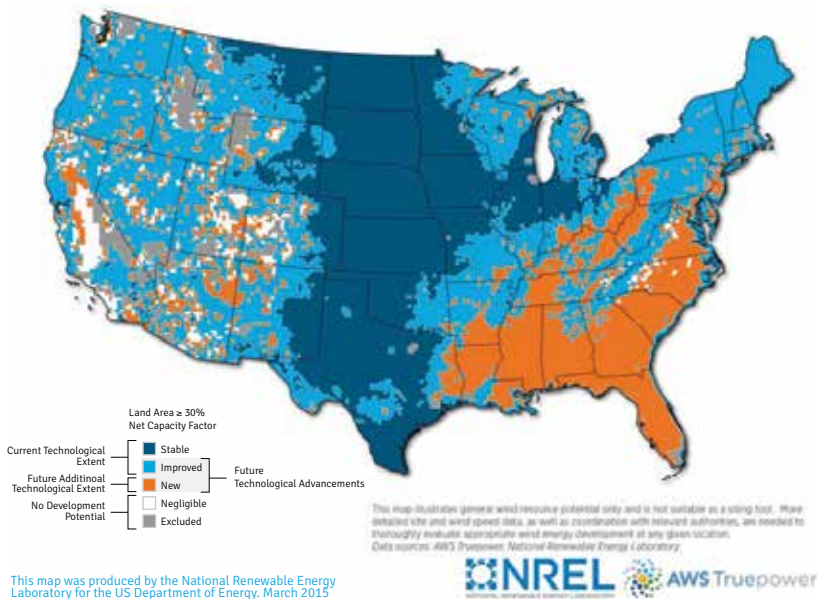


# DIRECTION

Policy • Advocacy • Business • Finance • Legal • Environment • International

## DOE REPORT EYES WIND POTENTIAL THROUGHOUT U.S.

*Advanced turbine technologies will unlock wind resources at untapped sites*



This map was produced by the National Renewable Energy Laboratory for the US Department of Energy, March 2015

Energy Secretary Ernest Moniz recently announced the release of “Enabling Wind Power Nationwide,” a report showing how the United States can unlock the vast potential for wind energy deployment in all 50 states — made possible through the next generation of larger wind turbines. Announced at the AWEA WINDPOWER Conference in Orlando, the report builds upon the recently released “Wind Vision” report, which quantifies the economic, social, and environmental benefits of a robust wind energy future.

The new report highlights the potential for technical advancements to unlock wind resources in regions with limited wind deployment today, such as the Southeast. These new regions represent an additional 700,000 square miles — or

about one-fifth of the U.S. — bringing the total area of technical wind potential to 1.8 million square miles.

Technological advancements, such as taller wind turbine towers of 110 and 140 meters and larger rotors — currently under development by the Energy Department and its private sector partners — can more efficiently capture the stronger and more consistent wind resources typically found at greater heights above ground level, compared with the average 80-meter wind turbine towers installed in 39 states today.

“Wind generation has more than tripled in the United States in just six years, exceeding 4.5 percent of total generation, and we are focused on expanding its clean power potential to every state

in the country,” Moniz said. “By producing the next generation of larger and more efficient wind turbines, we can create thousands of new jobs and reduce greenhouse gas emissions, as we fully unlock wind power as a critical national resource.”

These advanced wind energy systems will generate more electricity per dollar invested and further drive down the cost of wind energy. The Energy Department supports research and development that has already helped the wind industry install nearly 66GW of wind power capacity — enough to power more than 17 million homes — and has helped decrease the cost of wind energy by more than 90 percent. Continuing this technology development is essential to expanding this clean energy source to every state across the nation. Increasing the amount of land suited to commercial wind development, wind power can also provide local economic development opportunities, including jobs for installers, engineers, and other support personnel, in new communities and whole regions with currently untapped resources.

For more information on the Energy Department’s Office of Energy Efficiency and Renewable Energy, or the Wind Program specifically, please visit [www.energy.gov/eere](http://www.energy.gov/eere). To learn more about the Wind Vision report released in March, visit the Energy Department’s Wind Vision Web page at [www.energy.gov/windvision](http://www.energy.gov/windvision).

— Source: U.S. Department of Energy

## COMPANIES UNITE IN PROTEST OF HOUSE ANTI-WIND BILL

### *Joint letter to Congress urges defeat of 'PTC Elimination Act'*

A threat to the most important federal policy for continued wind energy development in America has led 85 companies to protest to the 21 members of Congress involved.

There are 20 co-sponsors of the "PTC Elimination Act" (H.R. 1901, known as the Marchant-Pompeo bill for its initial two sponsors). The 85 companies today sent each a letter saying that if passed, that bill would "take away an effective, business tax incentive that creates jobs, drives rural economic development and reduces energy costs for Americans across the country."

The legislation unfairly targets just one industry, the letter says, which has invested \$100 billion since 2008:

"[R]ecent PTC expirations have led to dramatic job losses and shuttered manufacturing facilities. These recent examples show that taking away the PTC and making retroactive tax policy changes would threaten an important economic opportunity for workers and their families in your states."

In 2014 alone, the U.S. wind energy industry added 23,000 jobs. But the year before, after the renewable energy Production Tax Credit was allowed to expire even briefly, installations of new wind farms fell 92 percent.

With stable policies, a U.S. Department of Energy report says American wind energy can quadruple by 2030 and supply the U.S. with 20 percent of its electricity. That will support 380,000 jobs; increase tax payments to communities to \$1.8 billion a year; and increase lease payments to farmers and ranchers to \$650 million a year.

The letter notes bipartisan support for continuing the renewable energy Production Tax Credit in Congress and from both Republican and Democratic presidents, as well as a strong majority of Americans.

For example, a March 2015 Gallup poll found 84 percent of American voters want the U.S. to put more emphasis or the same emphasis on producing domestic energy from wind. Two-thirds of Republicans and Independents wanted more emphasis.

— Source: AWEA

## CANADA SURPASSES 10,000 MW WIND INSTALLATION MARK

### *Wind energy is top new generation source over five-year span*

Canada has reached the 10,000 MW milestone of installed wind energy capacity through the K2 Wind Power Project in southwestern Ontario and now has enough power to accommodate more than 3 million homes annually.

The Canadian Wind Energy Association recently announced that Canada's wind energy industry has taken another significant leap forward. With the commissioning of the K2 Wind Power Project in southwestern Ontario in June, Canada has now become the seventh country in the world to surpass 10,000 MW of installed wind energy capacity.

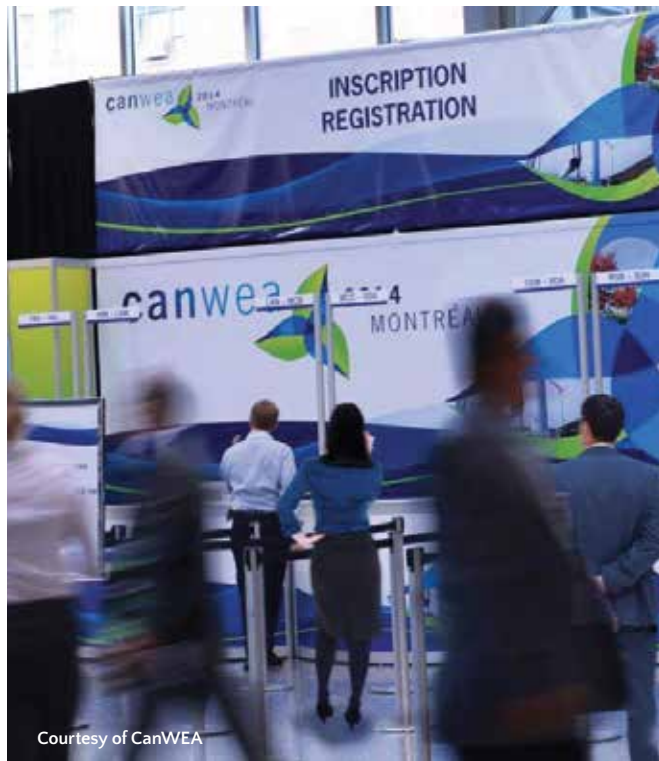
"Meeting the 10,000 MW milestone confirms that Canada is a global leader in wind energy development," said Robert Hornung, president of CanWEA. "Wind energy's cost competitiveness, coupled with the fact that it produces no greenhouse gas emissions, means it is well positioned to continue its rapid growth as a mainstream contributor to Canada's electricity supply."

Over the last five years, more wind energy capacity has been installed in Canada than any other form of electricity generation. The nation has seen three record years for the annual installation of new wind energy capacity, and Canada's wind energy capacity has grown by an average of 1,300 MW, or 24 percent, annually. Installations for 2015 are expected to exceed that average.

Wind turbines are now operating in every province in Canada, and in the Northwest Territories and Yukon, providing clean wind energy to over 100 communities and accounting for nearly 5 percent of domestic Canadian electricity demand. That's enough power to meet the needs of over 3 million average Canadian homes every year.

"Wind energy is meeting Canada's demand for new electricity in a clean, reliable and cost-competitive way," Hornung said. "As concerns about global climate change grow, wind energy will also need to play a critical role in Canada's transition to a more flexible and decentralized low carbon electricity system."

Every 100 MW of new wind energy brings 1,000 person-years of employment during the construction



Courtesy of CanWEA

phase of a wind energy project and 350 person-years of work in long-term operations and maintenance. In addition, wind energy is delivering significant economic benefits to local economies through property tax payments, community benefit agreements and land lease contracts. Every megawatt of new wind energy represents an investment of approximately \$2 million.

“We celebrate wind energy as Canada’s success story with another milestone reached,” Hornung said. “The best is yet to come.”

In celebration of the growing contribution that wind energy is making around the world and in Canada, CanWEA is once again proud to launch the annual Power of Wind contest. Students entering or who are in post-secondary education are eligible to submit entries on why harnessing wind power is important to Canada’s energy future. The submission deadline is September 16, and winners will be announced at CanWEA’s Annual Awards Banquet in Toronto on October 7. Additional information, contest rules, and terms and conditions can be found on the Friends of Wind website. ↘

— Source: CanWEA

## GOVERNORS PETITION CONGRESS TO EXTEND WIND TAX CREDITS

*Joint letter cites manufacturing, job losses as pitfalls of expired tax incentives*

The chairman and vice chairman of the bipartisan Governors’ Wind Energy Coalition sent a letter to House and Senate leadership in May urging Congress to approve a multi-year extension of the renewable energy production tax credit (PTC) and investment tax credit (ITC) as soon as possible. The most recently passed extension expired last year.

Washington Governor Jay Inslee and Iowa Governor Terry Branstad told congressional leaders that the recent Wind Vision report emphasized the importance of near-term policy support to prevent an industry slow down and the loss of manufacturing to foreign markets. Without policy support, wind deployment will be minimal and the domestic wind manufacturing sector will likely wither:

“Our assessment of the Department of Energy’s recently released ‘Wind

Vision’ report is that the domestic wind manufacturing industry is likely to stagnate over the next decade without the PTC. We anticipate that wind energy will be truly competitive with traditional energy sources soon given innovation in the industry.”

The governors also highlighted wind energy’s diverse public policy benefits, providing justification for near-term tax incentives:

“We believe it is important to recognize all the public policy benefits of wind energy, including a diversified energy portfolio, public health benefits, domestically-sourced energy, and others. We are also concerned that thousands of manufacturing jobs could be lost without stable federal policy.”

“There also exists enormous potential in the development of our nation’s offshore wind energy resources, and the investment tax credit is a vital tool

for our capturing that opportunity and further developing domestic renewable energy industries,” the governors wrote, with regard to the importance of the ITC.

“These tax credits have made possible the robust growth of the American wind industry and thousands of renewable energy jobs in recent years, with substantial economic returns to our states and the nation. But these gains are at risk...because ongoing federal policy uncertainty continues to hamper the further development of the nation’s wind industry.”

The leaders of the 22-member bipartisan governors’ coalition urged congressional leaders to act promptly to extend the renewable energy production and investment tax credits.

— Source: Governors’ Wind Energy Coalition

# SIEMENS TARGETS AMERICAS WITH NEW 2.3MW MODEL

*OEM estimates AEP boost of up to 10 percent for medium-to-low wind sites*

Siemens recently introduced a new turbine model to its G2 platform at WINDPOWER 2015 in Orlando in May. The Siemens SWT-2.3-120 is the first wind turbine designed by Siemens to specifically meet the demands of its North and South American customers. The powerful new turbine features a 120-meter rotor, enabling it to achieve an industry-leading capacity factor. It is the next step in the evolution of Siemens' proven G2 product platform — one of the bestselling product lines in wind turbine history. Serial production of the SWT-2.3-120 will commence in the U.S. in 2017.



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The product was developed with an eye toward increasing energy production for sites with medium to low wind conditions, which are prevalent in markets within the Americas region. It employs advanced technology including a newly-developed 59-meter-long rotor blade, which has been optimized for enhanced production at medium to low wind speed, while also reducing weights and loads for decreased wear and tear. Siemens' blade factory in Fort Madison, Iowa, and Siemens aerodynamic engineering center in Boulder, Colorado, were heavily involved in the development of the refined product and its aerodynamically tailored blade.

The drive train has been optimized to deliver maximum energy capture in medium to low wind conditions. At wind speeds ranging from 6 to 8.5 meters per second, the Siemens SWT-2.3-120 can yield an increase of nearly 10 percent in AEP compared to its predecessor, the SWT-2.3-108. The results are higher returns and a significant decrease in the projected Levelized Cost of Energy (LCOE). The product design also incorporates several added safety and operational benefits related to the service and maintenance of the turbines, including increased accessibility of key components and access to the weather station from inside the nacelle.

"We designed the SWT-2.3-120 with the requirements of the Americas region in mind," said Markus Tacke, CEO Siemens Wind Power and Renewables Division. "With the SWT-2.3-120, we have been able to achieve an industry-leading capacity factor of over 60 percent and a nearly 10 percent improvement in AEP under design conditions. The SWT-2.3-120 offers excellent returns on investment for years to come. This new wind turbine will ideally serve its home market and also strengthen our export business." ↵

— Source: Siemens

## EDF RENEWABLE ENERGY ACQUIRES SALT FORK PROJECT IN TEXAS

*Garland Power & Light commits to long-term power purchase agreement for 150 MW*

EDF Renewable Energy recently announced the acquisition of the up to 200 MW Salt Fork Wind Project from Cielo Wind Power LP. The achievement comes as a result of 18 months of close collaboration between the two companies to bring about the close of the acquisition transaction and the Power Purchase Agreement with Garland Power & Light.

Salt Fork is located in the Texas Panhandle on approximately 16,700 acres in Donley and Gray Counties, Texas, roughly 45 miles east of Amarillo. The project is expected to achieve commercial operation by the end of 2016, utilizing ERCOT's CREZ transmission infrastructure.

The clean electricity and renewable energy credits generated by 150 MW of the Salt Fork Wind Project will be provided to Garland Power & Light under a long-term power purchase agreement. This agreement follows the PPA the municipal utility signed in early 2014 for a portion of the electricity generated by EDF RE's Spinning Spur 3 Wind Project.

"We are pleased to expand our relationship with Garland Power & Light to include the Salt Fork Wind Project, building upon the Spinning

Spur 3 Wind Project, which is presently under construction and expected to be completed later this year," commented Ryan Pfaff, executive vice president at EDF Renewable Energy. "The diligent collaboration between Cielo and EDF Renewable Energy demonstrates the value of long-term relationships; Salt Fork represents the third wind project we have successfully acquired from Cielo in late-stage development."

"Our investment in wind helps to diversify GP&L's energy portfolio while mitigating risk of volatile fuel prices. With this agreement, we will add another clean resource to the power supply mix that will benefit our customers for years to come," said Jeff Janke, general manager of Garland Power & Light. "We are pleased to once again do business with EDF Renewable Energy."

Since first entering the Texas market in late 2011, EDF Renewable Energy has commissioned 872MW of wind energy capacity. The Salt Fork acquisition increases the Texas portfolio to 1.2 GW operating, under construction or in development.

— Source: EDF Renewable Energy

## HEADLINES

### GE invests \$25 million in TerraForm Global

GE's renewable energy business recently announced a \$25 million investment in TerraForm Global, LLC. TerraForm Global is a dividend growth-oriented company, or "yieldco," formed by SunEdison to own and operate contracted renewable power generation assets in attractive, high-growth emerging markets.

"This investment is about driving continued global growth for renewable power," said Anne McEntee, president & CEO of GE's renewable energy business. "Together with SunEdison, we will significantly increase wind developments in key growth regions like Latin America, Europe, India, and China."

The agreement is expected to help support new wind pipeline opportunities for TerraForm Global. GE also will provide life cycle operations and maintenance support for TerraForm's international wind fleet. The two companies have agreed to continue exploring additional opportunities for growth-oriented collaboration.