

Session 3A

EVALUATION PRACTICES- EXPLORING THE ROADS NOT TAKEN

Moderator: Michael Messenger, Senior Principal, Itron

PAPERS

Trials and Tribulations of Joint Electric and Gas Programs - Guidelines in Integrating Joint DSM

Robert Neumann, Navigant Consulting, Inc., Chicago, IL

Kicking the Can: How First-Year Impact Evaluation Transfers Cost and Uncertainty

Marc Collins, Senior Principal, Itron

Joe Loper, Principal Consultant, Itron

Evaluation Evolution: Leveraging Data Collection Standards for EM&V and Other Analysis

Jarred Metoyer, DNV KEMA Energy and Sustainability, Oakland, CA

Tom Ledyard, DNV KEMA Energy and Sustainability, Middletown, CT

Elizabeth Titus, Northeast Energy Efficiency Partnerships, Waltham, MA.

SESSION SUMMARY:

This session will focus on new approaches to program evaluation that estimate: (1) life cycle savings and cost effectiveness from program savings in addition to first year impacts, (2) energy savings from programs designed to save multiple energy forms, and a review of common data collection formats designed to facilitate the use of onsite data for use by evaluators from different jurisdictions. Each paper discusses improvements to the most common form of program evaluations that currently focus on evaluating first year program impacts. The authors describe the use of different evaluation designs and data collection formats that can be used meet multiple evaluation objectives over a two to three year format at a lower evaluation cost than repeating first year impact assessments every one or two years.

The first paper focuses on the experience of evaluators focused on evaluating joint energy efficiency programs managed by single fuel electricity and or natural gas utility programs. The paper provides insights gleaned through experience on how to effectively manage evaluation costs, ensure proper design (program theory, logic), manage program data collection efforts, develop joint implementation protocols and assess energy benefits gained by each utility program. Evaluators and implementers in Illinois correctly anticipated many core joint programs issues (e.g., which utility leads, budgets, managing expectations, overall success for each utility, and evaluating the joint and individual benefits). Key lessons learned and evaluation guidelines that have been successful in joint utility programs in Illinois, Ohio, New Hampshire, California and Massachusetts are highlighted in the paper.

The second paper examines the hidden costs and uncertainties associated with the common evaluation practice of focusing on evaluating first year energy impacts only with little attention focused on estimating incremental measure costs and effective useful lives of energy efficiency measures. The paper describe the drivers and policy objectives that lead some utilities to focus on first year impact in order to meet aggressive annual savings goals within the current context of the increasing emphasis on energy efficiency spending; reviews state and utility evaluation plans and assesses the extent to which their focus is on first-year impact evaluations; discusses why jurisdictions are relying on first-year savings rather than collecting other data and performing lifecycle analysis; and, identifies request-for-proposal instruments for alternative approaches to evaluation studies that would better integrate a

broader range of data and analytical requirements needed to address relevant policy questions, taking into account related data challenges.

Limiting the scope of evaluations to first-year savings makes evaluations appear less costly and avoids the need for up-front discussion of key uncertainties associated with the use of evaluation results. But, in reality, this approach can simply transfer evaluation costs and uncertainty to the post-evaluation analyses. Moreover, through delay, it adds to the costs of obtaining the data needed to estimate life-cycle savings and costs. In the process, the uncertainties associated with cost effectiveness analysis, compliance with EERS, and other issues are often obscured, since the focus is on high relative precision achieved for key first-year savings parameters with limited, if any, discussion of uncertainties of other parameters needed to complete cost effectiveness or valuation analyses.

The third and final paper explores the development of common data collection standards that facilitates the use of and transferability of “metered” data collected for one specific evaluation to other evaluations in jurisdictions with similar customer or building characteristics looking to establish baseline energy use or load shapes. The goal is to ensure that future evaluations and baseline studies can leverage these initial data collection results to improve their understanding of baseline conditions in their region using the same data collection standard and possibly supplement where the past studies have small sample sizes. The ultimate benefit is the feedback loop this creates where data collected under various studies could feed be used to update new load shape studies and deemed savings assumptions in updates of technical reference manuals around the country. Adopting standards for data collection potentially saves future dollars spent to collect the same data again if the future data is collected in a way that can’t be combined with other relevant data for a robust analysis.

This paper illustrates the benefits of adopting common data collection standards or protocols by reviewing a specific example where a regional data collection standard was designed and developed for compiling load shape data for lighting and HVAC systems. Lessons learned from this effort are described and contrasted with the current development of other national data standards and protocols that are designed to facilitate the use of common load shapes across multiple evaluations to meet multiple evaluation objectives.