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To Our Valued Commercial Customers

ALOHA! Welcome to the June edition of the *Powerlines* newsletter. Here's what's in store for this issue!



- Sheraton Princess Kaiulani Hotel an Energy Star
- Cool savings arrive at Kaimuki Shopping Center
- Future DDC control system engineers in action at the 2004 Botball Tournament
- High Tech Elevators and Power Quality
- New Developments in VFD Rebates
- LEDs Enter the Navy

Mark your calendar for HECO's 6th Biennial Efficient Electro-Technology Exposition & Conference, scheduled for **October 27 – 28, 2004** at the Sheraton Waikiki. Additional information inside.

Mahalo,

Dr. Karl E. Stahlkopf
Senior Vice President of Energy Solutions
and Chief Technology Officer

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A Vision of Energy Efficiency

Sheraton Princess Kaiulani Hotel

Year round sunshine, sparkling sandy beaches, clear blue water with gentle waves, gentle trade winds and..... energy efficiency? Let's face it, most people are not thinking about energy efficiency when they are visiting Waikiki. However, the Sheraton Princess Kaiulani hotel, located in the heart of Waikiki, just received two distinguished awards, the ENERGY STAR Building label, and the Starwood Hotels & Resorts Number One ranking as the most energy efficient property in their North American Division. Both awards are the result of the hotel's diligent efforts in utilizing the most current energy efficient technologies. More specifically, the two awards are the culmination of a commitment and effort to an energy efficiency vision that started 14 years ago.

As *Powerlines* reported in 1994 and again in 1997, the Sheraton Princess Kaiulani embarked on a master plan in 1990. For Chief Engineer Marty Heede; however, the vision began a few years earlier when he struck up a conversation with a gentleman that walked past the hotel every morning. It turns out this gentleman was a mechanical engineer who had intimate knowledge of the hotel from past jobs. After several months of sidewalk discussions, Heede hired the gentleman to develop a master plan to make the hotel more energy efficient.

Continued on next page

The first phase of the Master Plan was implemented over a 3-year period beginning in 1991. These phases emphasized consolidation and improvements to the existing chilled water plants and chilled water distribution systems serving the hotel's three towers. An efficient heat pump water heater was installed along with a plate heat exchanger to reclaim heat from condenser water and pre-heat domestic water. Marty says: "We were pleasantly surprised at the energy savings we saw. With the increased electrical load from the heat pump and added cooling load (due to improved distribution), we were really expecting an increase in electrical consumption." The hotel has also completed and installed lighting retrofits, variable speed drives on pumps, occupancy sensors, high efficiency elevators, and an energy management system over the years. Along with the energy savings, the hotel has received **\$94,000** in incentives from the Hawaiian Electric Company (HECO) Energy Solutions Program.

Besides saving electricity, other energy saving measures included the installation of a high efficiency boiler, low flush toilets, low flow showerheads, automatic valves on public fixtures, and reflective roof paint. Heede also put together an energy committee to educate employees on how to save energy at home. "If they can save energy at home, we were hoping it would carry over to the workplace." Using HECO's "Energy Tips & Choices" as a guide, Heede stated that one hotel employee decreased his electric bill by over \$100. HECO's Director of Customer Technology Applications Division, Paul Fetherland can still remember Marty telling him the story about painting his own roof white to keep his house cool.

The Sheraton Princess Kaiulani is the first hotel in Hawaii to attain the prestigious ENERGY STAR Building label and only the second hotel nationwide to receive the award in the Upper Upscale category. In fact, their score of 95 was



one of the highest ever achieved. During the awards ceremony last month, Lieutenant Governor Duke Aiona praised the hotel's effort as a role model in helping decrease the state's dependence on fossil fuels.

As we mentioned earlier, the Princess Kaiulani Hotel was also honored with the Number One ranking among North American Starwood hotels for energy efficiency. Starwood employs an energy-consulting firm that rates the Starwood properties based on a variety of energy factors. Fred Orr, General Manager of the Sheraton Princess Kaiulani and Sheraton Moana Surfrider comments, "If you have someone with a vision and someone else with the resources to



Left to Right: Darren Kimura – President/CEO of Pacific Energy Services, Lt. Governor Duke Aiona, Fred Orr – General Manager of Sheraton Princess Kaiulani Hotel, Marty Heede – Director of Engineering of Sheraton Princess Kaiulani Hotel, Dean Higuchi – Pacific Affairs Specialist for the EPA, Eileen Yoshinaka – Pacific Liaison for the US Department of Energy.

carry it through, great things can happen. We were fortunate enough that Marty had the vision and that our owners (Kyo Ya) put forth the resources to make things happen".

Even with these achievements, Heede remains on the lookout for new technologies he can implement. He is working with Lawrence Berkeley National Labs to beta test a task lighting lamp and is also considering implementing sensory light switches for the guestroom bathrooms. According to Heede, one of the greatest benefits of their application of technology is that they have been able to improve the level of guest comfort while still helping to reduce operating expenses. "Although energy savings are one way the engineering department can improve earnings, we wouldn't do any of the projects if it sacrificed the comfort of our guests. It wouldn't make sense since we are in the hospitality business."

The Environmental Protection Agency (EPA) and the Department of Energy (DOE) established the ENERGY STAR program as a way to help businesses and individuals protect the environment through superior energy efficiency. To qualify for the ENERGY STAR Building label, several criteria must be met. One of the criteria is to benchmark energy consumption on a scale of 1-100. Buildings that rank among the top 25 percent nationwide, in terms of energy performance in all similar-use buildings, can qualify for the ENERGY STAR rating. In addition, a Statement of Energy Performance must be verified by a Professional Engineer verifying that the facility meets industry standards for comfort and indoor air quality.

For more information about the EPA Energy Star Programs and Services, visit www.energystar.gov. To find the four buildings in Hawaii that are labeled Energy Star Buildings, click on the link [Find Labeled Buildings](#).