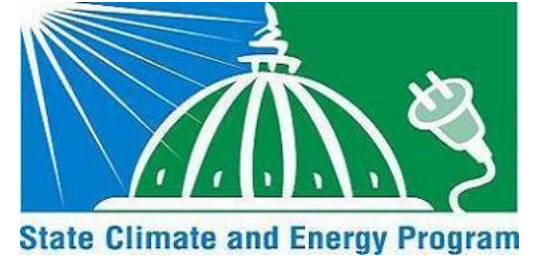


Energy Efficiency

Evaluation Measurement and Verification

Evaluation, Measurement and Verification for Demand Response



US EPA Webinar

introduction and context for our next speakers

April 26, 2011

Steve Schiller

steve@schiller.com

Background

- ▶ Demand Response (DR) – Reduction in electric usage by end use customer(s) from normal consumption patterns in response to change in the price of electricity or in response to explicit instructions to reduce load.
- ▶ DR has grown significantly over the last several decades from its start as discounted rates for large consumers (e.g. industrial facilities) able and willing to shed load on short notice.
- ▶ Now almost all customer classes can participate as distribution utilities offer retail electricity rates that reflect the time-varying nature of electricity costs and utilities (and service providers) offer programs that provide incentives to reduce load at critical times.

EM&V For DR Programs

▶ EM&V

- **Evaluation** – The performance of studies and activities aimed at determining the effects of a **program**
- **Measurement and Verification** – Data collection, monitoring, and analysis associated with the calculation of gross energy and demand savings from **individual sites or projects**.
- **EM&V** – The term “evaluation, measurement, and verification” is frequently seen in evaluation literature. EM&V is a catchall acronym for **determining both program and project impacts**.

▶ EM&V is needed for DR in order to determine:

- Whether individual customers and/or programs achieved the level of savings expected or required
- Lessons learned about what program designs work best and why, and how to improve (or cancel) programs that are not cost-effective

Objectives for Webinar

- ▶ Discuss experience and lessons learned in the U.S. with a wide range of DR programs
- ▶ Provide information useful to those implementing and evaluating DR programs.

Presenters

- ▶ Michael Sullivan, Freeman, Sullivan & Co.
- ▶ Peter Langbein, PJM Interconnection
- ▶ Miriam Goldberg, KEMA