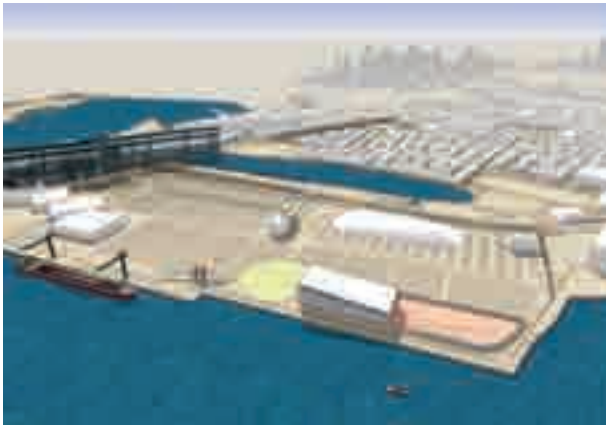


Massachusetts-NREL Wind Technology Testing Center

The Massachusetts Clean Energy Center is partnering with the U.S. Department of Energy's National Renewable Energy Laboratory to develop a world class large wind turbine blade testing center in Boston.

The Wind Technology Testing Center (WTTC) will offer a full suite of certification tests for turbine blades up to 90m in length. WTTC will also offer the latest wind turbine blade testing and prototype development methodologies in order to help the wind industry deploy the next generation of onshore and offshore wind turbine technologies. NREL is providing the technical expertise and testing hardware for WTTC under its Cooperative Research and Development



Test center site layout showing proximity to Boston and potential acreage for expansion

Agreement with the Massachusetts Technology Collaborative.

WTTC is uniquely positioned on an existing deep water port (all large blades can be shipped via water to this site) and near interstate highways. In addition, WTTC is close to research and academic centers in Boston and only 15 minutes from Boston Logan International Airport.

SPECIFICATIONS*

Load Capacity	Maximum static bending moment 84-Mega Newton meter (MNm)
Blade Length	Up to 90-m blades dependent on test and specification
Blade Displacement	32-m maximum horizontal tip displacement 21-m peak-to-peak vertical tip displacement
Mounting Plates	5-m in diameter with center-to-center distance of 12 meters
Overhead Cranes	2 independent 50 and 30 ton bridge cranes
Blade Mounting Height	4.6 meters from floor to blade root center
Static Testing	84MNm max static root bending moment
	Test to ultimate failure
	Up to 9 electrical winches to apply test loads
	Bending moment tracking
	Strain distribution
Dynamic Testing	NREL's patented resonant test system technology
	24-hour, fully-monitored fatigue testing
	21-m tip-to-tip fatigue test tip displacement

* Information subject to modification and refinements as facility design details are being finalized.



View from outside the large front door showing a horizontal static test

Capabilities*

- Two (provisions built-in for three) stands and 80 tons overhead bridge crane capacity
- Full suite of static and fatigue tests per IEC 61400-23 standard
- Blade material testing
- Dual axis static or fatigue testing
- Lightning protection testing
- R&D testing, quality testing, tooling inspection
- Prototype development and blade repair capabilities
- Research and development partnerships
- Hands-on workforce training
- Strong commitment to client intellectual property protection

* Information subject to modification and refinements as facility design details are being finalized.



Cross-sectional view showing interior and foundation sub-structure

For more information, contact:
Rahul Yarala
508.870.0312 x 1440
yarala@masstech.org
www.masstech.org/wttc