



Wind Energy R&D Collaboration between NIRE and NREL

Cooperative Research and Development Final Report

CRADA Number: CRD-11-437

NREL Technical Contact: Patrick Moriarty

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In accordance with Requirements set forth in Article XI.A(3) of the CRADA document, this document is the final CRADA report, including a list of Subject Inventions, to be forwarded to the Office of Science and Technical Information as part of the commitment to the public to demonstrate results of federally funded research.

Parties to the Agreement: Texas Tech University

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CRADA Title: Wind Energy R&D Collaboration between NIRE and NREL

Joint Work Statement Funding Table Showing DOE Commitment:

Estimated Costs	NREL Shared Resources
Year 1	\$ 20,000.00
TOTALS	\$ 20,000.00

Abstract of CRADA Work:

This work includes, but is not limited to, research and development of joint technology development and certification efforts in the wind power sector; providing access to commercial wind farm and federal facilities to enhance R&D; identification of workforce development best practices. This work will be done at Contractor and Participant facilities.

Summary of Research Results:

This CRADA was used to host a graduate student from Texas Tech University at the National Wind Technology Center. During his visit, the student investigated scaling laws that were adopted for the DeepCwind project for testing three different floating wind systems at 1/50 scale in a wave tank under combined wind and wave loading. The scaling approach adopted was verified through FAST, an aero-hydro-servo-elasto dynamic modeling tool, by comparing the consistency of simulation results between model and full scale. The Froude scaling approach does not maintain proper Reynolds number scaling and the implications of this issue were discussed.

Subject Inventions Listing: None

Report Date: 11/20/14

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