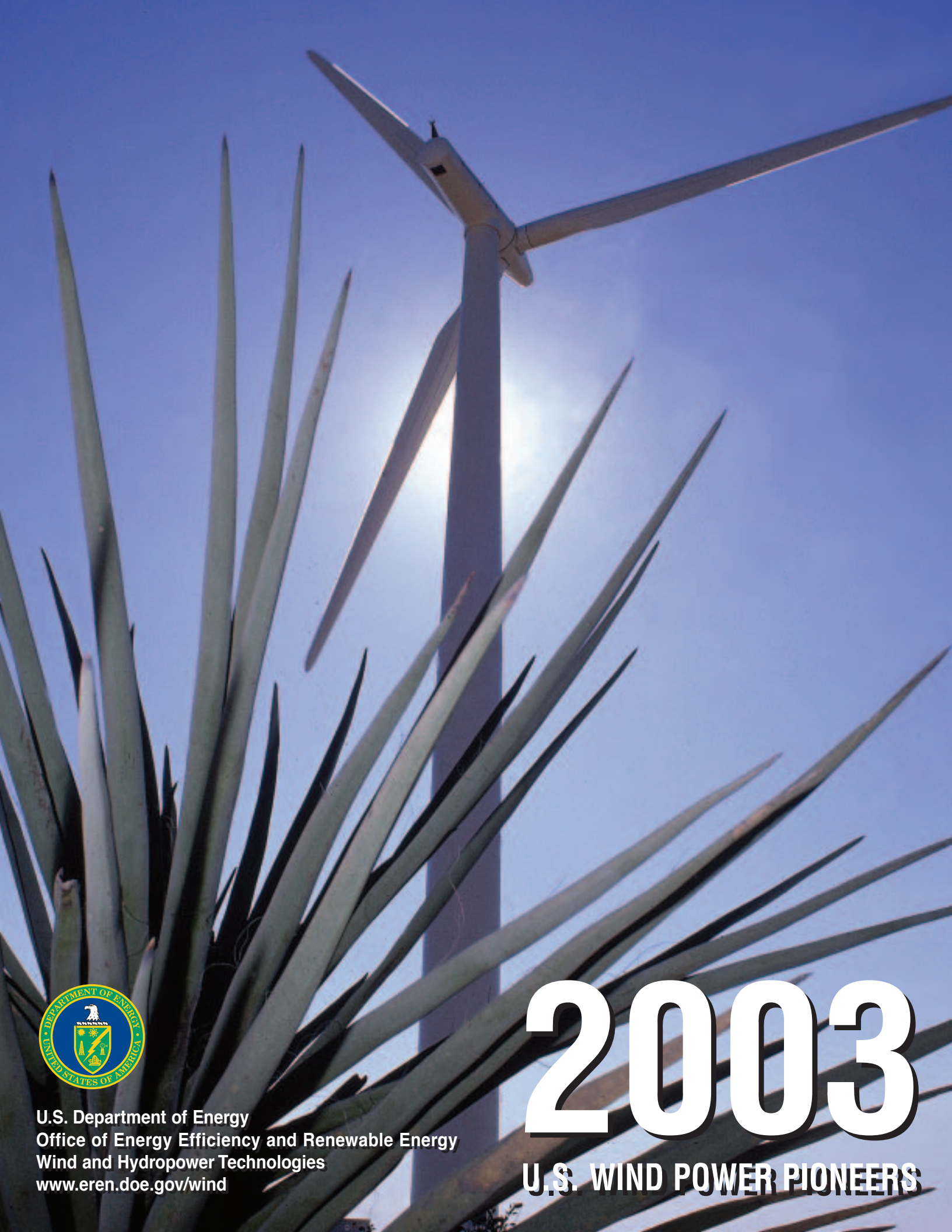


2003

U.S. WIND POWER PIONEERS

U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Wind and Hydropower Technologies
www.eren.doe.gov/wind


Carbon County, Wyoming

January 2003

Photo credit: Seawest WindPower, Inc./PIX12156

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
December 2002 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**February 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		**1** New Year's Day	**2**	**3**	**4**
5	**6** 6–9 — **22nd ASME Wind Energy Symposium**, Reno Hilton Reno, Nevada, www.sandia.gov/Renewable_Energy/wind_energy/aiaaconf.htm	**7**	**8**	**9**	**10**	**11**
12	**13**	**14**	**15**	**16**	**17** **West Virginia Wind Energy Working Group** Charleston, West Virginia pmann@wvu.edu	**18**
19	**20** 20–21 — **Renewable Energy 2003** The Hatton, London, UK www.smi-online.co.uk/renewable7.asp Martin Luther King, Jr. Day	**21**	**22** **NWCC Western Transmission Meeting** Salt Lake City, Utah www.nationalwind.org/events/default.htm	**23**	**24**	**25**
26	**27** 27–28 — **Wind Energy & Power Markets** Westminster, Colorado, www.euci.com	**28**	**29**	**30**	**31** **Renewable Energy for Homes, Farms & Businesses** Seabrook, New Jersey maryanne.daniel@ee.doe.gov 215-656-6964	

About the Wind Power Pioneers

The 2003 Wind Powering America calendar is dedicated to 12 U.S. wind pioneers whose innovative contributions to technology, market development, and enabling policies have laid the groundwork for today's vibrant U.S. wind energy market. Their leadership, vision, and dedication have set the stage for others to "carpe ventem" (seize the wind) for the benefit of current and future generations.

Minot, North Dakota

February 2003

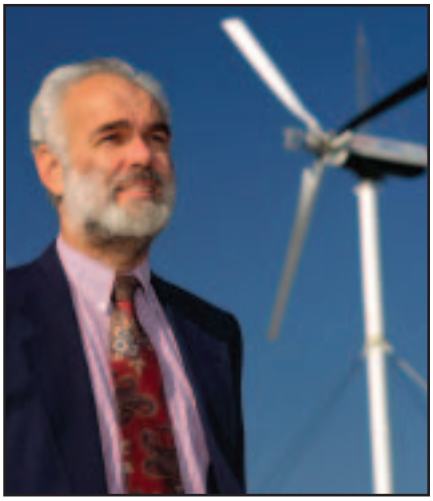
Photo credit: Stephen Crane, Basin Electric Power Co-op/PIX12152

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
January 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**March 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31					**1**
2 Groundhog Day	**3**	**4**	**5** **Virginia State Wind Powering America Workshop** Harrisonburg, Virginia heckmg@jmu.edu	**6**	**7**	**8**
9	**10** 10–11 — **Harvesting Clean Energy Conference III**, Boise, Idaho, Diane Gasaway, 360-943-4241, www.nwseed.org 10–12 — **NASEO 2003 Energy Outlook Conference**, Westin Grand Washington, DC, www.naseo.org	**11**	**12** Lincoln's Birthday	**13**	**14** Valentine's Day	**15**
16	**17** Presidents' Day	**18**	**19**	**20**	**21**	**22** Washington's Birthday
23	**24** 24–26 — **NCAI Executive Council Winter Session**, Washington, DC www.ncai.org 23–26 — **NARUC Winter Meeting**, Renaissance Washington Hotel, Washington, DC www.naruc.org	**25**	**26**	**27**	**28**	

Wind Power Pioneer

"Bob Thresher has more than 30 years of research, development, engineering, and management experience in wind technology. He directed wind turbine research efforts at Oregon State from 1970-1984, and he also spent two years in Washington, D.C., managing research projects for the Department of Energy. Bob later conducted wind research at the National Renewable Energy Laboratory, and by 1989 he was managing the wind research program. Bob worked with DOE management to secure use of a 280-acre site at Rocky Flats and developed the National Wind Technology Center. As director of the new facility, Bob works closely with DOE to make the Center a focal point for national wind research."

— Sue Hock, National Renewable Energy Laboratory



Robert Thresher, director, National Wind Technology Center, Golden, Colorado (PIX09817)

Tucker County, West Virginia

March 2003

Photo credit: Jens O. Hansen, NEG Micon/PIX11989

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
February 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	**April 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30					**1**
2	**3**	**4** 4–6 — **Electric Power 2003: "Where the Operating Companies Meet,"** Houston, Texas, www.electricpowerexpo.com/conference.asp	**5** Ash Wednesday	**6** **Renewable Energy Conference**, Missouri Energy Center www.dnr.state.mo.us/energy/homeec.htm	**7**	**8**
9	**10**	**11**	**12**	**13** 13–14 — **WRI 6th Sustainable Enterprise Summit**, Washington, DC lydiav@wri.org 202-729-7635 www.wri.org/wrisummit/2003_summit.html	**14**	**15**
16	**17** St. Patrick's Day	**18**	**19** 19–20 — **Sustainability 2003: A National Tribe Sustainability Conference** Denver, Colorado www.CERTRedEarth.com	**20**	**21**	**22**
23	**24** **North Dakota Wind IV Conference** Bismarck, North Dakota 701-777-5068 www.undeerc.org	**25** 24–26 — **7th Annual Distributed Generation & On-Site Power Conference: Making the Business Case for the End User** Houston, Texas, 508-823-5797 www.dist-gen.com	**26**	**27**	**28**	**29**
30	**31**					

Wind Power Pioneer

"Carl is a leader of the renewable energy effort in the United States. While at Pacific Gas & Electric during the 1980s, Carl managed the leading U.S. electric utility program in the development and deployment of renewable energy technologies. Wind became a major focus of that program, including installation and evaluation of leading prototype hardware and participation in a utility-manufacturer consortium to develop variable-speed wind technology. Through the PG&E program, Carl developed a cadre of professionals dedicated to renewable energy—many of whom, like Carl, are today's leaders in the renewable energy community. A tireless spokesman, Carl continues to lead the charge for renewables by articulating his vision."

— Ed DeMeo, Renewable Energy Consulting Services Inc.

Carl Weinberg, principal and founder, Weinberg Associates, Walnut Creek, California (PIX12066)

Kimball, Nebraska

April 2003

Photo credit: Jeremy Crane, TVIG/PIX12085

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
March 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**May 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**1** April Fool's Day	**2**	**3** **Wind Workshop for Illinois/Wisconsin Landowners/Farmers,** Wisconsin, william.hui@ee.doe.gov	**4**	**5**
6 Daylight Saving Time Begins	**7**	**8**	**9**	**10**	**11**	**12**
13 Palm Sunday	**14**	**15**	**16**	**17** First Day of Passover	**18** Good Friday	**19**
20 Easter Sunday	**21**	**22** Earth Day	**23**	**24**	**25**	**26**
27	**28**	**29**	**30**			

9–11 — **Asia Wind Power Conference and Exhibition**, Beijing International Convention Center, China, www.cnwpa.org/wind-e1.htm

10–12 — **Offshore Wind Energy in Mediterranean and Other European Seas**, Naples, Italy, www.owemes.it

14–15 — **DOE/NRECA Wind Workshop** Denver, Colorado, 703-907-5624

14–16 — **American Power Conference**, Chicago, Illinois www.apc-pennwell.com

16–17 — **Utility Wind Interest Group Annual Meeting**, Denver, Colorado www.uwig.org

22–24 — **The Earth Technologies Forum**, Hyatt Regency on Capitol Hill, Washington, DC, www.earthforum.com

24–25 — **Colorado Sustainability Summit Forging Solutions at Colleges and Universities**, 303-492-8308

Wind Power Pioneer

"Glenn Cannon has been the guiding force behind Waverly Light and Power, which helped to lead the way for wind energy development across the Midwest. In 1993, Waverly installed the first utility-scale wind turbine in Iowa. Since then, Iowa has installed approximately 350 wind turbines and is ranked third in the nation for wind energy development. Also under Glenn's guidance, Waverly Light and Power launched the Iowa Energy Tags Program in 2001, becoming the first electric utility in the nation to offer "green tags." In 2002, Glenn accepted the National Renewable Energy Laboratory's Paul Rappaport Renewable Energy and Energy Efficiency Award on behalf of the town and its utility."

— Brian Parsons, National Wind Technology Center

Glenn Cannon, general manager, Waverly Light and Power, Waverly, Iowa (PIX11923)

Hull, Massachusetts

May 2003

Photo credit: Doug Welch/PIX11261

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
April 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	**June 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			**1**	**2**	**3**
4	**5**	**6**	**7**	**8** **3rd Annual Green Power—Turn It On!** 717-214-7920 www.pennfuture.org	**9**	**10**
11 Mother's Day	**12**	**13** 13–15 — **SUSTAIN 2003: The World Sustainable Energy Exhibition and Conference**, RAI, Amsterdam, Holland www.sustain2003.com	**14**	**15**	**16**	**17** Armed Forces Day
18 18–21 — **WINDPOWER 2003**, Austin, Texas www.awea.org/conference	**19**	**20**	**21**	**22** **Wind Powering America State Wind Summit II** Austin, Texas steve.palomo@ee.doe.gov 303-275-4826	**23**	**24**
25	**26** Memorial Day Observed	**27**	**28**	**29**	**30**	**31**

Wind Power Pioneer

"As a professor of civil engineering at the University of Massachusetts (UMass) in the 1970s, Bill started the alternative energy program at UMass (now the Renewable Energy Research Laboratory) and led a team of researchers on wind engineering projects. The team developed the UMass "Wind Furnace" and a turbine design that formed the basis of the initial U.S. Windpower turbine design. Although Bill was a pioneer of the wind farm concept, his main area of interest was offshore wind power. Many of Bill's offshore wind power studies from the '70s, which were considered to be ahead of their time, are now under consideration in Europe. Bill passed away on November 2, 2002, but his former students and their continuing contributions to wind power are part of his legacy."

— Jon McGowan, University of Massachusetts, Amherst

Bill Heronemus, University of Massachusetts (Amherst)


Worthington, Minnesota

June 2003

Photo credit: Lisa Daniels, © 2002/PIX12079

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	**2**	**3**	**4**	**5**	**6**	**7**
8	**9**	**10**	**11**	**12**	**13**	**14** Flag Day
8–12 — **NASUCA Mid-Year Meeting**, 5th Avenue Suites Hotel, Portland, Oregon, www.nasuca.org						
15 Father's Day	**16**	**17**	**18**	**19** **2003 Oklahoma Wind Power Conference** Norman, Oklahoma Tim Hughes 405-447-8412 www.seic.okstate.edu/owpi	**20**	**21**
15–18 — **NCAI Mid-Year Session**, Phoenix, Arizona, www.ncai.org						
16–19 — **2003 European Wind Energy Conference**, Madrid, Spain, www.ewea.org						
22	**23**	**24**	**25**	**26**	**27**	**28**
					27–29 — **Colorado Renewable Energy Conference**, Montrose, Colorado 303-806-5317, www.cres-energy.org	
29	**30**					

May 2003

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

July 2003

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Wind Power Pioneer

"Tom Gray has devoted virtually his entire professional career to wind energy. While working as a Capitol Hill staffer, he played an important role in the development of the Wind Energy Systems Act of 1980. From 1981 to 1989, he served as the executive director for the American Wind Energy Association. After several years of consulting, Tom began directing AWEA's communications department in 1994. In 1986, Tom was recognized as AWEA's Wind Industry Man of the Year, and in 1989 he received a special award for selfless devotion to the promise of wind energy."

— Randy Swisher, American Wind Energy Association

Tom Gray, deputy executive director, American Wind Energy Association, Washington, D.C. (PIX11931)


Calverton, New York

July 2003

Photo credit: Long Island Power Authority/PIX12109

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
June 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	**August 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**1**	**2**	**3**	**4** Independence Day	**5**
6	**7**	**8**	**9**	**10**	**11**	**12**
13	**14**	**15**	**16**	**17**	**18**	**19**
20	**21**	**22**	**23**	**24**	**25**	**26**
	21–25 — **NCSL Annual Meeting**, San Francisco, California, www.ncsl.org					
27	**28**	**29**	**30**	**31**		
	27–30 — **NARUC Summer Committee Meeting**, Denver, Colorado www.naruc.org/Meetings/index.shtml					
	28–August 8 — **Solar Energy International Wind Power Workshop**, Carbondale, Colorado www.solarenergy.org/windpowr.html					

Wind Power Pioneer

"Nolan started working on wind energy for rural applications in the mid '70s. His research experience includes wind power for irrigation, domestic, and livestock water pumping; wind turbine performance; wind/hybrid generating systems; and wind effects on sprinkler irrigation. The USDA and the Alternative Energy Institute at West Texas State University have installed and operated more than 60 wind turbines, most of which were prototypes or first production units. Nolan has received numerous awards for his groundbreaking work in utilizing wind energy technology to meet rural needs."

— Vaughn Nelson, West Texas A&M University

R. Nolan Clark, laboratory director, United States Department of Agriculture (USDA) Conservation and Production Research Laboratory, Bushland, Texas (PIX11922)


Klondike, Oregon

August 2003

Photo credit: Lloyd Herziger, General Electric Company/PIX11952

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
July 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**September 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				**1**	**2**
3	**4**	**5**	**6**	**7**	**8**	**9**
July 28–August 8 — **Solar Energy International Wind Power Workshop**, Carbondale, Colorado, www.solarenergy.org/windpowr.html						
10	**11**	**12**	**13**	**14**	**15**	**16**
17	**18**	**19**	**20**	**21**	**22**	**23**
17–20 — **Energy 2003**, Lake Buena Vista, Florida, www.energy2003.ee.doe.gov						
24	**25**	**26**	**27**	**28**	**29**	**30**
31		26–28 — **Nevada Energy Showcase**, Elko, Nevada, Curtis Framel 206-553-7841				

Wind Power Pioneer

"Bob Lynette is a renewable energy advocate who has made a significant contribution to the wind energy industry during his more than 25 years of involvement. Bob opened his own consulting office in the '80s and performed "due diligence" work for investors. His firm was later instrumental in advancing the evolution of two-bladed teetered turbines and innovative vertical axis turbines. Beginning with his work at Boeing in the '70s and early '80s, Bob played a role in the formation of many of the early federal wind programs. Bob also served on the board of directors for the American Wind Energy Association for many years. He now continues his advocacy efforts through his consulting company."

— Karen Conover, Global Energy Concepts

Bob Lynette, president of R. Lynette & Associates Renewable Energy Consultants, Sequim, Washington (PIX11927)

Webster, New York

September 2003

Photo credit: Bob Bechtold/PIX12080

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Labor Day	**2**	**3**	**4**	**5**	**6**
7	**8**	**9**	**10**	**11**	**12**	**13**
14	**15**	**16** 15–17 — **NASEO 2003 Annual Meeting** Hyatt Regency, Austin, Texas, www.naseo.org	**17** 17–18 — **West Coast Energy Management Congress Conference** San Diego, California, 770-279-4388	**18**	**19**	**20**
21	**22**	**23** 23–24 — **West Virginia Energy Workshop** Canaan Valley Resort, West Virginia maryanne.daniel@ee.doe.gov 215-656-6964	**24**	**25**	**26**	**27** First Day of Rosh Hashanah
28	**29**	**30**			**August 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**October 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Wind Power Pioneer

"Mike Bergey has been a wind industry leader since 1977, when he became vice president of Bergey Windpower. In 1987, he became president of the organization. Mike was educated as an engineer, but he has an unusual ability to represent his company and the industry in arenas that are far from the engineering world, including energy policy and export promotion. He has twice served as president of the American Wind Energy Association and has served on the AWEA board since 1981. He also served as chairman of AWEA's Small Turbine Committee, AWEA's Export Committee, and the U.S. Export Committee for Renewable Energy. In 1994, he was honored as AWEA's Wind Industry Man of the Year."

— Randy Swisher, American Wind Energy Association

Mike Bergey, president and CEO of Bergey Windpower Company, Norman, Oklahoma (PIX11954)

Fenner, New York

October 2003

Photo credit: Lloyd Herziger, General Electric Company/PIX11951

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
September 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	**November 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		**1** Energy Awareness Month	**2**	**3**	**4**
5	**6** Yom Kippur	**7**	**8**	**9**	**10**	**11**
12 Columbus Day	**13** Columbus Day Observed	**14**	**15**	**16**	**17**	**18**
19	**20**	**21**	**22**	**23**	**24**	**25**
	20–25 — **Solar Energy International Wind Power Workshop**, Guemes Island, Washington, www.solarenergy.org/windpowr.html					
26 Daylight Saving Time Ends	**27**	**28**	**29**	**30**	**31** Halloween	

Wind Power Pioneer

"Jim Dehlsen played a central role in transforming the fledgling wind industry into a multibillion-dollar commercial enterprise. As founder of Zond Energy (now GE Wind, the largest U.S. wind turbine manufacturer), Jim's innovative approach to reducing the cost of wind energy through advances in development techniques, finance, and technology has been key to making wind the fastest growing source of energy in the world. Today, Jim is still involved in ventures to promote and further reduce the cost of wind and other renewable technologies."

— Kevin Rackstraw, Clipper Windpower

Jim Dehlsen, CEO and chairman, Clipper Windpower, Carpinteria, California (PIX12071)

White Deer, Texas

November 2003

Photo credit: Cielo Wind Power/PIX12068

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
October 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**December 2003** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31					**1**
2	**3**	**4** Election Day	**5**	**6**	**7**	**8**
9	**10**	**11** Veterans Day	**12**	**13**	**14**	**15** 15–16 — **Home-Scale Wind Workshop** Appalachian State University, Boone, North Carolina 828-262-6358 www.seeorg.org
16 16–19 — **115 NARUC Annual Convention**, Atlanta Marriott Marquis, Atlanta, Georgia www.naruc.org/Meetings/index.shtml 16–20 — **NASUCA Annual Meeting**, Sheraton Atlanta Hotel, Atlanta, Georgia, www.nasuca.org/web/cal/calendar.html 16–21 — **NCAI 60th Annual Session**, Albuquerque, New Mexico, www.ncai.org	**17**	**18**	**19**	**20**	**21**	**22**
23 **30**	**24**	**25**	**26**	**27** Thanksgiving Day	**28**	**29**

Wind Power Pioneer

"Rudd Mayer helped pioneer the field of wind energy marketing. Her commitment, passion, and joy for her work inspired utilities, regulators, businesses, nonprofits, and ordinary citizens to share her vision and to embrace wind energy. Her wind energy marketing and other related work led to 250 MW of new wind energy facilities coming online to meet Colorado's energy demands—an investment of a quarter of a billion dollars. Because of Rudd and a few others like her, Colorado is now on a path toward a cleaner energy future. Rudd was an extraordinary person who touched virtually everyone she came in contact with, often in deeply personal ways. On August 13, 2002, Rudd's great heart failed. She is missed greatly."

— Eric Blank, Community Energy, Inc.

Rudd Mayer, green marketing program director at Land & Water Fund of the Rockies, Boulder, Colorado

Saint Paul Island, Alaska

December 2003

Photo credit: Ed Linton, Northern Power Systems/PIX10596

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7 Pearl Harbor Day	8	9	10	11	12	13
14	15	16	17	18	19	20 Hanukkah
21	22	23	24	25 Christmas Day	26	27
28	29	30	31			

November 2003

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

January 2004

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Wind Power Pioneer

"As a wind-industry executive in the late 1980s and early 1990s, Dale Osborn led the U.S. wind industry's transition from a group of small firms charting new ground to the maturing industry it is today. During that period, he also led his company in a joint, industry-utility development program for a new generation of wind turbine technology employing power-electronic variable speed. This program was instrumental in maintaining momentum for the industry during a difficult period for wind in the United States and resulted in technology that is central to many of today's competitive wind turbines. Dale also consummated the deal for the first commercial-scale U.S. wind plant outside of California, in Lake Benton, Minnesota, and he continues to develop new commercial wind plants today."

— Ed DeMeo, Renewable Energy Consulting Services Inc.

Dale Osborn, DISGEN Corp., Evergreen, Colorado (PIX11971)

Upton County, Texas

January 2004

Photo credit: Cielo Wind Power/PIX10560

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
December 2003 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	**February 2004** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29			**1** New Year's Day	**2**	**3**
4	**5**	**6**	**7**	**8**	**9**	**10**
	5–8 — 23rd Annual ASME Wind Energy Symposium, Reno Hilton, Reno, Nevada www.sandia.gov/Renewable_Energy/wind_energy/aiaaconf.htm					
11	**12**	**13**	**14**	**15**	**16**	**17**
18	**19** Martin Luther King, Jr. Day	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**	**31**

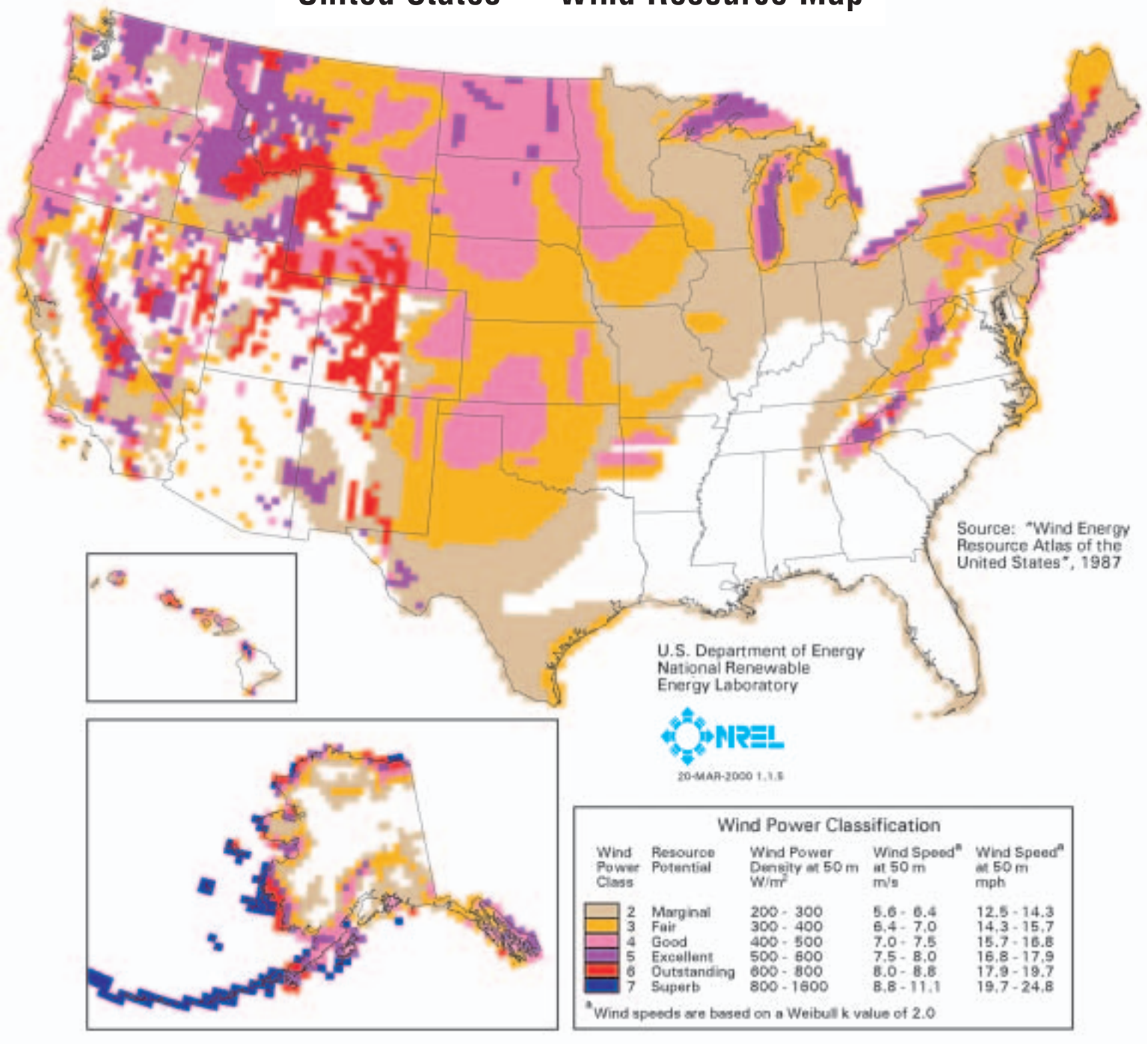
Wind Power Pioneer

"Ed DeMeo has been a champion of renewable energy since the late 1970s. At the Electric Power Research Institute, he provided a bridge from the Department of Energy Wind Program to the electric utility companies in the United States. In this role, he promoted the early testing and deployment of new advanced wind turbine designs in order for utilities to gain valuable experience with this new technology. Ed's most notable accomplishment was providing leadership for the EPRI-DOE turbine verification program, which tested small wind farms in the utility operating environment so that utilities could gain valuable economic and operating experience with this new clean energy source."

— Robert Thresher, National Wind Technology Center

Ed DeMeo, president, Renewable Energy Consulting Services Inc., Palo Alto, California (PIX12151)

United States — Wind Resource Map

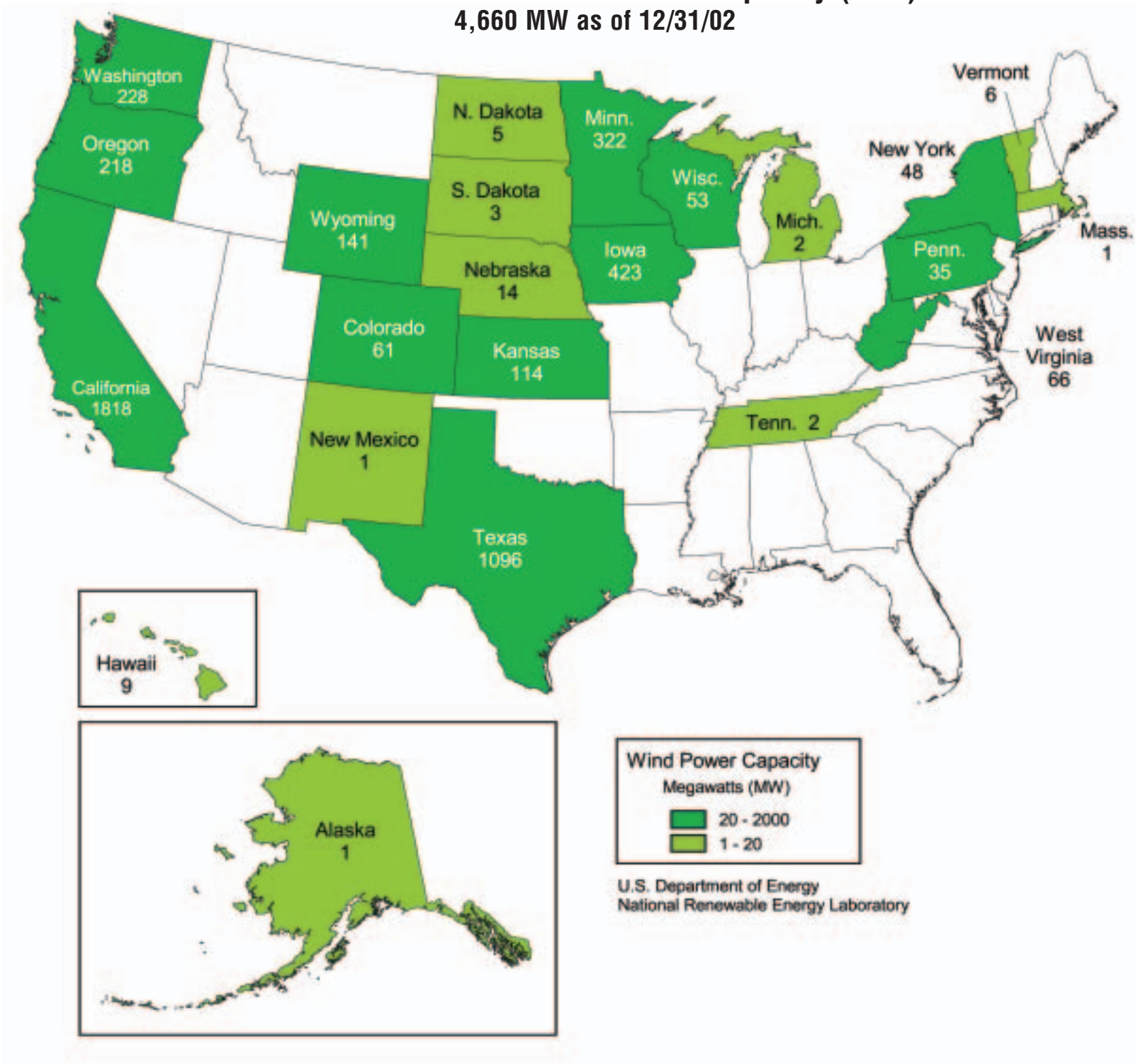


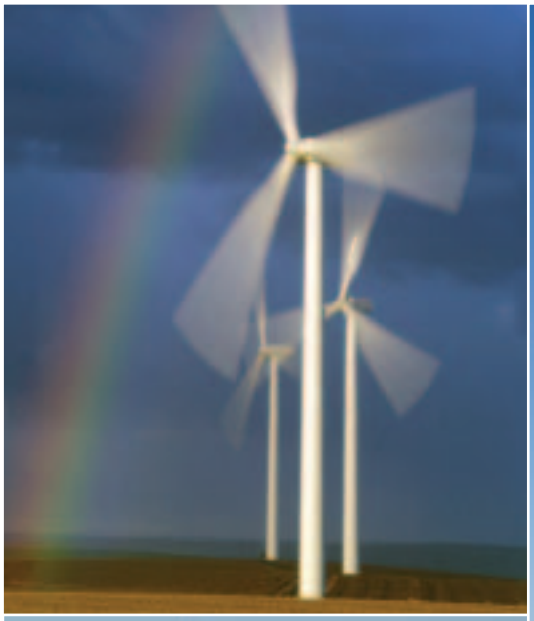
United States Wind Resource Map

The U.S. Department of Energy sponsored the development of a classification system to characterize wind resources. The system is based on wind power density and ranges from class 1 (the lowest) to class 7 (the highest). Good wind resource areas (class 4 and above) generally have an average annual wind speed greater than 15 miles per hour at the wind turbine hub-height and are suitable for grid-connected, large wind turbines. Class 2 and 3 wind resources are suitable for small turbine applications such as water pumping and providing supplemental power to residences and small businesses. Wind speed is a critical feature of the wind resource because the available energy in the wind is proportional to the cube of the wind speed. In other words, an increase in annual average wind speed as small as 1 mile per hour can increase the available wind energy by 30%.

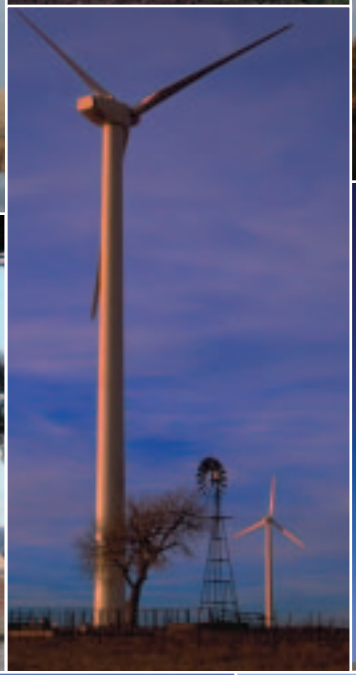
Current Installed Wind Power Capacity (MW)

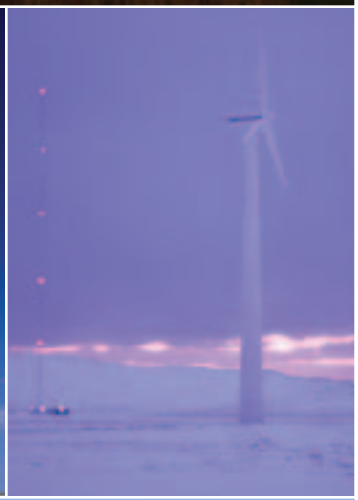
4,660 MW as of 12/31/02





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U.S. Department of Energy Regional Offices www.eren.doe.gov/rso.html

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Cover
Location: King Mountain Wind Ranch, Upton County, Texas
Turbine Size: 1,300 kW
Turbine Manufacturer: Bonus
Developer: Cielo Wind Power and Renewable Energy Systems Inc.
Capacity: 278 MW

Photo credit: Cielo Wind Power/PIX10560

January

Location: Carbon County, Wyoming

Turbine Size: 1 MW

Turbine Manufacturer: Mitsubishi

Developer/owner: SeaWest WindPower/Shell Renewables

Capacity: 50 MW

February

Location: Minot, North Dakota

Turbine Size: 1.3 MW

Turbine Manufacturer: Nordex

Developer/owner: Central Electric Power/Basin Electric Power

Capacity: 2.6 MW

March

Location: Tucker County, West Virginia

Turbine Size: 1.5 MW

Turbine Manufacturer: NEG Micon

Developer/owner: Atlantic Renewable Energy Corp./ FPL Energy

Capacity: 66 MW

April

Location: Kimball, Nebraska

Turbine Size: 1.5 MW

Turbine Manufacturer: NEG Micon

Developer/owner: Municipal Energy Association of Nebraska (MEAN)/TVIG

Capacity: 10.5 MW

May

Location: Hull, Massachusetts

Turbine Size: 660kW

Turbine Manufacturer: Vestas

Developer/owner: Hull Municipal Lighting Plant

Capacity: .66 MW

June

Location: Worthington, Minnesota

Turbine Size: 900 kW

Turbine Manufacturer: NEG Micon

Developer/owner: Missouri River Energy Services/Wisconsin Public Power Inc./Worthington Municipal Utility

Capacity: 3.6 MW

July

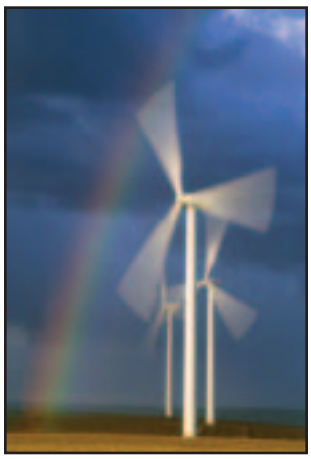
Location: Calverton, New York

Turbine Size: 50 kW

Turbine Manufacturer: Atlantic Orient Corp.

Developer/owner: Long Island Power Authority

Capacity: 0.050 MW



August

Location: Klondike, Oregon

Turbine Size: 1.5 MW

Turbine Manufacturer: GE Wind Energy

Developer/owner: Northwest Wind Power

Capacity: 24 MW

September

Location: Webster, New York

Turbine Size: 10 kW

Turbine Manufacturer: Bergey

Application: Residential grid-connected

October

Location: Fenner, New York

Turbine Size: 1.5 MW

Turbine Manufacturer: GE Wind Energy

Developer/owner: Atlantic Renewable Energy Corp./CHI Energy Inc.

Capacity: 30 MW

November

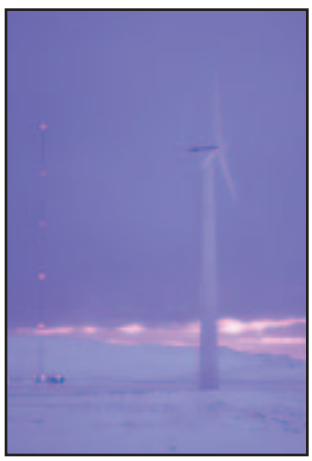
Location: White Deer, Texas

Turbine Size: 1 MW

Turbine Manufacturer: Mitsubishi

Developer/owner: Cielo Wind Power

Capacity: 80 MW



December

Location: Saint Paul Island, Alaska

Turbine Size: 225 kW

Turbine Manufacturer: Vestas

Developer/owner: Northern Power Systems/ TDX Corp.

Capacity: 0.225 MW