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*Draft Report*

# Clean Energy Works Portland Pilot Program

***Funded By:***

EnergyTrust of Oregon

***Prepared By:***

research/into/action

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# EXECUTIVE SUMMARY

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

The CEWP pilot tested a program approach expected to create local jobs while cutting household energy use and reducing carbon emissions. The CEWP pilot 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 program, each participant was assigned an Energy Advocate and a CEWP-approved contractor. Energy Advocates provide information to homeowners and support to contractors. Contractors are responsible for conducting a Home Performance Assessment, preparing a bid for the improvements identified in the assessment, and installing the approved measures. Homeowners must finance the projects through a loan from the program's sole lender, Enterprise Cascadia. Homeowners then repay the loans over 20 years on their heating utility bill.

## THIS REPORT

Energy Trust of Oregon 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 program. CEWP has been gradually transitioning to the statewide Clean Energy Works Oregon program, which officially launched March 15, 2011.

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

| Wave | Time Frame | Activities | Scope |
|---|---|---|---|
| Wave 1 | August -September 2009 | • Review background materials<br>• Develop process flow diagram<br>• Interview Energy Advocates, Contractors, and staff<br>• Survey initial participant cohort<br>• Present report to Steering Committee (September 21, 2009) | • Provide rapid feedback about initial CEWP pilot program launch<br>• Document experiences<br>• Summarize lessons learned |

| Wave | Time Frame | Activities | Scope |
|---|---|---|---|
| Wave 2 | February -March 2010 | • Re-contact Energy Advocates, Contractors<br>• Interview Stakeholders to identify themes and summarize lessons learned<br>• Exit Survey of Participants with completed projects: those that had a successful test-out | • Document project status<br>• Identify themes and summarize lessons learned<br>• Document participant experience and satisfaction with CEWP |
| Wave 3 | June -August 2010 | • Launch third wave of participant surveys<br>• Telephone survey of program dropouts | • Document Project Status<br>• Create report document with detailed results |
| Wave 4 | September 2010 – March 2011 | • Launch fourth wave of participant surveys<br>• Conduct second wave of telephone surveys of program dropouts<br>• Survey screened out applicants<br>• Interview utility contacts to identify lessons learned with on-bill payments | • Document project status<br>• Document participant experience and satisfaction<br>• Explore motivations for applying and identify potential among applicants |

## 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.

### *Participants*

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 program and reported no major problems navigating program elements, including the website, program 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 program to their family and friends. Also encouraging are indications that the program is supporting projects that otherwise might not have happened: less than one percent of participants indicated that they would have done the same project on the same timeline without the program.

## *On-Bill Payment Experience*

The program'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 program's fund manager.

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.

## *Program Features*

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

**Table 1: Value of CEWP Program Components**

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

*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".

The three groups of respondents valued financing products differently (**Error! Reference source not found.**). 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 2: Influence of Financing Aspects**

| Financial Aspect | Portion Agreeing* | | |
|---|---|---|---|
| **Aspect** | **Participants** | **Applicants** | **Dropouts** |
| No money down; avoiding the upfront costs associated with your project | 91% | 75% | 55% |
| Getting an attractive interest rate | 90% | 83% | 79% |
| Qualifying for the $1,500 federal tax credit | 85% | 92% | 73% |

| Financial Aspect | Portion Agreeing* | | |
|---|---|---|---|
| Qualifying for an Oregon tax credit | 84% | 90% | 67% |
| Obtaining an incentive from Energy Trust of Oregon | 83% | 79% | 73% |
| Having the option to repay the loan amount on your utility bill | 82% | 72% | 61% |
| Having the loan spread out over 20 years | 79% | 56% | 39% |

*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".

## *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.

**Motivations: Reasons for Applying**

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

*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.

## *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 Advocate and the details of pricing and bids. Dropouts continued to express confusion about the relationship between the energy advocate and the contractor. Also similar to the September 2010 report were comments from dropouts about contractors telling them that certain measures were required or they wouldn't 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.

- ***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 remain important for managing expectations.
- ***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.
- ***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.
- ***Continue to monitor the bill payment 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 checking in with a larger group; ideally by mid 2012 (three years after the pilot began). This aspect is of particular concern to utility partners.
- ***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.