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Day 1, June 17, 2009:

Reliability: Impacts across the Spectrum

- 1) *Welcome and Purposeful Criteria for this Workshop*, Roger Hill, Sandia National Laboratories (Verbal Address)
- 2) *A Video Message from the Chairman of The Senate Energy and Natural Resources Committee*, Jeff Bingaman, US Senator, NM
- 3) *Creating a Culture of Reliability*, Megan McCluer, US Department of Energy (Verbal Address)
- 4) *North American Wind Research and Training Center*, Jim Morgan, Mesalands Community College (Verbal Address)
- 5) **(Keynote Address)** *Reliability and the Future of Wind Energy*, Jim Walker, Past President American Wind Energy Association

Operator Approaches to Managing the Costs of Unreliability

- 6) *Wind Turbine Operations: Approach to Managing the Cost of Unreliability*, Manny Sanchez, NextEra Energy Resources
- 7) *Reliability Factors - Iberdrola Renewables*, Kevin Devlin, Iberdrola Renewables
- 8) *Reliability Management: Get the Basics Right*, Antonio Coutinho, Horizon Wind Energy
- 9) *Managing WTG Unreliability Costs through Failure Prediction and Proactive Maintenance*, Mike Smith, enXco Service Corporation
- 10) *Reliability Observations and the AWEA O&M Working Group*, John Dunlop, American Wind Energy Association

Luncheon Address

- 11) Arnie Baker, Sandia National Laboratories (Verbal Address)

Wind Turbines in Today's Environment

- 12) *Reliability of GE's 1.5 MW Turbine A Component View*, John Murphy, General Electric Energy
- 13) *Turbine Condition Monitoring*, Mikkel Maehlsen, Siemens Wind Power
- 14) *Reliability: Our Vision*, Miguel Gonzalez-Posada, Gamesa Wind US

Components are the Source of Turbine Reliability

- 15) *Manufacturing Blades for Turbine Reliability*, Gary Kanaby, Knight & Carver Wind Group
- 16) *Large Blade Testing Facilities in the U.S.*, Rahul Yarala, Massachusetts Wind Technology Testing Center
- 17) *Reliability & Availability of Wind Turbine Electrical & Electronic Components*, Peter Tavner, Durham University
- 18) *Permanent Magnet Generators: Design and Testing for Reliability*, Jonathan Lynch, Northern Power Systems
- 19) *Online Load Monitoring for Gear Boxes*, Eckart Bodenbach, Winergy Drive Systems Corporation

Day 2, June 18, 2009:

Gearbox Reliability

- 1) *NREL Gearbox Reliability Collaborative*, Francisco Oyague, National Renewable Energy Laboratory
- 2) *Advanced Analysis Approaches for Wind Turbine Drivetrain Design*, Ashley Crowther, Romax Technology
- 3) *Challenges of the Design, Manufacturing and Validation of Large Gearboxes used in Wind Turbine Applications*, Anthony Giammarise, General Electric Transportation
- 4) *Gear and Bearing Micropitting*, Sandy Butterfield, National Renewable Energy Laboratory

Condition Monitoring

- 5) *Data Fusion Applied to Health Monitoring of Dynamic Mechanical Components*, Paula Dempsey, NASA Glenn Research Center
- 6) *Overview of GRC Condition Monitoring*, Shuangwen (Shawn) Sheng, National Renewable Energy Laboratory
- 7) *Two Keys of Reliability Initiatives - Clean Oil and Oil Condition*, Justin Stover, CC Jensen, Inc.
- 8) *Condition Monitoring and Wind Turbine Blades*, Mark Rumsey, Sandia National Laboratories

Blade Reliability

- 9) *Wind Turbine Blades: Building Reliability*, Steve Nolet, TPI Composites, Inc.
- 10) *Improved Wind Turbine Blade Reliability*, Doug Cairns, Montana State University
- 11) *Methodology for Assessing the Reliability of Nondestructive Inspections on Wind Turbine Blades*, Dennis Roach, Sandia National Laboratories
- 12) *Designing Blades As They Are Really Manufactured*, Kyle Wetzels, Wetzels Engineering

Reliability Analysis and Data Collection

- 13) *Reliability Data Field Study in the Reliawind Project*, Michael Wilkinson, Garrad Hassan & Partners Ltd.
- 14) *Gearbox Reliability Collaborative Database*, Jim Johnson, National Renewable Energy Laboratory
- 15) *National Wind Plant Reliability Database & Analysis Program*, Valerie Peters, Sandia National Laboratories
- 16) *The Value of Reliability Data - A Look Back... A View of the Future*, Sal DellaVilla, Strategic Power Systems, Inc.

View from the Field: Perspectives Panel, Closing Discussion

- 17) *Digging Down for Reliability*, Larry Barr, enXco Service Corporation
- 18) *Reliability in the Field: A Consultant's Perspective*, Robert Poore, DNV Global Energy Concepts Inc.
- 19) *Reliability Considerations*, Eric White, AWS Truewind
- 20) *Design for Reliability: Economic Optimization*, Ben Bell, Garrad Hassan America