U.S. DEPARTMENT OF ENERGY

Energy Storage & Power Electronics Systems Program
(DOE / ESPE)

Sandia National Laboratories

DOE/ESPE PEER REVIEW MEETING 2008

September 29-30
Washington DC

MEETING HIGHLIGHTS

The FY08 Peer Review Meeting for the DOE Energy Storage and Power Electronics Program (ESPE) was held in Washington DC on Sept. 29-30, 2008. As in past Reviews, current and completed program projects were presented and reviewed by a group of industry professionals.

Dr. Imre Gyuk, ESPE Program Manager, welcomed the recorded attendance of more than 150 leaders and innovators from government, academia and industry; noting the increasing interest in advanced energy storage technologies, systems and associated power electronics.

The 2008 agenda covered a broad range of new and ongoing, state-of-the-art energy storage and power electronics technologies, including updates on the collaborations among DOE/ESPE, CEC in California, and NYSERDA in New York.

The progress and results of 28 projects were presented. John Boyes, ESPE program manager at Sandia National Laboratories, reported on program highlights during the past year:

- Completion of an ionic liquid electrolyte research project; a possible candidate for further investigation has been identified;
- Test results that revealed significant improvement in the lifetime of carbon-enhanced, lead-acid batteries;
- Completion of the Beacon 20 MW flywheel plant design. Beacon has purchased land in Eastern NY, where the company plans to install the first 1 MW facility. Beacon is currently in the permitting process;
- Commissioning of the CEC Palmdale, 450 kW, Supercap Project.
- Selection of a 20 kW, 9 hr VRB backup system for the CEC/SMUD/SPRINT POP site project; and a
- Report from NYPA that the NAS battery became operational at the Long Island bus terminal; part of the joint NYSERDA/DOE project.

Dr. Gyuk announced a significant event in FY08: Power Electronics became a sub-program within the DOE Energy Storage Program, thus creating the DOE ESPE Program (Energy Storage & Power Electronics Program). Dr. Gyuk and Gilbert Bindewald are joint DOE

managers for the Power Electronics sub-program, with support provided by Sandia National Laboratories in New Mexico and Oakridge National Laboratory in Tennessee.

A highlight of the meeting was an update from Brad Roberts, President of the Electricity Storage Association, on the Electricity Advisory Committee (EAC) Energy Storage Subcommittee that he chairs. The EAC is a 30-member panel that counsels DOE on long-range planning and priorities for modernization of the nation's electricity delivery grid.

Roberts commented on the objectives of the Energy Storage Subcommittee:

- Create energy storage recommendations for the EAC report;
- Develop a road map for DOE to meet the requirements of Subtitle D, Energy Storage for Transportation and Electric Power, in EISA 2007; and
- Compile technical input from experts in academia and industry).

Attendees agreed that increased interest in energy storage and power electronics will have greater impact on our nation's grid and energy policies in the near future and that DOE Peer Review 2008 successfully reflected that interest. Many commented that they are looking forward to the 2009 DOE *Electrical Energy Storage and Technologies Applications Conference* (EESAT), to be held in Seattle WA.

The 2008 Peer Review Agenda and all presentations can be viewed in their entirety on the DOE/ESS web site: http://www.sandia.gov/ess/. Information about *EESAT 2009* is available at http://www.sandia.gov/eesat/