

**Dr. Alex Papalexopoulos**  
**President, CEO and Founder of ECCO International, San Francisco, CA,**  
**USA**

**Title**

**“Next Generation Wholesale and Local Energy Market  
Design Structures for Sustainable Development:  
Challenges and Solutions”**

**Abstract**

Policy initiatives worldwide for sustainable development and security of supply coupled with technological developments have created new requirements for power market structures to meet the challenges of our times.

In this presentation I address the organization of the wholesale markets for power and transmission and new market functions taking into account the temporal and stochastic variability of demand and supply, multiple new technologies, environmental restrictions, and dependence on a reliable and secure transmission system. Further, given the emergence of local distributed energy resources close to the edge of the grid, such as demand response, Electric Vehicles, renewable energy generation and storage, the need for the development and implementation of Local Energy Markets at the distribution level is discussed and analyzed. I focus on the challenges of the next generation of power market design structures at wholesale and local level that deal with sustainable development, security of supply and smart grid technologies.