Accuracy of Energy Savings Projections – Implications for Industrial and Commercial Program Evaluation and Design

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Overview

The accuracy of energy savings estimates in the commercial and industrial (C&I) sector varies with different types of approaches and technologies. Technologies for energy efficiency programs in the C&I sectors generally fall into two main groupings: prescriptive equipment measures and custom efficiency solutions.

Variability in Energy Savings Estimates

More consistent estimates of energy savings would optimize the value and success of program evaluation efforts. This poster examines several common technologies and the accuracy of ex ante and ex post site specific gross impacts for each of these technologies. The data consist of site-specific reports for commercial and industrial energy efficiency program evaluations incorporating detailed impact analyse**s.** These reports are examined to assess the factors introducing the greatest variability in savings calculations. Specific emphasis is focused on fluorescent lighting, pulse start metal halide lighting, energy management system improvements, heat exchangers, compressed air systems, variable speed drives, and energy efficiency motors.

Results

The analyses present some insight into the sources of variation, and some recommendations for reducing the valriation.

Implications

Uncertainty in energy savings affects both energy efficiency program evaluation and program design. The policy implications can be significant, affecting program performance enhancements, technology inclusion, and associated incentive mechanisms.