

# Why Wind Power is Wrong for New Hampshire

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# Wind Power Issues

- Vulnerability to ice storms, common in the northeast
- Lightning and hurricane force high mountain winds
- Wind turbines have serious health effects
- Wind turbines will negatively affect tourism, our #2 industry
- Wind turbines devalue property
- Wind turbines affect weather radar and aviation providing false alarms
- Wind has proven to be undependable, often not the when needed the most during extreme cold and heat. Inefficient back up energy increases costs and CO2 production over more efficient natural gas plants without wind
- Wind would drive up the cost of energy dramatically as it did in Europe, hurting the poor and elderly on fixed incomes
- To limit costs, wind farms are poorly maintained and have shortened lifetimes, with no budget for replacement/repair
- Rising costs of energy is bad for the economy driving jobs away. In Europe this has caused Spain, Germany and soon the UK to stop subsidies as prices and unemployment skyrocketed

# Mt Washington Study

FAQ: Why Doesn't the Observatory use Wind Power?

Several years ago a lengthy study was conducted on Mt Washington evaluating the potential to harness wind power. The study concluded that the frequent icing of equipment and the strength and gustiness of the wind at this location was so severe that wind energy would not be a practical or cost effective alternative.

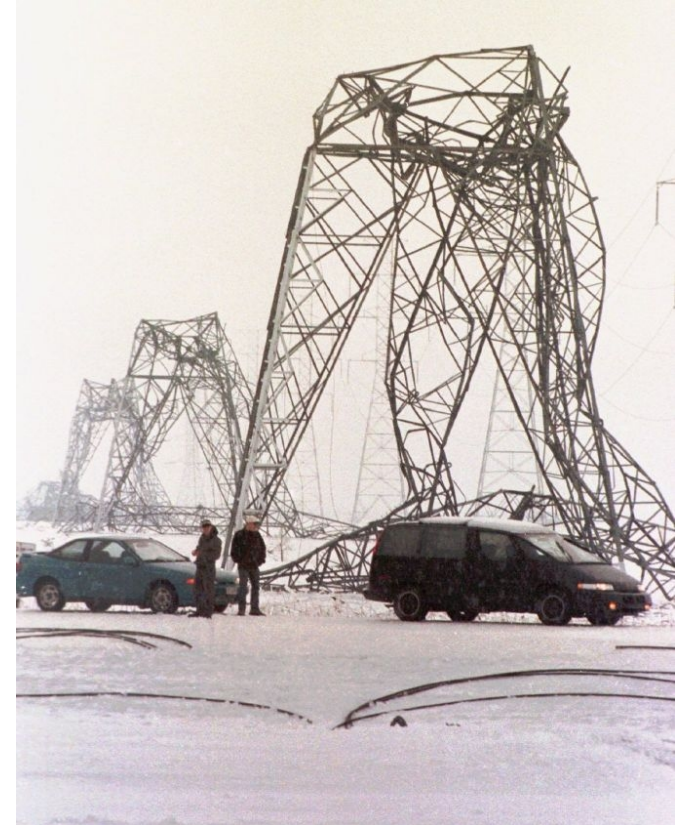
- Fires and blade damage from lightning strikes and extreme winds, are a much higher probability at higher elevations
  - Mt Washington averages 16 thunderstorm days per year. A lightning strike on an unprotected blade can lead to temperature increases of up to 30,000 degrees Celsius, and result in an explosive expansion of the air within the blades
  - Mt Washington frequently gets winds exceeding hurricane force and wind gusts have reached 231 mph.



Scotland wind damage

# Icing and Ice Storms

- Major ice storms occur on average every 7 years in the northeast. Ice damage can be very severe to power lines and power poles and turbines.
  - The devastating 1998 ice storm in northern New England and Quebec brought as much as 8.2 inches of ice, left 300,000 people shivering in the dark for a month. Thirty people died in Canada and another 17 in the United States.
  - The storm of 2008 left as many as 1.7 million NH customers without power.
- Heavy ice could lead to major damage to and even the collapse of wind turbines. In Canada's 1998 ice storm, heavy duty towers collapsed under the weight of ice.



# Health Impacts

- In Canada, Carmen Krogh, a retired Alberta pharmacist and a group of volunteers surveyed residents in areas near wind farms. Of 76 people who responded to their informal survey, 53 reported at least one health complaint. All across the US, lawsuits have been filed against the wind farms because of these health issues.
- An epidemiology study conducted by World Health Organization demonstrated disturbance by noise and sleep disturbance by noise increased the risk of depression 40%, and 100% respectively. In addition to visual burdens wind turbines create noise pollution which can cause annoyance, stress and sleep disturbance. In light of these statistics it is expected that people may suffer adverse health effects from visual and noise impacts of wind turbines.

# Tourism

- Tourism is New Hampshire's second-largest industry. The Outdoor Foundation reports tourism supports 53,000 jobs, generates \$261 million in annual state tax revenue and produces nearly \$4 billion annually in retail sales and services.
- State parks benefit tourism - *"In a recent survey the Division of Travel and Tourism learned that the main activities associated with New Hampshire were outdoor activities with 90% of them being recreational activities that take part in New Hampshire State Parks. Of those surveyed, 70% agreed that New Hampshire has great state and national parks...provide exceptional opportunities for both residents and visitors travelling from all corners of the globe to enjoy what New Hampshire has to offer whether they are seeking active outdoor recreation, relaxation, or just **the natural beauty of our quintessential New England landscape**.* -Lori Harnois, Director, NH Division of Travel and Tourism Development
- Plans to dot France with wind farms are facing fierce opposition from critics worried they will blight a landscape that has helped make the country the world's top tourist destination. ...opponents are urging the government to tread carefully so as not to damage France's thousands of kilometers of stunningly beautiful landscapes.

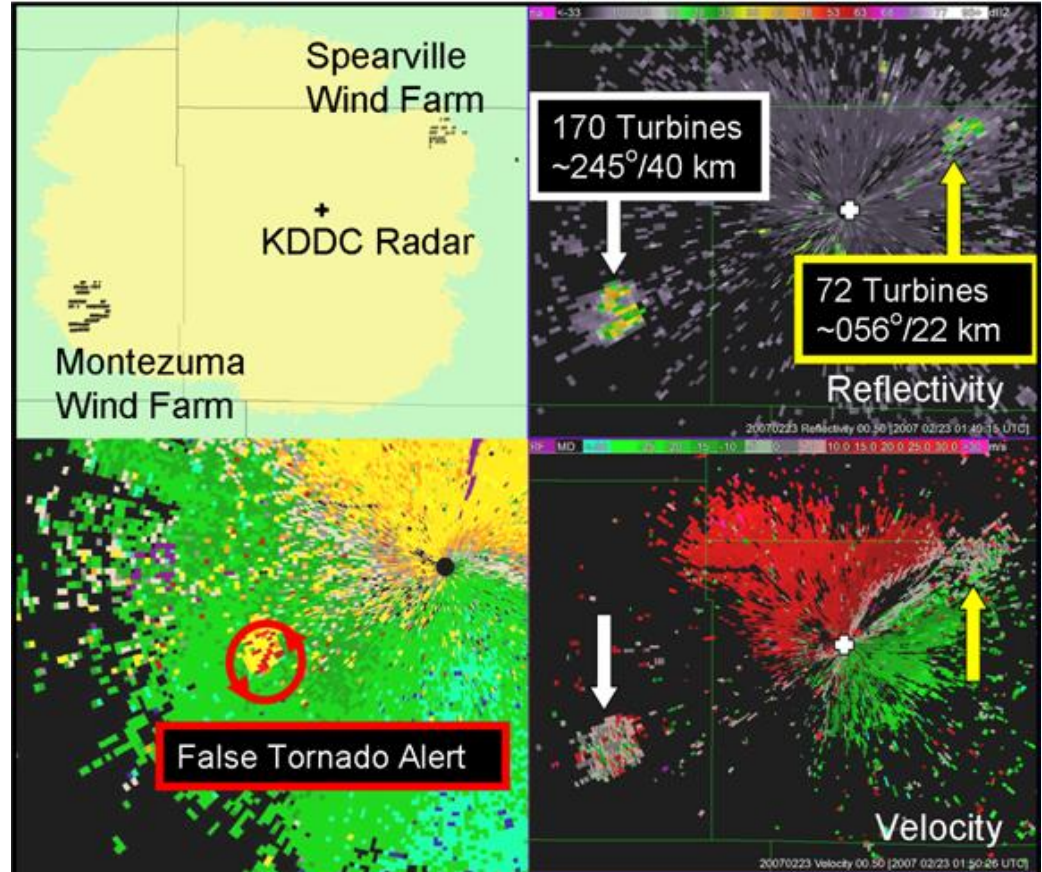
# Property Devaluation

- Though proponents of wind pay well for university studies that say wind turbines enhance property value, there is concrete evidence to the contrary.
- In a wind impact study in Dodge and Fond Du Lac Counties in Wisconsin, large turbines (389 feet high) using a literature study, an opinion survey of realtors and sales studies determined that sales were less than outside the areas, and prices were lower. Land values were decreased from 13% to 47% with an average of 30%.



# Wind Farms Affect Radar

- The NWS office in Burlington, Vermont has shown how wind farms provide clutter that can trigger alarms that forces the FAA to delay or reroute planes. NOAA has an [FAQ](#) on this issue. This confusion causes expensive aircraft re-routing and excess fuel consumption. Boston Center in Nashua could be affected.



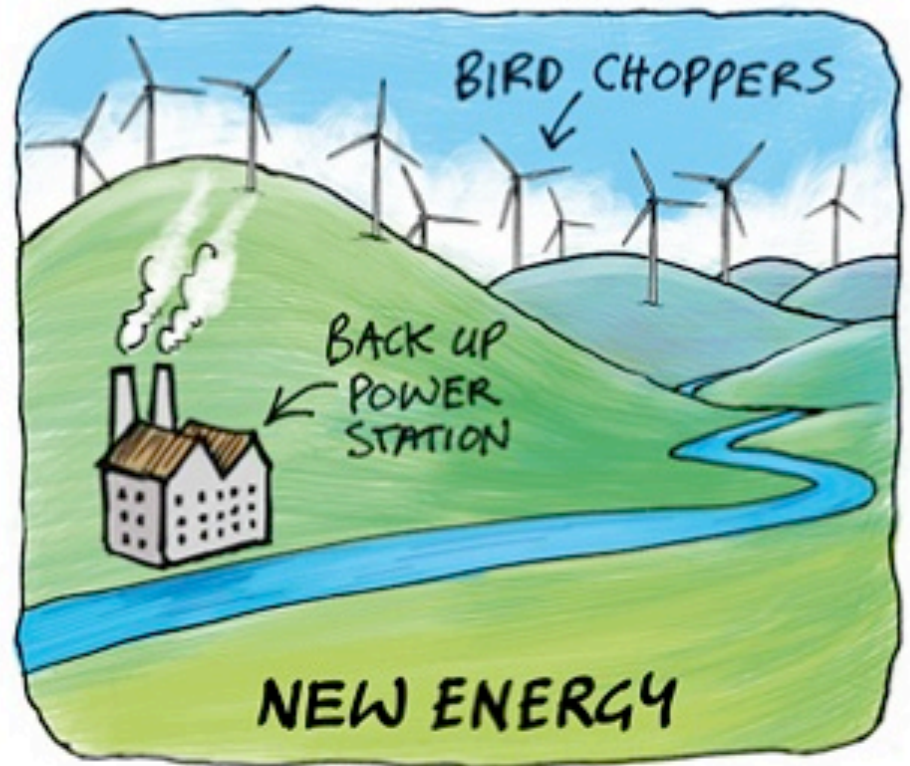
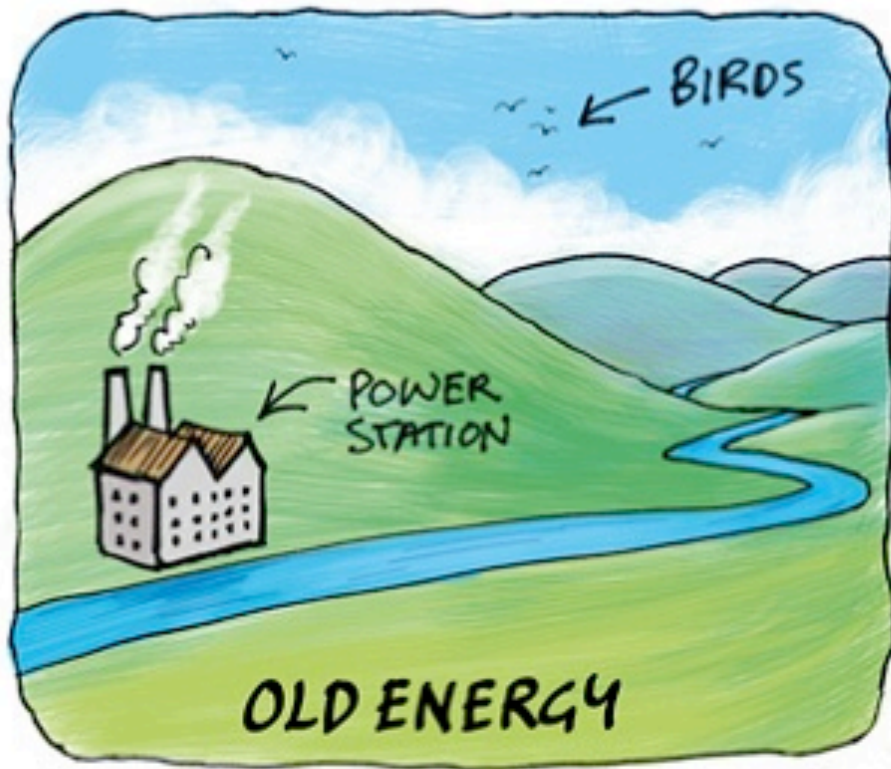


# Bird/Bat Kill

- According to an estimate published in the Wildlife Society Bulletin in March, almost 600,000 birds are killed by wind farms in America each year, including over 80,000 raptors such as hawks and falcons and eagles (Wildlife Society). Endangered and protected species are included. The Obama administration has given the wind industry a pass on bird kill. In its own documents supporting the rule, the US Department of the Interior states: "large soaring birds, specifically raptors, are especially vulnerable to colliding with wind turbines (Barrios and Rodriguez 2004, Kuvlesky et al. 2007)." It also states that it does not know how to solve that problem.
- In New Hampshire winter is peak viewing time for bald eagles along the Merrimack, if they don't fly into the state's ever-growing number of windmills first. A Union Leader [editorial](#) wonders how many will be left 30 years from now if windmills keep popping up along New Hampshire's ridgelines.
- Quietly, bats die, as their lungs are inverted by the negative pressures generated behind the 170 mile-per-hour spinning blades. A new study from the University of Colorado, Denver, estimates that 600,000 bats were killed by wind turbines last year alone – could be as high as 900,000. Bats feed on insects that would otherwise destroy crops, and it pollinates as it goes about its nightly tasks.

# Wind is Undependable

- When you need it most, wind is often not available or at best intermittent requiring ready back up fossil fuel sources running in inefficient modes.
  - Strongest winds at wind turbine levels are at night when energy demand is less
  - Frigid arctic air masses often cause winds to go calm.
    - In 2009, Black Bear Lake in Maine reached a state all-time record low of -50F with calm winds.
    - In December 2010, when the UK had the second coldest December since the Little Ice Age in 1659, wind produced less than 0.5% of energy needs (when 20% was promised)
    - The same wind power die down in west Texas was observed in a cold outbreak causing brownouts in Dallas and Houston.
  - In heat waves, stagnant air means little wind.
- This December after celebrating the big wind storm in Germany, the wind died and over a week the country had to rely on nuclear and fossil for electricity



**'GREENING' THE LAND**

# Wind is Expensive

- A Heritage study found that swapping one megawatt-hour (MWh) of electricity from coal or natural gas combined-cycle generation to onshore wind drives the cost up from about \$79 to \$177 per MWh. Offshore wind is worse at \$218 per MWh.
- Heritage analyzed a generic RES that starts at 3 percent of total power generation in 2012 and rises by 1.5 percent per year. They found it would destroy 1 million jobs by 2020, when the standard reaches 15 percent. ***The average family would pay \$2,400 more per year.***

# Improper Maintenance And Security

- In Florida, the *Desert Valley Star* reported in January 2009 that FPL/NER operates 60 wind turbines—and reportedly 40% were “malfunctioning, in disrepair, or need of maintenance.”
- *Windtech International* after a survey of 75 wind farm operators in the U.S. in 2008 found that 60% of turbines may be behind in critical maintenance
- Palm Springs keeps turbines more than ½ mile from highways and residences because of the risk of flying broken blade debris from poorly maintained wind farms.
- Renewables UK, an industry trade association, has admitted to 1,500 wind turbine accidents/incidents in the UK alone during the past five years, the [London Telegraph](#) reported. Those included 300 injuries and four deaths.

# Wind is bad for the economy

- In Spain, 2.2 jobs were lost for every green job created and only 1 of 10 green jobs was permanent. In Italy 3.4 jobs were lost for every temporary green job, Spain ceased subsidization, but the damage had been done. Industry relocated and unemployment reached 27.5%
- In the UK 12 million people are said to be in energy poverty. Many pensioners have had to choose between heating and eating. UK Prime Minister David Cameron has publicly promised to 'roll back' green taxes - *"We've got to get rid of all this green crap."* 280,000 have died from cold and 10,000 from heat. EU has told UK to stop subsidies for renewables
- Even in rock-solid Germany, up to 15% of the populace is now believed to be in "fuel poverty." Some 600,000 low-income Germans were cut off by their power companies. As a result, Germany is building 24 coal fired plants and reinstating some nuclear to provide the back up to the underperforming wind and solar. Blackouts and brownouts are an increased risk.

# The EU Walks Back from 'Green'

- The European Union is on the verge of rolling back much of its climate agenda, even as the United States is moving full speed ahead. “It is becoming obvious that Europe’s unilateral climate policy, the whole green agenda of the last 20 years, has turned into an unmitigated fiasco. Even EU leaders are beginning to accept reality.”
- These green bureaucrats will be replaced later this year by a new set of commissioners who almost certainly will be less green and more concerned about Europe’s economic future and competitiveness. The chances of the green lobby to push through any new binding renewables or climate targets are near zero.
- A new ComRes/ITV poll has revealed that half of those polled disagree, or ‘don’t know’ about whether climate change is “really happening” will no doubt be a blow to the ‘big green’ lobby, that spends tens of billions of pounds worldwide trying to sell the idea of climate change, and its tax-heavy ‘solutions’.