ACCELERATE ENERGY PRODUCTIVITY 2030

Webinar 2: Smart Grid & Smart Manufacturing

Wednesday, April 20, 2:00 p.m. – 3:30 EST

Register: https://attendee.gotowebinar.com/rt/6105794051578003204

AGENDA

2:00 p.m. **Welcome & Opening Remarks (15 mins.)**
Karen Wayland, Deputy Director, Energy Policy and Systems Analysis, U.S. Department of Energy
Kevin Lucas, Director of Research, Alliance to Save Energy
Deborah Wince-Smith, President and CEO, Council on Competitiveness

2:15 p.m. **Smart Grid Presentation (20 mins.)**
Arun Vedhathiri, Manager, New York Energy Manager, New York Power Authority

2:35 p.m. **Q & A (15 mins.)**

2:50 p.m. **Smart Manufacturing Presentation (20 mins.)**
Spencer Lipp, Chief Engineer and Engineering Manager, Energy California Programs, Lockheed Martin

3:10 p.m. **Q & A (15 mins.)**

3:25 p.m. **Closing Remarks (5 mins.)**
Accelerate Energy Productivity Partners

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OVERVIEW

The Accelerate Energy Productivity 2030 Partners are conducting a series of webinars to examine industry transformations and policy strategies in the context of energy productivity that will inform DOE as they draft the second installment of the Quadrennial Energy Review (QER 1.2). Each webinar will feature presentations from business leaders as well as state and local policymakers, drawing from the broad network of stakeholders who influenced the Partnership's work last year. Speakers and webinar participants alike will examine industry development and market transformation, to identify new and emerging strategies to inform potential policies. The speakers will also highlight "real world" examples of these potential strategies in the context of the six strategy wedges outlined in the *Roadmap.* Below are descriptions of the topics and framing questions for the second webinar on smart grid and smart manufacturing:

- **Topic: Accelerating Energy Productivity through Smart Grid and Smart Manufacturing**

With the increasing availability of technologies and data to inform energy usage and dispatch, the U.S. electric system is at a strategic inflection point. We must carefully plan, invest, and deploy technologies that will ensure safe, reliable, and affordable power for all. While reducing energy use and increasing economic growth are effective strategies for meeting the goal of doubling energy productivity; there is another significant opportunity to improve energy use intensity by modernizing the manufacturing sector to use innovative, effective, and more efficient manufacturing processes. We must look to bolster our manufacturing sector so that these major energy consumers can increase energy productivity in their own operations through smart manufacturing processes, and deliver an added competitive advantage to the organizations that leverage them. Speakers will offer insights and policy prescriptions for both topic themes. Framing topics include:

Smart Grid:

- The electricity generation mix in the United States is currently undergoing a fairly dramatic shift towards more natural gas and variable renewables. What role does energy efficiency play during this transition?
- The electric power sector is the leading source of emissions for a number of major air pollutants, including greenhouse gases (GHG) and sulfur dioxide. Changes in power sector infrastructure and operations could affect emissions throughout the economy. What are some potential pathways to ensure emissions reduction through electricity generation and energy efficiency?
- Smart meter deployments have increased dramatically in the past five years, building a foundation of two-way communication that can be used to integrate distributed energy resources such as energy efficiency. What are some of the technical and regulatory challenges that must be answered to be able to leverage these investments?
- The advent of smart meters and smart grids will greatly increase the amount of operational data that is available

to utilities, but also brings privacy and cybersecurity concerns. What is the best way to compile and provide data to parties that will be then able to build new, value-added products and services for end-users to better manage and control their energy use? How will utilities, commissions, ratepayer advocates, and interested parties address cost-recovery for cybersecurity investments given the sensitive nature of some of the information?

- With the rapid transformation of the electricity sector, utilities and regulators are balancing factors like cost, reliability, environmental performance, and consumer service under new, non-traditional business and regulatory frameworks. How can we best accelerate innovation across the electricity sector while navigating a complex regulatory ecosystem?

Smart Manufacturing:

- Smart Manufacturing was recently identified by private sector and university leaders in the White House's Advanced Manufacturing Partnership 2.0 as one of the highest priority manufacturing technology areas in need of federal investment. How can we further advance investment in smart manufacturing?
- How can sensors and other information and communications technology (ICT) be better integrated to allow industries better control over their processes and their energy management?
- How can we incentivize industrial businesses to adopt energy management systems, transition to advanced manufacturing technologies, and explore new, innovative products that enable energy productivity for customers and suppliers?
- What are some policies or initiatives that can help build the foundation for enabling growth of innovative businesses, such as advanced manufacturing in communities?
- How can local or state governments better support the development of advanced manufacturing ecosystems?
- In what ways can local governments partner with other local and state counterparts to expand available resources in order to attract new businesses that provide energy productivity-enabling products or services?
- Motor-driven systems are identified as the largest electricity end-use consumption category in the manufacturing sector, but savings from motor use can also come from better design of systems and processes. What approaches will both incent investments in new, high-efficiency motors and help facilities to understand how to use their motors in a more productive manner?
- How can we expand workforce training opportunities for careers in advanced manufacturing fields?