

# **Quick Evaluation of a Multifamily Weatherization Program**

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## **Introduction**

Time and expense often limits the value of program evaluation for program implementers. Feedback on performance can be more valuable when it is prompt. While not as robust as full-scale program evaluations, quick-turnaround evaluations can pinpoint potential problems in the early stages and provide useful results at lower cost. Quick-turnaround evaluations can suggest areas where program implementers should remain vigilant, and indicate areas for further study. Here a quick-turnaround impact evaluation of a multifamily weatherization program was completed on a small sample of apartment buildings. Representative findings useful for program implementers are presented.

## **Method**

Quick-turnaround evaluation activities were completed for a small sample of weatherized, low income large (20 units +) multifamily buildings in a cold weather state. Analysis of limited monthly utility data revealed interesting anomalies. Monthly energy consumption was compared in the same month across years to determine the impact of installing energy-saving measures. It was expected that consumption would drop consistently after major measures were installed, but this was not true in some cases. Weather could not account for all the anomalies. Shoulder month data was used as a simplified way to filter out the impacts of air conditioning and heating loads on energy use. Projected energy savings, from TREAT building modeling, was compared with actual building energy performance after Weatherization.

Analysis was done to estimate savings of individual measures before interactive effects set in. For example, where lighting was installed before refrigerators were replaced, analysis of the energy use between the installation dates showed the effect of lighting retrofits only without the refrigerator replacement effect. Both measures contribute to changes in space heating or air conditioning use, so it was important to study shoulder month data.

## **Findings**

Through close study of the jobs in the sample, reasons for some anomalies came to light. Findings suggested problems in field installation, and areas for improvement in the program. Examples include missed opportunities for baseload electric measures, heating system problems, and shell measure installation deficiencies. Several findings are presented to indicate the type of results possible even from this limited study. Quick turnaround evaluations can help program implementers identify and fix problems early.

The technique presented here to estimate energy savings from a particular measure is easy to use and transferable to other residential programs. The technique can be applied to single family, mobile home, multifamily, rental and possibly small retail customer classes. Public policy makers have identified the lack of demonstrated savings for individual measures as a barrier to securing finance industry support for energy saving projects. The approach illustrated here to document individual measure savings may address this need for savings calculations that go beyond deemed or estimated savings or engineering estimates.