



**NORTH CAROLINA**  
Wind Working Group

**NCWWG**

The North Carolina Wind Working Group is comprised of people statewide who are interested in or have existing experience with wind energy. We are citizens; engineers; scientists; and other technical professionals representing private industry, academia, environmental and energy government agencies, and others, who collectively strive to advance responsible wind energy development in North Carolina.

In line with our goals, the NCWWG prepared this information sheet as an educational tool for the general public. Additional goals of the NCWWG are to 1) develop a clear understanding of citizens' attitudes to wind energy, and 2) to generate interest leading to **responsible** wind energy development.

# Energetic Winds

## Harnessing Wind for Energy in the North Carolina Mountains

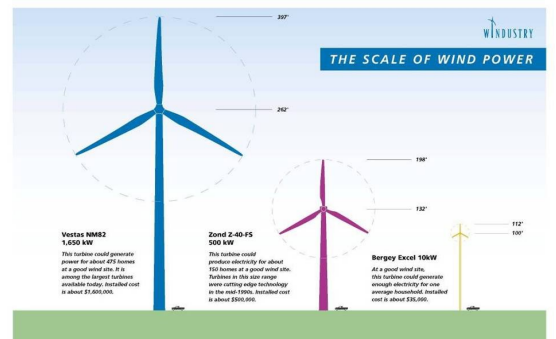
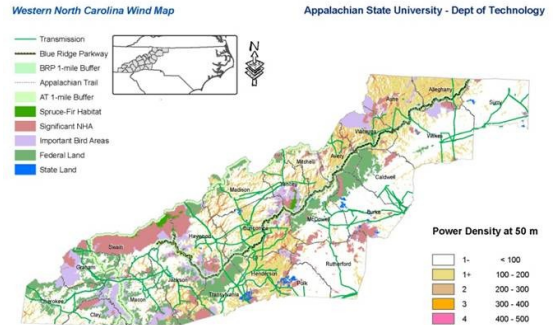
### Studies agree...our mountains create energy-producing winds

Government agencies, universities, and non-profit groups all concluded that the western North Carolina mountains have the resources and incentives to responsibly develop wind energy balancing economics, environmental impacts, and creating jobs. In 2007, Appalachian State University's Energy Center identified 768 megawatts (MW) after applying environmental and viewshed exclusion zones, 50-acre minimum lot size, and 5-mile proximity to existing transmission lines.

Ever watch the clouds move without a breeze on your face? Generally, the 'best wind' is about 150 feet above the ground and there are three different size turbines:

- **Small wind:** <100 kilowatts—power a single home or small farm—100 feet tall.
- **Intermediate or Community wind:** 100 kilowatts to 1 megawatt—power 150 homes or large farm—200 feet tall.
- **Utility-scale wind:** 1 to 5 megawatts—wind farms—power 500 homes—400 feet tall.

Small and Community wind turbines exist in NC... TN and WV have Utility-scale turbines.



**Want to know more...**

- www.windpoweringamerica.gov
- www.wind.appstate.edu
- www.ncsc.ncsu.edu
- www.windustry.org
- www1.eere.energy.gov/windandhydro/
- www.cleanenergy.org

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### NC Legislature advancing coastal communities but mountains in limbo

**Responsible development of a wind turbine requires knowing the possible environmental impacts.** The common impact concerns include noise, visual, bats and birds, land value, and shadow flicker.

In 2008 the General Assembly commissioned a study of coastal winds. In July 2009, UNC-CH published a comprehensive analysis that supports and identifies suitable locations for coastal wind development.

Currently, the Mountain Ridge Protection Act (commonly called the Ridge Law) is **informally interpreted to prohibit** Community and Utility-scale turbines along NC mountain ridges. Because of the ambiguity of the Ridge Law with regard to turbines, many mountain counties have ordinances outlining suitable wind energy development.

In Spring 2009, bills were introduced into the NC Senate and House (SB1068, HB809) to establish appropriate environmental review of wind

energy developments at the coast and mountains including substantial **local** approval authority and clarifying the Ridge Law.

The NC Senate passed SB1068 limiting turbine heights to 100 feet along mountain ridges; thereby eliminating the ability for private landowners and local communities to responsibly develop Community and Utility-scale turbines and removing local decision-making. The NC House is slated to discuss SB1068 and vote during their upcoming short session in May 2010.

**GO SEE FOR YOURSELF...IN JUNE 2009 A COMMUNITY SCALE TURBINE WAS INSTALLED ON THE ASU CAMPUS...CALL 828.262.7332 FOR A TOUR.**