



**California Energy Commission
IEPR Staff Workshop**

**Technologies to Support Renewable Integration
(Energy Storage and Automated Demand Response)**

November 16, 2010 – 9:00 a.m.

Hearing Room A

AGENDA

- 9:00-9:10** **Introduction and Opening Comments**
Laurie ten Hope, California Energy Commission
- 9:10-9:40** **Workshop Overview - Energy Storage and Automated Demand Response (Auto-DR)**
Mike Gravely, California Energy Commission
- 9:40-10:00** **Managing the California Grid and Integrating 33% Renewables**
Udi Helman, California Independent System Operator
- 10:00 -10:45** **Results of PIER Research: Research Evaluation of Wind Generation, Solar Generation,
and Storage Impact on the California Grid**
Dave Hawkins, KEMA, Inc.
- 10:45-11:00** **SCE's Approach to Energy Storage**
John Minnicucci, Southern California Edison
- 11:00-11:20** **The Use of Large Scale Pumped Hydro Energy Storage for Renewable Integration and
Renewable Load Shifting**
Doug Divine, Eagle Crest Energy
- 11:20-11:40** **Integrating Large Scale Distributed Energy Resources to Provide the Grid Megawatts of
Energy**
Frank Ramirez, ICE Energy
- 11:40-11:55** **Importance of Energy Storage to California's Renewable Future**
Janice Lin, California Energy Storage Alliance
- 11:55-12:10** **Applying Large Scale Li-Ion Energy Storage Technology to Supporting Renewable
Integration and Grid Services**
Charlie Vartanian, A123 Systems
- 12:10-1:15** **Lunch**

- 1:15-1:45** **Applying Large Scale Energy Storage to Support Grid Operations (Sodium Sulfur Battery Technology and Compressed Air Energy Storage)**
Robert Schainker, Electric Power Research Institute
- 1:45-2:00** **How to integrate Energy Storage and Demand Response into the Wide Area Network Control of the Electric Grid**
Jeff Dagle, Pacific Northwest National Laboratory
- 2:00-2:15** **Integration of Energy Storage and Automated DR onto the SMUD Grid Network**
Jim Parks, Sacramento Municipal Utility District
- 2:15-2:45** **Auto-DR and Renewable Integration**
Mary Ann Peitte, Lawrence Berkeley National Laboratory
- 2:45-3:05** **Auto-DR for Ancillary Services and Integration of Intermittent Renewable Resources: PG&E Pilots**
Albert Chui, Pacific Gas & Electric
- 3:05-3:20** **Demand Response Wholesale market triggers in response to intermittent renewables,**
Jeremy Laundergan, Southern California Edison
- 3:20-4:30** **Public Comments**
Mike Gravely, California Energy Commission
- 4:30-4:45** **Next Steps and Plans for Spring 2011 IEPR Workshop on Energy Storage and Automated DR Policy Recommendations**
Mike Gravely, California Energy Commission
- 4:45-5:00** **Closing Remarks (IEPR Committee and CEC Staff)**
- 5:00** **Adjourn**