

SESSION 2B

ESTABLISHING BENCHMARKS AND CONDUCTING BASELINE STUDIES

Moderator: Dave Weber, NSTAR Electric & Gas

PAPERS:

Benchmarking and Best Practices in Power Management of Computers and Other Plug-Loads on Campus

Carol Sabo, PA Consulting Group
Susan Andrews, NYSERDA
Lark Lee, PA Consulting Group
Kimberly Bakalars, PA Consulting Group

Innovative Lighting Baseline Hours-of-Use Research in Primary and Secondary Schools

Dan Barbieri, RLW Analytics
Paul Gray, Sr., United Illuminating

You've Decided You Need A New Baseline Study – Now What?

Energy Star[®] Homes Baseline Studies: Challenges and Solutions

Dorothy Conant, Independent Consultant
William Blake, National Grid
Stephen Bonanno, NSTAR Electric & Gas
Bruce Harley, Conservation Services Group
Lynn Hoefgen, Nexus Market Research
Joe Swift, Western Massachusetts Electric
Lisa Wilson-Wright, Nexus Market Research

SESSION SUMMARY:

This session focuses on the challenges associated with successfully developing and updating baselines and benchmarks for accurate measurement of energy savings. The papers stress the importance of careful planning and provide practitioners with useful lessons learned.

The first paper, *“Benchmarking and Best Practices in Power Management of Computers and Other Plug-Loads on Campus”*, describes an approach used to determine plug-load electric use and energy efficiency opportunities on college campuses. The authors apply their five years of experience in collecting and analyzing data to benchmark existing conditions against best practices for a variety of plug-load equipment. Given the large differences among colleges, the objective has been to identify indicators that are easy to calculate and compare across similar educational facilities. In addition, the project team has identified examples of policies, procedures and programs that represent best practices.

The second paper, *“Innovative Lighting Baseline Hours-of-Use Research in Primary and Secondary Schools”*, sought to update and refine estimates of annual operating hours and the potential savings for occupancy sensors. The authors employed an ambitious sampling and monitoring plan to address a number of dimensions of lighting usage. The importance and pitfalls of fundamental assumptions and reliance on standard analytical techniques are discussed. Successful completion of the project, including a number of interesting and useful findings, required persistent efforts to find alternative and simpler methodological approaches.

The third paper, “*You’ve Decided You Need A New Baseline Study – Now What? Energy Star® Homes Baseline Studies: Challenges and Solutions*”, addresses the need to update program baselines to reflect changes in building practice and energy consuming systems. The authors discuss an approach taken to minimize the introduction of bias in sample selection, as well as documenting unforeseen evidence of possible bias. A homeowner survey conducted at the time of data collection emphasizes the continuing issue of lack of awareness and understanding among consumers regarding energy efficient construction and equipment.