

## Lewis County's Wind Towers

Located in Lewis County primarily on the Tug Hill Plateau, the Maple Ridge Wind Farm is nearing completion. Constant lake-effect winds and the wide open farmland of Lewis County make the Tug Hill region an ideal place for New York's largest wind energy project.

This \$380 million dollar infra-structure project has been beneficial to Lewis County in many ways; providing new jobs, resulting in road development and offering Pilot payments (in lieu of taxes) to be shared among schools, towns and the County. Along with the welcome influx of construction workers, a less obvious, but real benefit has been a lessening of pressure on generational families to subdivide the family farm to make ends meet.

Along with the economic benefits to the county the Wind Towers still allow us to maintain our premier outdoor recreation activities such as skiing, snowmobiling, hunting, fishing, ATV and horseback riding, while at the same time, keeping our strong agricultural land base and heritage.

Maple Ridge Wind Farm is operated by Horizon Wind Energy and PPM Energy. The land that the Wind Towers are located on is owned by Lewis County residents through lease agreements with the Maple Ridge Wind Farm. The average landowner/farmer receives a base price per Wind Tower each year, as do some neighbors of the turbines.

While Maple Ridge Wind Farm involves 21,000 acres, the Wind Towers themselves use less than one percent of the total acreage. The entire project covers an approximately 12 by 3 mile stretch through the Towns of Martinsburg, Lowville and Harrisburg.

Many of the Wind Towers placed on family farms are actually providing an alternative commodity for Lewis County beyond milk, which is currently the largest agricultural commodity produced in the county, followed by maple syrup and wood pulp.

By the fall of 2006, all 195 Wind Towers will be completed and operational making Maple Ridge Wind Farm the largest wind tower project east of the Mississippi River.

A Wind Tower, sometimes called a Wind Turbine, is made up of a tower, the nacelle (the machine housed atop the tower), and the rotor. The weight of the nacelle and the rotor is 75 tons. It cost approximately 2.8 million to build one Wind Tower.

Each Wind Tower is 260 feet tall, with a rotor blade length of 130 feet. The total height is 390 feet for each Tower. The span across is approximately 260 feet. Each blade weighs 7 metric tons and is made from a wood interior coated with fiberglass.

The rotor blade speed is 14 RPM (revolutions per minute) which translates to 1200 RPM's at the generator. The blade will produce electricity when the wind is blowing at about 8-10 miles per hour and will shut down when the wind is higher than 42 miles per hour.

As you drive by the Wind Farm you will see that some Wind Towers are not turning. This is because at any one time 10 Towers are under daily scheduled maintenance.

Each Wind Tower produces enough power for 560 homes. Maple Ridge Wind Farm will produce enough power, on average, for 125,000 homes or to put it in North Country terms, enough electricity to completely supply all of the electrical energy needs for Lewis, Jefferson and St. Lawrence Counties, including all the industries, schools and hospitals in the three-county area.

This is clean, renewable energy and will save on the emission of carbon dioxide, nitrogen oxide (smog) and sulfur dioxide (acid rain).

The American Wind Energy Association estimates that 1 MW of wind generation capacity is the equivalent of 1 square mile of new forest, in terms of offsetting or displacing carbon dioxide from conventional generating sources. The Maple Ridge Wind Farm will produce 321 MW which is equivalent to 205,440 acres of new forest or equal to 3.4% of Adirondack Park.

Where does all this power go? The Maple Ridge Wind Farm power goes into the New York State energy grid through a substation located near Rector Road in the Town of Martinsburg. It is then piped through a 230kV line to a substation on the Wetmore Road in Glenfield 10.3 miles away. This line is attached to the main 230kV National Grid bulk transmission line that extends across NYS to the East Coast, from Boston to New York City and all cities and towns in between.

The Maple Ridge Wind Farm can provide 2% of NYS's residential power needs.

For more information on the Maple Ridge Wind Farm go to [www.mapleridgewind.com](http://www.mapleridgewind.com)