

Northwest Energy Innovations Launches Azura Wave in Hawai'i

First Grid Connected Wave Energy Device in the U.S. to be Independently Evaluated

Honolulu, June 8, 2015 – After a several months of preparation, Northwest Energy Innovations (NWEI) has successfully deployed its *Azura*TM wave energy device at the United States Navy's Wave Energy Test Site (WETS) near Kaneohe Bay, Oahu, Hawai'i. The device will be deployed for 12 months of grid-connected testing as part of a rigorous program to commercialize the *Azura* technology.

"As the first grid connected wave energy device in the U.S. that will be tested and validated by an independent party, this deployment marks a major milestone for our team and the marine renewable energy industry," said NWEI Founder and CEO Steve Kopf. "A special thanks to Sea Engineering, our deployment contractor, for their tireless efforts in completing the assembly, launch, and installation of the *Azura* at WETS," Kopf added.

Deployment and testing of the *Azura* at WETS is supported by the U.S. Department of Energy, the U.S. Navy, and the University of Hawai'i. The University of Hawaii is responsible for data collection, analysis, and reporting as a means of independently validating the technology performance. The data will also be delivered to the U.S Department of Energy and the U.S. Navy for their use in ongoing efforts to validate wave energy technology and advance the marine renewable energy industry.

In addition to evaluating system performance in the open ocean over an extended period of time, data collected during the deployment will enable NWEI to develop a more accurate assessment of the technology's Levelized Cost of Energy (LCOE), which accounts for capital cost, project development cost, life cycle costs, and annual energy production. The data will also be used to validate computer simulations to support commercialization of the *Azura* technology.

"Standards, rigorous testing, and transparency are the foundations of our development program for the *Azura* technology. We believe that independent verification of performance data is imperative to achieving commercialization," Kopf added.

This pilot project builds on NWEI's deployment of a prototype at the Northwest National Marine Renewable Energy Center's test site off the coast of Oregon in 2012. The 2012 deployment was also supported by the U.S. Department of Energy, and NWEI applied experience gained from that testing to refine the *Azura* design, with a focus on optimizing the technology's LCOE through increased power output and improved durability, maintainability, and survivability.

Development of the *Azura* technology is a collaborative effort between NWEI, Callaghan Innovation, and Energy Hydraulics Ltd (EHL). Callaghan Innovation led the conceptualization and early development of the technology in New Zealand, and NWEI recently secured a global exclusive technology license from Callaghan Innovation to commercialize the *Azura* technology. EHL plays a critical role in advancing the technology and is responsible for the engineering, fabrication, and testing of the power conversion system.

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Northwest Energy Innovations (*NWEI*) *is a Portland, Oregon, based firm specializing in ocean renewable* energy development. An affiliate of Pacific Energy Ventures, *NWEI was formed in 2010 for the specific* purpose of advancing the AzuraTM technology in the U.S. With a broad range of experience and depth of knowledge in the ocean energy sector, the NWEI team continually demonstrates its ability to successfully execute energy technology commercialization programs. <u>www.azurawave.com</u>

Callaghan Innovation accelerates the commercialization of innovation by firms in New Zealand. It offers products and services that help businesses turn their ideas into internationally marketable products and services more quickly and successfully, and has a key coordination role for the innovation system – providing a single front door to the skills, advice, support and technical services that businesses need. www.callaghaninnovation.govt.nz

Energy Hydraulics Ltd. (EHL) is an innovative and progressive company incorporating four separate business divisions which specialize in providing turnkey solutions for motion and control technologies and systems. Based in New Zealand's industrial hub of Taranaki, EHL is one of the leading providers of precision-engineered solutions for a wide variety of mobile, oil and gas, industrial and marine markets. <u>www.ehltd.co.nz</u>