



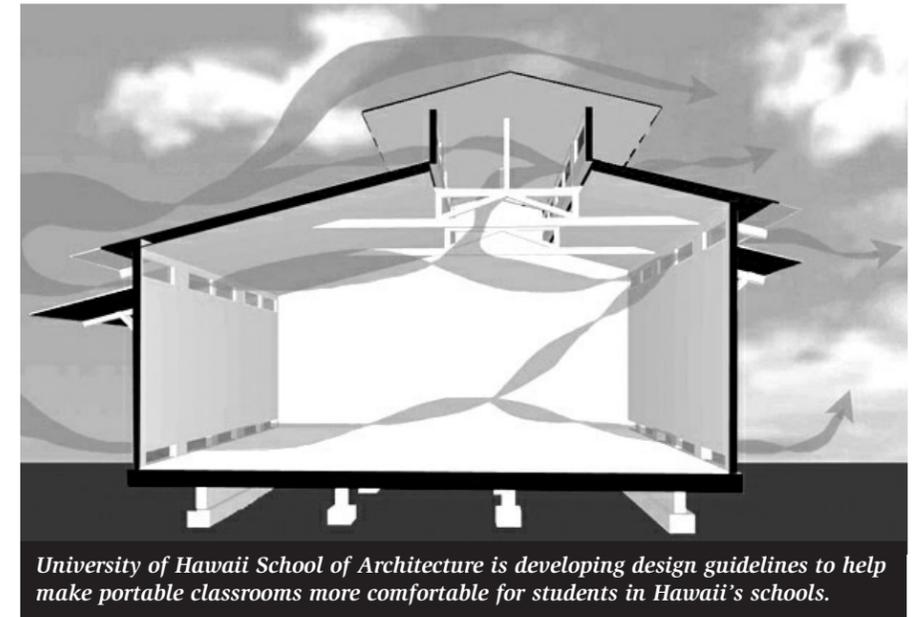
Rebuild Hawaii

Partnering with Rebuild America

Working together for energy and resource efficiency

Cool Designs for K-12 Portable Classrooms in Hawaii

A new Rebuild Hawaii project in development will provide the Department of Education with a set of guidelines to improve the comfort level and conditions of portable classrooms. Portable classrooms have continually come under fire from both teachers and students for their uncomfortable and stagnant conditions. With the school system's continued reliance on portable classrooms, there is no doubt that improving the comfort level is vital to maintaining an acceptable level of academic excellence in our schools.



University of Hawaii School of Architecture is developing design guidelines to help make portable classrooms more comfortable for students in Hawaii's schools.

The portable buildings are typically uninsulated, unsealed, single wall construction with dark roofs. The windows often only have screens and wooden louvers. The current approach to improve uncomfortable conditions within the classrooms is to dump tons of air conditioning at them. This is like trying to fill a hole in the beach with water (as we say in Hawaii). In addition to inefficiencies due to air conditioning, the louvers in the windows are usually closed, darkening the rooms and requiring greater

reliance on electrical lighting. The inefficient windows and uninsulated walls encourage thermal transfer causing the air conditioning units to work at maximum load for minimum cooling. It is estimated that the energy losses in each of these classrooms is between \$500 and \$1000 per year.

The University of Hawaii School of

Architecture will survey several of the suspect portable buildings on the West side of Oahu. At least one classroom will have a data loggers installed to monitor both temperature and air movement. The School of Architecture will analyze the results from the data loggers and run computer simulations to help them find design solutions that will

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Rebuild Hawaii

Rebuild Hawaii is a statewide consortium dedicated to promoting efficient energy and resource utilization.

Rebuild Hawaii is working with Rebuild America, a U.S. Department of Energy program, to help community partnerships make profitable investments in existing buildings through energy-efficient technologies.

The partnering of public and private business interests enables Rebuild Hawaii to employ innovative solutions to promote economic growth, lower energy costs, create jobs, and protect the environment.

There is opportunity for anyone to join Rebuild Hawaii. It is a voluntary program with no membership fee

For more information contact:

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Rebuild Hawaii Consortium

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County of Kauai
County of Maui
Department of Business, Economic
Development and Tourism
Department of Education
The Gas Company/Citizens
Energy Service
Hawaii Army National Guard
Hawaiian Electric Company, Inc.;
Hawaii Electric Light Co., Inc.;
Maui Electric Company, Inc.
Housing and Community Development
Corporation of Hawaii
Judiciary
Kauai Electric/Citizens Energy Services

Hawaii Public Library System
University of Hawaii Community Colleges
University of Hawaii at Hilo
University of Hawaii at Manoa,
School of Architecture
U.S. Department of Energy, Pacific Liaison
U.S. Department of Housing and
Urban Development

Affiliates

Eco-Lite
Energy Conservation Hawaii
Hawaii Society for Healthcare Engineering
SSFM Engineers International

Rebuild America Business Partner
Academic Capital

Rebuild Hawaii Projects

Rebuild Hawaii currently supports the following projects:

- ◆ University of Hawaii School of Architecture Portable Classroom Cooling Design Guidelines
- ◆ Hawaiian Electric Company Energy Smart Schools project to increase awareness of energy efficiency in schools and communities on the islands of Oahu and Maui
- ◆ Hawaii County Energy Smart Schools project at Kau High School
- ◆ Kauai Lagoons Golf Club Audit
- ◆ Na Makani Energy initiative, a community-sponsored rural project in North Kohala, Hawaii, that is planning for a "soft energy path" in the 21st century based on energy conservation and renewable resources
- ◆ Greening The Campuses, a project to implement resource efficiency at the community colleges
- ◆ Green Office exhibit and awareness program
- ◆ Workshops and technical seminars
- ◆ Multi-disciplinary programs to teach energy and resource management skills at universities and schools

Consumers Want Efficiency

A recent survey by Primen, an energy market-intelligence company based in Madison, Wisconsin, concludes that U.S. consumers now rate energy efficiency as the most important factor when purchasing new home appliances. This represents a significant departure from previous findings where price was always the main concern, and energy efficiency was of only moderate importance.



Consumers are looking for energy efficiency labels when purchasing new home appliances.

The survey was conducted in four distinct geographic regions as well as California. This allowed the reflection of a broad base of U.S. consumer attitudes that could not be relegated to specific local conditions. Respondents were asked to rank the impact of six factors: fuel choice (natural gas/electricity), price, energy efficiency, brand name, product features, availability, and appearance.

The key finding of the study indicates energy efficiency has replaced price as the top purchasing consideration in all regions of the U.S. More specifically, the survey found that three-fourths of those polled said energy efficiency was a key factor in

their purchase of appliances in the past year, while 84% said it would guide their future purchasing decisions.

The results appear to show that consumers are now looking at the total costs of their purchases, which include the operating costs of the appliance over the course of its useful life. This increased awareness and emphasis on energy efficiency stems in large part from the extensive media coverage of recent national energy problems coupled with a sagging U.S. economy. Consumer awareness is now focused on efficiency instead of purchase price, the task of keeping this trend intact is of primary importance. Other survey highlights were:

- ◆ EPA's Energy Star labeling program is raising consumer awareness about energy efficiency. Nearly 56 percent of consumers report they had seen the stickers on appliances or related advertising.
- ◆ Roughly one-quarter of the respondents said they would be willing to pay more for higher efficiency appliances.
- ◆ Consumers most familiar with energy efficiency issues have a more pessimistic long-term view about electricity prices, and are more likely to think they will experience a blackout. Conversely, those least interested are less likely to believe they will experience the same.
- ◆ Despite growing interest in the Internet to research energy efficient appliances, approximately 70 percent of consumers still go to friends and family, print media, home builders and contractors, sales personnel, and point-of-purchase displays for such information.

More information on this study can be obtained by contacting Primen at 1-877-976-4681, or by e-mail at ask@primen.com.

Cool Designs

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increase classroom comfort levels. Upon further analysis a set of final design guidelines will be developed and presented to the Department of Education along with all other recommended improvements.

The School of Architecture participates in a number of Rebuild Hawaii projects to help provide expertise in energy and resource efficient design practices. A grant from the U.S. Department of Energy through the State Energy Office will fund the research.

Subject Portals

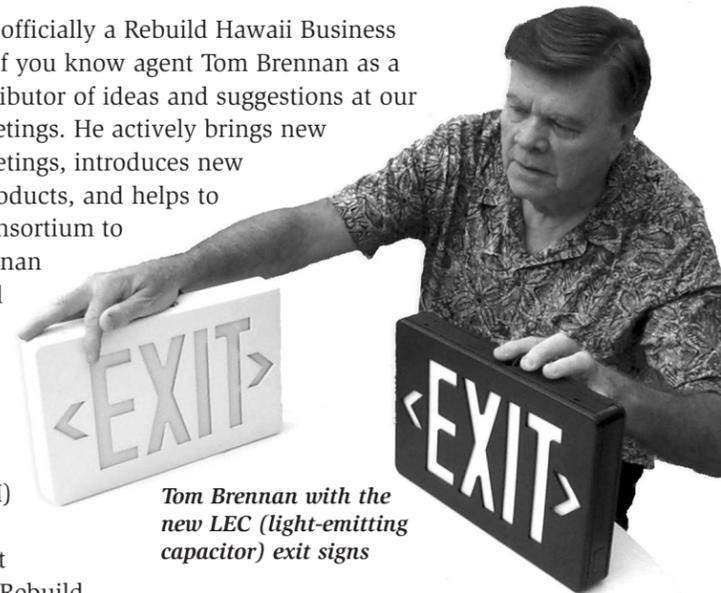
The Department of Energy (DOE), Office of Scientific and Technical Information (OSTI) in partnership with DOE Program Offices, released new tools for information access called Subject Portals. These versatile subject-specific web sites provide full-text DOE scientific reports, links to journal literature, and other useful information sources. You can find information on:

- ◆ Photovoltaics
- ◆ Geothermal Energy
- ◆ Hydrogen Energy
- ◆ Superconductivity
- ◆ Heavy Vehicle Technology
- ◆ Wind Energy
- ◆ Biopower
- ◆ Environmental Management
- ◆ Biofuels
- ◆ Solar Power.

All of these Subject Portals include a distributed searching feature, which provides parallel searching across a select set of heterogeneous databases. In addition, each portal is customized to meet the needs of the sponsoring organization. The portals can be accessed on the Web at <http://www.osti.gov/subjectportals/>.

New Business Affiliate Eco-Lite

Eco-Lite is now officially a Rebuild Hawaii Business Affiliate. Most of you know agent Tom Brennan as a consistent contributor of ideas and suggestions at our Consortium meetings. He actively brings new faces to our meetings, introduces new conservation products, and helps to promote the Consortium to the public. Brennan recently secured a display booth for Rebuild Hawaii at an Association of Residential Managers (ARM) conference; this was an excellent opportunity for Rebuild Hawaii to get some name exposure.



Tom Brennan with the new LEC (light-emitting capacitor) exit signs

Brennan first heard about LED exit signs in 1992 while working in the field of water conservation. He was amazed at how much energy and money the signs saved. Soon after learning about the signs Eco-Lite was formed and was the first to specialize in LED exit signs in Hawaii.

Eco-Lite provides customers with affordable energy-efficient lighting products. Eco-Lite does not operate a retail facility or keep any inventory, they simply act as a broker between mainland manufacturers and will ship orders directly to their customers. This reduces overhead costs thereby resulting in lower prices.

Energy 2002 Workshop & Expo

The Energy 2002 workshop and exposition will be held June 2-5, 2002 at the Palm Springs Convention Center in Palm Springs, California. Dubbed "Hot Challenges Cool Solutions", the exposition and workshop is sponsored by the U.S. Department of Energy Federal Energy Management Program (FEMP), Department of Defense, and U.S. General Services Administration. Energy 2002 will include topics on:

- ◆ Energy 101 Distributed Energy
- ◆ Facilities
- ◆ Project Financing
- ◆ Renewables
- ◆ Policies
- ◆ Programs and Partnerships
- ◆ Sustainable Designs
- ◆ Technology
- ◆ Transportation
- ◆ Utilities
- ◆ Water Management

To attend this informative workshop and see the latest in energy efficient technology, register online at www.energy2002.ee.gov or phone 1-800-395-8574.

Meetings

Next Meeting

January 11, 2002
8:00-3:30
HEI Training Room #2
8th Floor Pacific Tower

Previous Meetings

November 2001

Mike Siminovitch from Lawrence Berkeley National Laboratory presented the Berkeley Lamp. Dean Masai spoke about the new Field Guide. P.J. O'Reilly presented ideas for a Rebuild Hawaii video to air on Olelo. Jim Maskrey reported on resources available on the new Rebuild America web site. Jennifer Webb reported on the new Rebuild Hawaii web site.

August 2001

Consortium elected Steve Holmes as President and Jim Maskrey as Vice President. Outgoing President, Maurice Kaya presented what the Consortium accomplished during its first four years. Marlyn Aguilar from Department of Health spoke about how to dispose of light bulbs and ballasts. Howard Wiig presented on HiLites software and the Model Energy Code.

June 2001

Larry Hill spoke on restructuring the electrical industry and what went wrong in California. Gail Suzuki-Jones presented case studies that comply with environmental and energy related Federal Executive Orders. Sam Nichols and Tom Van Liew reported on Maui Schools. Dean Masai presented on DBEDT residential programs.

For a copy of minutes

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