SESSION 4D

EVALUATING RATE DESIGN IMPACTS

Moderator : Wendy Pallotta, Central Vermont Public Service Corporation

---

PAPERS:

Identifying Free Riders in Pacific Gas & Electric Company's Demand-side Real-time Pricing Project

Joel B. Brodsky and Bradley M. Gray, J. Brodsky and Associates, and Cynthia M. Crane, Charles R. Bolton, and Sarah S. Leonard, Pacific Gas & Electric Company

How to Evaluate a Direct Load Control Program's Load Impacts and Energy Effects without End-use Data

Bruce A. Smith and Carl Schaper, Quantum Consulting Inc., Paul Meagher, Electric Power Research Institute, and Alan Scott Davis, Florida Power Corporation

Ontario Hydro Time-of-use Rates: Two Years of Experience

Takis Plagiannakos, Evelyn Lawson, George Katsuras, and Jing Zhu, Ontario Hydro

SESSION SUMMARY:

This session focuses on methodologies associated with evaluating programs with different rate design strategies: time-of-use rates, direct load control, and real-time pricing.

The first paper examines how to identify two types of free riders in a real-time pricing program. Pacific Gas & Electric Company's real-time pricing cost study, which was designed in order to test customer responses to frequent and varying electricity prices, is the basis for the authors' research and discussion.

The second paper presents a specific methodology to reliably determine direct load control impacts for air conditioners without needing to collect expensive end-use load data. The authors describe how this methodology can be applied utilizing the EPRI Direct Load Control Impact Prediction Model (IPM), which is based upon the duty cycle approach. Specific research results are presented based upon Florida Power Corporation's Residential Load Management Program

The third paper discusses and compares four different approaches that Ontario Hydro has implemented in determining the impacts of its mandatory time-of-use rates for large industrial customers. These three methodological approaches include econometric analysis, implementing program questionnaires, and analysis of monthly billing data.