

## Benefits

For our customer, benefits include:

- No wind turbine installation costs
- No maintenance effort or cost
- No end of lifetime disposal costs
- Dedicated Project Coordinator
- Simple, boilerplate agreements:
  - NDAs
  - Demonstration agreements
  - Service agreements
  - Research agreements

*For Industry Partners and Researchers that are interested in demonstrating products on the wind turbines please contact our Faculty Director, for more information.*



NorthWind 100kW WT located on the CWRU campus

## Contact Us

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## Wind Energy Research and Commercialization (WERC) Center

**Wind Turbines as  
Research Instruments**



Vestas V27 225kW WT located at Sopko site

## The WERC Center



Nordex N54 1.0MW WT located at Sopko site

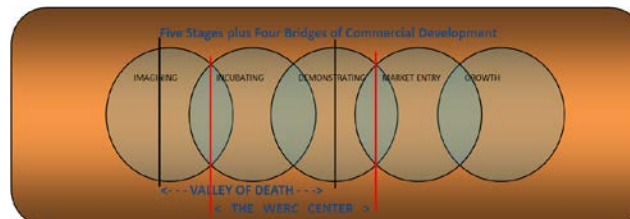
### The WERC Center

The WERC Center is a recognized Center of Excellence that combines the critical expertise of Case Western Reserve faculty with the opportunity to test and demonstrate new technologies in 'right sized' wind turbines, be it community scale, intermediate scale, or utility scale. It is our belief that 'wind turbines as research instruments' will provide for-profit and not-for-profit organizations alike with a platform for the development of wind power supply chain products.

### The Need

With 46,919 MW of wind power capacity installed as of the end of 2011<sup>†</sup> and over 8,300 MW currently under construction in the U.S., companies large and small see opportunities for expanding into the wind energy market. In order to develop new innovations that can be approved for use in turbines, industry needs to test and demonstrate products on working turbines. By providing the necessary facilities for collaboration, The Wind Energy Research and Commercialization (WERC) Center at Case Western Reserve University can help facilitate industry growth in the wind energy product market.

<sup>†</sup>([www.awea.org/learnabout/industry\\_stats](http://www.awea.org/learnabout/industry_stats))



New Product Development stages and their relationship to the WERC Center

### Facilities

The WERC Center facilities include:

- A. Natural Power ZephIR
  - LiDAR wind measurement system
- B. NPS NorthWind 100
  - 100kW direct drive
  - 37m tower
  - 21m rotor
  - stall controlled
- C. Vestas V-27
  - 225kW gearbox drive
  - 30m tower
  - 27m rotor
  - pitch controlled
- D. Nordex N-54
  - 1.0MW gearbox drive
  - 70m tower
  - 54m rotor
  - stall controlled

The CWRU campus is located in University Circle in Cleveland, OH and the Sopko site is located 1.5 miles from Lake Erie in Euclid, OH