

Case Study:

Utah Home Performance with ENERGY STAR

The Utah Home Performance with ENERGY STAR (HPwES) program, run by PEI, deployed EnergySavvy Optix Engage as a pre-screening tool for program qualification and EnergySavvy Optix Manage as a workflow management and program tracking system. The results: a friendly and effective initial engagement point, a dramatically improved in-home analysis to retrofit conversion rate, and the exclusion of unqualified homes. **More than 6,000 online audits, 1,800 in-home assessments and nearly 1,000 completed whole-home retrofits, in just over a year.**

The Challenge: Driving Engagement and Follow-Through for Whole-Home Retrofit Program

Utah HPwES was conceived as a savings-qualified system: retrofit rebates were set generously at \$2,000 per homeowner, but in order for homeowners to qualify, they had to improve their homes' efficiency by at least 20 percent. Furthermore, significant subsidies were offered to defray the cost of the in-home audits. To ensure these audit subsidies were saved for homes that could meet the 20 percent savings, PEI used Optix Engage as the main participant intake point to pre-screen homeowners to ensure they were able to meet the minimum savings requirements. Only qualified applicants were able to proceed to the in-home assessment.

Once engaged with the program, homeowners were tracked using EnergySavvy Optix Manage, a system used to manage program workflow. Optix enabled program stakeholders to coordinate seamlessly and ensure an efficient homeowner experience while improving transparency and reporting for program administrators.

The Results

The benefits of this innovative pre-screening approach to a savings-qualified program were quickly realized:

Figure 1.

Based on 1,834 completed in-home assessments between July 2010 and December 2011

Metric	Before Optix Manage	After Optix Manage	Change
Audit to Retrofit Conversion Rate	48%	70%	46% More Retrofits
Average Audit to Test-Out Time	103 days	62 days	40% Faster
Contractor Satisfaction	15%	89%	6x More Satisfied



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Online home energy surveys are an important element to our program requirements. The EnergySavvy approach represents the quality we demand, and provides an incredible user experience"

- Warren Cook, Sr. Engineering Manager, Utah Home Performance with ENERGY STAR (PECI)

1. **Program Savings from Optix Engage:** 16 percent of applicants were disqualified for low energy savings potential or not meeting other program requirements before ever talking to a program customer service rep, resulting in a significant savings to the program – in-home analysis subsidies that couldn't have led to qualifying retrofits. The accuracy of these online self-assessments was comparable to the results of the in-home audits.
2. **Customer Satisfaction:** Customer satisfaction for those disqualified applicants was an important consideration—while they did not get to participate in the program, they also did not have to spend \$100 (the unsubsidized portion of the in-home analysis) to find that out. Instead, they were guided to other utility-sponsored programs they could qualify for.
3. **Contractor Satisfaction:** Trade ally positive satisfaction ratings with the program portal jumped from 15 percent to 89 percent after the introduction of Program Optix.

The net impact: Real program savings in non-productive rebate dollars, a better customer and contractor experience and higher conversion rates, ultimately creating more savings per program dollar.

Detailed Accuracy Analysis

While an online assessment cannot (and should not) replace an in-home audit, EnergySavvy Optix Engage was just as accurate at predicting consumption and savings potential as an in-home analysis.

Methodology

EnergySavvy and PECEI conducted a comparative analysis of a randomly selected subset of 100 homes from the Utah HPwES program for which there were online self-assessment data (entered by the applicants themselves), in-home analysis results and actual consumption data. Note: See full Methodology at the link provided below.

What did we learn?

No building science tool (in-home or online) is perfect in modeling actual consumption in all cases. As an industry, we all understand that. There are too many unique circumstances and variations in behavior to always get it right. However, we were surprised by some of the findings.

Overall, the EnergySavvy online analysis tool—filled out within a few minutes by homeowners themselves—had 22.2% less error, on average, in modeling consumption than the in-home analysis software. EnergySavvy's average savings percentage estimate was higher, but within range of the in-home analysis' estimate (42.6% versus 31.5%; p-value: < 0.0001). However, the savings estimates from the in-home analysis software represent only the subset of measures that the homeowner was interested in completing; whereas, Optix Engage's savings estimate was based on all possible relevant measures for a home.

Why an Online Self-Assessment Doesn't Replace an In-Home Analysis

Although our Optix Engage is very accurate, we do not intend for it to replace the in-home audit. The in-home audit provides work scope actionability, in-person homeowner engagement and savings modeling by measure.

The Utah Home Performance with ENERGY STAR program was successfully completed in April 2012. Read the complete version of this article online at: <http://www.energysavvy.com/clients/studies/uhp/>

EnergySavvy is a leader in cloud-based software for the utility industry. Dedicated to making energy efficiency more controllable and transparent, EnergySavvy's platform unlocks value by creating modern customer experiences and delivering predictability to the industry. Lead by technology and energy experts from companies including Microsoft, Amazon, NASA, PG&E, and Enernoc, EnergySavvy sets the standard in client success, expertise and innovation. Utilities use EnergySavvy to reach one-third of American homes and businesses in more than 20 states.