

Evaluation of the Home Energy Score: An Experiment with New Jersey Natural Gas

Background: New Jersey Natural Gas (NJNG) implements an equipment rebate program as part of its SAVEGREEN efforts.. Homeowners can qualify for a \$500 incentive or 0% financing for replacing their furnace, boiler, or gas water heater with a qualifying high efficiency unit. For homeowners to qualify for the incentives, NJNG requires an in-home audit after equipment installation at which point the auditor provides customized energy efficiency recommendations.

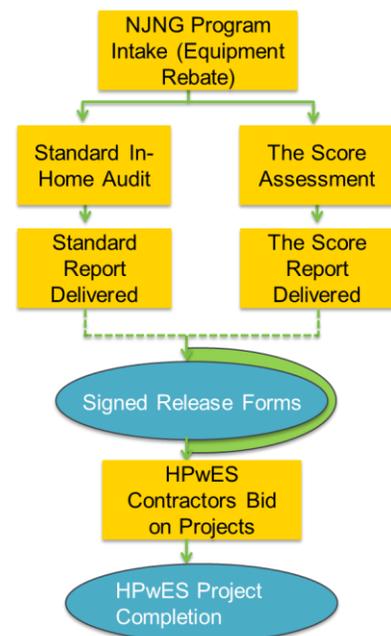
The audit shows customers other ways they can save energy and is intended to encourage these homeowners to participate in the state-wide Home Performance with ENERGY STAR Program (HPwES) to pursue deeper savings. Upon receiving the audit, homeowners are asked to sign a release form allowing contractors to get in touch with them to pursue further energy efficiency improvements. Homeowners who sign the release form are listed on SAVEGREEN'S contractor portal and participating HPwES contractors contact the homeowners and bid on projects.

Given that these homeowners have just spent thousands of dollars replacing equipment, a relatively small number of homeowners have historically signed the release form or enrolled in the HPwES program. Interested in seeing how the U.S. Department of Energy's (DOE) Home Energy Score (Score) might encourage greater participation in HPwES, NJNG, in collaboration with DOE, launched an evaluation study in May 2014 to test the impact of offering the Score to homeowners who recently participated in the NJNG rebate program.

Results: The Score was performed by NJNG Assessors on all homes but only presented to about half of program participants in conjunction with the in-home audit. Homes were randomly assigned to either receive or not receive the Score. Homes that did not receive a Score were given a standard audit and report. There were 5,650 participants in the study between May 2014 and October 2015.

NJNG was interested in (1) increasing the number of homeowners who agreed to release their information so that energy efficiency contractors could follow up with them and (2) increasing the number of homeowners who then enroll in HPwES. Homeowners who received the Score were 15.9% more likely to sign a release form ($p < .05$). However, the rate at which homeowners enrolled in HPwES was unchanged – only about 2 percent of homeowners in both treatment and control groups enrolled in HPwES during the study period.

The fact that the use of the Score did not translate into a greater number of HPwES projects may be attributed to a number of factors. First, regardless of what information was presented, this group of homeowners had just invested in an equipment upgrade and may therefore have been less inclined to pay for another improvement. Second, due to local



conditions, there was a general lack of participation from HPwES contractors in the bidding process that occurred for homeowners who signed the release form. Third, HPwES contractors who did follow up with these homeowners didn't have access to the Score and therefore didn't capitalize on the Score messaging when they proposed projects to homeowners. The positive impact of the Score seen on increased signing of release forms therefore wasn't able to be replicated in terms of higher project conversion rates. It is also worth noting that because it can sometimes take homeowners a year or so to decide to make additional energy improvements (e.g. they may not realize their home is still uncomfortable until the next winter rolls around), it is possible that some of the customers in the study may still pursue upgrades beyond the timeframe of the study. Additionally, some customers may have been inspired by the Score to pursue upgrades outside of HPwES.

Going forward, NJNG is looking for ways to capitalize on Score messaging during the phone follow-up, bidding, and proposal phases with contractors selling the additional energy efficiency improvements.

Conclusion: Homeowners in the treatment group – those who received the Score as part of the audit – were 15.9% more likely to sign a release form allowing energy efficiency contractors to follow up with them. This suggests that when the Score is part of the “conversation” with homeowners, they are more likely to understand the importance of investing in energy efficiency.

That said, only 2 percent of homeowners actually signed up for the HPwES program, regardless of whether or not they received the Score as part of the audit. This “conversion” to the HPwES program could increase if the Score is integrated into the messaging provided by the contractor and not only by the auditor. Although beyond the scope of this study, a general recommendation to programs interested in using the Score is to make sure its messaging is integrated into the entire process.