The Design and Implementation of the First Low-Income, Shared-Savings Weatherization Program: A Wisconsin Pilot program

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ABSTRACT

In 1997 the State of Wisconsin began searching for low-income programs that were innovative in their approach and which offered the potential to improve or expand program delivery. TecMRKT Works responded to this call with an RFP to implement the first shared-savings pilot weatherization program in the United States. This paper describes the program being tested in Wisconsin and presents some of the early "lessons learned".

Introduction

This paper presents the design and early implementation experiences of the first publicly funding low-income shared-savings weatherization program offered in the United States.

The Wisconsin Shared-Savings Weatherization Pilot Program was developed in response to a call by the Wisconsin Energy Bureau for new and innovative program ideas designed to serve low-income populations in the changing economic and political climate in which these populations find themselves. With the political climate moving toward less low-income services and more toward services that enable low-income clients to be more self-reliant, the Wisconsin Energy Bureau elected to test the shared-savings weatherization program.

To get the project started, TecMRKT Works established a team that could effectively respond to the Bureau's call by partnering with two Wisconsin CAP agencies with extensive low-income program experience, including Wisconsin's standard weatherization program as well as other programs. The two agencies joining the team were Southwest CAP, a community action agency located in Dodgeville, WI, and WestCAP, located in Glenwood, WI. Together, TecMRKT Works, Southwest CAP, and West CAP partnered with the Wisconsin Energy Bureau to pilot the first program.

The remained of this paper, discusses the program and its importance, presents the results of the early design and delivery process, and discusses the key experiences after the first six months of operation. A follow-up paper after the program conclusion will be prepared and submitted for presentation at the International Energy Program Evaluation Conference or in a subsequent ACEEE conference.

Purpose of the Program

The primary purpose of the program needs to be described on several levels. The overall purpose as identified by the State of Wisconsin, is to implement an innovative low-income energy efficiency program that helps make Wisconsin's low-income population more financially self-reliant. To this end the purpose of the program is to help reduce the financial impact of energy costs on the low-income household through an aggressive package of energy efficiency measures and modified customer behaviors.

This goal will be satisfied if the program reduces energy consumption such that the household becomes more "self reliant", or, in other words, is better able to handle their financial obligations. This goal does not assume that the customer is or is not able to manage their financial obligations, but that through program participation, the customer's financial position, with regards to their financial obligations, is improved to the extent that they are more able to rely on themselves. If the program provides a savings to the customer, such that the customer is better able to financially take care of themselves, the program will be considered successful in making the customer more self-reliant. We are confident that this goal can be reached because the key requirement for this goal is to reduce energy consumption such that the customer has additional funds for other living expenses that would not have been available in the absence of the program. This essentially makes the financial savings associated with the participant's long-term energy savings the driver for increasing the self-sufficiency of the participating household.

In addition to the self-reliant goal, the State of Wisconsin is also interested in programs that help expand or stretch energy program resources in the face of declining Federal and State resources. This goal is addressed in the program's shared-savings aspect. During the first 16 to 18 months of participation each household's post-program energy bills will remain essentially unchanged from the pre-program period. Yet, during this time their energy consumption is significantly reduced, leaving a gap between what the participant owes the utility and what the participant pays the program to cover the costs of their utility bills and their savings. Because the total monthly bill will be essentially unchanged from their pre-program consumption, there will be a substantial amount of dollars collected from the participants each month that go into an escrowed savings account. These dollars will be shared with the program so that half are paid to the customer and half are paid to the implementing agency. The half that goes to the agency is then used for additional measures in other low-income homes. Through the shared-savings component the program is able to provide additional measures to other low-income clients. If the shared-savings component of the program is able to produce savings to fund additional installations in other low-income homes, the program will be successful in reaching this goal.

We are optimistic about the ability to reach this goal because the operational cost of a larger scale automated billing and account system are estimated at between $1.00 and $3.00 per household per month. The shared-savings component of the pilot program must produce savings in excess of this amount for additional program dollars to be available for additional installations. Unfortunately early budget cuts to the program eliminated the development of an automated shared-savings accounting and billing system for the pilot program. This meant that we had to rely on a labor intensive accounting system not appropriate for a full-scale or demonstration scale program. As a result, to evaluate the program's performance for this goal we will use the projected incremental automated accounting and billing costs instead of the actual costs associated with the current program's spreadsheet based methods to determine how much money can be made available for energy measures with and without adjusting for the added billing and accounting costs.

From the program operations and implementation perspective, the primary purpose of the program is to test and gain experience with the implementation of a shared-savings approach for delivering low-income weatherization services. As a result, the focus of the program is to gain experience with a shared-savings delivery system in which the program assumes responsibility for processing bill payments and for tracking and sharing savings. This is important because some organizations have suggested that the focus of the program with regards to implementation and documentation practices should be something other than testing a delivery concept. Unfortunately, budget cuts during the early planning process eliminated most other program goals other than those

described here and attempts to expand program goals through additional funding sources have not yet been successful. As a result of these cuts, program implementation needed to focus on the single objective of testing the shared-savings delivery concept rather than testing other important goals such as designing a detailed system for estimating monthly savings based on weather and customer characteristics, designing and maintaining a program tracking system that documents all phases of customer or program performance, achieving targeted savings levels for energy or shared dollars, or maintaining customer communications systems such that other impacts of the program are monitored and documented. The lack of necessary resources to focus on these other goals is, from the author's perspective, an area where program operations can be significantly improved if supporting funds are made available. As the program was funded, each CAP agency became responsible for designing and maintaining individual tracking and monitoring systems as best they could within the approved budgets.

What Makes This Program Innovative

The pilot program includes several aspects which make it innovative. We will talk about six of these aspects in this paper.

1. The single most innovative component is the shared-savings approach to providing low-income weatherization services. While the shared-savings approach has been poo-hooed by a few involved in low-income service delivery, we think the approach, if carefully configured and managed, can be successful. In saying this we realize that being successful means different things to different people. However, one thing that must be understood is that a low-income shared-savings approach is not for all low-income clients. A successful shared-savings approach requires that participants be identified and enrolled who have the ability to manage their financial affairs in a way that will lead to a successful payment stream. This means segmentation of services. The shared-savings program is not for everyone. While this is an innovative approach to service delivery, it must also be a restricted approach. A shared-savings approach relies on timely payments to be successful. This means that the program's innovativeness must also extend to the methods used for qualifying program participants to include those who will pay their bills.

2. The program's mix of measures is also innovative. In this program we have no dollar limit per home, nor are there non-included measures. Put more positively, we are installing a wide range of energy measures that appear to be cost-effective over the life of the measure as long as the participant approves the installation. Unlike the standard weatherization programs, we can install windows, water heaters, refrigerators, air-conditioners, cloths dryers, solar collectors, heat recovery systems or other measures. This non-restrictive aspect of the program means that for the first time, a weatherization program can treat the home as a complete energy system rather than a per-measure cost-based retrofit. In several recent weatherization evaluations we have conducted we have identified from 15 to 20 percent of weatherized homes that have not saved significant amounts of energy because the standard program could not address all of the major inefficiencies of the home. The standard program needed to leave the homes half-done because the spending cap for the homes were reached before the home was made efficient. This program allows us to address all of the energy needs of the home.

3. Another innovative aspect of this program is the expanded audit methods used to determine what measures to include in the treatment plan. Because the standard weatherization audit includes only those measures that are pre-approved as a standard program-wide measure, it could not be used

for examining all of the shared-savings measures. As a result we build an audit system that expanded the analysis beyond the standard measures. Because the budget to accomplish this was cut during the program planning phase we needed to build an expanded audit system using very little time or resources. In addition, the analysis method needed to be reasonable, based on experience, produce real savings and be completed in conjunction with the standard audit.

4. The bill payment and tracking system also needed to be innovative. There is no automated off-the-shelf system tailored for a shared-savings accounting and billing system. Because the program budget did not permit the development of an automated accounting system, each CAP agency needed to develop a spreadsheet system for tracking energy consumption and savings, bill payments and receipts, and shared-savings.

5. The customer feedback activities associated with the program are also innovative. The CAP agencies maintained for each customer a savings spreadsheet that tracks monthly consumption and estimated savings. If a customer's bill does not show significant improvements, the program targets the home for follow-up educational visits and assessments. These visits are designed to help identify problems producing low savings and provides follow-up education or additional measures to deal with the problem.

6. The program provides different methods for sharing the savings. This aspect of the program is still being developed at this time. While our original plan was to provide the savings payments to the participant and the CAP agencies at the end of the 16 to 18 month participation period, client requests have required us to rethink this aspect. At this time we are in the process of developing payment options for participants and letting the participants choose the option that best fits their needs. This means a variety of payment options including an end-or-program payment, semi-annual or quarterly payments, or even collecting only for the CAP agencies share of the savings and providing participant savings each month in the form of a reduced bill. We will report on the progress of these optional designs during the ACEEE presentation in August.

Program Background

The pilot program went through an extensive development and re-scoping process beginning with a proposed two year budget of $360,000 plus standard weatherization measures. This budget included extensive customer interaction and educational services with periodic follow-up contacts, an aggressive mix of energy measures, a monthly report of energy and dollar saving estimations, customer behavior change reviews, central program tracking and documentation, central program accounting and billing systems and an intensive interactive management and program documentation processes. This early design was used as the foundation from which the actual program was molded following the introduction of a $200,000 budget cap. In order to meet this cap, much of the program's management and management systems had to be eliminated or significantly reduced in scope. This revised design survived the first review process with the Wisconsin Energy Bureau and was recommended for funding to the Wisconsin Joint Finance Committee who required additional budget cuts before an implementation contract could be signed. These additional cuts resulted in the further elimination or reduction to the program management plan. However, after the multi-tiered review and approval process and the elimination, reduction or restructuring of most management and administrative components, the program was approved for pilot implementation on 30 homes within an eleven county area served by the two CAP agencies.

Program Components

This section of the paper briefly presents the program components. They are presented in an order that closely represents the component's position in the implementation stream to give an implementation perspective.

Design and Structure of Operational and Management Systems

Among the first activities of the program was to establish the organization structure and management systems for the program. Because of extensive budget cuts eliminating the ability to establish coordinated management and operational systems we elected to divide the management budget into three parts consisting of a 45% split to each CAP agency and a 10% split to TecMRKT Works for periodic consultation as the program was designed, developed and implemented. Under this system each CAP agency would receive a little less than half of the program management and operational funds to implement their version of the program. This also meant that each CAP agency was on their own from an operational perspective and from a management systems perspectives. This made the program essentially two separate programs rather than one coordinated program, with each CAP agency implementing their program with the operational systems they develop within the restraints of the budget split. While management analysts may cringe at what might be considered an unnecessary duplication of activities for a small program, this split was viewed as a strength of the program rather than a weakness. Because the program is a pilot program designed to test the shared-savings concept, the split in the management and operations budget meant that we would have two different but coordinated pilot programs. The down-side to this was that it further diluted the under budgeted management and operational aspects, requiring duplication in most management systems and in the consultation aspects of the program. The strength of the split is that it lets us compare and contrast two different management systems and lets us see what two different CAP agencies can do with limited management resources. Unfortunately, because the program was contracted to only one CAP agency, the second agency needed to sub-contract to the first. This places a management and budget risk for the subcontracting agency in that it must trust the other agency to judiciously manage the resources so that the project results in an equitable split of resources. For the Wisconsin Energy Bureau this may also mean more aggressive monitoring of program expenditures to assure that each CAP agency receives the full share of their planned allocation.

Customer Identification and Contact

Because the program is a pilot program designed to serve 30 participants (15 per CAP) the use of mass media, organizational referral mechanisms, or customer networks could not be employed to identify potential customers. The use of any of these methods would have created a immediate over-subscription and built program demand levels well beyond the program's ability to service that demand. Prudent management of the customer identification effort required that we identify potential participants using a one-on-one personal presentation approach. In this approach, each of the CAP agencies examined their waiting lists for the standard weatherization program and screened new applicants during the enrollment process for the weatherization program. This method allowed each agency to identify participants using a one-on-one approach with clients during their normal course of implementing the standard weatherization program. Because the shared-savings program is designed to supplement the standard weatherization program, this process did not impact the weatherization

enrollment process and helped set the stage for presenting the shared-savings program to potential participants.

Program screening and enrollment was handled in a two tier approach. Tier one requirements included eligibility for the standard weatherization program, home ownership, the appearance of a steady dependable income, and service from a natural gas and electric utility company. The following table presents the tier one screening requirements:

Table 1. First Tier Screening Requirements

First Tier Shared-Savings Requirements
✓ Eligible for standard weatherization program
✓ Own home
✓ Has a reliable steady income
✓ Is served by a gas and electric utility with monthly bills sent to the customer calculated from monthly consumption records

Presenting The Program To The Customer

Once the participant is successfully screened for the standard weatherization program and has passed the first tier requirements for the shared-savings program the program is briefly presented to the client. If the client indicates an interest, additional screening activities are performed. If the client passes the additional screening activities and can provide the appropriate documentation to support their claim, a detailed presentation of the program is provided to the client. If the client still indicates an desire to participate, a national credit check of the client's payment performance is conducted to qualify the client for participation. If the client passes the credit check they are extended an invitation to participate in the shared-savings program. If the client accepts the invitation they are entered into the enrollment process.

The following table presents the second tier screening requirements to be eligible for participation in the shared-savings program.

Table 2. Second Tier Screening Requirements

Second Tier Shared-Savings Requirements
✓ Has lived in the home for 3 years or more
✓ Has no plans to move in the next 3 years
✓ Has no indication that their income stream will be reduced
✓ Has no utility arrearages
✓ Has a good utility bill payment history
✓ Has a positive national credit payment report

Enrolling The Customer

The enrollment process consists of a contractual agreement between the client and the CAP agency. The agreement makes the CAP agency the legal payment agent for the client's utility account(s) and establishes an agreement between the client and the CAP agency that the client will reimburse the agency for the amount of the bill and a "program participation fee" in the amount of the

estimated monthly savings. The agreement also establishes ownership of the installed appliances to rest with the CAP agency until the end of the pilot program. This acts to encourage the client to stay in the program until the end in order to receive ownership of the installed appliances. We realize that this aspect of the program may not be enforceable, but we also know that it acts as an incentive to discourage program dropout. Once the client has a legally binding participation agreement an energy audit of the home is scheduled.

Conducting The Audit

Each CAP agency has state certified energy auditors who are trained to conduct residential energy audits for the standard weatherization program. These same auditors are used to conduct the shared-savings audits. The audit is conducted in exactly the same way as a standard audit for the measures included in the standard program. This audit is essentially identical to the nationally recognized NEAT (National Energy Audit) audit and addresses the same measures as the NEAT audit using essentially the same analytical methods and measure identification and approval systems. For this reason we will not expand on the use of the audit software or address the measures covered by the audit. However, because the shared-savings program can address any measure including the measures covered by the NEAT audit, the program needed to design an expanded energy audit methodology to evaluate measures not included in the NEAT-type audit. As a result, the program designed audit procedures for forecasting energy savings for water heaters, cloths dryers, refrigerators, windows, lighting systems, and educational training. Because of the budget cuts, the program had limited funds for designing new audit or savings estimation techniques. As a result the audit procedures for the additional technologies were developed through consultation between the CAP agencies and TecMRKT Works with guidance from the Wisconsin Energy Bureau. The primary requirement for addressing the new measures was that they must be conducted with currently available audit equipment and during a single examination of the home lasting less than two hours. Dr. Jim Mapp form the Bureau provided recommendations for audit techniques for the technologies not addressed in the NEAT-type audit, and these recommendations were modified and incorporated into the standard weatherization audit. While a presentation and discussion of these additional audit techniques is beyond the scope of this report a brief discussion of the general approach to each measure can be addressed.

Insulation, Infiltration, Sealing, Weather-stripping, Furnace Tune-ups, Furnace Replacements. These items were evaluated for replacement using the NEAT type audit tool approved for Wisconsin weatherization programs.

Cloths Dryers. For cloths dryers the audit decision was an electric to gas replacement decision. If the audit found an electric unit and gas service was available, the cloths dryer was changed from electric to gas.

Windows. For windows the auditor made a visual determination on the condition of the window. If the window did not seal well and could not be effectively repaired it was replaced with double-pane gas-filled windows.

Water Heaters. For water heaters we replaced electric units with high efficiency gas units whenever possible. If gas service was not available the unit was replaced with a high-efficiency electric unit if it

appeared to be an inefficient design (old or with fiberglass insulation). Solar water heaters were also considered if approved by the client.

Refrigerators. For refrigerators we replaced all units that were 10 or more years old. If the unit was newer than 10 years old it was replaced if it was a side-by-side unit, if multiple inspections over a two hour period found excessive run times (DS=/>.50), or if the unit either made excessive noise or it had excessive vibrational problems with hotter than expected plugs or cords. In addition, if a visual inspection indicated damage to the unit that would impact efficiency the unit was replaced or repaired.

Compact Florescent Lights. If the home had incandescent lights that were used for more than 3 hours a day the bulbs were replaced with equivalent CFLs if the fixtures supported the replacement.

Educational Visits. The program provides on-site education training to participant families on how to maintain low utility bills. In addition, follow-up training or problem resolution is provided if energy savings are not maintained.

Installing The Measures

The installation of measures is handled in the same manner as the standard weatherization program. That is, for items that the weatherization teams can install, the measures are ordered and installed by the CAP agency. For items the teams are unfamiliar with or for which special expertise is required, contractors are hired to install the measures. Each CAP agency is responsible for the installation of measures and each handles the task is a slightly different way.

Estimating The Savings

Estimating the savings is an important part of the shared-savings program. Because the customer's total monthly bill from the CAP agencies is increased by the estimated savings, and because the clients are low-income customers with several places to spend their money, we felt the estimated savings should be conservative, yet not be significantly under-estimated. Our original plan for this effort was to survey each home to identify energy related behaviors and conditions, with a periodic call-back to confirm the data as needed. This information was to be used to help drive savings estimation calculations after they were linked to a monthly weather adjusted analysis of participant's consumption. We had also planned to use this data to provide monthly written and graphical feedback to the customer regarding their performance. While this innovative feature would have, in our opinion, maintained customer interest and increased program savings, this aspect of the program was significantly reduced in scope as a result of funding cuts to the original program design. Instead, we had to find a low-cost method for estimating savings that required no additional management or analysis efforts beyond a single savings calculation that could be estimated in less than one hour per home. This meant that each monthly calculation of savings had to be completed within a 2 to 4 minute period for each home, to be within the approved budget. This is, in one of the author's opinion, the single greatest weakness of the pilot program. This budget restriction required us to build a one-time estimation method that could be used across the pilot period for all participants without examining monthly client behavior, weather or historic consumption trends.

As a result of this weakness we are uncertain if the estimated savings accurately reflect the actual savings. We are looking forward to building a shared-savings pilot program in Wisconsin or

another state where we can build an automated system for estimating monthly savings using monthly customer and weather data. If we are able to find funding we can build an automated system that monitors weather and consumption, correlates appliance mix and appliance use characteristics to the billed amount, and estimates monthly savings. This would significantly improve the ability to accurately estimate individual household savings and would provide a sophisticated, yet simple to operate, residential savings estimation program. The weather adjustment driving mechanisms for this new program would be similar to the analysis routines used in PRISM or other weather adjusted energy savings estimation software, but would include behavior and seasonal appliance use adjustment algorithms tailored to each participant's appliance mix and use characteristics. Essentially it would be a "beyond-the-state-of-the-art" energy estimation system.

To build a simplified method for estimating savings for the pilot program we formed what we fondly refer to as the BLAST approach (*Before Learning Applicable Savings Technique*) to estimate savings. In the BLAST approach we used the NEAT type audit results for estimating the annual savings for each home and then added to that savings the annual estimations for the measures not covered by the NEAT type audit, multiplied by a conservation factor to account for over-estimations resulting from summing independently estimated measures and to provide a conservative approach for addressing the customer's ability to pay higher than necessary energy bills. Because the NEAT type audit uses historic consumption data correlated to weather changes, the annual estimations for the audit covered measures are weather adjusted annual projections. However, because we use the annual savings estimations for these measures, rather than monthly weather adjusted saving estimations, our BLAST approach acts to over estimate non-winter monthly savings and under estimates winter savings.

To estimate savings for the non-standard measures we went to available evaluation reports for low-income DSM programs for which savings have been estimated for participants in the northern part of the United States. This produced the follow savings estimations that were used in the shared-savings program:

Table 3. Summary of Non-Standard weatherization Measure Savings

Measure	Gas Savings	Electric Savings
Refrigerators	-	800 kWh/year
Window replacements	15 therms/window *	25 kWh/year/window
Compact florescent lights	-	100 kWh/year/bulb **
Water heaters elect to gas	N/A	Elimination of estimated consumption
Water heater elect to elect	N/A	10 to 40% depending on unit
Cloths dryers	5 to 20% depending on unit	Elimination of estimated consumption
Educational visits	5%	5%

* Not to exceed 1.5% per window

** Zero kWh if used less than 2 hours per day

To find the total household estimated annual savings we added the savings estimations from the NEAT type audit to the annual savings from the non-audit measures and multiplied by a conservation factor of .85. This essentially reduced the total estimated savings by 15%. The resulting estimated savings for natural gas and electricity are each used as a multiplier to the monthly consumption to estimate what the bill would have been in the absence of the program.

Paying The Bills

The bill payment process is fairly straight-forward. Because the participant legally transfers payment responsibilities for their electric and gas bills to the CAP agency, the bill is mailed directly to the agency rather than the customer. The CAP agency then re-bills the customer for the exact amount of the bill for both the electric and gas consumption. The bill is itemized so that each part of the bill can be seen. This is important because much of the utility payments in Wisconsin consist of taxes and monthly adjustments that are added to the energy costs. These need to be tracked separately.

The shared-savings component of the bill is a simple percent of the energy consumption charges based on the estimated annual percent savings for gas and electricity. The shared-savings component of the bill is handled separately from the utility bill and is included in the CAP agency's bill to the customer as a program "participation fee". This is also the way in which the shared-savings component is described in the participation contract. The participation fee is the amount of money that is split between the CAP agency and the client. This is important because in most states the sales of electric power and natural gas are controlled and regulated. The CAP agencies did not want to become or appear to become utility companies or companies selling natural gas or electricity. As a result the savings are legally described in the bill and in the participation contract as a participation fee and are not in any way associated with the purchase, distribution, or sales of electricity or natural gas.

Because the CAP agency is the payment agent for the client's utility bill and because the savings is a participation fee, the CAP agencies can operate the program in compliance with applicable laws and regulations. That is, we cannot charge a fee for the energy consumption, but we can charge a participation fee to cover the energy that is saved. In addition, all public utilities are familiar with payment agents in their normal course of operation. In a great many cases the customer consuming the energy is not the customer who receives and pays the bills. In many cases the payment agent is an agency, an organization, a relative, an estate, a business, etc. Having the customer and the payment agent in two different locations is very common within the utility industry.

Management Of The Escrowed Savings Accounts

Each month the participant sends their payment to the CAP agency. This payment includes the utility costs and the participation fee. The CAP agency deposits the entire check into the program's management accounts and then transfers the participation fee to the customer's escrowed account. This allows the CAP agency to be reimbursed for the utility bill payments made on behalf of the customer and allows for the transfer of the savings into a separate account that will be shared with the client.

Disbursement Of The Savings

The dollars maintained in the escrowed account are periodically split between the CAP agency and the participant. This is done in a number of ways depending on the CAP agency and the desires of the customer. In addition, we expect payment systems to change as customers become familiar with the program and more fully understand how the savings are accumulating. In some cases the customers have expressed a desire to share the savings at the end of the pilot period, in other cases clients have indicated they would like their savings annually or more often. Each program is dealing with these issues in different ways and one is attempting to provide a variety of disbursement periods.

One of the interesting aspects from this pilot will be to see how customers choose to collect their savings. It may be we need to plan low-income shared-savings programs with several different periods and methods for disbursing the savings to the client rather than one or two options.

Experiences to Date and Lessons Learned

The program needs to be carefully explained to participants.

The shared-savings concept is new. Few clients know what it is or how it works. Many do not understand why they need to pay for savings that they do not have to pay in the standard weatherization program. We learned to be very careful in presenting the program and make sure the client understands how the program works and what is expected of them. We also need to explain that the shared-savings program provides a wide mix of products and services that are not available through the standard weatherization program. We also need to give the client a participation choice after the on-site audit where the client can have a reduce scope of measure by going on the waiting list for the standard weatherization program or they can have an expanded set of measures and go right into the installation phase for the shared-savings program. Clients need to be able to choose after the audit so that they know exactly what they will and will not received from both programs before making the choice.

Budget billing means special problems.

Many customers are on budget billing systems that levelize payments. From the program perspective we learned that we must be able to use their already established budget billing system or have the customer come off the budget billing system and zero their accounts prior to enrollment in the program. What is nice about the budget billing problem is that the utility has already established a monthly consumption history and costs for the customer. We can take the monthly billing as the total bill for the shared-savings program and continue billing at the budget amount (once confirmed) while consuming energy at the post-program level. In this system the customer's bill does not change and acts to establish the shared-savings amounts for the program. However, this method requires special monitoring to see that consumption does not increase and erode the savings. It may be that we will need to recalculate their budget participation fee as the program gains experience.

Multiple bills on different dates covering different services

We found that many customers are served by two utility companies which bill at different times of the month. Because the program needs to provide one bill to the customer each month, we found that we must wait until both bills are in to process program bills and participation fees. In some cases the utilities are not prompt in processing their bills and the program must be ready to adjust bill processing schedules to correspond to when the utilities can actually produce their bills.

In addition, many customers have bills that include much more than energy consumption. In several cases we found bills that include trash collection charges, water charges, yard lights and other fees. These costs are not included in the program arrangement. For these individuals we had to arrange for non-energy charges to be billed to the customer or we hand to include these charges in the program bills. In view that the deregulation movement is allowing utilities to offer phone service, internet access, security systems, vehicle charging stations and home-made apple pie all billed on a

single convenient monthly bill, the shared-savings program must be ready to deal with these new charges.

Utilities are not always prompt on their commitments

We learned that when a company says that it has changed its billing address so that the program receives the utility bill, the program must carefully follow-up to confirm the change has been made. Programs must be ready to coordinate billing changes on a repetitive plan so that change requests are monitored until the program is sure that the bill is actually going to the CAP agency instead of the customer.

The shared-savings pilot program is more labor intensive than first thought

The program has provided some challenges to daily administration and management activities. This program needed to "cut-new-turf' in how programs are managed and implemented. New auditing, accounting and monitoring systems needed to be designed, new appliance suppliers needed to be established, new working relationships needed to be developed, management systems needed to be designed, tested, modified, and monitored and they will continue to evolve throughout the pilot program. These requirements must be planned and budgeting during the early phases of the program planning efforts. For this pilot, considerable voluntary hours were contributed by the implementing organizations in order to test this program.

New skill sets are needed at the implementing agencies

CAP agencies are, by plan, low-cost providers of services within small geographical areas. Staffing and staff skills have evolved to be complementary to the programs and activities they implement. The shared savings program places new staff requirements on people who may have little experience with the new procedures or who may not fully understand the complexities of implementing a shared-savings program. Program directors may need to acquire staff with a different sets of skills than typically needed, or they may need to provide training to staff in order to implement a shared-savings program.

Customers will turn over their bills to the CAP agency and make timely payments

After 6 months we have yet to experience an unpaid bill by a participating customer. Customers seem to be receiving and processing their bills in a timely manner and are paying their bills in accordance with the program contract. Shared savings accounts are growing and there are no customer complaints as of this paper. Customers appear to see the program as a way to obtain new appliances, reduce their energy bills, and receive a bonus at the end of the program in the form of a shared-savings check. Customers appear to be very happy with the program. However, this will need to be confirmed in a comprehensive evaluation of the program.

Summary

The Shared-Savings Pilot Weatherization Program provides an alternative delivery mechanism for serving low-income clients that expands program services and recovers a portion of the delivery

costs in the form of shared-savings. The program is not for everyone, and must be implemented in a way that provides services to those clients who have demonstrated ability to manage their financial affairs. As a result, the program is not considered a replacement strategy for standard weatherization programs, but the testing of an alternative program that has the potential to help both the client and the implementing agency. This program is demonstrating that shared-savings programs can be successful in serving the low-income households. However, the program has also been successful in identifying needed delivery changes, especially in the accounting and energy savings estimation and tracking systems, and in methods for automating the billing systems.

From a pilot program perspective, the Wisconsin Shared-Savings Pilot Program has broken new ground in service delivery for low-income customers and has made an important contribution to the range of services that can be successfully provided to the State's low-income customers.