Grid-Scale Energy Storage: Technological Innovations, Applications, and the Emerging Market

Date: July 27th, 2010
Location: Palo Alto
Format: Panel discussion with moderator and 50 selected attendees

Energy storage holds value for the grid by way of improved stabilty, power quality, and reliability of supply. Energy storage is widely considered the holy-grail, or missing link, of the grid, and thanks to recent trends surrounding the proliferation of the smart-grid and renewable energies, demand for grid-scale energy storage is on the rise. Addressing the multiple applications and technologies for grid-scale energy storage, we ask: how do we reach a low-cost, high-efficiency energy storage system and, more far-reaching, how do we close the loop between supply (storage technologies) and demand?

This seminar will bring together energy storage technology companies, renewable energy companies, electricity companies, and investors.

Introduction

- Definition of energy storage; progress of technologies to date.
- What are the most promising emerging technologies?
- Where is the innovation coming from? Where is the funding coming from?

Applications

- *Addressing:* frequency regulation (power-oriented), peak shaving (load-shifting), ancillary services, and etc.
- *Asking:* what is the purpose/benefits to the grid? The economic viability? The applicable technologies? The implementation/grid integration strategies?

Intermittent Renewables

- How does energy storage support the intregration of renewables to the grid (spinning reserve support, transmission curtailment reduction, time shifting)?
- How do applications differ for wind farms vs. solar?
- What are the financial advantages (storage to lower the price of renewables intregration, energy arbitrage, and etc.)?

Comparing Energy Storage Technologies

- On what dimensions are grid-scale energy storage technologies assessed? How do technologies compare in meeting these demands/criteria (energy density, space, life span, reliability, etc.)?
- What technologies are closest to reaching commercialization? Why?
- Which technologies are cost-competitive?
- What technologies are the most environmentally sound? The most socially acceptable? Why?

The Market

- What are the market requirements for energy storage technologies?
- Comparison to international energy storage markets (Europe, Japan, etc.)?
- Market projections

The Big Question

- What regulatory climate will support the emerging energy storage market?

Please contact Kimberly.Schoemaker@agrion.org for any further questions.
Please register directly in the section of the program after creating your profile on www.agrion.org.