

### Plenary Presentation

## Cognitive Power Grid – an intelligent electric energy management system to fuel global information economy

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### Abstract

Information quality power is one of the greatest business opportunities of our time. In an era driven by unprecedented globalization fueled by “knowledge” economy, energy and environment play a crucial role. The challenge is to develop and deliver low-cost clean electrical energy to sustain a rapidly expanding global information economy. The key factors are clean energy sources, reliable and efficient power grid, and energy efficient loads. Grid-level electric energy management is a daunting challenge and a “huge” business opportunity.

This talk will highlight the important issues pertaining to the development of a cognitive power grid fueled by information management on the Internet. An intelligent software engine with Web 3.0 mashup will be presented that is applied to perform grid-level electric energy management..

### Biography

Krishna Shenai is the USTAR professor in Electrical and Computer Engineering at Utah State University in Logan, UT. The Utah Science, Technology, and Research (USTAR) program is a new initiative by the Utah State Legislature and mandates advanced technology development and commercialization for economic development and high-technology job creation in the State of Utah. Dr. Shenai is a well-known international authority on low-power wireless technologies, and high-voltage and smart-power devices and applications. He has authored over 300 peer-reviewed papers, four books and ten book chapters, and is a named inventor in 14 issued US patents. Dr. Shenai is a Fellow of IEEE, a Fellow of AAAS, a Fellow of IETE (India), a Distinguished Lecturer of IEEE Electron Devices Society, a University Scholar of the University of Illinois, and a member of the Yugoslavian National Academy of Engineering.