

Will States Continue Push For More Renewable Energy?

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Almost 300 shiny new wind turbines, part of the Flat Ridge 2 Wind Farm, are now generating clean, renewable energy on a 66,000-acre site across four counties in southern Kansas. Each turbine has capacity to generate 1.6 megawatts (MW) of electricity or a total of 438 megawatts. That's enough to supply electricity to 160,000 homes as far away as Missouri, Arkansas and Louisiana.

The impact of the state's largest wind farm rippled across the Kansas economy and other Midwestern states, too. A study by the Kansas City law firm of Polsinelli Shughart, conducted by companies connected to the wind industry, found that the leasing of land for the wind turbines brings \$273 million in additional income for landowners and \$208 million in revenue for community organizations and local and county governments.

Building the \$800 million project also created 3,484 construction jobs, 262 operation and maintenance jobs, and 8,569 indirect jobs, the study noted. The wind farm is jointly owned by BP Wind Energy and Sempra U.S. Gas & Power.

Driven in part by state renewable energy targets, fourteen states have installed over 1,000 MW of wind capacity, and a total of 37 states now have installed at least some utility-scale wind power. With 9,728 MW of capacity, Texas is leading the way, followed by Iowa with 3,670 MW.

Wind set a new record in 2012 by installing 44 percent of all new electrical generating capacity in America, according to the Energy Information Administration, leading the electric sector compared with 30 percent for natural gas, and lesser amounts for coal and other sources.

Future unclear

But the future of wind energy in the U.S. is unclear, in part because of the low price of natural gas, which has made it an economical option to generate electricity and uncertainty over continuation of the federal Production Tax Credit (PTC).

Congress included the long-sought extension of PTC and Investment Tax Credits for community and offshore projects in final passage of a bill to avert the "fiscal cliff" earlier this year. The bill would cover all wind projects that start construction in 2013.

America's wind energy workers have been living under threat of the PTC's expiration for over a year and layoffs had already begun, as companies idled factories because of a lack of orders for 2013, according to the American Wind Energy Association.

"Uncertain federal policies have caused a "boom-bust" cycle in U.S. wind energy development for over a decade," AWEA notes.

State requirements key

But wind and other forms of renewable energy have also been bolstered by state-based Renewable Portfolio Standards (RPS). While some have argued against state mandates, there's no question that they have played a key role in developing a new clean energy economy.

Electric power generated under state Renewable Portfolio Standards (RPS) represented 54 percent of all retail electricity sales in the United States in 2012, despite renewable power having virtually no share of the market 15 years ago, data from the DOE's Lawrence Berkeley National Lab (LBNL) shows.

An RPS requires that a certain percentage of the market be supplied by new renewable energy sources, including anaerobic digesters on animal operations, wind farms and solar energy facilities – all found in rural areas across the country.

In other parts of the country where there are significant biomass markets, farmers and ranchers are providing feedstocks for co-gener-

ation with coal and natural gas in many power plants.

Facilities built since 1998 are now producing some 53 gigawatts (GW) of non-hydro renewable electricity. A gigawatt, or one thousand megawatts, is enough to power a medium-sized city. Some 63 percent of the 53 GW in capacity developed over the past 15 years is coming from states with an RPS.

"State RPS policies appear to be motivating substantial renewable capacity development," says Galen L. Barbose, a principle scientific engineering associate in the Electricity Markets and Policy Group at LBNL and presenter of the data at a recent Renewable Portfolio Standards summit held in Washington.

American agriculture is helping meet the goals established by those state standards by harvesting wind power, biopower and other renewables, says Patrick Mazza, research director at Climate Solutions, a regional non-profit group based in Seattle.

"America's farmers and working lands have the capacity to bring abundant clean energy supplies to the marketplace," Mazza says, adding that the energy market generates new revenues, "spurs economic renaissance in farm belts across the country and gives new generations a chance to stay in rural communities."

"These policies lead to cleaner air, economic development, and a more resilient electrical grid," says Richard Caperton, the director of Clean Energy Investment at the Washington-based think tank Center for American Progress.

Currently, 29 states and the District of Columbia have Renewable Portfolio Standards, while another five states have established renewable electricity goals but impose no penalties for failure to meet them.

The standards, which are principally imposed on major public and investor-owned utilities, vary widely from state to state, with some requiring only five percent of the generated power to come from renewable resources. At the other end, California recently raised its RPS target to 33 percent by 2020. Early last year, the wind industry there reached a milestone by providing five percent of the state's electricity.

However, not all share the confidence in state RPS policies expressed by Barbose, the LBNL and other renewable energy advocates. The American Legislative Exchange Council (ALEC), a conservative coalition of state legislators, has been recruiting state lawmakers to introduce legislation that would repeal the RPS in targeted states.

ALEC leaders say RPSs essentially impose a tax on consumers by making them pay more for new energy sources over more conventional fossil fuels like coal and natural gas.

However, efforts to repeal the RPS in 10 states over the last two years have failed – a setback attributable in part to the fact that electric rates have risen less than 5 percent.

Furthermore, advocates say Renewable Portfolio Standards have helped drive investments in renewable electricity facilities that are dropping costs dramatically, particularly in the past five to 10 years.

The Solar Energy Industries Association says the average price of a solar panel has declined by 47 percent since the beginning of 2011. And the American Wind Energy Association says there's been a drop of 90 percent in wind costs since incentives began in the 1980s, and that wind development has attracted private investment of \$15 billion in each of the past five years.

"Consumers in 29 states are seeing the benefits of renewable energy today thanks to renewable energy standards," says American Progress' Caperton. "They have access to cleaner air, reliable power, and growing economies – all of which are benefits of a simple, commonsense policy." Δ

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