EESAT 2007 SESSIONS & TOPICS

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Economics − Business Model

The Energy Storage Business Proposition
– Anthony Price, *Swanbarton Ltd* (UK)

The Declining Significance of Rates
– Charles Koontz, *Integrys Energy Svcs* (US)

Battery Energy Storage Systems for Primary Frequency Regulation
− Daniel Chartouni, *ABB Switzerland* (CH)

Economics − Benefit Studies

Evaluating Value Propositions for Four Modular Electricity Storage Demonstrations in California
– Jim Eyer, *DUA* (US)

Electricity Storage for Capacity-Constrained Markets Under Demand-Side Management Programmes: Management and Revenues
– Lazaros Exarchakos, *Imperial College* (UK)

Update on Benefit and Cost Comparison of Energy Storage Technologies for Four Viable Propositions
– Susan Schoenung, *Longitude 122 West* (US)

Utility & Commercial Applications of Advanced Energy Storage Systems

Performance of AEP's 1.2 MW, Peak Shaving, Energy Storage Unit
– Ali Nourai, *AEP* (US)

Iowa Stored Energy Park
− Kent Holst, *ISEP* (US)

Permanent Load Shifting and UPS Functionality at a Telecommunications POP Site Using the VRB-ESSTM − A Case Study
− John Davis, *VRG Power* (CA)

Design of 20 MW Flywheel-Based Frequency Regulation Plant
− Chet Lyons, *Beacon* (US)

Rail Applications

LIRR Flywheel BESS Demonstration
− Guy Sliker, *NYPA* (US

The ACE^2 System: A Kinetic Energy Storage for Railway Substations
− Marcos LaFoz, *CEDEX* (ES)

Multi-Megawatt Applications

Underground Pumped Hydroelectric Energy Storage Using Aquifer
− Greg Martin, *Univ. Colo. - Boulder* (US)

Analysis of Field Test Results for Stabilization of 30.6 MW Wind Farm with Energy Storage
– Gentaro Koshimizu, *EPD* (JP)

Potential Pumped Hydroelectric Energy Storage Sites in Colorado
– Jonah Levine, *Univ. Colo.-Boulder* (US)

Progress of the 34 MW NAS Battery System for a 51 MW Wind Farm
− Tomio Tamakoshi, *NGK* (JP)

Large Scaled Electricity Storage on Energy Island
− Frits Verheij, *KEMA* (NL)

Renewables & Distributed Energy Applications I

Using Intelligent Storage to Smooth Wind Energy Generation
– Peter Coppin, *CSIRO* (AU)

GROW-DERS (Grid Reliability and Operability with Distributed Generation Using Flexible Storage)
− Frits Verheij, *KEMA* (NL)

Grid Services from Plug-in Hybrid Electric Vehicles: A Key to Economic Viability
− Paul Denholm, *NREL* (US)

Demonstration of Commercial Energy Storage Device Used to Load Shift Residential-Sized Photovoltaic System − Preliminary Results
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Renewables & Distributed Energy Applications II

Integrated WTG, Transportable Compressed Air Energy Storage (T-CAES) System and Desalination Device
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Thermal Analysis of Lithium-Ion Battery Pack for Future Grid and Renewable Energy Storage Applications
– Chris Mi, *Univ. Mich.-Dearborn* (US)

Distributed Energy Storage: Role in Building-Based PV Systems
– Tyson Lawrence, *TIAX* (US)

International Energy Storage Programs

Canadian Electricity Storage Program
– Melanie Chamberland, *NRC* (CA)

The Status of Energy Storage Technologies and Demonstration Projects in Australia
– Tony Vassallo, *Invernergy* (AU)

The Need for Energy Storage in Africa
– P.J. Frampton, *ESKOM* (ZA)

Web-Based Energy Storage Monitoring − 2006-2007 Results
– Doug Dorr, *EPRI* (US)

Status Update on the NYSERDA/DOE Joint Energy Storage Initiative Projects
– Jeff Lamoree, *EnerNex* (US)

Update on ACONF – Where Is It Now? Where Is It Going?
– Garth Corey, *Sandia National Laboratories* (US)

Power Electronics I

STATCOM with Energy Storage System for Wind Power Integration
– Mesut Baran, *North Carolina St. Univ.* (US)

Energy Storage and Power Conditioning System for Clean, On-Site Energy Resources Supporting Grid-Interactive and Micro-Grid Operation
− Leo Casey, *SatCom* (US)

Cyber-Physical Systems Distributed Control: The Advanced Electric Power Grid
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An Sic Power Converter System − Thermal Management and High Temperature
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Power Electronics II

10 kW Silicon Carbide(Sic)-Based Inverter for Renewable Energy Applications
– Roberto Schupbach, *APEI* (US)

Large Area, Silicon Carbide, GTO Thyristor Development
– Ranbir Singh, *Genesic* (US)

Integration of Ultracapacitor (UCAP) with STATCOM for Improved System Fault Performance
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Innovations in Energy Storage Systems I

Electrochemical Capacitor Characterization for Electric Utility Applications
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A 25 MW Pulse Power Modulator Based on SMES Technology
− Rainer Gehring, *Institute for Technical Physics* (DE)

Vanadium Redox Flow Battery Layout for Improved Efficiency
− Martha Schreiber, *Funktionswerkstoffe F&E* (AT)

Third Generation Redox Flow Battery
− Mereille Schreurs, *KEMA* (NL)

Innovations in Energy Storage Systems II

High Power Flywheels with Super Conducting Bearings − Design Considerations and Experiences
− W.R. Canders, *IMAB* (US)

Advances in Energy-Efficient Power Quality and Energy Storage
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Innovations in Energy Storage Systems III

High Power and High Energy Wafer Cell, Nickel Metal Hydride and Li-Ion Batteries for Utility and Transportation Applications
− James Landi, *EEI* (US)

Review of CAES Systems Development and Current Innovations that Could Bring Commercialization to Fruition
− Septimus van der Linden, *Brulin Assoc., Inc.* (US)

Wind Integrated Compressed Air Energy Storage (CAES)
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