partners in any coordinated low-income program effort.

59 The recommendation to transfer funds from LIHEAP is made with the recognition that LIHEAP provides a temporary solution to high energy bills, while weatherization offers a more permanent solution. It may also be the case that the DOE program could experience future cuts, as it has in the past. It would seem prudent, therefore, to weatherize more homes now while funds are available in order to guarantee savings for the current and future residents of these households, rather than to continue the “stop-gap” measure of paying their utility bills.
4. Providing CAAs clear guidance on how to more effectively integrate LIHEAP, arrearage forgiveness, DSS/DOE weatherization, and utility weatherization, among other programs, to maximize opportunities for helping households. Their current system provides an inconsistent level of services in many CAA service areas. Again, such direction should not come only from the utilities, but would also require action on the part of the DSS, the ECMB and DPUC, and possibly the state legislature.

Other issues identified—such as a coordinated application process—present less difficult choices, but nevertheless can make significant improvements in the delivery of services.

The DPUC and the ECMB allow UI Helps and WRAP a great deal of flexibility in the actual planning and implementation of the two programs. UI Helps and WRAP are usually given permission to make requested changes as long as the programs provide logical justifications for the changes. It is likely, however, that the DPUC and ECMB will closely scrutinize substantial program changes—no matter what their direction. Therefore, we believe that the ECMB and the DPUC should provide UI Helps and WRAP with guidance regarding how to bring the two programs closer together, including, but not limited to, the following issues:

- Measures of cost effectiveness and program accountability
- Fuel neutrality
- Comprehensiveness of services
- Competitive bidding to identify program vendors

In addition to the recommended Impact Analysis discussed in 9.1.1, the NMR team believes there is a need for a comprehensive study of the best ways to coordinate all energy-related assistance programs available in the state in order to maximize opportunities for helping low-income households.
APPENDIX A

EVALUATION OF THE UI HELPS AND WRAP LOW-INCOME WEATHERIZATION PROGRAMS: DEMOGRAPHIC ANALYSIS REPORT
EVALUATION OF THE UI HELPS AND WRAP LOW-INCOME WEATHERIZATION PROGRAMS: DEMOGRAPHIC ANALYSIS REPORT

FINAL
October 18, 2006

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Northeast Utilities
Energy Conservation Management Board

Submitted by:
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1 Executive Summary

This Executive Summary highlights the key findings of the demographic analysis completed by Nexus Market Research (NMR) in support of the Process Evaluation of UI Helps and Weatherization Residential Assistance Partnership (WRAP) low-income weatherization programs, sponsored by the United Illuminating Company (UI) and Northeast Utilities – Connecticut Light and Power (NU CL&P), respectively. The sections of this report that follow this executive summary include additional findings, such as results reported by community action agency (CAA) and a greater number of maps.

1.1 Number Eligible and Served

The NMR team estimates that 47,693 households were eligible for UI Helps based on 2005 eligibility (150% of the federal poverty level [FPL]); the program served 8,308 (17%) of its eligible customers that same year. (Table 1–1) WRAP served 9,830 of its 176,001 (6%) eligible customers (200% of the FPL). Based on the recent increase in eligibility to 60% of the state median income (SMI), the number of households eligible for UI Helps nearly doubled to 92,046, while the number of households eligible for WRAP increased to 269,147.

### Table 1–1: Estimated Eligible and Participating Households Using 2005 Criteria

<table>
<thead>
<tr>
<th></th>
<th>Eligible</th>
<th>Participating</th>
<th>Percentage of Eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>223,734</td>
<td>18,401</td>
<td>8%</td>
</tr>
<tr>
<td>UIc</td>
<td>47,693</td>
<td>8,308a</td>
<td>17%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>176,001</td>
<td>9,830b</td>
<td>6%</td>
</tr>
</tbody>
</table>

*a Based on the number of individual accounts listed in the 2005 tracking database.

*b Based on records in the database.

Figure 1–1 maps the percentage of eligible households served by zip code. As the map shows, the programs are serving customers in all parts of the state. Participation rates are somewhat higher near cities, but there are some additional areas with high participation in the more rural eastern and northwestern regions of the state. The map also suggests—and statistical tests confirm—that low-income households living in wealthier regions appear to be less frequently served than those living in low- to moderate-income areas.
Figure 1–1: Percentage of Eligible Households Served by Zip Code
1.2 Comparison of Eligible and Participating Households

We are able to conduct only a limited comparison of the demographic characteristics of the eligible and participating households for the following reason:

- UI Helps does not track detailed demographic characteristics of its participants.
- WRAP tracks detailed demographic characteristics only for participants in Subprogram 2 and, to a lesser extent, in Subprogram 1.
- Information collected by the CAAs is not available as an electronic database and does not include all UI Helps and WRAP participants.

For this reason, we present Census demographic characteristics and discuss their connection to the programs. When possible, we then compare the results to any available demographic information on program participants.

Households Size and Composition: The average household size in Connecticut is 2.6 persons; this is similar to the average size (2.5) of households at 100% of FPL. The average size of households participating in WRAP is 2.8, slightly larger than the state overall and than households at 100% of FPL.

Children live in 35% of the households in Connecticut, and seniors live in 25% of the households. (Table 1–2) Although WRAP Subprogram 2 serves a proportionate number of households with seniors (25%), it serves a high percentage of households with children (57%).

### Table 1–2: Presence of Children and Seniors

(base – all households; participants in WRAP Subprogram 2)

<table>
<thead>
<tr>
<th></th>
<th>All Households</th>
<th>Children Present</th>
<th>Seniors Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect.</td>
<td>1,302,227</td>
<td>35%</td>
<td>25%</td>
</tr>
<tr>
<td>UI</td>
<td>265,081</td>
<td>34%</td>
<td>27%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>981,206</td>
<td>35%</td>
<td>25%</td>
</tr>
<tr>
<td>WRAP SP 2</td>
<td>2,930</td>
<td>57%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Owner-Renter Status: UI Helps and WRAP both serve owner- and renter-occupied housing units. Renters occupy two-thirds (67%) of households eligible for UI Helps, and 58% of households eligible for WRAP. Currently, WRAP Subprogram 2 serves more renter-occupied housing, and Subprogram 1 serves more owner-occupied housing.

Type of Housing Structure: Single-family houses make up the majority (64%) of housing units in Connecticut. Fifty-five percent of housing units in the UI service territory are single family compared to 67% in the CL&P service territory. Larger housing complexes (more than four units) are more common in the UI service territory (21% of all units) than the CL&P service territory (16% of all units). Fifty-three percent of WRAP Subprogram 2 participants live in single-family homes; however, 88% of participating owners live in single-family housing, while only 25% of participating renters live in single-family housing.
**Home Heating Fuel:** Just over one-half (52%) of homes in Connecticut heat with fuel oil. Another 29% rely on utility gas, 15% on electricity, and 2% on bottled gas. (Table 1–3) Utility gas tends to be used more heavily in UI’s service area, a very urbanized area with a more extensive gas distribution network. Fuel oil is most heavily used in rural parts of the state.

<table>
<thead>
<tr>
<th></th>
<th>Occupied Units</th>
<th>Heating Oil</th>
<th>Utility Gas</th>
<th>Electricity</th>
<th>Bottled Gas</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>1,301,670</td>
<td>52%</td>
<td>29%</td>
<td>15%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>UI</td>
<td>264,879</td>
<td>44%</td>
<td>43%</td>
<td>16%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>980,888</td>
<td>55%</td>
<td>25%</td>
<td>16%</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Although WRAP is a fuel blind program, it generally serves a higher proportion of electric households and a lower proportion of oil households overall and in all subprograms except Subprogram 1. Potential reasons for these findings include:

1. Slight bias in Subprogram 1 towards owner-renter housing
2. Client identification and marketing techniques that focus on customers of Yankee Gas and CL&P
3. Greater reliance of higher-income households on oil heat and lower-income households of electric and gas heat

### 1.3 Other Key Characteristics of Households and Units

In addition to the characteristics described above, the other factors discussed below may also relate to eligibility for and participation in UI Helps and WRAP. However, neither program currently tracks statistics on these characteristics.

**Race and Ethnicity:** Most households eligible for UI Helps (63%) and WRAP (78%) are headed by someone who identifies themselves as white, reflecting the high number of white households in the state overall. Households headed by those claiming their race as black comprise an additional 23% of households eligible for UI Helps and 11% eligible for WRAP. Hispanic households—who can be any race—represent 15% of households eligible for either UI Helps or WRAP. White households comprise a greater proportion of the eligible households in suburban and rural areas, and non-white households in urban areas.

**Language:** Most households in Connecticut (79%) primarily speak only English. The UI service territory has a slightly smaller percentage of English-speaking households (75%) than the CL&P service territory (79%). Spanish is the second most common language, spoken by eight percent of households in the state, eleven percent in the UI service territory, and eleven percent in the CL&P service territory. Eleven percent of households statewide speak another Indo-European language (e.g., Portuguese, Russian, French, etc.), two percent speak languages from Asia and the Pacific Islands, and one percent speaks a variety of other languages.

**Place of Birth:** Immigrant status is often associated with economic hardship. For this reason, we analyzed data on where Connecticut residents were born and how recently immigrants came to
the United States. Most Connecticut residents were born in the state (57%) or in another state (29%). However, eleven percent of residents were born in another state, and three percent were born in a U.S. Territory, primarily Puerto Rico. The UI service territory has slightly more residents born in a U.S. Territory (4%) or another country (12%). Just two percent of residents in the CL&P service area were born in a U.S. Territory and eleven percent in another country.

Most of the foreign-born residents immigrated to the United States before 1980 (39%), but 24% immigrated in or after 1995. The UI service territory has a slightly higher percentage of recent immigrants (26%) than does the CL&P territory (23%).

**Age of Housing:** The housing stock in Connecticut tends to be relatively old—one-fifth of the housing was built before 1940. The state, though, saw a housing boom between 1950 and 1989. Construction rates of single-family housing were highest in 1950s, 1960s, and 1990s, while those of large multifamily buildings (five or more units) were highest from 1970 to 1989.

### 1.4 Measures Installation over Time

The information presented in Table 1–4 confirms that the UI Helps program focuses heavily on the installation of lighting materials. The percentage of lighting measures was highest in 2002 (99%) and lowest in 2004 (93%), when the program served a higher than usual number of electric heating customers. The typical household participating in UI Helps receives only lighting products. UI Helps more than doubled the number of measures installed in 2005.

| Table 1–4: UI Helps Percentage of Installations by Measure Type, 2002 to 2005 |
|---------------------------------|--------|--------|--------|--------|
|                                | 2002   | 2003   | 2004   | 2005   |
| **Number of Measures**         | 41,002 | 33,884 | 35,425 | 80,150 |
| **Appliances**                 | 0%     | 0%     | <1%    | 1%     |
| **Envelope**                   | <1%    | <1%    | 2%     | 1%     |
| **Lighting**                   | 99%    | 98%    | 93%    | 97%    |
| **Water Heating**              | 1%     | 2%     | 5%     | 1%     |
| **Misc.**                      | <1%    | 0%     | 0%     | 0%     |

Envelope measures have dominated WRAP installations every year since 1999. (Table 1–5) The number of lighting measures installed has generally increased each year, except for a small decline in 2004. The typical household participating in WRAP receives one or more large table lamps, faucet aerators, a showerhead, a few CFLs, window and door caulking, and door sweeps. Although lower now than in 1999 and 2000, the number of WRAP measures has increased steadily since 2003.

| Table 1–5: WRAP Percentage of Installations by Measure Type, 2003 to 2005 |
|---------------------------------|--------|--------|--------|--------|--------|--------|
|                                | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   |
| **N Measures**                 | 391,365| 414,119| 232,738| 186,290| 116,529| 237,336| 264,803|
| **Appliances**                 | <1%    | <1%    | 1%     | 1%     | 1%     | <1%    | 1%     |
| **Envelope**                   | 85%    | 86%    | 75%    | 68%    | 68%    | 73%    | 61%    |
| **Heating**                    | 1%     | 0%     | 1%     | 1%     | <1%    | <1%    | <1%    |
| **Lighting**                   | 5%     | 7%     | 13%    | 20%    | 20%    | 17%    | 29%    |
| **Water Htg**                  | 4%     | 5%     | 9%     | 9%     | 10%    | 9%     | 9%     |
| **Misc.**                      | 6%     | 1%     | 2%     | 1%     | <1%    | <1%    | 1%     |

* The 1999 WRAP tracking database lists an unusually high number of “miscellaneous” measures.
2 Introduction and Methods

This report summarizes the demographic analysis completed by NMR in support of the Process Evaluation of UI Helps and WRAP low-income weatherization programs, sponsored by UI and NU CL&P, respectively.

The report presents and discusses the results on three major topics:

- Program eligibility and participation rates
- Characteristics of eligible and participating households and housing units
- Measure installation and customers served over time

The demographic analysis relies on three major data sources:

- UI Helps tracking databases, 2002 to 2005
- WRAP tracking databases, 1999 to 2005
- 2000 Census of Population and Housing
- Connecticut Department of Social Services (DSS)

Demographic data collected through the participant survey is reported in the Participant Survey Report. The Evaluation Final Report will include a comparison of the demographic results from this Demographic Analysis Report and the Participant Survey Report.

This report presents data using three different formats: tables, graphs, and maps. The data presented in tables have been aggregated to represent CAA service territories by utility. Because both CAA of New Haven (CAA-NH) and Competitive Resources, Inc. (CRI) implement UI Helps throughout the entire UI service area, the tables summarize data for the entire service territory. For WRAP, we have excluded zip codes served by municipal utilities from the aggregation. Finally, the data reported individually for CAA-NH and Action for Bridgeport Community Development (ABCD) cover only the portions of their weatherization service areas that fall into CL&P’s electric service territory, not UI’s.

3 Program Eligibility and Participation Rates

This section includes estimates of the number and percentage of households eligible for UI Helps and WRAP based on 2005 eligibility criteria. We also estimate eligibility based on the new 60% of state median income criterion being used by both programs. We then consider the participation rates in each program in 2005.

---

1 The data from the 2000 Census are now six years old. Although the patterns described here almost certainly continue to operate in Connecticut, the exact numbers have likely changed somewhat.

2 A small part of the Town of Lebanon is served by Bozrah Power and Light. However, one zip code covers all of Lebanon. We decided to take the conservative approach and keep the Lebanon zip code in the analysis, meaning a few customers of a municipal utility remain in the analysis.
3.1 Eligible Households

The NMR team estimates that 174,609 (13%) of the 1,302,227 households in Connecticut fall below 150% of FPL.\(^3\) (Table 3–1) Twenty percent, or 254,258 households, fall below 200% of the FPL. In 2005, the UI Helps program based eligibility on 150% of FPL, making about 47,693 households (18%) eligible for the program. For most of 2005, households with incomes up to 200% of the FPL were eligible for WRAP, including in Southwest Connecticut (SWCT). Therefore, we estimate that 176,001 households (18%) in CL&P’s service territory were eligible for services in 2005. These estimates were developed using a method put forth by the National Energy Assistance Directors Association (NEADA) that takes into account the number of individuals with incomes below various percentages of FPL and the average size of households in poverty.\(^4\)

The use of the new 60% of SMI criterion has nearly doubled the number of people eligible for UI Helps to 92,046 households (35% of households). The number of households in the CL&P service territory eligible for WRAP increased by more than half to 269,147 households (27% of households). To determine eligibility based on the new criterion, we used the median state income in 2000 of $53,935; 60% of the median is $32,361. Because the Census reports ranges of income, we made the simplifying assumption that 47% of all households within the $30,000 to $34,999 income group were eligible at this new level. We chose 47% because $2,361 is 47% of the $5,000 in the range. The 60% criterion was put into effect in late 2005 to be consistent with the new eligibility criteria used by the DSS/Department of Energy (DOE) weatherization program in response to legislation designed to help residents confront rising energy prices.

A total of 347,384 (27%) of households in Connecticut fall at or below 250% of FPL. The number of eligible households at this level in UI’s service territory is 85,269 (32%), while 246,276 (25%) of households in CL&P’s service territory meet the 250% of FPL criterion. WRAP had instituted this eligibility criterion in SWCT (entirely served by ABCD) in 2005, making 26,272 (18%) of households in that area eligible. This criterion was superseded by the new 60% of SMI criterion shortly after implementation. The Census Bureau does not report statistics at 250% of the FPL, but the cutoff is generally about $2,000 less than that at 60% of SMI. We made another simplifying assumption that the cutoff level at 250% of the FPL was $30,000, or $2,361 less than 60% of SMI.

We have also presented information on the number of households at 100% of the FPL. With very few exceptions (e.g., some college students receiving support from their parents), these households are the neediest in the state and likely carry the largest energy burdens in terms of the percentage of their income going to paying their energy bills.

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\(^3\) In 2000, the federal poverty level for a household of three (about the average size of low-income households in Connecticut) was $13,738. This means that the 150% level was $20,607, 200% was $27,476, and 250% was $34,345. Sixty percent of the Connecticut state median income for a household of three in 2000 was $36,644. However, eligibility for both programs is determined by a combination of income and household size, so that the income cutoffs are lower for households of smaller sizes and higher for households with more people. Our estimates of eligibility take these variations into account.

<table>
<thead>
<tr>
<th></th>
<th>All Households</th>
<th>100% of FPL&lt;sup&gt;a&lt;/sup&gt;</th>
<th>150% of FPL&lt;sup&gt;a&lt;/sup&gt;</th>
<th>200% of FPL&lt;sup&gt;a&lt;/sup&gt;</th>
<th>250% of FPL&lt;sup&gt;b&lt;/sup&gt;</th>
<th>60% of Median&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>1,302,227</td>
<td>103,578 8%</td>
<td>174,609 13%</td>
<td>254,258 20%</td>
<td>347,384 27%</td>
<td>378,680 29%</td>
</tr>
<tr>
<td>UI</td>
<td>265,081</td>
<td>29,628 11%</td>
<td>47,693 18%</td>
<td>66,281 25%</td>
<td>85,269 32%</td>
<td>92,046 35%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>981,206</td>
<td>69,950 7%</td>
<td>119,315 12%</td>
<td>176,001 18%</td>
<td>246,276 25%</td>
<td>269,147 27%</td>
</tr>
<tr>
<td>ABCD</td>
<td>146,801</td>
<td>7,570 5%</td>
<td>13,550 9%</td>
<td>19,981 14%</td>
<td>26,172 18%</td>
<td>378,680 20%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>158,979</td>
<td>10,150 6%</td>
<td>18,478 12%</td>
<td>28,447 18%</td>
<td>40,237 25%</td>
<td>28,704 28%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>13,294</td>
<td>478 4%</td>
<td>909 7%</td>
<td>1,562 12%</td>
<td>2,422 18%</td>
<td>44,148 21%</td>
</tr>
<tr>
<td>CRT</td>
<td>403,392</td>
<td>33,889 8%</td>
<td>54,888 14%</td>
<td>78,609 19%</td>
<td>111,262 28%</td>
<td>2,728 30%</td>
</tr>
<tr>
<td>NOW</td>
<td>258,740</td>
<td>17,863 7%</td>
<td>31,489 12%</td>
<td>47,402 18%</td>
<td>66,183 26%</td>
<td>72,184 28%</td>
</tr>
</tbody>
</table>

<sup>a</sup> Method derived from Census data on the number of individuals at each level of poverty and the average size of households at 100% of the FPL.

<sup>b</sup> Method assumes that 250% of FPL is about $30,000, or $2,361 below the criterion for 60% of state median income. The difference between 250% of FPL and 60% of state median income at varying family levels is typically a little more than $2,000.

<sup>c</sup> Calculation based on state median household income as reported in the Census. Because the median household income reported in the Census is based on households of all sizes, our method implicitly accounts for varying family size.
When considering the eligibility numbers, it must be remembered that not everyone counted in our Census method is truly “eligible.” In particular, those homes that have received services in the past 18 months are not able to receive repeat services until the “re-weatherization” period is past. It is also worth noting that some households counted as eligible may exceed the liquid assets test of DSS, making them ineligible for WRAP Subprogram 1, but not the other subprograms.

As Figure 3–1 and Figure 3–2 show, that low-income households tend to be concentrated in the cities of Connecticut, but not all low-income households are urban. Figure 3–3 and Figure 3–4 show that there are suburban and rural areas with high proportions of households eligible for weatherization services. Such pockets of poverty are more likely to occur in CL&P’s service territory, mainly because CL&P serves a much larger and less urban portion of the state than UI does. It is also worth noting that one-quarter to one-half of the households in some of the zip codes—mainly near the moderate to large cities but also a few in Eastern Connecticut—are eligible for UI Helps or WRAP. Furthermore, between 50% and 75% of households in one Hartford zip code and one New Haven zip code are eligible for WRAP and UI Helps, respectively. These percentages are based on the 2005 criteria, meaning that even greater percentages of households—nearly 100% in some of the poorest areas—are now eligible at 60% of SMI.
Figure 3–1: Number of Eligible Households by Zip Code
Figure 3–2: Number of Eligible Households by Zip Code – Hartford and New Haven Insets

New Haven

Hartford

Legend:
- 0
- 1 to 25
- 26 to 100
- 101 to 250
- 251 to 500
- 501 to 1,000
- 1,001 to 2,500
- 2,501 to 5,000
- 5,001 to 10,000
- Muni
Figure 3–3: Percentage of Households Eligible by Zip Code

- Stamford
- West Haven
- Torrington
- Shelton
- Naugatuck
- Middletown
- Danbury
- Bristol
- Shelton
- West Haven
- Stamford

Legend:
- 0%
- 1% to 5%
- 6% to 10%
- 11% to 25%
- 26% to 50%
- 51% to 75%
- Muni
Figure 3–4: Percentage of Households Eligible by Zip Code – Hartford and New Haven Insets
4 Comparison of Eligible and Participating Households

The information presented in this section comes from four primary sources:

1. UI Helps program tracking database
2. WRAP program tracking database
3. 2000 Census of Population and Housing
4. DSS

We are able to conduct only a limited comparison of the demographic characteristics of the eligible and participating populations for the following reasons. UI Helps does not track detailed demographic characteristics of its participants, and WRAP does so only for Subprogram 2 and, to a lesser extent, for Subprogram 1. The programs do not track data on other participants because of the difficulty in gathering the information through the neighborhood canvassing and whole-building approaches. DSS could provide NMR with detailed information only on participation by “vulnerable populations.” While the CAAs collect the demographic information on all energy assistance participants, these data are not always available electronically or even in compatible formats between agencies. It is beyond the scope of this evaluation to go through the databases and identify the subset who received services from WRAP or UI Helps; in fact, some of the utility program recipients have not received energy assistance and would not be in the CAA or DSS databases. The Final Report will include a comparison of demographic data collected through the participant survey to Census and program tracking data in order to help us identify any potential gaps in populations served by the programs.

4.1 Participation and Characteristics of Participating Households

Using information from the tracking databases, we estimate that about eight percent of the eligible households statewide were served in 2005 by either UI Helps or WRAP. (Table 4–1) The UI Helps program served approximately 18% of its eligible households, and WRAP served about six percent of its eligible households. For WRAP, five percent of eligible households were also served by three of the five CAA service areas. The ACCESS Agency (ACCESS) in Eastern Connecticut served eight percent of the eligible households, while ABCD served three percent of the eligible households.

<table>
<thead>
<tr>
<th>Table 4–1: Estimated Eligible and Participating Households Using 2005 Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>(base – eligible and participating households)</td>
</tr>
<tr>
<td>Eligible</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Connecticut</td>
</tr>
<tr>
<td>UIc</td>
</tr>
<tr>
<td>CL&amp;P</td>
</tr>
<tr>
<td>ABCD</td>
</tr>
<tr>
<td>ACCESS</td>
</tr>
<tr>
<td>CAA-NH</td>
</tr>
<tr>
<td>CRT</td>
</tr>
<tr>
<td>NOW</td>
</tr>
</tbody>
</table>

a Based on the number of individual accounts listed in the 2005 tracking database.

b Based on records in the database. The CAA was not listed for 212 of these records.

c UI based on 150% of FPL, the others based on 200% of FPL. These are the criteria in effect for most of the 2005 calendar and program year.
Program design plays a large part in explaining the greater participation levels in UI Helps over WRAP. UI Helps focuses on providing limited services to large numbers of households through neighborhood canvassing events, while WRAP provides more comprehensive services to a smaller number of households through its four subprograms. It is also the case that eligible UI Helps customers are concentrated in a smaller area, making it easier to target them. In contrast, eligible WRAP customers are spread out in more areas of the state, making it more difficult to target marketing and raise awareness among all possible participants.

Lower levels of participation in the ABCD service territory are of special concern because the region includes the ten most critically constrained parts of the electric grid in CL&P’s service territory. Overall, the Conservation and Load Management (C&LM) programs have a mandate to target services in these towns to reduce peak demand on the grid. This means that WRAP participation is lowest in precisely the area that needs the greatest reduction in electric use, from a peak demand savings perspective. Interviews with agency and WRAP unit members make clear, however, that they are aware of this concern. Recent efforts to increase participation and savings in this region include:

- Having a member of the NU Stamford office taking a more direct role in promoting WRAP in the area
- Increasing eligibility to 250% of FPL to match those used by housing authorities in the region. This step was superseded by the 60% of state median income criterion.
- Emphasizing measures that increase overall and peak demand electric savings
- Having contractors or other CAAs provide Subprogram 3 services when ABCD did not have the staff available to take on the job

We will discuss the differences in participation levels by CAA service area more fully in the overall Final Report. In short, the reasons for the differences generally center on:

- Marketing of the program by CAAs
- Relationships between weatherizing and non-weatherizing CAAs
- Overlap between CAA weatherization and utility service areas
- Structure and operating procedures of the CAAs

The maps in Figure 4–1 through Figure 4–4 show where the participants in UI Helps and WRAP live. Figure 4–1 and Figure 4–2 confirm that the greatest numbers of households being served are in or near the moderate to large cities in Connecticut. However, Figure 4–3 and Figure 4–4 demonstrate that the percentage of eligible residents served is more sporadic and spread throughout the state. To offer just one example, a zip code south of Norwich served nearly 68% of its eligible households; in reality, the program served 43 of its 64 eligible residents, mainly through a neighborhood canvassing event. The programs, furthermore, are often reaching relatively small portions of eligible households in the cities.
Figure 4–1: Number of Households Served by Zip Code
Figure 4–2: Number of Households Served by Zip Code – Hartford and New Haven Insets

New Haven

Hartford
Figure 4–3: Percentage of Eligible Households Served by Zip Code
Figure 4-4: Percentage of Eligible Households Served by Zip Code – Hartford and New Haven Insets

New Haven

Hartford

Legend:

- 0%
- 1% to 5%
- 6% to 10%
- 11% to 25%
- 26% to 50%
- 51% to 75%
- None Eligible
- Muni

Nexus Market Research
A comparison of the maps in Figure 3–1 through Figure 4–4 suggests that both programs have a tendency to serve the areas with greater proportions and numbers of eligible households. A simple statistical test—the Pearson’s Correlation—confirms this to be the case overall and for both programs. (Table 4–2) The positive correlations (ranging from .149 to .663) between the number and percentage of eligible households and customers served tell us that the programs are serving areas where poverty is concentrated. However, the fact that the correlation is larger (in the .6 range) between the number of households eligible and served indicates that the programs are focusing more on the areas where the number of eligible households is higher than where the percentage of eligible households is higher.

Table 4–2: Pearson’s Correlation between Eligible Households and Number of Customers Served by UI Helps and WRAP

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>UI Helps</th>
<th>WRAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>257</td>
<td>32</td>
<td>224</td>
</tr>
<tr>
<td>Percentage of Eligible Households by Percentage Served</td>
<td>.229</td>
<td>.354</td>
<td>.149</td>
</tr>
<tr>
<td>Number of Eligible Households by Number Served</td>
<td>.653</td>
<td>.628</td>
<td>.663</td>
</tr>
<tr>
<td>Percentage Served by Percentage Urban Housing</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Percentage Served by Housing Density</td>
<td>.151</td>
<td>.371</td>
<td>NS</td>
</tr>
<tr>
<td>Percentage Served by Median Household Income</td>
<td>-.270</td>
<td>-.406</td>
<td>-.219</td>
</tr>
</tbody>
</table>

a All results are significant at the 90% confidence level.
b NS = Not significant at the 90% confidence level.

The results in Table 4–2 also confirm that there is no systematic bias against serving more rural or less densely populated areas. No statistically significant relationships exist between the percentage served and the percentage of housing in urban areas. Furthermore, the positive correlation between the percentage served and housing density for the state and UI are better explained by the fact that the entire UI service territory is densely populated. The lack of a correlation between housing density and the percentage served by WRAP tells us that the program is serving people in both high and low density areas.

Instead, the results in Table 4–2 point to only one geographic difference in the households served—the programs appear to have difficulty reaching low-income households in somewhat wealthier areas. This statement is supported by the statistically significant negative correlation between the percentage of the eligible population served and median household income. The finding likely reflects three aspects of the programs. First, each program serves a large number of people through the neighborhood canvass approach, which actually does target densely populated, low-income areas. Second, WRAP marketing and UI Helps client identification target hardship-coded customers; however, other types of WRAP marketing are targeted to areas with more low-income residents or in media that predominantly serve low-income residents. The low income living in wealthy communities may not be exposed to these additional marketing efforts. Finally, program administrators and implementers have found that some people are reluctant to receive services from low-income programs. This reluctance may be stronger in areas where one’s neighbors are wealthy, leading to lower levels of participation.

---

5 The average density of the zip codes in the UI service territory is 1,716 homes per square mile; housing density is just 512 homes per square mile in CL&P’s service territory.
Finally, the WRAP database includes information on the percentage of Subprogram 2 participants who received energy assistance during the winters of 2004 and 2005. (Table 4–3) The results indicate that 40% of the 2005 participants in Subprogram 2 had received energy assistance in both 2004 and 2005. Another 35%, however, did not receive energy assistance in either year. The remaining 26% received assistance in just 2004 or 2005.

<table>
<thead>
<tr>
<th>Table 4–3: Participation in Energy Assistance Program, 2004 and 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N= 2,932; base- 2005 participants in WRAP Subprogram )</td>
</tr>
<tr>
<td><img src="image_url" alt="Table 4–3" /></td>
</tr>
</tbody>
</table>

4.2 **WRAP Participant Income**

The median self-reported income of the WRAP Subprogram 2 participants was about $14,440 per year in 2005.6 (Table 4–4) The maximum annual household income reported was $57,816; this eligible household had nine members. Only eight (<1%) of the 2,932 Subprogram 2 households exceeded the stated income level for their household size. These few cases could reflect special or emergency situations in which WRAP allowed services, or they could reflect data entry error.

<table>
<thead>
<tr>
<th>Table 4–4: Median Household Income, WRAP Subprogram 2 Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image_url" alt="Table 4–4" /></td>
</tr>
</tbody>
</table>

---

6 **WRAP approves participation based on applicants self-reported income but will occasionally ask for verification if information on the application or visual cues at the home suggest that the applicant is not being honest.**

Nexus Market Research
The graph in Figure 4–5 shows that the annual income of most participants falls between $10,000 and $20,000. Very few households have incomes above $30,000, the approximate income cutoff for the average three-member household.

**Figure 4–5: Annual Household Income, WRAP Subprogram 2 Participants**

- Mean = 15533.77
- Std. Dev. = 8769.27
- N = 2,932
4.3 **Household Size**

The average household size in Connecticut and for both UI and CL&P’s service territory is approximately 2.6 persons. (Table 4–5) At 2.5 persons, households at 100% of the federal poverty level are slightly smaller, on average, than are all households. The size of households overall and in poverty varies only slightly across utility and CAA service areas. We are unable to determine average household size among those eligible for UI Helps and WRAP, but the similarity in household size among households in poverty and overall suggests that household size among eligible households is also about 2.5 to 2.6 persons.

**Table 4–5: Average Number of Residents per Household**

(base – all residents and households in Connecticut by service area and age group)

<table>
<thead>
<tr>
<th></th>
<th>All Households</th>
<th></th>
<th>Households at 100% of Poverty</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N Households</td>
<td>Average Household Size</td>
<td>N Households</td>
<td>Average Household Size</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1,302,227</td>
<td>2.6</td>
<td>103,578</td>
<td>2.5</td>
</tr>
<tr>
<td>UI</td>
<td>265,081</td>
<td>2.6</td>
<td>29,628</td>
<td>2.5</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>981,206</td>
<td>2.6</td>
<td>69,950</td>
<td>2.5</td>
</tr>
<tr>
<td>ABCD</td>
<td>146,801</td>
<td>2.7</td>
<td>7,570</td>
<td>2.7</td>
</tr>
<tr>
<td>ACCESS</td>
<td>158,979</td>
<td>2.7</td>
<td>10,150</td>
<td>2.5</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>13,294</td>
<td>2.7</td>
<td>478</td>
<td>2.5</td>
</tr>
<tr>
<td>CRT</td>
<td>403,392</td>
<td>2.5</td>
<td>33,889</td>
<td>2.5</td>
</tr>
<tr>
<td>NOW</td>
<td>258,740</td>
<td>2.7</td>
<td>17,863</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Households that participated in WRAP Subprogram 2 tend to be slightly larger (2.8 persons) than all households in the state (2.6 persons) and than households in poverty (2.5 persons). (Table 4–6) WRAP households in the area served by New Opportunities of Waterbury (NOW) have the most members, on average.

**Table 4–6: Average Number of Residents per Household, WRAP Subprogram 2**

(base – participants in WRAP Subprogram 2)

<table>
<thead>
<tr>
<th></th>
<th>N Households</th>
<th>Average Household Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRAP</td>
<td>2,930</td>
<td>2.8</td>
</tr>
<tr>
<td>ABCD</td>
<td>138</td>
<td>2.8</td>
</tr>
<tr>
<td>ACCESS</td>
<td>668</td>
<td>2.5</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>31</td>
<td>2.8</td>
</tr>
<tr>
<td>CRT</td>
<td>1,190</td>
<td>2.8</td>
</tr>
<tr>
<td>NOW</td>
<td>903</td>
<td>3.0</td>
</tr>
</tbody>
</table>

4.4 **Household Composition**

The age and disability status of household members is often associated with program eligibility. First, many people identified as “hardship” are over the age of 64 and/or have a disability. Furthermore, households with children, seniors, or members with disabilities may be more likely to qualify for both state- and utility-sponsored weatherization programs because these groups often do not bring much, if any, income into the household. In fact, the DSS/DOE weatherization program prioritizes service based on the presence of young children, seniors, and
the disabled. This section summarizes data on the number and percentage of households with children, seniors, and members with disabilities.

On average, 0.6 children live in each household in Connecticut in both the UI and CL&P service areas. (Table 4–7) Only 0.4 people aged 65 or over live in each household, on average. In other words, households in Connecticut are not very likely to have many children or seniors living in them. The average household in poverty has just one child living in it, but only 0.3 seniors. Therefore, households in poverty are slightly more likely to have children and slightly less likely to have seniors living in them.

Table 4–7: Average Number of Children and Seniors Per Household
(base – all residents and households in Connecticut by service area and age group)

<table>
<thead>
<tr>
<th></th>
<th>All Households</th>
<th>Households in Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N Under 18</td>
<td>65 or older</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1,302,227</td>
<td>0.6</td>
</tr>
<tr>
<td>UI</td>
<td>265,081</td>
<td>0.6</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>981,206</td>
<td>0.6</td>
</tr>
<tr>
<td>ABCD</td>
<td>146,801</td>
<td>0.7</td>
</tr>
<tr>
<td>ACCESS</td>
<td>158,979</td>
<td>0.6</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>13,294</td>
<td>0.7</td>
</tr>
<tr>
<td>CRT</td>
<td>403,392</td>
<td>0.6</td>
</tr>
<tr>
<td>NOW</td>
<td>258,740</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Households participating in WRAP Subprogram 2 tend to have just over one child living in them (1.3 per household), which exceeds the average of households in poverty (0.8) and overall for the CL&P service area (0.6). (Table 4–7 and Table 4–8) WRAP households have, on average, about 0.3 seniors living in them, which is similar to the average number of seniors in households in poverty (0.3) and overall (0.4).

Table 4–8: Average Number of Children and Seniors per Household, WRAP Subprogram 2
(base – participants in WRAP Subprogram 2)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Under 18</th>
<th>65 or older</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRAP</td>
<td>2,930</td>
<td>1.3</td>
<td>0.3</td>
</tr>
<tr>
<td>ABCD</td>
<td>138</td>
<td>1.3</td>
<td>0.5</td>
</tr>
<tr>
<td>ACCESS</td>
<td>668</td>
<td>1.0</td>
<td>0.3</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>31</td>
<td>1.3</td>
<td>0.3</td>
</tr>
<tr>
<td>CRT</td>
<td>1,190</td>
<td>1.4</td>
<td>0.3</td>
</tr>
<tr>
<td>NOW</td>
<td>903</td>
<td>1.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>
The information in Table 4–9 shows that 35% of the households statewide have at least one child living in them, and one-quarter of the households have at least one person 65 or older. These percentages vary only slightly between the UI and CL&P service territories. Households in Community Renewal Team’s (CRT’s) service area are also least likely to have children present (34%), while those in CAA-NH’s area are most likely to have children present (38%). The Census data do not allow us to determine the percentage of households in poverty with children or seniors. Based on the information in Table 4–8, it is likely that slightly more households in poverty have children living in them, but slightly fewer have seniors living in them.\(^7\)

<table>
<thead>
<tr>
<th>Table 4–9: Presence of Children and Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>(base – all households in Connecticut by service area)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Connecticut</td>
</tr>
<tr>
<td>UI</td>
</tr>
<tr>
<td>CL&amp;P</td>
</tr>
<tr>
<td>ABCD</td>
</tr>
<tr>
<td>ACCESS</td>
</tr>
<tr>
<td>CAA-NH</td>
</tr>
<tr>
<td>CRT</td>
</tr>
<tr>
<td>NOW</td>
</tr>
</tbody>
</table>

The participants in WRAP Subprogram 2 are more likely than households in CL&P’s service territory overall to have children living in them (57% for SP2 vs. 35% overall). (Table 4–10) Participants in Subprogram 2 are equally likely as the service area to have at least one senior living in the household (25% for each). Each CAA appears to be serving a high percentage of households with children. This is especially true in the service territories of ABCD, CAA-NH, and CRT. ACCESS serves fewer households with children than the other CAAs. ABCD serves a higher percentage of households with seniors, while CAA-NH serves a lower percentage of households with seniors.

<table>
<thead>
<tr>
<th>Table 4–10: Presence of Children and Seniors Present, WRAP Subprogram 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>(base – participants in WRAP Subprogram 2)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>WRAP</td>
</tr>
<tr>
<td>ABCD</td>
</tr>
<tr>
<td>ACCESS</td>
</tr>
<tr>
<td>CAA-NH</td>
</tr>
<tr>
<td>CRT</td>
</tr>
<tr>
<td>NOW</td>
</tr>
</tbody>
</table>

\(^7\) The percentage of children in poverty statewide is 10% and the percentage of seniors is 7%. The overall poverty rate is about 8%.
Throughout Connecticut, there is an average of just under one person (0.7) in each household with some type of sensory, physical, or mental disability. (Table 4–11) The average number of persons per household who have a disability varies by only one-tenth across utility and CAA service areas. On average, about one senior with a disability lives in each household having at least one member over 65. The Census data do not allow us to provide estimates of the percentage of households having a person with disabilities.

Table 4–11: Residents with Disabilities per Household  
(base – all households; all households with person 65+)

<table>
<thead>
<tr>
<th>All Households</th>
<th>Residents with Disability</th>
<th>Households with Seniors</th>
<th>Senior with Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N Per Household</td>
<td>N Per Households with Senior</td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td>1,302,227</td>
<td>0.7</td>
<td>326,743</td>
</tr>
<tr>
<td>UI</td>
<td>265,081</td>
<td>0.8</td>
<td>71,385</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>981,206</td>
<td>0.7</td>
<td>241,833</td>
</tr>
<tr>
<td>ABCD</td>
<td>146,801</td>
<td>0.6</td>
<td>37,265</td>
</tr>
<tr>
<td>ACCESS</td>
<td>158,979</td>
<td>0.7</td>
<td>35,446</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>13,294</td>
<td>0.6</td>
<td>2,999</td>
</tr>
<tr>
<td>CRT</td>
<td>403,392</td>
<td>0.7</td>
<td>101,851</td>
</tr>
<tr>
<td>NOW</td>
<td>258,740</td>
<td>0.7</td>
<td>64,272</td>
</tr>
</tbody>
</table>

A total of 20% of households participating in Subprogram 2 have at least one member considered “handicapped” by the person filling out the application; an average of 0.2 residents per household is handicapped. We caution, however, that Census data on disabilities and WRAP data on handicapped household members are not necessarily compatible because people may define the two terms differently. In particular, many people probably consider only a subset of sensory and physical disabilities as handicaps.
Finally, the DSS/DOE weatherization program and WRAP Subprogram 2 keep track of the number of households served that have children, seniors, or persons with disabilities—what the DSS/DOE program calls the vulnerable population. Because the DSS/DOE program can only weatherize a small portion of the households requesting services each year, it tells the CAAs to prioritize vulnerable households. As shown in Table 4–12, the majority of participants in both programs come from households with vulnerable members. ABCD serves the greatest percentage of vulnerable households for both WRAP and DSS/DOE weatherization. CRT serves the lowest percentage of vulnerable households in the DSS/DOE program and NOW in the WRAP program. However, we must caution that the DSS definition of vulnerable includes only children under six, while the WRAP application asks about all children, no matter their age, driving up the estimate of the vulnerable population served.

Table 4–12: Vulnerable Residents Served by DSS/DOE Weatherization Program and WRAP Subprogram 2a

<table>
<thead>
<tr>
<th></th>
<th>DSS/DOE Weatherization</th>
<th>WRAP Subprogram 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>% Vulnerablea</td>
</tr>
<tr>
<td>Overall</td>
<td>838</td>
<td>64%</td>
</tr>
<tr>
<td>ABCD</td>
<td>178bc</td>
<td>75%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>160c</td>
<td>59%</td>
</tr>
<tr>
<td>CAA-NHd</td>
<td>198</td>
<td>67%</td>
</tr>
<tr>
<td>CRT</td>
<td>154</td>
<td>53%</td>
</tr>
<tr>
<td>NOW</td>
<td>148c</td>
<td>66%</td>
</tr>
</tbody>
</table>

a For DSS/DOE, vulnerable includes households with children under six, elderly, or disabled members. For WRAP, the definition includes children of any age, elderly, or disabled members.
b Includes the Bridgeport area
c Includes areas served by municipal utilities
d Includes areas in which DSS/DOE leverages services with UI Helps as well as WRAP

4.5 **Owner-Renter Status**

The UI Helps and WRAP programs serve both owner- and renter-occupied housing. As discussed in more detail in the Final Report, the programs have historically approached renter-occupied housing in different ways; WRAP’s program design facilitates serving units in multifamily housing and where the landlord pays for electricity, while UI Helps has historically not provided services to many owner-metered, multifamily buildings. Both UI Helps and WRAP have expressed a desire to better serve rental and multifamily housing. For these reasons, we present information on eligibility and participation, when available, by owner and renter status.
Table 4–13 summarizes program eligibility of both owners and renters using the 2005 criteria for each program—150% for UI Helps and 200% for CL&P. Just 12% of owner-occupied households in UI’s service territory and 14% in CL&P’s service territory are eligible for the programs. However, 39% of renters are eligible for the program statewide, 38% in UI’s service territory and 43% in CL&P’s service territory. Sixty-seven percent of all households eligible in UI’s service territory are renters, and 58% of all households eligible in CL&P’s service territory are renters. These patterns of eligibility by owner-renter status hold for most the CAA service areas. However, eligible owners outnumber eligible renter in the CAA-NH service territory mainly because home ownership rates are higher in that area overall.

Table 4–13: Eligibility by Owner-Renter Status
(base – households by owner-renter status)

<table>
<thead>
<tr>
<th>Area</th>
<th>Owner/Renter</th>
<th>N Households</th>
<th>N Eligible</th>
<th>% of Group that is Eligible</th>
<th>% of Eligible that are Owner or Renter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT</td>
<td>Owner</td>
<td>869,742</td>
<td>104,895</td>
<td>12%</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>431,928</td>
<td>169,711</td>
<td>39%</td>
<td>62%</td>
</tr>
<tr>
<td>UI</td>
<td>Owner</td>
<td>160,988</td>
<td>19,145</td>
<td>12%</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>103,978</td>
<td>39,457</td>
<td>38%</td>
<td>67%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>Owner</td>
<td>674,973</td>
<td>93,850</td>
<td>14%</td>
<td>42%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>305,851</td>
<td>130,255</td>
<td>43%</td>
<td>58%</td>
</tr>
<tr>
<td>ABCD</td>
<td>Owner</td>
<td>102,693</td>
<td>11,067</td>
<td>11%</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>43,938</td>
<td>13,028</td>
<td>30%</td>
<td>54%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>Owner</td>
<td>114,471</td>
<td>16,564</td>
<td>14%</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>44,519</td>
<td>19,794</td>
<td>44%</td>
<td>54%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>Owner</td>
<td>10,625</td>
<td>1,359</td>
<td>13%</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>2,650</td>
<td>875</td>
<td>33%</td>
<td>39%</td>
</tr>
<tr>
<td>CRT</td>
<td>Owner</td>
<td>263,690</td>
<td>38,107</td>
<td>14%</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>139,599</td>
<td>62,811</td>
<td>45%</td>
<td>62%</td>
</tr>
<tr>
<td>NOW</td>
<td>Owner</td>
<td>183,494</td>
<td>26,752</td>
<td>15%</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>Renter</td>
<td>75,145</td>
<td>33,746</td>
<td>45%</td>
<td>56%</td>
</tr>
</tbody>
</table>

The maps shown in Figure 4–6 and Figure 4–7 suggest that there is a tendency for renters to make up a greater portion of the eligible population in urbanized areas than in rural areas. However, even in many rural areas, renters make up 40% or more of the eligible population.

---

8 These are approximate cutoffs because the poverty determination is based on a mixture of family size and age composition. Here we chose to use the cutoff for a family of three, the average household size of low-income households in Connecticut.
Figure 4–6: Percentage of Eligible Households who are Renters

*Eligibility based on income of the average three-person household.
Figure 4–7: Percentage of Eligible Households who are Renters, New Haven and Hartford Insets

New Haven

Hartford

Eligibility based on income of the average three-person household.
Owners are disproportionately represented among participants in WRAP Subprogram 1, largely due to the difficulties in securing the landlord co-payments that are a part of the DSS/DOE subprogram. (Table 4–14) WRAP Subprogram 2 serves proportionate number of owners and renters. Given that Subprograms 3 and 4 are likely to serve somewhat more renters than owners, WRAP overall probably serves a somewhat higher proportion of renters overall than owners.

Table 4–14: Owner-Renter Status of WRAP Subprogram 1 and 2 Participants

<table>
<thead>
<tr>
<th>Subprogram</th>
<th>N Participants</th>
<th>% Owner</th>
<th>% Renter</th>
<th>% Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subprogram 1</td>
<td>387</td>
<td>74%</td>
<td>26%</td>
<td>0%</td>
</tr>
<tr>
<td>Subprogram 2</td>
<td>2,951</td>
<td>45%</td>
<td>55%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

*Owner-renter status is unknown for 60% of all WRAP participants, 76% of WRAP Subprogram 2 participants, and 100% of WRAP Subprogram 4 participants. Given Subprogram 3’s focus on multifamily buildings, it is likely that most of the participants are renters. Subprogram 4 would include a mixture of owners and renters.

4.6 Housing Characteristics

The characteristics of housing are often related to socioeconomic status. In particular, the type of housing and the fuel used to heat it vary by owner-renter status. As we have already seen, owner-renter status is also related to program eligibility. Furthermore, it may be easier or more cost effective to install some measures in single or small multifamily homes and others in large multifamily buildings. Finally, the fuel used to heat homes has a bearing on program implementation, electricity savings, and cost effectiveness.

4.6.1 Type of Housing Structure

Single-family houses make up the majority (64%) of housing units in Connecticut. (Table 4–15) The percentage, however, varies across the state, with just 55% of housing units being single family in the UI service territory but 79% being single-family in the CAA-NH service territory. Larger housing complexes (more than four units) are more common in the UI, ABCD, and CRT service areas, which are also the most urban service areas.

Table 4–15: Type of Housing Structure

(base – all housing units)

<table>
<thead>
<tr>
<th></th>
<th>Housing Units</th>
<th>Single Family</th>
<th>2-4 units</th>
<th>5-19 units</th>
<th>20 or more units</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1,385,975</td>
<td>64%</td>
<td>18%</td>
<td>9%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>UI</td>
<td>281,709</td>
<td>55%</td>
<td>24%</td>
<td>10%</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>1,044,609</td>
<td>67%</td>
<td>16%</td>
<td>9%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>ABCD</td>
<td>152,632</td>
<td>67%</td>
<td>14%</td>
<td>9%</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>172,279</td>
<td>73%</td>
<td>13%</td>
<td>8%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>13,662</td>
<td>79%</td>
<td>9%</td>
<td>5%</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>CRT</td>
<td>428,451</td>
<td>63%</td>
<td>17%</td>
<td>11%</td>
<td>9%</td>
<td>1%</td>
</tr>
<tr>
<td>NOW</td>
<td>277,585</td>
<td>68%</td>
<td>17%</td>
<td>8%</td>
<td>5%</td>
<td>1%</td>
</tr>
</tbody>
</table>
The vast majority of homeowners live in single-family housing, with ownership in multifamily housing being somewhat more common in UI’s service territory than in CL&P’s service territory. (Table 4–16) Renters live in a wider range of housing types, but it is most common for them to live in small (two to four units) to moderately sized (five to nineteen units) multifamily structures. Renters of single-family homes are more common in the CL&P service area than in the UI Service area.

<table>
<thead>
<tr>
<th>Owner</th>
<th>Occupied Units</th>
<th>Single Family</th>
<th>2-4 units</th>
<th>5-19 units</th>
<th>20 or more units</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N %</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Connecticu</td>
<td>869,742</td>
<td>88%</td>
<td>7%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>UI</td>
<td>160,988</td>
<td>83%</td>
<td>10%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>674,973</td>
<td>89%</td>
<td>6%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>ABCD</td>
<td>102,693</td>
<td>86%</td>
<td>6%</td>
<td>4%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>114,471</td>
<td>92%</td>
<td>4%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>10,625</td>
<td>92%</td>
<td>4%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>CRT</td>
<td>263,690</td>
<td>89%</td>
<td>6%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>NOW</td>
<td>183,494</td>
<td>89%</td>
<td>6%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Renter</td>
<td>Occupied Units</td>
<td>Single Family</td>
<td>2-4 units</td>
<td>5-19 units</td>
<td>20 or more units</td>
<td>Other</td>
</tr>
<tr>
<td>-------</td>
<td>----------------</td>
<td>---------------</td>
<td>-----------</td>
<td>------------</td>
<td>------------------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>N %</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Connecticu</td>
<td>431,928</td>
<td>19%</td>
<td>38%</td>
<td>22%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>UI</td>
<td>103,978</td>
<td>16%</td>
<td>42%</td>
<td>18%</td>
<td>24%</td>
<td>0%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>305,851</td>
<td>20%</td>
<td>37%</td>
<td>23%</td>
<td>19%</td>
<td>1%</td>
</tr>
<tr>
<td>ABCD</td>
<td>43,938</td>
<td>23%</td>
<td>32%</td>
<td>19%</td>
<td>25%</td>
<td>0%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>44,519</td>
<td>25%</td>
<td>37%</td>
<td>24%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>2,650</td>
<td>31%</td>
<td>28%</td>
<td>17%</td>
<td>24%</td>
<td>1%</td>
</tr>
<tr>
<td>CRT</td>
<td>139,599</td>
<td>17%</td>
<td>36%</td>
<td>25%</td>
<td>23%</td>
<td>0%</td>
</tr>
<tr>
<td>NOW</td>
<td>75,145</td>
<td>21%</td>
<td>43%</td>
<td>21%</td>
<td>15%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The Census data do not allow us to determine eligibility by type of housing structure. However, we can deduce that more residents of multifamily buildings are eligible for the programs because renters are disproportionately represented among both the eligible population and those living in multifamily structures.
The WRAP program tracks the type of housing in which participants of Subprograms 1 and 2 live. This information is presented in Table 4–17. It shows that multifamily dwellings are somewhat underserved through both Subprograms 1 and 2, although Subprogram 2 does a better job of serving multifamily dwellings than does the DSS/DOE program does. It should also be noted that WRAP Subprograms 3 and 4 generally serve more multifamily dwellings, meaning that the program overall most likely serves a proportionate number of residents of single and multifamily dwellings.

Table 4–17: Type of Housing Served by WRAP Subprograms 1 and 2 in 2005, by Owner-Renter Status
(base – all housing units served by owner-renter status)

<table>
<thead>
<tr>
<th>Overall</th>
<th>Owner</th>
<th>Renter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP1</td>
<td>SP2</td>
</tr>
<tr>
<td>N</td>
<td>387</td>
<td>2,930</td>
</tr>
<tr>
<td>Single Familya</td>
<td>76%</td>
<td>53%</td>
</tr>
<tr>
<td>2 to 4 units</td>
<td>23%</td>
<td>33%</td>
</tr>
<tr>
<td>5 or more units</td>
<td>1%</td>
<td>14%</td>
</tr>
</tbody>
</table>

a Includes townhouse for comparability with Census data

4.6.2 Home Heating Fuel

Just over one-half (52%) of homes in Connecticut heat with fuel oil. (Table 4–18) Another 29% rely on utility gas, 15% on electricity, and 2% on bottled gas. Utility gas tends to be used more heavily in the urbanized areas near Hartford (CRT’s service area) and New Haven (UI’s service area), where natural gas lines have been laid. Fuel oil is most heavily used in rural parts of the state. Homes served by CAA-NH are most likely to use electricity for heating, while those served by CRT are least likely.

Table 4–18: Primary Heating Fuel Used, all Occupied Housing Units
(base – occupied housing units)

<table>
<thead>
<tr>
<th>Occupied Units</th>
<th>Heating Oil</th>
<th>Utility Gas</th>
<th>Electricity</th>
<th>Bottled Gas</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1,301,670</td>
<td>52%</td>
<td>29%</td>
<td>15%</td>
<td>2%</td>
</tr>
<tr>
<td>UI</td>
<td>264,879</td>
<td>44%</td>
<td>43%</td>
<td>16%</td>
<td>2%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>980,888</td>
<td>55%</td>
<td>25%</td>
<td>16%</td>
<td>3%</td>
</tr>
<tr>
<td>ABCD</td>
<td>146,716</td>
<td>51%</td>
<td>30%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>158,994</td>
<td>68%</td>
<td>9%</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>13,277</td>
<td>80%</td>
<td>5%</td>
<td>18%</td>
<td>2%</td>
</tr>
<tr>
<td>CRT</td>
<td>403,283</td>
<td>48%</td>
<td>35%</td>
<td>10%</td>
<td>2%</td>
</tr>
<tr>
<td>NOW</td>
<td>275,314</td>
<td>56%</td>
<td>21%</td>
<td>16%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Figure 4–8 through Figure 4–13 show the distribution of homes heated by oil, utility gas, and electricity statewide. While oil is used by high percentages of households across the state, utility gas is primarily used in the Greater Hartford area and in SWCT. The few places with large percentages of homes heated with electricity (purple areas in Figure 4–12 and Figure 4–13) are scattered throughout the state in both urban and rural areas.
Figure 4–8: Percentage of Housing Units Heated with Oil
Figure 4–9: Percentage of Housing Units Heated by Oil –New Haven and Hartford Inset

New Haven

Hartford
Figure 4–10: Percentage of Housing Units Heated by Gas

Nexus Market Research
Figure 4–11: Percentage of Housing Units Heated by Gas – New Haven and Hartford Inset

New Haven

Hartford

Legend:
- 0%
- 1% to 2%
- 3% to 10%
- 11% to 25%
- 26% to 50%
- 51% to 75%
- 76% to 100%
- Muni

Nexus Market Research
Figure 4–12: Percentage of Housing Units Heated by Electricity

Nexus Market Research
Figure 4–13: Percentage of Housing Units Heated by Electricity –New Haven and Hartford Inset

New Haven

Hartford
Although WRAP is a fuel blind program, it generally serves a higher proportion of electric households and a lower proportion of oil households overall and in all subprograms except Subprogram 1, compared to their incidence statewide. (Figure 4–14) Numerous factors contribute to this finding. First, regarding Subprogram 1, the DSS in partnership with the CAAs decides which homes get served annually through this subprogram. The DSS/DOE program requirements to serve households throughout the state as well as a slight program bias toward homeowners because of the landlord co-pay may help explain why those heating with electricity are underserved in the DSS program, while those using other types of fuels are served at higher rates. The direct marketing of WRAP Subprogram 2 primarily to customers of Yankee Gas and CL&P is probably most responsible for the higher rates of electricity and gas participants in that subprogram. Third, the WRAP program identifies areas to target for Subprograms 3 and 4 through a variety of ways, including identifying areas with many people eligible for WRAP and through review of billing records. Therefore, those heating with electricity or gas would be more likely to be identified for participation in these two subprograms. Finally, as shown in Figure 4–15, low-income households are less likely to heat with oil than are moderate- and high-income households, which likely relates to owner-renter status and building type.

**Figure 4–14: Heating Fuel Used in CL&P Service Territory and by WRAP Participants**

<table>
<thead>
<tr>
<th></th>
<th>CL&amp;P Area - 980,888</th>
<th>WRAP - 9,830</th>
<th>SP1 - 387</th>
<th>SP2 - 2,951</th>
<th>SP3 - 2,465</th>
<th>SP4 - 4,027</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Oil</td>
<td>55%</td>
<td>38%</td>
<td>56%</td>
<td>24%</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Utility Gas</td>
<td>25%</td>
<td>28%</td>
<td>30%</td>
<td>24%</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Electricity</td>
<td>25%</td>
<td>31%</td>
<td>30%</td>
<td>39%</td>
<td>44%</td>
<td>35%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>8%</td>
<td>6%</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
</tr>
</tbody>
</table>

*Other category includes propane and other bottled gas, wood, coal, solar, and no fuel used.*

---

9 The DSS program asks landlords to pay 20% of the costs, up to $250, of the materials installed in each of their rental properties. Some landlords do not want to pay the amount, and the CAAs often do not try to convince them to change their minds. Therefore, the DSS recognizes that renters are somewhat under-served by the program.
Figure 4–15: Percentage of Homes Heating with Each Fuel by Income Group a
(base – households in each income group)

a Source: 2005 Northeast Utilities Residential Appliance Saturation Study
The fuel used to heat homes differs not only by region of the state but also by owner-renter status. Owners are much more likely to heat with oil, than are renters. Renters, on the other hand, are somewhat more likely to heat with utility gas and far more likely to heat with electricity. The greater use of gas and electricity to heat rental properties most likely reflects the more urban location of many of the units, their likelihood to be in large multifamily complexes, and their younger age. Given that more renters are eligible for the programs, it would seem that the eligible homes would rely disproportionately on electric heat, although it is also the case that electric heated homes make up a small percentage of all homes that meet income requirements. This is especially true in the UI area where only one-in-five renters heats with electricity and just four percent of owners heat with electricity.

<table>
<thead>
<tr>
<th>Owner-Renter Status</th>
<th>N Units</th>
<th>Oil</th>
<th>Utility Gas</th>
<th>Electricity</th>
<th>Bottled Gas</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>869,742</td>
<td>63%</td>
<td>25%</td>
<td>9%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>UI</td>
<td>160,988</td>
<td>57%</td>
<td>37%</td>
<td>4%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>674,973</td>
<td>64%</td>
<td>22%</td>
<td>10%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>ABCD</td>
<td>102,693</td>
<td>60%</td>
<td>28%</td>
<td>11%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>114,471</td>
<td>77%</td>
<td>5%</td>
<td>10%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>10,625</td>
<td>86%</td>
<td>4%</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>CRT</td>
<td>263,690</td>
<td>58%</td>
<td>31%</td>
<td>8%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>NOW</td>
<td>183,494</td>
<td>66%</td>
<td>17%</td>
<td>13%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Rent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td>431,928</td>
<td>31%</td>
<td>38%</td>
<td>27%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>UI</td>
<td>103,978</td>
<td>24%</td>
<td>51%</td>
<td>21%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>305,851</td>
<td>33%</td>
<td>34%</td>
<td>28%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>ABCD</td>
<td>43,938</td>
<td>30%</td>
<td>36%</td>
<td>30%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>44,519</td>
<td>48%</td>
<td>16%</td>
<td>29%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>2,650</td>
<td>57%</td>
<td>8%</td>
<td>32%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>CRT</td>
<td>139,599</td>
<td>29%</td>
<td>42%</td>
<td>25%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>NOW</td>
<td>75,145</td>
<td>33%</td>
<td>30%</td>
<td>32%</td>
<td>3%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Homeowners heating with electricity (5%) are slightly under-represented among WRAP Subprogram 1 participants, but owners heating with gas (36%) and electricity (17%) are over-represented among Subprogram 2 participants for reasons discussed above. (Table 4–20) Renters in Subprogram 1 disproportionately heat with oil (53%), but renters in Subprogram 2 are more likely to heat with gas (50%) than with other fuels.

Table 4–20: Heating Fuel Used by Owner-Renter Status, CL&P Territory and WRAP Subprograms 1 and 2a
(base – all occupied housing units by owner-renter status; participants by owner-renter status and WRAP subprogram)

<table>
<thead>
<tr>
<th></th>
<th>Occupied Housing Units</th>
<th>Heating Oil</th>
<th>Utility Gas</th>
<th>Electricity</th>
<th>bottled gas</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Census SP1 SP2</td>
<td>674,991 287 1,318</td>
<td>64% 22% 10%</td>
<td>22% 24% 17%</td>
<td>2% 1% 2%</td>
<td>2% 3% 9%</td>
<td>2%</td>
</tr>
<tr>
<td>Census SP1 SP2</td>
<td>305,897 100 1,612</td>
<td>33% 34% 28%</td>
<td>36% 34% 17%</td>
<td>3% 2% 3%</td>
<td>3% 2% 9%</td>
<td>3%</td>
</tr>
</tbody>
</table>

a Owner-renter status is unknown 76% of participants in Subprogram 3 and 100% of participants in Subprogram 4.

Although not included in (Table 4–20, it is important to note that heating audits make up four percent of home visits conducted by UI Helps, according to the 2005 program tracking database. (See Section 6 below). This suggests that electrically heated homes account for about four percent of all homes served by the program. The percentage of electrically heated homes matches the percentage of owner-occupied homes in the UI service territory that are heated with electricity (4%), but is lower than the percentage of renter-occupied homes heated with electricity (21%).

5 Other Key Characteristics of Households and Units

This section of the report summarizes key socioeconomic and demographic characteristics of households in Connecticut, particularly those most associated with poverty and economic hardship. However, we do not have comparable information for program participants. Therefore, the information in this section is meant to provide useful information for program planning, marketing, and potential targeting. We will compare these data with information gathered in the participant survey in the Final Report.

5.1 Race and Ethnicity

Throughout the United States, race and ethnicity are often, though by no means universally, associated with socioeconomic status. Because there are more white households overall, low-income white households outnumber low-income racial and ethnic minority households. Rates of economic hardship, however, are higher among racial and ethnic minority populations. As the information in Table 5–1 shows, Connecticut is no exception to this pattern. Most households eligible for UI Helps and WRAP are headed by someone who identifies themselves as white, reflecting the high number of white households in the state overall. However, looking within racial and ethnic groups, we find that only moderate percentages of white households (22% or less in each service area) are eligible for the programs. Typically, moderate percentages of Asian...
households are eligible for UI Helps or WRAP (22% or less in each service area); the ACCESS service territory serves as an exception, where 31% of Asian households are eligible for the program. In contrast, generally 30% or more of households from other racial or ethnic minority groups are eligible for UI Helps and WRAP. The ABCD and especially the CAA-NH service territories, however, tend to have smaller percentages of eligible minority households. This likely reflects the generally higher incomes in these areas due to their greater costs of living.

**Table 5–1: Eligibility by Race and Ethnicity**
(base – households headed by persons of each racial or ethnic group)

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
<th>Asian</th>
<th>Other</th>
<th>Two+ Races</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>1,101,582</td>
<td>105,870</td>
<td>25,994</td>
<td>45,900</td>
<td>22,881</td>
<td>91,298</td>
</tr>
<tr>
<td>N Eligible</td>
<td>210,277</td>
<td>37,942</td>
<td>4,827</td>
<td>19,895</td>
<td>7,921</td>
<td>36,142</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>19%</td>
<td>36%</td>
<td>19%</td>
<td>43%</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>75%</td>
<td>14%</td>
<td>2%</td>
<td>7%</td>
<td>3%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>UI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>199,782</td>
<td>40,379</td>
<td>6,565</td>
<td>12,179</td>
<td>6,176</td>
<td>26,185</td>
</tr>
<tr>
<td>N Eligible</td>
<td>36,858</td>
<td>4,827</td>
<td>1,124</td>
<td>4,290</td>
<td>2,001</td>
<td>8,789</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>18%</td>
<td>34%</td>
<td>22%</td>
<td>35%</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>63%</td>
<td>23%</td>
<td>2%</td>
<td>7%</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>CL&amp;P</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>851,330</td>
<td>63,142</td>
<td>18,451</td>
<td>32,631</td>
<td>16,652</td>
<td>63,022</td>
</tr>
<tr>
<td>N Eligible</td>
<td>173,419</td>
<td>24,408</td>
<td>3,404</td>
<td>15,605</td>
<td>5,921</td>
<td>27,353</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>19%</td>
<td>36%</td>
<td>19%</td>
<td>43%</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>78%</td>
<td>11%</td>
<td>2%</td>
<td>7%</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>ABCD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>124,711</td>
<td>11,329</td>
<td>4,846</td>
<td>3,523</td>
<td>2,392</td>
<td>10,077</td>
</tr>
<tr>
<td>N Eligible</td>
<td>17,785</td>
<td>3,767</td>
<td>564</td>
<td>984</td>
<td>667</td>
<td>2,605</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>14%</td>
<td>33%</td>
<td>12%</td>
<td>28%</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>75%</td>
<td>16%</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
<td>11%</td>
</tr>
<tr>
<td><strong>ACCESS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>147,852</td>
<td>3,683</td>
<td>1,970</td>
<td>3,135</td>
<td>2,339</td>
<td>5,228</td>
</tr>
<tr>
<td>N Eligible</td>
<td>32,073</td>
<td>1,338</td>
<td>601</td>
<td>1,331</td>
<td>808</td>
<td>2,208</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>22%</td>
<td>36%</td>
<td>31%</td>
<td>42%</td>
<td>35%</td>
<td>42%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>89%</td>
<td>4%</td>
<td>2%</td>
<td>4%</td>
<td>2%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>CAA-NH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>12,857</td>
<td>126</td>
<td>177</td>
<td>81</td>
<td>53</td>
<td>263</td>
</tr>
<tr>
<td>N Eligible</td>
<td>2,151</td>
<td>16</td>
<td>1</td>
<td>8</td>
<td>20</td>
<td>39</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>17%</td>
<td>13%</td>
<td>0%</td>
<td>10%</td>
<td>38%</td>
<td>15%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>98%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>CRT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>333,044</td>
<td>37,426</td>
<td>7,550</td>
<td>17,997</td>
<td>7,375</td>
<td>30,953</td>
</tr>
<tr>
<td>N Eligible</td>
<td>71,341</td>
<td>15,054</td>
<td>1,609</td>
<td>9,791</td>
<td>3,011</td>
<td>15,390</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>21%</td>
<td>40%</td>
<td>21%</td>
<td>54%</td>
<td>41%</td>
<td>50%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>71%</td>
<td>15%</td>
<td>2%</td>
<td>10%</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>NOW</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>232,866</td>
<td>10,578</td>
<td>3,908</td>
<td>7,895</td>
<td>3,493</td>
<td>16,501</td>
</tr>
<tr>
<td>N Eligible</td>
<td>50,070</td>
<td>4,234</td>
<td>629</td>
<td>3,490</td>
<td>1,415</td>
<td>7,111</td>
</tr>
<tr>
<td>% Eligible w/in group</td>
<td>22%</td>
<td>40%</td>
<td>16%</td>
<td>44%</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td>% of All Eligible</td>
<td>84%</td>
<td>7%</td>
<td>1%</td>
<td>6%</td>
<td>2%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Figure 5–1 and Figure 5–2 map the percentage of the eligible population that is non-white. These percentages are generally, but not always, higher near moderate and large sized cities. The percentage of the eligible population that is Hispanic is even more concentrated in the moderate and large cities of Connecticut. (Figure 5–3 and Figure 5–4)
Figure 5–1: Percentage of Eligible Population that is Non-White*

* Eligibility based on income of the average three-person household.
Figure 5–2: Percentage of Eligible Population that is Non-White, New Haven and Hartford Insets

New Haven

Hartford

* Eligibility based on income of the average three-person household.
Figure 5–3: Percentage of Eligible Population that is Hispanic

* Eligibility based on income of the average three-person household.
Figure 5–4: Percentage of the Eligible Population that is Hispanic, New Haven and Hartford Insets

New Haven

Hartford

Eligibility based on income of the average three-person household.
5.2 **Language, Place of Birth, and When Immigrated**

Most households in Connecticut (79%) primarily speak only English. (Table 5–2) The UI service territory has a slightly smaller percentage of English-speaking households (75%) than the CL&P service territory (79%). English speaking households are most common in the ACCESS (86%) and CAA-NH (87%) portions of CL&P’s service territory and least common in ABCD’s (75%) service territory. Unspecified (other) Indo-European languages are the next most commonly spoken languages across the state, followed by Spanish, particularly in UI’s service territory. Small percentages of households speak languages from Asia and the Pacific Islands, while “other” languages are spoken by very few households. See Appendix A for a full list of languages tracked by the Census Bureau, based on “write-in” responses to the Census questionnaire and for a list of languages used by clients of Connecticut Legal Services.

<table>
<thead>
<tr>
<th>Table 5–2: Percentage of Households Primarily Speaking Each Language Groupa</th>
</tr>
</thead>
<tbody>
<tr>
<td>(base – all households)</td>
</tr>
<tr>
<td>N Households</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Connecticut</td>
</tr>
<tr>
<td>UI</td>
</tr>
<tr>
<td>CL&amp;P</td>
</tr>
<tr>
<td>ABCD</td>
</tr>
<tr>
<td>ACCESS</td>
</tr>
<tr>
<td>CAA-NH</td>
</tr>
<tr>
<td>CRT</td>
</tr>
<tr>
<td>NOW</td>
</tr>
</tbody>
</table>

Most households, including those that primarily speak a language other than English, have at least one strong English speaker aged 14 and older living in the household. (Table 5–3) Households that speak Asian and Pacific Islands languages are the least likely to have an English speaker in the household, followed by Spanish speaking households.

<table>
<thead>
<tr>
<th>Table 5–3: Households with at Least One Person 14 Years and Older who Speaks English at Least Very Well</th>
</tr>
</thead>
<tbody>
<tr>
<td>(base – all households primarily speaking each language group at home)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Connecticut</td>
</tr>
<tr>
<td>UI</td>
</tr>
<tr>
<td>CL&amp;P</td>
</tr>
<tr>
<td>ABCD</td>
</tr>
<tr>
<td>ACCESS</td>
</tr>
<tr>
<td>CAA-NH</td>
</tr>
<tr>
<td>CRT</td>
</tr>
<tr>
<td>NOW</td>
</tr>
</tbody>
</table>
The information in Table 5–4 lists the “top ten” non-English languages spoken by residents 18 or older in Connecticut and in each utility’s service area. The data are based on individuals and not on households. The shaded cells highlight the languages more commonly spoken among linguistically isolated households—that is, households with no strong English speaker aged 14 or older. The information confirms that, next to English, Spanish is the most frequently spoken language. Chinese is the other language commonly found among linguistically isolated households. Other European languages dominate the remainder of the “top ten” lists, but most European language speakers are not linguistically isolated, with the likely exception of recent immigrants from Eastern Europe. Therefore, even though their numbers are small, it is possible that people eligible for the program come disproportionately from groups for which there are relatively few speakers in Connecticut. This increases the challenge the utilities face in reaching and serving these clients, a topic we will address in the recommendations to be included in the Final Report of the entire process evaluation.

Table 5–4: “Top Ten” Non-English Languages Spoken by Residents of Each Service Area
(base - all residents 18 years and older)

<table>
<thead>
<tr>
<th>Language</th>
<th>Connecticut</th>
<th>%</th>
<th>UI</th>
<th>%</th>
<th>CL&amp;P</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spanish/Creole</td>
<td>7.8%</td>
<td>Spanish/Creole</td>
<td>10.5%</td>
<td>Spanish/Creole</td>
<td>7.2%</td>
</tr>
<tr>
<td>2</td>
<td>Italian</td>
<td>1.9%</td>
<td>Italian</td>
<td>2.4%</td>
<td>Italian</td>
<td>1.8%</td>
</tr>
<tr>
<td>3</td>
<td>French/Patois</td>
<td>1.5%</td>
<td>Portuguese/Creole</td>
<td>1.4%</td>
<td>French/Patois</td>
<td>1.7%</td>
</tr>
<tr>
<td>4</td>
<td>Polish</td>
<td>1.3%</td>
<td>Polish</td>
<td>1.0%</td>
<td>Polish</td>
<td>1.4%</td>
</tr>
<tr>
<td>5</td>
<td>Portuguese/Creole</td>
<td>1.0%</td>
<td>French/Patois</td>
<td>0.8%</td>
<td>Portuguese/Creole</td>
<td>0.9%</td>
</tr>
<tr>
<td>6</td>
<td>Chinese</td>
<td>0.5%</td>
<td>Chinese</td>
<td>0.7%</td>
<td>German</td>
<td>0.5%</td>
</tr>
<tr>
<td>7</td>
<td>German</td>
<td>0.5%</td>
<td>German</td>
<td>0.4%</td>
<td>Chinese</td>
<td>0.5%</td>
</tr>
<tr>
<td>8</td>
<td>Other Indo-European</td>
<td>0.4%</td>
<td>Other Indo-European</td>
<td>0.4%</td>
<td>Other Indo-European</td>
<td>0.4%</td>
</tr>
<tr>
<td>9</td>
<td>Greek</td>
<td>0.3%</td>
<td>Russian</td>
<td>0.4%</td>
<td>Greek</td>
<td>0.3%</td>
</tr>
<tr>
<td>10</td>
<td>Russian</td>
<td>0.3%</td>
<td>Other Slavic</td>
<td>0.4%</td>
<td>Russian</td>
<td>0.3%</td>
</tr>
</tbody>
</table>
Table 5–5 summarizes where Connecticut residents were born.\(^{10}\) We present this information largely because recent immigrant status is often tied to economic hardship, especially among those who are linguistically isolated. Immigrant groups are generally represented in the last two columns of the table, which summarize those born in US territories—including Puerto Rico—and in other countries.\(^{11}\) The table indicates that 14% of Connecticut residents were born in US territories or in another country. The ABCD service territory has the highest percentage of residents born in another country (19%), and the UI and CRT service territories have the largest percentage of residents born in a US territory (4%).

### Table 5–5: Birth Place of Residents

<table>
<thead>
<tr>
<th>People</th>
<th>Connecticut</th>
<th>Other State</th>
<th>Born Abroad(^a)</th>
<th>US Territory</th>
<th>Foreign Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>3,405,565</td>
<td>57%</td>
<td>29%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>UI</td>
<td>697,370</td>
<td>61%</td>
<td>23%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>2,567,180</td>
<td>56%</td>
<td>30%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>ABCD</td>
<td>394,004</td>
<td>39%</td>
<td>41%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>425,224</td>
<td>58%</td>
<td>34%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>35,541</td>
<td>74%</td>
<td>18%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>CRT</td>
<td>1,027,071</td>
<td>58%</td>
<td>27%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>NOW</td>
<td>685,340</td>
<td>60%</td>
<td>28%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

\(a\) Those “born abroad” were born as US Citizens but in another country.

Around 40% of the foreign born residents in Connecticut and in most of the service areas immigrated to the United States before 1980. (Table 5–6) Between one-fifth and one-quarter of the foreign born residents moved to the U.S. from 1995 to March of 2000, the month before the Census was taken. The UI and ABCD service territories have a higher percentage of recent immigrants, perhaps pointing to a greater threat of economic hardship.

### Table 5–6: Date of Immigration to the United States

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>369,967</td>
<td>24%</td>
<td>15%</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>UI</td>
<td>83,335</td>
<td>26%</td>
<td>16%</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>276,688</td>
<td>23%</td>
<td>15%</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>ABCD</td>
<td>73,817</td>
<td>28%</td>
<td>16%</td>
<td>14%</td>
<td>10%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>22,207</td>
<td>21%</td>
<td>13%</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>2,512</td>
<td>19%</td>
<td>20%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>CRT</td>
<td>109,963</td>
<td>20%</td>
<td>15%</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>NOW</td>
<td>68,189</td>
<td>24%</td>
<td>14%</td>
<td>13%</td>
<td>8%</td>
</tr>
</tbody>
</table>

\(^{10}\) The Census finds it difficult to gather information on non-citizen immigrants—both documented and undocumented. Immigrants are often distrustful of government agencies and workers because they fear being denied citizenship or being deported. They avoid participating in the Census and in social service programs.

\(^{11}\) While not officially immigrants, Puerto Ricans make up the majority of people born in the US territories that move to the mainland. Many of the lowest-income Puerto Ricans also speak limited English.
5.3 Age of Housing

The age of housing has multiple impacts on energy efficiency. First, changing building codes and efficiency standards mean that newer homes are often more efficient than older homes, at least those older homes that have not been adequately retrofitted. While the efficiency of newer homes can be offset by larger home sizes and greater use of central air conditioning, these two factors are less likely to apply to housing geared to low- and moderate-income households than housing overall. Second, older homes often make it difficult and sometimes dangerous to install energy efficiency measures. Lead paint and knob and tube wiring are particularly troublesome, and addressing them increases the cost of installing energy efficient measures.

The housing stock in Connecticut tends to be relatively old—one-fifth of the housing was built before 1940. (Table 5–7) The state, though, saw many new units built between 1950 and 1989. Housing tends to be oldest in the UI service area. There has been a somewhat higher proportion of housing built recently in the ACCESS and CAA-NH service areas.

Table 5–7: When Housing Units Built

<table>
<thead>
<tr>
<th>Housing Units</th>
<th>1990s</th>
<th>1980s</th>
<th>1970s</th>
<th>1960s</th>
<th>1950s</th>
<th>1940s</th>
<th>1939 or earlier</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1,385,975</td>
<td>7%</td>
<td>13%</td>
<td>15%</td>
<td>15%</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>UI</td>
<td>281,709</td>
<td>6%</td>
<td>10%</td>
<td>13%</td>
<td>15%</td>
<td>19%</td>
<td>12%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>1,044,609</td>
<td>8%</td>
<td>14%</td>
<td>15%</td>
<td>16%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>ABCD</td>
<td>152,632</td>
<td>7%</td>
<td>12%</td>
<td>13%</td>
<td>17%</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>ACCESS</td>
<td>172,279</td>
<td>10%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>CAA-NH</td>
<td>13,662</td>
<td>11%</td>
<td>17%</td>
<td>17%</td>
<td>13%</td>
<td>15%</td>
<td>8%</td>
</tr>
<tr>
<td>CRT</td>
<td>428,451</td>
<td>7%</td>
<td>14%</td>
<td>15%</td>
<td>16%</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>NOW</td>
<td>277,585</td>
<td>8%</td>
<td>15%</td>
<td>17%</td>
<td>15%</td>
<td>14%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Although it has always been the most common housing type in Connecticut, the single-family home gained popularity during the 1940s and 1950s during the post-World War II housing boom. (Figure 5–5) During the same time period, the percentage of multifamily structures of all sizes declined. Prior to the 1960s, the two-to-four unit building was the most common type of multifamily housing, but its popularity declined steadily from 1940 through the 1960s. The 1960s, 1970s and 1980s saw a boom in moderate (5-19 units) and larger sized buildings (20 or more units). The 1990s saw a decrease in the building of multifamily housing, as new construction of single-family housing again gained prominence.12

Figure 5–5: When Housing Built by Type of Structure, Connecticut Only
(base – all occupied housing units built during each time period, N reported below decade)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Single Family</th>
<th>2-4 Units</th>
<th>5-19 Units</th>
<th>20+ Units</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990s - 112,448</td>
<td>74%</td>
<td>62%</td>
<td>60%</td>
<td>78%</td>
<td>54%</td>
</tr>
<tr>
<td>1980s - 175,952</td>
<td>60%</td>
<td>70%</td>
<td>70%</td>
<td>78%</td>
<td>54%</td>
</tr>
<tr>
<td>1970s - 193,673</td>
<td>60%</td>
<td>70%</td>
<td>70%</td>
<td>78%</td>
<td>54%</td>
</tr>
<tr>
<td>1960s - 200,950</td>
<td>60%</td>
<td>70%</td>
<td>70%</td>
<td>78%</td>
<td>54%</td>
</tr>
<tr>
<td>1950s - 220,460</td>
<td>60%</td>
<td>70%</td>
<td>70%</td>
<td>78%</td>
<td>54%</td>
</tr>
<tr>
<td>1940s - 117,656</td>
<td>60%</td>
<td>70%</td>
<td>70%</td>
<td>78%</td>
<td>54%</td>
</tr>
<tr>
<td>1939 or earlier - 280,531</td>
<td>60%</td>
<td>70%</td>
<td>70%</td>
<td>78%</td>
<td>54%</td>
</tr>
</tbody>
</table>

In short, the housing stock of Connecticut overall is generally at an age when efficiency improvements could lead to large reductions in energy use. This includes not only the single-family and two-to-four unit buildings but also the many moderate and large-sized multifamily buildings built in the 1960s through the 1970s, in which many eligible households probably live.

6 Measure Installation over Time

The UI Helps program focuses heavily on the installation of lighting measures. It provides additional measures to customers who heat water and/or space with electricity. The information in Table 6–1 reflects this aspect of the UI Helps program design. The findings show that, from 2002 to 2005, lighting made up at least 93% of the measures installed through UI Helps. The percentage of lighting measures was highest in 2002 (99%) and lowest in 2004 (93%), when the program served a higher than usual number of electric heating customers, resulting in the installation of more water heating and envelope measures.\(^\text{13}\) (Table 6–2). Appliance replacements have also become increasingly important over time. UI Helps has generally been installing more measures each year, with the exception of 2003, when all C&LM projects were placed on temporary hold due to unexpected funding constraints. The number of customers served by the program increased dramatically in 2005.

<table>
<thead>
<tr>
<th>Number of Measures</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliances</td>
<td>41,002</td>
<td>33,884</td>
<td>35,425</td>
<td>80,150</td>
</tr>
<tr>
<td>Envelope</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Lighting</td>
<td>99%</td>
<td>98%</td>
<td>93%</td>
<td>97%</td>
</tr>
<tr>
<td>Water Heating</td>
<td>1%</td>
<td>2%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Misc.</td>
<td>&lt;1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

\(^{13}\) In 2004, the DPUC was eliminating a discounted heat pump rate. In order to help mitigate higher electricity bills, UI Helps targeted places—particularly elderly complexes—where the elimination of the discounted heat pump rate would have caused particular hardship.
Table 6–2: UI Helps Audits and Measures Installed, 2002 through 2005

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Audits</td>
<td>General Service</td>
<td>6,409</td>
<td>5,131</td>
<td>4,090</td>
<td>8,197</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Hot Water</td>
<td>83</td>
<td>87</td>
<td>33</td>
<td>74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heating</td>
<td>59</td>
<td>110</td>
<td>600</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Visits Performed*</td>
<td>6,551</td>
<td>5,328</td>
<td>4,723</td>
<td>8,571</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Appliances</td>
<td>Refrigerator</td>
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<td>0</td>
<td>52</td>
<td>333</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>1</td>
<td>84</td>
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<td></td>
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<tr>
<td>Envelope</td>
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<td>23</td>
<td>7,120</td>
<td>34</td>
<td>10,640</td>
<td>456</td>
<td>212,494</td>
<td>116</td>
<td>39,795</td>
</tr>
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<td>Backer Rod</td>
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<td>0</td>
<td>2</td>
<td>23</td>
<td>1</td>
<td>4</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Caulk</td>
<td>5</td>
<td>365</td>
<td>0</td>
<td>5</td>
<td>43</td>
<td>33</td>
<td>1,852</td>
<td></td>
</tr>
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<td></td>
<td>Door Jamb</td>
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<td>0</td>
<td>0</td>
<td>105</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>Door Kit</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Door Sweep</td>
<td>4</td>
<td>2</td>
<td>32</td>
<td>166</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Foam Board Insulation</td>
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<td>0</td>
<td>0</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foam Insulation</td>
<td>9</td>
<td>2</td>
<td>3</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interior Storm Window</td>
<td>3</td>
<td>16</td>
<td>17</td>
<td>115</td>
<td></td>
<td></td>
<td></td>
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<td>Polyflex Tape</td>
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<td>1</td>
<td>9</td>
<td>28</td>
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<tr>
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<td>Room AC Covers</td>
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<td>13</td>
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<tr>
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<td>56</td>
<td>55</td>
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<td>596</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Lighting</td>
<td>CFL</td>
<td>32,961</td>
<td>29,959</td>
<td>31,330</td>
<td>75,385</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Globe Bulb</td>
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<td>1,330</td>
<td>860</td>
<td>1,696</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Other Bulb</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Torchiere</td>
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<td>103</td>
<td>140</td>
<td>404</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tube Bulb</td>
<td>1,122</td>
<td>1,147</td>
<td>419</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Fixture</td>
<td>329</td>
<td>528</td>
<td>188</td>
<td>315</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Heater</td>
<td>Aerator</td>
<td>267</td>
<td>436</td>
<td>1,298</td>
<td>773</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Domestic Hot Water</td>
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<td>0</td>
<td>0</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>Pipe Insulation</td>
<td>1</td>
<td>6</td>
<td>40</td>
<td>475</td>
<td>35</td>
<td>223</td>
<td>14</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Showerhead</td>
<td>30</td>
<td>200</td>
<td>490</td>
<td>349</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Turn Down Temperature</td>
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<td>0</td>
<td>0</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Water Heater Wrap</td>
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<td>24</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misc.</td>
<td>Waterbed Covers</td>
<td>1</td>
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<td>0</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>TOTAL</td>
<td>Excludes Audits</td>
<td>41,002</td>
<td>7,755</td>
<td>33,884</td>
<td>11,171</td>
<td>35,425</td>
<td>213,836</td>
<td>80,150</td>
<td>43,115</td>
</tr>
</tbody>
</table>

* The sum of all audits completed. Some homes receive more than one type of audit.
The typical household participating in UI Helps receives CFLs (Table 6–3). A few households also receive other measures, with the five most common being globe bulbs (also types of CFLs), torchieres (using CFLs), faucet aerators, refrigerators, and showerheads.

Table 6–3: Number of UI Helps Households Receiving Each Measure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Households Receiving</th>
<th>% of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Accounts Served</td>
<td>8,308</td>
<td>8,308</td>
</tr>
<tr>
<td>CFL</td>
<td>8,296</td>
<td>99.9%</td>
</tr>
<tr>
<td>Globe Bulb</td>
<td>536</td>
<td>6.5%</td>
</tr>
<tr>
<td>Torchiere</td>
<td>380</td>
<td>4.6%</td>
</tr>
<tr>
<td>Aerator</td>
<td>374</td>
<td>4.5%</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>331</td>
<td>4.0%</td>
</tr>
<tr>
<td>Showerhead</td>
<td>317</td>
<td>3.8%</td>
</tr>
<tr>
<td>Light fixture</td>
<td>180</td>
<td>2.2%</td>
</tr>
<tr>
<td>Air Sealing</td>
<td>116</td>
<td>1.4%</td>
</tr>
<tr>
<td>Door Sweep</td>
<td>104</td>
<td>1.3%</td>
</tr>
<tr>
<td>Room Air Conditioner</td>
<td>72</td>
<td>0.9%</td>
</tr>
<tr>
<td>Door Jamb</td>
<td>60</td>
<td>0.7%</td>
</tr>
<tr>
<td>Foam Insulation</td>
<td>40</td>
<td>0.5%</td>
</tr>
<tr>
<td>Interior Storm Window</td>
<td>35</td>
<td>0.4%</td>
</tr>
<tr>
<td>Caulking</td>
<td>33</td>
<td>0.4%</td>
</tr>
<tr>
<td>Tube Bulb</td>
<td>30</td>
<td>0.4%</td>
</tr>
<tr>
<td>Polytape</td>
<td>28</td>
<td>0.3%</td>
</tr>
<tr>
<td>V-Seal</td>
<td>28</td>
<td>0.3%</td>
</tr>
<tr>
<td>Outlet Gasket</td>
<td>18</td>
<td>0.2%</td>
</tr>
<tr>
<td>Pipe Insulation</td>
<td>14</td>
<td>0.2%</td>
</tr>
<tr>
<td>Water Heater Wrap</td>
<td>4</td>
<td>0.0%</td>
</tr>
<tr>
<td>Water Heater Temperature Adjustment</td>
<td>3</td>
<td>0.0%</td>
</tr>
<tr>
<td>Window Lock</td>
<td>2</td>
<td>0.0%</td>
</tr>
<tr>
<td>Backer Rod</td>
<td>1</td>
<td>0.0%</td>
</tr>
<tr>
<td>Foam Board Insulation</td>
<td>1</td>
<td>0.0%</td>
</tr>
<tr>
<td>Courtesy Measure</td>
<td>1</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

a Number of households based on number of individuals accounts served.
The number of WRAP participants increased steadily from 1999 through 2001, but declined somewhat in 2002 and dramatically in 2003 (again, because of unexpected funding constraints). (Table 6–4) After 2003, the program has been rapidly increasing the number of households served each year. Like UI Helps, the number of people served by WRAP increased dramatically in 2005. All program recipients are customers of CL&P, and many of them are also customers of Connecticut Natural Gas, Yankee Gas, or numerous oil companies serving Connecticut. However, CL&P is considered the primary company for the purposes of the program—and is thus the one that gets charged for most of the measures. For example, customers participating in Subprogram 3 and Subprogram 4 jobs are almost always considered CL&P customers in the tracking database, likely indicating that the electricity company gets charged for most of the measures installed in those subprograms. In 2005, however, the percentage of participants who are primarily considered customers of either Connecticut Natural Gas or Yankee Gas increased. This is most likely a reflection of the greater level of gas company participation in C&LM programs in general and WRAP specifically.

### Table 6–4: Number of WRAP Participants by Utility, 1999 to 2005a

<table>
<thead>
<tr>
<th>Year</th>
<th>Customers Served</th>
<th>CL&amp;Pb</th>
<th>Connecticut Natural Gas</th>
<th>Yankee Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>1999</td>
<td>4,399</td>
<td>99%</td>
<td>&lt;1%</td>
<td>1%</td>
</tr>
<tr>
<td>2000</td>
<td>6,384</td>
<td>99%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>2001</td>
<td>6,493</td>
<td>96%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>2002</td>
<td>5,959</td>
<td>96%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>2003</td>
<td>3,714</td>
<td>96%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>2004</td>
<td>5,781</td>
<td>98%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>2005</td>
<td>9,830</td>
<td>90%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

a All participants are customers of CL&P. Some participants are also customers of the Connecticut Natural Gas and Yankee Gas, which are WRAP partners.
b At times the utility was not listed. In these cases, we counted the participant as a CL&P customer.
c The utility was not listed for most participants in 1999 and 2000. Therefore, by assigning all participants of unknown utility to CL&P, we may have slightly underestimated the percentage of participants served by the two gas utilities.

Envelope measures have dominated WRAP installations every year since 1999. (Table 6–5 and Table 6–6) The number of lighting measures installed has generally increased each year, except for a small decline in 2004. The number of refrigerators replaced by WRAP jumped considerably in 2005, representing a return to pre-2003 levels. WRAP is now replacing fewer heating systems now than in 2000 and 2001, despite a considerable increase in 2005; WRAP is paying for more heating system cleanings than in the past. Although lower now than in 1999 and 2000, the number of WRAP measures has increased steadily since 2003.
Table 6–5: WRAP Percentage of Installations by Measure Type, 2003 to 2005

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliances</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td>1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Envelope</td>
<td>85%</td>
<td>86%</td>
<td>75%</td>
<td>68%</td>
<td>68%</td>
<td>73%</td>
<td>61%</td>
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<tr>
<td>Heating</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>5%</td>
<td>7%</td>
<td>13%</td>
<td>20%</td>
<td>20%</td>
<td>17%</td>
<td>29%</td>
</tr>
<tr>
<td>Water Heating</td>
<td>4%</td>
<td>5%</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Misc.</td>
<td>6%</td>
<td>1%</td>
<td>2%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

* The 1999 WRAP tracking database lists an unusually high number of “miscellaneous” measures.

Table 6–6: WRAP Audits and Measures Installed, 2002 through 2005

<table>
<thead>
<tr>
<th>Type</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Visits</td>
<td>4,399</td>
<td>6,384</td>
<td>6,493</td>
<td>5,959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performeda</td>
<td>4,399</td>
<td>6,384</td>
<td>6,493</td>
<td>5,959</td>
<td>3,714</td>
<td>5,781</td>
<td>9,830</td>
</tr>
<tr>
<td>Appliances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Freezer</td>
<td>3</td>
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<td>7</td>
<td>13</td>
<td>33</td>
<td>27</td>
<td>20</td>
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<tr>
<td>Refrigerator</td>
<td>778</td>
<td>1,207</td>
<td>1,572</td>
<td>1,013</td>
<td>821</td>
<td>600</td>
<td>1,531</td>
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<td>0</td>
<td>0</td>
<td>69</td>
<td>0</td>
<td>179</td>
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<td>24</td>
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<td>180</td>
<td>182</td>
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<td>Attic Insulation</td>
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<td>0</td>
<td>125</td>
<td>106,780</td>
<td>103</td>
<td>77,588</td>
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<tr>
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<td>15,054</td>
<td>203</td>
<td>113,639</td>
<td>255</td>
<td>191,689</td>
<td>130</td>
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<td>Door Insulation</td>
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<td>64</td>
<td>84</td>
<td>83</td>
<td>7</td>
<td>10</td>
<td>42</td>
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<tr>
<td>Door Sweep</td>
<td>5,276</td>
<td>6,998</td>
<td>6,561</td>
<td>4,769</td>
<td>3,407</td>
<td>6,478</td>
<td>5,281</td>
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<tr>
<td>Duct Insulation</td>
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<td>777</td>
<td>125</td>
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<td>160</td>
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<td>Broken Glass</td>
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<td>1,645</td>
<td>1,821</td>
<td>1,489</td>
<td>619</td>
<td>980</td>
<td>739</td>
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<td>17,487</td>
<td>17,883</td>
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<td>7,872</td>
<td>7,872</td>
<td>17,530</td>
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<td>326</td>
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<td>2,451</td>
<td>1,905</td>
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<tr>
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<td>99</td>
<td>113,077</td>
<td>231</td>
<td>273,534</td>
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<td>0</td>
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<td>183,694</td>
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<td>13</td>
<td>11</td>
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<td>85</td>
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<td>Heating Tuneup</td>
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Nexus Market Research
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<th>Type</th>
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<th>2002</th>
<th>2003</th>
<th>2004</th>
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<td>Ft²</td>
<td>Measures</td>
<td>Ft²</td>
<td>Measures</td>
<td>Ft²</td>
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<tr>
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<td>0</td>
<td>188</td>
<td>66</td>
<td>118</td>
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<tr>
<td><strong>Water Heating</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerator</td>
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<td>8,242</td>
<td>8,036</td>
<td>5,398</td>
<td>9,150</td>
<td>11,901</td>
<td></td>
</tr>
<tr>
<td>Pipe Insulation</td>
<td>5,326</td>
<td>8,240</td>
<td>7,903</td>
<td>4,562</td>
<td>3,341</td>
<td>8,151</td>
<td>4,780</td>
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</tr>
<tr>
<td>Showerhead</td>
<td>2,930</td>
<td>3,569</td>
<td>3,744</td>
<td>3,656</td>
<td>2,517</td>
<td>3,885</td>
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<td>995</td>
<td>1,024</td>
<td>771</td>
<td>566</td>
<td>683</td>
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<td>60</td>
<td>37</td>
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<td></td>
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<td></td>
</tr>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
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<td>86</td>
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<td>41</td>
<td>40</td>
<td>100</td>
<td>272</td>
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<tr>
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<td>0</td>
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<td>39</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Waterbed Cover</td>
<td>116</td>
<td>166</td>
<td>153</td>
<td>67</td>
<td>16</td>
<td>26</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>22,485a</td>
<td>3,941</td>
<td>4,029</td>
<td>1,098</td>
<td>56</td>
<td>120</td>
<td>1,125</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>Excludes number served</td>
<td>391,365</td>
<td>414,119</td>
<td>232,738</td>
<td>186,290</td>
<td>116,529</td>
<td>237,336</td>
<td>264,803</td>
</tr>
</tbody>
</table>

*a Based on the total number of records in the WRAP database. Some households received services through more than one Subprogram.

*b The “other” installations in 1999 and the “sill plate seals” installations in 2000 appear unusually high. WRAP unit staff verified that they are the numbers listed in the tracking database. However, because none of the current WRAP unit members were with the program in 1999 and 2000, no one is certain why the number of installations differs in these two years.
The typical household participating in WRAP in 2005 received the following (i.e. the measures were installed in 25% or more households): one or more large table lamps, faucet aerators, a showerhead, a few CFLs, window and door caulking, and door sweeps. This suggests that the typical WRAP participant is receiving a mixture of simple measures targeting lighting, water heating, and space heating. Ten percent or more of homes also receive various types of fixtures, a refrigerators, outlet gaskets, small table lamps, or miscellaneous other measures.

### Table 6–7: Number of WRAP Households Receiving Each Measure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Households Receiving</th>
<th>% of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Records in Database</strong></td>
<td>9,830</td>
<td>9,830</td>
</tr>
<tr>
<td>Table Lamp (22W) Large</td>
<td>6,922</td>
<td>70.4%</td>
</tr>
<tr>
<td>Aerator</td>
<td>6,331</td>
<td>64.4%</td>
</tr>
<tr>
<td>Showerhead</td>
<td>5,188</td>
<td>52.8%</td>
</tr>
<tr>
<td>Compact Light Bulb (15W)</td>
<td>4,817</td>
<td>49.0%</td>
</tr>
<tr>
<td>Compact Light Bulb (20W)</td>
<td>4,708</td>
<td>47.9%</td>
</tr>
<tr>
<td>Caulk Window</td>
<td>2,908</td>
<td>29.6%</td>
</tr>
<tr>
<td>Weatherstrip Door</td>
<td>2,805</td>
<td>28.5%</td>
</tr>
<tr>
<td>Door Sweep</td>
<td>2,509</td>
<td>25.5%</td>
</tr>
<tr>
<td>Caulk Exterior Door</td>
<td>2,492</td>
<td>25.4%</td>
</tr>
<tr>
<td>Circline Fixture (32W)</td>
<td>1,892</td>
<td>19.2%</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>1,530</td>
<td>15.6%</td>
</tr>
<tr>
<td>Outlet Gasket</td>
<td>1,504</td>
<td>15.3%</td>
</tr>
<tr>
<td>Circline Fixture (40W)</td>
<td>1,494</td>
<td>15.2%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1,077</td>
<td>11.0%</td>
</tr>
<tr>
<td>Fixture (18&quot; Strip)</td>
<td>1,056</td>
<td>10.7%</td>
</tr>
<tr>
<td>Fixture, Security (13W)</td>
<td>1,009</td>
<td>10.3%</td>
</tr>
<tr>
<td>Table Lamp (22W) Small</td>
<td>945</td>
<td>9.6%</td>
</tr>
<tr>
<td>Interior Caulk</td>
<td>785</td>
<td>8.0%</td>
</tr>
<tr>
<td>Weatherstrip Temperature Adjustment</td>
<td>678</td>
<td>6.9%</td>
</tr>
<tr>
<td>Pipe Insulation</td>
<td>458</td>
<td>4.7%</td>
</tr>
<tr>
<td>Heating System Tune-up</td>
<td>333</td>
<td>3.4%</td>
</tr>
<tr>
<td>Window Glaze</td>
<td>317</td>
<td>3.2%</td>
</tr>
<tr>
<td>Fix Broken Glass</td>
<td>313</td>
<td>3.2%</td>
</tr>
<tr>
<td>Interior Storm Windows</td>
<td>285</td>
<td>2.9%</td>
</tr>
<tr>
<td>Sill Plate Sealant</td>
<td>282</td>
<td>2.9%</td>
</tr>
<tr>
<td>Medicine Cabinet with GFI</td>
<td>249</td>
<td>2.5%</td>
</tr>
<tr>
<td>Window Lock (top)</td>
<td>214</td>
<td>2.2%</td>
</tr>
<tr>
<td>Minor carpentry</td>
<td>203</td>
<td>2.1%</td>
</tr>
<tr>
<td>Ceiling Insulation</td>
<td>192</td>
<td>2.0%</td>
</tr>
<tr>
<td>Sidewall Insulation</td>
<td>170</td>
<td>1.7%</td>
</tr>
<tr>
<td>Window Lock (Side)</td>
<td>158</td>
<td>1.6%</td>
</tr>
<tr>
<td>Thermostat</td>
<td>133</td>
<td>1.4%</td>
</tr>
<tr>
<td>Siding</td>
<td>121</td>
<td>1.2%</td>
</tr>
<tr>
<td>Air Conditioner Sears 11700 BTU</td>
<td>115</td>
<td>1.2%</td>
</tr>
<tr>
<td>Sconce Fixture (13W)</td>
<td>103</td>
<td>1.0%</td>
</tr>
<tr>
<td>Fixture (24&quot; Strip)</td>
<td>102</td>
<td>1.0%</td>
</tr>
<tr>
<td>Heating Repair</td>
<td>89</td>
<td>0.9%</td>
</tr>
<tr>
<td>Window</td>
<td>80</td>
<td>0.8%</td>
</tr>
<tr>
<td>Furnace Replacement</td>
<td>78</td>
<td>0.8%</td>
</tr>
<tr>
<td>Torchiere</td>
<td>77</td>
<td>0.8%</td>
</tr>
<tr>
<td>Measure</td>
<td>Households Receiving</td>
<td>% of Households</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>----------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Total Records in Database</td>
<td>9,830</td>
<td>9,830</td>
</tr>
<tr>
<td>Attic Insulation</td>
<td>76</td>
<td>0.8%</td>
</tr>
<tr>
<td>Fixture, Coach Lantern (13W)</td>
<td>74</td>
<td>0.8%</td>
</tr>
<tr>
<td>Fixture Retrofit 2 x 2 Lamp T-8 Kit</td>
<td>73</td>
<td>0.7%</td>
</tr>
<tr>
<td>Compact Light Bulb (23W)</td>
<td>69</td>
<td>0.7%</td>
</tr>
<tr>
<td>Fixture Retrofit 4’ x2 Lamp</td>
<td>68</td>
<td>0.7%</td>
</tr>
<tr>
<td>Minor Plumbing</td>
<td>60</td>
<td>0.6%</td>
</tr>
<tr>
<td>Air Conditioner Sears 8000 BTU</td>
<td>34</td>
<td>0.3%</td>
</tr>
<tr>
<td>Exit Lights</td>
<td>23</td>
<td>0.2%</td>
</tr>
<tr>
<td>Freezer</td>
<td>20</td>
<td>0.2%</td>
</tr>
<tr>
<td>Air Conditioner Sears 5300 BTU</td>
<td>12</td>
<td>0.1%</td>
</tr>
<tr>
<td>Waterbed Cover</td>
<td>11</td>
<td>0.1%</td>
</tr>
<tr>
<td>Burner Replacement</td>
<td>10</td>
<td>0.1%</td>
</tr>
<tr>
<td>Attic Hatchway</td>
<td>8</td>
<td>0.1%</td>
</tr>
<tr>
<td>Door Insulation</td>
<td>8</td>
<td>0.1%</td>
</tr>
<tr>
<td>Window Covering</td>
<td>7</td>
<td>0.1%</td>
</tr>
<tr>
<td>Water Heater Wrap</td>
<td>5</td>
<td>0.1%</td>
</tr>
<tr>
<td>Fixture (50 HPS)</td>
<td>3</td>
<td>0.0%</td>
</tr>
<tr>
<td>Duct Insulation</td>
<td>2</td>
<td>0.0%</td>
</tr>
<tr>
<td>CO Detector</td>
<td>2</td>
<td>0.0%</td>
</tr>
<tr>
<td>Air Conditioner Sears 12200 BTU</td>
<td>2</td>
<td>0.0%</td>
</tr>
<tr>
<td>Fixture-Security (26 Watt)</td>
<td>2</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

* Number of households based on records in the WRAP database.
Appendix A: Languages Tracked by the Census

The following list is taken from the detailed definition of “Languages Spoken at Home” published by the Census Bureau in its “Census Data Information” under the Subject “Languages Spoken at Home and Ability to Speak English.” (Table A–1) Bolded languages are spoken by WRAP or other readily available NU staff members (as of June 2006). Highlighted languages were named by employees of Connecticut Legal Services (CLS) as languages they have encountered in their work for that agency. Additional languages encountered by CLS are included in Table A–2.

### Table A–1: Census Language Groups

<table>
<thead>
<tr>
<th>Four Group Classification</th>
<th>39 Group Classification</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>Spanish and Spanish Creole</td>
<td>Spanish, Ladino</td>
</tr>
<tr>
<td>Other Indo-European</td>
<td>French</td>
<td>French, Cajun, Patois</td>
</tr>
<tr>
<td></td>
<td>French Creole</td>
<td>Haitian Creole</td>
</tr>
<tr>
<td></td>
<td>Italian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Portuguese and Portuguese Creole</td>
<td></td>
</tr>
<tr>
<td></td>
<td>German</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yiddish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other West Germanic</td>
<td>Dutch, PA Dutch, Afrikaans</td>
</tr>
<tr>
<td></td>
<td>Scandinavian</td>
<td>Danish, Norwegian, Swedish</td>
</tr>
<tr>
<td></td>
<td>Greek</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Russian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Serbo-Croatian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Slavic</td>
<td>Czech, Slovak, Ukrainian</td>
</tr>
<tr>
<td></td>
<td>Armenian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Persian *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gujarati</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hindi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urdu</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Indic</td>
<td>Bengali, Mrathi, Punjabi, Romany</td>
</tr>
<tr>
<td></td>
<td>Other Indo-European</td>
<td>Albanian, Gaelic, Lithuanian, Rumanian</td>
</tr>
<tr>
<td>Asian and Pacific Island</td>
<td>Chinese</td>
<td>Cantonese, Formosan, Mandarin</td>
</tr>
<tr>
<td></td>
<td>Japanese</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Korean</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mon-Khmer, Cambodian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Miao, Hmong</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thai</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laotian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vietnamese</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Asian</td>
<td>Malayalam, Telugu, Tamil, Turkish</td>
</tr>
<tr>
<td></td>
<td>Tagalog</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Pacific Island</td>
<td>Chamorro, Hawaiian, Ilocano, Indonesian, Samoan</td>
</tr>
<tr>
<td>All others</td>
<td>Navajo</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Native North American</td>
<td>Apache, Cherokee, Choctaw, Dakota, Keres, Pima, Yupik</td>
</tr>
<tr>
<td></td>
<td>Hungarian</td>
<td></td>
</tr>
<tr>
<td>Four Group Classification</td>
<td>39 Group Classification</td>
<td>Examples</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Arabic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hebrew</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African</td>
<td></td>
<td>Amharic, Ibo, Twi, Yoruba, Bantu, Swahili, Somali</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Syriac, Finnish, Other American</td>
</tr>
</tbody>
</table>

*The CLS staff members actually identified Farsi, the most common Persian language.*

### Table A–2: Other Languages or Countries of Origin Encountered by CLS Staff

<table>
<thead>
<tr>
<th>Language</th>
<th>Country of Origin (language not known)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dinka (African dialect)</td>
<td>Iran</td>
</tr>
<tr>
<td>Kurdish</td>
<td>Barbados</td>
</tr>
<tr>
<td>Bosnian</td>
<td>Ivory Coast</td>
</tr>
<tr>
<td>American Sign Language</td>
<td>Kosovo</td>
</tr>
<tr>
<td>Albanian</td>
<td>Morocco</td>
</tr>
<tr>
<td>Romanian</td>
<td>Nigeria</td>
</tr>
<tr>
<td></td>
<td>India</td>
</tr>
<tr>
<td></td>
<td>Trinidad</td>
</tr>
</tbody>
</table>

*CLS staff members knew the country of origin but not the language spoken.*
APPENDIX B

EVALUATION OF THE UI HELPS AND WRAP LOW-INCOME WEATHERIZATION PROGRAMS: PARTICIPANT SURVEY REPORT
EVALUATION OF THE UI HELPS AND WRAP LOW-INCOME WEATHERIZATION PROGRAMS: PARTICIPANT SURVEY REPORT

FINAL
October 18, 2006

Submitted to:
Northeast Utilities
United Illuminating

Submitted by:
Nexus Market Research, Inc.
Eastham Associates
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1 Executive Summary

This report describes the results of a telephone survey of participants in the WRAP (CL&P) and UI Helps low-income programs. The survey was designed to assess the customer satisfaction with the programs and their impacts as well as participants’ experiences with the programs staff, agencies staff, and contractors. A total of 202 participants in the UI Helps program and 212 participants in the WRAP program responded the survey. The response rate was 29% and the overall sampling error was 4.1%. This executive summary describes the key findings of the survey analysis.

1.1 Key Demographics

- **Housing Type, Ownership, and Bill Payment.** Table 1–1 displays the key demographic characteristics of telephone survey respondents. Overall, nearly two-thirds of respondents rent their homes, and another one-third own their homes. A slightly higher proportion of WRAP participants than UI Helps participants rent their homes, likely reflecting the fact that WRAP serves more owner-metered, multi-family buildings than UI Helps does.

- **Eligibility Criteria.** One-half of respondents earn less than $30,000 per year, with a slightly higher level among WRAP participants than UI participants. Nearly all respondents overall and in both the UI and WRAP service territories pay their own electricity bills. Approximately three-quarters of all participants pay their own heating bills, though the figure is slightly higher for UI respondents than CL&P respondents.

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent my home</td>
<td>55%</td>
<td>70%</td>
<td>62%</td>
</tr>
<tr>
<td>Total household income less than $30,000</td>
<td>43%</td>
<td>56%</td>
<td>50%</td>
</tr>
<tr>
<td>Pay the electricity bill</td>
<td>98%</td>
<td>96%</td>
<td>97%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
<tr>
<td>Pay the heating bill</td>
<td>82%</td>
<td>68%</td>
<td>76%</td>
</tr>
<tr>
<td>Number of Respondents (who do use heating fuel)</td>
<td>163</td>
<td>150</td>
<td>313</td>
</tr>
</tbody>
</table>

1.2 Program Participation

- **Program Name.** The majority of respondents, roughly two-thirds, did not know the name of the program in which they participated. Likely due to the prevalence of the neighborhood canvassing strategy, 51% of UI Helps participants report that they first heard about the program when someone came to their house. WRAP participants heard about the programs in more diverse ways—27% mentioned someone came to their house, 12% mentioned an application that came with their bill, and 12% mentioned a community action agency (CAA)
• **Participation Path.** Seventy-two percent of UI respondents participated in the program when someone from the program visited their home, compared to about 40% of WRAP respondents. Twenty-seven percent of WRAP customers mailed back an application form.

• **Reasons for Participating.** WRAP respondents (37%) were more likely than UI respondents (19%) to report participating in the program because they “wanted help paying their utility bills.” This likely reflects WRAP’s closer ties to the energy assistance program. UI respondents were more likely than WRAP participants to report participating to reduce energy bills (28% vs. 19%) or to learn how to save energy (28% vs. 16%)

• **Understanding of Program Goals.** Respondents show a high level of understanding about why the utilities offer these programs. Roughly 40% of respondents believe that sponsors offer the program in order to “save me or my household energy.” Another 25% mention lower energy bills, followed by 17% who mention saving the sponsors energy, and 15% who mention saving Connecticut energy. (Table 1–2)

### Table 1–2: Understanding of Program Goals
(All Respondents; Multiple Response)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>To save me or my household energy</td>
<td>36%</td>
<td>44%</td>
<td>40%</td>
</tr>
<tr>
<td>To lower my energy bills</td>
<td>23%</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>To save the program or company energy</td>
<td>20%</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>To save Connecticut/the state energy</td>
<td>18%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
• **Participation in Other Assistance Programs.** Of those respondents who pay their natural gas bill and oil bill, 54% and 31%, respectively, received energy assistance to help them pay their bills. Nearly one-half of the WRAP participants who pay their oil bills report receiving assistance in paying their oil bills, compared to 16% of UI Helps participants. Fourteen percent of respondents who pay their electricity bill received assistance with paying their electricity bills. Fifteen percent of WRAP customers participate in the “NU Start” program, 11% of UI Helps customers participate in the UI Matching Payment program and 1% in the UI Forgiveness program. (Table 1–3)

**Table 1–3: Types of Assistance Received in 2005**
(Base stated in the table)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy assistance to help pay the natural gas bill</td>
<td>48%</td>
<td>63%</td>
<td>54%</td>
</tr>
<tr>
<td><strong>Respondents who pay for natural gas</strong></td>
<td>79</td>
<td>49</td>
<td>128</td>
</tr>
<tr>
<td>Energy assistance to help pay the heating oil bill</td>
<td>16%</td>
<td>48%</td>
<td>31%</td>
</tr>
<tr>
<td><strong>Respondents who pay for oil</strong></td>
<td>47</td>
<td>46</td>
<td>93</td>
</tr>
<tr>
<td>Energy assistance to help pay the electricity bill</td>
<td>10%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Respondents who pay for electricity</strong></td>
<td>201</td>
<td>206</td>
<td>407</td>
</tr>
<tr>
<td>Receive an emergency fuel fill</td>
<td>9%</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Respondents who pay for oil or bottled gas</strong></td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Participate in the NU Start “New Start” program</td>
<td>na</td>
<td>15%</td>
<td>na</td>
</tr>
<tr>
<td><strong>Respondents participating in WRAP</strong></td>
<td>212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in the UI Matching Payment Program</td>
<td>11%</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td><strong>Respondents participating in UI Helps</strong></td>
<td>202</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in the UI Forgiveness Program</td>
<td>1%</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td><strong>Respondents participating in UI Helps</strong></td>
<td>202</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.3 **Program Experience**

• **Community Action Agencies.** Most respondents who applied for the program at a CAA office visited the agency that day to sign up for fuel assistance (42%) or request help with utility bills (29%). About one-half of respondents report that it was their idea to complete an application, and about one-third said it was the agency’s idea.

• **Rating of Community Action Agency Staff.** Most respondents think that agency staff members are “very polite” (84%), “very knowledgeable” (73%), and “very helpful” (87%). (Table 1–4)

**Table 1–4: Ratings of Agency Staff**
(Respondents who Applied at an Agency)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency staff were very polite</td>
<td>10</td>
<td>15</td>
<td>84%</td>
</tr>
<tr>
<td>Agency staff were very knowledgeable</td>
<td>9</td>
<td>12</td>
<td>73%</td>
</tr>
<tr>
<td>Agency staff were very helpful</td>
<td>10</td>
<td>15</td>
<td>87%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>17</td>
<td>30</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for each program; percentage of respondents reported for Overall.

Nexus Market Research
• **Application Process.** Of those applying for the programs, most respondents believe the application process to be “very easy” (85%). (Table 1–5) Eighty-two percent of respondents are “very satisfied” with the time to complete the application. Respondents suggest that the program could improve the sign-up process by easing the eligibility requirements, simplifying the entire process, and offering online sign-ups.

**Table 1–5: Rating of the Application Process**
(Respondents who Completed an Application)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application process was very easy</td>
<td>4</td>
<td>87%</td>
<td>85%</td>
</tr>
<tr>
<td>Very satisfied with application process</td>
<td>3</td>
<td>86%</td>
<td>82%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>6</td>
<td>59</td>
<td>65</td>
</tr>
</tbody>
</table>

*a* Number of respondents reported for UI Helps program; percentage of respondents reported for WRAP and Overall.

• **Energy Auditor.** About one-third of respondents remember their energy auditor. Most of these respondents say that their energy auditor was “very polite” (92%), “very knowledgeable” (72%), and “very helpful” (70%). (Table 1–6)

**Table 1–6: Ratings of Auditor**
(Respondents who Remembered Auditor)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditor was very polite</td>
<td>91%</td>
<td>93%</td>
<td>92%</td>
</tr>
<tr>
<td>Auditor was very knowledgeable</td>
<td>66%</td>
<td>81%</td>
<td>72%</td>
</tr>
<tr>
<td>Auditor was very helpful</td>
<td>63%</td>
<td>81%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>85</td>
<td>68</td>
<td>153</td>
</tr>
</tbody>
</table>

• **Appointment Scheduling.** Most respondents (63%) report that the program staff showed up at their home; this is particularly true for UI Helps respondents (77%) as opposed to WRAP participants (42%). Of those setting up appointments, most report that program staff contacted them to schedule an appointment and that it was very easy to find a convenient time for the appointment. Of the five respondents who report difficulties in scheduling, three say it was due to their own schedule being busy.
**Program Contractors.** According to respondents, program contractors were sent to the homes of 7% percent of UI Helps respondents and 34% of WRAP respondents. Most of these respondents (74%) are “very satisfied” with the quality of the contractors’ work. (Table 1–7) Eighty-three percent of respondents report that the contractor was “very polite,” 74% think the contractor was “very knowledgeable,” and 73% say the contractor was “very helpful.”

**Table 1–7: Ratings of Contractor**

(Respondents who saw Contractors)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied with quality of work</td>
<td>10</td>
<td>73%</td>
<td>74%</td>
</tr>
<tr>
<td>Contractor was very polite</td>
<td>11</td>
<td>82%</td>
<td>83%</td>
</tr>
<tr>
<td>Contractor was very knowledgeable</td>
<td>11</td>
<td>72%</td>
<td>74%</td>
</tr>
<tr>
<td>Contractor was very helpful</td>
<td>12</td>
<td>69%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>75</td>
<td>88</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for UI Helps program; percentage of respondents reported for WRAP and Overall.

1.4 Program Satisfaction

- **Overall Program.** The majority of respondents (64%) are “very satisfied” with the program overall and another 21% are “satisfied.” (Table 1–8) The perceived lack of energy savings or continued high utility bills serves as the primary reason for dissatisfaction with the program.

**Table 1–8: Satisfaction with Program Overall**

(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>4%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>22%</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>61%</td>
<td>68%</td>
<td>64%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>6%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
• **Products and Services.** Over two-thirds of respondents are “very satisfied” with the products and services provided by the program; another 20% are “satisfied.” (Table 1–9) Those few respondents who are dissatisfied with the products and services primarily mention the issues or concerns with light bulbs. Some also think that their bills remain too high.

<table>
<thead>
<tr>
<th>Table 1–9: Satisfaction with Products and Services (All Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UI Helps</strong></td>
</tr>
<tr>
<td>Very dissatisfied</td>
</tr>
<tr>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
</tr>
<tr>
<td>Satisfied</td>
</tr>
<tr>
<td>Very satisfied</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

• **Concerns or Complaints.** Overall, 8% of respondents mention that they had concerns or complaints about the program, but only 3% of all respondents actually contacted the program about concerns or complaints. The other 5% did not call. Concerns and complaints center on products not working correctly or being improperly installed, or that the participant did not receive a particular product or service.

• **Satisfaction with Home Comfort.** Over sixty percent of respondents report that the programs’ products and services made their homes more comfortable, 30% thought they had no effect, and 2% thought their homes were less comfortable. Thirty-five percent of UI helps customers thought the program had no effect on comfort compared to 25% of WRAP customers. (Table 1–10)

<table>
<thead>
<tr>
<th>Table 1–10: Comfort Rating of Products and Services (All Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UI Helps</strong></td>
</tr>
<tr>
<td>More comfortable</td>
</tr>
<tr>
<td>No effect on comfort</td>
</tr>
<tr>
<td>Less comfortable</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>
**Satisfaction with Electricity Savings.** Over one-third of respondents are “very satisfied” with the level of electricity savings and 18% are “satisfied.” (Table 1–11) However, 14% of respondents are dissatisfied. Nearly all respondents (93%) who are dissatisfied with their electricity savings cite the lack of savings, high bills, and rate increases.

<table>
<thead>
<tr>
<th>Table 1–11: Satisfaction Rating for Electricity Savings (Respondents who pay Electricity bill)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UI Helps</strong></td>
</tr>
<tr>
<td>Very dissatisfied</td>
</tr>
<tr>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
</tr>
<tr>
<td>Satisfied</td>
</tr>
<tr>
<td>Very satisfied</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

**Satisfaction with Heating Fuel Savings.** Twenty-nine percent of respondents are “very satisfied” with the level of heating fuel savings, and 16% are “satisfied.” (Table 1–12) However, 11% of respondents are dissatisfied. Most respondents are dissatisfied with the heating fuel savings due to the lack of savings and high bills. In addition, several respondents mention that they would like to see more comprehensive services.

<table>
<thead>
<tr>
<th>Table 1–12: Satisfaction Rating for Heating Fuel Savings (Respondents who pay Heating bill)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UI Helps</strong></td>
</tr>
<tr>
<td>Very dissatisfied</td>
</tr>
<tr>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
</tr>
<tr>
<td>Satisfied</td>
</tr>
<tr>
<td>Very satisfied</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

**Recommending the Program.** Four out of the 13 UI Helps respondents who recall applying for the program have recommended it to others. More than half (53%) of WRAP participants who applied for the program have recommended the program to others. Most respondents have recommended the program to others in order “to help them save money or energy,” while others have done so because it is a “good program.” Respondents who have elected not to recommend the program to others have done so because they did not think they would qualify or it just did not occur to them.
• **Program Benefits.** When asked to identify the single most important thing about the program, respondents say that the program saves money on utility bills (39%) and that the products and services are free (32%). Making it easier to pay the utility bill is the most important benefit of the program (27%), followed by improving home comfort (19%). However, 15% of respondents believe there is no benefit.

• **Most-liked and Least-liked Aspects of Program.** Participants report that the most-liked aspect of the program is that it lowers their bills (23%), followed by the service being free (20%), saving energy (13%), and improving comfort (12%). Over two-thirds of respondents say they “like everything” when asked to identify what they do not like about the program. However, 7% say the program did not reduce their utility bills.

• **Willingness to Pay.** In order to determine how much participants value the programs, we asked if they would be willing to pay a small amount of money in order to receive similar services in the future. Over one-half indicate that they would be willing to pay a small amount, demonstrating a high degree of value given the fact that participants have low incomes. Furthermore, of those unwilling to pay for program services, over one-third say they do not have the money, suggesting that they do value the programs but do not have the disposable income to pay anything for the services. One-third report the services are not worth the money, and 14% believe it is too expensive.
2 Introduction

The participant survey was designed to assess customer satisfaction with the UI Helps and WRAP (CL&P) programs and their impacts as well as participants’ experiences with program and agency staff and contractors. The survey asked questions on the following topics:

- Paths to Participation
- Reasons and Concerns about Participation
- Expectations and Satisfaction
- Other Assistance Programs
- Application Process and Interaction with Community Action Agencies (CAAs)
- Satisfaction with the Program and Personnel
- Satisfaction with Program Impacts
- Household Characteristics

2.1 Response Rates and Sampling Error

The participant survey was fielded from May 1 to May 18, 2005. A total of 414 participants in UI Helps or WRAP were surveyed—202 from UI Helps and 212 from WRAP. The response rate was 29%, and was determined using a calculator developed by the American Association of Public Opinion Research (AAPOR).\(^1\) (Table 2–1) This method excludes from the calculation those who were screened from the survey and unusable phone numbers. It also assumes that the proportion of eligible respondents not contacted is the same as the proportion that were contacted.

### Table 2–1: Response Rate\(^3\)

*(base – all phone numbers dialed at least once)*

<table>
<thead>
<tr>
<th>Phone Numbers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Numbers Dialed</td>
<td>3,521</td>
</tr>
<tr>
<td>I=Completed Surveys</td>
<td>414</td>
</tr>
<tr>
<td>R=Non completed surveys</td>
<td>217</td>
</tr>
<tr>
<td>NC=Not Contacted</td>
<td>181</td>
</tr>
<tr>
<td>O=Other</td>
<td>63</td>
</tr>
<tr>
<td>UH=Unknown eligibility</td>
<td>1,365</td>
</tr>
<tr>
<td>W=Willing but screened out</td>
<td>152</td>
</tr>
<tr>
<td>NE=Not eligible</td>
<td>1,129</td>
</tr>
<tr>
<td>(e)=Estimated Proportion of Unknowns that are eligible(^5)</td>
<td>.406</td>
</tr>
<tr>
<td>(e(UH))=Estimated Number of Unknowns that are eligible</td>
<td>554</td>
</tr>
<tr>
<td><strong>RESPONSE RATE(^c)</strong></td>
<td><strong>29%</strong></td>
</tr>
</tbody>
</table>


\(^2\) \(\frac{I+R+NC+O}{(I+R+NC+O)+(W+NE)}\)

\(^3\) \(\frac{I}{I+(R+NC+O)+e(UH)}\)
Table 2–2 includes more detail on the reasons that surveys were not completed for 3,107 of the phone numbers called. Most commonly, the phone call was not answered by a person, but instead continued to ring, was picked up by an answering machine, or was busy (42%). The second most common reason was that the phone number was not in service or had been disconnected (28%).

Table 2–2: Reasons Survey Not Completed
(base – all phone numbers dialed at least once)

<table>
<thead>
<tr>
<th>Reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone Numbers not Yielding Completed Survey</td>
<td>3,107</td>
</tr>
<tr>
<td>Non completed surveys</td>
<td>7%</td>
</tr>
<tr>
<td>Refusal</td>
<td>6%</td>
</tr>
<tr>
<td>Mid-survey termination</td>
<td>1%</td>
</tr>
<tr>
<td>Not Contacted – Respondent Never Available</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>Language Barrier</td>
<td>1%</td>
</tr>
<tr>
<td>Physically/mentally unable</td>
<td>1%</td>
</tr>
<tr>
<td>No Survey Screening Completed</td>
<td>44%</td>
</tr>
<tr>
<td>No answer/answering machine/busy</td>
<td>42%</td>
</tr>
<tr>
<td>Refused before screening</td>
<td>2%</td>
</tr>
<tr>
<td>Willing but screened out</td>
<td>5%</td>
</tr>
<tr>
<td>Under 18</td>
<td>0%</td>
</tr>
<tr>
<td>Says chose not to participate</td>
<td>1%</td>
</tr>
<tr>
<td>Doesn’t remember participating</td>
<td>4%</td>
</tr>
<tr>
<td>Work done at another address</td>
<td>0%</td>
</tr>
<tr>
<td>Not eligible</td>
<td>36%</td>
</tr>
<tr>
<td>Non-working/disconnected</td>
<td>28%</td>
</tr>
<tr>
<td>Beeper/fax/modem</td>
<td>1%</td>
</tr>
<tr>
<td>Wrong number/never heard of contact person</td>
<td>7%</td>
</tr>
<tr>
<td>Business number</td>
<td>1%</td>
</tr>
<tr>
<td>Quota full</td>
<td>0%</td>
</tr>
</tbody>
</table>

*a The respondent spoke a language other than English or Spanish

The overall sampling error at the 90% confidence level, assuming a 50%/50% break in responses was 4.1%. (Table 2–3) The sampling error for all UI Participants was 5.7% and for all CL&P participants was 5.8%. The sampling error for the individual WRAP Subprograms ranged from 10.0% for Subprogram 2 to 32.3% for participants in both Subprograms 2 and 4. The last sampling error is an artifact of the small population size for this group of participants.

Table 2–3: Participant Survey Sampling Error and Weight

<table>
<thead>
<tr>
<th>Utility and Subprogram “Strata”</th>
<th>Population Size</th>
<th>Final Sample Size</th>
<th>Final Sampling Error</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>15,593</td>
<td>414</td>
<td>4.1%</td>
<td>na</td>
</tr>
<tr>
<td>UI – All</td>
<td>8,071</td>
<td>202</td>
<td>5.7%</td>
<td>1.06</td>
</tr>
<tr>
<td>CL&amp;P Overall</td>
<td>7,522</td>
<td>212</td>
<td>5.8%</td>
<td>na</td>
</tr>
<tr>
<td>Subprogram 1</td>
<td>384</td>
<td>22</td>
<td>17.4%</td>
<td>0.46</td>
</tr>
<tr>
<td>Subprogram 2</td>
<td>2,913</td>
<td>67</td>
<td>10.0%</td>
<td>1.15</td>
</tr>
<tr>
<td>Subprogram 3</td>
<td>1,164</td>
<td>33</td>
<td>14.3%</td>
<td>0.94</td>
</tr>
<tr>
<td>Subprogram 4</td>
<td>2,155</td>
<td>59</td>
<td>10.7%</td>
<td>0.97</td>
</tr>
<tr>
<td>Subprograms 3 and 4</td>
<td>880</td>
<td>25</td>
<td>16.5%</td>
<td>0.93</td>
</tr>
<tr>
<td>Subprograms 2 and 4</td>
<td>26</td>
<td>6</td>
<td>32.3%</td>
<td>0.11</td>
</tr>
</tbody>
</table>

*a This is the usable population, excluding records in the tracking database lacking unique phone numbers.
In order to accurately reflect the population, each of the 414 completed surveys was weighted by the value displayed in the last column of Table 2–3. This weight is calculated as the ratio of the percentage of all customers in each stratum from the total population compared to the percentage of all respondents in each stratum from the survey sample.

Most tables presented in this report display the percentage calculated using the associated weight, though the ‘Number of Respondents’ shown at the bottom of each table represents the unweighted number of records. The majority of tables in the report present the results segmented by the UI Helps and CL&P WRAP programs. In addition, a few tables also segment the results by other variables such as owner vs. renter, heating fuel type, income range, and WRAP subprogram. The sub-sample asked each question is identified in parentheses below the title of each table.

3 Key Demographic Characteristics

This section summarizes the demographic characteristics that may affect household eligibility and the services a household might receive:

- Household size
- Income
- Owner-renter status
- Heating fuel
- Who pays for utilities

The other demographic characteristics are summarized in the final section of this report.

3.1 Eligibility Characteristics

Overall, 44% of the households have just one member, 24% have two members, and 15% have three members. (Table 3–1) The average household size of 2.2 people is the same overall and for each program.

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>40%</td>
<td>48%</td>
<td>44%</td>
</tr>
<tr>
<td>Two</td>
<td>27%</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>Three</td>
<td>16%</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td>Four</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Five</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Six</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Seven</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Eight</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Nine</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Ten</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>189</td>
<td>200</td>
<td>389</td>
</tr>
</tbody>
</table>

2 In the final report, we will compare the demographic characteristics of survey respondents to the characteristics reported in the demographic analysis from the 2000 Census and the program tracking databases.
Twenty-one percent of respondents earn less than $10,000 per year, another 19% earn between $10,000 and $19,999, and 10% earn between $20,000 and $29,999. (Table 3–2) Note, however, that 21% of respondents refused to answer the question.

Table 3–2: Annual Household Income in 2005
(All Respondents)

<table>
<thead>
<tr>
<th>Income Range</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $10,000</td>
<td>20%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>$10,000 to $19,999</td>
<td>14%</td>
<td>24%</td>
<td>19%</td>
</tr>
<tr>
<td>$20,000 to $29,999</td>
<td>9%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>$30,000 to $39,999</td>
<td>5%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>$40,000 to $49,999</td>
<td>7%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>$50,000 to $59,999</td>
<td>5%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>$60,000 to $69,999</td>
<td>3%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>$70,000 or more</td>
<td>6%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>9%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Refused</td>
<td>23%</td>
<td>19%</td>
<td>21%</td>
</tr>
</tbody>
</table>

As shown in the previous Table 3–2, a few households participating in the program have rather sizable incomes. Eligibility for both programs, however, is based on income and family size. The information in Table 3–3, which is read horizontally, not vertically, confirms that most households fall within the eligible income criterion for their household size based on the standards in place for most of 2005 (150% of the FPL for UI Helps and 200% of the FPL for WRAP, as denoted by the unshaded cells in the table). Many of the remaining households fall within 60% of the state median income, the criterion that went into effect in late 2005 (the cells shaded in gray). However, a few households have incomes that exceed eligibility criteria (the yellow shaded cells of the table). Such households could live in multifamily buildings served by WRAP Subprogram 3 or have been served by either programs’ neighborhood canvass approach. These modes of program delivery allow households with higher incomes to participate, as long as most households in the area are eligible.
### Table 3–3: Household Size by Income Range*

(All Respondents not answering “don’t know” or who refused to answer)

<table>
<thead>
<tr>
<th>Cut-off for family size</th>
<th>Less than $20,000</th>
<th>$20,000 - $29,999</th>
<th>$30,000 - $39,999</th>
<th>$40,000 - $49,000</th>
<th>$50,000 - $59,999</th>
<th>$60,000 - $69,999</th>
<th>$70,000 or more</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UI Helps 150% FPL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>$14,355</td>
<td>73%</td>
<td>4%</td>
<td>6%</td>
<td>10%</td>
<td>2%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Two</td>
<td>$19,245</td>
<td>47%</td>
<td>12%</td>
<td>9%</td>
<td>12%</td>
<td>3%</td>
<td>12%</td>
<td>34</td>
</tr>
<tr>
<td>Three</td>
<td>$24,135</td>
<td>33%</td>
<td>30%</td>
<td>4%</td>
<td>11%</td>
<td>7%</td>
<td>7%</td>
<td>27</td>
</tr>
<tr>
<td>Four</td>
<td>$29,025</td>
<td>36%</td>
<td>21%</td>
<td>21%</td>
<td>14%</td>
<td>7%</td>
<td>0%</td>
<td>14</td>
</tr>
<tr>
<td>Five</td>
<td>$33,915</td>
<td>25%</td>
<td>13%</td>
<td>0%</td>
<td>0%</td>
<td>13%</td>
<td>13%</td>
<td>38%</td>
</tr>
<tr>
<td>Six</td>
<td>$38,805</td>
<td>33%</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>33%</td>
</tr>
<tr>
<td>Seven</td>
<td>$43,695</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Eight+</td>
<td>$48,585</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>na</td>
<td>51%</td>
<td>14%</td>
<td>7%</td>
<td>9%</td>
<td>6%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>WRAP 200% FPL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>$19,140</td>
<td>85%</td>
<td>11%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Two</td>
<td>$25,660</td>
<td>62%</td>
<td>19%</td>
<td>15%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Three</td>
<td>$32,180</td>
<td>57%</td>
<td>17%</td>
<td>17%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Four</td>
<td>$38,700</td>
<td>0%</td>
<td>27%</td>
<td>27%</td>
<td>18%</td>
<td>9%</td>
<td>0%</td>
<td>18%</td>
</tr>
<tr>
<td>Five</td>
<td>$45,220</td>
<td>30%</td>
<td>40%</td>
<td>10%</td>
<td>0%</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Six</td>
<td>$51,740</td>
<td>33%</td>
<td>0%</td>
<td>33%</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Seven</td>
<td>$58,260</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Eight+</td>
<td>$64,780</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>na</td>
<td>63%</td>
<td>16%</td>
<td>11%</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

*The percent of respondents in each income bracket is displayed for each household size. Thus the table should be read horizontally, rather than vertically.

**Key**

- Meets current and former eligibility requirements
- Meets current eligibility requirements
- Exceeds current eligibility requirements
3.2 Housing and Utility Arrangements

Overall, nearly two-thirds of respondents rent their homes, and another one-third own their homes. (Table 3–4) The few remaining respondents have a variety of housing arrangements. A slightly higher proportion of WRAP participants than UI Helps participants rent their homes, likely reflecting the fact that WRAP serves more owner-metered, multi-family buildings than UI Helps does. UI Helps targets its service to residential customers who pay their own electric bills, limiting the participation of renters in owner-metered buildings.

<table>
<thead>
<tr>
<th>Table 3–4: Housing Arrangement</th>
<th>(All Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI Helps</td>
</tr>
<tr>
<td>I rent my home</td>
<td>55%</td>
</tr>
<tr>
<td>I own my home</td>
<td>43%</td>
</tr>
<tr>
<td>Someone who lives with me owns the home</td>
<td>0%</td>
</tr>
<tr>
<td>Someone who lives with me rents the home</td>
<td>0%</td>
</tr>
<tr>
<td>I don't own my home, but I don't pay rent</td>
<td>1%</td>
</tr>
<tr>
<td>Senior Housing</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
</tr>
</tbody>
</table>

Nearly one-half of UI Helps participants use natural gas as their primary heating fuel, compared to about one-quarter of WRAP participants. (Table 3–5) This is indicative of the urban nature of the UI service territory, whose customers have greater access to natural gas service. Roughly one-third of all customers use oil as their primary fuel, though 30% of WRAP participants use electricity compared to 19% of UI Helps participants.

<table>
<thead>
<tr>
<th>Table 3–5: Primary Heating Fuel</th>
<th>(All Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UI Helps</td>
</tr>
<tr>
<td>Natural gas; from underground pipes serving the neighborhood</td>
<td>46%</td>
</tr>
<tr>
<td>Fuel oil or heating oil</td>
<td>28%</td>
</tr>
<tr>
<td>Electricity</td>
<td>19%</td>
</tr>
<tr>
<td>Bottled or tank gas, LPG, or propane gas</td>
<td>1%</td>
</tr>
<tr>
<td>Some other fuel</td>
<td>0%</td>
</tr>
<tr>
<td>Don't know</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
</tr>
</tbody>
</table>
Table 3–6 displays the proportion of homeowners and renters, by program, who use oil, gas, electricity, or another fuel to heat their home. Homeowners in both programs predominantly use oil to heat their homes (roughly 50%). UI Helps renters mostly use gas (51%), while WRAP renters mostly use electricity (38%) followed by gas (27%). Because urban areas contain a greater proportion of rental properties and also have greater access to natural gas, this trend seems reasonable given the urban nature of the UI service territory.

<table>
<thead>
<tr>
<th>Table 3–6: Primary Heating Fuel by Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Respondents)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td><strong>UI Helps</strong></td>
</tr>
<tr>
<td>Oil</td>
</tr>
<tr>
<td>Gas</td>
</tr>
<tr>
<td>Electricity</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
<tr>
<td><strong>WRAP</strong></td>
</tr>
<tr>
<td>Oil</td>
</tr>
<tr>
<td>Gas</td>
</tr>
<tr>
<td>Electricity</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

Nearly all respondents pay their own electricity bills overall and in both the UI and WRAP service territories. (Table 3–7) Approximately three-quarters of all participants pay their own heating bills, though the figure is slightly higher for UI respondents than CL&P respondents (Table 3–8).

<table>
<thead>
<tr>
<th>Table 3–7: Who Pays Electricity Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Respondents)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>You pay it</td>
</tr>
<tr>
<td>Someone who lives with you pays it</td>
</tr>
<tr>
<td>Your landlord pays it</td>
</tr>
<tr>
<td>Someone who doesn't live with you pays it</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3–8: Who Pays Heating Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Respondents)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>I pay it</td>
</tr>
<tr>
<td>My landlord pays it</td>
</tr>
<tr>
<td>Someone who doesn't live with me pays it</td>
</tr>
<tr>
<td>Someone who lives with me pays it</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

3 Most of the “other” fuel types are a bottled or tank gas, such as LPG or propane.
4 Program Participation

This section summarizes questions related to program name recognition, how customers heard about and enrolled in the programs, and why they chose to participate.

4.1 Name Recollection and How Heard about Program

The majority of respondents, roughly two-thirds, do not know the name of the program in which they participated. (Table 4–1) However, 18% of UI Helps respondents mention “UI Helps” or “UI” and 22% of CL&P respondents mention either “CL&P” or “WRAP.” Remaining responses include energy assistance and weatherization or the names of individual CAAs.

Table 4–1: Recollection of Program Name
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI HELPS</td>
<td>11%</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>CL&amp;P, Connecticut Light &amp; Power</td>
<td>1%</td>
<td>12%</td>
<td>6%</td>
</tr>
<tr>
<td>WRAP</td>
<td>0%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>UI, United Illuminating</td>
<td>7%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Community Action Agency of New Haven/CAANH</td>
<td>5%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Weatherization</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>New Opportunities of Waterbury/NOW</td>
<td>0%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>ACCESS Inc.</td>
<td>0%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Energy assistance</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Community Renewal Team/CRT</td>
<td>0%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>ABCD</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Don't know</td>
<td>74%</td>
<td>60%</td>
<td>67%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Due to the prevalence of the neighborhood canvassing strategy, 51% of UI Helps participants report that they first heard about the program when someone came to their house. (Table 4–2) WRAP participants heard about the program in more diverse ways—27% mention someone coming to their house, 12% mention an application that came with their bill, and 12% mention a Community Action Agency (CAA).

**Table 4–2: How First Heard about Program**
*(All Respondents)*

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Someone came to my house</td>
<td>38%</td>
<td>19%</td>
<td>29%</td>
</tr>
<tr>
<td>Mailing or bill insert from my electric company</td>
<td>8%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>Someone from electric company came to my house</td>
<td>13%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Community Action Agency or CAA</td>
<td>3%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>Word of Mouth</td>
<td>6%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Heating or Energy or fuel-assistance program</td>
<td>2%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Separate mailing from my electric company or Helpline Newsletter</td>
<td>1%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Social Services or Government Agency</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Call from my electric company</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Newspaper</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Landlord/Management</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Competitive Resources Incorporated/CRI</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>211, Infoline</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Natural gas company</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Internet</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Advertisement on bus</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Television</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Fuel oil company</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>CL&amp;P</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Don't know/don't remember</td>
<td>19%</td>
<td>13%</td>
<td>16%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

*Although CRI does not serve the WRAP program, the company does provide energy audits to NU customers. Therefore, CRI may have informed some NU customers about WRAP.*
The majority of respondents (83%) had not heard about the program through any additional means. (Table 4–3) Those who had heard about the program in some other way had typically been exposed to program advertising or from someone who came to their house.

<table>
<thead>
<tr>
<th>Table 4–3: Other Ways Heard about Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Respondents; Multiple Response)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did not hear in any other way</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mailing or bill insert from my electric company</td>
<td>80%</td>
<td>86%</td>
<td>83%</td>
</tr>
<tr>
<td>Someone came to my house</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Heating or Energy or fuel-assistance program</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>211, Infoline</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Separate mailing from electric company, Helpline Newsletter</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Someone from my electric company came to my house</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Newspaper</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Government Agency</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Television</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Call from my electric company</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Radio</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Fuel oil company</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Landlord/Management</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Don't know/don't remember</td>
<td>8%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Refused</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>163</td>
<td>184</td>
<td>387</td>
</tr>
</tbody>
</table>

4.2 Enrollment in the Program

Seventy-one percent of UI respondents participated in the program when someone from the program visited their home, compared to 46% of WRAP respondents. (Table 4–4) Twenty-four percent of WRAP customers mailed back an application. Seven percent of UI participants completed an application at a CAA office compared to 11 percent for WRAP. There is one individual who recalls sending back an application in the mail to sign up for UI Helps. This person is likely confusing the UI Helps program with the state “yellow card” indicating the desire to receive weatherization assistance.

<table>
<thead>
<tr>
<th>Table 4–4: How Participated in the Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Respondents)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Someone visited my home or apartment</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I mailed back an application given to me by my electric utility</td>
<td>1%</td>
<td>24%</td>
<td>12%</td>
</tr>
<tr>
<td>I filled out an application at an agency.</td>
<td>7%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>Someone telephoned me</td>
<td>7%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Over the telephone</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Through my landlord/management</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Do not recall how I ended up participating</td>
<td>11%</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
According to program staff and the tracking databases, most participants in both programs are served by people who come to their home through neighborhood canvassing or through WRAP Subprogram 3. Furthermore, 34% of WRAP participants filled out either an energy assistance application or a WRAP application, both of which could have involved a mailing or filling out an application at an agency; this compares favorably with the 35% listed for WRAP in Table 4–4.

Two-thirds of all respondents made the decision to participate in the program. (Table 4–5) In the CL&P service territory, 33% report that someone else made the decision. For those respondents who report that someone else made the decision to participate, nearly all WRAP participants (94%) report that it was their landlord. (Table 4–6) This most likely reflects the fact that landlords decide whether or not to participate in Subprogram 3 (25% of all participants in 2005) and may also make the decision for multifamily units served under Subprogram 4 (41% of all participants in 2005). UI Helps participants mention a variety of other people who made the decision to participate.

Table 4–5: Who Made Final Decision to Participate
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I made the decision</td>
<td>75%</td>
<td>61%</td>
<td>67%</td>
</tr>
<tr>
<td>Someone else made the decision</td>
<td>9%</td>
<td>33%</td>
<td>20%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>15%</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

Table 4–6: Who Else Made Decision to Participate
(Respondents who report that someone else made decision to participate)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>My landlord</td>
<td>17%</td>
<td>94%</td>
<td>77%</td>
</tr>
<tr>
<td>Another family member who lives with me</td>
<td>33%</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>A family member who does not live with me</td>
<td>6%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>My roommate</td>
<td>6%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Someone else</td>
<td>6%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>33%</td>
<td>3%</td>
<td>10%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>18</td>
<td>68</td>
<td>86</td>
</tr>
</tbody>
</table>
4.3 Reasons for and Concerns about Participating

Thirty-seven percent of WRAP respondents participated in the programs because they “wanted help paying their utility bills.” (Table 4–7) In contrast, 28% of UI Helps respondents participated because they “wanted to reduce their utility bill” and 28% “wanted to learn how to save energy.” The differences in the stated reasons for participating may reflect the closer ties between the WRAP and Department of Social Services (DSS) weatherization program; participants first enter the latter program by signing up for energy assistance to help pay their utility bills.

Table 4–7: Main Reason for Participating in UI Helps/WRAP
(Respondents who report that they made decision to participate)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wanted help paying utility bills</td>
<td>19%</td>
<td>37%</td>
<td>26%</td>
</tr>
<tr>
<td>Wanted to reduce utility bill</td>
<td>28%</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>Wanted to learn how to save energy</td>
<td>28%</td>
<td>16%</td>
<td>23%</td>
</tr>
<tr>
<td>Wanted to make my home more comfortable</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>My house needed repairs</td>
<td>2%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Free light bulbs</td>
<td>4%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>I have limited income</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>My house needed/I wanted a new refrigerator, AC, and/or furniture</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Landlord signed me up</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Wanted to pay off utility debt</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Wanted to be able to heat home</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Wanted to have enough money for other bills and necessities</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Don't know</td>
<td>10%</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>157</td>
<td>130</td>
<td>287</td>
</tr>
</tbody>
</table>
Over one-half of respondents do not cite any other reasons for participating in the program, though 8%-10% mention reducing their utility bill, help paying their utility bills, and saving energy. (Table 4–8)

**Table 4–8: Other Reasons for Participating in UI Helps/WRAP**
(Respondents who report that they made decision to participate; Multiple Response)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>No other reason</td>
<td>66%</td>
<td>54%</td>
<td>61%</td>
</tr>
<tr>
<td>Wanted to reduce utility bill</td>
<td>7%</td>
<td>14%</td>
<td>10%</td>
</tr>
<tr>
<td>Wanted help paying utility bills</td>
<td>9%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Wanted to learn how to save energy</td>
<td>7%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>My house needed repairs</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Wanted to pay off utility debt</td>
<td>1%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Wanted to make my home more comfortable</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>My house needed/I wanted a new refrig., AC, and/or furnace</td>
<td>0%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>I have limited income</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>They fixed my windows</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Wanted to be able to heat home</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Don't know</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>7%</td>
<td>9%</td>
<td>8%</td>
</tr>
</tbody>
</table>

**Number of Respondents**

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>143</td>
<td>121</td>
<td>264</td>
</tr>
</tbody>
</table>

Very few respondents (2%) had any concerns regarding participation in the program. (Table 4–9) The few respondents who had a concern report that they did not want strangers in their home or they thought they would have to pay something for the service.

**Table 4–9: Had Concerns Regarding Program**
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>No</td>
<td>92%</td>
<td>93%</td>
<td>92%</td>
</tr>
<tr>
<td>Don't know</td>
<td>5%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Number of Respondents**

|                  | 202      | 212  | 414     |
4.4 Understanding of Program Goals and Expectations of Program

Forty percent of respondents believe that the sponsors offer the programs in order to “save me or my household energy.” (Table 4–10) One-fourth also mention lower energy bills, followed by 17% who mention saving the sponsors energy, and 15% who mention saving Connecticut energy. These responses indicate that most respondents have a clear understanding of the major goals of the program.

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>To save me or my household energy</td>
<td>36%</td>
<td>44%</td>
<td>40%</td>
</tr>
<tr>
<td>To lower my energy bills</td>
<td>23%</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>To save the program or company energy</td>
<td>20%</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>To save Connecticut/the state energy</td>
<td>18%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>Customer Service / Public relations</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Public Service</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>To help me fix up my house</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>To make my house warmer or more comfortable</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Improve environment</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Provide tax relief</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>19%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Over one-third of all respondents expected that the program would lower their energy bills, and 21% expected that the program would teach them how to lower their energy bills. (Table 4–11) Seventeen percent of respondents mention light bulbs, 15% saving energy, and 11% improving the comfort of their home. A higher proportion of UI Helps respondents than WRAP respondents expected to receive light bulbs (21% vs. 13%), while a higher proportion of WRAP respondents than UI Helps expected improved comfort (15% vs. 8%), which may indicate that some customers understand the scope of each program.

| Table 4–11: Expectation for Program (All Respondents; Multiple Response) |
|---------------------------------------------------------------|------------|------------|-------------|
| My energy bill to be lower                                   | UI Helps 35% | WRAP 36%  | Overall 35% |
| How to lower my energy bills                                 | UI Helps 22% | WRAP 20%  | Overall 21% |
| Light bulbs                                                  | UI Helps 21% | WRAP 13%  | Overall 17% |
| How to save energy                                           | UI Helps 16% | WRAP 13%  | Overall 15% |
| How to make my home more comfortable/warmer/less drafty       | UI Helps 8%  | WRAP 15%  | Overall 11% |
| Lamps                                                        | UI Helps 1%  | WRAP 5%   | Overall 3%  |
| Insulation                                                   | UI Helps 0%  | WRAP 6%   | Overall 3%  |
| No expectation                                               | UI Helps 2%  | WRAP 4%   | Overall 3%  |
| Refrigerator                                                 | UI Helps 0%  | WRAP 3%   | Overall 2%  |
| Furnace/boiler                                               | UI Helps 0%  | WRAP 1%   | Overall 0%  |
| New doors/wiring                                             | UI Helps 0%  | WRAP 0%   | Overall 0%  |
| Good Service                                                 | UI Helps 0%  | WRAP 1%   | Overall 0%  |
| Other                                                        | UI Helps 2%  | WRAP 4%   | Overall 3%  |
| Don’t know                                                   | UI Helps 18% | WRAP 14%  | Overall 16% |
| Refused                                                      | UI Helps 1%  | WRAP 1%   | Overall 1%  |
| **Number of Respondents**                                    | 202         | 212        | 414         |
4.5 Participation in Other Assistance Programs

Table 4–12 displays the percentage of respondents who report receiving different types of energy-related assistance. Overall, WRAP participants are more likely to have received other types of energy-related assistance than UI Helps participants. This finding may reflect the closer connections between WRAP and the state’s energy assistance program. Fifty-four percent of those who pay their natural gas bill and 31% of those who pay their oil bill received energy assistance to help pay their bills. Nearly one-half of the WRAP participants who pay their oil bills report receiving assistance in paying their oil bills, compared to 16% of UI Helps participants. Twelve percent of oil or bottled gas customers report receiving an emergency fuel fill in 2005. Fourteen percent of respondents who pay their electricity bill received assistance with paying their electricity bills. Fifteen percent of WRAP customers participate in the “NU Start” program. Eleven percent of UI Helps customers participate in the UI Matching Payment program and 1% participate in the UI Forgiveness program.

Table 4–12: Types of Assistance Received in 2005
(Base stated in the table)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy assistance to help pay the natural gas bill</td>
<td>48%</td>
<td>63%</td>
<td>54%</td>
</tr>
<tr>
<td>Respondents who pay for natural gas; n=</td>
<td>79</td>
<td>49</td>
<td>128</td>
</tr>
<tr>
<td>Energy assistance to help pay the heating oil bill</td>
<td>16%</td>
<td>48%</td>
<td>31%</td>
</tr>
<tr>
<td>Respondents who pay for oil; n=</td>
<td>47</td>
<td>46</td>
<td>93</td>
</tr>
<tr>
<td>Energy assistance to help pay the electricity bill</td>
<td>10%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>Respondents who pay for electricity; n=</td>
<td>201</td>
<td>206</td>
<td>407</td>
</tr>
<tr>
<td>Receive an emergency fuel fill</td>
<td>9%</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>Respondents who pay for oil or bottled gas; n=</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Participate in the NU Start &quot;New Start&quot; program</td>
<td>na</td>
<td>15%</td>
<td>na</td>
</tr>
<tr>
<td>Respondents participating in WRAP; n=</td>
<td></td>
<td>212</td>
<td></td>
</tr>
<tr>
<td>Participate in the UI Matching Payment Program</td>
<td>11%</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Respondents participating in UI Helps; n=</td>
<td>202</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in the UI Forgiveness Program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondents participating in UI Helps; n=</td>
<td>202</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive an emergency heating system replacement</td>
<td>5%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>All Respondents; n=</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
<tr>
<td>Receive free energy-saving products from someone other than my electric utility</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>All Respondents; n=</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
<tr>
<td>Receive other types of energy assistance</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>All Respondents; n=</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
5 Program Experience

In this section, we address a range of topics related to respondents’ experiences with the program, including:

- Interaction with the CAAs
- Application process
- Scheduling of appointments
- Interactions with auditors and contractors
- Energy saving tips brochure
- Other energy saving actions

5.1 Signing Up for the Programs at CAA Offices

Only those respondents who report signing up for the program at a CAA office were asked the series of questions regarding their CAA experience. Among the few participants who say they signed up for the program by visiting a CAA (see Table 4–4), most explicitly visited the agency that day to sign up for fuel assistance (42%) or request help with utility bills (29%). (Table 5–1) A small number of customers say they went to sign up for the utility-based programs, although this method of enrollment was not actually possible for the one person who reported it for UI Helps.5 Two WRAP participants went to the agency to find out how to improve the warmth of their homes.

<table>
<thead>
<tr>
<th>Table 5–1: Main Reason Visiting Agency when Applied for Program a</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Respondents who Applied at an Agency)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Sign up for energy assistance or fuel assistance</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Ask for help with your utility bills</td>
</tr>
<tr>
<td>Sign up for Wrap or UI Helps</td>
</tr>
<tr>
<td>Ask for help with other bills</td>
</tr>
<tr>
<td>Improve warmth in my home</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

a Number of respondents reported for each program; percentage of respondents reported for Overall.

4 It is important to note that participants who enrolled in the programs another way may still be users of CAAs. However, we only asked people who signed up at CAA offices about their interactions with CAAs. This was to avoid confusion by asking people about CAAs who may never have heard of them.

5 This person lives in Bridgeport and likely signed up for energy assistance at the Action for Bridgeport Community Development, and probably participated in UI Helps through neighborhood canvassing.
Of the few people who signed up at a CAA, most (83%) are infrequent users of the agencies’ services—that is, they visit the agency’s office no more than once a year. (Table 5–2) Another 11% visit the office two to five times a year, and 3% go more than once a month. Overall, about 6% of all customers report visiting the CAA office once a year or more often.

Table 5–2: Frequency of Visiting Agency Office
(Respondents who Applied at an Agency)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>That was the only time</td>
<td>1</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>Less than once a year</td>
<td>3</td>
<td>4</td>
<td>21%</td>
</tr>
<tr>
<td>About once a year</td>
<td>6</td>
<td>11</td>
<td>59%</td>
</tr>
<tr>
<td>Two to five times a year</td>
<td>2</td>
<td>1</td>
<td>11%</td>
</tr>
<tr>
<td>More than once a month</td>
<td>0</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td><strong>13</strong></td>
<td><strong>17</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

*a Number of respondents reported for each program; percentage of respondents reported for Overall.

When visiting an agency’s office, most respondents are signing up for energy assistance (70%), and some are applying for help in paying utility bills (27%). (Table 5–3)

Table 5–3: Reasons for Contacting the Agency Office
(Respondents who Applied at an Agency; Multiple Response)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>To sign up for energy assistance</td>
<td>8</td>
<td>13</td>
<td>70%</td>
</tr>
<tr>
<td>To apply for help to pay my utility bills</td>
<td>5</td>
<td>2</td>
<td>27%</td>
</tr>
<tr>
<td>Don’t know/Don’t remember</td>
<td>1</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td><strong>12</strong></td>
<td><strong>17</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

*a Number of respondents reported for each program; percentage of respondents reported for Overall.

About one-half of respondents report that it was their idea to complete an application, and about one-third say it was the agency’s idea. (Table 5–4)

Table 5–4: Person who Suggested Completing an Application
(Respondents who Applied at an Agency)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>My idea</td>
<td>8</td>
<td>8</td>
<td>52%</td>
</tr>
<tr>
<td>The agency’s idea</td>
<td>3</td>
<td>6</td>
<td>31%</td>
</tr>
<tr>
<td>Someone else’s Idea</td>
<td>2</td>
<td>0</td>
<td>10%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td><strong>13</strong></td>
<td><strong>17</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

*a Number of respondents reported for each program; percentage of respondents reported for Overall.
One-half of respondents completed the application themselves, while another one-third report that the agency did it for them. (Table 5–5)

Table 5–5: Who Completed the Program Application

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I filled it out</td>
<td>6</td>
<td>9</td>
<td>50%</td>
</tr>
<tr>
<td>The agency filled it out</td>
<td>4</td>
<td>6</td>
<td>33%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3</td>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>17</td>
<td>30</td>
</tr>
</tbody>
</table>

* Number of respondents reported for each program; percentage of respondents reported for Overall.

Most respondents, particularly WRAP participants, who originally filled out an application at an agency, report that they would prefer to complete the application at the agency’s office compared to another location. (Table 5–6)

Table 5–6: Preference for Location to Fill Out Application

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the agency's office</td>
<td>6</td>
<td>12</td>
<td>62%</td>
</tr>
<tr>
<td>At some other location</td>
<td>2</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>It depends on the location</td>
<td>1</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>4</td>
<td>2</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>17</td>
<td>30</td>
</tr>
</tbody>
</table>

* Number of respondents reported for each program; percentage of respondents reported for Overall.

5.2 Interaction with CAA Staff

Responses to a series of three questions about the politeness, knowledge level, and helpfulness of agency staff members indicate generally positive interactions with CAAs among the few participants who signed up for the programs through agencies. Specifically, most respondents (84%) think that agency staff members are “very polite”; none think they are impolite. (Table 5–7)

Table 5–7: Politeness Rating of Agency Staff

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Polite</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Impolite</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Neither impolite nor polite</td>
<td>0</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>Polite</td>
<td>3</td>
<td>0</td>
<td>10%</td>
</tr>
<tr>
<td>Very polite</td>
<td>10</td>
<td>15</td>
<td>84%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>17</td>
<td>30</td>
</tr>
</tbody>
</table>

* Number of respondents reported for each program; percentage of respondents reported for Overall.
Seventy-three percent of respondents report that agency staff members are “very knowledgeable,” and most of the remaining respondents rate the staff as “knowledgeable.” (Table 5–8)

<table>
<thead>
<tr>
<th>Table 5–8: Knowledge Rating of Agency Staffa</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Respondents who Applied at an Agency)</td>
</tr>
<tr>
<td>Not at all Knowledgeable</td>
</tr>
<tr>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Not at all Knowledgeable</td>
</tr>
<tr>
<td>Unknowledgeable</td>
</tr>
<tr>
<td>Neither Knowledgeable nor Unknowledgeable</td>
</tr>
<tr>
<td>Knowledgeable</td>
</tr>
<tr>
<td>Very knowledgeable</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

* Number of respondents reported for each program; percentage of respondents reported for Overall.

Most respondents (87%) report that agency staff members were “very helpful,” and another 10% say they were “helpful.” (Table 5–9)

<table>
<thead>
<tr>
<th>Table 5–9: Helpfulness Rating of Agency Staffa</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Respondents who Completed an Application)</td>
</tr>
<tr>
<td>Not very helpful</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Not very helpful</td>
</tr>
<tr>
<td>Not helpful</td>
</tr>
<tr>
<td>Neither unhelpful nor helpful</td>
</tr>
<tr>
<td>Helpful</td>
</tr>
<tr>
<td>Very helpful</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

* Number of respondents reported for each program; percentage of respondents reported for Overall.

### 5.3 Application Process

Respondents who filled out applications were asked a series of questions about the application process. Most respondents find the application process to be “easy” or “very easy.” (Table 5–10)

<table>
<thead>
<tr>
<th>Table 5–10: Ease of Completing the Applicationa</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Respondents who Completed an Application)</td>
</tr>
<tr>
<td>Very Difficult</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Very Difficult</td>
</tr>
<tr>
<td>Difficult</td>
</tr>
<tr>
<td>Neither Difficult nor Easy</td>
</tr>
<tr>
<td>Easy</td>
</tr>
<tr>
<td>Very easy</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
</tr>
</tbody>
</table>

* Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.
Eighty-six percent of respondents report that the application process took less than a half-hour, while a few think it was between a half-hour and an hour. (Table 5–11) Most respondents (82%) are “very satisfied” with the time to complete the application. (Table 5–12) Only 2% of respondents are at all dissatisfied with the time to complete the application.

**Table 5–11: Time to Complete Application**
(Respondents who Completed an Application)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 30 minutes</td>
<td>6</td>
<td>84%</td>
<td>86%</td>
</tr>
<tr>
<td>½ hour to 1 hour</td>
<td>0</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Refused</td>
<td>0</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>6</td>
<td>59</td>
<td>65</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

**Table 5–12: Satisfaction with Time to Complete Application**
(Respondents who Completed an Application)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Neither dissatisfied</td>
<td>0</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>3</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>3</td>
<td>86%</td>
<td>82%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Refused</td>
<td>0</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>6</td>
<td>59</td>
<td>65</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.
Respondents who mailed back the application and those who would prefer to complete the application somewhere other than at an agency were asked if they would rather sign up at other locations. (Table 5–13) Although 59% of respondents would have preferred to apply over the telephone, fewer than one-half of the remaining respondents prefer any other single location. Some of the more popular locations include a community center, grocery store, or at their home. The shopping mall garnered the least positive response.

**Table 5–13: Easier to Apply at Other Locations**
(Respondents who Mailed Back the Application or Preferred Applying Elsewhere)

<table>
<thead>
<tr>
<th>Location</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over the Phone</td>
<td>6</td>
<td>56%</td>
<td>59%</td>
</tr>
<tr>
<td>Community Center</td>
<td>4</td>
<td>46%</td>
<td>48%</td>
</tr>
<tr>
<td>Grocery Store</td>
<td>3</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>Assistance at my home</td>
<td>5</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>Walmart, Target, or Kmart</td>
<td>3</td>
<td>41%</td>
<td>41%</td>
</tr>
<tr>
<td>Public Health Clinic</td>
<td>2</td>
<td>42%</td>
<td>41%</td>
</tr>
<tr>
<td>The Salvation Army</td>
<td>5</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td>On the Internet</td>
<td>4</td>
<td>37%</td>
<td>40%</td>
</tr>
<tr>
<td>Public Library</td>
<td>2</td>
<td>39%</td>
<td>38%</td>
</tr>
<tr>
<td>Food Bank</td>
<td>3</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>YMCA or YWCA</td>
<td>4</td>
<td>31%</td>
<td>35%</td>
</tr>
<tr>
<td>Shopping Mall</td>
<td>2</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>Other Location</td>
<td>2</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>7</td>
<td>55</td>
<td>62</td>
</tr>
</tbody>
</table>

\*Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.
Table 5–14 displays the suggestions offered by respondents to improve the sign-up process, including easing the eligibility requirements, simplifying the entire process, and offering online sign-ups. No single answer was named by more than one person. Again, please note that some of the responses indicate that participants often cannot distinguish between enrolling in energy assistance and the utility-sponsored programs.

Table 5–14: Suggestions for Improving the Sign-up Process
(Respondents who Completed an Application; Multiple Response)

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyone seems to want to join the program. Everyone's appointment was at the same time. It was crowded at the agency.</td>
<td>UI Helps</td>
</tr>
<tr>
<td>They came by to sign me up at the house now because I've had a stroke.</td>
<td>UI Helps</td>
</tr>
<tr>
<td>They can send applications by mail.</td>
<td>UI Helps</td>
</tr>
<tr>
<td>They can allow us to fill out the application online.</td>
<td>UI Helps</td>
</tr>
<tr>
<td>It might help to make qualifications less steep.</td>
<td>WRAP</td>
</tr>
<tr>
<td>The CL&amp;P employees helping customers to sign up should be more polite.</td>
<td>WRAP</td>
</tr>
<tr>
<td>The only thing that would improve the system is, even if it takes years is that they should send a letter saying, &quot;Hey, we received your application.&quot;</td>
<td>WRAP</td>
</tr>
<tr>
<td>They should simplify things. Submitting documents to a bunch of places is tiring and takes a lot of time. They should centralize information available only to concerned agencies.</td>
<td>WRAP</td>
</tr>
<tr>
<td>To inform other applicants to make sure they have all their paper work ready before going to the agency to fill out an application.</td>
<td>WRAP</td>
</tr>
<tr>
<td>There should be more ways to find out about it, especially for the elderly and the disabled, through the Social Security Administration.</td>
<td>WRAP</td>
</tr>
<tr>
<td>They should have sign-up locations inside community colleges.</td>
<td>WRAP</td>
</tr>
<tr>
<td>They can put the application online, if it is not already online.</td>
<td>WRAP</td>
</tr>
<tr>
<td>Make it easier with what they require, like proof of financial papers and income.</td>
<td>WRAP</td>
</tr>
<tr>
<td>It would be good to get more advertising out there for people who need it and have trouble leaving their home.</td>
<td>WRAP</td>
</tr>
<tr>
<td>Include an application with the light bill. Whatever is in it they look at, so inserts in the mail are fine.</td>
<td>WRAP</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>14</td>
</tr>
</tbody>
</table>

5.4 Appointment Scheduling

Most respondents report that the program staff showed up at their home. This is particularly true for UI Helps respondents (77%), reflecting the dominance of the neighborhood canvass approach of that program. (Table 5–15) In contrast, only 49% of WRAP participants say someone showed up at their house, while 42% set up an appointment.

Table 5–15: Was an Appointment Scheduled
(All Respondents)

<table>
<thead>
<tr>
<th>Appointment Status</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just showed up</td>
<td>77%</td>
<td>49%</td>
<td>63%</td>
</tr>
<tr>
<td>Set up an appointment</td>
<td>17%</td>
<td>42%</td>
<td>29%</td>
</tr>
<tr>
<td>Don't know</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Most participants who used the appointment process report that program staff contacted them to schedule an appointment (80%), although a few say they contacted the program. (Table 5–16) These results coincide with the procedures described by the staff members of both programs and the CAAs. Usually, the program will contact the customers, but there are times when customers may call to set up appointments. For example, UI Helps participants may have gotten prior notification of a neighborhood canvass and called ahead of time for an appointment. WRAP customers sometime call the program or the agency to see when they will be served, and appointments are occasionally set up during such calls.

### Table 5–16: Appointment Contact Method
(Respondents who Set up an Appointment)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>They contacted me</td>
<td>71%</td>
<td>85%</td>
<td>80%</td>
</tr>
<tr>
<td>I contacted them</td>
<td>26%</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>Don't know</td>
<td>3%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>35</td>
<td>90</td>
<td>125</td>
</tr>
</tbody>
</table>

Fourteen of the 18 respondents who scheduled appointments think that reaching program staff was “easy” or “very easy,” while three think it was “difficult.” (Table 5–17)

### Table 5–17: Difficulty Rating of Contacting Program to Schedule an Appointment
(Respondents who Contacted Program to Schedule an Appointment)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Difficult</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Difficult</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Neither Difficult nor Easy</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Easy</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Very easy</td>
<td>6%</td>
<td>6%</td>
<td>12%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Refused</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>9</td>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>

Most respondents (83%) think that it was “very easy” to schedule a convenient time for a home visit. (Table 5–18) Of the five respondents who report difficulties in scheduling, three say that it was due to their own schedule being busy.

### Table 5–18: Difficulty Rating of Establishing a Convenient Time for Home Visit
(Respondents who Scheduled an Appointment)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Difficult</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Difficult</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Neither Difficult nor Easy</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Easy</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Very easy</td>
<td>84%</td>
<td>82%</td>
<td>83%</td>
</tr>
<tr>
<td>Don't know</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Refused</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>35</td>
<td>90</td>
<td>125</td>
</tr>
</tbody>
</table>
5.5 Interactions with the Energy Auditor

Survey respondents were also asked a series of questions about their interactions with the energy auditor who visited their home. Not all participants, however, may have interacted with an energy auditor. The respondent might not have been present during the audit or walk-through, or they might not have been given an audit. Therefore, we first asked respondents if they remembered the person who “came to your house to find ways that you could save energy, lower your utility bills, and make your home more comfortable.” This question also identifies those respondents who could answer more detailed questions on their interaction with the energy auditor.

Only about one-third of respondents remember their energy auditor; more UI Helps participants (42%) remember their auditor than WRAP participants (30%). For both programs, the percentage remembering the auditor is smaller than the percentage who actually received such services. (Table 5–19) In short, respondents do not remember their energy auditor or do not understand the role he or she played in providing services.

![Table 5–19: Remember Energy Auditor](All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>42%</td>
<td>30%</td>
<td>36%</td>
</tr>
<tr>
<td>No</td>
<td>55%</td>
<td>66%</td>
<td>60%</td>
</tr>
<tr>
<td>Don't know</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

Of the respondents who remember the energy auditor, nearly all (92%) say their energy auditor was “very polite.” (Table 5–20) There are no differences between UI Helps and WRAP regarding the politeness rating of the auditor.

![Table 5–20: Politeness Rating of Auditor](Respondents who Remembered Auditor)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Polite</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Impolite</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Neither impolite nor polite</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Polite</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Very polite</td>
<td>91%</td>
<td>93%</td>
<td>92%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>85</td>
<td>68</td>
<td>153</td>
</tr>
</tbody>
</table>

---

6 In particular, participants in WRAP Subprogram 3 do not have a computerized energy audit or an abbreviated walk-through audit. Instead, the program administrator and landlord decide what measures the unit needed.
Most respondents who remember the auditor (72%) report that the energy auditor was “very knowledgeable.” (Table 5–21) Participants in WRAP give their auditors somewhat higher knowledge ratings than do participants of UI Helps, but this might reflect the usually more extensive nature of WRAP services.

Table 5–21: Knowledge Rating of Auditor  
(Respondents who Remembered Auditor)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Knowledgeable</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Unknowledgeable</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Neither Knowledgeable nor Unknowledgeable</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Knowledgeable</td>
<td>13%</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>Very knowledgeable</td>
<td>66%</td>
<td>81%</td>
<td>72%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>14%</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>85</td>
<td>68</td>
<td>153</td>
</tr>
</tbody>
</table>

Likewise, most respondents (70%) report that the auditor was “very helpful,” again with WRAP participants giving somewhat higher ratings than do UI Helps participants. (Table 5–18)

Table 5–22: Helpfulness Rating of Auditor  
(Respondents who Remembered Auditor)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not very helpful</td>
<td>3%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Not helpful</td>
<td>5%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Neither unhelpful nor helpful</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Helpful</td>
<td>16%</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td>Very helpful</td>
<td>63%</td>
<td>81%</td>
<td>70%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>8%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>85</td>
<td>68</td>
<td>153</td>
</tr>
</tbody>
</table>
5.6 Interactions with Program Contractors

According to respondents, program contractors were sent to the homes of 7% percent of UI Helps respondents and 34% of WRAP respondents. (Table 5–23) These percentages are reasonable, given the nature of both programs. Although both programs install nearly all measures the day of the initial visit, WRAP more frequently sends contractors at a later date to install more substantial measures (e.g., insulation, replacement heating systems, and appliances, among others) than UI Helps does.

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7%</td>
<td>34%</td>
<td>20%</td>
</tr>
<tr>
<td>No</td>
<td>89%</td>
<td>57%</td>
<td>73%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3%</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

Most respondents receiving services from contractors are “very satisfied” (74%) with the quality of the contractors’ work, and another 20% are “satisfied.” (Table 5–24) Five WRAP customers are dissatisfied with the work, and two mention that the contractors did an improper job installing the weather stripping. In addition, another contractor was rushed and installed the refrigerator door on backwards and would not remove the old refrigerator. One respondent reports that the insulation had cockroaches in it, while another said the contractors did not turn the lights off after they were done.7

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>0</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>3</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>10</td>
<td>73%</td>
<td>74%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>75</td>
<td>88</td>
</tr>
</tbody>
</table>

7 Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

7 Please note that we cannot verify if the stated reasons for dissatisfaction are legitimate. For example, we do not know if the insulation really had cockroaches in it, or if its installation stirred them up. However, customers believe the reasons to be true, which clearly influence their ratings.
Eighty-three percent of respondents report that the contractor was “very polite” and no respondents say that the contractors were impolite. (Table 5–25)

**Table 5–25: Politeness Rating of Contractor**
(Respondents who saw Contractors)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Polite</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Impolite</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Neither impolite nor polite</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Polite</td>
<td>2</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Very polite</td>
<td>11</td>
<td>82%</td>
<td>83%</td>
</tr>
<tr>
<td>Don't know</td>
<td>0</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>75</td>
<td>88</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

Most respondents (74%) report that the contractor was “very knowledgeable,” and most of the remaining respondents rate them as “knowledgeable.” (Table 5–26)

**Table 5–26: Knowledge Rating of Contractor**
(Respondents who saw Contractor)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Knowledgeable</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Unknowledgeable</td>
<td>0</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Neither Knowledgeable nor Unknowledgeable</td>
<td>0</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Knowledgeable</td>
<td>2</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>Very knowledgeable</td>
<td>11</td>
<td>72%</td>
<td>74%</td>
</tr>
<tr>
<td>Don't know</td>
<td>0</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>75</td>
<td>88</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

Most respondents (73%) think the contractor was “very helpful,” and another 9% say they were “helpful.” (Table 5–27)

**Table 5–27: Helpfulness Rating of Contractors**
(Respondents who saw Contractor)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not very helpful</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Not helpful</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Neither unhelpful nor helpful</td>
<td>1</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Helpful</td>
<td>0</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Very helpful</td>
<td>12</td>
<td>69%</td>
<td>73%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>0</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>Refused</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>75</td>
<td>88</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.
5.7 Energy Saving Tips Brochure

Slightly over one-third of UI Helps respondents and about one-half of WRAP respondents report receiving an energy-saving tips brochure in the mail or during the home visit. (Table 5–28) In reality, more respondents should have received these brochures, suggesting that these customers have either forgotten about the brochure or mistakenly failed to receive it.

<table>
<thead>
<tr>
<th>Table 5–28: Received Energy Saving Tips Brochure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Respondents)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>36%</td>
</tr>
<tr>
<td>No</td>
<td>40%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>22%</td>
</tr>
<tr>
<td>Refused</td>
<td>2%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
</tr>
</tbody>
</table>

Nearly all respondents who remember receiving the brochure say that they had looked at it or read it (89%). WRAP participants are more likely to have read it (57%) than are UI Helps participants (37%). (Table 5–29)

| Table 5–29: Have Read Brochure                  |  |
| (Respondents who Received Brochure)            |  |
| Read the brochure                               | 37% | 57% | 48% |
| Just looked through it                          | 50% | 34% | 41% |
| Did not read it at all                          | 9%  | 4%  | 6%  |
| Don’t know                                      | 4%  | 5%  | 5%  |
| Number of Respondents                           | 74  | 100 | 174 |

The majority of respondents who had looked through or read the brochure (61%) are “very satisfied” with the quality of information, with WRAP respondents giving slightly more positive feedback than UI Helps respondents. (Table 5–30) Of the seven respondents who are dissatisfied with the brochure, most think that the information was not useful.

| Table 5–30: Satisfaction with Quality of Information in Brochure |  |
| (Respondents who Read Brochure)                      |  |
| Very dissatisfied                                    | 0%  | 0%  | 0%  |
| Dissatisfied                                        | 3%  | 0%  | 1%  |
| Neither dissatisfied or satisfied                    | 2%  | 5%  | 3%  |
| Satisfied                                          | 37% | 22% | 28% |
| Very satisfied                                      | 52% | 68% | 61% |
| Don’t know                                         | 6%  | 6%  | 6%  |
| Number of Respondents                               | 64  | 89  | 153 |
5.8 Other Energy Saving Actions

Over one-half of respondents report taking some other action to save energy. (Table 5–31)

Table 5–31: Took Other Action to Save Energy
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>56%</td>
<td>59%</td>
<td>58%</td>
</tr>
<tr>
<td>No</td>
<td>41%</td>
<td>38%</td>
<td>40%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

The most popular energy-saving action was to turn off their lights when not in use, mentioned by over one-half of respondents who have taken other energy saving actions. (Table 5–32) Twenty-one percent turned off appliances when not in use, 18% lowered their thermostat, and 17% used drapes or window coverings.

Table 5–32: Other Actions Taken to Save Energy
(Respondents who took Other Actions; Multiple Response)

<table>
<thead>
<tr>
<th>Action</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turned off lights when not in use</td>
<td>50%</td>
<td>54%</td>
<td>52%</td>
</tr>
<tr>
<td>Turned off appliances when not in use</td>
<td>25%</td>
<td>17%</td>
<td>21%</td>
</tr>
<tr>
<td>Lowered heating thermostat</td>
<td>10%</td>
<td>27%</td>
<td>18%</td>
</tr>
<tr>
<td>Used drapes or window coverings to keep house warmer</td>
<td>15%</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>Lowered water heater temperature</td>
<td>4%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Used air conditioning less</td>
<td>7%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Used less hot water</td>
<td>4%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Fixed Windows</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Installed Insulation</td>
<td>9%</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>Taken shorter showers</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Reduced usage at peak hours</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Purchased ENERGY STAR products</td>
<td>5%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Purchased CFLs</td>
<td>1%</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Got rid of second refrigerator or freezer</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Hung clothes out to dry</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Installed a wood stove</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Replaced a water heater</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Installed new windows</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>114</td>
<td>123</td>
<td>237</td>
</tr>
</tbody>
</table>
Over two-thirds of the respondents who took action believe that they would have taken these steps in the absence of the program. (Table 5–33) Only 8% would not have done so without the program. Therefore, the estimated spillover rate—the percentage of all respondents who have taken other actions because of the program—is 4.6%; the rate for UI Helps is 3.3%, and that for WRAP is 6.1%. Because most of the energy-saving actions require little effort and cost nothing, inertia is the primary reason preventing a person from taking an action prior to participating in the programs. Thus, it is likely that programs influenced participants to overcome this inertia and therefore the spillover estimates are conservative as people tend to report that they would have taken an action on their own, even if it is not the case.

Table 5–33: Likelihood to Take Energy Saving Action in Absence of Program
(Respondents who Took Other Actions to Save Energy)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would NOT have taken these steps anyway</td>
<td>6%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Would likely not have taken these steps anyway</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Neither likely nor Unlikely</td>
<td>7%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>Would likely have taken these steps anyway</td>
<td>8%</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>WOULD have taken these steps anyway</td>
<td>68%</td>
<td>68%</td>
<td>68%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>8%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Refused</td>
<td>3%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>114</td>
<td>123</td>
<td>237</td>
</tr>
</tbody>
</table>

6 Program Satisfaction

Respondents were asked numerous questions about satisfaction with the programs, products and services, and program impacts. We summarize their responses below.

6.1 Overall Program

The majority of respondents (64%) are “very satisfied” with the program overall and another 21% are “satisfied.” (Table 6–1) Only 4% of respondents are “dissatisfied” or “very dissatisfied.”

Table 6–1: Satisfaction with Program Overall
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>4%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>22%</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>61%</td>
<td>68%</td>
<td>64%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>6%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Table 6–2 displays the primary reasons for dissatisfaction with the program for all participants. The percentages in the first row indicate that most dissatisfied respondents (85%) gave inconsistent answers regarding satisfaction. They initially stated that they were less than satisfied with the program. However, when asked why they were dissatisfied, these respondents changed their answer to “satisfied.” Therefore, in reality, nearly all respondents are satisfied. Actual reasons for dissatisfaction include the lack of energy savings and/or the continuation of high utility bills (31%), wanting more comprehensive services (17%), or problems with light bulbs (14%).

Table 6–2: Reasons for Dissatisfaction with Program
(Respondents who are not Satisfied with Program Overall; Multiple Response)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am satisfied</td>
<td>83%</td>
<td>88%</td>
<td>85%</td>
</tr>
<tr>
<td>Not saving / high bill</td>
<td>27%</td>
<td>36%</td>
<td>31%</td>
</tr>
<tr>
<td>Would like more comprehensive services</td>
<td>18%</td>
<td>14%</td>
<td>17%</td>
</tr>
<tr>
<td>Problems with light bulbs</td>
<td>9%</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>Not eligible for other programs</td>
<td>14%</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>Agency had poor service</td>
<td>0%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Problems with insulation</td>
<td>0%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Long wait</td>
<td>0%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Would have liked more information</td>
<td>5%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Poor quality work</td>
<td>0%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>28%</td>
<td>0%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>20</td>
<td>15</td>
<td>35</td>
</tr>
</tbody>
</table>

6.2 Products and Services

Over two-thirds of respondents are “very satisfied” with the products and services provided by the program; another 20% are “satisfied.” (Table 6–3) Only 5% of respondents are “dissatisfied” or “very dissatisfied.”

Table 6–3: Satisfaction with Products and Services
(All Respondents)

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>20%</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>67%</td>
<td>68%</td>
<td>68%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Those respondents who are dissatisfied with the programs’ products and services primarily mention the light bulbs—that they were too dim, the customer did not like the light, or the bulbs broke. (Table 6–4) A handful of respondents also think that their bills remain too high.

### Table 6–4: Reasons for Dissatisfaction with Products and Services
(Respondents who are not Satisfied with Products & Services; Multiple Response)

<table>
<thead>
<tr>
<th>Problem</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems with light bulbs</td>
<td>50%</td>
<td>52%</td>
<td>51%</td>
</tr>
<tr>
<td>Bill is still high</td>
<td>11%</td>
<td>29%</td>
<td>21%</td>
</tr>
<tr>
<td>Problems with insulation</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>More Services should be offered</td>
<td>11%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Program was fair</td>
<td>0%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Did not receive a refrigerator</td>
<td>11%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>They left a mess</td>
<td>6%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td><strong>21</strong></td>
<td><strong>19</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

### 6.3 Time to Complete Work

The respondents who recall having filled out an application were asked their degree of satisfaction with the time it took between applying for the program and the completion of work. Most of these respondents are either “very satisfied” (61%) or “satisfied” (21%) with the time to complete the work. (Table 6–5) Only 6% are dissatisfied.8

### Table 6–5: Satisfaction with Time to Complete Worka
(Respondents who Completed an Application)

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>0</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>4</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>8</td>
<td>60%</td>
<td>61%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td><strong>13</strong></td>
<td><strong>67</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>

*a Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

---

8 Given the length of the survey and the fact that both UI Helps and WRAP track when they approve work or issue work orders and when the work order is “closed out,” the Evaluation Team agreed not to ask this question. Please see the Overall Final Report for more detail on time to completion.
6.4 Concerns or Complaints

About three-quarters of respondents report that no products broke or required fixing, and 8% said that everything is working just fine. (Table 6–6) Twelve percent mention that light bulbs broke.9

Table 6–6: Products that Broke or Required Fixing
(All Respondents; Multiple Response)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing broke or needed to be fixed</td>
<td>77%</td>
<td>71%</td>
<td>74%</td>
</tr>
<tr>
<td>Any light bulbs</td>
<td>14%</td>
<td>9%</td>
<td>12%</td>
</tr>
<tr>
<td>Everything is working just fine</td>
<td>7%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Any lamps or light fixtures</td>
<td>0%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Insulation</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Any showerheads</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Any faucet aerators</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Door/windows</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Furnace</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

Responses to two questions about concerns or complaints (summarized in Table 6–7 and Table 6–10) indicate that a total of 8% of respondents had a concern or complaint about the products or services they received. Only 3% called the program about their concerns. (Table 6–7)

Table 6–7: Called Program with Concerns or Complaints
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>No</td>
<td>96%</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

---

9 As will be discussed more in the final report, some CAA weatherization staff members have noted that the failure or breakage of CFLs in pin-based lamps—although infrequent—creates difficulties for the clients. The lamps are often taken out of use because clients cannot find or afford the replacement pin-type CFLs.
Respondents called the program for a variety of reasons, including that a product broke, they did not receive a refrigerator, their bill remained high, or there was a problem with the insulation. (Table 6–8)

Table 6–8: Concerns or Complaints Respondent Called Program About
(Respondents who Called to Complain; Multiple Response)

<table>
<thead>
<tr>
<th>Concern</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Something broke</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Did not get a refrigerator</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>High Bill</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Insulation</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Something did not work right</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>5</td>
<td>7</td>
<td>12</td>
</tr>
</tbody>
</table>

Of the twelve respondents who called the program with a concern or complaint, four remain “very dissatisfied” with how the complaint was handled, and three are neither satisfied nor dissatisfied. (Table 6–9) Another four are “satisfied” or “very satisfied.” The four dissatisfied respondents say either that nothing was done to address their concern or that the staff were difficult to work with. Without knowing the particular circumstances of the cases or having the CAA or program’s “side of the story,” we cannot determine whether the clients or the program is “at fault” in these cases.10

Table 6–9: Satisfaction with Handling of Concerns or Complaints
(Respondents who Called to Complain)

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Refused</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>5</td>
<td>7</td>
<td>12</td>
</tr>
</tbody>
</table>

---

10 For example, a person who has been told that their refrigerator does not qualify for replacement may still be unsatisfied with the way the program handled their concern or complaint.
The remaining 5% of respondents who had concerns or complaints chose not to contact the program. (Table 6–10) This indicates that the percentage of respondents who had a concern but did not call is higher than the percentage who did call. This emphasizes the importance for randomly selected spot inspections based on all units, not just those who complain or those who have more than $1,500 worth of work done in them.

### Table 6–10: Had Concern or Complaint, but Decided not to Call
(Respondents who Did Not Call to Complain)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>No</td>
<td>95%</td>
<td>92%</td>
<td>93%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>197</td>
<td>205</td>
<td>402</td>
</tr>
</tbody>
</table>

The concerns from respondents who did not call are similar to those voiced by those who did contact the program with a concern or complaint, namely that a product was not working correctly or had broken, they did not receive something they thought they should have, or their bills remained high. (Table 6–11)

### Table 6–11: Concerns or Complaints Respondent did Not Call Program Abouta
(Respondents who Did Not Call to Complain; Multiple Response)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Something did not work right</td>
<td>2</td>
<td>2</td>
<td>36%</td>
</tr>
<tr>
<td>Something broke</td>
<td>2</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td>Did not get Insulation</td>
<td>0</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>High bill</td>
<td>1</td>
<td>1</td>
<td>9%</td>
</tr>
<tr>
<td>Needed repairs</td>
<td>0</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Did not get a refrigerator</td>
<td>0</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Dull lights</td>
<td>1</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>7</td>
<td>16</td>
<td>23</td>
</tr>
</tbody>
</table>

a Number of respondents reported for each program; percentage of respondents reported for Overall.
Respondents who chose not to contact the program did not know the phone number to call (23%) or whom to call (14%). Others just did not get around to it or forgot to call (23%). (Table 6–12) However, a few did not call because they “did not think it would matter” or did not think it was right to complain about a free service.

Table 6–12: Reasons for Not Calling Program about Concerns or Complaints
(Respondents who Did Not Call to Complain; Multiple Response)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not have or know the number to call</td>
<td>0</td>
<td>1</td>
<td>23%</td>
</tr>
<tr>
<td>Did not get around to it</td>
<td>1</td>
<td>2</td>
<td>23%</td>
</tr>
<tr>
<td>Did not know whom to call</td>
<td>2</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>Product was free so didn’t think it was right to complain</td>
<td>2</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>Did not think it would matter</td>
<td>1</td>
<td>1</td>
<td>9%</td>
</tr>
<tr>
<td>Afraid to complain</td>
<td>0</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1</td>
<td>0</td>
<td>5%</td>
</tr>
</tbody>
</table>

*Number of Respondents

6.5 Satisfaction with Program Impacts

Over 60% of respondents report that the programs’ products and services made their home more comfortable, 30% thought it had no effect, and 2% thought it was less comfortable. (Table 6–13) A higher proportion of WRAP customers report being more comfortable (67%) compared to UI Helps customers (55%), which likely reflects the fact that WRAP installs more insulation-related measures than does UI Helps.

Table 6–13: Comfort Rating of Products and Services
(All Respondents)

<table>
<thead>
<tr>
<th>Comfort Rating</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>More comfortable</td>
<td>55%</td>
<td>67%</td>
<td>61%</td>
</tr>
<tr>
<td>No effect on comfort</td>
<td>35%</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>Less comfortable</td>
<td>3%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>5%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Refused</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Number of Respondents

NMR also asked a few questions about respondents’ satisfaction with energy savings. We stress that even though “usage” is sent with utility bills, customers focus most heavily on the amount they have to pay. Many confuse “use” with “cost.” Given the rate increases over the past year, customers’ responses may not reflect what actually happened to their energy usage after participating.
Over one-third of respondents who pay their electricity bills are “very satisfied” with the level of electricity savings and 18% are “satisfied.” (Table 6–14) However, 14% of respondents are “dissatisfied” or “very dissatisfied.”

### Table 6–14: Satisfaction Rating for Electricity Savings
(Respondents who pay Electricity bill)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>7%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>7%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>15%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>22%</td>
<td>13%</td>
<td>18%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>31%</td>
<td>41%</td>
<td>36%</td>
</tr>
<tr>
<td>Don't know</td>
<td>16%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Number of Respondents 201 206 407

Overall, 93% of dissatisfied respondents are not satisfied with their electricity savings due to the lack of savings, high bills, and rate increases. (Table 6–15)

### Table 6–15: Reasons for Dissatisfaction with Electricity Savings
(Respondents Who Are Not Satisfied with Electricity Savings; Multiple Response)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>No savings / high bill / rate increase</td>
<td>92%</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td>Problems with light bulbs</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Problem with insulation</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Number of Respondents 58 55 113

Twenty-nine percent of respondents who pay their heating bills are “very satisfied” with the level of heating fuel savings, and 16% are “satisfied.” (Table 6–16) However, 11% of respondents are dissatisfied.

### Table 6–16: Satisfaction Rating for Heating Fuel Savings
(Respondents who pay Heating bill)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>4%</td>
<td>14%</td>
<td>8%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>4%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>21%</td>
<td>10%</td>
<td>16%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>25%</td>
<td>34%</td>
<td>29%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>32%</td>
<td>31%</td>
<td>32%</td>
</tr>
<tr>
<td>Refused</td>
<td>4%</td>
<td>1%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Number of Respondents 135 102 237
Seventy-four percent of dissatisfied respondents are not satisfied with heating fuel savings due to the lack of savings and high bills. (Table 6–17) In addition, some respondents mention that they would like to see more comprehensive services.

Table 6–17: Reasons for Dissatisfaction with Heating Fuel Savings
(Respondents Who Are Not Satisfied with Heating Fuel Savings; Multiple Response)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not saving / high bill</td>
<td>65%</td>
<td>83%</td>
<td>74%</td>
</tr>
<tr>
<td>Would like more comprehensive services</td>
<td>15%</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>Problems with insulation</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>0%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>15%</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>25</td>
<td>26</td>
<td>51</td>
</tr>
</tbody>
</table>

6.6 Recommending the Program

The WRAP participants who signed up for the program are likely to have encouraged friends, family members or co-workers to sign up. (Table 6–18) Just four of the thirteen UI Helps respondents\(^{11}\) have recommended the program.

Table 6–18: Recommend Program to Others\(^{a}\)
(Respondents who Applied for Program)

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>53%</td>
<td>49%</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>47%</td>
<td>51%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Refused</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>13</td>
<td>67</td>
<td>80</td>
</tr>
</tbody>
</table>

\(^{a}\) Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

Most respondents have recommended the program to others in order “to help them save money or energy,” while some have done so because it is a “good program.” (Table 6–19).

Table 6–19: Reasons for Recommending Program to Others\(^{a}\)
(Respondents who Recommended Program to Others; Multiple Response)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>To help them save money or energy</td>
<td>3</td>
<td>65%</td>
<td>66%</td>
</tr>
<tr>
<td>It is a good program</td>
<td>1</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>For them to get other free equipment or appliances</td>
<td>1</td>
<td>9%</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>For them to get a free refrigerator</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>4</td>
<td>34</td>
<td>38</td>
</tr>
</tbody>
</table>

\(^{a}\) Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

\(^{11}\) The number of UI HELPS respondents reflects the small number who applied for the program.
Most respondents who elected not to recommend the program report that they did not think the others would qualify or because it did not occur to the respondent to recommend it. (Table 6–20)

Table 6–20: Reasons for Not Recommending Program to Othersa
(Respondents who did not Recommend Program to Others; Multiple Response)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t think they’d qualify</td>
<td>3</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Just did not occur to me to encourage others to sign up</td>
<td>1</td>
<td>33%</td>
<td>28%</td>
</tr>
<tr>
<td>They have no problems paying their bills</td>
<td>1</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>I don’t know anyone here</td>
<td>3</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>They don’t need any of the appliances given by the program</td>
<td>0</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>I did not recommend because the program is not that good</td>
<td>0</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Most or all of the people I know are already in the program</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Too busy</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>9</td>
<td>32</td>
<td>41</td>
</tr>
</tbody>
</table>

*a Number of respondents reported for the UI Helps program; percentage of respondents reported for WRAP and Overall.

6.7 Program Benefits

When asked to identify the single most important thing about the program, respondents say that the program saves money on utility bills (39%) and that the products and services are free (32%) (Table 6–21). This finding indicates that customers are not simply participating because they are being offered something for free. Instead, more participate because they want to save money.

Table 6–21: Single Most Important Thing about Program
(All Respondents)

<table>
<thead>
<tr>
<th>Reason</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program helps save money on my utility bills</td>
<td>42%</td>
<td>35%</td>
<td>39%</td>
</tr>
<tr>
<td>The products and services are free</td>
<td>33%</td>
<td>30%</td>
<td>32%</td>
</tr>
<tr>
<td>The program makes my home more comfortable</td>
<td>13%</td>
<td>20%</td>
<td>16%</td>
</tr>
<tr>
<td>All of the Above</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Better Knowledge</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Nothing</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>7%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Refused</td>
<td>4%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Making it easier to pay the utility bill is the most important benefit of the program (27%), followed by improving home comfort (19%). (Table 6–22) However, 15% of respondents believe there is no benefit.

Table 6–22: Most Important Benefits of Program
(All Respondents; Multiple Response)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easier to pay utility bill</td>
<td>27%</td>
<td>26%</td>
<td>27%</td>
</tr>
<tr>
<td>Home is more comfortable/warmer/less drafty</td>
<td>14%</td>
<td>24%</td>
<td>19%</td>
</tr>
<tr>
<td>No benefit</td>
<td>16%</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>Received products and services that I couldn’t have replaced myself</td>
<td>9%</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>The education I received about energy efficiency</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Makes it easier to pay other expenses</td>
<td>6%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Free Light bulbs</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Saving Energy</td>
<td>5%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Refused</td>
<td>4%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Free products</td>
<td>0%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>19%</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
6.8 Most and Least Liked Aspects of Program

Participants report that the most-liked aspect of the program is that it lowers their bills (23%), followed by the service costing nothing (20%), saving energy (13%), and improving comfort (12%). (Table 6–23) These answers are consistent with what people see as the major benefits of the programs.

Table 6–23: Most-Liked Aspects of Program
(All Respondents; Multiple Response)

<table>
<thead>
<tr>
<th>Aspect</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowered my bills</td>
<td>23%</td>
<td>24%</td>
<td>23%</td>
</tr>
<tr>
<td>It was free</td>
<td>19%</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Saved energy</td>
<td>14%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Made my house more comfortable/warmer/less drafty</td>
<td>11%</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>Light fixtures</td>
<td>8%</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Nothing</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Good program / helps people</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Fixed up my house</td>
<td>2%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Education</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Quality of Service / Polite Staff</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Convenience</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Everything</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Air conditioner</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Free aerator / showerhead</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>18%</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Refused</td>
<td>4%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Over two-thirds of respondents say they “like everything” when asked to identify what they do not like about the program. (Table 6–24) However, 7% report that the program did not reduce their utility bills and a few think that “not enough assistance was offered.”

### Table 6–24: Least-liked Aspect of Program
(All Respondents; Multiple Response)

<table>
<thead>
<tr>
<th>Aspect</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like everything</td>
<td>69%</td>
<td>69%</td>
<td>69%</td>
</tr>
<tr>
<td>Did not lower my bills</td>
<td>5%</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Not enough Assistance Offered</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Something broke or did not work correctly</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Did not get a refrigerator</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Light bulbs</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Did not do a good job/work was low quality</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>This interview is too long</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Not enough education</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Light fixtures</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Light bulbs</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Length of whole process</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Dislike outside agency’s attitude</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>11%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Refused</td>
<td>4%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

### 6.9 Willingness to Pay

In order to determine how much participants value the programs, we asked if they would be willing to pay a small amount of money in order to receive similar services in the future. Over one-half indicated that they would be willing to pay a small amount, demonstrating a high degree of value given the fact that participants have low incomes. (Table 6–25)

### Table 6–25: Willingness to Pay for Program Services
(All Respondents)

<table>
<thead>
<tr>
<th>Willingness</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54%</td>
<td>53%</td>
<td>54%</td>
</tr>
<tr>
<td>No</td>
<td>25%</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>Don't know</td>
<td>20%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Furthermore, of those unwilling to pay for program services, over one-third say they do not have the money, suggesting that they do value the programs but do not have the disposable income to pay anything for the services. One-third report that the services are not worth the money, and 14% believe it is too expensive. (Table 6–26)

**Table 6–26: Why Not Willing to Pay for Program Services**
(Respondents who are Not Willing to Pay for Program Services; Multiple Response)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t have the money</td>
<td>34%</td>
<td>40%</td>
<td>37%</td>
</tr>
<tr>
<td>Not worth the money</td>
<td>40%</td>
<td>27%</td>
<td>34%</td>
</tr>
<tr>
<td>Too expensive</td>
<td>15%</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>Don’t need the services</td>
<td>6%</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Don’t like the bulbs</td>
<td>8%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Landlord takes care of it</td>
<td>2%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>9%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Number of Respondents</strong></td>
<td>50</td>
<td>60</td>
<td>110</td>
</tr>
</tbody>
</table>

6.10 **Satisfaction by WRAP Subprogram**

Table 6–27 displays ratings of satisfaction with the overall program by WRAP subprogram. Satisfaction appears to be fairly consistent between subprograms, with about two-thirds of customers being “very satisfied.”

**Table 6–27: Satisfaction with Overall Program by WRAP Subprogram**
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Three &amp; Four</th>
<th>Two &amp; Four</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0%</td>
<td>3%</td>
<td>0%</td>
<td>3%</td>
<td>4%</td>
<td>0</td>
<td>2%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0%</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>0%</td>
<td>8%</td>
<td>3%</td>
<td>3%</td>
<td>0%</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>33%</td>
<td>16%</td>
<td>32%</td>
<td>19%</td>
<td>21%</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>67%</td>
<td>69%</td>
<td>61%</td>
<td>69%</td>
<td>71%</td>
<td>4</td>
<td>68%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>3%</td>
<td>4%</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>Refused</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0</td>
<td>1%</td>
</tr>
</tbody>
</table>

| **Number of Respondents** | 22 | 67 | 33 | 59 | 25 | 6 | 212 |

a Number of respondents reported for Subprogram Two & Four; Percentage of respondents reported for all other categories.
Satisfaction with products and services also appears to be relatively consistent between WRAP subprograms, with roughly two-thirds of customers being “very satisfied.” (Table 6–28)

### Table 6–28: Satisfaction with Products and Services by WRAP Subprogram
(All Respondents)

<table>
<thead>
<tr>
<th>Subprogram</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Three &amp; Four</th>
<th>Two &amp; Four</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>0%</td>
<td>4%</td>
<td>3%</td>
<td>7%</td>
<td>0%</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>30%</td>
<td>17%</td>
<td>22%</td>
<td>17%</td>
<td>35%</td>
<td>2</td>
<td>21%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>70%</td>
<td>74%</td>
<td>69%</td>
<td>66%</td>
<td>57%</td>
<td>4</td>
<td>68%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>7%</td>
<td>4%</td>
<td>0</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Number of Respondents: 22 67 33 59 25 6 212

*a Number of respondents reported for Subprogram Two & Four; Percentage of respondents reported for all other categories.

Satisfaction with electricity savings also appears to be relatively consistent between WRAP subprograms, with roughly 40% of customers being “very satisfied.” (Table 6–29)

### Table 6–29: Satisfaction with Electricity Savings by WRAP Subprogram
(All Respondents)

<table>
<thead>
<tr>
<th>Subprogram</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Three &amp; Four</th>
<th>Two &amp; Four</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0%</td>
<td>9%</td>
<td>17%</td>
<td>11%</td>
<td>4%</td>
<td>0</td>
<td>10%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0%</td>
<td>8%</td>
<td>0%</td>
<td>2%</td>
<td>8%</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>Neither dissatisfied or satisfied</td>
<td>22%</td>
<td>10%</td>
<td>21%</td>
<td>14%</td>
<td>8%</td>
<td>0</td>
<td>13%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>11%</td>
<td>15%</td>
<td>10%</td>
<td>11%</td>
<td>17%</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>44%</td>
<td>45%</td>
<td>35%</td>
<td>41%</td>
<td>29%</td>
<td>3</td>
<td>41%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>22%</td>
<td>13%</td>
<td>14%</td>
<td>20%</td>
<td>29%</td>
<td>1</td>
<td>17%</td>
</tr>
<tr>
<td>Refused</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
<td>4%</td>
<td>0</td>
<td>2%</td>
</tr>
</tbody>
</table>

Number of Respondents: 22 67 30 57 24 6 206

*a Number of respondents reported for Subprogram Two & Four; Percentage of respondents reported for all other categories.
Overall, 34% of WRAP participants are “very satisfied” with heating fuel savings, though only 20% of Subprogram Four participants are “very satisfied.” (Table 6–30) Participants in this subprogram received abbreviated services during a neighborhood canvass event, meaning that many had few or perhaps no heating-related measures installed.

| Table 6–30: Satisfaction with Heating Fuel Savings by WRAP Subprogram⁹ |
|------------------|---|---|---|---|---|---|
| Subprogram       | One | Two | Three | Four | Three & Four | Two & Four | Overall |
| Very dissatisfied| 13% | 9%  | 1    | 28% | 0            | 0          | 14%     |
| Dissatisfied     | 0%  | 2%  | 0    | 0%  | 0            | 0          | 1%      |
| Neither dissatisfied or satisfied | 13% | 11% | 1    | 8%  | 0            | 0          | 11%     |
| Satisfied        | 25% | 4%  | 0    | 20% | 0            | 1          | 10%     |
| Very satisfied   | 38% | 42% | 1    | 20% | 0            | 1          | 34%     |
| Don’t Know       | 13% | 31% | 2    | 24% | 3            | 0          | 31%     |
| Refused          | 0%  | 2%  | 0    | 0%  | 0            | 0          | 1%      |

| Number of Respondents | 19 | 48 | 5 | 25 | 3 | 2 | 102 |

⁹ Number of respondents reported for Subprograms Three, Three & Four, and Two & Four; Percentage of respondents reported for all other categories.

Overall, 54% of WRAP participants are willing to pay a small fee for program services, with slightly lower figures among those participating in only Subprogram 4 (49%) or for those participating in both Subprograms Three and Four (35%). (Table 6–31) Again, such participants would have received more abbreviated services with less impact on their utility bills, which may lower their willingness to pay for them in the future.

| Table 6–31: Willingness to Pay by WRAP Subprogram⁹ |
|------------------|---|---|---|---|---|---|
| Subprogram       | One | Two | Three | Four | Three & Four | Two & Four | Overall |
| Yes              | 60% | 58% | 58%   | 49% | 35%          | 4          | 54%     |
| No               | 30% | 20% | 29%   | 30% | 44%          | 1          | 26%     |
| Don’t Know       | 10% | 22% | 13%   | 19% | 22%          | 1          | 20%     |
| Refused          | 0%  | 0%  | 0%    | 2%  | 0%           | 0          | 1%      |

| Number of Respondents | 22 | 67 | 33 | 59 | 25 | 6 | 212 |

⁹ Number of respondents reported for Subprogram Two & Four; Percentage of respondents reported for all other categories.
6.11 Overall Feedback

At the end of the survey, participants were asked to provide any other comments or suggestions regarding the UI Helps and CL&P WRAP program. Table 6–32 lists the types of feedback provided by respondents. Most report being satisfied with the program or offering some form of praise. The next most common response was that respondents still had a high electric bill. Other feedback included specific program suggestions, such as providing bulbs that work with dimmers and offering more stylish fixtures.

Table 6–32: Overall Feedback
(All Respondents)

<table>
<thead>
<tr>
<th>Feedback</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied with program, praise, etc</td>
<td>36%</td>
<td>46%</td>
<td>41%</td>
</tr>
<tr>
<td>Still have a high electric bill</td>
<td>21%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Program suggestions</td>
<td>13%</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>Program should advertise more, I would like more info about programs, etc</td>
<td>18%</td>
<td>9%</td>
<td>14%</td>
</tr>
<tr>
<td>Need more weatherization work done</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>39</td>
<td>42</td>
<td>81</td>
</tr>
</tbody>
</table>

7 Respondent Demographics

About one-third of respondents are aged 65 or older. (Table 7–1) Another one-third of respondents are between 45 and 64 years old. Twenty-five percent of respondents are 25 to 44 years old. Very few respondents are below 25 years of age.

Table 7–1: Age of Respondents
(All Respondents)

<table>
<thead>
<tr>
<th>Age Category</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 24 years old</td>
<td>1%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>25 to 44 years old</td>
<td>24%</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>45 to 64 years old</td>
<td>32%</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td>65 years or older</td>
<td>36%</td>
<td>34%</td>
<td>35%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Refused</td>
<td>7%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Just under one-tenth of households have at least one child aged five or younger living in the home, but 27% have a child under the age of 18. (Table 7–2) Twenty-two percent of homes have at least one member over the age of 65 years of age.

Table 7–2: Household with Members in each Age Group
(All Respondents)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years old</td>
<td>7%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>5 to 13 years old</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>14 to 17 years old</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>18 to 24 years old</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>25 to 44 years old</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>45 to 64 years old</td>
<td>23%</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>65 years or older</td>
<td>23%</td>
<td>21%</td>
<td>22%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

One-third of respondents reside in a single-family home or a townhouse, 22% in a two-to-four unit building, and 36% in a building with five or more units. (Table 7–3)

Table 7–3: Type of Home
(All Respondents)

<table>
<thead>
<tr>
<th>Type of Home</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-family house or townhouse</td>
<td>40%</td>
<td>28%</td>
<td>34%</td>
</tr>
<tr>
<td>2 to four unit building</td>
<td>17%</td>
<td>27%</td>
<td>22%</td>
</tr>
<tr>
<td>5 to 19 unit building</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>20 or more unit building</td>
<td>23%</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>Mobile Home, boat, van, RV or other</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Don't know</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>7%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>

Over one-third of respondents have resided in their current home for more than one year but less than five years. (Table 7–4) Another 22% have resided in their current home for six to ten years, 16% have resided there for eleven to twenty years, and 19% more than twenty years.

Table 7–4: Tenure in Current Residence
(All Respondents)

<table>
<thead>
<tr>
<th>Tenure</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than one year</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>One or two years</td>
<td>9%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>Three to five years</td>
<td>19%</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>Six to seven years</td>
<td>8%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>Eight to ten years</td>
<td>13%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Eleven to fifteen years</td>
<td>11%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>Sixteen to twenty years</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>More than twenty years</td>
<td>24%</td>
<td>15%</td>
<td>19%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Refused</td>
<td>8%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
Those respondents who have lived in their home five years or less were asked the number of times they have moved within the past five years. Two-thirds report moving just once, 13% have moved twice, and 9% have moved three times or more. (Table 7–5) The respondents, therefore, are not very frequent movers.

**Table 7–5: Number of Time Moved in Past 5 Years**  
(Respondents with tenure of five years or less)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I haven't moved</td>
<td>11%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Once</td>
<td>74%</td>
<td>59%</td>
<td>66%</td>
</tr>
<tr>
<td>Twice</td>
<td>11%</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
<td>Three times</td>
<td>3%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Four times</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Five times</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>More than five times</td>
<td>0%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Number of Respondents**

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Respondents</td>
<td>189</td>
<td>200</td>
<td>389</td>
</tr>
</tbody>
</table>

Over 40% of respondents were born in Connecticut, and almost 30% were born in another state. (Table 7–6) About 10% were born in another country; these 31 respondents have lived in the U.S. for an average of 23 years, ranging from seven to 65 years; therefore, no respondent was a very recent immigrant to the United States.

**Table 7–6: Where Born**  
(All Respondents)

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>43%</td>
<td>43%</td>
<td>43%</td>
</tr>
<tr>
<td>Another state in the United States</td>
<td>30%</td>
<td>27%</td>
<td>29%</td>
</tr>
<tr>
<td>Puerto Rico or the US Island Areas</td>
<td>9%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>Another Country</td>
<td>7%</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Refused</td>
<td>11%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Number of Respondents**

<table>
<thead>
<tr>
<th></th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Respondents</td>
<td>202</td>
<td>212</td>
<td>414</td>
</tr>
</tbody>
</table>
About one-third of participants have acquired a high school diploma or GED, 26% have taken some college courses or obtained a two-year degree, and 9% have attended graduate school. (Table 7–7)

<table>
<thead>
<tr>
<th>Table 7–7: Highest Level of Education (All Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI Helps</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>No formal schooling</td>
</tr>
<tr>
<td>Eighth grade or less</td>
</tr>
<tr>
<td>Some high school but no diploma</td>
</tr>
<tr>
<td>High school diploma or GED</td>
</tr>
<tr>
<td>Some college, but no degree</td>
</tr>
<tr>
<td>Associate's or technical school degree</td>
</tr>
<tr>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td>Number of Respondents</td>
</tr>
</tbody>
</table>

The marital status of respondents is fairly evenly distributed, with 24% married and living with a spouse and 24% never married. (Table 7–8) Another 20% are divorced, and 19% are widowed.

<table>
<thead>
<tr>
<th>Table 7–8: Marital Status (All Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI Helps</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Married and living with spouse</td>
</tr>
<tr>
<td>Single, never married</td>
</tr>
<tr>
<td>Divorced</td>
</tr>
<tr>
<td>Widowed</td>
</tr>
<tr>
<td>Separated</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td>Number of Respondents</td>
</tr>
</tbody>
</table>

English is the primary language spoken at home for over 80% of respondents, though 11% of WRAP participants speak Spanish compared to 3% of UI Helps participants. (Table 7–9)

<table>
<thead>
<tr>
<th>Table 7–9: Primary Language Spoken at Home (All Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI Helps</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Spanish</td>
</tr>
<tr>
<td>French or French-derived languages such as Haitian Creole</td>
</tr>
<tr>
<td>Portuguese</td>
</tr>
<tr>
<td>Italian</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Refused</td>
</tr>
<tr>
<td>Number of Respondents</td>
</tr>
</tbody>
</table>
Forty-five percent of respondents report that they are White or Caucasian, 26% are Black, African, or African American, and 10% are Hispanic. (Table 7–10)

<table>
<thead>
<tr>
<th>Race</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>White or Caucasian</td>
<td>40%</td>
<td>50%</td>
<td>45%</td>
</tr>
<tr>
<td>Black, African, or African American</td>
<td>31%</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>7%</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>Some other race</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>More than one race</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>American Indian or Native American</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Asian</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Refused</td>
<td>14%</td>
<td>8%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Number of Respondents: 202, 212, 414

Overall, 14% of respondents report that they identify as Hispanic or Latino. (Table 7–11)

<table>
<thead>
<tr>
<th>Hispanic or Latino</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>11%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>No</td>
<td>78%</td>
<td>78%</td>
<td>78%</td>
</tr>
<tr>
<td>Refused</td>
<td>11%</td>
<td>7%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Number of Respondents: 202, 212, 414

Nearly three-quarters of the respondents are female. (Table 7–12).

<table>
<thead>
<tr>
<th>Gender of Respondent</th>
<th>UI Helps</th>
<th>WRAP</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>68%</td>
<td>75%</td>
<td>72%</td>
</tr>
<tr>
<td>Male</td>
<td>32%</td>
<td>25%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Number of Respondents: 202, 212, 414