

As the cost of fuel rises, battles rage over

Wind Power

By Wendy Williams

A commercial wind farm in north-east Oregon

CAPE COD, MASS., IS deeply rooted in tradition and its maritime past. Historic church steeples fill the skyline. 300-year-old sea captains' homes dot the landscape, and sailboats grace the oceanic horizons.

So when an energy entrepreneur proposed building a massive ocean-based wind-energy project in nearby waters, locals were understandably shocked. Although similar projects had operated successfully in European waters, none existed in the United States. Few Cape Codders were familiar with the ultramodern technology.

Cape Wind Associates wanted to build 130 wind turbines, each more than 400 feet high, in very shallow water about 5 miles south of Cape Cod. The project would provide most of the area's electricity, partially displacing an ancient and highly polluting oil-fired plant. But it also would be visible from the multimillion-dollar shoreline summer homes of many of the world's wealthiest and most powerful people.

Year-round residents immediately divided over the proposal. Some argued that the turbines would ruin the aesthetic experience for local yachtsmen. Others, like fifth-grade teacher Lynn Sherwood, loved the idea. "It's a no-brainer," she says. About a third

of Sherwood's students suffer from asthma. "They'll come back from the gym and ask to go to the clinic to get their inhalers," she adds. Cape Cod's air quality is among the worst in Massachusetts. Experts say that by generating electricity without using fossil fuels, Cape Wind would help clean up the local air.

TODAY, NEARLY SEVEN YEARS AFTER the idea was proposed, Cape Cod remains divided. Wealthy opponents have spent roughly \$20 million trying to stop the project, while the energy developer has spent more than \$30 million trying to move it forward. Polls show that more than 80% of the state at large supports the idea. State officials say the project could save New England's electricity consumers \$25 million or more each year.

Similar battles are raging nationwide. On Long Island, N.Y., in Virginia, the Appalachians, Illinois, Vermont and even California—where the modern American wind industry first was developed—opponents have successfully delayed projects. They say that wind turbines are noisy and unsightly, that they are expensive, harm wildlife, rely on federal and state subsidies and do not provide a dependable supply of electricity.

Supporters counter that the technology can help reduce America's dependence on fossil fuels, provide

high-paying jobs to local communities and clean up the nation's dirty air and water. They say the damage to wildlife can be minimized by building projects away from certain areas. Experts add that wind, while not controllable, is in fact predictable and therefore quite dependable.

GETTING ENERGY FROM THE WIND IS nothing new. Indeed, the idea is as old as the invention of a sail to move boats. The Romans used windmills to grind grain, and the Dutch used them to keep back the sea. Early ranches in America commonly used windmills to pump water and even, in the early 20th century, to generate electricity.

In 1887, inventor Charles F. Brush designed the first windmill that powered electric lights (for his Cleveland mansion). That machine, a cumbersome thing with 144 blades, operated for 12 years.

Today's wind turbines are sleek, powerful and highly efficient. The wind turns the blades, which turn gears inside a very large box placed atop a sturdy pole hundreds of feet high. The box, called a "nacelle," can be as large as a school bus. The electricity generated inside it is sent down the pole via wires and our onto the electric grid

continued

Wind Power | continued

for use in homes and businesses.

While there is great potential to generate energy from wind in the U.S., less than 3% of the nation's electricity is from that source. Texas, where wind provides roughly 4% of the state's electricity needs, has the most projects. California, once the industry leader, is a distant second. In Europe, however, where modern turbines were developed, wind energy plays a major role in electrical generation.

Some believe wind energy would make our nation more secure, as we'd be less dependent on foreign fuel. "We're importing natural gas and will be importing more and more," notes Richard Vietor, a wind-energy expert at Harvard Business School. "And we still burn oil to make electricity—as on Cape Cod—and that's imported."

Experts say many of the Northeast's electrical needs could be supplied by ocean winds. And they call the center of the nation, the Great Plains, the "Saudi Arabia of wind."

The technology also can save consumers money. "Adding wind electricity will drive down the cost of fossil fuels," says Willett Kempton, a senior policy scientist at the University of Delaware. He believes wind turbines could play a role in stabilizing the U.S. economy.

Many utilities agree. Last year, Kansas-based Westar chose to build new wind turbines instead of a coal-fired plant. "Looking at the big picture, we think wind is a favorable addition to our energy mix," says Westar spokeswoman Karla Olsen. "And it's a good thing for our environment."

Support for wind power is growing in Congress. When the Cape Wind project first was proposed in 2001, few elected officials knew much about wind energy. Today, however, wind turbines are much more accepted. Among the states where they are most common—Texas, California, Minnesota and Iowa—support for wind energy

is very strong. The growth of the industry has been promoted by the federal government in the form of tax credits.

But many agree that more could be done. Al Benson, a natural-gas expert formerly with the U.S. Department of Energy, worries that America may be losing its edge in energy technology. "We need to encourage investment in new ideas," he warns. "We need to try new things."

The lack of a long-term federal policy encouraging wind power has meant that manufacturing projects are moving to China, says Randall Swisher, head of the American Wind Energy Association. He notes that one important wind-turbine company has six factories in China—and none in the U.S.

"Wind isn't a boutique industry anymore," adds Swisher. "Wind energy was responsible for 30% of the new generating capacity that came on line in the U.S. in 2007. That has gotten the attention of many people."

Wendy Williams is the co-author, with Robert Whitcomb, of "Cape Wind: Money, Celebrity, Class, Politics and the Battle for Our Energy Future on Nantucket Sound" (PublicAffairs Books).

Winds Abroad

Europe has embraced commercial wind energy. Some examples:

- **DENMARK** produces 20% of its electric power from wind and plans to double that figure over the next few decades.
- **IN GERMANY**, nearly 19,000 wind turbines cover the country, generating 5% of its electricity. It will start building hundreds of new turbines in the North and Baltic seas next year.
- **BRITAIN** hopes to build 7,000 wind turbines—enough to power all the nation's houses—by 2020.



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Massive wind farm may endanger birds

Would be largest in nation, topping farm in Oregon/Washington

Thursday, May 11, 2006; Posted: 9:09 p.m. EDT (01:09 GMT)

SOUTH PADRE ISLAND, Texas (AP) -- Texas officials announced plans Thursday for the nation's largest offshore wind farm, consisting of as many as 170 windmills in the Gulf of Mexico.

Houston-based Superior Renewable Energy will build and operate the project, which will be situated within about 10 miles of Padre Island. It is expected to cost \$1 billion to \$2 billion and should be ready in five years.

Its 400-foot turbines would generate a total of 500 megawatts of electricity, or enough energy for 125,000 homes.

"The wind rush is on," Texas Land Commissioner Jerry Patterson said. "We want to be No. 1. We want to attract the businesses that build the turbines, that build the blades."

Some environmentalists said the spinning blades could kill countless rare birds that migrate through the area each year on their way to and from winter grounds in Mexico and Central America.

"You probably couldn't pick a worse location," said Walter Kittelberger, chairman of the Lower Laguna Madre Foundation, an environmental group named for the strip of water between the mainland and Padre Island.

John Calaway, Superior's chief executive, said the company would do everything possible to reduce the threat to migrating birds. "Of course there's going to be some mortality, but we don't think it will be significant," he said.



A Texas company wants to build a wind farm in the Gulf of Mexico, similar to this one in northern Germany.

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Patterson said the wind farm would be situated off a remote, unpopulated part of Padre Island National Seashore. People who are concerned about the farm obstructing the ocean view "shouldn't have a problem," he said. "There's nobody there to look at it."

The offshore farm is the second announced in less than a year for the Texas coast, joining 50 wind turbines planned off Galveston.

Jerome Collins of the Sierra Club said his and other groups support wind energy and hoped to work with energy producers to prevent bird deaths and protect the scenic landscape.

According to the American Wind Energy Association, the U.S. produces 9,149 megawatts of wind power, enough to power 2.3 million homes annually. The largest U.S. wind farm is the Stateline Wind Energy Center on the Oregon-Washington line, producing 300 megawatts of electricity.

The Texas announcement comes amid a bitter fight over a proposed 130-turbine wind farm off Cape Cod, Massachusetts, where residents fear the turbines will be unsightly.

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[OPINIONS & IDEAS]

DAREN BAKST

Wind power push full of hot air

Ocean views in North Carolina may soon have a whole new look. Instead of clear water and crashing waves, massive industrial wind turbines could dominate the scenery. Due to legislation passed last year, the Wilmington area likely will be home to wind turbines.

Raleigh policymakers passed a bill that requires utility companies to generate a certain percentage of their electricity through renewable sources of energy, such as wind power. According to a Utilities Commission report, wind power would play a prominent role in meeting such a renewable energy mandate.

If there's to be wind power in the state, it has to come from the mountains or the coast because of the limited wind power potential elsewhere. However, since state law prohibits the construction of tall structures in the mountains, the coast is the only option.

The N.C. Utilities Commission already is considering a wind power plant on the coast. In Carteret County, there is a possibility that a wind farm of about three wind turbines will be permitted. While this is a small number compared to most wind power plants, it is just the start of what will be a massive push to build wind turbines along the coast.

Wind turbines can be as tall as 475 feet, or the height of 47-story skyscrapers, like the ones being considered in Carteret County. Coastal wind turbines could be both onshore and offshore.

Clearly, wind turbines onshore would be visible. Offshore wind power plants would be just one to two miles offshore. So when looking out over the ocean, instead of unending horizon, individuals would see a skyline of 47-story wind turbines.

The visual blight certainly would undermine the area's aesthetics.

Tourism would suffer, likely leading to the loss of jobs. Property values in the Wilmington area would decline.

If devastating economic costs and visual blight aren't enough of a reason to oppose wind power, consider the significant environmental costs and inherent problems.

Wind turbines are bird blenders, notorious for killing birds and bats. As highlighted in a recent Sierra Club article, 22,000 birds have been killed at one wind power plant in Altamont, California. The sound emanating from the turbines is so loud that there's some research supporting the notion that wind turbines cause health problems for humans.

Wind power plants also use up an incredible amount of land. According to the Nuclear Regulatory Commission, it takes 1,700 acres to generate 1,000 megawatts of electricity from coal-fired power plants. To generate the same amount of electricity from wind, it would take 150,000 acres (88 times more land). To put this in context, this is bigger than the cities of Wilming-

ton, Raleigh, and Fayetteville combined.

Wind also is intermittent and variable. When the wind doesn't blow at high enough levels, there isn't going to be electricity. Therefore, wind power is unreliable and can't be counted on when electricity is needed. There always has to be some type of backup electricity generation when using wind, such as coal-fired power plants.

In other words, wind power doesn't replace the need for reliable sources of electricity such as coal-fired power or nuclear power plants.

Local communities often are criticized for worrying only about their own backyards when trying to block wind power projects. However, it's perfectly rational to worry about one's own backyard when it comes to wind turbines.

Even an "environmentalist" like Robert Kennedy Jr. has argued forcefully against wind turbines when it affected him and his family.

For high economic and environmental costs that will seriously damage North Carolina's coastal communities, electricity consumers can receive a costly, unreliable form of electricity that doesn't reduce the need for coal-fired power plants. This is bad policy for consumers and a disaster for coastal residents.

Daren Bakst is legal and regulatory policy analyst for the John Locke Foundation, a conservative think tank in Raleigh.



Senator Edward M. Kennedy backs a bill that would effectively halt the proposed construction in Nantucket Sound of 130 wind turbines similar to this one in Hull. The bill would give Governor Mitt Romney the power to veto the Cape Wind plan. (Stephan Savoia/ Associated Press/ File)

Kennedy faces fight on Cape Wind Key lawmakers oppose his bid to block project

The Boston Globe

By Rick Klein, Globe Staff | April 27, 2006

WASHINGTON -- As record oil prices turn attention to the need for renewable fuels, momentum is building in Congress to buck Senator Edward M. Kennedy's bid to block the proposed Cape Cod wind energy project, potentially reviving efforts to construct the sprawling windmill farm in Nantucket Sound.

The chairman and the top Democrat on the Senate Energy and Natural Resources committee said yesterday that when the bill Kennedy backs that would effectively halt the wind farm comes up for a vote in the Senate, they will object on procedural grounds. They say they'll argue that a renewable energy project shouldn't be lumped in with a bill governing the Coast Guard.

Meanwhile, a group of rank-and-file House members, worried about the political ramifications of rejecting alternative energy sources while motorists pay \$3 a gallon at the gas station, have persuaded House leaders to sidetrack the entire bill for at least several weeks, even though it was slated for action this week. The delay could give supporters of the wind farm time to make their case to members of Congress.

"Are we going to be for developing alternative energy or not?" said Representative Charles Bass, a New Hampshire Republican who helped persuade House leaders to table the bill until at least mid-May. "The longer you delay it, the longer there is for people to examine the issue, and to determine what's going on here."

The efforts to move the wind farm forward occur amid growing attention to Kennedy's role in the secret, behind-the-scenes maneuvering to stop it. Republican Ted Stevens of Alaska, the senator who inserted the wind-farm provision into the Coast Guard bill, has acknowledged discussing the matter privately with the Massachusetts Democrat.

Environmental groups have launched an aggressive advertising and lobbying campaign to persuade Democrats to abandon Kennedy and back a promising source of renewable energy. If the wind farm becomes a reality, advocates say, it could provide three-fourths of the Cape and Islands' energy needs and could set an example for the nation.

The maneuver to stop the wind farm "is clearly a backroom deal, and they're going to get called publicly on it," said John Passacantando, executive director of Greenpeace USA. "The Democrats are going to kill the first big offshore wind farm in the United States because of their relationship with Ted Kennedy."

The 130-turbine, 24-square-mile cluster of windmills would be about 8 miles from Kennedy's home in Hyannis Port, and he has long opposed it. The Coast Guard bill would give Governor Mitt Romney, another wind farm opponent, the power to veto it, even if the project clears all other hurdles.

Kennedy rejected suggestions that he doesn't like the wind farm because it would be near his Cape home, and said the project probably wouldn't be visible from the Kennedy compound. He said he's against the project because it would create a range of environmental and navigational problems and would hurt tourism, one of the area's key industries.

The Cape Wind developers, he said, want to erect a sprawling, for-profit field of giant windmills on public, state-owned territory. Kennedy noted that the project was the beneficiary of more lenient regulations included in last year's energy bill, which could have put it on a faster track to construction; therefore, a special deal was warranted to stop it.

Ultimately, Kennedy said, Massachusetts and its governor should get to decide yes or no on the site for the farm, Kennedy said.

"We had an opportunity to right a wrong," he said of the provision in the Coast Guard bill. "The people who ought to be irate ought to be the citizens of Massachusetts. I don't shrink from my advocacy for them. I welcome it. I'm going to continue to make sure that . . . a wealthy developer is not going to ride roughshod over the state's interests."

Kennedy said the effort to block the wind farm started in the House, where Transportation Committee Chairman Don Young, another Alaska Republican, originally inserted it in the House version of the Coast Guard bill. Young and Stevens maintain that states should have a say in energy projects off their coastlines.

"I just believe it's a state's right," Stevens said yesterday. "If that were in Puget Sound, don't you think people in Washington would want to say something about it? If it's off our coast, we'd want to know."

Stevens said he "conferred" with Kennedy about adding a provision to the bill that would allow the state to veto the Cape Cod project. He said Kennedy agreed with that idea, an account that Kennedy confirmed.

But the project's supporters don't like the manner in which the provision was included in the bill, an argument that appears to be catching on with some lawmakers. The final language was hashed out in secret by a small handful of lawmakers -- a group that included Young and Stevens.

"They've lost in the court of public opinion, so they're taking this to the back room because it's the only way they can get it done," said Sue Reid, a staff attorney for the Boston-based Conservation Law Foundation, which backs the wind farm. "There's growing outrage against this provision," said Reid, who was in Washington yesterday to lobby Congress.

Senator Jeff Bingaman of New Mexico, the ranking Democrat on the Senate energy committee, said it's important to encourage development of renewable energy sources like wind power.

Bingaman and Chairman Pete V. Domenici, Republican of New Mexico, will try to round up enough senators to strip the provision from the Coast Guard bill. That would send the bill back to the conference committee -- with the Senate on record against interference with the Cape Wind project.

The Kennedy-backed provision "would short-circuit the process and kill the project, which I think would be a mistake," Bingaman said.

"If there are problems with the project, they ought to come out and be discussed. But they shouldn't be dealt with this way."

Bass said the Cape Wind project has been treated differently in Congress because powerful lawmakers and special interest lobbyists vacation on Cape Cod and treasure the ocean views.

"It's odd that the people who are against it are the people who have [scenic] views," Bass said. "I'm sorry about that, but the project ought to rise or fall on its merits."

Kennedy dismissed such talk as "their response to any kind of raising of questions" about the project's problems. "It's just an easy response to an argument that has merit." ■

Offshore wind farm takes step forward

By Steve Leblanc
Associated Press

BOSTON | A plan to build the nation's first offshore wind farm cleared a key hurdle Friday, winning state approval of an environmental report submitted by the project's developers.

Cape Wind Associates hopes to build 130 windmills over 25 miles of federal waters in Nantucket Sound, off the Massachusetts coast. The turbines would reach heights as high as 440 feet above sea level when the tallest blade is pointing straight up, a concern for some opponents.

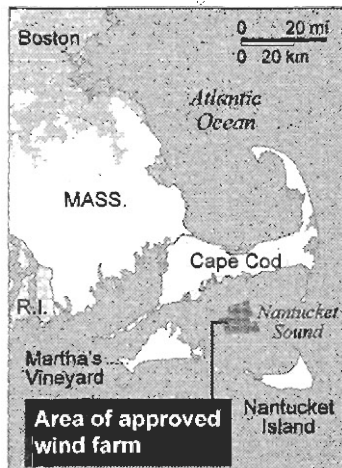
Ian Bowles, the state secretary of energy and environmental affairs, approved the report in a ruling announced Friday, saying it complies with state environmental laws.

"Overall the Cape Wind project will contribute to the long-term preservation and enhancement of our environment," Bowles said.

The project still needs to clear federal regulatory hurdles before it can move forward.

Cape Wind Associates — a subsidiary of the New England power company Energy Management Inc. — has touted its project as a safe, clean way to create renewable energy, a safer environment and new jobs.

But opponents fear the wind farm could hurt Cape Cod's tourism and fishing industries. They warn the turbines would pose navigational and radar hazards, as well as a threat to birds. They said the report also ignored the possibility of finding an alternative site.



SOURCES: Energy Information Administration; ESRI AP

Other critics say the turbines could hurt the views of some multimillion-dollar oceanfront homes.

"This wrong-headed decision will threaten fishermen, tourists and residents, place public safety in jeopardy, and endanger the marine environment of Nantucket Sound," said Jim Powers, a spokesman for Save Our Sound, an alliance of groups opposed to the project.

Cape Wind President Jim Gordon said the decision is good news not just for his company, but for the state.

"This certificate is a very strong statement on the future of Cape Wind and of wind power in the United States," he said. "This sends a message that Massachusetts is serious about renewable energy."

Gordon declined to say how much it would cost to build the project, but said \$30 million has been spent so far on design and

planning.

The state portion of the environmental review was limited to the potential impact of underwater cables that would run from the turbines to the shore. The turbines themselves are in federal waters and subject to a separate federal environmental review.

As part of the environmental package, Cape Wind agreed to a \$10 million mitigation

package.

The plan includes \$780,000 for the restoration of Bird Island, a prime nesting habitat for terns, \$4.2 million for natural resource and marine habitat restoration, and \$5.6 million in federal lease payments over 20 years.

The project has also drawn criticism from commercial fishermen, cruise lines, wildlife advocates and Cape Cod representatives.

3/31/07

Alternative energy stalls as windmills tilt at opponents

"Look there, friend Sancho Panza, where thirty or more monstrous giants rise up, all of whom I mean to engage in battle and slay, and with whose spoils we shall begin to make our fortunes."

— from 'Don Quixote' by Miguel de Cervantes

To my eye, they are lovely: Graceful, delicate, white against green grass and a blue sky. Last summer my children and I stopped specially to watch a group of them, wheels turning in the breeze.

But to those who dislike them, the modern wind turbine is worse than ugly. It is an aesthetic blight, a source of noise pollution, a murderer of birds and bats. As for the still-young wind industry, it is "an environmental plunderer, with its hirelings and parasites using a few truths and the politics of wishful thinking to frame a house of lies." Far from being clean and green, "corporate wind is yet another extraction industry relying on false promises," a "poster child for irresponsible development."

Such attacks — those come from www.stopillwind.org, the Web site of Maryland anti-wind activist Jon Boone — are not atypical. Similar language turns up on www.windwatch.org, on www.windstop.org, and on a dozen other anti-wind sites, most started by local groups opposed to a particular project. Their recent, rapid proliferation is not an accident: After languishing for years on the eco-fringe, wind energy has suddenly become mainstream. High oil prices, natural gas shortages, better technology, fear of global warming, state renewable-energy mandates and, yes, tax breaks have finally made wind farms commercially viable as well as clean.

Traditional utility companies want to build them — and thus the traditional environmental movement



Already, activists and real estate developers have stalled projects across Pennsylvania, West Virginia and New York.

(which supports wind energy) has produced a handful of untraditional splinter groups that are trying to stop them.

They may succeed. Already, activists and real estate developers have stalled projects across Pennsylvania, West Virginia and New York. In Western Maryland, a proposal to build wind turbines alongside a coal mine, on a heavily logged mountaintop next to a transmission line, has just been nixed by state officials who called it too environmentally damaging. Along the coast of Nantucket, Mass. — the only sufficiently shallow spot on the New England coast — a coalition of anti-wind groups and summer homeowners, among them the Kennedy family, also seems set to block Cape Wind, a planned offshore wind farm.

Their well-funded lobbying last month won them the attentions of Rep. Don Young, R-Alaska, who, though normally an advocate of a state's right to its own resources, has made an exception for Massachusetts and helped pass an amendment designed to kill the project altogether.

The groups do have some arguments, ranging from

the aesthetic — if you are bothered by the sight of wind turbines on a mountaintop, which I am not (or, anyway, not when compared with the sight of a strip mine) — to the economic. They are right to note that wind will not soon replace coal or gas, that wind isn't always as effective as supporters claim, and that some people are going to make a lot of money out of it (though some people make a lot of money out of coal, and indeed Nantucket summer homes as well).

But they also reflect a deeper American malady. The problem plaguing new energy developments is no longer NIMBYism, the "Not-In-My-Back-Yard" movement. The problem now, as one wind-power executive puts it, is BANANAism: "Build Absolutely Nothing Anywhere Near Anything." The anti-wind brigade, fierce though it is, pales beside the opposition to liquid natural gas terminals, and would fade entirely beside the mass movement that will oppose a new nuclear power plant. Indeed, the founders of Cape Wind say they embarked on the project in part because public antipathy prevents most other utility investments in New England.

Still, energy projects don't even have to be viable to spark opposition: Already, there are activists gearing up to fight the nascent biofuel industry, on the grounds that fields of switch grass or cornstalks needed to produce ethanol will replace rainforests and bucolic country landscapes. Soon the nonexistent "hydrogen economy" will doubtless be under attack as well.

There's a lot of earnest, even bipartisan talk nowadays about the need for clean, emissions-free energy. But are we really ready, politically, to build any new energy sources at all?

Anne Applebaum is a columnist for The Washington Post.

USA Today 6/4/06



2003 photo by Marcio Jose Sanchez, AP

New power generation: Modern windmills, like these near an old-fashioned windmill in Birds Landing, Calif., stand hundreds of feet tall.

Windmill projects stilled for now

By Alan Levin
USA TODAY

Worries that giant electricity-producing windmills may interfere with aviation radar have thrown several major wind-power projects into disarray and threaten to derail a rapidly growing source of domestic energy, industry advocates say.

In recent months, the Defense Department and the Federal Aviation Administration have blocked or slowed several projects in Wisconsin, Illinois and South Dakota. Their concern is that the windmill blades could confuse a radar or obscure its view of aircraft.

Congress passed a law in January requiring the Defense Department to study whether windmills interfere with radar. The military opposes any windmill project in the path of long-range air defense radars until that study is completed.

Laurie Jodziewicz, a spokeswoman for the American Wind Energy Association (AWEA), says up to 15 projects are on hold after the FAA notified the industry group this year that they would create a "presumed hazard."

That designation makes it difficult to obtain financing and insurance for the projects, she says.

Military, FAA worry that turbines in Midwest could confuse radars

"It's very uncertain and very unclear why these things are happening now when it never happened before," Jodziewicz says.

"It's just another example of the situation where in the United States the renewable energy industry is always swimming upstream," says Michael Vickerman, executive director of RENEW Wisconsin, an advocacy group. "There are all these unforeseen obstacles that come along and slow things down."

The FAA and the military say they are not trying to halt construction of windmill projects but must ensure that the generator farms don't compromise aviation safety or national defense.

The main impetus for putting the projects on hold has come from the military. FAA radars can easily distinguish aircraft from obstructions such as windmills, but defense radars designed to spot airborne intruders are more sensitive to interference.

"Until the potential effects can be quantified and possible mitigation techniques developed, it is prudent

to temporarily postpone wind turbine construction in areas where the ability of these long-range radars that protect our country might be compromised," Pentagon spokeswoman Eileen Lainez says.

Wind power generates slightly less than 1% of electricity in this country, but its share is growing rapidly, the AWEA says. Last year, wind was the nation's second-largest source of new power generation, after natural gas.

Lainez and FAA spokeswoman Laura Brown say their agencies are working with wind farm developers to smooth the application process. Brown cites the approval May 25 of a large project in Bloomington, Ill., that had been blocked.

Brown says the FAA has struggled to keep up with the influx of wind farm applicants. The aviation agency, which must rule on each windmill, received 4,343 applications last year, more than double the 1,982 it reviewed in 2004, Brown says. The agency expects as many as 10,000 this year.

The latest wind turbines stand several hundred feet high. Individual blades are more than 100 feet long. In some cases, the windmills could appear to be aircraft on radar screens or could create images that make it harder to spot planes.

Methods to minimize interference are available. Moving a proposed windmill, using computers to create smarter radars that ignore windmills, and using "stealth" technology to make windmills invisible to radar could solve the problem, Vickerman says.

The controversy over windmills in the upper Midwest follows a fight over a huge proposed project off Cape Cod in Massachusetts. Worried about possible radar problems at that project, Sen. John Warner, R-Va., inserted language into this year's Defense Authorization Act that required the study.

Warner didn't intend to block projects before the study was completed, says John Ulyot, a spokesman for the senator.

Action could kill planned wind farm

By David A. Fahrenthold
The Washington Post

BOSTON | A proposal before Congress that would limit the construction of wind turbines near shipping lanes could effectively doom plans to build the country's first offshore wind farm near Massachusetts, the project's supporters say.

Officials at Cape Wind Associates LLC say the rule, being considered as an amendment to a bill in a House-Senate conference committee, would rule out so many crucial sections of Nantucket Sound that there would not be enough space for their 130-windmill complex.

"This is a dire moment for us," said Mark Rodgers, a Cape Wind spokesman. He said the rule "would be totally fatal" for the project.

The Cape Wind project, begun four years ago, has proved consistently controversial: Though environmentalists have praised it for providing a renewable source of energy, Cape Wind has determined opponents who are concerned about its impact on

fishing, navigation and beachfront views.

Those against it are a powerful and bipartisan group, including Massachusetts Gov. Mitt Romney, R, and Sen. Edward Kennedy, D-Mass.

The latest move against the wind project has come from Rep. Don Young, R-Alaska, chairman of the House Transportation and Infrastructure Committee. In a letter to his colleagues that was released by Cape Wind officials, Young has called for an amendment banning all wind turbines within 1.5 nautical miles of shipping and ferry lanes.

He said the ban was based on research in Britain, which found that the turbines' massive blades could interfere with shipboard ra-

dar. In the letter, Young singled out the Cape Wind site - which is surrounded by sea routes between Cape Cod and the islands of Nantucket and Martha's Vineyard - as particularly unsafe.

"The Cape Wind proposal provides in some places only a 1,200-foot separation" between sea lanes and wind turbines, "... threatening loss of life, injury and pollution," the letter says. A spokesman for Young did not respond to calls for comment about the letter.

Officials at Cape Wind call the concerns about navigation a pretext for killing the project. They noted that a risk assessment completed by a contractor for the Army Corps of Engineers in 2003 found that "the presence of the Wind Park ... is not expected to create negative impacts to navigational safety."

The project has been closely watched because it is one of the most advanced proposals to build a wind farm in U.S. waters. The

country has numerous windmill farms on land, but experts believe offshore turbines could take advantage of strong sea winds and the ease of transporting electricity to nearby coastal cities.

Its supporters say that, in normal wind conditions, the Cape Wind project could provide three-fourths of the power needed by Cape Cod and the nearby islands. After a tortured history in the federal bureaucracy, the federal Minerals Management Service is scheduled to render a final verdict on it early next year.

Supporters said that the move to stop the project was particularly galling in light of President Bush's recent push for the development of alternative and renewable energy sources such as wind.

"This is sort of backdoor politics at its worst, for the worst possible reasons," said Nathanael Greene of the Natural Resources Defense Council.

2/27/06



Midwest's windmills generate buzz

Towns' energy answers may be blowing in wind

By Judy Keen
USA TODAY

MASON CITY, Iowa — Windmills are sprouting on hillsides across the Midwest, but this city is encouraging the use of electricity-producing wind turbines everywhere — even in homeowners' backyards.

Mason City this week became the first Iowa town to set rules that allow windmills in commercial, industrial and residential zones. The City Council unanimously approved the ordinance Tuesday.

City planner Tricia Sandahl says the council initially considered permitting windmills only in industrial areas. "Then we decided, let's just take a bolder step," she says. "We wanted to encourage small wind systems in residential areas. With electric prices going up, it just makes sense."

A few generations ago, almost every farm around here had a windmill that generated enough energy to pump water or grind grain. Those old-fashioned windmills became extinct after rural electric cooperatives extended power in the 1940s. In the last decade, commercial wind farms sprouted as energy costs soared.

The increasing popularity of wind energy is part of a surge in the development of alternative energy sources that's apparent here. Mason City, population 28,000, also is home to a plant that produces ethanol, a fuel made from corn and grain. A plant that will process soybean oil into biodiesel fuel will be finished late this year.

"Iowa is doing an awful lot to capitalize on its natural resources," says Gary Swanson of Energy Management Solutions, a consulting company. He's working with several Mason City manufacturers who are considering building windmills.

'Stream of revenue'

The Midwest is leading a spike in wind projects:

► Minnesota passed a law last year that encourages new windmills by cutting red tape and offsetting some construction costs.

► Michigan's public service commission changed its policies last year to allow consumers to sell excess electricity from windmills back to utilities.

► North Dakota last year reduced application fees and made it easier to get permission to build windmills.

Lisa Daniels, executive director of Windustry, a Minneapolis-based non-profit group, says wind energy is a natural fit in rural areas. Farmers lease their

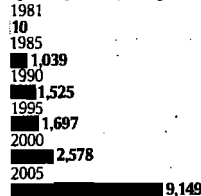


2002 photo by David Brewster, (Minneapolis) Star Tribune, via AP

Economic lessons: Windmills on the playground of Spirit Lake Community School in Spirit Lake, Iowa, are used to cut utility costs.

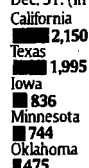
Wind power soars

Electricity generated nationally by wind power: (in megawatts)



Top producers

States generating the most electricity from wind power, as of Dec. 31: (in megawatts)



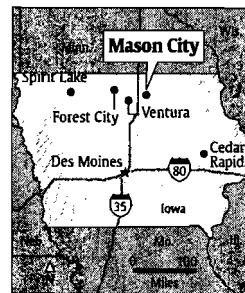
1 — a megawatt equals 1 million watts
Source: American Wind Energy Association

By Robert W. Ahrens, USA TODAY



By Doug Wells for USA TODAY

Buying in: Tom Hurd of Mason City, Iowa, uses windmills and solar-energy panels to produce 90% of his company's electricity.



Source: ESRI USA TODAY

land to commercial wind farms and in many states can sell back excess electricity from their own windmills.

"People are seeing that it's not only good for the environment, but it's also ... a new revenue stream that fits in well with the corn and the soybeans," Daniels says.

Tax credits and low-interest loans are making windmills more affordable. A small home-based system costs about \$40,000.

Last year, a record 9,149 megawatts of electricity was produced by wind in the USA, says Christine Real de Azua of the American Wind Energy Association, a trade group.

That's just 0.5% of all electric-

ity generated in the country, but production this year is expected to top 12,000 megawatts and keep climbing. One megawatt is enough to power 300 to 1,000 households at any one time, depending on climate and other factors.

"It's possible we could generate up to 20% of our electricity needs through wind and turbine," President Bush said Tuesday at the National Renewable

Energy Lab in Colorado. Marv Schlutz helped make Mason City a wind-energy pioneer. He asked the zoning board for a variance so he could put a 100-foot windmill at Mason City Warehouse, his storage business. He figured he'd save enough on electric bills to pay for a \$40,000 system in eight to 10 years.

"The neighbors raised heck with me," Schlutz says. They worried about whether birds could be killed by rotating blades, TV signal interruptions, interference with the local hospital's emergency helicopter and bad odors that could be sent their way.

Opposition faded as gas and electricity prices kept rising. School districts in Forest City and Spirit Lake, also in northern Iowa, were using windmills to cut utility bills. The Cerro Gordo wind farm in Ventura, a few miles west of here, has 55 large turbines on 2.4 acres.

Tom Hurd, a Mason City ar-

chitect, installed two 35-foot-tall windmills outside his office. His windmills and solar-energy panels produce 90% of the electricity used by his company, Spatial Designs.

"If the wind is 15 mph or less, you don't even hear it," he says. "Once a year you have to check whether the blades are tight, and that's all you have to do."

chitect, installed two 35-foot-tall wind turbines that stretch for miles along Altamont Pass, Calif., have been blamed for the deaths of tens of thousands of birds. Residents of Cape Cod, Mass., who oppose a proposed offshore wind farm say it would create visual pollution. Nebraska is studying whether transmission lines have to be updated to handle electricity produced by windmills, diminishing their cost-effectiveness.

Mason City's ordinance requires permits for windmills and sets limits on where they can be built. Residential windmills can't exceed 100 feet tall and can be put only in backyards. The lot has to be big enough so that if the windmill topples it doesn't cross property lines.

Sandahl, the city planner, says several homeowners have called to get information about installing a windmill. Bill Hammond, who manages an alternate-energy loan program at the Iowa Energy Center, a research facility at Iowa State University, predicts that more people will want windmills as they recognize the potential.

"There's actually money in that wind," he says, "and people want a piece of it."

2/21/06



CASEY TEMPLETON/THE NEW YORK TIMES
Roy Waggoner, on his farm in Blue Grass, Va., supports a plan to put 19 wind turbines in an area of Highland County, Va. The plan has prompted debate, but Waggoner supports the turbines because they aren't clean energy

Remote Va. county divided over plan for wind turbines

New York Times News Service

MONTEREY, Va. | Wes Maupin says he will move this spring to a 20-acre spread here in remote Highland County, a pastoral place where sheep outnumber people and where little has changed since his boyhood, when he fished the county's mountain streams with his father.

Maupin, a 52-year-old former corrections worker, does have one misgiving, though. Like many others in Highland, known for its rustic heights as Virginia's Switzerland, he finds no joy in the prospect that these blustery Allegheny ridges could soon become home to the state's first wind farm: 19 wind turbines, each taller than the Statue of Liberty, its pedestal included.

"Any wind farm," Maupin said, "would surely change the character of this county forever."

Only the vanguard

Much as disputes over the aesthetics, economics and environmental impact of wind farms have arisen in Vermont, Massachusetts, North Carolina and elsewhere, the proposed project here, first put forth eight years ago, has divided the 2,500 residents of Highland County, one of the least populated counties east of the Mississippi. Where some see unwelcome industrialization of the wilderness, others see green energy and an estimated \$200,000 a year in tax revenue for the financially needy county.

Though the farm would sit on only 50 acres of the county's 416 square miles, many fear it would be just the vanguard of similar local projects providing electricity for the regional grid.

"People around the state feel Highland should be sacrificed because not too many people live here," said Sandy Bratton, 64, a fourth-generation landowner. "They view us as docile, uneducated people."

But at Grady's Barber Shop here in Monterey, the county seat, 35 miles west of Staunton, Roy Waggoner said he supported the \$60 million project.

"One way to clean up the environment is with the wind turbines; it's green energy," said

Waggoner, 57, a sheep rancher. "I don't want to see them on every inch of land, but that ridge is very secluded."

Hurdles ahead

To be sure, the wind farm still faces hurdles. Though local officials have approved it, opponents have sued them in an effort to overturn their decision. Federal and state agencies oppose the project until sufficient bat, bird and other environmental studies are done. Further, a state hearing examiner is not expected to decide until March whether to recommend that the Virginia Corporation Commission issue a permit allowing the developer, Highland New Wind Development, to build and operate the turbines.

The man behind the project is Henry McBride, retired poultry farmer and founder of Highland New Wind. McBride intends to build the windmills on a part of his 4,000-acre ranch here not far from the West Virginia state line. He will sell electricity directly to a utility, a city, an energy cooperative or another power purchaser, said a family spokesman, Frank Maisano, a wind energy lobbyist in Washington. The project would generate 39 megawatts, enough for more than 15,000 homes, Maisano said.

'Heritage at risk'

Highland County has long worked to promote ecotourism; the number of lodgings that cater to birders, hikers and other visitors has tripled in the last decade. But since the wind farm was proposed, queries from people thinking of moving here have dropped to about 50 a year from 325, said Carolyn Pohowsky, executive director of the Highland County Chamber of Commerce.

"It has been a very controversial and polarizing issue," Pohowsky said. "Because this is a new industry in the state of Virginia, we have no idea of what the outcome will be. You not only have the family farm at risk, and your livelihood at risk, but your heritage at risk."

Jerry Rexrode, a county supervisor who voted to approve a con-

ditional use permit for the wind farm in 2005, said most people he had talked to supported the project. David Jessee, manager of an auto parts store, said of the turbines: "I don't see a thing wrong with them. Economically, the windmills would draw in a little money and maybe bring everyone up around here."

Not like Holland

But Randy Richardson, president of Highlanders for Responsible Development, a group that opposes the project, said people worried about noise pollution from the turbines' blades and light pollution from the red strobes that would alert aircraft to the 400-foot-tall structures.

"We actually had some guy saying these will be similar to the windmills in Holland," Richardson said. "Well, there is a little bit of difference between a quaint Dutch windmill and a 400-foot turbine."

Tom Brody and Patti Reum own Bear Mountain Farm and Wilderness Retreat, a lodging and environmental center that attracts birders, stargazers and hikers. It is near the site of the proposed turbines.

If development proceeded, "we would have to leave," Reum said.

Proposed wind farm generates opposition

Associated Press

RALEIGH | A couple looking to build three electricity-generating wind turbines in rural North Carolina is facing opposition from neighbors who say the towering windmills will create noise and disrupt the aesthetic scenery of their coastal community.

Nelson and Dianna Paul, who

live in Raleigh, have asked the N.C. Utilities Commission for permission to build the Golden Wind Farm on a 33-acre tract of open land in Bettie, about 7 miles northeast of Beaufort. If successful, it would be the largest wind farm in the state.

The turbines would generate 4.5 megawatts of electricity capable of providing power to about 900 homes, Nelson Paul told commissioners. The couple wants to sell the power to Progress Energy as a source of green energy.

Some residents living near the proposed project said the blades and turbines – which could stand 464 feet, taller than a 30-story building – would spoil the enjoyment of their properties and invite more entrepreneurs to build turbines along the coast.

“You’re going to be able to see it from Beaufort and Morehead City,” said Brady Golden, who lives across from the property. “Highway 70 is a scenic highway. There are a lot of questions the people of Bettie have.”

Carteret County commissioners called a special meeting to discuss a moratorium on new towers and similar structures.

The Marine Corps was concerned the turbines could interfere with radar and aircraft operations at Cherry Point Marine Corps Air Station in Havelock. But it agreed not to oppose the commission’s decision if the Federal Aviation Administration was given the final say on the project.

Representatives of the North Carolina Public Staff, which advocates for the public before the commission, recommended the panel grant a permit if the FAA approves the project. The commission is expected to issue a decision in the next several months.

The project will cost \$6 million and the turbines could begin generating power by 2010, Paul said.

2/8/08