

Policy boost for citizen-owned projects

The Obama administration's economic stimulus is giving new hope to the locally owned projects, which so far still only occupy a sliver of the US's burgeoning wind sector. The prospect of more revenue for local communities is smoothing the path, writes [Mark Anderson](#)

Community-based wind projects today comprise less than 4% of US wind power capacity, but thanks to a boost from last year's stimulus legislation and new interest from investors, citizen wind is set to take on greater prominence. Meantime, the allure of citizen ownership of wind plants, which funnels income into local economies, is helping reduce opposition to wind projects among communities where not-in-my-backyard attitudes are prevalent.

Cash grants under a federal programme included in last February's stimulus package provide wind project owners and developers of wind projects with an investment tax credit (ITC) offsetting 30% of installed capital cost. The grants are available to both commercial and community wind projects but are particularly valuable for the latter. Before the global meltdown, wind developers frequently

partnered with deep-pocketed companies that wanted to take advantage of production tax credits (PTCs) to reduce big tax burdens by \$0.021/kWh for energy produced during the first half of a wind project's life. The arrangement fuelled the voracious US commercial market for years, while leaving most would-be community developers in the lurch. But the ITC removes the need for such partnerships, because wind developers no longer need to find a partner with a large tax bill, opening new doors to community wind.

A recent report from the Lawrence Berkeley National

Shared ownership
GE turbines at the Fox Islands community wind project in Maine



PETER RALSTON/ISLAND INSTITUTE

WHERE COMMUNITY WIND BEGAN BY SARA KNIGHT

The roots of the pioneering German wind industry lie in the northern state of Schleswig-Holstein, spun off from Danish wind energy enthusiasts over the border who sowed the seeds of the new industry in the 1980s. As with the Danes, it was people power that pushed developments forward, overriding the naysaying of monopoly energy companies.

On the east and west coasts of Schleswig-Holstein, farmers, citizen groups and individuals embraced the concept of wind energy with enthusiasm. Politicians noticed wind could bring jobs to localities. Meantime, communities could benefit from local taxation on wind

plants' profits. Leaders also saw that wind development could help stem a population exodus from the area, once reliant on farming and shipbuilding.

Community wind in the form of *bürgerwindparks* – people's wind stations – is now widespread in parts of Schleswig-Holstein. In rural Nordfriesland, it accounts for 95% of the district's 600MW of wind capacity. "It is simply understood and accepted in Nordfriesland that only people living in a particular parish can build wind stations in that parish," says wind developer Henning Holst, who lives in Husum, Nordfriesland. The plant thus

remains under the control of the local community. While this is not the case in all Schleswig-Holstein districts, Holst believes the concept is spreading and that community wind principles are part of the government's state planning.

Municipalities throughout Schleswig-Holstein are prioritising new development by only recommending areas on the understanding that they will be used as *bürgerwindparks*. Almost all of those in Nordfriesland will be for the exclusive use of *bürgerwindparks*, Holst estimates. In districts where developers have acquired rights to build plants for possible sale to

institutional investors, parishes are appealing to landowners to insist that ownership remains local. Areas earmarked for wind are expected to become virtually immune to potential legal challenges.

Cultural icon

In Germany, community wind has become something of a cultural icon. The word *bürgerwindpark* itself is widely associated with the concepts of social responsibility and civic activism. "One should only use this term if people from all walks of life are given a realistic opportunity to participate financially and actively in

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Laboratory (LBNL) highlights enthusiasm for the programme. It says the grants provide benefits worth considerably more than the PTC to most community wind projects and encourage outside investors. The government promises cash payment within 60 days of connection to the electricity grid and developers are allowed to declare the money to lenders ahead of construction to secure loans, giving them a better shot at financing.

One drawback is that the application process cannot be altered midway if estimated costs spike. And the programme, which ends in 2012, contains a clause requiring construction to begin this year. "But there's very little not to like about it," says Mark Bolinger, the report's author, who expects the construction deadline to be removed anyway. Because stipulations for the new incentives were decided only midway through last year, officials say it is too early to quantify how many projects will benefit.

Green with envy

In the northern state of Minnesota, home to 469MW of community wind power — more than a third of the total citizen-owned capacity of 1.4GW for all 50 states combined — green entrepreneurs are looking north of the border with envy. Though the Canadian province of Ontario has only 1MW of community wind power, last year it passed green energy legislation favouring citizen-owned renewables as part of an initiative to eliminate reliance on coal by 2014. Key to the Canadian legislation, and the envy among US neighbours, is a feed-in tariff providing 20-year power purchase agreements (PPAs) worth C\$0.145/kWh (US\$0.136/kWh) for community-based projects — one Canadian penny more than the commercial rate. Armed with these payments and the promise of interconnection, Canadian community developers in a difficult economy became the apple of lenders' eyes. By mid-December, more than 8GW of new renewable energy projects, commercial and community, had applied for government mandated power purchase price contracts in Ontario.

"Ontario did a great job," says Lisa Daniels, founder and executive director of Windustry, a Minnesota-based



"Ontario flipped their whole energy system on its head and it really goes to the heart of the problem"

Lisa Daniels,
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Windustry

non-profit organisation that advocates community wind. "They flipped their whole energy system on its head and it really goes to the heart of the problem."

Pockets of progress

Communities in the US do not want to be left behind. A group of publicly owned utilities in Washington state was recently able to harness the PTC to connect a 200MW wind project, securing 20 years of power at well below market prices while planning a 100MW second phase. In Colorado, state legislation allows utilities striving to meet renewables standards to count community wind megawatts at 1.5 times a projects' actual output. In Oregon, the controversial Business Energy Tax Credit has doled out millions of largely unchecked dollars to wind but is undergoing legislative revision to tighten up the process by which successful applicants are chosen.

Feed-in tariffs are providing incentives to local ownership in Maine and Vermont. Vermont has a 2.2MW project limit. State legislators will revisit their per-kilowatt-hour rate at two-year intervals to reflect changing power prices and there is hope the rate will be raised. Maine's tariff, aimed at community wind but still lacking specifics, has a 51% local project ownership structure. It limits developments at 10MW, considerable for a state totalling roughly 100MW last year. Sue Jones, president of Community Energy Partners, which helped get the law passed, is optimistic. "Now that it's in place, I think it's going to really jump-start community wind projects," she says. In December, the 4.5MW Fox Islands project on the island of Vinalhaven, Maine, went online. Widely considered the largest community development in the eastern US, the three GE turbines produce enough electricity to supply Vinalhaven's population, which swells from 1800 to 3000 when seasonal dwellers arrive, plus a smaller sister island.

Islanders' power bills were significantly reduced and copycat projects nearby are likely, says George Baker, CEO of Fox Islands Wind. "When people look out their windows, see these wind turbines and flip on the light switch, they feel the connection," adds Baker. "If you do a project and

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these sort of projects," says Werner Frohwitter of Energiequelle, one of Germany's largest wind and renewable energy developers. The term should not be applied to financing packages with only minimal investment by local individuals, he says.

But the meaning of *bürgerwindpark* has changed over time, says Ulf Gerder, a spokesman for federal wind energy association *Bundeseverbund Windenergie*. In the 1990s, wind power investment funds allowed individual ownership partners. Individual investors often lived in the same area as the wind farms. But a 1995 change in law abolished the tax incentives. New

finance structures changed the nature of investments, making them more complex and less attractive to individuals. Either way, Gerder reckons that of Germany's roughly 25GW of wind capacity, around 75% of the finance has been arranged by medium-sized wind developers, turbine manufacturers and others — often with many individual investors. Only around 10% comes from Germany's four major energy companies — RWE, Vattenfall, EnBW and E.on — and regional company EWE. Institutional investors have raised another 10% and

Henning Holst

municipally owned utilities are the source of about 5%.

Hearts and minds

Local acceptance of wind power is critical to its expansion, say proponents of German community wind. Energiequelle agrees and has changed its approach accordingly. When municipalities earmark new areas for wind developments, Energiequelle aims to immediately sign up rent contracts with all landowners in areas prioritised for wind.

Not all of these will end up with turbines installed, but all will receive annual

payments proportional to wind power related activity on their property. Payments are small when no activity occurs but rise with, say, the construction of roads or cable routes to the sites and go higher yet to reward erection of turbines themselves. The company hopes this approach will stimulate local adoption of wind power by giving landowners shared economic objectives. "It is vital that parishes are not split over the issue of wind energy," says Frohwitter.

Even citizens outside priority wind zones benefit indirectly from local wind stations, via trade taxes flowing into municipality coffers. The tax is levied on business profits by local authorities, charged at

the community actually gets to control and benefit from things, people love turbines in their backyard.”

In 2005, Minnesota passed the pioneering community-based energy development (C-bed) law requiring utilities to award contracts to generation plant operators with at least 51% in-state project ownership and setting a higher rate for the power during the first ten years. In 2007, Nebraska followed suit with a law requiring 33% home-grown ownership. There have been results. By end-2011, Minnesota-based utility Xcel expects to have 300 of its 500MW goal of C-bed community projects connected, while all 153MW in Nebraska are already considered C-bed.

But C-bed is not without problems. Nebraska Farmers Union President John Hansen, who spearheaded the Nebraska legislation, says the spirit of the law has changed. “The qualified owners are corporate executives who live in Nebraska, but they’re corporate executives from Omaha, not rural folks,” he says. “We also know that two-thirds of the profits from some projects are going to leave the state.”

In Minnesota, transmission has reached capacity and even small projects are difficult to connect, says Mike Bull, senior resource analyst for Xcel. He points to a study concluding the problem is unlikely to be solved even by those projects located close to their electricity customers. “We have to build transmission,” Bull says. Even tiny projects come with their own risks. “If you lose a single turbine out of a two-turbine wind farm, you’ve lost half of your revenues and you can’t carry your debt,” Bull says.

Going green
Community ownership of wind projects brings ethical and economic advantages for families



PETER HALSTON/ISLAND INSTITUTE

Unclear definition

Other problems persist. Interconnection queues are difficult to navigate and transmission shortage is a dilemma. Economic stagnation has reduced electricity demand, making it easier for utilities to reach renewables targets without offering large numbers of PPAs to projects.

Meantime, the definition of community wind is itself unclear. Some say the term refers to projects 51% owned by state citizens. Others apply it simply to projects where local landowners get significantly more than a simple lease payment for hosting turbines. “If you can’t really explain to

a congressman what you’re talking about, it’s hard to convince him to actually pass policy that’s good for your sector,” says Hansen.

Indeed, Dan Juhl, a pioneer of community wind from Minnesota, believes a federally mandated purchase power price regime and national renewables standard are unlikely. “Utilities have too much political horsepower in this country,” he says. Obstacles notwithstanding, community wind is hitting its stride. That bodes well for community wind projects seeking not only the acceptance of local regulators but the nation as a whole. ■■W

varying rates depending on municipal policy. Countrywide, it averages around 14%.

In recent years, awareness of climate issues has sparked a new form of community wind in which municipal energy utilities, often entirely owned by the local town, buy up wind stations to reduce their carbon footprints. European Union CO2 emissions-trading rules require energy companies to buy all their CO2 certificate allocation at auction from 2013. This prospect is helping drive Germany’s 500 municipal electricity utilities to invest in wind.

But in this kind of citizen-owned wind, communities are often far away from the generation capacity they own. In one much-watched

deal in December, wind developer WPD sold nine wind stations in the eastern German state of Brandenburg, combined capacity of 163MW, to three municipal utilities in western Germany. Utility Stadtwerke München, which took a 75% share, had earlier in the year bought five wind stations totalling 50MW from WPD. Despite weak ties to the community hosting the wind, the deals were key components of a strategy of increasing use of renewable energy while gaining independence from “the current oligopoly of energy producers”, says HEAG Südthessische Energie, a municipal utility in the western industrial town of Darmstadt that took a minority stake. It was

referring to utility giants E.on, RWE, EnBW and Vattenfall Europe, which account for around 80% of electricity generation in Germany.

Community wind power has made forays into offshore, but with varying success. Project developer Butendiek Bürgerwindpark in 2001 invited individuals to invest in a 388MW offshore wind station west of the island of Sylt. Nearly 8500 individuals bought up a total of 20,000 stakes, raising €5 million. A construction permit was granted in 2002. But project implementation was too big and complex, and the enterprise was sold in 2007 to Airtricity, which was later acquired by Scottish and Southern Energy.

The size and risk of offshore wind

investments appear to make municipal utility involvement the only viable form of community involvement. Stadtwerke München and HSE Darmstadt have each taken 24.9% stakes in the Global Tech 1 offshore project, and German energy company Trianel has acquired the 400MW Borkum West 2 offshore project. But while Stadtwerke and HSE are both owned by cities, Trianel may not meet the definition of community wind so easily. The company is owned by 44 municipal utilities and would hardly generate a community feeling with the average German citizen. Even so, it is evident that people continue to explore new ways to get involved in wind.