

University of Pittsburgh
Pittsburgh, Pennsylvania



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University of Pittsburgh

Area of Expertise: Electric power grid and energy technologies

Major Takeaways: University of Pittsburgh

Event Overview

- The University of Pittsburgh's Center for Energy hosted the U.S. Department of Energy Mission Innovation Workshop on Grid Modernization on Friday, June 24, 2016, at the Energy Innovation Center in Pittsburgh's Hill District. The workshop focused on modernizing the nation's vast and complex electric power delivery system. The keynote address was delivered by Dr. Franklin Orr, Under Secretary for Science and Energy
- Over 70 participants joined the full-day workshop, including representatives from academia, industry, utilities, government, nonprofit, and the private sector

Key Takeaways

- **Current Regional Innovation Ecosystem**
 - University of Pittsburgh's Energy Grid Research and Infrastructure Development (GRID) Institute - The GRID Institute will leverage public and private partnerships with new laboratory space at the Pittsburgh Energy Innovation Center to create a comprehensive solution center for industry, government, and community partners, while advancing research, development, demonstration, and deployment of evolving grid technologies and applications
 - The City of Pittsburgh has a MOU with the Department of Energy to establish Pittsburgh as a leader in 21st Century energy innovation
- **Building a Broader Ecosystem**
 - Representative of the broader regional ecosystem, the Tri-State University Energy Alliance (TrUE Alliance) was recently established between the University of Pittsburgh, Carnegie Mellon University, Case Western Reserve University, and West Virginia University to collaborate on regional energy-related research

Major Takeaways: University of Pittsburgh (continued)

Key Takeaways (continued)

- Opportunities & Priorities
 - The City of Pittsburgh has the opportunity in partnership with the DOE and the University of Pittsburgh to update existing district energy systems, deploy EV infrastructure, and integrate new technologies (e.g. microgrids and renewables)
 - The broader region has opportunities with unconventional oil and gas
- Challenges
 - Ageing grid infrastructure and a changing business model - the evolving role of utilities
 - How the grid can respond to customer demands, isolate disasters (natural or man-made), and integrate renewables
 - Grid modernization from a policy and regulatory perspective
 - Energy storage systems integration

Next Steps

- The Mid-Atlantic Region is well-suited as a hub for clean energy research and development in the area of grid modernization - relevant work is already underway as exemplified by the TrUE Alliance, the MOU between DOE and the City, the Pitt Energy GRID Institute, and the development of the EIC as a center for collaboration between industry, government, academia, and the public sector
- The region presents an opportunity to showcase modern grid technologies, leveraging local and existing assets. Within the Mid-Atlantic alone, clusters of research universities have come together to work on energy specific topics, major utility companies are testing innovative approaches to grid development, and industry partners are investing in the region