

Failure to Follow-Through: Trends in Completion Rates of Residential Renewable Energy and Energy Efficiency Projects

Eileen C. Hannigan, Wisconsin Energy Conservation Corporation, Madison, WI

Introduction

This poster examines trends in completion rates for two different programs: the Wisconsin residential renewable energy program and the Wisconsin Home Performance with ENERGY STAR (WIHPES) program. Combining U.S. Census data, survey data, and program participant data, the poster presents an analysis of possible factors affecting project completion rates.

Background

Energy programs that offer potential participants incentives for taking the first step in installing energy efficiency measures or renewable energy measures run the risk of providing funds to customers who do not ultimately follow through on the installations. Analysis of these trends yields insights into improved program design to ensure maximum completion rates by participants.

Results

While more households have been receiving WIHPES evaluations, the percentage of these households completing energy efficiency measures has been declining. Census block data show that households receiving evaluations tend to be in blocks that are wealthier than WI on average and households that install energy efficiency measures live in census blocks that are wealthier than those that do not install measures. Since 2003, homes in the census blocks of households receiving WIHPES evaluations have gotten older. However, fewer households in older neighborhoods are actually installing energy efficiency measures. Participants that are in older neighborhoods and do not install energy efficiency measures also have lower household income than other WIHPES participants.

Since 2002, residential customers in WI who are considering installing renewable energy technologies (solar electric, solar hot water, or wind) have been encouraged to receive an assessment of the suitability of their site for the technology. While the number of assessments conducted has been increasing, the percentage of these customers who install a renewable energy system has hovered below 20%. A recent survey of site assessment customers shows that these customers are wealthier, have larger homes, and are more likely to live in rural areas than the overall Wisconsin population living in owner-occupied housing. Customers who have installed a system are a bit wealthier, but otherwise similar demographically to those who have not installed a system.

When asked about the barriers to installing a system, about 40% reported not having adequate wind or sun on their site. Of those reporting adequate wind/sun, more than half of respondents rated the following as barriers to the installation of a system: initial cost (all technologies); locating installers (solar hot water); needing better price or technical information (solar hot water, solar electric); and zoning/permit problems (wind).