

SESSION 1E

NUTS AND BOLTS: KEY INPUTS FOR FUTURE PLANNING

Moderator: Maureen McNamara, U.S. Environmental Protection Agency

PAPERS:

One Analysis to Rule Them All and In the Darkness Give Them CFLs

Katie Albee, The Cadmus Group
Brian Shepherd, The Cadmus Group
Steve Cofer, The Cadmus Group
Lisa Wilson-Wright, NMR

Incremental Costs: Keeping Current on a Critical Parameter

Mike Sherman, Navigant Consulting
Nick Beaman, Navigant Consulting
Floyd Keneipp, Navigant Consulting
Elizabeth Titus, Northeast Energy Efficiency Partnerships

Remaining Useful Lifetimes and Persistence--Literature and Methods

Lisa A. Skumatz, Ph.D., Skumatz Economic Research Associates, Inc.

Saving Upstream and Downstream Energy through End User Water Conservation

John Boroski, Evergreen Economics
Bing Tso, SBW Consulting
Heather Cooley, Pacific Institute

SESSION SUMMARY:

Energy efficiency is an important resource that is used across the nation as a key strategy for meeting future energy needs, but nevertheless it competes with a broad range of resource options for attention and funding. As such, a battery of tests including the participant cost test, the program administrator test, the rate impact measure test, and the total resource cost (TRC) tests have traditionally been used by the utility sector to evaluate the costs and benefits of energy efficiency measures from a variety of perspectives. Some of the critical inputs that are needed when assessing measures for inclusion in an energy efficiency portfolio include:

- How much energy will the efficient measure save compared to its standard efficiency counterpart?
- How long will savings persist?
- Does the energy efficient measure cost more than its standard efficiency counterpart?
- How much opportunity is there in the marketplace for saving energy with a given measure?
- Are we fully accounting for all energy benefits of this measure; are there non energy benefits that should be considered?

Gathering and updating information on these critical inputs when planning tomorrow's energy efficiency portfolio can be time consuming and expensive, but is necessary for utilities and other program administrators to ensure due diligence. This session focuses on four recent research projects that will help program administrators stay current on these key inputs. Several of the studies were co-funded by parties across multiple jurisdictions to improve data quality and achieve economies of scale.

The first paper, which collected data from 1500 households in 15 locations across the United States, helps inform the remaining market potential for CFLs, whether or not hours of use are decreasing, and the accuracy of current CFL assumptions. This paper is particularly timely, since CFLs--a staple of most energy efficiency programs for many years--are under increased scrutiny due to years of promotion, pending changes in baselines from upcoming federal lighting standards, and variable findings on hours of use.

Relative to other parameters, little attention is paid to determining baseline and efficient measure costs, in large part because incremental cost studies are difficult and expensive. The second paper explores a method for combining incremental costs data from multiple jurisdictions (for 12 measures) to derive Non-Regional Specific costs and develop and apply factors to adjust these Non-Regional Specific costs to local market conditions.

The third paper, which examined more than 100 measure-life studies, identifies gaps in research and values for residential, commercial, and industrial measures and identifies best practices for estimating measure lifetimes. The paper also discusses limited studies related to *remaining* useful lifetimes, which are used in programs that encourage or result in early equipment replacement.

The final paper presents high-level impact evaluation results for nine California Embedded Energy and Water pilot programs. Summarized results, including water savings, wastewater savings and total embedded energy savings, shed light on the considerable energy that is required to obtain, treat and distribute water supplies to end-use customers.