Key Findings and Recommendations From the Process Evaluation of Clean Energy Works Oregon

Prepared for

Energy Trust Oregon

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Executive Summary

Energy Trust of Oregon, Inc. (Energy Trust) has worked diligently with Clean Energy Works Oregon (CEWO) to develop and offer an innovative on-bill financing program in accordance with the Energy Efficiency and Sustainable Technology Act of 2009 (EEAST). The purpose of EEAST is to provide easy-to-use financing for residential and commercial energy-efficiency and renewable energy projects in Oregon.

Running a statewide energy efficiency-financing program is a daunting process, and overall CEWO staff is viewed as highly professional, competent and committed. CEWO has to serve many masters and meet many goals, all of which are difficult. It has to focus on recruiting customers to complete "deep retrofits" that lead to cost-effective energy savings, while also operating in a free market environment. Furthermore, it is committed to creating jobs, paying a "living wage" and reaching out to under-served customers across the entire state. Moreover, the biggest focus is to develop a self-sustainable model that will continue to be successful well past the American Recovery and Reinvestment Act (ARRA) funding cycle.

This process evaluation identified the ways in which this organization continues to improve and expand both geographically by reaching out beyond Metro-Portland, as well as institutionally by moving beyond a traditional on-bill or energy efficiency financing program. This evaluation is part of an ongoing series of evaluations to guide the development of EEAST as the Oregon Public Utility Commission determines if the law should become permanent.

The Clean Energy Works model was developed in early 2009 as a collaboration between Energy Trust of Oregon and the City of Portland. The intent was to explore how to generate deep residential energy savings through the Home Performance with Energy Star program. The effort was designated as the first EEAST pilot, serving the residential owner-occupied segment of the energy efficiency building market targeted through the EEAST legislation.

Johnson Consulting Group was hired by Energy Trust of Oregon to complete a process evaluation of CEWO. An effective process evaluation gathers data from a variety of sources, and then triangulates this information to develop meaningful and actionable recommendations. The process evaluation covered the CEWO activities from January 1 through August 31, 2012; however, it also included a review of previous program operations.

The overall goal of this process evaluation was to explore the following:

- Assess current program operations and customer experiences, in accordance with the requirement as defined in the EEAST legislation, and determine CEWO's progress in meeting its goal of weatherizing 6,000 homes[1],
- Focus on assessing the effectiveness of the on-bill financing offering, and
- Determine the effectiveness of the program offering in encouraging completion of Home Performance projects.

These issues were explored in a variety of ways, including reviewing the program documents and records;

[1] However, program staff indicated that this goal has been subsequently revised to 1,500 homes per year during the statewide roll out period ending in 2013.

conducting in-depth interviews with key program staff, the Energy Advisors, and contractors; and soliciting feedback from customers as they are engaged at different stages of the CEWO process.

Key Conclusions from the Process Evaluation

Areas of Success

- CEWO has successfully expanded beyond Metro Portland to Central Oregon, Rogue Valley, and South Central Oregon. The program has 39 active contractors who are currently working on more than 800 projects throughout the state.
- Based on the most current records to date[2], the program has completed 3,900 test-ins, which resulted in 1,402 completed projects. While this is below the original goal of 6,000 homes, it is on track to complete 1,500 projects each year—the new goal set by CEWO staff in 2012.
- The conversion rates for CEWO are between 36 to 39 percent, which is consistent with other Home Performance programs and well above the industry average of 25 percent[3]. These findings are illustrated in Tables E-1 and E-2.

Table E- 1: Summary of Critical CEWO Milestones

Critical CEWO Milestone	Past Seven Months (February through August 2012)	Cumulative Program Total Through August 2012
Test-ins Completed	1,874	3,900
Bids Accepted	957	1,660
Loans Approved	836	1.620
Test-Outs Completed	724	1,402

Table E- 2: Summary of Critical CEWO Ratios

Critical CEWO Ratio	Past Seven Months (February through August 2012)	Cumulative Program Total Through August 2012
Close Rate (Test-Outs/Test-Ins)	39%	36%
Loan Qualification Rate (Bids Accepted-Loans Approved/Bids Accepted)	13%	12%

[2] This includes the 500 projects completed during the pilot period for Clean Energy Works Portland (CEWP).
[3] National Energy Retrofit Institute 2012, p. 5.

- Program activities have increased substantially since the statewide roll out, with the number of projects in progress increasing 23 percent in the past six months. The weighted average number of projects, calculated on a monthly basis from February 2011 through February 2012, was 1,569. However, with program expansion, the weighted average has increased to 2,041 from March through August 2012, reflecting the increased level of program activity beyond the metro-Portland area. [4]
- CEWO has broadened its loan offerings and scope. There are now four lenders participating in the program, and these loans expand beyond energy efficiency to also address other key customer drivers such as health, comfort and safety. The four lenders are: Craft3 (formerly Enterprise Cascadia), Pacific Crest Federal Credit Union, SOFCU Community Credit Union[5] and Umpqua Bank. There is also a small minority of customers, six percent, who prefer to self-fund these energy efficiency improvements.
- Craft3 remains the largest lender and to date has closed nearly 1,900 loans[6] for a total of $24 million in energy efficiency financing. The portfolio performance continues to be outstanding, with "problem assets" accounting for only 0.05 percent of the total portfolio. The default rate is estimated to be less than one-half percent, with a total of $58,000 charged-off to date.[7] The three other lenders account for the remaining portfolio of loans; Umpqua Bank has issued 173 loans to date, and SOFCU Community Credit Union has 87 loans outstanding to date. Pacific Crest Federal Union has five loans outstanding while 104 customers have self-financed projects.
- The program continues to deliver on "easy" by emphasizing its one-stop shopping, a message that has resonated well with customers, as illustrated by the strong customer satisfaction scores on all CEWO program elements from the customer surveys.
- CEWO continues to leverage Energy Trust incentives and instant rebates, which—combined with financing—are the primary drivers of customer interest in the program (from post completion customer surveys.)
- CEWO continues to focus on internal quality control and monitoring, and fielded seven[8] surveys to measure overall satisfaction at key steps throughout the process. These surveys yielded valuable data and enhanced the overall quality of this process evaluation.
- The functionality of the software platform, which is used to manage the program and provide online tools to the Energy Advisors, contractors and staff, has improved since its launch. Key metrics are placed on the CEWO dashboard monthly to monitor program operations, and this has led to a reduction in the number of hours required for data input by the Energy Advisors.

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[4] Based on this evaluation, CEWO changed the number of projects in progress calculation to reflect the number of projects in progress throughout the entire program cycle, rather than just on a monthly basis. Now projects in progress reflect the gradual increase in CEWO projects since the program began in March 2011.

[5] The is now called First Community Credit Union, however the name change occurred after this evaluation period.

[6] The number of loans includes all loans, including those completed during the CEWP phase.

[7] Personal communication from Craft3

[8] The process evaluation contractor fielded an eighth survey focusing on program participants one year after project completion as well.

Areas of Concern

- This program is still dominated by Metro-Portland installations; 93 percent of all measures installed are in the Metro-Portland area. Moreover, more than three-quarters (79%) of all loans are from Craft3.
- The average time for the CEWO process is significantly longer than the project goal of 78 days. The average project takes 4.6 months (140 days) to complete from initial test-in to test-out. Furthermore, it takes customers nearly 6 months (186 days) to complete all the steps in the program, from submitting the initial application to completing the final test out. These long delays are contributing to both the program dropout rates and contractor dissatisfaction with the CEWO process.
- CEWO collects massive amounts of data from a variety of sources, but the data reporting could be improved. Many CEWO metrics presented in this report were based on the analysis of program records; however, many of the critical ratios are not used on the CEWO dashboard. This makes it difficult to track trends in important metrics such as close rates.
- While it is important to gather data from customers at key decision-points, the survey collection instruments were inconsistent, resulting in the inability to easily compare responses across or among groups, or more importantly, to identify key drivers of customer satisfaction or dissatisfaction.

Recommendations for Program Improvement

The process evaluation also identified some areas for program improvement. Specific recommendations are provided in individual findings for each section; however, the following recommendations focus on broader areas for CEWO to consider in order to improve and enhance its program as it continues to move forward.

- Develop more consistent ways to track the key metrics, including the conversion rate, as a way to minimize program dropouts. The most important metrics, such as the number of test-ins, test-outs, close rates, loan disqualification rates, and average length of projects, should be posted on the CEWO dashboard. This will provide immediate and ongoing feedback regarding program operations throughout the State and highlight which areas CEWO staff should address going forward.
- CEWO staff should develop a more consistent survey instrument to facilitate tracking of key questions at each step of the application process over time. This will further enhance overall program feedback and provide additional guidance to senior staff.
- CEWO needs to continue to streamline the participant process. In August, CEWO eliminated the Energy Upgrade Options menu, because it created unnecessary delays in the overall process. In particular, the period from the test-in to bid acceptance could be shortened, and the timelines for other internal reviews could also be expedited.
- CEWO should continue to develop some type of pre-screening checklist for customers to help identify viable candidates while reducing the “tire-kickers” who just want a free test-in. This will also help to set customer expectations, and may enhance program closure rates by focusing in on

those customers who are truly interested in completing a home energy retrofit. Investing some time upfront in educating the customers, via the Energy Advisor and contractor, could yield long-term dividends for the program.

- It is critically important to offer other solutions to program dropouts and thus "bridge them" from CEWO to another Energy Trust program. Identifying program dropouts earlier in the process and redirecting them to more appropriate program offerings will lower the acquisition costs required to enroll customers.
- Allow more customer flexibility in terms of selecting contractors, evaluating bids, and selecting financing options. Some customers wanted to be able to choose among bids and provide more input into making this important and costly home energy retrofit decision.
- The Energy Advisors should be allowed to provide more direct feedback regarding the proposed pricing and project specifications, as a way to encourage a higher close rate and reduce dissatisfaction with the contractors. Furthermore, the Energy Advisors should be able to provide some general pricing guidelines to customers in order to ensure that they are receiving a fair bid.

The basis for these findings and recommendations are provided in the remainder of this report, which is organized as follows:

- Section 1: Introduction and Methodology
- Section 2: Review of Program History and Databases
- Section 3: Summary of Findings from In-Depth Interviews
- Section 4: Summary of Findings from Customer Surveys
- Section 5: Conclusions and Recommendations

Appendix A contains copies of the in-depth interview guides used to complete the interviews with key CEWO stakeholders. Appendices B-H provide more detailed findings from the eight customer surveys conducted as part of this process evaluation. These appendices are bound separately.

Section 1 Introduction and Methodology

1.1 Introduction

Energy Trust of Oregon, Inc. (Energy Trust) has worked diligently with Clean Energy Works Oregon (CEWO) to develop and offer an innovative on-bill financing program in accordance with the Energy Efficiency and Sustainable Technology Act of 2009 (EEAST). During the pilot period, Clean Energy Works Portland (CEWP) laid the groundwork for Clean Energy Works Oregon by weatherizing more than 500 single-family homes through March 2011.

The Clean Energy Works model was developed in early 2009 as a collaboration between Energy Trust of Oregon and City of Portland. The intent was to explore how to generate deep residential energy savings through the Home Performance with Energy Star program. This was designated as the first EEAST pilot program, targeting residential owner-occupied segment of the energy efficiency building market.

As CEWO moves out of the pilot phase to meet its ambitious goal of weatherizing 6,000 homes[9] across the state, Energy Trust conducted a process evaluation to assess current program operations and customer experiences, in accordance with the requirement set forth in the EEAST legislation.

1.2 Methodology

Johnson Consulting Group was hired by Energy Trust of Oregon to complete a process evaluation of CEWO. The process evaluation relied on a variety of methodologies to address the critical research objectives:

- Assess current program operations and customer experiences, in accordance with the requirement as defined in the EEAST legislation and determine CEWO's progress in meeting its goal of weatherizing 6,000 homes,
- Focus on assessing the effectiveness of the on-bill financing offering, and
- Determine the effectiveness of program offering in encouraging completion of Home Performance projects.

An effective process evaluation gathers data from a variety of sources, and triangulates this information to develop meaningful and actionable recommendations. The process evaluation covered the CEWO activities from January 1 through August 31, 2012; however it did include a review of previous program operations. The key process evaluations activities completed were:

- A review of the key program documents and databases; the findings are summarized in Section 2.
- In-depth interviews with staff, Energy Advisors, and contractors; the findings are summarized in Section 3. The in-depth interview guides used for these surveys are in Appendix A.
- A summary of the key findings from seven customer surveys conducted by both CEWO and the evaluation contractor. Five surveys gathered feedback from customers at critical decision-points throughout the CEWO process, referred to as the "CEWO Lifecycle Surveys". Two additional surveys were conducted with participants six months and 12 months after project completion. Lastly, program drop outs were also surveyed. The key findings from these customer surveys are

[9] However, program staff indicated that this goal has been subsequently revised to 1,500 homes per year during the statewide roll out period ending in 2013

summarized in Section 4. Detailed findings for each survey are located in Appendices B-H.

Table 1 summarizes the key research questions that provided the foundation for this process evaluation.

Table 1: Summary of Key Research Questions for the CEWO Process Evaluation

Research Area	Key Research Questions
CEWO Program Characteristics	What is the customer breakdown among the different type of participants (i.e., program drop outs, program applicants, and full program participants)? How many loans were funded during the evaluation period? What is the total dollar value of projects funded? How much savings in terms of therms and kWh are attributable to the program?
Financing Characteristics	What is the average size of a funded loan? What is the average length of the loan?
Default Rates	How many loans have defaulted during the evaluation period? What were the reasons for these loan defaults?
Program and Administrative Costs	What are the program costs to date? How do these costs compare to other types of loan program offerings? What is the cost-benefit ratio for the loan value compared to program savings?
Effectiveness of Program Operations & Delivery	What is the average length of loan application processing time? Has this changed since program launch? Is the program performing as expected based on the perceptions from the staff/key stakeholders? How satisfied are contractors with the program implementation and delivery staff? Overall, how satisfied are customers with the program delivery? What are customer satisfaction levels for various program components, such as the program requirements, deadlines, application process, etc? Are any of these components perceived as too burdensome?
Effectiveness of Marketing and Outreach Activities	What is the general awareness of CEWO among the customer groups? Which marketing and outreach activities are the most effective? Which ones are least effective? Is the CEWO message successfully differentiated in the Oregon Home Performance marketplace? How can these materials and outreach activities be improved?
Participant Decision-Making Process	Please describe the application process. Why did program participants decide to participate in CEWO? What other program offerings did they consider? What were the reasons for program dropouts? How was the application denial process handled?
Barriers to Program Participation	What are the barriers to program participation? What has been the effect of program changes on reducing identified barriers?
Areas for Program Improvement	How can CEWO improve? What other types of financing offerings or delivery strategies should CEWO consider?

Research Area	Key Research Questions
Key Customer Demographics	What is the customer breakdown between owner-occupied and renters/landlords? What is the average household income among the different participant subgroups? Is the difference statistically significant? What is the geographical distribution of participants?

Section 2 Document Review and Program History

This chapter summarizes the program activities, focusing specifically on the ways in which the program has changed and evolved since its statewide rollout in March 2011. This task involved reviewing the key documents and program materials to highlight changes since the last evaluation in 2011. The document review consisted of completing the following activities, summarized in Table 2.

Table 2: Summary of the Historical Review Activities for CEWO

Information Source	Activity	Outcome
"Historical" Program Documents such as previous evaluations from the CEWP pilot program, monthly reports	Review program materials	Document historical changes to program implementation and delivery methods
Program Databases	Review key on-bill financing metrics such as: number of applications submitted, applications processed, applications denied, and loan default rates	Report on key metrics and provide comparisons to previous program cycles including program and participant costs, types of measures installed (gas & electric), savings achieved, percentage of completed projects, summary of projects by trade allies
Loan approval documents, Program Materials/ Staff and Trade Ally Interviews	Review process flow diagram	Identify "gaps" in program delivery and changes with updates

The in-depth interviews with program staff and implementers also provided additional insight into the overall changes that the program has experienced since March 2011.

2.1 History of Clean Energy Works Oregon Program

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 anticipated that initial funding and loans will leverage multiple sources of public and private capital to sustain the program over time (EEAST Report 2009).

The legislation also 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 (EEAST Report 2009).

By way of background, the EEAST bill was being developed as a legislative concept as Clean Energy Works was going to market. EEAST envisioned State of Oregon support for energy efficiency programs that offered financing, set wage standards, and offered health coverage and customer service features like Energy Advisors. One outcome from this legislation was the initial pilot program, Clean Energy Works

Portland (CEWP), developed by the City of Portland, Energy Trust and other key stakeholders. During the pilot period, Clean Energy Works Portland laid the groundwork for Clean Energy Works Oregon (CEWO) by weatherizing more than 500 single-family homes through March 2011.

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 to meet the original goal of weatherizing 6,000 homes during this funding cycle.

Lessons Learned from the Pilot Process Evaluation

During this critical pilot period, Energy Trust and the program implementers involved with CEWP completed several waves of process evaluation activities as a way to document success, identify program barriers, and help to inform the program design for the statewide model. These process evaluations were conducted by Research into Action (RIA 2010). The key findings from these process evaluation activities are summarized here to document program changes, track key recommendations, and provide background for the current process evaluation activities.

The pilot process evaluation revealed the following "lessons learned" that were subsequently used to guide the program design going forward.

1. *Projects were larger in scope and price than had been anticipated.*

This finding had implications regarding the amount of funds required to complete the recommended energy efficiency improvements as well as creating a "backlog" of applications due to the "pent-up" demand in the City of Portland's market.

The process evaluation found that the average project size was $12,633, which was above the anticipated cost range of $5,000 to $10,000. The 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.

2. *Traditional marketing outreach methods were effective in reaching customers during the pilot program.*

A team of marketing specialists, led by the City of Portland, developed and implemented a variety of marketing strategies to enroll customers in the pilot program. According to the results from the process evaluation, the emails, direct mailings, radio and newspaper ads were successful in attracting 400 participants in the pilot period.

3. *Clarify the role of the Energy Advocate because of the connotations associated with the term advocate. The role is now described as an Energy Advisor.*

Another key finding from the process evaluation was that some participants felt the term "advocate" was misleading. They wanted their advocate to represent them to the contractor and advocate for the participant's interest. Therefore, a key recommendation was to replace the term "advocate" with a more neutral term such as "advisor" in order to align the title with the activity.

4. Recommendations for Program Improvement

The pilot process evaluation also included recommendations to enhance CEWO and streamline the overall customer application process. These recommendations for CEWO were:

1. Ensure that program applicants are provided with financing alternatives, especially those homeowners who either do not qualify for the program or want financing choices.
2. Simplify the credit screening process--perhaps using the utility bill payment history as a proxy for the credit rating, which could speed up enrollment.
3. Eliminate the energy intensity review requirement for eligibility (which was made effective in October 2010).
4. Restructure program fees; the $300 Home Performance Assessment fee could be waived for participants that choose to go forward with their projects. Alternatively, CEWO could charge "program dropouts," if they drop out after receiving an assessment. Similar recommendations included disclosing the fees upfront to the homeowner to avoid confusion.
5. The services of an Energy Advisor could be an additional, optional for-fee service. Alternatively, the Energy Advisor services could be funded directly by the program, if deemed critical to overall program success.
6. Develop an organizational chart to clarify roles and responsibilities.
7. Address concerns raised by contractors including:
   - Questions about diversity training requirements
   - 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 (RIA 2010, p. 63).

As the program expanded statewide, the CEWO team reviewed these recommendations and implemented most of them. The status of these recommendations is explored more fully in Section 3.

Program Flowchart — Pilot Period

Figure 1 summarizes the "customer experience" during the pilot period for CEWP. As this flowchart illustrates, the customers had to complete a credit check as part of the application process and receive pre-approval prior to moving forward in the program. This sequence led to some customer confusion and dissatisfaction, as reported in the process evaluations conducted for CEWP.

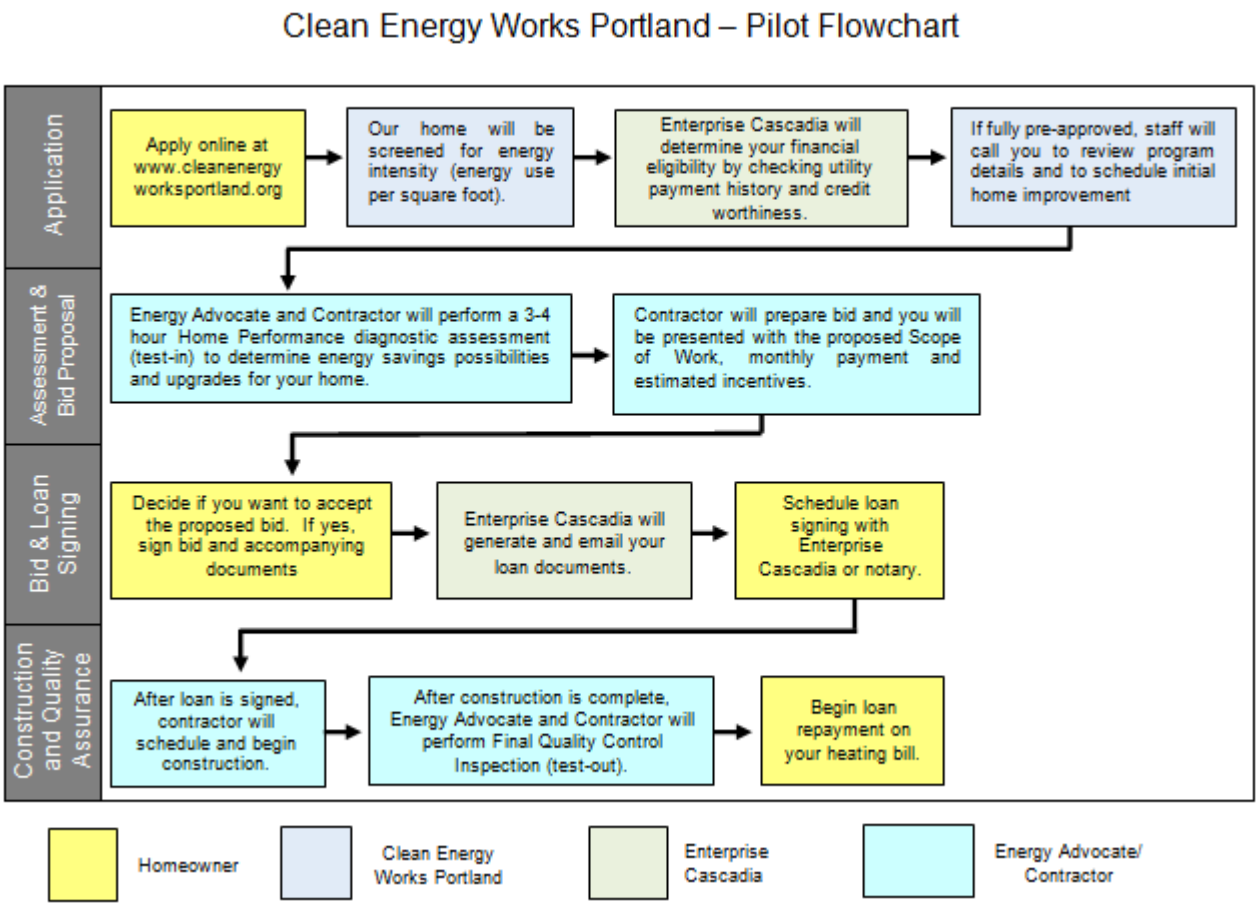


Figure 1: Program Flowchart- Pilot Period

Based on the feedback from the pilot process evaluation, the customer application process changed substantially as illustrated in the "customer engagement map" during the first quarter of 2012, shown in Figure 2.

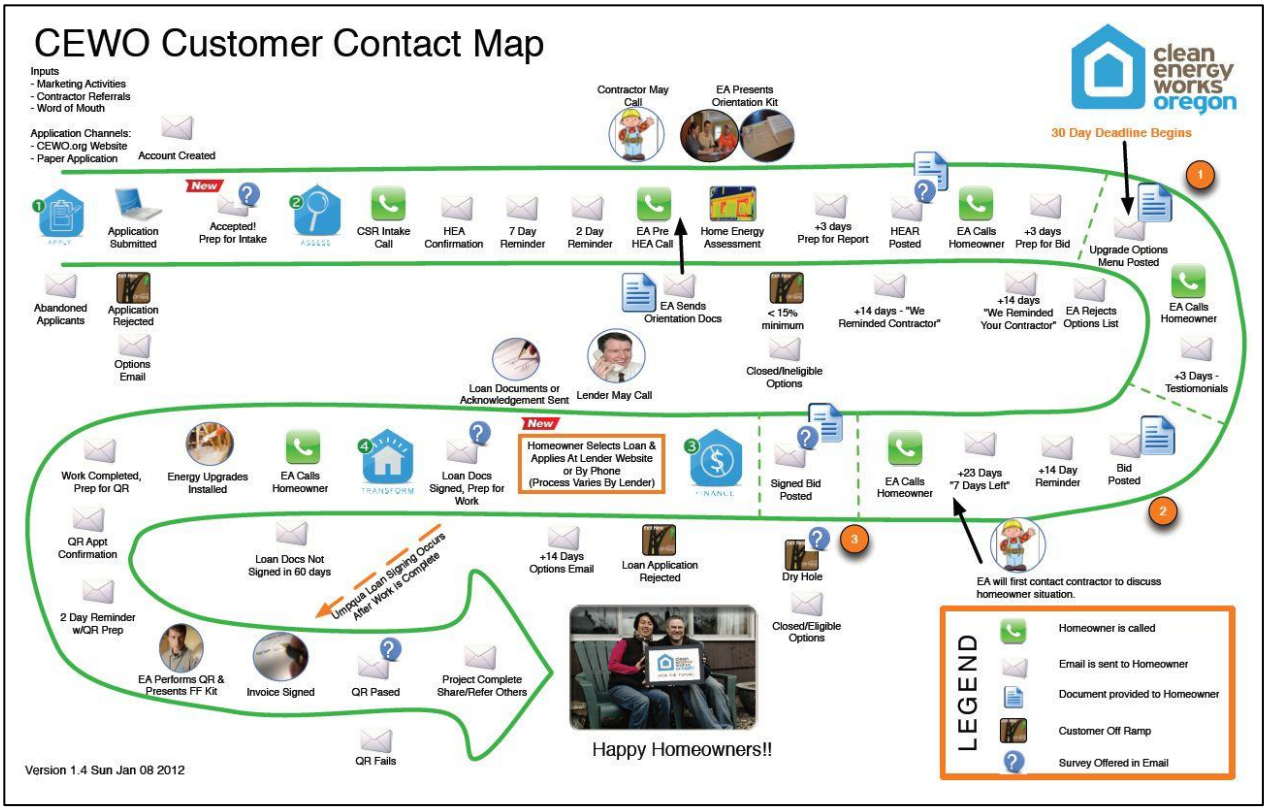


Figure 2: CEWO Customer Contact Map

Table 3 summarizes the goals set forth for the length of time it takes for each major step identified in the Customer Contact Map.

Table 3: Timing for CEWO Program Activity

Activity	Timing
Step 1. Test- In	7 days
Energy Advisor Review	2 days
Step 2. Create Upgrade Options List	10 days
Energy Advisor Review	2 days
Step 3. Final iteration of bid (includes negotiation)	25 days
Energy Advisor Review	2 days
Step 4. Acceptance	3 days
Complete Project	25 days
Step 5. Test-Out	2 days
Step 6. Invoicing/Loan Disbursement	Upon Project Completion
Estimated number of days from start to finish	78 days

Summary of Findings from Customer Research

CEWO has also conducted a variety of market research activities with residential customers, both program participants and program dropouts. This research yielded the key findings:

- The Energy Advisors received mixed reviews from program participants. One-half "completely agreed" that the Energy Advisor was a valuable resource, while 10 percent disagreed or felt that the Energy Advisor did not meet their expectations. Subsequent to this research, the role of the Energy Advisor has changed substantially, which is explained more fully in the in-depth interview findings in Section 3.
- Overall, the customers reported high satisfaction with the loan process during the CEWP period**.** However, they did want more clarity about the types of loans offered.
- During 2011, a survey was sent to 400 program dropouts; a total of 71 responded, yielding a response rate of 18 percent. Almost two-thirds (60%) of the program drop outs were satisfied with the Home Energy Assessment while the contractor's bid received generated the lowest satisfaction rates (41%). Most program dropouts (69%) felt the bid was too expensive and this was the primary reason for dropping out of the program. Furthermore, the program dropouts indicated that the high bid and lack of choice were the major reasons for them leaving the CEWP.

CEWO also conducted conjoint analysis research during 2011, called Max Diff, among residential customers to identify the importance of various drivers in the decision to pursue Home Performance projects. The key findings from this research are described next.

Key Drivers for the Program

- The primary drivers of interest in CEWO are rebates and financing options. Participants are also attracted by the expertise, guidance and one-stop solution that CEWO offers.
- Contractor bids are the primary area of dissatisfaction in the program. In addition, expensive bids were cited as a reason 69 percent of participants left the program (and the primary reason for 59% of the program respondents). The lack of competition and cost controls appears to be hurting the program effectiveness in the eyes of participants.
- Satisfaction levels for CEWO and the Energy Advisor are good, but the program dropouts wanted the Energy Advisor to take a more active role in reviewing contractor bids and providing guidance to the program participants. One suggestion to reduce the program dropout rate was to ensure that participants fully understand the program process, a task that could be addressed by the Energy Advisor.
- As most of the survey respondents in this study were enrolled in the program from March-May 2011 when the rebates were most attractive, some of these issues highlighted may be the result of the high volume of applications and/or growing pains.
- The program delivers on being "easy" to participate in according to two-thirds of participants. The website was also generally praised for providing good information. However, the respondents indicated that some "didn't really know exactly" what they were signing up for the program.

CEWO Target Audience

- Decision makers were overwhelmingly female (70%) and have a household income from $50,000 to $99,000 (72%).
- However, the drivers of interest in the program were a recognition of the need to make improvements, a strong concern about home heating costs and a likelihood to have already made some type of energy improvements over the last three years

Focus Groups to Develop the CEWO Brand

CEWO conducted focus groups with customers to assist in developing a new brand identity and the results of these focus groups form the foundation of the marketing campaign that CEWO rolled out in the Fall 2011. Four different advertising concepts were tested and the one that was selected is called "then and now," which the focus group respondents found to be the "most compelling." Figure 3 displays these results.

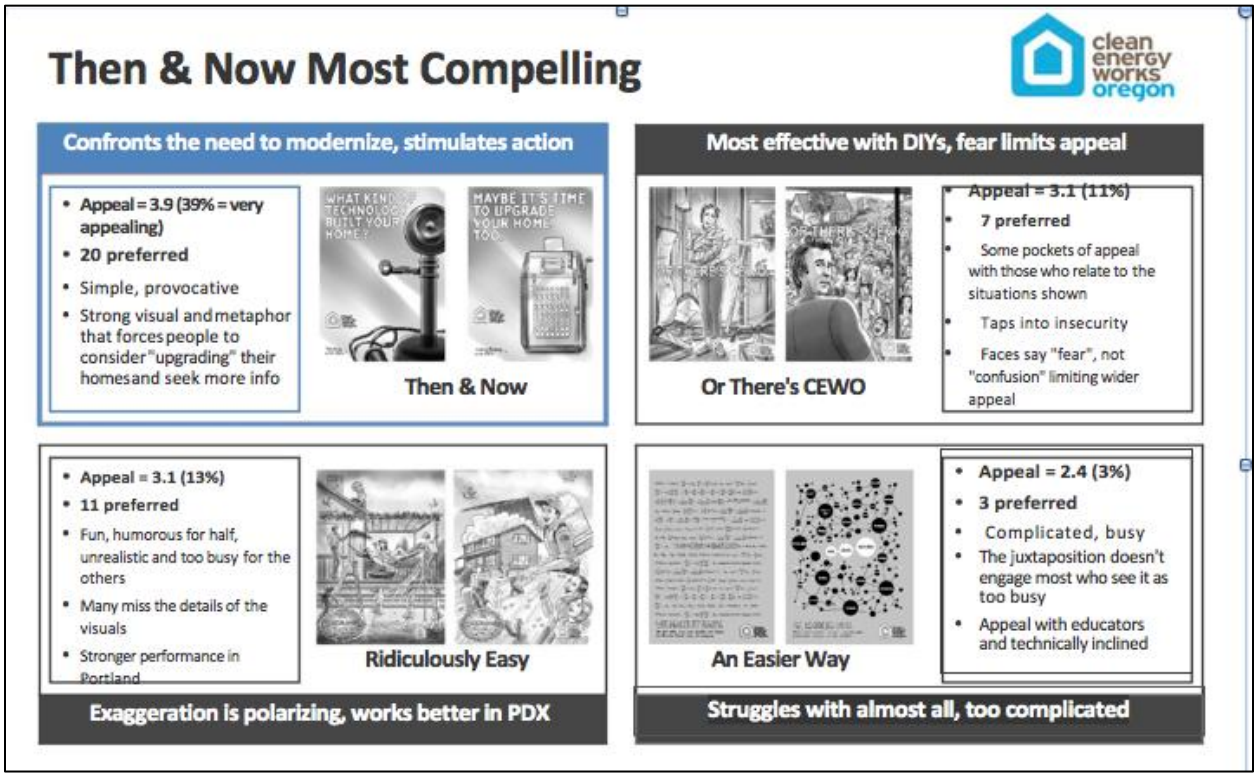


Figure 3: Focus Group Findings Regarding Advertising Messages

Program Portfolio – Key Metrics

This review of program materials also included summarizing the key metrics for the CEWO loan portfolio to date. This analysis was performed by the evaluation contractor, based on a review of both CEWO program results from February to August, 2012 as well as the cumulative program results based on the findings from the database provided by CEWO staff (which includes all projects from the pilot phase, CEWP, and all projects from CEWO through August 2012). The key findings from this analysis are summarized next.

Program Drop Out Rates and Loan Disqualification Trends

Currently, CEWO staff collects data on a number of key decision-points throughout the process, starting with the number of test-ins scheduled followed by the number of test-ins completed. For purposes of this analysis, the number of test-ins completed was viewed as the starting point for CEWO participation, as this is when the customer becomes formally engaged in the process and meets both the contractor and the Energy Advisor. Other critical benchmarks for program applications are the following steps: the number of bids accepted, the number of loans approved, and the number of test-outs completed. Although there are several interim steps along the way, these four metrics illustrate the progress of the project at key junctures throughout the CEWO process.

Table 4 illustrates the attrition rates for projects as they move from the initial test-in stage to the final test-out stage. The first column in Table 4 indicates the total number of projects that have cycled through the program from February through August 2012. The second column displays the same information based on the total number completed since the pilot stage.

Table 4: Summary of Critical CEWO Milestones

Critical CEWO Milestone	Past Seven Months (February through August 2012)	Cumulative Program Total Through August 2012
Test-Ins Completed	1,874	3,900
Bids Accepted	957	1,660
Loans Approved	836	1,620
Test-Outs Completed	724	1,402

Figure 4 illustrates the number of applications completing each step as they move through the CEWO process.

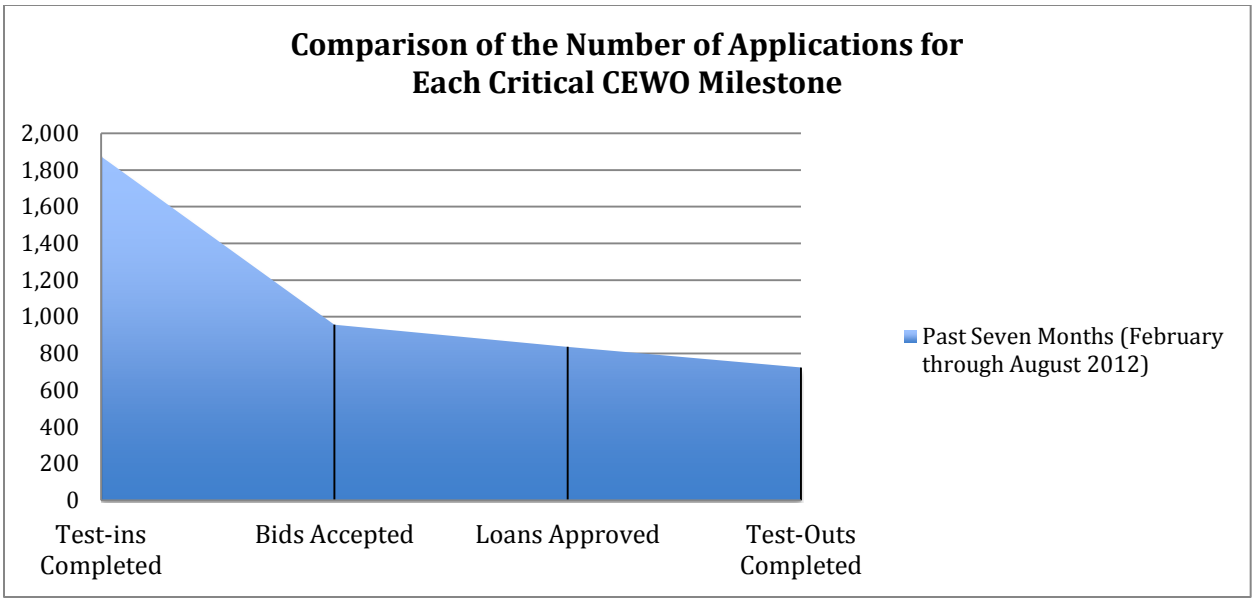
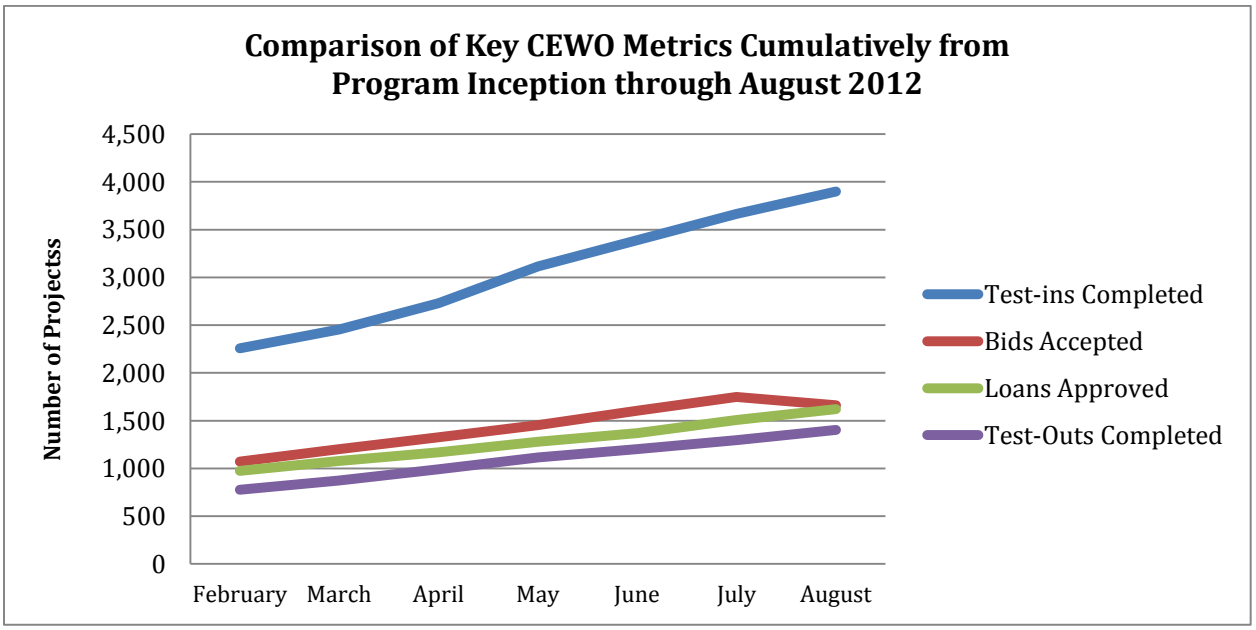


Figure 4: Comparison of the Number of Applications for Each Critical CEWO Milestone

The reasons for the decline in projects is explored more fully in the findings from the interviews with Energy Advisors, contractors and program drop out survey results, presented later in this report.

Figure 5 illustrates that the application drop out rates have remained steady since the pilot phase. This figure illustrates that there is a slight dip in projects after loan approval stage as well, which is consistent with the findings from the program dropout surveys.



Source: CEWO Program Database August 31, 2012

Figure 5: Comparison of Key CEWO Metrics Cumulatively from Program Inception through August 2012

Table 5 illustrates two other important trends in CEWO program operations: the close rate and loan disqualification rate. Based on the weighted average number of projects, the close rate to date is at 39 percent, up slightly from the cumulative program total of 36 percent. Similarly, the weighted average loan disqualification rate is at 13 percent for the past seven months compared to 12 percent for cumulative program operations to date.

Table 5: Summary of Critical CEWO Ratios

Critical CEWO Ratio	Past Seven Months (February through August 2012)	Cumulative Program Total Through August 2012
Close Rate (Test Outs/Test Ins)	39%	36%
Loan Qualification Rate (Bids Accepted-Loans Approved/Bids Accepted)	13%	12%

Source: CEWO Program Database August 31, 2012

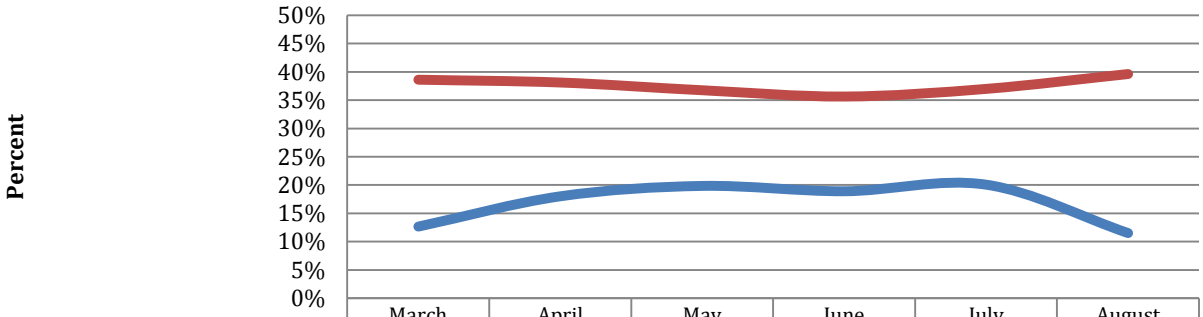
A review of conversion rates of similar types of "whole house" programs revealed a wide variability in the close rates for these programs nationally. According to a study completed by the National Energy Retrofit Institute (NERI) 2012, the industry average is about 25 percent. As Table 6 shows, CEWO is clearly out-performing the industry average of 25 percent and is performing well among its "peers." CEWO's conversion rate is also encouraging, given the relatively short amount of time the program has been operating at a statewide level.

Table 6: Comparison of Conversion Rates to Other Types of "Whole House" Programs

Program	Conversion Rate (Audit to Project Completion)	Source
Long Island Green Homes	72%	NERI 2012
Midwest Energy How$mart Program	70%	Midwest Energy 2012
Progress Energy (FL)	50%	Energy Savvy Report 2012
MidAmerican Energy	50%	Energy Savvy Report 2012
Focus on Energy	50%	Energy Savvy Report 2012
National Grid (RI)	40%	Energy Savvy Report 2012
Clean Energy Works of Oregon	**39%**	CEWO Database 2012
New Jersey HPwES	38%	NERI 2012
APS (AZ)	35%	Energy Savvy Report
Energy Trust (OR)	35%	NERI 2012
SustainableWorks	32%	NERI 2012
NYSERDA	30%	NYSERDA Press Release 2012
Industry Average	25%	NERI 2012

It is also important to examine the monthly trends for two critical metrics: the conversion rate and the loan disqualification rate. Figure 6 compares the monthly close rate and the loan disqualification rate based on a moving average of the past five months, to account for seasonal variations. Since it is a moving average, the time period is from March to August 2012.

As this figure shows, there has been a decline in the number of loans qualifying for the program from July to August, an issue that is addressed more fully in the contractor and Energy Advisor interviews. It also indicates that the project close rate hovers between 36 to 40 percent, suggesting that up to two-thirds of projects drop out of the program.

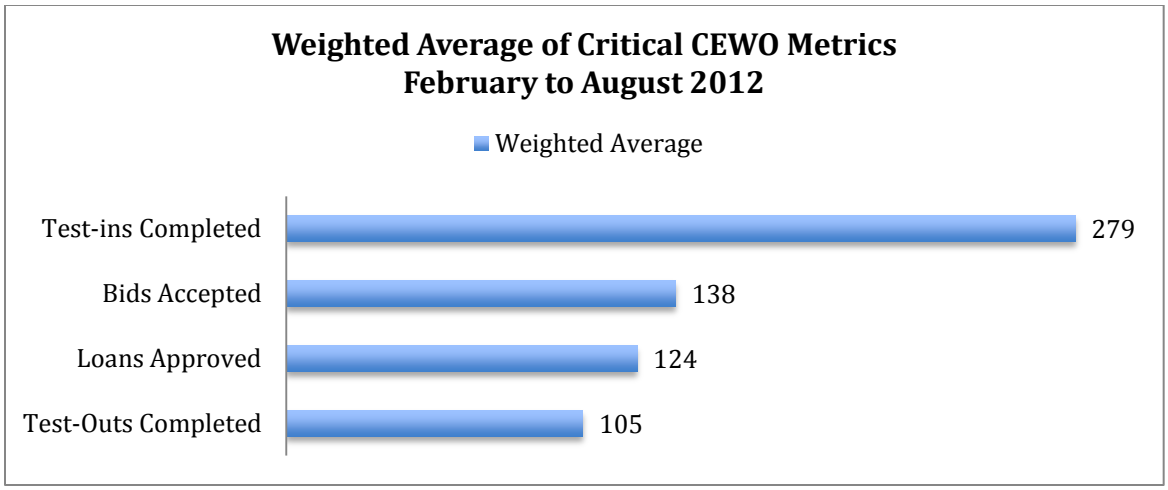


	March	April	May	June	July	August
Moving Average for Loan Disqualification	13%	18%	20%	19%	20%	11%
Moving Average for Program Conversion Rate	39%	38%	37%	36%	37%	40%

Source: CEWO Program Database August 31, 2012

Figure 6: Comparison of CEWO Close Rates and Loan Disqualification Rates March-August 2012

Figure 7 displays the weighted average of projects by month for each of the critical CEWO metrics during the past seven months. These findings reinforce the importance of monitoring critical program metrics on a consistent basis going forward.



Source: CEWO Program Database August 31, 2012

Figure 7: Comparison of Weighted Averages of Key CEWO Metrics Cumulatively from February through August 2012

Closed Project Trends

The program database also tracks two other indicators of program activities: the number of closed projects that have met the program standards and the number of projects that have exited the program. As Table 7 shows, during the past seven months a total of 746 projects were successfully closed and met CEWO standards during the test out. The number of projects closed is tracked separately from the number of test-outs, and the differences between the two final numbers are due to timing issues and delays between the time the project receives its final test-out and the time that information is updated in the program database. This is consistent with the previous discussion regarding project conversion rates.

Table 7: Number of Closed Projects Completed in 2012

Projects Closed	February	March	April	May	June	July	August	Total
Metro Portland	95	81	96	117	107	75	103	674
Outside Portland	6	8	10	9	10	13	16	72
Total	101	89	106	126	117	88	119	746

Source: CEWO Program Database August 31, 2012

Table 8 illustrates that during this same time period a total of 1,226 projects exited from the program. The Closed Failed status means that the applications are no longer active, and have therefore been removed from the program. These exits are based on a variety of reasons, including participants wanting to drop out of the program or not qualifying for the loan. But it does indicate that more than 1,200 projects have been removed from the program, which contributes to significant overhead costs and investments by both the contractors and the Energy Advisors. Reasons for these attrition rates are explored in the program dropout surveys.

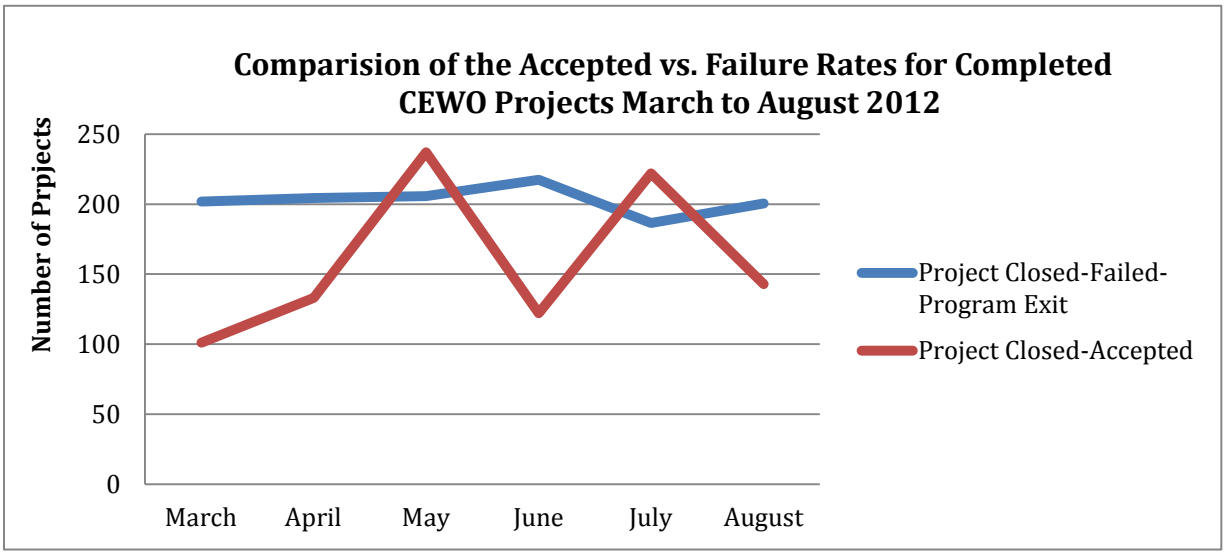
Table 8: Number of Closed Projects Which Exited CEWO in 2012

Project Closed-Failed-Program Exit	February	March	April	May	June	July	August	Total
Metro Portland	101	162	123	228	112	209	127	961
Outside Portland	86	35	36	82	47	49	16	265
Total	187	197	159	310	159	258	143	1,226

Source: CEWO Program Database August 31, 2012

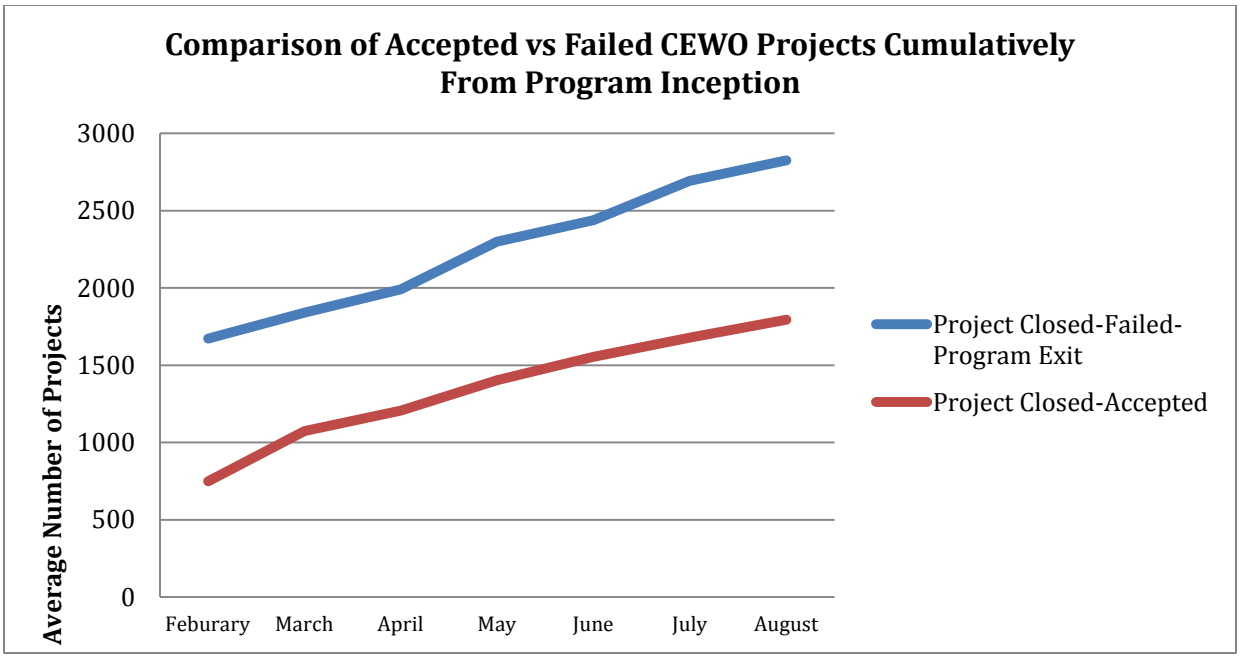
This finding further reinforces the importance of offering other solutions to program applicants and thus "bridge them" from CEWO to another Energy Trust program. By identifying program dropouts earlier in the process and redirecting them to more appropriate program offerings, this will lower the acquisition costs required to enroll customers.

Figure 8 illustrates the number of projects closed during the past seven months, since the program went statewide. Figure 9 displays these trends based on cumulative program data, suggesting that project attrition levels have been relatively steady since the pilot phase.



Source: CEWO Program Database August 31, 2012

Figure 8: Comparison of Accepted vs. Failure Rates for Completed CEWO Projects from March to August 2012.



Source: CEWO Program Database August 31, 2012

Figure 9: Comparison of Accepted vs. Failed CEWO Projects Cumulatively From Project Inception

These findings suggest that CEWO faces the same challenges as other "whole house" programs in minimizing project attrition rates. Therefore, CEWO staff should continue to work closely with Energy Trust to look for ways to move program dropouts into other Energy Trust program offerings. These findings further emphasize the importance of pre-qualifying customers early in the process, to avoid the time and expense associated with test-ins and bid preparations.

Projects in Progress

CEWO staff also tracks the number of projects in progress, which are summarized in Table 9. As this table shows, project volume has increased steadily during the first six months of project operations. This finding further confirms that CEWO is making inroads in building up its statewide capabilities.

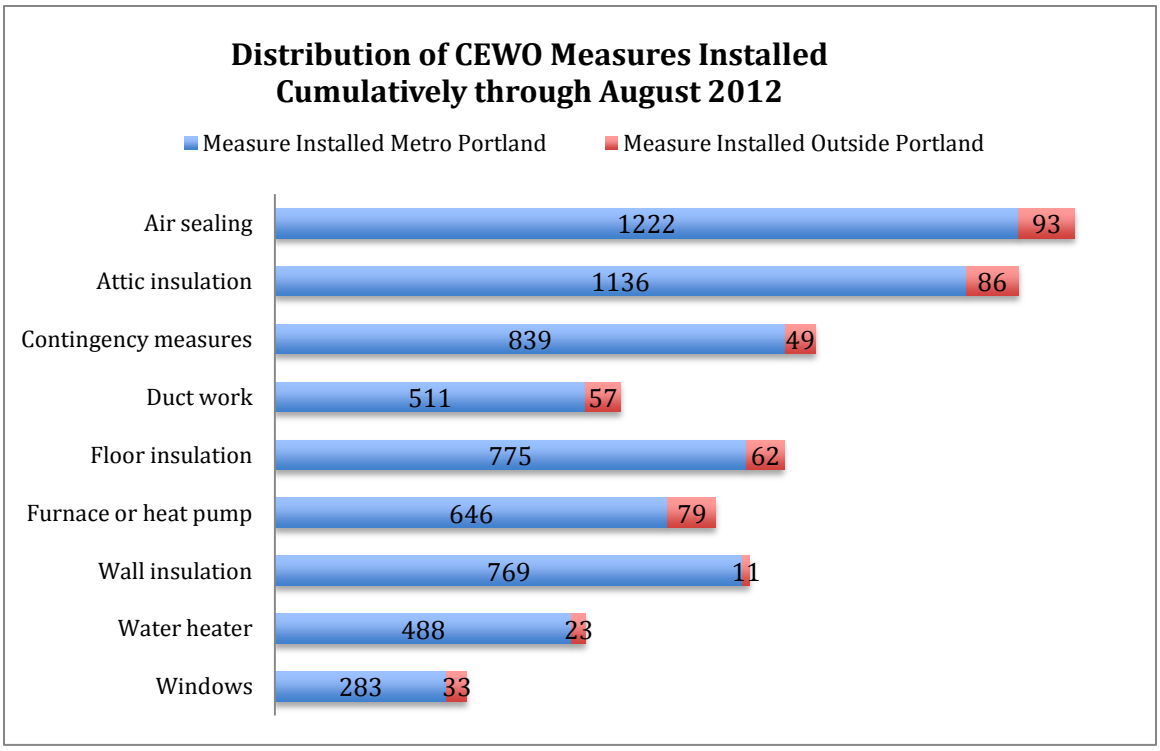
Table 9: Summary of Projects in Progress for CEWO From February to August 2012

Projects in Progress	February	March	April	May	June	July	August
Metro Portland	1,308	1,371	1,655	1,604	1,535	1,498	1,968
Outside Portland	245	300	481	498	490	442	572
Total	1,553	1,671	2,136	2,102	2,025	1,940	2,540

Source: CEWO Program Database August 31, 2012

Geographic Distribution of Projects

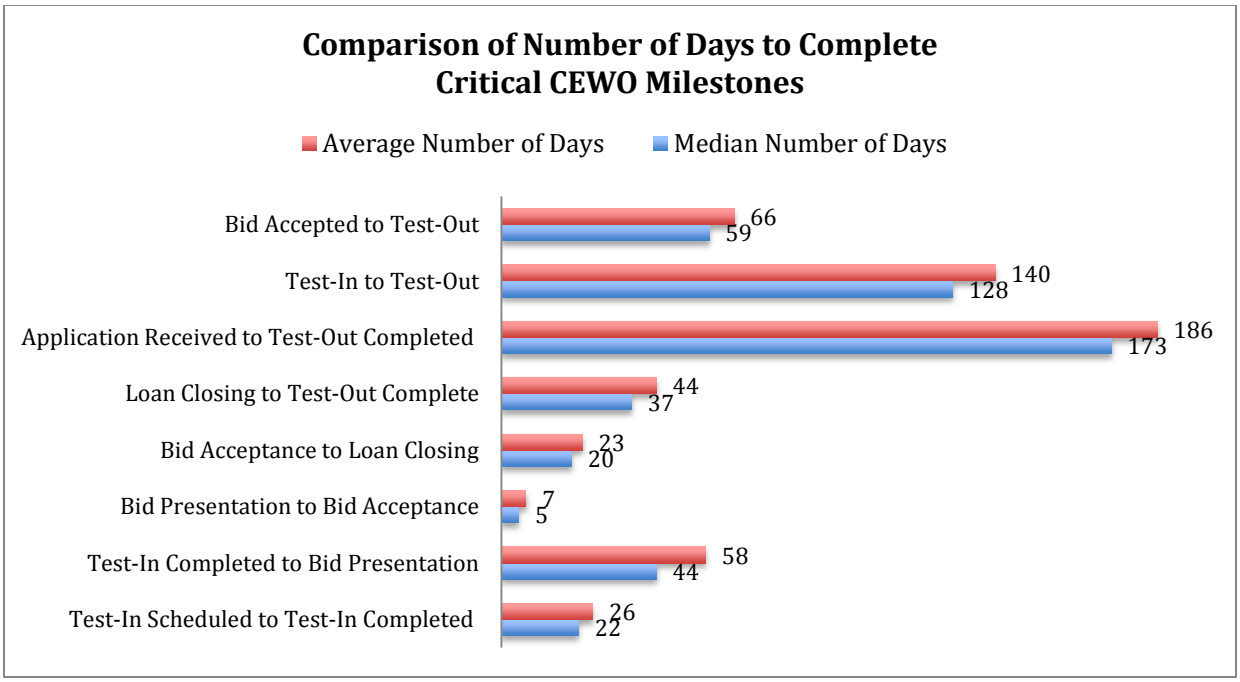
The analysis of the program records also found that the majority of all energy efficiency measures were installed in Portland area homes, as Figure 10 shows.



Source: CEWO Program Database August 31, 2012
Figure 10: Comparison of Measures Installed by Geographic Area

Project Processing Time

Although the goal is to complete the entire CEWO process in 78 days, according to the program materials, the records review indicated that the average project takes more than twice as long to complete. While some projects have been completed in just 19 days, the longest processing time in the past seven months was 491 days or 16.3 months. Figure 11 illustrates both the average and median times for processing applications at key points throughout the CEWO process. Most projects take between 5.8 to 6.2 months to complete. The figure also illustrates that there are several opportunities to shorten the time required to complete specific project steps, including the time from bid acceptance to loan closing and the time from test in to bid presentation.

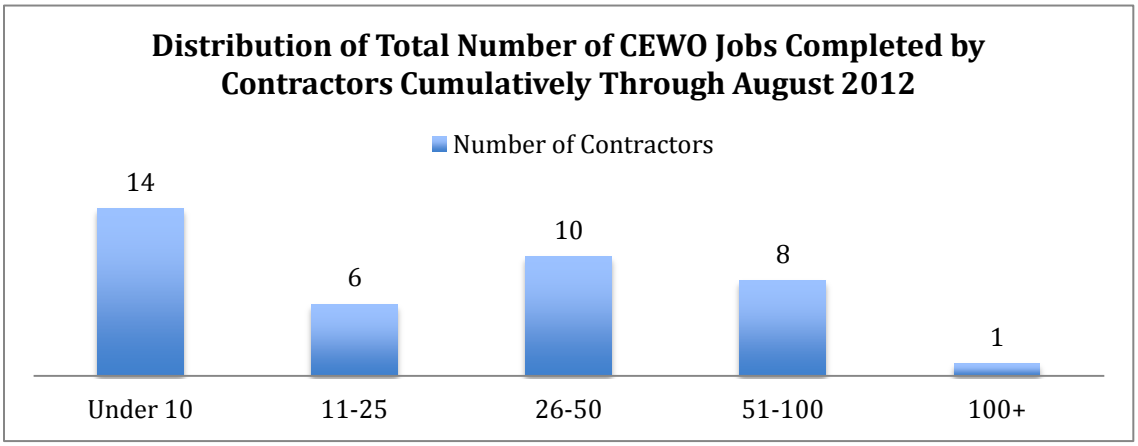


Source: CEWO Program Database August 31, 2012

Figure 11: Comparison of Number of Days to Complete Critical CEWO Milestones

Key Contractor Metrics

The program database also tracks key data regarding the participating contractors. According to program records there are 39 active contractors working throughout the state. As Figure 12 shows, 51 percent of the contractors have completed 25 projects or less through August 2012, while 26 percent have completed between 26 to 50 projects during the same time period.

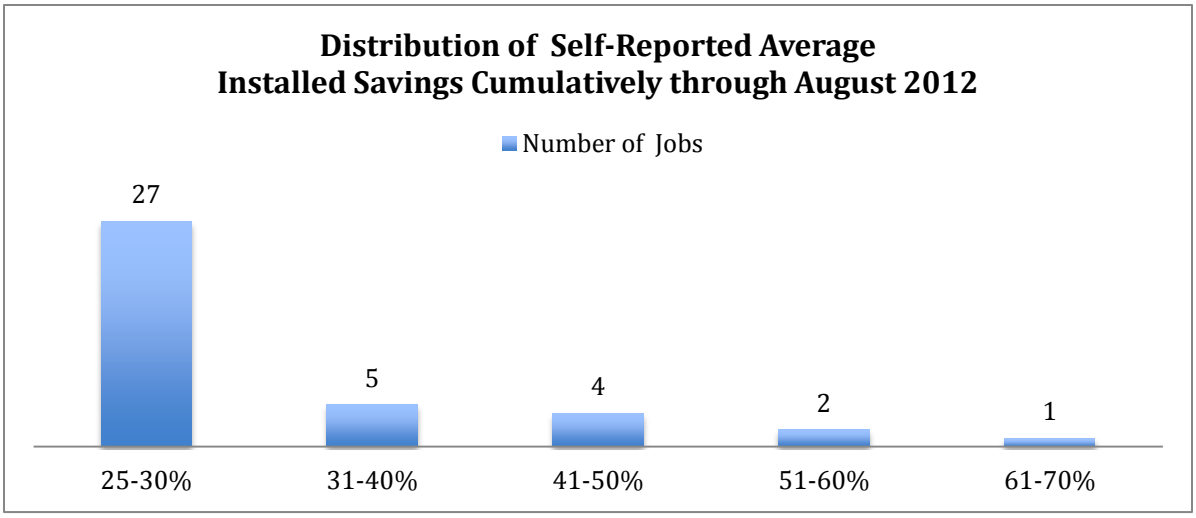


Source: CEWO Program Database August 31, 2012

Figure 12: Distribution of the Total Number of CEWO Jobs Completed by Contractors Cumulatively Through August 2012

These findings suggest that the program has a fairly diverse contractor base, as only one contractor has completed more than 100 jobs.

Seventy percent of the CEWO projects yielded an average estimated savings between 25 to 30 percent, suggesting that most of these projects will offer some savings opportunities to customers (see Figure 13). However, these estimates should be verified thorough an independent review of the claimed savings estimates.



Source: CEWO Program Database August 31, 2012

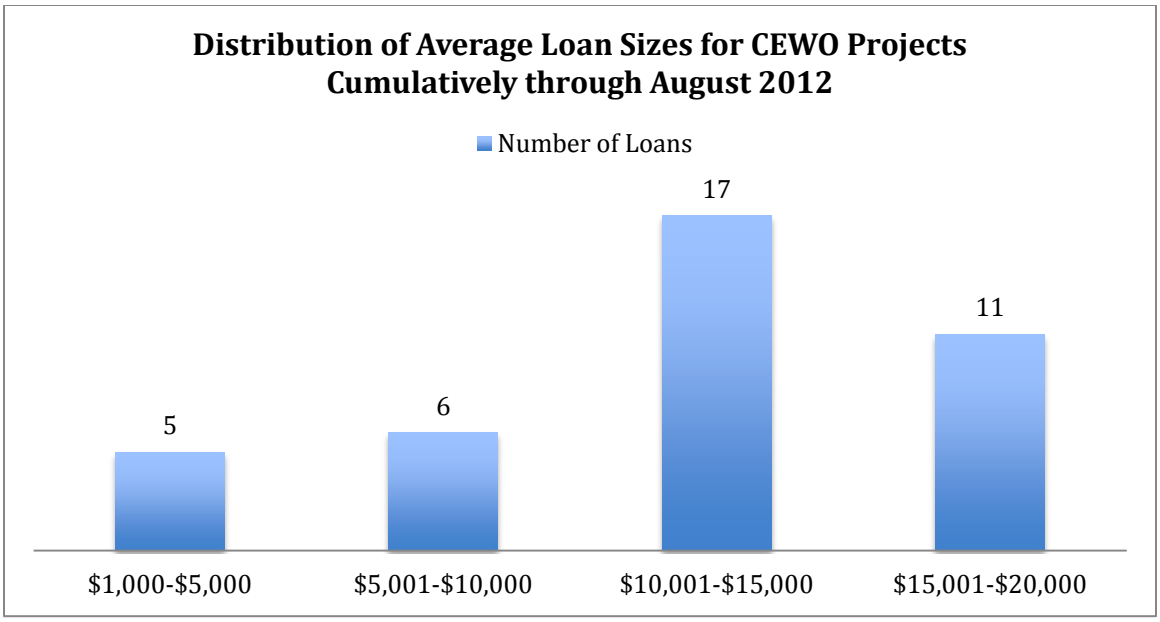
Figure 13: Distribution of Self-Reported Average Installed Savings Cumulatively Through August 2012

Key Financing Metrics

One of the major accomplishments during the first seven months of program operations was the addition of three more lenders for the CEWO program. Craft3, formerly Enterprise Cascadia, was the first lender for CEWO, and offered loans in combination with its own resources, and $4.5 million from a combination of grants from both the federal Energy Efficiency and Conservation Block Grant and the Portland Development Commission.

In 2012, the following lenders were added to the CEWO program: Pacific Crest Federal Credit Union, SOFCU Credit Union and Umpqua Bank. The program database records the number of loans offered by each lender, but does not provide details regarding the total value of these outstanding loans.

Most of the loans (44%) for CEWO projects are between $10,000 and $15,000 as Figure 14 shows, with another 28 percent between $15,000 and $20,000. The average loan size based on the program records was $11,840. Note, the program database only calculated average loan size for contractors, not the entire range of loans offered by CEWO lenders.



Source: CEWO Program Database August 31, 2012

Figure 14: Distribution of Average Loan Sizes for CEWO Projects Cumulatively Through August 2012

The program database also tracks the total number of loans outstanding based on information provided by customers; however these loan totals do not reflect the entire loan portfolio according to Craft3. Therefore, CEWO should examine more closely the reasons for these disparities and perhaps rely on data supplied from the lenders themselves, rather than from the project applications. In any case, it is clear that Craft3 continues to dominate the overall CEWO loan portfolio, while the other lenders comprise a much smaller number of the total outstanding loans (see Table 10).

Table 10: Summary of Projects in Progress for CEWO From February to August 2012

Lender	Cumulative Number of Outstanding Loans To Date Since Program Inception
Craft3	1,360
Pacific Crest Federal Credit Union	5
SOFCU Community Credit Union	87
Umpqua Bank	173
Cash (Self-Funded)	104
Total	1,729

Source: CEWO Program Database August 31, 2012

Craft3, the largest CEWO lender, provided additional information regarding the CEWO loan portfolio as part of this process evaluation. As of August 31, in conjunction with the City of Portland and Clean Energy Works Oregon, Craft3 has originated 1,882 Clean Energy Works Loans for a total of over $24 million in financing including loans generated during the pilot period for CEWP. The current Craft3 CEWO portfolio of active loans is worth $18,190,000. Overall, the portfolio performance continues to be

outstanding with “problem assets” accounting for only 0.05 percent of the total portfolio. The default rate is estimated to be less than one-half percent, with a total of $58,000 charged-off.[10] Note that these default rates are significantly lower than the industry reported rate of 2 percent (ACEEE On Bill Financing Report 2011).

[10] Personal communication from Craft3

Section 3 Summary of Findings from In-Depth Interviews

A. In-Depth Interviews with CEWO Staff, Program Implementation Staff and Allied Firms and Organizations

Introduction

This chapter summarizes the findings from a series of in-depth interviews conducted with CEWO program staff, implementers, lenders, and other key stakeholders.

Methodology

The in-depth interviews with program staff and implementers also provided additional insight into the overall changes that the program has experienced since March 2011. These interviews were conducted in March through June 2012, and the respondent groups are summarized in Table 11.

Table 11: Sample for In-Depth Interviews

In-Depth Interviews	Sample
CEWO Staff	6
Program Implementation Staff (CSG, Energy Savvy)	2
Allied Firms: Energy Trust, Electric and Gas Utilities, Craft3 (formerly Enterprise Cascadia), and ODOE	3
Total	11

The interview guide was based on the review of program materials, previous evaluation reports, and the program tracking database. A copy of this interview guide is provided in Appendix A, while Table 12 summarizes the key questions that were addressed in these telephone interviews.

Table 12: Areas of Focus for In-Depth Interviews

Research Area	Types of Questions
Financing Characteristics	Has the loan activity been as anticipated? If not, why not? How can the loan program offering be revised to ensure that capital is provided at the lowest possible cost? How can this loan offering be leveraged or bundled with other financing available from both public and private lenders?
Default Rates	Is loan default an issue for this program?
Program and Administrative Costs	Are the costs for this program offering comparable to other types of loan program offerings? What is the cost-benefit ratio for the loan value compared to program savings?
Effectiveness of Program Operations & Delivery	Please describe your role in the customer application process. Is the program performing as expected? How satisfied are contractors with the program implementation and delivery staff? Overall, how satisfied are customers with the program delivery? How is CEWO preparing for program growth, both internally and externally?
Effectiveness of Marketing and Outreach Activities	Which marketing and outreach activities are the most effective? Which ones are least effective? Is the CEWO message successfully differentiated in the Oregon Home Performance market place? How can these materials and outreach activities be improved?
Participant Decision-Making Process	Why did program participants opt for the CEWO program? What other program offerings did they consider? How was the application denial process handled?
Barriers to Program Participation	What are the barriers to participation? What has been the effect of changes on reducing identified barriers?
Areas for Program Improvement	How can CEWO improve? What other types of financing offerings or delivery strategies should CEWO consider?

These findings are explored by topic area in the remainder of this section.

Roles and Responsibilities

The in-depth interviews began with the respondents describing their key roles and responsibilities. As Clean Energy Works Oregon (CEWO) has evolved from a Portland-focused pilot to a full statewide program, the respondents' roles and responsibilities have changed as well. These roles have increased as the organization began to develop the processes to support statewide activities, modify the customer engagement process, develop a brand, refine the roles of the Energy Advisors, and develop financing options.

These respondents indicated that they are focused on creating CEWO as a self-sufficient model, moving away from its reliance on the ARRA grant. These respondents also described how their roles and responsibilities have changed as the organization grows, with some senior management stepping back and other staff receiving expanded responsibilities. Staff is focusing on developing and expanding on the

CEWO brand, as well as creating relationships with community partners throughout the state. The goal of these efforts is summarized in the following quote, "*We want to build a self-sufficient model.*"

Program History

The staff interviews also provided some insight regarding how CEWO has evolved from the pilot to the full statewide implementation. As the staff explained, CEWO received its first round of funding through a $20 million ARRA grant, which included providing funds to a local community bank, now called Craft3. The goal of this program is to test the effectiveness of on-bill financing to encourage energy efficiency retrofits.

However, there has been some tension between the role that CEWO plays in expanding the Home Performance network and the role that Energy Trust plays in administering energy efficiency funds. While some staff viewed the collaboration between the City of Portland and the Energy Trust as a "perfect storm" to create a new type of program, there were ongoing challenges to find a lending partner to offer project financing.

The staff then recruited a community bank that was willing to lend funds, albeit at a higher interest rate, which led to the creation of the pilot program in Portland. During the pilot period, the City of Portland leveraged other resources as a way to meet the goal of the DOE grant of creating a scalable, replicable model cost-effectively.

The staff is also focused on transforming the Home Performance market so CEWO "*can continue to make a strong case for continuous funding after the three-year period is up.*"

Program Goals

As part of the program evolution, the original goals have been revised based on actual program operations. As the staff explained, the original goals were estimates and have thus been reduced substantially to reflect market realities. However, given that the 6,000 home goal is still on the CEWO website, it is important to state clearly these new goals in program materials.

> *"The original 6,000 homes goal was a guestimate number based on $12,000 per average project. In Year 1, we would have 1,000 homes; Year 2 was 2,000 homes and Year 3 was 3,000 homes. We revised the goals after realizing that we were not going to meet that goal… The [Oregon] DOE (project team)…agreed to build in flexibility with the program budget and the ability to shift $2 million around (to meet program needs). So we revised our goal to 1,500 homes in 2012."*

Marketing

Marketing plays an integral part in the statewide roll out of CEWO. The CEWO staff has developed a comprehensive marketing strategy as a way to build customer awareness. A component of the marketing approach is to clearly explain to customers the participation process, an area that created confusion during the pilot period. Specifically, the marketing is focusing on trying to make the loan application process a simple and easy process and is promoting CEWO as a "one-stop shop."

"Demand generation is now something we are focusing on in the mid-term in the program and also in the longer term will be focusing on that 100%...In the past, there was a brand focus before program launch and after program launch the focus on customer experience."

"We are not successfully differentiated yet in the market beyond Home Performance. We need to differentiate (CEWO) from the Home Performance programs…we don't want this program to just be a financing program."

CEWO's marketing strategy includes a mix of traditional advertising and direct mail, as well as public relations activities. So far, the staff believes these activities have been effective in raising awareness, especially events that generated some local news coverage.

CEWO staff conducted a series of focus groups to help identify the best way to promote this program. A core element of the campaign has been to emphasize "the four easy steps to participate in the program: Apply, Assess, Finance and Transform."

"*We want to simplify the customer process…explain it as a CSI for home- uncovering energy secrets…We talk about having the customers create a scope of work with the vendors and then apply for financing, once approved, transform lives through the improvements."*

"We also developed another marketing approach called 'Tell Your Story'—the stories were that the program changed their life."

CEWO staff also conducted focus groups to test different messaging. The ones that were most effective were ones that focused on technology rather than ease or convenience, a finding that surprised program staff.

"We did a campaign showing old technology ideas...It shows the need to modernize the home and it was a simple, innovative headline that challenged assumptions about the existing technology in a home."

A major concern is the "bridging" of customers who either do not qualify for CEWO or decide to drop out. Staff from all three organizations, Energy Trust, CSG, and CEWO, believes this is an area that needs to be linked more directly going forward, especially as both organizations want to be able to claim energy savings from these activities towards their overall goals.

"We have been working …to focus intently on helping the customer that comes in either through CEWO or Energy Trust to have a common set of qualifying questions so they can be directed to the most appropriate programs and get directed by Energy Advisors and provide off ramps."

"Bridging is a focus right now. About 33 percent of the applications close but we don't want to lose out on the other 67 percent. We want to funnel those projects into other Energy Trust programs because it lowers the acquisition cost."

Program Operations

Program operations have changed substantially as the program evolved from a Portland-based pilot to a full statewide initiative. These changes include modifying the customer participation process by moving the financing qualification step to after receiving the in-home audit. CEWO staff developed a new customer contact map. This change was made so the amount of financing needed would match more

closely to a proposed scope of work based on the contractor's assessment rather than just having the customer apply for the maximum amount of funds available.

> *"Financing is now later in the process so the lenders have a scope of work- before the financing step was split into two steps; now there is just one (step)."*

> *"We did some surveying with the program drop outs and found they had 'sticker shock' so we redesigned the whole bidding process, and gave the home owners more information upfront. We also created an upgrade options list …. Now (homeowners) have a menu without prices so the home owner can pick and choose the options they want."*

By providing a homeowner with a choice of potential options, the contractor can then prepare a more customized bid. This process also helps the contractor better qualify the customer upfront, which may lead to a higher conversion rate of in-home assessments to energy efficiency projects.

One participating lender also liked this operational change, as it reduces the number of applications that need to be reviewed.

> *"For my company the change has been operationally helpful. It allows us to review credit at a later stage. We don't have to review as many applications."*

The reaction from the contractors regarding program changes has been "mixed" according to CEWO staff. Some contractors want the process to be even faster because they want to sell more jobs, while others want to find a "balance point." However, staff also indicated that some contractors are too small to handle the potential volume of projects that may be coming from the statewide program.

3.1 Role of Energy Trust

The respondents also indicated that there were still some challenges in making sure that Energy Trust goals align with the CEWO goals. Given the financial and strategic relationship between the two organizations, it has been challenging to find the right balance of building a Home Performance program that does not lead to market confusion.

The program staff from CEWO, Energy Trust and CSG indicated they are working closely together to manage both costs and expectations. All three organizations want to develop a way to more effectively leverage their relationship with Energy Trust's Existing Homes Program, even though there may be differing goals and objectives. The staff indicated that Energy Trust wanted to focus on offering on-bill financing to comply with the EEAST legislation, while CEWO had a broader focus which included creating "green jobs."

3.2 Role of Contractors

Home Performance contractors play a vital role in marketing and delivering this program. CEWO staff wants to strengthen the role that contractors play by featuring them more prominently in their marketing materials as well as providing them with support to help them develop sustainable and scalable businesses.

> *"We are changing the whole model with existing contractors…we want the contractors to get it together and get ready for the volume from the market."*

"We are hoping to capture something and we want to make contractors 'larger than life' heroes."

However, a barrier to successfully building a statewide program is the lack of qualified contractors in the less populated areas outside Metro-Portland.

"One challenge is we are rolling out in a community where there are no qualified contractors and the market is too small to build a business in that community."

"For 2012, a goal is to strengthen capacity and get contractors focused on sales and marketing and human resources. We have to have contractors that can be self-sustaining."

CEWO staff also wants to help standardize the application process to ensure that all contractors receive information in a timely manner. The staff also indicated they had helped the contractors build their business by hiring "Executive Coaches" and offering training on business management subjects including human resources, accounting, and field operations.

3.3 Role of Energy Advisor

Currently there are 15 Energy Advisors supporting the CEWO program. However, the role of the Energy Advisor has also changed substantially from the pilot phase to the statewide roll out. The Energy Advisor's responsibilities have now shifted more to quality control regarding reviewing the contractors' bids and ensuring projects are completing satisfactorily rather than focusing on helping customers navigate through the application process. This change has been driven, in part, by the large carrying cost associated with providing this type of "concierge" service. The staff has indicated that this type of personal service may not be sustainable after the grant period has ended.

The Energy Advisor must now complete a review at the end of each step within a specific time frame, ranging from two to seven days. These steps are:

1. Test- In
2. Upgrade options based on test-in and getting the work scope
3. Final iteration of bid
4. Acceptance Test-Out
5. Invoicing

"The Energy Advisor used to be much more labor-intensive in the beginning. Now, the Energy Advisor plays a critical role in quality control in both the test-in and test-out and reviews the work scope. (Customer interactions) are (more) scripted than in the past… For the contractors the systems in place are the same; but the interaction with them is different. That is a big change from the pilot and now has much tighter tracking of jobs."

Other program staff agree that the "idea of an Energy Advisor is not sustainable." The challenge will be how to still maintain quality control with contractors if customers are unwilling to pay for the services provided by an Energy Advisor

3.4 Role of Lenders

Another major change from the pilot phase to the full statewide roll out has been the addition of more lenders. Adding lenders has given the CEWO program more flexibility as well as the ability to offer a

wider range of loan products. It has also created some "competition" among these lenders, which has led to reductions in the interest rates associated with the loan products.

> *"We now have four lenders; two in Portland and two others."*

> *"We have brought in two new lenders that will offer different loan products with different terms and loan underwriting criteria."*

> *"These changes have benefited the program tremendously… Originally we gave the bank a 15% incentive (to buy down the interest rate), now we don't have to… The banks are now competing and CEWO doesn't have to offer incentives. Also the banks are redoing their process to compete for customers; it is changing to a market-based program based on customer response… The banks also have reduced interest rates and have changed the closing loan procedure to align better with contractors – and drop down the interest rates even further."*

3.5 Role of Utilities

Although all utility program staff involved with implementing the on-bill financing programs were contacted, only one agreed to be interviewed as part of this evaluation. This utility staff member indicated that to date, the loan program accounts for a small number of loans for his utility (i.e., less than 60), and therefore it has not been much of an administrative burden to process these loan payments each month. He explained that the loan repayment is treated like any other product offered by the utility and is featured as a "line item on the bill."

The utility staff also scans the loan records to identify those customers who may be delinquent in their repayments or who may have closed their accounts. So far, the default rates have been extremely low, with only one default since the program began more than two years ago, according to this utility staff member.

While the utilities have developed a way to include the on-bill financing loan payment in the monthly bill, the utility staff expressed concern about the possible issues that could arise if this loan program dramatically increases in size. The major concern is that the internal utility billing system is tied to the customer, while the loan program bills are tied to the meter. Currently, this has not been an issue as the volume of the loans is quite small. But matching up the bills every month does require manual labor.

Going forward, the utility staff noted that all four utilities are concerned about the language in the EEAST legislation that "*ties the bill to the meter."*

> *"… the utilities don't want to be involved with loans. The system is not set up to have a bill tied to a meter… we are concerned about that, especially for rental customers who make a loan payment… If we are required to tie the bill to the meter, then we would have to overhaul the entire internal billings system—when we make a change that affects billing, it is a change (in all areas we operate.)... The last time we had a major overhaul in 2003, it cost $2.3 million—it would be $4 million now to make that type of change in the billing system."*

However, the CEWO staff observed that the utilities have not been "enthusiastic" about starting up an on-bill financing program.

"The utilities …are not sure about the value (on bill financing) provides for the homeowner and don't want the energy bills to increase. They are concerned that the bill payment may go up—and has been tough reaching those about the benefits of utility financing."

The CEWO staff also indicated that the utilities have not been willing to participate in joint marketing or customer outreach activities, which makes it more difficult to reach customers outside the Metro-Portland area. The staff interviews also indicated that there is a general lack of interest among both utilities and financial institutions regarding on-bill financing because there is simply not enough of a track record to justify the costs associated with developing these kinds of programs.

"On-bill financing is not part of the original value proposition. Easy financing is part of the value proposition."

"There is no established market yet….On-bill financing is not of interest to depository market; that is a giant bureaucracy so we don't see that happening in Oregon."

Regarding the marketing strategy, the utility staff has a different view. The staff from this utility believes that expanding beyond the traditional on-bill financing model to allow third party lending for energy efficiency loans has diluted the value of the energy savings. For example, the on-bill utility loans required that 80 percent of the project costs must be related to energy efficiency improvements while the third-party lenders only require that 50 percent of the loan be used to fund energy efficiency improvements. The utility staff observed that the loan repayment costs are no longer covered through the energy savings, a key feature of on-bill financing programs.

"In the case (of 50% loans), the energy savings will not cover the loan proceeds,... it could actually lead to higher monthly payments…the banks and CEWO are straying from the original goal and there is a growing tension between making any improvements versus just making energy efficiency improvements. The financing is now focusing more on 'curb appeal' than energy efficiency."

Program Costs

The addition of new lenders has also reduced the amount of fees that CEWO has to pay for these financing products to the banks. However, there is still some concern about the best way to pass along the fees associated with the Energy Advisor and the In-Home Assessment. These fees, which are not yet passed on to the customer directly, can range from $400 to $900 per project.

The change in the role of the Energy Advisors has also led to reduced program costs.

"We have implemented the change so now we pay the contractor only $100 for the home assessment initially and $300 when the project converts…"

"We pay the Energy advisors in different stages and have struggled with this…we want to facilitate the process and are now staging the payment with CSG for the Energy Advisor."

"There is a certain segment of the population who doesn't need or want an Energy Advisor so are considering a big programmatic change to start offering options- but part of the blanket Value Proposition is to offer an Energy Advisor—so that is a challenge…. Did reduce the number of hours the Energy Advisor spent on projects; from 40 hours to about 9 hours; reduced the

administrative responsibilities- filling out the paperwork, etc. We want to automate that and eliminate the administrative time."

However, there has been some ongoing concern because Energy Trust cannot pay for non-energy related costs, such as a new roof. So the staff indicated it has been an ongoing challenge to identify the best way to allocate costs appropriately.

"*Energy Trust is only concerned about energy related savings of kWh and therms—while Home Performance is beyond pure energy savings. CEWO has additional costs like the Energy Advisor, financing costs, and administrative costs. From an energy savings perspective, a CEWO project is more expensive than the market price… because the contractors also have higher costs due to the need to pay the 'fair wages' and the cost of the equipment/measures- administration, marketing and so on."*

The difference in the project costs between CEWO and Energy Trust Home Performance projects has created the perception among contractors that CEWO projects are more expensive than Energy Trust projects.

An unanticipated benefit from this loan program is that customers are paying their loans off earlier than expected[11], thus reducing the overall program costs further. This suggests that there will always be a small percentage of customers who will be able to finance these types of projects on their own. But the true target market for this program is to attract customers who would not be able to complete these projects without some type of financing tool.

Reporting/Key Metrics

CEWO has "invested heavily" to develop a more robust tracking system for recording key program metrics using its Optix platform, developed by Energy Savvy. Contractors can now track the progress of their jobs in real time. This new tracking system has led to "more accountability and a higher degree of feedback" from contractors. CEWO staff can also generate a variety of reports using a much deeper set of key metrics captured in the process. CEWO staff also uses this new platform as a way to monitor contractor progress, using it as a "score card or report card" for contractors.

"We have several different reports and the (database) includes data from contractors, lenders, home owners. We can see how the project relating to the task. We can also funnel metrics; filter lists based on various criteria, generate charts and graphs."

Staff from CEWO, Energy Trust, and CSG has been working closely to develop an HTML reporting protocol that will provide more direct communication between CSG and Energy Savvy, CEWO's software developer. The goal of developing this protocol is to "open up lines of communication" between the two groups while also enhancing the overall level of analysis that is provided by CEWO to CSG and Energy Trust.

"We are tracking applications, showing standard metrics... We are also creating project dashboards…going forward we agreed on standards and there will be more transparency than in the past."

[11] Early payoff rates are described more fully in the participating customer surveys in Chapter 4.

"The program evolves every day but we put a big emphasis on technology and are working on whole program view…We are switching focus to more planning…going forward—want to switch from being 'reactive' to 'proactive.'"

Program Results

To date, CEWO has $24 million in outstanding loans. Overall, the portfolio performance has been outstanding with "problem assets" accounting for only 0.5 percent of the total portfolio. The default rate is estimated to be less than one percent.

Overall, the staff indicated that the portfolio is "performing well." However, even with more than 1,000 loans and only two defaults, the portfolio is still not generating sufficient interest to attract other investors to contribute to the loan fund.

"The performance of the asset attracts additional dollars…but it is still not enough money…. The loan repayment stream is a trickle. It is impossible to continue without receiving additional lenders and (getting more) financial institutions involved. For energy efficiency retrofit loans, there is no established market yet."

With the program changes described previously, CEWO is performing better than expected, according to all of the program staff interviewed. They also believe that CEWO is a national model for an effective energy efficiency loan program.

"The program is definitely performing better than expected — and also think it is a leader in programs compared to what is happening elsewhere across the country….In 2011, we were not at all sure but we have achieved the first goal of 1,000 projects… From all the evidence, we ARE the Oregon Home Performance market—because of the rich incentives, the no money down, one-stop-shop, contractors are steering to our program. "

"CEWO has been a really successful model to develop the one stop approach — it is very expensive, but I think there are much more opportunities for consolidation of functions rather than having two separate tracks… If Energy Trust sees the Home Performance market thrive and that projects are happening because of CEWO, then that is a good thing. "

At the time of the staff interviews, CEWO was serving 10 counties in four utility service territories: Portland Metro Area, Central Oregon, Rogue Valley, and South Central. The staff is also preparing to launch CEWO in four to five more service territories in the next few months.

"Most of last year had tremendous demand spike and that had capacity implications. Last November brought on a COO who is now responsible for managing program operations so the CEO can focus strategically on moving the organization forward… We are now at the midpoint of the program operations and pretty much the focus now is to how to sustain the organization after the grant period is up."

Remaining Challenges

The staff interviews also indicated major challenges still remained regarding getting CEWO fully operational. One particular concern raised by both program staff and lenders was the reluctance of the utilities to fully engage in designing an on-bill financing program.

"Utilities are less interested in on-bill financing."

"The utilities had a contractual obligation to fulfill the EEAST requirements and had some obligation for (to create) an on-bill payment program offering."

However, interviews indicated CEWO staff felt that the utilities are not fully participating in developing an on-bill program in collaboration with CEWO. Furthermore, the staff reported that the participating utilities are not sharing information to facilitate program marketing to utility customers.

"There has also been some marketing coordination challenges… We don't want to compete in the same space. We need to be coordinated but right now it is bureaucratic and not efficient."

"Another challenge has been that the utilities are reluctant to have a data exchange of their customer information… for marketing purposes."

However, it is a matter of utility practice and concern for customer privacy to not share this type of data with outside parties, including either CEWO or Energy Trust.

Another barrier is that each utility has its own requirements regarding Home Performance programs, which adds another layer of coordination between the CEWO contractors and the contractors operating within a utility's service territory.

"*One utility has a requirement that the customer use its own trade ally contractors (rather than those certified through CEWO). The local contractors pay for lead generation—it is the opposite of co-op advertising. It has been a challenge to work with this utility and to be a marketing partner with them. In order to be a marketing partner- need to have a prime contractor (if outside their territory), then the prime has to partner with a local subcontractor."*

Inter-relationships with Multiple Funders

The program staff also indicated that it is challenging to manage the expectations and needs from the various stakeholders involved in CEWO. The CEWO staff conducts regular weekly conference calls to discuss issues as they arise with all the various parties throughout the state.

"It's important to have direct contact so we have a series of service delivery meetings every week on a regional basis. There are regional meetings on a monthly basis and all the partners participate in calls… We talk to the partners about various issues that have arisen during the week and allow them to ask questions… ODOE and DOE are not involved in these meetings but we do report to them and the Controller provides the information they need."

However, the program staff also acknowledged that sometimes it is difficult to please all the parties involved with CEWO.

"With different funders and stakeholders, there are challenges-… We have lots of stakeholder management and relationship management… It's been tremendous challenge but we've done a good job. It has been our ability to effectively manage stakeholder expectations and manage multiple communications- use email; been trying to have group meetings and have good stakeholder management and public relations."

Future Plans/Areas for Improvement

The CEWO staff also indicated they planned to continue to focus on improving program operations, including conducting a business process review in the next six months. Other plans for future improvement include:

- Develop contractor ratings
- Integrate solar technologies into product offerings
- Set up automated scheduling
- Review the Energy Advisor cost structure
- Continue to revise program application process with the goal of reducing the amount of paperwork required
- Consolidate the information from the test-in and test-out process and streamline it so all the information is "housed in one place"
- Generate reports that capture the data collected throughout the project process
- Continue to standardize the process for contractors

A major concern raised by both Energy Trust and CEWO staff involves avoiding duplication of activities, such as creating multiple customer online profiles.

> *"Why not leverage it or integrate it in what Energy Trust is already doing? We need to determine how the functions can be leaner and consolidated…Energy Trust has focused on capacity building while CEWO is focusing on financing and branding and we should use the Energy Trust via one-stop-shop…We want to get more activities aligned with CEWO."*

The staff also indicated that ideally these are not "competing programs. They are working together but the programs have different goals and that creates a challenge."

B. Summary of Energy Advisor Interviews

Given the unique delivery method for this program and the key role that the Energy Advisors play in assisting customers and trade allies within CEWO, the evaluation contractor completed in-depth interviews with seven of the 12 Energy Advisors in August 2012. Table 13 summarizes the key areas of focus and a sampling of questions addressed in the interviews. A copy of the interview guide is in Appendix A.

Table 13: Areas of Inquiry for the Energy Advisor Interviews

Research Area	Types of Questions
Effectiveness of Program Operations & Delivery	Please describe your role in the customer application process. How satisfied are contractors with the program implementation and delivery staff? Overall, how satisfied are customers with the program delivery? Please describe how you interact with the trade allies. How has your role changed or evolved during the past six months? How has the customer application process changed in the past six months? What specific concerns do you have regarding overall program operations?
Effectiveness of Marketing and Outreach Activities	Which marketing and outreach activities are the most effective? Which ones are least effective? Is the CEWO message successfully differentiated in the Oregon Home Performance market place? How can these materials and outreach activities be improved? How effective have the communications been between program staff and the trade allies? What types of marketing activities would be more effective in reaching customers?
Participant Decision-Making Process	Why did participants opt for CEWO? What other program offerings did they consider? How was the application denial process handled? How has the participant decision-making process changed or evolved during the past six months?
Barriers to Program Participation	What are the barriers to program participation? What has been the effect of program changes on reducing identified barriers? Are there any barriers to program operations that cannot be mitigated?

Roles and Responsibilities

The first set of questions focused on the Energy Advisors' experiences with CEWO, in terms of their roles and responsibilities, length of time they have been involved with CEWO, and how these roles have changed during their tenure with the program.

Four of the seven Energy Advisors have been involved with the program since its pilot stage as Clean Energy Works Portland (CEWP), and thus have seen the program evolve and change during the past two years.

All of the Energy Advisors spend 100 percent of their time devoted to CEWO duties. Most of these duties involve a combination of being in the field, either during the test-in or test-out stages, and in the office managing the paperwork associated with each project. One of the Energy Advisors interviewed served as the field supervisor, acting as a liaison between the field staff and senior management at CEWO. On average, each Energy Advisor is managing 100 CEWO projects.

The Energy Advisors viewed themselves as the "face of CEWO," through their interactions with both homeowners and contractors. The Energy Advisors are involved in meeting with homeowners during the "test in" phase, keying in the existing building conditions provided by the contractor to help with the energy modeling as a way to help inform the contractor bids, reviewing the bids, and providing information about CEWO to the customer and contractors throughout the process.

During the initial test-in step, the Energy Advisors also install light bulbs and other instant savings measures.

> *"We are also a back-up resource for homeowners to help them figure out the savings potential (of proposed projects)."*
>
> *"The role of the Energy Advisor is having this lifeline to interpret what is being told to the homeowner."*

Change from CEWP to CEWO

The biggest change in their role from the pilot to the full statewide program has been the level of involvement of the Energy Advisors in the overall project. Initially called Energy Advocates, the staff spent as much as 25 hours on each project. Once the program moved statewide, the functionality of the program's software platform also developed and improved, which reduced the number of hours required by the Energy Advisor to review program documents. These improvements led to reducing the number of hours allocated for Energy Advisors from 24 to eight hours per project.

> *"They changed the term from 'Energy Advocate' to 'Energy Advisor', which is a better description… We are very customer facing while most interaction with contractors takes place behind the scenes. Now we are only at the initial assessment and quality review. They cut the cost and time involved (in face-to-face customer interactions) and instead I provide counsel on phone or via email."*
>
> *"In pilot phase spending 24 hours per project was not entirely necessary. We are doing a good job with current amount of hours per project; 8 hours per project—that's sufficient to do the work required."*

Several Energy Advisors believe that CEWO has now evolved into a much more contractor-oriented program, straying from its original goal to help customers complete energy efficiency projects.

> *"The role seems to be more focused around the contractor and the program has really focused on meeting the needs of the contractor."*

> *"When it was CEWP, the program was driven by the stakeholders… now they are allowing contractors more input and whatever gets in the contractors' way, it gets the attention… it does need to be contractor focused but it should be more well-rounded. For the program to be successful at this point, it should be focused on quality control and quality review (not just number of projects)."*

As part of the move to the statewide program, Energy Advisors were no longer involved in the bid presentation. This change, some Energy Advisors believe, has led to a reduction in the amount of jobs closed.

> *"During pilot (CEWP), the uptake (close rate) was 75-80 percent because Energy Advisor was involved in step by step. Now the volume of applicants is substantially higher so the uptake has fallen… a lot of customers are dropping out because of the lack of input from Energy Advisor..."*

While this is an area of concern (the program close rates have been averaging one-third of all test-ins), it does not reflect program history during the past seven months of program operations.

Steps in Application Processing

The Energy Advisor is directly involved with the customer and contractor at four key points throughout the application process:

- Initial Application
- Assessment and Bid Proposal
- Bid and Loan Signing
- Quality Control

All of the work, both from the Energy Advisor and the contractor, is posted on a proprietary energy platform developed specifically for CEWO by Energy Savvy. This online process contains all relevant information for each project, each step along the way.

The Customer Service Representative (CSR) has 24 hours to handle the customer intake, once the application is posted online. Each CSR makes up to three calls with the customer to complete this step and schedule the test-in assessment.

After the test-in is completed, the Energy Advisor has to post the modeling results within two days for the contractor to use to prepare the bid. The contractor has 30 days to prepare the bid and place it on the CEWO software platform. The Energy Advisor has to review the bid within two days of its posting on the software platform.

The Energy Advisors believe that they provide the most benefit to the customer during the test-in and test-out phases of the project; however, they do believe that their involvement throughout the entire process is a big "value-add" to the customer.

Overall, the Energy Advisors indicated that they could meet the assigned deadlines without too much difficulty, especially since the Energy Advisors are able to support each other with the workload as needed.

> *"A couple of steps that are 48-hour turnarounds- test-out review—ping points for the contractors. Think some of the earlier ones could be moved to 48 hours or less with little or no issues."*

> *"The time to do the work right now is pretty good, it is an adequate time frame…It gets hectic if we are out in the field for a couple of days, then we have to spend the whole day in the office catching up."*

Consistent with the findings from the analysis of program records, the entire process takes at least four months to complete from the initial application to the test-out phase, according to the Energy Advisors.

> *"The project volume has increased significantly so that kind of plays into the not having enough time or involvement because you have a lot to do; we're not the ones coming up with the proposals so it is hard to find out when the right time is to provide advice."*

Changes in the Application Process

With the roll out of CEWO, the application process changed[12] by moving the financing qualification step to after completing the test-in process. This change met with mixed reviews. Some Energy Advisors believed this change led to more motivated lenders, while others felt that it caused frustration among the small number of customers who did not ultimately qualify for a CEWO loan.

> *"By changing the application process, the bank cut down on the number of applications they had to review, but it was hard and in two or three cases, we had people spend two months going back and forth with the contractor to get the bid approved, only to be turned down by the bank…so that was frustrating."*

> *"There used to be a huge delay between people applying and being approved… so it was actually a positive change and loan approval is also faster now. The banks realize now that there is a project waiting for them, not a potential project."*

Changes to Credit Approvals and the Financing Step

Moreover, several Energy Advisors also believed that by not charging customers a test-in fee, the program attracted a higher number of customers who were not serious about moving ahead with an energy efficiency project.

> *"With a free test in- the customer has no skin the game—inherent problem with free programs—never been able to figure out to if the home buyer is serious (before proceeding)."*

> *"I feel there is a certain percentage of customers who sign up for free assessment. They just want the free assessment and then shop around the work. When the projects become too expensive they drop out and able to find more cost-effective projects outside the program."*

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[12] For more details regarding these changes, please see Chapter 2 on Program History.

One Energy Advisor said that one homeowner asked to have his credit checked ahead of time, but was told that was not possible. He was later denied credit for his project, causing some frustration for both the customer and the contractor.

> *"We have gone through the whole process of contractor developed bid and the home owner gets denied. It is a rare occurrence but that never had that happened in the pilot."*

However, the Energy Advisors also indicated that customers who are denied often find alternative financing on their own. In fact, some have noted a trend in customers taking the free assessment and then proceeding with the project outside of CEWO because they can find alternative financing, usually at a lower interest rate than that offered through CEWO.

> *"Some customers are self financing rather than going through CEWO… they pay cash and still receive the rebate but not part of CEWO. The contractors and customers are finding ways to finance it alternatively, arrange with another lender... they are still participating and take advantage of rebate and quality review but not using the CEWO financing. This is a gray area… people are inventive."*

The Energy Advisors handle the test-ins and test-outs in person with the customer, and then provide additional ongoing contact via the telephone or in email.

> *"It works pretty well when we're there for the bid review but some contractors are constrained…it is hard to schedule meetings with contractors to review the bid. The Energy Advisors are not paired with any specific contractors so it got tougher because the Energy Advisor was jumping into a situation that he is not familiar with."*

Changes to Bid Presentation and Pricing

Several Energy Advisors expressed concern with how the bids are now presented to customers under this new format, especially regarding "sticker shock" associated with the project costs.

Several Energy Advisors felt that the trend of contractors emailing bids rather than presenting them in person has affected the project conversion rate.

> *"Some contractors are emailing the home owner a bid for $15,000 or $30,000 and the customer never gets a phone call. CEWP had good contractors and learned from the Energy Advisor to do the bid presentation (in person). That helped the customer make the best decisions and the contractor could help close the deal with the Energy Advisor."*

If an Energy Advisor sees a disparity in the pricing, they will call the contractors for an explanation. However, the Energy Advisors did report incidents where they felt the bid was excessive and encouraged the customer to seek an alternative bid from a second contractor.

> *"There is some disparity in bid pricing. Every contractor has a slightly different price, but a few contractors are consistently high. The Energy Advisor is not involved in policing the prices… we do have a conversation with the contractors and give a call and ask why they are high. If a customer contacts me I give them my impression and offer customer a different contractor if they feel they have been f not well served."*

"*It is left up to the advisors (about pricing). There is no institutional guidance. We review prices from three dozen contractors and so we get a sense of whether contractors are going for a premium treatment. It puts us in a difficult position. We want to call the contractor first because we supposed to be keeping our eye on that but there is no programmatic support for that and we might end up getting blamed for losing a sale."*

"We talk with contractor first to find out if price is reasonable and determine the reasoning… Our job is to inform the customer. In one case, I felt a (customer) was being charged $7,000 for a $2,000 job."

"It is a choice between sticking up for a customer or meeting deadlines…that feels a little counter-intuitive and finding a balance is not easy."

Given the importance of balancing the needs of customers against the market conditions facing contractors, it is important for CEWO staff to establish a more transparent pricing policy and guidance to the Energy Advisors, especially when contractor prices include both energy and non-energy savings measures. Subsequent conversations with CEWO staff indicated there is a review process for bids in place, but the staff agreed that this process needs to be communicated more clearly to both customers and the Energy Advisors.

Feedback about Contractors

Overall, the Energy Advisors feel they have a good relationship with the contractors, especially those contractors who have been involved in CEWO for a while. However, some newer contactors may view them as an "extra set of eyes" second-guessing their work. But generally these contractors come to value the role that the Energy Advisor provides.

"There is no negative feedback… the contractors are extremely happy with the support we can provide and closing jobs."

"They (the contractors) put on a good face and are nice to us but behind our backs we are not confident that they like us involved, they don't want a second set of eyes and don't like that we're watching them."

Feedback about Customers

The Energy Advisors also reported that they receive positive feedback from customers as well.

"They view us as an advisor. They want to know that work has been done correctly."

"It depends on the contractor. If the contractor has good solid business and good customer service they have the happiest customers. If there is a glitch in the process, the Energy Advisor is going to hear about it."

Not surprisingly, the most frequent complaint the Energy Advisors receive from customers is about the pricing.

"The customers don't understand the pricing; the savings- how much do they get for doing these things… they want to know what kind of value they are getting out of the investment."

Barriers to Program Participation

The Energy Advisors indicated that the main barrier to participation continues to be a lack of understanding about CEWO among customers.

> *"The main barrier is education. I don't think enough home owners know about the program."*

Part of this is also because customers are still confused about the CEWO program, and many cannot differentiate CEWO from other Energy Trust program offerings.

Areas for Program Improvement

The Energy Advisors offered the following recommendations for ways in which CEWO could improve going forward.

- Continue to provide information about CEWO, specifically the anticipated time frame to complete a project.

> *"We need to let customers know up front that this is a process and it is going to take some time. The most often-cited reason customers are unhappy is miscommunication, so in our role we could review the project documents and make sure what they are proposing is clearly explained to the customer."*

- Provide clarity regarding pricing for both Energy Advisors and customers.

The Energy Advisors need additional guidance from CEWO regarding pricing guidance on bids. The Energy Advisors believe that they are not encouraged to provide feedback on proposed pricing, and doing so may lead to increased tensions between the contractors and the Energy Advisors. As these Energy Advisors observed, pricing is a gray area and they need additional guidance about how best to provide objective feedback to customers.

> *"Pricing is a pretty big gray area about what we should say if there is an issue with the pricing… the home owners want us to give pricing guidance."*

In several cases, the Energy Advisors said that if they asked the contractors to provide more information or encourage customers to seek a second bid, then the contractors would complain to their superiors as a way to discourage this practice. Since contractors are assigned to customers, unlike other competitive bidding situations, the Energy Advisors did report incidences where the prices quoted were significantly higher than reported for other jobs. However, they are discouraged from discussing these discrepancies with the customers.

Project pricing is a complex issue due to the product mix as well as scope to make both energy and non-energy related improvements. While there is a process in place for Energy Advisors to escalate concerns to senior staff, in reality many Energy Advisors feel pressure not to do so. Going forward, the CEWO staff needs to provide the Energy Advisors with more guidance as to how best to address pricing discrepancies and also provide a clearer explanation to customers regarding how they can request a second bid. Providing more clarity regarding the pricing policies will help to reduce some of the frustration expressed by both the customers and Energy Advisors.

Of note, in the follow-up interviews, the CEWO staff indicated there was a process in place for the

Energy Advisors to escalate concerns about contractor pricing. However, the staff agreed that this process needs to be more clearly explained to both customers and Energy Advisors. These subsequent interviews also indicated that contractor pricing is based on a variety of variables, which is one of the reasons it has been difficult to develop an appropriate price range for various project costs.

> *"Thirty percent of homeowners know what they want and get what they want; one-third drop out and one third don't know what they need. The pricing isn't very good from the contractors who are pushing the homeowners out by not giving them the option to do less costly work. The Energy Advisor is not involved enough to give their (opinion) and really advocate for the homeowner."*

Therefore, the Energy Advisors had recommended developing a table of average price ranges for various types of home energy efficiency improvements. However, CEWO staff has not yet developed a solution to this complex issue and contractors are reluctant to have customers request second bids.

- Offer some type of competitive bidding by encouraging second bids from contractors.

The Energy Advisors viewed this as critically important, since the customer does not select the contractor but is rather assigned the contractor by CEWO. Educating home owners more fully about the process for soliciting a second bid may reduce the number of program drop outs.

> *"The homeowners should get competitive bids rather than just one-contractor bids."*

> *"There are no real tools or metrics that the homeowner can use to see if they are getting a market price…The customers are assigned a contractor and get a bid but some contractors are not a good fit…It is a healthy thing to do to get competitive bids."*

- Eliminate contractors who continually charge above-market rates or those with low close rates.

While the Energy Advisors indicated most contractors were fair, there were a few they believed were overcharging customers. They believe those contractors could damage the CEWO brand.

> *"We have seen pricing ranging from $1.70 sq. ft. for attic insulation to $8.00 a sq. ft. for the same job…that behavior hurts the overall program."*

- Allow for more competition among lenders.

While the Energy Advisors were pleased that more lenders were in the program, they still hear from customers that the interest rates are too high, which leads many customers to opt to finance these projects without CEWO.

> *"People are most dissatisfied with interest rates on the loan… interest rates are 5% for the program, but they can get 3.8% or 3.9% if they go through credit union for a loan."*

- Review the Quality Assurance/Quality Control project requirements.

The Energy Advisors understand the importance of keeping their costs in line in order to maintain program cost-effectiveness. Therefore, they recommended that some of the smaller or more straightforward projects do not require the same level of quality control as the larger ones. They suggested reducing or eliminating test-outs for projects that just focused on one measure change out.

"Less comprehensive projects probably don't need full review by the Energy Advisor. Going forward, the advisor role could be scaled back on projects where there is not a whole lot to look at, like a heating system or windows only."

- Continue to promote CEWO, using a neighborhood or block by block approach.

The Energy Advisors noted that targeted direct mailings were quite effective in increasing project applications and recommended more targeted marketing going forward.

- Improve communication between all parties.

Lastly, while the Energy Advisors had positive feelings about the quality and caliber of the CEWO staff, they did wish there could be more ongoing communication about all aspects for the program including project status. For example, the Energy Advisors would like to be notified if projects have stalled for more than 30 days, or be alerted when a customer fails to qualify for a loan.

C. Summary of Contractor Interviews

Currently there are approximately 39 trade allies participating statewide in the CEWO program. As part of the process evaluation, the evaluation contractor completed in-depth interviews with 25 CEWO contractors currently active in the program. These surveys were completed in August 2012, and focused on the issues summarized in the following table. Appendix A contains the Interview Guide used for these surveys.

Table 14: Key Areas of Inquiry for Contractor Interviews

Research Area	Key Areas of Inquiry for Contractor Interviews
Reasons for Participation	About how long have you been a participating contractor in the program? Why did you decide to participate in the program?
CEWO Services Provided	How many projects have you completed for CEWO since you started with the program? Is this what you expected? Why/why not? What types of services account for most of your work?
Customer Satisfaction	Overall, what do customers seem to like best about CEWO? What did the customers seem to have problems with or dislike about the program?
Financing	About what percentage of the project costs are covered by CEWO financing? What is the average loan amount for projects you install? Has this amount increased or decreased in the past six months?
Customer Decision-Making Process	How important was the availability of financing to the customers' decision making process? About what percentage of projects would have proceeded without the CEWO funding? Please describe how you enroll customers in the CEWO program? How does this process compare to your experiences with other programs?
Effectiveness of Marketing & Outreach Activities	How do you market CEWO to customers? What types of marketing and outreach activities conducted on behalf of CEWO appear *to be the most effective* in reaching customers? What types of marketing and outreach activities conducted on behalf of CEWO appear *to be the least effective* in reaching customers? Are you involved in the Home Performance Contractor's Guild? How can this organization be used effectively to market CEWO?
Relationship of CEWO and Other ETO Program Offerings	What other energy efficiency program offerings are you also participating in? How does the program participation process compare to your experiences with other programs?
Program Satisfaction	Overall, please rate your satisfaction with the CEWO program components: The ways CEWO is promoted to customers; Responsiveness of CSG/Energy Advisors; Application Requirements Processing time for applications What do like best/like least about CEWO?
Program Improvement	How can CEWO be improved? How should CEWO be expanded?

Research Area	Key Areas of Inquiry for Contractor Interviews
Contractor Demographics	How many years have you been offering Home Performance type services? What percentage of revenue is generated by sales/installations of energy efficient equipment? What percentage of your revenue is generated by CEWO? How many employees do you have? Where is your office/s located?

Contractor Characteristics

All of the 25 contractors interviewed in this survey are participating in CEWO, with 67 percent based in the Portland-Metro area and 33 percent located outside Portland.

On average, these contractors have been participating in CEWP/CEWO for 16 months. However, a few had just enrolled in the program, while nearly one quarter (24%) has been participating for more than two years.

On average, these companies had been in business for 14.4 years, ranging from two to 65 years. These contractors employ an average of 23 employees, ranging from 1 to 147 employees overall, as Figure 15 shows.

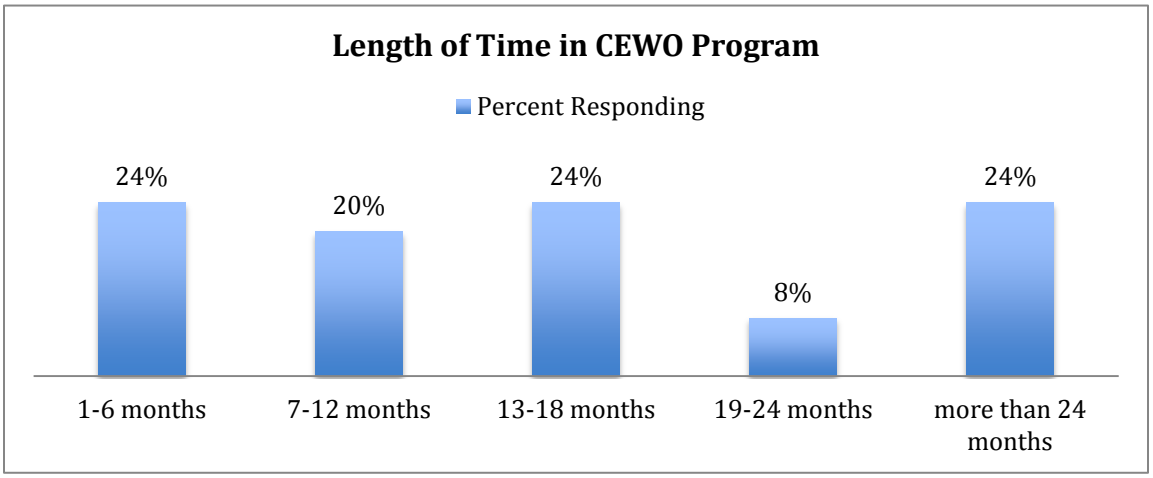

Figure 15: Length of Time in CEWO Program

Reasons for Participating in CEWO

These contractors viewed CEWO as a natural extension to their existing weatherization services, and therefore viewed CEWO as an opportunity to grow and expand their businesses in this area. They also liked the CEWO model, and believed it offered attractive benefits that would benefit homeowners, as the following comments illustrate.

> *"We were low on work, and we needed more work. Also we decided to participate because we could do value-added services beyond what we normally do, and the incentives were attractive.*

We could get people to do work that they normally wouldn't do without the incentive and the loan."

"We've been an Existing Homes trade ally with ETO for years and I figured that the CEWO program would be another avenue of revenue generation as well as being able to offer financing to homeowners."

"It's a big part of my company's business plan to make these kinds of improvements affordable to a wide variety of people. It's also important to provide some level of QA across the project."

"…As a contractor, if you can't offer the financing that CEWO offers, someone else will become the customer's contractor. We stay competitive this way. You have to be in the program or be left behind."

Number of Completed Jobs

On average, these participating contractors have completed 90 Home Performance assessments, with two contractors (8%) completing more than 500 assessments through CEWO. However, one quarter (28%) of these contractors had completed less than 10 CEWO assessments, while one quarter (24%) had completed 100 to 200 CEWO assessments.

On average, these participating contractors have completed 47 CEWO projects since 2011, with 16 percent of the contractors not completing any projects. In contrast, 12 percent of these contractors have completed more than 100 CEWO projects.

These participating contractors also indicated the various types of services they provided as part of their responsibilities as a CEWO contractor. Nearly one-quarter (23%) install air sealing, while duct sealing was mentioned by 10 percent of these contractors. Installing insulation, including duct (10%), ceiling (9%), floor (9%) and wall (9%) were mentioned by approximately one-third of these contractors.

However, the contractors reported different levels of expected project activity. In some cases, the number of jobs exceeded their expectations, while it fell short for others, as the following comments indicate.

"At some points in the program the leads exceeded my expectations; sometimes they were less than my expectations. However it hasn't been sustainable in the marketplace."

"A little lower as the close rate is lower and the quality of the customer is lower. CEWO doesn't prequalify the customers. CEWO no longer does a credit screen. They don't require customers to watch a video before signing up so the customer knows what the process is about. The quality of lead is lower and getting lower, not the other way around. CEWO is not improving the process."

"I think there have been some challenges with program design. I think that the CEWO staff are enthusiastic yet inexperienced. I think they are more focused on numbers of assessments rather than quality."

Several contractors, especially those outside the metro-Portland area, believe that the CEWO model is not designed to meet their specific needs, which ends up costing them both time and money. One contractor in particular indicated having a difficult time meeting the various program requirements and standards. This contractor was also disappointed that most customers were more interested in having a test-in rather than completing a retrofit, and so are considering dropping out of the program.

Types of Services Provided

Installing energy efficient equipment, such as windows (6%), water heaters (4%), and heating systems (4%) accounted for 14 percent of these contractors' CEWO projects, as Figure 16 illustrates.

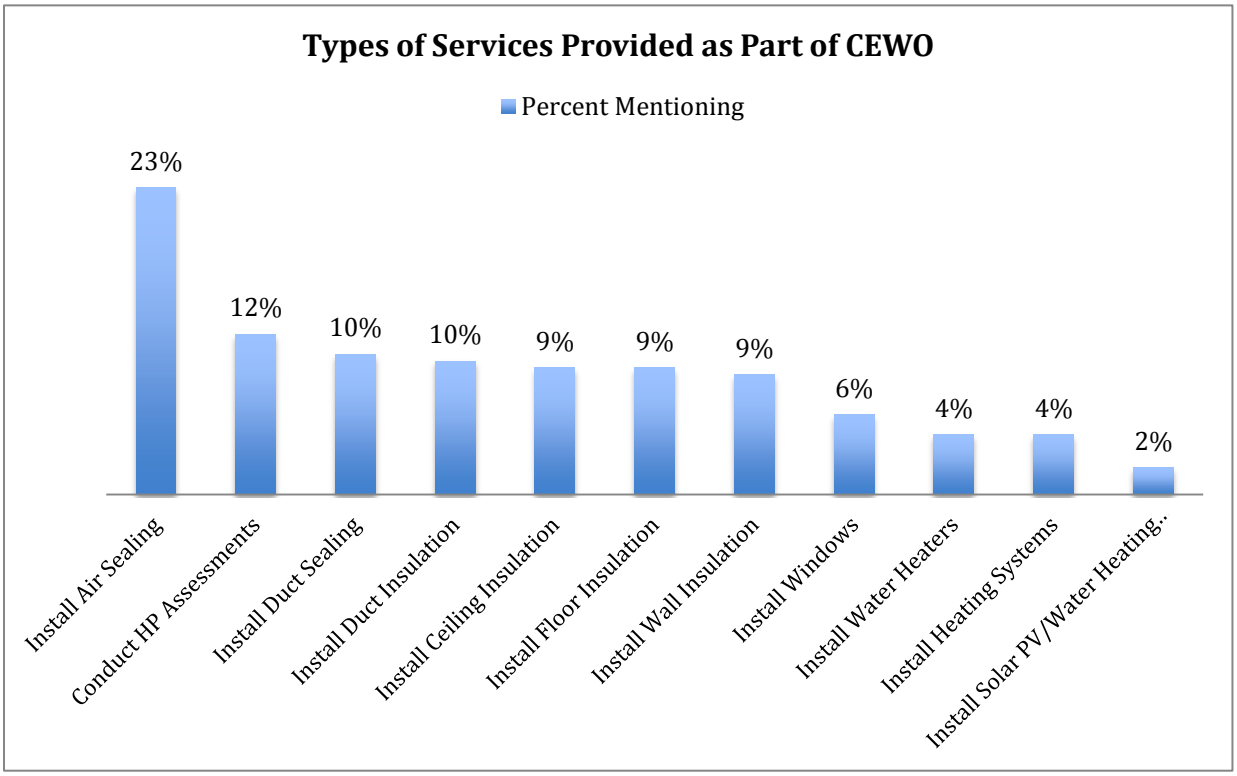

Figure 16: Types of Services Provided as Part of CEWO

Consistent with the previous findings, insulation work accounted for the majority of the work (65%), as Figure 17 shows.

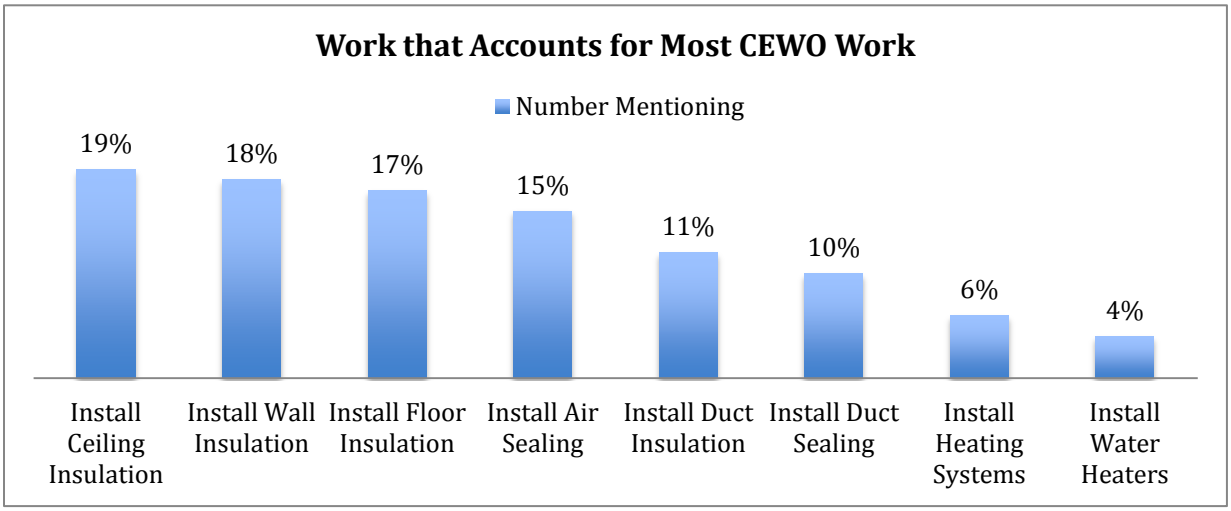

Figure 17: Work that Accounts for Most CEWO Work

Figure 18 illustrates that the CEWO contractors hired subcontractors to install equipment, such as water heaters (21%) and heating systems (19%), while 13 percent subcontracted wall insulation and windows. The remainder of the work completed by subcontractors was for insulation installations.

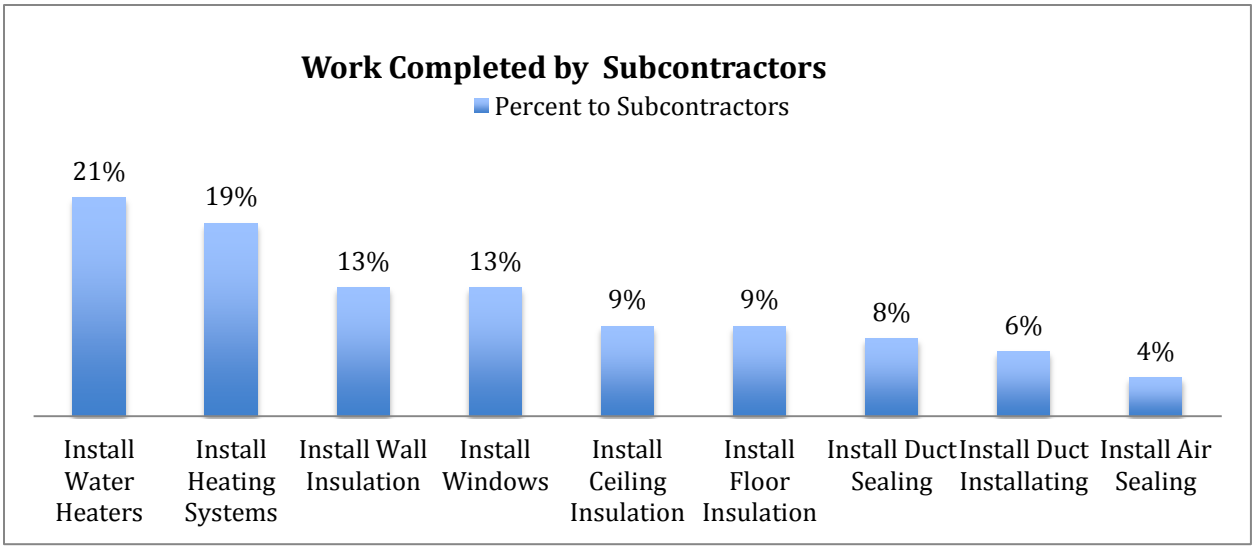

Figure 18: Types of Services Provided as Part of the Home Performance Program

Two-thirds of these contractors indicated that business had increased in the past two years (68%), while the remainder indicated it had either decreased (16%) or stayed the same (16%). Energy efficiency projects accounts for about 73 percent of these contractors' business, on average. Approximately one-third are due to the CEWO program.

CEWO Loans

These contractors indicated that the average loan amount for these projects was $12, 293, with the lowest loan amount at $3,000 and the largest loan amount at $30,000. The most frequently mentioned loan amounts were for $18,000. Figure 13 shows that the majority of these loans (52%) were between $10,000 and $20,000, while 41 percent were for loans between $5,000 and $10,000.

Furthermore, the majority (86%) of these loans funded the entire CEWO project, according to these contractors.

The contractors were evenly divided between those who believed that the loan amounts had increased (50%) and those who felt amounts had decreased. The following comments reflect their feedback regarding the effect of CEWO loans on project size.

> *"Decreased- people are doing smaller projects. The type of person that is enrolling in CEWO is looking for something for free, so they are looking to do the cheapest possible thing. The people cannot afford other types of financing so they aren't doing the bigger jobs. People are doing smaller projects this year due to economic conditions and the type of person applying."*

> *"Stayed the same. I think that the measures that our sales crew focus on selling is consistent."*

"Hasn't changed in the last six months. However, before CEWO our average job size was $6,000 and now it is $14,000."

"I am getting higher and higher subcontractor bids, however it's more money for the same work. The project scopes aren't getting bigger, it is just the amount that the subcontractors are charging has increased."

The majority of these contractors believed that two-thirds (63%) of their customers would not have gotten a Home Performance assessment on their own, without CEWO.

Of those contractors (n=15), three-quarters of them believed that more than one-half of their customers would not have asked for a Home Performance Assessment without the CEWO program (see Figure 19). This finding suggests that the contractors believe that CEWO is encouraging the majority of their customers to ask for the free test-ins.

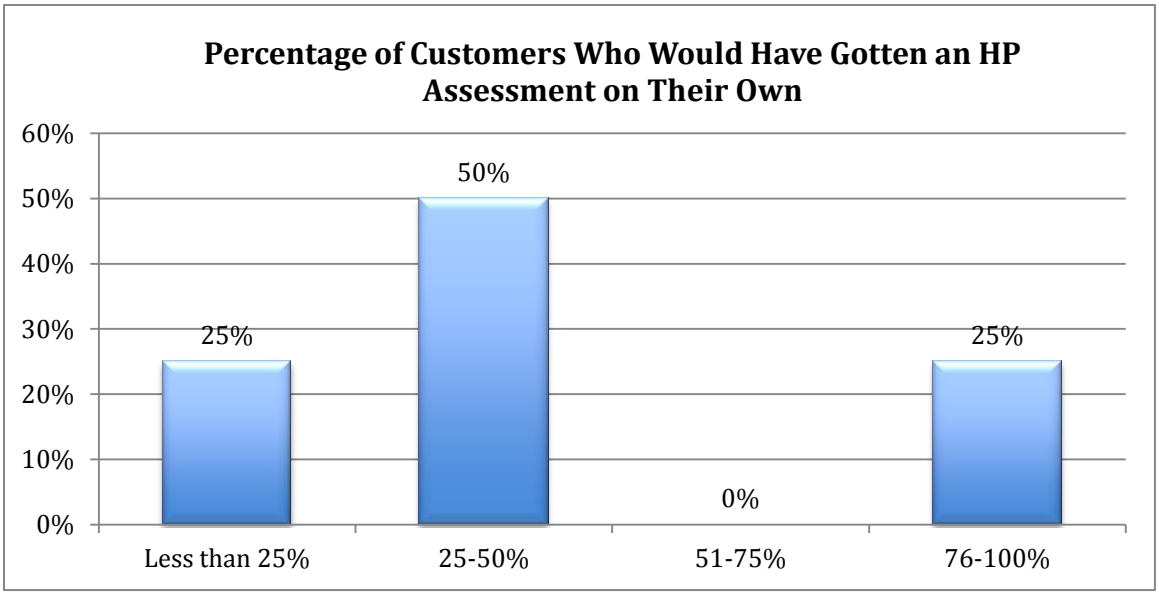

Figure 19: Percentage of Customers Who Would Have Gotten an HP Assessment On Their Own

Going one step further, the majority of these contractors reported that most of their customers would not have installed energy efficiency equipment without the program. One-third of the contractors (37%) believed that between 10 to 25 percent of their customers would not have made these energy efficiency improvements, while 58 percent believed that between 26 and 100 percent of their customers would not have proceeded without CEWO, as Figure 20 shows.

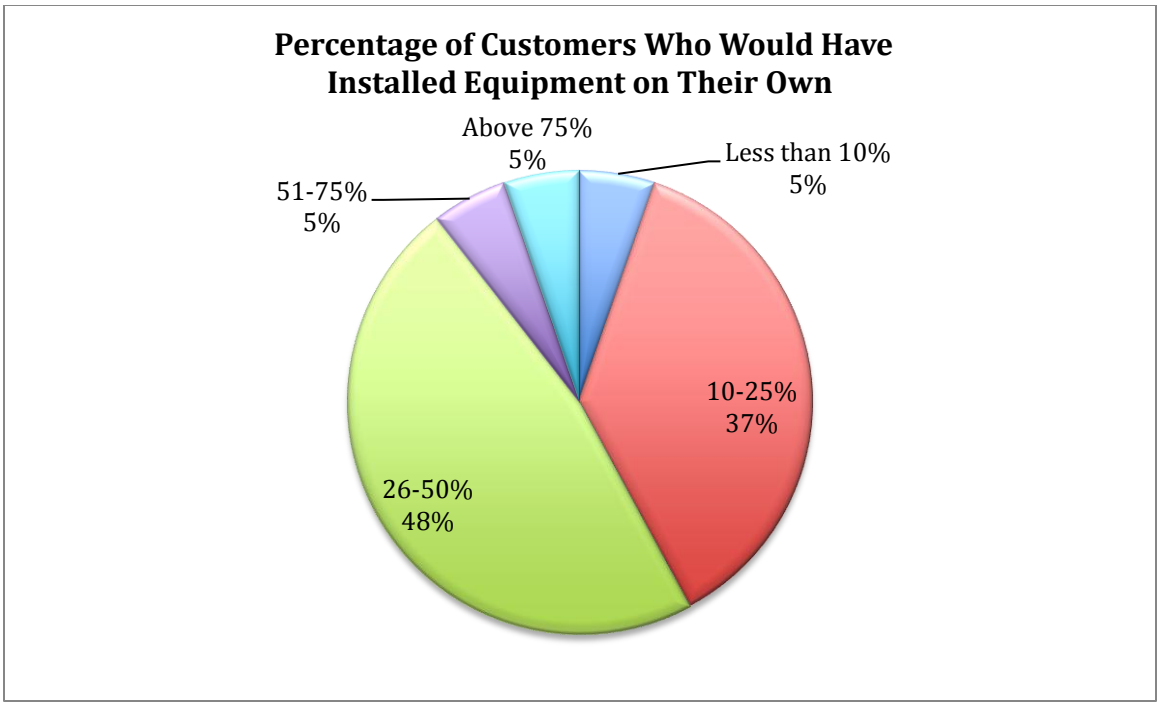

Figure 20: Percentage of Customers Who Would Have Installed Equipment On Their Own

While these results are qualitative, they do suggest that the contractors believe that CEWO is an influencing factor in both attracting customers to the program through the free test-in assessments and then encouraging the majority of them to make energy efficiency improvements.

CEWO Enrollment Process

The contractors reported that some customers are leads that they refer into CEWO, while in other cases they are assigned to a particular contractor through CEWO. The ratio of contractor versus CEWO leads is based primarily on how savvy the contractor is in promoting CEWO. The following comments provide additional insights into the ways in which contractors enroll customers into CEWO.

> *"We have a direct link on our web site and the link gets them to the sign up for CEWO. We give homeowners the web site and we give them some literature. We have helped some of the homeowners sign up when we were at their house."*
>
> *"Customers call us and we give them our code and they sign up on the CEWO web site. If we are at a home show, we have all our information there for the customer…The enrollment process got easier on the CEWO side. If we are at community event, we sign people up at the end. If we are at a sales call, we offer them CEWO at that time."*
>
> *"We have our own robust marketing program—95 percent of CEWO leads are sent into CEWO by us."*
>
> *"For the 30 percent of leads that we provide, we have done some marketing - direct mail and social media have been the two biggest. For 70 percent of the leads from CEWO—it's the normal HPwES process. We try to set ourselves up as an expert and fair broker. We tell people what's wrong with their house and how much it will cost to fix it."*

However, some contractors prefer to sign up customers first and complete the initial steps before actually enrolling them in CEWO, as a way to minimize the paperwork created by the program. As the following comment illustrates, the CEWO application process is time-consuming and therefore several contractors look for ways to avoid the lengthy application and approval process.

> *"Basically, the energy audit is done, at the data intake I get everything I need to know from the customer at the intake including the customer's intentions and budget. I do the energy model and give them the proposal right away to make sure there is no sticker shock to it. I answer questions. If we do everything through CEWO, it takes too much time. Most of the negotiations take place before we enter the job in the CEWO platform."*

But other contractors prefer to avoid the CEWO enrollment process entirely and instead steer customers to alternative programs rather than promoting CEWO, as the following contractor described.

> *"We try not to enroll customers in CEWO. The CEWO process is cumbersome and takes eight months to a year (to complete). The interest rate is expensive. If we can guide our customers to a more financially sound opportunity - we do so… We also offer a cash discount."*

The contractors also compared the CEWO enrollment process to other types of programs in which they participate, including the Energy Trust's Home Performance with Energy Star program. While a few contractors viewed the CEWO enrollment process as favorable, the majority indicated it was far too cumbersome and difficult to be effective. As these comments suggest, while the contractors acknowledge that CEWO staff is trying to streamline the process, there is still much room for improvement.

> *"Initially, it was very positive for us because of the larger rebate amount. Once they shrank the rebate amounts and the costs for the test-in and the learning to do it and the number of office hours has escalated immensely... the program is a great burden and we don't have enough volume of work to take on the extra overhead."*

> *"We did a ton of work through the ETO's programs, and the CEWO program has been more difficult to work with since the processes have frequently changed. Keeping myself and my employees abreast of all those changes have been a challenge. It has added a significant amount of work for every job. Just doing projects via ETO was an easy administrative burden. CEWO process involves four to five times the administrative work. It's understandable because you are doing financing and there are more entities involved."*

> *"Being able to provide the financing is a plus--- the other programs have faster approvals and less paperwork, however they don't have the third-party verifier. ETO endorsing it means a lot to the customers in the Portland metro area."*

Customer Feedback

These contractors also described the types of reactions they have received from customers about CEWO. The contractors reported that the customers liked best the availability of financing and the third-party verification features, all of which are integral to the CEWO design. They also liked receiving the incentives to help pay for the energy efficiency upgrades.

"I think CEWO does a nice job on the marketing side of things; it makes energy efficiency new and exciting. Also, customers like the neutral advocate of the Energy Advisor—it gives them peace of mind... The CEWO program does a nice job of financing and energy efficiency in one package."

"*Just the fact that there is a third-party entity that gives 100% oversight and that gives the confidence to the customer. People get ripped off all the time and weatherization is a hard concept for many to grasp."*

"They like that it's easy, fairly well defined. They like the support of the Energy Advisors. They like knowing that there is a third-party involved. They like that we are good contractors."

These contractors also indicated that while energy savings may be the issue that first attracts customers, it is health, comfort, and safety that are customers perceive as the primary benefits to this type of program.

"Initially the customer's motivation is energy savings, however ultimately most people are most interested in comfort."

"Financing helps them but its comfort that is the primary motivation."

The contractors also provided feedback they received regarding what customers disliked about the CEWO program. Consistent with the previous remarks made by contractors, these contractors indicated that the customers complained about the same obstacles the contractors faced regarding the paperwork requirements, and the amount of "hoops they have to jump through" to participate in the program. Several customers also indicated they disliked the financing terms, as they viewed it as very expensive compared to other options. This feedback is summarized in the following comments.

"…One customer said, 'It's a great program but it's like watching paint dry.'"

"*There is a lot of paperwork. Lot of steps. Some get tired. Some of them look at the costs and realize they can get lower costs elsewhere, because we have to charge more because of the paperwork of the CEWO project. The paperwork alone is 6 -10 hours worth of work."*

"Biggest complaint is how long it takes the financing to be completed…People who are already serious about moving forward with a home performance job and want to get the job done have gone outside the program and just paid me without getting the financing."

Satisfaction with the CEWO Program Components

The contractors also rated their satisfaction with various elements of CEWO on a five-point scale, where a "1" means "Completely Dissatisfied" and a "5" means "Completely Satisfied." The findings are summarized in Table 15 and the average ratings are provided in Figure 21.

Table 15: Satisfaction with CEWO Program Components

Program Component	Completely Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Completely Satisfied
Energy Trust Incentive for the HP Assessment (n=22)	0%	4%	17%	17%	54%
CEWO Energy Advisor (n=22)	4%	33%	29%	25%	0%
The information you provide the customer as part of the HP Assessment (n=23)	0%	4%	13%	38%	42%
The availability of project financing (n=22)	0%	0%	4%	67%	21%

As these findings show, the contractors were the most satisfied with the incentives provided for the home energy assessments, the information provided to customers and the availability of project financing, all of which received an average rating of 4.2 or higher on a five-point scale. However, they were the most dissatisfied with the CEWO Energy Advisors, as demonstrated by the low satisfaction rating of 2.8 on a five-point scale.

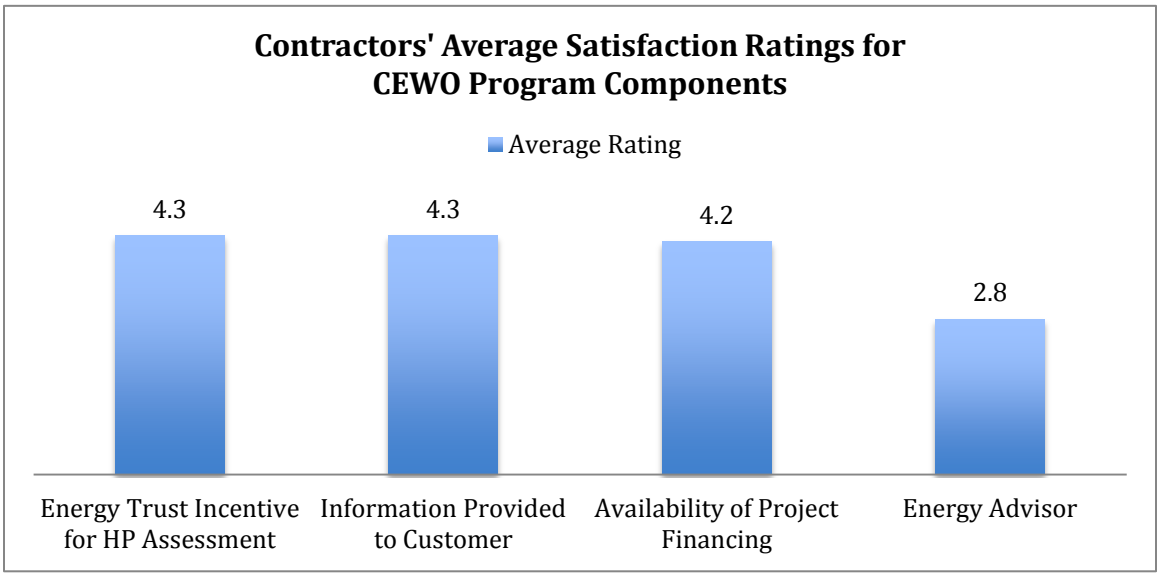

Figure 21: Contractors Average Satisfaction Ratings for CEWO Program Components

Section 4 Summary of Findings From Customer Surveys

CEWO staff fielded surveys to program participants during the application process as a way to monitor customer satisfaction and identify areas for program improvement. These lifecycle surveys were fielded to participants engaged in CEWO at the following steps:

- Post Application,
- Post Assessment,
- Post Bid,
- Post Financing, and
- Post Completion.

Respondents answered a series of questions that explored the specific stages of the program and the roles of the Energy Advisor and the contractors as well as information about the CEWO process. Questions were a mix of satisfaction ratings, multiple-choice responses based on experiences, and open-end responses. The key findings from these surveys are summarized in this section, and detailed findings are provided in Appendices B-I.

Each survey had its own set of questions and those responses are provided in separate sections for each of the lifecycle stages identified previously. The sample sizes for these surveys, as of August 29, 2012 are summarized in Table 16.

Table 16: Summary of Lifecycle Survey Fielding

Survey Name	Target Audience	Timing	Population	Number of Completes for this Analysis
Post Application	Current Program Participants	February 1-August 29, 2012	2,791	364
Post Assessment			1,978	107
Post Bid			713	112
Post Financing			852	142
Post Completion			550	148

4.1 Key Findings and Recommendations from the Lifecycle Surveys

- Overall, customers reported feeling "positive" about the CEWO program throughout the entire participation process, based on the satisfaction ratings from these respondents on a seven-point scale. In each survey, the participants were asked to rate their overall "feeling about the CEWO program" at this point in time on a seven-point scale, where "1" was "Very Negative" and "7" was "Very Positive," as Figure 22 shows.

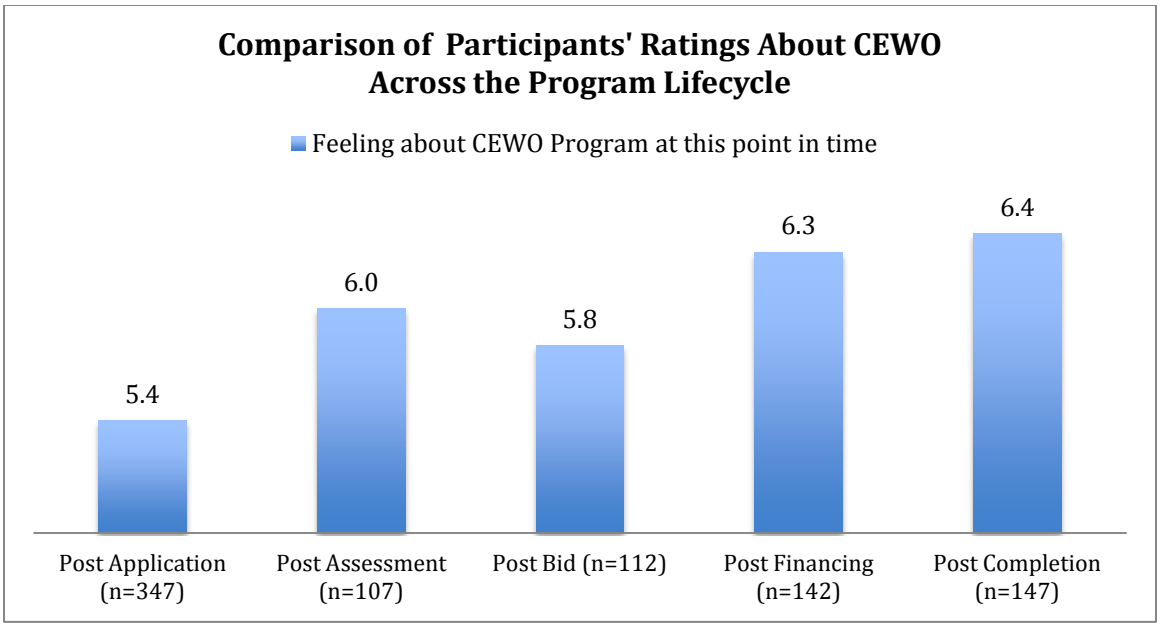

Figure 22: Comparison of Participants' Ratings About CEWO Across the Program Lifecycle

The key findings from the individual surveys helped to identify the primary drivers of these overall positive feelings about CEWO.

- The home energy assessment and the availability of instant rebates were the major drivers for initial interest in the CEWO program.
- The application process was clearly explained to most participants and the strong majority (75%) of post application respondents are "Satisfied" with the application process.
- The post financing respondents indicated that the features they liked best about the financing phase was that it was fast, simple, and uncomplicated. The majority (85%) of the post financing respondents indicated that the financing options their needs. Similiarly. 84 percent indicated that the financing options met (70%) or exceeded expectations (14%).
- The interest rates did not meet the post financing respondents' expectations. The majority (57%) indicated that the interest rates were higher than they expected, with 9 percent indicating that the interest rate was "Much higher" and 48 percent reporting that the interest rate was "A bit higher" than expected.
- The majority of post completion respondents (89%) indicated that the CEWO project either met (50%) or exceeded (39%) their expectations (see Post Completion survey findings).
- In addition, most post completion respondents (70%) indicated they "Definitely Will" recommend CEWO to others.
- The contractors and Energy Advisors were key reasons for driving this overall positive feeling throughout the entire participation process**.** As Figure 23 shows, overall the program participants provided fairly high satisfaction ratings for both their contractors and Energy Advisors, using a seven-point scale were "1" was "Completely Dissatisfied" and "7" was "Completely Satisfied."

On average, the satisfaction ratings were fairly consistent for both the contractors and the Energy Advisors. Note that the post financing respondents were not asked to assess the contractor, as that survey focused on other aspects of the financing process.

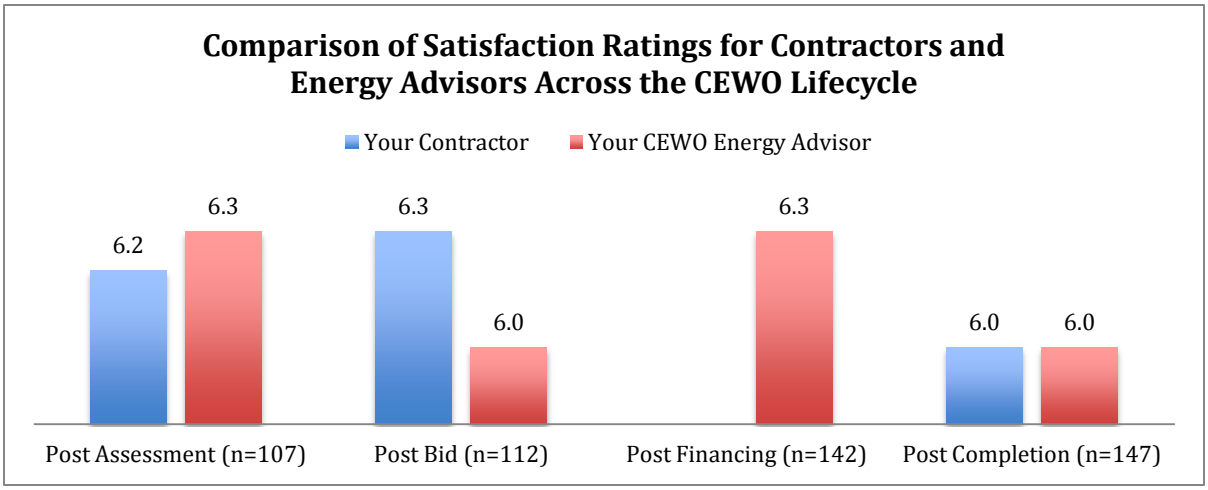

Figure 23: Comparison of Participants' Ratings For Contractors and Energy Advisors Across the Program Lifecycle

- These positive feelings extended to the respondents' feedback regarding the various CEWO features, including the home energy assessment, the contractor and the Energy Advisor. Most post assessment respondents indicated a high degree of satisfaction with the CEWO Energy Advisor, with 55 percent of the respondents indicating they were "Completely Satisfied" with their Energy Advisor, 48 percent were "Completely Satisfied" with their contractor and 50 percent were "Completely Satisfied" with the Home Energy Assessment.
- Nearly three-quarters of the post assessment respondents (71%) respondents "Strongly Agreed" that the Energy Advisor was "friendly and helpful," while 59 percent indicated that the Energy Advisors were both "very knowledgeable" and "provided clear expectations."
- The post bid respondents are pleased with the bid process overall, with the final signed bid addressing these respondents' needs (6.3 average rating) and a rating of 6.3 regarding the ability to have questions answered. However, 50 percent of these respondents asked for a revised bid during this process. (See Post Bid Survey Findings).
- Nearly one-half (49%) percent of the post financing respondents agreed that the "Energy Advisor was helpful during the financing process," while 64 percent agreed that the "Contractor was helpful during the financing process."
- Most of the post completion respondents indicated that contractors completed their required duties "Always" in a respectful and professional manner. For example, most respondents (84%) indicated that the contractor "treated them with respect," were "busy and working hard" (77%) and answered their questions satisfactorily (71%).

4.2 Customer Satisfaction with CEWO

This section summarizes the satisfaction ratings across various categories from these survey respondents at different points in the project lifecycle. Additional details are provided in Appendices B-H; however this section compares findings across the lifecycle surveys where possible to identify possible trends.

Figure 24 illustrates that satisfaction for CEWO peaked at the post financing stage, with respondents providing an average rating of 6.3. It was the lowest in the post-application stage, with a 5.4 average rating. Overall, these findings suggest that the respondents are most satisfied after the post-assessment period (average rating of 6.0), in which the Energy Advisor and contractor provide detailed information about the project, when they receive the project financing (average rating of 6.3) and when the project is completed (average rating of 6.0).

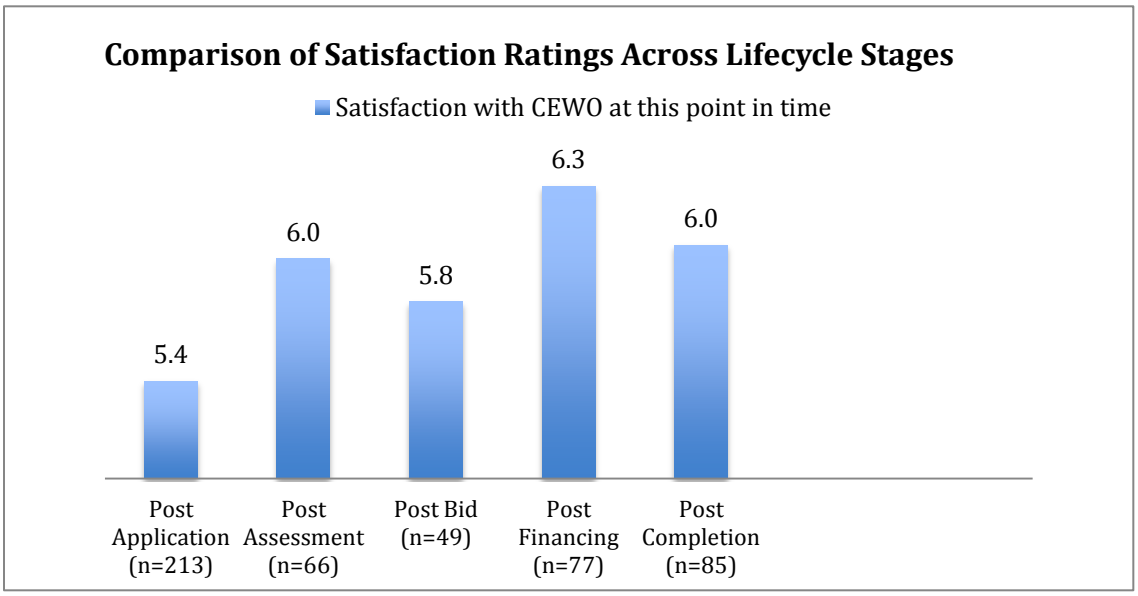

Figure 24: Comparison of Satisfaction with CEWO Across All Lifecycle Stages Groups

Figure 25 compares satisfaction ratings with the Home Assessment across the two groups of respondents who answered this question. The satisfaction ratings from both the post-assessment and the post-bid group were fairly high, with average ratings above 6.0.

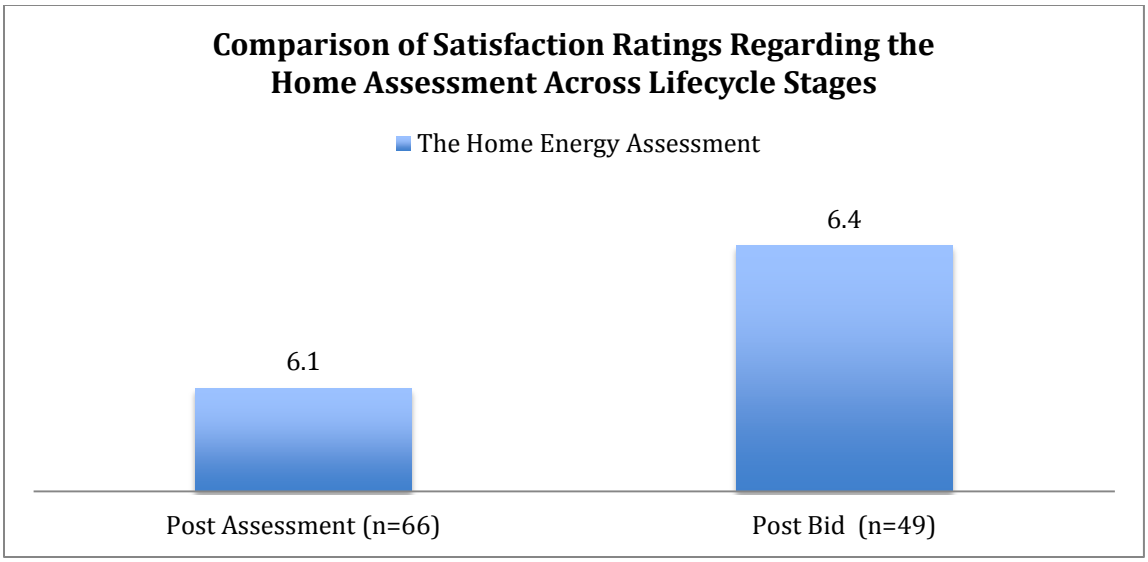

Figure 25: Comparison of Satisfaction Ratings Regarding the Home Assessment Across Lifecycle Stages Groups

The ratings for satisfaction with the Energy Advisor were generally positive among those who had just completed either the post assessment stage (i.e., 6.3 average rating) or the post financing stage (i.e., 6.2 average rating), when they had more direct interactions with the energy advisor. In contrast, the satisfaction ratings declined as participants moved through the process, including a 5.86 satisfaction rating for post completion respondents (see Figure 26). While these findings may not be statistically significant, they do indicate a qualitative trend that respondents are most pleased immediately after direct interactions with the Energy Advisors.

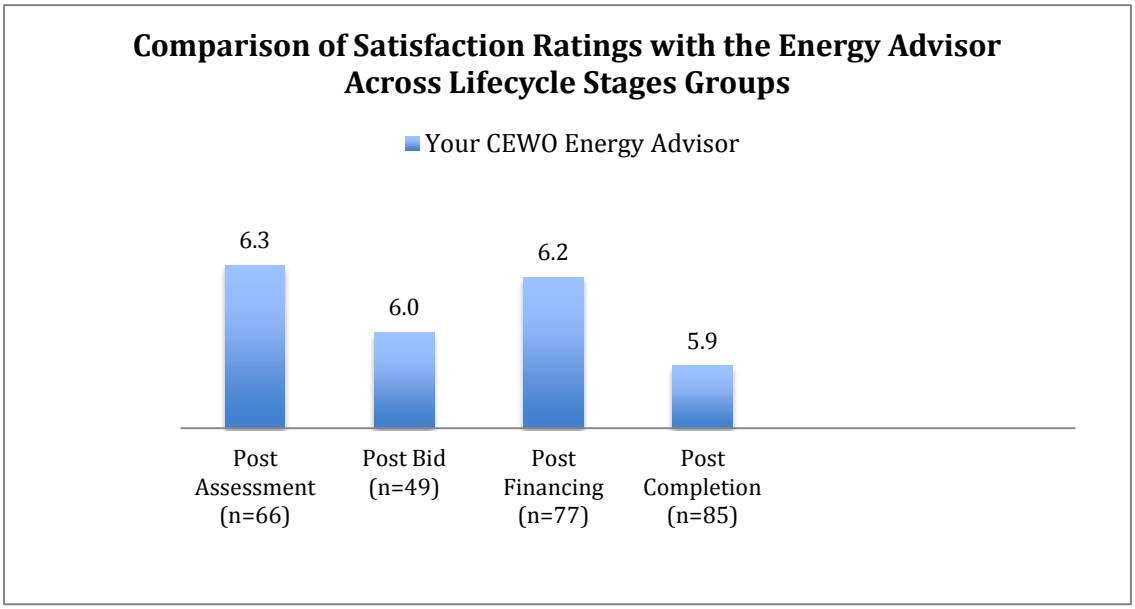

Figure 26: Comparison of Satisfaction Ratings with Energy Advisor Across Lifecycle Stages Groups

Figure 27 summarizes the comparison of satisfaction ratings with contractors. Most of the ratings were positive, ranging from 6.4 for the post bid respondents to 6.0 among those respondents who completed the project, which suggest overall satisfaction for the contractors is high across these respondent groups.

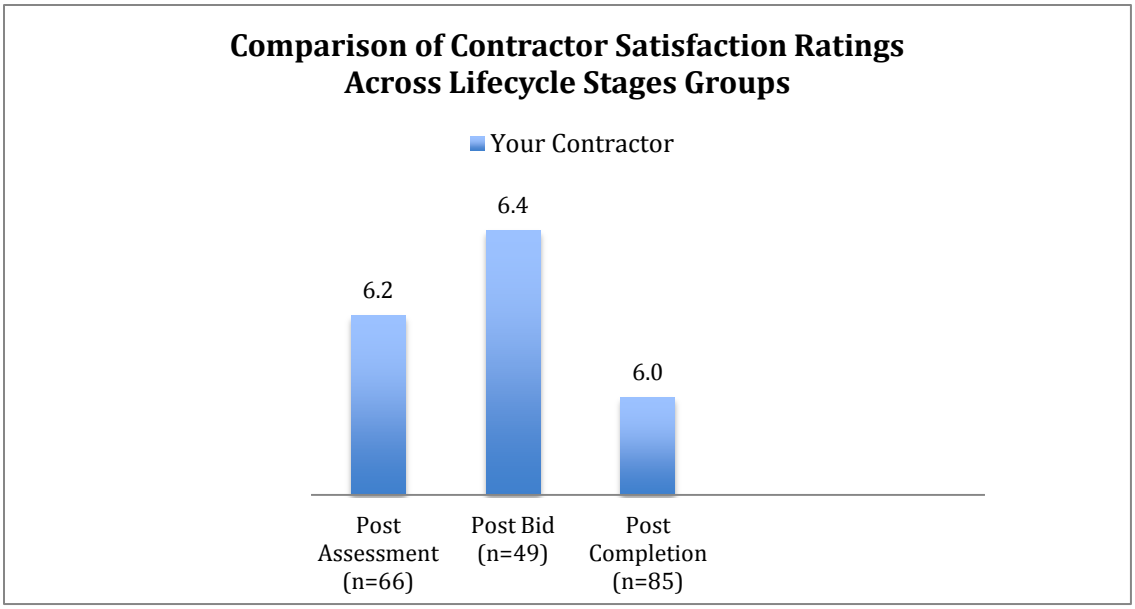

Figure 27: Comparison of Satisfaction Ratings with Contractor Across Lifecycle Stages Groups

4.3 Customer Satisfaction and One Year Post-Participant Surveys

Both CEWO and the evaluation contractor also fielded surveys with program participants after they completed projects with CEWO. Table 17 summarizes the key metrics regarding these two program participant surveys. Due to the differences among survey instruments, the findings for each customer survey effort are summarized individually in separate[13] sections.

Table 17: Additional Participant Surveys Fielded by in 2012

Survey Name	Target Audience	Timing	Total Population	Number of Completes for this Analysis
Customer Satisfaction Survey	Current program participants from Quarter 4 2011	April 2012	500	233
One Year Post-Participant Program Survey 2012	Current Program Participants	August 2012	133	51

[13] These response rates for the different surveys were adequate for the process evaluation. Therefore, only the additional post-participant survey was required.

Customer Satisfaction Survey Key Findings

The CEWO surveys were fielded online in April 2012, and focused on customers who had completed projects within the past six months. This survey effort was described as a customer satisfaction survey.

- The availability of financing options (77%) and instant rebates (81%) were mentioned as the most compelling reasons for participating in CEWO, according to these survey participants.
- Overall, the participants were very satisfied with CEWO overall as well as all the various program components**.** The satisfaction ratings ranged from 6.3 for CEWO overall to 6.0 for the interactions with the Energy Advisor. Furthermore, nearly all of the program participants (90%) indicated that it either "Easy" or "Very Easy" to work with CEWO.
- Overall, the program participants indicated that the contractors' treated them well and worked hard**.** In addition, the program participants also provided high ratings regarding these contractors work, with the majority providing a rating of "Very Good" (31%) or Excellent (54%).
- The assessment of the Energy Advisor was mixed**.** While the respondents believed that the Energy Advisor was professional and responsive, less than half (43%) agreed that the Energy Advisor was a "valuable resource."
- While the respondents were generally satisfied with the financing and loan process, they did want more flexibility in determining the work scope, selecting contractors, and enhanced communications with the lenders.

The complete findings from this survey are provided in Appendix G.

One Year Post-Participant Survey Key Findings

This section summarizes the results from 51 customers who were surveyed one year after completing a project with Clean Energy Works Oregon. The set of surveys was conducted via telephone using a nearly identical questionnaire in August 2012 as part of the overall process evaluation conducted by the process evaluation contractor.

- In general, most of the completed projects were aligned with their cost expectations (49%), but one-third said that the project was more expensive than they expected and 18% felt that the cost was below their expectations.
- Nearly three quarters (73%) of the respondents are paying the loan off in monthly payments. One quarter of respondents (25%) have paid off their loan completely.
- The majority (93%) of these respondents would use a program like or similar to the CEWO program.
- Overall, satisfaction ratings were very high among these participants, with an average rating of 4.6 out of 5 on all attributes of the CEWO program.

The complete findings from this survey are provided in Appendix H.

4.4 Program Drop Outs

Key Findings

CEWO surveyed those respondents who began the CEWO program process but did not finish the application or continue with the program. These respondents are referred to as "dropouts." This section summarizes the findings from 111 program dropouts, including the reasons for deciding not to continue with CEWO.

The key findings from these surveys are summarized next.

- Most program dropouts left the program after receiving a bid from the contractor. These findings suggest that the previous approach of bundling all the measures into one bid was not well-liked and led to program dropouts due the overall project cost and resulting "sticker shock."
- The program dropouts were not dissatisfied with CEWO, but rather with the contractors. The primary reasons for dissatisfaction centered on complaints regarding the contractors' bid, with many respondents indicating the bid was too high or not competitive. Other complaints focused on problems with the program requirements, financing limitations, and lack of communication with either the Energy Advisor or contractor.
- Moving the loan application and credit check to after the bid reduced loan-processing costs; however, it does not address the fundamental reasons that customers decide to drop out of the program.

Full findings from this survey are summarized in Appendix I.

Section 5 Conclusions and Recommendations

Running a statewide energy efficiency-financing program is a daunting process, and overall CEWO staff is viewed as highly professional, competent and committed. CEWO has to serve many masters and meet many goals, all of which are difficult. It has to focus on recruiting customers to complete "deep retrofits" that lead to cost-effective energy savings, while also operating in a free market environment. Furthermore, it is committed to creating jobs, paying a "living wage" and reaching out to under-served customers across the entire state.

Johnson Consulting Group was hired by Energy Trust of Oregon to complete a process evaluation of CEWO. An effective process evaluation gathers data from a variety of sources, and then triangulates this information to develop meaningful and actionable recommendations. The process evaluation covered the CEWO activities from January 1 through August 31, 2012; however, it also included a review of previous program operations.

The process evaluation explored all these issues in a variety of ways including reviewing the program documents and records, conducting in-depth interviews with key program staff, the Energy Advisors, and contractors and soliciting feedback from customers as they are engaged throughout the CEWO process. These process evaluation activities have yielded the following key conclusions and recommendations.

5.1 Key Conclusions from the Process Evaluation

- CEWO has successfully expanded beyond Metro Portland to Central Oregon, Rogue Valley, and South Central Oregon. The program has 50 active contractors who are currently working on more than 800 projects throughout the state.
- Based on the most current records to date[14], the program has completed 3,900 test-ins that resulted in 1,402 completed projects. While this is below the original goal of 6,000 homes, it is on track to complete 1,500 projects each year—the new goal set by CEWO staff in 2012.
- The conversion rates for CEWO are between 36 to 39 percent, which is consistent with other Home Performance programs and well above the industry average of 25 percent.[15]
- Program activities have increased substantially since the statewide roll out, with the number of projects in progress increasing 23 percent in the past six months. The weighted average number of projects, calculated on a monthly basis from February 2011 through February 2012, was 1,569. However, with program expansion, the weighted average has increased to 2,041 from March through August 2012, reflecting the increased level of program activity beyond the metro-Portland area. [16]
- CEWO has broadened its loan offerings and scope. There are now four lenders participating in the program, and these loans expand beyond energy efficiency to also address other key customer

[14] This includes the 500 projects completed during the pilot period for Clean Energy Works Portland (CEWP).
[15] National Energy Retrofit Institute 2012, p. 5.
[16] Based on this evaluation, the number of projects in progress calculation was changed to reflect the number of projects in progress throughout the entire program cycle, rather than just on a monthly basis. Now projects in progress reflect the gradual increase in CEWO projects since the program began in March 2011.

drivers such as health, comfort and safety. There is also a small minority of customers, six percent, who prefer to self-fund these energy efficiency improvements.

- Craft3 remains the largest lender and to date has closed nearly 1,900 loans[17] for a total of $24 million in energy efficiency financing. The portfolio performance continues to be outstanding, with "problem assets" accounting for only 0.05 percent of the total portfolio. The default rate is estimated to be less than one-half percent, with a total of $58,000 charged-off to date.[18] The three other lenders account for the remaining portfolio of loans.
- The program continues to deliver on "easy" by emphasizing its one-stop shopping, a message that has resonated well with customers, as illustrated by the strong customer satisfaction scores on all CEWO program elements from the customer surveys.
- CEWO continues to leverage Energy Trust incentives and instant rebates, which, combined with financing, are the primary drivers of customer interest in the program (post completion customer surveys.)
- CEWO continues to focus on internal quality control and monitoring, and fielded seven surveys to measure overall satisfaction at key steps throughout the process. These surveys yielded valuable data and enhanced the overall quality of this process evaluation.[19]
- The functionality of the software platform, which is used to manage the program and provide online tools to the Energy Advisors, contractors and staff, has improved since its launch. Key metrics are placed on the CEWO dashboard monthly to monitor program operations, and this has led to a reduction in the number of hours required for data input by the Energy Advisors.

5.3 Recommendations for Program Improvement

The process evaluation also led to some areas for program improvement. Many of the specific recommendations were made in the individual findings for each section; however, the following recommendations focus on broader areas for CEWO to consider in order to improve and enhance its program as it continues to move forward.

- Develop more consistent ways to track the key metrics, including the close rate, as a way to minimize program dropouts. The most important metrics, such as the number of test-ins, test-outs, close rates, loan disqualification rates, and average length of projects, should be posted on the CEWO dashboard. This will provide immediate and ongoing feedback regarding program operations throughout the State and highlight which areas CEWO staff should address going forward.
- CEWO staff should develop a more consistent survey instrument to facilitate tracking of key questions at each step of the application process over time. This will further enhance overall program feedback and provide additional guidance to senior staff.

[17] The number of loans includes all loans, including those completed during the CEWP phase.

[18] Personal communication from Craft3

[19] The evaluation contractor fielded an eighth survey focusing on program participants one year after project completion.

- CEWO needs to continue to streamline the participant process. In August, CEWO eliminated the Energy Upgrade Options menu, because it created unnecessary delays in the overall process. In particular, the period from the test-in to bid acceptance could be shortened by at least one week, and the timelines for other internal reviews could also be expedited.
- CEWO should continue to develop some type of pre-screening checklist for customers to help identify viable candidates while reducing the "tire-kickers" who just want a free test-in. This will also help to set customer expectations, and may enhance program closure rates by focusing on those customers who are truly interested in completing a home energy retrofit. Investing some time upfront in educating the customers, via the Energy Advisor and contractor, could yield long-term dividends for the program.
- It is critically important to offer other solutions to program dropouts and thus "bridge them" from CEWO to another Energy Trust program. Identifying program dropouts earlier in the process and redirecting them to more appropriate program offerings will lower the acquisition costs required to enroll customers.
- Allow more customer flexibility in terms of selecting contractors, evaluating bids, and selecting financing options. Some customers wanted to be able to choose among bids and provide more input into making this important and costly home energy retrofit decision.
- The Energy Advisors should be allowed to provide more direct feedback regarding the proposed pricing and project specifications, as a way to encourage a higher close rate and reduce dissatisfaction with the contractors. Furthermore, the Energy Advisors should be able to provide some general pricing guidelines to customers in order to ensure that they are receiving a fair bid.

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