

SESSION 4C

EVALULATION METHODS

Moderator: Iris Sulyma, BC Hydro

PAPERS:

Impact Evaluation Design in a Post TRM World

Pete Cleff, PPL Electric Utilities

Anne West, The Cadmus Group

Hossein Haeri, The Cadmus Group

Tina Jayaweera, The Cadmus Group

Free to Choose? A Comparison of a Nested Logit Model with a Billing Regression Model and Self-Report Analysis in a Commercial Impact Evaluation

Stephen Grover, Evergreen Economics

Ted Helvoigt, Evergreen Economics

Jenny Yaillen, Evergreen Economics

A Method for Calibration of DOE Models: Annualizing and Normalizing Short-Term Hourly Metered Data

Howard Reichmuth, New Buildings Institute

Anne West, The Cadmus Group

Jarred Metoyer, KEMA

Tom Van Lieu, The Cadmus Group

Kathy Hile, The Cadmus Group

Think Before You Do: The Importance of Survey Design in Program Evaluation

Tami Buhr, Opinion Dynamics Corporation

SESSION SUMMARY:

This session will focus on evaluation approaches, comparison of new and established DSM evaluation approaches, and how survey, evaluation and planning approaches impact DSM evaluation practice.

The first paper reviews the recent proliferation of Technical Reference Manuals (TRMs) providing standardized sources of technical specifications, per unit energy savings estimates and energy savings calculation algorithms. TRMs facilitate calculation and reporting of ex ante savings, standardization of the process and creation of a more transparent and predictable calculation of savings for utilities. This paper explores the consequences of expanding the use of TRMs to ex post verified savings and the potential impacts on DSM evaluation practice.

The second paper in the session compares the results of using a standard billing regression model with self-report analysis to the use of a nested logic discrete choice model to determine net energy savings for a large commercial lighting initiative. Advantages and disadvantages of each approach are discussed, as is the role of the discrete choice model in providing corroboration of the net energy savings results based on the standard approach relying on customer's self report.

The third paper in the session presents an approach for the partial calibration of a prototype DOE whole building model for one specific end use. The DOE prototype building model is used as a tool for annualizing and normalizing short-term, approximately 1 – 2 months, metered energy use from cooling equipment to develop an estimate of the normalized annual consumption (NAC). Potential issues and

advantages to this approach are discussed, including integration with commonly used energy planning tools and decreased evaluation costs.

The fourth paper in the session provides an overview of the survey design literature and best practices to reinforce and remind evaluation practitioners how important it is that DSM evaluation surveys address clear and specific questions, avoid the use of double negatives, utilize exhaustive and mutually exclusive response categories, provide context to minimize recall error, the use of unipolar and bipolar scales, and the advantages and disadvantages of neutral categories on response scales.