



*State Rep. Cynthia Thielen represents the 50th House District (Kailua, Kaneohe Bay).*

## **Hawaii in prime position to attract companies in wave energy production** By Cynthia Thielen

**Southampton, England** » At the opening of the recent five-day European Wave and Tidal Energy Conference, I presented a proclamation from Gov. Neil Abercrombie and Lt. Gov. Brian Schatz encouraging wave energy developers "to strongly consider Hawaii as an ideal market to present your products to the world."

I also informed the nearly 500 attendees from 29 nations that Marine Corps Base Hawaii at Kaneohe Bay was leading our state with its plans to construct a wave hub, where local and international wave energy converters (WECs) could be "plugged in" and tested in Hawaii's waters. This readies Hawaii to benefit from a global surge in wave energy production.

Indeed, Mike Reed, of the U.S. Department of Energy, Water Power Program, told conventioners that the program's mission is to develop innovative technology capable of generating cost-effective and clean renewable energy. Between \$39 million and \$50 million in federal dollars is allocated for fiscal year 2012, with an ultimate goal of bringing 23-38 gigawatts yearly on line. Noting that technologies are rapidly developing, Reed made it clear the U.S. would be active in this new market space.

A bit of history, courtesy of Stephen Salter, of the School of Engineering and Electronics at the University of Edinburgh: "In the autumn of 1973 the western economies were given the rare chance of a ride in a time machine and saw what the world would be like when there was no longer cheap oil.

"Most people thought it looked rather uncomfortable. ... Others, who had previously been regarded as eccentric, increased their efforts to develop what were then called alternative, and now are called renewable, energy sources. Still others set out to destroy what they saw to be a threat."

And they succeeded.

Fast forward to 2011, and this time renewable energy must succeed, and wave energy will play a major role. There are nearly 10 WEC companies close to full commercial stage. Utilities are engaged with some of these, meaning they will go online, including Wave Dragon and Wavestar in Denmark, OE Ocean Energy in Ireland, Aquamarine-Oyster in Scotland, and Oceanlinx in Australia.

Scotland has declared it will obtain 100 percent electricity from renewables by 2020. At 31 percent now, wave energy is playing a major role in achieving this objective.

The CORES project (Components for Ocean Renewable Energy Systems), led by Tony Lewis, of University College Cork in Ireland, has been a collaborative effort by 13 partners in seven countries. Sea-test results have been very encouraging and CORES demonstrates how international collaboration can bring wave energy online.

Until Marine Corps Base Hawaii stepped forward, Hawaii's policies have been primarily limited to wind and solar, thereby ignoring the vast and powerful non-polluting natural energy source surrounding our islands. This fuel — the waves — is free, unlike imported fossil fuel the utilities use to power our islands.

With the leadership of MCBH, Hawaii will soon tap into its wave resources, ultimately reducing the cost of power and our addiction to oil.