

ENVS 410

Energy Resource Guide Project

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Abstract:

Faced with an ever degrading human and natural environment, the RCEA has spawned with the mission to develop and implement sustainable energy initiatives that reduce energy demand, increase energy efficiency and advance the use of clean, efficient and renewable resources. Our group has worked with Maureen Hart, of the RCEA, to accomplish this very mission. To address the problem of energy inefficiency in Humboldt County, we have developed an informational guide that offers concerned residents and businesses valuable contact information to useful agencies and organizations that can aide them in reducing their energy consumption and subsequent costs.

Problem Background

For millions of years, the early human inhabitants of the Earth manipulated and exploited various facets of the natural world, leaving little impact and only a minimal 'footprint'. As the western world began to emerge into the industrialized age, our racess innocence was to become forever blackened by a plethora of noxious poisons, corrosive toxins, and an immensity of pollutants. Humans are now believed to be causing massive climate change due to the billions of people worldwide that recklessly are smoldering fossil fuel reserves, sending carbon-dioxide emissions into the atmosphere¹. The United States, with a military budget that dwarfs all other nations, is currently actively engaged in a war with Iraq that is driven largely by energy scarcity. The reckless and inefficient use of the world's energy is destroying the environment and quickly depleting finite energy reserves.

With an ever-growing human population coupled with continual careless inefficient energy use, the world energy consumption will increase by as much as 60 percent over the next 17 years, according to the Energy Information Administration's projections². The United States is leading the world in this massive consumption of resources. Between 1949 and 2000, while the United States experienced an 89 percent population growth rate, our energy consumption grew 1,315 percent. The per capita consumption of energy per household in 2000 was more than seven times the levels of 1949³.

The western world has the information and technology that would enable it to more cleanly generate energy and engage in consumptive patterns that are minimally degradative with sustainable yields of higher environmental cleanliness, yet chooses not to. The United States is the most influential and powerful nation in all of humanity and

¹ Intergovernmental Panel on Climate Change, Climate Change 2001: The Scientific Basis (Cambridge, UK: Cambridge University Press, 2001).

² Energy Information Administration, International Energy Outlook 2002, www.eia.doe.gov/ Accessed 2/21/04

³ Flexible Energy, Fall 2001 Review, www.flexibleenergy.com Accessed 2/09/04

yet its model of energy consumption and its methods of energy production that are promoted, and subsequently employed, are of the poorest efficiency, given the wealth, technologies and capacity of this country. Energy inefficiency is a widespread problem in each of the states of America.

The inflating price of energy in California has brought the issue to the table for a lot of Californians. It often takes fiscal concerns to affect people's decisions about how they live their lives. In 1999, industrial customers in California paid an average of 7.16 cents per kWh, while residential customers paid 10.71 cents per kWh. These costs were rather high compared to the rest of the country, which was paying averages of 4.43 and 8.16 cents per kWh, respectively. In March of 2001, the California Public Utility Commission approved electricity rate increases of up to 46 percent for the state's two largest electric utilities, which serve about 68 percent of the state's customers. These companies had formerly been prohibited from passing on high wholesale power costs to retail customers due to a rate freeze. This rate increase will surely increase the average retail price of electricity in California in the coming years⁴.

California has the highest growth rate and the largest population in the United States and is the tenth largest energy consumer on Earth. As of 1997, each of California's 11.5 million households consumed 64 million British thermal units (Btu) of energy per year for an average of over 1,000 dollars, and that amount is rising. Over 40 percent of those households were eligible for the state's Low-Income Home Energy Assistance Program, which many of them likely didn't even know existed⁵.

The root of the problem, however, is not that there is inefficient energy use, but that something is driving these unsustainable patterns. The source is much similar to the other environmentally unsustainable behavior of the United States – ignorance, apathy, and arrogance. The vast majority of citizens of Humboldt County are not aware of the various methods of energy efficiency at their disposal and of the subsequent financial savings that such methods would produce. For instance, the Department of Energy's Home Energy Saver division estimates that by increasing efficiencies in a typical Humboldt County home, they could save almost 600 dollars annually. That is over a third of the cost spent on average in the county⁶. There is a need to educate the public of these environmentally sustainable techniques of energy use. According to the Environmental Education and Training Partnership, "energy education is essential for a growing population faced with finite resources and serious environmental issues"⁷. To effect change on a national level or even international level, individuals can most often make a positive and powerful difference by addressing the overall problem as it is manifested in their local context.

Humboldt County has a population in excess of 128,000 with an annual growth rate of 0.7 percent⁸. As far as energy use is concerned, Humboldt County is a microcosm

⁴ Flexible Energy, Fall 2001 Review, www.flexibleenergy.com Accessed 2/09/04

⁵ Energy Information Administration, Four States Overview records www.eia.doe.gov/ Accessed 2/21/04

⁶ Department of Energy, Home Energy Saver, www.hes3.lbl.gov/ Accessed 2/17/04

⁷ State of California, Department of Finance, City/County Population and Housing Estimates, 1991-2000, with 1990 Census Counts. Sacramento, CA May 2000. www.co.humboldt.ca.us/ Accessed 2/29/04

(footnote continued)

are you
sure?

What has been or is being done regarding energy education?

of the larger energy problem with high ^{100%}consumptive rates in both the residential and commercial sectors. Environmental education affects people's attitudes towards energy use, thus promoting more efficient and sustainable methods and patterns of use. Ensuring that the population of Humboldt County has opportunities to learn about alternative energy sources and uses as well as sustainable consumptive methods is of paramount concern in developing more efficient energy use in Humboldt County.

Problem Statement:

There is widespread inefficient energy use in Humboldt County, which is being fueled by the lack of sustainable energy educational opportunities. The commercial and residential sectors of Humboldt County need proper education in energy use and conservation in order to promote more efficient energy consumption patterns.

Goals and Objectives

Goal 1: To collect data on various methods of energy conservation and alternative energy use that is currently being successfully utilized elsewhere.

Objective 1a: By April of 2004, our group will have conducted extensive research on various case studies of successful applications of efficient energy technologies.

Objective 1b: By April of 2004, our group will have conducted research on efficient energy technologies available that may or may not have been employed elsewhere.

Objective 1c: By April of 2004, our group will have conducted research on an array of techniques that promote appropriate energy conservation as well as other methods for reducing energy consumption while increasing energy conservation in both the commercial and residential sectors.

Goal 2: To provide educational resources to the residential sector of Arcata about viable methods of efficient energy consumption and conservation.

Objective 2a: By January of 2005, the residential sector of Arcata will have had the opportunity to be exposed to educational materials reflecting innovative and sustainable methods of energy use.

Objective 2b: By May of 2005, educational resources on how to significantly reduce energy inefficiency will be made available to Arcata households.

This goal and associated objectives are not a goal but part of a means to accomplish your goal 2 + 5as/3

Goal 3: To provide access to educational material to the commercial sector of Humboldt County about viable methods of efficient energy consumption and conservation.

Objective 3a: By January of 2005, the businesses of Arcata will have had the opportunity to be exposed to educational resources reflecting efficient energy use.

Objective 3b: By May of 2004, educational resources on how to reduce business consumption of energy and subsequent higher energy bills will be made available to the commercial sector of Arcata.

Project Alternatives

Workshop Alternative

Overview:

Conduct a class-based format course on energy conservation. Interactive presentation of florescent versus incandescent light bulbs to compare wattage usage, light output, and cost effectiveness. Other future workshops might include thermal curtains workshops, composting, regenerative design concepts, etc.

Strengths:

This will enable visitors to gain knowledge and implement these energy conservation ideas in their homes or places of businesses. Interacting with the presentation and on-hands methods will be user friendly and familiarize most people on the proper methods to apply these ideas.

Weaknesses:

These workshops would be time and monetary consuming. Providing all the material, staff, and space, would be problematic. It could be a heavily financial burden to RCEA or the cost could be passed on to the visitors. Also trying to plan and find the space available to produce and implement these workshops would be another dilemma.

Display Alternative

Overview:

This would involve designing and ultimately creating a display showing ways to use energy more efficiently. This display could be posted at the RCEA office and be taken to community events by representatives of the RCEA.

Strengths:

This solution works well because it has the potential to reach many people. The RCEA could use this display to visit numerous public venues, such as schools, fairs, or club meetings. It could also be produced at a low cost from durable materials, and could be utilized for years to come.

Weaknesses:

A simple display may not be enough to open the public's eyes about energy efficient technology and practices. There would also have to be funding to produce such a display as well as somebody to take it out into the community.

Education Alternative**Overview:**

This would involve the education of as many school aged children as possible about the consequences of using too much energy, and the possible ways in which to cut down on energy usage. The age span of these children should involve the K-12 range. The options for implementation would include developing a set of age appropriate "ways to save energy" and let each teacher decide how to best deliver them. Develop an assembly program that can be presented to large groups of children. Develop a field-trip program that can travel to locations done. Produce a pamphlet or booklet that talks and shows how energy consumption costs money and how energy conservation saves it.

Strengths:

Highly effective way to help school age children understand the importance of saving energy. The assembly part saves teachers time and effort. Actually seeing and touching how it is done can be much more effective than simply talking about it. With the pamphlet, it is a cheap and easy way to spread the word. Children can also take it home to their parents.

Weaknesses:

Individual classroom teaching is very labor and time consuming, especially for already overburdened teachers and would be require the approval of every school board who wanted to implement it. The assembly part would take away from classroom time and would not assure each child is understanding what is being presented like the classroom situation can. The field-trip would also be very time and energy consumptive for teachers and administration. With the pamphlet, it is hard to know if the information being be used or even be looked at and not thrown away like so many junk mailings.

Informational Guide Alternative (Preferred Alternative)

Overview:

This will be a comprehensive information guide that will direct people towards the appropriate state or federal agency that can better help them obtain the energy conservation goal that they are seeking. The information contained in the guide will give a review of the services and data available from each agency.

Strengths:

This would be a time-saver by compiling many agencies into one accessible packet. It would be fairly easy and cheap to produce. It would also be easy to track its usage by counting the number of people who check it out or look at it while at the RCEA office.

Weaknesses:

You can never have *all* the alternatives in one small booklet. Like any purely informational system, it would be hard to judge what exactly each person gets out of it.

Decision:

Due to the time and cost constraints placed on this project, we chose the information guide alternative. This alternative also covers a majority of the goals and objectives set forth for this project.

Survey Alternative

Overview:

Using a random sampling of 3-5% of Arcata residents, a survey will be administered to assess the relative efficiency of each individual household. We will construct a survey that will gauge both the attitudes of Arcata residents towards efficient energy consumption and will also assess what residents are doing to lower their energy bills as far as reduction of energy use, conservation, and other forms of efficiency. We will bring these surveys door to door, in varying (randomly selected) neighborhoods reflecting diverse socioeconomic strata. The four members of our group will all actively engage in polling the town to assess the level of concern residents have for lowering their energy bills and/or conserving energy as far as their households are concerned.

In addition to polling the residents, while we are talking to them, we will offer them suggestions of easy ways to reduce their energy consumption thus lowering their bills. We will provide informative pamphlets or booklets to those interested in actively increasing the efficiency of their energy use. The survey in tandem with the informative pamphlets and additional verbal information we will provide will empower both the homeowners and us (the surveyors) with new useful information. The information that they receive will hopefully work to educate them so that they feel compelled to adopt some of the suggested tactics of reduction of inefficient energy use. The information that we receive from the surveying will be handed over the RCEA and utilized however they wish (most likely in such a manner as to understand the attitudes that residents of Arcata have towards energy use thereby recognizing why they are resistant to implementing more environmentally friendly methods of energy use in their own homes).

Strengths:

The benefits of this alternative are that it is beneficial to both the residents being polled and provided with information and to the RCEA, which is being provided with information of the relative attitudes of homeowners towards energy use. It is also beneficial that the surveying is being conducted face to face, thus being more intimate. If the surveys were mailed to the residents or conducted on the phone, they would be more likely to be disregarded and would not provide us with accurate information. Other benefits of this alternative lie in the fact that we will be able to paint a pretty accurate picture of why there is resistance to energy efficient technology and methods of reduction of energy use.

Weaknesses:

There are also some shortcomings of this alternative. For one, it is difficult to assess the attitudes of the general population of Arcata based on this surveying sampling size. There are many regions of Humboldt County also, and to extrapolate overarching generalizations about attitudes of Humboldt County residents towards energy use based on a random sampling of Arcata is dangerous and probably foolish. Furthermore, door to door polling is probably not going to be well received by many residents who feel that it is an invasion of their privacy.

Decision:

We will most likely not use this alternative because it will not yield an accurate representation of the attitudes of residents of Humboldt County towards energy use. Furthermore, it is not the best alternative for disseminating information to the public about efficient energy use.

Implementation Strategy

To implement and insure the success of the Informational Energy Resource Guide, the following must be accomplished:

1. Obtaining funds or material resources from Redwood Coast Energy Authority (RCEA). Maureen provided the initial idea but we further developed the proposed concept, resources needed and time management required to accomplish the proposed project. The RCEA has provided some resources and is willing to provide any additional when and if the need should arise through the progress of this project.
2. The resource guide will be formatted to cover the main underlying energy conservation concepts that are most common to the public. These will be categorized under water, electricity, natural gas, and heat. These can further be distributed under different sources of information from which they were obtained such as State, Federal, or Private. The concepts will be researched for the guide being equally distributed among Noah, Robert, Kevin, and Shane.

3. information obtained will be analyzed to determine the most relevant and concise information that is needed to fulfill the goals of the proposed project. The relevant information will be compiled in a binder that will be formatted to be a user friendly and efficient resource for the general public. This will all be accomplished by April 21, 2004.
4. The concept of the proposed project was a mutual contribution by all team members in meeting the proposed goals and objectives. The Informational Energy Resource Guide will be provided as a comprehensive tool to be implemented in the RCEA's future stable office building. It would be utilized by the local community (school's, residents, and businesses) by borrowing the guide or using it at the office building. The guide includes information on non-profit organizations, energy conservation publications, government organizations, individuals knowledgeable on energy conservation, community organizations, businesses, and events. The guide will be completed by April 28, 2004 where a copy will be provided to Maureen, RCEA director.
5. The concept of an energy conservation pamphlet was suggested by Maureen and considered by our group. The information available in the pamphlet will focus primarily on energy conservation and provide accessible and general resources available to the general public. This will allow convenience for the general public to obtain further knowledge at their own leisure. Future consideration by the RCEA can utilize the guide to create the pamphlet and make one according to their own set standards and expectations. The guide would be available on May 31, 2004.
6. The RCEA amount will maintain a count of the number of visitors that utilize the Informational Energy Resource Guide. This will be accomplished by having visitors sign a registration book whenever the book is either borrowed or used. This will help determine if the number of people trying to be reached is achieved and is effective according to our objective being met. This can also be done with the pamphlet by taking count of how many are distributed in a given day by the number that are printed. This will be accomplished by September 30, 2004.

Monitoring and Evaluation

In order to decide how successful the completed project is, the following evaluation plan has been formulated.

Goal 1: To collect data on various methods of energy conservation and alternative energy use that is currently being successfully utilized elsewhere.

Objective 1a: By April of 2004, our group will have conducted extensive research on various case studies of successful applications of efficient energy

technologies.

Objective 1b: By April of 2004, our group will have conducted research on efficient energy technologies available that may or may not have been employed elsewhere.

Objective 1c: By April of 2004, our group will have conducted research on an array of techniques that promote appropriate energy conservation as well as other methods for reducing energy consumption while increasing energy conservation in both the commercial and residential sectors.

Evaluation: Because our final product will reflect the research done in order to meet these objectives, it will be used to evaluate the research. This research has been compiled and will be used to make our information guide. That guide will be the best way to measure the success of our research.

Goal 2: To provide educational resources to the residential sector of Arcata about viable methods of efficient energy consumption and conservation.

Objective 2a: By January of 2005, the residential sector of Arcata will have had the opportunity to be exposed to educational materials reflecting innovative and sustainable methods of energy use.

Objective 2b: By May of 2005, educational resources on how to significantly reduce energy inefficiency will be made available to at least 5 percent of Arcata households.

Evaluation: To meet these objectives, our group has decided to construct an informational guide covering various agencies, publications, and events concerning energy efficiency. How successful we are at meeting these objectives will be determined by keeping track of how many people utilize or are at least made aware of our information guide. There will be a log to see who accesses this guide at the RCEA office as well as a record of anybody who the guide may be sent to throughout Arcata.

Goal 3: To provide access to educational material to the commercial sector of Humboldt County about viable methods of efficient energy consumption and conservation.

Objective 3a: By January of 2005, the businesses of Arcata will have had the opportunity to be exposed to educational resources reflecting efficient energy use.

Objective 3b: By May of 2004, educational resources on how to reduce business consumption of energy and subsequent higher energy bills will be made available to the commercial sector of Arcata.

Evaluation: Once again, these objectives will be met by our information guide that will be made available through the RCEA. Local business owners can be sent a copy of the guide and we can keep a record of how many businesses receive a copy. Follow-up correspondence will be done to determine how helpful the guide is and if any of those people plan on using it to make their businesses more efficient.

REDWOOD COAST ENERGY AUTHORITY

Learn . . .

How to reduce your electric bill

Who to contact to increase your energy efficiency of your home

What books, magazines and websites can cut your bills in half

And much more!

2005 ENERGY RESOURCE GUIDE

REDWOOD COAST ENERGY AUTHORITY

Energy Resource Guide

Redwood Coast Energy Authority
<http://www.redwoodenergy.org/index.html>

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GOVERNMENTAL ORGANIZATIONS

DEPARTMENT OF ENERGY (DOE)

ENERGY EDUCATIONAL SERVICES:

- ✦ Bioenergy
- ✦ Hydropower
- ✦ Coal
- ✦ Natural Gas
- ✦ Electric Power
- ✦ Nuclear
- ✦ Oil
- ✦ Fossil Fuels
- ✦ Renewables
- ✦ Fusion
- ✦ Solar
- ✦ Geothermal
- ✦ Wind
- ✦ Hydrogen

OFFERING INFORMATION ON THE FOLLOWING SCIENCES AND TECHNOLOGIES:

- Biological
- Environmental Sciences
- Information Resources
- Nuclear Physics
- Carbon Sequestration
- Fusion Energy
- Life Sciences
- Science Bowls
- Chemical
- Genome Research
- Materials Science
- Teaching, Ed.
- Climate Change
- Nanotechnology
- Workforce
- Computing
- Energy sciences
- High Energy Physics
- Nuclear Medicine

Energy efficiency and renewable energy (DOE) Weblink

- ✚ U.S. Department of Energy : Energy Efficiency and Renewable Energy Webpage

<http://www.eere.energy.gov/>

“Energy Environmental Portal”

“A gateway to hundreds of Web sites and thousands of online documents on energy efficiency and renewable energy”

Components of Website –

- ✚ **Energy Efficiency: Buildings, Industry, Power, Transportation**
- ✚ **Renewable Energy: Bioenergy, Geothermal, Hydrogen, Hydropower, Ocean, Solar, Wind**
- ✚ **Information For: Consumers, Kids, States**
- ✚ **Various Programs:** *Biomass Program, Building Technologies Program, Distributed Energy Program, Federal Energy Management Program, FreedomCAR & Vehicle Technologies Program, Hydrogen, Fuel Cells & Infrastructure Technologies Program, Industrial Technologies Program, Solar energy Technologies Program, Weatherization & Intergovernmental Program*

Contact Information:

Web Address (URL): <http://www.energy.gov/engine/content.do>

By Mail: U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

ENVIRONMENTAL PROTECTION AGENCY (EPA)

ENERGY EDUCATIONAL SERVICES:

Provides information regarding.... *Air, Cleanup, compliance & Enforcement, Economics, Ecosystems, Emergencies, Environmental Management, environmental Technology, Human Health, Industry, International cooperation, Pesticides, Pollutants/ toxics, pollution Prevention, radiation, Research, Treatment & Control*

Contact Information:

Website: <http://www.epa.gov/>

Mailing Address:

Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
Phone Contact: (202) 272-0167

CALIFORNIA ENERGY COMMISSION

Purpose: This is an overall excellent website with too many links to list. It covers everything from renewables to statistics, laws, and conservation information.

ENERGY EDUCATIONAL SERVICES AND OTHER RESOURCES:

- ✦ **Climate change & California Energy emergencies**
- ✦ **Export Program**
- ✦ **Efficiency division Info**
- ✦ **Appliance Standards**
- ✦ **Consumer Energy Center**
- ✦ **Consumer Tips**
- ✦ **Efficiency Rebates**
- ✦ **How-To energy videos**
- ✦ **Peak Load Reduction Program**
- ✦ **Process Energy (Ag/Indus/Water/Wastewater)**
- ✦ **Energy Statistics / General Info**
- ✦ **Power Plants & Licensing**
- ✦ **Renewable Energy**
- ✦ **Research and Development**
- ✦ **Transportation Energy & Alternative Fuel Vehicles**
- ✦ **Current Transportation Fuels Studies.**

California Energy Commission: Consumer energy center

This site can be reached through a link from the California Energy Commission homepage too. It is geared toward the consumer and gives info about energy rebates, transportation, and renewables.

www.consumerenergycommission.ca.gov

Contact Information:

Webpage: <http://www.energy.ca.gov/>

Mailing address:

California Energy Commission

Media and Public Communications Office

1516 Ninth Street, MS-29

Sacramento, CA 95814-5512



U S A

Phone: 916-654-4287

CALIFORNIA ENVIRONMENTAL AGENCY (CALEPA)

Purpose: "The California Environmental Protection Agency (Cal/EPA) was created in 1991 by Governor's Executive Order. The six Boards, Departments and Office were placed within the Cal/EPA "umbrella" to create a cabinet level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources. Our mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality".

LINKS TO AIDE YOU IN ENERGY ISSUES:

-  **Air Resources Board**
-  **Department of Pesticide Regulation**
-  **Department of Toxic Substances Control**
-  **Integrated Waste Management Board**
-  **Office of Environmental Health Hazard Assessment (OEHHA)**
-  **State Water Resources Control Board**

COMPONENTS OF WEBPAGE:

-  Environmental education
-  Accomplishments & priorities
-  Awards program
-  Broadcasts
-  CEQA resources
-  Deed Restriction orders
-  DRIVECLEAN.CA.GOV
-  Earth 911
-  Employment
-  Environmental Protection Indicators
-  Environmental technology

Contact Information:

Website: <http://www.calepa.ca.gov/>

Mailing Address:

1001 I Street

PO Box 2815

Sacramento, Ca 95812-2815

Phone: (916) 445-3846

CALIFORNIA PUBLIC UTILITIES COMMISSION

Purpose: "The PUC regulates privately owned electric, telecommunications, natural gas, water and transportation companies, in addition to household goods movers and rail safety."

COMPONENTS OF WEBPAGE:

- + Core/Noncore staff report (market structure for the retail electric market)
- + Rural telecommunications grant program
- + Pacific Gas and Electric Company's bankruptcy proceeding
- + Information on the telecommunications bill of rights
- + Energy action plan

Contact Information:

Website: <http://www.cpuc.ca.gov/>

Mailing Address:

San Francisco Office (Headquarters)

505 Van Ness Avenue

San Francisco, CA 94102

Phone: 415-703-2782

FLEX YOUR POWER

California is facing a serious energy challenge. Working together, we can meet this challenge. Please spend a little time reviewing the information on this site, and join the millions of other Californians conserving energy.

ENERGY EDUCATIONAL SERVICES:

- + Energy saving tips and financial incentives
- + Information on how you can conserve energy and save money through the commercial, residential, industrial, governmental, and agricultural sectors
- + Energy conservation best practices
- + California's energy challenge (a California energy info website)
- + Consumer energy center.

Contact Information:

Webpage: http://www.flexyourpower.ca.gov/state/fyp/fyp_homepage.jsp

Phone: 1-800-555-7794

HUMBOLDT COUNTY ENVIRONMENTAL HEALTH DEPARTMENT

Purpose: Humboldt County Environmental Health Department is committed to promoting community health, disease and injury prevention, and a healthy human environment. The primary emphasis of the organization is making and keeping Humboldt County residents aware of current issues that are of major concern to them. Additionally, the organization provides public information on the disposal of recyclables, automotive fluids, hazardous waste, yard waste, batteries etc.

ENERGY EDUCATIONAL SERVICES:

- + **Features the Integrated Waste Management Program that provides the counties plans for minimizing waste and finding alternatives to waste disposal**
- + **Press Releases of current environmental health news and events**

Contact Information:

<http://www.co.humboldt.ca.gov.us/health/envhealth>

100 H Street, Suite 100

PHONE: (707) 445-6215

FAX: (707) 441-5699

LOCAL BUSINESSES

ALTERNATIVE ENERGY ENGINEERING

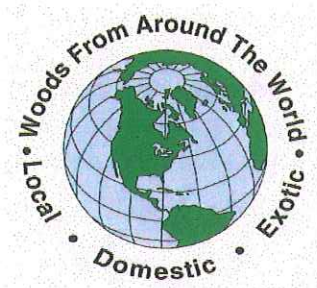


Purpose: A retail solar energy store that has been in business for over 20 years. Alternative Energy Engineering is the premier wholesale distributor of solar, wind and water products. They carry products from all the major renewable energy manufacturers and some less known ones as well. Their purchasers search the world for the best variety and quality of products, and their buying power enables them to find the most competitive pricing for their dealers.

Contact Information:

Website: www.alt-energy.com

Phone: (707) 923-2277

ALMQUIST LUMBER COMPANY

Purpose: Almquist is certified by SmartWood as a producer of Rediscovered Wood products, and sells products made from reused, recycled, reclaimed, and salvaged wood.

Contact Information:

Webpage: www.almquistlumber.com

Phone: (707) 668-5652

Address: 100 Taylor Way, Blue Lake

ARCATA COMMUNITY RECYCLING CENTER (ACRC)

Purpose: Provides a cost effective way to reduce waste. ACRC is America's oldest continuously operating community recycling center. ACRC will accept used motor oil and filters, packaging peanuts, household batteries, antifreeze, and many other recycling items.

**Contact Information:**

Website: [Www.arcatarecycling.org](http://www.arcatarecycling.org)

Phone: (707) 822-4542

Mailing Address: 1380 9th St. Arcata

SUNFROST

Purpose: The creator of the most energy efficient domestic and vaccine refrigerators in use in more than 50 countries, as well as composters and other products for sustainable living. Promoting sustainable through appropriate technology. The conservation of energy is of outmost importance.

ENERGY EDUCATIONAL SERVICES:

- ✚ Provides opportunities on how to reduce inefficient energy consumption.**
- ✚ Provides products and guidance for living in a more sustainable manner.**

Contact Information:

<http://www.sunfrost.com/>

824 L Street, Eureka, CA 95501
Phone: (707) 822-9095

SOLUTIONS

Purpose: Specializing in hemp products, paper and stationeries made from alternative, sustainable materials, and information on sustainable living. Formed by community activists to promote sustainable living methods through alternative materials.

SERVICES:

- ✦ **Comprehensive reading material on sustainable living**
- ✦ **Products based on alternative materials that promote sustainability.**

Contact Information:

1063 H St.
Arcata, CA 95521
Tel: (707) 822-6972

Mailing Address: 1155 Redway Dr. Redway

REAL GOODS

Purpose: "Real Goods' vision is multi-faceted. Since our inception in 1978, we have tried to change the way America does business by espousing the traditional values of integrity, honesty, friendliness, wise resource use, and ingenuity. Since our business began by serving the needs of rural homesteaders in what was called the "back-to-the-land movement" in the late 1970's, the Company has always strived to find and deliver appropriate technologies to its customers."

SERVICES THAT PROMOTE ENERGY EFFICIENCY:

- ✦ **Online shopping for Healthy Lifestyles (natural body care, baby, travel, and gifts)**
- ✦ **Indoor Home (healthy furnishings, decor, air and water filters, non-toxic cleaners, etc.)**
- ✦ **Energy Efficiency (light bulbs solar lighting, rechargeable batteries)**
- ✦ **Outdoor Home (gardening, composting, pest control, and solar gadgets)**
- ✦ **Library and Office (home office, musical CDs, videos, and large collection of books about sustainable living)**
- ✦ **Gifts and Toys for men, women and children.**

Contact Information:

Website Address: www.realgoods.com
Phone: 800-762-7325

EDUCATIONAL RESOURCES

THE TELONICHER MARINE LABORATORY

Purpose: The mission of the Humboldt State University Telonicher Marine Laboratory is to provide a center for marine and environmental science teaching and research. The primary emphasis of the laboratory is teaching, however, student and faculty research is active. Additionally, the laboratory provides public displays which focus on interpretation of marine science and the marine environment.

ENERGY EDUCATIONAL SERVICES:

- ✦ **Features a solar array that produces the power needed for the Schatz lab hydrogen fuel cell project while also powering the marine lab's blower that provides air to the aquariums and work stations**
- ✦ **Available for tours (45 minutes) \$1 per person**

Contact Information:

<http://www.humboldt.edu/~marinelb/>
 Humboldt State University
 Marine Laboratory
 P.O. Box 690 / 570 Ewing St.
 Trinidad, CA 95570
 Tel: 707-826-3671 Fax: 826-3682

CAMPUS CENTER FOR APPROPRIATE TECHNOLOGY (CCAT)

- *Purpose: CCAT run by students and on Humboldt State University campus, provides visitors with comprehensive and timely technical information on how utilize appropriate technology to conserve and efficiently use energy. CCAT is committed to making energy efficiency accessible and implemented with appropriate technology.*

ENERGY EDUCATIONAL SERVICES:

Visited on a daily basis by students and residents, CCAT responds quickly to technical questions with a variety of local services. Resources available include;

- ✦ Reading materials on energy conservation
- ✦ Access to appropriate technology on-site
- ✦ Technical information and detailed personal responses

Contact Information:



<http://humboldt.edu/ccat.html>
CCAT
Humboldt State University
Arcata, CA 95521
(707)826-3551

Hours:
Monday through Friday
8 a.m. to 12 p.m. and 1 p.m. to 4:30 p.m.

SCHATZ ENERGY RESEARCH CENTER

Purpose: Promote energy and environmental awareness through interactive lectures and physical demonstrations. SERC is a non-profit organization affiliated with the Environmental Resources engineering department at Humboldt State University. Supports the transition to a less fossil-fuel dependent society.

ENERGY EDUCATIONAL SERVICES:

-  **Demonstration of operation of fuel cells**
-  **Hydrogen fueled vehicle**

Contact Information:

Web: <http://www.humboldt.edu/~serc/>
Humboldt State University
Arcata, California 95521
Tel (707) 826-4345
E-Mail serc@humboldt.edu

NON-PROFIT ORGANIZATIONS

HUMBOLDT ENERGY TASK FORCE

Purpose: To develop regional energy authorities to implement sustainable energy programs that help create long lasting energy programs in Humboldt County. Humboldt's Energy Task Force has been investigating the creation of a regional structure to provide energy information and services locally. Showing our love of nature, knowledge and creativity. Through our service we attempt to act as a reliable resource in an effort to facilitate the implementation of energy conservation practices in Humboldt County.

ENERGY EDUCATIONAL SERVICES:

- ✦ Provide information on appropriate alternative energy systems
- ✦ Identify funding strategies for cost-effective energy projects

Contact Information:

Arcata, California 95521

Tel: (707) 822-8184

CITY OF ARCATA AND EUREKA-ENVIRONMENTAL SERVICES

Purpose: Comprehensive information on resources available on local environmental issue. Environmental services are available to the local community on disposal and recycling materials. Through our service we attempt to act as a reliable resource in an effort to facilitate the implementation of environmental conservation practices in Humboldt County.

ENERGY EDUCATIONAL SERVICES:

- ✦ Energy Program established for to meet city needs.
- ✦ Measures taken to implement program and expected results.

Contact Information:

www.arcatacityhall.org/energy/energyprogram/html

736 F St. Arcata, California 95521

Tel: (707) 822-8184

Eureka, CA 95510

Tel. (707) 441-4163

YOUTH EDUCATIONAL SERVICES - ENVIRONMENTAL EDUCATION

Purpose: "Showing our love of nature, knowledge and creativity." The mission of Youth Educational services (Y.E.S.) is to support Humboldt State University students in creating and implementing volunteer programs. Our student-run programs provide services to a broad age spectrum ranging from youth to the elderly. Volunteers spend time in the community building friendships and working together to meet community needs. Through our services we attempt to act as allies and resources in an effort to end the cycle of oppression in the community at large.

ENERGY EDUCATIONAL SERVICES:

- ✦ **Children and community groups gain more awareness of their natural environment through workshops and presentations on topics such as, recycling, water usage, native plants, garden education, and environmental issues**
- ✦ **Volunteers also host an annual Discovery Fair involving the use of environmentally conscious craft activities for children**

Contact Information:

<http://www.humboldt.org/yes/enviroed.htm>

Humboldt State University

Arcata, California 95521

Mail: Y.E.S. - House 91

email: yes@humboldt.edu

Tel: 707-826-4965 Fax: 826-5558

CALIFORNIA ENERGY COMMISSION ENERGY HOT LINE

*Purpose: The **Energy Hotline**, run by the California Energy Commission's Efficiency Division, provides callers with comprehensive and timely technical information on how to comply with the Title 24 building Energy Efficiency Standards and information on Appliances certified for sale in California. The Division is committed to making California's businesses, homes, and appliances more energy efficient. This commitment is achieved by:*

- *Developing and implementing energy efficiency building standards that help ensure comfort and affordability*
- *Identifying and developing ways to streamline energy use in agriculture, manufacturing, water systems, and processing functions*
- *Letting Californians know that using energy wisely is a good investment in the economy and the environment*
- *Analyzing demand and consumption trends to assist in policy decisions*

ENERGY EDUCATIONAL SERVICES:

Used daily by hundreds of utility, building and energy professionals, the **Energy Hotline** responds quickly to technical questions with a variety of consumer services. These include:

- ✦ Toll-free phone number
- ✦ Direct access to trained energy specialists
- ✦ Technical information and detailed personal responses

Contact Information:

<http://www.energy.ca.gov/efficiency/hotline.html>

California Energy Commission

Energy Standards Hotline

(916) 654-5106

or toll free in California

(800) 772-3300

CULTURE CHANGE: A PROJECT OF THE SUSTAINABLE ENERGY INSTITUTE

Purpose: To halt the tremendous environmental, social and economic damage caused by endless road building. Decaying inner cities, foul air and water, global warming and war over oil are all byproducts of our growth-at-any-cost economy. Supports the transition to a less fossil-fuel dependent society.

ENERGY EDUCATIONAL SERVICES:

- ✦ **Arcata Community Library Bike Program**
- ✦ **Alliance for a Paving Moratorium**

Contact Information:

Web: <http://www.culturechange.org/>

Culture Change/Sustainable Energy Institute mailing address: P.O.

Box 4347, Arcata, California 95518 USA

Telephone (215) 243-3144 (and fax)

E-Mail info@culturechange.org

DISCOVERY MUSEUM

Purpose: Our mission emphasizes interactive, open-ending exploration in science, art, culture, and technology. Our goal is to help future generations prepare for the information age and a global society by encouraging them to: "try on" a career; explore their world; discover their own abilities; and kindle a passion for life-long learning.

ENERGY EDUCATIONAL SERVICES:

- ✦ **Interactive children's energy exhibit. A good way to educate your children about efficient energy use in a manner that is fun and hands-on.**

Contact Information:

<http://www.northcoast.com/~discover/index.html>

Tuesday through Saturday: 10 am - 4 pm

Sunday: 12 pm - 4 pm

Sorry, closed Mondays!

Phone: (707) 443 - 9694

Fax: (707) 443 - 7242

P.O. Box 3456, Eureka, California 95502

General Questions, Concerns: discover@northcoast.com

Website Questions, Concerns: crystalhenson@yahoo.com

ENVIRONMENTAL PROTECTION INFORMATION CENTER (EPIC)

Purpose: The Environmental Protection Information Center was formed by community activists more than 26 years ago, and works to protect and restore ancient forests, watersheds, coastal estuaries, and native species throughout Northwest California. EPIC uses an integrated, science-based approach, combining public education, citizen advocacy, and strategic litigation.

SERVICES:

- ✦ **Provide litigation on behalf of imperiled species and their habitat**
- ✦ **Our primary program areas today are Industrial Forestry Reform, National Forest Conservation, our Humboldt Bay Initiative, and Biodiversity Protection.**

Contact Information:

<http://www.wildcalifornia.org/index/html>

Environmental Protection Information Center

P. O. Box 397

Garberville, CA 95542

Telephone: (707) 923-2931

Fax: (707) 923-4210

NORTH COAST ENVIRONMENTAL CENTER

Purpose: Created in February 1971, the Northcoast Environmental Center (NEC) is one of the most influential coalitions educating, agitating and litigating on behalf of the environment in the Klamath-Siskiyou region of northwestern California. This nonprofit umbrella for a host of citizen activist groups has been at the forefront of every regional environmental struggle for decades—from ancient redwoods, wild rivers and recycling to toxics, energy and endangered species.

ENERGY EDUCATIONAL SERVICES:

- ✚ Provides educational opportunities on how to reduce inefficient energy consumption.
- ✚ Provides products and guidance for living in a more sustainable manner.

Contact Information:

<http://www.necandekonews.to/>

575 H Street, Arcata, CA 95521

Phone: (707) 822-6918

Fax: 822-0827

E-mail: nec@ournec.org

REDWOOD ALLIANCE

Purpose: The Redwood Alliance is a community-based social and environmental organization whose main focus is advocacy and education to promote safe and efficient energy use and development.

ENERGY EDUCATIONAL SERVICES:

- ✚ “Renewable Energy Workshop for Women”
 - Women will learn about residential solar, wind, & hydro power. The workshop will review electrical terminology & concepts such as volts, amps, watts, loads, & RE equipment, and will also discuss RE system design, equipment selection, safety, & tool use.
- ✚ “Take Your Bedroom off the Grid Workshop”
 - Here's what the workshop offers:
 - An evening of solar electric basics with a slide show and pep talk for both workshop participants and the public
 - A full day of instruction on the details of sizing, designing, and installing systems
 - A second day of instruction with hands-on solar lab experience
 - A third day of hands-on experience with installing a system on a nearby home

- A packet of materials and information that will help you with your own project

Contact Information:

<http://redwoodalliance.org/>

Redwood Alliance

PO Box 293

Arcata, California 95518

Tel: (707) 822-7884

info@redwoodalliance.org

**REDWOOD COMMUNITY ACTION AGENCY
ENERGY DEMONSTRATION CENTER**

Purpose: The Energy and Environmental Services Division is committed to assisting low to moderate income households reduce their energy burden, improve the health and safety conditions of occupied housing and to foster client self-sufficiency.

ENERGY EDUCATIONAL SERVICES:

-  **Health & Safety Testing and Repairs**
-  **Energy Efficiency & Weatherization**
-  **Lead Based Paint Hazard Reduction & Inspection Services**
-  **Energy, Environmental & Telecommunications' Education**
-  **Energy Assistance**

Contact Information:

Web: <http://www.rcaa.org/energy.html>

Redwood Community Action Agency mailing address:

539 T St., Eureka, California 95510 USA

Telephone (707) 444-3831 Ext. 201

NATIONAL CENTER FOR APPROPRIATE TECHNOLOGY

Purpose: "Championing sustainable technologies and community-based approaches that protect natural resources and assist people, especially the economically disadvantaged, in becoming more self-reliant." Specialize in information on sustainable agriculture, energy, and communities.

ENERGY EDUCATIONAL SERVICES:

- ✚ **Renewable Energy**
- ✚ **Low-income Energy**
- ✚ **Affordable Housing**

Contact Information:

Web: <http://www.ncat.org>
Telephone (866) 674-6327

ENERGY FAIRS

RENEWABLE ENERGY FAIR

FEATURES OF FAIR:

- ✚ **DATE:** April 24 Each Year
- ✚ **FAIR COST:** Free
- ✚ **FAIR LOCATION:** Humboldt State University campus, Arcata, CA
- ✚ **FAIR FEATURES:** The Festival includes information and displays of renewable energy technologies as well as live music and vendors

Contact Information:

<http://humboldt.edu/~amfest/>
Email: energy@humboldt.edu<energy@humboldt.edu>

SOL FEST**FEATURES OF FESTIVAL:**

- ✦ **DATE:** August 23-34
- ✦ **AREA SERVED:** Northwest California
- ✦ **FAIR COST:** \$20, \$15 advanced, Senior prices TBA; Under 12 are free
- ✦ **FAIR LOCATION:** Hopland, CA
- ✦ **FAIR FEATURES:** 55 workshops, 115 exhibitors, tours, keynote speakers, music, kids' activities
- ✦ **FAIR ORGANIZER:** Institute for Solar Living

Contact Information:

<http://solarliving.com>
 Institute for Solar Living
 PO Box 836
 Hopland, CA 95449

SOLWEST RENEWABLE ENERGY FAIR**FEATURES OF FAIR:**

Purpose: The Eastern Oregon Renewable Energies Non-profit presents Solwest Fair the last full weekend of each July. SolWest is an occasion for learning, networking, and supporting all types of renewable energy. This three-day event offers engaging activities for all ages and knowledge levels, including the SolWest Electrathon rally (2003 results!). Participants from around the western region and beyond come and learn about energy efficiency, solar and wind energy, alternatively fueled vehicles, and more.

- ✦ **DATE:** July 25-27 Each Year
- ✦ **AREA SERVED:** Northwest California & Inland California
- ✦ **FAIR COST:** \$5, \$10 all days, JR/SR, Under 12 free
- ✦ **FAIR LOCATION:** Grant County Fairgrounds, John Day, OR
- ✦ **FAIR FEATURES:** 40 Workshops, 50 exhibitors, mintrels, camping, "Electrathon"

Contact Information:

<http://www.solwest.org>
 PO Box 485
 Canyon City, OR 97820
 (542) 575-3633

SOUTHERN CALIFORNIA ENERGY EXPO

FEATURES OF FAIR:

- + **DATE:** August 16-17: 9:00 am - 5:00 pm
- + **FAIR COST:** \$6 unless under 14, in which case it is free
- + **FAIR LOCATION:** At the Fairplex (Los Angeles County Fairgrounds) in Pomona
- + **FAIR FEATURES:**
 - Learn how to reduce or even eliminate your monthly electric bill and have the State of California help pay you to do it.
 - Talk to dozens and dozens of dealers, manufacturers and industry experts about incredible deals on the latest technologies in solar and wind energy that can actually spin your electric meter backwards. Listen to presentations by the California Energy Commission on how to qualify for cash rebates of up to \$3,800.00 per PTC kilowatt for the purchase of an alternative energy system for your home or place of business.
 - The expo features exhibits and presentations on solar electricity and solar heating for your home, business, RV or boat, solar powered cooling, solar powered refrigeration, wind energy, fuel cells, solar powered pool pumping, electric vehicles and much much more. There will also be prizes and free giveaways.

Contact Information:

<http://www.socalenergyexpo.com>

Ray Boggs (organizer)

Phone: 888-647-6527

NORTHWEST RENEWABLE ENERGY FAIR

FEATURES OF FAIR:

- + **DATE:** September 19-21 Each Year
- + **FAIR COST:** Canned food donation
- + **FAIR LOCATION:** Whitman College WallaWalla, WA
- + **FAIR FEATURES:** 25 workshops, 30 exhibitors, tours, keynote speakers, student activities, kids zone

Contact Information:

<http://www.nwrefest.org>

Email: info@nwrefest.org

Tel: (509) 525-8479

OLYMPIC ENRGY FAIR

FEATURES OF EXPO:

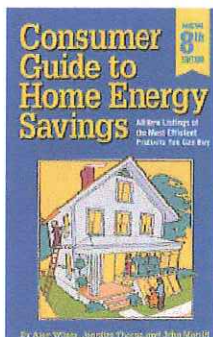
- ✦ **DATE:** Oct. 12-13 (tentative)
- ✦ **AREA SERVED:** Northwest Washington
- ✦ **FAIR COST:** \$3, under 12 are free
- ✦ **FAIR LOCATION:** Vern Burton Comm. Center, Port Angeles, WA
- ✦ **FAIR FEATURES:** 21 workshops, 35 exhibitors, tours, keynote speakers, kids' activities, EV's, building technologies
- ✦ **FAIR ORGANIZER:** Alternative Technologies Seminars

Contact Information:

<http://www.olympicenergyexpo.com>
 Alternative Technologies Seminars
 1327 Caroline, Port Angeles, WA 98362
 Tel: (360) 457-4047
 Email: vangies@olypen.com

PUBLICATIONS

CONSUMER GUIDE TO HOME ENERGY SAVINGS



FEATURES OF BOOK:

- ✦ **Author:** Alex Wilson and John Morrill
- ✦ **What the book offers:** From refrigerators to furnaces, air conditioners to washing machines, the *Consumer Guide to Home Energy Savings* can help you find energy-saving products in order to maximize energy and dollar savings in your home.

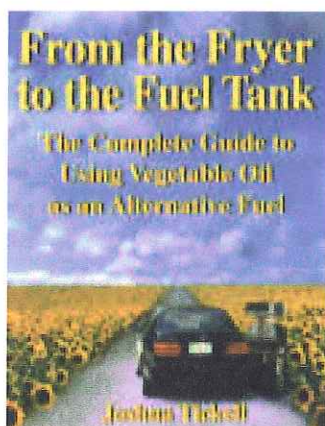
✦ Features:

- up-to-date lists of the most energy-efficient appliances and equipment by brand name and model number
- tips, diagrams, charts, and explanations on nearly every facet of home energy use -- insulation, dishwashing, laundry, cooking, heating and cooling, food storage, windows, lighting, and much more
- updated information on energy-efficient equipment, appliance standards, and the latest tips for saving energy
- which investments in energy efficiency pay for themselves
- why EnergyGuide labels on appliances can be misleading
- which energy-saving products work and which offer more hype than savings
- how to save hundreds of dollars by replacing your least efficient appliances and buttoning up your house

✦ Reviews:

- "One of the best resources for homeowners that we've ever seen." – Anne Ducey, *Conservation Marketing Coordinator, Seattle City Light*
- "*The Consumer Guide to Home Energy Savings*" suffers from a modest title...the guide reveals how to buy and operate just about everything in your house that's connected to an electric or gas meter." – *Today's Homeowner*

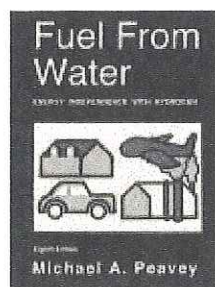
FROM FRYER TO FUEL TANK



FEATURES OF BOOK:

- ✦ **Author:** Joshua and Kaia Tickell
- ✦ **What the book offers:** *From the Fryer to the Fuel Tank* is the first and only book that details all aspects of running diesel engines on vegetable oil. Includes information on biodiesel, the diesel fuel substitute made from new or used vegetable as well as information on running any diesel engine on straight vegetable oil (SVO). This book is packed with history, information, instructions, photos, diagrams and resources. If you want to stop supporting Mid-East Petroleum oil, you must get this book.

FUEL FROM WATER: ENERGY INDEPENDENCE WITH HYDROGEN



FEATURES OF BOOK:

- ✚ **Author:** Michael A. Peavey , Peavey Michael A.
- ✚ **What the book offers:** Hydrogen is the fuel of the future. As our dependence on imported energy & the environmental costs of fossil fuels grow, the elegant simplicity of this fuel from water becomes more appealing. "Fuel from Water" reviews the current research that is reducing the cost of manufacturing hydrogen fuel, preparing the way when oil embargos, tanker spills & smog alerts become a distant memory.
- ✚ **Features:** The book covers...
 - Engine modifications
 - Replacing gasoline & diesel fuels with hydrogen
 - Electrolyzer technology
 - Fuel cells that convert hydrogen directly to electricity
 - Hydrogen storage in metal hydrides
 - How a liquid hydrogen-fueled compact won a long distance auto rally
 - Hydrogen for heating, cooling & cooking
 - How utilities can store energy during low demand periods
 - Using solar cells to generate hydrogen
 - Biological & thermochemical generation of hydrogen
 - Transmission of hydrogen vs. the costs of electrical power lines
 - Hydrogen-powered mass transit, railroads & aircraft demonstration projects.
- ✚ **Reviews:**
 - "Here's the best book of its type that I've seen yet. Nicely done. I'd like to offer more books like this. Rare information. I think you'll like it."-Thomas Lindsay, Lindsay Publications.

NEW TECHNOLOGIES FOR ENERGY EFFICIENCY

FEATURES OF BOOK:

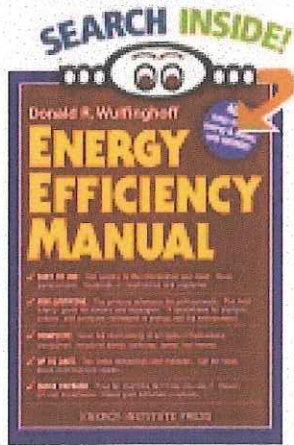
- **Author:** Michael F. Hordeski
- **What the book offers:** examines the full scope of new technologies available to address this crisis of electricity supply now by reducing dependency on the power grid. Author details the tools and technologies available for incorporating smaller, clean, more efficient energy generating technologies.
- **Reviews:** "Professional engineer Hordeski examines the role of new technologies in developing more innovative and cost-effective approaches to energy management. He explores energy usage trends and applications of energy audits; energy sources including heat pumps, solar energy and wind power; the integration of cooling, heating, and power systems; fuel cell technology for electrical power production; modular power generation using turbines, gasification, and combined cycle generation; lighting retrofits; and the effect of computer technology on energy control trends." Copyright 2004 Book News Inc., Portland, OR.

ENERGY EFFICIENCY AND HUMAN ACTIVITY: PAST TRENDS, FUTURE PROSPECTS

FEATURES OF BOOK:

- **Authors:** Lee Schipper and Stephen Myers
- **What the book offers:** This book focuses on the evolution of energy-using activities in a dozen industrialized countries and many developing countries as well, with particular attention paid to the energy-intensive branches of manufacturing, automobiles, air travel, home heating, and electric appliances. The authors draw scenarios of future energy efficiency improvements, based on their findings about past improvements, and their survey of the potential for change. The study concludes that only massive improvement in energy efficiency in the near and medium term can provide the world with breathing room to develop and deploy a mix of relatively clean energy sources that will not further aggravate environmental or climate problems.

ENERGY EFFICIENCY MANUAL: FOR EVERYONE WHO USES ENERGY, PAYS UTILITIES, DESIGNS AND BUILDS, IS INTERESTED IN ENERGY CONSERVATION AND THE ENVIRONMENT

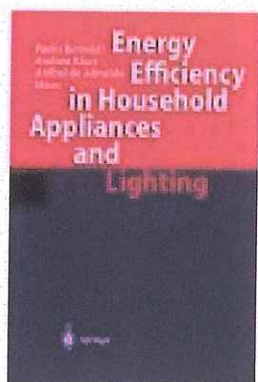


FEATURES OF BOOK:

- **Author:** Donald R. Wulfinghoff
- **What the book offers:** This is the primary reference, how-to guide, and sourcebook for energy conservation. It lets you improve efficiency and save money in all types of buildings and plants, ranging from individual houses to commercial buildings to large institutions and industrial plants. It is organized around 400 logically grouped energy conservation actions, presented in language that everyone understands.
- **Reviews:** Superlative! The ENERGY EFFICIENCY MANUAL by Donald Wulfinghoff is a "must have" for professionals, libraries, facility managers, policy makers, homeowners, and anyone else who is serious about saving energy and cashing in on lower energy bills. It is the ultimate energy saving resource for businesses, industry, and government. PLUS, it will save money and reduce pollution, satisfying corporate bottom lines, policy makers, and environmentalists all at the same time. This book is unique. Highly informative, illustration-rich, and user-friendly, it is treasure trove of everything you need to know about energy efficiency from A to Z. Don't bother looking elsewhere -- the ENERGY EFFICIENCY MANUAL simply has it all. This book will pay for itself almost as fast as you can spot a hot air leak or install an energy-efficient light bulb!

-- Amy Vickers

ENERGY EFFICIENCY IN HOUSEHOLD APPLIANCES AND LIGHTING



FEATURES OF BOOK:

- ✚ **Editor: Paolo Bertoldi et al**
- ✚ **What the book offers: Proceedings of the Second International Conference on Energy Efficiency in Household Appliances and Lighting, held in Naples, September 27-29, 2000. The latest developments were discussed in new technology for efficiency, policies and policy instruments, and international programs for market transformation and energy improvements.**

ENERGY EFFICIENCY: PERSPECTIVES ON INDIVIDUAL BEHAVIOR

FEATURES OF BOOK:

- ✚ **Editor: Willet Kempton and Max Neiman**
- ✚ **What the book offers: A collection of case studies put together by the American Council for an Energy Efficient Economy that examine energy-related behavior in detail and shed light on how individuals make decisions**

SOLAR ENERGY RESOURCE GUIDE FOR RESIDENTIAL USE

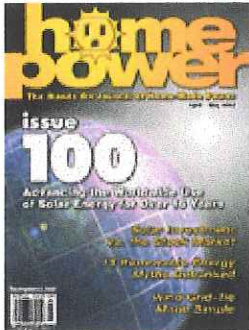
Solar Energy Guide Book

Produced by the Humboldt Energy Task Force. A step-by-step guide that helps potential solar energy owners size a system to meet their needs and to perform a simple economic analysis of the system.

Available at: www.arcatacityhall.org/energy/wholesolarguidev1.pdf

MAGAZINES

HOME POWER MAGAZINE



Purpose: "The Hands-On Journal of Home-Made Power." This is an every other month publication, and is available in the U.S. Canada, and internationally. Concerned mainly with the promotion and education of Renewable Energy.

FEATURES OF MAGAZINE:

- **System installation profiles**
- **"How to build your own..."**
- **"How to buy a..."**
- **Book and product reviews**
- **On and off-grid systems**
- **Electric and alternative fuel vehicles**
- **Future technologies and business**
- **Residential, commercial, and mobile**
- **Reader letters and questions**
- **History, politics, and education**
- **Developing world applications**
- **Events and happenings**

TECHNOLOGIES COVERED:

- Solar electricity
- Wind turbines
- Microhydro power
- Batteries and chargers
- Inverters and system controls
- Home heating and cooling
- Solar water heating
- Appliances and home efficiency

- Water pumping
- Green building
- Solar home design
- Transportation and biofuels

Contact Information:

Webpage: www.homepower.com

Phone: 800-707-6585

REFOCUS: THE INTERNATIONAL MAGAZINE



This is an online magazine with the latest news in renewable energy technologies from around the world.

Contact Information:

Webpage: <http://www.refocus.net/index.html>

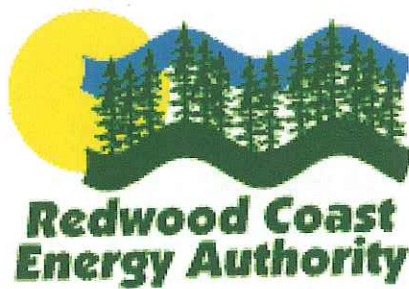
CREDITS

List of Preparers

2005 Energy Resource Guide was produced by Environmental Science Students of Humboldt State University in collaboration with Maureen Hart of the RCEA

Maureen Hart is the Executive Director of the RCEA

Students: Noah Burrell, Shane Philipps, Kevin Jimenez, Robert Kemry



THE REDWOOD COAST ENERGY AUTHORITY (RCEA) WAS FORMED IN 2003 AS A JOINT POWERS ASSOCIATION, REPRESENTING SEVEN MUNICIPALITIES (THE CITIES OF ARCATA, BLUE LAKE, EUREKA, FERNDALE, FORTUNA, TRINIDAD AND RIO DELL) AND HUMBOLDT COUNTY. RCEA'S PURPOSE IS TO DEVELOP AND IMPLEMENT SUSTAINABLE ENERGY INITIATIVES THAT REDUCE ENERGY DEMAND, INCREASE ENERGY EFFICIENCY, AND ADVANCE THE USE OF CLEAN, EFFICIENT AND RENEWABLE RESOURCES AVAILABLE IN THE REGION.