

Tilting at Windmills

During the controversy about the ATC Governing Board decision about a windmill energy farm, I saw good points on either side, had no personal experience with them, and feared I had little to contribute.

This spring my wife and I hiked 200 miles of the PCT (Pacific Crest Trail) in southern California; the path took us past and through extensive windmill farms near Tehachapi Pass, close to the Mojave Desert.

My reaction to the windmills was influenced by what happened during that hike--walking south from Walker Pass we found about 120 miles of trail impacted by vandals on dirt bikes. Some sections were so heavily used that ruts went several feet deep, others had "dunes" that started as potholes, some had so many bike-trails along the trail corridor that the Forest Service and BLM threw up their hand and simply installed many, many PCT signposts to keep the hiker on track. Not that some of these weren't shot up, torn down, uprooted, and even covered with brush to make them invisible to the hikers.

I could not help harboring black thoughts in response when we came upon the windmills. Just north of Tehachapi Pass we enter lands bought by General Electric and others for vast "farms" of windmills to generate power. These farms stretch across the trail for at least 25 miles south of the pass as well, and windmills number in the thousands. Enough electric power is generated to "feed" a city of 300,000 and we believe it. The latest generation of super-windmills have three-bladed propellers 50 yards in diameter that generate 1.5 Megawatts each when the wind blows, and today the wind howls... Their low whine is about as loud as the wind in the trees nearby today, but it does sound sort of mechanical.

These windmills don't put out CO₂, don't spew mercury into the air, there is little to no waste heat, no water pollution, no miners got sick making these, no mountain tops were removed. The windmills don't have to be buried for 25,000 years after they break down, and their distributed nature does not attract terrorists the way a nuclear plant might. Blow one up and you have a heck of a lot left spinning.

After that exposure to them I have come down in favor of wind farms, not in designated wildernesses, of which we have too few, but elsewhere. Their effect is far, far less disruptive than the many more miles of trashed trails from vandal on dirt bikes and ATVs.

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A.T. Journeys July-August 2005*

To the Editor, AMC Outdoors

OK, so you can see wind turbines from the Appalachian Trail (News, September). You can also see and hear aircraft flying overhead at frequent intervals or steeples of churches, God forbid! There are always reminders of civilization on the trail, including hiking boots and backpacks, not to mention hiking poles or cell phones! Keep things in perspective, I suggest.

Recently, I sailed by the wind turbine in Hull, Mass. It is located within sight of Georges Island and other National Park sites in Boston Harbor.

Is anyone complaining? The blades rotate at well below 100 rpm, slow enough for any self-respecting bird to circumnavigate. To me, the machine with its elegantly shaped blades is quite beautiful. Knowing that it produces useful electrical energy without smoke or radiation is quite satisfying.

Let's encourage more wind power. These modern "windmills" can always be taken down without much fuss if a more effective means of producing clean energy is developed in the future.

Klaus Kleinschmidt
Lancaster, Mass.
AMC Outdoors Magazine, November 2004

Fuel Cells vs. Windmills

Andrew Priestly's letter regarding the proposed Maine wind farm, in the November-December ATN, presents some significant misinformation. He suggests that fuel cells burning hydrogen and producing only water vapor represent renewable energy's future - leapfrogging wind power (a "dead-end technology"). But, just where will that hydrogen come from?

Today's fuel cells use natural gas or gasoline to produce the hydrogen. Those fossil fuels are first processed in a "reformer" to separate out the hydrogen (releasing carbon dioxide in the process). Many proponents of renewable energy and fuel cells, myself included, look to wind farms as one of the best ways to generate hydrogen from renewable energy.

Here's how it would work: During peak electric-demand periods, when electricity is needed, wind farms would send their power directly into the electricity grid. During nonpeak hours, typically at night, excess wind-generated electricity would be used to produce hydrogen from water through the process of "electrolysis." The hydrogen thus produced could be stored, transported, and then used, as needed, to power the fuel cells.

I continue to be saddened by the Appalachian Trail Conference's position on the Maine wind farm. If we - as people who celebrate and cherish the outdoors - cannot recognize that renewable energy sources provide our only real means of ensuring that this beauty will be around for our grandchildren and great-grandchildren to enjoy, then how can we expect the general public to buy into the idea of protecting wild areas, such as the A.T. corridor and its viewscape? Global warming now threatens the very forests that make New England such a wonderful place. Without a shift to make renewable energy source, my own state of Vermont is projected to lose maple forests - perhaps within the next century. I'd rather retain those maple forests with a few windmills on the ridges and be able to see those windmills through clear blue skies than have to peer through hazy gray skies at ridges whose native vegetation has been replaced by more southern species.

***Alex Wilson Dummerston
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Mr. Priestly suffers from a common misconception: that fuel cells somehow change our fundamental energy outlook. Because this particular myth is being promoted heavily by people in government and industry with a stake in the energy status quo, I'm appalled to see it repeated as fact in the ATN.

Fuel cells, simply put, are only another way of burning a fuel. Essentially all the fuel cells in the world today use fossil fuel (or other fuels produced by using fossil or nuclear energy).

The "hydrogen economy" that a lot of people are counting on is just another way of moving energy to its point of consumption. Burning hydrogen is cleaner at the point of use, but you still need a fossil, nuclear, or renewable energy source to make it. Much of the original is energy lost to inefficiencies in producing, storing, and transporting the hydrogen.

Running a fuel cell on alcohol from biomass comes closer to the mark, but our current farming methods require so much energy input (fuel, fertilizer, transportation, etc.) that you're lucky if the alcohol coming out represents as much energy as you put into growing the corn. Elsewhere, forested areas have been clear-cut and replanted with fast-growing species to be mass-harvested for fuel wood every few years; I don't know if this scheme's energy economics work better, but it doesn't sound like Mr. Priestly would like that in Maine, either.

America has a choice: If we continue on our fossil-fueled spree, regardless of the consequences of global warming, we will still hit the wall when supplies are exhausted. I believe we should follow the example of the Europeans and put our efforts into renewables and conservation in order to build something that will last.

James Van Bokkelen
South Hampton, New Hampshire
Appalachian Trailway News - March-April 2003

It embarrasses me to hear any hiker object to seeing other people's non-hiking activity from the A.T. It makes no sense that my merely liking to go to high places that overlook lots of terrain should give me the authority to be the ruler of all that I survey.

That is particularly true in regard to solar energy collection systems (of which wind systems are a subsidiary type). A basic fact about those is that solar energy comes to us in a very democratic form, spread thinly over our planet. To collect significant amounts of it calls for devoting large areas to the process, just as it takes large agricultural areas to provide our excessively large human population with food and fiber (including wood fiber) from solar energy. Those activities cannot be fitted into urban areas and are too extensive to hide elsewhere.

Nor should we, being responsible for the need for them, try to hide from them. On a scenic trail, we ought to be willing to see our world as we have made it, not as we fantasize it should be. As a twenty-six year Maine A.T. Club maintainer, I have long been made aware that my Trail surroundings have not been wilderness, but an agriforest maintained for continuous production by its harvest-owners. (I have also learned thoroughly that, without loggers' roads for Trail-maintainer access, the A.T. in Maine would not be as well maintained as it is.)

Only a few years ago did I come to realize how awfully pervasive hiker fantasizing has become. When I attempted a survey of Trail usage from the contents of the club's shelter registers, I was startled to find ninety-five percent of the entries made by, not real persons, but persons escaping from reality as Trail-name fantasy characters.

It's time for the hiker community to grow up and face facts.

Some claim we don't need solar power because we can use fuel cells. Sure, fuel cells are great - but only as portable energy converters that need hydrogen fuel. We might extract that hydrogen from petroleum, but what do we then do with all that remaining carbon? The least-polluting hydrogen source is water, which can be split into hydrogen and oxygen, which the fuel cells then recombine to make water. But, the splitting takes more energy than the cells can release, so we still come back to needing a truly primary energy source, one that is as close as possible to a solar one. And we must get it from where it is to be found.

One thing that would help educate hikers, as well as everyone else, would be measuring all concentrated forms of energy in terms of the Earth-area equivalent of solar energy - not coal in tons and oil in barrels and electric usage in kilowatt-hours, but each of those in acre-years (or hectare-years) that it takes to receive that much energy on the Earth's surface.

Richard B. Innes
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I would much rather see windmills than billowing smokestacks, which is what you will get if you deny environmentally friendly wind power. It is especially ironic that in this same ATN issue there is a concern expressed on the adverse effects of global warming. By begrudging windmills, the alternative substitute energy sources will surely hasten global warming! Does the left hand know what the right hand is doing?

Dennis R. Morgan
Morristown, New Jersey
Appalachian Trailway News - May-June 2002

I read with dismay of the Board of Managers' 18-1 decision to oppose the development of a wind farm near The Trail in Maine. My dismay turned into stunned disbelief and outrage when I read Glenn Scherer's article on global warming seven pages farther on. How can you dare to preach to us about buying compact fluorescent bulbs when you are trying to block a project that could prevent the emissions of hundreds of tons of greenhouse gasses? What difference does it make if the electricity generated is "of no benefit to Maine?" Do you think that the smog from fossil-fuel powered plants will stop at Maine's borders?

The ATC's opposition to this project is shortsighted and hypocritical. I hope that Glenn Scherer was the Board member who cast the one dissenting vote in this decision. If not, he needs to get down off his soapbox.

Timothy Edwards
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Appalachian Trailway News - May-June 2002

The last time I hiked over Saddleback was about forty years ago, but I recall the panoramic views from its above treeline peak and the Horn. It seems to me that one could see the Redington Range from the open ledges of Poplar Ridge at the closer distance of about four miles. From there on, all distant views vanished, as they still do after the A.T. dives into the valley of Orbeton Stream.

From 1976 to 1985, my maintenance section started at that stream and ended at Spaulding Mountain, covering more than six miles. Those six miles of A.T., being the only ones paralleling the Redington Range and about three miles Southeast of it, were and are the longest stretch from which that range (and the wind-power towers that may be built on it) might be seen continuously if the Trail were above treeline there. However, all of it has remained a "green tunnel" through forest, except for just one place, which offers an eastward view of Mount Abraham from near the top of Lone Mountain. Nowhere along that section is there any distant view to the north or west during the normal leafy hiking season. Instead, one usually cannot see through the forest.

So it is practically impossible to see the sites of any of the proposed towers from anywhere in that entire nearby stretch of the A.T.

Blue-blazed side trails now go off the A.T. to the tops of both Abraham and Spaulding, and, from each of those, one can at last see the skyline of the Redingtons. From Abraham, the distance is about four miles. At that distance, the apparent height of a 400-foot-tall tower is less than one-fiftieth of its distance away. So its intrusion into the scene from that overlook would be like some item less than half an inch tall held at an arm's length of twenty-five inches. Even at Spaulding's lesser three-mile distance, I could still hide a tower with the tip of my little finger.

A.T. Northbounders on Bigelow see, to their right, Sugarloaf Mountain, which has a ski area. In 1976, when I started maintaining the Trail, Maine's voters "rescued" Bigelow from becoming a ski development. So, the skiers and condominium owners on Sugarloaf have a view of it as a mountain whose wooded slopes face them across the Carrabassett Valley. But, what the hikers on Bigelow see across the same valley is the ugly scars of the many ski runs and the golf course on Sugarloaf. So much for one effect that creating the Bigelow Preserve has had on the scenic aspects of hiking there.

To their left is Flagstaff Lake. That body of water, about as extensive as the range itself, is usually pleasant to see, but it is no natural lake. It is a reservoir formed by the waters of the Dead River backed up above Long Falls Dam.

Not only did the resort developers and the water-power and logging entrepreneurs create such cultural features within the Trail's viewshed, but the builders and stewards of the A.T. have also contributed a third major artificial element to the "scenery" there. What one sees ahead or behind them from the

Trail on that ridge is twin scree walls that fence the footway, very obviously rising above and winding along and over the natural broken-rock surface like a pair of miniature Great Walls of China, plus an earlier stone fire warden's tower suggestive of one of that wall's fortress gatehouses. To me, those are about as natural as a concrete sidewalk, but I recognize their value for keeping hikers from creating "Trail sprawl" all along the ridge, just as the many bog bridges I built on my section kept hikers' avoidance of wetter boots from widening muddy spots.

The first of those features can be completely hidden by a full hand at arm's length, the latter two cannot be. As a hiker, I may regret the adding of another few fingertips-worth of evidence that humans inhabit and use Earth, but I can't conscientiously get very upset about it. In fact, I find accessible portion of the real world, which encompasses both natural and cultural elements, to be interesting. My attempting to deny the existence of either element would be a form of fakery.

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