



# Behind the Scenes

## The Players, the Products, the Technology

BY LEE SCHALLER

If you read Building Industry magazine on a regular basis, you are probably aware of our continuous coverage of “the industry and the environment,” encompassing all aspects of green building and sustainable development.

From the days before “green” and “sustainability” were buzzwords, back when a handful of industry heroes fought long and hard to bring the concept and the vision to fruition in Hawaii, we researched, interviewed, followed and reported on the (often slow) progress.

Over the past few years, there has been a major transformation. The fragility of our island environment, the legacy of what future generations will inherit, plus the simple reality of rising energy costs, all have contributed to the shift in attitudes — and action. These points have been mentioned to us over and over again as catalysts for change. But what we have heard most often was, “It’s just the right thing to do.”

Next month, we will address residential building, including green efforts and leaders in this area. Later this year we will cover public projects and energy initiatives. But here, in this report, we look at the technologies, innovations, services, products and players helping to advance green building in Hawaii.

And yes, it truly is advancing.

## Walking the Walk

"The interest in sustainability and green products and services shows no signs of waning," says Nestor Longboy, director of operations for CB Richard Ellis Hawaii, Inc. (CBRE). "For both tenants and owners," he points out, "the driver is cutting the cost of energy. We expect more and more green products and ideas to come online." CBRE, as part of its goal to become carbon neutral by the year 2010, has created an innovative employee team of "green knights" across the nation. This team, which includes Longboy as the designated Hawaii "green knight," serves CBRE clients as experts in energy-efficiency matters. CBRE also is committed to reducing its own energy consumption through more efficient space utilization and related energy savings, in addition to helping with energy-effi-

says Jessica Keala, CBRE real estate manager for Laniihau Center, "but we also have cut our trash hauling from six pickups per week to just two. We estimate that savings alone at \$3,000 per month."

Members of Hawaii's architectural community early on became major advocates for green building and sustainability measures. AIA (American Institute of Architects) Honolulu chapter's COTE (Committee on the Environment) is a leading force in this area, working in concert with city and county, state, federal and private industry organizations to sponsor LEED (Leadership in Energy and Environmental Design) workshops, build and buy green conferences, model energy-efficient homes and green building



**Nestor Longboy, CBRE's designated Hawaii "green knight"**

training programs. One of the stated objectives of COTE is, "Advocate for best design practices to improve energy and resource efficiency, indoor air quality and livability of Hawaii's homes, commercial and institutional buildings."

In this context, several architectural firms recently have created facilities and services specifically designed to educate and assist

in green building comprehension and practice. For example, Architects Hawaii Ltd. (AHL) provides free green building consulting to one business every two months in the downtown Chinatown and Kakaako areas. LEED-accredited professionals meet with the selected businesses, reviewing

# of Green Building:

ciency programs in the many client properties it manages.

CBRE's clients, too, are setting the pace in the use of innovative energy technology. The Laniihau Center in Kailua-Kona, for example, has installed a solar trash compactor. Built by Marathon Equipment Company and purchased and serviced by Kona's Pacific Waste Inc., the compactor operates on solar power and also is equipped to operate on 110-volt power if there is a lack of sufficient sunshine. (But even in this instance, it is more energy-efficient, since traditional trash compactors utilize 220-volt power.) The unit has a fire hose connection, biodegradable hydraulic fluid, a 40-inch by 58-inch feed opening plus full door seal and double hinge for liquid tight enclosure. Currently, 10 businesses in the center, including Sack & Save, use the compactor. "We not only save on the electric bill each month,"



**The solar trash compactor at Kailua-Kona's Laniihau Center**



**Group 70 recently submitted its second floor interior renovation project, which includes the new sustainable design center and this conference room, for LEED platinum approval. Pictured here are Group 70's Shirley Lum and Ryan Sullivan.**

goals and plans and providing lists of opportunities, resources and solutions to help them attain their goals. "We are working hard at AHL to be green," says David Bylund, company principal and director of design and sustainability, "and we want to help businesses in our community as well. Our goal is to reduce the demand for energy, our impact on Oahu's landfill and our carbon footprint, while retaining and enhancing the architectural and urban character of the unique districts of Chinatown and Kakaako." Companies wishing to be considered for AHL's consulting help may apply online at [www.ahl.design.com/freegreen](http://www.ahl.design.com/freegreen).

In late January of this year, Group 70 International, Inc. opened Hawaii's first sustainable design center, a facility encompassing a comprehensive resource center and showroom which provides clients and select community groups with direct access to sustainable technologies, a range of available environmental products and the expertise of Group 70's 19 LEED-accredited professionals. "At every level of government ... from the announcement of the State of Hawaii's Clean Energy Initiative to President Barack Obama's inauguration speech ... our leaders have recognized, and in some cases mandated, the pursuit of sustainability in development," says Paul Bierman-Lytle, Group 70 principal and chief sustainability officer. "Group 70's new sustainable design center provides a venue to see and touch a variety of sustainable products and technologies..." It is a requirement that products featured in the center help to achieve LEED credit. Featured products range from solar photovoltaic panels to power-saving energy-regulation systems and recycled construction materials. Group 70 has submitted the second floor renovation which houses the sustainable design center for review under the platinum level of LEED Commercial Interiors (CI) certification. Upon certification, it will be the first LEED platinum commercial interior project in Hawaii.



**DRI Energy recently completed solar installations at Target's first two stores in Hawaii.**

## Everything Under the Sun

Solar. The dictionary defines it as "of or pertaining to the sun, produced by the action of the sun, relating to or derived from the sun or utilizing the energies of the sun."

It would seem that Hawaii, with its abundance of sunshine, would be a natural and ideal fit with solar. It's taken a while, but it is happening.

In 2008, it was reported that approximately 25 percent of Hawaii's homes had solar water heaters. Actus Lend Lease had created the world's largest solar-powered community, Kalakaua at Schofield Barracks; Wal-Mart had installed 1,500 solar panels on its Keeaumoku building; and other residential developers, commercial-retail centers and the big boxes continuing to knock at our doors all were talking big solar talk.

Current solar technology and its adaptation in Hawaii ranges from major photovoltaic roof panel systems to unusual water heating and trash compacting systems such as that mentioned earlier in use at Kailua-Kona's Lanihau Center.

Recent solar-related news includes the announcement by DRI Energy, a provider of turnkey solar installation

services to commercial building owners and residential builders, that it had completed solar installations for Target's first two stores in Hawaii. Both the Honolulu West Target store at Salt Lake (Nordic PCL Construction general contractor) and the Kapolei Commons store (dck pacific general contractor) which opened simultaneously on March 8, were outfitted with

143 kilowatt (kW) DC systems, fully integrated with a single-ply roof system installed by DRI Commercial, the commercial roofing subsidiary of DRI Companies. (DRI Energy also is a service subsidiary of DRI companies, along with DRI Commercial and DRI Residential.) "DRI has the infrastructure, scale and reach to assist national clients such as Target in realizing their renewable energy goals," says Tim Davey, founder and CEO of the Irvine, Calif.-based DRI Companies. "We look forward to our continued relationship with Target for its roofing needs as well as in reducing its carbon footprint by turning to solar energy generation."

DRI Energy also will provide the solar installation at Target's third Hawaii store (dck pacific general contractor) opening at Kona Commons in July.

Hawaiian Host, Inc. also reports that it is now using clean, renewable power at its Honolulu chocolate-making factory and its macadamia nut processing plant in Kona. Hawaiian Host contacted Energy Industries LLC, a Honolulu-based energy services company, to install two photovoltaic systems that will generate a total of 200kW of

### Quick Fact:

Although worried about the economy, consumers are willing to buy energy-efficient products and services — if they see immediate savings, according to a recent national survey. In a notable change from surveys conducted in 2006 and 2007, 71 percent chose "saving money" over "protecting the environment" as a reason to buy energy-efficient products, again reflecting economic concerns.

renewable electricity. In addition to reducing its carbon footprint, Hawaiian Host expects to reduce its annual electricity consumption by 340,000kW hours and save \$95,000 each year on electric bills. "This PV system will help insulate us from the rising energy costs while providing good environmental benefits," says Dennis Teranishi, vice president and CEO of Hawaiian Host. Prior to installing the new PV systems, Hawaiian Host already had reduced its energy consumption by retrofitting its interior lighting with more efficient lighting technologies. By first engaging in energy efficiency, Hawaiian Host feels it was able to maximize the benefits of its PV system. "It's wise to make sure that the 'green' energy from PV is not wasted on inefficient building equipment," agrees Miles Kubo, president of Energy Industries. "The rule is to reduce before you produce and Hawaiian Host got it right."

Hawaiian Host also entered into net energy metering agreements with Hawaiian Electric Company (HECO) and the Hawaiian Electric Light Company (HELCO) on the Big Island to feed into the electricity grids any excess power generated by the systems.

## Saving More than Energy

In addition to the obvious energy-saving benefits of green building, which, of course, also translate into financial savings, a few innovative companies have gone the extra step, actually helping to finance solar installations. SunForce Solutions International, Ltd. (SFSI) was established early last year as one of the first Hawaii solar energy finance companies. "We established ourselves as a Hawaii-based company with a local presence," says SFSI CEO



**A recent solar installation by Commercial Roofing and Waterproofing**

Craig Hunt, "to assist in the growing concern related to energy demands for businesses, educational institutions, government and nonprofit agencies and military bases. We assist customers with finance options for the installation of large and medium-sized photovoltaic systems through SFSI's Power Purchase Agreements (PPA). Through SFSI financing, the customer is able to purchase and install a state-of-the-art PV system and buy lower-cost solar electric power through a 15 or 20-year PPA." Customers receive their electric power from an SFSI PV system installed on their premises and pay a lower monthly electric bill directly to SFSI. The interesting point here is that PPAs are not normally offered with building integrated photovoltaic (BIPV) systems. However, SFSI is able to offer PPA financing if the BIPV system is installed by Commercial Roofing & Waterproofing, a local company "that possesses the skill to install and remove the PV panel without damaging the roof or the solar panel," says Hunt. Guy Akasaki, chairman and co-founder of SFSI, also is a principal of Commercial

Roofing and Waterproofing. "With no capital costs to the end-user," says Akasaki, "we encourage Hawaii businesses to take a serious look at the solar energy and PPA programs that now are available. Our customers will see immediate savings on their monthly electric bills and will be able to cap their long-term energy for 15 to 20 years."

## No Tanks

(We were going to say "tanks for the memories" but decided that was a bit much.) In water heating advances, AirReps Hawaii, a division of Heide & Cook, tells us about a tankless gas water heater that produces hot water on demand via a compact 3-foot by 1-foot box mounted on an exterior or interior wall. "The Rinnai tankless water heater is ideal for gas-powered restaurants, condominiums, commercial buildings and individual homes," says Dawn Kanno, general manager of AirReps Hawaii. "Traditional tank heaters can take up to 16 square feet of valuable floor space. The Rinnai tankless units are about the size of a carry-on suitcase and can be installed on virtually any wall inside or outside a building." The tankless heater is Energy Star qualified and has a 20-year life expectancy.

In news of other energy-efficient innovations, we learn from Heide & Cook of a recent project involving the Kauai Marriott, with general

## Quick Fact:

Hawaii is set to receive \$15 million in federal stimulus funds for energy efficiency and conservation projects statewide, with \$9.6 million of that amount earmarked for the Hawaii State Energy Office. The rest is divided among the counties with Honolulu receiving \$3.9 million, the Big Island \$738,000, Maui \$605,000 and Kauai \$268,000.



The new Rinnai tankless water heater can be mounted on an interior or exterior wall.



The Kauai Marriott's new Broad Absorption Chiller is the first of its kind in Hawaii.

contractor WASA Electrical Services, Inc. In this instance, Heide & Cook was contracted to design/build a cogeneration plant for the hotel. New generators that run on propane provide electrical power for the chiller plant equipment — producing domestic hot water, pool heating water and chilled water. The chiller plant's high-tech equip-

ment, created by a Chinese company called Broad, is formally known as a Broad Absorption Chiller and is the first such product to be installed in Hawaii. Heide & Cook sent three of its people to China to study at Broad's headquarters, ensuring that they understood the details involved in the chiller and optimal installation techniques.

Heide & Cook currently is working at Macy's Pearlridge store (in this case as general contractor), replacing the existing air conditioning equipment with totally advanced compressor technology. The Turbocor being utilized here, from the Danfoss Turbocor family of compressors, is a frictionless and oil-free compressor receiving much

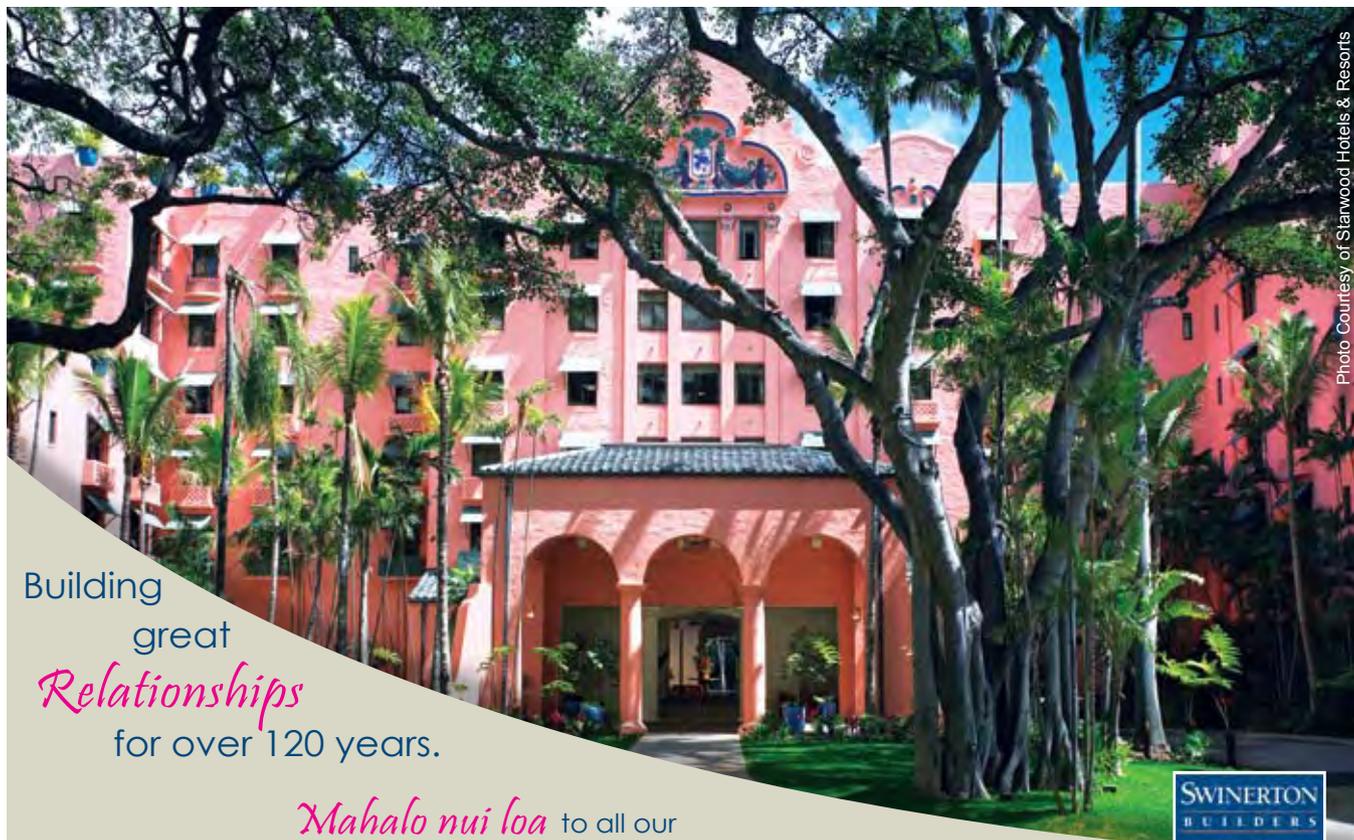


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attention for high efficiency in producing and using energy. In addition, the company reports that the oil-free properties of the Turbocor can mean a 50 percent savings in maintenance. Heide & Cook already has installed a Turbocor at the Macy's store on Maui.

Even though it was completed a short while back, the "ice plant" at Nordstrom in Ala Moana Center also merits mention for its energy efficiency and innovation. Heide & Cook was contracted by the project's mechanical design/build contractor PSF Mechanical, Inc. (under general contractor J. Kadowaki, Inc.) to assist with the design and to install the new HVAC system for Hawaii's first full-service Nordstrom store. The chiller plant runs at night during "off-peak" hours, creating ice in storage tanks. During the day, the plant shuts down and the ice is melted to provide air conditioning for the store, with the cycle of ice-making and melting repeated daily.

## High Technology — in a Nutshell

Big Island Carbon LLC, described as a "fully financed start-up company that will integrate agriculture and high technology utilizing macadamia nut shells for biomass conversion," plans to construct a \$20 million plant on the Big Island's Leeward Coast. The plant will be located in the Kaie Hana Industrial Park at Kawaihae, on four acres of land leased from the Department of Hawaiian Home Lands (DHHL). Company officials stress that the project fits into the state's efforts to reduce its dependency on foreign oil and also is in harmony with DHHL's energy policy, which includes facilitating the use of diverse renewable energy resources.

When fully operational, the plant



Rick Vidgen, CEO of Big Island Carbon

will manufacture premium grade granular activated carbon (GAC) and bio oil from the macadamia nut shells which have been proven to possess superior qualities to other feedstock, making the manufactured product a higher value commodity with specialty applications in air and water purification. A significant quantity of the bio oil will be used as a byproduct and sold on the Big Island as

biofuel and also will be used as a fuel source by Big Island Carbon.

"We have worked long and hard to bring Big Island Carbon's plant to reality," says Rick Vidgen, CEO. "This is an ideal industry that will provide quality year-round employment unrelated to the cycles of tourism, while supporting agriculture with a positive cash flow to the struggling macadamia industry. Big Island Carbon's plant will help diversify the

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Macadamia nut shells await processing at Big Island Carbon.

island's economy, create new high-tech jobs, support agriculture and be 'green' in the process."

The plant, which was expected to break ground at the end of April, will take approximately 10 months to complete. Big Island-based Tinguely Development will

oversee the construction phase. Big Island Carbon says it will work with DHHL on job training for many of the skilled positions required. "The production of combustible gas and biofuel is considered a 'firm' renewable energy source and an important part of our overall energy policy,"

says Micah Kane, DHHL director. "Reducing our dependence on foreign oil is important for the state and our economy and we are pleased to partner with Big Island Carbon on this renewable energy project."

In another biomass to energy story, also on the Big Island, the University of Hawaii College of Tropical Agriculture and Human Resources (CTAHR) and Hu Honua Bioenergy hosted the Hamakua Bioenergy Conference to review plans for the Hu Honua Bioenergy facility at Pepeekeo on the Big Island's Hamakua Coast. The conference hosts and members of the agricultural community established benchmarks toward the goal of making the bioenergy facility (the former Pepeekeo sugar mill power station) fully operational by 2010. The 24-megawatt (MW) carbon-neutral facility will convert locally grown biomass into electricity. Hu Honua Bioenergy, LLC, a Hawaii-based company created to bring the Pepeekeo power station back into production using renewable resources, is co-owned by ERH, a local firm that has been involved with renewable energy projects in Hawaii for the past five years and MMA Renewable Ventures, LLC, an investor in renewable energy projects. "Like its name, which means 'to come out of the earth,' Hu Honua turns to the land to effectively and sustainably meet Hawaii's power needs," says Dan KenKnight, director of Hu Honua Bioenergy. "Projects such as the Hu Honua Bioenergy facility play an important role in shifting Hawaii's energy mix away from imported petroleum toward renewable sources." Supplying energy directly into the regional utility grid, Hu Honua will deliver enough electricity to power approximately 18,000 homes on the Big Island, or between 7 and 10 percent of the island's total energy needs. Employing plant materials that otherwise go unused, the facility is expected to stimulate the local agricultural industry and prevent tens of thousands of tons of green waste

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BIOENERGY LLC



Photo courtesy of Hu Honua Bioenergy, LLC

Helping to paint the first green brush strokes on the former Pepeekeo sugar mill power station to symbolically transform it into a green biomass energy facility are (left to right): Dan KenKnight, Hu Honua Bioenergy director; Richard Baker, ILWU 142 Hawaii division director; Jane Testa, Hawaii County director of research and development; U.S. Sen. Daniel K. Akaka; U.S. Rep. Mazie Hirono; Tim Lasocki, MMA Renewable Ventures vice president; U.S. Rep. Neil Abercrombie and Guy Simmons, Hu Honua COO.

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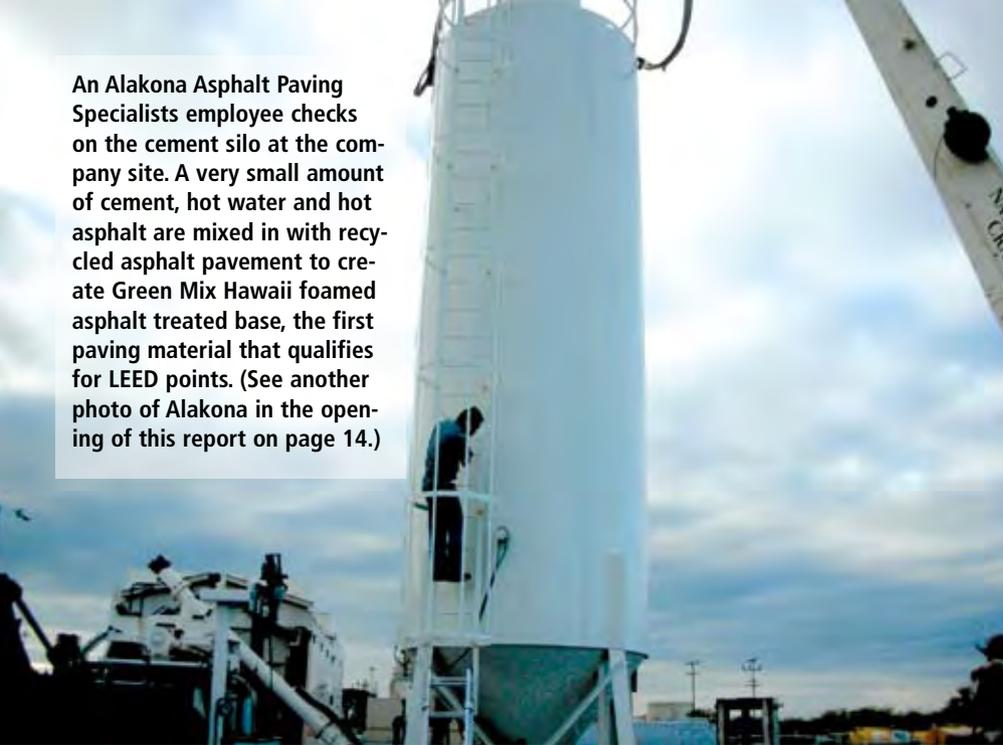
from going into Hawaii County's landfills each year. The project also is expected to create 130 permanent jobs and nearly 140 construction jobs during the project's development.

## Various Shades of "Green"

Timing the introduction of its new Green Mix Hawaii product with Earth Day on April 22, Alakona Asphalt Paving Specialists offered a first look at its foamed asphalt base and a demonstration of the new machine — the size of a 40-foot shipping container — that creates the mix. The WIRTGEN KMA 200 machine, the first of its kind in Hawaii, is capable of producing a 20-ton truckload of Green Mix Hawaii every six minutes. It uses a special cold mix process that uses less energy and emits virtually no particulate matter (pollutants).

Alakona president, Elisabeth R. "Betsy" Wilson says, "The foamed asphalt base is similar in strength to traditional asphalt-treated base; however, far less asphalt is used in the manufacturing process, thereby significantly reducing the cost." The asphalt base also is receiving praise as a "green" product because it utilizes 100 percent reclaimed (recycled) asphalt, eliminating the need for virgin aggregate and diverting material from the landfill. In addition, Green Mix Hawaii qualifies for LEED materials and resources credits based on its diversion of construction waste from landfills, its resource reuse, its recycled content and its use of regional materials. The product also is eligible for LEED innovation

An Alakona Asphalt Paving Specialists employee checks on the cement silo at the company site. A very small amount of cement, hot water and hot asphalt are mixed in with recycled asphalt pavement to create Green Mix Hawaii foamed asphalt treated base, the first paving material that qualifies for LEED points. (See another photo of Alakona in the opening of this report on page 14.)



and design credits. Wilson explains, “With Green Mix Hawaii foamed asphalt-treated base, the horizontal paved surfaces of a project can help toward achieving LEED certification or even ‘bump’ an already certified project to the next level.”

Alakona Asphalt Paving Specialists is a family-owned and operated local business founded in 1982.

In another take on “green,” Sunetric, previously known as Suntech Hawaii, now is offering a complimentary energy audit to help clients decrease their overall energy consumption. “Over time, we have found that the first way for our clients to save money is by lowering their overall energy consumption,” says Sunetric president Sean Mullen. “Through our audit, clients can then determine the appropriate size photovoltaic system required to meet their energy needs. A large part of this is simple education and teaching energy consciousness, which ultimately lead to a smaller carbon footprint and less impact on the environment. By lowering the overall energy a family or business uses, everyone benefits.” The one-hour audit is conducted by a Sunetric specialist trained to focus on residential or commercial energy consumption. The specialist also provides clients with a checklist that includes

behavior modification recommendations such as changing incandescent light bulbs to suitable CFLs (compact fluorescent light bulbs) and using a power switch to turn off electronics when not in use to eliminate phantom loads.

Recent Sunetric projects include the installation of a 500kW solar farm at Wilcox Memorial Hospital on Kauai. A project of Hawaii Pacific Health Partners, it is the first of its kind at a Hawaii hospital and the second largest solar farm in the state, supplying 52 percent of the hospital’s electricity needs during peak sun hours.

Sunetric also recently completed the installation of its largest Oahu commercial solar system to date at Heide & Cook’s Kalihi headquarters.

The 232kW high-efficiency PV solar electric power system is a 761-panel system that is expected to generate 379,000kW of energy a year, the equivalent of fully powering more than 40 homes annually.

## Taking the LEED

“Interest in sustainability is growing at a remarkable rate in Hawaii,” says Rhonda Goyke, chair of the U.S. Green Building Council (USGBC) Hawaii chapter. “The widespread adoption of the USGBC’s LEED Green Rating System on the mainland has helped to convince

the local building industry that this is not merely a trend but what soon will be simply ‘what is expected’ or the new ‘norm’ for the building industry.” Goyke’s comments are a fitting addition to this report on what is new in the green arena. For example, the USGBC Hawaii chapter is still a fairly new entity. It had been in the works since the spring of 2007 and ultimately became a reality last July. “We had a huge crowd turn out for the first meeting,” says Goyke. “It was standing room only. Frankly, we were not expecting such a response. But what a great problem to have!” Goyke says membership in the Hawaii chapter has increased over 900 percent since that first meeting.

In addition to her work in helping to get the USGBC Hawaii chapter off the ground and her leadership as its current chair, Rhonda Goyke and her husband Matthew (Matt) Goyke are the principals of Green Sand Inc. Architecture and Design. Matt is president and Rhonda vice president of the firm which specializes in sustainable design. In response to our question about innovation, new techniques and trends in green building, she says, “Trends that we see include interest in indoor air quality and healthy buildings, energy efficiency, residential energy production using sun and wind energy, rainwater harvesting, and an overall interest in being more self-reliant, more self-sufficient and using resources wisely.” Green Sand Inc. was founded in Hawaii in 2006 but both Matt and Rhonda Goyke have had heavy-duty prior experience in the field; Matt with more than 18 years in architecture and design plus several years in construction management and Rhonda with more than 17 years in the environmental field. “We joined forces three years ago,” says Rhonda, “to focus on sustainable design.”

At the recently held 2009 Hawaii Buildings, Facilities and Property Management Expo, the Goykes were panelists, along with Michael Chong of The Chong Group, in a forum titled “LEEDing by Example,”



**Koa Nani Brave and Beautiful in the Royal Hawaiian Center is a recent project of Green Sand Inc.**

presented in cooperation with the Hawaii State Department of Business, Economic Development and Tourism (DBEDT) and moderated by Gail Suzuki-Jones, research analyst with DBEDT's strategic industries division. (Suzuki-Jones is one of those green building heroes we referred to in the introduction to this report. Among her many "green" activities is serving as co-chair with Alan Ewell of AIA Honolulu's COTE, mentioned earlier in this report.)

Recent and current Green Sand clients include Nanala at Mehana, D.R. Horton, Schuler Division's live, work, play community in Kapolei; the Comprehensive Cancer Center of Maui and Koa Nani Brave and Beautiful — a contemporary Hawaiian jewelry showroom in the Royal Hawaiian Center. Other projects in the Royal Hawaiian Center include Love Renaissance (Tadd Construction, LLC) and Island Vintage Coffee. "Although sustainable design was not a goal of these clients," explains Matt Goyke, "Green Sand Inc. chose to integrate sustainable features into the projects."

## **A New Generation of Power Players**

And yes, we mean power in both senses of the word — fast-rising key players in the "green" arena with its focus on energy efficiency and sustainability. Pacific Sustainable

Building Science was formed in 2006 as Energy Management Solutions, LLC (EMS) to help builders, architects and owners create safer, healthier, more durable, energy-efficient and environmentally responsible homes throughout Hawaii and Guam, says founding principal Mitchell Johnson. EMS expanded over the next two years into related fields such as LEED, NAHB (National Association of Home Builders) Green Homes and select commercial projects and in January of this year evolved into Pacific Sustainable Building Science. At that same time Peter Stone, a friend and

former client of Johnson's, joined the company as a principal. The young company, which offers Energy Star for Homes, Energy Star BOPs (Builder Option Packages), HERS (Home Energy Rating System) ratings, LEED for Homes, energy modeling and green building project management, has earned more than its share of accomplishments and "firsts" since its inception. For example, Johnson points out that it is Oahu's only RESNET (Residential Energy Services Network) approved HERS certified provider. (Green Building LLC on Maui is the state's other RESNET Certified Rater.)



**Love Renaissance, a skin care company in Royal Hawaiian Center, was designed by Green Sand. Tadd Construction, LLC was the general contractor.**

## **USGBC Hawaii Chapter**

Elected in January were the following officers and directors of the USGBC Hawaii chapter:

- Chair — Rhonda Goyke, Green Sand, Inc. Architecture and Design
- Vice-Chair — John Bendon, Green Building, LLC
- Secretary — Jason Wanstrath, Pankow Special Projects
- Treasurer — Branka Knezevic, Group 70 International

Directors include Scott Inatsuka, Lincolne Scott; William Krill, Swinerton Builders; Laurens Laudowicz, 100% Green; Patricia McHenry, Cades Schutte LLP and Ross Yamasaki, KYA Design Group

Johnson himself was the first RESNET approved HERS rater in the state. "We also were the first rating firm to offer LEED for Homes in Hawaii and we helped introduce the first community in Hawaii to achieve a minimum of 50 percent more energy efficiency than a standard home — Gentry Homes, Ltd.'s Latitudes community. We also helped introduce the first Energy Star certified community on Guam — Watt's Constructors' North Tupalao."

Among the company's other clients are Haseko, Group 70, Peter Vincent & Associates and Design Partners Inc. (DPI).

Stone also is a HERS rater and certified green building professional. "Being born and raised in Hawaii," he says, "I've always had a passion for energy efficiency and sustainability." (Editor's note: As we were researching Pacific Sustainable Building Science for his report, the company received word that it had



Peter Stone (left) and Mitchell Johnson, principals of Pacific Sustainable Building Science, made their own furniture from recycled materials for the firm's new downtown Honolulu offices. The door they are working on here ultimately was transformed into a desk.

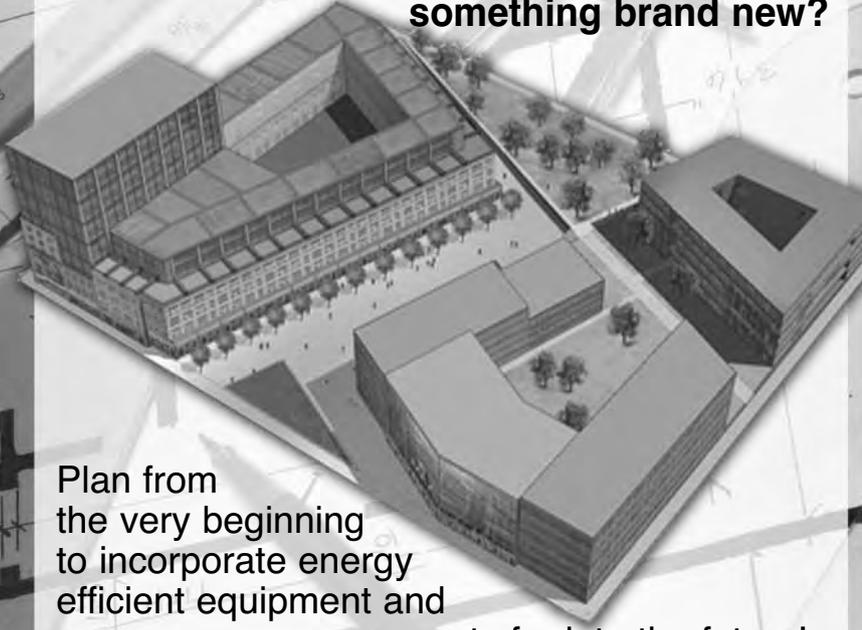
received an Energy Star Leadership in Housing Award from NAHB.)

Is there a new attitude towards green building and energy efficient technology? Johnson says he has seen "a 180-degree turn" in interest and efforts over the past two to three years.

In a visible example of practicing what they preach, Johnson and Stone are building their own furniture for the company's new downtown Honolulu offices from reclaimed (recycled) materials purchased from such sources as Reuse Hawaii. Bottom

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two types of processes used to create steel — the basic oxygen furnace and the newer electric arc furnace which uses 95 percent recycled scrap. Using the arc method means the recycled content of our products is increased.” Usami also points out, “We brought the manufacturing process closer to the end user, so transportation fuel also is being conserved. Our basic sustainability message focuses on not adding to Hawaii’s limited landfills. In addition, since there are no

steel mills here, we are not mining anything in Hawaii.”

• Sherwin-Williams reports that it is “committed to being a recognized leader in the development of renewable processes, products and initiatives that help preserve natural resources, protect the environment and contribute to social improvement.” To this end, Sherwin-Williams has created EcoVision, a company-wide mission to develop solutions that reduce environmental

line? “We try to walk the walk.”

There were many industry members who were eager to talk with us about green building, from new technology to new services and new interest in the overall area. For example:

• Dietrich Metal Framing’s Akira Usami tells us that every pound of material brought into the Dietrich plant is utilized or recycled or sold as scrap and shipped overseas. “Nothing goes into the landfill,” he says. He also explains, “There are



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impact. "It's an ongoing mission that all Sherwin-Williams employees can share to keep the environmental impact of our actions top of mind and to continue to develop products that work toward that goal," says Steve Revnew, director of marketing/product development. To date, EcoVision actions include reducing waste and conserving energy in manufacturing facilities, minimizing fuel consumption on distribution routes, implementing recycling programs and pioneering the use of sustainable raw materials in many paint formulations. The company's GreenSure® mark helps customers identify products that meet green criteria and highest performance standards.

- Castle & Cooke Hawaii and SunPower Corporation have opened the 1.2 megawatt La Ola Solar farm on Lanai. The system is expected to generate approximately 3 million kW of electricity per year. "With the dedication of Hawaii's largest solar farm," says David Murdock, chairman and owner of Castle & Cooke Inc., "we are delivering on our commitment by bringing clean solar energy to the people of Lanai."



The TurboCoc already has been installed at Macy's Maui store.

## TERMIMESH IS GREEN!

### LEED CREDITS:

- Indoor Environmental Quality
- Indoor Chemical and Pollutant Source Control
- Use Of Local Regional Materials  
(Made in Hawaii: Building Product Designation: HM)

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Dietrich Metal Framing's Akira Usami at the company's booth displaying the benefits of green building, at the recent ABC (Associated Builders and Contractors) national convention, hosted by the Hawaii chapter

- REC Solar, Inc. recently held a blessing for three solar electric systems which will provide power to Tony Group's Nissan, Honda and Hyundai dealerships, offsetting approximately 20 percent of the company's energy needs. "Tony Group has always placed a high value on being a responsible member of the communities we serve," says Stan Masamitsu, president of Tony Group.

- Alternative wind energy company First Wind has received the go-ahead to begin building a wind farm on Molokai, through an agreement between First Wind, Castle & Cooke and HECO. In the new agreement, First Wind and Castle & Cooke, formerly competitors in submitting wind energy proposals to the state, will build wind farms that will supply a combined 400 megawatts of energy to Oahu, ultimately connecting Lanai and Molokai to Oahu's energy grid through an undersea cable.

The one consistent theme we discovered in researching this report was the commitment and passion of those involved in Hawaii's green building activities. This includes long-time advocates who at one time fought a lonely battle in their attempts to create significant interest in green building as well as industry icons and new players who not only help to instill green building practices in clients' projects but also follow through with their own companies' sustainable practices.

It also includes those professional associations that have created green building categories in their award programs, an

excellent incentive for more sustainable projects as well as a means of increasing awareness and visibility.

We have come a long way since words such as green building and sustainability first surfaced

in our communities. Now we speak familiarly of biomass and carbon footprints.

Most importantly, it seems that it's not just talking the talk.

It truly is, more and more, walking the walk.

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