



# ENERGY STORAGE SYSTEMS RESEARCH PROGRAM (ESS)



A Department of Energy  
National Laboratory

## 2007 Annual Peer Review

September 27, 2007

San Francisco, California



<b>Welcoming Remarks</b>	Imre Gyuk	US Dept. of Energy
<b>DOE / ESS Program Overview</b> ( <a href="#">View .pdf</a> )	John Boyes	Sandia National Laboratories



## PRESENTATIONS\

### ECONOMICS — BENEFIT STUDIES

Evaluating Value Propositions for Four Modular Electricity Storage Demonstrations in California ( <a href="#">View .pdf</a> )	Jim Eyer (Distributed Utility Assoc.)
Update on Benefit and Cost Comparison of Modular Energy Storage Technologies for Four Viable Value Propositions ( <a href="#">View .pdf</a> )	Susan Schoenung (Longitude 122 West, Inc.)

### ECONOMICS — ENVIRONMENT BENEFITS STUDIES

Emissions from Traditional & Flywheel Plants for Regulation Services ( <a href="#">View .pdf</a> )	Rick Fioravanti (KEMA, Inc.)
--	------------------------------

### UTILITY & COMMERCIAL APPLICATIONS OF ADVANCED ENERGY STORAGE SYSTEMS

Application of Large-Scale Energy Storage Systems in AEP ( <a href="#">View .pdf</a> )	Ali Nourai (American Electric Power)
The Iowa Stored Energy Park ( <a href="#">View .pdf</a> )	Kent Holst (Iowa Stored Energy Park)
Design of the FSS 20 MW Frequency Regulation Plant ( <a href="#">View .pdf</a> )	Rob Rounds (Beacon Power)

### RAIL APPLICATIONS

Long Island Rail Road (LIRR) High-Speed Flywheel Demonstration ( <a href="#">View .pdf</a> )	Guy Sliker (N.Y. Power Authority)
--	-----------------------------------

### INTERNATIONAL ENERGY STORAGE PROGRAMS

DOE(SNL)/CEC Energy Storage Program: FY07 Projects ( <a href="#">View .pdf</a> )	Daniel Borneo (Sandia National Laboratories)
Status Update on the NYSERDA/DOE Joint Energy Storage Initiative Projects ( <a href="#">View .pdf</a> )	Jeff Lamoree (EnerNex)

### POWER ELECTRONICS

STATCOM with Energy Storage to Smooth out Intermittent Power Output of Wind Farms ( <a href="#">View .pdf</a> )	Mesut Baran (North Carolina State Univ.)
Cyber-Physical Systems Distributed Control: The Advanced Electric Power Grid ( <a href="#">View .pdf</a> )	Mariesa Crow (Univ. of Missouri – Rolla)
An SiC Power Converter System – Thermal Management and High Temperature Packaging ( <a href="#">View .pdf</a> )	Timothy Lin (Aegis Technology, Inc.)

## **INNOVATIONS IN ENERGY STORAGE SYSTEMS**

**Evaluation of Lead-Carbon Storage Devices for Utility Applications** ([View .pdf](#))

Enders Dickinson (MeadWestvaco)

**High Voltage Electrochemical Capacitor** ([View .pdf](#))

David Ingersoll (Sandia National Laboratories)

**U.S. Coast Guard National Distress System Performance Optimization using the ACONF System Controller** ([View .pdf](#))

Garth Corey (Sandia National Laboratories)

**Testing and Evaluation of Energy Storage Devices** ([View .pdf](#))

Tom Hund (Sandia National Laboratories)

**Design, Fabrication, and Test of a 5 kWh Flywheel Energy Storage System Utilizing a High Temperature Superconducting Magnetic Bearing – Phase III** ([View .pdf](#))

Phil Johnson (Boeing Phantom Works)

**Lead-acid Batteries for Hybrid Electric Automobiles** ([View .pdf](#))

Pat Moseley (Int'l Lead Zinc Research Organization)