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Wednesday, May 30

Welcome/Industry Status

Welcome, D. Todd Griffith, *Sandia National Laboratories* **(Verbal Presentation)**
DOE Wind Program Update, Mark Higgins, *U.S. Department of Energy*
Washington Perspective on Wind Energy, Jeff Bingaman, *U.S. Senator, N.M.* **(Verbal Presentation)**
Sandia Energy, Climate & Infrastructure Security Programs Overview, Rick Stulen, *Sandia National Laboratories*
Wind Industry Status, Daniel Laird, *Sandia National Laboratories* (Not Yet Available)
Trends in Turbine and Blade Technology – 2012, D. Todd Griffith, *Sandia National Laboratories*

Turbine Manufacturers

Wind Blade Technologies to Enable New Paradigms, Wendy Lin, *General Electric*
Alstom Perspective on Offshore Rotors, Loads and Controls, Albert Fisas, *Alstom* (Not Yet Available)
Gamesa: Global Technology, Everlasting Energy, Enrique Garcia, *Gamesa*

Blade Manufacturers

DOE Advanced Manufacturing Initiative – Blades, TPI Update, Steve Nolet, *TPI Composites*
Wind Turbine Blade Effects on Turbine Design and Lifecycle Cost, Carl LaFrance, *Molded Fiber Glass Companies (MFG)*

Blade Testing

Blade Testing at the National Wind Technology Center, Dave Snowberg and Mike Desmond, *National Renewable Energy Laboratory*
Rotor Blade Testing and International Standards, Derek Berry, *National Renewable Energy Laboratory* (Not Yet Available)
Blade Testing at WMC, Maaik Borst, *Knowledge Centre Wind Turbine Materials and Constructions (WMC)*

Rotor Testing

DOE/Sandia Scaled Wind Farm Technology (SWiFT) Facility at TTU, Jon White, *Sandia National Laboratories*
The Role of Turbulence on Wind Energy: From Single Blade to Wind Array, Luciano Castillo, *Texas Tech University*

Thursday, May 31: Track I

Material Suppliers and Testing

The SNL/MSU/DOE Fatigue Program: Recent Trends, John Mandell, *Montana State University*
Blade Materials Fatigue Testing and Modelling, Rogier Nijjsen, *Knowledge Centre Wind Turbine Materials and Constructions (WMC)*
Recent Developments in Materials and Processes for Blades at Hexcel, Chris Shennan, *Hexcel*
Advanced Materials Solutions for Infusing Carbon Fibers & Thick Composite Parts, Jay Bhatia, *BASF*
RodPack: A New Form of Aligned Fiber Reinforcement for Wind Blade Spar Caps, Joel Gruhn, *NEPTCO*
Recent Core Materials Developments/Applications for Blades at Milliken, Fred Stoll, *Milliken & Company*
Polyurethane in Composites, Usama Younes, *Bayer Material Science*
Ultrablade® Fabrics – Reducing the Cost of Wind Energy, Mala Nagarajan, *Owens Corning*
Wind Blade Manufacturing Innovation, Juan Serrano, *PPG*

Manufacturing and Inspection

Research Advances for Wind Blade Manufacturing, Frank Peters, *Iowa State University*
Rapid Flaw Detection in Wind Turbine Blade Assemblies Using Phased Array Ultrasonics, Dennis Roach, *Sandia National Laboratories*
Incorporating the Effects of Defects with a Probabilistic Reliability Risk Assessment Framework, Trey Riddle, *Montana State University*
Embedded Fiber Optic Sensing for Blade Defect Detection during Manufacture and Fatigue Testing
Aaron Kaplan, *LUNA Technologies*
Recent Developments/Applications in Blade Inspection, John Newman, *Laser Technology Inc.* (Not Yet Available)

Thursday, May 31: Track II

Blade Research and Innovative Design

Change in Failure Type When Wind Turbine Blades Scale-up, Find Jensen, *Bladena*
Potential and Limits for Sweep- and Laminate-Induced Torsion Coupling in Blades, Kyle Wetzel, *Wetzel Engineering*
Design Optimization of Bend-Twist Coupled Wind Turbine Blades, Carlo Bottasso, *Politecnico di Milano*
Design Challenges for Bend-Twist Coupled Blades for Wind Turbines, and Application to Standard Blades,
Mark Capellaro, *University of Stuttgart*
Enhanced Test-Based Design Approach to Improving Reliability of Wind Turbine Blades, Ken Lee, *Wetzel Engineering*
Development of Trailing Edge Flap Technology at DTU Wind, Helge Madsen, *DTU Wind*
Update on Sandia Active-Aero Rotor Field Test, Jon Berg, *Sandia National Laboratories*
Sandia 100-m Blade Research Update, D. Todd Griffith, *Sandia National Laboratories*
Design of Thick Airfoils for Wind Turbines, Francesco Grasso, *Energy research Centre of the Netherlands (ECN)*
Insights into Rotor Performance and Loads through Three-dimensional CFD, Case van Dam, *UC-Davis*
Frequency-Domain System Identification for Linear Time-periodic Systems with Application to Wind Turbine Dynamics and CSLDV, Matt Allen, *University of Wisconsin*

Wind Turbine Design and Analysis Codes

Overview of Sandia Wind Turbine Blade Analysis, Brian Resor, *Sandia National Laboratories*
VABS: Going Beyond Linear Elastic Cross-Sectional Analysis, Wenbin Yu, *Utah State*
FAST and AeroDyn Enhancements, Khanh Nguyen, *National Renewable Energy Laboratory*

Friday, June 1

Radar

Studying Methods for Mitigating Wind Turbine Effects on Radars, Dave Minster, *Sandia National Laboratories* (Not Yet Available)

Water Power

MHK-Specific Hydrofoil and Rotor Design, Rich Jepsen, *Sandia National Laboratories*

Distributed Wind

Current and Planned Distributed Wind Technology R&D at the NWTC, Rick Damiani, *National Renewable Energy Laboratory*

Rotor Design: Offshore

Vertical-Axis Wind Turbines Revisited: A Sandia Perspective, Matt Barone, *Sandia National Laboratories*

Reliability and Standards

Continuous Reliability Enhancement for Wind (CREW), Alistair Ogilvie, *Sandia National Laboratories*
Blade Reliability Collaborative (BRC) Overview, Josh Paquette, *Sandia National Laboratories*