

SAND2011-6522
Unlimited Release
Printed

DOE/SNL-TTU Scaled Wind Farm Technology Facility: Research Opportunities for Study of Turbine-Turbine Interaction

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Abstract

The proposed DOE/Sandia Scaled Wind Farm Technology Facility (SWiFT) hosted by Texas Tech University at Reese Technology Center in Lubbock, TX, will provide a facility for experimental study of turbine-turbine interaction and complex wind farm aerodynamics. This document surveys the current status of wind turbine wake and turbine-turbine interaction research, identifying knowledge and data gaps that the proposed test site can potentially fill. A number of turbine layouts is proposed, allowing for up to ten turbines at the site.