SCALED WIND FARM TECHNOLOGY (SWiFT)

R&D PROJECT

INDUSTRY PARTNERS:

> Texas Tech University
> National Wind Institute
> Wind Science and Engineering Center (WiSE)
> Group NIRE
> Sandia National Laboratories
> Department of Energy
> National Instruments
> Vestas
> ABB

PROJECT TERM:

> Commissioned July 9, 2013

INDUSTRY PROBLEM:

> Wind plant underperformance.
> Power loss and damage caused by turbine—turbine interaction.
> Rotor technology deficiency.
> Lack of national open-source research asset to advance simulation capabilities.
> A cost-efficient wind farm size for which research can be directly scaled to larger, more costly and time-consuming sizes.

SOLUTION:

> Enhances rapid, cost-efficient testing and development of transformative wind energy technology.
> Improves the validity of aero-dynamic, aero-elastic, and aero-acoustic simulations used to develop innovative technologies.
> Enables rapid, cost-efficient testing and development of transformative wind energy technology.
> Allows the university, federal and private partners to investigate new rotor designs and concepts; study complex wake flows; and improve wind plant reliability.

*Information referenced from sandia.gov*