# IoT and the Electric Grid

IoT Benefits, Challenges, and Government's Role

> Dept. of Commerce IoT Workshop Fostering the Advancement of the Internet of Things

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#### Kenneth W. Tobin, Ph.D. Director / Corporate Research Fellow Electrical and Electronics Systems Research Division





### The Internet-of-Things (IoT) is a Layered Stack of Technology Complexity



Ph: (865) 574-0355, E-mail: tobinkwjr@ornl.gov

# **Energy IoT Increasingly Integrating Grid, Buildings, and Manufacturing**

#### **Grid Visibility**

Ubiquitous sensing and measurement to provide visibility across generation, transmission, distribution, and loads

#### Building Energy Management

Low-cost, retrofit sensors and communications technology for energy management and control for buildings-as-loads

#### Smart Manufacturing

From process measurement to enterprise control for energy efficiency and increased productivity

#### IoT supports renewables integration, microgrid control, power flow, grid stability and resiliency



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# Southeast Grid Collaboration: Demonstration Projects with Industry and Academia



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# AMIE: Partnering with Industry to Accelerate Energy Innovation



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