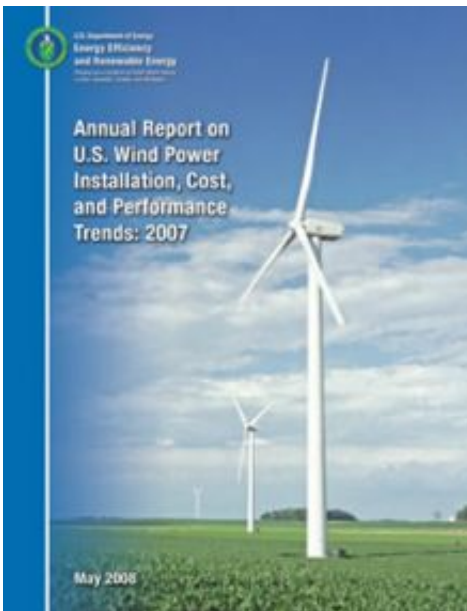


New Study Sheds Light on the Growing U.S. Wind Power Market

June 3 2008



A new report says that wind power is on the way to becoming a significant part of the U.S. electrical power mix.

For the third consecutive year the U.S. was home to the fastest-growing wind power market in the world, according to a report released today by the U.S. Department of Energy (DOE) and Lawrence Berkeley National Laboratory (Berkeley Lab). Specifically, U.S. wind power capacity increased by 46 percent in 2007, representing a \$9 billion investment in new wind projects. At this pace, wind is on a path to becoming a significant contributor to the U.S. power mix: wind projects accounted

for 35 percent of all new electricity-generating capacity added in the U.S. in 2007, and more than 200 GW (gigawatts, or billion watts) of wind power are in various stages of development throughout the country.

The 2007 edition of the Annual Report on U.S. Wind Power Installation, Cost, and Performance Trends provides a comprehensive overview of developments in the rapidly evolving U.S. wind power market. The need for such a report has become apparent in the past few years, as the wind power industry has entered an era of unprecedented growth, both globally and in the United States.

"As we work to implement President Bush's Advanced Energy Initiative by increasing the use of domestic, clean, and affordable renewable energy, we are eager to continue the trend of increasing the use of wind power at unprecedented rates," DOE's Assistant Secretary for Energy Efficiency and Renewable Energy Andy Karsner said. "Following on the heels of a detailed analysis by DOE and its partners of the technical and economic feasibility of using wind to generate 20 percent of the nation's electricity by 2030, this record-shattering year of wind additions shows that wind power is already one of the most important, emission-free sources of energy being deployed to address climate change and improve our energy security."

"With the market evolving at such a rapid pace, keeping up with trends in the marketplace has become increasingly difficult," notes report author Ryan Wiser, of Berkeley Lab's Environmental Energy Technologies Division (EETD). "Yet the need for timely, objective information on the industry and its progress has never been greater. This report seeks to fill this need."

Drawing from a variety of sources, this report — the second in an ongoing annual series — analyzes trends in wind power capacity growth, turbine size, turbine prices, installed project costs, project performance, wind power prices, and how wind prices compare to the price of

conventional generation. It also describes developer consolidation trends, current ownership and financing structures, and trends among major wind power purchasers. Finally, the report examines other factors impacting the domestic wind power market, including grid integration costs, transmission issues, and policy drivers.

"By consolidating this information into a single, publicly available document, DOE and Berkeley Lab hope to provide a valuable resource to industry participants, energy regulators, and state and local policymakers," notes coauthor Mark Bolinger of EETD. Indeed, the inaugural 2006 edition released last year has quickly become a key benchmark by which the wind industry judges its progress, and by which regulators and policymakers evaluate the merits of wind power.

Some of the key findings from the just-released 2007 edition include:

-- The U.S. is the fastest-growing wind market worldwide. The U.S. has led the world in new wind capacity for three straight years, and 1.2 percent of the nation's electricity supply could be met with the wind capacity on line at the end of 2007.

-- Growth is distributed across much of the U.S. States as diverse as Texas, Colorado, Illinois, and Oregon led the U.S. in annual wind capacity growth in 2007. Sixteen states had more than 100 MW (megawatts, or million watts) of wind capacity installed by the end of 2007, with six states topping 1,000 MW.

-- Market growth is spurring manufacturing investments in the U.S. Several major foreign wind turbine manufacturers either opened or announced new U.S. wind turbine manufacturing plants in 2007. Likewise, new and existing U.S.-based manufacturers either initiated or scaled up production. All told, the new turbine and component manufacturing facilities opened or announced in 2007 alone could create

more than 4,700 new jobs in the U.S.

-- Wind turbine prices and installed project costs have risen since 2002. Turbine price increases have been driven by weakness in the dollar, higher prices for materials and energy inputs, and shortages in certain turbine components — all factors that are impacting many different types of generating technologies.

-- Wind project performance has improved in recent years. The improvement in project performance has been driven in part by taller towers and larger rotors, enhanced project siting, and technological advancements.

-- Wind power is competitive and has provided good value in wholesale power markets. Despite rising project costs, in recent years wind power has consistently been priced at or below the average price of conventional electricity, as reflected in wholesale power prices.

Berkeley Lab's contributions to this report were funded by the Wind and Hydropower Technologies Program, the Office of Energy Efficiency and Renewable Energy of the U.S. Department of Energy.

Source: Berkeley Lab

Citation: New Study Sheds Light on the Growing U.S. Wind Power Market (2008, June 3) retrieved 24 April 2024 from <https://phys.org/news/2008-06-power.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.