

Wind Power Promises and Predictions Gone Awry

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by Jack Sullivan

The predictions and promises made by wind developers for Northern New York in 2005-2007 can now be analyzed in the light of a number of wind projects that have been in operation for 3 or more years.

I have scrutinized a number of news articles, press releases, and meeting minutes from the above period on wind power. Developer promises have come to pass in nearly none of the cases.

Most of the wind plant statistics I have quoted refer to the 106.5 MW capacity Chateaugay project. (All are verifiable). I use Chateaugay because it is in Franklin County and is the largest of the four area wind plants. The other three -- Clinton, Ellenburgh, and Altona -- have virtually identical outputs.

John Quirke of Noble Power said that local wind projects should average 30-35% of their listed capacity. In 2010, however, the Chateaugay wind plant only averaged 20.6%. The predicted value was exaggerated 58% over actual. According to Public Service Commission Report #09E-0497, if transmission losses and wind project electric use are subtracted, the wind projects only returned about 10% of their advertised capacity to consumers.

Noble's Mark Lyons said the Chateaugay project would produce enough electricity to power 33,000 homes. The actual output of 192,000 MWh in 2010 would power fewer than 18,000 homes, again a significant exaggeration over estimate. There is a huge caveat in these figures, since Chateaugay had 1,222 hours of no output (that's more than 50 days). Since this down time is unpredictable, Chateaugay can supply reliable electricity to ZERO homes. The low average value of NNY wind speeds coupled with a very high degree of variability means Northern NY is NOT suitable for economically viable nor dependable industrial wind installations.

In hyping a tentative 70 turbine project for Malone, Noble's Mark Lyons predicted it would create up to 45 jobs. This sounds like an exaggeration since the 195 turbines at Tug Hill created less than 40 jobs. The job creation aspect of wind projects is also often over-inflated. A Dept. of Energy document tells of a loan guarantee to First Wind for \$117 M for a project to create 10 jobs. That's nearly \$12M per job.

All of Noble's presenters claimed that wind would produce cheap electricity since the fuel is free. The reality? Chateaugay's electricity cost of \$38 MWh is more than 20% higher than the cost of power from the FDR Seaway hydro plant. Maybe wind power should be touted as "not so cheap electricity". The sale of electricity in Chateaugay will not be sufficient to pay for the turbines before they are worn out!!

Chuck Hinckley said “there is no evidence of property devaluation near large wind turbines”. In fact, there are a number of well done professional studies that have found significant property devaluation near wind turbines. Studies done in Texas and Wisconsin are among the best. Some local realtors avoid listing properties near turbines because they are hard to sell.

Dan Boyd, Noble’s project manager, stated on several occasions that wind power could reduce our dependence on foreign oil. Any such effect is laughingly small. The entire 2010 energy production at the Chateaugay wind plant is equivalent to a mere 17 minutes of imported oil. Since oil and electricity generally serve different uses, the effect is negligible. To produce 25% of imported oil’s energy would take approx. ½ million turbines occupying 30+ million acres (5 Adirondack Parks). An impossible dream.

All of Noble’s spokespersons claimed that free and clean windpower would combat global warming. No one mentioned the huge carbon emissions debt created when building a wind project.

An in-depth study by the internationally respected Pacific Research Institute found that a typical project must operate for 7 years at full capacity before it pays back all the emissions produced in manufacture and construction. Since our local wind plants operate at about 20% capacity, it would take 30+ years to become emission free. Not bad for machinery that the manufacturer (GE) says will last 20 yrs.

Then there’s the mercury problem. Through cement use, wind projects have released enough airborne mercury to render most of the fish in the Adirondacks inedible.

Mark Lyons and Chuck Hinckley insisted that Noble would pay its fair share of taxes. Yet the PILOT agreement with Franklin County has most homeowners paying 10 times the tax rate that Noble does.

In the PILOT agreement with Clinton County IDA, Noble offered to pay a bonus of \$1000/MW every time the annual capacity factor of any of their projects exceeded 35%. The problem? No NY wind project has ever exceeded a 35% annual c.f. Probably none east of the Mississippi has ever done so. Did Noble know this? If so, it was a con.

Lyons insisted that all the land around turbines could have the same use it could have had before they were installed. Not quite. If a turbine had to be sited say 1500’ from a home for health and safety reasons, then future homes could be built no closer than 1500’ to existing turbines. Thus, each turbine would exclude 160+ acres from home building.

Lyons and others claimed that 1&1/2 times the tower height was a safe setback from roads, trails and other areas frequented by people. Basic physics, however, shows that debris from blades at normal operating speeds can fly up to 1000’ far more than 1&1/2 tower heights. The runaway turbine that self-destructed in Altona in 2009 could theoretically throw debris up to 1640’. 1&1/2 tower height setbacks are woefully inadequate, actually downright dangerous.

Lyons and Hinckley maintained that noise was not a problem and the sound emitted by turbines was “no louder than a refrigerator”. Neighbors soon found the turbines at times much louder than a refrigerator. Medical experts are just learning that sound undetectable to the human ear (infrasound) is causing serious health problems. This is known as Wind Turbine Syndrome(WTS). These problems have been diagnosed in hundreds of people worldwide who live near wind turbines. This has led the prestigious French Societe de Medicine to recommend 2 km. (1.24mi.) between turbines and all houses.

Lyons said their turbines only turned at 20 RPM's therefore they were little threat to birds. A little math shows that the tip speed of a 20 RPM 240' diameter rotor is nearly 180 mph. -- certainly fast enough to do in most birds!

One has to wonder if the huge discrepancy between what the wind developers promised and what ultimately transpired is due to ignorance of a fledgling company that did not do its homework or the result of a concerted deceptive propaganda campaign designed to dupe a naïve and trusting rural populace?

Jack Sullivan is a member of the Malone Town Council. An earlier version of this article appeared in the Malone Telegram on April 19, 2011.