

U.S. DEPARTMENT OF  
**ENERGY**

Office of  
**ENERGY EFFICIENCY &  
RENEWABLE ENERGY**

# Wind Industry Partnership Summit Project ID #T23

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# FY17-FY18 Wind Office Project Organization

“Enabling Wind Energy Options Nationwide”

Technology Development

Atmosphere to Electrons

Offshore Wind

Distributed Wind

Testing Infrastructure

Standards Support and International  
Engagement

Advanced Components, Reliability, and  
Manufacturing

Market Acceleration & Deployment

Stakeholder Engagement, Workforce  
Development, and Human Use Considerations

Environmental Research

Grid Integration

Regulatory and Siting

Analysis and Modeling (cross-cutting)

# Project Overview

## T23: Wind Industry Partnership Summit

### Project Summary

The 2018 Wind Industry Partnership Summit focused on where wind power industry R&D and technology development needs intersect with the capabilities of DOE national laboratories and other participants in R&D initiated by the DOE Wind Program.

### Project Objective & Impact

- Identify critical technology R&D needs from industry
- Inform industry about DOE WETO-funded research and market-ready innovations
- Engage with industry for feedback on DOE WETO-funded technologies that are at mid- to lower technology readiness levels
- Identify partnerships with industry to realize commercialization pathways for promising technologies

### Project Attributes

#### Project Principal Investigator(s)

Katherine Dykes, NREL  
Lara Aston, PNNL  
Brian Naughton, SNL

#### DOE Lead

Alexsandra Lemke

#### Project Partners/Subs

Pacific Northwest National Laboratory  
National Renewable Energy Laboratory  
Sandia National Laboratory

#### Project Duration

1 year

# Technical Merit and Relevance

- The Summit focused on a subset of the Wind Energy Technologies Office R&D program specifically around technology development focused on the following areas:
  - Turbine Technology Innovation and Extreme-Scale Turbines
  - Wind Plant of the Future
  - Grid-Enhancing Wind Power Plants
- The Summit provided the opportunity to bring together wind industry executives, and representatives from DOE and the national laboratories, to provide feedback, network, and engage in substantive discussions about how federally funded research can address the industry's R&D needs and challenges.



2018 **Wind Industry Partnership Summit**

# Approach and Methodology

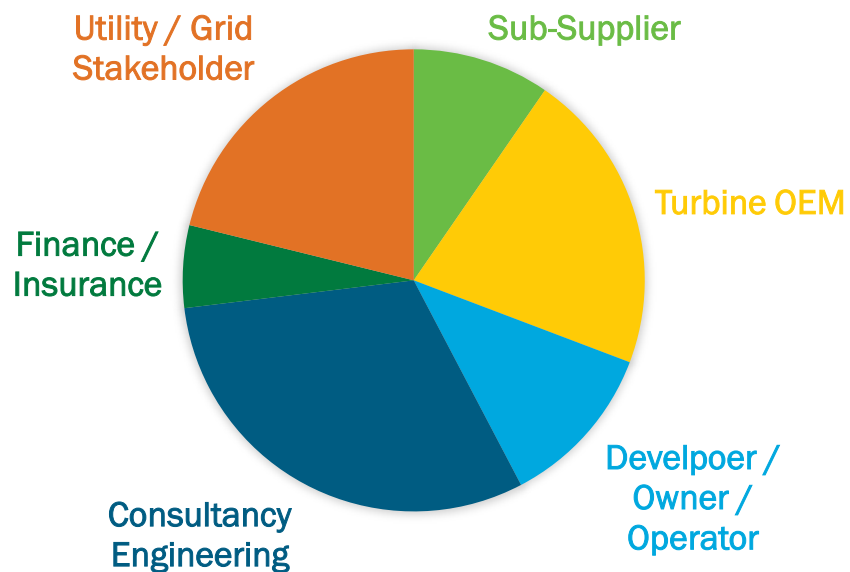
- Used the 2017 Survey and Wind Vision to identify session topics
  - Turbine Technology Innovation and Extreme-Scale Turbines
  - The SMART Wind Plant
  - Grid-enhancing Wind Power Plants
- Sessions followed an interactive format
  - Industry representative presentations on R&D needs in each technology area
  - National laboratory representatives presented lab capabilities directly responsive to the R&D needs
  - DOE WETO technology managers provided their impressions of the content shared by industry and laboratory speakers
- Each session of presentations was followed by a facilitated discussion that all Summit attendees participated in



# Accomplishments and Progress

- Invited participants included wind industry professionals from across the value chain with experience in addressing the short and long-term challenges of wind energy development and operations.
- The final attendee list included over fifty representatives from major wind turbine suppliers and manufacturers, developers, owner/operators, consultants, financiers and insurers, and utility / system operation stakeholders
- All national laboratories affiliated with DOE WETO had representation either as panel speakers, audience members or both. This was meant to ensure that the breadth of wind energy technology research under the DOE WETO program was well-represented

WIPS ATTENDANCE BY  
STAKEHOLDER CATEGORY



# Accomplishments and Progress

## Key takeaways from each Session

- **Session 1: Turbine Technology Innovation and Extreme-Scale Turbines**
  - For both land-based and offshore applications, scaling will continue if market conditions favor further scaling.
  - As we look towards extreme-scale turbines, there are research, testing and technology development questions that are unresolved where DOE can play a role
- **Session 2: Wind Plant of the Future**
  - Wind plants are huge assets and investors are very conservative. General research is too broad
  - and risky for individual companies to take on such that there is a significant opportunity for DOE-led research
  - and technology transfer through partnerships
- **Session 3: Grid-Enhancing Wind Power Plants**
  - Integration of large amounts of wind (and solar) into the electric system depends on the design of the system itself – in terms of both technology and market design.
  - As we move towards lots of wind and renewables it's not about fitting them into the system, it's about “integrating energy systems together” (including transportation, heating, etc.) and framing all these activities within the larger ongoing energy transformation across the country.

# Communication, Coordination, and Commercialization

- All attendees who took the Summit survey responded they were “interested in more” meetings in this format
- Many participants suggested a similar workshop should focus on offshore wind
- Several participants commented that smaller, focused workshops on specific topics would also be beneficial (not in place of but addition to)

