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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 Nijssen, 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