SESSION 6A

INDUSTRIAL STRENGTH EVALUATION

Moderator: Iris M. Sulyma, Power Smart, British Columbia Hydro

Cost Effectiveness of Energy Programs Involving Energy Audits – Results from Sweden
Patrik Thollander, Division of Energy Systems, Linköping University
Patrik Rohdin, Division of Energy Systems, Linköping University

Evaluation of Industrial Energy Audits in SME's
Louise Trygg, Linköping University
Patrik Thollander, Linköping University
Göran Broman, Blekinge Institute of Technology

Improving Industrial Energy Efficiency: How Australia Is Addressing Barriers To Change Among the Country's Largest Energy Users
Louise Vickery, Australian Department of Resources, Energy and Tourism

Addressing Data Center Efficiency: Lessons Learned From Process Evaluations of Utility Energy Efficiency Programs
A.J. Howard, Energy Market Innovations, Inc.
Jennifer Holmes, Market Innovations, Inc.

SESSION SUMMARY:

This session will focus on evaluations of energy efficiency initiatives targeting large, medium and small industrial establishments and the role of energy audits and energy savings assessments in achieving energy savings. Nationally and regionally industrial energy consumption generally accounts for a significant portion, often one-third, of total energy consumption. In addition, industrial energy users are often a significant and growing proportion of energy-related greenhouse gas emissions. This session includes process, market and impact evaluations of Swedish, Australian and California programs targeting industrial and other large energy users, such as data centers.

The first two presentations include evaluation of the potential and implemented energy savings and cost effectiveness of two Swedish programs, and detailed analyses of the barriers to energy efficiency, the driving forces for energy efficiency, and issues related to the corporate economic decision to invest in energy efficiency.

The Swedish programs included:

- energy audits in six municipalities targeting small and medium size, non-energy intensive industrial and service-and-sales companies; and
- long term agreements (LTAs) with energy intensive companies.

In the first paper, Patrik Thollander compares the cost effectiveness of the Swedish initiatives with those from similar programs in Finland and Norway. In the second paper, Louise Trygg describes the decision-making context for the six municipalities identifying sources of information about energy efficient measure, barriers to energy efficiency, the driving forces for energy efficiency, the presence of economically profitable measures, allocation of energy costs within the industry, payback periods for energy efficiency measures, and whether or not the company has a long-term energy strategy.

The third presentation by Louise Vickery provides detailed information regarding Australia's Energy Efficiency Opportunities program addressing some 250 corporations, the nation's largest energy users. The program was designed to address organizational and information barriers to energy efficiency and to identify cost-effective energy efficiency opportunities through assessments that improve energy use through producing a greater amount of product for the same level of energy or the same amount of product for reduced energy usage. The assessment framework, evaluation strategy will be presented, as will the results from a Phase 1 early

evaluation and a Phase 2 mid-cycle review and evaluation of the significant energy savings identified and implemented

The fourth presentation by Arthur Howard provides an overview of the unique challenges related to implementation of energy efficiency in large, energy intense, data centers. The process evaluations of two California initiatives provide an in depth picture of the program delivery and its operational efficiency through review of the key actors and their role in decision making, barriers to energy efficient decision-making and issues related to identifying data centers from other market actors, marketing and target marketing in the 'high technology market place'.