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ABSTRACT

This annotated bibliography presents resource materials for energy education programs. The materials are listed by the agency from which they are available. The agencies are alphabetized and, for each agency, a mailing address is given. Fifty given agencies are included, many of which have several references listed under them. For each reference, title, author, and publication date are given along with a four to five line annotation which describes the contents of the reference and possible uses. Some references also include number of pages and prices. The references in this bibliography were selected to be useful to those involved in developing or implementing an energy education or energy conservation program either in the schools or in community groups. The variety of references includes teaching guides, curriculum development guides, learning activities, energy education units, "how-to-do-it" materials for solar power projects, and consumer awareness publications. (MR)

E N E R G Y

Selected Resource Materials for developing Energy Education/Conservation Programs

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NATIONAL WILDLIFE
FEDERATION CREED

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ENERGY

Selected Resource Materials for developing Energy Education/Conservation Programs

This is a selected listing of reference materials for use in developing energy education/conservation programs. Listing does not imply endorsement by the authors or the National Wildlife Federation. The price is given when known. However, since publications are continuously being revised, going out of print, or changing in price, the reader is encouraged to check on price information before placing orders.

1.
American Gas Association
Educational Services
1515 Wilson Boulevard
Arlington, VA 22209

Weaver, Elbert C. Science Principles and Gas Appliances with Experiments, 1970.

This publication provides a thorough explanation of gas appliances and how they function. Detailed student experiments are diagrammed with excellent background material. Projector overlays for instructors are included. 33 pages. Write for price information.

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2.
American Institute of Architects
1735 New York Avenue
Washington, DC 20006

Basics of Solar Heating and Hot Water Systems, 1978.

Passive and active solar heating and hot water systems for use in residences are discussed. Solar collection, storage and distribution systems are reviewed, as well as a "state of the art" view of solar systems for housing. 48 pages. $5.00.

Anderson, Bruce and Michael Riordan. The Solar Home Book, 1976.

Topics covered are: energy conservation, passive solar designs, and complex active solar systems. Energy-conscious design techniques are encouraged for houses. Clearly written, this book is of value to professionals, tradespeople, and the homeowner. 297 pages. $8.50

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3.
The American Museum of Atomic Energy
Oak Ridge Associated Universities
P. O. Box 117
Oak Ridge, TN 37830

Science Activities in Energy: Conservation, 1977.

Thirteen activities are introduced as questions to facilitate student interest and participation. Material is printed on easily reproducible charts. These simple, easily understood experiments are targeted for grades 4, 5, and 6 but can be useful in any youth community program also. 30 pages. File format. Write for price information.

Science Activities in Energy: Solar Energy, 1977.

This material is part of a Science Activities in Energy series, illustrating various principles to 4th, 5th, and 6th graders. Twelve activities are presented listing materials, procedures, and discussion questions. Short explanations of activities are provided for teachers. 26 pages. File format. Write for price information.

Science Activities in Energy: Electrical Energy, 1977.

Sixteen activities are provided to introduce 4th, 5th, and 6th graders to electrical energy. Light and heat producing properties of electricity are demonstrated by simple experiments. Step-by-step instructions are presented on reproducible sheets. 34 pages. File format. Write for price information.

Science Activities in Energy: Chemical Energy, 1977.

Elementary chemistry experiments provide interesting activities to introduce students to chemical properties. Activities are presented as questions to increase student involvement. All necessary materials are listed. 37 pages. File format. Write for price information.

* *

4.
American Nuclear Society
244 East Ogden Avenue
Hinsdale, IL 60521

Nuclear Power and the Environment: Questions and Answers, 1976.

Discussion topics include alternative technologies, safety concerns, and radiation. Answers are detailed responses covering a spectrum of concerns. This is written from the nuclear industry's viewpoint. 122 pages. Write for price information.

* *

5.
Arizona Department of Education
Superintendent
1535 West Jefferson
Phoenix, Arizona 85007

Bayhs, Kathryn, Robert Brockel, John Burry, and Martin Tombari. My Energy. . . Is Your Energy, 1974.

This elementary teaching guide is divided into four major sections dealing with energy origins and uses, the energy crisis, conservation; and future prospects. It is designed for use in the Arizona school system, but the background information is applicable elsewhere. Some information such as the status of Alaskan oil and federal legislation is outdated. 53 pages. Write for price information.

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6.
Association of Physical Plant Administrators
of Universities and Colleges
11 Dupont Circle
Suite 250
Washington, DC 20036

Energy Conservation Checklist for Universities and Colleges.

This is a comprehensive checklist drawn from existing programs at institutions. $3.00 to non members.

Directory of University and College Energy Management Offices and Related Federal Government Agencies, 1977.

Contents gathered from campuses that have established an office of energy management with an officer responsible to plan, organize and implement energy conservation strategies. $.60 to non members.

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7.
Atmospheric Science Research
130 Saratoga Road
Scotia, NY 12302

Norton, Thomas, Donald Hunter, and Roger J. Chengo. Solar Energy Experiments for Secondary Students, 1975.

Experiments occupy most of this book with background information minimized. Materials are included for classroom activities. Several appendices include information on conversion factors, thermal resistance, solar angles, and other topics. Aimed at secondary school teachers. Some experiments are technical; 159 pages. Write for price information.

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8.
Chilton Book Company
Chilton Way
Radnor, PA 19089

and

U.S. Dept. of Housing and Urban Development
Office of Policy Development and Research
HUD Building, 451 7th Street, S.W.
Washington, DC 20410

In the Bank or Up the Chimney, 1978.

This easy to read manual supplies step-by-step instruction to evaluate household heating conservation options. Included are instructions to carry out the options selected. Options are identified as involving no cost, minor cost, and major expense. Excellent material for the homeowner interested in residential heating savings. Non-technical. 70 pages. $1.95.

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9.
Citizens Advisory Committee on
Environmental Quality
1700 Pennsylvania Avenue, N.W.
Washington, DC 20006

From Rails to Trails, 1975.

A concise summary of methods to convert abandoned railroad right-of-ways into bicycle trails is presented. Included are sources of funding and state and regional officials to contact. Non-technical. 68 pages. $1.50.

Citizens Guide to Energy Conservation, 1974.

Steps citizens can take to reduce personal energy consumption are identified. Topics include residences, offices, transportation, and industry. Also included are suggestions to mobilize other individuals and organizations. Non-technical. 64 pages. $1.75.

Energy in Solid Waste - A Citizens Guide to Savings, 1978.

This guide is an introduction to the solid waste problem. It covers steps to be taken on an individual, local, and federal level to create an energy-waste recovery plan. Semi-technical. 39 pages. $1.25.

* *

10.
Community Service Administration
Philadelphia Regional Office III
Gateway Building
3535 Market Street
Philadelphia, PA 19104

Eccli, Eugene and Sandra Fulton Eccli. Save Energy: Save Money, 1977.

This publication presents instructions and diagrams to carry out a variety of energy and money saving projects. Information is non-technical and very easy to read. Aimed at low income groups primarily. 40 pages. Write for price information.

Community Service Administration. A Community Planning Guide to Weatherization.

This booklet explains how to establish a cost-effective weatherization program in your neighborhood. 37 pages. Free.

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11.
Concern, Inc.
2233 Wisconsin Avenue, N.W.
Washington, DC 20007

Eco-Tips #5 - Energy Conservation, 1975.

This pamphlet briefly discusses energy sources and conservation options. Conservation measures deal with transportation, appliances, industry, heating and cooling. This can be useful to all grade levels, but could be best understood by high school students. 8 pages. $.50 ($25.00 per 100).

Eco-Tips #7, Part I - Fossil Fuels, 1974.

First of a four part series. Pros and cons of gas, petroleum, and coal use are described. Conservation is emphasized. Junior and senior high school. 5 pages. $.50 ($25.00 per 100).

Eco-Tips #7, Part II - Nuclear Energy, 1974.

The nuclear fuel cycle is examined from mining to waste disposal. Reactors, reprocessing and uranium enrichment are discussed. For junior and senior high school levels. $.50 ($25.00 per 100).

Eco-Tips #7, Part III - Solar Energy, 1974.

The advantages of solar power are discussed. Solar alternatives, including thermal conversion and photo voltaics are examined. Other topics include wind and sea power. For junior and senior high school levels. $.50 ($25.00 per 100).

Eco-Tips #7, Part IV - Geothermal Energy, 1974.

This briefly describes two major forms of geothermal energy, hot spots and geopressured brine systems. Environmental concerns and possible benefits are discussed. For junior and senior high school levels. $.50 ($25.00 per 100).

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12.
Conservation Foundation, The
1717 Massachusetts Avenue, N.W.
Washington, DC 20036

Large, David B. Hidden Waste, 1976.

Good background material is provided on energy sources, demands, conservation techniques, and utilization of waste materials. Effects on transportation, manufacturing and the environment are considered. State government energy management opportunities are discussed to aid citizen leaders. Semi-technical. 109 pages. $4.00.

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13.
Council of Education Facility Planners, International
29 West Woodruff Avenue
Columbus, OH 43210

Energy Sourcebook.

This presents a comprehensive energy management and design program for planning conservation strategies. It is directed toward human and educational needs as well as saving energy and dollars. Forms, diagrams and graphs are included in the guide, which is published in a 3-ring binder: $27.50 to non members; $25.00 to CEFP/I members.

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14.
Dow Chemical Company, The
Midland, MI 48640

Dalton, Richard and Warren Kass. All About Energy, 1974.

This colorful, well illustrated book introduces ideas concerning energy, fuel, and machinery to early elementary levels. Topics include fossil fuels, heat, electricity and alternative sources. 28 pages. $3.95.

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15.
Dutchess County Board of Cooperative
Education Service
R. D. #1, Salt Point Turnpike
Poughkeepsie, NY 12601

Mengel, Wayne. Energy, Key to the Future, 1974.

Teaching techniques are presented that provide basic concepts relating to energy for all grades K-12. A list of projects, energy conservation tips, and reprpducible charts are provided. This publication is not intended to provide complete curriculum material, but suggests topics for development. 48 pages. $4.00

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16.
Edison Electric Institute
90 Park Avenue
New York, NY 10016

Energy -- Now and In the Future.

This is a multimedia kit prepared for grade levels 6-8. Contained in the kit are six filmstrips and cassettes, and twelve duplicating activities. A teacher's guide is also included. $30.00.

Our Energy Based Economy.

Four filmstrips and records are included in this teaching kit. A teacher's guide is also included. The material is for graded 6-8. $30.00.

The Energy-Environment Game, 1973.

This unit contains material for an instruction simulation game. Material includes role cards and player's guides for 32 participants. A filmstrip, cassette and teacher's manual are included. Students make decisions on energy demand and environmental effects. For use by english, science, or social studies. Grades 7-12. $30.00.

104 Ways to Control Your Electric Bill, 1976.

This lists ways energy consumption in the home can be reduced. This material is for junior and senior high school. Homeowners would also find this useful. 12 pages. Free.

Questions and Answers About the Electric Utility Industry.

This booklet contains answers to frequently asked questions about electric energy. Levels: junior and senior high school. Free.

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17.
Thomas Alva Edison Foundation
Cambridge Office Plaza, Suite 143
18280 West Ten Mile Road
Southfield, MI 48075

Energy Conservation Experiments You Can Do . . . From Edison, 1974.

Background material on energy sources is provided along with material on being a "waste watcher" and how to read gas and electric meters. Eleven separate experiments are included requiring few materials. The experiments are suitable for upper elementary school levels. 32 pages. Free.

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18.
Energy and Man's Environment
0224 S.W. Hamilton, Suite 301
Portland, OR 97201

Jones, John. Energy and Man's Environment Activity Guide, 1976.

Educational ideas and activities are arranged into six separate booklets accompanying an Energy Activity Guide (30 pages) which serves as an introduction and conceptual outline. The individual guides contain clearly defined concepts, objectives and activities. The booklets include:

1. Sources of Energy; energy forms, sources, and political, geographic, physical, and social impacts are discussed. 34 pages.
2. Uses of Energy; energy impacts on lifestyles, conservation, various uses of energy and pressures affecting energy use are presented. 45 pages.
3. Conversion of Energy; natural laws governing conversion processes, efficient uses, conversion costs and impacts and the historical role of conversion technology are described. 45 pages.
4. Impacts of Energy; environmental tradeoffs and impacts, regulation efforts, assessing degree of impacts and side effects, the differences in impacts of industrial versus agrarian societies and improvement of environmental quality are the focal topics. 37 pages.
5. Limits of Energy; renewable versus non-renewable resources, changing demand effects on supplies, technical developments, economic factors, population changes, societal influences including employment are all identified as influencing energy supplies and development. 40 pages.
6. Future Sources of Energy; technical influences, evaluating technical benefits, effects on lifestyles, capital investment requirements, international relationships, and new job skills required for energy development are presented as affecting future sources. 33 pages.

These materials are presented as suggestions for curriculum and program development. Each idea can be developed into an appropriate exercise for any interdisciplinary educational program and any level. $25.00 for complete set.

Energy and Conservation Education: Activities for the Classroom, 1977.

Four binders contain material for each of four grade groups. Over 250 tested lesson plans are included. Material is arranged for grades 1-3; 4-6; 7-9; and 10-12. Complete information is contained in the lesson plans including concepts, objectives, implementation procedures and a list of materials. Separate binders are $24.00. The set - $86.40.

Energy and Environment Glossary, 1977.

This glossary contains energy terms which are frequently used in Energy and Man's Environment material. Excellent for use by teachers. 48 pages. $4.00.

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19.
Environmental Action Reprint Service
2239 East Colfax
Denver, CO 80206

Enertech Corporation. Planning a Wind Powered System, 1977.

This serves as an introduction to principles and components of wind powered systems. Various factors are considered such as site selection, tower height, and battery storage systems. This pamphlet is aimed at laymen. 46 pages. $2.00.

McGuigan, Dermot. Harnessing Water Power for Home Energy, 1978.

Introduction for the homeowner to water power. Chapters discuss various system components, dams, power transmission and legal positions. Photos, drawings, and a bibliography are included. 101 pages. $4.95.

McCullagh, James C. The Solar Greenhouse Book, 1978.

Design information and case studies are presented for a variety of solar greenhouses. The major emphasis is on low-cost, low-energy consuming structures. Information on heat retention, storage, glazing, and minimum design criteria for all U.S. areas is included. Crop management is stressed. 328 pages. $8.95.

Norton, Thomas. Solar Energy Experiments for High School and College Students, 1977.

The 18 experiments and 8 activities pertain to physics, general science, and environmental science curriculums. Experiments are designed to introduce students to solar energy measurement, collection, and use. Charts, appendices, a glossary, and a bibliography are included. 144 pages. $5.95.

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20.
Environmental Center
The University of Tennessee
South Stadium Hall
Knoxville, TN 27916

Gibbons, John H., Jonathan M. Wert, and Nancy E. Collins. An Energy Education Conservation Plan for Tennessee, 1976.

This can be used as a reference or a starting point to develop an energy program by any educational institution. This publication identifies sources, clients, program parameters, and recommends various program titles complete with objectives, outreach methods, and activities. Appendices present material concerning task force meetings including questionnaires ranking target group needs and evaluation instruments. An executive summary of this report is also available. 147 pages. Write for price information.

Watkins, Nancy Collins and Jonathan M. Wert. Energy Conservation Education in the Public Schools of Tennessee: Results of a Survey, 1975.

This presents results of a survey administered to Tennessee public school teachers to determine the status of energy conservation education in the state school system. Included is a copy of the survey instrument and data tables. 22 pages. Write for price information.

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21.
Environmental Education
Harris County Department fo Education
6209 Irvington Boulevard
Houston, TX 77022

Sheridan, Jack. Investigating the Environment: Resource Acquisition and Use, 1976.

This is one of eleven teaching notebooks produced to provide environmental education through science and social studies in the upper elementary and lower secondary grades. In this activity, a simulation game is presented in which the student becomes an oil operator forming a company, borrowing money, and facing conflicts. Student decision making is stressed. 108 pages. $2.50.

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22.
ERIC/SMEAC
Ohio State University
1200 Chambers Road, 3rd Floor
Columbus, OH 43212

Washington State Department of Public Instruction. Create Tomorrow . . . Today, 1974.

Elementary and secondary activities for individuals and groups are identified. Background information and a variety of reproducible charts are included with a comprehensive listing of resources and information. This material is flexible developed for coordination with Energy Awareness Week. It is extremely useful as a curriculum supplement to social studies, environmental, language arts, and communication programs. 72 pages. Write for price information.

Allen, Rodney and David LaHart. Sample Energy Conservation Education Activities for Elementary School Students, 1977.

Learning activities for introducing energy and conservation activities into elementary curriculums are provided. Sixteen sample lessons for grades 4-6 focus on energy sources and conservation. The activities were developed by teachers and are adaptable to specific programs. 59 pages. $3.50.

Frederickson, John H. The Principal and Energy Conservation, 1977.

This briefly describes the administrator's role in energy education. Curriculum development as well as building and equipment operation is discussed. Principals are encouraged to both direct and participate in energy conservation programs. 5 pages. $1.67.

Campbell, Bruce. Energy and Education Handbook, 1977.

This was prepared for distribution at an energy education conference for New Jersey teachers. Background information outlines the energy needs of the U.S. A curriculum model is supplied describing how to integrate energy and conservation topics into existing curriculums. 200 pages. $10.03.

Eaton, William W. Fossil Energy: Oil, 1977.

The history and technology of crude oil development is described. Industry and government programs that enhance development are discussed. A bibliography of petroleum related books and articles is included. 70 pages. $3.50.

Write to ERIC to request a complete listing of energy education publications and prices.

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23.
Ford Foundation Energy Policy Project
1776 Massachusetts Avenue, N.W.
Washington, DC 20036

Freeman, S. David et al. Exploring Energy Choices, 1974.

This report contains information on energy consumption, government policy, and environmental aspects of energy use. All major sources are covered as well as an analysis of energy use by various sectors. Options for the immediate and distant future are discussed. Non-technical. 81 pages. $.75.

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24.
Full Circle Press
P. O. Box 16744
Mobile, AL 36616

Wert, Jonathan M. Assessing an Issue in Relation to Environmental, Economic, and Social Impact . . . A Process Guide, 1977.

This guide contains procedures for designing a conceptual framework to assess impacts of various issues on environmental, economic, and social systems. It includes forms which can be used in preparing or evaluating environmental impact statements in a comprehensive manner. It serves as an excellent working guide for professional planners, university students, or citizens interested in preparing and evaluating comprehensive master plans and environmental impact statements. 81 pages. Soft cover. $9.95.

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25.
Hatheway Environmental Education Institute
Massachusetts Audubon Society
Lincoln, MA 01773

McDaniel, Margaret. The Energy Crisis - Aids to Study, 1974.

This bibliography contains annotations of books, pamphlets, reports, magazines, articles, curriculum materials and audio-visual aids. Addresses are provided and prices when known. Elementary material is identified. 23 pages. Write for price information.

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26.
Honeywell, Inc.
Commercial Division
Honeywell Plaza
Minneapolis, MN 55408

Energy Conservation with Comfort, 1976.

This workbook is designed as a building operation guide presenting energy conservation recommendations. Checklist and audit forms are provided to estimate possible savings from implementing alternative measures. Most procedures involve installation of Honeywell control equipment. This publication is useful to building owners and managers. Technical. 54 pages. Free.

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27.
Idaho Office of Energy
Statehouse
Boise, ID 83720

Puckett, Kathy. Curriculum Aids, 1977.

Electrical energy conservation and water conservation activities are arranged by grade level. Energy units are presented for all levels; K-12; water units are for grades 4-12. Worksheets and conservation tips are also included. 48 pages. Write for price information.

* *

28.
Iowa Energy Policy Council
State Capitol Complex
Des Moines, IA 50319

Bakke, Ruth. Energy Conservation Activity Packets, 1977.

Five packets present elementary activities that stress an energy conservation ethic. Background material, an annotated bibliography, and a list of resources are provided. Concepts, objectives, and activities are included in each packet. $10.00 a set from the Energy Policy Council.

Grades K-2: The teacher is supplied with over 40 pages of ditto masters, posters, and a game. 83 pages.

Grade 3: Ditto master and a student bibliography is provided. 81 pages.

Grade 4: Part one discusses energy conversion and part two discusses energy production and use. 102 pages.

Grade 5: Part one deals with fossil fuels and part two presents a history of energy use in Iowa. 94 pages.

Grade 6: Part one discusses the limits of energy sources and part two discusses alternative sources. 102 pages.

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29.
Lorien House
P. O. Box 1112
Black Mountain, NC 28711

Wilson, David A. and William H. Rankins III. Practical Sun Power, 1974.

Complete plans, information and photographs are included that explain how to build parabolic reflectors, solar ovens, water heaters, window air heaters, and several mini-projects. All materials and tools are listed. Useful background information is included. 56 pages. $4.00.

Wilson, David A. and William H. Rankins III. The Solar Notebook.

This notebook describes in detail how to collect and calculate all the data necessary to use solar space and water heating in your home. Included is information covering sun angles, house positions and heating and storage requirements. Step-by-step details are provided, including maps, charts, and drawings. 56 pages. $4.00.

Wilson, David A. Creating Energy, 1978.

This is a complete presentation about utilizing solar power on a large scale. Electric generation, concentrating collectors and a solar furnace are discussed. Complete plans for these solar systems is included with background information. 56 pages. $5.00.

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30.
Mobile County Public Schools
P. O. Box 1327
Mobile, AL 36601

Wert, Jonathan and Michael A. Magnoli. Finding Solutions to Environmental Problems . . . A Process Guide, 1976.

A workable methodology is presented for college students and adults to identify, evaluate, and solve environmental problems. Procedures to collect data are listed and possible sources of information identified. Three sample projects are worked through listing questions which should be considered. Non-technical. 27 pages. Write for price information.

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31.
National Association of College and University
Business Offices
#1 Dupont Circle, N.W.
Suite 510
Washington, DC 20036

Energy Management for Colleges and Universities, 1977.

This aids financial and physical plant personnel in developing a complete energy management program. The manual is based on an Energy Task Force workshop series information. 140 pages. $20.00.

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32.
National Bureau of Standards
U.S. Department of Commerce
Washington, DC 20234

Jacobs, Madeleine and Stephen R. Petersen. Making the Most of Your Energy Dollars in Home Heating and Cooling, 1975.

This publication aids the homeowner in computing energy costs and comparing expenses with investments in conservation improvements. It is non-technical, illustrated and easily understood. 16 pages. $.70.

Rubin, Arthur I. Energy Conservation in Buildings - A Human Factors System Viewpoint, 1976.

This discusses intergrating human relations factors in conservation programs. Non-technical. 19 pages. $.65.

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33.
National Education Association
1201 Sixteenth Street, N.W.
Washington, DC 20036

Wert, Jonathan et al. Environmental Education Teaching Resources, 1976.

A guide for designing student projects in environmental education. This booklet outlines approaches and methodologies for teaching community problem-solving skills to students. Could easily be used in assessing the impact of energy resource development projects on the environment. Excellent for educators or advisors of environmental organizations. Non-technical. 23 pages. Single copies free.

Energy Choices Now, 1974.

Background information introduces students to energy and stresses the importance of energy in everyday life. Sources of energy are discussed. Diagrams and photographs are included. This can be intergrated into any environmental program. A teacher's guide accompanies this book. 64 pages. Teacher's guide - 12 pages. Write for price information

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34.
National Recreation and Park Association
Park Project on Energy Interpretation
1601 N. Kent Street
Arlington, VA 22209

Stephenson, Lee. Energy Manual for Parks, A Handbook for Interpreters and Naturalists, 1976.

This text contains eight chapters presenting basic information on the balance of nature and the contrast between the flow of energy in natural and man controlled environments. The appendices review the park project on energy, energy measurements and conversions, alternative energy forms and a good bibliography. Although designed to provide energy information to park interpreters, a variety of environmental interest groups can utilize this material. 160 pages. $3.00.

Energy, Who's Doing What, 1976.

Approximately 200 citizen groups, companies, and non-profit agencies are listed with a brief description, address and phone number. Organizations are arranged by state. A variety of political and philosophical viewpoints are represented. 43 pages. Write for price information.

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35.
National Solar Heating and Cooling Information Center
P. O. Box 1607
Rockville, MD 20850

Kroner, Walter and David Haviland. Passive Design Ideas for the Energy Conscious Architect.

A wide variety of passive solar designs are discussed comparing energy savings and heat loss. Topics include building configuration, atriums, greenhouses, underground housing, window design among others. This publication is useful to anyone interested in building design and construction. Semi-technical. 71 pages. Write for price information.

Solar Hot Water and Your Home, 1977.

This booklet points out basic solar hot water heating facts. Various systems are described and illustrated. An extensive list of manufacturers is included. Non-technical. 20 pages. Write for price information.

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36.
National Science Teacher's Association
1742 Connecticut Avenue, N.W.
Washington, DC 20009

The Energy We Use, 1976.

This unit presents eight separate lessons and a review providing an introduction to energy for first grade students. Lessons contain an overview, performance objectives, material list, background information and suggested teaching strategies. Topics include the sun, fossil fuels, wind, water, and conservation. 25 pages. Write for price information.

Community Workers and the Energy They Use, 1976.

Second grade students learn about community workers such as farmers, oilmen, meter readers, and electricians. Twelve lessons are provided. Lessons contain an overview, objectives, material list, background information, and teaching strategies. Reproducible worksheets are included. 61 pages. Write for price information.

Energy, Engines, and the Industrial Revolution, 1976.

Five lessons have been prepared for grades 8 and 9. Complete student and teacher materials are included. This is useful if integrated into existing social studies and science curriculums. 53 pages. Write for price information.

Transportation and the City, 1976.

Three lessons are provided to relate the influence the automobile has over our lifestyles for grades 8 and 9. This material could be presented in one to two weeks in social studies programs. Topics are "Getting There," "Shut Down by Tin Lizzie," and "The City of Windshields." 18 pages. Write for price information.

Agriculture, Energy and Society, 1976.

Agricultural methods and their impacts on energy resources are examined. Eight lessons are included for grades 10, 11, and 12. These materials can be utilized in existing social studies, math, or science courses. 38 pages. Write for price information.

How a Bill Become a Law to Conserve Energy, 1977.

This publication for secondary students integrates facts and concepts of energy-environment-economics into studying the process of law making. Activities can be included in traditional history, government or civics courses. Seven lessons are presented in this publication containing both student and teacher manuals. 115 pages. Write for price information.

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37.
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161

Arthur D. Little, Inc. Technical Opportunities for Energy Conservation in Appliances, 1976.

Proceedings of the ERDA conference in Boston, Massachusetts on May 11, 1976. Topics include consumption patterns and opportunities for conservation in electric and gas-fired appliances. Heating and cooling equipment is stressed. Technical. 307 pages. $10.00.

Beall, S. E. et al. An Assessment of the Environmental Impact of Alternative Energy Sources, 1974.

The major topics presented are geothermal, solar, fusion energy sources, and an environmental and economics analysis of their impacts. Information such as cost/benefit consideration, feasibility of various alternatives, engineering data, and environmental concerns are included. A wide variety of considerations are brought into focus including social costs, designs, location consideration, aesthetics, and possible impacts on other energy sources. Some information is highly technical, but generally this publication is fairly easily understood. 128 pages. $5.45.

Delene, J. G. and J. B. Gaston. A Regional Comparison of Savings from Various Residential Energy Conservation Strategies, 1976.

This publication deals with residential space heating and cooling alternatives for various geographic areas. The intent is to provide basic data for future reference and much of the material is subject to revision. Alternatives such as thermostat setback, improved furnace efficiency, use of heat pumps and installation of insulation are evaluated. Technical. 69 pages. $6.00.

Ellison, R. D. Savings in Energy Conservation by Residential Heat Pumps: The Effects of Lower Indoor Temperatures and of Night Setback, 1977.

The relationship between energy consumption and heating load is scrutinized, considering savings potential possible by reduced indoor temperatures and night setback. Graphs and computer data are included for six cities covering a variety of climatic conditions in the U.S. Technical. 26 pages. $4.00.

Hirst, Eric and Janet Carney. Residential Energy Use to the Year 2000: Conservation and Economics, 1977.

Economic effects of various conservation programs are evaluated using an engineering-economic model. The programs evaluated include several strategies authorized by the 94th Congress and supported by the Carter Administration. A key strategy involves predicting consumer behavior in response to sharply increased fuel costs which are inevitable before the year 2000. Write for price information.

Hirst, Eric C. Energy and Economic Benefits of Residential Energy Conservation RD & D, 1978.

A residential energy model is presented that evaluates new technologies in terms of energy and direct economic effects. Space and water heating, appliances, and lighting are the specific targets of the model. Calculations are made from the present to the year 2000. Technical. 33 pages. $4.50.

Hirst, Eric C. Residential Energy Conservation Strategies, 1976.

Various factors are considered that will effect total energy use by the residential sector, calculated from now to the year 2000. Income, fuel costs, equipment, housing formation and choices, and thermal integrities of buildings are calculated using a computer model. Charts and graphs are presented. Technical. 37 pages. $4.00.

Moyers, John C. The Room Air Conditioner as an Energy Consumer, 1973.

Differences in operating efficiencies of room air conditioners are examined and pointed out. Changes possible in efficiency due to design alterations are predicted and methods for prediction are explained. A simple method for individual cost evaluations is presented. Technical. 33 pages. Write for price information.

Pilati, David A. The Energy Conservation Potential of Winter Thermostat Reductions and Night Setback, 1975.

Space heating requirements for a model home have been calculated for several locations and thermostat settings. Human comfort at lower temperatures is discussed. Also, the economic considerations of devices such as a clock-actuated thermostat are presented. Technical. 27 pages. Write for price information.

Spore, R. L. and E. A. Nephew. Costs of Coal Surface Mining and Reclamation in Appalachia, 1976.

Costs and a description of methods of mining and reclamation in Appalachia are presented. Terrain angles and degree of reclamation quality are discussed as being the major factors involved. Charts are used to note results obtained from various equipment, soil, and capital costs. Technical. 45 pages. $5.50.

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38.
National Wildlife Federation
1412 16th Street, N.W.
Washington, DC 20036

Houck, Oliver A. The Best Present of All, 1974.

A storybook introduction to energy sources is presented for early elementary grades. Solar and geothermal sources are explained as being more advantageous than conventional sources. $.30.

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39.
New York Cooperative Extension Service
Cornell University
Riley-Robb Hall
Ithaca, NY 14853

Save Energy, Save Dollars, 1977.

This examines a variety of problems and outlines steps homeowners can take to reduce energy waste. Simple projects are discussed as well as others requiring professional assistance. Non-technical information is presented for use by homeowners including an excellent energy management checklist. A good source of information for homeowners interested in conserving energy. 95 pages. $1.50.

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40.
New York State Education Department
Division of Curriculum Development
Albany, NY 12186

Living Within Our Means: Energy and Scarcity.

Two instructional activity guides are available, one for grades K-6 and the other for grades 7-12. Both contain material covering English language, arts, mathematics, science and social studies. The high school publication also contains home economics, consumer education materials, and supplementary activities. All materials are prepared for inclusion in established curriculums. Elementary guide, 82 pages; secondary guide, 106 pages. Available outside New York state from ERIC. Write to ERIC for price information.

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41.
W. W. Norton and Company
500 - 5th Avenue
New York, NY 10036

Hayes, Dennis. Rays of Hope: The Transition to a Post-Petroleum World, 1977.

Problems involved with a shift from petroleum to coal and nuclear power are presented. Alternative energy sources are discussed, particularly solar and wind powers. Also, conservation measures are included which can be effective through the transition period. Non-technical. $3.95.

Nader, Ralph and John Abbots. The Menace of Atomic Energy, 1977.

Nader describes nuclear energy technology and identifies perils inherent in the field. The performance of the atomic energy industry is analyzed, specific as it affects citizens and consumers. Alternative energy sources are identified as are the current actions of citizens groups across the country. Non-technical. $10.95.

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42.
Ohio Department of Education
65 South Front Street
Columbus, OH 43215

Battelle Center for Improved Education. A Teacher's Introduction to Energy and Energy Conservation, 1975.

Identical background material dealing with energy sources, problems, and conservation is presented in both elementary and secondary versions of this inservice publication prepared for Ohio teachers. Teaching units are divided into four categories: primary, upper elementary, middle school, and senior high. Although prepared for Ohio schools, most information and activities can be utilized elsewhere. Elementary, 88 pages; secondary, 92 pages. Write for price information.

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43.
Oregon Department of Education
942 Lancaster Drive, N.E.
Salem, OR 97310

Curry, Wendall, Dick Louthan, and Randi Douglas. Energy Crisis Teaching Resources, 1974.

This curriculum guide was prepared to aid teachers in developing activities in conjunction with Energy Crisis Week. Background information relates primarily to the Northwest area. Classroom and schoolwide activities are for various age groups, are interdisciplinary and can be utilized in any area. A home survey, handbook, and checklist are included. 59 pages. Write for price information.

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44.
Pennsylvania Department of Education
Box 911
Harrisburg, PA 17126

A Teacher's Guide for the Environmental Impact of Electrical Power Generation - Nuclear and Fossil, 1973.

Various methods of electrical power generation are discussed with the goal being to enable the student to evaluate available alternatives to arrive at an independent decision. For each chapter objectives, activities, audio-visual materials, references, and background material are provided for the teacher. This mini-course can be integrated into a science course or used as an independent study unit or adult education program. 156 pages. Write for price information.

The Environmental Impact of Electrical Power Generation: Nuclear and Fossil, 1973.

This publication presents curriculum materials teaching a mini-course comparing two methods of electrical power generation. Environmental and health implications, waste treatment and energy conservation are discussed regarding both nuclear and fossil fuel generating plants. Supplemental material such as charts and student activities sheets are included. 236 pages. $3.05.

Governor's Energy Council. Energy -- Pennsylvania's Energy Curriculum for the Middle Grades, 1977.

Activities and diagrams are arranged into six modules. Energy activities cover a wide variety of topics and range in degree of difficulty. Very good classroom activities, fair teaching background material. 217 pages. Write for price information.

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45.
Philadelphia Electric Company
2301 Market Street
P. O. Box 8699
Philadelphia, PA 19101

Ladson, Gloria. Our World of Energy, 1977.

This teacher's guide is part of an instructional kit that also includes three filmstrips and cassette tapes and thirty copies of the student guide. Activities are problem oriented and reinforce other subject material. Reference material for students and teachers as well as information on enrichment programs are included. Designed for grades 4-5. 126 pages. Teacher's guide, $10.00; complete kit, $75.00.

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46.
Sierra Club
530 Bush Street
San Francisco, CA 94108

Energy and the Sierra Club, 1977.

This illustrated pamphlet supplies a comprehensive overview and explanation of Sierra Club policy, specifically regarding energy consumption and conservation. Topics include economics, rate structures, regulation, siting, research and alternative energy sources. This is most easily understood by senior high students and adults. 8 pages. $.25.

Hess, Hamilton. Geothermal Energy: Prospects and Limitations, 1976.

A brief introduction and explanation of geothermal energy is provided. Its potential as an alternative source is discussed. Environment problems are also presented. 3 pages. $.10.

Nuclear Power and the Sierra Club, 1977.

An introduction states the policy of the Sierra Club towards nuclear power. Topics include reactor safety, waste management, security, radiation, and environmental concerns. An extensive bibliography is provided including a list of organizations concerned with nuclear power. Write for price information.

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47.
Solare
P. O. Box 4233
Whitter, CA 90607

Bradley, Quinton M. and James F. Carlson. Solar Primer One, 1975.

This book presents a thorough review of solar energy in architecture for architects, designers, and laymen. Topics include collection, transfer, and storage componnets. Functions of total systems are also discussed. Effective use is made of various diagrams to explain operations of the various components. Fairly technical. 122 pages. $10.00.

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48.
South Carolina Department of Education
Room 803, Rutledge Building
Columbia, SC 29201

Moseley, A. M. et al. The Energy Book.

Excellent individual and group activities are arranged by classes K-3, 4-6, and 7-12. Activities are coded to correspond to various disciplines. This is not a complete curriculum guide but can be utilized to supplement existing curriculums. Several checklists and a bibliography are included. 29 pages. Write for price information.

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49.
Tennessee Department of Education
Room 112, Cordell Hull Building
Nashville, TN 37219

Wert, Jonathan et al. Ideas and Activities for Teaching Energy Conservation: Grades 7-12, 1977.

This excellent teaching guide presents historical perspectives as well as information concerning energy resources and conservation. Numerous ideas and activities are divided by grade level and subject area. Background material for teachers and students is non-technical. Although the guide was developed specifically for teachers and students in Tennessee, most of the activities are appropriate for other states as well. 225 pages. Write for price information.

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50.
Tennessee Valley Authority
Electrical Demonstration Branch
DB-PSC-3
Chattanooga, TN 37401

Your Electric Meter and How to Read It.

This folder discusses factors that increase electrical use and explains how to read an electric meter. Free.

Electric Savings.

This booklet presents a collection of practical methods to aid the homeowner in reducing his electric bill. Free.

The Fireplace.

This colorful booklet explains selection and use of wood fireplaces and stoves. Free.

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51.
Topeka Public and Parochial Schools
1601 Van Buren
Topeka, KS 66612

Energy, 1974.

Topics are arranged to develop a working definition of energy, its various uses and sources, conversion and conservation principles, and environmental and health impacts. Teaching resource materials include activities, a home checklist, and reproducible graphs and charts. Field trip guidelines and directions are presented for visiting sites in Kansas. For intermediate level elementary school students. 90 pages. Write for price information.

Energy and You, 1974.

The major topics presented here include: "What is Energy?", "Energy Fuels," "How We Use Energy," and "Conservation of Energy." An extensive appendix contains student activities. This material was prepared for Level II and III educable mentally retarded students, but is adaptable for other curriculums with slight modification. 65 pages. Write for price information.

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52.
U.S. Department of Agriculture
Office of Communication
Publications Division
Washington, DC 20250

Wynn, N. A. A Guide to Energy Savings for the Vegetable Producer, 1977.

Fertilization is identified as the largest single energy user in vegetable growing operations, followed by diesel fuel and then gasoline use. Possible savings in these areas are primarily stressed, followed by irrigation and weed control. Harvesting practices are covered and a fairly technical discussion of energy use in greenhouse operations. A section is also included on recording energy consumption. Fairly technical. 54 pages. Free.

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53.
U.S. Department of the Interior
Office of Management Operations
Energy Conservation Program Manager
Washington, DC 20240

Saving Energy on the Road.

This simple pamphlet contains many useful tips to conserve energy in meeting daily family transportation needs. Some tips apply specifically to commercial trucking operations. Aimed specifically at the automobile owner. Non-technical. 10 pages. Free.

Saving Energy at Home/On the Job.

This unbound pamphlet presents a variety of energy saving tips. The home section covers most accepted conservation practices and the "on the job" section includes several tips specifically work related. Non-technical. 17 pages. Free.

There Has Never Been Any Real Energy Crisis . . . And Other Myths.

This unbound pamphlet provides an excellent presentation of commonly held beliefs concerning the present energy situation and an assessment of signification facts supporting each side of the issue. The data is accurate but the questions remain basically unanswered and not all factors are listed. Non-technical. 23 pages. Free.

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54.
U.S. Department of Energy
Technical Information Center
P. O. Box 62
Oak Ridge, TN 37830

Selected Department of Energy Publications, 1978.

This catalog lists publications prepared by agencies that now comprise the U.S. Department of Energy. Annotations are provided. All the publications listed are free. 14 pages. Free.

Energy in Focus: Basic Data, 1978.

This pamphlet is all charts dealing with energy reserves, production, and consumption. The tables presented would be useful to anyone desiring an easy to use, non-technical source of data. All major sources of energy are listed. 13 pages. Free.

Tips for Energy Savers, 1978.

This is an excellent source of conservation options for the homeowner. Tips for "on the road" and "in the marketplace" are in addition to "how to save energy and dollars at home." A heating zone map and a chart to calculate R-values and required insulation is included. 46 pages. Free.

Activities of the Department of Energy in Energy Education, 1978.

This describes programs of the Department of Energy and its predecessor agencies in energy education. This publication would be useful to curriculum planners to identify worthwhile programs. DOE curriculum materials, facilities and special programs are listed. 66 pages. Free!

Project Retro-Tech: Teacher's Kit for Course on Home Winterization, 1975.

These lesson plans were developed to train supervisors of work crews and are useful in planning home winterization curriculums in vocational-technical schools. In addition to student and teacher manuals, a home winterization job book and book of charts are included. Charts, 53 pages; Job Book, 12 pages; Teacher's Guide, 55 pages; Manual, 27 pages. Write for price information.

Energy Conservation: Understanding and Activities for Young People, 1975.

Three chapters discuss what energy is, its sources, conservation and energy uses. Background information is accompanied by suggestions for student activities. This publication can be a useful supplement to environmental science curriculums for upper elementary or junior high school students. Easily understood. 20 pages. $.85.

How to Save Money by Insulating Your Home, 1977.

This provides diagrammed, easy to understand instruction on installing insulation for the homeowner. Where, what type, how much, and do's and don'ts are included. Also included is a brief explanation of window and door weatherizing procedures. Non-technical. 22 pages. Free.

My Energy Book by Energy Ant, 1976.

This book is designed to introduce energy and energy use to preschool and early primary-age children. It uses color illustrations to discuss the energy situation. 29 pages. Write for price information.

Energy Conservation on Campus, Volume I and II, 1976.

This two-volume set presents information on energy management for universities and colleges. Volume one deals with developing a management program for operations, vehicles, utilities, and heating systems. Volume two presents case studies of programs used at various universities. Volume I: 36 pages, $.90; Volume II: 28 pages, $.80.

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55.
The University of Wisconsin
Sea Grant Program
1800 University Avenue
Madison, WI 53706

Smith, Thomas and John Jenkins. The Household Energy Game, 1974.

This game develops an energy budget and identifies how families spend energy. Consumption is calculated by assigning points for various energy uses. Other sections deal with saving energy and the energy outlook. This would be most useful for junior high and high school students, or for use in community awareness programs. 20 pages. Write for price information.

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56.
Virginia Energy Office
823 East Main Street
Richmond, VA 23219

Erickson, Kathy Baker and Deborah Fick Sherman. Energy and the Classroom, 1975.

This is a three volume teaching guide presenting activities concerning energy types, sources, and conservation. This will be updated in 1978. Write for price information.

Volume I, Activity Guide for K-3: The concept of energy and how it applies to everyday life is presented. Experiments, demonstrations, puzzles, games, and a brief glossary and bibliography are included. 38 pages.

Volume II, Activity Guide for 4-7: An introduction to the energy problem is supplied with a discussion of our major resources. Experiments, demonstrations, activities, a glossary, and a teacher's resource section are included. 102 pages.

Volume III, Activity Guide for 8-12: A brief introduction to the energy crisis is provided. Classroom, club, and community involvement activities are included with a teacher's resource section. 143 pages.

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57.
Worldwatch Institute
1776 Massachusetts Avenue, N.W.
Washington, DC 20036

Hayes, Denis. Energy: The Case for Conservation, 1976.

Impacts and rationales concerning energy conservation are discussed, specifically the dilemna of non-renewable energy dependence. Energy consumption and conservation options are considered for transportation, buildings, industry, food and waste sectors. Various charts are presented and a personal conservation guide is included. Non-technical. 77 pages. $2.00.

Hayes, Denis. Nuclear Power: The Fifth Horseman, 1976.

A broad view of serious concerns that must be faced if nuclear power use increases. Topics presented include the environmental impact, uranium availability, economics, safety problems, weapon proliferation, and the possibility of terrorism. Non-technical. 64 pages. $2.00.

Hayes, Denis. Energy: The Solar Prospect, 1977.

Current and possible future contributions of solar resources are described. Solar uses discussed include direct heating and cooling, electrical generation as well as wind and hydroelectric power possibilities. Biological processes such as anaerobic digestion are considered. Non-technical. 80 pages. $2.00.

Hayes, Denis. Energy for Development: Third World Options, 1977.

Alternatives available to planners in third world countries are explored. Renewable resources and their advantages are detailed, particularly solar energy possibilities. Hayes concludes that developing countries may utilize solar power on a wide scale before industrial nations do. Write for price information.

Hayes, Denis. The Solar Timetable, 1978.

Hayes' study considers the likelyhood of solar power providing most energy needs by the year 2025. The magnitude of the problems involving solar collection are explained. Preliminary steps by some governments are identified, but major resource commitments are necessary to more to renewable energy sources according to Hayes. Write for price information.

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