

A Longitudinal Approach To Evaluating Wisconsin's Low-income Programs: Results To Date

Lark Lee, PA Government Services Inc., Grantham, NH
Pam Rathbun, PA Government Services Inc., Middleton, WI
Laura Schauer, PA Government Services Inc., Middleton, WI
Steve Tryon, Wisconsin Division of Energy, Madison, WI
Jim Cain, Wisconsin Division of Energy, Madison, WI
Nick Hall, TecMarket Works, Oregon, WI

ABSTRACT

The Wisconsin Department of Administration's Public Benefits program, Focus on Energy¹, is sponsoring a three-year (June 30, 2001 to June 30, 2004) evaluation of the State's low-income programs – the Wisconsin Home Energy Assistance Program (WHEAP) and the Weatherization Assistance Program (WAP). This timeframe allows the authors to take a longitudinal approach to evaluating the program administration and the effects of the low-income programs over three years. As a result of the longitudinal approach, we can track over the course of the evaluation process issues identified, improvements made, response to program changes, and changes in participants well-being and self-sufficiency as a result of the program. This longitudinal approach differs from the majority of evaluations which are funded and designed for a one-year look or snapshot of program process issues and impacts.

Because we are in the middle of the longitudinal study and only year one results are available to-date, this paper focuses on introducing the WHEAP and WAP programs, discussing the evaluation methodology and research activities taking place annually, and presenting year one results (July 1, 2001–June 30, 2002).

Introduction

The Wisconsin Department of Administration's (DOA) Public Benefits program, Focus on Energy, is sponsoring a three-year (June 30, 2001 to June 30, 2004) evaluation of the state's low-income programs – the Wisconsin Home Energy Assistance Program (WHEAP) and the Weatherization Assistance Program (WAP). This timeframe allows the authors to take a longitudinal approach to evaluating the program administration and the effects of the low-income programs over three years. As a result of the longitudinal approach, we can track over the course of the evaluation process issues identified, improvements made, response to program changes, and changes in participants well-being and self-sufficiency as a result of the program. Our longitudinal approach differs from the majority of evaluations which are funded and designed for a one-year look or snapshot of program process issues and impacts.

¹ Focus on Energy is a public-private partnership offering energy information and services to residential, business, agricultural, and industrial customers throughout Wisconsin. These services are delivered by a group of firms contracted by the Wisconsin Department of Administration's Division of Energy. Focus is funded by the Utility Public Benefits fund created by the Wisconsin State Legislature in 1999 as part of the Reliability 2000 initiative.

From the perspective of DOA management staff, the WHEAP and WAP programs share the common goal of improving the energy sustainability² of low-income households and the programs are designed to address similar barriers to help low-income households move toward this goal. The longitudinal approach is especially well-suited to allow the evaluation to assess how the programs are helping low-income households move toward energy sustainability as we can track changes in households' well-being and ability to pay over three years through a customer panel study.

Because we are in the middle of the longitudinal study and only year one results are available to-date, in this paper we focus on introducing the WHEAP and WAP programs, discussing the evaluation methodology and research activities taking place annually, and presenting year one results (July 1, 2001 – June 30, 2002). This is done in the following sections:

1. **Program description:** introduces WHEAP and WAP programs,
2. **Evaluation methodology:** outlines the researchable questions that directed the evaluation and evaluation activities conducted in year one,
3. **Results of evaluation activities:** presents process results, program impacts measured from participant surveys, and detailed tables,
4. **Problems encountered during the evaluation:** details problematic issues addressed in the first year evaluation, and
5. **How year one results are being used:** outlines areas evaluations identified for further exploration and consideration, and DOA's response to these recommendations.

Program Description

DOA and local agencies administer the WHEAP and WAP programs (local agencies can administer both programs or only one of the programs). Both of these programs are long running programs (over 20 years) that serve low-income households up to 150% of the federal poverty level³. The following summarize the WHEAP and WAP programs to the reader.

WHEAP

WHEAP includes the federally funded Low Income Home Energy Assistance Program (LIHEAP) and other related programs. WHEAP provides energy assistance to income-eligible families that face an

² Sustainability—the ability of a household to make full and timely payments of energy bills over an extended period of time without resorting to actions that cannot be maintained or are otherwise undesirable. For example, paying energy bills and not purchasing necessary medicine is an example of an action that cannot be maintained for a long period of time without an undesirable consequence. Another way of thinking of sustainability is affordability over time. A bill or bills may be affordable in the short term but not over an extended period of time. Sustainability is meant to add the dimension of time to the concept of affordability. (Wisconsin LIHEAP Performance Measures, Working Group Report, December 2000).

³ Wisconsin statute s.16.385 limits eligibility for WHEAP and WAP to households at or below 150 percent of the federal poverty level. Federal eligibility for LIHEAP and weatherization is households at or below 150 percent of federal poverty level or 60 percent of area median income, whichever is higher. In Wisconsin, 150 percent of federal poverty level is lower than 60 percent of area median income; so fewer households meet the Wisconsin income eligibility criterion than are eligible under federal rules. Certain other households may be considered eligible for LIHEAP by federal law and by Wisconsin statute s.16.384. These categorically eligible households amount to less than one percent of all households' eligibility determination in Wisconsin (Wisconsin LIHEAP Performance Measures, Working Group Report, December 2000).

energy burden. County agencies, tribal governments, or their subcontractors oversee client contact, outreach, and the application process for the program. WHEAP offers three main avenues of assistance.

1. **Direct payment to fuel providers.** Direct payment is a once a year, lump payment made directly to the fuel provider in the name of the recipient, except where there is no registered fuel provider. Recipients may receive assistance for heating fuel, or assistance for both heating fuel and electric service. Electric assistance is only available to dwellings located in areas served by Class A electric utilities and the service areas of cooperative and municipal utilities who have “opted in” to the Low-income Public Benefits Program. These benefits are structured to provide greater amounts of assistance as the level of income decreases and the energy burden increases.
2. **Crisis assistance.** Crisis assistance is intended to aid households facing “no-heat” situations. This type of assistance commonly includes special fuel purchases for bulk fuel users whose tank is empty; replacement of non-functioning or unsafe heating systems; and temporary lodging until the emergency has been resolved. Crisis assistance also contains a proactive component intended to help households avoid the need for emergency crisis services. Proactive assistance includes counseling for financial planning and arranging budget payment plans.
3. **Referrals to the WAP.** WAP improvements are intended to decrease the energy use in the dwelling. We discuss typical measures in the following WAP description. A set percentage of 15 percent of total WHEAP funds are designated for use in weatherization.

WAP

DOA contracts with 21 agencies throughout the state to provide weatherization services. Agencies include community action agencies, housing authorities, tribes, local governments, and other non-profit organizations. Structures served include one- and two-story single-family homes, multi-family rental buildings, and mobile homes or trailers. The array of energy conservation measures installed is prescriptive in the sense that if a measure is needed, it is selected for installation. With the exception of refrigerators, windows, or door replacement, the measures are installed without choices being offered to the resident. For owner-occupied dwellings, most measures are installed at no cost to the low-income family. Replacement of windows and doors is cost-shared with the owner. For rental dwellings, there may be a cost-share arrangement with the landlord for all measures. WAP staff works out this arrangement on a case-by-case basis with landlords.

The 21 local agencies deal with structural eligibility, sometimes financial eligibility (in most cases client financial eligibility is determined by WHEAP), building assessment for energy conservation measures, and installation of the energy conservation measures. These agencies may use their own crews to perform the measures, sub-contract with contractors, or some combination of these two.

WAP consists of two parts—a base program and additional services. The base program offers the same services to all eligible dwellings in the state. These basic weatherization services include insulation, infiltration reduction, furnace tune-up or replacement, compact fluorescent lamps, and some health and safety measures. The additional services are only available to dwellings located in areas served by Class A electric utilities and the service areas of cooperative and municipal utilities who have “opted in” to the Low-income Public Benefits Program. The additional measures include such items as refrigerators and air conditioning.

Evaluation Methodology

Researchable Questions

The 2000 Wisconsin LIHEAP Performance Measures Working Group established four performance measures that comprise the foundation of this evaluation research. The longitudinal approach allows the evaluation to track the programs' performance and progress for each of these measures across three years. The performance measures assess the programs': 1) Effectiveness in targeting and servicing those who are vulnerable or have a high energy burden; 2) Interactions with other programs; 3) Impact on a client's ability to sustain payment of home energy bills; and 4) Impact on clients' lives, including non-energy benefits.

Evaluation Activities

The three-year longitudinal study includes a combination of qualitative and quantitative data to address these researchable questions on an annual basis.

Qualitative data collection activities include interviews with program staff, local WHEAP and WAP providers, and other stakeholders (e.g., subcontractors, landlords, utility staff). These interviews have been a rich source of process information, and conducting them on an annual basis has allowed us to appraise changes in identified process issues. Through our interviews in year two, we are assessing the progress of issues noted in year one interviews as well as probing about new issues as they arise. We will repeat this process in year three.

Interviews with WHEAP and WAP providers and other stakeholders cover a wide array of issues. WHEAP and WAP provider interviews cover the following types of issues across the three-year evaluation period: coordination between WHEAP and WAP as well as coordination with other low-income programs; types of customer outreach and customer education offered; administrative, program, and funding barriers; and how Public Benefits has affected the way they deliver the program. In stakeholder interviews, we address specific questions pertaining to their relationship with the program, but generally cover how they interact with the programs, their perception of how the programs are functioning, and how they believe clients are benefiting from the programs.

The quantitative data collection activities include statewide customer telephone surveys and low-income market characterizations. The customer telephone surveys are being conducted with two groups: a sample of program participants, and a sample of non-participants (income-eligible households that are not participating in the low-income programs). The evaluation is following these households over the three-year evaluation period and this allows us to look at program impacts and satisfaction by key variables such as poverty level, geographic region, program, and years of participation because of the large number of completed participant and non-participant surveys (n=997 and n=352 in year one, respectively).

The panel study of customers allows the evaluation to measure changes in participants' energy-sustainability, the ultimate goal of the programs as discussed in the Program Description section above. We are following changes in sustainability across the evaluation period by: 1) identifying a key set of quantitative indicators of "sustainability" that can be measured reliably over time and thus "tracked" from year to year as descriptive indices of program outcomes; and 2) conducting statistical analyses each year that allows the evaluation to assess the net effects of program participation on sustainability while also controlling for other individual, structural, and environmental factors (e.g., employment, fuel prices, weather patterns).

The participant surveys address the following key issues: program participation history; expectations and satisfaction; energy use and bill payment behavior; disconnect history; quality of life

issues – comfort of home, physical and emotional health; and other household expenses and concerns with paying non-energy bills. Non-participant surveys cover similar topics as well as awareness of the programs and barriers to participation.

The evaluation is also conducting a market characterization of Wisconsin's low-income population and program participants on an annual basis through the analysis of secondary data sources and program databases. The main objective of the market characterization is to provide context about the Wisconsin low-income population in order to best interpret WHEAP and WAP participation levels and evaluation results. The market characterization also helps us better understand the energy and non-energy characteristics of those that the WHEAP and WAP programs do and do not target and serve each year. Specific questions being investigating each year are the percentage of eligible vulnerable households being served by county; the percentage of household income spent on heating and electric bills (energy burden); typical participation in social and housing programs; characteristics of low-income households' living situations; mobility of low-income households; energy use and behavior of low-income households; and demographics of low-income households.

There are two additional quantitative evaluation tasks only being conducted once during the evaluation period in order to allow two years of post-participation data – a consumption analysis and an arrearage analysis. The consumption analysis will be conducted in year three of the evaluation for households who participated in WAP in year one. The consumption analysis will assess changes in consumption data before and after program participation. If a family's life style is unchanged after weatherization, a significant reduction in energy use per degree-day for the dwelling is expected. Fuels addressed will include not only electricity and gas, but will also include the bulk fuels propane and fuel oil, which are often used in rural areas.

An arrearage analysis will also be conducted in year three of the evaluation. The arrearage assessment will focus on determining the extent to which participants have taken actions that have actually resulted in changed payment behavior as a result of the programs. Particular items to be addressed are regularity of payment, consistency of payment amounts, increases or decreases in arrearage amounts, the link between utility debt write-off and arrearage debt, and the impact of price and weather. It is also important to note that changes in arrearage behavior can include no growth in the arrearage amount or a slowed rate of growth in the arrearage amount as well as decreased arrearages.

Results

This section presents process and program impact results of the year one evaluation. We are using these findings as a baseline and to identify issues in need of further exploration in years two and three.

Process Results

The following process results⁴ are based on analysis of the program database, interviews with local WHEAP and WAP agency staff, utility and bulk fuel vendors and customer surveys as described in the preceding section.

The program administration is running efficiently. Interviews with local WHEAP and WAP agency staff, and utility and bulk fuel vendors indicate that the programs run efficiently, without significant administrative difficulties. At the same time, areas were identified where administration

⁴ A more complete presentation of the reported benefits, the type of questions asked and the responses provided can be found in the Focus on Energy report entitled Year One: Low-income Program Evaluation Report, State of Wisconsin, Division of Energy, September 9, 2002.

could be improved, including consistency in WHEAP program administration between counties (i.e., administering non-emergency crisis funds), and closer cooperation and communication between WHEAP and WAP to improve the targeting of vulnerable and high-energy burden households. The evaluation is following identified areas for program improvements in years two and three.

Participants are highly satisfied with the programs. On a 5-point scale, with 1 being “not at all satisfied” and 5 being “very satisfied,” the average satisfaction rating with WAP was 4.8. On this same scale, the average satisfaction ratings given to different components of WHEAP ranged from 4.2 to 4.9.

The programs are serving those most vulnerable, but areas of improvement were identified. Forty percent of all eligible low-income households received WHEAP benefits in Federal Fiscal Year 2 (FFY02). This exceeds the goal of 33 percent proposed to the DOA by the LIHEAP Performance Measures Working Group.⁵ Of all households receiving WHEAP benefits in Federal Fiscal Year 2 (FFY02), 35% have an individual over the age of 60, 39% report a disabled member, 23% have a child under the age of 6, and 57% have an energy burden of greater than 10%. Despite the high participation of eligible households in WHEAP, the evaluation found that the percent of eligible households receiving WHEAP benefits varies substantially by county. While 10 counties provide benefits to over 50 percent of their eligible households, 5 counties provide benefits to less than 10 percent of their eligible households.

In FFY02, WAP served significantly fewer households with individuals over 60 years of age, households with disabled persons, those below 75% of the poverty level, and those with an energy burden greater than 10% than were served through WHEAP. Furthermore, WAP is delivered to a much higher proportion of homeowners than renters, who are more likely than homeowners to report having difficulty meeting bills and controlling their energy use. We are exploring these issues in more depth in years two and three of the evaluation.

The type and amount of energy education provided varies widely by local agencies. Fewer than 50% of local WHEAP agency staff said they provide any energy education due to reported time and budget constraints. While all WAP providers reported providing energy education, the extent of this effort also varied. A majority of participants who reported receiving education said they now know more about how to save energy and control their utility bill, and they are more likely to report taking low-cost, no-cost actions to reduce their bills. The extent to which energy education is being offered to participants is also being further explored in years two and three of the evaluation.

The coordination between WHEAP and WAP agencies needs improvements. As found in an earlier study conducted by the Energy Center of Wisconsin⁶, our year one interviews with local WHEAP and WAP agency staff indicate that the level of integration between WHEAP and WAP in year one varied throughout the state, ranging from close cooperation to minimal cooperation. Increased coordination and communication between the programs was suggested by the evaluation to increase efficiencies, better target the most vulnerable households, and to increase their understanding of each other’s objectives.

Public Benefits are viewed positively by those who know and understand it. Interviews with WHEAP staff revealed that those who understand Public Benefits view it as a strength, allowing them to expand services and to target additional clients, such as electric heating households. While slightly more than a quarter of the local WHEAP agency staff interviewed said that funding for administrative support is still a problem for them, this situation has improved since Public Benefits. However, almost half of WHEAP staff were unclear about the impact Public Benefits has had on their operation. All WAP

⁵ Wisconsin LIHEAP Performance Measures Working Group Report, December 2000. Prepared by Bobbi Tannenbaum, Energy Center of Wisconsin, for Steven Tryon, Energy Service Bureau, Division of Energy.

⁶ “Wisconsin Low-Income Energy Services,” publication # 167-1, Energy Center of Wisconsin, 1997.

providers interviewed and their DOA monitors and managers feel Public Benefits has increased their ability to adequately address a home's needs by providing services in a more comprehensive manner. However, this has resulted in additional time and money to weatherize each home, which has had other staffing implications and resulted in fewer homes being weatherized.

Program Impacts

This section summarizes the program impacts from the first year of the panel study with participants and non-participants. Where applicable, program impacts are discussed for three different classifications of 'participants' – those who participated only in WHEAP (WHEAP-only), those who participated only in WAP (WAP-only) and those who participated in both WHEAP and WAP (WHEAP/WAP). A sample of tables presenting impacts can be found at the end of the paper.

Ongoing analysis of the energy impacts of WAP (as well as WHEAP furnace replacements) indicate that the programs are having a positive effect. The average energy savings per participating WAP household is estimated to be approximately \$261 a year, and the average energy savings per WHEAP furnace replacement is approximately \$196 a year.

Supporting the analysis of energy impacts, program participants report energy benefits as a result of the program. As a result of their participation in the programs, at least a quarter of low-income participants reported improved control of their household's energy use and the size of their energy bill; a decrease in their utility bills (WAP participants only); a decrease in the number of times they have had to set up a bill payment plan or experienced a disconnect; paying more bills on time; and lower levels of concern with meeting energy and non-energy bills.

Ongoing analysis of the non-energy impacts of the programs indicate that a major benefit of the programs is not simply in the reduction of energy costs, but in the other non-energy benefits to participants and society as a whole resulting from the measures implemented. Other non-energy benefits of the Focus program include benefits for participants – for example, increased health, safety, and comfort – and benefits for the utility companies serving the participants – for example, reduced cost of service. The dollar values assigned to these non-energy benefits in the past evaluation year averaged \$246 for WAP only participants, \$30 for WHEAP only participants, and \$267 for households participating in both WHEAP and WAP. These values were determined from prior research and from an analysis of the non-energy benefits accruing from energy efficiency improvements and bill payments conducted through the Low-income Programs.

Program participants report improvements in their quality of life as a result of the program. Improvements in quality of life include greater comfort and health through heating the home sufficiently in the winter; a decrease in the number of drafts (WAP participants only); fewer problems with inconsistent room temperatures or indoor air quality problems (WAP participants only); increased safety through decreased use of portable heaters, cooking stoves, and fireplaces; more money for other necessities such as food and medicine that they did without prior to participating in the program; and improved health in the form of decreased number of colds, flues or other sicknesses.

Program benefits and improvements are similarly realized across poverty levels. A breakdown of participant benefits/improvements by poverty categories (below 75% and above 100% of federal poverty level) indicate that the programs' energy and non-energy benefits are realized fairly equally across the different income levels participating in the programs.

Program benefits are helping lead participants toward greater sustainability. While benefits were measured for both WHEAP and WAP, the reported impacts on sustainability are greatest among those who participated in both WHEAP and WAP (or at least WAP). The improved situation of participants compared to those households that have not participated in the low-income programs further substantiates that the low-income programs are resulting in benefits that help sustain the ability of some

households to meet their energy and non-energy bills, although external factors will always be a barrier for some households in achieving sustainability. The impact of the programs on sustainability will be examined more closely in years two and three, using the methodology described in the preceding section.

The following table shows the percent of respondents reporting improvements in quality of life indicators since participating in the program. Percent improvement is the change in the overall percent who reported having a problem before participating in the program(s), but do not report having the problem since participating in the program.

Table 1. Program Effect on Quality of Life

Since program participation, the percent of households that report they . . .	WHEAP and WAP (N=399)	WHEAP -only (N=400)	WAP-only (N=198)
Are no longer uncomfortable in home because they kept the heat low	48%	26%	44%
No longer using portable kerosene heaters or portable electric heaters for heat (asked of those that reported being uncomfortable in home)	28%	17%	16%
No longer using a cooking stove or fireplace for heat (asked of those that reported being uncomfortable in home)	15%	9%	11%
No longer limit their purchase of food, medicine or other necessities	33%	25%	25%
Have not had telephone service disconnected	13%	20%	14%
Are no longer living with other people because they could not pay the rent or mortgage or utility bills	2%	6%	1%
Are no longer living in an emergency shelter or similar housing situation	1%	2%	1%
Are no longer homeless	3%	1%	2%
No longer are experiencing unfavorable conditions	83%	78%	69%
Experience colds, flues or other sicknesses	27%	13%	24%

Source: 2002 (Contract Year 1) participant survey

The following table presents program effects on participants' energy and non-energy bills (self-reported), as well as participants' concern about these bill payments before program participation.

Table 2. Program Effect on Payment of Energy and Non-energy Bills

Energy and Non-energy Bill Indicator (as a result of participation)	WHEAP and WAP	WHEAP- only	WAP- only
CONTROL			
Since participation, increased control over household energy use	52% (n=389)	30% (n=391)	56% (n=196)
Since participation, increased control over size of energy bill	46% (n=384)	32% (n=381)	53% (n=191)
IMPACT ON BILL PAYMENT			
<i>(If discussed bill payment plans in past)</i> Experienced a decrease in the number of times they discussed bill payment plans or options with someone at utility or fuel company	46% (n=125)	29% (n=121)	49% (n=61)
<i>(If experienced disconnection in past)</i> Experienced a decrease in the number of times their fuel/energy was disconnected	64% (n=23)	24% (n=27)	71% (n=10)
Would pay fewer bills on time if they had not participated in program(s)	45% (n=389)	48% (n=385)	36% (n=190)
Utility bill lower due to weatherization services	64% (n=353)	N/A	77% (n=168)
CONCERN			
More concerned with meeting winter heating costs <u>before</u> participating in program(s)	40% (n=388)	47% (n=390)	41% (n=194)
More concerned with meeting monthly electric costs <u>before</u> participating in the program(s)	35% (n=387)	41% (n=394)	33% (n=195)
More concerned with meeting mortgage or rent costs <u>before</u> participating in program(s)	21% (n=298)	29% (n=310)	21% (n=169)
More concerned with meeting food costs <u>before</u> participating in program(s)	18% (n=388)	26% (n=393)	18% (n=197)
More concerned with meeting medical and health expenses <u>before</u> participating in program(s)	23% (n=371)	31% (n=371)	23% (n=190)

Source: 2002 (Contract Year 1) participant survey

Table 3 compares program participants' and non-participants' control over energy use and bills, bill payment behaviors, and concerns about meeting essential living costs.

Table 3. Participant Bill Behavior and Attitudes Compared to Non-participants

Energy and Non-energy Bill Indicators	Participants			Non-participants	
	WHEAP and WAP (n=399)	WHEAP -only (n=400)	WAP- only (n=198)	WAP- waitlisted (n=153)	WHEAP and WAP (n=200)
CONTROL					
Have control over energy use	84%	71%	79%	60%	62%
Have control over energy bill	59%	51%	60%	35%	37%
IMPACT ON BILL PAYMENT					
Discussed bill payment plans or options with someone at utility or fuel company	31%	34%	37%	49%	22%
Experienced utility or fuel disconnection	5%	6%	5%	9%	7%
Pay 25% or more bills late	32%	43%	42%	47%	30%
CONCERN					
Concerned with meeting winter heating costs	67%	73%	59%	78%	51%
Concerned with meeting monthly electric costs	60%	69%	59%	71%	43%
Concerned with meeting mortgage or rent costs	60%	69%	65%	71%	53%
Concerned with meeting food costs	57%	63%	53%	61%	44%
Concerned with meeting medical and health expenses	61%	69%	60%	70%	57%

Source: 2002 (Contract Year 1) participant and non-participant surveys

Problems Encountered During the Evaluation

Many things in year one of this evaluation went right. The programs are long running and well established. Program managers and the DOA supported evaluators having access to data and documentation, facilitated the process to interview key staff and local providers, fostered open lines of communication, and allocated sufficient resources to do a comprehensive evaluation. Two of the main problems encountered were (1) cost-effectively identifying a non-participant sample, and (2) reluctance on the part of individual utilities to provide consumption data for the year 3 billing analysis.

4. **Cost-effectively identify a non-participant sample.** Since it was not cost-effective to conduct a statewide random digit dial survey to obtain the desired number of non-participant surveys, we developed a sample design that focused on census tracts that have the highest percentage of households in poverty. This sample design also incorporated the evaluation's desire to have adequate representation among both rural and urban households, and representation of households by geographic region.
5. **Utility reluctance to provide consumption data.** DOA assisted evaluators in convincing utilities to provide consumption data. As described below, as a result of this issue, DOA changed the release form that program participants sign to authorize release of consumption information to both DOA and evaluators.

How Year One Results Are Being Used

In the year one evaluation report, evaluators identified some areas for further exploration and consideration. These areas and DOA's actions in response to these findings are discussed here.

1. **Encourage increased cooperation and communication between WHEAP and WAP agencies.** In year two, DOA management instituted a requirement that local agencies administering the programs develop and submit local coordination plans. Agencies were required to meet with each other and major fuel suppliers to develop the plan. One objective of this requirement was to foster agencies' and utilities' communication and cooperation by encouraging the agencies of each program to communicate with each other. Another objective was to increase understanding of each other's program. Agencies are required to produce and deliver a common product to DOA (which they could work on together). In addition, DOA planned a joint statewide low-income energy programs conference in year two. The evaluation attended this conference and believes it met the objective of providing another set of links between local staff of both programs and providing case studies of successful coordination activities by some of the agencies.
2. **Improve the programs' targeting and servicing of the most vulnerable and high-energy burden households.** A second objective of the local coordination planning efforts discussed in the previous bullet was to improve the referral process between WHEAP and WAP in order to make the targeting of WAP services more effective. In addition, DOA identified a minimum number of rental units to be completed in the most recent WAP contracts performance standards. DOA also has contracted for special outreach services in rural communities to increase awareness and participation in the programs among eligible non-participating households.
3. **Explore methods for and the effectiveness of increasing energy education.** In year one of the evaluation, DOA initiated a Pilot Energy Calendar effort where calendars were distributed to WHEAP applicants in selected areas of the state. The calendar contains hints and tips for reducing energy consumption and maintaining, or improving, comfort. WHEAP participant surveys included a battery of questions related to these calendars. WHEAP management reviewed the acceptance and tentative results of the Pilot Energy Calendar effort and decided to expand the distribution of calendars to all counties. DOA management have also begun a reassessment of the energy education activities of both programs with an eye towards providing more educational materials to local agencies as a way of supporting the educational efforts of

local staff. The statewide low-income conference also included a session on best practices to share effective energy education methods and techniques with program operators in the state.

4. Consider revising the way WHEAP direct payment benefits are delivered to households.

The state did considerable evaluation when it put in place the current payment system. A prime consideration was a system that would minimize administrative expenses in order that the maximum amount of funds goes directly to benefit customers. Most of the recommended changes of the evaluation, while conceptually logical, would increase operational costs. WHEAP management and staff are considering modifications to the benefit payment system currently used. Major barriers to changes have been identified as: 1) A potential and substantial increase in costs for fuel suppliers (especially utilities) in processing a multiple payment system; 2) The substantial investment in the current web-based application system and the difficulty in changing the system to accommodate a multiple payment approach; 3) The problem of tracking a population of recipients where some move from one address to another, potentially changing fuel suppliers; and 4) The impossibility of gaining administrative approval to expend funds, in a time of very tight budgets, to reprogram the computer system.