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WANT A TAX CREDIT FOR A SMALL WIND SYSTEM? BE SURE IT'S CERTIFIED

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Bergey Windpower Co., Inc.; NREL 13830

A small wind turbine can produce enough energy to cover the electricity costs of the average American home.

Small wind electric systems are one of the most cost-effective, home-based renewable energy systems for your home with zero emissions and pollution. If you decide small wind is right for you, you will need to ensure that your wind turbines are tested and certified for safety, function, performance, and durability.

WHY TURBINES ARE CERTIFIED

If you are considering a small wind energy system, certification can give you greater confidence in the performance and safety of the system you install. Adoption of distributed wind systems has been hindered by untested technologies and unverified claims about turbine performance.

Certification and quality assurance requirements can help promote solid products and can be adopted by local planning officials, utilities, banks, state energy offices, and federal agencies to ensure consumer protection and industry credibility.

HOW TURBINES ARE CERTIFIED

As part of the effort to ensure quality, standards providing a set of design and engineering criteria to verify and assess performance are used to test wind turbines at facilities that provide site, equipment, and technical expertise. The Energy Department's world-class National Wind Technology Center and its regional test

Applicant	Turbine	Certifier	Rated Annual Energy ¹ @ 5 m/s	Rated Sound Level ²	Certified Power Rating ³ @ 11 m/s
Bergey Windpower Co.	Excel 10	SWCC	13,800 kWh	42.9 dB(A)	8.9 kW
Bergey Windpower Co.	Excel 6	SWCC	9,920 kWh	47.2 dB(A)	5.5 kW
Eveready Diversified Products (Pty) Ltd.	Kestrel e400nb	SWCC	3,930 kWh	55.6 dB(A)	2.5 kW
Kingspan Environmental	KW6	SWCC	8,950 kWh	43.1 dB(A)	5.2 kW
Osiris Technologies	Osiris 10	Intertek	23,700 kWh	49.4 dB(A)	9.8 kW
Sonkyo Energy	Windspot 3.5	Intertek	4,820 kWh	39.1 dB(A)	3.2 kW
Sumec Hardware & Tools Co., LTD	PWB01-30-48	Intertek	2,920 kWh	41.1 dB(A)	1.2 kW
Sumec Hardware & Tools Co., LTD	PWA03-44-250	Intertek	6,400 kWh	40.9 dB(A)	3.2 kW
Sumec Hardware & Tools Co., LTD	PWB02-40-48	Intertek	4,660 kWh	36.9 dB(A)	1.7 kW
Sumec Hardware & Tools Co., LTD	PWA05-50-280	Intertek	9,240 kWh	42.0 dB(A)	5.0 kW
Xzeres Wind Corporation	442SR	SWCC	16,700 kWh	48.5 dB(A)	10.4 kW
Xzeres Wind Corporation	Skystream 3.7	SWCC	3,420 kWh	41.2 dB(A)	2.1 kW

Courtesy of IREC

centers, for example, are facilities that test and evaluate small wind turbines. An accredited third party, such as the Small Wind Certification Council or Intertek, then verifies test results and provides certificates to manufacturers.

Qualifying manufacturers are required to show that their wind turbines meet the requirements of the American Wind Energy Association (AWEA) or the International Electrotechnical Commission (IEC).

TAX CREDIT FOR CERTIFIED WIND TURBINES

In January of this year, the U.S. Internal Revenue Service introduced new performance and quality requirements for small wind — a nameplate capacity of up to 100 kW. To qualify for the 30 percent federal Investment Tax Credit (ITC), you must install a fully certified wind turbine.

HOW TO QUALIFY FOR THE TAX CREDIT

The new requirements go into effect for small wind energy properties on the following dates:

Effective Feb. 2, 2015:

- The most commonly installed turbines at homes — wind turbines with a rotor-swept area of 200 m² or less — that have been acquired or placed in service on or after Feb. 2, 2015, are subject to the requirements.

Effective Dec. 31, 2015:

- Larger wind turbines with a rotor-swept area of 200 m² or more that are acquired or placed in service on or after Dec. 31, 2015, are subject to the requirements at that time to qualify for the ITC.

There are currently 13 fully certified small wind turbine models. The En-

ergy Department is committed to increasing the number of certified small and medium wind turbine designs to 40 by 2020. To help make this happen, the Wind Program supports a Competitiveness Improvement Project (CIP) that helps U.S. manufacturers of small- and medium-sized turbines achieve certification and lower their cost of energy — building U.S. leadership in distributed wind markets.

To learn more about turbine certification in the U.S. market, check out this chart of certified small wind turbines maintained by the Interstate Renewable Energy Council (IREC). More information can be found on the DOE’s website or at IREC’s website where you can learn more about small wind and how it can benefit you and your community. ↴

— Source: U.S. DOE

RENEWABLE NRG SYSTEMS LAUNCHES USER INTERFACE

Designed for vibration analysts and technicians alike, updates include improved fleet views, reporting, and alarm features

Renewable NRG Systems (RNRG), a designer and manufacturer of decision support tools for the global renewable energy industry, has completely redesigned its software interface for the TurbinePhD® wind turbine condition

monitoring system (CMS). TurbinePhD is the only CMS in the wind industry that is engineered for use by wind plant operators at multiple levels of their organization, from technicians to data analysts.

AUTOMATED DIAGNOSIS

TurbinePhD’s powerful automated analysis classifies the health of all turbine drivetrain components so users don’t have to be vibration experts to get actionable information. Improved alert management allows users to handle all alerts in one place and track who acknowledges and clears issues. Charts and data can also be easily exported for deeper analysis.

FLEET HEALTH AT A GLANCE

The TurbinePhD user interface is completely web-based so users can access all of their turbine health data anywhere with an Internet connection. The fleet view allows operators to assess the health of all wind farms at a glance, and graphical health alerts clearly highlight those that need attention. At the wind farm level, users can see which turbines have new alerts or view and download charts of the most critical faults on the farm.

TurbinePhD is backed by RNRG’s two-year warranty and lifetime technical support. ↪

— Source: Renewable NRG Systems



Renewable NRG Systems

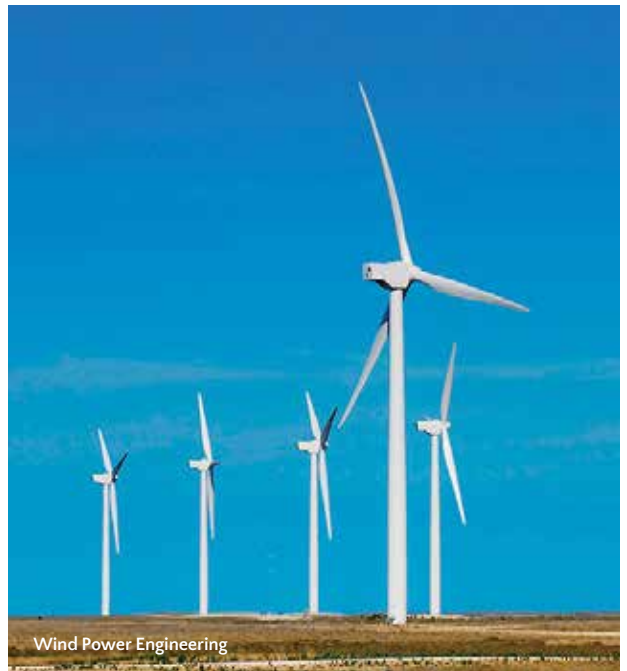
PATTERN ENERGY ACQUIRES REMAINING CAPACITY IN 283-MW GULF WIND POWER FACILITY

Pattern Energy Group Inc. recently announced that it has completed the acquisition of the remaining 170 MW ownership interests in the 283-MW Gulf Wind power facility in Kenedy County, Texas, from Pattern Energy Group LP and MetLife Capital LP.

“We now own 100 percent of Gulf Wind, which is located in a unique site on the Gulf Coast where the winds blow strongest at the times of Texas’ peak demand and pricing,” said Mike Garland, president and CEO of Pattern Energy. “The acquisition of the Gulf Wind equity interests and recapitalization of the project debt provides us with increased cash flow and complete control of the facility. The acquisition of the Gulf Wind interests, along with our recently announced dividend increase, demonstrate our commitment to increasing value for our shareholders.”

The Gulf Wind facility consists of 118 wind turbines and has the capacity to generate 283 MW of energy, the power equivalent to the annual energy usage of approximately 80,000 Texas homes. ↪

— Source: Pattern Energy Group



Wind Power Engineering

D.C. SETS EXAMPLE WITH MAJOR WIND ENERGY PURCHASE, SAVING \$45 MILLION

While Congress continues to debate extending the renewable energy Production Tax Credit and Investment Tax Credit, the nation's capital city just endorsed wind power in a big way. On August 12, Washington, D.C., Mayor Muriel Bowser announced a new power purchase agreement (PPA) for wind energy from an Iberdrola Renewables wind farm in southwestern Pennsylvania.

Wind power will supply the District of Columbia's government buildings with 35 percent of their electricity, all while saving \$45 million for D.C. taxpayers over the next 20 years. Mayor Bowser stated in a press release that the purchase was to "boost our economy and create cleaner air for current and future generations":

"The District of Columbia will continue to lead the nation in the fight against climate change. We are supporting green building, promoting energy and water efficiency, and fostering renewable energy. This wind agreement exemplifies how my administration will use energy policy to boost our economy and create cleaner air for current and future generations."

The agreement, which is the largest purchase of wind energy by a U.S. city to-date, has already come into effect as of August 1.

In this case, the D.C. government, not residents, is the recipient of wind energy. In other parts of the country, wind energy is lowering consumers' electricity bills. The Midwest utility system operator, MISO, has noted that wind power "ultimately helps keep prices low for our customers," and a Synapse Energy Economics report found that doubling the use of wind energy in the PJM Interconnection (which



includes Washington, D.C.) would save consumers close to \$7 billion per year.

Though D.C. is one of the first major American cities to directly purchase wind energy, it joins other municipalities like Georgetown, Texas, (not to be confused with the D.C. neighborhood). Earlier this year, the City of Georgetown opted to be powered entirely by renewable energy, primarily because low-cost wind and solar energy will bring savings. Other cities have chosen to buy Renewable Energy Credits,

which help to green the electricity supply, but don't guarantee a long-term, stable price for electricity.

The District's PPA is yet another example of major non-utility businesses and organizations buying wind energy because it saves money, provides long-term price certainty, and emits no carbon pollution. Other notable non-utility purchasers of wind power who have been in the news lately include Amazon, Facebook, and Hewlett Packard. ↴

— Source: AWEA