



TEXAS TECH UNIVERSITY
National Wind Institute

Wednesday, April 22, 2015
3:30 p.m. to 4:30 p.m.
Civil Engineering Room 209
Reception to follow

The McDonald-Mehta Lecture Series Presents:

**National Wind Technology Center:
35 Years of Innovation Leading the Way to a Clean Energy Future**

Brian S. Smith

Director

National Wind Technology Center, National Renewable Energy Laboratory

Abstract: The Department of Energy (DOE) National Wind Technology Center (NWTC) at the National Renewable Energy Laboratory (NREL) is at the forefront of energy innovation. For more than three decades, NREL researchers have built unparalleled expertise in renewable energy technologies while supporting the nation's vision that wind and water can provide clean, reliable, and cost-effective electricity. Just south of Boulder, Colorado, the NWTC is nestled at the base of the Rocky Mountain foothills. The 305-acre site experiences diverse and vigorous wind patterns – more than 100 miles per hour – making it an ideal setting for researching and testing the reliability and performance of wind turbines. The NWTC comprises the necessary infrastructure, highly experienced staff, and state-of-the-art equipment needed to provide its partners and stakeholders with a full spectrum of R&D capabilities to develop everything at one location – from small residential wind turbines and components to utility-scale land-based and offshore wind and water power technologies.

Through 35 years of innovation, the NWTC is leading the way to increase the reliability and performance of wind technologies, greatly reducing the cost of wind energy and contributing to record-breaking industry growth. The center's impact is industry-wide, ranging from the creation of award-winning components to helping partners develop the nation's most commercially successful renewable energy technologies. Working with its partners, the NWTC will play a pivotal role in implementing the roadmap for the DOE Wind Vision: A New Era for Wind Power in the United States that lays out a pathway forward for wind energy to supply the U.S. with 10 percent of the country's electricity by 2020, 20 percent by 2030 and 35 percent by 2050.

Short Biography of Speaker: Mr. Brian Smith is Center Director of the National Wind Technology Center (NWTC) at the National Renewable Energy Laboratory (NREL). The NWTC is the nation's premier wind energy technology research facility that advances the development of innovative land-based and offshore wind & marine hydrokinetic energy technologies through research, development, deployment and demonstration. In this role, he manages the NWTC's efforts to improve performance, lower costs, and accelerate deployment of wind & water power technologies. Brian has worked at NREL since 1988, first as a test engineer and then as project leader for advanced wind technology development and field verification partnerships with industry. He managed the DOE Wind Turbine Research and DOE-EPRI Wind Turbine Verification Program activities at NREL since their inception in the early 1990's, activities that helped reinvigorate the development and deployment of innovative small and utility-scale wind turbine technology and power plants in the U.S. Brian served as NREL's Laboratory Wind and Water Power Program Manager from 2002 – 2014 and was responsible for managing the laboratory's commitments to the DOE Wind and Water Program Technologies Office. He actively participates in developing national and international research and deployment strategies that are leading the way to a clean energy future. He is the U.S. Alternate Member and Vice Chair of the Executive Committee for the International Energy Agency Implementing Agreement for Wind

Energy Systems RD&D and serves on the Advisory Board for the European Union Technology Platform for Wind Energy (TPWind) and the National Wind Institute at Texas Tech University. He is well-versed in many aspects of utility-scale and distributed wind turbine research, development, deployment, and integration into electric systems, and is applying this experience to the growing offshore wind energy and marine hydrokinetic technologies industries as well as hydropower. Before joining NREL, Brian worked as Chief Engineer and Operations & Maintenance Manager for several wind companies in California from 1984-1988. He has a Bachelor of Science degree in Manufacturing & Management Engineering from the University of Vermont (1980) and a Master of Science degree in Mechanical Engineering from the University of Massachusetts-Amherst (1983).