

Michael D. Zuteck

Legal Relevant Experience

(includes Depositions, Expert Witness work, and Root Cause Analysis efforts that were resolved before dispute)

Mr. Zuteck has provided field failure examination and analysis of blade problems including edgewise vibrations, panel buckling failure, fatigue failure, surface cracking, structural cracking, web debonding, lightning, tower strike, spar/shell debonding, root integrity failure, and outer blade oil incursion / degeneration. This work covers a wide range of modern blade types and sizes, and provides background on the difficulties encountered with current blades. Wind arbitration support has included both deposition and live expert witness testimony, and outside wind, to litigation support for a fatal helicopter crash.

Broader Wind Turbine Experience

Mr. Zuteck has pursued rotor research and design as an independent consultant in the field of wind energy since 1977. He proposed to Sandia the concept of a sweep twist blade design, provided the initial study analysis of engineering feasibility, was the lead designer for the effort to reduce this design to practice, helped guide build by Knight & Carver, and verification atmospheric and fatigue testing. He also provided key design guidance and analysis for the Sandia 9m research blades including the CX-100, TX-100, and flatback BSDS blades fabricated by TPI Composites, and also supported subsequent testing of these blades. He supplied the initial structural design concept and analysis for a variable diameter extensible blade. These build projects are all within this decade.

Earlier in his career, Mr. Zuteck had key technical responsibility for rotor system design in many projects which include: two NASA research rotor systems, many commercial rotor designs with thousands of blades produced, the DOE/NASA/GE 400' diameter multi-megawatt Mod-5A design study, and the Westinghouse 142' dia., 600 kW. turbines. He served as structural consultant on the SERI advanced airfoil composite blades, and was co-recipient of the 1990 American Wind Energy Association Technical Achievement Award for that work. He is the originator of the airfoil tower concept that received study both here and abroad. He provided blade designs for both the AOC and AWT NREL supported wind turbines, led the design of an innovative flap control retro-fit for the Westinghouse turbine, and was a contributor on the ERS and NPS blade designs.