

Testimony of Will Staats

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To whom it might concern:

My name is Will Staats and I live in the Northeast Kingdom town of Victory, Vermont. I make my living as a professional Wildlife Biologist but also run a small guide business in my spare time. I am an avid hunter, trapper and have spent a good portion of my life exploring wild places. For the record I believe in global warming. It is this very fact that causes me concern about the plight of our sensitive mountain ridgeline habitat. In fact, as the climate warms, these high elevation islands of fragile habitat will become even more important.

I have walked hundreds of miles of mountain ridgelines in Vermont, north western Maine and northern New Hampshire. As a young man I camped along the Long Trail in Vermont's central Green Mountains snowshoeing long bobcat and fisher trap lines while sleeping nights in homemade shelters or a tent. In my professional career I have studied and worked in high elevation forests in northern Vermont and New Hampshire for 30 years. Working for Vermont Fish and Wildlife in the 1980's, I reviewed Act 250 permit applications for timber harvests planned for mountain ridges above 2500 feet and ski area development. I performed wildlife and forest habitat surveys on numerous mountain complexes. As a forester for a large timber company, I supervised logging operations on mountains in northern Vermont. In the 1990's, as a Wildlife Biologist in New Hampshire, I helped negotiate the High Elevation Memorandum of Agreement between State agencies, The Appalachian Mountain Club and numerous landowners resulting in specific guidelines for timber harvest above 2700 feet, ultimately protecting sensitive wildlife habitat. My broad experience working in this exceptional environment has provided me with a unique insight and understanding of why we must protect this rare, quickly disappearing type of habitat. I believe this was also recognized years ago by Vermont visionaries who put safe guards in place through Act 250. Sadly, this land use law allows no vehicle for input regarding energy projects plans for these habitats.

For the past four years I have been closely involved with the environmental review of a 33 Turbine IWT project in Northern New Hampshire involving four mountain summits. I've monitored all phases of this project including hiking the alignment, review of turbine locations, providing testimony, helping to formulate mitigation and developing pre and post construction studies. This project has given me a firsthand knowledge of what a mountain looks like before and after an IWT project and has helped me better understand the process of proper siting, construction and resulting effects on the mountain ecosystem. It would take hundreds of additional pages of testimony to describe what I've learned

through this experience. As part of this project, my agency has spear-headed two ground breaking wildlife studies on the affected mountain ridges, studying the ecology and the impacts to the American Marten and Bicknell's Thrush. These are the very first studies of this kind, performed in this habitat, involving these species.

It is important to emphasize that many proponents of Industrial Wind Turbine (IWT) projects have little or no experience in this environment. Frequently these proponents pay a brief visit only after a wind generation facility is built. One can only truly comprehend the scale of disturbance by first visiting an undisturbed mountain ecosystem and then being present for all phases of construction from design to the finished operation. In short, an "after the fact" bus tour cannot begin to reveal the story of these projects as they unfold.

Due to the rapid increase in wind development projects in the Northeast, Wildlife Biologists and Natural Resource Managers are expressing their growing concerns regarding large scale development and its impacts to sensitive habitat and the wildlife that inhabit these areas. High elevation land (2500 feet and higher) is a scarce resource in the Northeast and is limited to approximately 3 % of Vermont's total land area. Concerns for the sensitivity of this habitat prompted Vermont to enact the tough development law, Act 250, which requires a permit for any activity occurring above 2500 feet, including timber harvest.

Wildlife is impacted by IWT development at both stand landscape and the forest stand level. Impacts are dependent on wildlife species, location of the ridgeline and the greater landscape context. At a stand level, forest cover is removed and permanently lost for some species due to the project footprint. Important wetlands can be compromised or destroyed during construction and headwater, seeps and feeder streams directly impacted. For birds and bats, turbines pose a new source of mortality in these habitats. At a landscape level, habitat connectivity and resiliency across the forest landscape may be compromised depending on the scale of the project and its context within the surrounding forestland.

Terrestrial wildlife using these habitats include those species found commonly at lower elevations but also species that are found almost exclusively at these higher altitudes. The softwood and mixed wood cover, with its associated complex stand structure, are preferred by American Marten, a species state listed as endangered in Vermont and state listed as threatened in New Hampshire. High elevation forests can provide stands of trees in an older, aged condition, interspersed with natural gaps and holes. Some wildlife use mountain ridgelines as a refuge from more developed areas at lower elevations. Over the years we have handled numerous black bears that seek out these areas for den sites due to their remote location. The mountain ridges may be the only undeveloped areas in a region and serve as critical corridors for wide ranging species including bobcat, lynx, bears, fisher and marten. These animals exist more successfully with infrequent human contact. One of the more rare birds in the Northeast, the Bicknell's thrush, resides exclusively in high elevation forests.

Many unanswered questions exist regarding the impacts of wind development on wildlife in these sensitive habitats and it may take years to more fully understand. How does increased human presence

influence the use by wildlife in these habitats? What residual impacts are there to forest vegetation growing along roads and the project footprint over time? How do the dynamics of predator and prey change due to the edge effects of road cuts or hard packed snow roads in the winter months? We know that wildlife have hearing far more sensitive than humans. How is the noise impacting the ability of wildlife to communicate, hunt or breed?

It will be essential for resource managers and clean energy advocates the time to allow ongoing wildlife studies to be fully analyzed before committing to further industrial scale projects on additional ridgelines. Associated studies need a broader scope to evaluate the cumulative impacts of these projects in an extended landscape context instead of looking at each project in isolation. Biologists understand that it is critical to evaluate the importance of providing connectivity for wildlife across the greater landscape to ensure genetic exchange and access to habitat resources. IWT projects that sprawl across miles of undeveloped ridgelines may be fragmenting important forestland habitat far greater than we now realize.

Over the years I have come to recognize the significance high elevation habitat has for the American Marten in Vermont. We have learned that marten, due to their small size and heavily furred feet, are able to exploit deep snow environments. Fisher, coyotes and other predators can be direct competitors with these animals but are less able to negotiate the deep fluffy snow conditions found on our mountain ridgelines. Here marten can more readily avoid competitors commonly found at lower elevations. Over the years I have detected marten tracks on numerous mountains in the Northeast Kingdom. Private land located on one of these mountains, Seneca, located in Newark, Brighton and Ferdinand, is currently being proposed for what would be the largest IWT development in Vermont. Incidentally, this project would also significantly impact conserved lands, (the former Champion Lands), paid for by Vermonters, and located directly adjacent to the proposed site.

Our research in northern New Hampshire has demonstrated that turbine access roads built on these remote mountains become vectors for coyotes and foxes. Maintenance vehicles traveling to and from the turbines continually pack the snow providing a firm base on which these canines travel from lower elevations to the ridgelines. We have followed tracks of these animals demonstrating this behavior on numerous occasions. Windswept turbine pads and road cuts contribute to the creation of a packed snow surface in the unbroken forest adjacent to these openings. Canine predators can now penetrate the mountain forest where the snow would previously have consisted of a loose and fluffy surface. As a result of the project construction, the ecological community of these forests have been drastically changed, possibly putting additive stressors on the endangered marten. Necropsies that we performed on our marten research animals revealed that a number of these animals were killed near the project area by coyotes, foxes and fisher. This research is currently under analysis and will be available to the broader public by next year.

Wildlife Biologists and Ecologists are alarmed about global warming and understand the need for sensible, responsible renewable power. However, given the scarcity and fragility of high elevation

habitat, we need to question if these limited mountain ecosystems should even be considered at all as a choice for this type of intrusive development. As our wild lands continue to disappear at an alarming rate through a “death by a thousand cuts”, we have to ask ourselves “where will our wildlife reside in this ever shrinking natural landscape”?

I would like to help dispel a myth regarding wind power and that is the notion that Vermonters can recreate near these huge machines. It has been inferred that snowmobiling and hunting can coexist with a IWT project but I can assure you this is the last place one would, or should, choose to pursue these pastimes. The danger of ice throw cannot be over emphasized. I have often worked near these turbines on our research projects in the winter and witnessed the large divots in the snow where ice has been flung from the turning blades. I have seen the steel stairs leading to the doors of turbines bowed and broken by ice falling from the nacelle. And, on one terrifying occasion, my truck was struck by flying ice that, had it hit me or anyone else close by, could have killed or caused serious injury. One operator of a wind installation told me these machines will throw a four hundred pound chunk of ice one thousand feet. And I would also add, having worked near and under these turbines on numerous occasions, I can say with certainty that the noise alone would prevent any sort of enjoyment I might get out of what was formerly mountain solitude.

Addressing climate change will require sacrifice, leadership and courage. Courage to admit when one is wrong. And I believe industrial wind, as currently proposed, is wrong for Vermont. We should not sacrifice one non-renewable resource, our ridgelines, in the misguided attempt to replace other non-renewable resources. We need to stop groping for symbolic non-productive solutions, as we literally tilt at windmills in our efforts to combat the real threat of global climate change.

Vermont’s Green Mountains have been instrumental in the creation of who we are as a people. The iconic ridgelines that frame our vistas and cradle our valleys have been aptly called the back bone of our state and have served to refine our cultural toughness and fierce independence. These high elevation forests evoke a sense of mystery and adventure. They are the last wild places we have. Vermonters have cherished, gazing with admiration, the endless green folds of ridgelines leading to the horizon. We are drawn to these ridges to recreate and enrich our lives. The question before us is: do we sell our horizons’ for a misguided attempt to solve this world crisis that calls for more creative, and bolder action? Vermont can help lead this effort by continuing to demonstrate true stewardship towards our irreplaceable mountains while at the same time designing creative solutions for meaningful conservation and innovation This alternative thinking will move us forward towards solving the impending crisis of climate change. We owe it to fellow Vermonters, our children and the mountains that we call home. You only get one chance to save our mountains and that time has come. Please help to support a moratorium on Industrial Wind Turbines.

I sincerely thank you for taking the time to read my lengthy testimony. Please feel free to call me with any questions. I invite you to climb these threatened ridges with me to discover this unique and irreplaceable mountain habitat before it is destroyed.

