

SESSION 1C

CODES AND STANDARDS: EVALUATION ISSUES AND ANSWERS

Moderator: Ken Keating

PAPERS:

Getting Credit for Energy Savings from Promoting Energy Codes and Standards: Status and Evaluation Issues

Allen Lee, The Cadmus Group, Portland, OR
Jeff Schlegel, Consultant
Elizabeth Titus and David Lis, Northeast Energy Efficiency Partnerships (NEEP)
Gail Azulay, NSTAR

The Untapped Potential in Code Compliance: A Study in Residential New Construction

Betty M. Tolkin, NMR Group, Inc.
William Blake, National Grid
Christine Hastings, NSTAR Electric and Gas
Allen Lee, The Cadmus Group, Inc.
Robert Wirtshafter, Wirtshafter Associates, Inc.
Zachary Tyler, NMR Group, Inc.
Lynn Hoefgen, NMR Group, Inc.

The Costs and Benefits of Measuring if States Meet 90% Compliance with Building Codes

Robert M Wirtshafter, Ph.D., Wirtshafter Associates, Inc, Rydal, PA
Betsy Harper, VEIC, Burlington, VT
Richard Faesy, Energy Futures Group, Hinesburg, VT
Glenn Reed, Energy Futures Group, Carlisle, MA
Leslie Badger, VEIC, Burlington, VT
Jennifer Chiodo, CX Associates, Burlington, VT
Eveline Killian, CX Associates, Burlington, VT
Kevin George, CSG, Albany NY

Code Change Theory and Attribution

Joshua Rasin, Heschong Mahone Group, Inc., Gold River, CA
Douglas Mahone, Heschong Mahone Group, Inc., Gold River, CA
Yanda Zhang, Heschong Mahone Group, Inc., Gold River, CA
Cynthia Austin, Heschong Mahone Group, Inc., Gold River, CA
Patrick Eilert, Pacific Gas & Electric Co., San Francisco, CA

SESSION SUMMARY

Improving energy codes and appliance efficiency standards has been a market transformation tool for at least 20 years. In many ways, getting them in place has been a sign of “Mission Accomplished.” There was very little demand for evaluations of the actual energy savings that resulted from them. In recent years, the role of C&S has become both more important to achieving energy reductions, but also Green House Gas reductions, and more valuable to the portfolios of efficiency program administrators (PAs). Especially when PAs begin to get credit toward their goals or even shareholder incentives for working to promote C&S improvements – usually at some cost to their acquisition programs which are hindered by the increasing code baselines – evaluation has become more

critical. The American Recovery and Reinvestment Act (ARRA) grants from the federal government also require that all states accepting the money must adopt building energy codes and measure compliance with them.

With evaluation efforts, the usual questions come up in a new arena. What is the proper baseline for savings? What is the potential savings with full compliance? What would have occurred without the C&S in the market? Who gets credit for the changes? In addition, evaluators are asked to deal with the critical issue of compliance with the code or standard. This is much more difficult for evaluators as there are no identifiable participants, and few consumers who believe that they owe cooperation to program evaluators.

The papers in this session take many of the evaluation issues head on. The first paper by Lee, et al. provides a good national overview of most current C&S policies and activities. It discusses the alignment of policies, implementation, and evaluation to achieve the best results. The Tolkin, et al. paper is an example of how PAs and efficiency advocates can determine what potential is available through code-related activities, especially if they work to achieve better compliance. It is a study of the potential savings, rather than the measure of actual compliance.

The third paper by Wirtshafter, et al. directly addresses the problems involved with measuring compliance, especially trying to develop a consistent approach that can provide comparable, unbiased metrics across the very varied US building and enforcement market. The authors offer some suggestions for methods to measure compliance at a lower cost than draft US DOE protocols. The last paper takes on the issue of establishing attribution for code change. Rasin and his colleagues understand that if PAs do not receive any credit for C&S efforts, they are likely to be less enthusiastic about using ratepayer funds to enhance codes and compliance. Nevertheless, they recognize that they need to establish an a priori basis for code change actions and to document in real time the activities they engage in in support of the code change. Although it follows the pattern of “tracking for the test,” the approach is classic market transformation theory. They are “telling the story” and tracking near term indicators of long term goal accomplishment.