

Best Practices and Lessons Learned from EPA/DOE's Home Performance with ENERGY STAR Program

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ABSTRACT

Energy efficiency offers one of the lowest cost solutions for improving energy security, reducing energy bills, and addressing the important issue of global climate change—all while helping to grow the economy. Energy efficiency is increasingly important to families and businesses, particularly now with the higher fuel prices of the past several years.

This paper summarizes how successful program sponsors from nearly 20 states have developed, implemented, and evaluated the effectiveness of these programs. These lessons learned are based on interviews and analyses drawn from the experiences of a variety of program sponsors including: Austin Utilities, Long Island Power Authority, Maine Home Performance with Energy Star, New York State Energy Research and Development Authority, Energy Trust of Oregon and Wisconsin Energy Conservation Corporation.

Introduction

Energy efficiency is especially important among homeowners. The average homeowner spends \$1,900 annually on energy. The average energy cost in US homes is 45 kBtu/SqFt/Yr, but some homes use twice that amount. This is because more than half of all single-family homes in the US were built before the enactment of modern energy codes.^[1] Many of these homes have no wall insulation, high levels of air infiltration, poorly functioning duct systems, and inefficient heating and AC systems. In fact, 60 percent of US households report having winter drafts^[2] and 62 percent complain of a room that is too warm in the summer.^[3]

To help US homeowners increase the energy efficiency of their homes, the U. S. Environmental Protection Agency (EPA) and the US Department of Energy (DOE) developed the Home Performance with ENERGY STAR[®] (HPwES) Program. This program offers a comprehensive, whole-house approach to improving energy efficiency and comfort at home, while helping to protect the environment.

Key Elements of the HPwES Program

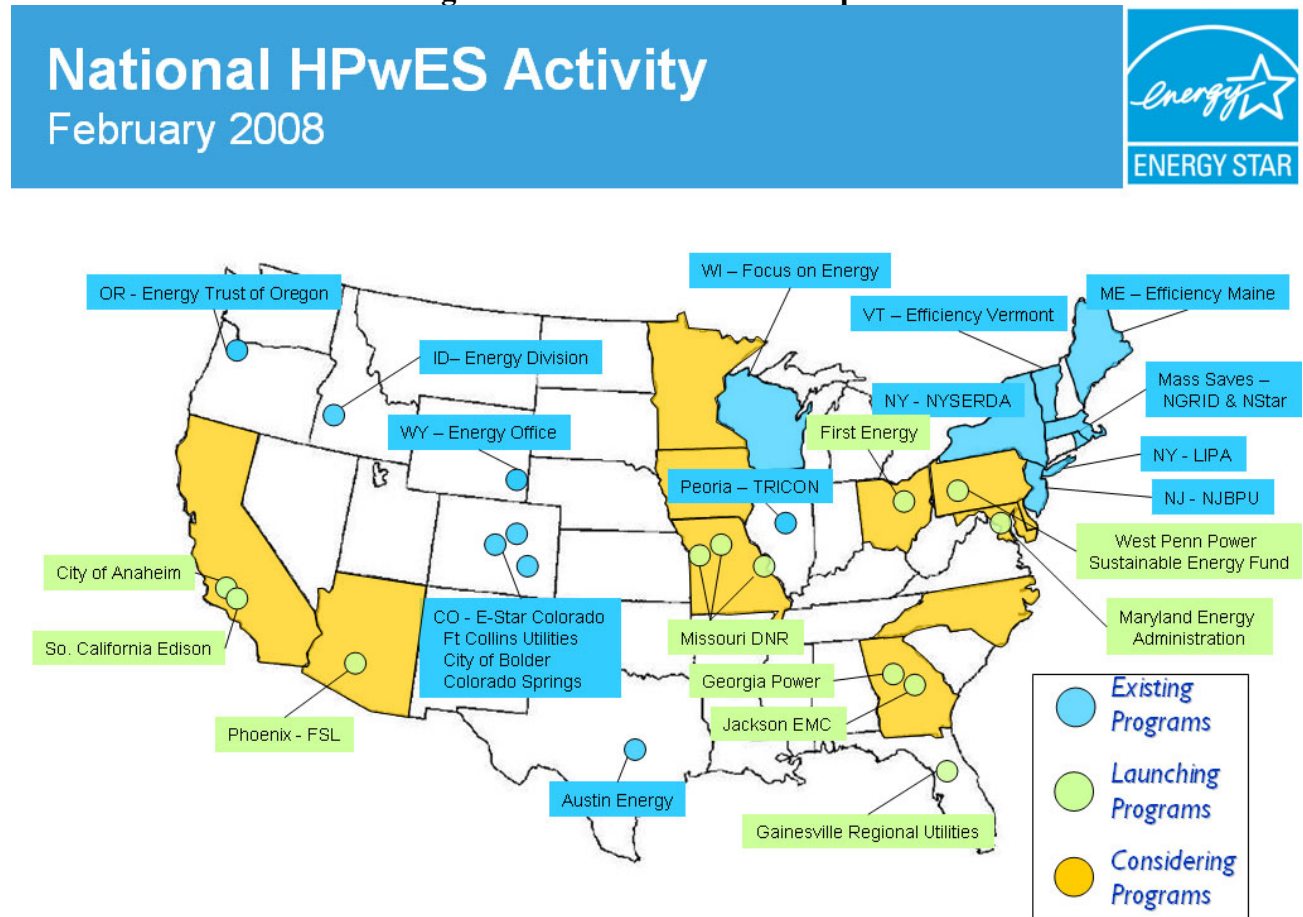
This program takes a “whole house approach” that begins with a comprehensive energy audit by a trained and certified contractor. This whole-house assessment includes diagnostic tests by a qualified contractor who can make comprehensive improvements or refer homeowners who can make these improvements.

Another important component of this program is that the contractor must “test in” and “test out” which means that all completed projects are verified upon completion to ensure that the improvements were installed properly and the homeowner will achieve the energy savings.

The test-out is an important step at the end to verify that improvements to the home will be effective.

This program is gaining traction across the US. Currently there are more than a dozen active programs, and many more are being established across the country.

Figure 1: National HPwES Map



Austin Energy, Wisconsin Focus on Energy, and the New York Energy Research and Development Authority (NYSERDA) are the most successful programs to date. Collectively improved the efficiency of nearly 20,000 existing homes saving their customers an estimated \$400 per year in energy costs.

Lessons Learned from HPwES Sponsor

The US DOE and EPA have also learned some valuable lessons from the current program sponsors based on their experiences. These lessons are summarized next.

Lesson 1: Contractor Participation Is Key

The most successful programs have developed contractor-centric programs. Since this is a contractor driven program, these leading organizations have developed a variety of ways in which to recruit, reward, support, and recognize contractors. These activities include providing contractor incentives to encourage contractor training.

Table 1: Types of Contractor Support Offered by Program Sponsors

Program Sponsor	Quality Assurance	Equipment / Training Reimbursement	Dedicated Website	Contractor Mentoring/Sales Training	Job Completion Incentive
Energy Trust of Oregon	√	√	√	√	√
Efficiency Vermont	√	√	√		√
Maine Home Performance		√			√
New Jersey Board of Public Utilities		√	√		√
NYSERDA	√	√		√	

Lesson 2: Contractors Need to “Own” It

The most successful program sponsors have also realized the importance of recruiting the “right” contractors into the program. This requires both time and resources. The “right contractors” are those who have the necessary vision to be willing to invest in the HPwES concept. These contractors are often already active in promoting energy efficient or renewable technologies. The most successful HPwES contractors are those that view this as a viable business opportunity and are experienced in selling premium efficiency or renewable technologies.

Several of the most successful program sponsors have developed ways to position their programs as a strategy to recruit the “right” contractors. For example, Austin Energy focuses on recruiting solar contractors. The Energy Trust of Oregon promotes the program to potential contractors as a turn-key business development opportunity.

Lesson 3: Financing Helps Sales

Home improvements are not cheap. The average cost for a home improvement completed under the HPwES program is \$7,000. Therefore, it is essential that the program sponsor provides homeowners with access to financing beyond the traditional rebates. The most effective financing programs provide simple, quick, and hassle free low-interest loans. Making financing available helps both contractors close sales and the program sponsor achieve results.

Most programs are either offering, or plan to offer, low-interest customer loans. For example, Austin Energy relies on audits and low-interest loans to encourage customers to make needed improvements. Customers can qualify for up to \$1,575.00 in rebates and/or receive additional financing in unsecured loans for installing a list of approved measures. The financing is provided through a local credit union.

NYSERDA has partnered with four lending institutions to offer discounted loans for qualifying home improvements. The rates are reduced by 3.5% for loans of up to five years for qualifying Home Performance projects, but only if the qualifying home improvements are completed or supervised by a participating Home Performance with ENERGY STAR[®] contractor.

Energy Trust of Oregon has developed a comprehensive financing package that includes low-interest loans of up to \$20,000, Oregon tax credits, and cash back for installing qualifying measures. The New Jersey BPU provides low-interest loans and a 50% subsidy for Income Qualified Participants, up to \$5,000, and a 10% cash back for customers not using the other incentives, up to \$2,000.

Lesson 4: Marketing Is Critical to Program Success

The successful program sponsors have recognized the importance of program marketing and have developed a variety of ways to support contractors and build customer awareness. Programs operating in Oregon, Vermont, Maine, New York, and New Jersey offer a variety of contractor marketing support. The most common features including offering co-op marketing and contractor support, website support and tie-ins to EPA campaigns, media radio spots, print media ads, and Internet keyword search.

Maine Home Performance has developed a proactive marketing approach that includes extensive information on the website to promote energy efficiency improvements. The program also features several other innovative marketing approaches including Energy Savings certificates. The contractors also provide customers with Energy Savings certificates after the project is completed as a way to further reinforce the energy efficiency message.

Some savvy HPwES contractors have learned to leverage these marketing activities to build their own contractor business. For example, some contractors piggyback NYSERDA's advertising activities by buying TV spots immediately before and after the NYSERDA TV ads. These contractors also do targeted telemarketing in the neighborhoods where they are already performing home assessments and making home improvements.

New Jersey's BPU program has also relied on extensive marketing outreach to both home owners and contractors. Residential marketing activities include: a comprehensive web site, stories and ads in the local press, outreach at home shows and the development of a TV program in the fall 2007. The website also contains customer testimonials.

Lesson 5: Energy Efficiency Is not the Key Message

Despite all of the recent interest in energy efficiency, this is not the only motivator for home owners to hire HPwES contractors. Rather, the primary driver for some home owners is to improve the health, comfort, and safety of their residence. Therefore, it is important that these marketing messages emphasize the "non-energy" benefits of these improvements.

Several program sponsors have developed innovative ways to promote these non-energy benefits. Wisconsin's program, operated by WEEC, focuses comfort, safety, durability, and resale value. Maine Home Performance, shown in Figure 2 developed an integrated approach to provide customers with an easy-to-understand media campaign that showcases the health, comfort, and safety benefits in an easy-to-understand manner. Each message focuses on one aspect of home performance and this theme is carried to the website and other media channels.

Figure 2: Example of Maine Home Performance Ad Campaign



Summary

HPwES programs are in the process of “scaling up” across the United States. This paper provided a summary of the key lessons learned by the most experienced program sponsors of the HPwES program. Successful program sponsors have recognized the importance of identifying the right types of HPwES contractors to recruit into the program, and then provide them with the appropriate tools, training, financing, and marketing support. These program sponsors have also developed a successful partnership with these critical trade allies that results in long-term and sustainable programs.

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