

AWEA WINDPOWER 2015

With Orlando as the host city, North America's premier wind energy event approaches

From Staff and Press Reports

Companies and individuals representing the global utility scale wind energy industry will gather once more next month, as the American Wind Energy Association hosts its annual WINDPOWER Conference & Exhibition — this time at the Orange County Convention Center in Orlando, Florida.

The event, to be held May 18-21, is the preeminent annual gathering of the utility-scale wind energy industry in North America, and provides stakeholders within the industry opportunities to share and address thoughts, concerns, and challenges surrounding the industry, both in the present and going forward.

As in years past, WINDPOWER 2015 is dually centered around an educational program as well as an industry exhibition. However, attendees can take advantage of additional training, networking, and recreational events, all of which coincide with the conference and exhibition.

WINDPOWER 2015 officially kicks off Monday, May 18 at 4:00 p.m. with the Opening Reception in the Orange County Convention Center's South exhibit halls.

CONFERENCE

Tuesday, May 19 marks the official start to the conference, beginning at 8:30 a.m. with the opening general session, featuring AWEA CEO Tom Kiernan and opening keynote speaker Lisa Davis, member of the Managing Board of Siemens AG, Power and

Gas, Wind Power and Renewables, and Power Generation Services.

Davis, a recent appointment to Siemens board, is expected to give a presentation on how the recent dip in the price of oil will affect renewable power generation methods, wind in particular.

A panel of prominent leaders from varied segments of the wind industry will take the general session stage on Wednesday to discuss trends and challenges currently facing the wind industry, as well as strategies for the future.

Also during Wednesday's general session, best-selling author and marketing professor Jonah Berger will deliver a second keynote address, educating WINDPOWER participants on understanding how and why certain thoughts, products, and gain exponential growth and acceptance, to the point of "going viral."

Berger is the author of "Contagious: Why Things Catch On", a best-selling examination of the power of word of mouth advertising. Through sharing insights of his research, the intent of Berger's presentation is to equip the wind energy community with the skills and thought processes necessary to carry the message of the U.S. wind energy industry to new heights.

The closing general session on Thursday, May 21, will feature a forum with executives from the wind energy industry's leading large turbine manufacturers.



This year's WINDPOWER 2015 conference sessions, as has been the case in years past, will feature topics of general interest, as well as sessions that are narrow in focus, and aimed at specific segments within the industry. Attendees are given the options of 20 individual sessions and four Power Sessions from which they can tailor their WINDPOWER conference experience.



Courtesy of AWEA

Technical training sessions which require separate registration from the general conference are offered throughout the day on Monday.

EXHIBITION

Serving as an opportunity for business and overall industry development, AWEA has gathered hundreds of companies involved in

the wind energy industry to participate in the exhibition portion of WINDPOWER 2015. Exhibitors from around the world will be on hand to showcase their services, products, and projects.

The exhibit hall will be open from 10:00 a.m. to 6:00 p.m. on Tuesday and Wednesday, and from 9:00 a.m. until 1:30 p.m. on Thursday.

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REGISTRATION

Those who wish to register to exhibit or attend WINDPOWER 2015, are invited to do so online at www.windpowerexpo.org. Registrants have multiple attendance options, ranging from single-day conference or exhibition passes up to the VIP conference pass. Registration price schedules vary depending on date of registration and AWEA membership status.

SPECIAL EVENTS & NETWORKING

In addition to the conference and exhibition, networking opportunities and special events will be held during the week of WINDPOWER 2015.

Wind turbine manufacturer Suzlon is once again sponsoring the WINDPOWER 2015 Golf Open at Walt Disney World on Monday, May 18 starting at 7:00 a.m. Proceeds from the event benefit the Wind Energy Foundation.

On Tuesday, May 19, beginning at 4:30 p.m. participants are invited to join in Exhibition Happy Hour in the exhibit hall. Extended booth receptions follow from 6–8 p.m. on Tuesday only.

On Wednesday, May 20, beginning at 4:30 p.m., educational poster authors will be on hand in the exhibition hall to discuss their scholarship. Those with registered access to the exhibition hall are invited to attend the discussions.

This year's conference dinner, held on Wednesday, May 20, is another networking opportunity for WINDPOWER attendees. The dinner, with the theme "An Exclusive Night in Old Havana" will be held from 6:00 p.m. to 9:00 p.m. at Cuba Libre Restaurant and Rum Bar. The conference dinner attendance is a separately ticketed event, and is not included with show registration. ✎

**** THE FULL CONFERENCE SCHEDULE FOR WINDPOWER 2015 CAN BE FOUND ON PAGE 48 OF THIS ISSUE.**

For more information about WINDPOWER 2015, including education, registration, exhibitors, travel and housing information, sponsors, and special events, visit www.windpowerexpo.org.

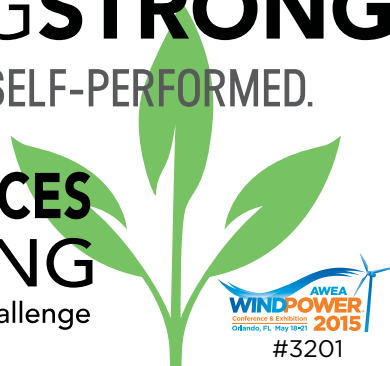


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DOE UNVEILS UPDATED WIND VISION REPORT

Study outlines long-term economic and environmental benefits of wind growth

The U.S. Department of Energy has released a new report looking at the future of wind power through 2050 and the economic benefits that come with a robust wind industry. The report, “Wind Vision: A New Era for Wind Power in the United States,” confirms that with technological advancements driving projected cost reductions, in combination with continued siting and transmission development, wind power can be economically deployed to provide renewable power in all 50 states.

The report highlights the importance of wind in the nation’s energy portfolio and how critical it is to advance wind’s position in the energy marketplace to maintain the nation’s existing wind manufacturing infrastructure and economic benefits. The report includes a roadmap that defines actions needed to realize the substantial economic and social benefits of a robust wind energy future. Through continued cost reductions and further investments in wind energy systems, wind power is projected to be directly competitive with conventional energy technologies within the next

decade.

In 2013, an estimated total of more than 50,000 American jobs were supported by wind investments. The report projects that wind could support more than 600,000 jobs by 2050 in industries such as construction, engineering, transportation, manufacturing, operations, maintenance, and supporting services.

While the wind industry is maturing, many future actions and efforts remain critical to further advancement of domestic wind energy. Continued technology development is essential to reducing costs in the near term and maximizing savings in the long term. This report not only sets the scene for the future of the wind industry, but also defines a roadmap of actions the wind energy industry and the research community can take to optimize wind’s potential contribution to the nation’s energy portfolio.

For more information on the Energy Department’s Office of Energy Efficiency and Renewable Energy, or the Wind Program specifically, visit www.energy.gov/eere.

— Source: U.S. Department of Energy

WIND POWER LED NEW U.S. ELECTRIC GENERATION IN 2014

Industry maintains overall fifth ranking among all generation sources

American wind power added significantly more new electricity than any other resource in 2014,

according to U.S. Department of Energy data released in early March.

Wind power generated 4.4 percent of all the electricity in America in 2014 and maintained its position as the fifth largest electricity source in the U.S., according to the latest data from the U.S. Department of Energy's (DOE) Energy Information Administration (EIA). Iowa led the nation by producing 28.5 percent of its electricity from wind power, followed by South Dakota at 25.3 percent and Kansas at 21.7. Wind energy provided more than 15 percent of electricity in a total of seven states, more than 10 percent in a total of nine states, and more than five percent in a total of 19 states.

All renewable energy sources including hydropower now deliver more than 13 percent of the nation's electricity, with wind energy providing more than one-third of that total.

"The U.S. is blessed with an abundant supply of wind energy. Pairing this homegrown resource with continued technology innovation has made the U.S. the home of the most productive wind turbines in the world," said Emily Williams, Deputy Director of Industry Data and Analysis for AWEA. Analysis released last year found the U.S. is num-

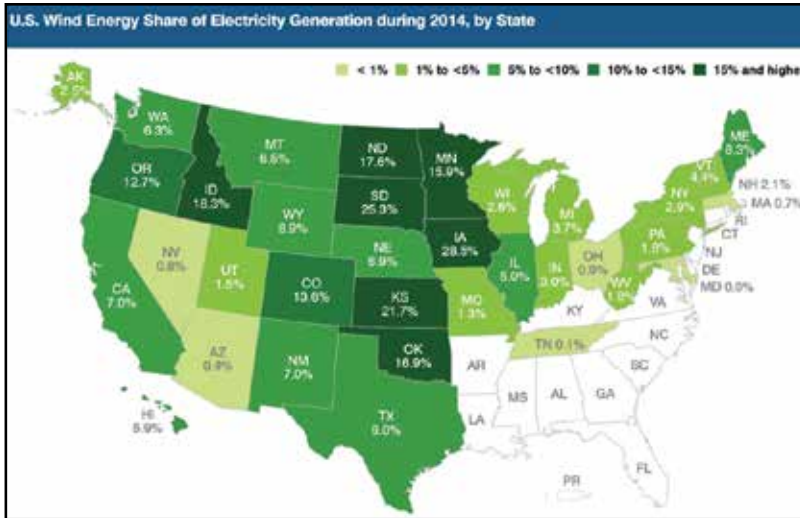


Chart Source: AWEA; Data Source: EIA Electric Power Monthly

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Ranking	State	Wind Energy as Percent of Total State Generation
1	Iowa	28.5%
2	South Dakota	25.3%
3	Kansas	21.7%
4	Idaho	18.3%
5	North Dakota	17.6%
6	Oklahoma	16.9%
7	Minnesota	15.9%
8	Colorado	13.6%
9	Oregon	12.7%
10	Texas	9.0%
11	Wyoming	8.9%
12	Maine	8.3%
13	New Mexico	7.0%
14	California	7.0%
15	Nebraska	6.9%
16	Montana	6.5%
17	Washington	6.3%
18	Hawaii	5.9%
19	Illinois	5.0%
20	Vermont	4.4%

Figure 1: Energy sources by amount new generation in 2014

ber one in the world in wind energy production.

“Having more clean, affordable wind power than ever is helping to keep the lights on for U.S. homes and businesses,” said Tom Kiernan, CEO of the American Wind Energy Association (AWEA). “We have an opportunity to have even more of the U.S. reliably powered by wind, resulting in more well-paying jobs, more benefits for consumers and cleaner air.”

Wind energy’s growth has been driven by technological improvements and cost declines that have reduced the cost of wind energy by more than half over the last five years, as documented by Lawrence Berkeley National Laboratory.

In 2014, wind provided enough electricity to power the equivalent of 16.7 million homes, or all the residential households in Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota, Colorado, Idaho, Illinois, and Montana.

Once recently added U.S. wind projects have had a full year of production, total wind output will likely rise to powering the equivalent of 18 million homes.

Congress is currently faced with the decision to extend the Production Tax Credit (PTC), the primary federal tax incentive for wind energy. The PTC’s performance-based incentive is a primary reason why U.S. wind plants are more productive than those in other countries. Construction of new U.S. wind farms has driven an average of \$12.2 billion a year in private investment over the last five years, and \$100 billion since 2008.

Texas broke into the top 10 states for percentage of the state’s electricity supplied by wind. The main Texas grid, the Electric Reliability Council of Texas (ERCOT), generated 10.6 percent of its electricity from wind in 2014. Texas continued to lead the U.S. with the most wind installed wind capacity, as well as the most electricity generated

Ranking	State	Wind Energy Generation (thousand MWh)	Equivalent Avg. U.S. Homes Powered
1	Texas	39,371	3.61 million
2	Iowa	16,295	1.49 million
3	California	13,778	1.26 million
4	Oklahoma	11,862	1.09 million
5	Kansas	10,844	990,000
6	Illinois	10,077	920,000
7	Minnesota	9,060	830,000
8	Oregon	7,580	690,000
9	Colorado	7,351	670,000
10	Washington	7,264	670,000
	U.S. TOTAL	181,791	16.7 million

Figure 2: Top 20 States for Wind Energy as Percent of Total State Generation

from wind energy - over 39 million megawatts-hours, enough to power more than 3.6 million homes. At times, wind energy has provided nearly 40 percent of the electricity on the main Texas grid, and over 60 percent of electricity on the main Colorado power system.

Texas, Iowa, California and Oklahoma all generated enough electricity to power more than 1 million homes.

The U.S. will tap into more of its wind power resources this year, and



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Key Topics:

- Capitol Safety Competent Climber/Rescuer
- OSHA 30 Hour
- NFPA 70E Arc Flash Protection
- Fall Protection Systems
- AAA Driver Improvement
- Programmable Logic Controllers
- Tractel/Rollgliss/Petzl I’D
- Respirator/Pulmonary Test
- Component Troubleshooting
- Self and Assisted Rescues
- Turbine Maintenance
- Nacelle/Hub Systems
- Confined Space/Rescues
- Electrical Safety/Fundamentals
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Electricity Source	Change in Generation 2013-2014 (GWh)	2013 Generation (GWh)	2014 Generation (GWh)
Renewable Sources			
Wind	13,951	167,840	181,791
Solar	9,285	9,036	18,321
Biomass	3,461	60,858	64,319
Geothermal	853	15,775	16,628
Hydroelectric	-9,816	268,565	258,749
Traditional Sources			
Nuclear	8,051	789,016	797,067
Petroleum Liquids	4,888	13,820	18,708
Coal	4,582	1,581,115	1,585,697
Petroleum Coke	-1,563	13,344	11,781
Natural Gas	-2,908	1,124,836	1,121,928

Figure 3: Top 10 States for Wind Generation

in years ahead, as the U.S. wind energy industry entered 2015 with a record of more than 13,000 MW of wind projects under construction. Construction activity is currently ongoing in 22 states.

Wind power is emerging as a critical solution for states and utilities to cost-effectively reduce pollution, which will help comply with pending EPA rules. In 2014, the U.S. wind fleet reduced carbon dioxide pollution by around 125 million metric tons, equivalent to 26 million cars worth of carbon emissions.

“Wind has more than tripled since 2008, it can double from where it is today to 10 percent by 2020, then double again to 20 percent by 2030, and become the leading source of electricity in the U.S. by 2050,” said AWEA’s Kiernan. “However, to get there Congress must provide wind with the same policy certainty it provides to other energy sources by rapidly extending the Production Tax Credit for as long as possible.”

The DOE is expected to release a new report this month titled, “Wind Vision:

A New Era for Wind Power in the United States,” that will show how the U.S. can reach those goals. In a 2010 study, the National Renewable Energy Laboratory reported that the U.S. has over 10 million megawatts of viable wind resource potential, enough to power the equivalent of the nation’s total electricity needs 10 times over.

As wind energy has grown to provide a larger share of our electricity mix, wind turbine technology has matured so that modern wind plants are able to provide the same grid reliability services as conventional generators, as documented in an AWEA report released last month.

American wind power now supports well-paying manufacturing jobs at over 500 manufacturing facilities in 43 states, and 50,000 well-paying jobs. Wind farms deliver over \$180 million a year to landowners in lease payments, as over 98 percent of wind projects are located on private land. ✎

— Source: American Wind Energy Association

THOUSANDS ATTEND EWEA OFFSHORE 2015 IN DENMARK

Over 8,000 delegates from 54 countries descended on Copenhagen this year to attend the EWEA OFFSHORE 2015 event at the Bella Center — the world’s largest offshore wind energy conference and exhibition.

In addition to more than 430 exhibitors, the event saw keynote speeches from high-level political and industry players on the state of Europe’s offshore wind industry and the continent’s energy mix at large.

The central theme of the event tackled one of the most pressing issues for the offshore wind business today — cost reduction. Three of the biggest players on the European offshore wind stage — DONG Energy, MHI Vestas Offshore Wind and Siemens Wind Power — launched an initiative at the event called United Industry. The declaration aims to spark joint and collective actions across the



whole of the value chain to deliver long-term reductions in the cost of offshore wind.

The event played host to the Crown Prince Frederik of Denmark and six ministers from four different Member States including the Deputy Prime Minister of Denmark Morten Ostergaard; Denmark’s Foreign Minister Martin Lidegaard; Denmark’s Minister for Climate, Energy and Building Rasmus Helveg Petersen; Sweden’s Energy Minister Ibrahim Baylan; Ireland’s Research and Innovation Minister Damien English; and the Latvian Economy Minister Dana

Reizniece-Ozola, whose country also holds the EU Council Presidency.

Over 100 journalists from the mainstream, trade and B2B media attended the event to speak with delegates and experts on a variety of different topics.

The three-day event provided an excellent showcase and networking opportunity for EWEA’s members to speak with policymakers, media and industry partners alike while also enjoying a wide range of plenary sessions and workshops.

— Source: EWEA

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RENEWABLEUK AND EWEA COMBINE EFFORTS FOR 2017 OFFSHORE CONFERENCE

The first ever joint offshore wind conference organized by EWEA and RenewableUK was announced in March. Offshore Wind Energy 2017 will take place in London on June 6–8, 2017, and will take the place of RenewableUK’s annual event and the biannual EWEA OFFSHORE event. The announcement was made at EWEA OFFSHORE 2015 in Copenhagen.

Offshore Wind Energy 2017 is expected to attract up to 12,000 wind industry players to the UK, with 70 percent of delegates expected to come from outside the UK. It is expected to be the world’s largest offshore wind energy conference and exhibition.

“We are delighted that Offshore Wind Energy 2017 is coming to London,” said Maria McCaffery, CEO of RenewableUK. “As the UK is the world-leader in the offshore wind industry, it makes sense for RenewableUK and EWEA to collaborate on this first-of-a-kind joint event.”

EWEA CEO Thomas Becker similarly praised the joint effort. “The UK is already the global goliath of the offshore wind industry and there is still so much left to play for. The UK is sitting on a goldmine when it comes to offshore wind and that is why we are very much looking forward to teaming up with RenewableUK for Offshore Wind Energy 2017 in London.”

— Source: EWEA