SESSION 6A

PEAKING INTEREST IN ENERGY EFFICIENCY

Moderator: Maureen McNamara, U.S. Environmental Protection Agency

PAPERS:

Estimating Peak Demand Impacts of Energy Efficiency Programs: A National Review of Practices and Experience

Dan York, Ph.D., American Council for an Energy-Efficient Economy
Marty Kushler, Ph.D., American Council for an Energy-Efficient Economy
Patti Witte,

Overview of the Evaluations of California's 2004-2005 Efficiency Programs

Nick Hall, Carmen Best, Johna Roth, TecMarket Works
Peter Lai, California Public Utilities Commission
Pete Jacobs, Architectural Engineering
Lori Megdal, Megdal and Associates

Integrating Demand Side Resource Evaluations in Resource Planning – An Industry Turning Point

Daniel M. Violette, Summit Blue Consulting
Rachel Freeman, Summit Blue Consulting, LLC

SESSION SUMMARY:

With more than a decade of delivering energy efficiency programs in some parts of the country, the industry has developed a great deal of experience in evaluating the kWh benefits of energy efficiency programs, and demonstrating that energy efficiency can deliver substantial results. Many utilities across the country currently are faced with a potential need for significant generation and infrastructure investments at a time of uncertainty regarding future carbon regulation and escalating costs for traditional supply resources. Energy efficiency offers a cost-effective solution to delaying or avoiding some investments with its potential to curb energy consumption overall as well as reduce demand during peak hours. This session will focus on how energy efficiency programs are accounting for peak demand benefits, as well as explore potential changes to resource planning processes that could improve how supply-side planners integrate demand-side resources in their planning framework to mitigate costs and risks.

The first paper "Estimating Peak Demand Impacts of Energy Efficiency Programs: A National Review of Practices and Experience,**"** presents results from a national review of current practices for estimating demand impacts from energy efficiency programs. A particular focus of the project was to review a set of existing databases and related technical references to examine reported energy and demand impacts for a set of common energy efficiency measures included in programs. The authors found a surprising lack of actual ex-post measurement of demand savings from energy efficiency programs and that most of the references for estimating demand impacts of energy efficiency measures were based on assumptions about load factors and shapes, not necessarily actual field-measured results.

The second paper, "Overview of the Evaluations of California's 2004-2005 Efficiency Programs" summarizes findings to date from a an ongoing effort to review the evaluations of the over 200 energy efficiency programs that are funded through the California public goods charge (PGC). The

paper presents the evaluation approaches being used to address the California Public Utility Commission's evaluation requirements, as well as overarching findings and recommendations from the process and impact evaluations completed thus far. Studies reviewed in the paper demonstrate that the 75 percent of the kW savings predicted by program implementers are being delivered and that somewhat less than half of the programs are accurately projecting the impacts that they can achieve.

The third paper "Integrating Demand Side Resource (DRS) Evaluations in Resource Planning – An Industry Turning Point" explores the importance of planning approaches that addresses risk management across both supply-side and demand-side resources – including the role that DSR can play in managing resource cost risks – and advocates for a direct incorporation of DSR in resource planning processes. A case study is used to illustrate issues.