

SESSION 3B

INTERNATIONAL DIMENSIONS: EVALUATING MULTIPLE MARKETS & MEASURES

Moderator: Iris M. Sulyma, Power Smart, BC Hydro

PAPERS:

Assessment of White Certificate Schemes and Their Energy Savings Evaluation Methods

Paolo Bertoldi, European Commission DG JRC, Institute for Environmental Sustainability, Ispra, Italy

Silvia Rezessy, Central European University, Budapest Hungary

Developing a Process for Harmonised Bottom-Up Evaluations in European Union Member States

Harry H.J. Vreuls, SenterNovem, The Netherlands

Jean-Sébastien Broc, Ecole des Mines de Nantes, France

Stefan Thomas, Wuppertal Institute for Climate, Environment and Energy, Germany

How Do We Measure Resident's Benefits? Benefits and Costs Through Energy Savings Activities

Tsuyoshi Ueno, Central Research Institute of Electric Power, Tokyo, Japan

Yukio Nakano, Central Research Institute of Electric Power, Tokyo, Japan

SESSION SUMMARY:

This session will focus on emerging evaluation approaches and strategies for initiatives targeting multiple market segments (consumers, commercial, industrial and transportation sectors), multiple markets (countries and/or regions) and/or multiple energy efficiency measures, programs or services. The relationship between form and function, the role of evaluation, the key evaluation elements required, the process of developing frameworks and other insights are very relevant given the emerging need to integrate energy efficiency evaluation with related initiatives such as demand response, climate change and renewable energy.

Paulo Bertoldi addresses an emerging market-based policy instrument, tradable white certificates, to foster energy efficiency improvements within the European Union. He assesses and discusses key design and operational features of the white certificate schemes in Great Britain, Italy & France and schemes emerging in Europe. These schemes are based on quantified energy savings obligations imposed on energy distributors and suppliers, coupled with certification of the energy savings (white certificates) and the possibility to trade certificates. He explains the role of monitoring and evaluation in the certification process and the process for assessing achievement of energy savings goals.

Harry Vreuls provides detailed information regarding the development of the monitoring and evaluation systems for European Union Member States. The emerging system addresses single programs, services and measures, as well as methods for monitoring the overall impact of measures implemented in a country/region, including white certificate schemes. The main elements of the project to develop the harmonised framework are presented, including descriptions of the process for developing the framework, the bottom-up evaluation methods developed, and the plans to develop harmonised default values and benchmarks.

Tsuyoshi Ueno describes an approach to determining which energy savings activities (consumer behaviours) are both effective at decreasing energy consumption and that also maximize the comfort and convenience of consumers. He uses an analytic hierarchy process, a mathematical technique for estimating the relative effectiveness of various factors in a decision making process using pair-wise

comparisons. The model identifies which energy savings activities should be adopted first in terms for four evaluation criteria (convenience, environmental benefit, comfort, and cost) and allows calculation or energy savings potential when combined with pre-existing meter data.