



**Report to the
Oregon Public Utility Commission
On Pilot Programs for the
Energy Efficiency and Sustainable Technology
Act of 2009 (EEAST)**

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Energy Trust of Oregon
Public Purpose Fund Administrator**

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EXECUTIVE SUMMARY

A. Background

The Energy Efficiency and Sustainable Technology Act (EEAST), HB 2626, was passed by the Oregon Legislature and became law in 2009. EEAST calls for a loan program, administered by the Oregon Department of Energy (ODOE), to support energy efficiency and renewable energy retrofits in Oregon homes and businesses. It identifies funding from the existing ODOE Small Scale Local Energy Project Loan Fund (SELP), along with other potential funds to be pooled in a Loan Offset Grant Fund. EEAST anticipates that initial funding and loans will leverage multiple sources of public and private capital to sustain the program over time, including state lottery funds.

Goals for the EEAST loan program, as stated in the legislation, include fostering energy savings, stimulating job growth and reducing carbon emissions. The vision is to achieve these outcomes by providing low-cost capital through a unified funding mechanism to support energy efficiency and renewable energy installations in residential and commercial buildings.

The legislation called for a series of pilot projects to test the feasibility of EEAST approaches. The pilots were to include community-focused outreach, greater assistance to participants, up front financing to remove the barrier of capital requirements and favorable terms for utility bill loan repayment. As the administrator of public purpose funds collected from Oregon customers of investor-owned utilities, Energy Trust of Oregon was designated Sustainable Energy Project Manager in investor-owned utility territory and directed to initiate pilots there. The Oregon Department of Energy was given responsibility for pilots in consumer-owned utility territory.

The City of Portland was able to direct \$2.5 million in American Recovery and Reinvestment Act (ARRA) funds and other resources to support a pilot effort. Clean Energy Works Portland was designed as EEAST proceeded through the legislature, and each effort informed the other. Clean Energy Works Portland launched in July 2009 as an EEAST pilot with the intent to weatherize 500 Portland homes. Homes were enrolled and served by Energy Trust, its contractor Conservation Services Group and—growing in number over five phases of pilot activity—16 Energy Trust trade ally contractors, each certified by the Building Performance Institute. Enterprise Cascadia¹ managed financing and made loans. NW Natural, Portland General Electric and Pacific Power supported on-bill repayment and helped with outreach.²

¹ Enterprise Cascadia is a certified nonprofit Community Development Financial Institution serving urban and rural communities of Oregon and Washington. Until recently the organization was known as ShoreBank Enterprise Cascadia. In August ShoreBank's midwest bank was purchased from FDIC out of receivership. To avoid confusion the nonprofit registered to do business as (dba) Enterprise Cascadia. Enterprise Cascadia is an autonomous nonprofit corporation and is not impacted by developments around the Chicago Bank.

² A table listing all principal stakeholders in the Clean Energy Works Portland pilot is included as Appendix 1 of this report.

B. Clean Energy Works Portland Pilot Status and Major Outcomes to Date

As of September 25, 2010, the Clean Energy Works Portland pilot had made significant progress toward its 500-home target, with 323 loans signed and 250 home retrofits completed. An additional 30 homes had signed bids and were in process to receive loans and complete retrofits, while another 93 homes were in earlier stages of participation. The final 100 homes in the pilot are being recruited through targeted outreach in a defined neighborhood by a team of contractors and community organizations. The effort is led by Metropolitan Alliance for Common Good (MACG) and is focused on the Cully Neighborhood in Northeast Portland. This portion of the Portland pilot launched in July 2010 and is anticipated to complete in early 2011.

With half of the 500 pilot homes complete, Energy Trust has prepared a preliminary analysis of energy savings, number of measures installed and percentage of homes that follow through after receiving an energy assessment. The results from pilot homes were compared to homes over the same period that were served through Energy Trust's standard program for existing home retrofits. Preliminary energy saving results are promising: 66 percent of pilot homes followed through after their assessment by installing at least one energy efficiency measure, compared to 25 percent of homes in the standard program. Importantly, homes in the pilot installed on average nearly three times as many energy-saving measures. Pilot homes saved more than twice as much electricity and five times as much gas as homes served over the same period by Energy Trust's standard program.³ Whether these results are cost effective will be assessed when the pilot is complete, in 2011.

One impressive outcome of the pilot effort to date has been the success of its leaders in earning a \$20 million ARRA grant. This grant enables expansion of the Portland pilot to serve communities throughout the state. The City of Portland was named as the grant recipient on behalf of the state as a whole. In turn, the city has contracted with a newly formed nonprofit, Clean Energy Works Oregon, to manage the funds, attract a 5:1 match of additional capital, and support energy efficiency retrofits of 6,000 homes and small businesses throughout Oregon over the next three years. Clean Energy Works Oregon's board of directors includes Margie Harris, Energy Trust executive director.

In its first weeks of existence, Clean Energy Works Oregon contacted communities statewide that had previously expressed interest in hosting an EEAST pilot. These earlier efforts had been unable to move forward without a funding source for initial loans, as identified in EEAST legislation. On behalf of these communities and several others named in the ARRA grant proposal, the organization has applied to the Oregon Department of Energy for EEAST Loan Offset Grant funds. If approved, the funds would

³ The analysis compared electricity (kilowatt-hours) saved in homes heated by electricity and gas (therms) saved in homes heated by natural gas.

support capacity-building grants, along with credit enhancement for private capital, to help 14 Oregon communities design and implement EEAST-like projects as part of Clean Energy Works Oregon.

In another significant outcome, Clean Energy Works Portland has become the first efficiency retrofit program in the nation to include a Community Workforce Agreement, with equity and diversity goals for contractors and an active oversight committee tracking compliance. This effort received valuable support from Green For All, a national nonprofit organization with a mission to build an inclusive green economy. When the workforce agreement was adopted in September 2009 by Portland City Council, none of the pilot's contractors was a minority- or women-owned business. A year later two of 16 prime contractors and five subcontractors represented these categories, and half of the field workforce hours had been performed by individuals from historically disadvantaged populations.

The pilot's success to date in the areas of energy savings, securing continued funding and social equity has been made possible by commitment of significant resources from Energy Trust and the entire pilot team. Analysis of the pilot's operating costs is ongoing and will be completed after the pilot is concluded. Clean Energy Works Oregon expects to develop a technology platform that will streamline participant processes, such as screening, scheduling and loan approval, which are labor intensive operations in the pilot.

C. Lessons Learned

Early in the pilot Energy Trust contracted with Research Into Action (RIA), a social marketing and evaluation research firm, to evaluate the pilot's customer- and contractor-focused processes.⁴ The evaluation work proceeded in phases, roughly tied to the first three phases of the pilot, with periodic reports to pilot managers. The pilot team has drawn from RIA's recommendations and their day-to-day experience in the field to continuously improve the customer's experience. Lessons learned cover a broad range of pilot challenges related to outreach, screening, home assessments, loan processing, utility bill repayment and other topics covered in the body of this report.

In addition to their benefits during the remainder of the Portland pilot and planning for statewide scale up, some of the pilot experiences and lessons learned may be instructive for legislators considering possible changes to EEAST. One example is the requirement in EEAST [section 35(4)] that on-utility-bill loan repayments be transferred to the new owner upon sale of a home. Enterprise Cascadia's lending policies require a lien on a property as a condition of making a loan. Utilities foresee considerable expense to upgrade their billing systems to accommodate transfer of a loan to a new owner upon sale. Typically, liens are required by lenders to be retired at time of sale. Enterprise

⁴ Research Into Action's report, Clean Energy Works Portland Pilot Process Evaluation, is included as Appendix 2 of this report.

Cascadia currently offers a lien transfer option for a \$850 fee. These and other topics could be considered for resolution if the Legislature revisits the initial EEAST law.

D. Conclusion

Energy Trust believes that there would be benefit in extending the timeframe for pilot implementation beyond 2011, especially given the added capability enabled by external funding sources now in place. With \$25 million in federal and Loan Offset Grant funding, and a new nonprofit Clean Energy Works Oregon organization formed to manage and invest these funds, much opportunity remains to learn from further implementation experience.

In partnership with the Oregon Department of Energy, utilities, contractors, Enterprise Cascadia and Clean Energy Works Oregon, Energy Trust is now poised to design and implement a range of EEAST pilots in different parts of the state. Therefore, we recommend that full-scale implementation of EEAST be deferred until more experience has been gained from these diverse pilot activities.

I. CLEAN ENERGY WORKS PORTLAND PILOT

A. Introduction

EEAST specified topic areas for pilots to test [Section 43(1)(a-i), chapter 753, Oregon Laws 2009]. This report presents insights into all but one of these topic areas:

- a. Demand creation strategies
- b. Use of energy assessments
- c. Customer experience
- d. Loan rates, terms, securitizing
- e. Effectiveness of on-bill repayment
- f. Coordinated installations
- g. Utility coordination
- h. Relative demand⁵
- i. Administrative costs

In addition, EEAST called for this report to evaluate the effectiveness of the pilot [Section 43(2)(a-d), chapter 753, Oregon Laws 2009], including the extent to which various strategies and measures:

- a. Help produce significantly higher rates of energy savings
- b. Increase participation in energy efficiency programs
- c. Increase the number of measures installed per building
- d. Reduce administrative cost of providing energy efficiency services

Clean Energy Works Portland was the only EEAST pilot underway with substantial results as of September 30, 2010.

Clean Energy Works Portland targeted the residential sector. The pilot was expected to provide low-interest, long-term financing to 500 homeowners for pre-approved energy-efficiency improvements to reduce annual household energy use by at least 10 percent. Each participant was assigned an “Energy Advocate” and an approved contractor. Energy Advocates provide information to homeowners and support to contractors. Contractors are responsible for conducting a Home Performance assessment, preparing a bid for improvements identified in the assessment, and installing the approved measures. Homeowners finance the projects through a loan from the nonprofit Enterprise Cascadia that they repay over 20 years on their heating utility bill.

⁵ This topic for testing seeks to understand factors influencing relative demand for loan program services among residential and commercial properties and between low-income and other households. As Clean Energy Works Portland serves no commercial properties and very few low-income properties (which are covered by a separate subset of SB 1149 energy efficiency funds than those provided to Energy Trust), this report does not address this topic.

B. Lessons Learned To Date

NOTE: The lessons in this report are based on data available as of September 25, 2010. At that point Clean Energy Works Portland had issued 323 loans and completed 250 homes, with 123 more homes in progress toward the 500 home goal. From this vantage point, about halfway through the pilot, lessons learned are preliminary and subject to refinement and change. Evaluation will continue and a final report will be prepared following completion of the pilot.

1. Demand creation⁶

With City of Portland staff in the lead, a team of outreach specialists from Energy Trust, Conservation Services Group, Enterprise Cascadia and the three participating utilities—NW Natural, Pacific Power and Portland General Electric—developed and implemented strategies to enroll homes in the pilot. Experience with the pilot showed the need to attract approximately five applicants for every home that completed the program.

Lessons learned. The first 400 participating homeowners in the pilot were attracted through standard outreach and communication practices. Partner organizations sent notices to email lists. Participating utilities sent mailers and emails to customers. Radio and newspaper print ads were placed. Table 1 lists the most frequently cited answers to “how I heard about the pilot” questions on the application.

How heard about pilot* * Applicants for first 400 homes	Percentage
Word of mouth	18.1%
Newspaper	13.2%
PGE	12.9%
Friend/family	12.7%
Email from City of Portland	10.2%
Other	33.0%

Table 1 Successful Outreach Tactics

Messaging used to attract participants in the pilot led with economics—“Lower your home energy use with no upfront costs.” Advertising placed mid-pilot added the “comfort” message—“Improve your home’s comfort and value with no upfront costs,”

⁶ Section 43 (1)...The pilot programs shall test (a) The effectiveness of direct contact, door-to-door, media outlet and other community-focused outreach and solicitation strategies designed to provide potential energy efficiency and sustainable technology loan program participants with information about energy efficiency and renewable energy opportunities under the program and under similar local, state and federal incentive programs

and “Hot in the winter, cold in the summer? We can help.” Participant surveys upon project completion appear to give the edge to economic messages, although comfort also was a strong motivator, as shown in Table 2.

Motivation factors	Not at all influential			Very influential	
	1	2	3	4	5
Saving energy	3%	--	--	6%	91%
Lowering heating bills	3%	--	6%	19%	72%
Increasing comfort of their home	5%	1%	3%	21%	70%
Increasing value of their home	17%	9%	22%	15%	37%

Table 2 Motivation to Participate

The remaining 100 homes are being recruited from the Cully Neighborhood in Portland using a number of social marketing strategies. The effort is led by Metropolitan Alliance for Common Good. MACG is active in several cities nationally. In Portland, MACG is allied with 17 area organizations, principally union local chapters, churches and other religious/cultural organizations. MACG has recruited volunteers, hosted open houses and coffee events, placed doorhangers throughout the neighborhood and tabled at events. The effort launched at the end of July 2010 and continues through this fall. It is too early to draw conclusions about the relative effectiveness of these highly targeted outreach tactics.

From the beginning of the pilot, applicant homes were screened for energy intensity (heating fuel use per square foot). Low-intensity homes were ruled ineligible for the pilot out of concern they could not produce at least 10 percent energy savings, a requirement for loan underwriting. There are indications that a significant number of prospective participants in the Cully Neighborhood are being screened out for low energy use in older homes that have not been weatherized, presumably because they keep thermostats low or off to avoid higher bills. Other environmentally motivated residents adopt energy-conserving behaviors that keep energy use low. Energy Trust recently analyzed the link between energy intensity and homes eliminated from the pilot because their home assessment predicts energy savings of less than 10 percent. A clear correlation between low energy intensity and energy savings potential could not be established. The findings provide support for dropping any energy intensity review as an eligibility screen, and the pilot team decided to make this change effective October 1, 2010. Further study of this policy’s potential to increase the debt burden of moderate-income borrowers is warranted.

2. Energy savings assessment⁷

The Portland pilot uses an enhanced home energy audit. Contractors, assisted by Energy Advocates—all trained and certified by the Building Performance Institute—use diagnostic equipment to conduct a Home Performance with ENERGY STAR assessment. The assessment evaluates every element of the home's interior and exterior to identify energy-saving opportunities and risks to health and safety. Specialized equipment helps find and measure air leaks and cold/hot spots. Approximately three to four hours are required to complete the assessment. The Energy Advocate enters data from the assessment into a computer program that helps contractors design custom energy-saving plans and fashion bid proposals. In contrast, a traditional Energy Trust Home Energy Review takes about one hour and produces a simple checklist of energy-saving retrofit opportunities. The Home Energy Review does not identify overall home performance.

In Clean Energy Works Portland, the contractor is paid \$300 for the assessment. Conservation Services Group—Energy Trust program management contractor and provider of the Energy Advocate—is allocated \$100 for the assessment and an additional \$200 upon completion of energy-saving retrofits and a quality control check. If the home with the assessment proceeds with efficiency retrofits, the \$600 in fees is subtracted from the value of Energy Trust's incentives for the upgrades. Remaining incentive dollars are provided to Enterprise Cascadia to reduce the loan principal for that home.

If a home receiving the assessment drops out of the pilot, there are no incentive funds to cover the assessment costs. Energy Trust has covered these costs with its core program delivery funds. It is in the pilot's and Energy Trust's best interests to keep the number of drop outs as small as possible. As of September 18, 2010, 145 homes of the 592 that received assessments subsequently dropped out or were found to have no savings opportunity, a 24 percent drop-out rate.

Lessons learned. The value of the Home Performance with ENERGY STAR assessment lies in its ability to analyze the energy performance of the entire house and the interacting effects of energy-saving measures. Using the results of the assessment, contractors can develop an integrated plan for efficiency upgrades that maximizes funding available through the pilot. Based on experience to date, the assessment has been determined worthy to continue at scale up.

Analysis of patterns of home size, age, intensity of energy use and other variables has begun. Results will help Energy Trust guide residential customers to programs

⁷ Section 43 (1)...*The pilot programs shall test (b) The costs and benefits of taking alternative approaches to energy audits, including but not limited to, the identification of measures that are cost-effective and time-effective, take advantage of economies of scale and produce results that are accurate and are replicable for equivalent base efficiency packages*

and services most appropriate for them, and should help reduce the number of homes that start down the Clean Energy Works path but later drop out.

Another potential strategy for discouraging post-assessment drop outs is to charge a fee for the assessment, perhaps only if a homeowner drops out after receiving an assessment. Discussions around scale up are considering these and other approaches to establishing customer buy-in at the outset.

3. Customer experience⁸

Figure 1 depicts the participant cycle through Clean Energy Works Portland, from online application (paper forms are available upon request) through completion of construction and final inspection. Throughout the pilot, representatives of partner organizations have met regularly, usually weekly, to address ways to enhance service and reduce time and costs associated with these steps, thereby improving the customer experience.

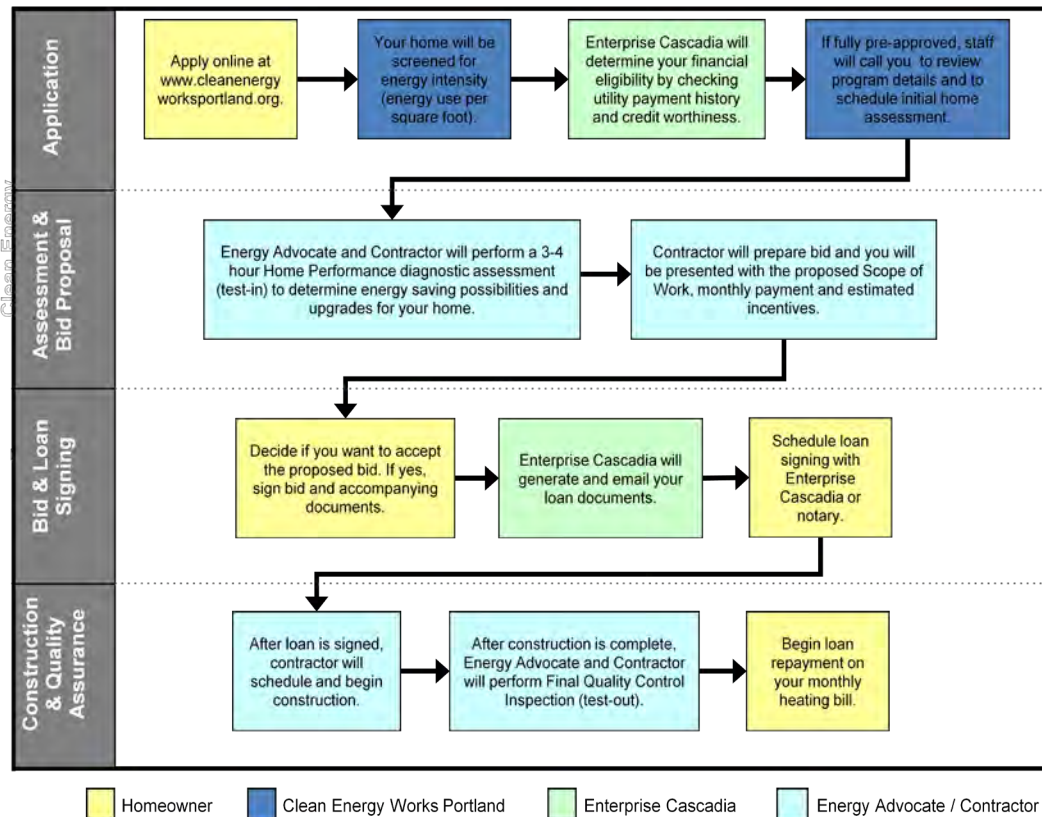


Figure 1 Clean Energy Works Portland Program Flowchart

⁸ Section 43 (1)...The pilot programs shall test (c) Ways to assist program participants in understanding and accessing small scale local energy project funding and making informed decisions in selecting appropriate energy efficiency and renewable energy projects

In August 2009, Energy Trust contracted with Research Into Action, a social marketing and evaluation research firm, to evaluate the pilot’s customer-focused and contractor-focused processes. Their work proceeded in three “waves” in order to support continuous improvements to pilot processes.

The initial “wave” of research, in September-October 2009, supported additional steps to screen out homes with limited potential savings and/or challenging conditions for the pilot. Home eligibility criteria on the new on-line application were expanded to screen out homes with known knob-and-tube wiring and/or asbestos materials, homes on historic registries and homes over 4,500 square feet in size, among other criteria. In addition to the automated screening built into the application, homeowners passing subsequent creditworthiness and energy intensity screens were questioned by telephone to further qualify the home for the pilot. The role of the Energy Advocate was clarified.

A second phase of research, January-March 2010, led to recommendations to automate paperwork and simplify tracking of participant and project status, among others.

The third wave of research, June-July 2010, reached out to 94 participants with completed projects as well as 67 individuals who received home assessments but subsequently withdrew from the pilot. Eighty participants returned email surveys and 33 drop outs answered telephone surveys. Table 5 shows the responses of participants and drop outs to questions about customer experience.

Statement	Participants agreeing	Drop outs agreeing
Completing on line application form was easy	96%	85%
Finding answers on website was easy	78%	43%
Satisfied with / value the services of my Energy Advocate	92%	70%
Interacted with my Energy Advocate more than 7 times	33%	64%
Satisfied with / value the services of my contractor	84%	66%
Would recommend the pilot to friends/family	95%	--

Table 3 Customer Experience Results

Lessons learned. Drawing from Research Into Action’s report and day-to-day experience with the pilot, the pilot team is bringing a number of considerations to bear in discussions about statewide scale up.

One such consideration is to offer alternatives to applicants. By providing a full-service approach—a qualified contractor, neutral third-party assistance through an

Energy Advocate, high-quality energy use information and access to financing—the Clean Energy Works Portland model attempts to overcome several of the barriers to investments in residential energy-efficiency upgrades. The success of the Clean Energy Works model reflects the power of the model for some homeowners. However, the pilot approach is not right for everyone. Hundreds of homeowners interested in efficiency upgrades were screened out because of low energy use or credit scores. Fifty-two percent of homeowners who chose to drop out of the pilot report subsequently taking action to reduce their home’s energy use; 36 percent hoped or planned to do so in the future. Messaging should be developed to help residents decide whether to choose the Clean Energy Works path or one of several other paths offered by Energy Trust.

The pilot presents participants with one bid from their assigned contractor. Before the bid is presented, the Energy Advocate reviews it and may work with the contractor to make adjustments. This streamlined approach is attractive to individuals who have neither time nor interest in meeting with several contractors and evaluating multiple bids. Other participants seek multiple bids to assure the price is fair or recommended approach is appropriate. Presently the pilot permits customers who express discomfort with their bid to request a second bid. Clean Energy Works Oregon is considering offering “tracks” for customers, including one that would provide for multiple bids, as a way to help make the program attractive to a broader range of customers.

Some participants felt the term “advocate” was misleading. They wanted their advocate to represent the participant to the contractor and advocate for the participant’s interest. Research Into Action recommends replacing the term “advocate” with a more neutral term such as “advisor” in order to align the title with the activity. The scale-up team is considering this recommendation.

While not addressed in the Research Into Action evaluation, pilot team members recognize the challenge for the scaled-up program in addressing how to serve customers who are not fluent in English.

4. Loan rates, terms and payback⁹

The Clean Energy Works Portland pilot offers loans through the services of Enterprise Cascadia. A loan fund was capitalized with \$2.5 million from Portland’s formula federal Energy Efficiency and Conservation Block Grant, \$2 million from Enterprise Cascadia resources and approximately \$3.5 million in grant support from the Portland Development Commission.

Applicants are qualified for creditworthiness based on strong utility bill-paying history

⁹ Section 43 (1)...*The pilot programs shall test (d) the effectiveness of various levels of loan offset grants as an incentive to program participation; (e) the effectiveness of on-billing financing as a means of loan repayment and the effectiveness of fixture filings, liens or other forms of security for loans*

and a minimum 590 credit score. Participants must have occupied the home for at least one year and be named on the title. Loans are secured by the borrower’s real property assets. Loan interest rates are set at 5.99% for general borrowers and 3.99% for applicants below 250 percent of federal poverty level. Enterprise Cascadia charges borrowers a \$300 loan fee, included in the loan amount, to cover direct documentation costs associated with executing the loan and a portion of Enterprise Cascadia’s cost for delivering the pilot.

Energy Trust incentives associated with weatherization measures installed in a participant’s home—minus \$300 to cover the contractor’s energy assessment and \$300 for Energy Trust’s Energy Advocate services—are applied to reduce the loan principal.

Enterprise Cascadia established a loan loss reserve to cover any eventual loan default events. Loans can be transferred on sale of the property for an \$850 fee.

Clean Energy Works Portland established project cost caps that rise with number of measures included. Basic weatherization—air sealing, duct sealing, duct insulation or attic insulation—must cut energy use by at least 10 percent. Extended weatherization—including wall or floor insulation—must reach at least 20 percent energy savings. If a furnace or heat pump is added, a 35 percent energy savings is required. Caps range from \$4,300 for basic weatherization to nearly \$20,000 for extended weatherization plus water heating and home heating equipment.

Enterprise Cascadia’s monthly “scorecard” for Clean Energy Works Portland tracks salient information about loans; see Table 4 for fund management metrics.

Fund management activity	Totals as of 8/31/10
Number of eligible applications received	1,220
Number approved for credit	865
Number of loans closed / \$\$\$ value	290 / \$3.63M
Median loan size/avg Energy Trust incentive used to reduce principal	\$12,633 / \$843
% “near low income” (lower interest rate) ¹⁰	16%
Amount currently reserved for portfolio losses	\$199,728

Table 4 Fund Management Dashboard

The City of Portland and Enterprise Cascadia entered into agreements with the three Portland area utilities (NW Natural, Pacific Power and Portland General Electric) to establish on-bill loan repayment. Monthly loan payments are included as a separate

¹⁰ Clean Energy Works Portland offers lower interest rates to “low-income” and “near low-income” households, defined as households falling below 250 percent of federal poverty level.

line item on bills, or a separate statement included in the bill envelope, from the utility supplying heating fuel to the home.

Lessons learned. Clean Energy Works Portland is demonstrating that providing up-front financing with utility bill repayment is attractive to homeowners and can be effectively managed by lending institutions.

Surveys of participating homeowners (completed retrofits) and drop outs (entered the program and completed a Home Performance assessment but dropped out without completing a project as of July 1, 2010) illuminate areas of satisfaction and concern around financing, as shown in Table 5.

Survey statement	Participants agreeing	Drop outs agreeing
CEWP financing process was simple	74%	NA
Financing features were valuable to me	85%	32%
On-bill repayment was valuable to me	71%	61%
Interest rates were attractive	72%	NA

Table 5 Participant and Drop Out Opinions on Finance Features

Concerns regarding financing were expressed by over one-third of responding participants. Comments in some cases reflected confusion about the financing process and the need for additional information about how their loan would work. Finding ways to simplify and clarify the loan approval process is a task for planners of the Clean Energy Works Oregon scale up.

Some participants were perplexed about fees (\$300 for assessment, \$300 for Energy Advocate and \$300 loan fee) that effectively increased the size of their loan. Fee redesign is under consideration for the scale up.

Loan caps were raised several times during the pilot to accommodate more non-energy-saving improvements necessary for energy retrofits—the major example of which is the presence of old-fashioned knob and tube wiring, which must be replaced before insulation can be added—and/or health and safety fixes identified through Home Performance assessments, such as radon gas and lead remediation. Although higher than initially planned, the financing caps accommodate only the most basic knob and tube upgrades. Whether or not to offer separate financing sources or otherwise address these non-energy expenses must be addressed in planning for the scale up into Clean Energy Works Oregon.

Scale-up planners also are working to eliminate confusion linked to a phantom balloon payment at the end of loan repayment schedule. Loans are signed before construction begins, while incentives are paid only upon completion. Therefore loans are written to cover the full project cost. The loan repayment schedule shows the

value of the incentives as a final balloon payment. When the incentive funds are paid by Energy Trust to Enterprise Cascadia, they are applied to reduce the loan principal—in effect cancelling the final balloon payment. Many participants are confused by this on-again, off-again amount due on their repayment schedule.

Also confusing for some is the fact that estimated incentives, disclosed to the participant at the bid presentation, sometimes do not match the final incentive amount. This is being addressed for scale up through Energy Trust's program incentive design.

The Clean Energy Works Portland pilot, along with scaled-up retrofit financing through the \$20 million Clean Energy Works Oregon, intend to build momentum to position Portland and Oregon to transform the energy-efficiency marketplace, making clean energy financing widely available in the primary market and a credible financial instrument in the secondary market. While the pilot is taking tangible initial steps toward this vision, market transformation takes time and will not be accomplished within the framework of the pilot alone.

5. Coordinated installations¹¹

Energy Trust's Program Management Contractor for home retrofits, Conservation Services Group, has managed delivery of the Clean Energy Works Portland pilot, guided by a committee with members from pilot partner organizations.

Lessons learned. Roles and management strategies for Clean Energy Works Oregon are in discussion. The statewide effort will serve properties outside Energy Trust's service territory (areas served by Cascade Natural Gas, NW Natural, Pacific Power and Portland General Electric). Scale-up planners are considering a direct contract between Clean Energy Works Oregon and Energy Trust or Conservation Services Group to serve consumer-owned utility territories that do not overlap Energy Trust's territories.

6. Utility coordination¹²

The three utilities participating in Clean Energy Works Portland—NW Natural, Pacific Power and Portland General Electric—each assigned a staff member to manage coordination with the pilot. These individuals have contributed time and insights while serving on the pilot Steering Committee and participating in service delivery planning. The utilities supplied customer contact information for mailings and emailed their customers with tailored messaging about the pilot.

¹¹ Section 43 (1)....*The pilot programs shall test (f) The feasibility and effectiveness of coordinated installations of residential and commercial structure energy packages overseen by a single project manager*

¹² Section 43 (1)....*The pilot programs shall test (g) The manner in which the program interacts or conflicts with existing consumer-owned utility loan programs and other utility and regional energy efficiency programs*

The three utilities have agreements in place with Energy Trust regarding public purpose funding for energy efficiency services. This funding supported Energy Trust's involvement in the Portland pilot and will support its participation in the statewide scale up.

Lessons learned. While Pacific Power has systems in place to support on-bill repayment, NW Natural and PGE had to modify, update or establish new systems for the pilot. They believe investment in further upgrades will be required if the number of loans increases as expected in scale up, especially if loans are required to be tied to the home and transfer to the new owner when the home is sold. Cost recovery for expenses related to on-bill repayment would require dialogue between the utilities and the Oregon Public Utility Commission. Clean Energy Works Oregon will reach out to the utilities on this subject.

The pilot has demonstrated the need for data exchange between utilities and funding institutions. The utilities would like the scaled-up Clean Energy Works Oregon to provide a central financing platform and customer data exchange protocols that shield them from different requirements of multiple funding entities in localities across the state.

The utilities note that they have had little experience with long-term customer repayment on utility bills. PGE believes it will take at least a year to develop a good understanding of whether customers will consistently pay and how satisfied they are with the mechanism.

As these are 20-year loans, utilities are making a long-term commitment, stretching the definition of "pilot."

7. Administrative costs¹³

A comparison of the cost of delivering the pilot to Energy Trust traditional program delivery costs will be developed when the pilot is completed in 2011. The major incremental expenditures involve two FTEs doing scheduling and tracking, and nine FTEs providing Energy Advocate services and supervision, as well as staff from Energy Trust and other pilot collaborators overseeing the pilot process.

Lessons learned. During the course of the pilot the team automated screening for energy intensity and designed the enrollment application to automatically screen out homes that do not meet various eligibility criteria. Nonetheless, significant resources have been required to provide further screening, scheduling and project data tracking. Clean Energy Works Oregon is evaluating software that would support on

¹³ Section 43 (1)...*The pilot programs shall test (i) The administrative costs and participation rates associated with various forms of loan security; Section 43 (2)...the report [about the pilot to OPUC] shall include an evaluation of the extent to which various strategies and measures (d) Reduce the administrative cost per building of providing energy efficiency and renewable energy services*

line scheduling, status reports and data tracking, reducing the workload for program managers.

On average, participants in the Portland pilot spent 40 hours interacting by telephone or in person with their assigned Energy Advocate. This level of interaction is regarded as unsustainable. Scale-up planners anticipate streamlining the interactions, reducing Energy Advocate hours per customer significantly and charging a fee for premium service, in order to improve the efficiency of the Energy Advocate role and control costs.

8. Energy savings, participation rates, measures per site¹⁴

With close to half the 500 pilot home retrofits completed, it is possible to make preliminary comparisons to the traditional home retrofit program offered by Energy Trust. The Existing Homes program offers free Home Energy Reviews. Knowledgeable energy advisors spend about an hour in a home identifying energy-saving opportunities. Unlike Energy Advocates, these advisors are not certified to provide Home Performance assessments. The advisors do not use diagnostic equipment to model the home's efficiency potential. They provide a checklist of energy efficiency opportunities and a list of available Energy Trust trade ally contractors. There is no Energy Advocate to provide follow-up support, no assigned contractor, no facilitated up-front financing and no utility bill repayment.

Lessons learned. Energy savings per site and per square foot, participant uptake rate and measures installed per site all are significantly higher for homes in the Clean Energy Works Portland pilot compared to the traditional Energy Trust Existing Homes program.

¹⁴ Section 43 (2)....the report [about the pilot to OPUC] shall include an evaluation of the extent to which various strategies and measures (a) Help to produce significantly higher rates of energy savings or renewable energy production; (b) Increase participation in energy efficiency and renewable energy programs; (c) Increase the number of energy efficiency and renewable energy measures installed per building

Homes with Assessments/Reviews that Install Measures		
	Portland Pilot Home Performance Assessment	Existing Homes Pgm Home Energy Review
# homes with assessments/reviews 7/1/09-3/31/10	225	6,085
# homes installing measures 7/1/09-9/17/10	148	1,549
% follow through	66%	25%

Table 6 Participant Uptake Comparison

Energy Saved (7/1/2009 through 9/17/2010)		
	Portland Pilot	Existing Homes Pgm
Average measure count per site	4.9	1.7
Average annual kWh saved/site	4,249	1,956
Average annual therms saved/site	380.0	69.1

Table 7 Measure Count and Energy Savings Comparison

9. Community Workforce Agreement¹⁵

In September 2009, Portland City Council passed a resolution endorsing a groundbreaking Community Workforce Agreement (CWA) to help ensure that Clean Energy Works Portland provides high-quality employment and access for those in the community who have been historically left out of new economic opportunities. A broad array of stakeholders helped craft the agreement, including Green For All (a national organization with a mission to build an inclusive green economy), the City of Portland and Energy Trust.

Like EEAST legislation, the CWA calls for 80 percent of employees to come from the local workforce. While EEAST requires wages to be at least 180 percent of state prevailing wage, the CWA requires the higher of this or federal prevailing wage—necessary, in some circumstances, to comply with Portland’s federal grant. The CWA supports the requirement through EEAST for giving preference to contractors that provide employee health insurance benefits. Other objectives in the CWA not specifically addressed in EEAST, include:

¹⁵ EEAST does not call for reporting on workforce and equity goals. Partners to the Clean Energy Works Portland Community Workforce Agreement asked to have their experience and lessons learned included in the report.

- Hire 100 percent of new worker/installer weatherization employees from a designated training program until 50 percent of the contractor's total non-supervisory worker/installer weatherization employee monthly work hours on covered projects are performed by graduates of a designated training program, such programs selected based on commitment to and strategies for training individuals from historically disadvantaged groups
- Engage historically disadvantaged or underrepresented workers to accomplish at least 30 percent of all project trade and technical work
- Direct at least 20 percent of all pilot project dollars to businesses owned by historically disadvantaged or underrepresented people
- Establish "mentor-sub" relationships with businesses owned by historically disadvantaged or underrepresented people
- Require contractors to sign labor peace agreements
- Strive to provide employment to formerly incarcerated individuals

A committee was established to guide implementation of the workforce agreement. Members of the Stakeholder Evaluation and Implementation Committee are listed in Appendix 1.

Committee members are encouraged by results to date. When the Clean Energy Works Portland pilot enrolled its first six Home Performance contractors in summer 2009, before the Community Workforce Agreement was adopted, none of them was a minority- or women-owned business. A year later two of 16 prime contractors, and five subcontractors, represent these categories. Six prime contractors are classified as "emerging small businesses." Field workers from historically disadvantaged populations accounted for 50 percent of all work hours attributed to the pilot. Fifteen of 21 new hires came from designated training programs, 26 of 41 contractors and subcontractors offered health insurance, and eight workers were identified as formerly incarcerated individuals.

The Stakeholder Evaluation and Implementation Committee is currently analyzing lessons learned from its experience to date with the Portland pilot. The committee is formulating recommendations for applying these lessons to Clean Energy Works Oregon. The recommendations generally fall into three categories: greater accountability, more compliance and regularly reported results.

II. STATUS OF POTENTIAL EEAST PILOTS

A. Introduction

Over the past year Energy Trust has reached out to several communities exploring their interest in sponsoring EEAST pilots. Some communities contacted Energy Trust. The Oregon Public Utility Commission informally asked Energy Trust to develop a minimum of three EEAST pilots. Clean Energy Works Portland represents an urban residential pilot. OPUC asked Energy Trust to develop in addition a rural residential pilot and a commercial pilot.

None of the communities could move forward absent a source of funds for making loans. EEAST envisioned tapping Oregon's Small Scale Local Energy Project Loan Fund (SELP), along with a \$5 million Loan Offset Grant Fund comprised of lottery funds. Rules and application formats published by the Oregon Department of Energy July 1, 2010, require local governments to demonstrate "full faith and credit" obligations in order to obtain EEAST loan funds via SELP. Energy Trust is unaware of any communities stepping forward to request funds under these terms.

There are other unresolved matters from the EEAST legislation that could inhibit going forward with pilots. These include lack of OPUC regulations for investor-owned utilities regarding on-bill repayment, unresolved status of the transfer of loan upon sale, lack of contractor certification standards, and the need for a central financing platform.

In early September Clean Energy Works Oregon submitted an application for funds from the EEAST Loan Offset Grant Fund to create a loan origination fund, supported by credit enhancement, for residential and small commercial projects and a structured finance offering for larger commercial projects in communities around Oregon. Some of these communities had been named in the Clean Energy Works Oregon proposal to the U.S. Department of Energy, which was awarded a \$20 million grant in June 2010. The grant application proposes to provide capacity-building grants to 14 communities statewide and reserves an additional amount for additional grants in year 2.

B. History/Readiness of Potential EEAST Pilots

Table 8 presents a summary of the status and readiness of Oregon communities (other than Portland) that have expressed interest in supporting EEAST pilots.

Potential EEAST Pilots*				
*all are in CEWO Lottery Funds Proposal				
Jurisdiction	In \$20m DOE grant	Sector	Contact with Energy Trust	Readiness /status
Salem	N	Comm	Since 12/09	The City of Salem plans to use \$120,000 in formula EECBG funds to buy down interest rate to 1% on loans for lighting upgrades at approx 100 commercial properties. Loans and payback would be offered through West Coast Bank (no on-utility-bill payback). Energy Trust/Salem Electric incentives would pay 50% of project cost. The City intends to issue its 1 st loan by Dec. 2010. The program could be expanded through CEWO.
Eugene	Y	Comm	Since 7/09	EWEB plans to close a steam plant providing heat to about 50 downtown businesses in 2012. Buildings would install replacement heat sources (furnaces, boilers or heat pumps). EWEB, NW Natural and Energy Trust are collaborating. Energy Trust has offered to project-manage and add shell and lighting efficiency retrofits. With on-bill repayment through either utility, this could be an EEAST commercial pilot.
Corvallis	N	Resid Comm	Since 6/09	Corvallis received EECBG formula funds to support a residential energy efficiency program, Energize Corvallis, with EEAST-like features. This funding supports a volunteer coordinator (who has trained 20 volunteer energy advocates), loans from a \$250,000 revolving fund (payback through city) and weatherization incentives up to \$500 for following through on the 800 Energy Trust Home Energy Reviews provided through the Corvallis Energy Challenge in 2008-9. With support from Energy Trust, the Corvallis Resource Efficiency Program has provided energy assessments, with repeated follow up contacts, for some 175 businesses. They are eager to do a commercial EEAST pilot if CEWO funds and fund management can be offered.
Pendleton/ Eastern Oregon	N	Resid Comm	3/10	City of Pendleton contacted Energy Trust for support for a Solarize effort. In this context Energy Trust opened discussion of a possible EEAST rural residential pilot. Greater Eastern Oregon Development Corporation offered to provide local leadership and support, if CEWO funds and fund management can be offered.
Klamath and Lake counties	Y	Resid Comm	Since 10/09	In June 2009 Energy Trust opened a temporary field office in Klamath Falls and conducted approximately 60 Home Energy Reviews. Collaborators included South Central Oregon Economic Development District and the effort led to discussions about an EEAST rural residential pilot. These discussions were overshadowed by the prospect of CEWO funding through the then-hoped-for \$75 million DOE grant.
Clackamas County	Y	Resid Comm	Since 3/09	Clackamas County and Energy Trust have discussed EEAST collaboration since the county received formula EECBG grants. The prospect of funding through CEWO put those discussions on the back burner, temporarily.

Jurisdiction	In \$20m DOE grant	Sector	Contact with Energy Trust	Readiness /status
Rogue Valley COG/ So. Oregon Green Jobs Council	N	Resid	Since 1/10	These two organizations, with other local stakeholders, have been meeting regularly since November 2009 to design a program with many of the features of Clean Energy Works Portland to serve Josephine and Jackson counties. The Southern Oregon Energy Efficiency Retrofit plans 100 home retrofits by the end of 2011. A Regional Workforce Agreement has been developed. They hope to move forward with CEWO funds and fund management.
Deschutes County	N	Resid Comm	NA	Deschutes County and the City of Bend, with formula EECBG funds, have developed plans. The nonprofit Central Oregon Climate Alliance hopes to collaborate with CEWO to serve low- to moderate-income residential and small commercial.
Astoria	Y	Resid Comm	NA	Astoria is included in the CEWO \$20m grant but has not had specific conversations with Energy Trust.
Hood River County	Y	Resid Comm	NA	Hood River County is included in the CEWO \$20m grant and had envisioned a Property-Assessed Clean Energy financing program (PACE) allowing property owners to repay loans on property tax bills. PACE programs collapsed nationwide when Fannie Mae and Freddie Mac said they would prohibit mortgage holders from participating in PACE programs.

Appendix 1 Clean Energy Works Portland Collaborating Organizations

Organization	Role
City of Portland	Bureau of Planning + Sustainability convened the stakeholders, provided seed money from its Energy Efficiency and Conservation Block Grant funding, led successful pursuit of \$20 million USDOE grant for statewide scale-up into Clean Energy Works Oregon
Energy Trust of Oregon	Nonprofit provider of energy efficiency and renewable energy services/funds to customers of 4 Oregon investor-owned utilities, including 3 participating in the pilot. Energy Trust's program management contractor Conservation Services Group enrolls customers, schedules home assessments, assigns and supervises Energy Advocates, identifies trade ally contractors to do retrofits, provides quality control and directs incentive funds to reduce loan principal.
Enterprise Cascadia	Nonprofit community development financial institution that has established the loan fund to provide loans to program participants.
Green For All	National organization dedicated to improving the lives of all Americans through a clean energy economy. Helps the pilot assure "triple bottom line" returns—economy, environment, equity. Helps disseminate lessons learned in Portland to create national impact.
Multnomah County	Ensuring coordination with its low-income weatherization assistance program.
NW Natural, Pacific Power, Portland General Electric	Utility customers pay public purpose charge, which supports Energy Trust incentives for energy efficiency retrofits. Utilities provide on-bill loan repayment. They provide data on customer bill-paying history, essential to establishing credit-worthiness for a CEWP loan. They reach out to their customers with information about the pilot.
Stakeholder Evaluation and Implementation Committee	Brings together diverse stakeholders to work alongside the City, Energy Trust and other pilot collaborators. Responsible for helping implement the varied elements of the Community Workforce Agreement adopted by stakeholders and Portland City Council in September 2009. Evaluates progress toward goals in the CWA and will recommend changes for the statewide scale-up as Clean Energy Works Oregon. Members listed on back.
Worksystems Inc.	Local workforce investment board that connects the public job-training system to the pilot. It is helping support a pipeline of trained workers from qualified training programs.

**Community Workforce Agreement
Stakeholder Evaluation and Implementation Committee**

Established by City Council on 9.30.09

Appointed by Mayor Sam Adams on 10.13.09

Connie Ashbrook, executive director, Oregon Tradeswomen, Inc

Paige Coleman, NE Coalition of Neighborhoods

Rey España, director of community development, Native American Youth and Family Center

Warren L. Fluker, director of workforce development programs Urban League of Portland

Berenice Lopez-Dorsey, president and owner, Home Energy Life Performance Group, Inc.

Michael Hanna, president-elect, AFSCME Local 88

Alan Hipólito, executive director, Verde

Beverly Logan, executive board member, Metropolitan Alliance for Common Good (MACG)

Ivan Maluski, Sierra Club

Steve McGrath, president and co-founder, Sustainable Solutions Unlimited

Brian McVay, vice president, Neil Kelly Home Repair

John Mohlis, executive secretary-treasurer, Columbia Pacific Building Trades Council

Ben Nelson, organizer, Laborers' Union

Melissa Peterson, Enterprise Community Partners and Cascadia Green Building Council's board of directors

Maurice Rahming, president, O'Neill Electric Inc and Oregon Chapter of the National Association of Minority Contractors

Marshall Runkel, partner, EcoTech

John Steffens, Carpenters Union

DeBorah Williams, director, Director of Portland Community College's Evening Trades Apprenticeship Preparation

Ron Williams, organizer, Oregon Action



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Final Report
**Clean Energy Works Portland
Pilot Process Evaluation**

Funded By:



Prepared By:



research/into/action^{inc}

Jane S. Peters, Ph.D.
Dulane Moran
April Armstrong
Research Into Action, Inc.

September 2010



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CLEAN ENERGY WORKS PORTLAND PILOT PROCESS EVALUATION



ACKNOWLEDGEMENTS

This report summarizes three waves of research that occurred between August 2009 and September 2010, and would not have been possible without the support and cooperation of numerous contacts. We gratefully acknowledge Philipp Degens at Energy Trust of Oregon for his project management support and guidance. We would also like to thank members of the Clean Energy Works Portland (CEWP) Steering Committee and program representatives Diane Ferington and Jan Schaeffer of Energy Trust, and Derek Smith at the City of Portland for their patience and insight as we sought to understand and document the quickly evolving CEWP pilot.

We would also like to acknowledge the staff at Conservation Services Group, specifically Jonathan Tillman, Nicolette Reibold, and the CEWP Energy Advocate team for their time on the phone with us, and especially their assistance in tracking down information to support this effort.

Finally, our work depends on the cooperation of the participating contractors, applicants, and participants that responded to requests for interviews or provided information through multiple survey efforts. The information they provided is invaluable.



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ACKNOWLEDGEMENTS



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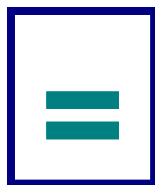


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EXECUTIVE SUMMARY

In June 2009, using a \$3.2 million award from the federal American Recovery and Reinvestment Act (ARRA), the City of Portland, in collaboration with Multnomah County and Energy Trust of Oregon, launched a pilot residential energy efficiency program called *Clean Energy Works Portland* (CEWP).

The CEWP pilot tested a program approach expected to create local jobs while cutting household energy use and reducing carbon emissions. The CEWP pilot was expected to provide low-interest, long-term financing to 500 homeowners for pre-approved energy efficiency improvements to reduce their annual household energy use by at least 10%. Options ranged from basic weatherization upgrades to more comprehensive Home Performance measures, including: insulation; duct and air sealing; and efficient water heaters, furnaces, or heat pumps.

In the pilot program, each participant was assigned an Energy Advocate and a CEWP-approved contractor. Energy Advocates provide information to homeowners and support to contractors. Contractors are responsible for conducting a Home Performance Assessment, preparing a bid for the improvements identified in the assessment, and installing the approved measures. Homeowners must finance the projects through a loan from the program's sole lender, ShoreBank Enterprise Cascadia (SBEC). Homeowners will repay the loans over 20 years on their heating utility bill.

THIS PROJECT

In August 2009, Energy Trust of Oregon contracted with Research Into Action, Inc. to provide evaluation activities in rapid succession as CEWP was launched and processes evolved. This report summarizes three waves of CEWP pilot project evaluation activities Research Into Action conducted between August 2009 and July 2010, and synthesizes the experiences of and lessons learned by participants, staff, and contractors. The waves generally corresponded to the first three phases of CEWP and mapped the program's growth from fewer than 50 participants to well over 200. Each of the waves included unique combinations of survey populations, program documentation, and analysis of program status documentation. Table 1.1 outlines the timeframes, activities, and scope of evaluation activities for each wave.

CEWP launched with a limited 50-home test pilot and built steadily upon that experience in rolling phases that allowed the program to adjust terms and screening, recruit additional Home Performance contractors, and build on experience with the program without a gap in program activity. After the gap between Phase I and Phase II in October 2009, each of the subsequent phases overlapped.



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Table ES.1: Scope and Timeframe of Research

WAVE	TIMEFRAME	ACTIVITIES	SCOPE
Wave 1	August - September 2009	<ul style="list-style-type: none"> • Review background materials • Develop process flow diagram • Interview Energy Advocates, contractors, and staff • Survey initial participant cohort • Present report to Steering Committee (September 21, 2009) 	<ul style="list-style-type: none"> • Provide rapid feedback about initial CEWP pilot program launch • Document experiences • Summarize lessons learned
Wave 2	February - March 2010	<ul style="list-style-type: none"> • Re-contact Energy Advocates, Contractors • Interview Stakeholders to identify themes and summarize lessons learned • Exit Survey of Participants with completed projects: those that had a successful test-out 	<ul style="list-style-type: none"> • Document project status • Identify themes and summarize lessons learned • Document participant experience and satisfaction with CEWP
Wave 3	June - August 2010	<ul style="list-style-type: none"> • Launch third wave of participant surveys • Telephone survey of program dropouts 	<ul style="list-style-type: none"> • Document Project Status • Create report document with detailed results

FINDINGS

Successes

In the first year of operation, those involved in the CEWP pilot program worked through many process and policy issues to establish a program model stable enough to earn a \$20 million dollar award through the Energy Efficiency Community Block Grant (EECBG) process established in ARRA. This funding will support an expanded version of the program, *Clean Energy Works Oregon* (CEWO). CEWP also served as a pilot project for the Energy Efficiency and Sustainable Technology Act (EEAST), passed by the Oregon Legislature in 2009. EEAST sought to foster energy savings, stimulate job growth, and reduce carbon emissions by establishing a loan program to support energy efficiency and renewable energy retrofits in Oregon homes and businesses.

CEWP involved multiple organizations and thus required extensive collaboration. The CEWP Steering Committee and other stakeholders to date have successfully navigated the requirements of this collaborative effort, and continue to work together toward meeting existing and expanded goals for both CEWP and the larger CEWO effort being planned for 2011.

The CEWP website serves as an effective portal for interested homeowners and applicants, providing basic information about what to expect from the program and obtaining the information required to process applications. In the first year of operation, CEWP staff refined



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the process and simplified the application. A pre-screening step added after the pilot program's initial phase improved the likelihood that homes with problematic existing conditions (such as knob-and-tube wiring) would be excluded early enough to avoid unnecessary costs.

The program trained a cohort of Energy Advocates capable of explaining CEWP features to applicants and assisting them in understanding the bids they receive from contractors. CEWP has steadily expanded the number of qualified contractors authorized to conduct Home Performance Assessments and complete energy efficiency projects through the program. In September 2009 there were six contractors enrolled; by September 2010 this had grown to 16.

Finally, the program is well on its way to meeting the goal of treating 500 Portland area homes. As of September 1, 2010, CEWP had provided home assessment services to over 500 Portland homeowners and completed projects in more than 200 homes. While not every home receiving a Home Performance Assessment ultimately installed measures and accepted financing through CEWP, a substantial portion of those that dropped out of the program reported that they had completed a retrofit project or intended to take action to reduce their home's energy use subsequent to their CEWP involvement. Saving energy is an important motivation for CEWP participants, many of whom reported seeking information on the energy savings they could expect from their projects.

Remaining Issues

As CEWP evolves from a Portland-based pilot project to a statewide program, improvements to data tracking and reporting will be required. The program does not operate with a single database, making it difficult to obtain information on measures installed, loan amounts, cost data and estimated energy savings associated with CEWP projects. Detailed project information was not available until September 2010, almost a full year after the pilot program launched.

The program clearly meets the needs of a segment of homeowners who want help to improve the energy efficiency and comfort of their homes, but it does not meet the needs of all homeowners who have energy efficiency upgrade opportunities. Overall satisfaction and value indices were lower for participants that had dropped out of the program than for those that completed their CEWP projects. On average, dropouts had higher income and larger homes than participants who completed projects through the program, perhaps indicating that program dropouts had access to other financing options with which to pay for their projects. Of more concern are comments offered by dropouts frustrated by the restrictions on contractor selection, limitations on competitive bidding, and lack of options for avoiding program fees and financing terms. As CEWP transitions to the larger CEWO effort, the program management will want to consider options for reducing restrictions on participants.

Consistent with the program's logic and design, CEWP provides the services of an Energy Advocate and a Home Performance Assessment to every participant. Energy Advocates are expected to help participants navigate the program and understand the rationale behind the bid they receive. These services are valued by participants but can, in some cases, be perceived as



pressure to accept a bid or that the program representatives and contractors are working for each other's interest, not the participants.

CONCLUSIONS AND RECOMMENDATIONS

Ensure that Applicants are Provided with Alternatives

By providing a qualified contractor, project assistance through an Energy Advocate, high-quality audit information, and access to financing, the CEWP model attempts to overcome several of the barriers to investments in residential energy efficiency upgrades. The success of the model to-date reflects the power of this combination of services for some homeowners. However, the program should also include a path for engaging the hundreds of homeowners interested in energy efficiency upgrades but screened out because of their energy intensity or credit score, or those who dropped out because they preferred a different source of project funding or want to install only a portion of the projects identified.

- ➔ **Inform all applicants of their program options with Energy Trust and capture the contact information and demographic details for applicants screened out or dropped out of the program so that they can be engaged in other energy efficiency efforts or offered another path through which to pursue energy efficiency upgrades.**

Clarify Expectations for Energy Advocates

The CEWP pilot project assumed that the Energy Advocate would be a central point-of-contact for participants, providing information and guidance on a variety of complicated matters; contacts report valuing the services of the Energy Advocate. The number of Energy Advocate interactions reported for both participants and dropouts shows that a majority of participants require more than five interactions and, perhaps unsurprisingly, participants that ultimately drop out of the program have more interaction with Energy Advocates than those that install projects.

A high number of interactions, especially with those who ultimately drop out, will likely increase administrative costs. If administrative costs are found to be too high, or if CEWO determines that it cannot sustain the level of support provided by Energy Advocates in the CEWP pilot, CEWO leadership will need to clarify and communicate project support expectations to Energy Advocates.

- ➔ **Track each interaction event in the program database to be able to assess the costs of Energy Advocate services.**

Assign a New Title for Energy Advocates

The word *advocate* carries connotations of activism and creates an expectation that the Energy Advocate will protect the interests of program participants. Comments provided in each of the three waves of research and in verbatim responses to the last two surveys indicate that



participants expect their Energy Advocate will represent the participant to the contractor and advocate for the participant's interest, and ensure that the bid from the contractor is fair and that the work is done properly. These expectations may be more than the Energy Advocate can deliver.

- **Drop the term *advocate* from the Energy Advocate title. Energy Advocates act more as advisors or program representatives; align the title with the activity.**

Consider Dropping Energy Intensity Screening

CEWP was designed to maximize the likelihood that an enrolled home would have substantial energy-saving projects. To this end, each applicant has an *energy intensity score* calculated prior to program acceptance. For the first eight months of the pilot program, applicants with an energy intensity score below median value were excluded from the program. In April 2010, in order to increase the number of qualified applicants, the energy intensity threshold was dropped to 25%. While it is logical to assume that the largest energy users would be the most likely to pursue opportunities for energy savings, because CEWP employed a Home Performance approach and requires only 10% modeled energy savings, it is likely that most homes will have opportunities for improvement and the energy intensity score requirement could be lowered further or eliminated.

- **Assess the effect of using a lower energy intensity score threshold on the ability to identify viable projects.**

Simplify Credit Screening Process

CEWP was also designed to identify homeowners with sufficient credit to be able to move forward with the projects identified. To this end, each applicant has their utility bill payment history assessed and is subject to a standard credit check. Across the United States, some on-bill financing programs allow credit to be extended based solely on utility bill payment history, using utility bill payment history as a proxy for credit. Using a single assessment of credit viability could lower administrative costs and speed up enrollment.

- **CEWP staff should work with SBEC to assess the relationship between utility bill payment history and credit score and whether it is feasible to shift to a single requirement for credit approval.**

Align Fees with Project Details

Fees required to participate in the CEWP pilot totaled \$900 per completed project, regardless of size. Each loan is assessed a \$300 loan origination fee and each project is assessed a \$600 Home Performance Assessment fee. Of the \$600 Home Performance Assessment Fee, \$300 is paid to the Home Performance contractor to cover the cost of the test-in and \$300 is allocated to cover the costs of the Energy Advocate.



The amount of the fees and their purpose emerged as a topic of complaint or comment in surveys of participants with installed projects and those that withdrew from the program. As CEWP transitions to the larger CEWO, this fee structure will continue to create barriers to participation.

→ **The following options for restructuring fees should be considered:**

- **The \$300 of the Home Performance Assessment fee could be waived for participants that choose to go forward with their projects.**
- **The services of an Energy Advocate could be an additional, optional for fee service.** Alternatively, the program could decide that the services of the Energy Advocate are simply too important to the logic and expectations of the program and cover those costs directly.
- **The loan origination fee could be adjusted for smaller projects so that the fee is never more than 3% to 5% of the total loan.** Identifying best practices or fees allocated by similar programs could provide context for establishing a threshold.

Distribute the Information from the Home Performance Assessment

Participants value the information in the Home Performance Assessment and a substantial portion of dropouts report either taking action or intending to take action to reduce their home's energy use. However, it is rare for participants to receive a copy of their Home Performance Assessment.

Currently, there is no charge for the Home Performance Assessment test-in and only those who continue in the program pay the Home Performance Assessment fee. The cost and potential value of the Home Performance Assessment may lead CEWO to assess a charge for the service to those who drop out of the program without completing a project.

→ **Since participants are charged for their Home Performance Assessment and dropouts need the information to pursue projects on their own, ensure that all enrolled homeowners receive a copy of their Home Performance Assessment report.**



1

INTRODUCTION

In June 2009, using a \$3.2 million award from the federal American Recovery and Reinvestment Act (ARRA), the City of Portland, in collaboration with Multnomah County and Energy Trust of Oregon, launched a pilot residential energy efficiency program called *Clean Energy Works Portland* (CEWP).

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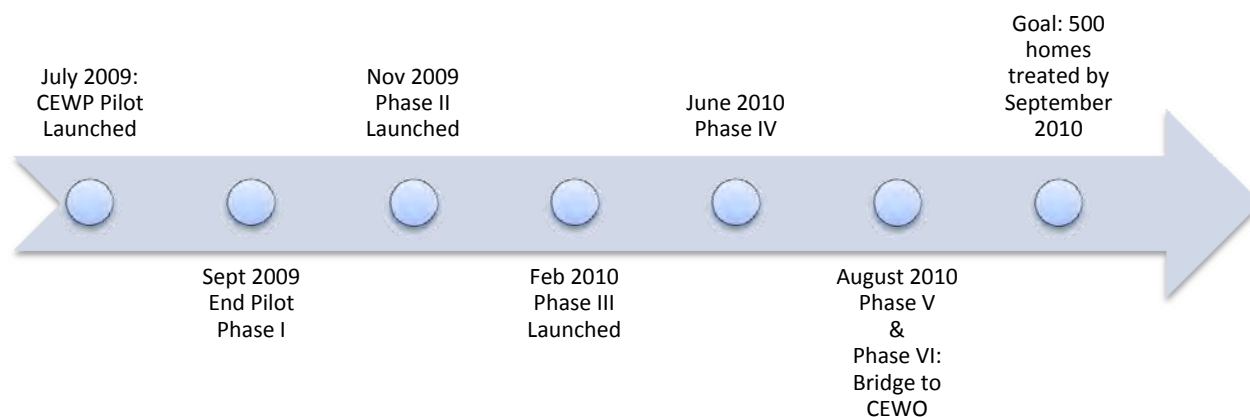
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WAVE	TIMEFRAME	ACTIVITIES	SCOPE
Wave 1	August - September 2009	<ul style="list-style-type: none"> • Review background materials • Develop process flow diagram • Interview Energy Advocates, contractors, and staff • Survey initial participant cohort • Present report to Steering Committee (September 21, 2009) 	<ul style="list-style-type: none"> • Provide rapid feedback about initial CEWP pilot program launch • Document experiences • Summarize lessons learned
Wave 2	February - March 2010	<ul style="list-style-type: none"> • Re-contact Energy Advocates, Contractors • Interview Stakeholders to identify themes and summarize lessons learned • Exit Survey of Participants with completed projects: those that had a successful test-out 	<ul style="list-style-type: none"> • Document project status • Identify themes and summarize lessons learned • Document participant experience and satisfaction with CEWP
Wave 3	June - August 2010	<ul style="list-style-type: none"> • Launch third wave of participant surveys • Telephone survey of program dropouts 	<ul style="list-style-type: none"> • Document Project Status • Create report document with detailed results

CEWP launched with a limited 50-home test pilot and built steadily upon that experience in rolling phases that allowed the program to adjust terms and screening, recruit additional Home Performance contractors, and build on experience with CEWP without a gap in program activity. After the gap between Phase I and Phase II in October 2009, each of the subsequent phases overlapped (Figure 1.1).

Figure 1.1: CEWP Pilot Phases



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CLEAN ENERGY WORKS PORTLAND: BACKGROUND AND COMPONENTS

Clean Energy Works Portland is managed jointly by Energy Trust and the City of Portland. Energy Trust residential efficiency staff and City of Portland Bureau of Planning and Sustainability staff provide technical and program administration support.

CEWP relies on extensive collaboration and receives input from a Steering Committee that includes representatives from: the three primary program partners (City of Portland, Multnomah County, and Energy Trust); SBEC; Portland General Electric, Pacific Power, and NW Natural; the Portland Development Commission; and several advocacy organizations, including Green For All, Worksystems, Inc., Efficiency First, and the Home Performance Contractor's Guild. This Steering Committee meets regularly to assess the pilot program's progress and identify opportunities for improvement.

Program Logic

Figure 1.2 presents a simplified logic model of the CEWP pilot project.

CEWP operated with six primary activities: marketing and outreach; screening of potential participants; assessment and project scoping; project support; construction; and financing. Marketing and outreach, screening activities, and an assessment are all expected to identify energy savings projects expected to reduce household energy consumption by at least 10%. Once the homes are assessed, the information is analyzed and a bid to install appropriate equipment is prepared. The program logic reflects the assertion that providing expert assessment, project management services, and financing that requires no upfront payment will overcome the substantial barriers that continue to prevent homeowners from making energy efficiency improvements to their homes.

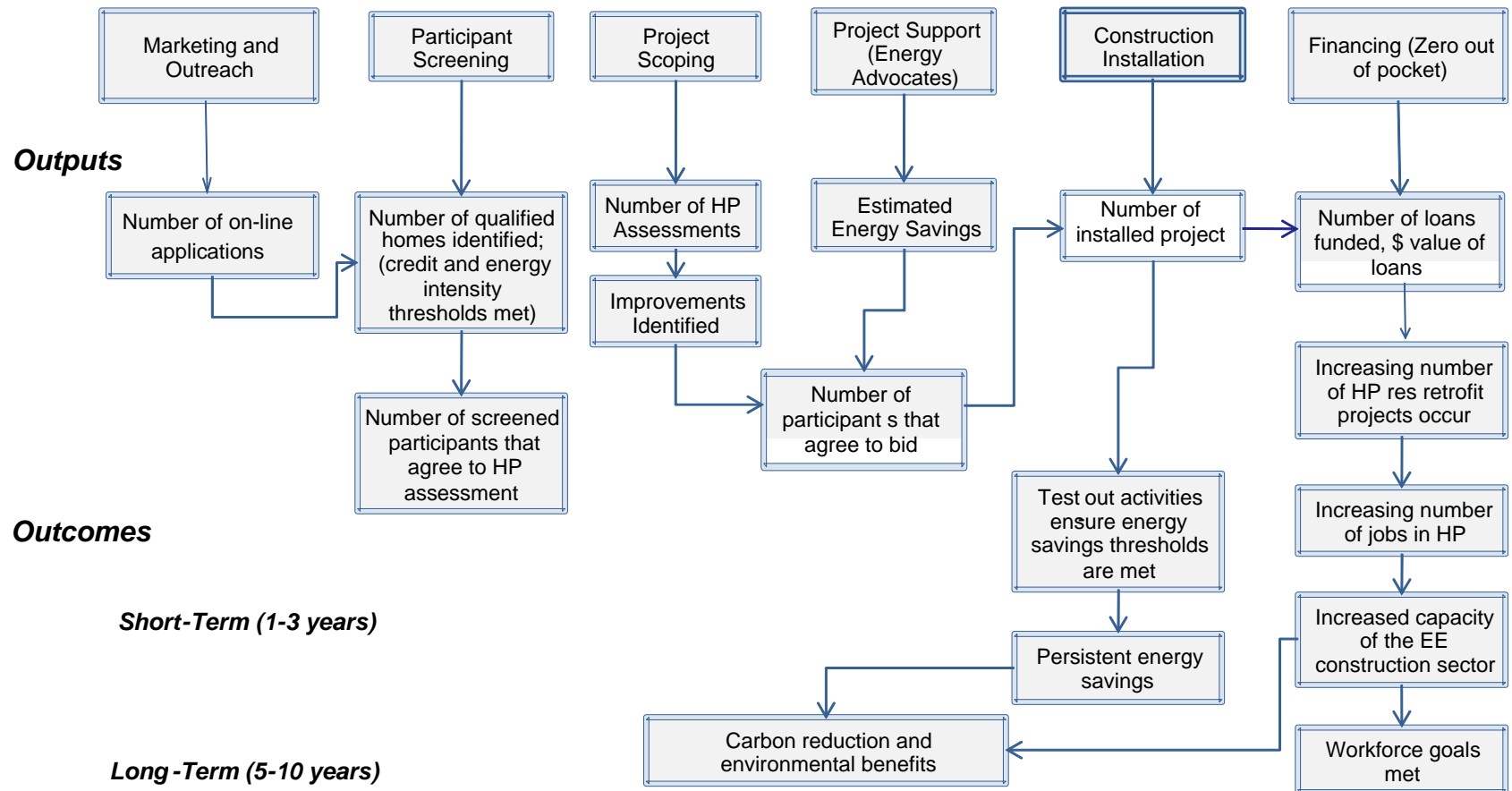
The portion of participants that agree to install the specified equipment after receiving a CEWP Home Performance Assessment is expected to be greater than the portion of participants who install measures through Energy Trust's standard Home Performance program because of the option to finance the entire cost of the project and pay for it over 20 years on ones heating utility bill.

The program's quality assurance and test-out activities ensure energy savings thresholds are met and result in energy savings that persist for many years. The provision of financing is expected to support a number of projects sufficient to increase the overall employment in the Home Performance and residential construction sector. Persistent energy savings and the increased capacity of the residential energy efficiency workforce is expected to result in long-term improvements to the environment and should help Portland meet its carbon reduction goals.



Figure 1.2: CEWP Pilot Program Logic

Activities



Program Implementation

Applicant Screening

Interested homeowners submit an online application at <https://www.cleanenergyworksportland.org>. As part of the application process, they provide utility account numbers and confirm that they do not use oil heat, do not have knob and tube wiring, and are prepared to address other structural or deferred maintenance projects that might be identified. Once the application is submitted, Energy Trust program staff¹ use the account numbers to access energy usage data from which they calculate an energy intensity value that reflects the energy used by the household relative to the size of the home. This requirement was expected to increase the likelihood that the Home Performance Assessment would identify energy savings sufficient for program treatment.

For the first nine months of the program, applicants had to have above-median energy use relative to the size of their home. In April 2010, in order to increase the number of qualified applicants, CEWP began allowing those with an energy intensity greater than 25% of median to participate.

All applicants with sufficient energy use are then screened for credit-worthiness by SBEC. Credit screening involves a review of their utility bill payment history and a credit check. For the CEWP pilot program, SBEC required a credit score of at least 590.

The energy usage and credit screening occur before program representatives contact the applicant. Applicants screened out for either reason are notified and dropped from the program. Qualified applicants then are assigned an Energy Advocate and a pre-approved contractor

Home Performance Assessment and Project Scoping

Homeowners are required to attend a Home Performance Assessment “test-in” at their homes. Typically, applicants meet their Energy Advocate and contractor at the test-in. Energy Advocates are expected to provide qualified applicants information and offer assistance with decision-making about efficiency upgrades and financing options.

The Energy Advocate enters the data gathered at the Home Performance test-in into *Real Home Analyzer* audit software, developed and owned by CSG. The program relies on the estimates from the software to assess the opportunities in a participating home and judge the worthiness of identified improvements. Energy savings must reduce household energy use at least 10% in order for applicants to participate in the program.

¹ Program staff include Energy Trust staff and staff members housed at the Energy Trust residential program management contractor, Conservation Services Group (CSG).



CEWP launched with established project cost caps that rise commensurate with the number of measures specified. Basic weatherization – including air sealing, duct sealing, duct insulation, or attic insulation – must cut energy use by 10% to 20%. Extended weatherization – including wall or floor insulation – must reach 20% to 30% energy savings. The cost caps were increased after the first Phase. The caps for Phases I, II, and III are presented in Table 1.2.

Table 1.2: Weatherization Package Cost Caps

WEATHERIZATION PACKAGE	GAS HEAT		ELECTRIC HEAT	
	PHASE I	PHASE II & III	PHASE I	PHASE II & III
Basic Weatherization	\$3,700	\$4,300	\$3,700	\$4,300
+ <i>Hot Water</i>	\$7,650	\$8,150	\$5,150	\$5,500
+ <i>Heat</i>	\$9,350	\$9,950	\$13,300	\$14,150
+ <i>Hot Water & Heat</i>	\$13,300	\$14,200	\$14,750	\$15,700
Extended Weatherization	\$7,500	\$8,800	\$7,550	\$8,800
+ <i>Hot Water</i>	\$11,500	\$12,300	\$9,000	\$9,600
+ <i>Heat</i>	\$13,200	\$14,100	\$17,150	\$18,300
+ <i>Hot Water & Heat</i>	\$17,150	\$18,300	\$18,600	\$19,850

Bid Development

Building Performance Institute (BPI)-certified contractors apply to participate in the pilot; program managers review the applications and approve appropriate contractors to assess participants' homes, prepare bids, and install efficiency measures expected to reduce participants' energy use 10% to 30%. Working with the Energy Advocate, the contractors prepare a bid for homeowners. Bids are expected to address the issues identified during the Home Performance Assessment

However, homeowners typically do not receive a Home Performance Assessment report or the energy-savings estimates from the audit software. The homeowner reviews the bid and either accepts it or requests a second bid. If a second bid is requested, CEWP assigns another contractor to the participant, who provides a bid based on the data from the existing test-in.

Project Fees and Terms

Homeowners who opt to install the approved measures must agree to the CEWP pilot program fees and terms. There are two fees:

- ➔ **Home Performance Assessment fee: \$600.** Of the \$600, half is allocated to CSG for the Energy Advocate's services. The remaining \$300 is paid to the contractor for the Home



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Performance test-in. In general, this fee is paid out of any Energy Trust incentives earned by the project. If the Energy Trust incentive is greater than \$600, the remainder is used to reduce the loan principal. If the Energy Trust incentives total less than \$600, the remainder is added to the loan principal.

→ **Loan Origination fee: \$300.** The Loan Origination fee is paid to SBEC for underwriting costs. It is a fixed fee, and is added to the loan principal.

In addition to these fees, the program operates under specific loan terms. Monthly payments are amortized over 20 years and added as a line item to the participant's heating utility bill. In Phase I of the pilot, interest rates ranged from 2.99% to 5.99%; the more extensive projects received the lower interest rates. In Phases II and III, the interest rate was set at 5.99%. Lower interest rates are available for income-qualified participants.

When a bid is accepted, CEWP provides the project details to SBEC's finance representatives. SBEC prepares loan papers that reflect the cost assumptions in the bid. If work orders detail costs other than those in the bid, SBEC must re-create the loan documents, and the homeowner must sign the new documents and re-submit them to the bank. Participants are expected to sign loan papers before construction begins.

After construction is complete, the contractor, Energy Advocate, and homeowner attend a final inspection, or "test-out," to verify that the energy efficiency measures were installed as specified. The test-out involves many of the same procedures that occur during test-in, such as a blower door test or combustion safety check. For the CEWP pilot program, a successful test-out triggered loan execution, and SBEC paid the contractor according to the work orders and signed loan documents. SBEC then notified the heating utility, which added the loan payment to the customer's bill. The utility collects the loan payment and sends it to SBEC, which manages the fund on behalf of CEWP.

Program Expansion: Clean Energy Works Oregon

In mid-2010, CEWP received an additional \$20 million award from the federal Energy Efficiency and Conservation Block Grant (EECBG) program to expand the pilot to customers of the participating utilities throughout Oregon. *Clean Energy Works: Oregon* (CEWO), an independent nonprofit was created in August 2010 to manage this effort and direct the expansion.

As of September 1, 2010, CEWO staff were continuing to review the components of CEWP. It is likely that several components of CEWP will be altered to facilitate statewide expansion of the program. At the time of this report, these decisions had not yet been made.

OTHER CEWP GOALS

The ARRA funding and the involvement of the City and County have focused expectations on goals associated with job creation, workforce development, social equity, and carbon reduction.



Investments in energy efficiency projects and programs often are expected to enhance these outcomes, but these non-energy outcomes often are not measured directly. It is rare for an energy efficiency program to be held to objectives other than cost-effective energy savings or increasing the awareness of energy-saving options. Most of the job creation effects are expected to occur in participating Home Performance contractor firms.

Community Workforce Agreement

In September 2009, a committee of stakeholders developed a Community Workforce Agreement (CWA) that outlined expectations for workforce outcomes associated with equity goals for the CEWP. According to language in the Agreement, the CWA is designed to “help ensure equity for women, people of color, and other historically disadvantaged or underrepresented groups in the implementation of CEWP.” The CWA was signed by almost 30 organizations prior to the launch of Phase II of CEWP.

The CWA includes a clause that establishes a Stakeholder Evaluation and Implementation Committee (SEIC) responsible for monitoring the implementation and accomplishment of the goals outlined in the CWA. The CWA required that Energy Trust “ensure that the CEWP contractor selection processes reflect and implement the minimum requirements and best value contracting selection processes identified” in the CWA, including goals and targets for: 1) local hiring, 2) living wages, 3) health insurance, 4) workforce/business diversity, and 5) access to training or continuing education necessary to develop a highly skilled workforce.

The contractor application was revised to reflect many of the CWA’s objectives. To evaluate each contractor applicant, each item was given a maximum number of points (Table 1.3). Contractors were ranked per the number of points they received; the portion of jobs allocated to each contractor reflects the total score earned by each firm.

Participating contractors track their program-related employees and any program-driven hiring and report their progress on each of the CWA goals to the SEIC. For example, each contractor is expected to report the portion of their employees who are paid prevailing wages and have access to healthcare, the opportunities they provide for formerly incarcerated individuals, and the dollars paid to historically disadvantaged or underrepresented businesses.



Table 1.3: Phase III CEWP Contractor Application Point Allocation

ITEM	MAXIMUM POINTS
EXPERIENCE AND SERVICE QUALITY	
Demonstrated experience in the Home Performance with ENERGY STAR® program	7
Quality control compliance in Home Performance installation work	7
Record of exceptional service	7
<i>Subtotal</i>	21
CHARACTERISTICS OF BUSINESS	
Successful track record in hiring and retaining historically disadvantaged or underrepresented people	7
Plan for establishing mentor-sub relationship with business owned by historically disadvantaged or underrepresented people	7
Demonstrated history of subcontracting with DBE/MBE/WBE*	5
Track record of hiring from registered apprenticeship and other credential granting programs	7
Hire record at least 80% Portland metro residents	4
Provide health insurance	7
Oregon-based contractors	3
Demonstrate efforts to strive to provide employment to formerly incarcerated individuals	2
<i>Subtotal</i>	42
TOTAL	63

* Disadvantaged Business Enterprise (DBE); Minority Business Enterprise (MBE); Women Business Enterprise (WBE)

PROGRAM STATUS: SUMMER 2010

By July 2010, the CEWP pilot project had operated for a year. In mid-2010, the City of Portland received confirmation from the Department of Energy that the City's application for additional EECBG funding had been approved, resulting in an additional \$20 million for CEWP. Following this award, the City moved administration of CEWP to an independent nonprofit organization created to manage the project long term.

As of September 1, 2010, the program had assessed more than 580 homes, and more than 200 participants had completed their projects and successfully tested out of the program; an additional 166 projects were in progress (Figure 1.3).



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Figure 1.3: CEWP Status and Applicant Flow as of September 1, 2010

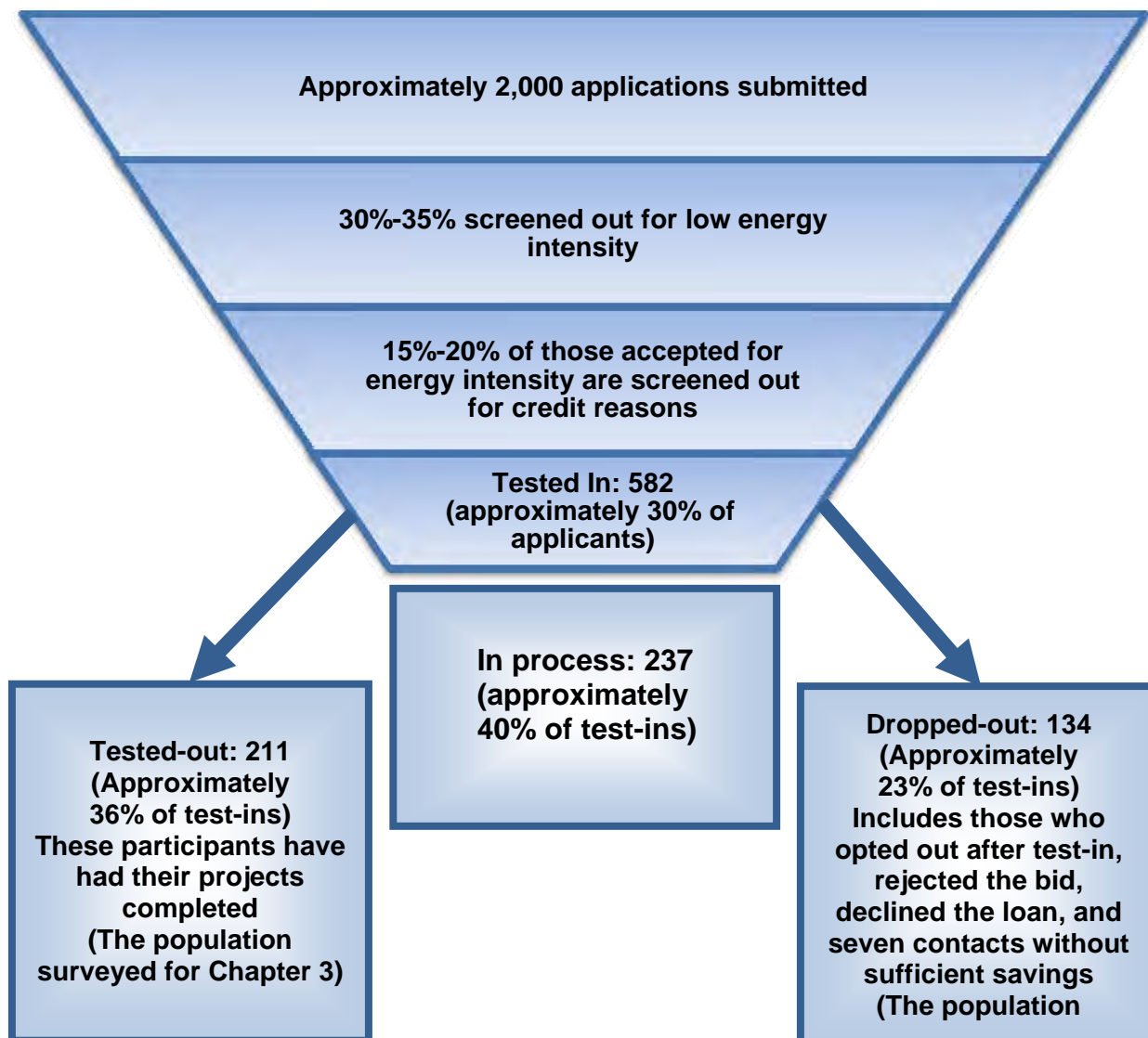
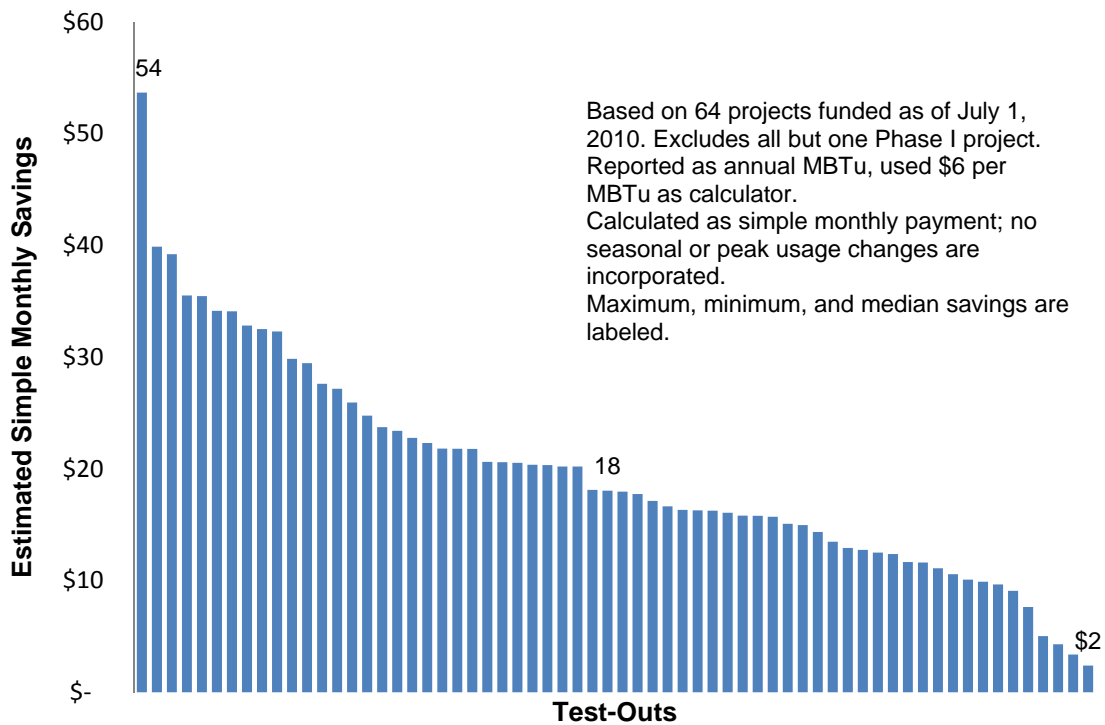


Figure 1.4 presents the estimated monthly energy savings from 64 projects completed between December 18, 2009, and June 7, 2010. These projects include one of 24 completed Phase I projects, 38 of 39 completed Phase II projects, and 25 of 28 completed Phase III projects. These 64 projects represent estimated savings of more than 2,500 MBtu. The annual savings obtained expressed in dollars ranges by project from a high of almost \$650 to a low of \$28. The actual savings obtained likely reflect the measures installed in each home.



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Figure 1.4: Estimated Monthly Savings in Dollars



Information provided by the program on 267 loan documents prepared as of September 1, 2010, indicates the program is on track to lend more than \$3.2 million dollars to pay for projects that provide air and duct sealing, insulation, and equipment upgrades to improve homes and save energy.



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KEY CONTACT INTERVIEWS

This chapter presents the results of key contact interviews that occurred in the first two waves of research for the CEWP pilot program.

PHASE I: RESEARCH WAVE 1

During the first two months after the program was launched, we conducted interviews with 19 key contacts: 5 of the 6 Energy Advocates, 4 of the 6 Home Performance contractors, 2 program staff, and a representative from SBEC. The interviews centered on the experience of contacts and their expectations for the future, and sought to identify any immediate lessons learned. We presented findings from this initial research effort to the CEWP Steering Committee on September 21, 2009. We summarize those findings here.

A central point that emerged in these interviews was the contacts' awareness of the stakeholder expectations for CEWP. Program contacts described working hard to establish program processes and launch program activities while navigating the numerous, and occasionally competing, goals of program stakeholders. Contacts also described the high expectations of applicants and participants. In late summer and early fall of 2009, CEWP experienced a flood of applicants in response to earned media and promotion by City of Portland officials.

The first wave of research found that staff and contractors believed:

- ➔ The organizations involved in launching CEWP had demonstrated impressive flexibility and willingness to move forward with the program concept regardless of uncertainties regarding the process.
- ➔ CEWP represented an opportunity for Portland to demonstrate leadership to other cities.
- ➔ The contractors engaged in the program brought substantial expertise and were committed to Home Performance.

Wave1 Research Findings – Major Themes

Four major themes emerged from interviews with key contacts in the first wave of evaluation: 1) the role of the Energy Advocate; 2) addressing existing home conditions; 3) the presence and disclosure of program fees; and 4) managing expectations.

Role of the Energy Advocate

As noted earlier, Energy Advocates provide project management services to CEWP participants and contractors, and act as intermediaries between participants, contractors, and program staff. In



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the first wave of interviews, the evaluation team found that Energy Advocates were unsure of their role in the program. They needed to build strong working relationships with the contractors assigned to them, but also sought to maintain a certain level of neutrality. As one Energy Advocate stated:

- *“I have to avoid being seen as the contractor’s friend, but also not be seen as the contractor’s boss.... A big part of my job is listening to these participants and addressing their concerns and questions.”*

Energy Advocates expressed uncertainty about their role, particularly when disagreements arose between contractors and participants:

- *“An ‘Energy Advocate’ is not necessarily a customer advocate; we want to push this stuff through so that we can save energy....”*
- *“It’s like the word ‘advocate’ is loaded. It’s adversarial. We are [Home Performance] account managers, too. I have to maintain a good working relationship with these guys. We may have to either be an account rep or an Energy Advocate, but not both.”*

Contractor perceptions of the value of the Energy Advocate were mixed in the early months of the pilot program. Contractors valued Energy Advocates for providing credibility as a neutral third party by offering expert advice to homeowners, and for acting as a liaison or conduit of information to participants. However, contractors also expressed frustration with situations in which they perceived that the Energy Advocate hampered their ability to close the deal, for example, by having insufficient information or by questioning the reasonableness of bids.

When asked about expectations for the future, Energy Advocates were uncertain if they would be managing competitive bids or providing extensive project management services in the future. Contractors expected that Energy Advocates would assist and support the contractor, serve as program and finance specialists, and otherwise minimize their involvement as the program volume increased. One contractor urged Energy Trust to have Energy Advocates attend Energy Trust classes about how to sell Home Performance.

Existing Home Conditions

Another challenge that emerged in the early months of the pilot program was difficulty in overcoming existing home conditions. The program launched with an energy usage screening that selected only homes with above-median energy use per square foot. This process tended to select homes with high energy bills: often large homes built before 1940. High energy use can be the result of occupant behavior, deferred maintenance or improvements, or a combination of factors. Early applicants were found to have knob-and-tube wiring, asbestos siding, and water seepage, and to require basic home repairs. Key contacts described other conditions that impeded projects, including: metal siding; stucco; unused chimneys; lath and plaster walls; or plans for significant remodeling work in the near future.



Including homes with deferred maintenance or other required upgrades meant that participants had to arrange and pay for electrical upgrades or other repairs outside of their CEWP-eligible project(s). For the CEWP Steering Committee, addressing these issues remains important, since screening out problematic homes could lead to systematic exclusion of certain neighborhoods or populations, while incorporating the larger project costs attributable to repairs or other improvements could lead to fewer overall CEWP projects.

CEWP staff and contractors discussed how to address this tension and in March 2010 (in the third phase of the pilot), the program established a “contingency category” expected to provide “needed flexibility for contractors to perform efficiency work.” The contingency dollars allow for an increase to the weatherization portion of the bid, up to 20% of the existing weatherization cap. The contingency category is to address exceptional conditions and is not expected to automatically increase the cost cap for typical weatherization measures. In a memo describing this new process, CEWP staff wrote that contingency dollars are:

...not part of the overall cost-effectiveness calculation in regard to Energy Trust incentives because there are Federal stimulus dollars being deployed by CEWP that primarily value job creation and economic stimulus

...meant to provide contractors with a means to provide valuable upgrades that might not directly contribute to energy savings but are either: 1) prerequisites for effectively completing efficiency improvements, or 2) address safety or comfort issues essential to Home Performance contracting.

Program Fees and Loan Terms

In the first wave of interviews, key contacts also expressed concerns about how and when the fees associated with participating in the program were disclosed to participants. The total fees associated with participating in CEWP are \$900.² Contacts’ perception of these fees varied depending on the total cost of the project, how they were disclosed, and when they were presented. For example, the fees would represent 13% of a \$7,000 project, but 4.5% of a \$20,000 project. Fees are not allocated to a project until loan documents are created, although the Home Performance Assessment fee is paid for each home assessed, regardless of whether the homeowner pursues project financing through CEWP.

In the early months of the program, the fees were inconsistently itemized or not explained until loan papers were presented. For some contractors, the discussion of fees represented an opportunity to outline a choice between pursuing financing or becoming a cash customer (and thus allowing the participant to keep their incentive dollars). In this view, those for whom avoiding any up-front costs is paramount likely would choose the financing, while those with other options might decide to proceed with the project as a cash customer.

² See the Introductory chapter for a breakdown and allocation of fees.



Expectation Management

Stakeholder Expectations

As mentioned earlier, key contacts involved in developing the procedures and implementing the program in August and September 2009 reported being aware of the high expectations for CEWP, in particular by the many organizations represented on the Steering Committee. Contacts reported “lots of eyes” on CEWP and described many people involved in making decisions about the project. In addition to the organizational goals of the City of Portland, Multnomah County, Energy Trust, Conservation Services Group (CSG), SBEC, and the three investor-owned utilities operating in Portland (Portland General Electric, Pacific Power, and NW Natural), numerous long-term outcomes were expected to flow from the program’s full-scale deployment, including:

- ➔ Reduced carbon emissions
- ➔ Equity in service delivery and job creation
- ➔ Cost-effective energy savings
- ➔ Leveraged program dollars
- ➔ Business opportunities
- ➔ Regulatory compliance and demonstration of the concept for statewide Energy Efficiency and Sustainable Technology (EEAST) pilot requirements

Applicant Expectations

Early applicants heard about the program through word-of-mouth, email communication, and newspaper articles; they were expected to be committed to efficiency and knowledgeable about energy efficiency projects because of their connection to the energy efficiency organizations that launched the initial recruitment effort. The pilot program sought these applicants to allow staff and stakeholders a chance to test the model and adjust processes as needed while interacting with a group of applicants expected to be more patient than typical homeowners.

The volume of applicants in the early months created communication challenges for the program staff, who were working through policy choices and establishing processes while processing applications and managing multiple expectations. Applicants in the queue had to be screened in or out, and those who qualified had to be alerted that they might not be able to have their home assessed before October or November.

Contractor Expectations

Key contacts, including program contractors, reported that residential contractors sought involvement in CEWP. Energy Trust and CSG representatives worked to communicate the benefits of CEWP involvement and initially selected contractors that had previous experience



with Home Performance assessments and success using the home analysis software then in use: *HomeCheck* (subsequently changed to *Real Home Analyzer*).

Contractors engaged in CEWP expected that:

- ➔ They would have an opportunity to build their Home Performance business.
- ➔ They would add employees as a result of their CEWP-assigned work.
- ➔ Their participation in CEWP would result in bigger jobs.
- ➔ Financing would provide a tool to leverage homeowner interest and lead to a higher close rate.
- ➔ Their selection for CEWP would provide them an opportunity to communicate status and quality to potential customers.
- ➔ They would be allocated a certain number of prospective projects.

Wave 1 Research Recommendations

The first wave of research concluded with several key considerations and recommendations for CEWP staff.

Improve the Pre-Screening Process

Addressing existing conditions in old homes emerged as a central issue for Phase I. Determining whether or not to exclude homes with knob-and-tube wiring, asbestos, and carpentry requirements required that CEWP contacts consider equity and other options for financing the additional costs of required home improvements. Recommendations were to:

- ➔ Identify existing home conditions that could lead to exclusion or additional costs.
- ➔ Propose typical monthly loan payments.
- ➔ Assess a fee for the Home Performance Assessment, which could be credited back when participants move forward, but also could weed out the tire-kickers and extremely price sensitive customers.

Improve Tracking Systems and Develop a Strategy for Pipeline Management

We encouraged CEWP contacts to focus on process improvements so they could more effectively manage participants' expectations, describe the project pipeline, and report program progress. Specific recommendations and issues to explore were to:

- ➔ Communicate with applicants: Will they receive information about status?



- Communicate with participants: Is a timeframe necessary? Should bids expire?
- Determine when a participant is officially considered withdrawn.
- Should stalled projects have a path or resting place?
- Standardize the content of records and files, including: important dates, application data, measures proposed, measures installed, loan size, energy savings estimated, contractor, and Energy Advocate.
- Develop a status log or way to quickly determine where participants are in the process.

Clarify the Role of the Energy Advocate and Determine Who Will Communicate Financing Details

We encouraged CEWP contacts to clarify the role of the Energy Advocate because of the connotations associated with the term *advocate*. We suggested eliminating the term *advocate*, or at least clarifying with participants that *Energy Advocates* were not *consumer advocates*.

How and when the fees are disclosed and the communication about how they are allocated to the project also required CEWP clarification. It is important to avoid surprises when it comes to financing terms and fees, and it is important to articulate why the fees exist and to whom they are paid. Specific recommendations were to:

- Determine if notary services are required.
- Improve coordination and communication about loan document status with ShoreBank.
- Establish a process for fee disclosure; articulate what the fees cover and how incentives are allocated

PHASE II: RESEARCH WAVE 2

The second wave of research occurred between January and March 2010. It included a second round of interviews with CEWP Contractors and Energy Advocates, interviews with members of the CEWP Steering Committee, and a second wave of surveys with program participants – specifically, those that had completed their project since September. Results of this work were presented to the CEWP Steering Committee on March 22, 2010.

Wave 2 Research Findings

Revisit of Contractors

In Wave 1, we interviewed 4 of the 6 contractors enrolled in the program. In Wave 2, we interviewed 6 of the 8 contractors then enrolled in CEWP. Two of the six interviewed in Wave 2 had withdrawn from the program, both for business reasons unrelated to CEWP.



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Contractors reported that the lines of responsibility were clearer in January and February than when the program launched, but that there still were opportunities for process improvements. One suggested improvement would address the complicated transactions involved in CEWP participation: scheduling; test-in; bid development; loan document preparation, presentation, and signing; construction; and quality assurance – all required multiple, and sometimes duplicative, documents and coordination.

Contractors offered more comments on the application process in the second wave of interviews. This was not surprising, given the more complicated re-application process driven by the objectives of the Community Workforce Agreement, described in the introductory chapter under *Other CEWP Goals*.

Five of the six contractors we interviewed had difficulty with the re-application process required in November. Contacts reported having little notice of mandatory meetings and were surprised by the allocation of points in their application; they expressed concerns about balancing the hiring requirements of the CWA, given the actual employment opportunities resulting from their CEWP work. The points assigned to contractors in the re-application process were used to allocate jobs: those with higher scores were assigned more leads than those with lower scores. Contractors were aware that this would occur, although several were surprised by the actual effect. Other comments from contractors about the re-application process and the CWA requirements raised several issues:

- ➔ **Questions about diversity training requirements** – contractors were unaware of how to obtain these services
- ➔ **Assumptions of control of subcontractor hiring** – contractors reported limited influence over the characteristics of subcontractor new hires
- ➔ **Belief that contractors were being held to higher standards than the other parties involved in CEWP**

Contractors also described challenges in planning business activities (including hiring) without certainty that the program would continue. In the first months of 2010, when the second wave of evaluation research occurred, the City of Portland was confident that its application for EECBG block grant funding would be approved, but could not confirm the final award or describe how the program would expand. Contractors said they were cautious and reluctant to increase their staff without certainty that the program would be permanent.

Contractors also expressed concern about over-selling CEWP projects, since the projects tended to cost more because of prevailing wage requirements and the processes required to guide a project through each step.

Regardless of their concerns, contractors expressed appreciation for the opportunity to participate in the program and for the support of Energy Trust. Several acknowledged that demand for an innovation like Home Performance and the CEWP program was difficult to forecast, but that they intended to make these activities a part of their businesses model.



Revisit of Energy Advocates

We asked the current Energy Advocates about their experiences with CEWP and if their role in the program was clearer than it had been when we interviewed them during the pre-pilot assessment in September 2009. Energy Advocates reported being clearer about their responsibilities and articulated two primary benefits of their involvement in CEWP projects:

- **Serving as a liaison between participant and contractor** – providing communication and a link to the program for both, and articulating the program features
- **Bringing trust and credibility** – by representing a neutral third-party and offering validation.

Lessons Learned – Energy Advocates and Contractors

Pre-Screening

In this second wave of research, program contacts reported that an added pre-screening step had reduced the number of and costs associated with testing ineligible homes. This pre-screening step was added after the first wave of research revealed that many homes failed to qualify because of home characteristics discovered after the application was screened and accepted. Pre-screening involves a telephone conversation between the applicant and a CSG staff person, during which the staff person verifies that the home is free of knob-and-tube wiring, asbestos, or other problematic conditions.

Paperwork

Substantial opportunities for improvements to paperwork and data entry processes remained in March 2010. Energy Advocates and contractors desired: that forms and data entry be automated to improve accuracy and reduce redundancy; tracking systems that could improve project management; and an interface through which contractors could log-in to identify the status of their projects.

Pipeline Management

Staff and contractors noted that delays and household decision-making created pipeline management challenges. Given the time required for household members to digest the information from the Home Performance Assessment and commit to completing their project through the program, it remained difficult for Energy Advocates and contractors to determine when to officially consider a participant withdrawn from the program and stop pursuing them.

Project Costs

Projects were larger in scope and price than had been anticipated. Early in the program, contacts had expected projects would cost between \$5,000 to \$10,000. The median loan size as of August 31, 2010, was \$12,633. As might be expected from the usage screening that filtered out



applicants with below-median energy use, CEWP Home Performance Assessments found that these high-use homes had deferred maintenance, required updates to mechanical systems, or contained duct failures at an unanticipated rate.

Overall project costs also were affected by costs associated with the program: specific fees³; the interest rate; quality assurance and prevailing wage requirements; and the project cap structure that encouraged inclusion of multiple measures in order to increase the overall funding allowed for a project.

Stakeholder Interviews

The second wave of pilot program evaluation research also included interviews with nine stakeholders representing the diverse organizations involved in CEWP. Those interviewed included representatives from Portland-area utilities, City and County staff, Energy Trust and implementation contractors, financial services staff, and representatives from nonprofit advocacy groups involved in the project.

Interviews were in-depth and open-ended, and focused on understanding stakeholders' long-term, short-term, and organizational goals associated with their involvement in CEWP. The research team also sought to document perspectives on CEWP's current status and expectations for the future. Finally, we asked stakeholders about any concerns that remained or had emerged in the second phase of program ramp-up.

CEWP stakeholders described several important goals for the program. Specifically, stakeholders described seeking to:

- ➔ Demonstrate the program concept and spur large-scale investment in residential energy efficiency retrofits
- ➔ Save energy
- ➔ Meet climate action goals
- ➔ Grow the Home Performance and energy efficiency sector
- ➔ Support workforce development
- ➔ Offer a valuable service to program participants
- ➔ Provide excellent customer service

³ Including \$300 for the Home Performance Assessment, \$300 for the program contractor, and a \$300 loan fee.



Assessment of Status

In discussing their assessment of program status in January 2010, stakeholders were cautiously optimistic that CEWP would meet the goals of the pilot project and treat 500 homes by the end of August 2010. Those with knowledge of the other Home Performance program options expected to demonstrate a higher conversion rate from Home Performance test-in to installed job than occurred in Energy Trust's standard Home Performance program.

Community Workforce Agreement

CEWP was launched with capital from ARRA and thus is tied to goals associated with jobs and workforce development. The EEAST legislation, passed by the Oregon Legislature in summer 2010, after CEWP had been developed, contains language about prevailing wage, disadvantaged businesses, and training programs that is very similar to the requirements outlined in the CWA. Interviews with stakeholders revealed that they respected the goals embodied in the CWA and remained patient with the SEIC's attempt to document progress in terms of workforce metrics. However, several stakeholders expressed concern about contractors' ability to meet the CWA goals.

The Future

Stakeholders expressed concerns about expectations for future increases in program scale or scope. Process and policy issues that remain unresolved from the pilot could become more pressing as the program attempts to increase the level and scope of activity.

Wave 2 Research Conclusions

Role of Financing

The financing component of the program and discussions about developing a secondary market for CEWP loans also emerged as an area of concern. Contacts wondered:

- ➔ How will interest rates be set?
- ➔ Will participants continue to make their loan payments, month after month, on their utility bills?
- ➔ How will the program balance the low risk tolerance in the secondary loan market and the program's mission to provide financing to those without access to attractive credit options?

Financing is perceived to be a key component of the program and a lever to overcome the barrier associated with up-front costs. Because of this, the financing product must be attractive to homeowners; it must offer competitive interest rates, be simple, provide fixed payments, and be supported by a utility payment process.



Resolving conflicts between the desires of secondary market investors and the financial options of homeowners will be an important task of the program in the future. For example, low interest rates make the program attractive to homeowners, but not to secondary market investors. Securitizing all loans makes the portfolio attractive to the secondary market, but adds costs to the loans and places property liens on participants for loans of all sizes. Similarly, standardized underwriting ensures that the loan portfolio can be sold to investors, but may invariably exclude those without access to other financing who could have qualified based on their utility payment history – reducing the overall equity of the program.

Quantifying Job Growth

High expectations continue to be attached to the outcomes of CEWP regarding job creation. Federal stimulus funds were awarded with the expectation that the program would create jobs. Estimates of the costs of job creation range from 10.5 jobs per \$1,000,000⁴ to 8 jobs per \$1,000,000.⁵ In a 2009 jobs creation program, the City of Portland estimated 14 jobs created per \$1,000,000 spent.⁶ Participating contractors expect their involvement will generate enough work to justify hiring additional staff, but quantifying this remains a challenge.

Program Assumptions

The program does not operate with clear cost-effectiveness parameters or provide energy savings estimates to participants. There are several options for home audit/modeling software, each of which has advocates and detractors. The software being used by CEWP was publicly challenged by one of the program's enrolled contractors.

Wave 2 Research Recommendations

Continue to Improve Data Tracking and Program Processes

Automate paperwork; simplify tracking. Develop a program database tracking system that allows auto population of key inputs or ties together the data collected from the Home Performance test-in, application data, and the project details as submitted for loan documentation.

⁴ Green For All. *Policy Brief: Clean Energy Works Portland: A National Model for Energy-Efficiency Retrofits*. <http://www.greenforall.org/what-we-do/cities-initiative/portland/clean-energy-works-portland>

⁵ Lawrence Berkeley National Laboratory and Research Into Action, Inc. *Energy Efficiency Services Sector: Workforce Size and Expectations for Growth*. September 2010. [Not publically available as of October 1, 2010]

⁶ City Auditor, City of Portland. *Portland Job Creation and Stimulus: Construction spending is up, while actual job creation remains unknown*. June 2010. <http://www.portlandonline.com/auditor/index.cfm?&c=26649>



Develop an Organization Chart to Clarify Roles and Responsibilities

Specify the roles for staff and various organizations involved – Which organization leads? Who works for whom?

Clarify the Role of the Bank and the Role of the Financing Tool Box

How important is it that participants accept CEWP financing? Is the program expected to be a Home Performance program with a financing component or is it primarily a financing program that funds Home Performance? Determine the role of financing and explore other ways to leverage limited capital and homeowner interest by expanding flexibility: consider down-payment options, partial payment, or pre-payment discounts.

Confirm Size, Scope, and Timeline of Program Scale-Up

Once the size and limitations on the EECBG funding are known, the Steering Committee will need to communicate expectations for future program expansion. This information is needed to create stability for contractors and should indicate potential opportunities for hiring. It will also allow investment in program infrastructure; specifically: management and data tracking systems.

PHASE III & IV: RESEARCH WAVE 3

The remainder of this document presents the results from the third wave of research: surveys of participants with completed projects and participants that had dropped out of the program. The results of these surveys follow.



3

APPLICANTS & PARTICIPANTS

INTRODUCTION

Each of the three waves of research included an email survey of CEWP participants. The first wave, launched in September 2009 before any loans had been closed, included participants that subsequently dropped out of the program or were ultimately disqualified because of existing home conditions.

The second wave of research involved an email exit survey of participants who had successfully completed their projects and passed the final inspection. Respondents to the survey in the first wave who subsequently completed their projects were given an abbreviated survey in the second wave, focused on how the last steps of the program had worked for them and to assess their overall satisfaction with CEWP. The number of participants who had passed the final inspection step in February 2010 (when the second wave of research occurred) was limited and thus the survey sample was small. Of the 21 respondents to the February survey, 13 had been in the program queue in September and thus received the abbreviated survey; only 8 were new respondents. A separate survey task, interviewing participants who left the program (dropouts), was postponed until July 2010 because of the limited number of participants considered actual dropouts.

The third wave of research occurred in June and July 2010, about a year into the pilot project. The numbers of post-inspection participants and certain dropouts as of July 1, 2010, were sufficient to warrant separate survey efforts for successful participants and dropouts. We contacted successful participants (those who had projects installed and whose projects had been inspected) via email with a slightly revised version of the email survey used in the previous two waves. Those who had left the program were contacted by phone and interviewed about their experiences with CEWP.

This section presents the results from the July 2010 email survey of successful participants. The results of a telephone survey of participants that left the program are presented in Chapter 4.

METHODOLOGY

CEWP program staff provided the research team with a list of 125 contacts who had entered the program and completed their project as of July 1, 2010. For this research, *completed project* means that the construction was done and the home had had a post-construction test-out. The list included participants from the three phases of the program (Table 3.1).



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Table 3.1: Test-Outs by Phase as of July 1, 2010

PROGRAM PHASE	TEST-OUTS	PERCENT
Phase I	24	19%
Phase II	49	39%
Phase III	52	42%
TOTAL	125	100%

We compared this list to prior survey contact lists and removed contacts who already had responded to a survey. Our final contact list contained 99 unique contact names. After removing those without email addresses, we had 94 contact names. These participants had test-in dates between November 2, 2009, and April 14, 2010.

The survey team created a questionnaire to determine participants' satisfaction with several program elements and their motivations for completing a project through CEWP. In July 2010, we conducted two waves of email surveys of successful test-outs; these collected 48 responses and 32 responses, respectively. Altogether, 80 participants completed the email survey – a response rate of 85% (Table 3.2). The survey respondents included 41 participants from Phase II and 39 participants from Phase III.

Table 3.2: Test-Out Survey: Final Disposition

OUTCOME	RESPONSES	PERCENT
Complete	80	85%
Eligible But Not Completed	14	15%
TOTAL	94	100%

RESULTS

By linking survey data to application data, we were able to quantify several basic demographic characteristics of the test-out respondents. Their reported household income ranged from \$20,000 to \$228,000, with a median value of \$64,000. Home size ranged from 680 to 2,400 sq ft, with a median size of 1,300 square feet. The age of participant homes ranged from 22 to 122 years old, with an average year built of 1936.

While 80 contacts ultimately completed the email survey, not every contact answered every question. In addition, several questions were added after the first wave of surveys closed, which reduced the number of possible respondents to 32 for those questions. Therefore, in each table or question below, *N* indicates the valid number of respondents.



Awareness and Initial Interaction

We asked contacts several questions about how they heard of the program opportunity and the information they initially received. Participants reported hearing of the program through a variety of sources – the most common being newspaper articles, family or friends, and paper mailings (Table 3.3).

Table 3.3: Source of First Information about CEWP

SOURCE	RESPONSES	PERCENT (N=75)
Newspaper Article	22	28%
Friend or Family Member	14	18%
Paper Mailing	14	18%
Email/Listserv or Electronic Post/Internet	10	12%
At Work	4	5%
News	4	5%
Other [includes radio, community events, or meetings]	7	8%
TOTAL	75	100

Participants reported that their experience with the program website was positive. Almost everyone (96%) who answered the question indicated that finding the online application was easy (assigning a “4” or a “5” on a five-point scale) and 93% indicated that completing the online application was easy (Table 3.4).

Table 3.4: Initial Interaction with CEWP

HOW SUCCESSFUL PARTICIPANTS RATED THE EASE OF...	VERY HARD					VERY EASY
	1	2	3	4	5	
Completing the Online Application (N=73)	4%	1%	1%	29%	67%	
Finding the CEWP Application Online (N=74)	5%	1%	4%	31%	62%	
Finding Answers to Questions on CEWP Website (N=73)	4%	4%	14%	38%	40%	

Nine respondents offered more detailed suggestions for improvements. The most common suggestion centered on program fees – making the costs to participate easier to find and more obvious – and suggestions to provide more detailed information about the type of measures that would qualify for financing.

- *“Make it easier for initially interested parties to learn of the costs of the program upfront: the fees for the program, the set-up fee for the bank loan and the fee for testing.”*



- *“I would have liked to know more about the fees involved in the program before even filling out the application.”*
- *“Provide access, by drop-down menu, to more detailed information on measures that would qualify for financing (including qualifying for tax credits) and potential barriers (e.g., knob-and-tube wiring).”*

The Home Performance Assessment

The Home Performance Assessment, or *test-in*, uses specialized equipment to assess: air infiltration, duct system quality, the presence or absence of insulation, combustion safety, and the efficiency of existing systems. In response to suggestions from program contacts, we added a set of questions about the Home Performance test-in to the second wave of email surveys, which were completed by 32 contacts. We sought to identify contacts’ level of agreement with statements about scheduling and overall experience with their Home Performance test-in. Almost all contacts agreed that the time required for the test-in was reasonable and that it was simple to schedule; 94% responded with a “4” or a “5” on a five-point scale to both questions (Table 3.5). Eighty-four percent agreed that they appreciated the presence of their Energy Advocate.

Table 3.5: Experience with Home Performance Assessment

STATEMENT ABOUT HOME PERFORMANCE ASSESSMENT...	STRONGLY DISAGREE		STRONGLY AGREE			DON'T KNOW
	1	2	3	4	5	
The time required for the audit was reasonable (N=30)	3% (1)	—	3% (1)	27% (8)	67% (20)	—
It was simple to schedule the initial audit (N=31)	3% (1)	—	3% (1)	26% (8)	68% (21)	—
I appreciated the presence of my Energy Advocate (N=30)	3% (1)	—	7% (2)	33% (10)	53% (16)	3% (1)

Program Familiarity

Participants are notified about several aspects of the program early in their engagement, including the expectations for their home performance assessment, timelines, financing, and measure eligibility. We asked successful participants to what degree they agreed that they were informed about several CEWP components before the Home Performance Assessment (Table 3.6). Successful participants indicated being well informed about the on bill financing (95% reporting a “4” or a “5” on a five-point scale) and low-interest financing through a third-party bank (87%). Respondents reported lower levels of awareness about the thirty-day timeline (74%) and the potential that existing building conditions could require additional repairs (60%).



Table 3.6: Participants Received Information on CEWP Components

RECEIVED SPECIFIC INFORMATION BEFORE HOME PERFORMANCE ASSESSMENT THAT...	STRONGLY DISAGREE		STRONGLY AGREE			DON'T KNOW
	1	2	3	4	5	
Payments could be made through utility bills (N=79)	5% (3)	—	—	10% (8)	85% (26)	—
Low interest financing would be offered through a third-party bank (N=79)	5% (3)	1% (1)	6% (5)	15% (11)	72% (58)	1% (1)
Only certain projects were eligible for financing (N=79)	5% (5)	8% (6)	5% (5)	24% (18)	58% (45)	—
There were packages of measures that would be proposed (N=79)	4% (3)	6% (4)	9% (7)	22% (18)	55% (44)	4% (3)
The program wanted construction of projects to begin within 30 days (N=77)	5% (4)	4% (3)	11% (8)	9% (7)	65% (52)	6% (3)
Existing building conditions could lead to repairs not paid for by the program (N=79)	8% (6)	9% (7)	15% (12)	21% (17)	39% (31)	8% (6)

Motivation and Value

Respondents rated saving energy as the most influential reason for participating in CEWP (97% offering a “4” or a “5” on a five-point scale), followed by lowering heating bills and increasing the comfort of their home (Table 3.7). Making improvements as part of a larger home improvement project and decreasing noise were rated least influential.

Table 3.7: Motivation to Participate

MOTIVATION FACTORS	NOT AT ALL INFLUENTIAL			VERY INFLUENTIAL	
	1	2	3	4	5
Saving Energy (N=78)	3% (2)	—	—	6% (5)	91% (71)
Lowering Heating Bills (N=78)	3% (2)	—	6% (5)	19% (15)	72% (56)
Increasing the Comfort of their Home (N=78)	5% (4)	1% (1)	3% (2)	21% (16)	70% (55)
Increasing the Value of their Home (N=78)	17% (11)	9% (7)	22% (18)	15% (12)	37% (30)
Making Improvements as Part of a Larger Home Improvement Project (N=78)	35% (27)	15% (12)	21% (16)	10% (8)	19% (15)
Decreasing Noise (N=74)	31% (23)	12% (9)	28% (21)	15% (11)	14% (10)



Respondents also rated the value of several aspects of CEWP on a one-to-five scale (Table 3.8). The services provided by the Energy Advocate were rated most valuable (92% assigned a “4” or a “5” on a five-point scale). The services provided by the assigned contractor received the highest number of “5” ratings. In considering the top two boxes (a “4” or a “5”), the on-bill repayment option received the lowest rating, at 80%.

Table 3.8: Participant Value of CEWP Program Components

ASPECT	NOT AT ALL VALUABLE					VERY VALUABLE
	1	2	3	4	5	
Services Provided by Energy Advocate (N=77)	1% (1)	—	6% (5)	44% (34)	48% (37)	
Financing Provided (N=77)	—	5% (4)	9% (7)	27% (21)	58% (45)	
Services Provided by Contractor Assigned to Participant (N=77)	—	5% (4)	10% (8)	18% (14)	66% (51)	
On-Bill Repayment Option (N=76)	4% (3)	3% (2)	13% (10)	22% (17)	58% (44)	

Home Improvements

Forty-five contacts (56%) reported that they replaced their water heaters as part of the home improvements made through the project. Of participants who replaced their water heaters, all 45 indicated that their water heaters were working. Seven respondents indicated that their water heaters were working, but not very well. Two replaced them because the project altered venting or otherwise made the existing configuration unsafe. One participant was advised to because the other improvements wouldn't be as effective with their existing water heater. Others were interested in replacing their working units with more efficient units.

Forty-five successful participants (56%) replaced their heating systems as part of the project. Of these: four indicated that their previous heating system had failed or needed major costly repairs; seventeen indicated that their heating system was working, but they wanted to replace it anyway; and twenty-four reported that their heating system was working, but not very well.

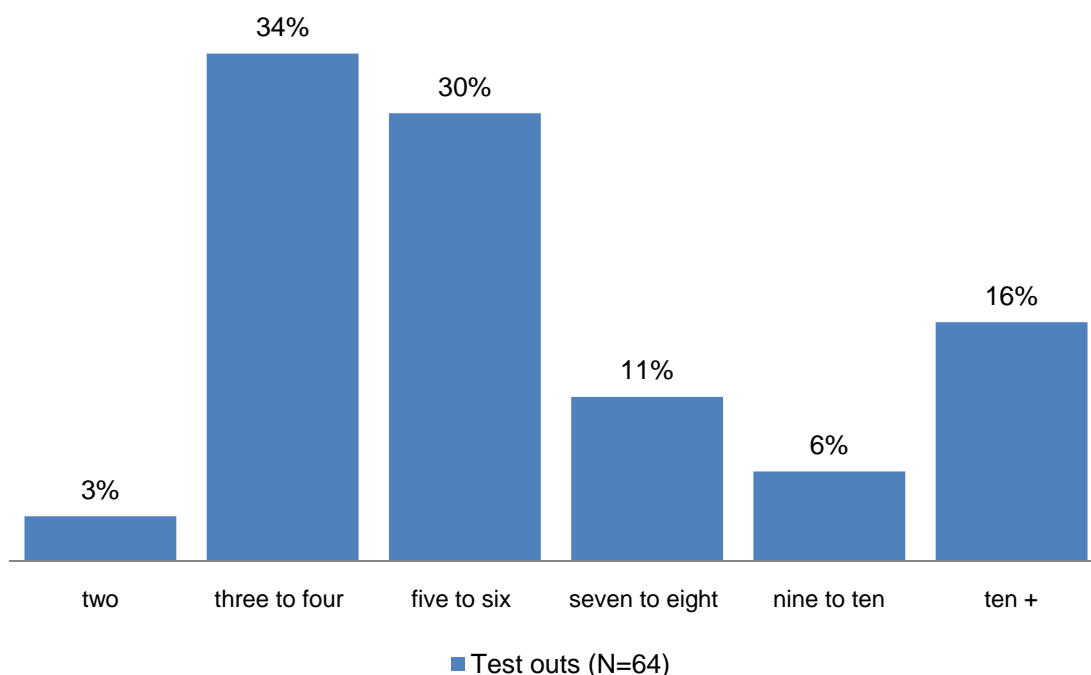
Experiences with CEWP Energy Advocates

Sixty-four contacts were able to estimate how many times they interacted with their Energy Advocate throughout their participation in the program. Most of these participants (41 of the 64) reported interacting with their Energy Advocates between three and six times. We did not define *interaction* for respondents; therefore, the estimates in Figure 3.1 should be viewed as participant perceptions, not an actual count of Energy Advocate interactions. For example, one person may



count a string of email conversation as a single interaction, while another might count each reply as a separate contact. The interactions graphed in Figure 3.1 include in-person contact, phone calls, and emails. The number of contacts reported ranges from as few as two to more than ten.

Figure 3.1: Interactions with Energy Advocate



Respondents rated their Energy Advocates' knowledge about the program, accessibility, and effectiveness (Table 3.9). Almost all contacts reported that their Energy Advocates were knowledgeable about the program (99% offering a "4" or a "5" on a five-point scale). Large majorities reported that their Energy Advocate was able to answer questions (92%), and was considerate of the participants' circumstances when presenting the bid and financing package (91%). Overall, most (85%) of the participants with completed projects indicated that their Energy Advocate met their expectations.



Table 3.9: Satisfaction with Energy Advocate

ASPECT STATEMENT...	STRONGLY DISAGREE			STRONGLY AGREE	
	1	2	3	4	5
My Energy Advocate was knowledgeable about the program (N=78)	1% (1)	—	—	27% (21)	72% (56)
My Energy Advocate was able to answer my questions or direct me to someone who could (N=78)	1% (1)	1% (1)	4% (3)	27% (21)	65% (51)
My Energy Advocate considered my circumstances when presenting the bid and financing package (N=78)	1% (1)	—	8% (6)	29% (23)	62% (48)
I was able to reach my Energy Advocate when I needed to (N=77)	1% (1)	1% (1)	6% (5)	29% (22)	62% (48)
My Energy Advocate met my expectations (N=76)	1% (1)	3% (2)	10% (8)	25% (19)	61% (47)

Experiences with Contractors

Most (87%) participants reported that their contractor completed the work on their project as proposed and 80% of contacts reported that their contractors completed work on time.

Contacts rated the accessibility, fairness, and capability of their contractors (Table 3.10). Over 80% of participant contacts agreed with all satisfaction aspects associated with their contractor (providing a “4” or a “5” on a five-point scale), except for the statement about receiving a fair bid.

Table 3.10: Satisfaction with Contractor

ASPECT STATEMENT...	STRONGLY DISAGREE			STRONGLY AGREE		DON'T KNOW
	1	2	3	4	5	
I believed the information I received from my contractor (N=77)	1% (1)	3% (2)	12% (9)	25% (19)	60% (46)	—
My contractor was able to address my concerns about the proposed work (N=79)	3% (2)	4% (3)	10% (8)	29% (23)	52% (41)	2% (2)
I was able to reach my contractor when I needed to (N=78)	6% (5)	1% (1)	10% (8)	29% (22)	54% (42)	—
My contractor considered my circumstances in his/her bid (N=78)	3% (2)	1% (1)	9% (7)	31% (24)	51% (40)	5% (4)
I received a fair bid from my contractor (N=78)	1% (1)	1% (1)	11% (8)	25% (19)	48% (38)	14% (11)



Of the 78 contacts rating the fairness of the bid received from their contractor, 11 (14%) reported not knowing if they had received a fair bid. This level of uncertainty could reflect a lack of good information about the reasonableness of home improvement project costs in general or the lack of competitive bidding in CEWP, removing the option for comparisons from which to judge reasonableness. As one contact said:

- *“I really liked my contractor; however, it would be nice if the program allowed for receiving competitive bids from multiple contractors.”*

Respondents were also asked if they had any additional comments about their experience with their contractor. Fifty-one participants offered comments. These comments were almost equally split between positive (offered by 17), negative (18), and mixed comments (16). Positive comments were the most straightforward and tended to simply state that the contractors “were great,” that they “did a lot of extra things,” or that the participant would be willing to recommend the contractor to others. The negative and mixed comments were longer and more complicated, and tended to reflect the myriad issues that emerge when homeowners pursue home improvement projects. Issues with scheduling and communication were the most commonly mentioned problem, followed by issues with the work completed, or the state of the participant’s home during or after construction.

Representative comments included:⁷

- *“We had on-going communication and scheduling problems with our contractor. We had to constantly reach out to him to get an update. He did not manage his subcontractors well and went significantly over the time frame he originally gave us.”*
- *“There were significant communication omissions with the contractor. Ultimately, the work was of good quality, but the lack of communication and coordination with the contractor became the single most difficult step in the process.”*
- *“I feel the plumbing proposal was out of line for the market. I cancelled the hot water heater on contract due to pricing. I was informed that the rates are set by the federal government and contractor had no control. I would suggest you address this issue.”*
- *“I would have preferred to get three bids and choose. If I hadn’t been doing this as part of CEWP, I would NOT have paid for the Home Performance Assessment. I knew I needed insulation...and contractors generally waive the cost of the assessment if you undertake a project with them. So I feel I spent more than I had to. As far as the work, I can’t begin to tell you how frustrating the level of incompetence was.”*
- *“I wish that the contractor had drilled holes in the outside of the house to blow in the insulation, so that there weren’t any drywall patches in the interior.”*

⁷ The full text of verbatim responses is presented in Appendices A & B.



- *“The use of the word ‘advocate’ connotes an active participant who looks out for the interests of the parties through the entire process on many different levels. Our advocate was more of a quality assurance agent, whose job is more contractor-centric assessment – which is great, in regards to quality assurance. [When] problems arose, they were answered with a ‘well, here’s their number – go ahead and work it out.’”*

As mentioned earlier, the survey of successful participants occurred in two email waves. For the second wave, several questions were added. Thus, we asked the last 31 respondents whether or not any issues emerged at final inspection. Four of the 31 (13% of those asked) reported having at least one issue emerge. These issues included: unsealed air leaks, missing vapor barriers, and an inadequate bathroom fan.

Financing and Paperwork

Nearly all (96%) of successful participants interacted with a representative of the financing firm, ShoreBank Enterprise Cascadia. Contacts rated their agreement with several aspects of CEWP financing. The highest level of agreement went to understanding how future payments will occur, with 92% of contacts reporting a “4” or a “5” on a five-point scale (Table 3.11). This was followed, somewhat distantly, by agreement that the financing process was simple (74%) and that the interest rate was attractive (72%).

Table 3.11: Satisfaction with Financing Aspects

FINANCING STATEMENT...	STRONGLY DISAGREE			STRONGLY AGREE	
	1	2	3	4	5
I understand how future payments will occur (N=78)	3% (2)	—	5% (4)	21% (16)	71% (56)
The CEWP financing process was simple (N=78)	1% (1)	10% (8)	13% (10)	26% (21)	48% (38)
The interest rate was attractive (N=78)	3% (2)	6% (5)	18% (14)	22% (17)	50% (39)

Thirty contacts (38%) reported having questions about their financing proposal or loan paperwork. The most frequent areas of concern were: clarification of loan requirements (offered by 9 participants); options regarding early repayment or extra payments (7 participants); and confusion about how incentive dollars were applied and the presence of a balloon payment at the end of the loan (8 participants). Participants noted that specific elements of the financing were problematic, including the terminology and the payment structure.

- *“As with almost all financial paperwork, it was not written in plain English, but in financial doubletalk, which is incomprehensible at best. Even the bank’s people could not adequately translate their own paper work.... It did cause stress and some uncertainty.”*



- *“I was concerned that the loan documents I signed didn't account for the energy discounts through the Energy Trust. It took a very long time for the loan officer to be able to show me how I was not signing for a loan amount that was significantly more than the project would actually cost. [The bank's] answers basically consisted of ‘Trust us.’ – which was hardly comforting.”*
- *“Only thing that was not clear is why leave the credits for the end of the loan. Paying interest on Energy Trust credits seems a little off to me.”*
- *“The rate was higher than we were promised it would be. Also, we really didn't know about a lot of the details about the balloon payment program until we went in to sign. It would have been nice to have more details on it all before going in.”*
- *“No one from CEWP, Energy Trust, or the bank ever briefed or assisted us with accessing the government tax credits that were integral to the economic logic of participating in the program.”*

The majority (81%) of successful participants reported not needing any assistance with the loan paperwork and 89% said none of the required forms was difficult to complete. Eighty-one percent of participants rated their satisfaction with the paperwork required by the program generally as acceptable, offering a “5” (55%) or a “4” (33%) on a five-point scale. We also asked contacts about if they received any assistance with program paperwork (Table 3.12).

Table 3.12: Assistance with Paperwork

EXPERIENCES WITH PROJECT PAPERWORK	YES	NO	DON'T KNOW
After your initial participation agreement, were there other forms that you had to fill out? (N=78)	82% (64)	9% (7)	9% (7)
Did your Energy Advocate complete any forms for you? (N=78)	50% (39)	17% (13)	33% (26)
Did the contractor complete any forms for you? (N=78)	36% (28)	27% (21)	37% (29)

Overall Satisfaction

Participant contacts with completed projects reported high levels of overall satisfaction with CEWP, with 88% of participants rating their overall satisfaction a “4” or a “5” on a five-point scale (Table 3.13).



Table 3.13: Overall Satisfaction

OVERALL SATISFACTION WITH CEWP EXPERIENCE	VERY DISSATISFIED					VERY SATISFIED				
	1	2	3	4	5	1	2	3	4	5
Please rate your overall satisfaction with the CEWP experience (N=77)	1% (1)	3% (2)	8% (6)	33% (26)	55% (43)					

Most (95%) of the successful participants indicated that they would recommend the CEWP program to family and friends. Although overall satisfaction was high, 42 successful participants suggested program improvements. The most common suggestions (offered by 12 of the 42) centered on improvements to the financing experience.

Suggestions for improvement to the financing aspect included:

- *“Provide more details about financing. We were told 5%. The bank came back with 5.378%, not telling us that the .378 covered their ‘expenses’ to close the loan for us. And our loan representative wasn’t exactly a ray of sunshine. The bank part of it all was the worst experience.”*
- *“Lower the interest rate – maybe offer more options from other banks...”*
- *“The bank’s paperwork was the only sticking point. I have a master’s degree and it was incomprehensible. Especially when you’re financially challenged, it’s frightening to see terms like ‘balloon payment.’ The fact that the bankers cannot even explain what that means or why it’s there is disturbing. I had to go on trust from the program representative that it would go away when the incentive kicks in.”*
- *“[Develop] clearer information about the loan process or [consider] a different bank.”*

Other suggestions included:

- ➔ **Increase quality control both during and after home improvements** – offered by five contacts. Comments of this ilk included requests for inspection after the work is complete to verify quality and effectiveness.
- ➔ **Facilitate better communication between contractors and participants** – offered by five contacts.
 - *“Improve communication overall. There was some confusion between us and the contractor. They called to cancel on a Monday, and we didn’t even know they were planning on coming.”*
 - *“I would like to have had more involvement with the contractor during the installation.”*



- Allow competitive bids for projects rather than assigning one contractor – offered by five contacts.
- *“Add competitive bids. I realize the Energy Advocate is there to help oversee that, but I would feel more comfortable if at least one other contractor bid the project.”*
 - *“Allow people to vet their own contractors and make their own deals. My Advocate said he could tell if the bid was within normal limits, and that was part of his role, but I'd rather have three bids and make people compete for my business more. I think I would have saved money.”*

In the second wave of surveys with the successful participants, we asked participants if their participation in the CEWP gave them a better understanding of how to reduce their energy use. Of the 30 participants who responded, 24 (or 80%) agreed that the program was helpful (Table 3.14).

Table 3.14: CEWP Influence

CEWP INFLUENCE STATEMENT...	STRONGLY DISAGREE					STRONGLY AGREE				
	1	2	3	4	5					
The CEWP experience gave me a better understanding of how to reduce my energy use (N=30)	7% (2)	—	13% (4)	37% (11)	43% (13)					

SUMMARY

Participants that had successfully navigated the program and completed a project through CEWP as of July 1, 2010, were generally satisfied with their experience and reported valuing the services of their Energy Advocate – with virtually all of them reporting that their Energy Advocate was knowledgeable about the program and large majorities agreeing that their Energy Advocate could answer questions and considered their circumstances when presenting the bid and financing. These participants reported seeking to save energy, lower their heating bills, and increase the comfort of their homes as almost equal reasons for pursuing projects through CEWP.

Over 60% reported interacting with their Energy Advocate at least five times and a third required more than seven interactions. However, the lowest level of satisfaction (at 85%) was assigned to agreement that contact’s Energy Advocate met their expectation. This, coupled with the level of interaction with the Energy Advocate, could reflect high expectations on the part of CEWP participants that their Energy Advocate will help them assess bids and equipment, complete paperwork, and ensure quality.



Successful participants were satisfied with their contractors, but at somewhat lower levels than with the Energy Advocate. Contacts mentioned issues communicating with contractors about scheduling, expectations, and project details. Successful participants reported high levels of overall satisfaction with CEWP and 95% said that they would recommend the project to a friend, family member, or colleague.

Despite high overall satisfaction, participants offered suggestions for improvement, especially for the financing process. Comments from these participants in some cases reflected confusion about the financing process and the need for additional information to understand how their loan would work. Several contacts remained unclear about balloon payments and how Energy Trust incentives would be applied to their loans.



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4 DROPOUTS

This chapter presents the results of telephone surveys with participants that had a Home Performance Assessment through CEWP, but withdrew from the program without completing a project.

METHODOLOGY

CEWP program staff provided the research team with a list of 86 people who had entered the program and completed a Home Performance Assessment, but had dropped out without completing a project as of July 1, 2010. This list was cross-checked against the previous email survey lists. After removing those whom we already had contacted, we had 67 unique contact names.

Working with Energy Trust and CEWP staff members, the research team developed a survey instrument designed to document participant experiences, understand their reasons for leaving the program, and identify any energy-saving upgrades or purchases they had made (or planned to make) because of their interaction with CEWP. Phone surveys occurred between July 12, 2010, and July 23, 2010. Ultimately, surveys were completed with 33 contacts, which is a response rate of 49%. Of the 33 contacts, nine entered the program in Phase II, 23 entered in Phase III, and one entered in Phase IV (Table 4.1).

Table 4.1: Dropout Survey Final Disposition

OUTCOME		COUNT	PERCENT
Complete		33	49%
Eligible but Not Completed, or Eligibility Unknown	Refused	1	2%
	Not complete	31	46%
Not Eligible	Denied dropout status*	2	3%
TOTAL		67	100%

By linking survey data to application data, we were able to quantify several basic demographic characteristics of the dropout respondents. Their reported household income ranged from \$30,000 to \$200,000, with a median value of \$72,500. Home size ranged from 647 to 3,000 sq ft, with a median size of 1,600 square feet. Their home's age ranged from 1895 to 1984, with an average age of 1943.



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RESULTS

Awareness and Initial Interaction

Contacts reported first hearing of CEWP in a variety of ways. The most common sources were friends and family members or a newspaper article (Table 4.2).

Table 4.2: Source of First Information about CEWP

SOURCE	RESPONSES	PERCENT
Friend or Family Member	9	28%
Newspaper Article	8	25%
Utility Communication (mailing or website)	5	16%
Email/Listserv or Electronic Post	5	16%
Other [includes radio, community events, or meetings]	5	16%

Contacts reported that completing the online application and navigating the CEWP website were easy, but they had more difficulty finding answers to their questions on the website (Table 4.3).

Table 4.3: Ease of Initial Interaction

HOW DROPOUTS RATED THE EASE OF...	VERY HARD					VERY EASY
	1	2	3	4	5	
Completing the Online Application (N=33)	3% (1)	—	12% (4)	21% (7)	64% (21)	
Navigating the CEWP Website (N=31)	—	—	26% (8)	26% (8)	48% (15)	
Finding Answers to Questions on the CEWP Website (N=28)	4% (1)	18% (5)	36% (10)	14% (4)	29% (8)	

Twelve of the 33 contacts (36%) offered comments about their experience with the CEWP website or had suggestions for improvements to it. Seven of the 12 respondents specifically described needing more, or more specific, information about what to expect from the program, the interest rates, and restrictions on fuel switching.

- *“I needed more information about what to expect from my experience with the Energy Advocate and contractor. It wasn’t easy for me to understand the different programs – or how the funding was different for larger and smaller projects.”*
- *“The content wasn’t as specific as I needed. I wanted to know that this wasn’t really about trying to give incentives for sustainability. I would rather have known that the program really was about giving people jobs – including bringing people from Bend here*



to do the work. I had no way to get real info about specific furnaces and water heaters and which was better and why. I would have liked more options.”

- *“We were hoping to see transparent information up-front about costs. On the website, it painted a picture of a program that was too good to be true. Initially, we were really excited.”*

Seventy percent (23 of 33) of dropout respondents reported that they were first contacted by their Energy Advocate (14 of 33) or another program representative (9 of 33). Two contacts believed they were contacted by Energy Trust staff and the remainder (8 of 33) could not recall who first contacted them to schedule a Home Performance Assessment. All dropout contacts reported knowing that an Energy Advocate would be assigned to them. Ninety-seven percent reported knowing that they needed to be present for the Home Performance Assessment, and 94% reported receiving information about the financing package and process. Seventy-three percent (24 of 33) of dropout contacts reported being told they would need to be present during an inspection after construction.

Two contacts offered additional comments about the level of information related to financing. One noted that general financing information was provided early in the process, but the details were not clear until he had progressed “quite far into the process.” Another said that, “The financing was the big bone of contention. It was foggy.”

A third contact described being confused “about who everybody was.... The first person I remember speaking with was a woman from the program. The next was a woman from the contractor, who asked me: ‘How willing would you be to spend \$15,000?’”

Experience with Energy Advocate

All 33 of the dropout contacts reported interacting with their Energy Advocate. Using a one-to-five scale (where one means “strongly disagree” and five means “strongly agree”), contacts rated their Energy Advocates on four aspects (Table 4.4). Contacts assigned the highest ratings to their Energy Advocate's knowledge of the program, and agreed the least with the statement, “*My Energy Advocate considered my circumstances when presenting the bid and financing package.*”



Table 4.4: Satisfaction with Energy Advocate

ASPECT	STRONGLY DISAGREE			STRONGLY AGREE	
	1	2	3	4	5
Knowledgeable about the program (N=33)	—	3% (1)	6% (2)	30% (10)	61% (20)
Reachable when needed (N=33)	—	6% (2)	6% (2)	33% (11)	55% (18)
Able to answer all my questions (N=33)	—	6% (2)	27% (9)	21% (7)	46% (15)
Considered my circumstances when presenting the bid and financing package (N=30)	13% (4)	10% (3)	7% (2)	23% (7)	47% (14)

Twenty-seven contacts offered additional comments about their interaction with their Energy Advocate. Twenty-one of them offered positive comments. Typically, these were brief and focused on interpersonal communication skills, such as that the Energy Advocate was friendly or knowledgeable. These comments included:

- *“He was great. He has a nice personality, is very knowledgeable and followed through. He inspired trust.”*
- *“He was great at communicating with us. The reason we said ‘no’ had nothing to do with our interaction with him or the contractor.”*
- *“He was really knowledgeable and committed, and also laid-back. In every situation where there was something I needed, he’d find a solution that worked for me. I felt like he was starting to be my best friend. It’s a fabulous program, even though I didn’t continue.”*

Twelve of the 27 (including 8 contacts who also gave positive comments) expressed concerns or had complaints about their Energy Advocate. These comments were lengthy and focused on the cost of the project, the level of information provided, and, in some cases, feeling pressured by the Energy Advocate. These comments included:

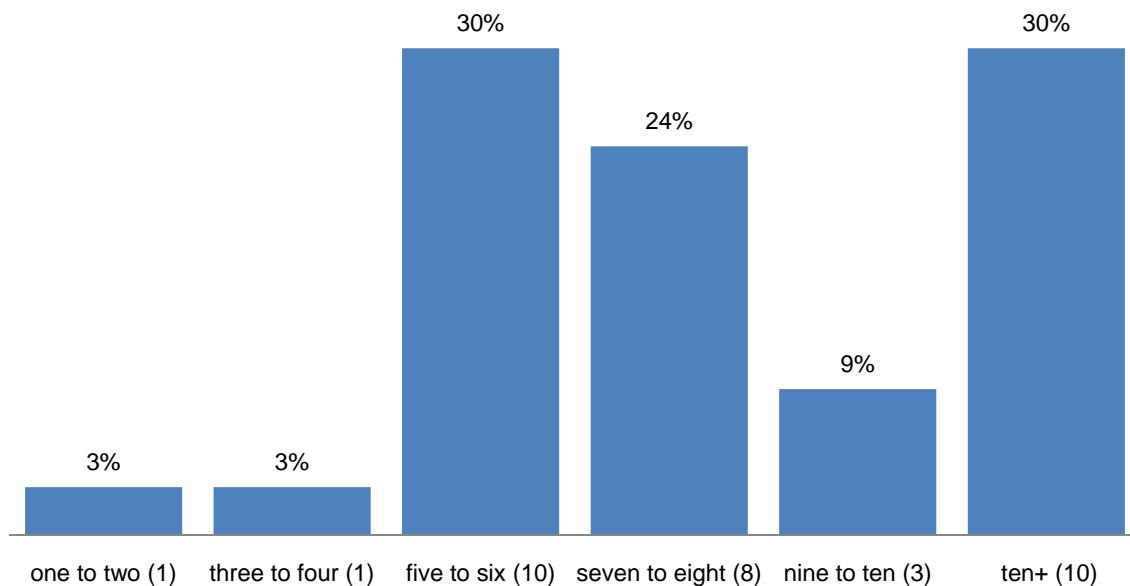
- *“I decided they were just trying to sell me a package. They were nice people, but they (the Energy Advocate and contractor) were friends. When they sent me the report, the heater cost \$7,000, but my neighbor said it should have been about \$3,000. By having one particular contractor assigned to the client, the client is at a big disadvantage. I asked the woman from the program about having a bid from a second contractor, but she said to continue with the one I was assigned. And then these two guys were friends.”*
- *“I don’t feel like he was advocating for me; I feel like he was advocating for the contractor. I raised my concerns in detail, but he didn’t attempt to address them. I didn’t see any initiative on his part to rectify the situation or address the concerns.”*



- *"He was really nice. He kept saying that he was there to make sure that the contractors did their job. But I also felt like I was being sold a program; it was a lot of money at a really high interest rate. When I voiced some concern about that, I didn't feel totally supported by him. I wanted to do only part of the program, but my energy savings wouldn't allow me to participate if I didn't do all the recommended things. He did do some research about my usage that was very helpful."*
- *"He was technically very knowledgeable, but he didn't follow up on my concerns. Actually, I thought I was still in the program. I've learned that there's a second, similar program in my neighborhood, and I've signed up with them. It's run by the Metropolitan Alliance for the Common Good, and it's offering similar energy efficiency options for 500 households in the Cully neighborhood in NE Portland. I understand it's using federal stimulus money. Since I did the furnace [on my own], I needed only \$3,000-\$4,000 in energy efficiency work. The (CEWP) loan initiation fee was \$300-\$400, which was a lot – about 10% of the total loan."*
- *"He was belligerent. When I had an objection, he said, 'So what are your intentions?' as if I HAD to decide to participate before he'd answer."*

We sought to document the level and frequency of interactions between participants and the Energy Advocates. More than half of the dropout contacts reported communicating with their Energy Advocate seven or more times (Figure 4.1).

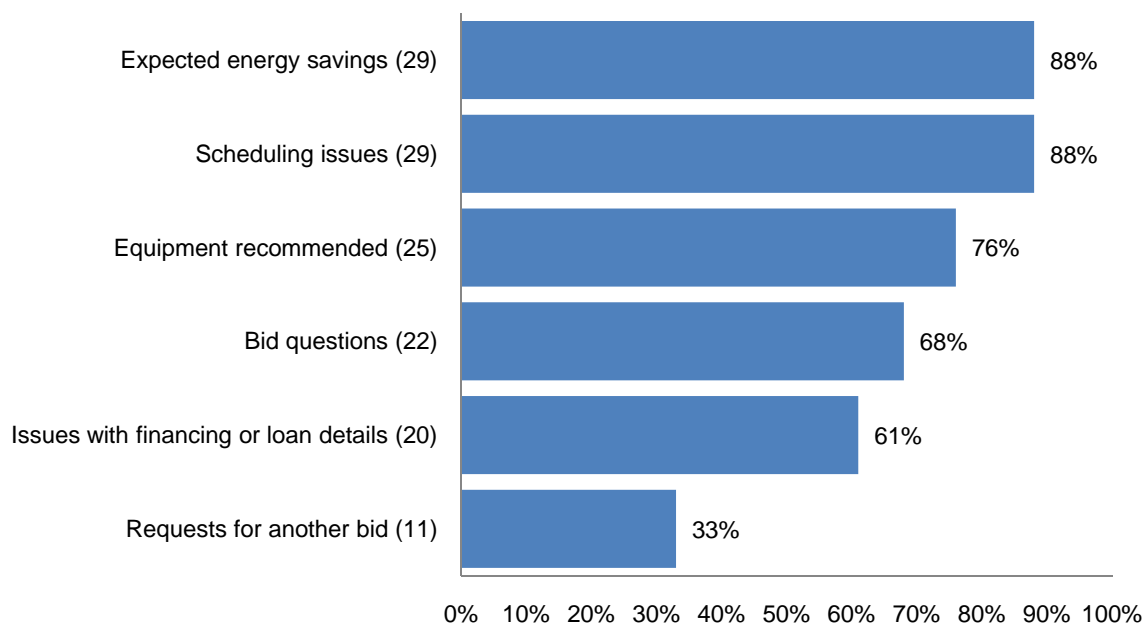
Figure 4.1: Number of Times Contact Communicated with Energy Advocate (N=33)



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When asked if any topics required more communication than others, 31 of the 33 contacts mentioned specific topics (**Error! Not a valid bookmark self-reference.**).

Figure 4.2: Topics Discussed with Energy Advocate (N=33)



The most common topics they discussed with their Energy Advocate were: financing, fees, and loan terms; bid details; specified equipment; expected energy savings; and scheduling (Table 4.5).

Table 4.5: Topics Requiring Most Communication (Multiple Responses Allowed)

TOPIC	NUMBER OF MENTIONS
Financing, Fees, and Loan Terms	11
Content and Details in Bids	9
Equipment Specified	8
Expected Energy Savings	5
Scheduling	3



Illustrative Comments

To provide additional insight and avoid losing the nuance contained in the comments provided by dropout contacts, we provide several examples for each of the typical discussion topics listed in Table 4.5. It is worth noting that topics discussed with Energy Advocates also reflect discussions with or questions for contractors. This is not surprising given the Energy Advocate's central role in program coordination and communication.

- ➔ **Financing topics**, mentioned by 11 contacts, included: the need for alternatives to CEWP-provided financing; lack of clarity about how the fees and incentives were incorporated into loan terms; how the loan would be tied to the existing mortgage; and how the project caps affected interest rates.
 - *"I was never clear about the different caps and financing rates. I asked for the information, but they gave me a quick answer and kept going. I sensed they understood the information, but they didn't take the time to explain it to me."*
 - *"The financing needed more communication. It was the \$900 in fees we were concerned about."*
 - *"The bid and the financing are two of the reasons we opted out, and were the reasons for most of our communication. When we asked about Energy Trust incentives and how we would receive them, we learned that the incentives would be applied to the \$600 cost of the test-in and test-out. That was a red flag for us, because I could get a less expensive assessment from someone else. Because it was a pilot program, they hadn't dealt with those issues yet."*
- ➔ **Questions about bids**, mentioned by nine contacts, included: concerns about what was included in the bid and the equipment specified.
 - *"We had conversations about tweaking the bid they first proposed, to try to trim the costs so it wasn't such a shock. We were trying to figure out what we could and could not afford."*
 - *"We went back and forth on the bid and financing. I didn't want to use the financing. We ended up waiting to do the energy efficiency measures."*
 - *"I requested another bid because the contractor didn't do the complete testing in my house, and they didn't share the assessment with me."*
 - *"When they tested our home and sent us the results, they told us our home was not very inefficient. They said there were maybe two things that could be done. But, when we got the list and the bid, there were about 6 or 7 things on the list. It was astronomical; it was almost laughable."*
 - *"The big issue was the sticker shock we felt about the amount of money for the amount of work to be done. We're an unmarried couple with no kids. How are*



other folks in Portland with kids and who are making less money than we are able to participate? How do they make it when the quotes come out and they get the bid?"

➔ **Needing more detail about equipment specified or wanting equipment other than what was specified** was mentioned by eight contacts.

- *"They tried to steer me into considering a new furnace and I said I wanted an electric heat pump. The contractor made arrangements to have someone come back and give me a bid to do the work, but not through the program. I didn't hear from them for a month, and they never gave me a new bid."*
- *"I had questions and never got answers about equipment, too. I wanted to talk to the subcontractor about the furnace and to discuss the removal of the big old octopus furnace I have – which required dealing with asbestos. The subcontractor was a friend of theirs. I wanted to call him, but didn't get his card. It started to feel like they were all in cahoots."*

➔ The next most common reason for communication with the Energy Advocate, offered by five contacts, was to **understand expected energy savings**.

- *"I don't recall that the bid for what they would do and what it would cost showed estimated energy savings. I said 'Guys, why would anyone pay thousands of dollars for energy efficiency items without knowing what kind of savings they can expect?' So they added some information to the bid just for me. I know the margin of error for this kind of software is high. But the fact that it wasn't included in the proposal was a concern."*
- *"We didn't really get an answer to our questions about energy savings. We didn't really cover the relationship between the cost savings and the payment. Our goal was to get a cash-flow-neutral project."*

Regardless of the issues dropout contacts discussed with their Energy Advocate, 70% of them reported that they were satisfied with their Energy Advocate, rating them a "4" or a "5" in a five-point scale (Table 4.6).

Table 4.6: Overall Satisfaction with Energy Advocate

SATISFACTION WITH ENERGY ADVOCATE	VERY UNSATISFIED			VERY SATISFIED	
	1	2	3	4	5
Overall Satisfaction (N=33)	6% (2)	9% (3)	15% (5)	24% (8)	46% (15)



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Interaction with CEWP Contractor

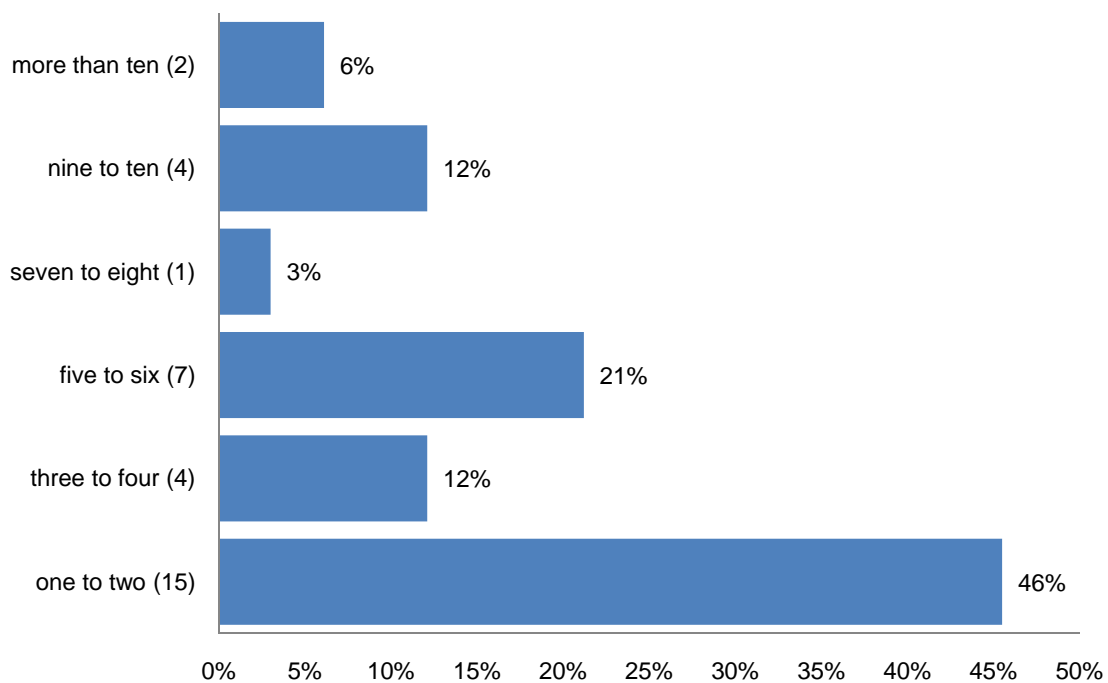
All 33 of the dropout contacts reported interacting with their contractor. Using a one-to-five scale (where “1” meant strongly disagree and “5” meant strongly agree), contacts rated their contractor on three aspects (Table 4.7).

Table 4.7: Satisfaction with CEWP Contractor

ASPECT	STRONGLY DISAGREE			STRONGLY AGREE	
	1	2	3	4	5
My contractor was able to answer all my questions (N=33)	12% (4)	3% (1)	18% (6)	12% (4)	55% (18)
My contractor considered my circumstances when presenting the bid and financing package. (N=32)	13% (4)	13% (4)	6% (5)	19% (6)	41% (13)
I was able to reach my contractor when I needed to. (N=25)	12% (3)	—	20% (5)	24% (6)	44% (11)

We also sought to understand the number of times dropout contacts interacted with their CEWP contractor (Figure 4.3). Recall that these contacts did not have any equipment installed through the program.

Figure 4.3: Number of Times Respondent Communicated with Contractor



We asked contacts if they had any comments about their experience with their CEWP contractor. Thirty-one of the 33 contacts offered comments. Three specifically noted that they had almost no contact with their contractor – that almost all of their contact with the program was through their Energy Advocate. Eleven had only positive comments about their contractor. In general, these comments were brief and focused on the professionalism and knowledge their contractor seemed to have. These comments included:

- *“They only came out to do the assessment and get information for the bid. They were really nice; I liked them.”*
- *“They really bent over backwards trying to make this work. And I know it was a big disappointment for them that I couldn’t continue. I think they did a good assessment; they were very no-nonsense and personable.”*
- *“I really felt they were knowledgeable and willing to explain what they were finding during the test-in. There was a nice rapport between them and the Energy Advocate. When some of my paperwork seemed to have disappeared, they were very apologetic and were quick to get it right. We hired them to do some work, but outside of the program.”*

Seven contacts had mixed comments – often starting with a positive comment about the contractor and then describing problems they experienced. These comments were more lengthy and nuanced. Comments of this type included:

- *“It was interesting to see them work. I learned a lot from them. They seemed really good. I just wish their quote had been lower. We have a small house, and their quote seemed inflated. The bid spooked us; I thought we could do some of this work on our own for a third of the cost. Plus, we would have had to pay \$300 to the contractor, \$300 to CEWP, and \$300 to the lender just to start the process. The quote was \$6,000 for complete re-insulating and buffering (caulking and weather-stripping) of the basement, and insulation in the attic, and a little bit of insulation blown into the walls.”*
- *“He answered all of my questions well. I’d drink a beer with him. My problem is with the system. I understand that it’s a pilot program. I’m glad you called – it’s nice because we were considering writing an email to the program. They should explain up front that I could not shop around for other contractors. The City should have many more contractors on the list than the seven they offered us. If they assign a middleman to you, you are at a disadvantage, because they don’t really represent you.”*
- *“I was satisfied with his concern about environmental things and that he was respectful of the property. I was less satisfied with the details of what he was going to do. If we’d done all the things on the list, it would have increased our energy bills by \$125 a month. We weren’t sure we wanted to do all of the things they recommended. After we revised the list of things to do, they told us we wouldn’t qualify for the financing. This wasted time for us and for them. Also they presented the bid for an energy-efficient water heater*



and furnace. We didn't want to do both. They presented them to us tied together in order to receive the Energy Trust incentives.”

Ten contacts had primarily negative comments, which typically involved communication issues and skepticism about the cost of the proposed project or the equipment recommended. These comments also were somewhat lengthy, and included:

- *“It seemed like they wanted to spend as much of my money as possible – to increase the bill – and didn't consider the total debt I would have. Instead, they focused on the monthly payment, which was not as important to me. They really didn't listen or understand my situation. For example, they wanted to replace the water heater and would have had to tear out cabinets [to do so]. That would have been about \$2,000. I called George Morlan for another bid and they came in at about \$600.”*
- *“I felt like they were slightly sales-aggressive. He proposed things that were unrealistic. He strongly suggested that we replace our water heater, but we chose not to because it wasn't cost-effective for us.”*
- *“I asked why the bid was so high. The Energy Advocate said it's because the contractor knew so much more about energy efficiency, so I needed to pay extra for that expertise. It all seemed unnecessarily complex and confusing.”*
- *“I felt that he was really aggressive in trying to sell me more services and work than I thought would be included in an energy efficiency program. I felt that anytime I balked at something, he challenged my position or ideas.”*

As shown in Table 4.8, dropout contacts rated their overall satisfaction with their contractor slightly lower than the Energy Advocate, with 66% reporting they were satisfied (offering a “4” or a “5” on a five-point scale).

Table 4.8: Overall Satisfaction with Contractor

SATISFACTION WITH CONTRACTOR	VERY UNSATISFIED					VERY SATISFIED				
	1	2	3	4	5	1	2	3	4	5
Overall Satisfaction (N=33)	12% (4)	3% (1)	18% (6)	24% (8)	42% (14)					



Experience with Financing Proposal

Nineteen of the 33 dropout contacts reported receiving a financing proposal or loan paperwork.⁸ Fifteen of the 19 reported having questions or concerns about the financing package. The most common concern, voiced by 6 of the 15, was that the interest rate was unattractive. This was followed by concerns about fees (5 of the 15). Three contacts described being focused on total or net costs of the project, not the financing terms. Two other dropout contacts had questions about how the incentives were applied.

- *“My questions were about why we would want to finance with ShoreBank in particular and why we needed to pay the \$900. We were fortunate that we had the money the bank so we could pay for the work, and that we have a line of credit. We had no reason to add \$900 to a job costing less than \$10,000.”*
- *“I trimmed down a lot of elements in the proposal and realized that the capital I needed would be very low. I wanted to see if I could proceed without the financing. I was told I couldn’t. I thought that was kind of silly, so I quit the program then. I did the energy upgrades recommended in the HP assessment on my own with an outside contractor. I definitely used the suggestions in the audit, and the bid was about the same. But, because I didn’t have to finance it, I saved a ton of money, including the loan origination fees.”*
- *“We knew that there would be fees for the Home Performance Assessment and a loan origination fee. But then there was another \$300 fee, I think just for being in the program. That irritated me. I don’t like surprises.”*

Point of Dropout

All but one of the respondents confirmed that they had dropped out of the program, and each of the 32 remaining contacts were asked to describe the point at which they decided not to go forward with their project through the CEWP. Twenty-four of the 32 contacts reported dropping out after receiving their bid proposal. Six reported dropping out after reviewing loan documents and one decided to drop out before he received a bid.

Contacts described several reasons for dropping out of the program. The most common reasons had to do with the overall cost of the project (offered by 19 contacts) and the financing details (offered by 11). Comments about these topics were detailed and in some cases reflected frustration:

⁸ Because the financing details often are included in the bid package, it is possible that in some cases contacts were thinking of the details as described in the bid and that they hadn’t actually received financing documents from SBEC. Nevertheless, their questions or concerns are important to document.



- *“It was too much money over too much time. Also, my Energy Advocate was evasive when I asked about energy savings. He said that my bills might not go down. I just don’t make enough money to invest in something like that. It’s a program for rich people.”*
- *“I started to get wiggled out about having to spend money to seal the house and then having to spend money to install fans to improve indoor air quality. The estimate for the blown-in insulation was much higher than the other estimates I’d gotten – I ended up getting that done by another contractor for significantly less cost.... The final thing was that, of course, everything was tied to the financing and since I could have gotten financing from other mechanisms at a better rate and all the other incentives would still be available, the financing package didn’t appeal to me.”*
- *“I thought the contractor’s prices were expensive, and the requirement to put in a new water heater when mine is only 10 years old. If they had been willing to leave the water heater, I might have said ‘Oh well,’ and done the work.”*
- *“Part of my frustration is my understanding that the federal government is trying to use incentive dollars to put people to work. But I have access to 4.5% home equity money, so I don’t need this program’s higher priced loans – and the feds are helping banks and low-income people, but they are asking me, who has been out of work and wants to green up our home, to pay \$10,000 to do this work. I’d have been more willing to jump on board if they had been more willing to share the wealth with me and make it more affordable.”*
- *“When I checked the bid against other prices online, and asked my friends, I realized the equipment was too expensive. When I asked why the program existed, the Energy Advocate and the contractor said it was a jobs stimulus program. I realized I was in the wrong program; the title was misleading and I felt disappointed that the city had its name on the program.”*
- *“I asked the program people: ‘That’s going to be \$7,000 for a heating system and the weatherization will be about \$5,000?’ She said ‘yes’ and tried to get me to continue, but I was done at that point.”*

Subsequent Activity

Seventeen of the 33 (52%) dropout contacts reported making home improvements or taking other actions to reduce their home’s energy use after they dropped out of the program. When asked to describe what they had done, eight reported adding insulation, six mentioned other weatherization efforts (duct sealing, weather-stripping, caulking, or venting), four mentioned windows, and three mentioned installing CFLs. One contact reported making other sustainability improvements like gardens and bee hives.

An additional twelve contacts reported that they hoped or planned to do something in the future. Five of these said they intended to install insulation, while three intended to add other



weatherization measures, and two mentioned changing their water heater. The rest mentioned a variety of projects, including appliances, roofs, duct work, electrical upgrades, and rain barrels.

Suggested Changes

Contacts were asked what, if any, changes would have led them to continue with the program. The most common response, mentioned by 14 dropouts, was better financing options, followed closely by improved program flexibility. The two issues were often mentioned together, as illustrated by comments below:

- *“It’s a great program, I’d like to participate. However, some of the recommended actions were intended to get us to a certain, lower interest rate. For instance, I would have had to install a new water heater. I don’t need one. I have an old furnace, but it works fine. If I decided not to get the new furnace, the loan rate would have been even higher. If we could have participated by just putting insulation in the walls, attic, and basement, and gotten a good loan rate, I would have done it.”*
- *“Maybe if there were different financing options. Also if we could have done just part of the work – like the one thing we could afford that would have given us the greatest benefit, which was insulating the duct work under the house.”*
- *“If I’d had the ability to pick and choose which items I wanted to proceed with, and the ability to negotiate interest rates.”*
- *“If they would have offered an option where it wasn’t financed through a bank – where I could have used my own money, or money from a better source.”*
- *“We [were told] we had to do a certain amount of things, spend a certain amount of money to qualify. It would have been nice to get part of it done at least.”*
- *“We would have liked to qualify for the program with the measures we decided to do. It would have helped if we could separate the water heater and the furnace [in order to get the] Energy Trust incentives.”*

Comments about financing and flexibility were followed by comments about cost (including fees). Project costs were mentioned 11 times, and in some cases overlapped with comments about financing:

- *“It’s set up for a different scale of work than ours. And, obviously, the fees were disproportional to the scale of work we wanted to do.”*
- *“I can’t tell you how excited we were about this program. We could have been cheerleaders for the program. We would have continued if we had gotten a more reasonable estimate and a little more awareness on the part of the Energy Advocate we interacted with.”*



- *“I would have liked more incentives through the stimulus money to cut the price in half, which would signal to me that the government really is trying to create jobs AND help me.”*
- *“The pricing has to be in the ballpark of other contractors'. When someone told me it's not just about insulating your home, but it's about putting people back to work, it seemed like I was being taken, especially when the cost was at least double what I can get someone else to do the work for.”*

In a second question about any other recommended changes, 23 contacts offered suggestions. Generally, these mapped their previous comments and focused on two topics: offer more flexible ways to finance projects (including choosing another lender, improving the terms, and allowing people to move forward with smaller projects), and expand the program to include solar installations or window replacements.

Finally, we sought to identify the components of CEWP thought to be most valuable to participants. Contacts rated six program features on a one-to-five scale where “1” means not at all valuable and “5” means very valuable (Table 4.9). The information obtained from the Home Performance Assessment (when provided) was rated most valuable, followed by the presence of an Energy Advocate. The financing features were considered least valuable; just 31% of respondents rated this a “4” or a “5.”

Table 4.9: Value of CEWP Program Components According to Dropouts

ASPECT	NOT AT ALL VALUABLE			VERY VALUABLE	
	1	2	3	4	5
Information from HP Assessment (N=33)	12%	0%	12%	18%	55%
Energy Advocate (N=33)	6%	9%	12%	12%	58%
On-Bill Repayment Option (N=31)	10%	13%	6%	10%	61%
Incentives Available from Energy Trust (N=33)	12%	9%	15%	18%	42%
Contractor Assigned to You (N=33)	9%	6%	27%	27%	27%
Financing Features (N=32)	22%	22%	22%	16%	16%

SUMMARY

Dropout contacts offered extensive and complicated descriptions about their experience with CEWP. The most common reasons for dropping out centered on the cost or scope of work proposed and access to better financing. Several contacts mentioned pricing specifically and received information indicating that job creation was driving the program, rather than energy efficiency.



Suggestions offered by program dropouts reflect the need for more transparency: how the project works; the relationship between the Energy Advocate and contractor; pricing and bid options; and flexibility – particularly in financing options, partial payments, opportunities to avoid fees, and access to better terms.

Dropout contacts valued the information in the Home Performance assessment and a large portion reported taking subsequent action (or intending to take action) to improve their home's energy use.



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CONCLUSIONS AND RECOMMENDATIONS

In June 2009, using a \$3.2 million award from the federal American Recovery and Reinvestment Act (ARRA), the City of Portland, in collaboration with Multnomah County and Energy Trust of Oregon, launched a pilot residential energy efficiency program called *Clean Energy Works Portland* (CEWP).

The CEWP pilot tested a program approach expected to create local jobs while cutting household energy use and reducing carbon emissions. The CEWP pilot was expected to provide low-interest, long-term financing to 500 homeowners for pre-approved energy efficiency improvements to reduce their annual household energy use by at least 10%. Options ranged from basic weatherization upgrades to more comprehensive Home Performance measures, including: insulation; duct and air sealing; and efficient water heaters, furnaces, or heat pumps.

In the pilot program, each participant was assigned an Energy Advocate and a CEWP-approved contractor. Energy Advocates provide information to homeowners and support to contractors. Contractors are responsible for conducting a Home Performance Assessment, preparing a bid for the improvements identified in the assessment, and installing the approved measures. Homeowners must finance the projects through a loan from the program's sole lender, ShoreBank Enterprise Cascadia (SBEC). Homeowners will repay the loans over 20 years on their heating utility bill.

In August 2009, Energy Trust of Oregon contracted with Research Into Action, Inc. to provide evaluation activities in rapid succession as CEWP was launched and processes evolved. This report summarizes three waves of CEWP pilot project evaluation activities conducted between August 2009 and July 2010, and synthesizes the experiences of and lessons learned by participants, staff, and contractors. The waves generally corresponded to the first three phases of CEWP and mapped the program's growth from fewer than 50 participants to well over 200. Each of the waves included unique combinations of survey populations, program documentation, and analysis of program status documentation.

CEWP launched with a limited 50-home test pilot and built steadily upon that experience in rolling phases that allowed the program to adjust terms and screening, recruit additional Home Performance contractors, and build on experience with the program without a gap in program activity. After the gap between Phase I and Phase II in October 2009, each of the subsequent phases overlapped.



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FINDINGS

Successes

In the first year of operation, those involved in the CEWP pilot program worked through many process and policy issues to establish a program model stable enough to earn a \$20 million dollar award through the Energy Efficiency Community Block Grant (EECBG) process established in ARRA. This funding will support an expanded version of the program, *Clean Energy Works Oregon* (CEWO).

CEWP involved multiple organizations and thus required extensive collaboration. The CEWP Steering Committee and other stakeholders to date have successfully navigated the requirements of this collaborative effort, and continue to work together toward meeting existing and expanded goals for both CEWP and the larger CEWO effort being planned for 2011.

The CEWP website serves as an effective portal for interested homeowners and applicants, providing basic information about what to expect from the program and obtaining the information required to process applications. In the first year of operation, CEWP staff refined the process and simplified the application. A pre-screening step added after the pilot program's initial phase improved the likelihood that homes with problematic existing conditions (such as knob-and-tube wiring) would be excluded early enough to avoid unnecessary costs.

The program trained a cohort of Energy Advocates capable of explaining CEWP features to applicants and assisting them in understanding the bids they receive from contractors. CEWP has steadily expanded the number of qualified contractors authorized to conduct Home Performance Assessments and complete energy efficiency projects through the program. In September 2009 there were six contractors enrolled; by September 2010 this had grown to 16.

Finally, the program has provided home assessment services to over 500 Portland homeowners and completed projects in more than 200 homes. While not every home receiving a Home Performance Assessment ultimately installed measures and accepted financing through CEWP, a substantial portion of those that dropped out of the program reported that they had completed a retrofit project or intended to take action to reduce their home's energy use subsequent to their CEWP involvement. Saving energy is an important motivation for CEWP participants, many of whom reported seeking information on the energy savings they could expect from their projects.

Remaining Issues

As CEWP evolves from a Portland-based pilot project to a statewide program, improvements to data tracking and reporting will be required. The program does not operate with a single database, making it difficult to obtain information on measures installed, loan amounts, cost data and estimated energy savings associated with CEWP projects. Detailed project information was not available until September 2010, almost a full year after the pilot program launched.



The program clearly meets the needs of a segment of homeowners who want help to improve the energy efficiency and comfort of their homes, but it does not meet the needs of all homeowners who have energy efficiency upgrade opportunities. Overall satisfaction and value indices were lower for participants that had dropped out of the program than for those that completed their CEWP projects. On average, dropout contacts had higher income and larger homes than participants who completed projects through the program, perhaps indicating that program dropouts had access to other financial products with which to pay for their projects. More worrisome are the comments offered by dropout participants frustrated by the restrictions on contractor selection, limitations on competitive bidding, and lack of options for avoiding program fees and financing terms.

Consistent with the program's logic and design, CEWP provides the services of an Energy Advocate and a Home Performance Assessment to every participant. Energy Advocates are expected to help participants navigate the program and understand the rationale behind the bid they receive. These services are valued by participants but can, in some cases, be perceived as pressure to accept a bid or that the program representatives and contractors are working for each other's interest, not the participants.

CONCLUSIONS AND RECOMMENDATIONS

Ensure that Applicants are Provided with Alternatives

By providing a qualified contractor, project assistance through an Energy Advocate, high-quality audit information, and access to financing, the CEWP model attempts to overcome several of the barriers to investments in residential energy efficiency upgrades. The success of the model to-date reflects the power of this combination of services for some homeowners. However, the program should also include a path for engaging the hundreds of homeowners interested in energy efficiency upgrades but screened out because of their energy intensity or credit score, or those who dropped out because they preferred a different source of project funding or want to install only a portion of the projects identified.

- ➔ **Inform all applicants of their program options with Energy Trust and capture the contact information and demographic details for applicants screened out or dropped out of the program so that they can be engaged in other energy efficiency efforts or offered another path through which to pursue energy efficiency upgrades.**

Clarify Expectations for Energy Advocates

The CEWP pilot project assumed that the Energy Advocate would be a central point-of-contact for participants, providing information and guidance on a variety of complicated matters; contacts report valuing the services of the Energy Advocate. The number of Energy Advocate interactions reported for both participants and dropouts shows that a majority of participants require more than five interactions and, perhaps unsurprisingly, participants that ultimately drop out of the program have more interaction with Energy Advocates than those that install projects.



A high number of interactions, especially with those who ultimately drop out, will likely increase administrative costs. If administrative costs are found to be too high, or if CEWO determines that it cannot sustain the level of support provided by Energy Advocates in the CEWP pilot, CEWO leadership will need to clarify and communicate project support expectations to Energy Advocates.

- **Track each interaction event in the program database to be able to assess the costs of Energy Advocate services.**

Assign a New Title for Energy Advocates

The word *advocate* carries connotations of activism and creates an expectation that the Energy Advocate will protect the interests of program participants. Comments provided in each of the three waves of research and in verbatim responses to the last two surveys indicate that participants expect their Energy Advocate will represent the participant to the contractor and advocate for the participant's interest, and ensure that the bid from the contractor is fair and that the work is done properly. These expectations may be more than the Energy Advocate can deliver.

- **Drop the term *advocate* from the Energy Advocate title. Energy Advocates act more as advisors or program representatives; align the title with the activity.**

Consider Dropping Energy Intensity Screening

CEWP was designed to maximize the likelihood that an enrolled home would have substantial energy-saving projects. To this end, each applicant has an *energy intensity score* calculated prior to program acceptance. For the first eight months of the pilot program, applicants with an energy intensity score below median value were excluded from the program. In April 2010, in order to increase the number of qualified applicants, the energy intensity threshold was dropped to 25%. While it is logical to assume that the largest energy users would be the most likely to pursue opportunities for energy savings, because CEWP employed a Home Performance approach and requires only 10% modeled energy savings, it is likely that most homes will have opportunities for improvement and the energy intensity score requirement could be lowered further or eliminated.

- **Assess the effect of using a lower energy intensity score threshold on the ability to identify viable projects.**

Simplify Credit Screening Process

CEWP was also designed to identify homeowners with sufficient credit to be able to move forward with the projects identified. To this end, each applicant has their utility bill payment history assessed and is subject to a standard credit check. Across the United States, some on-bill financing programs allow credit to be extended based solely on utility bill payment history, using



utility bill payment history as a proxy for credit. Using a single assessment of credit viability could lower administrative costs and speed up enrollment.

- **CEWP staff should work with SBEC to assess the relationship between utility bill payment history and credit score and whether it is feasible to shift to a single requirement for credit approval.**

Align Fees with Project Details

Fees required to participate in the CEWP pilot totaled \$900 per completed project, regardless of size. Each loan is assessed a \$300 loan origination fee and each project is assessed a \$600 Home Performance Assessment fee. Of the \$600 Home Performance Assessment Fee, \$300 is paid to the Home Performance contractor to cover the cost of the test-in and \$300 is allocated to cover the costs of the Energy Advocate.

The amount of the fees and their purpose emerged as a topic of complaint or comment in surveys of participants with installed projects and those that withdrew from the program. As CEWP transitions to the larger CEWO, this fee structure will continue to create barriers to participation.

- **The following options for restructuring fees should be considered:**
 - **The \$300 of the Home Performance Assessment fee could be waived for participants that choose to go forward with their projects.**
 - **The services of an Energy Advocate could be an additional, optional for fee service.** Alternatively, the program could decide that the services of the Energy Advocate are simply too important to the logic and expectations of the program and cover those costs directly.
 - **The loan origination fee could be adjusted for smaller projects so that the fee is never more than 3% to 5% of the total loan.** Identifying best practices or fees allocated by similar programs could provide context for establishing a threshold.

Distribute the Information from the Home Performance Assessment

Participants value the information in the Home Performance Assessment and a substantial portion of dropouts report either taking action or intending to take action to reduce their home's energy use. However, it is rare for participants to receive a copy of their Home Performance Assessment.

Currently, there is no charge for the Home Performance Assessment test-in and only those who continue in the program pay the Home Performance Assessment fee. The cost and potential value of the Home Performance Assessment may lead CEWO to assess a charge for the service to those who drop out of the program without completing a project.



- **Since participants are charged for their Home Performance Assessment and dropouts need the information to pursue projects on their own, ensure that all enrolled homeowners receive a copy of their Home Performance Assessment report.**





APPENDICES

APPENDIX A: TEST-OUT SURVEY TEXT – VERBATIM RESPONSES

APPENDIX B: DROPOUT SURVEY TEXT: VERBATIM RESPONSES



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TEST-OUT SURVEY TEXT – VERBATIM RESPONSES

Website Comments

- *For the most part, finding the info was easy, once I found out about the PROGRAM...Applications are generally fairly simple, and any further questions I had, I addressed to the site. They were very good about responding quickly to any queries I had regarding the program.*
- *Access (by dropdown menu) to more detailed information on measures that would qualify, financing (including qualifying for tax credits), potential barriers (e.g., knob-and-tube wiring).*
- *FAQ could be expanded to understanding relationships and process for working with various contractors and program reps.*
- *Some answers to questions did not seem to fit within the categories.*
- *Having a phone number and name of just one person who knew what was going on.*
- *I don't have any troubles. Once I was accepted in the program there was always someone available to help me.*
- *I would have liked to know a little bit more about the fees involved in the program prior to even filling out the application.*
- *I would make it easier for initial interested parties to learn of the costs for the program up front. The fee for the program, the set fee for the bank loan, and the fee for the testing.*
- *More specificity regarding specific items that qualified, windows, fireplace etc.*

Is there anything you'd like to add about your experience with your contractor?

- *Started out well, but found it very difficult to reach him. He was very busy. Workers nice but needed repeated do-overs. Very much liked the people who put in my mechanicals but would never recommend the energy contractor. Still have not received help for tax-rebate answers (I have filed an extension).*
- *Home Visions West provided excellent service. Paul and Christian carefully explained options and/or demonstrated where leaks/drafts were occurring that would be remedied by duct and air sealing.*
- *I dealt with a different contractor for each part of the process, i.e.: heating, water heater, interior installations (fans and venting), insulators. The only part I really had a problem*



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with was the installers that did the blow-in foam insulation in the walls. They didn't do the job completely at first, and had to come out three times to get it done properly. I am a little concerned about some of that work: they didn't properly plug all of the holes they drilled in the exterior walls at first, and now some are showing signs of discoloration. Don't know if it's mold, or just a brownish discoloration common to the materials they used. Would like someone to look at it and tell me one way or the other. Otherwise, the various contractors did their jobs well and within the timeframes indicated prior to work start. They did their best to accommodate my unique personal schedule with as little disruption as possible.

- *EcoTech was great.*
- *I was told at the very end that they had bumped a water spigot. I recently looked at the work and noticed that water is building up under my house. This could be bad.*
- *Scheduling process was difficult and I did not actually speak with a contractor, so the office had to continuously reschedule things because they did not know what the actual work entailed. The subcontractors did not communicate with each other and I was often left alone just sort of watching all these various contractors come in and out of my house with no real sense of cohesion. There was no onsite supervision by anyone I had originally met with. Granted, personal circumstances dictated I be home during some of the process, so I witnessed all this. If I had just given them the keys and said "go for it" everything would have been just fine. One subcontractor had expressed much displeasure at the fact the general contractor did not communicate certain things to them, and if they had been able to they could have saved me from some major additional work I'll need to do to my home in the future if I choose. But overall, for the work that was done and the program in general, these were relative minor issues to deal with. I thought the contractors did top notch work and in the end that's my biggest concern.*
- *I was the first home that they did and the guys missed doing the air sealing and a couple of other things but Chris, my energy advocate, had them come back and finish the work. I felt that this was a learning experience for the contractors so I was patient about this. All in all, I had a very positive experience with the contractor and the work they did.*
- *The overall air-tightness on test was underwhelming. There is a large air leak that had not originally been detected. A side contract was discussed but the contractor has not followed up with an estimate.*
- *Contractor (Bull Run) did the work expeditiously and as expected, with the exception of slowness in completing last details (repairing window they broke; repainting patches where insulation was blown in). On balance, b/b+ grade.*
- *I would have preferred to get 3 bids and choose. If not doing this as part of CEWP, I would NOT have paid for the home performance -- I *knew* I needed insulation ("duh"). Also, contractors generally waive the cost of the assessment if you undertake a project*



with them. So I feel I spent more than I had to. As far as the work, I can't begin to tell you how frustrating the level of incompetence was. I already complained about this to ETO and CEWP, so you have the file. Just lots of no shows...coming 1-2 hours late....coming but leaving right away saying wrong equipment. Also did horrible "patch" job on my cedar shingles where insulation blown in. All lumpy. And the icing on the cake....my camera has been missing ever since the time of this project. I can't prove, but can't imagine where else it went. Bull Mountain..priceless! Never again!

- *One new member of the company gave bad advice, twice, so the company had to come back 3 times and that expense probably hurt their bottom line.*
- *The quality of work was good, but very poor communication. We came home one night to discover we had no hot water; on two other nights, no heating. With no warning. On another occasion, they even locked one of our (indoor-only) cats outside on the porch when they left. They over-ran the schedule, and didn't say when they'd finish.*
- *Very fast...needed better communication about schedule.*
- *I wish that the contractor had drilled holes in the outside of the house to blow in the insulation, so that there weren't any drywall patches in the interior.*
- *Discrepancy from the initial walk through on the bidding process to actual contract and execution.*
- *My contractor was terrific!*
- *We really liked our contractor, he and his crew were very respectful and took a lot of time to answer any questions and concerns.*
- *We're still waiting for building permits.*
- *Marshall Runkel was a very nice man, very knowledgeable, his crew did excellent work, more than met my expectations.*
- *There were significant communication omissions with the contractor. Ultimately, the work was of good quality, but the lack of communication and coordination with the contractor became the single most difficult step in the process.*
- *Feel plumbing proposal was out of line for market. I cancelled the hot water heater on contract due to pricing. I was informed that the rates are set by the Federal Government and contractor had no control. Would suggest you address this issue.*
- *Overall, it went pretty well. it was a bit confusing because my wife handled the first meeting or two with them, then I handled the rest. They gave my wife the impression that they were going to do some things that they didn't end up doing. They maxed out the budget so we can't be too upset, but it wasn't ideal. Also, I didn't feel like we were presented with a full list of options for us then to choose what we wanted. We were*



presented with a list of things that went right up to (actually, a bit over after a revision) the program max and we gave a yes or no on the whole thing. I also thought they didn't do some of the insulation work they said they would at the beginning, but the advocate called them on that during the check-out meeting. Plus, they didn't seal some pretty significant leaks from windows and doors. Again, overall, the house is much better now; but I don't really feel like Neil Kelly was looking out for us or the ideals of the program. one other note, though, the main guy from Neil Kelly with whom I dealt (and whose name I've forgotten) seemed like a great guy, there was another guy who seemed shady and more interested in selling us a bunch of fancy stuff and other home remodel projects.

- *Very good and polite and helpful.*
- *We're happy with the results but wished things were made clearer at the onset by our contractor.*
- *Overall, the work was basically done well. However, my contractor had issues with time, scheduling, scope, budget, and communication. I can't say I'd recommend them or work with them again. And, this leads me to not want to encourage others to use this program.*
- *A few things weren't stated up front that should have been, such as what to expect as far as restoration work (I ended up having to repaint all the replaced shingles myself, which I didn't expect). Some of the shingle replacements were done rather haphazardly – and at least one replacement was overlooked and they had to come back to finish it.*
- *I really liked my contractor, however, it would be nice if the program allowed for receiving competitive bids from multiple contractors.*
- *My contractor, Heat Relief, was great. Unfortunately, the subcontractor, a crew directed by Bart James, was absolutely awful. Work that was supposed to be completed in 1-2 days dragged out for 8 and was shoddily done. I was still having to badger Bart to complete it more than two months later. Shingles keep coming off the side of our house, the crew used different shingles than the ones we requested and left dirt all over the side of the house. Marc Harrison of Heat Relief graciously offered to help us repaint in compensation for all the trouble his subcontractor caused. Unfortunately, because of the weather, that still hasn't happened and our house has had ugly gray "polka dots" all over it since work "ended." Overall very dissatisfied with the workmanship and lack of professionalism of James' crew.*
- *Contractor went way beyond call of duty to clean up, repair un-related things and take care of the house.*
- *The singular term "contractor" is really misleading. The contractor contracts out the heating aspect of the work to a third-party, in our case Heat Relief. The communication between those two parties failed and we ended up with a heating unit placed in the worst possible location without our consent -- all due to miscommunication. Thankfully everyone worked together and the problem was fixed. The other complaint was that our*



home was left in shambles. Red dust, bits of wood, insulation nails. The workers laid down single hallway tarp. A board with nails was left sitting on my front porch as everyone was in hurry to leave. These guys know I have a baby and a toddler and I felt the way they left my house was rather inconsiderate and dangerous for my kids. I can't say if it was one or both contractors. I was hoping that our advocate would have advocated more in these situations and been accessible in some such capacity. The use of the word "advocate" connotes an active participant who looks out for the interests of the parties through the entire process on many different levels. Our advocate was more of a quality assurance agent, who's job more contractor-centric assessment, which is great in regards to quality assurance. Problems that arose were answered with a well here's there number and go ahead and work it out. Which is fine and swell, no harm. However that is not advocacy in the sense that the title connotes. Perhaps a title change would be better suited. Our dude was good and cool, but I was hoping for more help around the issues that arose with the contractors.

- *At first it moved slowly, but when addressed our contractor moved very quickly and efficiently.*
- *I will keep them in mind for any future needs and recommend them to others.*
- *Project manager was switched. Crew that showed up didn't know anything - paperwork from initial test was missing.*
- *Did a great job!*
- *H.E.L.P. was an excellent contractor to work with - we would certainly recommend them and hire them again in the future.*
- *the sub-contractors did not do a very good job in regards to clean up and patching the holes in my house.*
- *We had ongoing communications and scheduling problems with our contractor. We had to constantly reach out to him to get an update, he did not manage his subcontractors well and went significantly over the time frame he originally gave us. Considering that we have a young child and had to move out of our house for the duration of the construction we were not thrilled with the length of time it took. It could have been handled much better. Even after the construction was done it took weeks to get our final paperwork and get them to come back out to do the final little repairs they said they'd do.*
- *Excellent job!*
- *I had more interaction with the HVAC company and their staff then the contractor. I met with 2 brothers initially that were owners of the contracting company. I met them 2 times prior to the work beginning and then I never saw or heard from them again. There was also a mistake and they didn't tell me that I needed to move my water heater which was something I didn't know about until they had to move it. The best contact for me*



throughout the process was the HVAC company (Heat Relief) they were very helpful. It was hard for me to make decisions and answer questions when there was no one continuous person I felt was there to lead me through the process. It all got done, I am happy but there was some confusion prior and during the installation of the ducts and the moving of the water heater.

- *The spray foam contractor that COAT hired to insulate my crawl space, was the last to leave my house one evening and he failed to secure my house. I came home to the front door and screen door propped wide open with the key laying on the dining room table. The house was left that way for several hours. I immediately called and filed a complaint with COAT, my energy advocate, and Nicolette Reibold (the program coordinator).*
- *I would have preferred all the work to have been done in one block, than spread out over the weeks.*
- *The short version: I would never recommend sustainable solutions. Although we are mostly satisfied now with the final outcome of the work they did, the process was ridiculous. We were never given a schedule in writing of when the work would take place, and the verbal schedule, if you can call it that, from the contractor was really lacking in both clarity and accuracy. Adam's communication skills in particular are just terrible. We had numerous problems with the actual work they did in terms of shoddy quality, poor planning, deviating from the written bid, not completing tasks, etc. Most of the issues were ultimately resolved to some degree, but it took multiple phone calls and my husband taking time off work to follow Adam around making sure things got done properly. We've worked with other contractors, both with our house and with our businesses, and have never had a contractor so genuinely unconcerned with doing things right. The tests say that we're better insulated now, but if I had it to do over again, I would not participate in this program despite that.*
- *They were very accommodating when I added a list of several misc. items onto my project. They were friendly, cleaned the space whenever they left, answered my many questions, and were detailed and honest.*
- *We just completed our punch items and I still had one little straggling issue I needed help with, haven't heard from them yet.*
- *Green Hammer were great to work with.*
- *The contractor actually did a pretty good job. A couple of small things were finished differently than the original bid. He was professional and finished on time. I thought the bid was pretty pricey however.*
- *The only thing I would add about Bull Mountain Heating and Cooling (my contractor) was when scheduling they needed to make clear when they were going to be there. Also, it was my understanding that they would be there in consecutive days from start to finish.*



In my case the job spanned a weekend and therefore days in between work that was done. Other than that...they were excellent to work with.

- *It would be better if they made communication a priority.*
- *The overall communication was not great. I would've liked to know what work was being done on what days and who to talk to about concerns or changes. The schedule was delayed because of some road work but afterwards some items still seemed to drag on. Some of the subs left a lot of mud and dirt on the floor which they said would clean up but didn't. The basement stairwell walls are also quite marked up. Work equipment was placed on a table that I'd covered specifically to protect the items on it. I realize the people doing the work don't have time to ask permission to touch everything in my house but I should be told how much room they need and what items of mine they plan to use (tables, brooms etc) in case their use isn't appropriate.*
- *Still uncertain about the quality of the heat/air system through "Heat Relief", we are currently talking to them about issues with the system. HELP the contractors are not responsible for this.*
- *I was initially disappointed in the work the contractor did with the water heater installation and its function (low water pressure). They called upon a plumber to fix the problem; however, the plumber took a couple of weeks to contact me. The contractor was very apologetic and contacted the plumber again. After the plumber came out and fixed it the water heater and pressure worked fine.*
- *Contractors need to be better about cleaning up when work is finished.*
- *They were great.*
- *They did a lot of extra things for my house.*

What were your questions or concerns about the financing?

- *Basic questions about what needed to be signed and what needed to be notarized.*
- *Part of the contract did not apply to us, but they were willing to strike it. They also did not have a notary available the day we signed, so that was an inconvenience.*
- *I wanted to know if you could pay extra and pay off early.*
- *No one from CEW, ETO or the bank ever briefed or assisted us with accessing the government tax credits that were integral to the economic logic of participating in the program.*
- *Only thing that was not clear is why leave the credits for the end of the loan. Paying interest on ETO credits seems a little off to me.*



- *The first mortgage bank did not consent to the new mortgage on the property. This puts me in default of my first mortgage.*
- *Payback schedule and process - this was clarified immediately.*
- *Prepayment penalties, fixed rate v. variable, credit rating, and banking advantages.*
- *The rate was higher than we were promised it would be. Also we really didn't know about a lot of the details about the balloon payment program until we went in to sign. It would have been nice to have more details on it all before going in.*
- *General questions about the terms of the loan, which were answered competently to our satisfaction. One thing that wasn't initially clear was that credits and rebates would offset the final balloon. But that was explained when we asked.*
- *Loan terms, which were answered.*
- *There were a few things that I had to ask which weren't explained upfront without me asking.*
 - 1) *the conditions on the transferability of the loan*
 - 2) *the fact that there is a balloon payment on the loan**The inability pay-down extra principal without sending a check to a different address is rather annoying. I would like to be able to set my automatic bill payments via my bank to a fixed dollar amount each month and let any extra automatically be applied to principal – that's especially true given the balloon payment.*
- *I was curious if I wanted to pay extra how I go about doing that.*
- *I was concerned that the loan documents I signed didn't account for the energy discounts through the Energy Trust. It took a very long time for the loan officer to be able to show me how I was not signing for a loan amount that was significantly more than the project would actually cost. She may have truly not understood my question, but it seemed to me that she just didn't care because I asked several times in several different ways how I could be sure that on paper it wouldn't look like I owed the bank much more than I was supposed to. Until I made her show me the line in the contract that mentioned the energy credits, her answers basically consisted of "trust us" -- hardly comforting in the middle of a recession caused by such banking rhetoric.*
- *Unexplained balloon at the end of the project.*
- *The specific terms around the lean on the house. The presentation really downplayed the lien on the house part, which would have been nice to put out upfront.*
- *Way loan written with balloon payment at end.*
- *We just wanted to handle the paperwork in person rather than over e-mail. Shore Bank obliged and answered all of our questions at the signing.*



- *Pre-payment penalties.*
- *We were concerned about the \$300 loan cost as we did not hear about this until we were well into the process of this program. Also, the woman working with us from Shorebank was a bit of a challenge to work with. She was short-tempered, not very helpful, and cold when we talked with her or met with her for the loan signing.*
- *Early payoff, paying more than the minimum payment, how the billing would be done and shown on my gas bill.*
- *I felt the loan signing process was unorganized and made me feel uncomfortable; I met with a different person to sign papers rather than the person I had been communicating with on the phone. This would have been ok except the new person could not answer some of my questions about the loan. I recently received a letter stating they need me to sign additional papers that were missed at our meeting. I would like to have more confidence in a bank where I am making a \$15,000 transaction.*
- *We asked about different payment methods, and about making additional monthly payments. There was not a lot of flexibility in their payment options. We will be sending an additional check to Shorebank on a monthly basis in order to reduce the overall interest. We were also confused by the "balloon payment" which was explained to us, but also kind of confusing.*
- *Wanting to understand early settlement issues.*
- *Some pieces were not clearly laid out, the closing process was also confusing.*
- *As with almost all financial paper work, it was not written in plain English but in financial double talk which is incomprehensible at best. Even the bank's people could not adequately translate their own paper work. This has a lot to do with why we do not trust the banking industry. It did cause stress and some uncertainty. They need to be urged to hire actual writers not associated with the banking industry and then learn basic communication skills.*

Suggestions for Improvement

- *I was a part of the initial pre-pilot program, and was frustrated by the kinks that had not been worked out yet, and which I understand have since been addressed. The biggest frustration was political, I believe. I had very much wanted to turn my gas furnace into an electric one, but was prevented from doing so because apparently that would not have made Northwest Natural very happy. There could be no switching of fuel sources which I felt was an injustice to those of us wishing to be more environmentally conscious by way of a heat pump.*
- *One thought: Use the CWEP contact as an opportunity to promote other energy saving, recycling and low impact behaviors/activities. Seems like it would be an easy sell to*



people who are already benefiting from the program. Also maybe arrange for participants to have materials so information can be distributed to friends, family and other social networks....of course all that assumes that Portland will be able to expand this program to more households. THANK YOU for this program; it made my home improvements affordable and, after researching all the options, it was good to test my thinking with the CWEP advocate and contractor.

- *I would've liked to know exactly what would be done at the audit so that we'd have time to prepare (move furniture to expose ducts etc). I would also like to have a fact sheet ahead of time about the numbers that would be measured, average for square footage, and other information that would help me understand what the measurements were.*
- *More direct follow-up with the program might be good. As I mentioned earlier in the survey, the insulation issue concerns me; I need to know if the discoloration on the plugs they used to fill the drilled holes in the exterior of the house is benign, or if I need to address it prior to painting the exterior in a particular fashion. It would also be good to know if it IS an issue that extends beyond the plugs themselves to the insulation inside the walls...Otherwise, the program is fairly efficient, the interactions with those overseeing the process were clear and concise, and the products (aside from possibly the insulation) were appropriate and adequate for my needs and the overall improvement of the property. I couldn't have done this work ANY other way due to my being on a fixed income. I'm not sure how much (if anything) I'm saving yet on my utility bills, as my gas bill doubled (due to the installation payments for the project) and my electric and water bills are pro-rated budget payments that stay constant until they do their "true-up" evaluations annually. It hasn't been done yet for this year for the electric/water bills, so I won't know for a couple of months yet whether or not they're coming down. I certainly HOPE so...*
- *Put out some info up front about what hurdles you face if you have knob and tube wiring.*
- *The crawl space has what looks like an unfinished project.*
- *I have recommended this program to others and I think it's great. My house is lots warmer and I'm not spending any more money. It was very helpful to have an energy advocate since I would never have known if the work was done right or not. Plus, I loved that I did not have to be the one to confront the contractor about the work and the quality. I don't really have any suggestions. It was a pretty easy process.*
- *Lower interest rate - maybe more options from other banks, streamline the paperwork (we had to go back and forth a lot). There were a couple of communication losses with the contractor but they put forth the extra effort to get everything correct in the end. I can only begin to describe the difference in comfort we have in the house, the energy bills will show us savings next winter.*



- *Allow people to vet their own contractors and make their own deals. My advocate said he could tell if bid was within normal limits, and that was part of his role, but I'd rather have 3 bids and make people compete for my business more. I think I would have saved money.*
- *This is a great program!*
- *The bank's paper work was the only sticking point. I have a master's degree and they were incomprehensible. Especially when you're financially challenged, it's frightening to see terms like 'balloon payment'. The fact that the bankers cannot even explain what that means or why it's there is disturbing. I had to go on trust from the program rep. that it would go away when the incentive kicks in. That was not written anywhere. No one really seemed to understand the bank's paperwork. Of course, if doesn't kick in when they said it does - I'm the one that loses my house. So you can see that it's a significant item. We DO NOT trust banks. So the area that needs most work is eliminating their worthless paperwork and creating clear information in plain English.*
- *Improve communication overall--some confusion between us and contractor (they called to cancel on a Monday, and we didn't even know they were planning on coming).*
- *I think there should be a suggestion as to how to get the first mortgage lender to consent.*
- *Provide paperwork checklist and timeline to set expectations from the beginning of the process. Allows customer to gauge the level of involvement and touch points needed to participate. On site, pre-construction meeting with contractor to go over what's being done and what the homeowner can do to facilitate the installation process. Develop punch out list with customer based on contract obligations and have Energy Advocate present to close the loop and have a "third party" review the work.*
- *Provide more details about financing. We were told 5%. The bank came back with 5.378 not telling us that .378 covered their "expenses" to close the loan for us. And our loan rep. wasn't exactly a ray of sunshine. Not exactly there to help us. She just wanted a signature. The bank part of it all was the worst experience. We were more than happy with everything else.*
- *I'd prefer to have been given a list of everything they could have done then allow me to work with the advocate to pick the ones that I want. this probably isn't an issue for those homes who don't go over the project maximum, but I can't imagine we're the only house that has or will.*
- *Make initial contact and application info easier.*
- *Didn't like working with Shorebank. Would like at least another financial institution to choose from.*



- *I don't think that matching a home owner so strictly to a contractor is a good idea. I would suggest allowing a home owner to get more than one estimate from your various contractors.*
- *Open the program to more residents; I know a lot of interested home owners! Letting people know it will be "X bank" contacting them. I got an email asking for all my private info and had no way to know if they were for real because they didn't really mention the program, etc. After a few emails back and forth, I was assured the bank was actually a bank and working with CEWP.*
- *Add competitive bids. I realize the energy advocate is there to help oversee that, but I would feel more comfortable if at least one other contractor bid the project.*
- *I think it could be helpful for the contractors to notify the homeowners about how to prep their house for the work that was done. This seems quite basic, but for a large project like mine, I wasn't quite sure all that needed to be moved/covered and at what point during the project. I asked if there was anything I needed to do in advance, but was told no, so when the workers arrived at my house, they ended up doing a lot of the moving/covering and it just ended up being very messy and there was slight damage in areas. Not a huge deal, just a lot of work for me afterward.*
- *I'm hoping the troubles I had were a fluke or related to this being a pilot program. I do think this is a good way to get folks to improve the energy efficiency of their home affordably. But I think the professionalism and customer service aspect of everyone involved could be greatly improved upon.*
- *Don't require the loan as part of the package.*
- *In the end Brina from Bull Mountain found some things that he wanted his workers to come back and fix. It meant having to schedule a time to let the workers back in the house, but it was well worth it and was appreciative that Bull Mountain has such good QA/QC.*
- *You need Energy Advocates who help with the paper work and timelines, separate from the more technical assessment Advocates.*
- *There was a mishap at the start where we did not have the final loan docs signed but the contractors were due to start work so they had to be pushed back at the last minute. We were not aware that they had to be informed by us as to when the loan would be finalized and signed. Everyone was flexible and worked with us to start at a later date*
- *My only problem was having to take time off work to allow home access. I don't know how you could address that.*
- *At the final inspection a few areas under the crawl space weren't covered with the new vapor barrier that we paid for. This is resolved as they added more barrier.*



- *Didn't know about the project manager being switched until loan documents signed - may have made a difference - the 1st once promised things he couldn't deliver. Patchwork on shingles did not get painted. Crew needed to come back because an attic door wouldn't open. More communication on the contractor's part would be better. Having a choice of 2 contractors would be good. Being able to pay additional loan payment on gas bill is not possible and wasn't explained.*
- *We ran into a bit of confusion with Shore Bank and felt uncomfortable handling loan docs online. They were very nice though and let us come into the bank and sit down with a loan officer to get our questions answered and the papers signed.*
- *Most of my frustration was with the contractor. The overall program and our advocate were great. Shorebank was pretty disorganized in getting our loan documents together and signed but they did finally figure it out. Overall a positive experience that I would recommend (and have) to others.*
- *I would have more involvement with the contractor during the installation.*
- *Include window replacements, please.*
- *Get a new contractor.*
- *Include water reducing options, windows, solar, eco roofs.*
- *Disclose program, loan, and testing fees up front so everyone is aware this program does cost additional money over the cost of construction. Make it possible for people to shop around for loan processing costs or interest rate.*
- *The representative from Shorebank (during the loan signing) was less-than-friendly and seemed completely disinterested in the program. Other than that it was a great process and I'm happy with the results.*
- *The ability to get competing bids from approved contractors. Mine was pretty good but competitive bidding may keep costs down. The project seemed a little pricey for the work done.*
- *In addition to providing the survey, having random, in construction, progress checks of all personnel working on the project (contractors and advocates) to determine the efficiency and effectiveness of the program.*
- *I would appreciate an educational aspect to the program. Either future home improvements that can be made, skills to make them, or actionable items to increase our efficiency based on our actual usage patterns.*
- *Clearer information about the loan process/or possible different bank.*



- *My one and only suggestion is for contractors to be little more careful with exterior landscaping and cleanup. The contractor and/or employee inadvertently trampled a small part of my garden, and left it strewn with sawdust and insulation debris. Otherwise a great program well-executed.*
- *More flexibility in the payment options, allowing people to put money down (if they want to) to lessen the overall debt.*
- *Check all clean up after every completion phase with each contractor.*
- *Maybe make the financing piece more upfront and easier to contact/deal with.*





DROPOUT SURVEY TEXT – VERBATIM RESPONSES

Website Comments

- *I used the website only to fill out the application. The website was down a lot when I tried to fill out the application. Over time they fixed that.*
- *When I first checked the website in August, the program was just starting. I got a first email that we might qualify, then I didn't hear anything for a while. I threw my name in the hopper and we ended up getting selected. That took a long time. We were excited about participating, but I still wasn't sure that I understood the program.*
- *We were hoping to see transparent info up-front about costs. On the website, it painted a picture of a program that was too good to be true. Initially we were really excited. We thought, "It's a pilot program and it's in Portland, and we're doing as much as we can to use energy as we work on the house we bought last November."*
- *I thought I had applied in November but I didn't hear back. Then I learned that there was a longer application process and so I reapplied. Between November 2009 and March 2010, the website didn't change much, but in March it seemed like a new system was in place.*
- *My only issue was that I was so eager to be in the program that I lied about the kind of wiring I had. Having the EA and the amount of time they could spend were truly valuable. I'll write Shawn/the program to tell them that.*
- *We didn't have any questions to address via the website. If we had any questions, we called our Energy Advocate.*
- *When I used it, the application kept recycling. I got frustrated and I quit it. I called the program to find out why and submit my application.*
- *The content wasn't as specific as I needed. I wanted to know that this wasn't really about trying to give incentives about "clean" or "sustainability." I would rather have known that the program really was about giving people jobs, including bringing people from Bend here to do the work. I didn't know that until they arrived. The main contractor said that the furnace guy would tell me the information I needed, but the furnace guy sold only 2 models. I had no way to get real info about specific furnaces and water heaters and which was better and why. And I would have liked more options other than those the program offered. The title gives you the feeling that you're working on things to be more energy efficient. But I discovered they were working on technology that is 20 years old. For instance, they came in and did the blower test in my 100-year-old house, and it was leaky, of course it was leaky. That's 20-year-old technology.*



- *I didn't use the website, except to fill out the application.*
- *If everything had been broken down during the application process. The interest rates for the loans should have been linked to the application. I had to go through several screens to identify the percentages. I think they should do away with the general energy questions in the application process such as: "Do you think you can really save more energy by changing your water heater?" The real need-to-know stuff should be clear and easier to find, more straight to the point.*
- *It wasn't clear what the parameters were for whether you qualified or not. Initially, I was under the impression that there was a maximum income limit. I'd underestimated our income at first, but then I was told that income really wasn't a problem. So I wasn't sure if there really were an income limit. I'm the sole owner of the house, although both my husband and my names are on the gas company bill. I assumed that, since the gas company said it was OK for us to participate, it was, even though it wasn't clear on the website.*
- *I needed more answers. I needed more information about what to expect from my experience with the EA and contractor. I didn't understand, or it wasn't easy for me to understand, the different "programs" (specifically, funding for larger and smaller types of projects). I like to gather a lot of information and needed more details.*
- *There wasn't very detailed information about the program. I assumed they'd give that to me when they contacted me. It seemed like they assumed I knew the program details. It would have been nice if they had provided that.*
- *The whole reason I looked at the program was because I had full intentions of putting in a heat pump, and I have. I went through the program and didn't find out until the guys did the assessment that I couldn't switch from a gas furnace to an electric heat pump. I had just switched from an electric water heater to a gas on-demand water heater. The reason I did that was to free up electric space for the heat pump. Also the interest rate was higher than what I was paying for my home equity loan, so a lower interest rate would have been helpful.*

Comments on Initial Information about Financing, Energy Advocate, and Program Processes

- *I was always a little confused about who everybody was. The first person I remember speaking with was a woman from the program. The next was a woman from the contractor, who asked me: "How willing would you be to spend \$15,000?"*
- *We got general financing info early on, but the financing details did not come into it until we were quite far into the process.*
- *The financing was the big bone of contention. It was foggy.*



- *I was so frustrated (trying to start the process). I submitted information by email. Then I followed up by phone. I didn't hear anything for a month or so. When I called, a woman from the program said they hadn't received my information, and said to send it again. I did, but they did not contact me at all for about a month. Then a woman emailed me that they had received my information. I do not like to email; I prefer calling. Then they sent me an application asking for my SSN, etc. They finally said they got the information from me and then they contacted me that someone (EA) would contact me. Jason (my EA) came over with the contractor to do the home performance assessment.*
- *They were all very good at their jobs.*
- *We were also working with ETO on a PV installation project, so I'm a little confused about what they did, and what the CEWP program did. ETO kind of screwed up about the energy audit.*

Comments on Energy Advocates

- *Was very personable and knowledgeable and spent a lot of time with us doing the assessment. After Mike left our house, I didn't hear from him again. He was on a string of emails between us and the contractor, but didn't respond to us directly. I imagine that's in part because the contractor responded so quickly.*
- *He was just real good. He seemed to know his stuff.*
- *He was great. I really liked Mike. He was really knowledgeable. He really made it attractive.*
- *Mike had a very balanced approach. He learned about my background as COO of Earth Advantage and got deeper into the aspects of the project because he knew I understood the program. He was very accommodating.*
- *He did a fine job doing what he was supposed to do. He didn't try to talk us into staying in the program. I liked that.*
- *The big issue was the sticker shock we felt about the amount of money for the amount of work to be done. We're an unmarried couple with no kids. How are other folks in Portland with kids and who are making less money than we are able to participate? How do they make it when the quotes come out and they get the bid?*
- *I was pretty satisfied with him.*
- *He was knowledgeable but he didn't really understand my situation.*
- *Neil Kelly was the contractor. I have previously gotten bids for other work on my own. Neil Kelly was by far at least 25% higher than any other bids I've ever gotten. I expressed my concern about that to Shawn. He replied that Neil Kelly was trying to pay their*



workers a living wage. I found that insulting. It assumes a few things about me that I didn't appreciate. I didn't think it was a professional response to someone you're trying to serve, especially in these economic times. He's been to my 800-square-foot home in the neighborhood I live in, so he knows I don't have a lot of money. In some ways, I think he was saying, "Neil Kelly is just trying to pay their poor workers." But I've lived in this town for 10 years and I know many people who work there, and they're doing OK. I was as nice as I could be about it with him, but it was a major turn-off for me and my partner.

- *He didn't impress me too much. First, don't come over to my house late, with a baseball cap on, tired (I had to give him coffee), and with no shower. And he had an attitude with anything I said. First impressions are everything. It's one thing to come to me (I'm in my 40s) like that, and another to come to a 60- or 70-year-old like that. To be honest, if he had been my employee, he would have been fired, and fast. I'm in the construction business, and I hire and manage lots of people. He was belligerent. When I had an objection, he said, "So what are your intentions?" as if I HAD to decide to participate before he'd answer. He also didn't understand how the financing would really work for me. Also, when they did the blower door test, they blew soot all over the place and didn't clean it up. They should have prepped a lot more for it, to protect my antique chair or ask us to move it. It felt like the \$85,000 government hammer deal. When I had a question about the costs, they told me the program was about putting people back to work. Also I remodel homes myself, so I took it with a grain of salt. My wife was interested because she thought it was about replacing windows. They recommended \$8k for a water heater I can install myself for \$1k. He turned me off to the whole program.*
- *He was a nice person but he missed stuff. And he said that if I didn't agree with the numbers, I should work out the issues with Seth, the contractor.*
- *I like him. He was very straightforward. He had a good grasp of reality. He didn't really try to influence any decision I made. I didn't get a sense that he was a salesman, though I know that in a very real sense he was. I had a sense I could trust him.*
- *He was very helpful.*
- *I don't feel like my EA was advocating for me; I feel like he was advocating for the contractor. I raised my concerns in detail. But he didn't attempt to address them. I didn't see any initiative on his part to rectify the situation or address the concerns.*
- *He was really nice. He kept saying that he was there to make sure that the contractors did their job. But I also felt like I was being sold a program; it was a lot of money at a really high interest rate. When I voiced some concern about that, I didn't feel totally supported by him. I wanted to do only part of the program but my energy savings wouldn't allow me to participate if I didn't do all the recommended things. He did do some research about my usage that was very helpful.*



- *He was very candid. In our situation, we weren't sure it would make sense, so his input helped. I really understood the variables to make the decision. He did a great job.*
- *I'd say about a 10. He was really knowledgeable and committed, and also laid-back. When I was a little concerned about something, he could discuss it with me in a way that was comfortable and also effective. In every situation where there was something I needed, he'd find a solution that worked for me. I felt like he was starting to be my best friend. It's a fabulous program, even though I didn't continue.*
- *He was great at communicating with us. The reason we said "no" had nothing to do with our interaction with him or the contractor.*
- *I was interested in replacing my refrigerator and putting a skylight in the kitchen. but when Jason and the contractor, Greg, came over, they told me I needed to do something about my HVAC system and insulation. I decided they were just trying to sell me a package. They were nice people, but they were friends. My main conflict is that, from the beginning, whoever is responsible for telling customers like me about the program, they should have told me that they were going to send just one contractor who was assigned to me. Everybody wants to shop around, but I discovered that I wouldn't be able to. When they sent me the report, the heater cost \$7,000, but my neighbor said it should have been about \$3,000. The extra seems like it would pay for the middle man, which I didn't need. By having one particular contractor assigned to the client, the client is at a big disadvantage. I asked the woman from the program about having a bid from a second contractor, but she said to continue with the one I was assigned. And then these two guys were friends. Jason was supposed to help me, but he seemed just to be trying to sell me a package. I called and said, "Thank you, but no."*
- *It was vague. I waited for a bid. When the bid arrived, it was four lines long -- no detail. I had talked specifically about bidding the duct work separately. The bid was line items only, with no detail. I'm a retired contractor. I've never seen such a bid. And the EA hadn't either. He had to get back to me with more info. He should have done that research before he gave it to me. He was a nice guy, and was glad he had a good financing package, but he didn't give a good bid.*
- *He was great. He has a nice personality, is very knowledgeable, and followed through. He inspired trust.*
- *He is a really nice guy. He bought up a lot of safety issues that I'd never have thought about and that gave us a lot of food for thought. I mentioned that we were thinking of switching to a gas stove and water heater and he said we might check carefully about that, for our kids' safety. There were some minor things we had had done before the program, and he said that the contractors had done good work but it wasn't quite to code. He was very good at explaining things. Was clearly knowledgeable but not cocky.*



Did any of the following topics require more communication than the others?

Topics:

- ➔ Scheduling issues
 - ➔ Bid questions
 - ➔ Expected energy savings
 - ➔ Recommended equipment
 - ➔ Requesting or receiving additional bids
 - ➔ Financing, loans, or interest rates
- *The scheduling was a problem. We had to change the appointment time, because my husband wouldn't be home. We live in a somewhat historical house and my husband is really stubborn about not changing it, say through putting vents in the roof. We did get an energy audit and got light bulbs.*
 - *The financing. Because that was my big question about whether to move forward with the project. I would like to have moved forward, but it was about spending the money.*
 - *Energy savings: I don't recall that the bid for what they would do and what it would cost showed some estimated energy savings. I said, "Guys why would anyone pay thousands of dollars for energy efficiency items without knowing what kind of savings they can expect?" They kind of said, "Well, you're right, I guess." And so they did a kind of add-on just for me. I know the margin of error for this kind of software is high. But the fact it wasn't included in the proposal was a concern. I don't know if they hadn't refined the program yet and now it's part of the program or not. Also we talked about the pros and cons of including the high efficiency gas furnace and the challenges associated with doing the program without it. They would have had to isolate the existing furnace and mitigate back drafting through the plenum if I didn't replace it. The contractor said they would cover the cost of sealing the plenum to resolve the back draft solution in the cost of the bid for free. Also, we did discuss my issues around the incentives. I'd already received a tax credit for air sealing, which is why they clarified they would seal the plenum for free. I didn't want to discover later that I wouldn't qualify for other incentives. I got two different sets of numbers. Mike had to list what he believed were all the incentives I'd be qualified for and the financing, based on my income. Bernice (the contractor) had to do the bid. There was a little disconnect between the incentives they identified. They had to determine which incentives I could get through the program. At the time, I was under-employed, so they were trying to figure out what I would qualify for, based on my income.*
 - *We went back and forth on the bid and financing. I didn't want to use the financing. We ended up waiting to do the energy efficiency measures until possible tax energy credits are passed by Congress.*



- *Because we only did the test in, we never really heard details about our estimated savings. More of the equipment talk came from Andrew, the contractor. We had solar panels added in November, so we wanted to switch from gas to electric, and what we wanted to do didn't qualify for the program. The bid and financing are two of the reasons we opted out, and were the ones we most discussed with Tom. When we asked about the ETO incentives and how we would receive them, Tom said the ETO incentives would be applied to the \$600 cost of the test in/test out. This was undisclosed, both that the testing cost \$600 and that the incentives would be applied to the cost of the test. That was a red flag for us, because I could get a less expensive assessment from someone else. And we were concerned that, since we opted out, we'd be responsible for that cost. Also, these fees weren't part of the discussions we had regarding the financing. That wasn't discussed well at first; I don't think they really had answers to our questions. Once we discussed it, they handled it well. Because it was a pilot program, they hadn't dealt with those issues yet.*
- *Financing. At some point, I wanted to see if I could continue without the financing.*
- *Tweaking the bid they first proposed to try to trim the costs so it wasn't such a shock. We were trying to figure out what, of the work that was proposed, we could and could not afford.*
- *We should have communicated more about the equipment. He and the contractor didn't give us enough info about it.*
- *The financial issues did require more communication. Once I did the online request, there was a 3- to 4-week dead time. During that time, I got a bid for a furnace from a contractor because I was in the midst of a remodel. I'd already accepted the bid when I heard back from the program. That took away the biggest chunk of the reason to participate in the program. The other things they recommended that I do were not enough to justify a 20-year payback period. Once you're accepted into the program there's another \$600-700 charge for audit and other administrative costs that would be included in the loan, so you've got quite a fee for a 20-year loan.*
- *The financing. It seemed like I talked to 2-3 different people (pretty much anyone who had contact with me). It was difficult to understand the sequence and all the applications for tax rebates, etc., and questions that come up later, such as since it's a personal loan tied to the home, who would be responsible to pay it off: us or the next owner(s) of the home. Cameron was fairly knowledgeable and referred me to others. Also, I wanted to know if I were contractually obligated to pay for services if we decided not to participate later, so I always asked about that at each step in the process.*
- *The financing needed more communication. It was the \$900 fees (to the contractor, lender and CEWP) we were concerned about. Also, we wanted to know if we owed for the initial visit (which included the HP assessment), whether or not we went through with the project. They clarified that fine.*



- *I needed more information about recommendations they made during the assessment. Tom (EA) said he would discuss it with Seth at Neil Kelly, and never got back to me. One example: Seth was here doing the assessment and said I needed exterior wall insulation. I asked him about that. Seth explained that he assumed that since I didn't have insulation in some walls, there wouldn't be any in the walls he was testing. Seth was in a hurry and had to leave. Tom said Seth could check the wall with a machine. I asked Seth four times to check it but he was rushed and didn't do it. I asked Tom about that and he said it was weird but tried to make excuses for Seth, so Tom removed a light socket and felt insulation in the wall, so he determined we wouldn't need insulation in the walls. Tom then discussed other energy efficiency measures the program said he would do when he was there, including installing a showerhead, kitchen sink restrictor and light bulbs. They left here and I didn't hear anything from him for a couple of weeks. A couple of days later, Tom said I don't know why you haven't gotten the bid yet. He took his time putting the bid package together -- and the bid included the wall insulation. When I asked him about that, he said he forgot. We also had discussed adding some type of heat pump furnace or fireplace insert in a separate room that's an energy hog, but the bid included only the insert. I understood they were going to give me all my options, but the bid didn't. I had questions about the various options and impacts on the interest rate. He didn't give me complete answers. And then he pestered me to act -- and I mean pestered me -- about proceeding with the program. He said that if I didn't choose to participate in just a couple of days, they'd cancel me. To be honest, I didn't participate in the program because of that.*
- *Because of all of our schedules, finding a place and time that would work for all of us was "interesting." And the contractor contact was busy, too. That was nobody's fault.*
- *The part I was never clear about, whether it related to Shawn or the contractor, was the different caps and financing rates. That was never very clear. I asked for the info but they gave me a quick answer and kept going. I sensed they understood the info, but they didn't take the time to explain it to me.*
- *We didn't really get an answer to our questions about energy savings. We didn't really cover enough the relation between the cost savings and the payment. Our goal was to get a cash-flow-neutral project. The only thing we were willing to do outside of the program was replacing the outside door, which wasn't covered by the program.*
- *Energy savings was my main concern. My communication with Tom about that was pretty good.*
- *The equipment and why we didn't qualify.*
- *They did the analysis and saw that I already had good insulation and that I had partial knob-and-tube wiring. They tried to steer me into considering a new furnace and I said that wasn't what I wanted because I was planning to put in an electric heat pump. Neil Kelly was my contractor, a high-end firm. The NKC rep had made arrangements to have*



someone come back and give me a bid to do the work, but not through the program. I didn't hear from them for a month, and they never brought a bid back to me.

- *The technical package did, because I had some real concerns about some items. The audit was very professional; I've done those kinds of things, and I was really impressed with the blower door test equipment. But I never got a printout on the expected savings. I imagine they were going to do that after the final house test, but I never received the information.*
- *The bid, because Shawn was really pushing for us to do something. The bid included some extras we weren't at all interested in. We got another bid, but it very much felt like they were trying to raise the amount of the loan and looking for projects to do that. When they tested our home and they sent us the results, they told us our home was not very inefficient. They said there were maybe two things that could be done. But when we got the list and bid, there were about 6-7 things on the list. It was astronomical; it was almost laughable. (See Q11) Shawn gave us some general info about the loan, for instance, that the interest rate would be between 5-7%.*
- *Bid: I had a lot of electrical issues to deal with before they could do the work. Paul (contractor) and Shawn recommended I ask an electrician to give me a bid on the electrical work. They said it would cost \$100 to have the electrician come out. I asked what it was for. They said, "It's a \$100 fee." I said, "I know people in the trade and I'm sure I can get a free estimate." They both snickered at each other and said, "Good luck with that!" They were like together on it. I called a friend who's with a big company here and he sent someone out, did a great job, and they did it for free. I understood this was stuff I needed to do before they could do the program work. It was just kind of painful to communicate with both of them. I would email both of them, trying to get an answer from even one of them, and I didn't hear from either of them. That was especially true of the contractor. By the time I understood that, I didn't feel it was worth continuing to work with him on the project. Also, equipment: I had questions and never got answers, either. At one point, I had wanted to talk to the subcontractor about the furnace and I wanted to discuss the removal of the big old octopus furnace I have, which would involve dealing with asbestos. The subcontractor was a friend of theirs. I wanted to call him, but I didn't get his card. It started to feel like they were all in cahoots with each other.*
- *I requested another bid because the contractor didn't do the complete testing in my house, and they didn't share the assessment with me. And Zane should have been well aware of that. If he has the quals to do that, he should know what's involved in the testing process. I asked for another contractor and bid several times, because I didn't get what I asked for and what others I know have gotten through the program. But Zane didn't address that at all. He told me it would be very difficult to get a new contractor and testing and that I might be charged for an additional assessment.*
- *I didn't know I could have asked for a second bid.*



- *We discussed what we would need to do. The job was more about insulation and sealing holes, instead of adding big equipment. In the end, it was a small amount of work, but with big fees attached. If it had been a bigger job, it would have made more sense to continue with the program. The bid also was an issue. We didn't think the bid was up for changing: We assumed it was a bid for a certain amount of work with a certain contractor. I didn't know there was an option to negotiate or get another bid from a different contractor. Our contractor gave us enough information so we could decide what we would do.*
- *We discussed getting another bid, but it was too late to make a change that would have made a difference to me. I started to feel a little stuck. I picked my contractor because I got their card at the Better Living Show. I wish I had researched that more. By the time I realized that and might have gotten another a bid, Shawn (my EA) said I probably would have had to start the program all over, including getting a new EA. I didn't want to do that.*
- *They really need more information telling the applicant what kinds of projects can be done through CEWP, and what cannot, so I could have known that right away. I'd hoped to get a more efficient refrigerator and skylight. I asked Jason about that, but he said, "I don't know." He should have known whether or not I could. As to expected energy savings: Jason and the contractor (Greg) gave me some general info about energy savings, but they were to go over detailed energy savings if I'd agreed to go ahead with the work. He gave me only a little info; Greg gave me more.*
- *No. Trying to set up times was what we talked about the most.*
- *The bid re: equipment. We also discussed the incentives. I wanted to know about the incentives, and he didn't really know enough; he could have had more information, especially about tax incentives, and others, outside of tax incentives. He didn't have that info. Also, I may have misconstrued the program, because I thought there would be incentives from the program. He said there were, but I wasn't clear about what those were, because he was vague about them. I still don't know.*
- *We asked for a second bid from the same company, to add an item. Also, the financing was an issue because some of the paperwork from the bank wasn't clear.*
- *We ended up not using the financing package, and so didn't do the program all the way through. He was fine. He understood our concerns completely.*

Contractor Comments

- *When I got the bid, I said I didn't want something and she sent a new bid. She was always timely in responding, which may be why Mike (the EA) didn't respond as much. The biggest things they recommended were a new furnace and water heater and no one explained to me why replacing them was a good idea -- certainly not a good financial*



idea. And the proposal didn't take into account the cost/benefits to us. Our furnace was just fine although it was big, but the proposal said we should get a new one. That didn't seem a wise decision. It made me doubt everything else.

- *The problem was that they have to honor the building code or they wouldn't get federal money. The contractor seemed really knowledgeable, and so was the EA, and they had a good working relationship, My husband wished he could just hire them without going through the program.*
- *They didn't do any work. But Bernice and her partner were great.*
- *He did a great job, although we didn't end up working with him. He wasn't trying to push us into doing anything. He tried to help us switch from gas to electric, due to the solar panels, but the program doesn't allow that.*
- *He was very professional.*
- *He seemed very knowledgeable. He exuded competence.*
- *Hope (contractor) was great. She understood that I'd been unemployed for 18 months, and so she was looking at getting us the biggest bang for the buck. She was a very clear communicator.*
- *My wife and I are chemically sensitive, so we had some kind of unusual requests. It didn't seem like there was quite enough space for that issue in the program. If the goal is to roll this out to the most people possible, that may make sense.*
- *I felt that he was really aggressive in trying to sell me more services and work than I thought would be included in an energy efficiency program. I felt that any time I balked at something, he challenged my position or ideas.*
- *I never had to contact him. I interacted with him only when he was at our home for the assessment. He took a back seat to Shawn. Shawn did all the interaction with us. The contractor did the tests, but was behind the scenes. We were very satisfied with the evaluation he did. It was just the bid we had issues with, which had nothing to do with him.*
- *I don't know if he didn't know the info, or if he just didn't want to give it to me. It was hard getting info that we talked about. I even ran into the contractor during one of the home shows while I was trying to resolve the issue of asbestos (vermiculite) in my attic. He said he'd discuss it with a guy in another booth at the show. When I didn't hear from him, I emailed him and asked if he had done so. He didn't respond. I would make other calls, still hoping to hear from my contractor, but it felt like he was disconnected from tasks. It felt like he thought my job was a waste of time, because he wasn't being paid to answer my questions.*



- *We were very impressed with the contractor and may call him to do some of the improvements he suggested. But this won't be through the program, since we don't qualify. We're also talking with the furnace guy, Heat Relief, whom we also met through program. We are very impressed with the contractors we met through the program. Especially because we called the usual suspects (Jacobs, Sunset) for bids, and got the usual attempt to sell us something. The program contractors were much better -- like the difference between public and commercial radio stations.*
- *He was technically knowledgeable, but he didn't follow through on my request for info about the wall insulation, which caused the contract to stall. I did ask him about some radon issues (and he's a radon contractor), and he said he would look into including that in the contract, but he never followed up on that, either.*
- *It felt like they were slightly sales-aggressive. He was proposing things that were kind of unrealistic for our circumstances. He strongly suggested that we replace our water heater, but we chose not to because it wasn't cost-effective for us.*
- *He was fine. They seemed like good guys. There seemed to be a disconnection between the contractor and the EA; it was little disorganized between them. I gave them the attitude: "Sell me on this. You're asking me to spend \$8000, and I could have a plumber \$1500 to do the work." They couldn't explain it. That showed they were ill-prepared, and had different opinions from mine. I've built "green" homes in CA. You can't tell me that bamboo flooring from China is green. There was no justification to the program. It became a waste of time.*
- *It was a very inaccurate bid. He and Seth were an hour late. It seemed odd to me that both of them were late the same amount. And I'd already had an energy assessment from another program, and they could use a lot of that information from that assessment. Also, I had sealed ducts and some other stuff through that program. After they saw what I'd already done, they seemed to kind of rush through it, because there wouldn't be much money to be made.*
- *Seth (of Neil Kelly) is wonderful; I really enjoyed working with him.*
- *I think the part that was a little frustrating was it seemed like they wanted to spend as much of my money as possible -- to increase the bill -- and not consider the total debt I would have. Instead, they focused on the monthly payment, which was not as important to me. They didn't really listen to or understand my situation. For instance, they wanted to replace the water heater and would have had to tear out cabinets. That would have been about \$2,000. I called George Morlan for another bid and they came in at about \$600, which was significantly different.*
- *He spent only about 30 minutes in my house for the assessment -- well short of what the program said I should expect. They subcontracted work out to HELP, and the note HELP received from Heat Relief didn't give them enough information about my situation. A*



woman from HELP spent over an hour with me to explain the program -- information I should have gotten from Zane or Mark from Heat Relief. Also, Mark was supposed to meet with the woman with HELP and me at my house, but he never showed up or called, and we couldn't find him. And then, in the bid, Heat Relief tried to sell me \$6,000 of new equipment that I didn't need. I already have a new high-efficiency water heater. Half of the \$15,000 was for things I didn't need, and half the work was to be subcontracted to others. I emailed Zane that the bid was unacceptable to me, and that the program wasn't advocating for me, but was trying to take advantage of me. Further, Heat Relief sent me a shoddy, cryptic "bid" not on letterhead, with no itemization of each item--and attached a beautiful, detailed bid from HELP, who would have subcontracted the work. A friend of mine works for Imagine Energy, which is one of the other program contractors. I asked him for advice. I told him about Heat Relief and he validated my perspectives that they weren't doing a good job, and that that kind of experience wasn't supposed to occur.

- They only came out to do the assessment and get info for the bid. They were really nice; I liked them.
- We met him once at the site meeting and I didn't see further discussions with him were necessary, because we'd communicate via our EA. He didn't break down the work; he just gave us a number. Traditionally, you go out and get several bids and then compare them, apples to apples. We didn't ask him for more information. I suppose we could have. For the amount of work, the fees were too high.
- They were clearly competent. This crew of about 5 showed up at my house for the HP assessment. My house was in disarray because I'd had a big leak, and my uncle had died the day before. The contractor brought an extra woman who was in training. The contractor was a big man who was off-putting. The new woman sort of tried to protect me. I thought they would do a good job, but I felt their estimates were high. I was considering an on-demand water heater, but it was twice the price of the on-demand water heater some friends had had installed. Something about that didn't feel right to me. Also, there was a gas leak in my furnace, and I'm thrilled they found it. But they told me I could switch to an electric furnace. They were helpful in ways that would increase the cost of the project, but not helpful with the things that decreased the cost. They said my water heater didn't meet code, and they quoted me \$1500 for the high-efficiency electric water heater and about \$200 to put in a new electric line and about \$200 in labor. The woman who was in training sent me her spreadsheet accidentally, and it showed her mark-ups. In the end, they're a contracting company, and it may be the program requires I work with such companies, but I usually hire individuals to work on my house. It just felt like all the prices were padded, as if I were paying their executives' bonuses. For someone like me, I'd be spending too much on something I didn't really need. But the funny thing is that I'm spending way more than I would have had I done the work with the contractor. Instead I've hired a friend to insulate the walls and they discovered carpenter ants. The CEWP contractor didn't catch that, and would have sealed the ants into the walls. So, I've spent more money, but at least I'll have a house. And I also learned



through the HP assessment that before, the air basically blew through my house; I'm going to have it sealed up really well. Also, I learned that it made no sense to have the gas floor furnace bolted to the floor of my basement/floor space. I've now taken it out. And I learned that all the insulation in the basement was mounted backwards, and I'm having that replaced. Shawn gave me a lot of information about my options. The furnace used to keep the basement area warm. Now that I won't have it there anymore, I have to insulate the pipes. And I'll remove and replace the old insulation. And I also have to redo the entrance to the basement because my friend showed me that there's water that leaks into the basement and down the drain. I didn't think that was a problem before. I learned I would have had a mold problem, so I've hired a contractor to redirect the water. I learned about the insulation, wrapping the pipes, and potential for the electric heat through the HP assessment. They didn't mention the water coming into the basement, nor did they mention the carpenter ants, and they could have missed them when they insulated the walls. They also said I'd have to have replacement boards on-hand, in case they broke any. I certainly recommend the program to others, but I tell them to be careful about picking a contractor. Shawn gave me a lot of info and I'm getting the work done. My house will be in way better shape due to info from the HP assessment. Also my friend and contractors got me materials at contractor costs. Also, the program doesn't really get to tell the homeowner what's reasonable about the costs; that's up to the homeowner to monitor that. Basically, I had to review the bid. I saw that the contractor wasn't giving me materials at cost; they were marking them up. I took the time to figure out costs with them, because I need to save money. That's the glitch in the program (the lack of oversight of the bid). The hands-on service was great. I am doing everything they suggested and more. Without that info from the program, I wouldn't have done all of this. So, the way I'm honoring the gift from the program is by doing the work that they identified and doing it well. I wouldn't have done any of it without the program. Because I had someone I could talk to or email (EA), I felt confident to go forward without the program's help. I'm totally grateful to the city, state, and US government because of the time they gave me. I really thought it through and it took a long time. I'm glad I did. And I'm glad they're expanding it throughout the state.

- *We never considered asking for another bid. We asked our EA that, since there were so many contractors participating, and our contractor was high-end, we wondered if our bid would be higher. He answered that there might be some discrepancy. We felt like he answered our questions.*
- *I would only judge the way he was when he was here. He answered all of my questions well. If I see him on the street, I would drink a beer with him. My main problem is with the system. I understand that it's a pilot program. I'm glad you called--it's very nice, because we were considering writing an email to the program. They should explain up-front that I could not shop around for other contractors. The city should have many more contractors on the list than the 7 they offered us; they could have hundreds of HVAC contractors alone. If they assign a middleman to you, you are at a disadvantage, because they don't really represent you.*



- *The contractor was a nice man, and I thought I had a nice connection with him. I told him that, "If this is going to be really high, let's not even discuss this," because we have good credit and can go anywhere for money. With the general contractor, I asked for specific information and he kept telling me I'd have to get that from the subs. The subs only represented the products on the list. And the EA and contractor didn't seem to be up on Consumer Reports' rankings of equipment. I asked why the bid was so high. The EA said it's because the contractor knew so much more about energy efficiency, so I needed to pay extra for that expertise. Also, I wasn't sure if I should contact my EA or contractor. I worked with the mechanical contractor for the furnace and plumbing for the tankless water heater. It all seemed unnecessarily complex and confusing.*
- *We had him do the work recommended in the HP assessment, except for replacing the furnace. If you had asked me right after he was done with the work, I would have given him high marks, but now I'd have to say 2-3. This work was done in April and I still haven't gotten the check from the Energy Trust. There's confusion about the paperwork. I don't have any trust in him that he got the information to the program. Zane (EA) said his role was to shepherd the whole process, but since we didn't use the financing, he couldn't help me. Bull Mountain (the contractor) did a good job on the HP test and the work and was pretty responsive. But after he was done, we seemed to fall through the cracks. I haven't heard yet about the incentives I'm supposed to get from ETO. To get the ETO incentive, there's paperwork to complete. I filled it out and sent it off right away. Weeks later I got a letter from ETO that they hadn't received it. I called Bull Mountain and they said they had called ETO in May or June and been told they wouldn't have to resend it. I still haven't gotten the money from ETO. Zane told me that one thing that was really good about Bull Mountain is that they were good at doing the paperwork, but that wasn't my experience.*
- *I really felt they were very knowledgeable and willing to explain what they were finding during the test. There was a nice rapport between them and Mike. And the president of the company was the one who communicated with us and she was very quick to respond. When some of my paperwork seemed to have disappeared, they were very apologetic and were very quick to get it right. We hired them to do some work, but outside of the program.*
- *He was really good. He was in a bit of logjam at first, because he had some previous jobs. He made up for that, and was super on top of it.*
- *I had only one contact with them, during the walk-through assessment that included the blower door test. I felt comfortable with them. It was interesting to see them work. I learned a lot from them. They seemed really good and friendly and tried to answer all our questions. I just wish their quote had been lower. We have a real small house, and their quote seemed inflated. I thought we could do some of this work on our own for a third of the cost. The bid spooked us. Not to mention that we would have to pay \$300 to the contractor, \$300 to the CEWP, and \$300 to the lender just to start the process. The*



contractor's quote was \$6,000 for a complete re-insulating and buffering (caulking, weather-stripping) of the basement, and insulation in the attic, and a little bit of blown-in insulation in the walls. We'd already installed a 96% gas furnace, so the insulation was what we needed most.

- *I was satisfied with his concern about environmental things and that he was respectful of the property. I was less satisfied with his details of what he was going to do, especially re: equipment and what the work entailed. We went around on what they recommended we do. We weren't sure we wanted to do all of the things they recommended. After we revised the list of things they'd do, they told us we wouldn't qualify for the financing. Then, if we'd done all of the things on the list, it would have increased our energy bills by ~ \$125/month. That's when we asked about doing fewer things. That's when we decided not to continue. This wasted time for us and for them. One other complaint: It had to do with putting in BOTH an energy-efficient water heater and furnace; we didn't want to do both. They presented to us as tied together to receive the ETO incentives. We wanted to do the water heater but not the furnace. I didn't feel that either Ted or the contractor was up on the latest rules regarding them. I wanted a water heater with a pilot light, because of potential power outages. They suggested that water heaters could be only pilot-less, but I knew that wasn't true. The contractor gave us an estimate for the furnace, but absolutely no concrete info about the actual equipment. I did a lot of research and determined that the new ones weren't terribly reliable. Mine still works, though it's not terribly energy-efficient, but it works, so we decided not to replace it. We never got the questions answered, because Ted said we wouldn't get enough energy savings to qualify for the program. We had selected insulating the attic and outside walls, and discussed a lot about insulating the basement (which my husband was doing and so we didn't pursue that), sealing a lot of things, adding an insulated hatch to access the attic above back entry, and replacing the furnace and water heater. Also, based on info from our friends and Ted's input, we decided not to have them blow in insulation in the outside walls, because our walls are stucco (so they'd have to blow it in from the inside). He recommended that we not do the walls. We were also concerned about the contractor's recommendation about blowing insulation into the walls because we may have knob-and-tube wiring. He also said he might have an electrician look at it, but decided he didn't need to.*
- *They really bent over backwards trying to make this work. And I know it was a big disappointment for them that I couldn't continue. I think they did a good assessment; they were very no-nonsense and very personable.*

Contractor Comments

- *I wondered if the ETO incentives were factored into the bid, but I figured that out pretty quickly on my own. I also wondered why a total net cost wasn't presented. I don't think I asked about why I needed to replace the furnace. Any questions I did ask were resolved.*



- *My husband seemed to think the interest was a little high, but I didn't think that was a problem, since we would have repaid it through the utility bill.*
- *I don't remember any specific questions or concerns. I was really trying to figure out the economic viability of the improvements they suggested.*
- *Why pay 5% interest over 20 years when we could have paid cash?*
- *I trimmed down a lot of the elements of the proposal. After I did that, I realized that the capital I needed would be very low, so I wanted to see if I could proceed without the financing. The answer I received was that I couldn't do that. I thought that was kind of silly, so I quit the program then. I did the energy upgrades recommended in the HP assessment on my own with an outside contractor. I definitely used the suggestions in the HP audit. The bid was about the same as the CEWP contractor's. Because I didn't have to finance it, I saved a ton of money, including the loan initiation fees.*
- *The additional costs we weren't aware of (the \$1,000 to the contractor, CEWP, lender) and taking on another loan. We have OK jobs, but we really didn't want to take out any more loans. If it had been a more reasonable cost, we could have just cut them a check for the work, without the loan. But there was no way around that.*
- *I'm not sure we really received a financing package. We were preapproved for a loan, and I never got to the loan. Cameron gave me a couple of different options for the equipment we might have installed, such as a tankless water heater (which cost \$5,000 but had a huge incentive) versus a traditional water heater. When we reviewed the bid and what I think was the financing proposal, they made it look like the tankless water heater would have cost only \$900 net after all the incentives. I didn't understand how that and the various incentives worked. Hope clarified that Cameron hadn't given me the right information in his proposal, which confused me. I also reviewed the proposal with my father line by line, and then my wife and I met face to face with the contractor and EA to review what I'm calling the funding proposal (but may have been the bid), because they wanted to make sure both of us knew what we were getting into. Cameron explained that everything they were proposing qualified for the program, and explained the energy savings. It would have helped if Hope and Cameron had spoken in advance and tweaked the bid, so they agreed on our best options. Through all of this, I learned that I'd have to pay for everything up front, and get the incentives later, and that I'd have to apply for the state and federal tax incentives on my own. I also learned that they included the ETO incentive in pre-loan bid amount. I'm still not clear about some of this.*
- *The interest rates were higher than what I might have gotten through a home equity loan.*
- *I was concerned only about the amount of the estimate, but that had nothing to do with the bank.*
- *I told my EA that the cost of the financing was very high (would be ~ 10% of the total project cost) and so I would finance it personally. He accepted the information. He*



asked: "Where are we now?" I said I was waiting for info from the contractor about the insulation for my walls, but I haven't heard anything since. I get tired of kind of nursing them along. As I said, the audit was wonderful, but with the overhead and profit associated with the layers of the EA and contractor, I would probably save money by finding a contractor myself, or doing the work myself.

- *Why we would want to finance with ShoreBank in particular and why we needed to pay the \$900. We were fortunate that we had the money in the bank so we could pay for the work, and also have a line of credit. We had no reason to add the \$900 for a job that was going to be less than \$10,000. That included attic insulation, wall insulation, and a new hot water tank (that we didn't need). We wanted to replace our windows, but the program didn't do that. We didn't get the answer we'd hoped for, but Zane answered all of our questions.*
- *It was way more interest than I was paying on my mortgage: it was 6%. I felt like I should have been able to go the bank and negotiate, based on my credit history. That would have made me more prone to accepting the proposal.*
- *We didn't think that the financing rates were all that great. We decided that we could do the work through our home equity line if we wanted to finance it.*
- *The first time I called the bank, I found the woman wasn't helpful; she didn't have a customer service approach, though she did get me the info I wanted. When I saw how much the total payout of the loan would be over 20 years, I saw what it would have cost me in interest. We could pay for everything through our home equity loan and at a lower rate, and so decided to do it. The program is a great option for those who don't have access to that capital. I just chose not to pay that much interest on it.*
- *It was in the final summary statement. There were some things in there that indicated there would be some out-of-pocket costs that didn't make sense. We knew that there would be fees for the HP test, and a loan origination fee. But then there was another \$300 fee or cost, I think just for being in the program. That irritated me. I don't like surprises. I sent the document to Mike because he hadn't ever seen one. We discussed it by email but I don't think we ever closed out a conversation on that. That's when I decided not to do the project.*

Comments on the Bank

- *He presented the info, but we decided we didn't need to pay the interest.*
- *Our EA got a little more unreasonable at the end re: why we didn't want to take out another loan.*
- *They were straightforward. It just came down to our decision that it wasn't the best financial option for us.*



- *I didn't get the financing paperwork until the very end. I still have it, but I'm not going to use it.*
- *I did email with her. In terms of getting the paperwork, it was efficient. I didn't send her any questions about the additional \$300 fee; I discussed it only with Mike. I felt that Mike was surprised by it. He said there should have been no out-of-pocket expense. I still don't know what that cost was.*
- *I think I filled out some forms online but I didn't speak to a person.*
- *I basically decided I would finance it myself.*

At what point did you decide not to go through with the program?

- *At that point, after I saw the cost in the bid, I thought it made no sense. My brother's in the business in Nevada and he almost fell off his chair when he saw the costs. He wasn't surprised: he was shocked.*
- *Pretty soon after seeing the proposal, particularly the total cost. I don't think I was clear about what we could and could not do to negotiate the bid down. I did say we would do some of the insulation and sealing through the program, but the contractor said, "I don't think that will be enough to do through the program, but we will be happy to work with you on it outside of the program."*
- *After talking to my wife, after we looked at the final numbers -- the total loan.*
- *It became not legally possible because my husband was refusing vents in the roof. He grew up in this house and it's historic for him. But the suggestions made sense to me: to keep your house cooler and make your roof last longer.*
- *It was after we had gone through the proposal and determined the outlay and I asked for an estimate of energy savings with and without the furnace, and then I had to crunch the numbers to determine if it were viable. I determined it wasn't economically feasible.*
- *I first started thinking about it during the home inspection, when I asked for rough quotes for each item. We finally decided not to do it when we got our bid. We've lived in our house for two years and we've done a lot of work, to code, and for a lot less than what the contractor would have charged us. From the beginning, I didn't realize that all of the work had to be done by the contractor. I thought that I could do the work myself, and my wife and I would be comfortable doing most of it. And this seemed like a great way to finance our energy upgrades. But it was really to pay someone else; it seemed like it was more about putting people to work. We opted out because we didn't want to finance someone else's work over 20 years that we can do ourselves.*
- *When the contractor told us that there might be an additional federal tax credit, which could have reduced the total \$6,000 cost by about one-third. Mike (EA) was super up-*



front about the CEWP program. He said basically, "I'm not going to try to convince you to get a loan since you don't need it."

- *I left the program when I asked for a no financing option and there was none.*
- *When we got the quote from the contractor and loan documents. Zane went back and forth with the contractor to cut costs, and he brought us a different quote that was about \$1,000 less, but it wasn't low enough.*
- *At the point where Ted said we didn't have enough energy savings to qualify. The contractor gave us the bid with measures and pricing. We went thru the list and decided what we wanted to do and what we didn't want to do. Then we learned that it wasn't enough savings.*
- *After they came to do the inspection and we met with the EA and contractor. They presented the package and it was flawed in some ways, and too expensive.*
- *Mike Gilbert was aware of my concerns and agreed that the program didn't make sense for me.*
- *A day or two after the proposal presentation.*
- *After our meeting at the contractor's office and got the final, updated bid.*
- *After the inspection and the bid proposal and discussions around the various line items in the bid.*
- *After receiving and reviewing the estimate.*
- *It was when I got the loan info and I reviewed the weeks of inaction and realized it just didn't feel right. Getting the paperwork made me really look at if I wanted to work with these people. But it just wasn't going well enough. I didn't want to work with the guys who were supposedly helping me. When I wrote to Shawn, I outlined why I'd chosen not to work with them.*
- *When they called us and told us we didn't qualify. They actually selected us out of the program. When they did the tests on the house, they identified some issues, but we didn't get up to the minimum amount of work they needed, because we couldn't insulate the walls and attic ceiling and basement. They couldn't determine the amount of insulation in the walls in the attic and basement because they are finished, so they didn't recommend doing them. And we would have had to remove the siding or drill holes into it in order to insulate the walls, and there was no place to blow the insulation in because there was no backing to hold the insulation in place. Our house is 103 years old, and a lot of the siding is 103 years old.*
- *My advocate and NKC rep were here after the HP assessment, which is when I was told that I couldn't switch power sources. I never would have gotten to that point otherwise.*



- *Everything (the assessment and financing) had been presented to us. We reviewed everything to see if we wanted to add a second mortgage. We had some money for energy efficiency improvements, and eventually we did spend it, but didn't want to take out a second mortgage.*
- *After I got the bid. But it was a 50% chance that I'd go forward even before I got the bid. When I got the bid, it was obvious it was too high.*
- *If I did accept the bid, I would have had to pay \$600 for the assessment. But they had been in the house for just 1 hour instead of the 3+ hours the program promised. So why should I pay the full amount? Also, I never got an amended bid that removed the wall insulation, which was \$2000, which left about \$5000 to \$6000, which still is a lot of money. The bid also didn't include replacing the water heater with a more efficient one.*
- *When I did the math and learned that it would cost me somewhere between \$50-60k. I couldn't do the project on my terms. That included a new roof (so we could simultaneously add insulation), and I understood that that would come out of my pocket. The energy things they recommended for ETO came to \$20k: replacing the water heater with an on-demand water heater, and an on-demand space heater (we have baseboard radiators), and wall and ceiling insulation: together they were about \$20k. As part of the roof, to insulate it as we wanted to, we would have had to rebuild it. I thought this would be the time to do this, which I'd wanted to do for a while. they really earned their money, trying to figure this out. The whole package came to a big number.*
- *After I received the bid and looked at the types of proposed projects, the whole big picture didn't make sense for me, particularly since I don't know how long I'll be in the house and my concerns about the loan and projected energy savings.*
- *It took almost three weeks to get a bid from Heat Relief. Before I got the bid, I'd already decided I wouldn't do it. I told Zane to tell Heat Relief not to bother.*
- *At the point after I got the bid (for \$12,000) and tried to do only a few things in the package. But that wouldn't have done enough to reduce my energy usage enough to qualify. Also, because the loan is amortized over 20 years, and I felt that if I wanted to sell the house I wouldn't get my money back. I also decided not to do it now because I might want to do the program if I move to another house.*
- *When we got the bid.*
- *The point when the contractors insisted I had to replace the water heater and put in a pipe that meets the code in order for them to do the work. I probably would have said OK without that.*
- *We kind of had some hesitation all the way through. It was about the financing. There was no doubt that the work would benefit our house's energy efficiency, but we just*



couldn't say yes to those financing terms. We weren't told about any other financing options.

- *I was 80/20 that I wasn't going to do it when I learned that the heating system was going to be so expensive. I asked the program people: "If that's going to be \$7,000, the weatherization will be about \$5,000, right?" The program woman said, "Yes." and tried to get me to continue, but I was done at that point.*
- *I got the bid, and I requested a breakout on the items. I told all of the contractors and subs that I wanted the info broken out. And I told them I was willing to do some of the work (e.g., caulking) myself, but they never did the break-outs. They never sent it. And when I checked that bid versus other prices online, and asked my friends, I realized that the equipment was too expensive. When I asked why the program existed, the EA and contractor said it was a jobs stimulus program, and I realized I was in the wrong program. The title was misleading.*
- *When I saw the financing and the amount of interest involved. I wanted the clean energy components, but not the financing.*
- *When we reviewed the financing package.*

Why did you decide not to go through with the project?

- *Because we couldn't pick and choose what we wanted them to do, in particular sealing drafty areas. We have a brick house with some wood windows. You can see through a gap between them. We do have an energy-efficient furnace which we'd installed before the program.*
- *It was a financial decision. We don't expect to be in that house forever. We thought that if we were going to spend that much money on a home improvement project, there were other things we could do to increase the value of the house. If we thought we were going to stay there, we would have done it, because we liked the program.*
- *See previous. It wasn't like we had a bad interaction with anyone. More, it was a misunderstanding. I think our bid was about \$12,000 for insulation and a water heater. When we penciled that out, we realized we didn't want to finance a lot of the energy upgrades that we could do ourselves.*
- *It was to save \$2,000-\$4,000 thru the proposed federal tax credit.*
- *Because, based on the estimates based on energy savings, I didn't see the economic payback. My costs would increase and my savings would be quite negligible. That wouldn't warrant the extra debt, based on my low energy use. Also, my combined gas and electric bills are only about \$60/month, so the only real benefit I could see was improved comfort. At that time, I couldn't make sense out of paying more for that. I'm not a family of 4 in a 2,400-square-foot home that could see big energy savings; I'm not a low-*



hanging fruit. The pilot program really should learn that they should go after homes with higher energy use and potential savings. They should have selected the sweet spot and found those homes for the pilot.

- *I guess it really all boiled down to money. The way the project was set out, it was two times more money than I anticipated it would be. Then when we wanted to cut down the money, we didn't cut down the cost. We decided not to have the attic insulation installed because my husband can do that if he wants, and not do the wall insulation at all. It was a combination of not wanting to do part of the project, and it being more \$ than we wanted it to be. Also, the website could have been clearer. It could have said that our energy bill could actually increase by a lot more than \$60/mo. Ours would have gone up by \$125 or so. I also was unclear about the financing. It wasn't clear that we'd have a second mortgage. Our house is paid for, so if that had been clear, I'm not sure I would have pursued it at all. I would have left the water heater on the list, but it was tied to the furnace. And we decided not to do the furnace because: 1) the contractor wasn't clear about the furnace equipment and the efficacy of the new equipment. We decided that if we wanted to get another furnace, we could probably just hire a contractor on our own and pay less money for it.*
- *Because it was too expensive. When they came to do the inspection, the program looked really cool. But when Jason went into the basement, he kind of went into a panic and said there was a big hole in my furnace that was dangerous. So I called NW Natural and they came out to inspect and said there was no leak. So I lost some faith in Jason, because the NWN representative said the furnace was fine. It's old, but the NWN guy said there are some advantages to its age: it's easy to fix and get parts, and based on my bills, didn't use much gas. And since the whole thing turned out too expensive for too few things for the price I could afford to monthly, I felt that if I were going to pay that much per month, I should put it in my retirement. It was too much money over too much time. Also, Jason was evasive when I asked about energy savings. He said that my bills may not go down. I just don't make enough money to invest in something like that. It's a program for rich people.*
- *It wasn't financially prudent.*
- *3-4 reasons: 1) My wife is convinced that we'll sell our home and move very soon. 2) I've been unemployed 10 of the last 18 months, so we were concerned about our ability to pay anything extra, since we couldn't know when I'd get a job and we'd drained my retirement. 3) My wife's just not comfortable with it. I'm more willing to take the risk to save energy and make our home more comfortable, but she isn't. Part of my frustration is that, my understanding is that the federal government is trying to use incentive dollars to put people to work. But I have access to 4.5% home equity money, so I don't really need this program's higher-priced loans -- and the feds are helping banks and low-income people but they're asking me, who has been out of work and wants to green up our home, to pay \$10,000 to do this work. I'd have been more willing to jump on board if they had*



been more willing to "share the wealth" with me and make it more affordable for us, especially since my wife is concerned about investing in something when she's convinced we're going to move soon.

- *I think the main ones were the chemical sensitivity issues (the contractor proposed cellulose insulation, which might be treated with something and might be dusty, so we might have had to move out of the house for two weeks and weren't sure what level of cleaning we'd have to do to get back in the house) and neutral cash flow. Also, the contractor was late to meetings, so we didn't feel good about being able to trust him.*
- *I had done quite a bit of work to improve the energy efficiency of my home, so some of the low-hanging fruit (e.g.: blowing in attic insulation) was already done. I had reached a point where incremental improvements in my energy efficiency were going to cost a lot more money. As we started talking about things to do to improve the air sealing to reduce heat transfer, I started to get wigged out about having to spend money to seal the house and then having to spend money to install fans to blow the air out (to improve indoor air quality). Also, I was interested in switching from my natural gas furnace to a heat pump, but we couldn't even discuss that, because it would have been fuel switching, and that wasn't allowed under the program. I didn't understand that, because I wanted to improve the energy efficiency and not being able to do that blocked a whole avenue of savings. So that meant that the only things I could do would be to blow in insulation and replace the furnace with another, newer natural gas furnace. But my furnace still is good, and it didn't make sense to replace it now (unless I could have switched to a heat pump). Also, the estimate for the blown-in insulation was much higher than other estimates I'd gotten. And I ended up getting that done by another contractor for significantly less cost. Also, I didn't like the contractor from Green Hammer (Andrew), because he always countered my suggestions and didn't listen to me. Unfortunately, Tom Walther (my EA) couldn't really say anything about that during our meetings. The final thing is that, of course, everything was tied to the financing, and since I could have gotten financing from other mechanisms at a better rate, and all the other incentives (federal, ETO) were available to me, whether I used the program or not, the program's financing package didn't appeal to me.*
- *It was literally the one statement Shawn made. When you're trying to do a community project -- and when people with all sorts of big homes are getting all sorts of work done through the program -- it was Shawn's insensitive comment that turned us off.*
- *It ended up being a bigger project than I'd ever expected it to be, coupled with the lack of communication with my EA and contractor. If I'd felt that these guys were really on board, I would have gone through the asbestos removal and electrical work, but it just didn't feel right.*
- *Because we didn't qualify. We probably would have done it had we qualified.*
- *It didn't fit my needs*



- *The cost of financing. Not the interest rate; that was fine, but the \$900 fee was not. We didn't really understand if we were really eligible for the program because we didn't have the financial need; those with the need might be better served by the program. It's a great program and we would like to have supported it, but it didn't make sense for us.*
- *I think that, for the energy companies supporting the program, make sure that the guys who come out, their shirts are ironed, they're clean and awake (get the Sandman out of your eyes), and they're on time. Ten grand is ten grand. Fifty bucks is fifty bucks. They need to sell me on spending the \$10k. Tom sure didn't do it.*
- *The general costs associated with assessment. That was absurd. And when I looked at the interest they would have made off of me, it was a lot. The program was presented as a way to help people, but it wasn't. Mostly, I didn't see any benefit. I felt that it was a way for creative financing, but it wasn't anything special: it felt like a shift of numbers. I knew I would pay for saving energy, but with the interest I would have to pay over the life of the loan, it wasn't worth it to me. If they had gotten back to me sooner, I wouldn't have had the time to crunch the numbers and think about it, and I probably would have decided to do it, because I liked the program. They did tell me that they have to pay prevailing wage, which I understood. I think that if there had been more money to be made, they would have been more interested.*
- *I had no beef with the program. I couldn't make the finances work. When I added it all up and looked at the return on my investment through having the energy savings pay for the work, it wasn't going to work out in a timely way.*
- *I felt like the project was mismanaged, the contractor was not honest or reliable, and that my EA was actually not my advocate. It was a shame. I was really excited about doing the program.*
- *It was just looking at the big picture. Once I had the information, it didn't seem like the best step for me.*
- *It was too expensive and too high of interest and not enough energy savings.*
- *The fees were a third of the cost of the work, which was going to be about \$2,500. We weren't sure, going into the process, about the program. The assessment was terrific. But after we found out what it would cost, including the fees, we realized "WOW! This won't work!"*
- *I thought the contractor's prices were expensive, and the requirement to put in a new water heater, when mine is about 10 years old. If they had been willing to leave the water heater, I might have said, "Oh well," and done the work. Also, I was having enough of a hard time dealing with the contractors, so I didn't want to keep working with them. I want people to work on my house whose work I trust and who do good work. The people I'm working with have great energy; it's not just about doing the job.*



- *Its purpose was misleading regarding their priorities. I felt very disappointed that the city had its name on the program.*
- *I felt at a disadvantage as a shopper.*
- *Part of it was the financing. We want to go forward with this work, but couldn't accept the financial terms. And we realized that we could do some of the stuff ourselves, obviously for a lot less money. We think it's a great program, and everyone was knowledgeable and good to work with.*
- *I did go through with the project, but not through the financing. I never would have done it if Zane and Bull Mountain hadn't come out and shown us what we could do. And I'm so glad we did it. We're already seeing savings on our utilities.*
- *When I actually laid it out and looked at the financing costs, it didn't make sense to take out a loan for such a paltry amount (about \$7,700, but with the fees it was about \$9,000) that would have cost us twice as much over 20 years. Instead, we chose to pay out of pocket.*

What have you done since?

- *We are actively replacing windows. We had wanted to do that before the program.*
- *Replacing incandescents with CFLs.*
- *We insulated hot and cold water pipes. We also had a \$100 home energy audit by Imagine Energy, which installed our PV panels,. The assessment was great -- and tested basically the same stuff as the program's assessment did. We got a bid from Imagine for a lot of the same stuff we'd discussed with Clean Energy Works: insulation and a heat pump. We also have gotten bids to replace our windows, which we couldn't do through Clean Energy Works. The Imagine Energy audit showed that the insulation would save a lot more than the windows. Their report was excellent, and included next steps and where to put our money. The CEWP assessment was basically the same as the Imagine Energy's, but we never saw the results. I think they might have shown them to us if we'd continued in the program.*
- *Sealed the air ducts, performed some insulation through air sealing (weatherstripping and caulking), installed more energy-efficient light bulbs.*
- *We put in a huge raised bed garden, set up bee hives. Those are less about the house and more about the yard. That's about sustainability, to be sure.*
- *I was in the process of the remodel, so I insulated the walls of the kitchen and the attic above the kitchen. I got a tankless water heater and 95% efficient furnace and heat pump. I replaced some leaky windows.*



- *Replaced our old water heater. That's it, because we're planning to sell our house.*
- *I had insulation blown into walls and replaced some windows. They were on the HP assessment.*
- *We bought new energy-efficient appliances. After we learned from the CEWP review that our home was pretty well insulated, we decided to replace our appliances with energy-efficient ones.*
- *There was a closet in my studio that was the only unfinished part of the basement. We needed to have a door to the outside. We added that and insulated it and weatherstripped it. It also is good soundproofing.*
- *I did put in the heat pump.*
- *We raised the attic insulation from about an R15 to about R38, and have replaced 7 very inefficient windows (about 1/2 of our windows) with triple-pane windows in part to deaden noise. In about 2 years, we plan to do the rest of the windows. We also have gotten more CFLs, and we installed an attic fan which draws the heat out of the attic (not the whole house).*
- *I got new windows, which wasn't an option through the program and was a priority for me.*
- *When they called me, I said, "I'm going to be doing these things to make the house more energy efficient." And I have. I've pulled all my ductwork and replaced it. I'm weatherstripping the doors and caulking. From the program, I learned that I should caulk the baseboards, so I caulked the wall to the floor when I installed some baseboard. I'm committed to replace my furnace. The prices I've found are about \$1000 for the furnace itself. It looks like I'll install it, though I don't really want to, because I'm retired. I've continued to research high-efficiency furnaces. And I'm probably going to go forth with the tankless water heater, and will probably hire someone else to do it.*
- *I removed the old furnace, and blocked that space in the floor. We're half-way through insulating the walls and replacing the siding. We're going to plug the air leaks in the foundation, and the whole house--inside and outside. The next phase is insulating the basement, basement pipes, wrapping the water heater, fixing the doorway to stop the leak into the basement, and adding a new electric heat source. Shawn suggested some motel-type wall heaters.*
- *We did all the things Zane recommended except the furnace: 3 kinds of insulation, and completely sealing the leaks. We also replaced our wood-burning fireplace with a gas insert.*
- *We had all of the attic insulation added and venting they suggested in the assessment. We replaced the bathroom fans and had them properly vented. We replaced the vent fan over*



the stove and had it properly vented. They extended the venting on the gas furnace to the outside, instead of the garage (which was to code, but it was preferable to vent it to the outside). This was everything on the original list but the water heater. When Mike called to tell us that we wouldn't qualify for the program because we had fewer items than they needed, we considered replacing the gas water heater (which was new) because it was safer, and to meet the program's minimum. We'd considered a tankless water heater but he'd said it wouldn't be the best choice, given that there are 5 people in our home.

Do you anticipate doing anything in the future?

- *Yes. We're also thinking about getting rain barrels to gather rainwater for watering plants.*
- *I had not anticipated anything, but I may do a solar project. Tightening up the house is really about saving gas, since that's what I use for the furnace, but I can't save much there. I could justify solar thermal and PVs because they could really reduce my electricity bill.*
- *Yes. I still have the contractor's card and may have them do the work recommended in the HP assessment (sealing air leakage, blowing in some insulation in the walls, and shoring up the attic) when/if the federal tax credit passes, either through the program or I'll pay him myself.*
- *Maybe. That was another consideration: My husband and I decided our house most needed a new roof, and we'd insulate the attic at that time. We won't do the walls. I'd like to switch out the windows, but that's really expensive, and it wasn't on the CEWP list, or I would have wanted an estimate on that.*
- *Yes. I'll probably do the weatherization steps they recommended (insulation in the attic, new outside door, taping hot water pipes in the basement) myself when I have time.*
- *Yes. I need to start with the electrical issues. I'll have to make smaller steps before I get to the energy efficiency piece that I was really hoping for.*
- *Yes. We're looking into tankless water heaters, though we hear good and bad things about them keeping up with demand. Also we're going to insulate a dining room ceiling. And we'll add a more energy-efficient front door. Most of all, this house needs more-efficient windows. I go back and forth about air-tight homes; I think it's important that a home breathes. You have to be very careful.*
- *Yes. I'll replace my water heater. And I'll install attic and floor insulation on my own, for approximately 20% of the cost of the bid.*
- *Yes. I'm definitely going to do some things, but I don't know when. Our existing furnace still works; it's not old and decrepit. Installing the on-demand domestic water heater*



makes sense. And I'd really like to do something to insulate the roof in my 50s ranch. It's expensive to get in and do something about it. I'd hoped to get the utility's help with that.

- *Yes. I'm going to get a new roof, hopefully at the end of the summer. I'll explore insulation at that time.*
- *I found out that my usage is too low. I think that I will fix the insulation in the attic (the existing isn't installed correctly -- it needs to fit more tightly to the space), add insulation in the crawl space, and replace the Cadet space heaters.*
- *Yes. We anticipate putting blocks on the pulleys for our double-hung windows. That was included in the bid. When they did the analysis, it was obvious how much air leaked through the window channels. We'll do that ourselves, probably this fall. We'll also add some soffit vents this fall; we might hire someone (including our contractor, Neil Kelly) to do that. We'll also do little bits and pieces from the audit.*
- *Yes. We'll probably do some of the insulation in our attic ourselves, and we would like to insulate the ductwork but probably will hire someone else to do that.*
- *We're going to see if I can get a new refrigerator and put in the skylight. I'll get bids from other contractors, who aren't on the CEWP list.*

What, if any, changes to the program would have led you continue in the program? Do you have any suggestions for how we might improve this program for future participants?

- *A better understanding of the energy and/or cost savings that were likely to result from the proposed changes.*
- *We had to do a certain amount of things, spend a certain amount of money to qualify. It would have been nice to get part of it done at least. That would have made us a little bit greener. I would have done it, but my husband didn't want to, because of the required vents and the interest rate.*
- *It's a great program. If it's still going on after we buy a new house, I'd like to participate in it. However, some of the recommended actions were intended to get us to a certain, lower loan percentage. For instance, I would have to install a new water heater. I don't need one. Also, I have an old furnace and it's not terribly efficient but it works fine. If I decided not to get the new furnace, the loan rate would have been even higher. If we could have participated without replacing the heater and water heater, but put insulation in the walls, and attic and basement, and gotten a good loan rate, I would have gone for those. It was the big price tag that came along with the water heater and furnace, which weren't the most important things to me. They wouldn't have really changed the comfort of the home, which is a big thing for my wife, because our house is cold in the winter and*



leaks a lot of energy. I discussed doing just those things with Mike, but our loan rate would have been much higher.

- *I would have considered it if we had had some way to do the on-bill financing, since I might want to sell my home and I could pass that loan on to the next owner. I wasn't sure how long I'll stay in the home, and I'd like to know if what was proposed might increase the value of my home.*
- *If the program offered interest-free loans, that would have helped. But it wasn't the program's fault that the federal tax break isn't available yet. Our decision not to participate really was more: if we can wait and the federal tax credit can knock \$2,000-\$3,000 off the bill, why would we not wait?*
- *The big thing is if it had allowed us to finance the energy upgrades without working with the contractor. If that had been the case, we probably would have done the program. I would recommend the program to people who don't have the skills or desire to do the work themselves and need the financing. For us, because we have the skills and had just financed the solar panels, it didn't work for us. We didn't get the info from the assessment, so we don't know how valuable it might be. Also, I learned that I wouldn't have seen or gotten the ETO incentives, since I found out that they were to cover the test in/test out. So it was paying for something I didn't need. Also, the ETO incentives are valuable to us in general, because we'd like to use them for all the other energy efficiency and solar things we're doing, but we couldn't really get the benefit from them in this program. The financing would have been more valuable if we had been able to switch fuels for the heat pump (which we wanted to do, but can't necessarily afford to pay for out of pocket and don't have the ability to install ourselves).*
- *If they would have offered an option where it wasn't financed through a bank. For instance, if the homeowner would put up their own money. I suspect that I could have gotten a better rate from my own bank or my credit card than I was going to get from the program's lender (inclusive of the loan fees).*
- *Having known going into it what the up-front costs were going to be. Definitely the lending institution part of it was off-putting, because of who they were, and we didn't want to deal with an institution we didn't know. Both of us are members of OnPoint Community Credit Union, and the program could have been more successful if it had been personalized to our own lending institution. I still think it's a good program, and I wish we could have stayed in it.*
- *We would like to have qualified for the program with the measures we had decided to do. It would have helped to separate the water heater and furnace for the ETO incentives.*
- *Somehow if they make it work for lower-income people. I think the contractor saw the house and started adjusting the bid for my income. The assessment information was*



interesting, but I can't do anything with it, because I can't afford to do the things. So that wasn't valuable to me. The EA and contractor were good, but I couldn't use the info.

- *Different payment options to allow for different circumstances. The 20-year loan is fine for some people. I'm not a big person for loans; I would rather have had the option to pay it off immediately.*
- *I would have liked more incentives through the stimulus money to cut the price in half, which would signal to me that the government really is trying to help me AND create jobs.*
- *I came home from the proposal presentation and made a spreadsheet of our electricity bills for the last year. We heat with electricity. It turned out that we spend about \$600/yr on electricity. I sensed that we would save about \$300/yr on the energy efficiency improvements. It seemed like we would not save that much. We're also buying green tags; we want to save energy. But we are not in a position to take on a negative cash-flow project. It would have been nice to see a proposal outlining our savings, and what they would do to make the improvements fit in our budget. And I still need a new door! I would like the program to cover that. Also, in terms of helping this program roll out on a bigger scale, it's really important to be on time for meetings, to give confidence that the contractors will get the work done on time.*
- *More flexibility in terms of what type of products might be available options for me. Also, if they'd given the information to me in a more consumer-friendly way. For example, the contractor and EA discussed model XZ671, but I wanted an easier to read visual of energy savings. I was working with another contractor about installing solar panels, and he showed visually what my energy use and savings would look like over time: where I could plug in all of the measures/equipment and show cost, energy savings, and when I'd recoup my costs. I never felt that I understood that from the visuals for the Clean Energy Works program. I felt that we couldn't tweak my options for equipment, too, so it would have made a difference if I'd been able to choose from a lot of products. Also, the EA and contractor were very familiar with air transfer and did a decent job explaining it to me, but they sometimes talked over my head, so I would have liked some additional sources of information. Also, it would have been nice to receive a copy of the assessment report. Also, I wasn't aware that I could have requested a different contractor. I'm not sure I expressed my issues with Green Hammer to my EA. They knew each other, so I wasn't necessarily inclined to discuss issues about Green Hammer with Tom. If I had been convinced that I should go forward, I might have explored other options.*
- *I can't tell you how excited we were about this program. We could have been the cheerleaders for the program. We would have continued with it if we had gotten a more reasonable estimate and a little more awareness on the part of the individual (EA) we interacted with. Also, we were sad to see that the program didn't include windows. We and everyone we know in our age group who have old homes need new windows. The EA*



role was very important; it was good to have that help. I didn't think the contractor (Neil Kelly) was the appropriate one for our neighborhood because of its billing rates.

- *Better communication from the EA and contractor.*
- *If the program had more funding, so the cutoff weren't quite as high. Basically, we wanted to replace the furnace and water heater, and we didn't have the money to do that. CEWP was attractive because we thought we could finance them and pay for them on our gas bill. It didn't work because we didn't meet their minimum energy savings, because the big gap was the insulation. I'd also like CEWP tied into the solar program. It would help if the two were combined. And it'd also be good to have an option to do windows. I like giving people who aren't totally wealthy options thru programs like these.*
- *Being able to do what I needed to do, and to have gotten a competitive interest rate. I also learned that in addition to my home equity interest rate being lower than the one offered by the program, and that I also could have gotten the same interest rate from the contractor. Actually, the deal I got from Jacobs was about 1% less than ShoreBank's offer, and my own home line of credit was 3% less than the program's rate.*
- *The energy efficiency part of the program was great, but the financing was the part that didn't work. If we could have continued with the process of upgrading the home without the required financing through ShoreBank, we would have stayed in the program.*
- *The pricing has to be in the ballpark of other contractors. When someone told me it's not just about insulating your home, but it's about putting people back to work, it seemed like I was being taken, especially when the cost was at least double what I can get someone else to do the work for.*
- *I think if the program is truly intended to help people be energy efficient, especially those who meet the income limits -- if it's truly for low-income people -- the interest rate needs to be lower, and there should be a kickback from the program, and the assessment fee shouldn't be so high if I already have done a lot of the things they're checking for. I didn't feel there was any financial support coming from the program. I understand one colleague is participating and their contractor is doing an amazing job on it. I want to know where's the interest money going? I mean -- 8% on a 20-year loan? Where does it go? When I did the math on the \$5,000 I was going to borrow, it would ended up costing me \$12,000 over 20 years. The creative financing was interesting, but if they're really looking to help low-income people, they need to redesign the program, by lowering the interest rate and the up-front fees.*
- *I was hopeful that it would work. the issue really was just dollars and cents. If we'd redesigned the hot water conversion -- maybe by leaving the furnace out and doing the hot water instead -- we might have been able to do that. I'm sure there are other ways to insulate that ceiling, but I don't know what they are. That's certainly worth discussing.*
- *If there had been more flexibility in the projects that I could have chosen to do.*



- *Some sort of checklist method or accountability method in terms of the testing procedures, when they were done, presenting the results to me, holding the contractor accountable for their work and incrementally show their work, and if the EA would have addressed my concerns.*
- *The ability to pick and choose which items I want to proceed with. The ability to negotiate interest rates.*
- *It's set up for a different scale of work than ours. And obviously the fees were disproportional to the scale of work we were doing.*
- *If I had realized I had the option and taken it early on to get a second bid/opinion. In any other situation, I would have had somebody else come look. I thought I didn't have that option. I probably could have done it later if I'd insisted. But it probably would have added months to the process. I felt like I needed to rush to make sure I could participate in the pilot program. I could have asked where I was in the line and that getting another opinion wouldn't jeopardize my place in line.*
- *Maybe if there were different financing options. Also, if we could have done just part of the work, like the one thing we could afford that would have given us the greatest benefit, which was insulating the ductwork under the house.*
- *Overall, it should be a really simple program. The info to the clients should be easy and friendly. I'm in advertising and marketing, so I know how important that is. I got a lot of paperwork and information -- too much. Less is definitely more, at first. Then give additional, useful information later that the client asks for and that addresses the client's needs. And be clear up-front what you can and can't do through the program. Overall, the program is a good idea. If you can spread out your debt every month, that's a good thing. But how can the city implement it more easily for the customer? How come the contractor and EA tell me they are friends only after I've already started looking into the program? That's not fair.*
- *I needed a more informed advocate. It would have helped if the EA had known the options better. None of them knew what's really on the market and what is a competitive product -- nor were they neutral. I called a friend in a heating department with a company and he said the equipment they wanted to install through the program was older technology. Basically, I wish I had been more informed by the program -- with neutral/unbiased information.*
- *Again, we did continue but we didn't finance it. Zane couldn't have done a better job.*
- *Honestly, I really don't think it was for us, because of the financing. If we'd needed extensive (\$20,000) in work, it may have made sense. But the financing wasn't a great fit for us. When Mike first went into the house, he said, "I don't really understand why we're here," because our house already was so close to what the program wanted to get us to that he wasn't sure we would have qualified for the program anyway.*



Do you have any suggestions for how we might improve this program for future participants?

- *The financing and options to repay the loan on my utility bill were helpful. It would help if we could continue to repay the loan on our utility bill if we move. I think that financing is a good idea, and generally a good fit for people who plan to be in their homes longer (10-20 yrs.), but for those who will be in their home 3-5 years, you're kind of putting off the inevitable, of paying off the loan in a balloon payment.*
- *I thought there it would be nice to have a program to cover windows. I think there are probably other niches to save energy that weren't addressed by the program. I don't have any specific suggestions.*
- *For me personally, the issue about the loan rates.*
- *It was great. It was just about the timing of the federal tax credit.*
- *As I said, different options to finance the work, but not necessarily through the contractor. It seemed that the program was intended to make jobs for people, rather than achieve the most energy efficiency affordably. I think the program should allow people to install what they want and switch fuels.*
- *Having an option without financing. Everything else was great.*
- *Give a lot more specific information on the website about financing, and what it takes to qualify. Also, we determined that we'd probably save money by doing it ourselves. Normally, we would have gotten a number of bids for the work from general contractors and specialists, and we didn't know we could get bids from others. There also were some trust issues, about whether we were getting a fair price.*
- *It's not meant for lower- or middle-income people. I'm sure it's a great program, but it is what it is. The EA and contractor were supposedly neutral, but I could see them gasp when they saw how much air leakage I had. But I felt like, "Have you checked in with reality lately?" There's going to be air leaking out everywhere. It would have been nice if they hadn't gasped. I know my house is leaky and that's why I called. I feel like, to make your house green you have to have the money to spend. I guess I shouldn't have signed up to begin with because I didn't understand the income limitations.*
- *Just having different payment options. The only way this makes sense for anyone is to do the \$10,000-\$20,000 upgrade. And not everyone is going to be in that group, particularly if you're in the \$1,000-\$5,000 range. They need to have other options.*
- *If they could add a home inspection to the package. Say we do end up selling in our house and in 4 months we buy a new one, and the same people come out and do a home inspection and recommend green options that we can include right in the mortgage and do the work before we move in. That makes sense to me.*



- *It would be nice if the website clearly spelled out the financing in terms of if you need to have any equity in the house, and what exactly happens to the lien when the house gets sold before the loan is paid off. That information may be there but I just don't remember seeing it.*
- *I like facts and figures and details. I remember that they showed some case studies of other people. These were easy to read, but they were "fluffy": lacking in detail. I wanted to know: Sally and Bob invested \$____ in _____measures and recouped their investment in ____ years. Also, having the ability to ask questions from someone other than the EA might have been nice. Tom was great to work with, but someone else might not feel comfortable with their EA. It'd be nice to have another source of info. Certainly, anything to lower the interest rates would be useful.*
- *My suggestion would be: In this economy, most people don't want to make huge expenses and take out huge loans, so offer people smaller amounts that they feel comfortable with. The interest rate was OK. If everything else had been more aboveboard, we might have gone for it. The literature first indicated the interest rate might be as low as 3% but it was actually about 6%.*
- *Getting the word out to people. I spread the word to fellow teachers, and nobody really knew about it. Contact major employers (Nike, Intel, Portland Public Schools), asking them to let employees know about it. I think I saw a TV commercial, but mostly I heard about it via word-of-mouth. I thought a lot of people could benefit from it and a lot of young first-time homeowners I know hadn't heard about it.*
- *Linking it with the solar program. Also, getting more funding. And including window replacement.*
- *I think that they should spend more time talking with the homeowner before the EA has the appointment. My assessment may have been shot gunned because they may have had a cancellation, so I had my assessment the day after I called for information. I told the EA that I already had made the decision to install a heat pump before the summer. I had saved the money and changed out the water heater. But the EA didn't even ask that question (about fuel switching) until they were here and had sealed my doors and were doing the blower test. And the paperwork didn't mention fuel switching, either. It led you to believe that if you were a customer of the participating utilities, you would qualify.*
- *A lot more people could participate if they're financing it through their utility bill. But I just can't see the energy savings paying for the work and the loan. Honestly, they need to have multiple EAs and contractors to break any relationship that might form between them; they need to be independent. The same guys shouldn't show up together at all jobs they work on. If I were a federal regulator, I'd sure look at that. Also, they should really look at that \$600 fee and make sure that the EA and contractor are doing what they're being paid for. That wasn't the case in my situation. Also, the people who are EAs should be better prepared to present the overall program and answer the financing issues. It just*



wasn't clear to me about how the financing works. They need to give that information all at once prior to the application. When I first got into the program, I didn't have info on the interest rates. A friend who works for Neil Kelly suggested I really look at the interest rates.

- *Off the top of my head, part of the issue is that Neil Kelly was the contractor. They're not cheap; that's top dollar construction, because you're paying a lot of money for the name. They do good work. There may be people out there doing good work like Neil Kelly, but charging less for it. When we got the measurements for the roof, it looked like the roof was 2x the floor area. We questioned it. The roof contractor said no, you have a lot of overhangs here. The first bid also assumed that we'd insulate the roof over the carport. They redid the bid, but I was never satisfied that we got the measurement of the roof right.*
- *I don't know. I think if we were doing different work, it might have been a better fit. It's a very innovative idea. I'm glad people are thinking of other ways to get things done, get people working, and do something that's great for the environment. Great ideas.*
- *Let people know early that they can get more than one estimate.*
- *If you could do just some of the measures and offer different financing terms.*
- *I've been wanting to share feedback about the program, so this was helpful. I'd like them to include links to info about installing solar PV, and how to integrate the other energy efficiency improvements with solar. I'd like them to add more emphasis on "clean" energy sources, and incentives for windows, more information about innovative technology, and more choices of equipment. It would help if they offered solar incentives, and how to set the systems up so I could integrate them with a new radiant heating system.*
- *Having the EA available even if you don't do the financing. I'm probably going to call him to see if he can check on my ETO incentive. Other than that, it's a great program.*
- *I think it probably works pretty well for those who need to take advantage of it (specifically, the financing). I think there could have been more communication/better initial response at the start. I had applied and got a quick automatic reply that I'd hear from them in X weeks. But I didn't hear for three months, so I had to follow up on that.*

