

The Wind Once More

A few notes to start with, the last of which will then segue, as the TV folks say, into the main body of the post.

First, to give credit where it's due, the photo of work at the Sheffield wind power project site in last Wednesday's post was taken by Steve Butcher from a plane flown by Peter Boynton. Both live in the Mad River Valley and oppose plans for a wind power project along Northfield Ridge. The photo was not intended to, could not have, and did not reveal any improper activity going on at the site.

Next, the sentence in Friday's post that read, "electricity consumption nationwide is equivalent to about 450 GW annually," should have replaced "annually" with "on average," or "equivalent to the output of 450 GW running continuously."

For the record, the guy in the photo on the right side of Friday's post was John Donne

Finally, some clarifications on the earlier posts, starting with clearing up some confusion toward the bottom of Friday's post, Latish in the evening, after dinner out, the News Guy got some new information thanks to the cooperative folks at ISO New England.

Perhaps because it was late, perhaps because the dinner included a drink (OK, two drinks, if you insist) the information was at first misinterpreted as a dissent of sorts from the findings of a U.S. Government agency that Vermont's capacity to create electricity from wind was quite small.

Those who read that post after about 9 AM when the misinterpretation was corrected can skip this paragraph. For earlier readers, there is no discrepancy. Both ISO New England (the area's Regional Transmission Organization, based in Holyoke, Massachusetts) and the U.S. Energy Department's National Renewable Energy Laboratory (NREL) conclude that Vermont's wind power potential is less than a gigawatt.

This can get confusing, and blame for some of the confusion rests right here, because electricity capacity is sometimes expressed in megawatts or gigawatts and sometimes in megawatt hours or gigawatt hours. (See above clarification about the difference between "annually" and "on average.").

The comment on last Friday's post (scroll down) by Hilton Dier is factually accurate. Friday's post concluded, based on U.S. Energy Department assessments, that Vermont's wind power potential was tiny in relation to the nation's energy consumption, too tiny to make a dent in greenhouse gas (GHG) emissions.

That's true.

Dier points out that if Vermont fully exploited its wind potential (a most unlikely prospect), it could effectively provide all its power from wind.

That's probably true, too.

How can they both be true? Because Vermont, according to the [Energy Department](#), uses but two tenths of one percent of all the electricity consumed in the country.

That's not enough to save much, if any, fossil fuel burning, especially without some disincentive for burning those fossil fuels (see below).

Now, this alone does not prove that wind power should not be developed. There are all kinds of reasons for supporting more wind power in Vermont. Some people approve any addition to the power supply by any means. They may be right.

(Or not. A case can be made that New England, where the population is stable and per-person electricity consumption is declining, needs no more power generating plants at all, at least for a while. But that's a separate discussion.)

But the point of these last few posts, which should have been obvious to the functionally literate, is that if your case for supporting wind power in Vermont was that it might help reduce fossil fuel use and thereby ease global warming, you ain't got much of a case.

The wind power that could potentially produced on land (the offshore potential is greater) by the entire east coast (which effectively includes Vermont, its lack of actual coastline notwithstanding) is not likely prevent the burning of a single ton of coal, barrel of oil, or cubic foot of natural gas.

At least not if NREL's assessment is correct.

Especially considering that without that carbon tax or cap and trade regimen, adding new generating power to the system will probably mean only that Americans will use more power, not that they will substitute the clean for the dirty. The coal will still be in the ground waiting to be mined, sold, and burned. Absent some disincentive to mine, sell, and burn it, that's what is likely to happen.

The key question here is not whether putting wind towers on Vermont ridge lines would do any good at all. Obviously, it would produce some electricity without polluting the air.

The key question is whether creating this tiny (in the national context) amount of power is worth the damage to the ridge lines.

Especially since, as Lyndon State science professor Ben Luce said, the near future could see a much more meaningful expansion of renewable energy from wind towers off-shore and on the Great Plains and from solar energy.

If that happens, Vermont will have degraded some of its pristine mountain streams, intruded on valuable wildlife habitat, and scarred its high elevation ridges for...well, effectively for nothing.

Granted, some people – seemingly intelligent, knowledgeable, well-meaning people at that – remain bullish about New England wind, raising the possibility that there could be a flaw in

NREL's analysis. This is not likely – the federal scientists have access to the best data all over the country – but let's play with the idea briefly.

Seth Kaplan, a vice president for policy and climate advocacy at the Conservation Law Foundation, is a real optimist about New England wind power's potential to reduce greenhouse gas emissions. His line of reasoning, which appears informed and responsible, is too complicated and not sufficiently central to today's discussion to require a detailed account here. But he's confident that eventually wind can produce enough power to create a tipping point, reducing coal production by a greater percentage of power use than the wind produces.

“If 2.5 percent (of all power produced) came from (wind), emissions would drop by 2.5 percent,” he said. But if wind could produce 14 percent of the power, “you'd get a 17 percent CO2 reduction. At 24 percent, a 30 percent reduction.”

Needless to say, those estimates are debatable. But what is important for now is Kaplan's acknowledgement that they only rise to the level of debatable if Vermont and the rest of the northeast can produce a great deal of wind power, apparently more than the National Renewable Energy Laboratory finds feasible. Could NREL be wrong?

Yes. Before assessing the wind power potential of each state, NREL excludes all the land where, it assumes industrial wind towers could not be built—city centers, lakes, parks. In Vermont the study excludes more than three quarters of the state's 2,569.6 square kilometers, including, it seems, the Green Mountain National Forest.

But wind towers have not been banned on the GMNF, whose officials are considering whether to allow them in the Searsburg area. Ponder this possibility, then: the same peaks and ridge lines that George Aiken saved from a federal highway proposal in the 1930s could be covered by 450-foot-high wind towers in the coming decade.

Not, probably, what most Vermonters want. Not, probably, a plus for the state's tourism economy. But if wind towers are acceptable to the Forest Service, and if people are serious about producing enough wind power to make a difference in global warming, not out of the question.

Ben Luce, who has studied the wind maps, doubts that very much of the GMNF is prime wind power terrain. In much of the area, he said, building the necessary roads would be prohibitively expensive. Besides, he said, even covering much of the National Forest with wind towers would still produce “a tiny fraction” of the region's or the nation's electricity, not enough to reduce greenhouse gases.

Especially considering that Vermont now gets much of its power from Hydro-Quebec and (for a while) Vermont Yankee, neither of which emit GHGs. (Or not much. A more scientifically literate reporter than this one informs that HQ's flooding and reservoirs emit some carbon dioxide.

The mainstream environmental groups who support more wind power now would probably draw the line at covering the National Forest with wind towers. But here's the contradiction that confronts them: unless Vermont wind power is developed everywhere it can be produced, it's not likely to have any impact on greenhouse gas production.

With some justification, the enviros have complained that the earlier posts on this subject

did not mention their commitment to “careful siting, scale, and design of wind facilities,” as they make clear in the joint statement they released last week. Jamie Fiedel of the Vermont Natural Resources Council pointed out that his organization had “spent years” on “limiting the impact on bear habitat” from the Searsburg wind project.

No doubt they did and no doubt they are sincere in their desire to limit the harmful impacts of wind projects. But the more they limit, the less productive the wind developments, so their two goals – create more power; protect the ridge lines – seem to be in conflict.

Besides, no matter how much damage is limited, it is indisputable that from an environmental perspective, the best thing to do with these ridges is...nothing. Any development will result in some degree of environmental and ecological degradation. Here we have environmentalists favoring environmental degradation largely because they think it will assuage the greater environmental crisis of global warming.

They seem to be wrong.

And in a bit of political irony, the environmentalists, politically left of center, argue for a policy which grants extraordinary discretion over land use policy to developers. Without comprehensive energy or land use planning, it is developers, whose mission is to make money, not produce power or protect nature, who will decide where the wind towers go.

With, to be sure, approval from the Public Service Board and the Agency of Natural Resources. So far, this has not been a problem.

To be fair, climate change is not the green groups only goal here. In an email, Paul Burns of the Vermont Public Interest Research Group (VPIRG) said he and his colleagues were also motivated by “the retirement of Vermont Yankee,” and the “belief...that we Vermonters bear some responsibility for generating the power we use every day.”

It’s understandable that environmentalists, who have been fighting to shut down Vermont Yankee, feel responsible for making sure something is available to replace the power the nuclear plant now provides. But it seems there is plenty of power in the area. CLF’s pro-wind Seth Kaplan noted that “New England is capacity rich,” right now.

The part about Vermont’s responsibility to produce its own power is understandable, but also subjective and a bit abstract. It also seems to be a thin reed on which to base the environmentalist pro-wind policies.

So here, admittedly as conjecture more than evidence-backed analysis, are two alternative explanations.

First, the environmentalists and some of the wind developers are associates, even friends. Some of those developers (see last Monday’s post) even sit on the green groups boards and contribute generously.

No, the greenies are not being bought off. But they and the wind developers are in the same tribe. They frequent the same Montpelier restaurants and coffee shops. They share the same liberal politics. To the environmental leaders, the wind developers are “one of us.” They must mean well (and no doubt do; but as George Bernard Shaw noted, “all men mean well”).

The second explanation has to do with that liberalism they share. These environmentalists are liberals, and Vermont liberals at that. Liberals, perhaps especially in Vermont, believe in being personally responsible. They recycle. They try to limit their carbon imprint.

Good things to do. But in the case of recycling, it really only does any good if enough people do it. In Vermont, they do, thanks to the efforts of environmentalists.

But the environmentalists would do it anyway, whether or not it did much good. It would make them feel better.

Maybe that's why they want to cover the ridges with wind towers.

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