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. More than half the United States have wind resources that could support the development of utility-scale wind power plants.

We have enough wind in Colorado to generate 288 billion kilowatt-hours (kWh) of electricity annually. That's enough to serve double the entire state's population. Construction on Colorado's first wind farm, Public Service Company's Ponnequin wind farm located near the Colorado-Wyoming border, began in January 1997. The first wind turbine was installed in January 1998 and began generating electricity in April 1998. Today, Ponnequin boasts 29 turbines that generate 20 megawatts (MW) of electricity.

Colorado utilities also purchase wind power for their customers from wind farms in Wyoming. Public Service Company purchases wind power from the Foote Creek Rim Wind Farm near Arlington, Wyoming. In addition, four turbines recently installed at Medicine Bow by the Platte River Valley Authority will serve green-pricing customers and renewable energy programs in Aspen, Fort Collins, Longmont, Loveland, and Estes Park.

What is Green Pricing?

In Colorado, customers can arrange to purchase a certain amount of wind power (actual energy in 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 the slightly higher costs for "green power" to customers is called "green pricing." Green power is power produced by renewable or environmentally friendly energy sources, as distinct from power produced by fossil fuel, nuclear, and other types of generators.

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Twenty-nine turbines generate 20 megawatts of wind power at the Ponnequin Wind Farm along the Colorado-Wyoming state line. To see the turbines in action watch 9news (KUSA TV). KUSA maintains a solar-powered live action camera on site and purchases enough wind power to provide for the needs of its weather center and maintains live solar-powered cameras on site.

How Do I Sign Up?

Residential and commercial customers can join wind power programs across the state by signing up through their local utilities to buy wind energy in 100-kWh blocks on a monthly basis for $2.50-$3.00 per month above existing residential rates. Since wind power programs were introduced in Colorado in 1996, more than 16,000 customers have signed up for wind power for their homes and businesses.

You can sign up for wind power through your local utility or online. To sign up for green power and calculate the environmental benefits of your purchases, visit http://www.cogreenpower.org/

Colorado utilities currently offering green power include:

Carbon Power & Light

Chimney Rock Public Power

Colorado Springs Utilities

Delta-Montrose Electric

Estes Park Power & Light

Fort Collins Utilities

Gunnison County Electric

Holy Cross Energy

La Plata Electric

Longmont Power & Communications

Loveland Water & Power

Morgan County Rural Electric Mountain Parks Electric

Mountain Parks Electric

Northwest Rural Public Power District

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

By 2000 the total U.S. installed wind energy capacity is 2,650 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.

WIND POWERING AMERICA

Colorado

State Summary

Installed—21 MW

Purchased—30 MW from Wyoming

In-State Wind Energy Potential:
170,000 MW capacity after land use and environmental exclusions
288 billion kWh per year electric energy

Current Wind Power Commitments:
20 MW, Ponnequin Wind Farm, Public Service Company of Colorado, NEG Micon turbines.
25 MW in customer rates, purchased power from Foote Creek Wind Farm

Planned Wind Power Commitments:

Public Service Company
10 MW for green pricing, extension of Ponnequin Wind Farm
25 MW for green pricing, 6 MW built per year starting 2002.

Platter River Power Authority
4.8 MW, Medicine Bow Wind Farm.

Platte River Power Authority

Poudre Valley Rural Electric

Public Service Company

San Isabel Electric

San Luis Valley Rural Electric Cooperative

San Miguel Power

United Power

Y-W Electric.

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New Belgium Brewing Company in Fort Collins, Colorado, is the largest business in Colorado to purchase 100% of its electricity from wind power.

Key Contacts

Colorado Springs Utilities
Joanie Callahan
719-668-3809

Fort Collins Utilities
Wind Power Program
Lori Clements-Grote
970-221-6396
http://www.light-power.org/windpowr.HTM

Holy Cross Energy
Wind Power Pioneers
Dave Church
970-947-5406
dchurch@holycross.com
www.holycross.com

Land and Water Fund of the Rockies
Rudd Mayer
303-444-1188 ext. 227
rudd@lawfund.org

Public Service Company of Colorado
WindSource Program
800-824-1688
http://www.psco.com/solutions/windsource.Asp

Links

National Wind Technology Center
National Renewable Energy Laboratory
http://www.nrel.gov/wind/

Green Power Network
U.S. Dept. of Energy
Energy Efficiency and Renewable Energy Network
http://www.eren.doe.gov/greenpower/

Colorado Wind Power Campaign
http://www.cogreenpower.org/

National Wind Coordinating Committee
http://www.nationalwind.org/

Wind Energy Resource Atlas
http://rredc.nrel.gov/wind/pubs/atlas/

Colorado Renewable Energy Society
http://www.cres.gen.co.us

Land and Water Fund of the Rockies
http://www.lawfund.org

Additional Resources

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

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

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