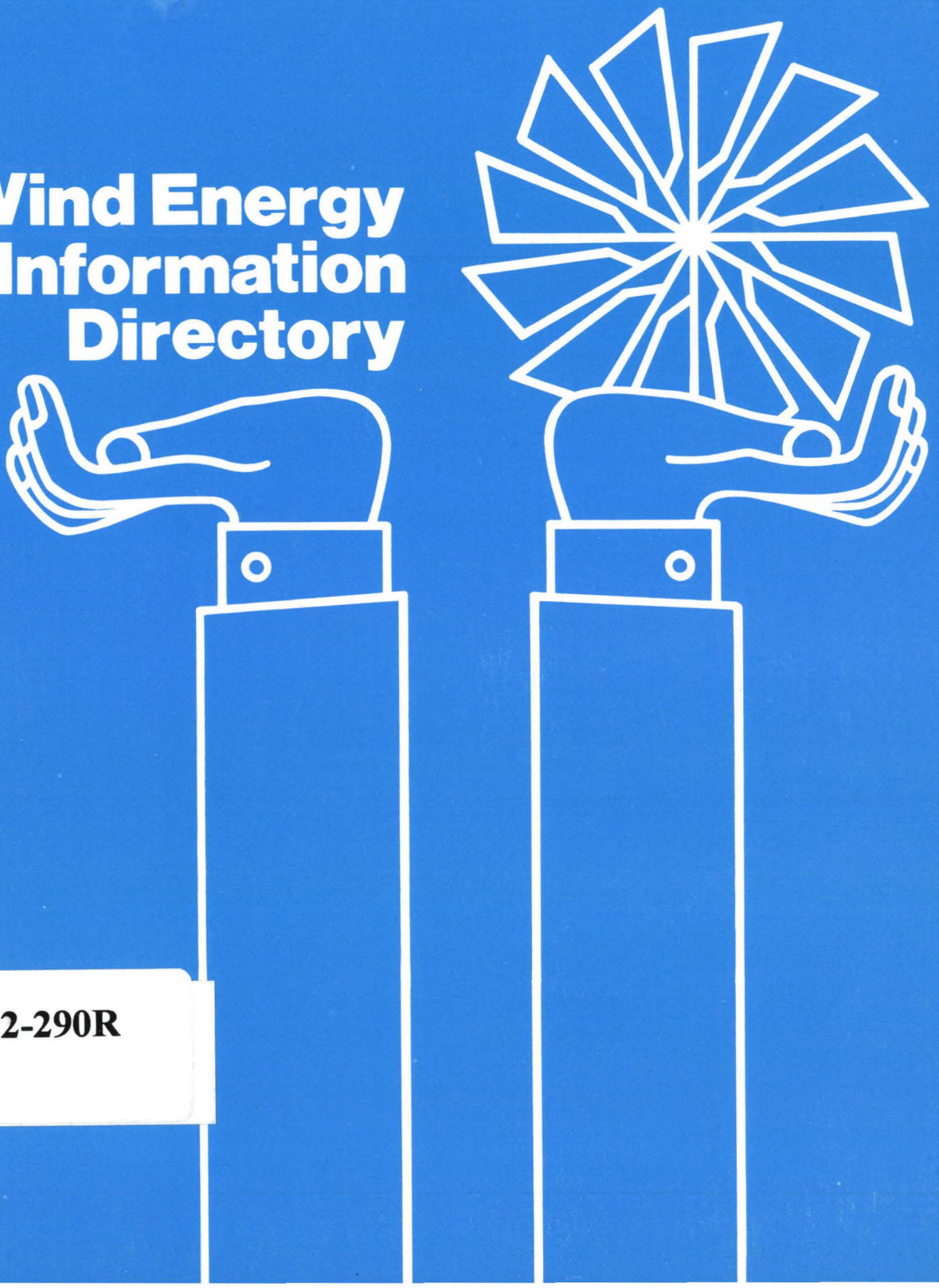
SERI

May 1980

Wind Energy Information Directory



Foreword

Wind Energy Information has been prepared to provide researchers, designers, manufacturers, distributors, dealers, and users of wind energy conversion systems with easy access to technical information.

This directory lists organizations and publications which have the main objective of promoting the use of wind energy conversion systems, some organizations that can respond to requests for information on wind energy or make referrals to other sources of information, and some publications that occasionally include information on wind energy. The bibliography contains references to information for both the neophyte and the expert.

Information published about a rapidly expanding industry may soon become ancient history. Addresses and phone numbers change frequently while new organizations and periodicals emerge. To keep up with an old industry returning to a new age, we will update this directory periodically.

Please send us your changes and suggestions on the reader response form at the back of the directory.

Editor's Note: Many publications cited in this directory are available from the National Technical Information Service (NTIS). Orders for publications (and a check for the appropriate amount) should be directed to National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. (See p.26 for more information.)

Patricia Weis
Task Leader

Approved for:
Solar Energy Research Institute

Neil H. Woodley, Manager
Utilities and Industries Division

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Wind Energy Information Directory

Editors:
Patricia Weis
Steve Mooney

May 1980

Prepared Under Task No. 6722.16

Solar Energy Research Institute
1617 Cole Boulevard
Golden, Colorado 80401

SERI

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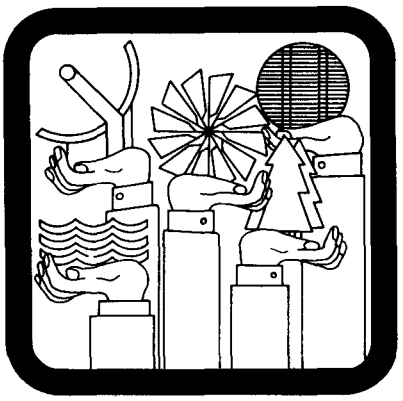


This directory was produced as part of the Department of Energy Technical Information Dissemination (TID) Program managed at SERI.

The Federal Wind Energy Program

The main objectives of the Federal Wind Energy Program are to accelerate the development of reliable and economical wind energy systems and to encourage the earliest possible commercialization of wind power. The program seeks to advance wind energy technology, to develop a sound industrial technology base, and to address nontechnological barriers to the use of wind energy.

The following laboratories have responsibility for various components of the wind program and publish reports on their various research and development projects. These reports, some of which are cited in this directory, contain a variety of useful information and range from highly technical to not-so-technical. Contact the National Technical Information Service for information on available reports.

These laboratories also issue requests for proposals (RFPs) from time to time and may fund unsolicited proposals which help to achieve program objectives. Each laboratory maintains a mailing list and should be contacted individually. RFPs are also published in the *Commerce Business Daily*. (See p.13.)

Editor's Note: The Federal Wind Energy Program (FWEP) defines small wind energy conversion systems as less than or equal to 100 kW power output and large wind energy conversion systems as greater than 100 kW power output. The same definitions will apply for this directory.

Rocky Flats Plant

Manages a test center for commercially available wind systems and administers small machine development and field evaluation programs.

Wind Energy Program
Rockwell International Energy Systems Group
P.O. Box 464
Golden, CO 80401

Contacts:

Publications—Darrell Dodge
(303) 441-1300
FTS: 322-1797

Technical Information—Terry Healy
(303) 441-1300
FTS: 322-1797

National Aeronautics and Space Administration (NASA) Lewis Research Center

Provides technical management of large and intermediate system development programs and related supporting research and technology development.

Large Wind Turbine Program
NASA Lewis Research Center
21000 Brook Park Road
Cleveland, OH 44135

Contacts:

Publications—Jerry Kennard
(216) 433-4000
FTS: 294-6833

Technical Information—Ron Thomas
(216) 433-4000
FTS: 294-6134

Sandia Laboratories

Provide technical management of the Vertical-Axis Wind Turbine (VAWT) Machine Development Program and related supporting research and technology development.

Wind Systems Program
Sandia Laboratories
Division 4715
Albuquerque, NM 87185

Contacts:

Publications—Sandia Document Distribution
(505) 264-3850
FTS: 475-3850

Technical Information—Emil Kadlec
(505) 264-8669
FTS: 475-8669

Pacific Northwest Laboratory (PNL)

Provides technical management for wind characteristics research and site validation.

Wind Energy Program
Pacific Northwest Laboratory
Battelle Blvd., P.O. Box 999
Richland, WA 99352

Contact:
Publications—Pamela Partch
(509) 942-4410
FTS: 444-4410

Technical Information—Larry Wendell
(509) 942-4626
FTS: 444-4626

Solar Energy Research Institute (SERI)

Provides technical management of economic and application studies, investigates institutional issues, administers Wind Energy Innovative Systems Program, and manages technical information dissemination.

Solar Energy Research Institute
1617 Cole Blvd.
Golden, CO 80401

Contacts:
Publications—Document Distribution Service
(303) 231-1158
FTS: 327-1158

Technical Information—Irwin Vas
(303) 231-1935
FTS: 327-1935

U.S. Department of Agriculture (USDA)

Develops requirements for agricultural wind applications and administers related applications research and testing.

Development of Rural and Remote Applications of Wind Generated Energy
Agricultural Research Services
U.S. Department of Agriculture
Beltsville, MD 20705

Contacts:
Publications—
Government & Public Affairs
Information Desk, USDA
Room 100W
14th & Independence
Washington, DC 20250

Technical Information—Louis Liljedahl
(202) 447-3504
FTS: 344-3504

Manufacturers, Dealers, and Distributors

One good source of product information is the manufacturer or local dealer/distributor of the machine. Wind machine distributors may also provide anemometers and other wind measuring devices to assist in siting. The yellow page section of the phone book is a good place to start looking for local dealers and distributors. Many of the recently published books on wind energy also have good directories. Some of the more accessible and complete directories of manufacturers, dealers, and distributors are listed below.

The American Wind Energy Association Brochure, 1609 Connecticut Ave. NW, Washington, DC 20009, (202) 667-9137. Free.

Contains an abundance of useful information, including a directory of wind machine dealers and distributors. Names and addresses of wind machine dealers and distributors, mechanical wind machine manufacturers, and electrical wind machine manufacturers.

A Guide to Commercially Available Wind Machines, RFP-2836/3533/78/3, The Wind Systems Program, Rockwell International, Rocky Flats Plant, April 1978, 121 pp., $7.25. Available from NTIS.

Detailed descriptions of 66 small wind machines commercially available in the United States. Names, addresses, phone numbers, contact persons, and extensive product information (including power curves

and illustrations) for 20 electrical wind machine manufacturers, 7 mechanical wind machine manufacturers, and 42 dealers and distributors.

Harnessing the Wind for Home Energy, Dermot McGuigan, Garden Way Publishing, Department WP, Charlotte, VT 05445, 1978, 134 pp., $4.95.

Information on site selection, wind measurement, wind energy estimation, windmills, home wind equipment, specific wind energy systems, and a directory of manufacturers and agents (dealers/distributors). Names, addresses, phone numbers, and detailed product information (including 1978 prices) for 38 manufacturers. Names and addresses for 6 manufacturers of mechanically applied windmills; names, addresses, and phone numbers for 28 agents.

Manufacturers Data Base, Solar Energy Information Center, 1617 Cole Blvd., Golden, CO 80401. Available through Regional Solar Energy Centers. (See p. 18.) Free.

Names, addresses, phone numbers, contact persons, and product information for wind machine manufacturers; continually updated. (To be listed in the Manufacturers Data Base or to report corrections, contact Mickey Loeb, Solar Energy Research Institute, 1617 Cole Blvd., Golden, CO 80401, (303) 231-1254, FTS: 327-1254.)

An Informal Directory of the Wind Energy Industry, The Mother Earth News, No. 58, p. 94, July/August 1979, P.O. Box 70, Hendersonville, NC 28739. $2.50.

Although not all-inclusive, represents a fair cross section of the field. Names, addresses, phone numbers, and some product information for 21 windplant manufacturers and 54 wind energy system distributors.

Northeast Wind Industry Directory, Northeast Solar Energy Center, 470 Atlantic Avenue Boston, MA 02110, (617) 292-9250. Free. Available through Center's library.

Names, addresses, phone numbers, contact persons, and some product information for large and small wind machine manufacturers, wind equipment dealers and distributors, and firms and universities conducting wind energy system research and development in the Northeast. Updated periodically.

1979 Wind Access Catalog, Wind Power Digest, Winter 1979, 54468 CR 31, Bristol, IN 46507. $2.00.

A yearly supplement to the regular four issue subscription, updated quarterly. Includes "The Wind Energy Primer," an introduction to the use of wind energy systems; directories to wind machine manufacturers and distributors; and a catalog of wind measurement systems, inverters, storage systems, towers, and accessories. Names, addresses, phone numbers, contact persons, and extensive product information (including photographs and power curves) for 28 wind machine manufacturers; names, addresses, and most phone numbers for 52 wind system distributors. Also has names, addresses, phone numbers, and product information for 11 wind measurement systems distributors, 9 inverter distributors, 9 storage system distributors, 5 tower distributors, and 16 accessory distributors. (This description includes the spring 1979 update.)

Siting Information

"Siting" a wind machine refers to choosing the location (and tower height) that will yield the most power at the least installation cost, the least maintenance cost, and the least risk of damage or accidental injury. According to many manufacturers, improper siting is the greatest cause of dissatisfaction among owners of small wind machines. A relatively small investment for proper siting can easily yield significant savings over the lifetime of the system.

A reputable distributor or dealer can provide useful information on siting and may even furnish anemometers and other wind measuring devices. Check one of the lists on p. 3 for a local dealer.

A Siting Handbook for Small Wind Energy Conversion Systems, Order No. PNL-2521 Rev. 1, H. Wegley, M. Orgill, and R. Drake (Battelle Pacific Northwest Laboratory, May 1978, 132 pp.). Available from NTIS.

A guide for individuals wishing to install small wind systems. The reader needs only a knowledge of basic arithmetic and the ability to understand simple graphs and tables to understand and apply the siting principles discussed.

Wind Power for Farms, Homes, and Small Industry, RFP-2841/1270/78/4, J. Park and D. Schwind (Nielsen Engineering and Research, Inc. Mountain View, CA 94043, September 1978. $9.25). Available from NTIS.

Contains practical, easy to understand information that complements "A Siting Handbook for Small Wind Energy Conversion Systems."

Site Selection and Evaluation Handbook for Wind Energy Systems, Steve Blake (Sunflower Power Company, Route 1, Box 93-A, Oskaloosa, KS 66066, May 1979, 60 pp., $8.50 domestic, $9.50 foreign.)

Handbook for understanding performance and siting requirements of small to large wind systems. Demystified, practical approach uses everyday examples. Based on experience of wind manufacturers and owners of the 30s and 40s as well as current state of the art. Refers readers to information on U.S. and international wind speed data.

For information unavailable through the above sources, contact:

William Pennell
Battelle Pacific Northwest Laboratory
Richland, WA 99352
(509) 942-4620
FTS: 444-4620

Wind Data

Wind data collected near a potential site area useful for developing good siting strategy and estimating power output.

Do not neglect possible sources of wind data such as U.S. and State Forest Services, some public utilities, airlines, industrial plants, and agricultural and meteorological departments of local colleges and universities.

National Climatic Center (NCC)
NOAA Environmental Data and Information Service
Federal Building
Asheville, NC 28801
(704) 258-2850
FTS: 672-0683

Usually the best source of wind data. The NCC will, for the cost of reproduction, provide available summaries for sites in or near a locality. Climatic summaries for major U.S. weather stations, including wind data, are available in different forms—some more detailed than others. Detailed summaries include wind variation by hour of day and month of year. Wind roses have been constructed for many of the weather stations.

"Wind Power Climatology of the United States, Supplement." Jack W. Reed (Sandia Laboratories, Albuquerque, NM 87185, 1979, 98 pp., $8.00). Available from NTIS.

Extends summaries in the earlier Wind Power Climatology of the United States to include monthly and annual average wind speed.

Wind Power Climatology of the United States. (SAND 74-0348, Sandia Laboratories, Albuquerque, NM 87185, 1974, 163 pp., $8.00). Available from NTIS.

Analyzes data in the National Climatic Center archives for 758 weather stations for monthly, seasonal, and annual average windpower.

Summary of Wind Data from Nuclear Power Plant Sites, M. G. Verholek (BNWL-2220, WIND-4, Battelle Pacific Northwest Laboratory, Richland, WA 99352, 1977, 342 pp., $12.00). Available from NTIS.

Summarized wind data from over 100 nuclear power plant sites. Includes wind speed frequencies by direction, graphs of wind speed versus duration of speed, height and location of wind sensors, average wind speed, available wind power, and descriptions of site and surrounding terrain.

Index-Summarized Wind Data, W. T. Changery, W. T. Hodge, and J. V. Ramsdell (BNWL-2220, WIND-11), Battelle Pacific Northwest Laboratory, Richland, WA 99352, 1977, 245 pp., $9.50). Available from NTIS.

Lists all sites for which wind summaries are available. These sites include past and present National Weather Service Stations, Federal Aviation Administration and Civil Aeronautics Administration sites, and military installations.

National Wind Data Index, M. J. Changery (HCO/T1041-01, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data and Information Service, National Climatic Center, Asheville, NC 28801, December 1978, 245 pp., $9.50). Available from NTIS.

Concise listing of the periods of record of all available wind observations in the National Climatic Center's meteorological data archives for U.S. locations. Includes periods with various types of manuscript records and autographic charts containing wind data, the approximate number of observations per day, periods for which wind data are on magnetic tape, brief history of standard U.S. instrumentation, and available meteorological record forms.

Site Selection and Evaluation Handbook for Wind Energy Systems, Steve Blake (Sunflower Power Company, Route 1, Box 93-A, Oskaloosa, KS 66066, May 1979, 60 pp., $8.50 domestic, $9.50 foreign). Refers readers to detailed information on U.S. and international wind speed data.

Northwest Wind Energy Resource Assessment Atlas, W. R. Barchet and D. Elliott (Battelle Pacific Northwest Laboratory, Richland, WA 99352, 1979, 100 pp., $6.00). Available from NTIS. PNL3195.

Maps and graphs depicting geographic distribution of wind resources in Washington, Oregon, Idaho, Montana, and Wyoming. Detailed to sub-county level. Will be available December 1979. Eleven additional atlases of remaining U.S. regions will follow by late fall 1980.

Universities and Colleges

Many universities and colleges are conducting research on wind energy conversion systems and can be valuable sources of information on wind machine technology, wind resource assessment, or siting techniques.

This is a representative sampling of universities conducting wind energy research. The people listed have agreed to provide information or make referrals to other sources of information.

Alaska

Tunis Wentink, Jr.
Geophysical Institute
University of Alaska
Fairbanks, AK 99701

California

Peter Lester
Dept. of Meteorology
San Jose State University
San Jose, CA 95192
(408) 277-2311

P. P. Friedmann
Room 6731 G Boelter Hall
University of California
Los Angeles, CA 90024
(213) 825-6041

Colorado

Barbara L. Burke
Engineering Research Center
Colorado State University
Ft. Collins, CO 80523
(303) 491-8694

Georgia

C. G. Justus
School of Geophysical Science
Georgia Institute of Technology
Atlanta, GA 30332
(404) 894-3890

Hawaii

C. Ramage, A. Daniels, T. Schroeder
Dept. of Meteorology SE Project
University of Hawaii
Honolulu, HI 96822
(808) 948-8775

Illinois

Robert Ferber
Survey Research Lab
University of Illinois
1005 W. Nevada Street
Urbana, IL 61801
(217) 333-4273

Kansas

G. L. Johnson (Wind Characteristics)
College of Engineering
Kansas State University
Manhattan, KS 66506
(913) 532-5600

L. Hagen (Darrieus Applications)
USDA-SEA
Dept. of Agronomy
Kansas State University
Manhattan, KS 66506
(913) 539-4991

Massachusetts

L. Morino
College of Engineering
Boston University
110 Cummington Street
Boston, MA 02215
(617) 353-3069

D. Cromak
Energy Alternative Program
University of Massachusetts
Amherst, MA 01003

Michigan

Mark L. Hassett
Dept. of Physical Geography
University of Michigan
Flint, MI 48503
(313) 762-3355

Jess Assmussen
Michigan State University
East Lansing, MI 48824
(517) 355-4620

Minnesota

A. A. Lopez
Division of Science & Math
University of Minnesota
Morris, MN 56267
(612) 589-2234

Nevada

J. W. Telford
Desert Research Institute
Atmospheric Sciences Center
University of Nevada
Boulder City, NV 89506
(702) 972-1676

New Jersey

H. C. Curtiss
Dept. of Mechanical & Aerospace Engineering
Princeton University
Princeton, NJ 08544
(609) 452-5149

New Mexico

K. M. Barnett, R. Schoenmackers
New Mexico Solar Energy Institute
P.O. Box 3 SOL
Las Cruces, NM 88003
(505) 646-1846

Ralph D. Reynolds
Physical Science Lab
P.O. Box 3 PSL
Las Cruces, NM 88003
(505) 522-9237

New York

Donna Josephson
Conference & Information Center
Clarkson College
Potsdam, NY 13676
(315) 268-6647

W. W. Gunkel
Agricultural Engineering Dept.
Cornell University
Ithaca, NY 14853
(607) 256-2297

R. E. Duffy
Dept. of Aeronautical Engineering
Rensselaer Polytechnic Institute
Troy, N.Y. 12181
(518) 270-6260

Oklahoma

R. G. Ramakumar, W. L. Hughes
School of Electrical Engineering
202 Engineering South
Oklahoma State University
Stillwater, OK 74078
(405) 624-5170

Karl Bergey
AMNE
University of Oklahoma
Norman, OK 73019
(405) 325-5011

Oregon

B. Baker
Dept. of Atmospheric Sciences
Oregon State University
Corvallis, OR 97331
(503) 754-4557

R. W. Thresher
Mechanical Engineering Dept.
Oregon State University
Corvallis, OR 97331
(503) 754-2535

Pennsylvania

Robert Fischl
Dept. of Electrical Engineering
Drexel University
32nd and Chestnut
Philadelphia, PA 19104
(215) 895-2254

Texas

V. Nelson, E. Gilmore, R. E. Barieau
Alternative Energy Institute
Box 248 West Texas State University
Canyon, TX 79016
(806) 656-3904

Virginia

J. A. Schetz
Dept. of Aerospace Engineering
Virginia Polytechnic Institute
Blacksburg, VA 24061
(703) 961-6611

Wisconsin

D. K. Reitan
Dept. of Electrical & Computer Engineering
1425 Johnson
University of Wisconsin
Madison, WI 53706
(806) 262-3736

Wyoming

Donald Smith
Dept. of Mechanical Engineering
University of Wyoming
Laramie, WY 82071
(307) 766-6495

Virgin Islands

R. F. Dill
Fairleigh Dickinson University
P.O. 4010
West Indies Lab
Christiansted, St. Croix, VI 00820
(809) 773-3339

(Editor's Note: If you would like to have your university included in the next edition, please tell us on the reader response form at the back of this directory.)

Computer Programs

Researchers, engineers, utility planners, and others need access to wind energy simulation methods and analytic modeling techniques. The following summary is from *Analysis Methods of Wind Energy Applications* (SERI/SP-35-231). This SERI brochure reports previous work done in developing wind energy simulation methods. It describes 17 computer programs including title, input requirements, output data, references, availability, and contact. Available from Document Distribution Service, Solar Energy Research Institute, 1617 Cole Blvd., Golden, CO 80401, (303) 231-1158. Free.

Program Name	Availability	Documentation			Rotor Types			Control Strategy		Inputs			Program Type			Experimental Verification	
		User's Manual (2)	Program Manual (3)	References	High Speed Horizontal (4)	Darrieus	Giromill	Constant Speed	Constant Tip Speed Rate	Single Wind Speed	Wind Speed Distribution	Weather Tapes	Design Tool (5)	Economic Analysis (6)	Aeroelastic Analysis	Wind Tunnel	Field Data
CROFTAN		●		●			●	●		●	●		●				●
F762	(1)	●			●			●		●	●				●	●	●
G400		●		●	●			●		●					●	●	●
GIROMILL PERF.				●			●	●	●	●			●			●	
GOLDSTEIN P.A.	(1)				●			●	●	●			●			●	
OFF DESIGN		●			●			●			●			●			
PAREP		●		●		●		●					●			●	●
PROP (7)		●		●	●			●		●			●				●
PROP (8)		●	●	●	●				●	●			●			●	●
ROTOR		●	●		●			●	●	●	●		●			●	●
SERIES/WIND		●			●			●				●		●			
SIMWEST			●	●	●			●	●	●	●	●		●			
UTRC PWPA	(1)	●			●			●	●		●		●			●	
VAWTOP						●		●			●			●			
VERSION 16		●	●	●		●		●			●			●			
WIND OPT		●			●			●			●			●			
WRFP		●		●	●			●		●			●				●

Notes from Analysis Methods of Wind Energy Applications

(1) This program is not currently available to the public.
(2) User's manual is defined to be minimum description of the program necessary for its operation.
(3) Program manual is detailed operations manual including instructions for program modifications.
(4) A high speed wind turbine is one in which the linear speed of some portion of the rotating parts is five times or more the oncoming wind speed during normal operations.
(5) The output of these programs includes the loads and power output of a particular wind turbine. This information is necessary for design.
(6) The output of these programs includes some information on the economic qualities of the considered system.
(7) NASA Lewis Research Center version.
(8) Aerovironment version.

Organizations

These organizations can respond to requests for information on wind energy or make referrals to other sources of information.

This is not a comprehensive list. Contact your local solar energy association or the American Wind Energy Association, (202) 667-9137, for referrals to local sources of information

Alternative Energy Resources Organization (AERO)

435 Stapleton Building
Billings, MT 59101
(406) 259-1958

Maintains small collection of books and articles. Publishes *The Aero Sun Times.*

Alternative Sources of Energy, Inc. (ASE)

107 S. Central Ave.
Milaca, MN 56353
(612) 983-6892

Maintains library of 1,000 books, articles, and journals. Publishes *Alternative Sources of Energy* (bimonthly magazine), and *Energy Digest* (Midwest newsletter). Offers bibliographic and information searches, as well as consulting services, through its Energy Information and Referral Services. Ask for the *Buyer's Guide to Available Information.*

American Wind Energy Association (AWEA)

1609 Connecticut Ave. NW
Washington, DC 20009
(202) 667-9137

Has two regular publications, the AWEA *Windletter* and the *Wind Technology Journal.* Also publishes information on research contracts, news releases, conference proceedings, and items of general interest. Sponsors two conferences each year which include presentations and exhibits. Provides Federal and state legislators with necessary information to make a reasonable assessment of wind as an energy source. (Ask for their free brochure. In addition to membership and organizational information, it contains useful information on the use of wind energy, siting, the economics of wind energy, wind energy publications, commercially available wind machines, wind machine distributors, and the Federal Wind Energy Program.)

Ecotope Group

2332 E. Madison Street
Seattle, WA 98112
(206) 322-3753

Maintains literature and data collection, microfiche collection, bibliographies.

Electric Power Research Institute (EPRI)

Communications Division
Box 10412
Palo Alto, CA 94303
(416) 855-2000

Selects, funds, and manages research projects to develop new ways to produce, transmit, and distribute electric power. Publishes *EPRI Guide* which contains ordering information and annotations for all EPRI research project reports, reprints of *EPRI Journal,* fact sheets, and other miscellaneous printed items.

Great Plains Windustries

5130 Mission Rd.
Shawnee Mission, KS 66205
(913) 842-7662

A small, nonprofit organization working to promote wind energy development in the plains and across the nation. Has 700 members including many who are willing to make speeches as well as offer engineering expertise to wind system builders. Open to queries of all kinds.

National Center for Appropriate Technology (NCAT)

P.O. Box 3838
Butte, MT 59701
(406) 494-4572

Maintains information on technical research, outreach, and grants. Provides multimedia communications, publications, grant opportunities, field-extension workers, decentralized information systems, regional advisory panels, regional newsletters, workshops, conferences, and technical research.

New Mexico Solar Energy Institute

Box 3 SOL
New Mexico State University
Las Cruces, NM 88003
(505) 646-1846

Develops standards, tests equipment; coordinates major research, development and demonstration efforts within the state; collects and disseminates information. Conducts wind energy studies and experiments under individual contracts.

Technology Application Center (TAC)

University of New Mexico
Albuquerque, NM 87131
(505) 277-3622

Maintains bibliography on wind energy dating back to 1944. Conducts tailored literature searches using computerized files on many aspects of wind. Also capable of conducting analytical studies in the field of energy and providing formal state-of-the-art reports. Makes referrals to other sources for specialized wind energy information.

Periodicals

Periodicals are very good sources of the most up-to-date wind energy information, news, and commentary.

Wind Engineering

Technical articles, current research on wind and energy systems, Quarterly £34/year.

Multi-Science Publishing Co., Ltd.
The Old Mill
Dorset Place
London, E15 1DJ
England

Wind Technology Journal

State-of-the-art research on wind energy conversion and use. Quarterly, $15/year to American Wind Energy Association (AWEA) members, $20/year for nonmembers.

Wind Technology Journal
P.O. Box 7
Marston Mills, MA 02648

Windletter

Newsletter of the American Wind Energy Association (AWEA). Monthly, included in AWEA annual membership, $10/year for nonmembers.

American Wind Energy Association
1621 Connecticut Ave. NW
Washington, DC 20009

Wind Power Digest

Comprehensive coverage of ongoing developments in the wind energy field from both consumer and industry perspectives. Articles, interviews, and reviews of the latest wind energy happenings. Also publishes "Wind Access Catalogue" as an annual supplement to the regular four-issue subscription. Quarterly, $8/year.

Wind Power Digest
109 East Lexington
Elkhart, IN 46514

Wind Energy Report

An international newsletter of wind power. Monthly, $95/year.

Wind Publishing Co.
P.O. Box 14
Rockville Centre
New York, NY 11571

Windirections

Newsletter of the British Wind Energy Association (BWEA). Interviews, editorials, news, and articles on the British and international wind scene. Three issues a year. Mailed to

members and associate members of the BWEA. Membership, £10/year; associate membership £6/year.

British Wind Energy Association
Wind Power Unit
Faculty of Applied Science
University of Exeter
Devon, U.K.

Proceedings, National Conferences American Wind Energy Association

Published after each semi-annual conference. Contains papers on development of large and small wind systems. Price covers printing and postage.

American Wind Energy Association
1609 Connecticut Avenue N.W.
Washington, D.C. 20009
(202) 667-9137

The following periodicals occasionally include information on wind energy. Check the *Reader's Guide to Periodical Literature* at your library for more articles on wind energy.

Alternative Sources of Energy

Covers developments in wind energy and other alternative energy technologies. (Special issue on wind energy: Jan./Feb. 1980.) Bimonthly, $15/year.

Alternative Sources of Energy, Inc.
107 S. Central Ave.
Milaca, MN 56353

Canadian Renewable Energy News

Covers worldwide renewable energy and appropriate technology news. Perspective on U.S. energy scene. Monthly, $10/yr. (individual) $18/yr. (corporate/institutional).

Canadian Renewable Energy News
P.O. Box 4869, Station "E"
Ottawa, Ontario, Canada K1S 5B4

Commerce Business Daily

A daily list of U.S. Government procurement invitations, contract awards, subcontracting leads, sales of surplus property, foreign business opportunities, and Department of Energy-funded contracts. Daily, $105/year (1st class); $80/year (2nd class); $60/six months (1st class); $45/six months (2nd class).

Superintendent of Documents
Government Printing Office
Washington, DC 20402

U.S. Department of Energy Information Weekly Announcements

Official department announcements on all energy topics. Weekly, free.

U.S. Department of Energy
Office of Public Affairs
Washington, DC 20585

U.S. Department of Energy Solar Energy Mailing List

The Department of Energy solar program offices maintain a computerized mailing list for professionals interested in receiving information on the Department's solar technology development and applications programs, and other activities of the Federal solar effort. An occasional newsletter called *Solar Energy Research and Development Report* is also mailed. Contact the Department of Energy to be placed on the mailing list.

Solar Energy Information Request
U.S. Department of Energy
Room E-020-GTN
Washington, DC 20585

The Energy Consumer

Covers Federal energy programs of interest to consumers. Periodically, free.

U.S. Department of Energy
Office of Consumer Affairs
Room 8G082
Washington, D.C. 20585

The Energy Daily

Daily newsletter covering general energy technology news. Discusses in some detail policy decisions and major technological developments and breakthroughs. Daily, $525/year.

The Energy Daily
300 National Press Building
Washington, DC 20045

The Energy Digest

New publication from *Alternative Sources of Energy*. Covers renewable energy and appropriate technology news from the Upper Midwest. Monthly, $6/year (charter subscription).

Alternative Sources of Energy, Inc.
107 S. Central Avenue
Milaca, MN 56353

Energy Insider

A newspaper of the Department of Energy. Includes a calendar of upcoming speeches and conferences. Biweekly, free.

U.S. Department of Energy
Office of Consumer Affairs
Room 8G031
Washington, DC 20585

Energy Research Digest

Newsletter detailing new developments in various energy technologies. Highlights new publications available from NTIS. Biweekly, $150/year.

Energy Research Digest
P.O. Box 17162
Washington, DC 20041

EPRI Journal

Journal of the Electric Power Research Institute which includes status reports on the Institute's R&D projects, new publications, happenings in Washington, and features. Bimonthly, free.

Electric Power Research Institute
Communications Division
Box 10412
Palo Alto, CA 94303

Inside DOE

A report on the Department of Energy. Weekly, $320/year.

McGraw-Hill, Inc.
1211 Avenue of the Americas
New York, NY 10020

The Mother Earth News

Heavy emphasis on alternative energy and lifestyles, ecology, working with nature, and doing more with less. Issue No. 58, July/August 1979, has (informal) Directory of the Wind Energy Industry.: Bimonthly, $15/year.

The Mother Earth News
P.O. Box 70
Hendersonville, NC 28791

The NESEC Update

Newsletter of the Northeast Solar Energy Center. Monthly, free.

Northeast Solar Energy Center
470 Atlantic Avenue
Boston, MA 02110

Popular Science

Includes regular features *Energy News* and *Alternate Energy Answers*. Monthly, $9.94/year.

Popular Science Subscription Dept.
P.O. Box 2871
Boulder, CO 80302

RAIN

Emphasizes small-scale, home-built, and community projects. Monthly, $10/year.

RAIN
2270 NW Irving Street
Portland, OR 97210

Solar Age

Offical magazine of the American Section of the International Solar Energy Society. Comprehensive coverage of passive and active solar energy applications and activities in the United States. Monthly, $20/year.

Solar Vision, Inc.
Church Hill
Harrisville, NH 03450

Solar Calendar

A listing of conferences, symposia, workshops, and other formal meetings pertaining to the solar technologies (including wind). To list an event, contact Ann Hansen, Data Base Systems Branch, Solar Energy Research Institute, 1617 Cole Blvd., Golden CO 80401, (303) 231-1260. Monthly, free.

Document Distribution Service
Solar Energy Research Institute
1617 Cole Blvd.
Golden, CO 80401

Solar Energy

Contains scientific and engineering papers on all aspects of solar energy technology, theory, and applications. Monthly, $45/year (individual), $176/year (library).

Pergamon Press, Inc.
Maxwell House
Fairview Park
Elmsford, NY 10523

Solar Energy Digest

Concise summaries of developments in all solar energy technologies (including wind), ongoing research, and publications, both U.S. and foreign. Monthly, $35/year.

Solar Energy Digest
CWO-4 W. B. Edmondson
P.O. Box 17776
San Diego, CA 92117

Solar Energy Intelligence Report

Reports Federal, state, local, and international activities; new business and technical developments; publications; patents; contracts awarded; available opportunities; and meetings. Weekly, $90/year.

Business Publishers, Inc.
P.O. Box 1067
Silver Spring, MD 20910

Solar Energy Update

Lists, indexes, and abstracts of current scientific and technical reports, journal articles, conference papers and proceedings, books, patents, theses, and monographs for all sources on solar energy. Available to the public on a subscription basis. Monthly, $27.50/year. Publication Number NTISUB/C/145.

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

Solar Engineering

Official magazine of the Solar Energy Industries Association. Descriptions of activities and developments in the field of solar energy, particularly in the United States. Monthly, $20/year.

Solar Engineering Publishers
8435 N. Stemmons Freeway, Suite 880
Dallas, TX 75247

Solar Law Reporter

Discusses important issues related to the legal institutions and rules surrounding the development of solar energy (including wind energy). Allows presentation of minority or conflicting points of view in addition to material on which a consensus has been reached. Published by Solar Energy Research Institute. May/June issue contains "NEPA and Alternative Energy: Wind as a Case Study." Bimonthly, $7.50/year.

Solar Law Reporter
P.O. Box 5400
Denver, CO 80217

Audiovisuals

In addition to these formal productions, your state energy office, regional solar energy center or solar energy association should be contacted for speakers, slide shows or other presentation materials.

Generation on the Wind

16mm, color, 58 min., 1979.

Documents the experiences of five young men who designed and constructed the Cuttyhunk 200 kW wind generator turbine. This film was aired by PBS, April 23, 1979.

Contact:
David Vassar
The Windmill Movie Co., Inc.
P.O. Box 43
Venice, CA 90291
(213) 399-5474

Gusts of Power

16mm, color, 14 min., 1979.

Describes rural and agricultural applications including deep well pumping and irrigation, building and water heating, and product cooling and storage. Looks at machines currently operating in the above applications. (National AudioVisual Center Stock Number AO1302.)

Contact for free loan:
DOE Film Library
P.O. Box 62
Oak Ridge, TN 37830

Contact for purchase:
National AudioVisual Center
Sales Order Division
Washington, DC 20409

Smith-Putnam and Hutter-Allgaier in Operation

16mm, silent color, 15 min., 1974.

Rare historical footage filmed in the 1940s of the 1250 kW Smith-Putnam wind turbine. Also German footage of the 10 kW Hutter wind turbines filmed in 1958-1965 period.

Contact for purchase:
Lee Johnson
5300 NW Skyline Blvd.
Portland, OR 97229

Windcatchers

videocassette, color, 30 min., 1979.

Discusses history of wind energy. Describes current development of wind energy technologies, progressing from small machines to large machines. Concludes with questions about the generation of electricity.

Contact:
Evelyn Messinger
519 Castro St.
San Francisco, CA 94114
(415) 626-3131

Wind: An Energy Alternative

16mm, color, 12 min., 1980.

Presents history, current development, and applications of wind energy systems. (National AudioVisual Center Stock Number AO2709).

Contact for free loan:
DOE Film Library
P.O. Box 62
Oak Ridge, TN 37830

Contact for purchase:
National AudioVisual Center
Sales Order Division
Washington, DC 20409

Wind Power: The Great Revival

film strip, audiocassette, 16mm, or videocassette, color, 29 min., 1976.

Presents history and current development of wind power technologies. Includes interviews with small wind machine owners discussing cost, storage, and operation.

Contact:
University of Colorado
Educational Media Center
Stadium Building
Boulder, CO 80309
(303) 492-7341

Solar Energy Information Center

As a component of the Solar Energy Information Data Bank (SEIDB), the Information Center maintains a comprehensive collection of solar energy and energy related material such as contractor reports, books, periodicals, patents, government documents, standards and specifications, and audiovisuals. The Information Center also maintains the Solar Energy Bibliographic Data Base (Solar Biblio) as one of several SEIDB data bases. The Information Center will answer brief written or telephone inquiries.

Another of the SEIDB data bases is the Manufacturers Data Base. It is a directory of approximately 2,000 manufacturers in the solar energy field (including wind). Some non-U.S. companies are included in the file. The data base provides information on products, addresses, and contacts.

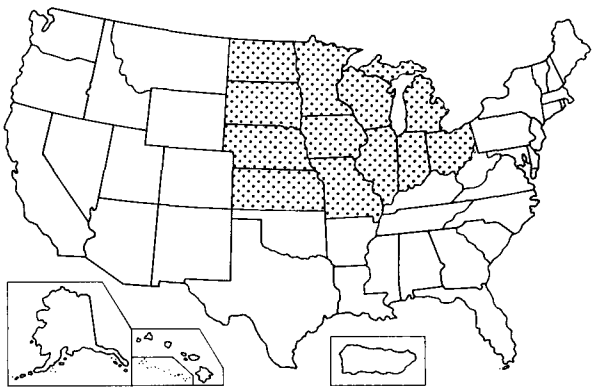
Additional data bases are under development. For information contact:

Solar Energy Information Center
Solar Energy Research Institute
1617 Cole Blvd.
Golden, CO 80401

Reference Desk: (303) 231-1415
FTS: 327-1415

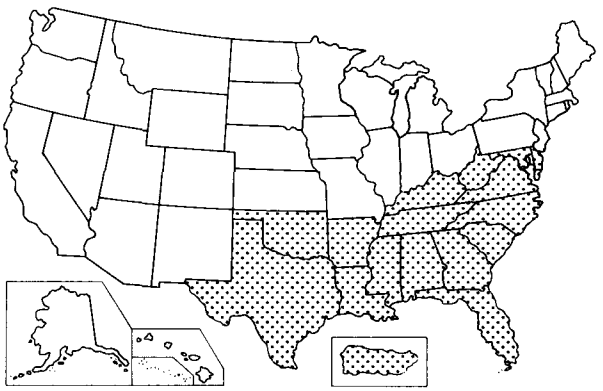
Regional Solar Energy Centers

In addition to the national Solar Energy Research Institute, the Department of Energy funds four Regional Solar Energy Centers (RSECs) whose focus is moving solar technology into the marketplace. RSECs work closely with state energy offices, industry, and varied organizations within their regions to provide general solar information and technical assistance through onsite libraries, computerized data systems, seminars and workshops, and distribution of reports. Scope of services will vary for each region.



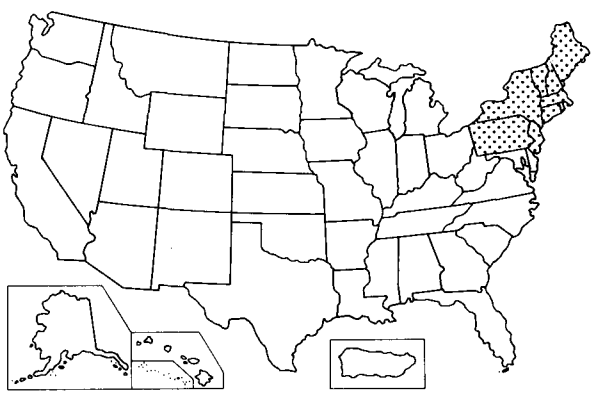
Mid-American Solar Energy Complex (MASEC)
8140 26th Avenue S.
Minneapolis, MN 55121
(612) 452-5300

Answers inquiries, conducts seminars and workshops, provides onsite use of the library collection.



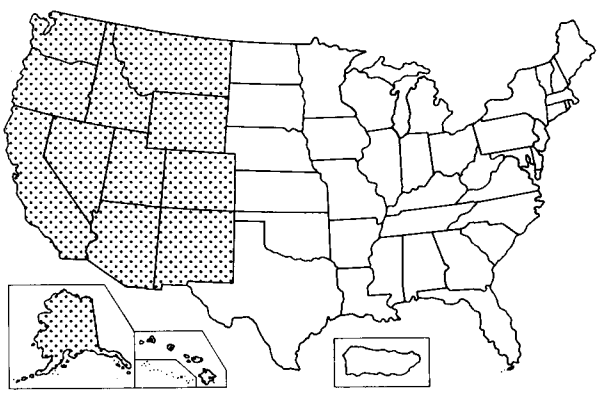
Southern Solar Energy Center (SSEC)
61 Perimeter Park
Atlanta, GA 30341
(404) 458-8765

Distributes SSEC/News which covers technical and general information topics.



Northeast Solar Energy Center (NESEC)
470 Atlantic Avenue
Boston, MA 02110
(617) 292-9250

Answers inquiries, conducts conferences and seminars, provides onsite use of the library collection, conducts computerized information searches. Distributes Northeast Wind Industry Directory, The NESEC Update, *NESEC Focus,* and technical reports on various subjects.



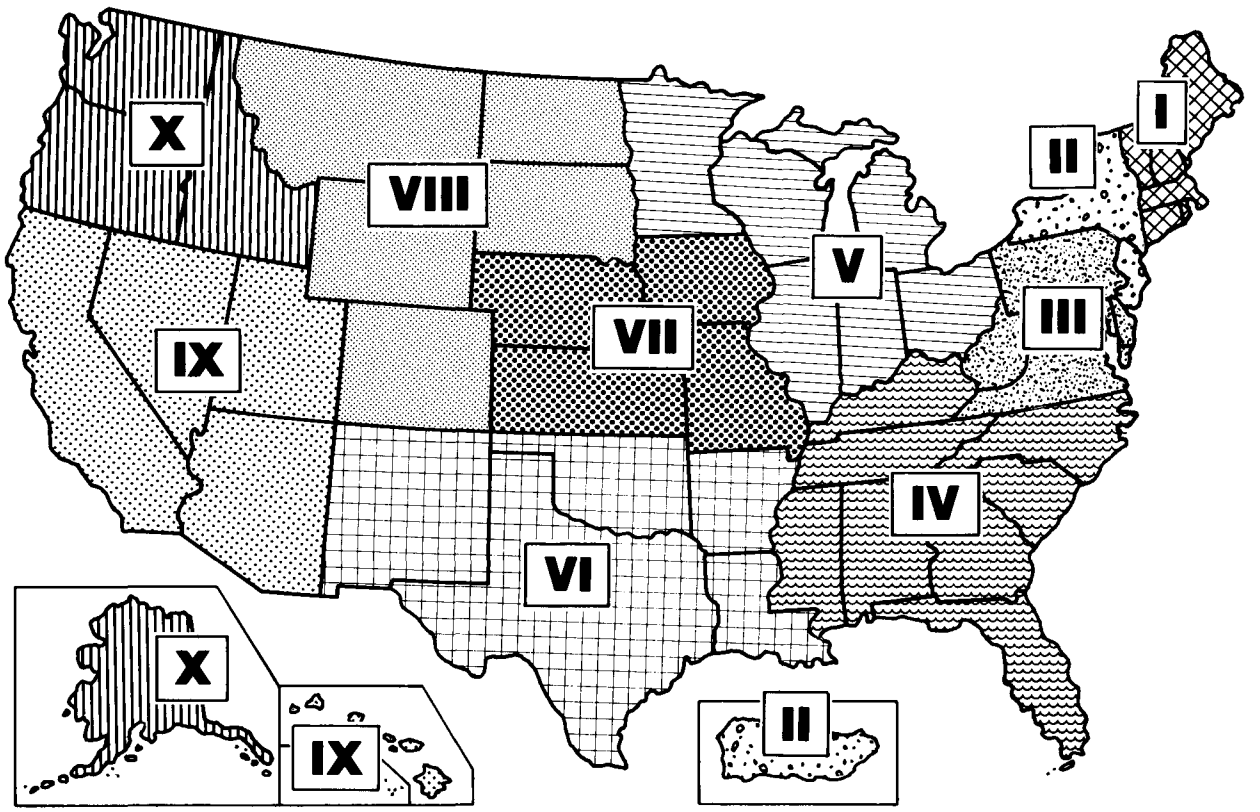
Western Solar Utilization Network (WSUN)
715 S.W. Morrison, Suite 800
Portland, OR 97205
(503) 241-1222

Information programs under development to include inquiry service, seminars and workshops, computerized information searches.

Department of Energy (DOE) Regional Offices

There are 10 regional Department of Energy offices set up to administer DOE programs at a regional level and to assist citizens living in each region to get information from DOE.

The regional offices can assist with information on the Federal Wind Energy Progam and make referrals to other sources of wind energy information.



U.S. Department of Energy, Region I
150 Causeway Street
Boston, MA 02114
(617) 223-0504
FTS: 233-0504

U.S. Department of Energy, Region II
26 Federal Plaza, Room 3200
New York, NY 10007
(212) 264-0560
FTS: 264-0560

U.S. Department of Energy, Region III
1421 Cherry Street, 10th Floor
Philadelphia, PA 19102
(215) 597-3609
FTS: 597-3609

U.S. Department of Energy, Region IV
1655 Peachtree Street, N.E.
Atlanta, GA 30309
(404) 881-2352
FTS: 257-2352

U.S. Department of Energy, Region V
175 West Jackson Boulevard, Room A-333
Chicago, IL 60604
(312) 353-8515
FTS: 353-8515

U.S. Department of Energy, Region VI
P.O. Box 35228
2626 West Mockingbird Lane
Dallas, TX 75235
(214) 767-7777
FTS: 729-7777

U.S. Department of Energy, Region VII
Regional Representative's Office
324 East 11th Street
Kansas City, MO 64106
(816) 374-3481
FTS: 758-3481

U.S. Department of Energy, Region VIII
Regional Representative's Office
P.O. Box 26247, Belmar Branch
1075 S. Yukon Street
Lakewood, CO 80226
(303) 234-2420
FTS: 234-2420

U.S. Department of Energy, Region IX
Energy Resources Center
333 Market Street, 7th floor
San Francisco, CA 94105
(415) 764-7035
FST: 454-7035

U.S. Department of Energy, Region X
Regional Energy Information Center
Room 1992, Federal Building
915 Second Avenue
Seattle, WA 98174
(206) 442-7285
FTS: 399-7285

Energy Extension Services

Ten states have developed pilot Energy Extension Services to answer specific questions or make referrals. Energy extension services will soon be available in all states. For more information about your state's program contact your DOE regional office listed above.

Alabama Energy Extension Service
John A. Hoyle, Director
Auburn University
Auburn, AL 36830
(205) 826-4718

Connecticut Energy Extension Service
Office of Policy and Management
Bradford S. Chase, Director, Energy Division
80 Washington Street
Hartford, CT 06115
(203) 566-5803

Michigan Energy Extension Service
Energy Administration
Michigan Dept. of Commerce
6520 Mercantile Way, Suite #1
Lansing, MI 48910
(517) 373-0480

New Mexico Energy Extension Service
Robert Plunkett, Director
P.O. Box 00, 113 Washington Avenue
Santa Fe, NM 87501
(505) 827-2386

Pennsylvania Governor's Energy Council
John Hafer
1625 N. Front St.
Harrisburg, PA 17102
(717) 783-8610

Tennessee Energy Extension Service
Douglas Bennett, Jr.
226 Capitol Blvd.
Suite 615
Nashville, TN 37219
(615) 741-6677

Texas Energy Extension Service
Texas A&M University
Stephen Riter
College Station, TX 77849
(713) 845-8025

Washington Energy Extension Service
J. Orville Young
Washington State University
Pullman, WA 99164
(509) 335-2531

Wisconsin Energy Extension Service
William Bernhagen, Director
437 North Lake Street
Madison, WI 53706
(608) 263-1662

Wyoming Energy Extension Service
Ron White, Program Administrator
University Station
P.O. Box 3965
Laramie, WY 82071
(307) 766-4253

State Energy Offices and Solar Energy Associations

Each state government has an energy office. In addition, many states have solar energy associations which are usually nonprofit organizations. These energy offices and associations are good sources of general solar energy information and should be able to make referrals to other sources if they cannot answer specific questions on wind.

Alabama

Alabama Energy Management Board—3734 Atlanta Highway, Montgomery, AL 36130 (205) 832-5010

Alabama Solar Energy Association—Johnson Environmental & Energy Studies Center, University of Alabama at Huntsville, P.O. Box 1247, Huntsville, AL 35807 (205) 895-6257

Alaska

Alaska Division of Energy and Power Development—Mackay Building, 7th Floor, 338 Denali St., Anchorage, AK 99501 (907) 276-0508

Alaska Renewable Resources Library 1069 W. 6th Ave., Anchorage, Alaska 99501

Federation for Community Self-Reliance P.O. Box 73488, Fairbanks, AK 99707

Arizona

Arizona Solar Energy Commission—1700 W. Washington, Room 502, Phoenix, AZ 85007 (602) 271-3682

Arizona Solar Energy Association—c/o FCCAT, P.O. Box 1443, Flagstaff, AZ 86002

Arkansas

Arkansas Department of Energy 3000 Kavanaugh Blvd., Little Rock, AR 72205 (501) 371-1370

California

California Energy Commission—1111 Howe Ave., Sacramento, CA 95825; public information (916) 920-6430 ; publications (916) 920-6216; in California, toll-free (800) 852-7516

Northern California Solar Energy Association—P.O. Box 1056, Mountain View, CA 94042 (no phone)

Southern California Solar Energy Association—City Administration Building 11-B, 202 C St., San Diego, CA 92101 (714) 236-0432

Colorado

Colorado Office of Energy Conservation—1600 Downing St., Second Floor, Denver, CO 80203 (303) 839-2507

Colorado Solar Energy Association—P.O. Box 5272, Denver, CO 80217; Solar Bookstore, 2239 E. Colfax Ave., Denver, CO 80206 (303) 321-1645

Connecticut

Connecticut Office of Policy and Management, Energy Division—80 Washington St., Hartford, CT 06115; energy information (203) 566-2800; solar information (203) 566-3394

Solar Energy Association of Connecticut—Box 541, Hartford, CT 06101 (203) 233-5684

Delaware

Delaware Energy Office—114 W. Water St., P.O. Box 1401, Dover, DE 19901 (302) 678-5644

Florida

Florida State Energy Office—301 Bryant Building, Tallahassee, FL 32304 (904) 488-6764

Georgia

Georgia Office of Energy Resources—270 Washington St. SW, Suite 615, Atlanta, GA 30334 (404) 656-5176

Georgia Solar Energy Association—Campus Box 32748, Georgia Institute of Technology, Atlanta, GA 30332 (no phone)

Hawaii

Hawaii State Energy Office, Department of Planning and Economic Development—1164 Bishop St., Honolulu, HI 96813 (808) 548-4150

Hawaii Natural Energy Institute 2540 Dole Street, Homes Hall, Honolulu, Hawaii 96822

Idaho

Solar Energy Division Idaho Office of Energy—State Capitol Bldg., Boise, ID 83720 (208) 334-3800

Illinois

Illinois Institute of Natural Resources, Division of Solar Energy and Conservation—325 W. Adams, Springfield, IL 62706 (217) 785-2800

Illinois Solar Energy Association, Inc.—P.O. Box 1592, Aurora, IL 60507 (312)377-9363

South Central Illinois Solar Energy Association—c/o Earl G. Powell, 637 Eccles, Hillsboro, IL 62049 (217) 532-3233

Indiana

Indiana Energy Office—Consolidated Building, 7th Floor, 115 N. Pennsylvania, Indianapolis, IN 46204 (317) 633-6753

Hoosier Solar Energy Association—P.O. Box 44448, Indianapolis, IN 46202 (no phone)

Iowa

Iowa Energy Policy Council—215 E. 7th, Des Moines, IA 50319; solar information (515) 281-8071; energy conservation information (515) 281-4308

Kansas

Kansas Energy Office—503 Kansas Ave., Room 241, Topeka, KS 66603 (913) 296-2496

Kansas Solar Energy Association—c/o Donald R. Stewart, 1202 S. Washington, Wichita, KS 67211 (316) 262-7427

Kentucky

Kentucky Department of Energy P.O. Box 11888, Iron Works Pike, Lexington, KY (606) 252-5535

Kentuckiana Solar Energy Association—c/o David Ross Stevens, Box 974, Louisville, KY 40201 (812) 945-4496

Louisiana

Louisiana Department of Natural Resources, Division of Research and Development—P.O. Box 44156, Baton Rouge, LA 70804 (504) 342-4592

Maine

Maine Office of Energy Resources, Solar Information—55 Capitol St., Augusta, ME 04330 (207) 289-2196

Maine Solar Energy Association—24 Goff St., Auburn, ME 04210 (207) 783-6466

Maryland

Maryland Energy Office—301 W. Preston St., Suite 1302, Baltimore, MD 21201 (301) 383-6810

Massachusetts

Massachusetts Office of Energy Resources, Solar Information—73 Tremont St., Room 700, Boston, MA 02129 (617) 727-4732

Massachusetts Bay Chapter of New England Solar Energy Association, 55 Chester St., Newton, MA 02161 (617) 547-1942

Western Massachusetts Solar Energy Association—c/o Cooperative Extension Service, College of Food and Natural Resources, Energy Conservation Program, Tillson Farm, Amherst, MA 01003 (413) 545-2132

Michigan

Michigan Energy Administration—6250 Mercantile Way, Suite 15, Lansing, MI 48913 (517) 374-9090

Michigan Solar Energy Association—201 E. Liberty St., Suite 2, Ann Arbor, MI 48104 (313) 663-7799

Minnesota

Minnesota Energy Agency—Ninth Floor, American Center Building, 150 E. Kellogg Blvd., St. Paul, MN 55101 (612) 296-5120

Mississippi

Mississippi Energy Office—Suite 228, Bearfield Complex, 455 N. Lamar, Jackson, MS 39202 (601) 354-7406

Mississippi Solar Energy Association—c/o Dr. Pablo Okhuysen, 225 W. Lampkin Rd., Starkville, MS 39759 (601) 323-7246

Missouri

Division of Energy—P.O. Box 176, 1014 Madison St., Jefferson City, MO 65102 (314) 751-4000, 1-800-392-0717 (Missouri Only)

Montana

Montana Department of Natural Resources and Conservation, Energy Division—32 S. Ewing St., Helena, MT 59601 (406) 499-3940

Nebraska

Nebraska Energy Office
Ninth floor, State Capitol, P.O. Box 95085, Lincoln, NE 68509 (402) 471-2867

Nebraska Solar Energy Association—c/o Dr. Bing Chen, University of Nebraska, Department of Electrical Technology, 60th and Dodge St., Omaha, NE 68182 (402) 554-2769

Nevada

Nevada Department of Energy—1050 E. William, Suite 405, Carson City, NV 89701 (702) 885-5157

New Hampshire

Governor's Council on Energy—2½ Beacon St., Concord, NH 03301 (603) 271-2711

New Hampshire Solar Energy Association—P.O. Box 666, Manchester, NH 03105 (603) 435-8157

Northern New Hampshire Solar Energy Association—c/o Paul Hazelton, EVOG, Hebron, NH 03241 (603) 744-8918

New Jersey

New Jersey Department of Energy, Office of Alternate Technology—101 Commerce St., Newark, NJ 07102 (201) 648-6293

New Mexico

New Mexico Energy and Minerals Department—P.O. Box 2770, Santa Fe, NM 87503 (505) 827-2472

Alamogordo Solar Energy Association—c/o Ed Tyson, 1832 Corte Del Ranchero, Alamogordo, NM 88310 (505) 437-4258

Albuquerque Solar Energy Association—c/o Bob Stromberg, Solar Technical Division, Sandia Labs 4714, Albuquerque, NM 87185 (505) 264-2282

Dona Ana Solar Energy Association—c/o Harry Zweibel, P.O. Box 1592, Las Cruces, NM 88001 (505) 646-1846

New Mexico Solar Energy Association—P.O. Box 271, Santa Fe, NM 87501 (505) 471-2573

San Miguel County Solar Energy Association—P.O. Box 153, Montezuma, NM 87731 (no phone)

Taos Solar Energy Association—Fred Hopman, P.O. Box 2334, Taos, NM 87571 (505) 758-4051

New York

New York Energy Office—
2 Rockefeller Plaza, Albany, NY 12223
(518) 473-8251

Eastern New York Solar Energy Society
P.O. Box 5181, Albany, NY 12205
(518) 270-6301

Metropolitan New York Solar Energy Association, c/o Mr. William Bobenhausen, President, P.O. Box 2147, Grand Central Station, New York, NY 10017 (914) 856-6633

North Carolina

North Carolina Energy Division—
P.O. Box 25249, 430 N. Salisbury, Raleigh, NC 27611 (919) 733-2230

North Carolina Solar Energy Association—
Suite 614, Tower 1, 1110 Navoho Drive, Raleigh, NC 27609

North Dakota

Federal Aid Coordinator Office, Energy Management and Conservation, 1533 N. 12th St., Bismarck, ND 58501 (701) 224-2250

Ohio

Ohio Department of Energy—30 E. Broad St., 34th Floor, Columbus, OH 43215
(614) 466-8277, 1-800-282-9234 (Ohio only)

Oklahoma

Oklahoma Department of Energy—4400 N. Lincoln Blvd., Suite 251, Oklahoma City, OK 73105 (405) 521-3941

Oklahoma Solar Energy Association—c/o Dr. Bruce V. Ketcham, Solar Energy Laboratory, University of Tulsa, OK 74104 (918) 939-6351

Oklahoma Solar Energy Industries Association, 4432 South 74th East Avenue, Tulsa, OK 74145

Oregon

Oregon Department of Energy—
Labor & Industries Building, Room 102, Salem, OR 97310 (503) 378-6715

Columbia Solar Energy Association—
4015 S.W. Canyon Rd., Portland, OR 97221
(503) 242-0643

Pennsylvania

Governor's Energy Council—1625 N. Front St., Harrisburg, PA 17102 (717) 783-8610

Mid-Atlantic Solar Energy Association—2233 Grays Ferry, Philadelphia, PA 19146
(215) 963-0880

Rhode Island

Governor's Energy Office—80 Dean St., Providence, RI 02903 (401) 277-3374

South Carolina

Department of Energy Resources—Edgar Brown Building, 1205 Pendleton St., Columbia, SC 29201 (803) 758-2050

South Dakota

South Dakota State Energy Office—Capital Lake Plaza, Pierre, SD 57501 (605) 773-3604

Tennessee

Tennessee Energy Authority—
226 Capitol Blvd., Suite 707, Nashville, TN 37219 (615) 741-2994

Tennessee Solar Energy Association—P.O. Box 19, Middle Tennessee State University, Murfreesboro, TN 37132 (615) 898-2778

Texas

Texas Energy and Natural Resources Advisory Council, 411 W. 13th Street, Suite 804, Austin, TX 78701 (512) 475-5407

Texas Solar Energy Association—c/o Russell E. Smith, 1007 S. Congress, Suite 348, Austin, TX 78704 (512) 443-2528

Utah

Utah Energy Office—231 E. 400 South, Suite 101, Salt Lake City, UT 84111 (801) 533-5424 energy hotline (801) 581-5424; toll-free in Utah (800) 662-3633

Vermont

Vermont Energy Office—State Office Building, Montpelier, VT 05602 (802) 828-2393

New England Solar Energy Association—P.O. Box 541, 22 High St., Brattleboro, VT 05301 (802) 254-2386

Virginia

Division of Energy—310 Turner Rd., Richmond, VA 23225 (804) 745-3245

Virginia Solar Energy Association P.O. Box 12442, Richmond, VA 23231, Attn. Larry Perry (703) 342-1816

Washington

Washington State Energy Office—400 E. Union, First Floor, Olympia, WA 98504 (206) 754-1350

Pacific Northwest Solar Energy Association—c/o Ecotope, 2332 E. Madison, Seattle, WA 98112 (206) 322-3753

Western Sun — Washington Office c/o SMT Program, 318 Guggenheim, FS-15, University of Washington, Seattle, WA 98195 (206) 543-1249

Western Washington Solar Energy Association, c/o Ed Kennell, 3534 Bagley N., Seattle, WA 98103 (206) 633-5505

West Virginia

West Virginia Fuel & Energy Office—1262½ Greenbrier St., Charleston, WV 25311 (304) 348-8860

Wisconsin

Wisconsin Division of State Energy 8th Floor, 101 S. Webster Street, Madison, WI 53702 (608) 266-8234

Wisconsin Solar Energy Association—c/o Ernest Rogers, 6704 Spring Grove Ct., Middleton, WI 53562 (608) 831-4446

Wyoming

Wyoming Energy Conservation Office—320 W. 25th St., Cheyenne, WY 82002 (307) 777-7131

Energy Information Data Bases

These data bases may be available through your local company or public library. Further guidance can be obtained from the U.S. Department of Energy (DOE) Regional Offices. (See p. 19.)

Energy Data Base

Contains approximately 400,000 references to literature on energy research, development, and demonstration. Maintained by the Technical Information Center, Oak Ridge, Tennessee for DOE. Available to DOE personnel and contractors, and to the public through the DOE Regional Offices.

Energyline

Contains approximately 69,000 references to literature on energy research, development, and demonstration. Strives to provide broad rather than comprehensive coverage. Maintained by the Lockheed Information Retrieval Services, Palo Alto, California, and produced by the Environment Information

Center (EIC), New York, New York. Available to anyone with a Lockheed Search Service contract or through company libraries with Lockheed contracts.

Research in Progress (RIP)

Contains approximately 9,000 energy research project listings. Maintained at the Technical Information Center, Oak Ridge, Tennessee for DOE. Available to divisions in DOE, DOE contractors, and the public through the DOE Regional Offices.

General and Practical Information (GAP)

Contains approximately 10,000 general and practical references to energy literature. Maintained at the Technical Information Center, Oak Ridge, Tennessee for DOE. Available to divisions in DOE, DOE contractors, and the public through the DOE Regional Offices.

National Technical Information Service

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Bibliography

This bibliography, though not comprehensive, provides references to a broad range of general information on large and small wind energy conversion systems. Publications cited here are available from your local library or bookstore. Reports on Federally funded research reports are available from NTIS.

American Windmills: Harnessers of Energy, Sharon Cosner; David McKay Co., Inc. 750 Third Ave., New York, NY 10017, 1977, $6.95. Describes history and current development of the American windmill.

Catch the Wind: A Book of Windmills and Windpower, Dennis Landt; Four Winds Press, Box 126, Bristol, FL 32321, 1976, 114 pp., $7.95. General introduction to windpower. History, current U.S. and international development, and prospects for the adoption of windpower.

Earth Water, Wind, and Sun: Our Energy Alternatives, Dan Halacy, Jr.; Harper & Row, New York, New York, 1977, 186 pp., $8.95. Historical development and use of renewable resources with information on potential uses of renewable energy resources. Includes data on costs, feasibility, and environmental impacts.

Electric Power from the Wind, Henry Clews; Enertech, P.O. Box 420, Norwich, VT 05055, 1973, 29 pp., $2.00. A nontechnical introduction to small-scale systems.

The Generation of Electricity from Wind Power, 2nd edition, E. W. Golding; Halsted Press/John Wiley, 605 Third Ave., New York, NY 10016, 1976, 322 pp., $19. A reprint, with additional new material, of Golding's 1955 study of wind power research.

A Guide to Commercially Available Wind Machines, Rocky Flats Wind Systems Program; RFP-2836/3533/78/3, National Technical Information Service, Springfield, VA 22161, 1978, 121 pp., $7.25. Detailed technical descriptions of 66 wind machines under 100 kW commercially available in the United States. Includes illustrations on power curves. Directory to manufacturers and dealers.

Harnessing the Wind for Home Energy, Dermot McGuigan; Garden Publishing, Charlotte, VT 05445, 1978, 134 pp., $4.95. Covers all areas including site selection, wind energy estimation, and available equipment. Directory of manufacturers and dealers. Nine specific site reports.

The Home Built, Wind-Generated Electricity Handbook, Michael A. Hackleman; Earthmind, 5246 Boyer Rd., Mariposa, CA 95338, 1975, 194 pp., $8.00. Companion volume to the author's *Wind and Windspinners.*

Mother Earth News Handbook of Homemade Power, Mother Earth News, P.O. Box 70, Hendersonville, NC 28739, 374 pp., $1.95. Includes chapter on wind energy systems.

Planning a Wind Powered Generating System, Enertech Corporation; P.O. Box 420, Norwich, VT 05055, 1977, 46 pp., $2.00. Written to help the homeowner understand the workings of wind-powered electrical generating systems and components that best meet all requirements.

Power from the Wind, Palmer Cosslett Putnam; Van Nostrand Reinhold Co., 450 W. 33rd St., New York, NY 10001, 1948, 224 pp., $10.95. Classic study of the Smith-Putnam wind turbine, a 175 ft , 150 kW unit which operated near Rutland, Vermont, in the 1940s. (Still in print.)

Simplified Wind Power Systems for Experimenters, Jack Park; available from Earthmind, 5246 Boyer Road., Mariposa, CA 95338, 1975, 80 pp., $6.50. A simplified engineering handbook for the design and construction of wind machines.

Wind and Windspinners: A "Nuts 'N Bolts" Approach to Wind-Electric Systems, Michael A. Hackleman; Earthmind, 5246 Boyer Rd., Mariposa, CA 95338, 1975, 140 pp., $8.00. How-to-do-it approach for a simple, electricity generating windmill.

Wind-Catchers: American Windmills of Yesterday and Tomorrow, Volta Torrey; Stephen Green Press, Brattleboro, VT 05301, 1976, 226 pp., $12.95. Covers the history of windmills in America back to the Colonial period, survey of current developments.

Wind Driven Water Pumps—Economics, Technology, Current Activities, Steve Blake; Sunflower Power, Route 1, Box 93-A, Oskaloosa, KS 66066, 1978, 28 pp., $5.00, domestic; $5.75, foreign. Analyzes performance and economics of 12 machines. Conclusion gives recommendations regarding international development strategies. Thirty-two illustrations, 13 graphs and tables.

Wind Energy Conversion Systems: Workshop Proceedings, 1st Workshop Proceedings, Washington, DC, 1973, ed. by J. M. Savino, Document No. PB-231-341/9, $10.75. 2nd Workshop Proceedings, Washington, DC, 1975, ed. by F. R. Eldridge, Document No. NSF-RA-N-75-050, $19.00. 3rd Workshop Proceedings, Washington, DC, 1977, 2 volumes, ed. by T. R. Kornreich, Document No. CONF-770921 (in press). All available from the National Technical Information Center (NTIS), Springfield, VA 22161.

Wind Power and Other Energy Options, David R. Inglis; University of Michigan Press, 615 E. University, Ann Arbor, MI 48106, 1978, 298 pp., $16.00 hardcover, $8.50 paperback.

Wind Power for Farms, Homes, and Small Industry, Jack Park, Dick Schwind; RFP-2841/1270/78/4, National Technical Information Service, Springfield, VA 22161, 1978, $9.25. Covers all aspects of home-sized wind power use including legal barriers. Also considers mechanical power applications.

Wind Power Book, Jack Park; Cheshire Books, 514 Bryant St., Palo Alto, CA 94301, 1980, 300 pp., $11.95, hardcover; $14.95, paperback. Will be published October 1979, at the earliest, or Spring 1980. Over 200 diagrams, charts, and photos. Delves into the evolution of windmill design and applies this experience to the development of efficient and reliable wind systems for today. Covers wind generated electricity, water pumping, mechanical power, and space heating.

Wind Machines, Frank R. Eldridge; Report for the National Science Foundation, 1975, 77 pp. $2.00, Serial No. 038-000-00272-4. Good introduction to all aspects of wind energy, profusely illustrated.

Wind Machines, Frank Eldridge; Second Edition; Van Nostrand Reinhold Company, 135 West 50th Street, New York, N.Y. 10020. 214 pp.

Windmills and Watermills, John Reynolds; Praeger Publishers, 200 Park Ave., New York, NY 10017, 1970, 196 pp., $8.95. Good history of the ways that wind power has been put to use in the past. Includes a glossary of terms.

The following bibliographies are more extensive:

Energy from the Wind: Annotated Bibliography, Barbara L. Burke and Robert Meroney; available from Colorado State University, Engineering Research Center, Publications Department, Fort Collins, CO 80523, approximately 480 pp., $15.00. Includes the basic volume, August 1975, plus the April 1977 supplement. Annual supplements, available on subscription, are planned, with Supplement 2 due October 1979. Covers journal articles, conference papers, technical reports, books, and other published information on both technical, large-scale wind energy projects and small, home-built applications.

Wind Energy Information Sources, Wind Systems Branch, U.S. Department of Energy; available from Document Distribution Service, Solar Energy Research Institute, 1617 Cole Blvd., Golden, CO 80401, 1979, 22 pp. Covers recent reports generated by the Federal Wind Energy Program. Other sources outside the program that contain pertinent additional bibliographical and technical information are also provided.

Wind Energy Utilization: A Bibliography, Technology Applications Center, Publications and Documents, University of New Mexico, Albuquerque, NM 87131, 1975, $10.00. Covers the period 1944-1974.

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