

## SESSION 3B

### BEHAVIOR CHANGE: DETERMINING IMPACTS

*Moderator: Sharyn Barata, Itron, Inc.*

#### PAPERS:

##### **Moving Beyond Econometrics to Examine the Behavioral Changes Behind Impacts**

Anne Dougherty, Opinion Dynamics Corporation  
Amanda Dwelley, Opinion Dynamics Corporation  
Rachel Henschel, National Grid  
Riley Hastings, NSTAR

##### **MO'Power to the Customer: An Evaluation of a Dual Fuel Home Energy Reports Program**

Ken Agnew, KEMA  
Bobbi Wilhelm, Puget Sound Energy  
Dr. Min Niu, KEMA  
Paulo Tanimoto, KEMA  
*Dr. Miriam Goldberg, KEMA*

##### **Impact Evaluation of Behavior Change in the Industrial Sector**

Chris Smith, ERS  
Rita Siong, NEEA  
John Sandin, NEEA

#### SESSION SUMMARY:

Across the country, more and more utilities are adding behavioral based programs into their energy efficiency portfolios. In many cases, traditional measurement and evaluation methodologies are not enough to determine the effectiveness of these efforts. This session will focus on the methods now being used to determine the energy impacts associated with these behavioral programs in residential, dual fuel utility and industrial programs.

Our first presentation, *“Moving Beyond Econometrics to Examine the Behavioral Changes Behind Impacts”* will detail how market research techniques were paired with econometrics analysis to examine the behavior changes that drive energy savings for behavioral programs. The goal of this evaluation was to address the following researchable questions: (1) how are the behavioral program interventions generating changes in energy saving installations and practices among those who are touched by the program?; (2) what are the unique behaviors that contribute to energy savings, including but not limited to measure installation and conservation behaviors?; and (3) how, if at all, are these behaviors persisting over time?

The next presentation, *“MO'Power to the Customer: An Evaluation of a Dual Fuel Home Energy Reports Program”* evaluates 20 months of savings results from a Home Energy Reports Program sponsored by Puget Sound Energy. This program was the second program implemented by Opower and it was the first to be offered to households that used both natural gas and electricity. The program was designed as a randomized controlled trial. The impact evaluation of the program used actual month billing data produced using daily AMI data. The effort examines annual and monthly electric and natural gas savings within the first 20 months. The analysis also teases out the effects of

quarterly reports compared with the typical monthly schedule. Finally, the results of an attribution analysis to determine whether energy savings came from behavior change or from the installation of other utility-sponsored (and rebated) energy efficiency programs will be presented.

Our final presentation, *“Impact Evaluation of Behavior Change in the Industrial Sector”* details the evaluation of Northwest Energy Efficiency Alliance’s (NEEA’s) program - Continuous Energy Improvement (CEI) program. The concept of this program is to systematize energy management into the industry’s traditional and familiar management structure. The CEI program adapts the familiar management system construct to energy and provides tools and services that enable companies to manage energy in the same way they manage other manufacturing variables. This presentation will provide an in-depth look at this industrial behavior change program and the evaluation methods used to determine energy savings, as well as the implementation efforts required to ensure the effort leads to market transformation.