SESSION 7B

RETAIL SALES AND MARKET PENETRATION ANALYSIS

Moderator: Elizabeth Titus, Northeast Energy Efficiency Partnerships, Inc.

PAPERS:

CFL Market Penetration Using Point-of-Sale Data – Regional Perspectives
Alan Fields, Itron, Inc.
Rachel Harcharik, Itron, Inc.
Jennifer Holmes, Itron, Inc.
Shel Feldman, Shel Feldman Management Associates
Rick Winch, Glacier Consulting
Rich Pulliam, South California Edison

Assessing Residential Market Transformation Programs Through Retail Sales Analysis
Thomas Mauldin, KEMA-XENERGY Inc.
Tom Franks, Vermont Department of Public Service
Margaret Cush Grasso, Long Island Power Authority

Using Regression Discontinuity Models to Understand Market Transformation
Ken Tiedeman, Habart and Associates Consulting

SESSION SUMMARY:

Market penetration and other analyses of retail sales data are among the most obvious and compelling indicators to consider when evaluating programs that are designed to influence markets. This set of papers illustrate a variety of uses of retail sales data in evaluations of market transformation programs and provide insights concerning benefits and challenges of studies relying on retail sales data.

Fields et. al. tracked market penetration of CFLs regionally from three years of quarterly point of sale data. Their sample covered geographic differences in sales and various retailers within most major market channels.

Tracking of CFL bulb sales illustrated a sharp increase in sales in California coinciding with that state's energy crisis in 2001. Sales data have also been used to estimate energy savings beyond market penetration, such as sales attributable to CFL promotions and the effects of different rebate levels. Further analyses estimate that about 70% of all CFLs sold are ENERGY STAR qualified.

The immediate challenge to building on these efforts is to develop a tracking system that meets the needs of a variety of organizations nationally and regionally and also has ongoing participation from major retailers.

Mauldin, Franks and Grasso conducted comparative studies of retail sales of ENERGY STAR qualifying products in stores and locations with and without ENERGY STAR promotional programs. Up to three years of quarterly appliance and lighting sales from a small number of hardware and appliance stores in Vermont were compared with similar data from Maine and CFL product sales records from five home center stores on Long Island were compared with similar data from stores in Pennsylvania. Building the relationships to obtain the data, selecting comparison sites, collection and processing the data are significant challenges in this type of study.

The comparisons explored spillover and attribution effects of local ENERGY STAR promotional programs. While results were not statistically robust, the study illustrates methods that can be used to assess program effects. The comparisons in this study found that the volume of sales of ENERGY STAR qualifying products was higher in program areas than in non-program areas. There were substantial sales of qualifying products in program areas.

Tiedeman estimated post-program effects of the Green Lights program in China based on a linear regression model with data on a limited set of variables including an interrupted time series of domestic sales of incandescent and CFL lamps from a thirteen year period. Results suggest annual increases in production and consumption of CFL products during the four post-program years. Results include estimated energy savings and carbon dioxide reductions associated with increases in market penetration of CFL lamps in China during 1997 – 2000.