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*Final Report*  
**Clean Energy Works Portland  
Pilot:  
Process Evaluation Wave 4**

*Funded By:*



*Prepared By:*



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**June 24, 2011**



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**CLEAN ENERGY WORKS PORTLAND PILOT**



## ACKNOWLEDGEMENTS

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This report presents the fourth and final wave of process evaluation research to support improvements in Portland's Clean Energy Works pilot. We gratefully acknowledge Philipp Degens at Energy Trust of Oregon (Energy Trust) for his project management support and guidance. We would also like to thank members of the Clean Energy Works Portland (CEWP) Steering Committee and program representatives at Energy Trust, Clean Energy Works Oregon, and Enterprise Cascadia for their insight as we sought to understand and document the quickly evolving CEWP pilot.

We would also like to acknowledge the staff at Conservation Services Group, specifically Nicolette Reibold, for her continued assistance and patience with our requests for information.

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



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## ACKNOWLEDGEMENTS



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## EXECUTIVE SUMMARY

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

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

In the pilot, each participant was assigned an Energy Advisor<sup>1</sup> and a CEWP-approved contractor. Energy Advisors provide information to homeowners and support to contractors. Contractors are responsible for conducting a Home Performance Assessment, preparing a bid for the improvements identified in the assessment, and installing the approved measures. Homeowners must finance the projects through a loan from the program's sole lender, Enterprise Cascadia. Homeowners then repay the loans over 20 years on their heating utility bill.

### THIS PROJECT

Energy Trust contracted with Research Into Action to conduct several waves of survey research to find out how the pilot project was working, understand the experiences of participants, and help inform ongoing program adjustments expected with any pilot program. The first three waves of research were documented in a September 2010 report to Energy Trust. This document presents the fourth, and final, wave of survey research supporting the pilot.

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<sup>1</sup> During the CEWP Pilot, Energy Advisors were called Energy Advocates. In subsequent chapters some questions and responses reference Energy Advocates, the term that matched respondent experience.



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**Table 1: Scope and Timeframe of Research**

Wave	Time Frame	Activities	Scope
Wave 1	August -September 2009	<ul style="list-style-type: none"> <li>• Review background materials</li> <li>• Develop process flow diagram</li> <li>• Interview Energy Advisors, Contractors, and staff</li> <li>• Survey initial participant cohort</li> <li>• Present report to Steering Committee (September 21, 2009)</li> </ul>	<ul style="list-style-type: none"> <li>• Provide rapid feedback about initial CEWP pilot launch</li> <li>• Document experiences</li> <li>• Summarize lessons learned</li> </ul>
Wave 2	February -March 2010	<ul style="list-style-type: none"> <li>• Re-contact Energy Advisors, Contractors</li> <li>• Interview Stakeholders to identify themes and summarize lessons learned</li> <li>• Exit Survey of Participants with completed projects: those that had a successful test-out</li> </ul>	<ul style="list-style-type: none"> <li>• Document project status</li> <li>• Identify themes and summarize lessons learned</li> <li>• Document participant experience and satisfaction with CEWP</li> </ul>
Wave 3	June -August 2010	<ul style="list-style-type: none"> <li>• Launch third wave of participant surveys</li> <li>• Telephone survey of program dropouts</li> </ul>	<ul style="list-style-type: none"> <li>• Document Project Status</li> <li>• Create report document with detailed results</li> </ul>
Wave 4	September 2010 – March 2011	<ul style="list-style-type: none"> <li>• Launch fourth wave of participant surveys</li> <li>• Conduct second wave of telephone surveys of program dropouts</li> <li>• Survey screened out applicants</li> <li>• Interview utility contacts to identify lessons learned with on-bill payments</li> </ul>	<ul style="list-style-type: none"> <li>• Document project status</li> <li>• Document participant experience and satisfaction</li> <li>• Explore motivations for applying and identify potential among applicants</li> </ul>

## PILOT ACCOMPLISHMENTS

Pilot programs are often exciting new opportunities that attract attention while those involved rapidly learn many lessons about the program model being tested. This was the case for CEWP. Guided by a Steering Committee of stakeholders and the expertise of Energy Trust, those involved in launching CEWP were able to get a new program concept developed, launched, and relatively stabilized within a year. Contractors were recruited and screened, Energy Advisors hired and trained, and participants served, even as program staff adjusted application documents, contractor expectations, and communication processes.

CEWP met its goal of treating 500 Portland area homes. The CEWP pilot stopped accepting new applicants in March 2011, with the launch of the expanded Clean Energy Works Oregon (CEWO) program. As of June 4, 2011, CEWP had operated for nearly two years and had assessed 979 homes and helped 563 homeowners complete efficiency upgrade projects in their homes.



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**Table 2: Pilot Status (as of June 4, 2011)**

Status	Count
Applicants	2,306
Received test-in (Home Performance Assessment)	979
Dropped out	387
Tested-out (completed project through program)	563
In process	29

## FINDINGS AND CONCLUSIONS

As the CEWP pilot project winds down and the lessons learned inform the larger CEWO program, this final wave of pilot research confirmed many of the themes that emerged in previous waves of research and that were reported in the September 2010 summary report. New to this wave of research are surveys with excluded applicants, interviews with utility contacts about establishing the on-bill payment process, and a brief survey with a small group of participants with more than a year of on-bill payment experience.

### Successes

CEWP is clearly providing a valuable opportunity to the participants for whom the program features work well. Participants continue to report high levels of overall satisfaction with the pilot and reported no major problems navigating program elements, including the website, required paperwork, and construction. Participants have completed projects with no out-of-pocket costs, and many have already begun paying their loans off through monthly payments on their utility bills. More than 90% of successful participants report that they would recommend the pilot to their family and friends. Also encouraging are indications that the pilot supported projects that otherwise might not have happened: less than 1% of participants indicated that they would have done the same project on the same timeline without the pilot.

The pilot's utility partners have also successfully navigated their own billing system requirements and created the internal processes required to ensure the loan payments are collected and transferred to the fund manager. Utility contacts expressed some concern about future project volume, particularly if CEWO meets its goals and the existing utility processes are not more automated.

A brief survey with the small group of participants with at least a year of bill payment experience confirms the overall satisfaction of these participants with the results of their projects. Most reported energy savings consistent with their expectations, and nearly all of these respondents believe their CEWP project has made their home more valuable, comfortable, and sustainable, and that the equipment installed through the program performs better than the equipment it replaced.



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## Different Perceptions of Program Features

Participants and dropouts valued the information obtained from the Home Performance Assessments, while applicants valued access to contractors with specific training in energy efficiency or building science.

**Table 3: Value of CEWP Pilot Components**

Program Feature Aspect	Portion Agreeing*		
	Participants	Dropouts	Applicants**
Access to information obtained from the Home Performance Assessment	88%	82%	62%
Access to a contractor with specific training in energy efficiency or building science	87%	68%	67%
The services provided by an Energy Advocate	77%	63%	59%
A program-assigned contractor	53%	37%	43%

\* Those that gave a “4” or a “5” on a 5-point scale. Not shown are the percentages of respondents rating each aspect a “1”, “2”, or “3.”

\*\* Excludes participants.

The three groups of respondents valued financing products differently (Table 4). Perhaps not surprisingly, participants valued the opportunity to avoid upfront costs most highly, while other financial aspects were more important to the excluded applicants and the dropouts. The fact that dropouts rated the “no money down” and long loan payment amortization lowest may indicate that the financing package provided by the program was simply unattractive to them.

**Table 4: Influence of Financing Aspects**

Financial Aspect Aspect	Portion Agreeing*		
	Participants	Dropouts	Applicants
No money down; avoiding the upfront costs associated with your project	91%	55%	75%
Getting an attractive interest rate	90%	79%	83%
Qualifying for the \$1,500 federal tax credit	85%	73%	92%
Qualifying for an Oregon tax credit	84%	67%	90%
Obtaining an incentive from Energy Trust of Oregon	83%	73%	79%
Having the option to repay the loan amount on your utility bill	82%	61%	72%
Having the loan spread out over 20 years	79%	39%	56%

\* Those that gave a “4” or a “5” on a five-point scale. Not shown are the percentages of respondents rating each aspect a “1”, “2”, or “3”.

### ***Patterns of Reported Motivation***

All three surveyed groups reported that saving energy was the most important factor behind their application to CEWP, followed closely by lower heating bills and a warmer winter home. While the overall patterns of motivation differed somewhat between the groups, all three assigned the lowest value to increasing the value of their home.

**Table 5: Motivations: Reasons for Applying**

Potential Benefit Aspect	Portion Agreeing*		
	Participants	Dropouts	Applicants
Saving energy	95%	97%	96%
Lowering heating bills	92%	89%	91%
Keeping home warmer in the winter	94%	71%	86%
Increasing the comfort of their home	91%	86%	84%
Keeping home cooler in summer	78%	57%	64%
Increasing the value of their home	54%	42%	57%

\* Not shown are percentages of applicants replying to the questions with a “1”, “2”, or “3.” Applicants that failed to answer this question or stated “don’t know” are excluded from the percentage calculations.

### ***Out of Program Activity***

Consistent with findings in the September 2010 report, large portions of dropout contacts reported that they had either completed energy saving projects in their homes after dropping out of the program or intended to do so in the future. A high proportion of excluded applicants reported that they had specific energy efficiency projects in mind when they applied to the program; however, far fewer of these applicants reported that they had completed energy efficiency projects in their homes since submitting their application. Regardless of the status of actual completed projects, it is clear that the program is attracting applicants primed to accept information about efficiency upgrades. Survey results do not indicate that applicants and dropouts are being effectively handed off to other energy efficiency program options.

### ***Experience of Dropouts***

Process evaluation surveys of program dropouts expect to identify program features that do not work for these contacts. Because they dropped out of the program, the benefits of the program did not outweigh barriers for a variety of reasons. Similar to findings documented in the September 2010 report, this wave of research revealed a desire for more flexibility, particularly in financing options and transparency, particularly around the role of the Energy Advisors (known to contacts as an Energy Advocates) and the details of pricing and bids. Dropouts continued to express confusion about the relationship between the Energy Advisor and the contractor. Also similar to the September 2010 report were comments from dropouts about



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contractors telling them that certain measures were required or they would not qualify for the program.

## RECOMMENDATIONS

The recommendations below are based on our surveys of CEWP applicants and participants and information gained during four waves of research. They do not reflect a detailed understanding of program design changes expected for CEWO. Thus, it is possible that program design revisions occurring in CEWO address some or all of these recommendations. These recommendations are divided into two broad categories below: program structure or design recommendations and process recommendations.

### *Program Structure or Design Recommendations*

- ➔ ***Develop effective ways to refer applicants and dropouts to other programs or services.*** CEWP applicants represent a cohort of homeowners motivated to complete energy efficiency upgrades to their homes. Even if they are excluded from the program or ultimately drop out, they represent the type of engaged homeowner Energy Trust works to identify. Providing these homeowners with targeted communication about other opportunities to obtain financial or technical assistance could cause them to take action sooner or complete more comprehensive projects than they might complete on their own.
- ➔ ***Energy Advisors should offer many solutions.*** The CEWO website provides content and referrals to the numerous program options for potential applicants, but the program's overall design remains focused on closing projects with program financing. Additional training or official authorization could convert these valuable program ambassadors into true advisors—providing encouragement and information that further supports efficiency upgrades among those that drop out of the program.
- ➔ ***Verify the market value of the Home Performance Assessment.*** Survey results indicate that people (including successful participants) do not value the Home Performance Assessment at full cost. Compensation for the Home Performance Assessment rose from \$300 in CEWP to \$400 in CEWO, higher than the \$100-\$200 survey respondents indicated they would pay.
- ➔ ***Identify non-energy benefits experienced by CEWP participants.*** Even if these benefits cannot be quantified, they are often important motivations for participants and can inform program marketing and help communicate benefits. These benefits can augment the impact evaluation of these deep retrofit projects, something Energy Trust expects to complete within the next year.

### **Process Recommendations**

- ➔ ***Ensure that it is easy to request another contractor.*** CEWP allows participants to request another contractor, but comments indicate that this might be discouraged or not communicated clearly. If participants want a second bid, allow them to choose the contractor from a list of qualified firms.
- ➔ ***Consider flexibility in terms.*** CEWP operated with a 20-year loan term. Survey results indicate that participants might be looking for a shorter loan payment timeframe and could be encouraged to pay off their loans early, freeing capital up for additional projects. Lower interest rates and a pre-payment bonus could encourage participants to choose shorter loan terms or repay their loan early.
- ➔ ***Continue to monitor the bill payment and loan repayment experience.*** We found no problems among the contacts with at least 12 months of bill payment experience that responded to our survey in this wave of research. The small sample size, however, warrants launching again with a larger group; ideally by 2012, if not sooner (three years after the pilot began). This aspect is of particular concern to utility partners, and could be affected by increases in project volume expected to result from CEWO.
- ➔ ***Continue efforts to clarify screening or selection criteria for program applicants, including existing home conditions and credit standards that could exclude specific applicants.*** Substantial progress has been made on this issue as the program has stabilized and clarified its requirements, but communicating these restrictions will remain important for managing expectations.
- ➔ ***Define and solidify a regular loan status and project activity reporting process.*** Tracking and reporting pilot activities, the volume and status of loan portfolio, measures installed, and project costs remained somewhat ad hoc at the end of the CEWP pilot.
- ➔ ***Simplify the incentive calculations and allocation.*** Uncertainty in the amount of incentives has created confusing language in loan documents and obfuscates the benefit obtained from Energy Trust support. A flat incentive that reflects the comprehensiveness of the project would be easier to communicate and understand. CEWO launched with a simplified incentive structure that should facilitate communication and understanding.



## MEMO

**Date:** July 6, 2011  
**To:** Board of Directors  
**From:** Philipp Degens, Evaluation Manager  
Marshall Johnson, Residential Sector Manager  
**Subject:** Staff response memo: Clean Energy Works: Portland Pilot Process Evaluation 2011

Clean Energy Works: Portland Pilot (CEWP) has been underway for over two years. The pilot has been evaluated at many stages and this is the final process evaluation of the pilot as it has now transitioned into Clean Energy Works Oregon (CEWO). The pilot clearly succeeded in:

- Proving the feasibility of on-bill financing
- Showing that on-bill financing combined with the more in-depth engagement of Energy Advisors in project facilitation could lead to comprehensive retrofits
- Achieving its goal of having 500 customers make significant energy efficiency investments in their home

Participant surveys have shown that customers are highly satisfied with the CEWP provided efficiency and financial services, both in the short and long run (one year after retrofit).

One opportunity that CEWO clearly needs to address is connecting the applicants that do not move forward with CEWO with appropriate information and services that can help them move forward on energy efficiency improvements. In CEWP about 3 out of 4 applicants did not end up completing a CEWP project, even though most had efficiency improvements in mind when applying. Many that did complete a project without CEWP did not make use of Energy Trust programs that they were eligible for.

Given the Energy Trust investments in developing and supporting CEWO, it would be advantageous to develop processes to quickly identify customers where CEWO service benefits are limited. Customers, who are interested in only small projects or have specific housing characteristics (e.g., newer homes), are examples of such marginal candidates. Faster identification of appropriate services for each applicant will allow CEWO to focus on those customers that will benefit from CEWO's services. Customers will benefit by being matched to services and information that are appropriate for their size project, financial preferences and housing circumstances.

Energy Trust will continue evaluating CEWO as required by the EEAST legislation. This on-going evaluation will include an impact evaluation analyzing electric and gas consumption that will be completed in 2012. The process evaluation will continue to monitor the expansion of the program to other regions of Oregon and other sectors, and provide customer feedback on the services as they evolve.



# 1

## INTRODUCTION

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In June 2009, using a \$3.2 million award from the federal American Recovery and Reinvestment Act (ARRA), the City of Portland, in collaboration with Multnomah County and Energy Trust of Oregon (Energy Trust), launched a pilot residential energy efficiency pilot program called *Clean Energy Works Portland* (CEWP). The pilot launched quietly as a small pilot to engage up to 500 participants in summer 2009. A steering committee included representatives from the city, the county, the three Portland utilities, Energy Trust, a local economic development organization, advocacy groups, and labor unions. Program staff approved contractors to provide the audit and installation services.

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

In the pilot, each participant was assigned an Energy Advisor<sup>2</sup> and a CEWP-approved contractor. Energy Advisors provided information to homeowners and support to contractors. Contractors conducted a Home Performance Assessment, prepared a bid for the improvements identified in the assessment, and installed the approved measures. Homeowners were required to finance the projects through a loan from the program's sole lender, Enterprise Cascadia. Homeowners are then expected to repay the loans over 20 years on their heating utility bill.

The program has evolved—by integrating the results of, and recommendations from, multiple waves of research—without a gap in operations. Program processes have continued to become more streamlined. By mid-2010, the pilot program had secured \$20 million of additional ARRA funding, and re-launched as an expanded, statewide effort in March 2011. The number of participating contractors had increased from the original six, to 15, and 51 subcontractors worked on pilot program jobs.<sup>3</sup>

### THIS PROJECT

Energy Trust contracted with Research Into Action to conduct several waves of survey research to find out how the pilot project was working, understand the program participants' experiences,

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<sup>2</sup> During the CEWP Pilot, Energy Advisors were called Energy Advocates. In subsequent chapters some questions and responses reference Energy Advocates, the term that matched respondent experience.

<sup>3</sup> Green For All. "High Road Outcomes in Portland's Energy Efficiency Upgrade Pilot. March 2011. <http://www.greenforall.org>.



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and help inform ongoing program adjustments. The first three waves of research were documented in a September 2010 report to Energy Trust. This document presents the fourth, and final, wave of survey research supporting the CEWP pilot. CEWP has been gradually transitioning to the statewide Clean Energy Works Oregon (CEWO) program, which launched March 15, 2011.

**Table 6: Scope and Timeframe of Research**

Wave	Time Frame	Activities	Scope
Wave 1	August - September 2009	<ul style="list-style-type: none"> <li>Review background materials</li> <li>Develop process flow diagram</li> <li>Interview Energy Advisors, contractors, and staff</li> <li>Survey initial participant cohort</li> <li>Present report to Steering Committee (September 21, 2009)</li> </ul>	<ul style="list-style-type: none"> <li>Provide rapid feedback about initial CEWP pilot launch</li> <li>Document experiences</li> <li>Summarize lessons learned</li> </ul>
Wave 2	February -March 2010	<ul style="list-style-type: none"> <li>Re-contact Energy Advisors, contractors</li> <li>Interview stakeholders to identify themes and summarize lessons learned</li> <li>Exit survey of participants with completed projects: those who had a successful test-out</li> </ul>	<ul style="list-style-type: none"> <li>Document project status</li> <li>Identify themes and summarize lessons learned</li> <li>Document participant experience and satisfaction with CEWP</li> </ul>
Wave 3	June - August 2010	<ul style="list-style-type: none"> <li>Launch third wave of participant surveys</li> <li>Telephone survey of program dropouts</li> </ul>	<ul style="list-style-type: none"> <li>Document project status</li> <li>Create report document with detailed results</li> </ul>
Wave 4	September 2010 – March 2011	<ul style="list-style-type: none"> <li>Launch fourth wave of participant surveys</li> <li>Conduct second wave of telephone surveys of program dropouts</li> <li>Survey screened out applicants</li> <li>Interview utility contacts to identify lessons learned with on-bill payments</li> </ul>	<ul style="list-style-type: none"> <li>Document project status</li> <li>Document participant experience and satisfaction</li> <li>Explore motivations for applying and identify potential among applicants</li> </ul>

## PROGRAM STATUS

The CEWP pilot stopped accepting new applicants in March 2011, with the launch of the expanded CEWO program. As of June 4, 2011, CEWP had operated for nearly two years, had assessed 979 homes, and 563 participants had completed their projects and successfully tested out of the program; an additional 29 projects were in progress.

Table 7: Pilot Status (as of June 4, 2011)

Status	Count	Context
Applicants	2,306	All applicants since July 2009. 73% assigned to NW Natural. Population described in Chapter 4.
Received test-in (Home Performance Assessment)	979	Approximately 42% of applicants. Remainder were screened out, opted out, or failed to follow through on scheduling.
Dropped out	387	40% of those receiving test in. Population described in Chapter 3.
Tested-out (completed project through program)	563	58% of those receiving test in. Population described in Chapter 2.
In process	29	3% of those receiving test in.

Blue Tree Strategies, a financial consulting firm in Portland, Oregon, under contract to CEWO, prepared an analysis of the project details, FICO scores, and energy savings expected from the CEWP projects completed through December 31, 2010. The Blue Tree analysis found that projects took an average of 96 days to complete, from application submission to loan documentation, and the average cost of a completed project was \$12,300 (costs ranged from a minimum of \$1,300 to a maximum \$22,500).<sup>4</sup>

Projects most commonly included were air sealing (94%), insulation (91%), and duct sealing (30%)<sup>5</sup>. About half of all projects included “energy efficiency enabling” measures, which are essential to installing other energy efficiency improvements, but do not inherently impact energy performance. Efficiency enabling measures added an average of \$1,424 to project costs (11% of per-project costs and 5.5% of the total loan portfolio). Participants completed an average of six total measures.

## FINANCING AND ON-BILL PAYMENT EXPERIENCE

In this final wave of research, we sought to understand how the on-bill payment process was working. We interviewed contacts from each of the three participating utilities and Enterprise Cascadia to find out how the collection and payment processes functioned. As of January 31, 2011, 23 participants had made payments for 11 months or more, and an additional eight had closed their loans. Loans are closed when they are paid off. None of the loans had defaulted as of May 31, 2011.<sup>6</sup>

<sup>4</sup> Blue Tree Strategies. “Pilot Program Data Analysis”. Accessed April 14, 2011.

<sup>5</sup> Ibid.

<sup>6</sup> As of 5/31/11, two loans [totaling \$30,645, or 0.51% of total outstanding] had aged more than 121 days, but had not been charged off.



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The on-bill repayment process is guided by rules of payment agreed upon by Enterprise Cascadia, City of Portland, participating utilities, and the Oregon Public Utility Commission (OPUC). Partial payments are applied first to the energy charges. Any amount over that is applied to the loan. If the loan is not paid for 90 days, Enterprise Cascadia can request that the utility remove the loan payment from the utility bill. Contacts at Enterprise Cascadia noted that the first unpaid loans had been removed in early February 2011. Enterprise Cascadia can arrange for the participant to make other payment arrangements, so removal from the utility bill does not necessarily lead to default; however, Enterprise Cascadia may charge the loan off after 180 days.

Enterprise Cascadia and the participating utilities tracks payments, but communicating the status of the loans is the purview of Enterprise Cascadia. The utilities act as a payment portal, not the financier, and are thus dependent on Enterprise Cascadia to inform them of pre-payment, early termination, or default. There was no standard loan status report or regular reporting to CEWP staff as of early February, 2011. Contacts at Enterprise Cascadia reported continuing to work through the requirements of the reporting process, the privacy considerations, and the needs of the program.

### ***Experience with Set Up***

As of February 2011, NW Natural had the highest loan volume (approximately 300) and the most experience with loan billing; PGE had about 50 loans in their system, while PacifiCorp had about 25. All three utilities faced some obstacles in setting up the loan payment process. Utility contacts described having to establish new internal processes and a system for exchanging information with Enterprise Cascadia. All three reported that they had adapted their billing systems to allow for loan payment collection. Additionally, all had to consider how the loan payment would work for “equal pay” customers. In one case, equal pay customers appeared to be in arrears until the utility revised the payment allocation assumptions. The loan payment is derived by adding interest and principle and dividing the total by 239 equal payments. Equal pay customers do not experience seasonal variation in their energy bills because their energy use is averaged over the year to create a flat, predictable energy bill. Adding a loan payment to the bills of these customers should theoretically be simple, but all three utility contacts reported having to work with the billing system staff to add the loan payment without affecting the equal pay algorithm. All three utility contacts reported that they had resolved the issue.

Utility contacts mentioned other scenarios in which customer bill payment habits had resulted in unintentional arrearages. These scenarios revealed some of the mechanics of the bill assessment and credit processes and reflects the way people approach their utility bills. In one scenario, a customer was habitually paying their bill within a floating “window” or grace period where the bill might be late, but not officially in default—because of this gap, a customer’s bill might have two months assessed, only one of which was current. This rolling payment allocation interfered with automatic allocation of additional funds to the loan payment. In another scenario, a customer set up automatic electronic, flat payments and let the bank automatically deduct the payment. Because the payment amount did not fully cover the loan payment, the difference built up each month. In both cases, as soon as the issue was identified, it was resolved.



All three utility contacts reported that adding the loan payment to customer bills required manual set up, and many of these bills continued to be reviewed manually—at least in the first few months of loan payment. CEWP loans are tied to a customer name rather than a meter location, so the utility assigns the loan payment to a customer. All three contacts expressed concern about the idea of tying the payment to a meter, something they believe would require the utility to become more involved in loan collection—particularly considering that the loans are structured to be repaid over 20 years. Said one contact, *“Our position is, whatever the fund manager says is right. We don’t do the interest calculations or substantiate the loan status—our system is good at allocating charges, but not at banking.”*

Because the utilities will not reconcile the loan, and the last payment is billed directly to the customer by the bank, utility contacts expect CEWO staff to establish some regular review of the role of the bank and true up payments with utility records to make sure there are no surprises for customers as they approach the end of the loan repayment period. According to utility contacts, bill payment records are occasionally purged, making it difficult for the utility to substantiate 20 years of loan payments. The utilities are assuming the fund manager will be responsible for this.

### ***Expectations for the Future***

Utility contacts were cautiously optimistic that the process would continue to work for them as the program launched statewide, assuming there was not a substantial jump in the number of projects. All three noted that certain aspects of their processes continued to require manual set up or review and that if CEWO is able to recruit the volume of participants that are expected, it could exceed the capacity of the existing process.

- ➔ *“Our system can bill it. But it’s manual... we enter the contracts manually and do a review of the contracts after 60 days to ensure its working. If they get the numbers they expect, that could put a strain on the resources.”*
- ➔ *“We started thinking we’d have about 250 loans max. We now check each of these bills every month. If we are up to 4,000 or 6,000, we’ll need to automate more. We need some trigger for when we look at this.”*

Utility contacts expect that the loans will continue to be tied to a borrower, not a meter; and two contacts described organizational and communication issues that could emerge if these loans are tethered to a meter or property. Right now, if a borrower moves, the utility ceases to be involved in servicing the loan—payments are removed from utility bills and the loan is transferred to the fund manager.

## **ON-BILL PAYMENT EXPERIENCE**

In order to more fully understand the bill payment mechanics, we conducted a brief email survey of the 31 participants that (1) had at least one year of bill payment experience or (2) had paid off their loan in full. Because the population was relatively small, this survey allowed us to verify



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that the bill payment experience was working reasonably well so far and provided an opportunity to test bill payment survey questions for future efforts. The results of each question are provided in Appendix B.

Of the 31 participants surveyed, 13 completed the survey (42%) and provided feedback about their experience. One of the 13 could not recall receiving a utility bill that included a CEWP project payment. This respondent answered other questions about the process, but skipped specific payment process questions. All 13 respondents had applied for the Oregon state tax credit, and 11 had applied for the federal tax credit. Four of the respondents had already paid off their CEWP loan.

We sought to understand what these participants might have done had they not had access to the CEWP financing program. Of the 13 respondents:

- Ten reported they would not have completed the same project at all.
- One respondent reported that they would have completed their project, but postponed it for at least one year.
- One respondent reported that they would have completed their project without the program.

### ***Expectations***

We asked respondents if the program met their expectations in terms of cost and results.

- Ten of 13 respondents indicated that the project they completed through the program cost about what they expected.
- Three reported that their project cost more than they expected.
- Only one respondent reported that their monthly payments were higher than they expected.

We asked respondents about their energy savings and other benefits from participating in the program. Eleven respondents saved as much energy, or more, than they expected. Only two saved less than they expected. In addition to energy savings, respondents reported cleaner air in their homes, increased comfort, increased awareness of how to save energy, and quieter homes.

We asked respondents about the benefits they perceived. All but one respondent indicated that the project made their home more valuable, comfortable, and sustainable. Twelve respondents reported that the equipment installed through the program performs better than the equipment they had previously and that they are now more confident in their home's performance. Nine participants reported that the project they completed made their home healthier.



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We asked respondents how much they would pay for the information they received from the Home Performance Assessment. Respondents had varied opinions. Three would have paid less than \$100 for similar information, seven would pay \$100 to \$200, and two would pay \$300 to \$400.<sup>7</sup>

### **Satisfaction**

Twelve of 13 respondents indicated that they were satisfied (1) or very satisfied (11) with this method of repayment. The one respondent who was not satisfied said that he/she did not enjoy working with the bank and that the interest rate was higher than they could have qualified for elsewhere. Twelve respondents also indicated that if they were to do another similar project, they would use a program like this. Only one respondent indicated that he/she would not use a program like this and would instead use a home loan to finance a similar project because a home loan would give them more control over their project.

We asked on-bill financing participants how satisfied they were with the overall Clean Energy Works experience. Eleven of 13 respondents indicated that they were satisfied or very satisfied. Two were very unsatisfied or unsatisfied.

When asked about any issues, respondents identified communication with the bank as the most problematic part of the process. Three of 13 respondents offered elaboration on the reasons for their dissatisfaction. They indicated that the financing was confusing, they had to make excessive efforts, or making additional extra payments was difficult.

### **THIS REPORT**

This report has four additional chapters. Chapter 2 presents the results from the fourth survey of successful participants, those that navigated the program and have completed their project. Chapter 3 presents the results of second wave of interviews with program dropouts. Chapter 4 describes the results of a survey of screened-out applicants, the first survey of that population. Finally, Chapter 5 presents findings and provides recommendations.

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<sup>7</sup> One answered “don’t know.”





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**CLEAN ENERGY WORKS PORTLAND PILOT**



# 2 PARTICIPANTS

## INTRODUCTION

This is the fourth, and final, wave of survey research focused on CEWP pilot participants. As the program transitions to a broader, statewide effort, it is losing its pilot status. The first three waves were summarized and reported in a September 2010 report sent to the OPUC.

## METHODOLOGY

CEWP launched with successive planned phases, which allowed the program to adjust processes, recruit new contractors, and train staff as lessons were learned. CEWP pilot staff provided the research team with a list of 310 contacts who had entered the program and completed their project as of October 31, 2010. For this research, *completed project* means that the construction was done and the home had a post-construction test-out. The number of completed projects has grown steadily since September 2009 (Table 8).<sup>8</sup> As of October 31, 2010, the bulk of completed projects had occurred in Phase 3.

**Table 8: CEWP Test-Out Population for Sampling by Phase, as of October 31, 2010**

Program Phase	Test-Outs	Percent of Total	Cumulative Percent
Phase 1 (Early pilot)	24	8%	8%
Phase 2 (Fall 2009/Winter 2010)	55	18%	25%
Phase 3 (Spring/Summer 2010)	170	55%	80%
Phase 4 (Summer/Fall 2010)	52	17%	97%
Phase 5 (Neighborhood Outreach)	1	0%	97%
Phase 6 (Bridge to CEWO)	7	2%	100%
<b>Total</b>	<b>310</b>	<b>100%</b>	

The first four phases were implemented in rolling, overlapping waves. The fifth phase involved an innovative neighborhood outreach strategy that included direct outreach to specific Portland neighborhoods by staff and volunteers of the Metropolitan Alliance for the Common Good (MacG). Phase 5 launched in August 2010 and is expected to wrap up by mid 2011. Finally, Phase 6 was launched to allow participants, CEWP staff, and contractors to continue to offer the program while the larger statewide effort, CEWO, prepared to launch. This Phase launched in August 2010 and is expected to wrap up in mid 2011, as CEWO becomes the primary path for

<sup>8</sup> As of March 20, 2011, CEWP had 203 completed projects and 463 in queue.



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projects. The list of participants that had successfully tested out of the program as of October 31, 2010, included participants from each of the six phases.

We sent an invitation to complete an email survey to 170 participants in January 2011 and received 122 responses. We eliminated two responses that did not complete the entire survey, leaving a total of 120 completed surveys.

**Table 9: Test-Out Survey: Final Disposition**

Outcome	Responses	Percent
Completed	120	70%
Eligible, But Not Completed	50	30%
<b>Total</b>	<b>170</b>	<b>100%</b>

## PARTICIPANT CHARACTERISTICS

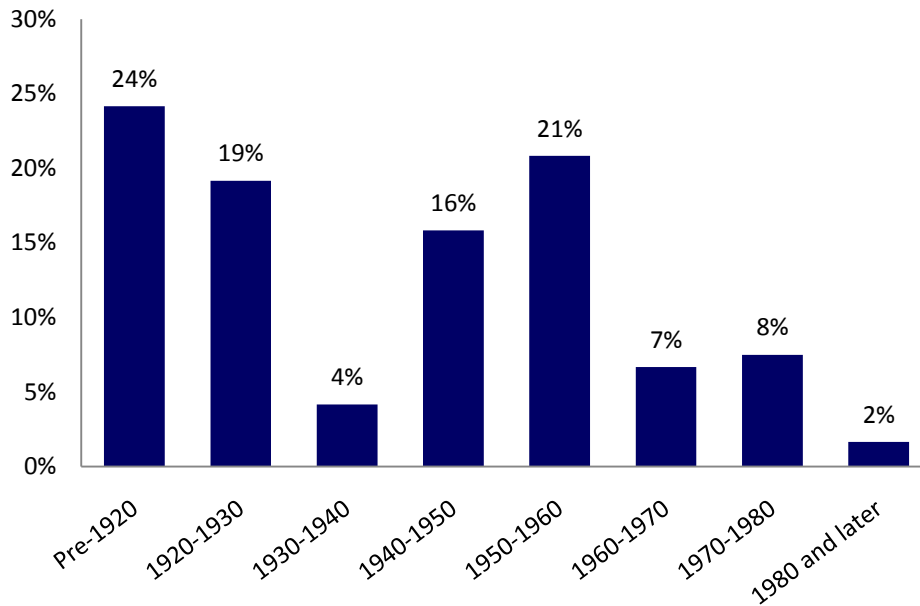
Half of the 116 participants (58) indicated a pre-tax household annual income of \$69,999 or less (Table 10).

**Table 10: Participant Income (n=116)**

Annual Pre-Tax Household Income	Percent
Less than \$10,000	1%
\$10,000 to \$29,999	5%
\$30,000 to \$49,999	22%
\$50,000 to \$69,999	22%
\$70,000 to \$89,999	12%
\$90,000 to \$109,999	9%
\$110,000 to \$149,999	8%
\$150,000 to \$199,999	3%
\$200,000 or more	4%
Refused	14%

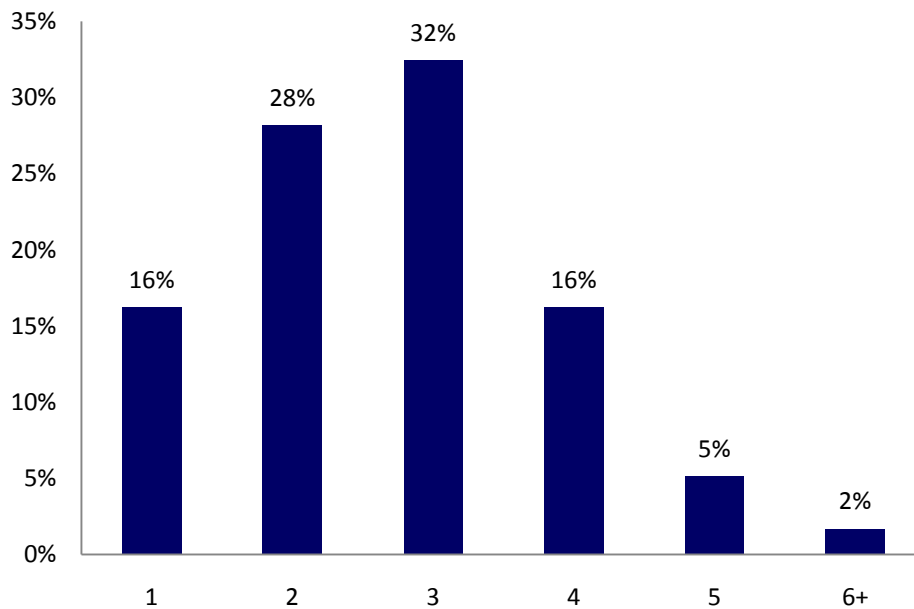
The average year of construction of the participant homes was 1922 (Figure 1). Most participants (101) lived in homes built before 1960.

Figure 1: Year Participants Homes were Built (n=120)



Seventy-seven percent of participants reported that their households consisted of between two and four individuals (Figure 2).

Figure 2: Number of Individuals in Applicants' Households (n=117)



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## FINDINGS

### *Awareness and Initial Interaction*

We included questions for participant contacts about how participants heard of the program opportunity. Participants reported hearing of the program through a variety of sources – the most common being word of mouth (Table 11).

**Table 11: Source of First Information about CEWP (n=120)**

Initial Information Obtained	Percent (N=120)
Word of Mouth	34%
Media (TV, newspaper, radio)	27%
Utility (bill insert, letter, website link)	25%
Listserv or forwarded email, electronic	5%
Other (home shows, communication from the Mayor's office)	5%
Don't know	4%
<b>Total</b>	<b>100%</b>

Participants reported that their experience with the program website was positive. A majority of participants (74%) indicated that finding answers to questions on the website was easy (assigning a “4” or a “5” on a five-point scale), and 91% indicated that completing the online application was easy (Table 12). These responses are slightly less favorable than the previous study, in which 97% of respondents reported that completing the online application was easy.

**Table 12: Initial Interaction with CEWP\***

Statement	Strongly Disagree			Strongly Agree	
	1	2	3	4	5
Completing the Online Application was Easy (N=113)	0%	1%	8%	41%	50%
Finding Answers to Questions on CEWP Website was Easy (N=92)	0%	6%	20%	51%	23%
Navigating the Clean Energy Works website was easy (N=101)	0%	0%	14%	46%	40%

\* Note: Applicants that failed to rate the influence of these program features or stated “don't know” are excluded from the percentage calculations.

Three respondents elaborated on their responses:

➔ *“The stuff about the tax credits was not clear. I could not find the information I needed to do my taxes on the website.”*

- ➔ *“The nature of the debt... It wasn’t clear that it was a second mortgage. I ended up having to call the actual lender.”*
- ➔ *“I could not tell what kind of costs to expect or what kind of savings I should expect to see on my energy bill.”*

### **The Home Performance Assessment**

The Home Performance Assessment, or *test-in*, uses specialized equipment to assess: air infiltration, duct system quality, the presence or absence of insulation, combustion safety, and the efficiency of existing systems. We sought to identify contacts’ level of agreement with statements about scheduling and understand their overall experience with their Home Performance test-in (Table 13).

**Table 13: Experience with Home Performance Assessment**

Statement	Portion Agreeing*
The time required for the audit was reasonable (N=120)	90%
It was simple to schedule the initial audit (N=120)	90%
I learned valuable things about my home during the audit (N=120)	88%
The information from the audit convinced me to move forward with my project (N=120)	86%
I appreciated the presence of my Energy Advocate (N=120)**	83%

\* Those that reported a “4” or a “5” on a 5-point scale. Not shown are the percentages of respondents rating these aspects a “1”, “2”, or “3.”

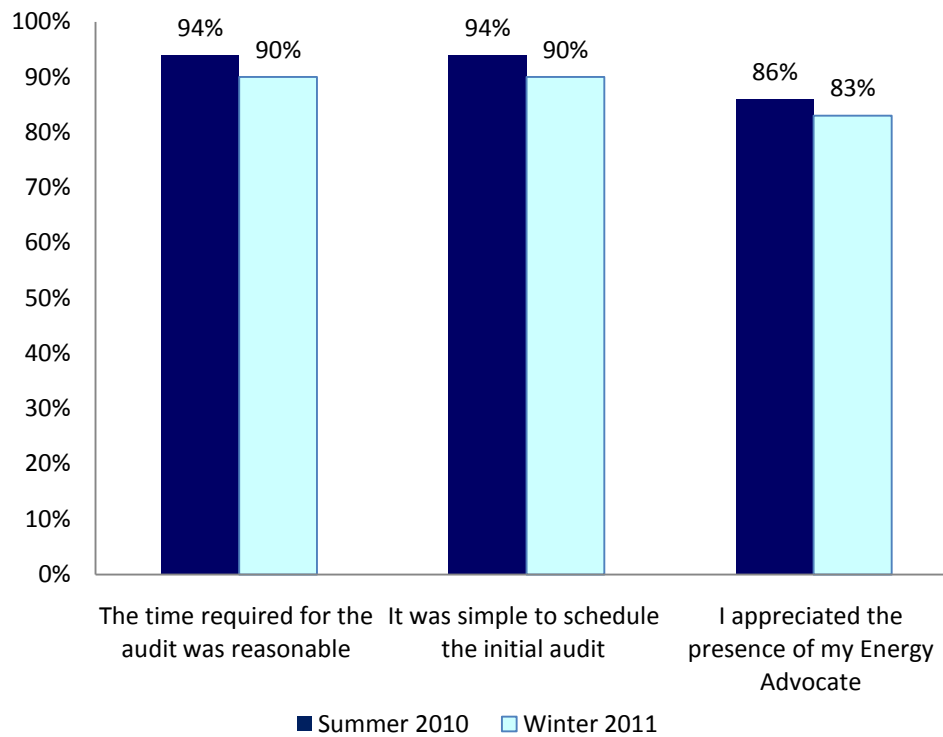
\*\* Excludes three respondents that answered “don’t know” to this statement.

While over 80% of participants agreed with the statements about ease and value of the Home Performance Assessment (responding with a “4” or “5” on a 5-point scale), overall agreement dropped somewhat on several aspects compared to the prior survey wave, reported in September 2010. Figure 3 compares the portion of respondents reporting a “4” or a “5” on the three aspects of the test-in that were explored in both survey waves.



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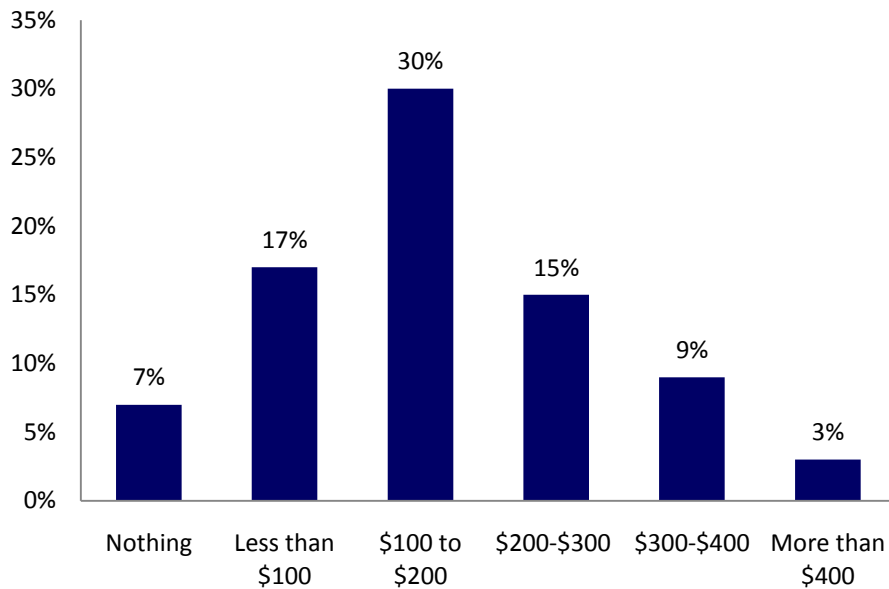
Figure 3: Comparison: Strength of Agreement



We sought to understand the overall value participants placed on the Home Performance (or similar audit), given their experience with the Clean Energy Works test-in. When asked how much they would pay for a similar audit, 7% reported they would not pay for such an audit, and 19% did not know. The remaining responses ranged from less than \$100 to more than \$400, and are presented in Figure 4.<sup>9</sup>

<sup>9</sup> CEWP paid contractors \$300 for each completed Home Performance Assessment. CEWO pays \$400 for each completed Home Performance Assessment.

**Figure 4: Amounts Participants Would Pay for Similar Audit (N=119)\***



\* Percents do not total to 100. The 19% that reported “don’t know” are not graphed.

**Motivation and Value**

As was the case in prior survey waves, saving energy emerged as the most influential factor behind participants’ decision to enroll in CEWP, followed by keeping their home warmer in the winter and lowering heating bills.

**Table 14: Influential Factors**

Factor	No Influence			Strong Influence	
	1	2	3	4	5
Saving energy (N=119)	--	1%	4%	12%	83%
Keeping your home warmer in the winter (N=119)	2%	1%	3%	14%	80%
Lowering heating bills (N=120)	--	4%	4%	20%	72%
Increasing the comfort of my home (N=119)	--	1%	8%	20%	71%
Keeping your home cooler in the summer (N=118)*	5%	6%	10%	25%	53%
Increasing the value of my home (N=119)**	5%	14%	26%	29%	25%

\* Total may not equal 100%. Excludes two respondents reporting “don’t know.”

\*\* Total may not equal 100%. Excludes one respondent reporting “don’t know.”

When asked if there were any other reasons participants pursued their CEWP projects, 27 contacts offered other reasons for their engagement with CEWP. The most common reasons



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were environmental/climate concerns (9), making improvements to their home (7), the availability of financing (5), and supporting the local economy and local contractors (5). Their comments included:

- ➔ *“Reducing emissions and other environmental impacts through energy conservation and local job creation.”*
- ➔ *“It’s the right thing to do when considering how to lessen the effects of global warming and conserving the world for future generations.”*
- ➔ *“I knew that the heating system and insulation needed to be done eventually, and it seemed like a good opportunity to finance it. Paying cash would have been too much of a hardship.”*
- ➔ *“Good for the economy to support local businesses and the stimulus for Oregon.”*
- ➔ *“I really liked the idea of spending money on local labor in these times of high unemployment instead of sending the money to Wyoming or Canada or wherever it is that they are drilling for the natural gas that heats my home.”*

We also sought to understand participant perceptions of CEWP pilot components. Participants rated access to a one-stop shop for information as the highest value (assigning a “4” or a “5” on a five-point scale), followed by access to information obtained from the Home Performance Assessment. The portion valuing the services of the Energy Advisor dropped somewhat in this wave—to 77% from 92% in the September 2010 report.

**Table 15: Perception of Value: CEWP Pilot Components**

Program Component	Portion Rating Valuable*
Access to one-stop-shop for information and services (n=117)	90%
Access to information obtained from the Home Performance Assessment (n =115)	88%
Access to a contractor with specific training in energy efficiency or building science (n=115)	87%
The services provided by Energy Advocate (n=119)	77%
A program-assigned contractor (n=115)	53%

\* Not shown are the percentages of respondents rating these aspects a “1”, “2”, or “3.”

CEWP appears to be supporting projects that otherwise would not have happened, would have been smaller, or would have happened more than a year from now. A majority of participants (60%) indicated that they would not have completed the project without the program’s services (Table 16).



Table 16: Program Influence (n=118)

What would you would have done if you had not had access to Clean Energy Works	Percent
I would not have completed this project	60%
I would have completed a project, but done less	20%
I would have done the same project, but postponed it for more than one year	19%
I would have done the same project, but with less efficient equipment	<1%
I would have done the same project	<1%
<b>Total</b>	<b>100%</b>

Most participants (70%) reported that they had acquired better information about how to minimize their energy use because of the program.

### Specific Improvements

Sixty-five respondents (54%) reported replacing their water heaters as part of the home improvements made through the project. None of the respondents reported that their water heaters were broken. Among those that described their reasons for their water heater purchase, 29 of the 65 (45%) indicated that their water heaters were working, but they wanted to replace them or that their water heaters were working, but not well (9%, 14%). An additional 13 (21%), reported that the program recommended or required them to replace their working water heater as part of their program participation.

Sixty-nine participants (58%) replaced their heating systems through the program as part of the project. None of the participants reported that their heating systems were not working. Of those participants who replaced their heating systems, 43% indicated that their heating systems needed costly repairs or were not working well. In open ended comments, several participants volunteered that they replaced their heating system because it was old or inefficient.

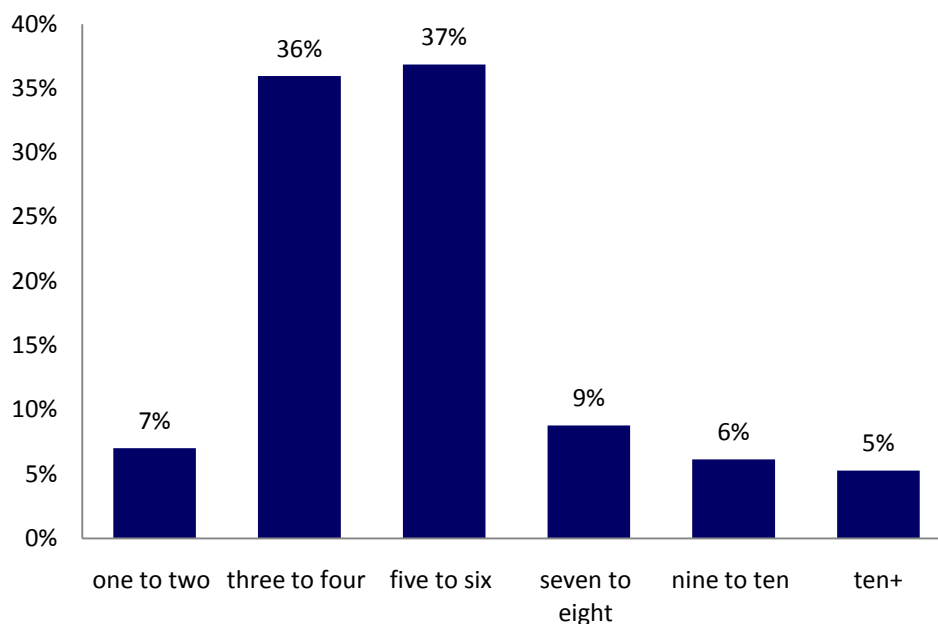
### Experiences with CEWP Energy Advocates (Advisors)<sup>10</sup>

Nearly all of the participant respondents (114 of 120 or 95%) were able to estimate how many times they interacted with their Energy Advisor in the course of participating in CEWP. Seventy-three percent, (83 of 114) reported interacting with their Energy Advisors between three and six times. We did not define *interaction* for respondents; therefore, the estimates in Figure 5 should be viewed as participant perceptions, not an actual count of Energy Advisor interactions. For example, one person may count a string of email conversation as a single interaction, while another might count each reply as a separate interaction.

<sup>10</sup> Called Energy Advisors in CEWO. Questions reflect language of the pilot that would be familiar to respondents engaged in CEWP.



Figure 5: Interactions with Energy Advisor (n=114)



Participants rated their Energy Advocates on several aspects. Most (95%) reported that their Energy Advocate was knowledgeable about the program. Slightly fewer (88%) agreed that they were able to reach their advocate when they needed to and that the advocate was able to answer their questions.

Table 17: Experience with Energy Advocate

Aspect Statement	Portion Agreeing*
My Energy Advocate was knowledgeable about the program (N=120)	95%
I was able to reach my Energy Advocate when I needed to (N=118)	88%
My Energy Advocate was able to answer my questions or direct me to someone who could (N=117)	88%
My Energy Advocate was helpful (N=119)	86%
My Energy Advocate met my expectations (N=120)	84%
My Energy Advocate considered my circumstances when presenting the bid and financing package (N=117)	84%

\* Not shown are the percentages of respondents rating these aspects a “1”, “2” or “3.”

Those offering a low score (a “1” or a “2”) when rating the extent to which their Energy Advocate met their expectations overall was asked how their Energy Advocate failed to meet their expectations. The most common concerns expressed by participants answering this question involved an overall lack of attentiveness on the part of their Energy Advocate (provided by 8

respondents) and the perception that the Energy Advocate deferred to the contractor rather than providing information (4 respondents). Comments on this topic included:

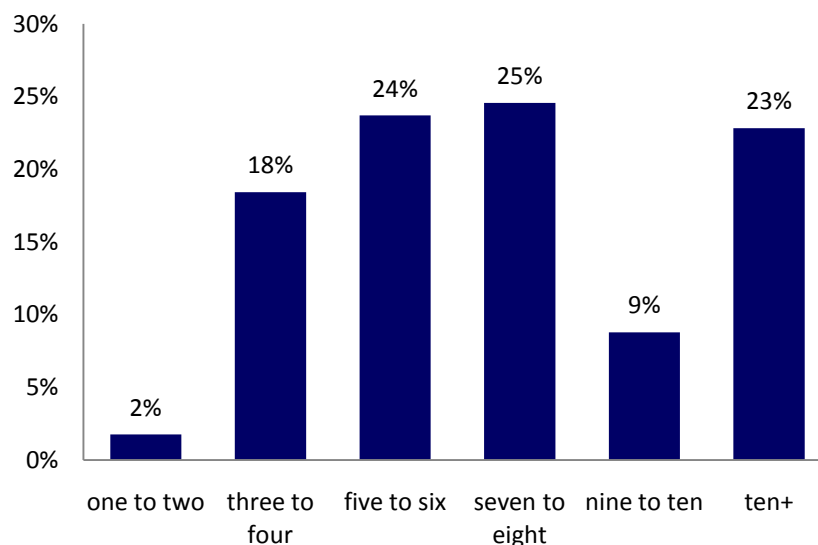
- ➔ *“He referred me back to the contractor in several instances when my issues were about the contractor or subcontractors work. To me, this is exactly the sort of situation that the Energy Advocate should have been involved with.”*
- ➔ *“I liked the program, but I felt like he was selling it too much and not focusing on my concerns as a homeowner. He did not seem to be advocating for me, instead, he seemed to be advocating for the contractor.”*
- ➔ *“All questions were deferred to the contractor, which seemed appropriate, but made me wonder what the purpose of the Energy Advocate was.”*
- ➔ *“We were not informed that the job would require drilling holes all over the outside of our house. The Energy Advocate seemed too ‘in bed’ with the contractor.”*

### Experiences with Contractors

Most participants (109) indicated that their contractor completed the work as proposed, and most (99) of the total respondents reported that the contractor completed the work as scheduled. In the previous wave of research, respondents gave nearly identical responses. A small number of respondents (13) reported getting more than one bid for the work completed through the program. Of these, ten participants found the second bid helpful, noting that these additional bids helped them set appropriate expectations and compare prices.

Most (65%) participants interacted with their contractor between three and eight times (Figure 6).

**Figure 6: Interactions with Contractors (n-114)\***



\* Excludes “don’t know” responses.



Overall satisfaction with contractors was moderate, with 78% of respondents indicating they were satisfied or very satisfied, while 22% indicated they were somewhat to very dissatisfied.

Respondents were also asked if they had any additional comments about their experience with their contractor. Participants offered positive (25 comments), negative (11 comments), and mixed comments (25) about their contractor experiences. Most of the positive comments were brief and indicated that the respondents were pleased with their interaction and would employ the contractor again. Negative and mixed comments were longer and tended to reflect the various obstacles involved in major home improvement projects.

Representative overall comments included:

- ➔ *“He seemed very qualified and good, but overworked. He farmed out a bunch of the work to subcontractors, the quality of which varied greatly. It seemed as if as one of the few contractors on this program, he was spread too thin and didn't have the time and energy he should have to dedicate to each project.”*
- ➔ *“Although I liked all individuals involved, I found project management to be lacking -- particularly oversight of sub-contractors. I frequently had to follow up on work details and scheduling.”*
- ➔ *“We were thrilled with the work and care of our home. The work exceeded our expectations.”*
- ➔ *“Although the contractor was responsive, the mess left in my house was unacceptable. The contractor was able to come out and clean up, but only after I identified the problem.”*
- ➔ *“I expected more from these people since they made a lot of money from this project, and I would have hoped you would only have the best contractors in this program.”*
- ➔ *“I think we would have chosen a different contractor if we had any sort of choice in the matter. I think we over-paid for a variety of projects. Adjustments were made on the contract without our consent or authorization. The main contractor was nice, but used sub-contractors that didn't follow contract specifications.”*
- ➔ *“I would like to have received two bids for the work. I didn't know that was an option.”*
- ➔ *“They made a number of mistakes. Maybe they were having a bad week. To their credit, they did fix everything that they didn't do correctly and did so quickly. They just did not perform up to the standards I expected. Some of the mistakes were from their heating subcontractor...not the main contractor.”*

Thirty-six (30%) of participant respondents reported having issues emerge at the final inspection. Twenty-five participants described the nature of these issues—16 reported issues with mechanical items or trouble with project quality. Two contacts reported that the work was

unsatisfactory in appearance or that the contractors left a mess. The remaining comments did not provide enough detail to categorize; however, several mentioned issues with subcontractors.

### ***Financing and Paperwork***

Contacts were asked to rate the importance of the features of CEWP-provided financing, relative to their decision to participate in the program (Table 18). Avoiding upfront costs and obtaining home improvements with no money down was the highest rated financial benefit of participating in the program, followed by access to an attractive interest rate.

**Table 18: Influence of Financing Aspects**

<b>How important were each of the following in your decision to participate:</b>	<b>Portion Rating Important*</b>
No money down; avoiding the upfront costs associated with your project (n=117 )	91%
Getting an attractive interest rate (n=116)	90%
Qualifying for the \$1,500 federal tax credit (n=115)	85%
Qualifying for an Oregon tax credit (n=117)	84%
Obtaining an incentive from Energy Trust of Oregon (n=117)	83%
Having the option to repay the loan amount on your utility bill (n=117 )	82%
Having the loan spread out over 20 years (n=119)	79%

\* Not shown are the percentages of respondents rating these aspects a “1”, “2” or “3”

Nearly all respondents (94%) interacted with a representative of the financing firm, Enterprise Cascadia. Regardless of whether or not they interacted with Enterprise Cascadia, contacts were asked if they had any questions about their financing proposal or loan paperwork. Thirty-nine contacts (33%) reported having questions, most commonly about payment timing and structure (10), followed by details of the loan, including the project fees (4). Participants expressed confusion about early repayment and how the incentives factor into the loan. The following are representative comments:

- ➔ *“I did not know or understand, until after the work was completed, that the loan was a second on my first mortgage.”*
- ➔ *“The explanation about the balloon payment (energy incentive) wasn't very clear. I wasn't sure when it would be paid, and then when it was, there wasn't any follow up to let us know. We had to inquire with the loan officer and request the final statement. Also, we've had a difficult time getting them to return our calls when we've asked for paperwork. Very frustrating.”*
- ➔ *“I was interested in the tax status of the transaction. All my questions were answered in a satisfactory way.”*



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Most participants reported that none of the forms were difficult to complete (88%) and that they did not need assistance with the loan paperwork (80%). Participants were asked about their experience with forms and paperwork, including whether or not their Energy Advocate or contractor completed forms for them (Table 19).

**Table 19: Assistance with Paperwork (n=117)**

Experiences with Project Paperwork	Yes	No	Don't Know
Completed other forms after the initial participation agreement	60%	15%	25%
Energy Advocate completed forms for participant	55%	20%	25%
Contractor completed forms for participant	45%	26%	29%

### Overall Satisfaction

Participants reported high levels of overall satisfaction with CEWP, with 85% of participants rating their overall satisfaction a “4” or a “5” on a 5-point scale (Table 20). This is slightly lower than the levels reported in September 2010 (in which 88% rated overall satisfaction a “4” or “5”).

**Table 20: Overall Satisfaction (n=116)**

Overall Satisfaction	Very Dissatisfied			Very Satisfied	
	1	2	3	4	5
Overall satisfaction with the CEWP experience	--	3%	10%	38%	48%

Most (92%) of the participants indicated that they would recommend the CEWP pilot to family and friends.

We asked participants if their project completed through Clean Energy Works matched their cost expectations (Table 21). Sixty percent reported that their project cost less than, or the same as, they expected.

**Table 21: Cost Expectations (n=118)**

Participants Cost Expectations	Participants
Less than I expected	12%
The same as I expected	48%
More than I expected	37%
Don't know	3%
<b>Total</b>	<b>100%</b>

Most (92%) of the participants had received at least one utility bill which included their Clean Energy Works payment. Participants indicated that the payments were consistent with their

expectations (82%). A small number of participants (7%) reported that the payment did not meet their expectations, and a few (2%) reported that it exceeded their expectations.

## **SUMMARY**

Participants with completed CEWP projects continued to report high levels of overall satisfaction with the program and indicated no major problems in navigating program elements, including the website and paperwork. Participants remained satisfied with their Energy Advisors and found the audits they received through the program valuable. Participants participated in CEWP out of desire to save energy, contribute to their local economy, and in order to improve their homes.

Findings from this round of data collection are generally consistent with findings from previous waves of research. Participants reported similar levels of satisfaction with program processes, interactions with the Energy Advisors, and the projects they completed through the program. In this round of research, participants rated their Energy Advisors as slightly less valuable, on average.

Participants reported high levels of satisfaction with their contractors, although several expressed concern over the work done by sub-contractors. The program appears to be encouraging projects that otherwise might not have happened - less than 1% of the respondents indicated that they would have done the same project on the same timeline without the program.

The financing process remained confusing for some participants; indicating continued opportunities to clarify how incentives are applied, how the loan will be executed, and what participants should expect in terms of payment structure and fees.



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# 3

## DROPOUT SURVEY

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

### METHODOLOGY

As of October 31, 2010, approximately 156 applicants had dropped out of the program since it began in July 2009. In July, 2010, CEWP pilot staff provided the research team with a list of 88 people who had entered the program and completed a Home Performance Assessment, but had dropped out without completing a project as of July 1, 2010. In November, 2010, CEWP pilot staff provided an additional list of 92 people who had dropped out of the program after receiving a Home Performance Assessment. After removing those that had already been surveyed, we were left with 88 contacts that had dropped out of the program, but that had not been surveyed.

Working with Energy Trust and CEWP staff members, the research team reviewed and updated the survey instrument developed earlier in 2010, seeking to understand contacts’ experiences as a program participant, their reasons for applying, and what caused them to subsequently leave the program. We also sought to identify any energy-saving upgrades or purchases they had made (or planned to make) since dropping out of CEWP. Phone surveys occurred in January 2011.

Ultimately, surveys were completed with 35 of the 88 contacts (Table 22). Of the 35 dropout contacts, 17 entered the program in Phase 3; 14 entered the program in Phase 4; two entered the program in Phase 5, and two were assigned to Phase 6.

**Table 22: Dropout Survey Final Disposition**

Outcome		Count	Percent
Complete		35	40%
Eligible but Not Completed, or Eligibility Unknown	Refused	1	1%
	Scheduled/not completed	6	7%
	Not reached/message left	43	49%
	Language barrier	1	1%
Not Eligible	Bad number/disconnected	2	2%
<b>Total</b>		<b>88</b>	<b>100%</b>

Over half of respondents reported a household income between \$50,000 and \$109,000. Twenty percent reported making less than \$50,000, and 14% reported making more than \$110,000. Home size ranged from 757 to 3,200 sq ft, with a median size of 1,600 square feet. The year the home was built ranged from 1889 to 1991, with an average year built being 1938. Over half of



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dropout contacts (57%) live in houses with fewer than three occupants. Forty-three percent of dropout contacts live in houses with three or more occupants; only one contact reported living in a household with more than four occupants.

## RESULTS

### Awareness

Dropout contacts reported first hearing of CEWP in a variety of ways, most commonly through communication from their utility or media coverage (Table 23). Utility communications alerted more dropout contacts to the program in this survey than in the first, reported in September 2010 (11 versus five respondents, respectively).

**Table 23: Source of First Information about CEWP**

Source	Responses	Percent
Utility Communication (mailing or website)	11	32%
Media (TV, newspaper, radio)	10	29%
Word of Mouth	6	18%
Other (community/neighborhood events, or employer)	4	12%
Email/Listserv or Electronic Post	3	9%
<b>Total</b>	<b>34</b>	<b>100%</b>

Similar to the results of the previous survey, dropout contacts who were able to recall their experience reported that completing the online application and navigating the CEWP website were relatively easy (a “4” or a “5” on a 5-point scale), but they had more difficulty finding answers to their questions on the website (Table 24).

**Table 24: Ease of Interaction with Websites (n=35)**

Aspect of Website	Easy (a “4” or a “5”)	Did not Rate
Completing the Online Application	71%	23%
Navigating the CEWP Website	60%	26%
Finding Answers to Questions on the CEWP Website	34%	43%

Six of the 35 dropout contacts (17%) offered additional comments about their experience with the CEWP website or had suggestions for improvements to it. Those that had applied more recently gave more detailed comments. Five of these contacts described needing specific information about program elements, such as the terms of the loan and guidance filling out the application. Three contacts indicated that the website fell short of their expectations for a primary reference for program information.

- ➔ *“I found the website wasn't updated regularly. I also found out info about the program from other sources, long before the CEWP posted it. One thing I couldn't learn from the website was whether to include my basement as finished space; I ended up submitting an application three times, before I got the correct criteria. It also would have been easier if I had had more complete info about the costs. The website was not a go-to source for me....”*
- ➔ *“It was clear enough for me to apply, but I didn't fully understand the program based on the information it presented. I think they could have had more information explaining the program more fully.”*
- ➔ *“There was one tiny detail that wasn't clear on the site, and it was the reason we pulled out: it wasn't clear that the loan would appear on a credit report as a mortgage....”*

### Reasons for Applying

This survey wave included a question set designed to assess the elements that influenced dropout contacts' decision to apply to the program. When asked about the types of benefits to their homes that induced them to apply, almost all dropout contacts rated “saving energy,” “lowering heating bills,” and “increasing the comfort of my home” as either a “4” or a “5” on a 5-point scale (97%, 89%, and 86% respectively; Table 25). Only a few (11%) contacts rated “increasing the value of my home” as a “5.”

**Table 25: Important of Home Improvements in Decision to Apply to Program (n=35)**

Aspect	Not Important			Very Important	
	1	2	3	4	5
Saving energy	-	-	3%	17%	80%
Lowering heating bills	-	3%	9%	20%	69%
Increasing the comfort of my home	-	9%	6%	29%	57%
Keeping my home warmer in the winter	3%	11%	14%	14%	57%
Keeping my home cooler in the summer	9%	17%	17%	14%	43%
Increasing the value of my home	11%	20%	26%	31%	11%

Dropout contacts also identified the importance of program elements in their decision to apply to the program (Table 26).<sup>11</sup> They rated the prospect of obtaining information from a Home Performance Assessment the most important aspect of the program; 83% rated this “4” or a “5” on a 5-point scale. One contact offered additional comments, indicating that he/she appreciated the prospect of understanding why their energy bills were so high.

<sup>11</sup> In the prior survey, we asked a similar version of this question. In this iteration, the question asks about the importance of program elements on respondents' decision to apply for the program rather than about the overall value of the program components.



Table 26: Importance of Program Elements in Decision to Apply to Program (n=35)

Aspect	Strongly Disagree			Strongly Agree	
	1	2	3	4	5
Access to information obtained from a Home Performance Assessment	6%	-	11%	31%	51%
Access to a contractor with specific training in energy efficiency	3%	9%	20%	31%	37%
A program representative or Energy Advocate to help you	6%	9%	23%	29%	34%
The program finding and assigning a contractor for you	11%	17%	34%	20%	17%

About two-thirds (63%) of dropout contacts indicated that having an Energy Advisor was an important factor in their decision to apply (rating it a “4” or a “5” on a 5-point scale). Eight contacts offered spontaneous comments about their Energy Advisor, most of which extolled their helpfulness during the application process rather than during their decision-making process. One contact described how his perception of the value of the Energy Advisor increased as he progressed through the program: *“Before I started the program, this [importance of having an Energy Advisor] would have been a “3.” After, it was a “5.” It was nice to have another, unbiased perspective/opinion.”*

Responses to the two contractor-related items were mixed. While two-thirds of dropout contacts (68%) rated access to a contractor with specific energy efficiency training as important to their decision (a “4” or a “5” on a 5-point scale), far fewer (37%) identified “the program finding and assigning a contractor for you” as an important factor. Of the 68% of dropout contacts who identified access to a contractor with specific energy efficiency training as important, three offered spontaneous comments about appreciating the specialized expertise. On the other hand, four of the six comments about the program *assigning* a contractor mentioned that having a single assigned contractor dissuaded them from continuing with the program.

- ➔ *“It seemed that they had the latest technology for looking at leakage and air flow within the house. . . . I know my general contractor wouldn't have had access to those tools or instruments.”*
- ➔ *“Having an assigned contractor worked against my participation in the program. I have a contractor I've used for two remodels, and I trust him completely. I would have gone to him [to do this work], and he would have been a heck of a lot cheaper than the contractor assigned to me.”*
- ➔ *“I prefer to pick my own contractor. It was nice that they had people they could recommend, but I wish it had been not just the one.”*
- ➔ *“Having a contractor with special expertise was important to me.”*
- ➔ *“I can find contractors on my own.”*



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Nineteen dropout contacts also provided additional reasons for applying. Seven of the 19 contacts mentioned financial incentives or the financing opportunities as reasons for applying. Six contacts applied in order to make a specific change, such as installing a ductless heat pump, weatherization, solar panels, or reducing radon exposure. Four contacts indicated that a general desire to help the environment was an important reason for applying, three mentioned the information provided by the program, and two mentioned a desire to take care of their homes.

Dropout contacts rated the importance of several financial products or benefits that might influence them “when considering whether to go forward with an energy efficiency project in your home,” as opposed to engaging with CEWP specifically (Table 27).<sup>12</sup> We also asked contacts to comment on these financial benefits.

**Table 27: Importance of Financial Benefits in Completing Home Energy Projects (n=33)**

Aspect (N=33)	Percent Rating Important*
Getting an "attractive" interest rate	79%
Obtaining an incentive from Energy Trust	73%
Qualifying for the \$1,500 federal tax credit	73%
Qualifying for an Oregon tax credit	67%
Having the option to repay the loan on your utility bill	61%
No money down, avoiding upfront cost	55%
Having the loan spread out over 20 years	39%

\* Not shown are the percentages of respondents rating these aspects a “1”, “2”, or “3.”

An attractive interest rate emerged as the most important financial benefit for dropout contacts. Over three-quarters (79%) of contacts rated this as important (a “4” or a “5” on a 5-point scale.) Three contacts offered additional comments, specifying how the interest rate affected their decision to apply to this program. The comments included:

- ➔ *“I could have gotten that same rate from my credit union via a home equity loan, so there wasn't any advantage for me to go through the program.”*
- ➔ *“I wanted a good interest rate, but couldn't tell from the website what the interest rate was.”*

Nearly three-quarters of contacts (73%) also rated obtaining an Energy Trust incentive and qualifying for the federal tax credit as important. Sixty-one percent of contacts rated the option to repay the loan on the utility bill as an important consideration:

- ➔ *“It seemed to be a hassle-free way to do it. I looked it at as a lien I'd transfer to the new owner if I chose to sell the house, so I wouldn't have to pay it off.”*

<sup>12</sup> Only 33 of the 35 contacts were asked this question.



- ➔ *“This is very important because otherwise it's only for people who can afford it. People should be warm. It's a basic right for all of us.”*
- ➔ *“It's a nice idea not to have to pay another bill, by having the cost folded into my utility bill.”*

Just over half (55%) of dropout contacts rated “no money down” as an important consideration. Three contacts commented on this aspect, and their comments were mixed, which included:

- ➔ *“If it's a refrigerator, I pay cash; I never borrow for that. I always consider energy efficiency. I'd borrow only for big-ticket items.”*
- ➔ *“This tells me that the program is not out to gouge people. It said a lot about the CEWP process.”*

The long loan term received the lowest rating. Only 39% of respondents rated having a 20-year loan repayment period as important. The four comments on this item were mixed, and included:

- ➔ *“It's attractive only if I can't do the project out of pocket.”*
- ➔ *“I was interested -- assuming that the loan payment would be offset by the energy savings.”*
- ➔ *“I don't want a 20-year loan.”*

We also asked dropout contacts about whether they had particular energy efficiency projects in mind when applying for the program. All 33 contacts<sup>13</sup> described having specific improvements in mind, and many listed several projects (Table 28). The most common improvements mentioned were insulation (22 mentions), HVAC system upgrades (18 mentions) including six that specifically mentioned wanting a new heat pump, and weatherization or air sealing (13 mentions).

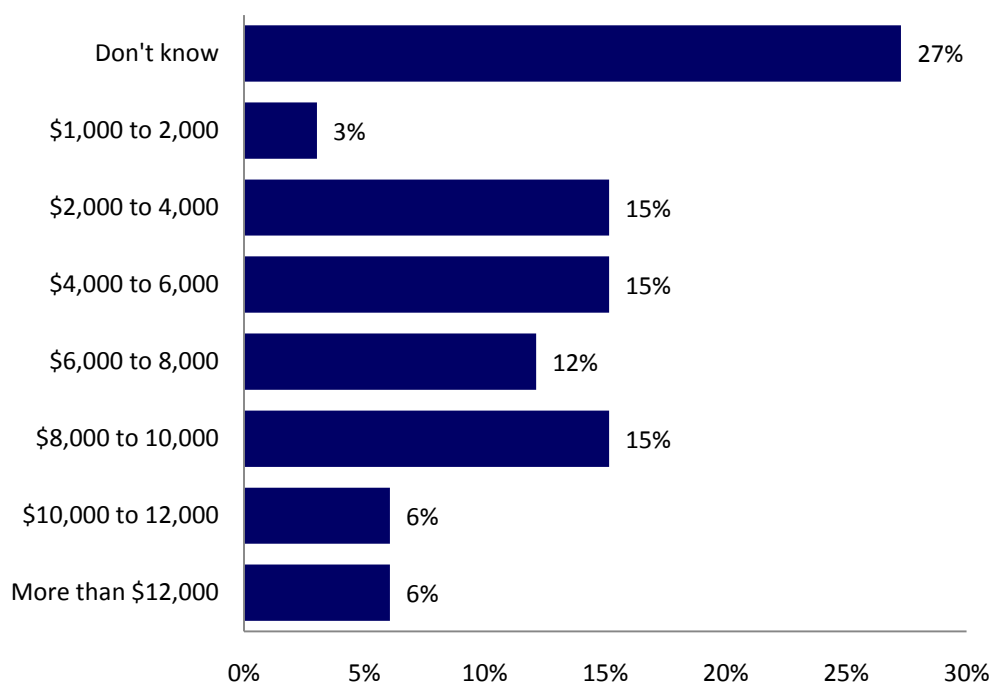
**Table 28: Specific Projects Desired When Applying (Multiple Responses Allowed)**

Project Type	Number of Mentions
Insulation	22
HVAC upgrade/replacement	18
Weatherization/Air sealing	13
Replace windows	8
Water heater	6
Other (Solar electric, replace toxic insulation, remove skylight, etc)	4

<sup>13</sup> Two contacts were not asked this question.

Contacts provided estimates of what they thought these projects would cost (Figure 7). Almost a third (27%) reported not having an expectation of project cost at the time of application. Among those that provided an expected cost, amounts were somewhat evenly distributed between \$2,000 and \$10,000.

**Figure 7: Predicted Cost of Project at Time of Application (n=33)**



### ***Experience with Energy Advisor***

All 35 of the dropout contacts reported interacting with their Energy Advisor. Using a one-to-five scale (where “1” meant “strongly disagree” and “5” meant “strongly agree”), contacts rated their Energy Advisors on four aspects (Table 29). Similar to the prior survey results, contacts assigned the highest ratings to their Energy Advisor's knowledge of the program. Contacts provided the lowest agreement to the statement, “*My Energy Advocate considered my circumstances when presenting the bid and financing package.*”



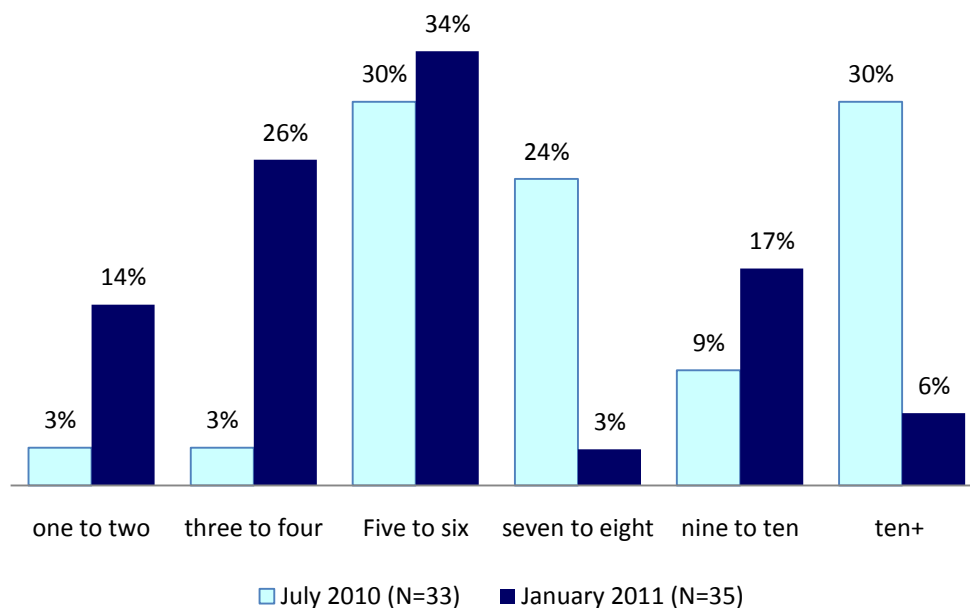
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Table 29: Satisfaction with Energy Advocate

Aspect	Strongly Disagree			Strongly Agree		Don't Know
	1	2	3	4	5	
Knowledgeable about the program (N=35)	—	6%	9%	29%	57%	—
Reachable when needed (N=34)	9%	3%	12%	24%	53%	—
Able to answer all my questions (N=35)	6%	11%	17%	11%	54%	—
Considered my circumstances when presenting the bid and financing package (N=29)	3%	7%	17%	21%	38%	14%

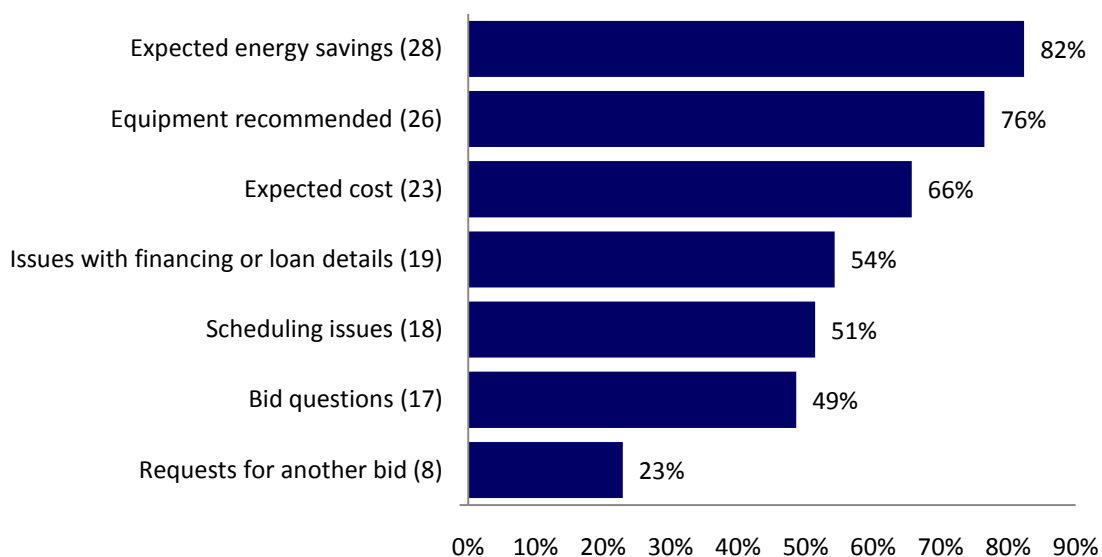
This wave of dropouts reported interacting less frequently with their Energy Advisors than the previous cohort, reported September 2010 (Figure 8). Almost three-fourths of dropout contacts (74%) reported communicating with their Energy Advisor six or fewer times. In comparison, in the 2010 survey, almost two-thirds of the dropout contacts reported communicating with their Energy Advisor seven or more times.

Figure 8: Number of Times Contact Communicated with Energy Advocate (n=35)



There were generally few differences from the previous survey in terms of the topics discussed with the Energy Advisor (Figure 9). In this survey, however, only half of contacts (51%) reported discussing scheduling issues with their Energy Advisor, compared with almost 90% in the previous survey.



**Figure 9: Topics Discussed with Energy Advocate (Multiple Responses Allowed)**

When asked which topics required the most communication, 30 of the 35 contacts mentioned specific topics (Table 30). These topics differed from the topics mentioned in the third wave survey. In the previous survey, financing, fees, and loan terms was most often listed as the topic requiring the most communication. In this survey, over two-thirds of contacts (73%) mentioned that the content and details of the bids required the most communication, but only a few mentioned the financing, fees, and loan terms as requiring the most communication.

**Table 30: Topics Requiring Most Communication (Multiple Responses Allowed)**

Topic	Number of Mentions
<b>Content and Details in Bids</b>	22
Expected Costs*	7
Equipment Specified	6
Expected Energy Savings	5
<b>Program Rules/Overview</b>	5
<b>Energy Assessment</b>	4
<b>Financing, Fees, and Loan Terms</b>	3
<b>Scheduling</b>	1

\* One additional respondent mentioned expected costs outside the context of the bid.

Contacts described several specific bid topics that required the most communication: the expected costs, the equipment specified, and the expected energy savings. It is worth noting that topics discussed with Energy Advisors also reflect discussions with or questions for contractors. This is not surprising given the Energy Advisor's central role in program coordination and



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communication. Below are some selected comments from respondents who identified the bid content as requiring the most communication:

- ➔ *“The bid and trying to get a fair price. I knew I would pay more because I was going to pay on credit, but I also knew the bid was overpriced, even with prevailing wage rates, which I also work with. The Energy Advocate said to work issues about the bid out with the contractor. I also asked for another contractor, because I didn't like the one assigned to me. He said, ‘That's not possible’.”*
- ➔ *“There wasn't enough detail in the bid. That's what I have to do at work. That should include chain of recourse if something goes wrong. The bid also required a lot of communication. The Energy Advocate didn't really discuss it, but I learned that everything on the bid was negotiable, instead of having a fixed bid that included detailed materials and costs and their labor rates. They should have presented a firm labor rate and stuck by it. I saw my Energy Advocate as more of salesman than an advocate for me. We discussed potential energy savings in general, but I knew it wasn't real; you can't really tell how much you'll save until you do [complex calculations]. It wasn't like the guy was an engineer and had really crunched the numbers. I know an energy engineer who can do that. It was like: ‘Take this weight-loss pill. You may experience this weight loss, but results may vary.’”*
- ➔ *“I didn't get any options about the equipment; he chose the most expensive/top of line furnace and that was all he presented to me. I didn't ask about other options because I figured that was all that was available to me. The proposed furnace would have cost me about \$6,000. That didn't include the AC. I didn't know I could request another bid, so I felt like that was the only option I had if I'd wanted to participate in the program. . . .”*

Five contacts mentioned that the program rules and overview required the most communication with their Energy Advisor.

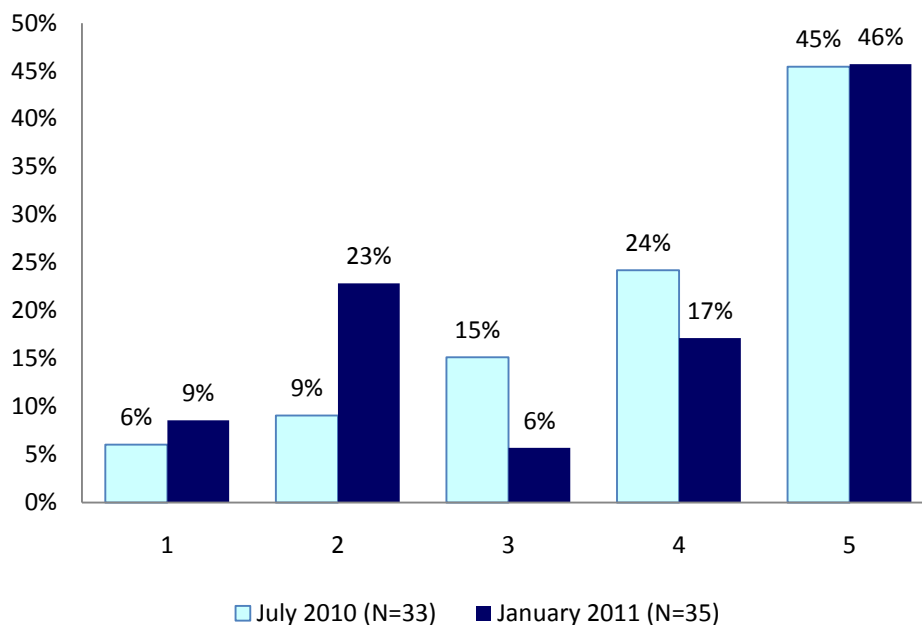
- ➔ *“Whether or not we would qualify, since the program seemed to target insulation and ducting, which we had already done.”*
- ➔ *“Is this good idea for me? I just never could see that it made sense.”*

Regardless of the issues that dropout contacts discussed with their Energy Advisor, 63% of them reported that they were satisfied with their Energy Advisor, rating them a “4” or a “5” on a 5-point scale (Figure 10). The number of contacts who were unsatisfied with their Energy Advisor (a “1” or a “2” on a five-point scale), however, increased relative to the July 2010 survey.



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Figure 10: Overall Satisfaction with Energy Advocate



Twenty-four of the 35 dropout contacts provided additional comments about their Energy Advisor. These comments were similar in content to the comments offered in the previous survey. Half of the 24 comments were positive, primarily praising the knowledge and interpersonal skills of the Energy Advisors.

- ➔ *“He was very nice, easy to have at the house, unobtrusive, and he seemed to know about the program.”*
- ➔ *“He was easy to deal with and available, and when he didn't know an answer, he would refer me to the Bull Mountain folks.”*
- ➔ *“The EA explained that he was there to make sure the work was done right. . . .I was impressed with how the EA and contractor worked together to study my kind of old, odd house and determine how best to do the assessment. . . .That comes from education and experience: a good understanding of how things fit together.”*

The other 12 comments expressed concerns or complaints about the Energy Advisor. The most frequent complaints were that the Energy Advisor was unable or unwilling to address all of the contact's questions (six comments), that the Energy Advisor was unavailable or did not follow up with the contact (six comments), and that the Energy Advisor was too pushy and did not consider the contact's best interests (five comments).

- ➔ *“We were concerned about how they'd deal with asbestos tape on the ducting, and how they'd maintain cleanliness when they worked in the attic. The EA seemed to know about the products, but my wife and I are very knowledgeable about the health and safety of the*



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products, and he didn't represent them well. He also forwarded the questions to the contractor. But at some point, the EA emailed us something like: 'I'm going to have to cancel the Q&A period at this point. I deal with many others on this program and I can't take this much time with you.'"

- ➔ "The EA was so busy he couldn't answer my questions about what I could do and what my return on investment. It seemed like it was a program to employ the CEWP people and contractors, while giving loans to people who otherwise couldn't get a loan -- and maybe shouldn't have gotten one. They should have done a better job explaining and managing the benefit of the program to me. I talk with people about this program and what a waste of taxpayers' money it is."
- ➔ "Everything that they tried to sell me seemed like more than I needed, and cost more than it should have. The EA seems to be working with the contractor. I don't know if they're paying anything to each other, but when they said, "See you tomorrow," I wondered if they worked together too closely. It's a conflict of interest to have the energy auditor be your contractor. I know what the EA's role was supposed to be. I didn't find him to be independent. I feel sorry for people for whom he's the "advocate." And he told me he's not there on behalf of me or the contractor. I felt that the EA was assisting the contractor in trying to up-sell me."

### Interaction with CEWP-Assigned Contractor

All but two of the 35 of the dropout contacts reported interacting with their CEWP-assigned contractor. Using a one-to-five scale (where "1" meant strongly disagree, and "5" meant strongly agree), contacts rated their contractor on three aspects (Table 31). These responses were generally similar to the previous wave of survey responses, except that the number of contacts who disagreed (a "1" or a "2") that their contractor considered their circumstances in the bid decreased slightly.

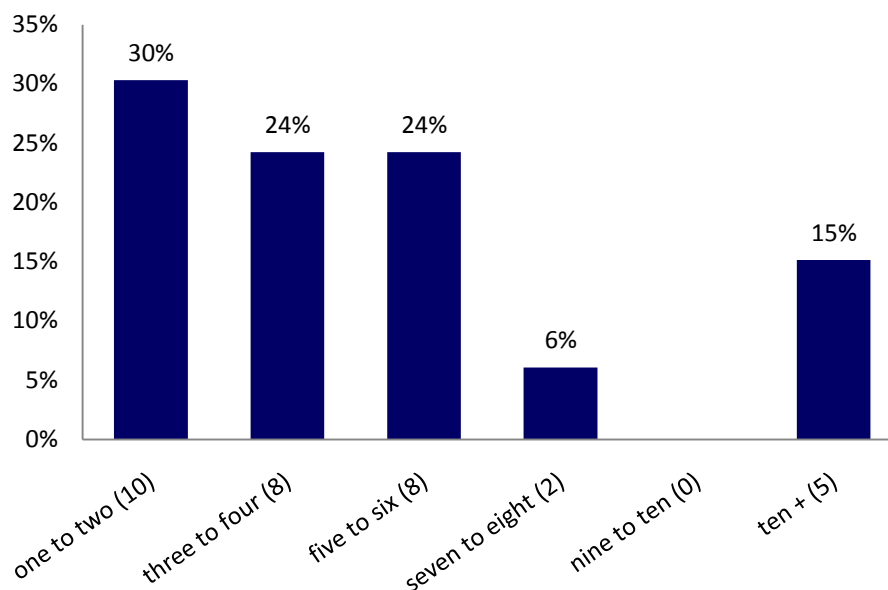
**Table 31: Satisfaction with CEWP Contractors**

Aspect	Strongly Disagree			Strongly Agree		Don't Know
	1	2	3	4	5	
I was able to reach my contractor when I needed to. (n=24)	8%	13%	-	13%	63%	4%
My contractor was able to answer all my questions (n=32)	3%	3%	22%	19%	53%	-
My contractor considered my circumstances when presenting the bid and financing package (n=28)	4%	7%	29%	14%	36%	11%

We documented the number of times dropout contacts interacted with their CEWP contractor (Figure 11). Recall that these contacts did not have any equipment installed through the program,

although a few contacts reported that they ultimately hired their assigned contractor outside of the program.

**Figure 11: Number of Times Respondent Communicated with Contractor**



We asked drop out contacts if they had any comments about their experience with their CEWP contractor. Twenty-three contacts offered comments, including two that reported having multiple contractors. Thirteen had only positive comments about their contractor. In general, these comments focused on the professionalism and personal qualities of the contractor. Five specifically mentioned their contractor's expertise. Several specifically mentioned that the issues they had with the program were not due to the contractor. These comments included:

- ➔ *“He was very good and knowledgeable. I would call him if I were going to do the work.”*
- ➔ *“He did a great job. I had no problems with him whatsoever. He definitely shopped for me, gave me multiple options. He put in time over and above the call of duty. I'm still having him do some work on my house.”*
- ➔ *“I was very impressed with the contractors' thoroughness and knowledge. If the cost had worked out, I would have been more than happy to work with him. Plus, he gave me some ideas of things I could do myself.”*

Four contacts had mixed comments – often starting with a positive comment about the contractor and then describing problems they experienced (especially the cost). Comments of this type included:



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- ➔ *“They clearly were well trained and knew what to do. But there were some things that seemed like they were going to be making a bunch of money but I wasn't going to benefit from them, in proportion to how much they were going to benefit from the items. I told them I'd already used the federal energy tax credit, but the bid included that. I met with the contractor first when they did the home audit. They sent me the test results. Then they said they needed to bring their water heater expert, to confer about changing our gas water heater to electric. They came and did that. Then they sent me a bid. But the bid didn't allow me any way to prioritize the things they'd learned during the audit.”*
- ➔ *“He seemed knowledgeable about the program, but the cost was so high on some items that I lost interest right away. The water heater bid I thought was ridiculously high. I called some other places for a bid on a similar water heater and it was about 1/4 of the cost [compared to the CEWP bid]. I asked the contractor if he'd install the water heater I'd found, independent of the CEWP project, and he said he would, but was surprised to hear about the price I'd found, so I wondered if he'd really researched all of the options. . . . Also, the contractor wanted to build a platform with a tent over it in the attic to help with storage issues I had up there. That added to the cost of the project considerably and had nothing to do with energy efficiency. . . . He also asked who had put the deck on the back on my house. I said I did. He said that it shouldn't be attached the house [as I had done it] or it would cause rot. It gave me the sense that he was looking for extra work.”*

There were fewer overall negative comments compared to the prior survey. Four contacts had primarily negative comments (compared with 10 in the third wave). These comments involved skepticism about the cost of the proposed project or the equipment recommended:

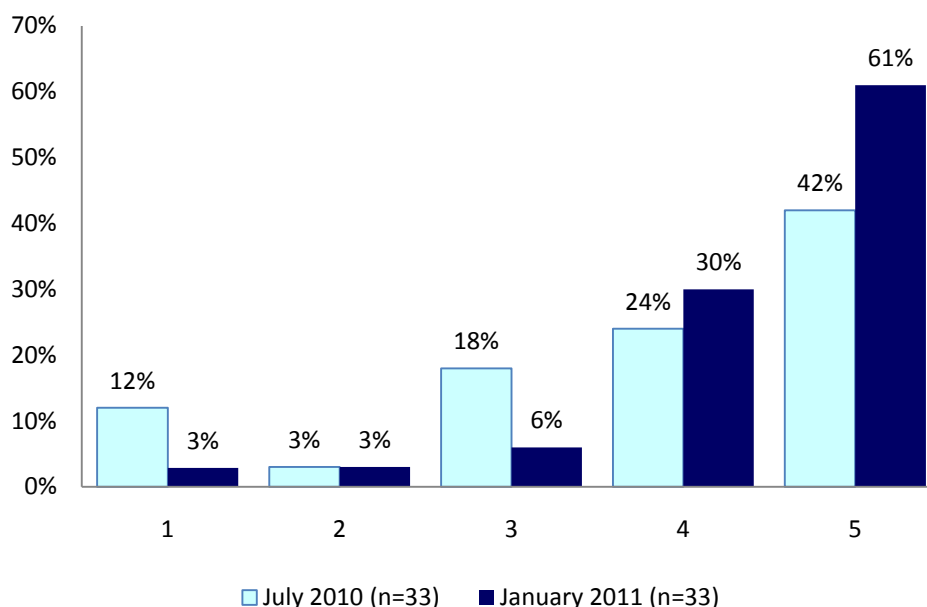
- ➔ *“When they did the duct blaster test, it was very apparent that they were having problems generating the data they wanted to get. It seemed that they weren't extraordinarily up-front with me about what they were finding. I asked them to clarify what they were finding. It seemed that the numbers they provided weren't accurate. When he responded to my health and safety questions, the contractor answered only one.”*
- ➔ *“The contractor went on and on about a new electric water heater, but he couldn't answer my questions about a heat pump water heater I knew was more energy efficient. The contractor is not just the energy auditor; he's a salesperson, too. I feel the nature of the program burdened him with having to do that. If the assessment had been done by a contractor other than the one who would install the measures, it would have been better.”*
- ➔ *“They weren't as knowledgeable as I would have expected. Their energy assessment was not as thorough as the one provided by my usual provider.”*

As shown in Figure 12, dropout contacts rated their overall satisfaction with their contractor somewhat higher than with their Energy Advisor, with 91% reporting they were satisfied (offering a “4” or a “5” on a 5-point scale). This is an increase from the third wave, when 66% were satisfied.



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Figure 12: Overall Satisfaction with Contractor



### Experience with Financing Proposal

Seventeen of the 35 dropout contacts had progressed far enough in the program to receive a financing proposal or loan paperwork.<sup>14</sup> Thirteen of the 17 reported having questions or concerns about the financing package. Similar to the previous survey, the most common concern, voiced by eight of 13, was that the interest rate was unattractive. This was followed by concerns about fees and the general cost of the loan, as well as concerns about the type and duration of the loan (five of the 13 each). Three other dropout contacts had concerns about the implication of having the loan recorded as a mortgage. Concerns about the financing package included comments such as:

- ➔ *“I thought the interest rate was extremely high for today. Other conservation/efficiency programs I’ve known about do low-interest loans because their main goal is to help people, instead of making money off of people. CEWP charges a \$300 loan fee and a high interest rate. It seemed that the bank was just in it to make money off of people.”*
- ➔ *“We learned that the loan was going to appear to be a mortgage and were concerned that that would prevent us from refinancing our home. We were in the process of doing that when we applied to the program.”*

<sup>14</sup> Because the financing details often are included in the bid package, it is possible that in some cases, contacts were thinking of the details as described in the bid and that they hadn’t actually received financing documents from Enterprise Cascadia. Nevertheless, their questions or concerns are important to document.



- ➔ *“I didn't want to have another lien on my house. That didn't make any sense. I didn't go through the program because I could get a much lower interest rate at OnPoint Credit Union.”*

Of the 13 contacts with questions or concerns about the financing proposal, 11 offered comments about whether their concerns had been addressed. Three contacts stated that their concerns had not been addressed. These respondents elaborated very little on their answers:

- ➔ *“No. So I just got uneasy and decided this wasn't the thing for me.”*
- ➔ *“No. I got financing elsewhere at 4.3% vs. 6% from the program.”*

Eight of the contacts stated that their questions or concerns had been addressed. Of these, five offered further comments which specified that, although their questions were answered, the answers were the reason that they dropped out of the program.

- ➔ *“Yes. He said it would increase the value of the house, but that I would still owe the cost of the work [the balance of the loan], so I should sell the house to someone who understood the value of the work. And I was looking at saving only \$40/month by changing the heating system. That wasn't enough.”*
- ➔ *“Yes, I got the info I needed but it didn't resolve my concerns. I decided it would be better to save the money and hire a contractor to do the work. I'd save the extra fees and costs. They gave me all the info and if I had any questions, both the EA and contractor were responsive to them. I think the program is taking advantage of middle- and lower-income Oregonians. The program targets those people, not those who can afford to pay to have the work done themselves, without the financing. And the upselling also was an issue. I don't know how accurate the article [about the program] in the Portland Tribune is, but I understand that some people's energy bills actually are higher than anticipated after they've participated in the program. I've actually met with some of the people who designed the program and raised my concerns with them. There are other programs/utilities that are doing better programs. Now this program is going statewide and I wish they were using these other utilities' programs as a model instead.”*

### **Point of Dropout**

Only 31 of the 35 contacts confirmed that they had dropped out of the program. These contacts were asked to describe the point at which they decided not to go forward with their project through the CEWP. A majority of the 31 contacts (17) reported dropping out after receiving their bid proposal. Nine contacts reported dropping out after reviewing loan documents, and one decided to drop out before receiving a bid. The four that said they didn't remember dropping out of the program mentioned that they continued to be interested, were still considering it, or never heard back from someone.



Contacts described several different reasons for dropping out of the program. The most common reasons had to do with the overall cost of the project (offered by 12 contacts) and the financing details (offered by 11) (Table 32). Within each of these topics, there were several distinct subsets of responses.

**Table 32: Reasons for Leaving Program (Multiple Responses Allowed)**

Reason	Number of Mentions
Cost	12
Financing	11
Change in life circumstances (death, move, etc)	5
Problems with Energy Advocate or contractor	3
Not enough flexibility with specific energy efficiency upgrades	3
Concern about projected energy savings	2

The most common point of drop out was after the contact received the bid or initial estimate. In some cases, comments reflected frustration with costs and loan financing that were above market rates, as well as with other program elements:

- ➔ *“When I got the first bid and almost fell over. I told the Energy Advocate immediately that I always get multiple bids. That put up a red flag up for me. I had to trust them completely and I thought it was very unfair. It went against my grain and everything I'd been taught. I had to make calls to others to compare costs.”*
- ➔ *“After I got the bid. It wasn't worth going into that much debt. It seemed the loan/program costs didn't pan out, even with the energy efficiency. I thought I would get more of a rebate; a friend in Massachusetts participates in a program like that and gets a better deal there. I don't expect that our program has to be like the one out there, but my friend was surprised at how small the rebates were.”*
- ➔ *“When we received that last estimate. It was too high.”*
- ➔ *“When I looked at the overall costs. I got a bid from another contractor and his was much less expensive for a similarly efficient furnace. And I didn't like it that I would lose the Energy Advocate if I chose not to go through with the program financing.”*
- ➔ *“When I got my bid. I negotiated it down a bit. Then they sent me a summary form with how much I had to pay my Energy Advocate (\$300), the assessment (\$300), and loan fee (\$300), etc. All of that seemed too expensive.”*
- ➔ *“When I realized I could have gotten a better deal going through a home equity loan. The first inkling I had was when the assessment showed that our house wasn't losing much heat. They said we could address our minor leaks by doing an expensive project but we wouldn't save much energy for the cost. The most expensive item was installation of a tankless water heater. I didn't see the savings in doing that.”*



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- ➔ *“As soon as I saw the financing. That's a no-brainer.”*
- ➔ *“When I began to understand the scope of the financial end of it and that it wasn't the right thing for me. I want to emphasize that adding the costs to utility bills that I can't predict didn't work for me. It would have been better if I could have paid for it through a regular loan. Also, I remember that the person from Shorebank was rather abrupt, which was part of my decision not to go through with the project. I'm going to try to do the work one little project at a time on my own.”*
- ➔ *“The moment I saw the bid. It was \$17,000 and included a new heat pump, a new water heater, insulation, and other items. I didn't necessarily feel that the heater and water heater were necessary. I have a really hard time throwing away a furnace and water heater that still work. I know our house would be more energy-efficient with a new furnace, but I don't get why I'd buy a new one just for that reason. It's like buying a new Prius when you have a Toyota Corolla that works totally fine.”*

Other comments reflected the impact of personal circumstances on applicants' decision to withdraw from the program:

- ➔ *“At the end, after I'd had the audit (which I really appreciated), when I said I didn't want to take out a loan, and learned I wouldn't have the services of the Energy Advocate. I really did like the assurance of having someone with technical knowledge overseeing the project.”*
- ➔ *“I felt like I wasn't ready to spend the type of money that was required.”*
- ➔ *“We were approved for the loan, but then we discussed if we could really afford it, and decided we couldn't. I really do believe in the program, and have recommended it to a lot of people.”*

### **Subsequent Activity**

In this wave of the survey, we again asked contacts if they were referred to another program after dropping out of CEWP. Out of seven contacts who reported getting information about other program options, four reported getting non-specific information, and three reported getting information about state and federal tax incentives and other Energy Trust programs.

Fifteen of the 33 (45%) dropout contacts<sup>15</sup> reported making home improvements or taking other actions to reduce their home's energy use after they dropped out of the program. When asked to describe what they had done, three reported installing or upgrading HVAC systems, two mentioned insulating, one mentioned installing a new water heater, and one mentioned installing CFLs. Twelve of these contacts provided an estimated cost of these projects, which ranged from \$600 to \$12,000, with an average cost of about \$6,160. Five of these contacts reported using

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<sup>15</sup> Two contacts were not asked this set of questions.



incentives to complete their projects. An additional 16 contacts reported that they hoped to increase the energy efficiency of their homes in the future; only two contacts reported that they had cancelled their projects.

### Suggested Changes

We asked contacts for their suggestions to improve the program. Twenty-nine contacts had comments, many of which were reiterations of previously voiced complaints. The responses spanned a wide variety of topics, but the most common response was the need for improved flexibility (12 responses)—including a desire for flexibility in choosing which energy efficiency upgrades to pursue (seven responses), as well as flexibility in contractor choice (seven responses). The next most common response was the need to improve the financing costs and structure (10 responses). Comments about the financing often overlapped with comments about the overall costs of the projects (six responses). As in the prior survey, contacts often mentioned flexibility and financing together.

- ➔ *“They should allow people to fuel switch if it's the best option for their house. Have a second contractor review the bid. It seemed that only a few contractors were qualified to do the work, but it doesn't seem to be too hard to figure out. It seemed that you could hire a contractor who has received training from the program to do the energy evaluation, and then give people the option of hiring another contractor to do the work. You feel that you're trapped, in that this is the only person who can do the work. But if I were going to do a job like a kitchen remodel, I'd have 3-4 contractors bid the work.”*
- ➔ *“I think they should give you a bid on the least amount of work that is the most effective and affordable. Also, I think there should be a 5-year repayment plan; I don't want to repay the improvements over 20 years because I don't know where I'll be in 20 years. It was attractive to pay for the improvements on my utility bill; I can afford \$20 extra on my utility bill.”*
- ➔ *“The number one is to allow multiple bids. I also felt that, at the time, with the financing, if your bid came in at \$3,000 or \$20,000, you'd still have to pay the same up-front costs. That didn't make any sense; that's not the case with any other loan. And the interest rate was not attractive, compared to other financing options at the time.”*
- ➔ *“I think it was a really good program but it didn't work for us financially. The house assessment was really helpful. Everyone we talked with was very knowledgeable; we were very impressed with everyone. We decided to do some things that weren't covered by the program. It had to do with the kind of insulation we were putting under the house; we chose a kind of spray-on insulation that wasn't covered through the program because the program determined that it wasn't cost-effective. By choosing it, we both insulated the house and solved a rodent problem we had under the house, too.”*
- ➔ *“I thought it was a good program overall. But their goal, of getting us to do enough work on our house in order to qualify for the tax credit and incentive, almost conflicted with*



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*the payback value. I think they really wanted to keep us in the program. I spent \$1,300 to get what was proposed to cost \$10,000.”*

Eight contacts also had comments about the Energy Advisors when it came to suggesting improvements to the program. These comments included concerns about whether the Energy Advisors watched out for the respondents’ best interests (6 responses) and their knowledge of efficiency (4 responses). These comments confirm the program’s subsequent decision to drop the word “advocate” and often emerged as part of a more comprehensive list of program improvements.

- ➔ *“The Energy Advocate and the contractor need to be better educated about the materials they’re using. And the Energy Advocate was not a very good advocate for ME. I had hoped that that’s what they would have done. The word “advocate” implies that that would be his role.”*
- ➔ *“The Energy Advocate shouldn’t be financed through the person who will finance the project. I didn’t really feel he was an advocate for ME. I thought he was supposed to be on MY side.”*
- ➔ *“1) Have an independent energy auditor and 3 independent bidders so there’s some competition. 2) The Energy Advocate should advocate FOR the homeowner, or have the independent energy auditor be the advocate. 3) Figure out some way to offer at least market rates for the loans; instead of locking people into a high interest rate and trying to make money off of them. 4) Have more transparency. It seems like such a scam: like window salesmen who claim energy savings, but really are trying to get you to spend more money. There’s a lot of room for corruption. 5) Model the program after Eugene’s and other utilities’ programs; they have figured it out. They do a great job and they offer pretty much a 0% interest rate.”*
- ➔ *“Training of the Energy Advocate should be improved. They need to be able to really sell the program to the end-user; it seemed they were just trying to create work for the contractor. They would only communicate with me when I asked them for info, but I never really got answers to my questions.”*
- ➔ *“Get a clear flow chart diagram/outline/graphic on the website and a handout that shows how it works: who you’ll talk to and when, what each person will do, including the homeowner, Energy Advocate, contractor, and lender. I know that I started with the program when it was brand-new and they were stumbling around. I couldn’t tell them how to do the work. Have all program representatives really know how the program works. I have no complaints about the contractor. They were very communicative and did a great job.”*
- ➔ *“Follow through! Persist! The Energy Advocates are great and they get excited about saving energy, but I don’t know if they know anything about how to remedy the issues*

*discovered through the audit. If they were more informed, they could be better advocates between the homeowner and the contractor.”*

Other suggestions for program improvements included improving the communication about program rules (four responses) and the estimated energy savings, and improving the Energy Advisors and contractors’ follow-up (each mentioned by three respondents.)

- ➔ *“One recommendation: to the extent possible, the Energy Advocate should tell the homeowner as explicitly as possible where they will save the most energy for the money. I couldn't make a link between the recommended work and real energy savings.”*
- ➔ *“My issue was straightforward -- how to deal with my old wiring -- and I never heard anything. It seems that my kind of problem must come up for other people.”*
- ➔ *“Everybody was nice and agreed on what needed to be done, but the program was very confusing. My recommendations: 1) Be clearer about what the program is. . . . 2) Be clear about the financing. 3) What is the difference between the regular and low-income programs? 4) Encourage contractors to use standardized bid forms, to show measures and costs, instead of bundling them so you can't compare each of them.”*

## SUMMARY

While a few changes emerged, the results of this dropout survey were, in many respects, similar to the results of the previous survey. Dropout contacts offered extensive and complicated descriptions about their experience with CEWP. The most common reasons for dropping out still centered on the cost or scope of work proposed and access to better financing. Several contacts commented that job creation was driving the program, rather than energy efficiency.

Dropout contacts continued to value the information in the Home Performance Assessment, and a large portion reported taking subsequent action (or intending to take action) to improve their home’s energy use.

Suggestions offered by program dropouts continue to reflect the need for more transparency: how the project works; the relationship between the Energy Advisor and contractor; pricing and bid options. In particular, the growing subset of contacts who expressed dissatisfaction with their Energy Advisor reflects continuing confusion about the role of the Energy Advisors and their relationship to the contractors.

Comments from dropouts continue to suggest the need for more program flexibility – particularly in financing options and project elements. On the other hand, fees were a somewhat less contentious topic in this wave of the survey. Although above-market bids and financing rates were still frequent complaints, few contacts expressed confusion or concern about the program fees.

In this survey, a new set of questions on contacts’ motivations to apply to the program revealed that saving energy and lowering heating bills were the highest-rated motivators for applying.



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Additionally, these contacts rated getting an attractive interest rate as the most important financial consideration. A greater portion of these respondents also heard about the program from their utility, indicating greater involvement and communication on the part of the utilities.

The low response rate to questions about the online experience suggest that this question should be dropped from future surveys or replaced with an open-ended question about the difficulty of getting answers to questions when applying to the program. Similarly, high levels of “don’t know” responses to the items about whether the contractor and Energy Advisor “considered my circumstances when presenting the bid and financing package” suggest the need to clarify these questions.



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# 4

## APPLICANT SURVEY

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### INTRODUCTION

This wave of research included a survey of a stratified sample of applicants that had applied to participate in the CEWP pilot, but were (1) screened out because their energy use was too low, (2) screened out for credit reasons, or (3) excluded for other reasons (including other eligibility criteria or because they failed to schedule a Home Performance Assessment). This was the first time we interviewed these "excluded applicants."

Applying to participate in CEWP required that interested homeowners navigate to the Clean Energy Works website and complete an application. The application included fields for utility account numbers, asked about demographic and home characteristics, and included questions about overall intention. Utility account information was requested and used to verify that applicants were eligible to participate in the program (that they were customers of Portland General Electric, Northwest Natural, or PacifiCorp), and to assess applicants' household energy use. To increase the likelihood of finding homes with substantial energy savings and to reduce costs associated with assessments on homes without sufficient energy savings opportunities, CEWP launched with a requirement that participants have above-median energy use per square foot, called an energy intensity score. In April 2010, this requirement was loosened to exclude only the bottom 25% (those with the lowest energy use). By October 2010, the energy intensity screening had been dropped altogether.

Because it is important for Energy Trust to understand what Portland residents were seeking when they applied to CEWP, the survey of CEWP applicants focused on applicants' motivations for applying, their perceptions of the application process, and to identify any actions they might have taken since applying to CEWP.

### METHODOLOGY

Program representatives provided the research team with a list of 1,058 records of Portlanders that had applied to participate in CEWP between June 24, 2009, and October 26, 2010, but that had been excluded or failed to schedule a test-in. The most common reason for exclusion was having an energy intensity score that was too low (a household with relatively low usage).



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Table 33: Applicant Population

Exclusion Status	Count	Portion
Below Median Usage	606	57%
Screened Out for Creditworthiness	224	21%
Opted Out or Other Disqualification	228	22%
<b>Total</b>	<b>1,058</b>	<b>100%</b>

This survey involved both email and phone survey efforts. For each method, we selected a random sample of 150 records, divided equally among the three strata listed in Table 34. The two survey efforts overlapped, and both occurred between December 13, 2010, and February 1, 2011.

Table 34: Phone and Email Survey Dispositions

Phone Survey (n=150)			
Outcome		Count	Percent
Completed		45	30%
Eligible but Not Completed, or Eligibility Unknown	Refused	2	1%
	Not Completed	94	63%
Not Eligible		9	6%
<b>Total</b>		<b>150</b>	<b>100%</b>

Email Survey (n=150)			
Outcome		Count	Percent
Completed		49	33%
Invited, Not Completed		96	64%
Undeliverable, or Bounced Back		5	3%
<b>Total</b>		<b>150</b>	<b>100%</b>

Disposition by Applicant Status			
Completed		Count	Percent
Below Median Usage		38	40%
Screened Out for Creditworthiness		25	27%
Opted Out or Other Disqualification		31	33%
<b>Total</b>		<b>94</b>	<b>100%</b>

## APPLICANT CHARACTERISTICS

We asked applicants about a variety of demographic characteristics, including income, the size and age of their homes, and how many people lived in their homes. Reported home size ranged from 740 to 3,400 square feet, with a median home size of 1,628 square feet.



Nearly half of the applicants (48%) reported pre-tax household annual income of \$50,000-\$109,000 (Table 35). Applicants screened out for low energy intensity were most likely to report a household income of \$110,000 or more (35 %). This is somewhat surprising, and could reflect the role of home size in calculating energy intensity or the presence of applicants already committed to reducing their energy use.

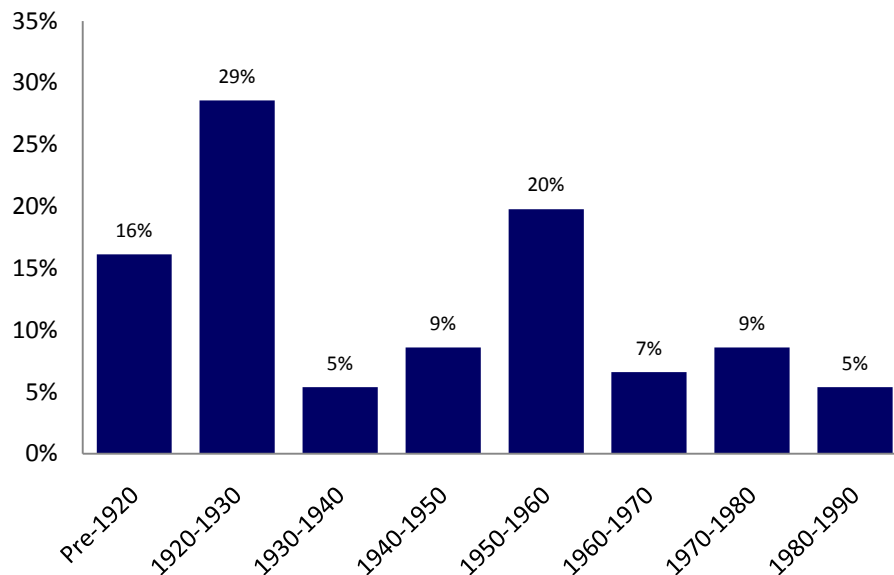
**Table 35: Household Income by Applicant Status (n=87)**

Annual Pre-Tax Household Income	Below Median Usage (n=37)	Screened Out for Creditworthiness (n=22)	Opted Out or Other (n=28)	Total
Less than \$10,000	0%	0%	11%	3%
\$10,000 to \$29,999	0%	9%	4%	3%
\$30,000 to \$49,999	14%	36%	25%	23%
\$50,000 to \$69,999	16%	32%	14%	20%
\$70,000 to \$89,999	27%	14%	14%	20%
\$90,000 to \$109,999	8%	5%	11%	8%
\$110,000 to \$149,999	24%	5%	11%	15%
\$150,000 to \$199,999	8%	0%	7%	6%
\$200,000 or more	3%	0%	4%	2%

Note: Applicants that declined to provide a response (n=7) were excluded from the population for the purpose of calculating percentages.

Applicants tended to live in pre-1940 homes, with nearly half (49%) of respondents reporting their homes were built prior to 1940 (Figure 13).

**Figure 13: Year Applicants' Homes were Built (n=91)**



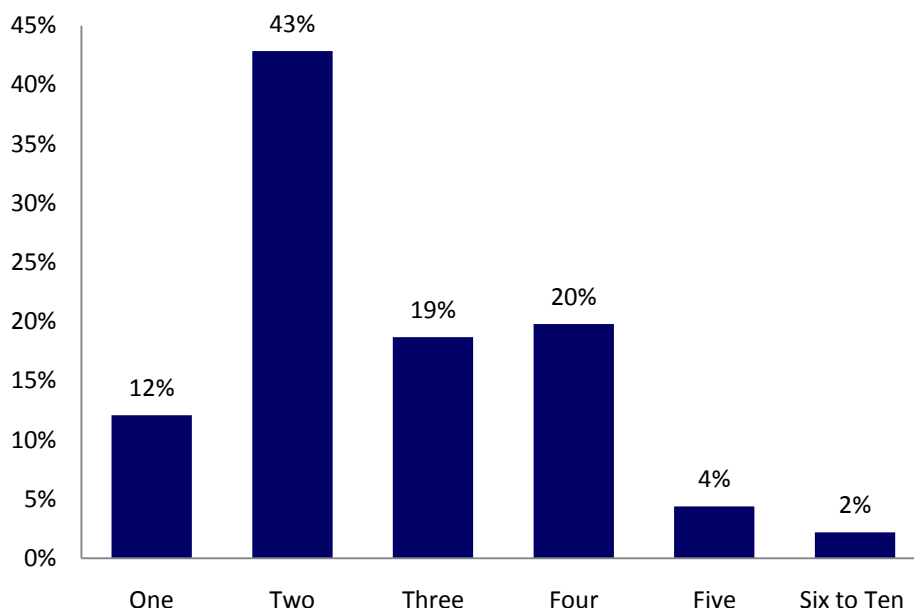
Note: Percent totals may not equal 100% due to rounding.



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Eighty-three percent of applicants reported that their households consisted of between two and four individuals (Figure 14).

**Figure 14: Number of Individuals in Applicants' Households (n=91)**



**Awareness and Initial Interaction**

Applicants most frequently reported becoming aware of CEWP through media sources, including newspaper articles, television stories, or announcements on the radio, followed closely by word-of-mouth communication (Table 36).

**Table 36: Source of First Information about CEWP (n=83)**

Source	Total
Media (TV, newspaper, radio)	34%
Word of mouth (co-worker, friend, family member, neighbor, neighborhood meeting)	31%
Utility (bill insert, letter, website link)	13%
List serv or forwarded email, electronic post	11%

Note: Eleven applicants did not recall their initial source of program awareness. They are excluded from the percentage calculations above.

Few applicants reported experiencing difficulties completing the on-line application or navigating the program website. A small proportion of applicants (10%) reported difficulty finding answers to their questions on the CEWP website. Illustrative comments from them included:



- ➔ *“It was not very detailed and it was confusing. We had never heard of that bank before and that makes everyone nervous.”*
- ➔ *“We would have liked to have seen links to other resources if we were not eligible.”*
- ➔ *“We wanted to know if we could switch fuel to save energy we ended up calling staff to find out.”*

**Table 37: Usability of CEWP Website (n=94)**

How Applicants Rated the Ease of...	Difficult	Not Difficult	Don't Know Don't Recall
Completing the Online Application	5%	84%	11%
Navigating the CEWP Website	5%	74%	20%
Finding Answers to Questions on the CEWP Website	10%	70%	20%

### **Motivation and Influence**

We sought to understand the reasons people applied for the program, the relative influence of program components, and the attractiveness of financial benefits when considering energy efficiency projects. Applicants rated the degree of influence of six potential benefits on their decision to apply to the program (Table 38). Applicants rated saving energy as the most influential reason for applying, followed by lowering heating bills. Contacts rated increasing the value of their homes least influential.

**Table 38: Reasons for Applying**

Potential Benefit	Portion Rating Important ("4" or "5" on 5-point scale)*
Saving energy (n=93)	96%
Lowering heating bills (n=93)	91%
Keeping home warmer in the winter (n=93)	86%
Increasing the comfort of their home (n=93)	84%
Keeping home cooler in summer (n=89)	64%
Increasing the value of their home (n=93)	57%

\* Not shown are percentages of applicants replying to the questions with a "1", "2", or "3". Applicants that failed to answer this question or stated "don't know" are excluded from the percentage calculations.

Twenty-three of the 94 applicants (24%) offered additional reasons for their applying to the program, most commonly citing environmental stewardship (offered by 10 of the 23 contacts) and access to the program's financial package (offered by seven of the 23 contacts).



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### Program Features

Applicants rated the influence of four program features on their decision to apply. It is important to remember that these applicants did not actually participate and thus are not responding based on their actual experience with these CEWP components. Rather, these contacts were asked about the attractiveness of each program component generally. Applicants rated access to contractors with specific training in energy efficiency or building science as the most influential program feature, followed by the information obtained through a home performance assessment or audit (Table 39). Contacts rated the program's identification and assignment of contractors as least influential. Several contacts offered spontaneous complaints about the program's policy of assigning a contractor, including one contact whose answer indicated that he might be a "drop out" rather than a screened out applicant:

- ➔ *I did not like the fact that CEWP chose the contractor for my job. I did not know if the subs were even local; the contractor assigned to me was from Bend. The type of tankless water heater specified by the contractor was not the best model."*
- ➔ *"Allow me to choose my own contractor from among three applicants. Let me see all the bids."*

**Table 39: Influence of Program Features**

Program Feature	Portion Rating Important ("4" or "5" on 5-point scale)*
A contractor with specific training in energy efficiency or building science (n=83)	67%
Information obtained from a home performance assessment or audit (n=82)	62%
A Program Representative or Energy Advocate to help navigate decisions about efficiency upgrades (n=81)	59%
Identification and assignment of contractors on behalf of customers (n=81)	43%

Note: Not shown are percentages of applicants replying to the questions with a "1", "2", or "3". Applicants that failed to rate the influence of these program features or stated "don't know" are excluded from the percentage calculations.

### Financial Benefits

We asked applicants to consider seven financial products and benefits and assess the degree to which each might affect their decisions to pursue energy efficiency projects in their homes, generally. Applicant responses reflect the influence of the \$1,500 federal tax credit that expired at the end of 2010. This factor was rated most influential, followed by receiving an attractive interest rate. Applicants rated "Having a loan spread out over 20 years" as being least influential (56% offering "4" or a "5" on a five-point scale). In addition, 15 of the 94 applicants (16%) offered spontaneous comments about financial options they could obtain from a program like CEWP. The most common theme, offered by seven of the 15, involved not wanting or needing a loan to complete energy efficiency upgrades to their homes. Two applicants expressed disappointment that the program did not offer funding for window installation.



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**Table 40: Influence of Financial Products and Benefits on Energy Efficiency Decisions**

Motivational Factors	Not at all Influential			Very Influential	
	1	2	3	4	5
Qualifying for the \$1500 federal tax credit (n=93)	1%	1%	6%	24%	68%
Getting an attractive interest rate (n=90)	3%	2%	11%	22%	61%
Qualifying for an Oregon tax credit (n=91)	—	2%	8%	30%	60%
Obtaining an incentive from Energy Trust (92)	3%	1%	16%	25%	54%
No money down; Avoiding the upfront costs associated with your project (93)	6%	5%	13%	26%	49%
Having an option to repay the loan on your utility bill (91)	7%	4%	16%	27%	45%
Having a loan spread out over 20 years (93)	14%	6%	24%	24%	32%

Note: Applicants that failed to rate the influence of these financial products or benefits or stated “don’t know” are excluded from the percentage calculations.

### Energy Efficiency Projects

Seventy-nine of the 94 applicants (84%) said that they had specific energy efficiency projects in mind when they applied to the program. Sixty-two provided specific information concerning the projects they had in mind. These 62 respondents most frequently reported that they were considering installing insulation (61%) and windows (40%) at the time they applied (Table 41). Of the 12 respondents who reported that they did not have specific projects in mind at the time they applied, five reported they had completed energy efficiency projects in their homes since submitting their applications. Two of the five reported applying other Energy Trust incentives towards their completed projects.

**Table 41: Projects Applicants Had in Mind when Applying to CEWP (Coded Open Ended, n=62)**

Energy Efficiency Measure	Number Mentioning	Percent Mentioning
Insulation	38	61%
Windows	25	40%
Heating System	18	29%
Weatherization	8	13%
Water Heater	7	11%
Solar panels	6	10%

Note: Applicants that (1) reported not having specific energy efficiency projects in mind at the time they applied (n=12) and (2) did not reference specific energy efficiency projects (n=20) are excluded from the count of responses and percentage calculations.



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Fifty-one of the 79 applicants with specific energy efficiency projects were able to provide an estimate of what they thought their project would cost. A majority thought their project would cost between \$2,000 and \$6,000.<sup>16</sup>

**Table 42: Estimated Cost of Projects, Per Applicants (n=51)**

Cost	Responses	Percent
\$1,000 to \$2,000	5	10%
\$2,000 to \$4,000	11	22%
\$4,000 to \$6,000	15	29%
\$6,000 to \$8,000	5	10%
\$8,000 to \$10,000	5	10%
\$10,000 to \$12,000	5	10%
More than \$12,000	5	10%

Note: Applicants that (1) said they did not have specific energy efficiency projects in mind at the time they applied (n=15) or (2) failed to provide estimates of the projects they had in mind (n=28) are excluded from the count of responses and percentage calculations.

Of the 79 applicants who said they had specific energy efficiency projects in mind at the time they applied, about half (48%) reported that they were still considering their project (Table 43). These respondents most commonly said that their disqualification from the program resulted in their having not yet initiated the projects. Respondents also frequently mentioned upfront costs as a reason their project remained incomplete.

Eleven of the 79 applicants with projects in mind when they applied reported they had completed at least a portion their project. Of the seven that reported completing *all* of the projects they had in mind at the time they applied; only one reported receiving assistance from another Energy Trust program.

**Table 43: Project Status (n=79)**

Project Status	Responses	Percent
Still thinking about project	38	48%
Decided not to do it	26	33%
Completed project as planned on my own	6	8%
Focused on other home improvements	4	5%
Completed part of project	4	5%
Completed project as planned with help from another Energy Trust program	1	1%

Note: Applicants that said they did not have specific energy efficiency projects in mind at the time they applied (n=15) are excluded from the count of responses and percentage calculations.

<sup>16</sup> For all but 10%, the project estimates are lower than the average project cost of \$12,300, reported by Blue Tree Strategies.

Applicants were presented with a list of common residential energy efficiency measures and asked if they were likely or unlikely to make energy efficiency upgrades or improvements in the next year or if they had already completed the improvement (Table 44). Applicants most frequently reported that, within the next year, they would most likely make shell improvements (38%), followed by replacing old or inefficient appliances (25%).

**Table 44: Applicant Intentions: Likelihood of Completing Efficiency Upgrades**

Energy Efficiency Measure	Likely to do This in the Next Year	Unlikely to do This in the Next Year	Already Done It	Don't Know
Add insulation, air sealing, or weather stripping (n=93)	38%	38%	17%	8%
Replace old or inefficient appliances (n=93)	25%	30%	40%	5%
Install a more efficient water heating system (n=93)	15%	46%	30%	9%
Recycle a refrigerator or freezer (n=91)	15%	59%	19%	7%
Install a more efficient heating/cooling system (n=93)	12%	48%	32%	8%
Install new windows (n=93)	9%	53%	31%	8%
Install a solar electric or solar hot water system (n=93)	2%	82%	5%	11%

### ***Suggested Program Improvements***

We asked applicants for suggestions that might have made the program work better for them. Fifty-nine of the 94 applicants (63%) suggested improvements (Table 45). Applicants most frequently recommended that the program revise its selection criteria to be more inclusive (15 mentions).

**Table 45: Applicants' Suggested Program Improvements (Multiple Responses Allowed)**

Suggested Program Improvements	Responses
Revise selection criteria to be more inclusive	15
Provide alternate path to pursue energy efficiency upgrades	11
Provide notification regarding application status	8
Increase clarity regarding selection criteria	8
Inform applicants about the reason(s) they were not selected	6
More timely communication from CEWP staff	5
Allow participants to choose their own contractors	4
Include additional energy efficiency measures/services	4
Provide additional/improved financing options	3
Increase clarity about the measures and services offered and expectations of participants	3
CEWP telephone representatives should be more helpful/knowledgeable	3



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In addition, applicants frequently suggested that the program provide excluded or screened-out applicants an alternate path to pursue energy efficiency upgrades (11 mentions); several noted that individuals that apply for CEWP are typically predisposed towards making energy efficiency improvements, and thus, would be likely to pursue such alternate programs and services. A few applicants further noted that those who were not selected because their energy intensity was too low could be particularly likely to pursue such alternate programs and services.

Additionally, applicants suggested that the program provide increased clarity regarding CEWP selection criteria (eight mentions). The respondents most frequently suggested that the program provide additional clarification regarding the program's credit-screening criteria, criteria applied to existing home conditions, and restrictions on fuel switching.

Applicants also suggested that the program clarify the specific measures and services offered and what program participation entails for participants (three mentions). Regarding the qualifying measures that are offered through the program, one respondent said, *"The program seems limited to basic stuff that most homeowners can handle themselves. The program needs to include more sophisticated upgrades like windows, solar, heat pumps, and hybrid water heaters."* Regarding the expectations of participants, one respondent said, *"It seemed more involved after we'd started. It's so easy to start, but then it gets harder after that and we got lazy and didn't do it."* Another respondent said, *"It should be a little clearer upfront about the level of investment required, so people know that they are talking about a major investment."*

Comments from applicants suggest that there may be an opportunity to improve the responsiveness among CEWP telephone representatives. Applicants suggested that CEWP telephone representatives: provide notification regarding the status of applications (eight mentions); inform applicants about the reason(s) they were not selected (six mentions); provide more timely communication (five mentions); and, be more helpful and/or knowledgeable about the program (three mentions).

Several applicants suggested that the program allow participants to choose their own contractors, rather than assigning a contractor (four mentions). One suggested that the structure of the program results in a *"loss of control"* among participants. According to this respondent, *"the program was going to dictate to me what was to be done and by whom. My role was to step aside."*

Finally, applicants suggested that the program provide additional/improved financing options (three mentions). For example, one respondent stated, *"I don't want to pay interest for 20 years. Give us additional options, not just the pay on your bill for such an extended period of time option."* A second respondent suggested that the program *"offer a better interest rate."*



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## SUMMARY

Applicants requested greater clarity regarding CEWP selection criteria and wanted the program to provide alternate paths to pursue energy efficiency upgrades, including web links to alternate programs and resources.

Applicants rated access to contractors with specific training in energy efficiency or building science as the most influential program feature, followed by the information obtained through a Home Performance Assessment or audit. However, applicants rated the program's identification and *assignment* of contractors as least influential. Applicants who did not consider contractor assignment an attractive feature, frequently suggested that the program allow participants to choose their own contractors or to select from multiple bids at once.

When rating the attractiveness of financial benefits, applicants gave the lowest ratings to the three key components of the CEWP package: an option to pursue a project with no out-of-pocket costs, the opportunity to pay off the loan on one's utility bill, and a 20-year amortization schedule. These ratings indicate that a substantial portion of applicants may not want or need a CEWP loan to complete energy efficiency upgrades to their homes. They may, however, benefit from the information in a Home Performance Assessment and expert assistance from trained contractors or program representatives.

Applicants are focused on shell measures. Respondents most frequently reported that they were considering installing insulation and windows at the time they applied and reported that, within the next year, they would be likely to add insulation, air sealing, or weather stripping. Several expressed disappointment that the program did not offer funding for energy efficient windows.

Finally, applicants frequently requested increased responsiveness from CEWP telephone representatives. Respondents suggested that CEWP telephone representatives provide more timely and consistent information concerning application status, increased clarity about the reason(s) applicants were not selected, and that representatives be more helpful and/or knowledgeable about the program. Because the applicant samples were pulled from the entire population of screened-out applicants, some respondents had interacted with the CEWP pilot as program aspects were evolving. Confirming that the information and messaging for the statewide CEWO program is clearer for subsequent cohorts of applicants will likely require a survey of CEWO applicants that are screened out or choose not to participate within 12 to 18 months.



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## CONCLUSIONS AND RECOMMENDATIONS

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As the CEWP pilot project winds down and the lessons learned inform the larger CEWO program, this final wave of pilot research confirmed many of the themes that emerged in previous waves of research and that were reported in the September 2010 summary report. New to this wave of research are surveys with excluded applicants, interviews with utility contacts about establishing the on-bill payment process, and a brief survey with a small group of participants with more than a year of on-bill payment experience.

### FINDINGS AND CONCLUSIONS

As the CEWP pilot project winds down and the lessons learned inform the larger CEWO program, this final wave of pilot research confirmed many of the themes that emerged in previous waves of research and that were reported in the September 2010 summary report. New to this wave of research are surveys with excluded applicants, interviews with utility contacts about establishing the on-bill payment process, and a brief survey with a small group of participants with more than a year of on-bill payment experience.

#### *Successes*

CEWP is clearly providing a valuable opportunity to the participants for whom the program features work well. Participants continue to report high levels of overall satisfaction with the pilot and reported no major problems navigating program elements, including the website, required paperwork, and construction. Participants have completed projects with no out-of-pocket costs, and many have already begun paying their loans off through monthly payments on their utility bills. More than 90% of successful participants report that they would recommend the pilot to their family and friends. Also encouraging are indications that the pilot supported projects that otherwise might not have happened: less than 1% of participants indicated that they would have done the same project on the same timeline without the pilot.

The pilot's utility partners have also successfully navigated their own billing system requirements and created the internal processes required to ensure the loan payments are collected and transferred to the fund manager. Utility contacts expressed some concern about future project volume, particularly if CEWO meets its goals and the existing utility processes are not more automated.

A brief survey with the small group of participants with at least a year of bill payment experience confirms the overall satisfaction of these participants with the results of their projects. Most reported energy savings consistent with their expectations, and nearly all of these respondents believe their CEWP project has made their home more valuable, comfortable, and sustainable,



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and that the equipment installed through the program performs better than the equipment it replaced.

### ***Different Perceptions of Program Features***

Participants and dropouts valued the information obtained from the Home Performance Assessments, while applicants valued access to contractors with specific training in energy efficiency or building science.

**Table 46: Value of CEWP Pilot Components**

Program Feature	Portion Agreeing*		
	Participants	Dropouts	Applicants**
Access to information obtained from the Home Performance Assessment	88%	82%	62%
Access to a contractor with specific training in energy efficiency or building science	87%	68%	67%
The services provided by an Energy Advocate	77%	63%	59%
A program-assigned contractor	53%	37%	43%

\* Those that gave a “4” or a “5” on a 5-point scale. Not shown are the percentages of respondents rating each aspect a “1”, “2”, or “3.”

\*\* Excludes participants.

The three groups of respondents valued financing products differently (Table 47). Perhaps not surprisingly, participants valued the opportunity to avoid upfront costs most highly, while other financial aspects were more important to the excluded applicants and the dropouts. The fact that dropouts rated the “no money down” and long loan payment amortization lowest may indicate that the financing package provided by the program was simply unattractive to them.

**Table 47: Influence of Financing Aspects**

Financial Aspect	Portion Agreeing*		
	Participants	Dropouts	Applicants
No money down; avoiding the upfront costs associated with your project	91%	55%	75%
Getting an attractive interest rate	90%	79%	83%
Qualifying for the \$1,500 federal tax credit	85%	73%	92%
Qualifying for an Oregon tax credit	84%	67%	90%
Obtaining an incentive from Energy Trust of Oregon	83%	73%	79%
Having the option to repay the loan amount on your utility bill	82%	61%	72%
Having the loan spread out over 20 years	79%	39%	56%

\* Those that gave a “4” or a “5” on a five-point scale. Not shown are the percentages of respondents rating each aspect a “1”, “2”, or “3”.

### ***Patterns of Reported Motivation***

All three surveyed groups reported that saving energy was the most important factor behind their application to CEWP, followed closely by lower heating bills and a warmer winter home. While the overall patterns of motivation differed somewhat between the groups, all three assigned the lowest value to increasing the value of their home.

**Table 48: Motivations: Reasons for Applying**

Potential Benefit Aspect	Portion Agreeing*		
	Participants	Dropouts	Applicants
Saving energy	95%	97%	96%
Lowering heating bills	92%	89%	91%
Keeping home warmer in the winter	94%	71%	86%
Increasing the comfort of their home	91%	86%	84%
Keeping home cooler in summer	78%	57%	64%
Increasing the value of their home	54%	42%	57%

\* Not shown are percentages of applicants replying to the questions with a “1”, “2”, or “3.” Applicants that failed to answer this question or stated “don’t know” are excluded from the percentage calculations.

### ***Out of Program Activity***

Consistent with findings in the September 2010 report, large portions of dropout contacts reported that they had either completed energy saving projects in their homes after dropping out of the program or intended to do so in the future. A high proportion of excluded applicants reported that they had specific energy efficiency projects in mind when they applied to the program; however, far fewer of these applicants reported that they had completed energy efficiency projects in their homes since submitting their application. Regardless of the status of actual completed projects, it is clear that the program is attracting applicants primed to accept information about efficiency upgrades. Survey results do not indicate that applicants and dropouts are being effectively handed off to other energy efficiency program options.

### ***Experience of Dropouts***

Process evaluation surveys of program dropouts expect to identify program features that do not work for these contacts. Because they dropped out of the program, the benefits of the program did not outweigh barriers for a variety of reasons. Similar to findings documented in the September 2010 report, this wave of research revealed a desire for more flexibility, particularly in financing options and transparency, particularly around the role of the Energy Advisors (known to contacts as an Energy Advocates) and the details of pricing and bids. Dropouts continued to express confusion about the relationship between the Energy Advisor and the contractor. Also similar to the September 2010 report were comments from dropouts about



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contractors telling them that certain measures were required or they would not qualify for the program.

## RECOMMENDATIONS

The recommendations below are based on our surveys of CEWP applicants and participants and information gained during four waves of research. They do not reflect a detailed understanding of program design changes expected for CEWO. Thus, it is possible that program design revisions occurring in CEWO address some or all of these recommendations. These recommendations are divided into two broad categories below: program structure or design recommendations and process recommendations.

### *Program Structure or Design Recommendations*

- ➔ ***Develop effective ways to refer applicants and dropouts to other programs or services.*** CEWP applicants represent a cohort of homeowners motivated to complete energy efficiency upgrades to their homes. Even if they are excluded from the program or ultimately drop out, they represent the type of engaged homeowner Energy Trust works to identify. Providing these homeowners with targeted communication about other opportunities to obtain financial or technical assistance could cause them to take action sooner or complete more comprehensive projects than they might complete on their own.
- ➔ ***Energy Advisors should offer many solutions.*** The CEWO website provides content and referrals to the numerous program options for potential applicants, but the program's overall design remains focused on closing projects with program financing. Additional training or official authorization could convert these valuable program ambassadors into true advisors—providing encouragement and information that further supports efficiency upgrades among those that drop out of the program.
- ➔ ***Verify the market value of the Home Performance Assessment.*** Survey results indicate that people (including successful participants) do not value the Home Performance Assessment at full cost. Compensation for the Home Performance Assessment rose from \$300 in CEWP to \$400 in CEWO, higher than the \$100-\$200 survey respondents indicated they would pay.
- ➔ ***Identify non-energy benefits experienced by CEWP participants.*** Even if these benefits cannot be quantified, they are often important motivations for participants and can inform program marketing and help communicate benefits. These benefits can augment the impact evaluation of these deep retrofit projects, something Energy Trust expects to complete within the next year.

### Process Recommendations

- ➔ **Ensure that it is easy to request another contractor.** CEWP allows participants to request another contractor, but comments indicate that this might be discouraged or not communicated clearly. If participants want a second bid, allow them to choose the contractor from a list of qualified firms.
- ➔ **Consider flexibility in terms.** CEWP operated with a 20-year loan term. Survey results indicate that participants might be looking for a shorter loan payment timeframe and could be encouraged to pay off their loans early, freeing capital up for additional projects. Lower interest rates and a pre-payment bonus could encourage participants to choose shorter loan terms or repay their loan early.
- ➔ **Continue to monitor the bill payment and loan repayment experience.** We found no problems among the contacts with at least 12 months of bill payment experience that responded to our survey in this wave of research. The small sample size, however, warrants launching again with a larger group; ideally by 2012, if not sooner (three years after the pilot began). This aspect is of particular concern to utility partners, and could be affected by increases in project volume expected to result from CEWO.
- ➔ **Continue efforts to clarify screening or selection criteria for program applicants, including existing home conditions and credit standards that could exclude specific applicants.** Substantial progress has been made on this issue as the program has stabilized and clarified its requirements, but communicating these restrictions will remain important for managing expectations.
- ➔ **Define and solidify a regular loan status and project activity reporting process.** Tracking and reporting pilot activities, the volume and status of loan portfolio, measures installed, and project costs remained somewhat ad hoc at the end of the CEWP pilot.
- ➔ **Simplify the incentive calculations and allocation.** Uncertainty in the amount of incentives has created confusing language in loan documents and obfuscates the benefit obtained from Energy Trust support. A flat incentive that reflects the comprehensiveness of the project would be easier to communicate and understand. CEWO launched with a simplified incentive structure that should facilitate communication and understanding.





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# APPENDICES

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**APPENDIX A: SURVEY GUIDES**

**APPENDIX B: ON-BILL FINANCING SURVEY**



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**CLEAN ENERGY WORKS PORTLAND PILOT**



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# SURVEY GUIDES

## CEWP PARTICIPANT SURVEY

*I have a few questions about your first contact with the program...*

1. *How did you first hear of the Clean Energy Works Portland pilot project?*

- Word of mouth (co-worker, friend, family member, neighbor)
- Media (TV, newspaper, radio)
- List serv or forwarded email, electronic post
- Utility (bill insert, letter, website link)
- Another way, please specify: \_\_\_\_\_
- Don't know/remember

2. *On a scale of one-to-five, where 1 means "strongly disagree" and 5 means "strongly agree", to what extent do you agree that: Navigating the Clean Energy Works website was easy?*

3. *[If question 2 is answered with a 1 or 2] What difficulties did you have navigating the Clean Energy Works website?*

4. *Using a one-to-five scale, where 1 means "strongly disagree" and 5 means "strongly agree", to what extent do you agree that: Completing the on-line application was easy*

5. *[If question 4 is answered with a 1 or 2] What was difficult about completing the online application?*

6. *Using a one-to-five scale, where 1 means "strongly disagree" and 5 means "strongly agree", to what extent do you agree that: I could find the answers to my questions on the website*

7. *[If question 6 is answered with a 1 or 2, What questions were difficult to answer?*

*We'd like to understand what motivated you to sign up for the Clean Energy Works program. For each of the following factors, please indicate how influential the factor was in your decision to participate.*

	1-No influence	2	3	4	5-Strong influence	Don't know
8. <i>Increasing the value of my home</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. <i>Increasing the comfort of my home</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. <i>Decreasing noise</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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		1-No influence	2	3	4	5-Strong influence	Don't know
11.	<i>Saving energy</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	<i>Lowering my heating bills</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	<i>Keeping my home warmer in the winter</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	<i>Keeping my home cooler in the summer</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	<i>Was there any other important reason?</i>						

*Thinking about the first steps of CEWP—scheduling and attending the home performance assessment/audit—please indicate the extent to which you agree with the following statements.*

		1-Strongly disagree	2	3	4	5-Strongly agree	Don't know
16.	<i>It was simple to schedule the initial audit.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	<i>I appreciated the presence of my energy advocate at the audit.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	<i>The time required for the audit was reasonable.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	<i>I learned valuable things about my home during the audit.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	<i>The information from the audit convinced me to move forward with my project.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*If you had any difficulty with any of these aspects, please describe them here.*

21. *Did you replace your water heater as part of the program?*

- Yes [Skip to Q22]
- No [Skip to Q23]
- Don't know [Skip to Q23]
- Not applicable [Skip to Q23]

22. *Did you replace your water heater because....*

- It had failed (could not be repaired)



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- It needed major (costly) repairs
- It was working but not very well
- It was working but wanted to replace it
- Other: \_\_\_\_\_

23. ***Did you replace your heating system as part of the program?***

- Yes
- No

24. ***How many times did you interact with your Energy Advocate?***

- \_\_\_\_ Insert number
- Don't know
- Not applicable

25. ***Did you replace your heating system because...***

- It had failed (could not be repaired).
- It needed major (costly) repairs
- It was working, but not very well
- It was working, but wanted to replace it anyway
- Other: \_\_\_\_\_

*We'd also like to know about your experience with your CEWP Energy Advocate.*

26. ***How many times did you interact with your Energy Advocate?***

- 1-2
- 3-4
- 5-6
- 7-8
- 9-10
- 10+
- Don't know

*Please indicate the level to which you agree with the following statements:*

	1-Strongly disagree	2	3	4	5-Strongly agree	Don't know
27. <b><i>My Energy Advocate was knowledgeable about the program</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. <b><i>My Energy Advocate was helpful</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. <b><i>I was able to reach my Energy Advocate when I needed to</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	1-Strongly disagree	2	3	4	5-Strongly agree	Don't know
30. <i>My Energy Advocate was able to answer my questions or direct me to someone who could</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. <i>My Energy Advocate considered my circumstances when presenting the bid and financing package</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. <i>My Energy Advocate met my expectations</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. <i>[If any item in previous series rated lower than 3] How did your energy advocate fall short of your expectations?</i>						
34. <i>Did you get more than one bid for the work completed through CEWP?</i>						
	<input type="checkbox"/> Yes [Skip to Q35]					
	<input type="checkbox"/> No [Skip to Q37]					
35. <i>Was the second bid helpful?</i>						
36. <i>How many times did you interact with your contractor?</i>						
	<input type="checkbox"/> 1-2					
	<input type="checkbox"/> 3-4					
	<input type="checkbox"/> 5-6					
	<input type="checkbox"/> 7-8					
	<input type="checkbox"/> 9-10					
	<input type="checkbox"/> 10+					
	<input type="checkbox"/> Don't know					
37. <i>Did your contractor complete the work as proposed?</i>						
	<input type="checkbox"/> Yes					
	<input type="checkbox"/> No					
	<input type="checkbox"/> Don't know					
38. <i>Did your contractor complete the work as scheduled?</i>						
	<input type="checkbox"/> Yes					
	<input type="checkbox"/> No					
	<input type="checkbox"/> Don't know					
39. <i>Did any issues emerge at the final inspection?</i>						
	<input type="checkbox"/> Yes [Skip to Q40]					
	<input type="checkbox"/> No [Skip to Q41]					



Don't know [Skip to Q41]

**40. What issue emerged? How was this issue resolved?**

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

**42. Overall, how would you rate your satisfaction with your CEWP contractor?**

- 1-Very unsatisfied
- 2
- 3
- 4
- 5-Very satisfied
- Don't know

*Now we'd like to ask you a few questions about your experience with the Clean Energy Works-provided financing.*

**43. Did you interact with a representative from the financing firm, Shorebank Enterprise Cascadia?**

- Yes
- No
- DK

**44. Did you have any questions or concerns about the financing proposal or loan paperwork?**

- Yes, Skip to Page 27: What were your questions or concerns?
- No, Skip to Page 28: Given your experience, please rate how important each aspect listed below was in your decision to complete your project.
- Don't know
- Not applicable

**45. What were your questions or concerns?**

*Given your experience, please rate how important each aspect listed below was in your decision to complete your project.*

	1-Not important	2	3	4	5-Very important	Don't know
<b>46. The services provided by the Energy Advocate</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>47. The program assigned you a contractor</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	1-Not important	2	3	4	5-Very important	Don't know
48. <i>Access to a contractor with specific training in energy efficiency or building science</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. <i>Access to "one-stop-shop" for information and services</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. <i>Access to the information obtained from a Home Performance Assessment or audit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. <i>Considering your experience with Clean Energy Works, and the information you obtained from the Home Performance Assessment or audit, about how much would you pay for a similar audit?</i>						
	<input type="checkbox"/> Nothing					
	<input type="checkbox"/> Less than \$100					
	<input type="checkbox"/> \$100-200					
	<input type="checkbox"/> \$200-300					
	<input type="checkbox"/> \$300-400					
	<input type="checkbox"/> More than \$400					
	<input type="checkbox"/> Don't know					

*Clean Energy Works also provided an opportunity for homeowners to take advantage of financial incentives and financing options to support energy efficiency projects. Please indicate how important each aspect was in your decision to go forward with your project.*

	1-Not at all important	2	3	4	5-Very important	Don't know
52. <i>Obtaining an incentive from Energy Trust</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. <i>Qualifying for an Oregon tax credit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. <i>Qualifying for the \$1500 federal tax credit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. <i>Getting an attractive interest rate</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. <i>Having the loan spread out over 20 years</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





	1-Not at all important	2	3	4	5-Very important	Don't know
57. <i>No money down; Avoiding upfront costs associated with your project</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. <i>Having the option to repay the loan on your utility bill</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Please tell us a bit about your experience with the paperwork required to participate in CEWP:*

59. *After your initial participation agreement, were there other forms that you had to fill out?*
- Yes  
 No  
 DK
60. *Did your Energy Advocate complete any forms for you?*
- Yes  
 No  
 DK
61. *Did your contractor complete any forms for you?*
- Yes  
 No  
 DK
62. *Did you need assistance with the loan paperwork?*
- Yes  
 No  
 DK
63. *Were any of the forms difficult to complete?*
- Yes [Skip to Q64]  
 No [Skip to Q65]  
 DK [Skip to Q65]
64. *Which forms were difficult? What was difficult about them? Any other problems with the paperwork?*
65. *Which of the following statements best describes what you would have done if you had not had access to Clean Energy Works:*
- I would not have completed this project.  
 I would have completed a project, but done less.



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- I would have done the same project, but with less efficient equipment.
- I would have done the same project, but postponed it for more than one year.
- I would have done the same project.

66. ***How did the project's overall cost match your expectations?***

- Cost less than I expected
- Cost the same as I expected
- Cost more than I expected
- Don't know

67. ***Using a scale of one-to-five where 1 means "very dissatisfied" and 5 means "very satisfied", please rate your overall satisfaction with your Clean Energy Works Portland experience:***

- 1
- 2
- 3
- 4
- 5
- Don't know

68. ***Because of your interaction with CEWP, do you have better information about how to minimize your energy use- beyond the improvements you have already made?***

- Yes
- No
- Don't know

69. ***Would you recommend the program to family and friends?***

- Yes
- No
- Don't know

70. ***Have you received a utility bill that included your CEWP payment?***

- Yes [Skip to Q71]
- No [Skip to Q72]
- DK [Skip to Q72]

71. ***Was the bill consistent with your expectations? How so?***

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

***Finally, we have a few demographic questions. These questions help us understand the characteristics of those participating in this program.***

73. ***About when was your home built?***

74. ***About how many square feet is your home?***



75. ***How many people, including yourself, live in your home now?***
76. ***Please select the range that best describes your household's total annual income, before tax.***
- Less than \$50,000 [Skip to Q77]
  - \$50,000 to \$109,999 [Skip to Q78]
  - Over \$110,000 [Skip to Q79]
  - Choose not to answer
77. ***Is it....***
- Less than \$10,000
  - \$10,000 to \$29,999
  - \$30,000-\$49,999
  - Choose not to answer
78. ***Is it.....***
- \$50,000-\$69,999
  - \$70,000-\$89,999
  - \$90,000-\$109,999
  - Choose not to answer
79. ***Is it.....***
- \$110,000 - \$149,999
  - \$150,000 - \$199,999
  - \$200,000 or more
  - Choose not to answer
80. ***May we contact you again if we have further questions?***
- Yes, preferred contact method: \_\_\_\_\_
  - No

***Thank you so much for taking the time to offer your feedback. Your comments will help us improve the program for future participants.***

***If you have any questions about this survey, please contact Dulane Moran at 503-287-9136.***

***Please press "submit"***



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**CLEAN ENERGY WORKS PORTLAND PILOT**

## CEWP DROPOUT SURVEY

### 1. ID

ID \_\_\_\_\_

### 2. Prefill Info

Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Energy Advocate: \_\_\_\_\_

*Hello, my name is \_\_\_\_\_. May I speak with \_\_\_\_\_? I'm calling from Research Into Action of behalf of the Clean Energy Works Portland program. At some point last year, you applied to participate in Clean Energy Works Portland, a project that provides home performance assessments and financing opportunities for energy efficiency projects in Portland homes. You were part of a small group of initial participants, so your opinions about the program are valuable to us. I would like to ask you some questions about your experience. It should take about 15 minutes.*

*Is this a good time? [Schedule another time if no]*

*Am I talking to you on a cell phone? [If yes] Would you like me to call you on another number?*

*Can you confirm for me that you aren't driving and that you can complete the call safely? If not, I'm happy to call back at a better time.*

*Thanks for your time. First, I have a few questions about your first contact with the program.*

### 3. How did you first hear of the Clean Energy Works Portland pilot project?

- Word of mouth
- Media (TV, newspaper, radio)
- List serv of forwarded email, electronic post
- Utility (bill insert, letter, website link)
- Other:
- Don't remember

*On a scale of one-to-five, where one means very hard, and five means very easy, how would you rate:*

	1	2	3	4	5	DK	NA
4. Navigating the Clean Energy Works website?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Completing the on-line application?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	1	2	3	4	5	DK	NA
6. <i>Finding answers to your questions on the website?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. *[If an item in the previous series is a 1 or 2] What would have made it easier for you?*

*People participate in programs like Clean Energy Works for a variety of reasons. I'm going to list some reasons. For each one, please tell me how much of an influence it was on your decision to apply. Please use a scale of one-to-five, where one means "this wasn't important at all" and five means "this was very important".*

*How important was....*

	1	2	3	4	5	DK
8. <i>Increasing the value of my home?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. <i>Increasing the comfort of my home?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. <i>Saving energy?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. <i>Lowering heating bills?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. <i>Keeping my home warmer in the winter?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. <i>Keeping my home cooler in the summer?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. <i>Was there any other important reason you chose to apply?</i>						

*In addition to those factors, there are also some program features that may have influenced your choice to apply. We'd like to understand how important these program features might have been in your decision to apply to the program. Please use a one-to-five scale with 1 being "not at all important" and 5 being "very important".*

*How important was....*

	1	2	3	4	5	DK
15. <i>A program representative or Energy Advocate to help you navigate decisions about efficiency upgrades</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. <i>Access to information obtained from a Home Performance Assessment or audit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	1	2	3	4	5	DK
17. <i>The program finding and assigning a contractor for you</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. <i>Access to a contractor with specific training in energy efficiency or building science</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*I'm going to read a list of financial products or benefits. Please tell me how important each of the following financial products or benefits are when considering whether to go forward with an energy efficiency project in your home.*

	1	2	3	4	5	Don't Know
19. <i>Obtaining an incentive from Energy Trust</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. <i>Qualifying for an Oregon tax credit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. <i>Qualifying for the \$1,500 federal tax credit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. <i>Getting an "attractive" interest rate</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. <i>Having the loan spread out over 20 years</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. <i>No money down, avoiding upfront cost</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. <i>Having the option to repay the loan on your utility bill</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. <i>When you applied, did you have any particular energy efficiency projects in mind?</i>						
<input type="checkbox"/> Yes [Skip to Q27]						
<input type="checkbox"/> No						
<input type="checkbox"/> DK						
27. <i>What were you hoping to do?</i>						
28. <i>How much did you think your project would cost? [probe to code]</i>						
<input type="checkbox"/> \$1,000 to 2,000						
<input type="checkbox"/> \$2,000- 4,000						
<input type="checkbox"/> \$4-6,000						
<input type="checkbox"/> \$6-8,000						
<input type="checkbox"/> \$8-10,000						
<input type="checkbox"/> \$10-12,000						
<input type="checkbox"/> More than \$12,000						



Don't know

29. ***What is the status of this project right now?***

- Completed with help from another Energy Trust program
- Completed project as planned, on my own
- Completed part of project, which part? \_\_\_\_\_
- Still thinking about project
- Focused on other home improvements
- Decided not to do it
- Other: \_\_\_\_\_

30. ***How much did the improvements you made end up costing?***

31. ***Since applying to Clean Energy Works, have you made any home improvements or taken any action to reduce your home's energy use?***

- Yes, specify: \_\_\_\_\_
- No
- Don't Know

32. ***Did you interact with your Energy Advocate?***

33. ***Did you receive a rebate or other assistance from Energy Trust?***

- Yes
- No

34. ***Are you still interested in obtaining help with energy efficiency upgrades to your home?***

- Yes [Skip to Q35]
- No [Skip to Q37]

35. ***What improvements are you interested in?***

36. ***When might you make these improvements?***

*Next, I have a couple of questions about your interaction with the Energy Advocate assigned to you.*

*Please indicate how much you agree with the following statements, using a five-point where 1 means "strongly disagree" and 5 means "strongly agree"*

	1	2	3	4	5	NA	DK
37. <b><i>My Energy Advocate was knowledgeable about the program</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. <b><i>My Energy Advocate was able to answer all my questions</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	1	2	3	4	5	NA	DK
39. <i>I was able to reach my Energy Advocate when I needed to</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. <i>My Energy Advocate considered my circumstances when presenting the bid and financing package</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. <i>Overall, how would you rate your satisfaction with your Energy Advocate (use a 5-point scale with 1 being "very dissatisfied" and 5 being "very satisfied")</i>							
<input type="checkbox"/> 1							
<input type="checkbox"/> 2							
<input type="checkbox"/> 3							
<input type="checkbox"/> 4							
<input type="checkbox"/> 5							
<input type="checkbox"/> DK							

*I'm going to list several topics you may have discussed with your Energy Advocate. Did you communicate with your Energy Advocate about:*

	Yes	No	Didn't get that far	Don't know
42. <i>Scheduling issues</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. <i>Expected cost</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. <i>Bid questions</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. <i>Expected energy savings</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. <i>The equipment specified or recommended</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. <i>Requesting or receiving another bid</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. <i>Any issues with the financing package/loan details/interest rates</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. <i>What topic would you say required the most communication?</i>				
50. <i>Did you interact with the contractor assigned to you?</i>				
<input type="checkbox"/> Yes				
<input type="checkbox"/> No [Skip to Q56]				
<input type="checkbox"/> Don't Know				





Please indicate how much you agree with the following statements, again using a one-to-five scale where 1 means "strongly disagree" and 5 means "strongly agree".

- |   | 1                        | 2                        | 3                        | 4                        | 5                        | DK                       | Didn't get there         |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 51. <i>My contractor was able to answer all my questions</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. <i>I was able to reach my contractor when I needed to</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. <i>My contractor considered my circumstances in the bid</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. <i>How many times did you interact with your contractor?</i>  |                          |                          |                          |                          |                          |                          |                          |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. <i>Overall, how would you rate your satisfaction with your CEWP contractor? [with one being "very dissatisfied" and 5 being "very satisfied"]</i> |                          |                          |                          |                          |                          |                          |                          |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. <i>Did you receive a financing proposal or loan paperwork?</i>  |                          |                          |                          |                          |                          |                          |                          |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. <i>Did you have any questions or concerns about the financing?</i>  |                          |                          |                          |                          |                          |                          |                          |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. <i>If yes, what were your questions or concerns?</i>  |                          |                          |                          |                          |                          |                          |                          |



59. *If yes, were you able to get those questions or concerns resolved?*
60. *Did you have any interactions with a representative from the financing firm, Shorebank Enterprise Cascadia?*
- Yes
  - No
  - DK
61. *According to our records, you chose not to go forward with a project through Clean Energy Works. Is that correct?*
- Yes
  - No
  - Don't know
62. *At what point did you decide not to go forward with a project through Clean Energy Works?*
63. *[If not clear from above] Why did you decide to stop pursuing your project through CEWP?*
64. *Were you referred to another program or told about other options to obtain rebates or assistance to complete energy efficiency projects in your home?*
- Yes [Skip to Q65]
  - No [Skip to Q66]
  - DK [Skip to Q66]
65. *What type of program were you referred to? What happened?*
66. *Do you have any suggestions for how we might improve this program for future participants?*
- Finally, I have a few demographic questions to help us understand the program participants.*
67. *When was your home built?*
68. *About how many sq ft is your home?*
69. *How many people, including you, live in your home now?*
70. *Please stop me when I get to the range of your household's total annual income, before taxes:*
- Less than \$50,000 [Skip to Q71]
  - \$50,000-\$109,999 [Skip to Q72]
  - Over \$110,000 [Skip to Q73]
  - Refused



**71. Is it...**

- Less than \$10,000
- \$10,000-\$29,999
- \$30,000-\$49,999
- Refused

**72. Is it..**

- \$50,000-\$69,999
- \$70,000 to \$89,999
- \$90,000 to \$109,999
- Refused

**73. Is it..**

- \$110,000 - \$149,999
- \$150,000 - \$199,999
- \$200,000 or more
- Refused

*Thank you so much for taking the time. We appreciate your feedback.*



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## CEWP APPLICANTS E-MAIL SURVEY

*Thank you for taking the time to offer your feedback.*

*To begin, please enter the ID contained in the email into the box and press the "next" button.*

**1. How did you first hear of the Clean Energy Works Portland program?**

- Word of mouth (co-worker, friend, family member, neighbor)
- Media (TV, newspaper, radio)
- List serv or forwarded email, electronic post
- Utility (bill insert, letter, website link)
- Another way (please specify) \_\_\_\_\_
- Don't remember

**2. Thinking back to when you applied to the program....**

	Yes	No	Don't Remember
<b>3. Did you have any difficulties navigating the Clean Energy Works website?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4. Did you have any difficulties completing the on-line application?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Did you have any difficulties finding answers to your questions on the website?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6. Any comments?</b>			

*For each item listed below, please indicate how much of an influence it was on your decision to apply to the program. Please use a 1-to-5 scale, where "1" means "this factor was not important" and "5" means "this factor was very important".*

*How important was ...*

	1-Not Important	2	3	4	5-Very Important	Don't Know
<b>7. Increasing the value of my home?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. Increasing the comfort of my home?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9. Saving energy?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>10. Lowering my heating bills?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>11. Keeping my home warmer in the winter?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	1-Not Important	2	3	4	5-Very Important	Don't Know
12. <i>Keeping my home cooler in the summer?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. <i>Was there any other important reason?</i>	<input type="checkbox"/> Yes [Skip to Q14]					
14. <i>What other reason(s) were there?</i>	<input type="checkbox"/> No					

*Clean Energy Works offers several program features. In the table below, please rate how important the prospect of receiving each of the following was in your decision to apply.*

	1-Not Important	2	3	4	5-Very Important	Don't Know
15. <i>A program representative or Energy Advocate to help me navigate decisions about efficiency upgrades</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. <i>Access to information from a Home Performance Assessment or audit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. <i>A program-provided contractor</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. <i>Access to a contractor with specific training in energy efficiency or building science</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*The table below lists financial products or benefits that are commonly available for energy efficiency projects. Please indicate how important each might be to you when considering whether to go forward with an energy efficiency project in your home.*

	1-Not Important	2	3	4	5-Very Important	Don't Know
19. <i>Obtaining an incentive from Energy Trust</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. <i>Qualifying for an Oregon tax credit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	1-Not Important	2	3	4	5-Very Important	Don't Know
21. <i>Qualifying for the \$1500 federal tax credit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. <i>Getting an “attractive” interest rate</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. <i>Having a loan spread out over 20 years</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. <i>No money down; Avoiding the upfront costs associated with your project</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. <i>Having an option to repay the loan on your utility bill</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. <i>When you applied, did you have any particular energy efficiency projects in mind?</i>						
<input type="checkbox"/> Yes [Skip to Q28]						
<input type="checkbox"/> No						
27. <i>Since applying to Clean Energy Works, have you made any home improvements or taken any other action to reduce your home’s energy use?[Skip to Q30]</i>						
<input type="checkbox"/> Yes, please specify: _____						
<input type="checkbox"/> No						
<input type="checkbox"/> Don’t know						
28. <i>About how much did you think your project would cost?</i>						
<input type="checkbox"/> \$1,000-2,000						
<input type="checkbox"/> \$2,000-4,000						
<input type="checkbox"/> \$4-6,000						
<input type="checkbox"/> \$6-8,000						
<input type="checkbox"/> \$8-10,000						
<input type="checkbox"/> \$10-12,000						
<input type="checkbox"/> More than \$12,000						
<input type="checkbox"/> Don’t know						
29. <i>What is the status of this project right now?</i>						
<input type="checkbox"/> Completed with help from another Energy Trust Program, Skip to Page 12						
30. <i>What did the energy efficiency improvements cost?</i>						
<input type="checkbox"/> Completed part of project (please specify what part) _____						
<input type="checkbox"/> Still thinking about project, Skip to Page 20						
31. <i>Why did you not participate in the Clean Energy Works Portland program? [Please specify]</i>						



Don't Know

*The table below lists several of the most common energy efficiency improvements made by homeowners. For each one, please indicate if it is likely you will do this in the next year, if it's unlikely you'll do this in the next year, or if you've already done it.*

	Likely to do in next year	Unlikely to do in next year	I've already done it	Don't know
32. <i>Replace old or inefficient appliances</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. <i>Install a more efficient heating/cooling system</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. <i>Install a more efficient water heating system</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. <i>Add insulation, air sealing, or weather stripping</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. <i>Install new windows</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. <i>Install a solar electric or solar hot water system</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. <i>Recycle a refrigerator or freezer</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. <i>Thinking about your interaction with the Clean Energy Works program, do you have any suggestions that might have made the program work better for applicants like you?</i>				

*Finally, we have a few demographic questions. These questions help us understand the characteristics of those applying to participate in this program.*

- 40. *About when was your home built?*
- 41. *About how many square feet is your home?*
- 42. *How many people, including yourself, live in your home now?*
- 43. *Please indicate the range of your household's total annual income, before taxes:*
  - Less than \$50,000 [Skip to Q44]
  - \$50,000 - \$109,999 [Skip to Q45]
  - \$110,000 or more [Skip to Q46]
  - Choose not to answer
- 44. *Is it....*
  - Less than \$10,000
  - \$10,000-\$29,999



- \$30,000-\$49,999
- Choose not to answer

**45. Is it...**

- \$50,000 - \$69,999
- \$70,000 - \$89,999
- \$90,000 - \$109,999
- Choose not to answer

**46. Is it...**

- \$110,000 – \$149,999
- \$150,000 - \$199,999
- \$200,000 or more
- Choose not to answer

*Your comments will help us improve the program for future participants.*

*If you have any questions about this survey please contact Dulane Moran at 503-287-9136.*

*Please press "submit".*



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# ON-BILL FINANCING TEST SURVEY: RESULTS

In order to more fully understand the bill payment mechanics, we conducted a brief email survey of the 31 participants that (1) had at least one year of bill payment experience or (2) had paid off their loan in full. Of the 31 participants surveyed, 13 completed the survey (42%) and provided feedback about their experience. One of the 13 could not recall receiving a utility bill that included a CEWP project payment. This respondent answered other questions about the process, but skipped specific payment process questions.

**1. Which of the following statements best describe what you would have done if you had not had access to Clean Energy Works:**

I would not have completed this project	10	(77%)
I would have done the same project, but postponed it for more than one year.	1	(8%)
I would have done the same project.	2	(15%)

**2. How did the project's overall cost match your expectations?**

Cost about what I expected	10	(77%)
Cost more than I expected	3	(23%)
Total	13	(100%)

**3. What about the project's overall impact on energy consumption in your home, how did this meet your expectations?**

Cost about what I expected	10	(77%)
Cost more than I expected	3	(23%)
Total	13	(100%)

**4. In addition to the energy savings, were there any other benefits you or your household have obtained from this project?**

Not specified	4	(31%)
Clean Air in the home and less mold. Less damp. Feels good to be in the house. comfort.	1	(8%)
I learned a lot about conserving energy, what to tackle first and which things would have a very slow payout. I may use this knowledge at a future date	1	(8%)
I like my new furnace but the cost of the program was much higher than expected.	1	(8%)
Less drafts and more consistent hot water generation.	1	(8%)
Less drafty, less noise from the street	1	(8%)
Noise reduction.	1	(8%)
Peace of mind	1	(8%)
warmer, quieter house	1	(8%)



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**5. Please indicate the extent to which you agree with the following statements using a 1 to 5 scale where "1" is "strongly disagree" and "5" is "strongly agree"**

Rating	1	2	3	4	5	DK
This project has made my home more comfortable	0	1	0	2	10	0
This project has made my home more valuable	0	1	0	5	7	0
The equipment installed through this project performs better than the equipment I had before	0	1	0	2	10	0
Completing this project has made my household more sustainable	1	0	0	5	7	0
This project has made me more confident in my home's performance	0	0	1	5	7	0
This project has made my home healthier	0	2	1	4	5	1

**6. Have you received a utility bill that included your CEWP payment?**

Yes	12	(92%)
Don't know	1	(8%)

**7. Was the payment consistent with your expectations?**

Yes	12	(92%)
No	1	(8%)

**8. How was it different than you expected?**

Higher	1	(8%)
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**9. Have you experienced any difficulties with your CEWP payment on your utility bill?**

Yes	2	(15%)
No	11	(85%)

**10. What difficulties?**

No difficulties	11	(85%)
The first month's payment didn't hit the gas bill, and the bank called to request a direct payment, which we made. This was a minor issue. The next month's payment was on the gas bill.	1	(8%)
There was an adjustment at the completion of the project and the first bill was not adjusted accordingly. It seemed like the communication between the utility and the bank was not great. However, it was resolved within 2 billing cycles but required me to make a number of calls and act as an intermediary.	1	(8%)

**11. Overall, how satisfied are you with this method of repayment? Please use a 1-to-5 scale where "1" means "very dissatisfied" and "5" means "very satisfied."**

1- Very Dissatisfied	1	(8%)
2	0	(0%)
3	0	(0%)
4	3	(23%)
5-Very Satisfied	9	(69%)



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**12. Why are you dissatisfied?**

I did not enjoy working with the bank and the interest rate was higher than I got elsewhere so I just paid it off with a different loan.

**13. Thinking about your experience, if you had the opportunity to do another project or a similar project in another home, would you consider using a program like this to finance your project or would you do it differently?**

I would use a program like this	12	(92%)
I would do it another way	1	(8%)

**14. How would you pay for the project?**

Home loan	1	(100%)
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**15. Why would you choose to pay for the project this way?**

Lower interest and increased control	1	(100%)
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**16. Considering your experience with Clean Energy Works and the information you obtained from the Home Performance Assessment or audit, about how much would you pay for a similar audit in another house?**

Less than \$100	3	(23%)
\$100-\$200	7	(54%)
\$300-\$400	2	(15%)
Don't know	1	(8%)

**17. Since completing your CEWP project, have you: [Please check all that apply]**

Applied for a Federal Tax Credit	11	(85%)
Applied for the Oregon state tax credit	13	(100%)
Made extra payments on your CEWP loan	0	--
Paid off your CEWP loan	4	(31%)

**18. Did you have any difficulty making payments to your CEWP loan outside of your utility bill?**

No	11	(85%)
Yes	2	(15%)

**19. Using a scale of 1 to 5 where "1" means "very dissatisfied" and "5" means "very satisfied", please rate your overall satisfaction with your Clean Energy Works Portland experience:**

1	1	(8%)
2	1	(8%)
3	0	--
4	5	(38%)
5	6	(46%)



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**20. Thank you for your time today, please use the box below for any additional comments or other information about your experience.**

Great Program!

Mostly satisfied - the gas water heater wasn't installed properly and wasn't burning efficiently. They fixed it, but we still smell natural gas in the yard sometime. Maybe just the way it was vented.

Overall, I had a positive experience and am happy with the improvements made to my house. If improvements are made to the information displayed on the utility bill, loan balance reporting to the customer and ease of making additional payments, that would be very helpful

The program was great, I would really have liked to have two or three contractors to choose from as I didn't particularly care for the one I was assigned.

We were very satisfied with the contractor and workers. They were friendly and professions.



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