

## SESSION 2A

### THE PRICE – IS IT RIGHT?

*Moderator: Michelle McGuire, Databuild Ltd.*

#### **Accuracy of Alternative Baseline Methods for Measuring Demand Response Program Impacts**

Steven D. Braithwait, Christensen Associates Energy Consulting

#### **Evaluating Residential Real-Time Pricing: Connecting Customer Response to Energy Market Impacts**

Marjorie Isaacson, CNT Energy

Anthony Star, CNT Energy

Larry Kotewa, CNT Energy

#### **Energy Information and E-commerce: Evaluating the Effect of Life-Cycle Cost Information on Consumer Behavior**

Matthias Deutsch, Prognos AG

#### SESSION SUMMARY:

This session will focus on evaluations that consider the role of pricing and the provision of cost information in encouraging behaviour that reduces energy consumption.

Across the United States, electric utilities and independent system operators (ISOs) are increasingly applying their resources to demand response. Demand response refers to “changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.” (DOE, 2006).

A key component of demand response programs is the method used to estimate the hourly usage level that the customers would have consumed had the demand response event not occurred (the baseline). This determines the level of payment to end-use customers participating in the program. Dr Steven Braithwaite’s paper considers different methods for calculating this baseline looking at the tradeoffs between accuracy and simplicity.

Because most demand response programs in effect today are event driven, currently most demand response events occur for limited periods that are called by the grid operator; however, critical peak pricing (CPP) and real-time pricing (RTP) are growing in prevalence and impact. Under a legislatively mandated program, approved by the Illinois Commerce Commission residential customers in the state of Illinois can choose a real-time pricing option and be billed for the power they consume based on hourly market prices. Participating customers will be able to lower their monthly electric bills by changing their usage habits to take advantage of lower-priced time periods, and avoiding heavy usage during higher-priced time periods. The paper by Anthony Star, Marjorie Isaacson and Larry Kotewa considers how to evaluate the market impacts of the program. The program is going to have to show that the demand response impacts of the participants create value for non-participants in order to justify the cost of the program. This requires a methodology that demonstrates how demand response changes the price curve in wholesale markets and therefore changes prices for everyone.

The paper by Matthias Deutsch discusses an evaluation that considers whether the disclosure of life-cycle cost (LCC) information—i.e. purchase price plus lifetime operating cost—makes consumers opt for more energy-efficient household appliances. This paper reports the results from two randomized field experiments conducted at the websites of an online shop for washing machines and a price comparison for cooling appliances regarding the effectiveness of monetary and life-cycle cost disclosure that have been conducted in Germany.