



## Press Release

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## Hawaii Natural Energy Institute To Conduct Energy Research At Kawaikini School Utilizing New Project Frog Classrooms

Honolulu, HI – Today, a Hawaiian Blessing will take place at Kawaikini New Century Public Charter School, in Lihue, Kauai. Students will now have the unique opportunity to learn in new classrooms that are truly research and learning platforms in and of themselves. Two 1,200-squarefoot, state-of-the-art structures have been installed at the school, the second of three sites selected for energy research that will test the effectiveness of innovative energy efficient buildings powered by renewable energy.

“The ‘Ohana of Kawaikini, kumu, limahana, mākua and keiki, are excited to begin the expansion of our facilities with this innovative project.” said Kaleimakamae Kaauwai, Executive Director of the School. “Kawaikini values hands-on experiences as well as academics in the Hawaiian language and cultural learning environments that we create here. This building is a living model of sustainable design. We look forward to working with the Hawaii Natural Energy Institute (HNEI) in observing and monitoring the performance of these wonderful structures that the school now refers to as *Hale Akamai*.”

The pre-engineered test platforms, created by California-based Project Frog, Inc., incorporate passive design elements to decrease energy demand, thus increasing the effectiveness of its photovoltaic systems. The structures are outfitted



The front (top) and side (bottom) of the state-of-the-art structure which was created by Project Frog Inc. for Kawaikini School. Images courtesy Project Frog

with high-tech energy monitoring instruments providing valuable research data on the performance of design and material components.

Project Frog's design provides air quality management and thermal comfort through the use of natural convection and air displacement to reduce the requirements for mechanized systems. Optimized daylighting and glare reduction provides high quality illumination for over 95 percent of daylight hours, keeping the electrical lights off during most of the school year. The design reduces energy consumption, construction waste and operating expense, while providing spaces that are adaptable for a variety of uses. The Hawaii Natural Energy Institute of the University of Hawaii is leading the research study which will analyze the performance of these energy systems for potential future Navy applications in the Pacific region.

"We are excited to play such an integral role in HNEI's research and together advance the science and technology behind all new construction throughout the Islands," said Nikki Tankursley, director of marketing for Project Frog.

"Frog component buildings are responsive to the Hawaiian climate," according to Tankursley. "With a small rooftop photovoltaic array, the classroom at Ilima Intermediate School produces more energy than it consumes."

At Kawaikini, HNEI will also compare the performance of two different photovoltaic systems, one using a high efficiency crystalline technology, and the other using a newer thin film technology.

"This important assignment is part of a larger research program to evaluate energy technologies for the Office of Naval Research that includes a range of efficiency, storage, and renewable generation systems," said Dr. Richard Rocheleau, HNEI Director.

The Office of Naval Research is providing funding for the project through a grant to the University of Hawai'i. This project supports the Department of Navy's energy programs to demonstrate technologies that enable increased implementation of alternative energy sources and promote energy security were made possible by the efforts of the late U.S. Senator Daniel Inouye, to ensure that the Department of Defense has adequate resources to make these critical, cutting-edge investments in energy technology.

Project partners include State of Hawaii Department of Education, University of Hawaii – Hawaii Natural Energy Institute, Project Frog, Inc. and MK Think.

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#### **About Kawaikini New Century Public Charter School**

*Kawaikini New Century Public Charter School's* core curriculum focuses on three general areas of instruction: Kaua`I a Manaokalanipō, focusing on Arts, Literature, Science and Social studies integrated in Hawaiian concepts, traditions of Kaua`I and the expertise of the Kaua`I community; Ola Pono, which incorporates traditional medicine, exercise and nutrition into the lifestyle at Kawaikini; and Ke Ala `Ike, which provides students with life skills to pursue career and/or college goals upon graduation. Students in grades K-4 are immersed in the Hawaiian Language to the fullest extent possible during the day, while in grades 5-12, our students receive part of their instruction in the medium of the English language. Kawaikini's program immerses the students in the language, VALUES AND TRADITIONS of Hawaiian culture and fosters an increased level of hands-on experiential learning.

#### **About Hawai`i Natural Energy Institute**

An organized research unit of the University of Hawai`i at Manoa's School of Ocean Earth Science and Technology (SOEST); HNEI is a nationally acknowledged leader in energy research with active programs in alternative fuels, energy efficiency, systems integration/energy security, renewable energy generation, and electrochemical power systems. HNEI has undertaken a pivotal role within the State, working closely with DBEDT, the HPUC, and the utilities to reduce the state's dependence on fossil fuels. HNEI is leading several major public/private partnerships to deploy and demonstrate grid-scale energy systems to address the technical issues associated with high penetration of renewable energy technologies onto the grid.

## **About Project Frog**

Better. Greener. Faster. Smart. Project Frog is on a mission to revolutionize the way buildings are created by applying technology to overcome the inefficiencies of traditional construction. The result is a structure that is measurably greener and significantly smarter; creating brighter, healthier spaces that inspire better performance from the people who occupy them. Project Frog offers a versatile ecosystem of products that adapt to all kinds of uses including: healthcare, education and retail. The innovative systems are frequent recipients of industry awards for their design and performance. For more information, visit [www.projectfrog.com](http://www.projectfrog.com).

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The School of Ocean and Earth Science and Technology at the University of Hawaii at Manoa was established by the Board of Regents of the University of Hawai'i in 1988 in recognition of the need to realign and further strengthen the excellent education and research resources available within the University. SOEST brings together four academic departments, three research institutes, several federal cooperative programs, and support facilities of the highest quality in the nation to meet challenges in the ocean, earth and planetary sciences and technologies.

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