

ENVIRONMENTAL AND ENERGY STUDY INSTITUTE

122 C STREET, N.W., SUITE 630 ■ WASHINGTON, D.C., 20001 ■ 202-628-1400 ■ www.eesi.org

Renewable Energy Fact Sheet

Contact:

Fredric Beck (202) 662-1892, fbeck@eesi.org

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Wind Energy Resource Base and Incentives

Key Facts

- At the beginning of 2006, the U.S. wind industry has a total generating capacity of 9,149 MW.
- ➤ In 2005, the U.S. wind energy industry installing nearly 2,500 megawatts (MW) or over \$3 billion worth of new generating equipment in 22 states. This represents a 35 percent growth in capacity from 2004.
- The wind farms completed in 2005 will generate approximately \$5 million in payments to landowners annually and create skilled, long-term jobs in areas where such employment is scarce, as well as short-term construction jobs and associated economic activity.
- According to the American Wind Energy Association (AWEA), wind energy facilities now installed in the U.S. will produce as much electricity annually as 2.3 million average American households use, and will displace emissions of more than 15 million tons of carbon dioxide (the leading greenhouse gas) annually.
- ➤ 16 states have Public Benefit Funds (PBF) for renewable energy that will be worth \$4 Billion by 2017.
- ➤ 25 states have Renewable Portfolio Standards (RPS). Of these, two are voluntary standards.

Resource Potential

- According to AWEA, by 2020 wind energy technology could provide six percent of the nation's electricity—a share similar to hydropower today. The drivers are strong: proven technology, attractive cost, vast potential, investor interest, strong demand.
- ➤ The U.S. Department of Energy estimates that approximately 600 gigawatts (GW) of wind energy, enough to easily provide 20 percent of U.S. power supply, are cost-effective at the wind plant "busbar" (that is, the point at which the wind farm connects to utility transmission lines) when natural gas prices exceed \$4 per thousand cubic feet (mcf).

Major Programs

- > DOE Office of Energy Efficiency and Renewable Energy: Wind and Hydropower Technologies Program
- ➤ DOE National Wind Technology Center (NREL)
- ➤ DOE Wind Powering America Initiative: This initiative is a commitment to dramatically increase the use of wind energy in the United States. This initiative will establish new sources of income for American farmers, Native Americans, and other rural landowners and meet the growing demand for clean sources of electricity
- ➤ USDA Rural Development Program

Funding

DOE Energy Efficiency and Renewable Energy Budget: Wind				
Energy Supply and Conservation (dollars	FY 2005	FY 2006	FY 2007 Budget	
in thousands)	Appropriation	Appropriation	Request	
Wind Energy	40,631	38,857	43,819	

USDA Sec. 9006, Renewable and Energy Efficiency Improvements Program				
Grants and Loans	FY 2005	FY 2006	FY 2007 Budget	
(dollars in millions)	Appropriation	Appropriation	Request	
All Eligible Technologies	\$23 million	\$23 million	\$10.2 million	

Tax Incentives

[EPACT Sec. 1301] Production Tax Credit (PTC)

- ➤ Wind is eligible for the Renewable Production Tax Credit of 1.9¢/kWh for the first 10 years of operation.
- ➤ EPACT extends the PTC two years, through December 31, 2007.
- Existing tax incentives need longer extensions to provide business certainty.
- NOTE: there are no tax incentives for community/small-scale wind.

[EPACT Sec. 1303] Clean Renewable Energy Bonds (CREBS)

- ➤ CREBS are a financing mechanism for co-ops and public power producers to participate (as tax-exempt entities they cannot participate in the PTC).
- Wind projects are eligible for Clean Renewable Energy Bonds.
- Sec. 1303 provides a tax credit for holders of CREBS.
- Sec. 1303 provides \$800 million in CREBS for electric cooperatives and public power systems, with a minimum of \$300 million reserved for electric cooperatives and a maximum of \$500 million for projects for governmental bodies. The application deadline is April 26, 2006.

Other Incentives

[EPACT Sec. 202] Renewable Energy Production Incentive (REPI)

- Wind is eligible for a production incentive of $1.5 \phi/kWh$ (1993 dollars and indexed for inflation) for the first 10 years of operation.
- ➤ Historical spending is approximately \$4 million per year.
- > Appropriations authorized as necessary.

[EPACT Section 209] Rural and Remote Community Electrification Grants

- Authorizes \$20M per year for efficiency, transmission and renewable energy projects, including wind. (\$140M total from 2006-2012)
- Implementation contingent upon funding.
- ➤ DOE requested no funds for FY 07.

[Farm Bill 2002, Sec. 9006] USDA Renewable Energy Systems and Energy Efficiency Improvements Program

- ➤ Wind is eligible for grants and loans under Sec. 9006.
- For Grant awards for renewable energy systems will be between \$2,500 and \$500,000.
- For Grants will not exceed 25 percent of the eligible project costs.
- The maximum guaranteed loan made to a borrower will be \$10 million.
- ➤ Guaranteed loans will not exceed 50 percent of the eligible project costs.
- ➤ In 2005, \$11,251,373 went to large wind turbine projects and \$101,157 to small wind turbine projects.
- ➤ The 2006 solicitation makes \$11.385 million available in competitive grant funds and approximately \$176.5 million in guaranteed loan authority for the purchase of renewable energy systems and energy efficiency improvements for agriculture producers and rural small businesses.

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