

## Statement of Susan Morse, nationally recognized naturalist and habitat specialist

I am convinced that big wind turbine construction and operation cannot be done on ridgelines in wild, unfragmented forests in a manner that protects Vermont's natural resources and wildlife populations, safeguards water quality and forest health, and assures the best interests of Vermonters. Even if there was some way to make the turbines safe for wildlife, the roads are not. These projects involve roads along ridges and summits that lead to numerous impacts including the spread of invasive species, nest parasitism, poaching, to name just a few of the many scientifically measurable kinds of habitat degradation.

As for threats to wildlife, which wind turbines do cause, we cannot be cavalier about the losses. For example, at a time when seven of the northeast's bat species are severely threatened by a new disease, White-Nosed Syndrome, the additive mortality which wind turbines are known to cause to bats is, in my view, completely unacceptable. Air pressure drops caused by spinning turbine blades results in known bat and songbird mortality. At a Pennsylvania wind project, average yearly fatalities for each of 23 turbines is 32 bats and 4 songbirds.<sup>1</sup> So what, some folks might ask – isn't energy production more important than bats? The loss of so many bats may result in unpredictable changes to ecosystem structure and function. Bats are obligate insectivores and contribute to human society inestimably by their daily consumption of insect pests which effect forests, agriculture and garden crops, not to mention insects which pose health risks to ourselves. We cannot afford to lose *any* more bats.

At their best, even the most brilliant wind turbine infrastructure doesn't belong on a mountain any more than oil drilling belongs in the Arctic National Wildlife Refuge. We need to completely and irrevocably protect these precious places, large and small alike – habitats that are not continuously compromised and damaged by our activities. Such habitats are not isolated by fragmentation and human dominated landscapes, and as a consequence should continue to play vital roles as natural reservoirs for species and genetic diversity. Such intact habitats along Vermont's mountain ridgelines will play an integral role as global climate change forces countless species of plants and animals to adjust and find new habitats in which to survive and persist.

Draped like a net over our entire northern forest eco-region, ridgelines link together protected core habitats. Our challenge today is to enhance, nurture, and firmly protect this remarkable connectivity by resisting any temptation to develop and fragment these habitats. At the same time, we should embrace every opportunity to restore an even healthier matrix of surrounding private rural forests and farmlands. A huge part of what impresses me about Vermont's ridgelines – aside from their extraordinary beauty – is the fact that, large and small alike, our wild mountain habitats function as "lifelines" for evolution itself. They provide countless opportunities for biodiversity's ongoing and miraculous legacy – opportunities for living entities to adapt and grace the future with their being.

All energy sources have impacts, but far fewer impacts would be experienced if we were to wholeheartedly define and implement ways in which we would not use so much energy in the first place. For example, we could drive less. For those folks who champion current forms of wind energy because it will be less damaging to forest health because of alleged reduced acid precipitation, here are some thoughts. Take a close look at the accompanying chart, produced by Vermont's Air Pollution Control Division, and you will quickly appreciate that a growing source of acid precipitation is NO<sub>2</sub>, and that results from our driving hither and yon.

Those of us who are feeling the need to voice our concerns are feeling a tremendous knot in our stomachs right now because we are being falsely accused of being NIMBYs. Quite the opposite, in all appropriate humility, we are speaking for the animals and we are speaking for the forests. Our motives are absolutely selfless. We worry for the health and well-being of our natural resources, and as a consequence, Vermont's human inhabitants as well.

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<sup>1</sup> Great Migrations, by David Quammen, National Geographic Magazine, November 2010

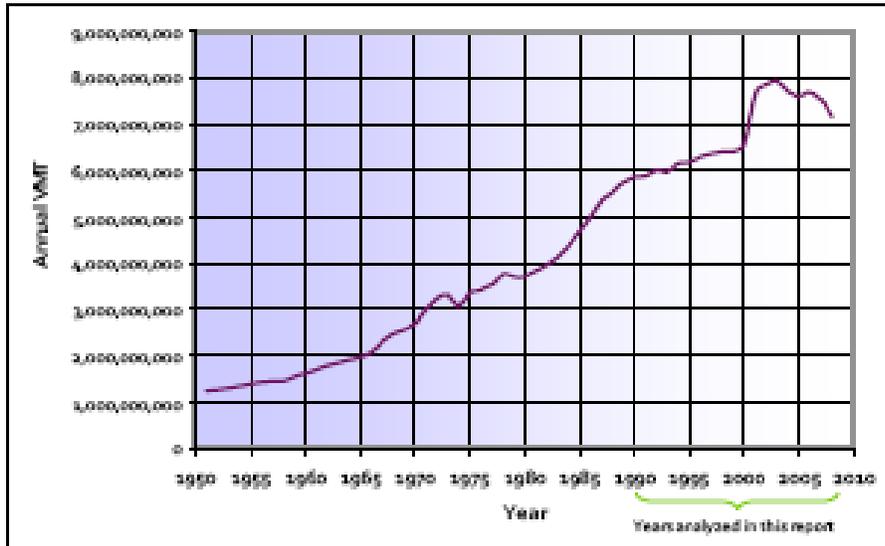
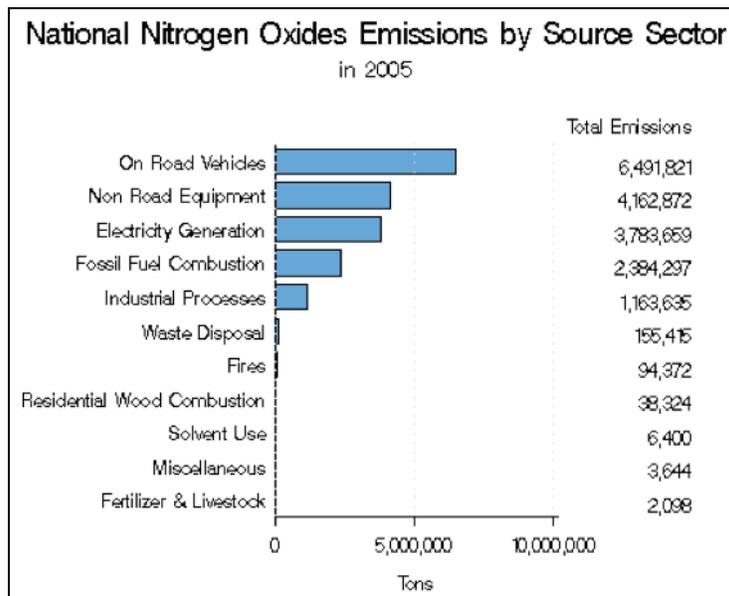


Figure T-2.  
Vermont Annual Vehicle  
Miles Traveled (VMT)  
(1950-2008)<sup>16</sup>

VERMONT  
GREENHOUSE GAS  
EMISSIONS INVENTORY  
UPDATE  
1990-2008

VERMONT AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
AIR POLLUTION CONTROL DIVISION

SEPTEMBER 2010



source EPA