

# The GREENING of Hawai'i



## ISLAND BUILDERS AND DESIGNERS, LEADING THE CHARGE TO SUSTAINABLE LIVING

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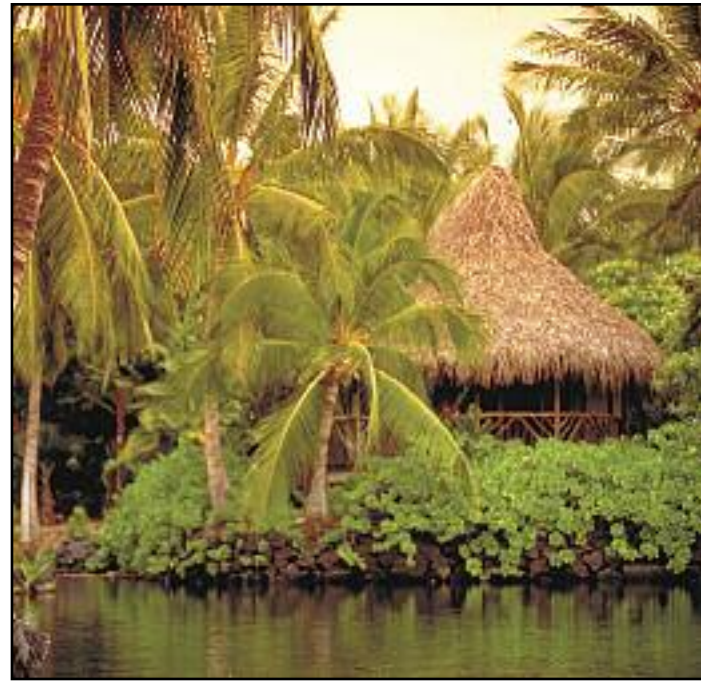
IT'S NOT EASY BEING GREEN, AS KERMIT THE FROG FAMOUSLY SANG many years ago. But in the Hawaiian Islands, leading luxury resorts and cutting-edge home builders and suppliers are proving that you can be environmentally friendly without sacrificing style and comfort. In the Islands, as elsewhere around the world, more and more architects and designers are striving to be,—and be seen as—green. Interest in pro-conservation products and policies is shared by building professionals as well as governments, businesses, resorts, and homeowners, many of whom clamor for the latest green goods.

But what does it really mean to be “green” and, at their best, how do the myriad eco-friendly efforts actually improve our lives? Above all, how is the green movement finding concrete expression in Hawai'i?

To start with the public sector, the State of Hawai'i is taking a leading role in the development and implementation of green technologies. The Hawaiian Electric Company (HECO) pursues its own renewable energy projects and invests in others through an unregulated, renewable energy subsidiary called Renewable Hawai'i, Inc.. The Maui Electric Company (MECO) can claim bragging rights too with several green projects,



OPPOSITE PAGE: A Balines style design created by Bali Built Homes. THIS PAGE: To reduce the use of precious woods Balu Built builds conventionally up to where the roof begins, then use hardwoods where they can be seen. Michael McLychock explains, “There is really no need to use hardwood inside your walls or under your floor.” This approach eliminates the larger wood beams needed by up to 70% but it still shows off the gorgeous roof structures with rattan underlay, natural flooring, cabinets and decking.



The Kona Village Resort at Ka'upulehu is an 82-acre property beautifully situated along the Kohala Coast that has remained true to Hawaiian culture and traditions since it opened in 1965. LEFT AND ABOVE: Each private guest hale is built in a traditional island motif using sustainable materials such as the roof materials which comes from the coconut palms on the property and making use of nature's cooling system instead of air conditioning.

including one that provided a solar roof to the Lahaina Civic Center. Hawai'i's public renewable energy programs include photovoltaic systems for schools, plus nearly \$50 million in rebates to bring solar energy to 30,000 private homes and energy-efficient technologies to businesses.

With results like these, Hawai'i is literally a shining example of how people can benefit from renewable energy. About 7% of the electricity sold to customers of HECO and its subsidiaries, HELCO and MECO, comes from RE resources including sun, wind, biomass, geo-thermal and other sources. That's compared to a nationwide average of only 2%.

Positive examples can be found in the Hawai'i hospitality sector too. HELCO has partnered with the Outrigger Waikoloa Hotel, Pacific Energy Services and Solel on a project to demonstrate the value of solar thermal power to hotel guests. Since April 2003 the system has used solar thermal panels to produce domestic hot water to help meet the hotel's needs.

Another Big Island hotel pioneering green living is the Kona Village Resort at Ka'upulehu. The 82-acre property is beautifully situated along the Kohala Coast and has remained true to Hawaiian culture and traditions since it opened in 1965, demonstrating its deep respect for the *'āina* (land) through a variety of eco-friendly endeavors.

From the day it opened the resort began recycling long before the practice was in vogue and today it maintains an environmental record that would make other resorts, well, green with envy. For example, the roofing material on the resort's restaurants, spa and fitness center and each of the 125 individual thatched-roof guest haies (bungalows) is derived from the thousands of coconut trees that grace the property.

Taking a cue from the ancients, KVR's buildings were designed to make use of cool ocean breezes rather than noisy air conditioning. It follows the resort's "unplugged" philosophy that proudly shuns telephones, televisions and radios, much to



ABOVE: The Diamond Head Self Storage, in Honolulu. In an effort to provide a sustainable design, RIM Architects created a building that uses the footprint of the existing building and 50 percent of the existing walls as well as solar energy panels.

**“Sustainable” in design and lifestyle terms means, “geared toward making human economic systems last longer and have less impact on ecological systems”—particularly with regard to global issues like climate change and resource preservation.**

the delight of guests.

In seeking harmony with the environment, the Kona Village Resort not only authenticates its timeless Hawaiian style; it also reduces power consumption and helps ensure a sustainable future. These steps have not sacrificed the guest experience either. KVR has been rated by Travel & Leisure Magazine among Hawai'i's top 25 best hotels, listed on Conde Nast Traveler's "World's Best Places to Stay" and "Top 20 Hawai'i Resorts" and ranked by Forbes.com among the top ten luxury family resorts in the U.S.

Meanwhile at the Four Seasons Resort Maui at Wailea, Hawai'i's only AAA Five Diamond and Mobil Five Star resort, efforts are constantly underway to improve the guest experience while boosting efficiency, all in an environmentally sensitive way. As part of a major refurbishment project that just concluded last year the resort invested in brand new technology for their laundry operation. Resort manager Simon Pettigrew explained the overhaul included, "the implementation of a Central Batch

Washer, which aids the speed of the operation but is also very user-friendly as it relates to the use of chemicals, water and gas. So it's environmentally friendly as well as being the latest and greatest."

Given the Aloha State's widespread enthusiasm for eco-friendly elements, it's not surprising that Hawai'i is home to green-leaning architectural and design firms. Take RIM Architects, Hawai'i, for example. Led by principals Matt Gilbertson and Dave McVeigh, the firm offers comprehensive architecture, interior design, and planning services that resonate with green priorities. Gilbertson adds, "We also offer unique services such as LEED building commissioning for projects, carbon footprint analysis, life cycle cost analysis and other services that are now being requested due to the expansion of sustainability in the industry." (LEED stands for Leadership in Energy and Environmental Design; it's a rating system created by the U.S. Green Building Council.)

(LEED is a consensus-based, voluntary national rating sys-



**LEFT:** Bali Built Homes offers architectural designs for tropical homes and imports hardwood house materials and other stone and accessory items from Bali. The company offers a roster of options to make homes green including solar hot water heaters, photovoltaic panels, solar-powered roof fans, rain water collection cisterns, grey water systems, anaerobic septic systems, energy efficient lighting, energy star appliances, and home automation systems, all to lower energy bills and help protect the environment.

**OPPOSITE:** Bamboo is a green alternative to other hardwood floors. Bamboo Flooring of Honolulu offers E-Boo flooring, New Mulberry flooring, Palmwood (Coconut) flooring, cork flooring, cork underlayment, and bamboo tabletops. "Being "green" is one of the founding philosophies of our company," says Elwell. "It means that our products are made from materials that are renewable, sustainable, and are low in VOCs, formaldehyde and other harsh chemicals."



tem for developing high-performance, sustainable buildings. It addresses all types of structures and fosters a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

In addition to being the nationally accepted benchmark, LEED serves as a helpful rating tool that provides measurable results for building owners and occupants. Architects, designers, landscape architects, real estate professionals, facility managers, engineers, construction managers and lenders all use LEED to help guide the built environment toward sustainability.)

To underscore the firm's green ethos, Gilbertson says, "We have adopted a statement that reflects our local roots in Hawai'i: 'I mea e malama a ike kanaka a me ka honua,' which translates, 'So the people and the earth will be cared for.' This focus on the broadest definition of sustainability—building design, cultural, community and individual—helps encompass all aspects of the company's goals."

Gilbertson says they are backing up those words with concrete actions too. "We are doing everything we can as a compa-

ny to inspire our employees to "walk the talk" by living, working and acting responsibly. And this starts at the top. By the end of this year, all of our Principal owners across our footprint will be LEED accredited. We have expanded their education and training programs and involvement in the US Green Building Council, eco-volunteerism and charitable involvement, our entire way of doing business, to reflect this aspiration. Our office is moving past simple recycling programs towards complete eco-friendly consumables, the highest energy efficiency standards and much more."

Honolulu-based Philip K. White Architects is another firm known for designing buildings that are environmentally sensitive and culturally respectful. Working on everything from private homes to offices and hospitality work, PKWA was among the first architectural firms to demonstrate that a green building can also be stylish and visually appealing. They recently put those skills to the test while seeking new headquarters to accommodate their growing business. Instead of starting from scratch they ended up buying an older building with Mary Philpotts of Philpotts and Associates, and completely updated it with green in mind.

The results of the eco retrofit are impressive. They installed a PV system, which provides power for a good percentage of the lights and the elevator and they use occupancy sensors to turn off lights after 20 minutes of inactivity. The toilets are dual flush and faucets in the building are all low-flow, automatically controlled and hydro powered, meaning the water flow generates power to keep batteries charged. All of the carpets, adhesives and paint used are low VOC (volatile organic compounds) and they used recycled or renewable materials including bamboo, sisal, and eucalyptus wood that was grown in a soon-to-be certified forest on the Big Island.

Another strong advocate for the use of renewable resources is Mark Elwell, founder of Hawai'i-based Bamboo Flooring. He explains, "I began importing bamboo over a decade ago and have been working with various green flooring products ever since. Being "green" is one of the founding philosophies of our company. It means that our products are made from materials that are renewable, sustainable, and are low in VOCs, formaldehyde and other harsh chemicals."

Options were scant initially, but Elwell says choices have increased substantially. "Although we initially began with bamboo, we now have a number of exclusive products that are not only environmentally friendly, but beautiful and exotic as well." That list includes E-Boo flooring, New Mulberry flooring, Palmwood (Coconut) flooring, cork flooring, cork underlayment, and bamboo tabletops.

Elwell is proud of Bamboo Flooring's extracurricular green activities. "We have worked on a number of projects with Global

Green, an environmental organization striving to bring awareness to global environmental issues. We also support Habitat for Humanity, and supplied materials for a Seattle-based project on Extreme Home Makeover."

It's clear that being green for Elwell is more than a business philosophy and he speaks passionately about the level of the Islands' eco-awareness. "Hawai'i is a great environment in which our company has been able to thrive because the people here are very enthusiastic about environmentally conscious products. I believe that Hawai'i is an environmentally educated group that should be a leader in environmental conservation."

Echoing that strong eco-ethic is Hawai'i-based Bali Built Homes, LLC. Led by owners Michael and Lani McLychok, the company offers architectural designs for tropical homes and imports hardwood house materials and other stone and accessory items from Bali.

Each home is designed for modern tropical living, with spacious covered lanais and expansive glass sliding doors for extended open living and enhanced views. Open floor plans and cathedral ceilings connote spaciousness and all homes come complete with designer hardwood kitchen cabinets, bathroom vanities and a range of finishing choices.

The company delivers these extraordinary and authentic homes by partnering with one of the top Balinese Architects. It also works closely with local production and design teams to ensure eco-friendly practices. All of the wood, including mahogany, teak, ironwood, bangkirai, merbau and acacia is harvested and bought from legal government sources and each log

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is stamped, certified and taxed. These heavy taxes are used to help control illegal logging, which in turn protects forests. And all the hardwoods are termite-resistant negating the need for chemical treatment, leaving them toxic-free.

To reduce the use of precious woods they can also build conventionally up to where the roof begins, then use hardwoods where they can be seen. Michael explains, "There is really no need to use hardwood inside your walls or under your floor." This approach eliminates the larger wood beams decreasing the amount of hardwood needed by up to 70% but it still shows off the gorgeous roof structures with rattan underlay, natural flooring, cabinets and decking.

Lani notes that builders are now constructing walls in a variety of eco-friendly materials, including recycled Douglas Fir, recycled steel, or insulated concrete forms. They often prefer using recycled steel or concrete forms for their strength, time and cost savings. She says, "We are particularly impressed with Nudura concrete systems because they are green, approved by LEED and the walls are Energy Star-rated R22-26."

In addition, the company offers a roster of options to make homes even greener. The impressive list includes solar hot water heaters, photovoltaic panels, solar-powered roof fans, rain water collection cisterns, grey water systems, anaerobic septic systems, energy efficient lighting, energy star appliances, and home automation systems, all to lower energy bills and help protect the environment.

While a growing number of companies are espousing green products and techniques for the inside of homes, one stands out for championing outdoor eco-friendly services. Designers Greg and Terri Lee created 1st Look Exteriors in 2002 to deliver creative and green outdoor products and services. Using recycled copper, glass, and organic plant material in various artistic mediums, 1st Look Exteriors has pioneered a variety of lighting, water features, lighting accents, and garden furniture for home exteriors in addition to tropical photographic and print images.

Terri explains, "We are the only com-



pany in the islands that offers sustainable outdoor furniture including patio furniture, benches, tables, water features, all made from recycled plastic." Greg adds, "Being green is not a new way of thinking for us. Being environmentally sensitive has always been our philosophy."

They offer the widest selection of LED lighting for commercial and residential use on the islands. Terri says, "These lights use only 2.5 watts of power to equal 25-50 watts of power without losing light intensity and the bulb lasts 80% longer." Their work also includes green rooftop designs, where they create entire sustainable plant environments on rooftops.

After years of landscape work for schools, Terri and Greg became concerned about the use of common but harsh chemicals in the ground so they sought out



safer products to maintain landscapes. Greg explains, "The active ingredients that make these more eco-friendly herbicides work, is sunlight, so it leaves no residual chemicals. We also use Neem oil to help control insects and the fertilizers we use are made from sugar cane byproducts."

For pioneering eco-efforts like this, they received the "Build It Green" award for 2005 from the building industry of Hawai'i and in 2007 "Scenic Hawai'i" awarded them for a community project with elementary school kids.

The O'ahu natives are proud of the green services they offer and the market they serve. As Greg notes, "Hawai'i has an abundance of natural resources like sunlight, wind, waves, and currents—but with the rising costs of oil, electricity and finite natural resources, our goal is to be more self-sustainable, resourceful and be able to recycle. Due to our size and remote location, it's important to make the best use of what is available to us in our own backyard." Terri adds, "There's nowhere else you can find an ecosystem like we have here in Hawai'i, so going green is a vital step in protecting our fragile ecosystem."

Thanks to the efforts of Hawai'i's many eco-friendly businesses and groups, as well as programs like LEED, being green is more than a passing fancy: it's the way to a sustainable future. Perhaps it's still not easy being green, but it's getting easier all the time – and as Kermit the Frog himself noted in his famous song, "Green can be big like an ocean, or important like a mountain, or tall like a tree... green can be cool." 🌿

ABOVE: Bamboo is a sustainable material that can replenish the amount used for a 3,000 sq. foot home after just a few years.

**Rim Architects - Hawai'i:**  
[www.rimarchitects.com](http://www.rimarchitects.com)

**Philip K White Architects:**  
[www.pkwa.com](http://www.pkwa.com)

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