



# Rebuild Hawaii

Partnering with Rebuild America

Working together for energy and resource efficiency

## HCDCH Sets Pace for Energy Efficient Homes

It should not be a surprise to see a public housing agency in the forefront of building homes that are energy efficient. With a resident clientele that is mostly very low-income, the housing agency knows firsthand that high energy costs have a significant impact on the affordability of public housing units. The recent reconstruction of two federal public housing projects by the Housing and Community Development Corporation of Hawaii (HCDCH) provided the opportunity for HCDCH to apply new technology in the design of public housing to not only make them more efficient but to also make the units more affordable to the residents.

The Maili II housing development along the Waianae coast is in an area that is relatively hot and dry. When the HCDCH had the opportunity to reconstruct the 24 family units, energy efficiency and resident comfort were

on the top of the "How Can We Make It Better" list of improvements. The completed product features:

- ◆ Reflective insulation radiant barrier as part of the roof system to minimize heat gain through the roof surface.
- ◆ Ridge vents to remove as much of the hot air trapped in the attic space of the unit as possible.
- ◆ An 8" CMU exterior wall system wrapped with an exterior insulation finish system of thermal resistance insulation boards to reduce heat gain through the exterior walls.
- ◆ Solar water heating system to take advantage of the sunny climate of the Waianae coast.
- ◆ Tinted glass for the jalousie windows to reduce heat gain through the windows.
- ◆ Compact Fluorescent Light fixtures for the front and back porch of each unit to reduce energy costs.

The Maili II project is believed to be one of the first federally-assisted low-income public housing projects assisted in the country to use as many energy efficient methods in one development and is by far the most energy efficient HCDCH project in Hawaii. In addition to being more energy efficient, the units are much more comfortable. Those who know

the "before and after" of Maili II say that the interior of the units are now about 10 degrees cooler. At the dedication of the Maili II housing development in October, Hawaiian Electric Company presented HCDCH with a check for \$30,000 in recognition of the energy efficient improvements incorporated in the project.

On the Big Island recently, the HCDCH dedicated the completion of the first 80 units of the 230-unit Lanakila Homes project in Hilo. Like Maili II, Lanakila Homes is being reconstructed to modernize the entire development. But unlike the Waianae coast on Oahu, Hilo is known for rainfall. The energy efficient features in this development include:

- ◆ Fiberglass batt insulation with R-19 value for the attic space and R-11 for the exterior walls.
- ◆ Compact Fluorescent Light ceiling fixtures in each room of the unit and for the front and back porch.
- ◆ Gas water heating and cooking.

More information on the improvements made at HCDCH may be obtained by calling Russell Nanod, HCDCH Information Officer, at (808) 587-0597.

*Contributed by Michael Flores, U.S. Department of Housing and Urban Development.*



Rebuild Hawaii



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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 enable 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, please contact:

#### Rebuild Hawaii

c/o Department of Business, Economic  
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### Rebuild Hawaii Projects

Rebuild Hawaii currently supports the following projects:

- ◆ Hawaiian Electric Co., Inc. small commercial business project, and a student energy efficiency project
- ◆ Na Makani Energy initiative, a community-sponsored rural project in North Kohala, Hawaii, that is planning for a "soft energy path" into the 21st century based on energy conservation and renewable resources
- ◆ Greening The Campuses, a project to implement resource efficiency at the community colleges
- ◆ Workshops and technical seminars
- ◆ Multi-disciplinary programs to teach energy and resource management skills at universities and schools

### Rebuild Hawaii Consortium Leaders in Energy Efficiency

City & County of Honolulu  
County of Hawaii  
County of Kauai  
County of Maui  
Department of Business, Economic  
Development and Tourism  
Department of Education  
The Gas Company/Citizens  
Energy Service

Hawaiian Electric Company, Inc.;  
Hawaii Electric Light Co., Inc.;  
Maui Electric Company, Inc.  
Hawaii Army National Guard  
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

Energy Conservation Hawaii  
SSFM Engineers Inc.

#### Rebuild America Business Partner Academic Capital



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## Solutions from Rebuild America

Q— How can partnerships evaluate the final energy savings performance contract (ESPC) proposal from an energy service company (ESCO)?

A— Rebuild America's technical experts can review proposals, also called audits, to evaluate accuracy and thoroughness. However, any reviewer must have the ESCO's basis, assumptions and methods of calculations they used to estimate energy savings and project cost.

The best way to ensure that this information is included is to require it in Request for Proposal (RFP) or Request for Qualifications (RFQ) documents. Partnerships can download samples from the Rebuild America IMS, accessible via [www.eren.doe.gov/buildings/rebuild](http://www.eren.doe.gov/buildings/rebuild). A list of "proposal content requirements" used in Federal ESPC projects is also available from EREC.

The Tennessee Small Business Development Center at the University of Memphis developed an RFQ that was used by Rebuild Shelby in North Carolina and several school districts. This RFQ requires bidders to detail information including:

- ◆ Extensive baseline information including methods for developing an energy consumption baseline and for adjusting the baseline as equipment is added, and specifics on current energy consumption, both total cost and cost per-square-foot.
- ◆ The financing instrument typically used, including type, term, frequency of payments, interest rate, and methods of risk minimization.
- ◆ A project cost summary for the whole project with detail on necessary engineering studies, system and equipment upgrades, training, and maintenance services.
- ◆ Guaranteed energy savings including a description of operational savings, the rationale for each item, and an explanation of how the savings are guaranteed.

For more information on evaluating draft ESPC documents or ESCO proposals, contact EREC at 1-800-DOE-3732.

*Reprinted from the November-December 1999 issue of Rebuild America's Partner Update newsletter.*

## Update on Previous Stories

### Fred Creager's Class Designs Well Received



*UH Associate Professor Fred Creager's Design Class (from left to right, back row) Michelle Burns, Reynaldo Royo, Shannon Teves, Fred Creager (front row) Jon Lipka, Fran Palama*

University of Hawaii Associate Professor Fred Creager and his five architectural design studio students helped address the needs for a community fire station in Thurston County, Washington. During the fall semester, Creager's students began development of five individual designs for an energy efficient fire station.

During the initial design phase an interesting and encouraging thing happened. The Police Department heard about the project and asked Creager's students to expand their designs to include a small branch police station. The students accommodated this request and added a police station to their fire station designs.

Creager and his students successfully worked to meet the collective vision of the volunteer fire fighters and police department. When Rita Hutcheson, Fire Chief of the volunteer fire department in Rainer, Washington, received the final designs she responded to Creager, "your students have outdone themselves...their creativity and enthusiasm for the project is infectious." She added, "the plans give us some real substance to our vision." The designs give a graphic representation of the fire and police station and will hopefully help Thurston County solicit more community support for implementation of the project.

### Smart Schools Program . . . In Session

Hawaiian Electric Company's Smart Schools Program has begun working with high school students at Waianae and Kalaheo High School. Fifty Oahu students are learning about energy efficiency and training to become lighting auditors. The participating students come from Michele Haushulz's Chemistry class from Waianae, and Jim Redmond's Physics class from Kalaheo. The program will run through the rest of the school year.



*Guest speaker Dean Oshiro from Hawaiian Electric Company speaks about electricity to high school students at Kalaheo High School.*

## Member Spotlight

### A Look at Our Rebuild Hawaii Affiliates

#### Energy Conservation Hawaii

Energy Conservation Hawaii is a licensed Hawaii electrical contractor and lighting service provider. They install energy efficient T8 fluorescent lamps, electronic ballasts, specular optical reflectors, controls, sensors and other lighting technologies to help Hawaii's businesses save money by saving electricity. Energy Conservation Hawaii is also a EPA Green Lights and Energy Star Buildings Ally company.

#### SSFM Engineers, Inc.

A Hawaii-based business founded in 1959, SSFM Engineers, Inc. provides quality professional services for project management, structural engineering, civil engineering, planning, corrosion engineering, special inspections, and construction management assignments in the State of Hawaii and the Pacific Basin. They offer a broad range of consulting engineering services, and a staff with extensive experience in the planning, management, and design of projects from the conceptual phase through the construction phase. SSFM is characterized as being very mobile and flexible, geographically adventurous, and willing to explore and implement non-traditional project approaches.

### Rebuild Hawaii Members Share Actions for Success

Some of our Rebuild Hawaii members were recently quoted in Rebuild America's *Partner Update*. In the article, "Removing Barriers to Implementation," Cyane Dandridge (Strategic Energy Innovations), Ray Carr (Rebuild Hawaii County), Glenn Sato (Rebuild Kauai County), and Eileen Yoshinaka (DOE Pacific Liaison) were asked to identify ways new partnerships can maintain momentum during setbacks and delays in implementing building energy retrofits. Their answers reflect Rebuild Hawaii's experience and success in overcoming barriers to implementation.

#### The Do's and Don'ts of Moving to Action

- ◆ Find a champion
- ◆ Keep the lines of communication open
- ◆ Don't just give out assignments (lead toward decision and action)
- ◆ Don't overlook key players
- ◆ Pay careful attention to planning, but don't over plan
- ◆ Get "buy-in" from upper management early on
- ◆ Open doors by starting small
- ◆ Make the case for energy savings by doing your homework
- ◆ Appoint a project manager for each retrofit project
- ◆ Don't make assumptions about technical expertise
- ◆ Anticipate barriers to funding and be ready with solutions

*See the November-December 1999 issue of Rebuild America's Partner Update.*

## Meetings

*March 1999*

Jeff Brown from Rebuild America presented some of the essential elements to developing a successful partnership and action plan. Cyane Dandridge from Strategic Energy Innovations, and Norris Creveston and Sam Nichols from Hawaiian Electric Company, Inc., gave presentations on implementing energy efficiency in the small business sector.

*July 1999*

Consortium elects Maurice Kaya as President and Steve Holmes as Vice President. Hawaii attendees of the Rebuild America Peer Exchange Meeting in San Francisco reported on the interactive exchange of ideas between partnerships in the Western and Pacific regions. Presentations by members on the status of current Consortium projects.

#### Funding Opportunities

The Seattle Regional Office of the U.S. Department of Energy has compiled a newsletter on energy and environmental grant opportunities from the Federal Government and other sources. To receive a copy of this newsletter by email, contact Laurie Brown at [LAURIE.BROWN@hq.doe.gov](mailto:LAURIE.BROWN@hq.doe.gov).

**Next Meeting March 7, 2000.**

8:30-noon  
Room 5-208  
Federal Building

For a copy of minutes from previous meetings:

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