



**NJ LIWAP and NJ Comfort Partners  
Comparison of Programs and  
Evaluation Findings  
Final Report**

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## I. Introduction

In 1999 electric and gas restructuring legislation authorized the BPU to establish an adjustable societal benefits charge (SBC) for socially beneficial programs. In March 2001, the New Jersey Board of Public Utilities approved a three-year statewide comprehensive energy efficiency and renewable energy program that included a low-income energy efficiency component that was named the New Jersey Comfort Partners program.

The implementation of the Comfort Partners Program represented an important change in the way that ratepayer funds were used to provide low-income usage reduction programs. Prior to Comfort Partners, low-income usage reduction programs were developed by each utility as part of their demand side management plans. The existing set of programs differed widely in terms of the funding level and the types of services offered. Comfort Partners replaced those individual utility programs with a single statewide program model that could offer comprehensive services to a household. However, while the program model was consistent across individual utilities, each utility retained responsibility for meeting goals in terms of the number households served and for managing program expenditures.

There are two other major sources of funding for low-income usage reduction in New Jersey. The federal Low Income Weatherization Assistance Program (LIWAP) provides funds for low-income weatherization through a block grant. The federal Low Income Home Energy Assistance Program (LIHEAP) provides funds for low-income energy assistance through a block grant and the New Jersey Department of Human Services allocates a portion of those funds for low-income weatherization. The New Jersey Department of Community Affairs manages the weatherization programs funded by LIWAP and LIHEAP.

The NJ BPU, with the assistance of the Clean Energy Council, is considering how the Comfort Partners Program can be operated most effectively and efficiently in the future. They are considering how the program should be administered, what program delivery model should be used, what program services should be offered, and how program performance should be tracked. The existing models for Comfort Partners, LIWAP, and LIHEAP all serve as potential starting points for the development of a Comfort Partners Program. However, there is no reason that the program can't adopt a different model altogether.

To date, there has been little coordination between the delivery of the government funded LIWAP/LIHEAP programs and the ratepayer funded Comfort Partners Programs. This lack of coordination seems to be an important missed opportunity for both programs. In addition to considering what changes may be appropriate to the Comfort Partners Program model, the BPU also is considering the extent to which the programs should be coordinated and/or integrated.

While there has been extensive evaluation of the Comfort Partners Program, the NJ LIWAP has not been evaluated. In order to provide some comparable information on program services and

impacts for the NJ LIWAP, this project included an impact analysis involving two of the current nineteen WAP agencies. Findings from this evaluation are incorporated into the comparison.

The purpose of this report is to furnish the BPU and the Clean Energy Council with detailed documentation of the existing program models and data on the impacts of the NJ LIWAP. This will allow advisors and decision-makers to start with a common understanding of those program models. The analysis helps to demonstrate the ways in which the models are similar and ways in which they differ. Where there are important differences between the program models, the analysis discusses the rationale for each program's design to help the BPU and the Clean Energy Council assess which model might be most appropriate for a ratepayer funded low-income usage reduction program.

## II. NJ LIWAP Evaluation

### *A. Introduction*

APPRISE worked with Rutgers CEEEP and the NJ Office of Low-Income Energy Efficiency (OLIEC) to design an evaluation that would provide quick feedback on the impacts of the NJ LIWAP program. While the findings from this analysis represent only two of the nineteen community agencies that provide LIWAP in New Jersey, they provide some information on the range of potential benefits provided by the program. This section summarizes the methodology for the evaluation as well as the evaluation findings.

### *B. Methodology*

This section describes the selection of clients for the evaluation, how evaluation data were obtained, weather normalization procedures, and the use of a comparison group.

#### **Study Group**

Nineteen agencies provide services under the NJ LIWAP program, but the evaluation was limited to two agencies to control costs and provide quick feedback. Two community agencies in PSE&G's service territory, Burlington County Community Action Program and Camden County Council on Economic Opportunity, were selected for the evaluation study. These agencies were selected because PSE&G provides both electric and gas service to their clients, and PSE&G could quickly provide electric and gas usage data in an electronic format.

Clients treated in 2002 were targeted as the group to be studied in this evaluation. These clients were targeted because the Comfort Partners evaluation also studied clients served in 2002, and because usage data would be available for pre and post-treatment for the study group and for the same periods for a comparison group (clients treated in 2003).

#### **Evaluation Data**

The NJ LIWAP does not maintain data on individual clients in a program database. Therefore, APPRISE worked with agencies to obtain customer level data from the paper files stored at the agencies. APPRISE staff and agency staff copied information from clients' files that included whether vulnerable persons were present in the household (elderly, disabled, and young child), household poverty level, treatments received, funding sources, and pre-treatment energy usage data. The agencies had requested usage data from PSEG at the time the client applied for weatherization services. While PSE&G provided electronic usage data for the post-treatment period that was used in this evaluation, their system does not maintain data for a long enough history to provide pre-treatment data.

**Weather Normalization**

The usage impact analysis presented in this memo followed the procedures utilized by the NJ Comfort Partners usage impact analysis conducted by Blasnik and Associates in order to provide the greatest comparability between the results. Gas usage data were normalized for variations in weather using PRISM software. This software provides an estimate of each client's usage in the pre and post treatment periods in an average weather year. Electric usage data were normalized for variations in weather using a more robust adjustment procedure that also provides estimates of usage in an average weather year.

**Comparison Group**

When measuring the impact of an intervention, it is necessary to recognize other exogenous factors that can impact changes in outcomes. Changes in a client's energy usage, between the year preceding service delivery and the year following service delivery, may be affected by many factors other than program services received. Some of these factors include changes in household composition or health of family members, and changes in weather. The weather normalization process described above controls for changes in weather between the pre and post treatment periods. To control for other exogenous factors, we examine the change in outcomes for program participants compared to the change in outcomes for another group of households. This group of households is called a comparison group. The comparison group is designed to be as similar as possible to the treatment group, those who received services and who we are evaluating, so that the exogenous changes for the control group are as similar as possible to those of the treatment group.

In the evaluation of the NJ LIWAP, we use clients who participated in the program at a later date as the control group. These clients serve as a good control because they are low-income households who were eligible for the program and chose to participate. We use data for these clients for the two years preceding service delivery, to compare their change in usage in the years prior to receiving services to the treatment group's change in usage after receiving services.

Customers designated as the treatment group, those whose outcomes we evaluate in this report, received NJ LIWAP services during 2002 (and a few at the end of 2001). Customers in the control group received NJ LIWAP services during 2003.

In this evaluation, we examine pre and post-treatment usage statistics. The difference between the pre and post-treatment usage for the treatment group is considered the gross change. This is the actual change in behaviors and outcomes for those clients who were served by the program. Some of these changes may be due to the program, and some of these changes are due to other exogenous factors, but this is the customer's actual experience. The net change is the difference between the change for the treatment group and the change for the control group, and represents the actual impact of the program, controlling for other exogenous changes.

### C. Client and Program Characteristics

In this section we examine characteristics of clients who participated in the NJ LIWAP. Table 1 displays the vulnerable characteristics and the poverty level of participating households. This table shows that about one third of participating households had an elderly household member, aged 60 or older. About one quarter of participating households had a disabled member or a young child. Burlington was more likely to serve households with elderly members, and Camden was more likely to serve households with young children.

Twelve percent of participating households had income below 50 percent of the poverty level, 37 percent had income between 50 and 100 percent of poverty, 47 percent had income between 100 and 150 percent of poverty, and 5 percent had income above 150 percent of poverty. Camden was more likely to serve households with income below 100 percent of the poverty level.

The table also shows that Burlington and Camden are not successful in providing services to renters. Eighty-five percent of Burlington clients and ninety-six percent of Camden clients are home owners.

Table 1  
NJ LIWAP Participant Characteristics

	Burlington		Camden		All Burlington	All Camden	All Clients
	Treatment	Control	Treatment	Control			
<b>Number of Clients</b>	120	64	91	61	184	152	336
<b>Elderly (60 or older)</b>	36%	38%	24%	23%	36%	24%	31%
<b>Disabled</b>	29%	30%	27%	16%	30%	23%	26%
<b>Young Child (5 or younger)</b>	23%	14%	40%	34%	20%	38%	28%
<b>Poverty Level</b>							
<b>&lt;50%</b>	11%	10%	13%	11%	11%	13%	12%
<b>51%-100%</b>	31%	34%	47%	34%	32%	42%	37%
<b>101%-150%</b>	51%	47%	38%	52%	50%	44%	47%
<b>&gt;150%</b>	7%	8%	1%	2%	8%	1%	5%
<b>Home Owner</b>	86%	84%	95%	98%	85%	96%	90%

Table 2 displays the frequency of installed measures and the total material cost. This table shows that three percent of participating clients received wall insulation and 14 percent received attic insulation. This compares to four percent of Comfort Partners participants who received wall insulation and 53 percent of Comfort Partners participants who received attic insulation. The most common measure provided was air sealing – 82 percent of participants received air sealing work. Thirty-four percent had furnace work done and 25

percent had a furnace replacement.<sup>1</sup> Forty-two percent of clients had work done that was considered a health and safety improvement. Almost all clients received other measures that included CFL's, aerators, window and door replacement, and refrigerator replacement. Seventy-one percent of clients received window replacement, and 19 percent received door replacement. Five percent received refrigerator replacement, but this was only implemented for the control group in 2003. Seventy-two percent of clients received CFL's, averaging three per home.

Table 2 also displays the mean level of materials costs. The total costs and the costs per measure were not reported, as one of the agencies did not allocate agency labor to individual jobs. This table shows that the average material cost was \$1163. Material costs averaged \$830 for Burlington and \$1500 for Camden.

**Table 2**  
**Frequency of Installed Measures**  
**And Total Material Cost**

	Burlington		Camden		All Burlington	All Camden	All Clients
	Treatment	Control	Treatment	Control			
<b>Number of Clients</b>	120	64	91	61	184	152	336
<b>Percent Who Received:</b>							
<b>Wall Insulation</b>	3%	2%	3%	2%	3%	3%	3%
<b>Attic Insulation</b>	20%	17%	11%	7%	19%	9%	14%
<b>Other Insulation</b>	7%	13%	1%	0%	9%	1%	5%
<b>Air Sealing</b>	82%	51%	99%	82%	72%	92%	82%
<b>Furnace Work</b>	7%	2%	73%	51%	5%	64%	34%
<b>Furnace Replaced</b>	0%	2%	55%	43%	1%	50%	25%
<b>Hot Water Heater Work</b>	9%	6%	27%	26%	8%	26%	17%
<b>Hot Water Heater Replaced</b>	4%	6%	16%	11%	5%	14%	9%
<b>Health &amp; Safety Measures</b>	56%	60%	17%	43%	57%	27%	42%
<b>Other Measures</b>	98%	98%	99%	93%	98%	97%	97%
<b>Percent Who Received:</b>							
<b>Window Replacement</b>	54%	57%	93%	77%	55%	87%	71%
<b>Door Replacement</b>	3%	2%	37%	34%	3%	36%	19%
<b>Refrigerator Replacement</b>	0%	0%	0%	23%	0%	9%	5%
<b>CFLs</b>	91%	96%	57%	41%	93%	50%	72%
<b>Number of CFLs</b>	3	3	3	3	3	3	3
<b>Total Materials Costs</b>	\$803	\$880	\$1637	\$1295	\$830	\$1500	\$1163

<sup>1</sup> Burlington was less likely to have work classified as furnace work because of the way the work was recorded on their work summary. For Burlington, thermostats were counted as other measures and flue replacement was listed as a health and safety measure. For Camden, these were listed as furnace work.



Table 3 displays the frequency of different funding sources. DOE funds were used on 48 percent of jobs, HHS funds were used on 42 percent of jobs, and HIP funds were used on 33 percent of jobs.

**Table 3**  
**Funding Sources**

	Burlington		Camden		All Burlington	All Camden	All Clients
	Treatment	Control	Treatment	Control			
<b>Number of Clients</b>	120	64	91	61	184	152	336
<b>Received Funding from:</b>							
<b>DOE</b>	50%	50%	54%	33%	50%	46%	48%
<b>HHS</b>	33%	28%	46%	67%	32%	54%	42%
<b>HIP</b>	29%	23%	64%	3%	27%	40%	33%
<b>Funding Combinations:</b>							
<b>DOE Only</b>	43%	48%	18%	33%	45%	24%	36%
<b>HHS Only</b>	28%	28%	18%	64%	28%	36%	32%
<b>HIP Only</b>	17%	22%	0%	0%	18%	0%	10%
<b>DOE/HIP</b>	7%	2%	37%	0%	5%	22%	13%
<b>HHS/HIP</b>	6%	0%	28%	3%	4%	18%	10%

#### *D. Electric Usage Impacts*

This section provides an analysis of the impacts of the NJ LIWAP on the electric usage of participating households. All clients included in the study use gas heat. However, electric usage may be impacted by this program through increased efficiency of the furnace operation resulting in reduced use of the furnace fan, reduced use of the furnace fan due to shell measures, and reduced lighting usage due to the provision of CFL's.

Table 4 displays the sources and the extent of data attrition. Approximately 58 percent of treatment households and 24 percent of control households could be included in the analysis. The greater attrition of the control households is due to the need for pre-treatment data extending back two years before the client was served. Many of the clients only had usage data extending back one year before service delivery.

**Table 4**  
**Electric Usage Data Attrition**

	Burlington		Camden		All Burlington	All Camden	All Clients
	Treatment	Control	Treatment	Control			
<b>Original Population</b>	120	64	91	61	184	152	336
<b>No Pre Usage Data Match</b>	24	14	2	2	38	4	42
<b>Insufficient Data</b>	3	1	2	0	4	2	6

	Burlington		Camden		All Burlington	All Camden	All Clients
	Treatment	Control	Treatment	Control			
Insufficient Seasons	31	38	22	39	69	61	130
Usage Estimate <1200,>40000 kWh	0	0	0	0	0	0	0
Change in Total Usage>65%	3	0	2	1	3	3	6
Final Analysis Sample	59	11	63	19	70	82	152

Table 5 displays the electric usage and savings for households who were treated by NJ LIWAP in 2002 (and a few at the end of 2001.) This table shows that 122 households were included in the analysis. The mean pre-treatment electric usage was 7,989 kWh and the mean post-treatment electric usage was 7,529 kWh, for a gross savings of 460 kWh or six percent. The net savings was 611 kWh or eight percent. This compares to an average gross savings of nine percent and net savings of 12 percent for the Comfort Partners evaluation.

**Table 5**  
**Electric Usage and Savings – kWh per Participant**

Average Usage and Gross Savings					Net of Comparison	
	Units	Pre-Use	Post-Use	Savings	Net Savings	Net % Savings
Treatment Group	122	7,989	7,529	460	611 (+/- 833)	8%
Comparison Group	30	6,737	6,888	-151		

### *E. Gas Usage Impacts*

This section provides an analysis of the impacts of the NJ LIWAP on the gas usage of participating households. Table 6 displays the sources and extent of data attrition for the gas analysis. Thirty-nine percent of the treatment group and 25 percent of the control group had sufficient data to be included in the analysis.

**Table 6**  
**Gas Usage Data Attrition**

	Burlington		Camden		All Burlington	All Camden	All Clients
	Treatment	Control	Treatment	Control			
Original Population	120	64	91	61	184	152	336
No Usage Data Match	13	12	2	2	25	4	29
Insufficient Data	13	18	4	13	31	17	48
Poor PRISM fit	28	7	33	17	35	50	85
Insufficient days or degree days	4	7	0	6	11	6	17
Usage Estimate out of range	1	1	1	0	2	1	3
Change in Total Usage>65%	0	0	0	2	0	2	2
Change in Base or Heat Usage>100%	13	6	17	3	19	20	39

	Burlington		Camden		All Burlington	All Camden	All Clients
	Treatment	Control	Treatment	Control			
<b>Final Analysis Sample</b>	48	13	34	18	61	52	113

Table 7 displays gas savings for NJ LIWAP participants. This table shows that there were 82 clients included in the analysis. The mean pre-treatment usage was 1,047 ccf and the mean post-treatment usage was 956 ccf. The gross savings was 91 ccf, or nine percent, and the net savings was 37 ccf, or four percent.<sup>2</sup> This compares to a gross savings of eight percent and a net savings of seven percent for the Comfort Partners program.

**Table 7**  
**Gas Usage and Savings – CCF per Participant**

Average Usage and Gross Savings					Net of Comparison	
	Units	Pre-Use	Post-Use	Savings	Net Savings	Net % Savings
<b>Treatment Group</b>	82	1047	956	91	37 (+/-64)	4%
<b>Comparison Group</b>	31	1001	947	54		

The previous table showed modest gas savings for households participating in the NJ LIWAP. Previous research has repeatedly shown that households with higher pre-treatment energy usage achieve greater energy savings as a result of weatherization treatments. Table 8 displays gross gas savings by the level of pre-treatment usage. This table shows that while households with pre-treatment usage under 1200 ccf had gross gas savings of four to five percent, households with pre-treatment usage over 1200 had gross gas savings of 13 percent.

**Table 8**  
**Gross Gas Savings – CCF per Participant**  
**By Pre-Treatment Gas Usage**

Pre-Use Category	Units	Pre-Use	Post-Use	Gross Gas Savings	Gross Percent Savings
<b>&lt;=800 ccf</b>	30	667	631	36	5%
<b>801-1200 ccf</b>	55	980	939	41	4%
<b>&gt;1200 ccf</b>	28	1535	1330	205	13%

## **F. Conclusion**

This evaluation of the impacts of the NJ LIWAP provides performance feedback for two of the nineteen agencies providing WAP services in New Jersey. Because the clients are only drawn from two agencies, the impact results may not be representative of the NJ LIWAP as

<sup>2</sup> It should be noted that the gas savings for this comparison group were high at 54 ccf, compared to 15 ccf for the Comfort Partners comparison group. Given a 15 ccf savings for this comparison group, the net gas savings would be 76 ccf, or 7 percent.

a whole. However, they do provide some evidence that the NJ LIWAP and the NJ Comfort Partners programs provide comparable impacts on the electric and gas usage of participating households.

Both the NJ LIWAP and the NJ Comfort Partners programs provide modest savings given the level of investment in energy efficiency measures.<sup>3</sup> The Comfort Partners evaluation and this evaluation showed that households with greater pre-treatment usage achieved greater energy savings as a result of program participation. Usage impacts for both programs could be improved by increased targeting of high usage homes.

The evaluation showed that the two programs focus on different measures. The Comfort Partners program is more likely to provide attic insulation. The NJ LIWAP is more likely to provide furnace work and window and door replacement. The NJ LIWAP also provides more health and safety work. The fact that the two programs focus on different measures may provide some guidance for how the programs can be coordinated.

This evaluation of the impacts for the two NJ LIWAP agencies required that paper files be retrieved from the agencies, copied for APPRISE, coded, and data based. The lack of a client level data tracking system for this program impedes documentation of program accomplishments. The available data for this program would not meet currently structured BPU requirements for Comfort Partners.

A review of client files for the NJ LIWAP showed that cost allocation for individual jobs is also an issue for the program. Most ratepayer programs require explicit attribution of costs of service delivery to individual investments. One of the two agencies reviewed did not allocate agency costs to individual homes. Only the material costs and the contractor labor costs were allocated to particular jobs for this agency. This project accounting would not meet the requirements of the BPU.

This evaluation provided some evidence that savings from the NJ LIWAP are comparable to those from the NJ Comfort Partners program. The evaluation also showed that data tracking and cost accounting need to be improved to meet the requirements of the BPU.

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<sup>3</sup> See Berry, Linda. "State-Level Evaluations of the Weatherization Assistance Program in 1990-1996: A Metaevaluation that Estimates National Savings, Oak Ridge National Laboratory, 1997. This report finds an average natural gas savings of 23 percent.

### III. Comparison of NJ LIWAP and NJ Comfort Partners Programs

This section provides a comparison of the NJ LIWAP and the NJ Comfort Partners Programs. Seven different areas are examined:

- Program Overview
- Program Management
- Program Participants
- Service Delivery
- Service Delivery Statistics
- Quality Control
- Performance

#### A. *Program Overview*

In this section, we furnish an overview how the Comfort Partners Program compares to the NJ LIWAP/LIHEAP programs. The specific areas covered include:

- Authority – Who authorized the program and is responsible for the program's performance?
- Goals/Requirements – What is the stated purpose of the program and how does it set goals to meet that purpose?
- Funding – What is the overall funding level for the program?
- Partners – What organizations are part of the program administration, management, and delivery system?
- Flexibility – How much flexibility has the authorizing agency given the program to achieve its intended goals?

It is important to have a good picture of how each program is structured in order to anticipate possible barriers to cooperation between the programs.

#### *Authority*

Title IV of the Energy Conservation and Production Act authorized the Federal Department of Energy to administer the Low-Income Weatherization Assistance Program. The Low Income Home Energy Assistance Program was authorized by Title XXVI of the Omnibus

Budget Reconciliation Act of 1981 and began in 1982. As with other federal block grant programs, the State of New Jersey is allocated a share of the total federal allocation for LIWAP and LIHEAP based on a formula. The state must submit a plan to the LIWAP and LIHEAP program offices that indicates how the funds will be spent.

The NJ Electric Discount and Energy Competition Act (ADECA) was passed in January 1999. This bill authorized the NJ Board of Public Utilities (NJBPU) to establish an adjustable societal benefits charge (SBC), as a non-bypassable charge on all electric and gas public utility customers and authorized the NJBPU to allow electric and gas public utilities to impose an SBC, to recover costs associated with socially beneficial programs. In March 2001, the NJBPU approved a three-year statewide comprehensive energy efficiency and renewable energy program that included a low-income energy efficiency component called New Jersey Comfort Partners, budgeted at \$15 million yearly, managed by seven major electric and gas utilities. The budget level has increased to \$19.8 million in 2004. (The basic design parameters of the program were based on the prior programs managed individually by the utilities, and predate the March 2001 order.)

While the BPU has control over the spending of funds in the Comfort Partners program, it has less flexibility with LIHEAP weatherization funds, and serious restrictions on the means in which DOE funds can be spent.

#### *Goals/Requirements*

WAP grantees are expected to achieve a rate of production and expenditure that will result in all Weatherization funds being spent by the end of the Program year. They do not have a numeric target for production.

The NJ Comfort Partners program has a goal to serve 3,250 Comfort Partners customers and 200 Seniors pilot customers through June 30, 2004 (6,500 for all of 2004), deliver the program to high-use, income-eligible customers, and achieve 60 percent of the goals of 10 percent electric savings and 15 percent gas savings.

The difference between the two programs' approaches is related to the difference between their ultimate goals. While the WAP program focuses on what it can achieve for each participating household, the NJ Comfort Partners program focuses not only on the household level savings, but the overall energy savings.

#### *Administration*

The NJ LIWAP is administered by the NJ Department of Community Affairs (NJDCA). The NJ Comfort Partners Program is currently administered by the NJ Board of Public Utilities, Office of Clean Energy. Program management is currently performed by a working group of the investor-owned utilities.

#### *Funding*

The NJ LIWAP receives funding from the Federal Department of Energy (DOE). The state receives a share of the total funds allocated for WAP based on a block grant formula. The

state has no control over the level of funding. In FY 2004, funding from DOE was \$5,102,877.

The NJ DHS receives LIHEAP funding from the Federal Department of Health and Human Services (DHHS). NJ DHS then allocates a certain share of the LIHEAP funding to the LIHEAP weatherization program. NJ DHS is allowed to allocate up to 15 percent of the state's allocation for weatherization. In FY 2004, DHS allocated 5% of its LIHEAP grant to weatherization and funded the program at \$3,607,000.

NJ LIWAP received funding from the Oil Overcharge Fund that was used for the Heating Improvement Program (HIP) until 2002. They now use emergency LIHEAP funds from HHS for crisis furnace replacement. Except in the case where HHS funds are used for emergency furnace replacement, DOE and HHS funds are not used on the same job.

The NJ Comfort Partners Program is part of the "Clean Energy Program", funded from the Societal Benefits Charge (SBC) that was established in the 1999 Electric Discount and Energy Competition Act. The SBC is a non-bypassable fee assessed by the energy utilities at the point of use for both natural gas and electricity. The Act established this funding for a minimum of eight years. The Comfort Partners budget is \$19.8 million in 2004.

Funding for the Comfort Partners program is more than twice that for the WAP funding from DOE and HHS. State policy determines the level of funding for the Comfort Partners program. While the state has less control over HHS funding, they can vary that amount from 0 to 15 percent of the LIHEAP block grant (and up to 25 percent with an exemption). The state has no control over the WAP funding available from DOE. Potential variation in funding streams from HHS and DOE should be considered when planning for integration between the different funding sources.

#### *Partners*

The partners in the NJ LIWAP are the Community Action Agencies that provide services to households. The partners in the Comfort Partners program are the NJBPU Office of Clean Energy and the investor-owned utilities that manage the program, and the private contractors that provide services. When thinking about how the programs should be coordinated, it is important to consider the potential roles for these partners, and how they can work together to provide for the most effective program.

#### *Flexibility*

DOE has regulations for how funds can be spent and services that can be provided. Funds provided by HHS for weatherization have more flexibility. Within the approved budget, the Comfort Partners program has flexibility to make changes to the program under the administrative oversight of the NJBPU's Office of Clean Energy. In determining how the new program should be structured, the state has complete flexibility to change Comfort Partners, some flexibility to adapt weatherization services provided with HHS funds, and little flexibility to adapt weatherization services provided with DOE funds.

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
<b>Authority</b>	Title IV, Energy Conservation and Production Act	NJ Electric and Gas Restructuring Act NJ Board of Public Utilities order.
<b>Goals/Requirements</b>	Expend all Weatherization funds by the end of the Program year. No numeric goal.	Serve 6,500 customers, serve high-use income-eligible customers who request service, achieve set level of savings.
<b>Administration</b>	NJ Department of Community Affairs.	NJ Board of Public Utilities, Office of Clean Energy
<b>Funding</b>	Department of Energy: \$5,102,877 in 2004 Department of Health and Human Services: \$3,607,000	Societal benefits charge: \$19.8 million budget in 2004
<b>Partners</b>	Community Action Agencies	Utilities, private contractors
<b>Flexibility</b>	Flexibility in funding from different sources and in the application of WAP rules to the different funding sources.	Flexibility to make changes to program with OCE oversight.

Issues:

Agency level program integration

## ***B. Program Management***

In this section we compare the management of the NJ LIWAP to the management of the Comfort Partners program. The specific areas covered include:

- Program Manager – What party is responsible for managing the program?
- Fiscal Reporting Requirements – What are the current fiscal reporting requirements for each program? What reports are produced and on what timeline are they produced?
- Performance Reporting Requirements – What are the current performance reporting requirements for each program? What reports are produced and on what timeline are they produced?
- Information Tracking System – What data systems are in place for each program? How do these systems facilitate the operation of each program?
- Options for Capacity Building – How could each program's capacity to serve households be increased?



*Program Manager*

The program manager for the NJ LIWAP is the Department of Community Affairs. The program manager for the Comfort Partners program is the utilities.

*Fiscal Reporting Requirements*

The NJ LIWAP is required to submit the following reports on a quarterly basis: the financial status report, the federal cash transaction report, and grant outlays. The NJ LIWAP is required to submit the leveraging report on a semi-annual basis.

The Comfort Partners program has been required to submit a quarterly report (effective May 2004, detailed monthly reports are required) on the program expenditures for arrears reduction, training, implementation contractor and direct installation of measures, administration, sales, marketing and promotion, and market research, evaluation and program development. The Comfort Partners program is required to submit an annual leveraging report to the NJ Department of Human Services. The Comfort Partners program has received requests to submit ad hoc reports such as active contracts and a marketing plan.

*Performance Reporting Requirements*

The NJ LIWAP must submit a quarterly program report, a quarterly grant production report, a semi-annual training and technical assistance report, and a semi-annual monitoring report.

The Comfort Partners program is required to submit a monthly report on the number of homes completed by utility and the arrearage reduction participants by utility. They are required to submit a monthly report on the Seniors Pilot with the number of ineligible applications, customers not interested, home surveys completed, jobs in progress, and jobs completed. They are required to submit a quarterly report on energy savings and demand savings by customer, by measure, and by company and a quarterly report on water savings by customer, by measure, and by company. They are required to submit a quarterly quality assurance report with the number of inspections by utility and inspection company; the type of inspection: gas heat/ joint delivery, electric heat, oil heat; the number of passed inspections, the number passed with customer or inspector reservations; the percent of jobs passed, and the category of job failure if the job failed.

The Comfort Partners program has been required to develop a more extensive set of reporting tools. These reports provide important information for program management and evaluation.

*Information Tracking System*

Client-level data for the NJ LIWAP is kept in paper files. Program summary statistics are developed in databases. These statistics are sent to the Federal Weatherization office using WINSAGA.

The NJ Comfort Partners program has two information tracking systems. The implementation contractor, Honeywell/DMC (HDMC) has a database that contains extensive information on the customers' characteristics, home characteristics, and measures installed for jobs they complete. JCP&L's WARM3 database contain extensive information

on customer characteristics, home characteristics, measures installed, invoicing for all measures, and dates for installation, inspections, approval for JCP&L customers, electronic message board, and numerous administrative and operational reports.

The customer level data tracking systems that have been developed by the Comfort Partners are critical for program evaluation, and are useful for program management. These tools should be used, either as a building block, or as a template, to design a tracking system for the program model.

#### *Options for Capacity Building*

The NJ LIWAP can bring on additional agencies in order to build their capacity. They can also train additional staff using job training sites. The Comfort Partners program can build capacity by having their current contractors hire additional staff, or by hiring additional contractors or agencies through an RFP process.

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
<b>Program Manager</b>	NJ Department of Community Affairs	Utilities
<b>Fiscal Reporting Requirements</b>	<u>Quarterly reports:</u> Financial status report, federal cash transaction report, grant outlays <u>Semi-annual reports:</u> The leveraging report	<u>Quarterly reports:</u> Spending report by various categories and by utility <u>Annual report:</u> LIHEAP leveraging report to the NJ Department of Human Services <u>Ad Hoc reports:</u> Active contracts reports, marketing plan and report
<b>Performance Reporting Requirements</b>	<u>Quarterly reports:</u> Program report, grant production <u>Semi-annual reports:</u> The training and technical assistance report, and the monitoring report	<u>Monthly reports:</u> Participant report, Arrears Participant Report, Seniors Pilot report  <u>Quarterly reports:</u> Energy savings and demand savings report, water savings protocol report, quality assurance report for Comfort Partners and Seniors Pilot,
<b>Information Tracking System</b>	Most client-level data is kept in paper files. Program summary statistics are developed in databases.	HDMC database, JCP&L WARM3
<b>Options for Capacity Building</b>	Bring on additional agencies and train additional staff.	Current contractors can hire additional staff. Hire additional contractors or agencies through RFP process.

#### Issues:

Should the data tracking system be housed by the program manager, by an independent administrator, or by a contractor? Alternatively, should there be a web-enabled access to all databases?

### *C. Program Participants*

In this section we provide information on program procedures and outcomes related to program participants. The specific areas covered include:

- Goals/requirements – What are the goals and requirements of the program related to program participants? How are different demographic groups given priority for program treatments?
- Outreach – How are potential participants informed about the opportunity to participate in the program?
- Intake/enrollment – What are the methods used to provide intake and enrollment for the program?
- Demographic outcomes – What are the demographic characteristics of the program participants?
- Geographic outcomes – What is the geographic distribution of the program participants? How are they distributed throughout the state? How are they distributed through urban, suburban, and rural areas?
- Housing type outcomes – What is the distribution of the housing unit types of the program participants (single family detached, town home or row home, apartments, mobile homes)?
- Ownership outcomes – What is the owner/renter distribution of the program participants?

#### *Goals/requirements*

The NJ LIWAP is required to use their budget and not exceed the limit on the cost per home. They are required to serve anyone who is eligible for the program. They prioritize households with children under 6, with members aged 60 and older, with persons with disabilities or who are terminally ill, and with high energy burdens.

The Comfort Partners program has a numerical goal for the number of income-eligible homes to complete each year. Their goal for 2004 is to serve 6,500 homes. They are also required to serve any eligible household that applies for the program. The program has

energy savings targets and cost-effectiveness criteria. Most utilities prioritize households with high usage or those with payment problems.

The two programs target different sets of customers. The targeting of the WAP program is based upon treating households that would have difficulty dealing with temperature extremes. The targeting of the Comfort Partners program are based upon treating those customers that would achieve the greatest energy savings (high usage households) or those who would provide the greatest cost savings to the ratepayers (payment-troubled households). The targeting priorities for the new program should be related to the primary program goals.

#### *Outreach*

The NJ LIWAP program conducts outreach through its agencies. The agencies conduct outreach using media – paid and community service advertising, events – displays at community and agency sponsored programs, mailings – targeting mailings based on referrals from other programs, and canvassing – door to door contacts.

The Comfort Partners program primarily conducts outreach through its vendor by calls to lists of customers received from the utilities. Some utilities send HDMC a list of all LIHEAP customers. PSE&G allows HDMC to access their system and download high usage customers. HDMC and BBI access JCP&L's website to check customer energy usage. JCP&L does its own outreach to customers and sends out applications. All utilities are required to include information about Comfort Partners in their bill inserts. This is changing so that USF customers will constitute the majority of new enrollees.

#### *Intake/enrollment*

Intake and enrollment for the NJ LIWAP is done by the local agencies. Clients are placed on a waiting list based on the priority point system.

For most utilities, intake and enrollment is done by HDMC when they make their marketing calls. JCP&L does its own enrollment. They send customers applications in the mail and then enter completed applications into their WARMIII system. HDMC and BBI then access the database to obtain customers to serve.

The two programs have different means of providing outreach, intake, and enrollment. The different methods may be related to different demographic outcomes of the program participants.

#### *Demographic Outcomes*

The NJ LIWAP reports demographic outcomes separately by funding sources. In 2002, 14 percent of those served with DOE funds had an elderly head of household and 40 percent of those served with HHS funds had an elderly head of household. About half of the homes treated by the Comfort Partners program in 2002 had one or more elderly members.

It appears that the Comfort Partners serves a greater proportion of elderly households. This may be related to the different outreach methods that are used.

*Geographic Outcomes*

Geographic information is included in the Comfort Partners information systems, but it has not yet been analyzed. The HDMC and the WARM3 databases maintain information by county. The WARM3 system contains data by municipality, and the HDMC database will contain this information in 2004.

*Housing Type Outcomes*

The NJ LIWAP gives priority to single family homes. In 2002, 53 percent of those served by WAP and 68 percent of those funded by HHS were in single-family homes.

In 2002, 60 percent of those served by the Comfort Partners program were in single-family homes, 27 percent were in row houses or town houses, and the rest were in apartments, except for a few mobile homes.

*Ownership Outcomes*

In 2002, 56 percent of NJ LIWAP participants treated with DOE funds were owners and 71 percent of those treated with HHS funds were owners. In 2002, 70 percent of Comfort Partners participants were owners.

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
<b>Goals/Requirements</b>	Use budget and do not exceed limit on cost per home. Serve anyone who applies and is eligible. They target households with young children, elderly, disabled, terminally, or high energy burdens.	Goal is to serve 6,500 homes in 2004. Serve income-eligible customers who apply. Most utilities target high usage customers. There are also energy savings targets.
<b>Outreach</b>	Each agency conducts outreach. Outreach done through media, events, mailings, and canvassing.	Outreach done by HDMC and/or JCP&L through telephone marketing. Utilities provide information in their bill inserts and direct-mail campaigns.
<b>Intake/Enrollment</b>	Done at the agency level.	Done by HDMC for most utilities. HDMC, BBI and JCP&L do intake for JCP&L.
<b>Demographic Outcomes</b> (Age, Income, Family Type)	In 2002, 14% of those served by DOE had an elderly head of household and 40% of those served by HHS had an elderly head of household.	About half of homes treated in 2002 had 1 or more elderly members. <sup>4</sup>
<b>Geographic Outcomes</b> (County, city/suburb/rural)		Information available in HDMC and WARM3 databases by county. Available by city/suburb/rural in WARM3 and will be in 2004 in HDMC database.
<b>Housing Type Outcomes</b>	Gives priority to single family	60% single family detached in

<sup>4</sup> Source: NJ Comfort Partners Impact Evaluation Report, M. Blasnik & Associates, January 2004.

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
(SF, Attached, MF)	homes. 53% of those in 2002 who were funded by WAP and 68% of those funded by HHS were single family.	2002, 27% were row houses or town houses, and the rest were apartments and a few mobile homes. <sup>5</sup>
<b>Ownership Outcomes</b> (Owner/renter)	56% of those treated with DOE funds in 2002 were owners. 71% of those treated with HHS funds in 2002 were owners.	70 percent owner <sup>6</sup>

#### *D. Service Delivery*

In this section we compare the service delivery characteristics of the two programs. The specific areas covered include:

- Program philosophy – What is the mission of the program, and how do the programs attempt to meet the mission?
- Delivery models – How are the services delivered?
- Allowable measures – What are the measures that are allowed by the program rules?
- Measure priorities – How are the measures prioritized to determine what work should be done within the spending limits or guidelines?
- Limits per housing unit – What are the spending limits for each program?
- Health and safety practices – What are the health and safety measures provided by the programs?
- Client education – What is the importance of the education component, and what education is provided?
- Waiting lists – Are there waiting lists for the program, and how long are the waiting lists?

##### *Program philosophy*

The mission of the NJ LIWAP is to reduce energy costs for low-income homes by increasing their energy efficiency, while ensuring health and safety. The Comfort Partners program is designed to obtain the maximum level of cost-effective savings in each home, improve utility bill payment capability and behavior, and improve comfort, health and safety for participants.

<sup>5</sup> Source: NJ Comfort Partners Impact Evaluation Report, M. Blasnik & Associates, January 2004.

<sup>6</sup> Source: NJ Comfort Partners Impact Evaluation Report, M. Blasnik & Associates, January 2004.

The difference in the two philosophies is that the NJ LIWAP is more focused on serving each individual home, while the Comfort Partners program also has a focus on total program energy savings.

#### *Delivery models*

Local agencies deliver services for the NJ LIWAP. The agencies have crews that conduct the weatherization audits and provide air sealing services. Some agencies use their own crews for insulation and some agencies employ private contractors for this work.

The Comfort Partners program delivers services through the use of private contractors selected through a competitive solicitation. RFP's have been open to non-profit agencies. Most of the jobs are performed by HDMC, and a small number of JCP&L jobs are performed by Bill Busters Inc. BBI uses subcontractors for electrical and plumbing work. HDMC uses subcontractors for insulation and other specialized work. Two third-party contractors provide quality assurance and training services.

The NJ LIWAP uses a larger number of smaller providers to deliver services. A potential advantage of smaller providers is the possibility of greater oversight of crews by the manager at each agency. A potential disadvantage of a larger number of smaller providers is greater variability in the type and quality of services that are provided.

#### *Allowable measures*

The NJ LIWAP program provides weatherization and baseload measures, furnace and hot water heater replacement, and window replacement. They can use DOE funding for furnace replacement based on the cost/benefit ratio, and can use LIHEAP emergency funding for furnace replacement if the household is in a crisis.

The Comfort Partners program provides weatherization, hot water heater replacement, and baseload measures, and limited door, window, and furnace replacement. Moisture evaluation and mitigation are now standard as well as cost-effective custom measures.

The Comfort Partners program appears to have a greater emphasis on baseload measures than does the NJ LIWAP program. These different emphases may provide direction as to how the programs can be integrated by combining funds on individual jobs or by targeting funding to jobs based upon the majority of the work called for in the home.

#### *Measure priorities*

The NJ LIWAP uses the EQUIP audit to determine which measures should be installed. They have petitioned for the opportunity to use a priority list because they feel they have been using the audit for long enough that they know what is expected.

The Comfort Partners program has a prioritization of measures that determines the order in which measures are provided within spending guidelines. This is separated by space conditioning and baseload measures. Under the space conditioning measures, the priority order is: ducts, air leakage, insulation, space conditioning equipment, and niche opportunities. Under baseload measures, the priority is based on appliance testing and

protocols and includes the following measures: domestic hot water, refrigerators/freezers, lighting, pumps/motors, and niche opportunities.

#### *Limits per housing unit*

For the NJ LIWAP, the adjusted average expenditure limit is \$2672 for 2004. The maximum expenditure per home is \$2900.

Comfort Partners expenditure guidelines are based on household energy usage. These guidelines have recently been changed as a result of recommendations in the Blasnik & Associates impact analysis of the program. The new guidelines provide lower levels of spending for the low-usage homes, and higher levels of spending per ccf or kWh for higher usage homes. The previous guidelines used a linear relationship between usage and spending. The tables below show the old and new spending for electric and gas measures, and the estimated impact on program costs.

Pre-Treatment Use	Estimated Jobs	Estimated Avg. CCF	Proposed Spending \$/CCF	Gas Seasonal Costs	Current Spending \$/CCF	Gas Seasonal Costs	Costs Difference
< 801 CCF	598	600	\$0.25	\$89,760	\$0.86	\$308,774	-\$219,014
801- 1,400 CCF	1,637	1,100	\$0.86	\$1,548,697	\$0.86	\$1,548,697	\$0
> 1,400 CCF	1,165	1,600	\$1.80	\$3,353,760	\$0.86	\$1,602,352	\$1,751,408
	<b>3,400</b>			<b>\$4,992,217</b>		<b>\$3,459,823</b>	<b>\$1,532,394</b>

Average Annual Pre-Treatment Use	Estimated Jobs	Estimated Seasonal Avg. kWh	Proposed Spending \$/kWh	Electric Seasonal Costs	Current Spending \$/kWh	Electric Seasonal Costs	Costs Difference
< 2,000 kWh	3,500	1,000	\$0.00	\$0	\$0.14	\$490,000	-\$490,000
2,000 - 4,400 kWh	1,900	3,000	\$0.08	\$456,000	\$0.14	\$798,000	-\$342,000
4,401 - 8,400 kWh	730	6,400	\$0.14	\$654,080	\$0.14	\$654,080	\$0
> 8,400 kWh	370	11,000	\$0.17	\$691,900	\$0.14	\$569,800	\$122,100
	<b>6,500</b>			<b>\$1,801,980</b>		<b>\$2,021,880</b>	<b>-\$219,900</b>

The limits on the WAP jobs are higher than what the guidelines for the NJ Comfort Partners program recommend. The differences in funding levels may provide more insight into which types of jobs should be targeted to which programs.

#### *Health and safety practices*

The NJ LIWAP health and safety plan is included in their DOE applications. Costs for health and safety measures are not included in the cap on average spending.



The NJ Comfort Partners program does not count health and safety measures toward the spending guidelines. All homes with combustion appliances receive a safety testing and a CO detector. As a general rule, health and safety measures cannot exceed 25 percent of the total cost of a job.

The NJ LIWAP program appears to have more flexibility as to the amount of funds that can be spent on health and safety measures. Under a coordinated approach, the homes with the more serious health and safety problems should be targeted to the WAP program.

#### *Client education*

Client education is an important component of both programs. The Comfort Partners Program provided education training, a tabletop energy education notebook, and conservation conversation cards for use with the customer. An energy education training video is in progress. Auditors can charge up to two hours in a visit to the energy education portion of the visit.

The Comfort Partners program appears to have greater tools for and emphasis on the education portion of the visit.

#### *Waiting lists*

Waiting lists for NJ LIWAP vary by agency. Households with children under 6, with members age 60 or older, with disabilities, who are terminally ill, or who have high energy burdens are given priority.

Comfort Partners appointments are scheduled when the customer enrolls with the completed job occurring within 30 days from enrollment. Most utilities have HDMC conduct telephone marketing, and the marketing is done on an ongoing basis. JCP&L enters clients in their WARM3 system after applications are received and high use clients are prioritized.

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
<b>Program Philosophy</b>	The mission is to reduce energy costs for low-income homes by increasing their energy efficiency, while ensuring health and safety.	The program is designed to achieve cost-effective energy savings, improve bill payment, and improve comfort, safety and health.
<b>Delivery Model(s)</b>	Services are delivered by local agencies. The agencies use their crews for the audits and air sealing, and either crews or contractors for insulation.	Services are delivered by private contractors selected through a competitive solicitation. RFP's have been open to non-profit agencies. The for-profit contractors use subcontractors for insulation and other specialized work. Quality assurance and training are performed by a third party contractor.
<b>Allowable Measures</b>	<b>Weatherization and baseload measures, furnace replacement, window replacement.</b>	Weatherization, water-heater replacement, and baseload measures. Limited furnace,

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
		window, and door replacement.
<b>Measure Priorities</b>	They use the EQUIP audit.	Conditioning: Ducts, air leakage, insulation, space conditioning equipment, niche opportunities. Baseload: Domestic hot water, refrigerators/freezers, lighting, pumps/motors, niche opportunities.
<b>Limits per Housing Unit</b>	The adjusted average expenditure limit for program year 2004 is \$2,672. The maximum expenditure per home is \$2900.	Guidelines are based on energy usage and site-specific testing.
<b>Health and Safety Practices</b>	Their health and safety plan is part of their DOE application. Costs are not included in the per home expenditure average.	Health and safety measures do not count towards spending guideline. All homes with combustion appliances receive safety testing and a CO detector.
<b>Client Education</b>	Client education is an important component of the program.	Client education is an important part of the program. They have had education training sessions, and have provided an education notebook and education cards.
<b>Waiting Lists</b>	Varies by agency. Households with children under 6, with members age 60 or older, with disabilities, who are terminally ill, or with high energy burden are given priority.	Varies by utility. Priority is given to high use customers.

### *E. Service Delivery Statistics*

In this section, we address the spending for different aspects of service delivery, and the rates of installation for different program measures. The specific areas include:

- Total program funding – the level of program funding available for the most current program year
- Total units served – the number of home completed in the most current program year
- Administrative spending – Guidelines for or actual percent of program dollars spent for administrative purposes
- Assessment spending – Average amount per home spent on assessment
- Baseload measure spending – Average amount per home spent on baseload measures
- Seasonal measure spending – Average amount per home spent on seasonal measures

- Health and safety spending – Average amount per home spent on health and safety measures
- Measure total per home – Average amount per home spent on baseload and seasonal measures
- Average total spending – Average total spending per home, equal to total program spending divided by number of homes served
- Rates of installation – rates of installation for major measures including attic insulation, wall insulation, furnace replacement, refrigerators, and CFL's.

Some of this information for the NJ LIWAP program was developed from an evaluation of 2 of the 19 agencies that provide services. The Comfort Partners data is based upon the 2002 Blasnik and Associates Impact Evaluation, as well as program reporting.

	<b>NJ LIWAP</b>	<b>Comfort Partners<sup>7</sup></b>
<b>Total Program Funding</b> (Discuss all sources)	FY 2004 funding from DOE was \$5,102,877 total. This includes \$432,814 for training and technical assistance. FY 2004 funding for HHS was \$3,607,000.	\$19.8 million budgeted for 2004 (Actual spending for 2003 was \$14,756,000 for Comfort Partners and \$679,000 for the seniors pilot. These costs include Board staff administration costs.)
<b>Total Units Served</b>	1592 through DOE funds in 2002 1208 through HHS funds in 2002 1134 heater replacements in 2002 through HIP funding	6,268 homes in 2003 plus 383 seniors pilot homes. Goal is 6,500 in 2004
<b>Administrative Spending</b>	Limited to 10 percent.	Less than 5 percent was spent on administration in 2002 (based on Clean Energy definition). During 2003, 5 percent was spent on administration including utility and OCE costs.
<b>Assessment Spending</b>		Average of \$89 for single-family homes and \$79 for multi-family homes in 2002
<b>Baseload Measure Spending</b>		Averaged \$398 in 2002
<b>Seasonal Measure Spending</b>		Averaged \$737 in 2002
<b>Health and Safety Spending</b>		Average expenditure of \$98 per unit in 2002.
<b>Measure Total per Home</b>		Averaged \$1135 in 2002
<b>Average Total Spending</b>	Averaged \$3205 for DOE and \$2986 for HHS in 2002	Averaged \$2354 in 2002 for Comfort Partners and \$1773 for the seniors pilot.
<b>Rates of:</b>	2002 rates from a sample of 2	2002 rates:

<sup>7</sup> Source for types of expenditures and rates of measures installed: NJ Comfort Partners Impact Evaluation Report, M. Blasnik & Associates, January 2004.

	<b>NJ LIWAP</b>	<b>Comfort Partners<sup>7</sup></b>
<b>Attic Insulation</b>	agencies:	Attic insulation: 53%
<b>Wall Insulation</b>	Attic insulation: 14%	Wall insulation: 4%
<b>Furnace Replacement</b>	Wall insulation: 3 %	Refrigerators: 51% (3,029 units)
<b>Refrigerator</b>	Refrigerators: 5%	CFL's: 5.5/unit (37,388 units)
<b>CFLs</b>	CFL's: 3/unit	

## *F. Quality Control*

In this section we describe the quality assurance procedures that are in place for each of the program. The specific areas covered include:

- Program documentation – How are the policies and procedures for each program documented?
- Service delivery and staff training – What is the funding and level of training for service providers
- Service delivery staff supervision – How are service providers supervised?
- Contractor certification – What levels of certification are required and/or achieved for each program?
- Internal quality control – What levels of internal quality control are provided for each program?
- External quality control – What levels of external quality control (third party) are provided for each program?
- Quality control statistics – What quality control statistics are available for each program?

### *Program documentation*

The NJ LIWAP has a documentation manual for the weatherization installation standards. They also have a set of program bulletins that document different aspects of program requirements.

The Comfort Partners program has a procedures manual that outlines the general program procedures. They also have a materials and installation specifications manual that provides more details on the requirements for the program. Their Building Performance Field Guide provides more specific guidelines on the installation of measures. They have a tabletop energy education notebook that illustrates and documents the information to be covered with the client during the audit. They also have client conservation conversation cards.

Both programs have extensive documentation for their policies and procedures. The Comfort Partners program has more documentation for their education requirements.

*Service Delivery Staff Training*

Up to 10 percent of NJ LIWAP funds can be spent on training and technical assistance. NJCAA provides trainers for the NJ LIWAP training. They provide at least 2 trainings per year and an annual training conference.

The Comfort Partners program provides periodic training to contractors. Utilities provide funds for some contractors to attend the Affordable Comfort conference. They are developing an education training video to be used for new auditors and as part of future energy education training for all team leaders. The primary contractor, HDMC, also provides training for its staff. They provide an initial training for new staff that lasts three to four weeks and consists of classroom and in-field training. They provide on-going regularly scheduled training sessions.

The NJ LIWAP provides more regular training to its participating agencies. The two programs provide different types of training to their providers. An integrated program should examine which types of training are most critical, and which training can be integrated.

*Contractor certification*

Comfort Partners minimum requirement, as specified in their RFP for contractors, is that “inspectors must have one year hands-on field experience relative to the installation and execution of pressure diagnostics. Auditors must possess minimum of 3 months of the same. The crews must have one-month minimum of the same.” Six Comfort Partners contractor staff hold BPI certification of Building Analyst 1.

*Internal quality control*

For the Comfort Partners program, HDMC conducts quality control on a sample of the jobs that their company completes. BBI conducts quality assurance on all jobs.

*External quality control*

NJ LIWAP jobs are inspected by state monitors. Those who had better performance in the previous year are inspected at a lower rate. For the Comfort Partners program, utilities hire third party contractors to inspect a sample of homes completed by the program. In 2003, 1,449 inspections were performed.

*Quality control statistics*

The Comfort Partners program provides a quality assurance report with the number of homes inspected by utility, the number that passed the inspection, and the number that failed for different reasons. In 2003, 78 percent of the homes inspected passed the initial inspection. Homes that did not pass required a follow-up visit by the contractor.

The reports provided by the Comfort Partners program provide important information for quality control, oversight, and training.

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
<b>Program Documentation</b>	Weatherization installation standards and Program bulletins	Procedures manual, Materials and Installation Specifications,

	<b>NJ LIWAP</b>	<b>Comfort Partners</b>
		Building Performance Field Guide, education notebook
<b>Service Delivery Staff Training</b>	Up to 10 percent of funds can be spent on training and technical assistance. NJCAA provides trainers. They have at least 2 field trainings per year and an annual training conference.	Provide periodic training to contractors. They are developing an energy education training video. HDMC provides initial and ongoing training for its staff.
<b>Service Delivery Staff Supervision</b>		BBI has 1 supervisor, 1 crew member, and multiple contractors. HDMC has 3 field supervisors, 1 field trainer, 1 QA supervisor, 22 Team Leaders (crew chiefs) and 54 crew members.
<b>Contractor Certification</b>	NA	RFP minimum requirement for contractors, is that “inspectors must have one year hands-on field experience relative to the installation and execution of pressure diagnostics. Auditors must possess minimum of 3 months of the same. The crews must have one-month minimum of the same.” Six Comfort Partners contractor staff hold BPI certification of Building Analyst 1.
<b>Internal Quality Control</b>		HDMC conducts quality control inspections on a sample of jobs. BBI inspects all jobs.
<b>External Quality Control</b>	Agencies jobs are inspected. Those who had better performance in the previous year are inspected at a lower rate.	Utilities hire third party inspectors to inspect a sample of homes. 1,449 in 2003
<b>Quality Control Statistics</b>		In 2003, 78 percent of homes inspected passed the initial inspection.

### *G. Performance*

In this section we furnish a summary of the evaluation findings on program performance. The specific areas covered include:

- Performance measures – what are the performance measures that have been identified for each program?

- Baseload savings per unit – what are the evaluation findings regarding the average amount of baseload usage saved per unit as a result of the programs?
- Seasonal savings per unit – what are the evaluation findings regarding the average amount of seasonal usage saved per unit as a result of the programs?
- Cost/Benefit ratios – what are the evaluation findings regarding the cost/benefit ratios for the programs?
- Nonenergy benefits – what level of nonenergy benefits have been measured to result from each program?
- Client satisfaction – what are the results of client satisfaction studies for each program?
- Performance improvement opportunities/needs: what are the opportunities for performance improvement that have been identified in the program evaluations?

### *Evaluation*

The Comfort Partners program has undergone extensive program tracking system, process, comprehensiveness, participant survey, and energy impact evaluation that provided the performance measures listed in the table below. A small-scale evaluation on two of the nineteen agencies that deliver services for the NJLIWAP provided the impact data in the table below.

	<b>NJ LIWAP</b>	<b>Comfort Partners<sup>8</sup></b>
<b>Performance Measures</b>	Number of homes served	Number of homes served Average savings per home
<b>Baseload Savings per Unit (Amount and Percent)</b>	611 kWh, 8% (net)	787 kWh, 11.7% (net)
<b>Seasonal Savings per Unit (Amount and Percent)</b>	37 ccf, 4% (net) <sup>9</sup>	1082 kWh, 8.3% (net) 82 ccf, 6.9% (net)
<b>Cost / Benefit Ratios</b>		Cost of conserved energy Electric baseload: 6.1¢/kWh Electric heat: 13¢/kWh Gas heat: .97¢/ccf
<b>Nonenergy Benefits</b>	Not documented	Not documented in the evaluation.
<b>Client Satisfaction</b>	Have not done a survey, but agencies have unsolicited letters from customers who were satisfied with program services.	2002 survey – 96 percent were somewhat or very satisfied

<sup>8</sup> Source for performance measures: NJ Comfort Partners Impact Evaluation Report, M. Blasnik & Associates, January 2004.

<sup>9</sup> The gas savings for the comparison group used for this study were high, at 54 ccf, compared to the 15 ccf for the Comfort Partners comparison group. Given a 15 ccf savings for this comparison group, the net gas savings would be 76 ccf, or 7 percent.

	<b>NJ LIWAP</b>	<b>Comfort Partners<sup>8</sup></b>
<b>Performance Improvement Opportunities / Needs</b>	Targeting of high use homes. (Based on 2002-2003 study)	Targeting of high use homes. (Based on 2002-2003 study)



## IV. Conclusion

This report provided an analysis of energy savings for the NJ LIWAP, and a comparison of the NJ LIWAP and the NJ Comfort Partners programs on several dimensions. The comparisons in this documents showed that these programs have different histories and different goals, but provide similar services to low-income households in New Jersey. While the differences between the programs would make it challenging to have total program alignment in one integrated approach, there are many benefits to be gained from some level of coordination between the two. These benefits include:

- *Identification of households in need.* The two programs have different outreach and enrollment methods. Together, the two methods may allow a greater percentage of low-income households with energy needs to be reached.
- *Targeting available program resources to specific needs of the household.* The two programs concentrate on different types of services. Together, they should be able to better meet the diverse needs of low-income households.
- *Leveraging of resources from other types of programs (housing/income/utility).* By working together, there may be opportunities to leverage resources from additional programs.
- *Potential efficiency gains.* Reducing the number of contacts and visits to the home while providing coordinating services can reduce the fixed costs of providing services.

However, there are also potential challenges to coordination of the program. Some of the possible barriers include:

- *Program goals.* As noted above, the two programs have a different set of goals that overlap in a number of ways. These differences may interfere with coordination of the programs at various levels.
- *Program financial models.* The programs have different means of paying for services delivered. This may create barriers for service delivery providers or funders of the programs.
- *Program service delivery models.* Different service delivery models are used. Previous experience has shown that it is difficult to have technicians change their procedures, or use two different sets of procedures for service delivery.

Our previous experience with attempts to integrate programs in Ohio found the following benefits:

- *Single targeting list.* The state obtained data from the utilities and used a single targeting list of high usage households. This approach was successful in finding clients with the best opportunities for saving energy.
- *Development of high quality model.* They developed a good model for service delivery.
- *Types of service providers.* Both local community agencies and private contractors have been successful in providing services.

However, they did face challenges in implementing the new program:

- *Lack of statewide coverage.* Not all local agencies participated, leaving significant gaps in geographic coverage.
- *Hiring freeze.* A state hiring freeze limited the ability obtain required management resources, despite the availability of program management funds in the budget.
- *Lack of program integration.* They were not successful in integrating programs, even when they were administered by the same agency.
- *Loss of utility involvement.* The state takeover caused some utility management to eliminate active participation. They lost one avenue for outreach. Some utility managers no longer saw the link between low-income customer problems and the solutions offered by the state program.

New Jersey will face similar opportunities and challenges in coordinating the LIWAP and Comfort Partners programs. Some of the issues that New Jersey will face are summarized below.

- *Program goals and objectives:* Currently the goals and objectives of the two programs differ in important ways. One approach might be to align the goals and objectives. Another might be to identify how they are different and use those differences to treat clients with different funding sources.
- *Targeting:* Currently, the two programs target different clients. The targeting decision is closely related to the decision about program goals and objectives. If the programs continue to have different goals and objectives, they will serve different clients.
- *Outreach and intake:* Currently, the programs use completely different avenues for outreach and intake. The programs can operate more efficiently if they provide joint outreach and intake. However, different avenues for outreach and intake may reach different types of clients and together provide a more diverse set of clients who are served jointly by the two programs.

- *Staff training:* Joint training could be provided on fundamentals such as building science and energy education. If the programs retain their own identities and service delivery models, different training would need to be provided on these aspects of the program.
- *Service delivery – delivery model, allowable measures, measure priorities:* Different service delivery models, measures, and priorities may be maintained. If separate models are maintained, they should be coordinated to create efficiencies. The program managers will need to prepare detailed assessment procedures that will allow auditors to understand the funding sources that should be used in different situations.
- *Information tracking:* We recommend that one database should track the same information for both programs so that the programs can be evaluated on the same performance measures. Standard definitions should be created.
- *Reporting:* Programs should provide reports with the same set of data. For ease of analysis and comparison, they should be presented in the same format.
- *Quality control:* One set of quality control standards should be developed for both programs. However, they can be measured according to their individual goals and objectives.
- *Evaluation:* A joint evaluation should be conducted for both programs. However, each program can be compared to its own goals and objectives.

Both the NJ Comfort Partners program and the NJ LIWAP have improvements to be made to increase energy savings benefits for low-income participants. There is more potential that can be achieved by targeting the higher use households and by making better decisions about the services to provide. In addition to these opportunities, there are opportunities for coordination and collaboration that can provide further improvement. This report presented information on similarities and differences between the two programs, and potential areas that may be beneficial to coordinate.