

Evaluation of a Low-Income Shared-Savings Pilot

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Abstract

This paper describes the evaluation of a shared-savings pilot program implemented at a community action agency in rural Wisconsin. Under this pilot, weatherization clients receive a broader array of energy savings measures, and enter into an agreement with the weatherization agency to split the energy savings that accrue during the first year following participation. The pilot was focused on income-eligible homeowners with gas heat and good utility payment histories. This paper reports on preliminary evaluation findings from one of the two agencies implementing the pilot, and is based on interviews with participants and program staff and review of program data.

The results show that at least some low-income households are willing to enter into shared savings agreements: the agency was able to recruit 14 of 15 targeted households into the program. Client interest in replacement windows (not available under the standard weatherization program) probably also affected interest in the program. One household partially reneged on the shared savings agreement after measures had been installed, but the remaining households were mostly timely in making payments to the agency.

Restrictions on the pilot funding reduced its scope, so that important features such as an automated system to track savings and process bills could not be tested. This leaves unresolved issues related to cost-effectively performing these tasks. Dealing with a variety of small municipal utilities also emerged as an administrative issue for the pilot. The pilot was not designed to test the limits of cost recovery for the agency, but our analysis suggests that this approach would be unlikely to have a substantial impact on weatherization resources in a state like Wisconsin. Under very favorable conditions a modest stretch of weatherization resources might be possible.

Introduction

Background

The Shared Savings pilot program grew out of concern for the future of low income energy programs in Wisconsin. Wisconsin's weatherization and energy assistance programs suffered major funding reductions in 1994, 1996 and 1997. The surrounding discussion in Congress indicated that instability in this funding would be the norm in the future. In response, the Wisconsin Energy Bureau proposed using oil overcharge money to pilot new approaches that would increase either resources or the administrative efficiency of these programs. From solicited proposals, six programs were approved. The Shared Savings pilot concept was developed by the consulting firm TecMRKT Works, which also took the lead role in proposing the concept to the Energy Bureau.

Although budget restrictions by the Energy Bureau and the Wisconsin Legislature reduced the scope of the pilot from the original vision (as we describe later), one of the original concepts of the Shared Savings pilot was to increase the resources available for weatherization. The program would work as follows. Participating households would receive an expanded set of weatherization measures that would include measures not allowed under the standard weatherization program such as replacement refrigerators, window replacement, or even the installation of clothes lines to offset dryer energy use. The weatherization agencies would also provide in-home energy education to participants.

Utility bill savings from these interventions would then be divided between the weatherization agency and the client over a specified period of time. Since some of the cost of weatherization would be repaid out of client energy savings, funds would go further than if they had been disbursed through traditional weatherization grants. For the purpose of testing the concept, the shared savings were not intended to substantially recover the cost of the measures.

In addition, the weatherization agency would take over the role of billing agent from the utility. Utility bills would be sent directly to the agency, which would then re-bill each customer with the addition of a fee meant to capture the shared savings. This arrangement was also meant to be a vehicle for providing feedback to participants on their energy savings, thus complementing an energy education component of the program. At the end of what was envisioned as a 1-1/2 to 2-year period of shared savings, the agency would return half of the shared savings to the client.

Participants for the pilot were to be screened to include only households that: (1) were income eligible for the standard weatherization program; (2) were homeowners; (3) heated with gas only; and (4) had relatively reliable income and a good utility payment history.

A two year pilot was envisioned, with community action agencies implementing the pilot program. The West Central Community Action Program (West CAP), in northeastern Wisconsin, and the Southwest Community Action Agency (Southwest CAP), in southwestern Wisconsin, planned to run parallel programs in their respective regions, enrolling 15 households each, and sharing management tasks where feasible. At recruitment, customers would be given the choice of a traditional weatherization grant as an alternative to Shared Savings. But only the Shared Savings program would offer premium measures such as new windows and major appliances. This was intended to attract customers who would otherwise reject Shared Savings in favor of a weatherization grant. Hall, Reed, and Strand (1998) provide more details about the design and early implementation lessons of the pilot.

Purpose of the Evaluation

A key element under test was the pilot's ability to recruit clients willing to enter into—and follow through with—a shared savings agreement with the weatherization agency. Also under test was the weatherization agencies' ability to manage such a program. Secondary questions included whether participants valued the education and changed their behavior in response, whether they saved energy, whether they paid their bills on time, and whether this program is feasible for customers over a longer period needed to make it self-sustaining financially.

The full evaluation of this pilot is still underway. Delays in implementation at one of the agencies (West Central CAP) limits the analysis and results here to Southwest CAP. The conclusions offered here are therefore tentative.

Method

On-site interviews with all participating clients at Southwest CAP were conducted by one of us (Sturiale). The interviews were designed to gather information about how families heard about the program, what made them decide to participate, and what their opinions were of it—as well as to probe for understanding about how the program worked.

The interviews were originally envisioned to be scheduled for shortly after measure installation and entry into the shared savings plan, but delays in implementing measures and contracting for the interview process had the result that most of the 11 Southwest CAP client interviews were conducted between six and nine months into participation. Follow-up telephone interviews with some households after the end of the shared savings period are planned, but have not been conducted yet. In

addition, program staff were interviewed to obtain their viewpoints regarding implementation of the program.

Analysis was conducted of program records, including: (1) records of measures installed and their cost; (2) client utility billing histories; and, (3) records of agency bills to participants and payments to the agency. We used the Princeton Scorekeeping Method (PRISM) to estimate weather-normalized gas savings (Fels, 1986), using weather data for Madison Wisconsin and the period from 1978 through 1997 as the basis for average heating degree days. The PRISM method also provides estimates of the statistical uncertainty in weather-normalized energy use and savings. To calculate electricity savings, we simply annualized pre- and post-participation consumption, using as close as possible to a year immediately preceding and following participation. We did not attempt to control-adjust the gas and electricity savings estimates for living situation changes or other non-program factors which might affect savings estimates. Given the small number of participants, the savings estimates are meant to be suggestive only.

Results

Recruiting

Southwest CAP first tried to recruit participants by screening the energy assistance rolls for households that met the relatively narrow eligibility criteria for the pilot. This led to a pool of participants comprising mainly elderly households. The agency therefore tried an alternative approach of using county case workers to identify eligible households from among the families they deal with for a variety of programs. As we show later, a key selling point for the program appears to have been the need for new windows. Ultimately, Southwest CAP recruited their target of 15 households. One household dropped out of the program prior to installation of the measures for unspecified reasons, and one elderly participant died partway through the shared savings period.

A demographic profile of the 11 interviewed participants is as follows:

- Nine families currently have children under the age of 18 living in the household, with the following breakdown:
 - 2 children (3 families)
 - 3 children (3 families)
 - 4 children (1 family)
 - 5 children (2 families)
- One family consisted of a retired couple.
- One person lives alone.
- Two are currently disabled.
- Two are divorced, while eight are currently married and one is recently widowed.

Implementation Issues

Reduced funding for pilot development. One immediate implementation issue was that in approving expenditure of the pilot funds, the Energy Bureau capped the overall budget for any individual pilot at \$200,000, and the Wisconsin Legislature required that no more than 15% of pilot funds be used for program design and management. The consequence for the Shared Savings pilot was that consulting funds intended to help develop a more sophisticated system to estimate individualized energy savings and process monthly utility billing were eliminated, and client education efforts were scaled back. Although some development work was done towards estimating the savings from non-standard

measures such as refrigerator replacements, in the end Southwest CAP was left without adequate resources to implement such a scheme. Instead, they adopted the administratively simpler approach of adding 20% to the client's utility bills. Their reasoning was that an earlier evaluation of the more limited standard weatherization program had shown average savings of 25% (unpublished, see Barry, 1997), so applying a 20% shared savings charge (of which Southwest CAP would ultimately keep only 10%) would be conservative.

Implementation Delays. As is perhaps inevitable with such pilots, contract arrangements and startup issues took longer than expected, and perhaps more importantly measure installation was delayed. This reduced what had been envisioned as a 1-1/2 to 2-year shared savings period to one year of shared savings, or—for a couple of households that had to await housing rehabilitation or lead abatement work before proceeding with weatherization—considerably less than a year.

Utility Billing Issues. Another difficulty arose due to the fact that Southwest CAP serves mostly rural areas and small towns in southwestern Wisconsin. While all of the participants received gas service from one of two major gas utilities, most received electricity from small municipal utilities that included services such as water, sewer, and garbage collection on the same bill as electricity. This meant dealing with more utilities than expected, as well as making different arrangements with each about how to separate the electricity bill from other services. Some utilities were able to send a separate bill directly to the client, but others could not. The end result was more hand processing of monthly utility bills than originally envisioned—and a much more costly arrangement for processing customer bills than the automated system envisioned in the original pilot proposal. The financial officer at Southwest CAP estimated that it took most of a day to process the bills for half a dozen participants.

Another issue that arose was that three families were on a utility percent-of-income plan, and most received energy assistance credits to their utility accounts. These programs sometimes resulted in the customers having credit balances on their accounts, which meant that Southwest CAP could not collect a shared savings payment, since it was based on a percentage of the bill.

Client Education and Feedback. West Central CAP was to have taken the lead in developing a protocol for conducting in-home client education. But implementation delays at the agency (and the budget restrictions imposed by the legislature) meant that Southwest CAP had to improvise on their own. They ended up with a less ambitious approach of including informational pieces on energy use and energy savings tips in the monthly bills that were sent out to the participants. Topics included tips on washing, cooking, appliance energy use, lighting energy, and moisture in homes. Short questionnaires administered by Southwest CAP indicate that while the families felt that they were already doing many of the things suggested in the literature, at least some of the information provided was new and useful to the participants. County case workers also visited each household once at the start of the 1998/99 heating season to discuss the materials that had been provided and ways to reduce heating costs during the upcoming winter.

The original vision for customer energy savings feedback was also scaled back due to cuts in the pilot administrative budget. The monthly bills sent by Southwest CAP included a table with a rolling one-year comparison of current and previous year monthly electric and gas use. But there was no attempt to adjust the figures for differences in the weather, and this information was spotty in a number of cases, because of difficulty obtaining billing histories from some of the utilities involved.

The interviews with participants showed that clients noticed these gaps, but also mostly paid attention to the total dollars they owed, not how many therms or kilowatt hours they used.

Measures and Costs

A total of \$56,639 was spent on weatherization measures meant to save energy in 14 households, for an average of \$4,045 per house and a range of \$2,658 to \$6,106.¹ The pilot funded 82% of the materials and labor, with the remainder funded by the state weatherization program (13%) and the gas utilities (5%).

Spending was dominated by window replacement and repair; all participating households received some window treatment, and most had extensive window replacements (Table 1). A number of households also received a new refrigerator or freezer or a new water heater. The only other atypical measure was the installation of an outdoor clothesline for three of the households.

Table 1, Measures installed and costs.

Measure	# of houses	Pilot Funds	Wx Funds	Utility Funds
Materials:				
window repair/replacement	14	\$21,927	\$87	\$0
compact fluorescent	12	\$264	\$741	\$0
replace refrigerator or freezer	10	\$6,042	\$0	\$0
door repair/replacement	8	\$1,736	\$177	\$0
water heater replacement	6	\$3,994	\$0	\$0
wall insulation	5	\$0	\$128	\$148
ceiling insulation	5	\$0	\$819	\$0
attic venting	4	\$0	\$176	\$0
duct work	3	\$226	\$187	\$0
install clothesline	3	\$153	\$0	\$0
sillbox insulation	3	\$0	\$57	\$0
exhaust fan	3	\$0	\$161	\$0
htg. Sys. Clean and tune	2	\$106	\$0	\$0
setback thermostat	2	\$37	\$45	\$0
water heater wrap/pipe insulation	2	\$0	\$24	\$0
floor insulation	2	\$0	\$407	\$0
low-flow showerhead	2	\$0	\$15	\$0
dryer venting	2	\$0	\$52	\$0
heating system repair	2	\$0	\$76	\$0
foundation insulation	1	\$373	\$0	\$0
smoke detectors	1	\$0	\$12	\$0
infiltration reduction	1	\$0	\$153	\$0
waterbed cover	1	\$0	\$16	\$0
water heater repair	1	\$0	\$2	\$0
heating. system replacement	1	\$0	\$0	\$1,891
Total Materials		\$34,858	\$3,333	\$2,039
Labor		\$11,028	\$3,884	\$883
Misc.		\$384	\$230	\$0
Total		\$46,270	\$7,447	\$2,922

¹ These costs exclude \$40,310 for extensive lead abatement and rehab work not directly related to saving energy in two of the houses.

Shared Savings Payments

As of March 1999, six participants had completed their year of shared savings payments, having made total shared savings payments of between \$120 and \$240 to the agency (half of which was to be returned to the participants). Four participants were partway through their year of payments, and two had not yet begun due to delays in installing the measures. The amount added to the clients' monthly utility bill has averaged \$15, with a range from \$3 to \$42.

One of the 14 participants partially reneged on the shared savings agreement by instructing the gas utility not to forward her gas bills to Southwest CAP. She did, however, make shared savings payments on her electric bill. There was also a mix-up with the gas bill for another client that resulted in no bills being forwarded to Southwest CAP until the end of the shared savings period. Aside from these two cases, there were only a few problems or late payments by the remaining clients. Of course a condition of participation was that the household have a good utility payment history. That the last two winters have been among the warmest on record probably also plays a role.

Energy Savings

We were able to analyze pre/post gas usage for nine participants, and look at electricity savings for eight. The results, shown in Figure 1 and Table 2, while not a formal impact analysis of the pilot do suggest that substantial energy savings are being achieved. For the most part, houses with large energy savings correspond to the houses that received measures known to substantially reduce heating energy use, such as wall insulation, ceiling insulation, and heating system replacement. House # 's 11 and 14 show significant savings despite the absence of these measures, however. House #2 shows a large increase in gas usage as a result of replacing an electric water heater with a gas water heater, in a household that apparently uses a lot of hot water. The large increase in gas use is paired with a reduction in electricity use.

Aside from the house with the water heater fuel switch, only two households show electricity savings that exceed the shared savings assumption of 20%, (though two others are in the 15% to 20% savings range). And one household exhibits a substantial increase in electricity usage, despite receiving a new refrigerator and compact fluorescent lights.

Changes in Energy Bills

A central premise of the shared savings concept is that participants' bills are held at the pre-participation level during the shared savings period. But while the original pilot concept was to create individualized estimates of gas and electricity savings, budget restrictions forced Southwest CAP to implement the more expedient approach of simply adding 20% to the client's utility bill. Under this scheme, Southwest CAP keeps 10%, and returns 10% to the client at the end of the program. If actual savings are more than 20%, then Southwest CAP gets less than half of the savings. If savings are less than 20%, then Southwest CAP gets more than half the savings. And if savings fall below 10%, then the client's bills will actually be higher than if they had not participated. (Of course this only applies over the duration of the sharing period, after which participants keep all of the energy savings.)

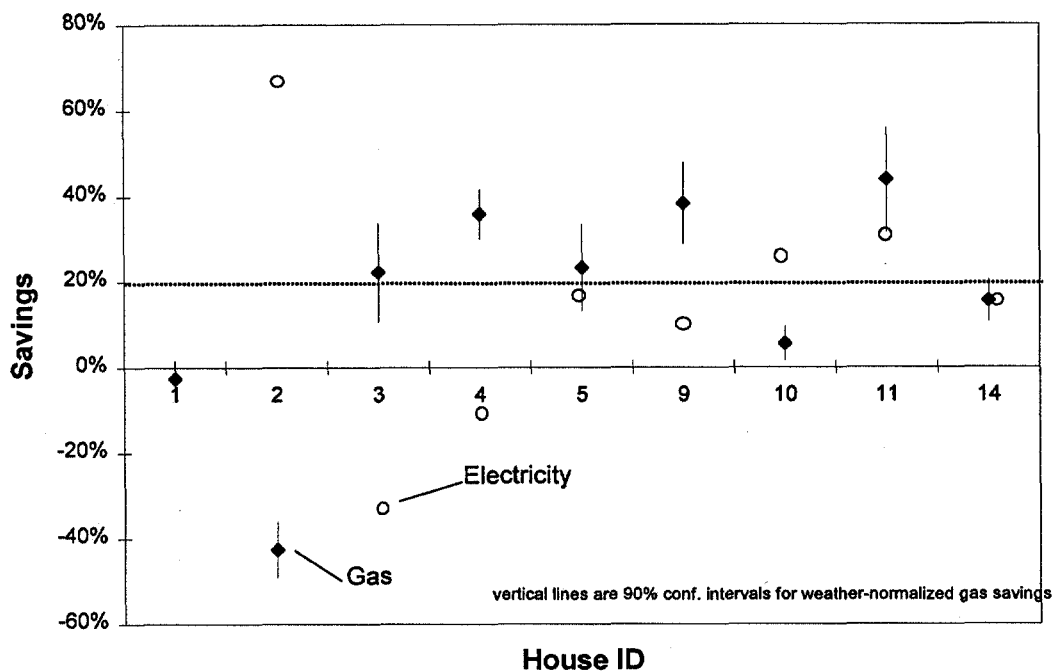


Figure 1, weather normalized gas savings and annualized electricity savings for nine program participants.

Table 2, weather normalized gas savings, annualized electricity savings, and measures installed, for nine program participants.

House ID	Gas (therms)			Electricity (kWh)			Major Measures
	Pre	Post	Savings	Pre	Post	Savings	
1	671	689	-18 ±28				floor ins., windows, lights
2	1225	1747	-522 ±74	18312	5953	12359	refr repl., wh repl. (fuel switch), lights, clothesline
3	1625	1263	362 ±193	5989	7962	-1973	refr. repl. wh repl., wall ins, ceiling ins., floor ins., infil. red. ,windows, lights
4	1241	797	445 ±90	9660	10670	-1010	furnace repl., ceiling ins., refr. repl., infil. red., windows, lights, showerhead, clothesline
5	1255	963	293 ±135	6309	5243	1066	wall ins., refr. repl., showerhead, lights
9	1440	888	552 ±138	10350	9270	1080	wall ins., wh repl., windows, doors, lights
10	741	700	41 ±30	6985	5118	1867	wall ins., windows, doors, lights, waterbed cover, htg. sys. repair, wh repair
11	1346	756	590 ±190	14310	9854	4456	found. ins., ceiling ins., windows, doors, tstat, lights, clothesline
14	1044	882	162 ±55	9622	8140	1482	refr. repl., windows, door,

The impact on the overall energy bill depends on savings that accrue for both gas and electricity use, as well as the relative cost of these fuels. Like most low-income, owner-occupied households in the upper Midwest, the shared savings participants tend to have roughly equal annual bills for gas and electricity that total about \$1,200 on average. Our analysis of the eight households with pre/post data on gas and electricity use indicates that only one household (#3) faced an overall higher bill due to Southwest CAP claiming 10% of post-participation use. This was a consequence of the large increase in electricity use after weatherization that offset substantial gas savings—an increase that may well not have been a consequence of participation in the pilot.

In the short run, however, two other factors increase client energy bills. First, even though the agency only recovered the first 10% of savings, the program added 20% to the utility bills, of which half was put into escrow to return to the client at the end of the pilot. Adding 20% to the bill was enough to create higher bills in the short run for three additional participants, though they would later receive enough back from the escrow account to offset this increase.

Second, nearly all participants were on utility budget payment plans (mainly for their gas bills). Normal lags in adjustments to these plans meant that participants were still being billed by the utilities for their pre-weatherization usage level well into the shared savings period. Until the budget plans caught up to the fact that their usage had dropped significantly, these clients were essentially paying 20% more than their pre-participation bills, and several built up substantial credits on their utility accounts as a consequence.

These problems would be exacerbated in a cold winter, but this was not put to the test during Southwest Cap's implementation of the pilot, which included two of the warmest winters on record. A warm winter prior to participation followed by a cold winter that drove up client energy bills could also easily create a perception that the measures installed or the shared savings charge have increased household utility bills, even if energy use shows a decline when differences in the weather are taken into account.

Findings from Client Interviews

Highlights of the eleven post-participation interviews are as follows.

Nearly all families (10) heard about the Shared Savings Program through a contact they had (either directly or indirectly) through the Southwest CAP office. Some families were receiving energy assistance administered through a Southwest CAP program. Others learned about the program when seeking emergency help from Southwest Cap's food pantry. One family learned about the program through its involvement with Head Start.

Eight out of the 11 participants had a relatively good understanding of how the program would work before they committed to the program. They also had a higher satisfaction level, as compared to the three who did not have a good understanding of the program.

The three participants with the least understanding of the program were also the least satisfied with the Shared Savings obligation. All three individuals were either single mothers or lived alone. None seemed to comprehend fully what was told to them at the start of the program because of other distractions in their lives. Two said their energy bills have been higher since enrolling in the Shared Savings program and attribute the increase to the Shared Savings fee. One dropped out of the program because of the Shared Savings fee.

The major concern when deciding whether or not to participate was the amount of the Shared Savings fee and being able to afford it. No one was given a guarantee of what the Shared Savings amount would be. Some were told their bills would be no higher than what they're currently paying now. Others were given a percentage of what the Shared Savings would be. Some figured the

amount would run between \$10 and \$30 extra per month, which they felt would be manageable. At least five, however, had no idea how much more they would be paying. In dealing with the uncertainty, some rationalized that Southwest CAP would not steer them down a wrong path.

Nearly all of the families decided to participate in the program because of an immediate maintenance need in their home. Most needed new windows and had no idea how they were going to pay for them. Several knew their furnaces were on their last leg, while others knew their refrigerators were ready to give.

No one attempted to estimate how much the Shared Savings account would cost them over time and compare that to the total cost of improvements in their home. No one said they put pencil to paper to figure out how far ahead they would be. Five, however, gave the concept some thought and logically felt it made sense that they'd come out ahead in the program.

Even though the majority had a fairly good understanding of how the program would work, all had blind spots in what they knew about the program. All of the families understood that their bills went directly to Southwest CAP, who re-billed them with an extra shared savings fee. But the shared savings agreement that the participants signed (and generally recalled) did not spell out the exact terms of the shared savings arrangement, such as the start and end date of the program, or the percentage of savings that would be shared with the agency and escrowed for the customer. Another document that had more about the terms of the agreement was not generally recalled by the participants. Some thought the shared savings was based on how much energy they saved each month compared to the same month the previous year. Others felt it was based on a complicated formula. Some were surprised that a straight 20% was added to everyone's bill. However, many didn't feel it was necessary to understand how the fee was calculated. They simply trusted that Southwest CAP would act in their best interests.

Participants were able to recall most of the measures installed in their homes but were mostly unaware of the amount spent to weatherize their home. Some were told that up to \$3,000 or \$5,000 could be spent on their home, but they didn't remember ever seeing an exact itemized list and a total. Many recalled signing the form that gave permission for the work to proceed, but no one had saved or could refer to a copy of the form, nor could they recall the details of the form.

Families exhibited varying opinions of how their energy bills have increased or decreased. Of the 11 families interviewed, three said their electric and heating bills have decreased since their involvement in the program. Three families said their bills have increased—one of whom (as identified above) dropped out of the program because of it. Two families didn't know if their bills have decreased, but sensed they have because their homes are more comfortable. Two families felt it's too premature to tell while one family (a widow) had no idea how much the utility bill has fluctuated.

The majority (9) said their pattern of reviewing utility bills has remained unchanged: they simply look at the amount due and pay it—but at least six families noticed pieces of missing information on their Southwest CAP bills. Most families judge the success of the Shared Savings program by how much they pay, comparing it to what they paid last year, rather than by the number of therms they use from year to year, month to month. But six families didn't understand why some of the "thermal" information was missing from their bills when they could retrieve the information from previous bills.

Some dissatisfactions in timeframes arose from a lack of communication from the Southwest CAP office. The time period with the most complaints occurred between the submission of the application and notification of approval. Four participants waited several months for their approval and had to call Southwest CAP for an update. Two other families felt the length of time between the

audit and the construction start-up was lengthy—again because they had no formal updates (letters, phone calls, visits) from Southwest CAP. The majority, however, felt the timeframes were reasonable.

The majority felt the installation process went quickly. Only two families felt that installation took a long time. One project involved insulating the exterior foundation walls, which had to be dug by hand. The other project involved a major renovation of a home (\$24,000 project) that encountered numerous problems along the way.

At least five families were unsure about exactly what they would get in terms of window measures, and two families expressed major disappointment with their windows. Many of the families were unsure about the type and number of windows that would be installed, and there was some surprise at having to do finish work on the windows that were installed. One family was very disappointed that their windows ended up being replacement windows rather than entire new units and that a new frame wasn't constructed around their new front door. Another woman was unhappy with her windows for a variety of reasons: some won't open, some didn't have screens and the rest require additional work (staining and finishing), which she hadn't expected.

Four families expressed minor dissatisfactions with the work completed at their homes, but were still quite satisfied overall with the work done. They identified the following situations: problems with clotheslines, inadequate cleanup by installers, setback thermostat not properly installed, dissatisfaction with finishing work on exterior doors and dissatisfaction with windows that wouldn't lock.

One participant had major problems with nearly every aspect of work done on her home. Upon inspection, many of her concerns about the physical nature of the work were valid. The majority of work was completed by a contractor via a contract administered through her village.

When asked about a hypothetical shared savings program that involved a longer period of shared savings, many (6) felt that a five-year commitment would stretch too far into the future. Only two felt a more reasonable time frame would be two years. The majority felt that "a year is long enough."

Impact of Shared Savings on Weatherization Resources

The Shared Savings pilot was not designed to test the limits of how much this approach could increase weatherization program resources. Southwest CAP recovers only a small fraction of the over \$4,000 average cost to install measures in the houses. Also, administrative tasks that could to some extent be automated were performed manually because the pilot did not have funds to set up an automated system. It would therefore be inappropriate to use the pilot as the basis for calculating how much a shared savings program might be able to increase weatherization resources.

Nonetheless, the financial impact on a weatherization agency is a key question than needs to be addressed before the concept would be adopted more widely. We therefore attempt to put some rough boundaries on how much this approach could stretch weatherization dollars by looking at the factors that influence how much resources the program returns. These are:

- the cost of weatherization;
- how much energy savings are achieved;
- the shared savings split between the participant and the agency;
- the length of the shared savings agreement;
- the attrition rate from the program; and,
- the administrative cost of implementing the shared savings.

Optimistic assumptions on these variables suggest an upper limit of about 10% on how much impact a shared savings program could have on a weatherization resources in a state like Wisconsin. For example, if we assume that a program spends on average no more than \$3000 per household to achieve a 25% reduction in gas and electricity use per household, then one could expect annual utility bill savings of about \$360 per year (assuming typical weatherization clients with annual utility bills of about \$1200). If the agency claims half of the savings over a three-year period, and program attrition is no more than 10%, then the agency will recover about \$400 per participant. If we neglect the start-up costs for an automated system to do the billing and accurately estimate the savings, and assume a low monthly processing cost of \$2 per participant (the mid-point of a range suggested by Hall et al. 1998), the net recovery by the agency is about \$340 per participant, which is 11% of the weatherization cost.

In actual practice, the financial impact on the agency is likely to be considerably less than this best-case scenario. These assumptions are nearly all more optimistic than what actually occurred in the pilot. Any expanded program effort would need to carefully examine the extent to which the extra costs for program delivery can be recovered through the shared savings collections.

Conclusions

The shared savings pilot at Southwest CAP confirms that at least some low-income households will participate in a shared savings arrangement, and Southwest CAP clearly made a good-faith effort to implement the program concept in the face of cuts to the management budget. Program staff were enthusiastic about how—in contrast to the standard weatherization program—the program kept them in contact with the clients over an extended period of time.

But several aspects of the pilot make it difficult to predict how this approach might fare if it were implemented more widely. First, the fact that window replacement and repair dominated measure spending, and that the pilot was deliberately restricted to homeowners with gas heat and good utility payment histories, leaves open the question of the viability of a shared savings approach with less attractive (to clients) energy measures and a wider client base. On the other hand, designers for such a program might similarly restrict participation to clients with positive credit histories and enroll clients with poor credit histories in the standard weatherization program.

Second, the pilot was not designed to test whether a shared savings program could appreciably stretch weatherization dollars. Nonetheless, our own analysis suggests that this approach is unlikely to have a substantial impact on weatherization resources, though under very favorable circumstances a modest net financial benefit might be possible.

Third, the flat 20% shared-savings formula adopted by Southwest CAP skirts the difficult but important issue of how to cost-effectively implement a reasonably accurate protocol for estimating the energy savings to be shared. To be at all cost effective, some sort of automated system for billing and estimating client energy savings is almost certainly required. Besides correcting for variation in the weather and dealing with billing issues like the ones that arose in the pilot, this system must somehow also distinguish (or at least flag) significant changes in energy use that are the result of household changes unrelated to the weatherization. This is not a trivial undertaking, especially if the program has an education and feedback component that is in fact meant to change client behavior. In addition, the downside consequences of not having an accurate savings estimation protocol include possibly recovering more than the full program-induced savings, which would actually increase the bills of the participants.

That the pilot was not able to explore these issues is a direct consequence of budget restrictions imposed by the Wisconsin legislature. Moreover, rural weatherization agencies are probably not the most logical ones to operate a shared savings program, because their clients are customers of a variety of large and small utilities. If a shared savings program is to succeed administratively, it would probably be implemented by either a utility or a weatherization agency with working in close concert with a few utilities.

Some have viewed this pilot as a test of community action agencies as aggregators of low-income utility customers. The two lessons that emerge in this regard are: (1) the costs to set up and run a utility billing system are not trivial, and rural agencies especially need to be prepared to deal with clients who are connected to a wide variety of idiosyncratic distribution systems; and (2) acting as a billing agent for utility services can put an agency in the conflicted position of being both an advocate for the poor and their bill collector.

There may be a role for shared savings arrangements as part of a broader array of low-income energy programs—albeit a perhaps more limited one than originally envisioned. Some eligible and needy households are reluctant to participate in weatherization programs because of the stigma associated with taking a government handout. A shared-savings program offering might overcome this barrier by allowing these families to feel that they are not just taking but are also giving something back—a sentiment expressed by a couple of the families that participated in the pilot. Seen this way, the value of a low-income shared savings program lies less in generating revenue for weatherization agents, and more as a niche vehicle for attracting and maintaining contact with some families in need.

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