SCIENCE & TECHNOLOGY RESEARCH DFFICE 49 State Office Building ST. PAUL, MINNESOTA 55155

980 American Center Building 150 East Kellogg Boulevard St. Paul, Minnesota 55101 800-652-9747 (out state), 612-296-5175 (metro area)



MINNESOTA STATE SOLAR OFFICE

MINNESOTA SOLAR RESOURCES

The attached information was prepared by the Minnesota Solar Office. The lists represent to the best of our knowledge people in Minnesota who are involved in solar energy, either by providing services, products, or have established a solar related organization.

Inclusion in these lists <u>does not constitute</u> <u>endorsement by our office</u>. Our intention is merely to provide names to contact for specific solar related needs. The information will be updated every three months, as solar is a rapidly changing industry.

For more specific information, contact our office at the address or telephone number listed above.

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MINNESOTA SOLAR ARCHITECTS

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The architecture firms listed below are involved in designing active and passive solar as well as earth sheltered and underground buildings. Listing is coded as follows: RS = firms designing residential active or passive solar systems; CS = commercial solar systems; IS = industrial solar systems; RU = firms designing earth sheltered or underground residential buildings; CU = commercial underground.

Architectural Resources Inc. 704 East Howard Street Hibbing, Minnesota 55746 218/263-6868

Ackerberg and Associates, Inc. 1016 Marquette Avenue Minneapolis, Minnesota 55403 612/336-7781 Sanders Ackerberg

Architectural Alliance 100 Clifton Avenue Minneapolis, Minnesota 55403 612/871-5703 Peter Pfister/Chris Johnson RS, CS

Architecture One 1509 Penn Avenue Brainerd, Minnesota 56401 218/829-0656 Roy Abbott RS, RU

Armstrong, Torseth, Skold and Rydeen, Inc., Architects and Engineers 4901 Olson Memorial Highway Minneapolis, Minnesota 55422 612/545-3731 Harold E. Shull Associated Architects and Engineers 244 Hamline Avenue South St. Paul, Minnesota 55105 612/698-0008 Grant Peterson/Chuck Liddy RS

Atelier 1 Architects 25 University Avenue South St. Paul, Minnesota 55414 612/379-2048 Alexander Dekker RS, CS

Frederick Bentz/Milo Thompson & Associates 1234 Dain Tower Minneapol.s, Minnesota 55402 612/335-1207 Milo Thompson CS, IS, CU

Berg & Associates 1315 Garland Lane Wayzata, Minnesota 55391 612/473-6544 RS Bergstedt, Wahlberg, Bergquist, Rohkohl, Associates, Inc. 400 Sibly Street St. Paul, Minnesota 55101 612/222-3701 Del Erickson CS, CU

Beta² Associates 401A North Main Street, Box 453 Austin, Minnesota 55912 507/433-5834 Charles French RS, CS

Brooks Cavin Architecture 416 Hamm Building St. Paul, Minnesota 55102 612/224-2311

Buetow & Associates 2345 North Rice St. Paul, Minnesota 55113 612/483-6701 Tom Dunwell RU

Carmody and Ellison Design 1800 Englewood Avenue St. Paul, Minnesota 55104 612/644-5991 Tomm Ellison RS, RU

Centrum Architects, Inc. 390 Clifton Avenue Minneapolis, Minnesota 55403 612/870-7117 Les Formell

F. M. Christianson 1912 Ryan Avenue West Roseville, Minnesota 55113 612/646-3524 Fredrik Christianson RS, RU

Close Associates, Inc. 3101 East Franklin Avenue Minneapolis, Minnesota 55406 612/339-0979 Winston Close/Michael Dunn Community Design Center 118 East 26th Street Minneapolis, Minnesota 55404 612/827-2608 Mark Ryan

James W. Cox Box 233 Marine on the St. Croix, MN 55047 612/433-3690 RS, RU

Criteria 100 1st Street North Minneapolis, Minnesota 55401 612/338-4761 Jerry Allen RS, RU, CU

Damberg & Peck Architecture 524 1st National Bank Building Virginia, Minnesota 55792 218/741-7962

Design 7 Fargo, North Dakota Richard Burns

Design Consortium Inc. 1012 Marquette Avenue Minneapolis, Minnesota 55403 612/341-3601

Design Through Research, Inc. 100 North 6th Street Minneapolis, Minnesota 55403 612/332-8433 James Morss RS

Dickey/Kodet Architects, Inc. 4930 France Avenue South Edina, Minnesota 55410 612/920-3993 Edward Kodet RS, CS

ECO Systems 2328 Cromwell Drive Minneapolis, Minnesota 55410 612/926-8174

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Ellerbe Architects One Appletree Square Bloomington, Minnesota 55420 612/853-2000 Joseph F. Pfost RS, CS

Arvid Elness Architects, Inc. 838 Butler Square 100 North 6th Street Minneapolis, Minnesota 55403 612/339-5508 Paul Knutson RS, RU, CS, CU

Richard D. Engan Box 89 323 4th Street Willmar, Minnesota 56201 612/235-0860 RS, RU

The Evjen Associates Box 152 Hudson, Wisconsin 54016 715/386-2658 Richard Evjen RS, RU

Orlen Fjelsted and Associates, Inc. 339 River Mall East, Box 147 Northfield, Minnesota 55057 612/336-2332 or 507/645-4407 Orlen Fjelsted

Freeberg Company 4132 Colfax Avenue South Minneapolis, Minnesota 55409 612/941-7092

Foss Engelstad Foss 28 North 3rd, Box 360 Moorhead, Minnesota 56560 218/236-1202 Royce Yeater RS

Alfred French and Associates 314 Clifton Avenue Minneapolis, Minnesota 55403 Alfred French RS Genesis Architecture 417 West Litchfield Avenue Willmar, Minnesota 56201 612/235-8663 Phillip B. Anderson RS, RU

Gerrish Architecture 4903 South Cedar Lake Road Minneapolis, Minnesota 55416 612/377-4490

Howard Goltz Architecture Service 1108 Nicollet Mall Minneapolis, Minnesota 55403 612/332-8902

Martin Gould 716 East Superior Duluth, Minnesota 55802 218/723-8054 RS

Hammel Green and Abrahamson, Inc. 2675 University Avenue St. Paul, Minnesota 55114 612/646-7501 CS,RS,RU

Hendrix Associates, Inc. 670 Sexton Building Minneapolis, Minnesota 55415 612/339-7966 CS

Henningson Durham and Richardson 5401 Gamble Drive Minneapolis, Minnesota 55416 612/544-7741

Honeywell Inc. 2600 Ridgway Parkway Minneapolis, Minnesota 55413 612/331-4141 Jerry Mevisson CS, IS

Horty, Elving and Associates, Inc. 505 East Grant Street Minneapolis, Minnesota 55404 612/335-9364 James C. Elving RS, RU

Edward J. Vogt and Associates Suite 141, 9100 Bloomington Freeway Bloomington, Minnesota 55431 612/888-4459 Edward J. Vogt Waters and Klutz 9481 Creekwood Drive Eden Prairie, Minnesota 55344 612/941-5702 Keith Waters RS John Weidt and Associates 43 Olin Court Chaska, Minnesota 55318 612/448-3863 John Weidt RS, CS Williams/O'Brien Associates. Inc. 45 South 9th Street Minneapolis, Minnesota 55402 612/338-8991 James O'Brien RS, RU Winsor/Faricy Architects, Inc. Skyway Building Arcade Northwestern National Bank Building St. Paul, Minnesota 55101 612/227-0655 RU Zejdlik Harmala Delapp Inc. 430 Oak Grove Street -Suite 400 Minneapolis, Minnesota 55403 612/871-6771 Richard J. Delapp Zuber Architects, Inc. 836 West 79th Street Minneapolis, Minnesota 55420 612/884-6204 John Sirny RS, CS, IS



MINNESOTA STATE SOLAR OFFICE

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MINNESOTA SOLAR HOME BUILDERS

Arne Kahn 1000 Stockholm Road Duluth, Minnesota 218/728-4820 home builder/active and bassive scler Cedrus Creek Craftsman Route 1 Monticello, Minnesota 55352 Scott Campbell, 612/878-2507 John Kimarek, 512/558-613) custom home builders/passive solar Don Christianson Building Co. 3650 Pilot Knob Road Eagan, Minnesota 55122 612/454-4426 Don Christianson custom home builder/passive solar المحادث ومعارضه ومعادر المحاد Gar-San Enterprises 544 3rd Street Elk River, Minnesota 55330 612/441-6311 612/441-1755 home builder/active and passive solar Hobmar Homes, Inc. 1345 Natchez Avenue South Minneapolis, Minnesota 55416 612/374-9450 Herbert Beatty custom home builder/active and passive solar

Houston Construction Inc. 13009 Diamond Path West Apple Valley, Minnesota 55124 612/423-2925 John C. Houston custom home builder/active solar 579 624 678, 146 675 677 167 167 574 678 674 674 674 675 Jenson Construction 1207 2nd Avenue N.W. Rochester, Minnesota 55901 507/288-1206 Mike Jenson home builder/active and passive solar John Baird Faribault, Minnesota 55021 custom homes, active and passive hybrid Lahmers Construction Rochester, Minnesota 55901 507/282-1191 Don Lahmers custom home builder/active and passive solar, underground Marvin H. Anderson Construction Co. 8901 Lyndale Avenue South Bloomington, Minnesota 55420 612/881-2661 Marlin D. Grant custom home builder/active solar

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Nastrom Construction Co. Route 1 Cambridge, Minnesota 55008 612/689-3768 Ken Nastrom custom home designer/builder, active and passive systems National Homes 4501 Arnold Road Duluth, Minnesota 55803 Gordie Roberts distributor for National Homes ens en en tois en 653 ten kus 659 ten 404 407 Nelson-Lewis Construction Co. 20969 Quadrant Avenue North Scandia, Minnesota 55073 Mark C. Nelson home builder/active solar North Woods Builder Route 1, Box 48A Two Harbors, Minnesota 55616 218/525-5643 home builder/passive solar Red Barn Realty, Inc. Box 103 Esko, Minnesota 55733 218/879-4503 Glenn Koskj home builder/active and passive solar

Rochester Solar Heat P. O. Box 433 Rochester, Minnesota 55901 507/282-3951 or 282-5590 Rick Ahren home builder/active solar Solar Housing Association Inc. 544 3rd Street Elk River, Minnesota 55330 612/441-6311 Henry Griner general contractor/active solar 600 mm mm, kay mm kao kao kao kao Stevens Associates 11925 Larc Industrial Boulevard Burnsville, Minnesota 55337 612/894-5320 Steven Wasilowski custom home builder, passive solar 429 100 101 100 103 103 109 400 100 001 604 SureLock Homes Inc. 36 West Central Entrance Duluth, Minnesota 55811 Bob Skoog custom home builder/active solar



- MINNESOTA STATE SOLAR OFFICE

MINNESOTA SOLAR ENERGY CONSULTANTS November 1979 Vol. 6 Ekistic Longrange Engineering Bressler, Armitage, Tillman & Lunde 904 West Lake Street 1002 Wesley Temple Building Minneapolis, Minnesota 55407 Minneapolis, Minnesota 612/823-1267 612/270-7011 Steve Lowe crehitecture/engineering services. engineering services/installer Late Byran Energy Alternatives 151. 1st Street 9535 18th Avenue North linneapolis, Minnesota 55401 Plymouth, Minnesota 55441 612/039-2520 612/544-6235 rassive solar home design and Dan Flaherty etrofit, design for active passive solar retrofit design and rolar systems construction متعا ومرة وتورة ومعه ، م م hasney Associates, Inc. I.E. Associates 15 Florida Avenue South 3704 11th Avenue South Minneapolis, Minnesota 55426 Minneapolis, Minnesota 55407 (12/146-3355 612/825-9451 consulting engineers Tom Abeles n na v (po bar ()an bar pas p passive & active solar design for .eff Christianson new residential buildings 28 Eth Street Led Ving, Minnesota 55066 LWSM Engineers, Inc. 612/088-8326 614 Endicott on 4th Building colar analysis and design St. Paul, Minnesota 55101 naa y y y yaa caay caay kaa caa kees 612/291-1293 Russel Troy Creative Alternatives consulting engineers for residential, Route 1 Long Prairie, Minnesota 56347 commercial, industrial and medical 512/132-6304 John Weber massive solar retrofit design and construction

Robert H. Schauinger Don Marier Route 2, Box 74 221 Montrose Place Milaca, Minnesota 56353 St. Paul, Minnesota 55104 612/983-2363 612/647-0691 wind energy design, consulting solar engineer & designer for both and products active and passive solar homes ಕಲ್ಲಾ ಮಹಿ ಎನ್ ಕಾರ್ ಬ್ರಾ ಒಂಡ ನಿರ್ದ ಸ್ರಾತಿ ಕ್ರಮ ಕ್ರಮ ಕ್ರಾ era aza an iza ba con an as an an an era era era era era aza a Eldow McLain Henry Schipike Associates, Inc. 1320 27th Avenue South 3101 West 69th Street Moorhead, Minnesota 56560 Minneapolis, Minnesota 55435 612/925-3131 218/233-5853 423 Print print crist and the base brint fight strat first first first bids bids consulting engineers Michaud, Cooley, Hallberg, Erickson محمد المحم وحمة وحمة وحمة وحمة المحم وحم المحم وحمة وحمة وحمة وحمة وحمة وحمة 310 Plymouth Building Scientific Sunsource Systems Minneapolis, Minnesota 55415 5 Woodcrest Drive 612/339-4941 Burnsville, Minnesota 55337 612/890-3480 consulting engineers 475 KDA 2021 674 2021 674 KD4 674 KD4 674 KD4 674 KD4 674 KD2 674 KD2 674 J. Harlan Anderson Oftedal, Locke, Broadston & Assoc-iates, Inc. attempting to license 2 patents 620 Sexton Building Tom Smilanich 7th and Portland Avenue Route 3, Box 137 Minneapolis, Minnesota 55415 Goodhue, Minnesota 55027 612/333-4341 612/923-4562 consulting engineers solar analysis and design אין לאסן לאין נאין נאין איין איין איין איין איין גער איין גער איין גער איין גער גער איין גער גער איין גער גער א רקי היים פאר היים (רים גבו ביין אות עם אית פער ביים ביין את ביי היים איין אית ביי היים איין אית ביי היים איין Owens Service Corporation Solar Dynamics, Incorporated 930 East 80th Street 371 Sibley Bloomington, Minnesota 55420 St. Paul, Minnesota 55101 612/854-3868 612-225-0380 Robert Owens solar design for residential and engineer/contractor for new commercommercial buildings cial and industrial buildings Solatech, Inc. Pfeifer & Shultz/HDR, Inc. 10900 Wayzata Blvd. 300 Parkdale 1 Building Minnetonka, Minnesota 55343 5401 Gamble Drive 612/546-6235 Minneapolis, Minnesota 55416 Scott Getty 612/544-7741 computer consulting service for consulting engineers solar energy analysis אייא נאו איא אנא אייא גער גער גער גער גער גער גער אייע גער אייע גער אייע גער אייע גער אייע גער אייע גער גער גער Pierre Aircon Corp. Darryl Thayer and Associates 1322 Rice Street 2406 Doswell Avenue St. Paul, Minnesota 55117 St. Paul, Minnesota 55108 612/488-6601 612/644-5060 R. L. Bumgardner Darryl Thayer consulting engineer solar installer/designer/engineer

Phil Willgrubs/Jim Brigham Route #1 Island Road Red Wing, Minnesota 55066 715/792-2162

design and construction of passive solar greenhouses

Karen Wilson 1837 Laurel St. Paul, Minnesota 55104 612/647-0667

passive solar retrofit design, especially greenhouses

ADDITIONS

Bill/Connie Beard 3957 37th Av. S. Mpls., Minn. 55406 612/722-9229

passive solar retrofit, design and construct

John Bolkcom Rt. 3 Box 524 Delano, Mn. 55328 612/955-1591

design for active solar systems



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LOW-COST SITE BUILT SOLAR SYSTEMS

The people listed below specialize in building low-cost solar systems. They purchase components separately and build the solar systems themselves, often assembling the collector system at the buyers home. The cost is generally less than commercially available systems, while performance varies depending on each system.

Long Prairie

Creative Alternatives Route 1 Long Prairie, MN 56347 612/732-6304

Madelia

Feder Mobile Village Madelia, MN 56062 507/642-3704 William Feder Sr.

Moorhead

Northern Solar Power Company 311 Elm Street Moorhead, MN 56560 218/233-2515 Bruce or Dave Hilde

Northfield

Earth Bound Natural Energy 401 Division Northfield, MN 55057 507/645-9471 Dave Smith

Wayzata

Goodwin Controls 1430 Ranier Lane Wayzata, MN 55391 612/473-7888 Ralph Goodwin



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Minnesota Tritec, Inc.

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MINNESOTA SOLAR MANUFACTURERS

Chicago Solar Castle Rock, Minnesota 55010 507/645-9488 Lance Crombie

manufactures portable plastic hot air solar systems which provides supplemental daytime space heating

Ilse Engineering 7177 Arrowhead Road Duluth, Minnessta 55811 218/729-6858 John Ilse

manufactures a liquid drain down combination space heating and domestic hot water solar system; all steel absorber plate

Lord's Power Company Box 37 New Richland, Minnesota 56072 507/465-3355

manufactures hot air solar systems which provides supplemental daytime space heating Route 3, Box 524 Delano, Minnesota 55328 612/955-1591 Keith Knutson or Dan Bolkcom manufactures, distributes and installs air handlers, controls and collectors for air solar system Solar Enterprises, Inc. 7830 North Beach Street Minneapolis, Minnesota 55440 612/784-7177 Edward Ditelle manufactures liquid closed loop systems used both for domestic hot water and space heating

Solargizer Corporation 7317 Auto Club Road Bloomington, Minnesota 55438 612/941-8136 David Thornberg

manufactures liquid closed loop system for domestic hot water and space heating; also manufactures air system for space heating Solargy Corporation 7216 Boone Avenue North Minneapolis, Minnesota 55428 612/535-0305 Vince Grimaldi

manufactures liquid closed loop system used for both domestic hot water and space heating

Sol-Terra, Inc. Suite 203 6531 Cambridge Street St. Louis Park, Minnesota 55426 612/926-6408 Mike Mottran

manufactures both liquid and air solar systems for domestic hot water, space heating, pool heating or grain drying (Bethany Solar System)

and 125 170 175 183

Suntec Systems 2101 Wooddale Drive St. Paul, Minnesota 55119 612/735-7600 Jim Menke

manufactures concentrating SLATS liquid collector

553 950 and 650 hot Las 684 403 625 684

612/983-6392



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MINNESOTA SOLAR ORGANIZATIONS

Alternative Sources of Energy, Inc. (ASE) 107 South Central Milaca, Mirresota 56353

ASE is a non-profit organization/ information sharing network that emphasizes the "do-it" approach to energy alternatives. Services include publishing <u>Alternative</u> <u>Sources of Energy</u>, workshops, conferences, exhibits, information center, speakers, as well as slide, filmstrip and video tape presentations dealing with alternative energy.

Center for Local Self-Reliance (CLSR) 3302 Chicago Avenue Minneapolis, Minnesota 55407 612/824-6663

CLSR is a non-profit neighborhood based organization primarily involved in energy conservation. They also have done demonstration projects on solar, greenhouses, cold frames, insulating curtains and water conservation. Services include workshops, speakers, energy education materials, library, energy audits, and publishing <u>Neighborhood Energy</u> Watch S newsletter. Mid-America Institute of Energy Resource Technology, Inc. 16174 Forbes Rosemount, Minnesota 55068 612/432-7888

This non-profit organization is involved in promoting alternative energy technology through demonstration projects and seminars.

Made up of a very broad based group of professionals.

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Mid-American Solar Energy Complex (MASEC) 1256 Trapp Road Eagan, Minnesot: 55121 612/452-5300

This private non-profit organization funded by the Federal Dept. of Energy was established to help commercialize effective, practical solar and conservation systems in the upper-midwest. Services include funding State Solar Offices and SRAP groups, initiate solar demonstration programs, publish monthly newsletter, provide speakers and exhibits, organize conferences, provide F-chart analysis, education materials, and coordinate regional solar programs. Minnesota Community Action Programs (CAP)

6th Floor American Center Building 150 East Kellogg Boulevard St. Paul, Minnesota 55101 612/224-1238

The over 25 Minnesota CAP groups are charged with eliminating and alleviating poverty in Minnesota. Almost every one of these groups is involved with some kind of low cost solar energy project.

Minnesota Energy Agency (MEA) 980 American Center Building 150 East Kellogg Boulevard St. Paul, Minnesota 55101 Toll Free - 800/652-9747

The MEA maintains an Energy Information Center which offers a broad assortment of information in alternative technologies. Other Solar related activities include sponsoring design competitions and alternative energy grant programs, conferences and seminars, research reports, legislation, and program development.

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Minnesota Instructional Materials Center (MIMC) 5554 White Bear Avenue White Bear Lake, Minnesota 55110 612/770-3943 Toll Free - 800/652-9024

MIMC has a series of films, filmstrips and slide presentations dealing with energy which are available to educators throughout the state.

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Minnesota Public Interest Research Group (MPIRG) 2412 University Avenue S.E. Minneapolis, Minnesota 55414

612/376-7554 MPIRG, the state's citizen advocacy group, has offices on campuses throughout the state. Solar related services include lobbying at the Legislature and helping to organize Sun Day Minnesota. Minnesota Solar Energy Association (MSEA)

P.O. Box 171

Minneapolis, Minnesota 55440

MSEA is the Minnesota chapter of the International Solar Energy Society. Primarily involved in supporting the development of alternative energy technologies in Minnesota. Consists mainly of architects, engineers, and solar businessmen.

Minnesota Solar Office (MSO) 980 American Center Building 150 East Kellogg Boulevard St. Paul, Minnesota 55101 612/296-5175 (Metro) 1-800-652-9747 (Toll Free Outstate)

MSO, funded through MASEC, is charged with helping accelerate the development of solar energy in Minnesota. Primary functions include legislation, program development and information gathering and disseminating. Services include library, information center, peakers, slide shows, conferences and seminars, program development.

NU 20 NF 50 NF 119 00 NO 80 NO 11 NF 84 54 FF 80 ND

Solar Resources Advisory Panel (SRAP) P. O. Box 9815 Minneapolis, Minnesota 55440

SRAP, the citizens advisory group to MASEC, is comprised primarily of professionals, activists, and governmental workers, although membership is open to anyone interested in solar. Services include publishing <u>Solar Resources</u>, sponsoring seminars, planning, identifying barriers to solar development, providing solar information and involvement in legislative issues.

Wright Alternative Energy Association Box 39 Waverly, Minnesota 55390 612/658-4415 (Luke Markve)

This appropriate technology group provides practical information on building alternative energy projects.

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MINNESOTA STATE SOLAR OFFICE

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MINNESOTA "SOLAR" LIBRARIES

Minnesota Energy Agency/Minnesota Solar Office 980 American Center Building 150 East Kellogg Boulevard St. Paul, Minnesota 55101 (612) 296-5175 metro 800/652-9747 outstate Hours: 8:00 - 4:30 Monday - Friday

Probably the most complete single source of solar information in the state. Books, periodicals and reports cover topics including: technical product data, earth sheltered housing, solar industry, government reports, appropriate technology applications, legislative affairs, activities in other states, conference proceedings as well as many others.

Books <u>cannot</u> be checked out, so plan to spend some time at the library. All information available through Minitex.

Energy Conservation Library Minneapolis Public Library 300 Nicollet Mall Minneapolis, Minnesota 55401 (612) 372-6609 Hours: 9:00 - 9:00 Monday 9:00 - 5:30 Tuesday - Saturday

A good source for general solar information. Contains a wide range of informative books and journals including "Solar Age", "Alternative Sources of Energy", "Solar Energy Digest", "Solar Energy" and "Sun at Work".

Also has a good selection of government reports and technical information on solar systems. All information available through Minitex.