South Dakota

Wind Powering America

Clean Energy for the 21st Century

Since earliest recorded history, wind power has been used to move ships, grind grain, and pump water. Today, wind power is also being used to provide electricity to homes, schools, businesses, and entire communities. Wind power has been the fastest growing source of electricity generation in the world in the 1990s. More than half the United States has wind resources that could support the development of utility-scale wind power plants.

According to a report, An Assessment of the Available Windy Land Area and Wind Energy Potential in the United States, written by Pacific Northwest National Laboratory, nearly half of South Dakota is classified as having enough wind to produce electric power. This development potential is equivalent to around 35% of the total U.S. electric demand. Only 2% to 5% of the total land required for wind energy production is actually occupied by the turbine foundations and access roads. The remaining land is compatible with rural land use, such as farming and ranching.

Although South Dakota currently lacks the transmission-line capacity to get wind energy to load centers such as Minneapolis and Chicago, the state could start with wind development for smaller local loads (i.e., Sioux Falls) if local utilities would agree to purchase the power and reduce output from existing conventional electric plants.

Green Pricing

"Green power" is power produced by renewable ("green") energy sources, as distinct from power produced by fossil fuel, nuclear, and other types of generators. Customers can arrange to purchase a certain amount of green power (actually energy, in kilowatt-hours [kWh]) per month, for which they commonly pay a small premium to completely or partly offset any higher cost of renewable power sources. The policy of transferring these costs to green power customers is called "green pricing."

Because wind power is currently marginally more expensive than fossil-fueled alternatives (at current short-term prices), cost is one of the main impediments to wind development in South Dakota. Fuel-price volatility and environmental factors are not factored into today's electric choice decisions. This is changing in states with deregulation, where consumers are often choosing to pay more for environmentally preferred alternatives such as wind. In addition, wind prices are expected to continue to decline significantly in the next few years.

State Incentives

Statute 10-6-35.20 exempts renewable energy systems on residential and commercial property from local property taxes. The exemption applies to the entire assessed value of residential systems and 50% of the installed cost of commercial systems, and it may be taken for three years after installation. This exemption is not allowed for systems that produce energy for resale.

State Summary

In-State Wind Energy Potential:

465,500 megawatt capacity after land use and environmental exclusions

776 billion kilowatt-hours per year electric energy

Key Contacts

Governor's Office of Economic Development
711 East Wells Avenue
Pierre, South Dakota 57501-3369
(800) 872-6190 or (605) 773-5032
http://www.state.sd.us

What is the installed wind energy capacity in the United States?

By January 2000, the total U.S. installed wind energy capacity was 2500 MW. (See http://www.awea.org/faq/instcap.html) That's enough electricity to meet the needs of 600,000 to 800,000 typical U.S. homes.

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Additional Resources

National Renewable Energy Laboratory
National Wind Technology Center
1617 Cole Boulevard
Golden, Colorado 80401
(303) 384-6979
www.nrel.gov/wind

U.S. Department of Energy
Denver Regional Support Offices
1617 Cole Boulevard
Golden, Colorado 80401
(303) 275-4826
http://www.eren.doe.gov/dro/

U.S. Department of Energy
Wind Energy Program
Forrestal Building
1000 Independence Ave., S.W.
Washington, D.C. 20585
(202) 586-5348
www.eren.doe.gov/wind

American Wind Energy Association
122 C Street, NW, 4th Floor
Washington, D.C. 20001
phone (202) 383-2500
fax (202) 383-2505
www.awea.org

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