Research and Capabilities at the National Wind Technology Center

The National Renewable Energy Laboratory’s (NREL) National Wind Technology Center (NWTC), the nation’s premier wind energy technology research facility, fosters innovative wind energy technologies for land-based and offshore wind through its research and testing facilities and extends these capabilities to marine hydrokinetic water power. Dr. Fort Felker will present an overview of these exciting research areas in the context of increasing worldwide demand for wind power.

ABOUT THE SPEAKER

Prior to becoming director of the National Wind Technology Center in 2009, Dr. Fort Felker was the co-founder and vice president of Winglet Technology LLC, a company that commercialized his patented design of “elliptical winglets” for business aircraft. Elliptical winglets reduce drag and fuel consumption, which in turn improved the range and takeoff performance of aircraft. Before his 6-year stint as an entrepreneur, Felker was an engineering analyst at Lawrence Livermore National Laboratory where he developed the underlying theory and computational modeling for the hypersonic flow about re-entry vehicles undergoing extreme maneuvers. From 1994-1996, Felker worked in senior engineering positions at Kenetech Windpower. As manager of engineering modeling, he was responsible for developing wind turbine engineering analysis tools. Later as director of engineering analysis and test, he played a key role in the development of the KVS-45 wind turbine and led a team of engineers and technicians in the online bookies bonuses testing of large wind turbine systems. His early experience includes 9 years with NASA Ames Research Center and 6 years with the U.S. Army Research and Technology Labs where he worked on rotorcraft analysis and testing. Dr. Felker holds one patent and is the author of 29 publications.

Dr. Felker’s presentation is co-sponsored by the Virginia Tech Center for Renewable Energy and Aerodynamic Testing (CREATE). Established in the fall of 2012, CREATE brings together faculty interested in wind energy who possess expertise in related technical areas. CREATE is designed to be interdisciplinary and is coordinated with Virginia Tech’s Institute for Critical Technology and Applied Science.

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