

ADVANCES IN DISTRIBUTED RESOURCES (DR) – 2007 A PANEL SESSION SUMMARY

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within the IEEE Energy Development Subcommittee

This session will begin with a brief description of the DG & ES Working Group, including the range of technical interests, types of panel session presentations made, WG membership and potential topics for future panel sessions.

“Status and Outlook of the Energy Storage Market”, by James McDowall of SAFT America, Inc. will cover the current status of conventional fixed-volume batteries like lead-acid and nickel-cadmium, and more advanced technologies such as sodium-sulfur and lithium-based batteries. He will also discuss the two primary types of flow batteries in development, and several other forms of energy storage.

The status of DR represented by Micro-CHP systems in Japan will be described in ***“The Penetration of Micro-CHP in Residential Dwellings in Japan ”*** by Hirohisa Aki of NIAIST/ETRI. This will include a discussion of gas-engine CHP systems and a residential fuel cell system, system efficiencies and tariffs for gas and electricity at the experimental sites.

Progress in interconnection of inverter-based DR technologies on utility network distribution systems will be described by James Bing (New Energy Options, Inc.) and Mohammad Vaziri (Pacific Gas & Electric Co.) in ***“Interconnection of DG to Secondary Network Electricity Distribution Systems: An Evolving Concept”***. The topics range from current tariffs in several states to planned R&D in network protector technology.

Leo Casey (SatCon Corp) and four other authors will present information on the state of the art in power electronics applicable to DG and ES in ***“Advanced Semiconductor Impact on Distributed Generation, Energy Storage and the Utility Grid”***..

“Thermophotovoltaics – a New Concept Evolving in Energy Conversion” will be presented by John Bzura of National Grid USA. This technology involves combustion of a fuel and capture of radiant energy (primarily infrared wavelengths) by specially-developed semiconductors to produce direct-current electricity.

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