

# The Need for Better Evaluation Methods for Home Energy Audit Programs

*Amanda C. Korane, American Council for an Energy-Efficient Economy, Washington, D.C.*

## Introduction

This poster presents findings from a survey of energy audit programs, regarding the need for better energy savings evaluation methods. As energy costs and concern for the climate continue to rise, home energy audit programs are gaining recognition among states, utilities, and program implementers – as well as residential customers. However, there is a substantial lack of data on the savings achieved through such programs, and a lack of transparency of evaluation methods. Where savings are attempted to be calculated at all, methods range from using billing data, engineering estimates based on measures installed or assumed to have been installed, and voluntary surveys.

This issue is important for several reasons. Programs looking to improve the effectiveness of their audits often have no baseline with which to compare savings, and no reliable method for determining the best way to improve programs based on historical data. Additionally, with programs needing to convince customers to spend significant amounts of time and money on audits, there is no way to convincingly demonstrate past performance or guarantee a certain level of savings.

## Findings

A survey of 17 different audit programs revealed the diversity and limitations of current evaluation methods. Assessment of the methods being used and the drivers behind these methods was undertaken through a literature review and interviews with program managers and other experts.

Many independent audit programs do not even attempt to quantify energy saved, and the programs that do quantify savings use a diversity of methodologies. This is problematic on several levels. It raises the question of how accurate the savings can be when calculated in so many different ways. Additionally, the diverse methods used to assess program savings make comparing programs a difficult and inexact proposition.

Different types of audits are expected to result in different levels of energy savings. For instance, there is no proof that information-only audits lead to any energy savings. Furthermore, the manner in which programs select customer pools and market their programs also affects the outcome. There is evidence to suggest that linking the audit to a process for implementing energy saving measures is a strong indicator of the success of a program in terms of energy savings achieved. Additional research should be conducted to assess which types of audit programs result in the greatest savings, as well as the components of programs that attract customers and influence energy-saving actions.

In order to improve home energy audit programs, and to encourage the creation and maintenance of such programs in the future, a better model for M&V and a stronger commitment to the necessity of accurate evaluation is imperative. The energy savings evaluation method should include rigorous data collection including using pre- and post-billing data, data collection during the audit, on-site post-installation analyses, and transparent reporting.