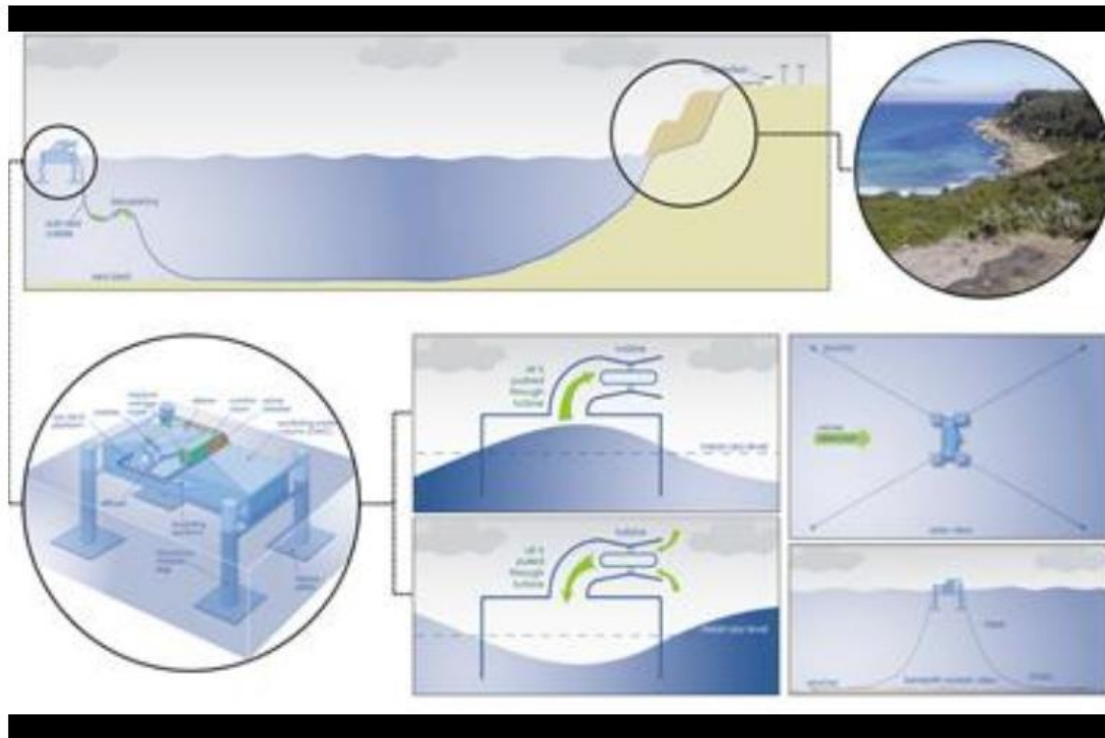


R.I. signs \$45M wave energy agreement



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A look at the technology behind the proposed wave energy agreement signed between Oceanlinx and the state of Rhode Island.

By Sherbie Worthen
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The state of Rhode Island took a plunge towards Rhode Island's energy independence when Governor Donald L. Carcieri signed a "memorandum of understanding" with Oceanlinx, an Australian company, to build two wave farms off Point Judith and Block Island on Dec. 5. The decision makes this the first East Coast state commitment to a particular form of wave energy out of a number of new technologies being tested around the globe.

Oceanlinx has had a successful two year trial operation in Port Kembla, NSW, Australia and has other proposed sites in Oregon, Hawaii, Cornwall, England and Namibia. The company says its "technology would allow it to produce electricity on a larger scale, at lower cost and at higher levels of reliability than that currently achieved by other wave power devices."

The Oceanlinx system is based on an oscillating water column. A partially submerged platform, 90' long by 60' wide and about 30' above the water line is anchored to the sea floor by cables with a buried power transmitting cable that runs to a conversion station on the shore. Within the platform is a chamber where rising waves force air out which then turns turbine engine blades that generate electricity. As the wave recedes, the turbine blades continue to operate.

Steve Kass, director of communications for Governor Carcieri, says this is a most exciting and far reaching proposal. "It is incredible" and so simple. The turbine floats, the wave comes through and preserves and creates electricity," he said.

The state is also seeing this as a major step forward in realizing the governor's goal of providing 20 percent of the state's electricity through renewable sources by 2011. "This is a win-win, with no carbon emissions, no dependence on Middle East oil, guaranteed price for 20 years and (potentially) a slow down in beach erosion," Kass said.

The deal is contingent upon the General Assembly passing legislation creating a state power authority that will then authorize \$45 million from general revenue bonds. Andrew Dzykewicz, commissioner of the State Office of Energy Resources, said he expects the legislation to pass in the next session. The authorized bonds would be repaid through the sale of energy from the Oceanlinx machines, he noted.

Necessary permitting involves approval of the RI Coastal Resource Management Council and the Federal Energy Regulatory Commission, a process, according to Kass, that could receive FERC approval in a year's time.

Under the agreement, the facilities for developing the wave energy will be built in Rhode Island. The first project off Point Judith would consist of 10 to 14 platforms that are expected to generate enough electricity to power up to 18,000 homes.

According to Tom Denniss, Oceanlinx founder and executive director, the cost of electricity "would be at or below the market price of power."

Although the RI project is the first for the East Coast, on the West Coast, Oceanlinx has a proposed site in Florence, Oregon where the company is expected to begin site research, consultation and a feasibility assessment over the next six to nine months, according to published reports.

Although new sources of new energy are vital, some concerns are being raised about potential environmental impacts of wave energy facilities. In Oregon, Pete Stauffer, of the Oregon Chapter of the Surfrider Foundation, said he has concerns about "potential impacts to ocean recreation, nearshore ecology, public safety, aesthetics and fishing access."

According to Foerd Ames, head of a Bristol, R.I. -based wave energy start-up, the cost to taxpayers could be minimized. Although the Ocean Wave Energy Co. principal suggested recent investment growth in the wave energy industry is a plus, he said, "\$45 million is a lot for Rhode Island taxpayers to solely provide one company. Many of us, including RI based Ocean Wave Energy Company, could well advance a development program with 1 to 2 percent of the above amount."

In Providence, Steve Kass suggested Rhode Island has a history of bringing all the stakeholders to the table from day one when introducing new initiatives. The University of Rhode Island is a key player in Oceanlinx' development and will be used by the company for research and analysis. Oceanlinx' business headquarters will also be located in Rhode Island. Once the financing is in place, they expect to begin generating electricity in about 30 months.