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## **Tower Infernos?**

Arguing the aesthetics of wind turbines

BY DONALD MAURICE KREIS

Jean Vissering laughs when asked to describe a really beautiful wind turbine. What loyal Vermonter could take pleasure in the prospect of festooning a pristine ridge with a series of industrial towers as tall as a 25-story building?

Actually, Vissering can, which is why the Montpelier landscape architect's laughter is not derisive but slightly nervous. Wind energy — more specifically, helping Vermont grapple with the visual impacts of wind turbines — has been a big part of her vocation for several years. "I'm working both sides of the question," Vissering confesses. She got into it by preparing a report for the Vermont Department of Public Service two years ago. Her paying clients now include a company seeking to expand Vermont's only currently operating commercial generator of wind power. Vissering is also working with a town that's trying to decide whether to oppose a generator proposed within its borders.

Are wind turbines beautiful? Before she answers the question, Vissering stresses what ought to be an obvious point: that a beautiful thing in the wrong place is an abomination. "You wouldn't want to see the Vermont Statehouse on top of Camel's Hump," she suggests.

Nor will any wind turbines end up there, even though Vermont is trying to figure out how to meet the state's official goal: to meet 5 percent of its energy needs by harnessing the wind. Engineers and economists say wind turbines in Vermont need to be sited at elevations between 2500 and 3500 feet, and on ridges broad enough to support multiple towers. That rules out Camel's Hump (elevation 4083 feet), as well as Mount Ascutney (elevation 3150 feet, but too pointy).

The best location would be relatively flat — like the Acropolis. Accordingly, Vissering references classical notions of beauty as she conjures a picture of wind turbines that delight rather than annoy. "There's something very clear and positive about those sleek, white columns," she asserts — something that would justify regarding properly sited wind-power facilities as "Greek temples to the gods of wind."

Vissering is not the only design professional in Vermont who finds artistic virtue in these outsized propellers. "What's really kind of mesmerizing is the movement," insists Donna Leban, a South Burlington architect and president of the Vermont chapter of the American Institute of Architects (AIA). "It kind of takes you away from your everyday thinking."

Leban, whose usual specialty is lighting design, has staked her presidency on wind. Soon

after taking office last year, she rallied the Vermont AIA chapter to conduct what amounts to a statewide discussion of aesthetics. The move came at the request of Congressman Bernie Sanders, who was seeking to resolve a dilemma many of Vermont's alternative-energy enthusiasts face: how to reconcile the lure of wind as one of the most renewable energy resources with the obvious visual changes wind turbines bring to the natural environment. The very environment, ironically, that renewable-energy advocates are trying to save.

What emerged was an official statement Leban read at a news conference Sanders called in March. "We all know that beauty is in the eye of the beholder," she declared. "Can wind turbines lined up on a ridge be beautiful? Many people, including many architects, think so."

Calling for the aesthetic questions to be "placed in the larger context of our limited choices for energy to fuel our modern lifestyles," Leban singled out for praise Vermont's only wind-power facility currently producing electricity for public distribution: the 11 turbines Green Mountain Power placed on a ridgeline in Searsburg. The wind farm is visible from Route 9 as one heads east out of Bennington. "I look at the Searsburg wind farm not only with admiration of the elegant forms set in nature, but with great hope for our future and that of generations to come," Leban said.

Opponents of wind power will find little comfort in the larger world of architecture, where fame and Ph.D.s can depend on an ability to pontificate about aesthetics. For example, the prestigious Spanish architecture journal 2G recently devoted an entire issue to "Architecture and Energy." The lead article, by Professor Michael Jakob of the Geneva University Institute of Architecture, refers to a "new visibility," the idea of "electricity as text" and power facilities becoming "unassimilated signs of the modern... as diffuse components of an unstable, deficient system."

Translation: In the digital age, electricity is more essential than ever, and it is artistically appropriate to force people to confront the reality of energy production. Wind turbines are beautiful for the same reason that Alexander Calder's mobiles are. Unlike essentially all other human-built objects attached to the earth, wind turbines are in motion, and the movement is a direct reflection of a natural force.

Jakob sees moral as well as artistic virtue here, contrasting this reality with Chernobyl. That Soviet nuclear behemoth, far removed from the consumers of its energy, was ultimately "the tragic emblem of an absolute invisibility that has now become impossible," as Jakob puts it. Come to think of it, Vermont Yankee is invisible from I-91, too.

Whether or not you buy 2G's semiotic thesis, it's difficult to argue with its arresting photographs of the wind farm in Tarifa, in the Cadiz province of Spain. These turbines overlook the Strait of Gibraltar, standing like sentinels against a sharp blue sky and the not-so-distant African continent — a landscape rich with symbolism as well as splendor.

Back on this side of the Atlantic, many architectural symbols have arisen out of efforts to address the economic challenges of their time, and with the technology then available. Think lighthouses and gristmills, and, for that matter, rural windmills. Even the classic New England connected farmhouse was an ingenious effort to save energy by eliminating the need to walk outside to get to the barn or the outhouse in winter.

Wind-farm opponents point out that even lighthouses do not rise to 330 feet. That's the height — measured from the ground to the apex of each rotating blade — of the turbines Central Vermont Public Service Corporation hopes to build on Glebe Mountain in Londonderry. And that's more than 100 feet taller than the turbines in Searsburg.

A forceful rebuttal comes from Keith Dewey of Weston, an architect who specializes in sustainable buildings. "If there's no frame of reference as to scale," he argues, "the human mind doesn't make a good connection to what the height really is." This is why they told him in architecture school to put human figures in his renderings, Dewey says, and why he contends that no one will much care how tall wind turbines really are.

Dewey doesn't count any wind farmers among his clients, but he's nevertheless so impassioned about wind power that he founded an informal group called Fair Wind Vermont to argue with project opponents. These he dismisses as "well-funded aristocrats" who want nothing but nature to be visible from their patios. Dewey and other Vermont architects helped fend off legislative efforts earlier this year to impose a moratorium on wind-energy projects.

"I love to look at modern windmills," Dewey proclaims. When he does, he thinks about his two kids, ages 14 and 16, and the image of them being drafted someday to fight wars over Middle East oil. He compares that image with the "simple, clean and graceful form and kinetic movement" of the wind farms, whose sleek, three-bladed, shape is the one that works best technologically.

Apart from symbolism and iconography, what makes a work of architecture appealing is the play between unity and variety. Think of Moshe Safdie's famous Habitat housing complex in Montréal — the uniformity of concrete boxes and the delightfulness of their seemingly haphazard arrangement. Consider, too, a field of daisies. What makes the tension between unity and variety compelling is that it is borrowed from nature. Visually speaking — and assuming Dewey is right about scale — turbines along a ridgeline are not unlike flowers on a hillside.

That will not appease anyone who wants to gaze only upon real flowers. But it's possible that what some view today as "ridgeline blight" will be seen as truly memorable architecture in the future.