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Title of Abstract:

A Smarter Greener Power Grid

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Abstract (not to exceed 300 words)

Abstract The concept of a “Smart Grid” for the delivery of energy to consumers has emerged in recent years, fueling much discussion, speculation, and controversy as to its definition, structure, content, and technical feasibility. Hand-in-hand with the Smart Grid initiative, societal pressures have driven increasing governmental incentives for technology providers and utility mandates to incorporate significant levels of renewable resources (“Green Power”) in the coming years. These two topics are intimately linked and their success is, ultimately, dependent on the technologies and approach used to implement them. This presentation discusses the definition and characteristics of a Smart Grid, its relationship to Green Energy Resources, the consequences to utilities, and impacts on devices, systems and solutions necessary to support it. Like other utility initiatives, “Smart Grid” means different things to different utilities. The term itself has become abused in the sense that it is “fuzzy”, not having been implemented as a whole, but with many on-going studies and pilot projects at various utilities examining subsets of a Smart Grid. These subsets generally relate to areas of benefit a particular utility perceives as a priority at the time, and can vary, sometimes significantly, in content. This has created an appearance of confusion as to what Smart Grid is and the best avenue for implementation. Rather than a recipe for specific implementations, to me, Smart Grid provides a conceptual framework that defines new criteria for the design and implementation of a reliable power delivery grid. Key Words: Smart Grid, Green Power.

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