SESSION 8C

EVALUATION OF EDUCATION AND TRAINING PROGRAMS

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PAPERS:

An Education and Training Evaluation that Changed a Program
  Ingo Bensch, Energy Center of Wisconsin
Education That Changes Behavior: The Impacts of the BOC Program
  Marjorie McRae, Research Into Action
  Jane S. Peters, Research Into Action
  Elizabeth Titus, Northeast Energy Efficiency Partnerships, Inc.
  Tom Rooney, GDS Associates
Are Education and Training Programs Producing Knowledge and Behavioral Effects in Wisconsin?
  Tom Talerico, Glacier Consulting Group
  Lark Lee, PA Consulting
  Kimberly Bakalars, PA Consulting
  Barbara Smith, Wisconsin Department of Administration

SESSION SUMMARY:

Education and training programs achieve energy efficiency by influencing knowledge and behavior. Assessing the effectiveness of training programs frequently involves measuring changes in students' knowledge and behavior – intangible outcomes that are difficult to track.   The many challenges to this type of evaluation include limitations of self-selection of respondents, self-reporting bias, attribution of changes to training programs, quantifying intangible effects, and the fact that education and training often complement other functions of energy efficiency programs. This set of papers presents three approaches to this task and a review of some of the benefits as well as challenges involved.

Bensch outlines an evaluation process developed at the Energy Center of Wisconsin to assess the effectiveness of training for architects, engineers and contractors to encourage use of daylighting in commercial building design. The process involves surveys and interviews of samples of trainees at several points in time. The goal was to qualitatively and quantitatively assess trainees' satisfaction, learning and actions resulting from training as well as the business impact on the Energy Center. Results were obtained from a small sample; however, the evaluation provided constructive recommendations on the design of the program. The study illustrates the benefits of getting early feedback on programs and designing evaluations that involve strategic follow-up after education and training.

McRae et. al. evaluated and compared the impacts of the Building Operators Training and Certification (BOC) Program as delivered in the Northwest and the Northeast within the past five years. The BOC is exclusively an education and training program, with the goal of increasing energy efficiency in existing commercial and industrial facilities. The evaluations included telephone surveys of trainees and comparison groups. Behavioral results were combined with engineering estimates to quantify energy and other resource impacts associated with specific measures. To estimate electricity savings, a triangulation approach was used, in which limited behavior-based results and retrocommissioning model results provided a floor and ceiling, respectively, for the final estimate. While these evaluations are an important step forward in quantifying resource impacts for training-based energy efficiency programs, the paper also identifies several remaining challenges and needs for future refinements.

Talerico et. al. measured several indicators of knowledge and behavioral effects resulting from education and training events in some of the market transformation programs within the overarching Wisconsin Focus on Energy program. The Wisconsin evaluation approach was designed to accommodate limited resources and a wide range of programs over a four year period. In-depth interviews were conducted with small samples of trainees' in eight programs, and quantitative indicators were constructed from information provided in open-ended responses as well as from rating questions. Evaluation of education and training in the Focus on Energy programs is considered important as a leading indicator of market effects that ultimately energy savings. Therefore, it is vital to design the evaluation in conjunction with program design.