

Purdue University (West Lafayette, Indiana)



Purdue President Mitchell Daniels welcoming Under Secretary Lynn Orr and other participants

In Association with
Argonne National
Laboratory

Pankaj Sharma

Managing Director, Energy Center, Discovery Park

Area of Expertise

Sustainable Energy Development

Major Takeaways: Purdue University

Event Overview

- 195 attendees; Midwestern States: IA, IL, IN, MI, MO, MN, OH, WI
- National Labs (ANL, AMES, SNL); Universities (PU, MN, MSU, ND, UIUC)
- Industry (Alcoa, Duke Energy, Energy Systems Network, Navitas, Enginuity Worldwide, GE, MISO, Whirlpool)
- Indiana State Government (Lieutenant Governor; Office of Energy Management; Indiana Geological Survey; Indiana Economic Development Corporation)
- Non-profits (Citizens Energy Group; Battery Innovation Center)
- USDA-ARS; Naval Surface Warfare Center, Crane, IN
- DOE (Office of Under Secretary, AMO)

Format: Key notes and five panels

1. Energy Storage *Plus Student Poster Session
2. Biomass/Synthetic Biology
3. Critical Materials/Advanced Manufacturing
4. Wind Energy/Grid Integration
5. Public Private Partnership



Mark Johnson, DOE Advanced Manufacturing Office and other panelists discussing energy storage challenges

Major Takeaways: Purdue University (continued)

Key Takeaways

- **Current Regional Innovation Ecosystem**
 - The Midwest has very strong research universities, national labs and industries focused on clean energy but there is no coordinated approach at the regional level to exploit abundant renewable resources (e.g. biomass, wind) and develop the talent pool of the future.
- **Building a Broader Ecosystem**
 - Efficient energy generation and utilization has both a regional and national basis. The time has come to address clean energy which is most appropriate for a given geographical area and for which solutions and living laboratories to test and prove the solutions, is best done on a regional basis. In our case, the pertinent region is IA, IL, IN, MI, MO, MN, OH, WI.
- **Opportunities & Priorities**
 - There is a compelling case to be made for a Midwest Regional Clean Energy Center whose scientific/engineering plus entrepreneurial expertise would address the bioeconomy, wind and solar energy, advanced materials and manufacturing, and energy storage technology. A partnership in the Midwest could act as a lens to focus regional activities on robust and internationally relevant solutions in clean energy.
- **Challenges**
 - It is important to speed up transfer from discovery to development to the market, and work with industry partners to define gaps and challenges before the translation process starts.
 - The challenges in carrying out the work under the auspices of a public/private partnership appear to be communication, intellectual property, and at times, differences in culture (i.e., timelines and expectations).
- **Next Steps**
 - Provide resources for each region for planning purposes to respond to future DOE RFPs for Regional Energy Innovation Centers.
 - These resources will allow: (1) a lead organizer of the forum to work with key stakeholders across the region to pull a team together; (2) engage a 501c.3; (3) hold workshops, meetings; (4) set a communication infrastructure (e.g. web site). This money is for planning purposes only and not for R&D.