

# BLUE TECH INNOVATION IN TAIWAN AND THE GREATER BOSTON AREA

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# Greater Boston Area

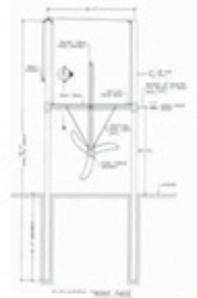
# Marine Renewable Energy Collaborative (MRECo) – Bourne, MA

- **What they do:** MRECo “envisions a future where New England obtains a significant, greater than 5%, of its power from reliable and predictable ocean based renewable energy technologies, *and supports the infrastructure for testing that allows the cost effective, rapid commercialization of new sustainable technologies* being developed by the rich entrepreneurial environment of the region.”
- **Bourne Tidal Testing Site** reduces the overall costs by 70% for tidal energy startups.

## Bourne Tidal Test Site

### Short Term (3 months) Tidal Testing

- Mounted on 2 pilings 20 meters south of railroad bridge
- Small turbines partial scale or distributed generation
- Battery package for non-grid connected communities

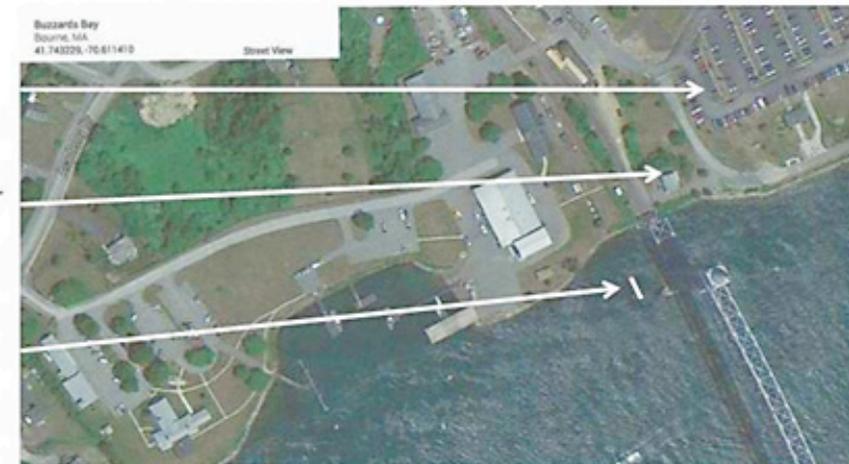


## Cape Cod Railroad Bridge Test Site

Parking Lot

Backup Power Enclosure

Test Frame



Innovation Grant, Seaport Economic Council

@2015 MRECo



## Resolute Marine Energy (RME) – Boston, MA

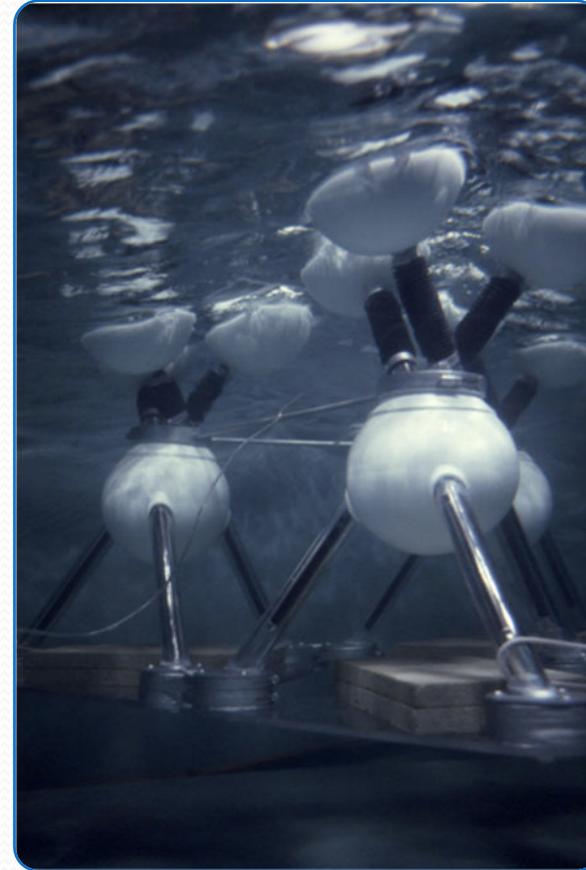
- **What they do:** “RME’s goal is to build and sell smaller-scale, wave-driven power solutions (1-50kW) utilized in commercial applications including open-ocean aquaculture, seawater desalination and ocean observation systems...Longer-term goal is to develop [wave power] technologies that are appropriate for utility-scale, grid-connected electricity generation“



Example of RME’s surge wave energy convertor

## Ocean Wave Energy Company – Portsmouth, RI

- **What they do:** Company aims to provide self-stabilized ocean wave energy conversion modules that have the following qualities: high electrical generation efficiency, rugged reliability, low maintenance, and low true cost.



Early OWEC Wave Energy Converter



# Blue Harvest Fisheries – Fairhaven, MA

- **What they do:** The company aims to “transform commercial fishing into an industry that is defined by sustainability, governed by transparency.”

## Sustainable Infrastructure



Example of a Blue Harvest Fisheries product



## InnovaSea – Boston, MA

- **What they do:** The company aims to “create innovative and integrated production systems that efficiently and effectively produce fish, while not harming the environment.”

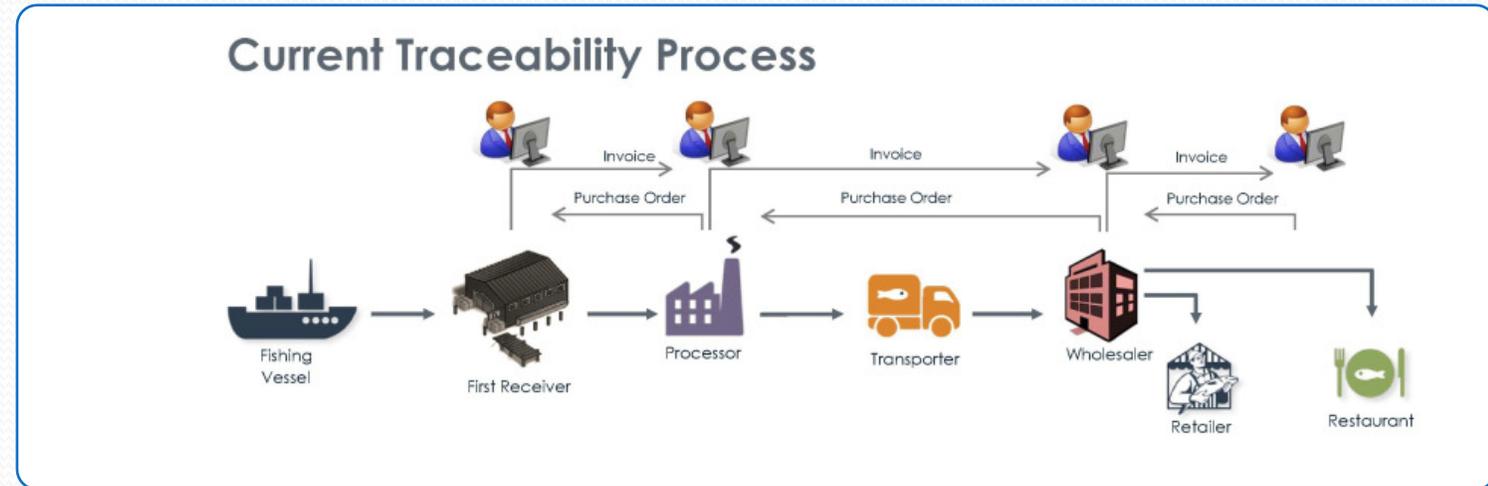


InnovaSea Sea station integrated nursery net



# Backtracker Inc. – Boston, MA

- **What they do:** “BackTracker has developed a seafood traceability database that compares confidential data from supply chain participants to landings data collected by the government in order to provide seafood dealers, processors, retailers, and their customers a solid verification of each individual lot of product that has been transacted.”



## Vineyard Wind – New Bedford, MA

- **What they do:** “Vineyard Wind is hoping to develop the first utility-scale offshore wind energy project off the coast of Massachusetts, generating clean, renewable and cost-competitive energy to power thousands of homes and businesses across the state.”



## Deepwater Wind – Providence, RI

- **What they do:** The company is “actively planning offshore wind projects to serve multiple East Coast markets located 15 or more miles offshore, including New York, Massachusetts, Rhode Island, Maryland, and New Jersey.”

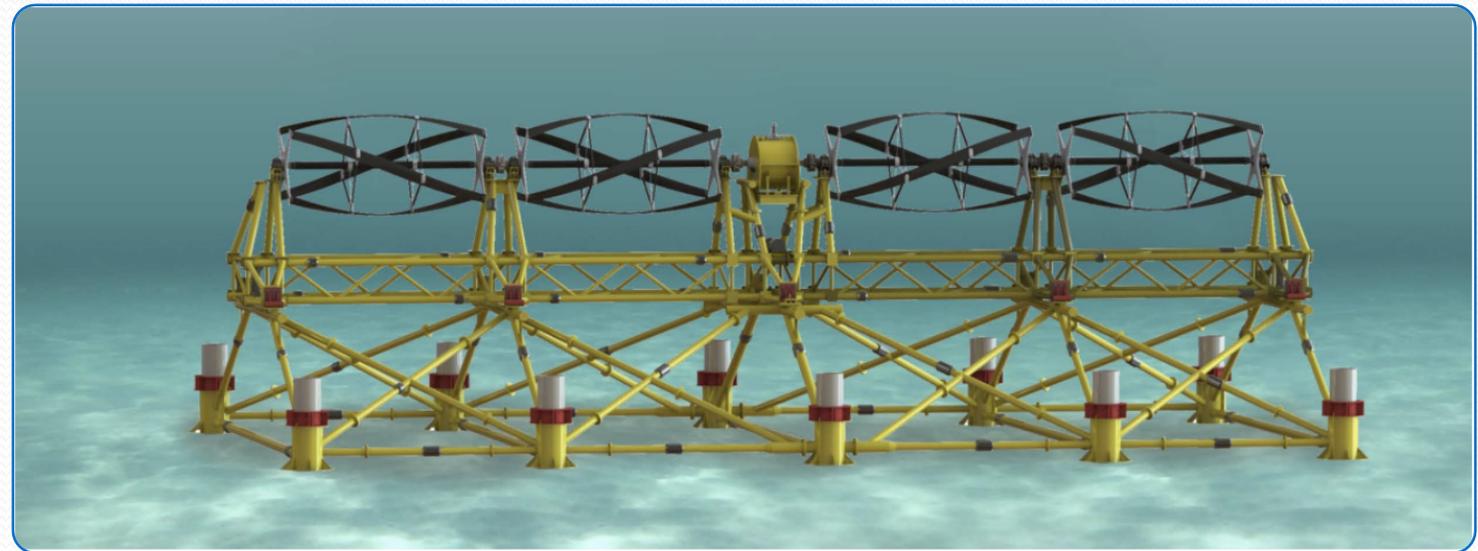


America's First Offshore Wind Farm at Block Island, RI. Developed by Deepwater Wind



# Ocean Renewable Power Company (ORPC) – Portland, ME

- **What they do:** ORPC aims to “develop breakthrough technology and eco-conscious projects that use ocean and river currents to produce clean, predictable electricity to power.”



Ocean Renewable Power Company tidal power generation system  
TidGen®



# Poseidon Water – Boston MA

- **What they do:** Specializes in “large-scale seawater reverse osmosis desalination plants... Poseidon’s approach combines state-of-the-art technology with innovative contracting practices and a disciplined development process.”

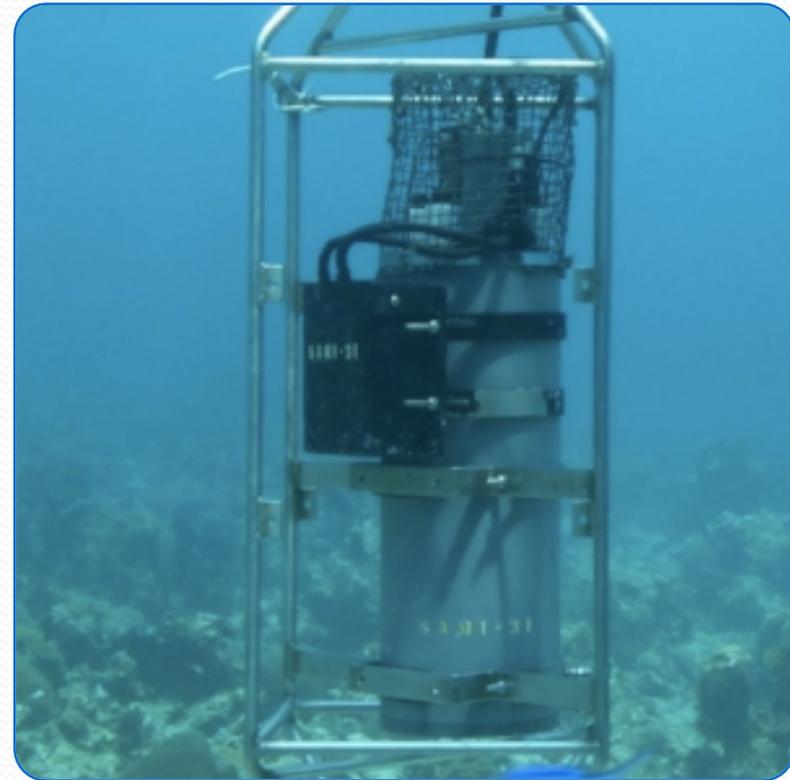


Poseidon Water Desalination plant, Carlsbad, CA



## Blue Water Metrics – New Bedford, MA

- **What they do:** Blue Water Metrics aims to “build a new ocean monitoring system for the world's scientists and maritime industries to tackle some of the biggest environmental challenges of the 21st Century, including climate change, ocean acidification, and strained fish stocks.” Company aims to bring the Internet of Things revolution to ocean science.



## OpenWater Power – Somerville, MA

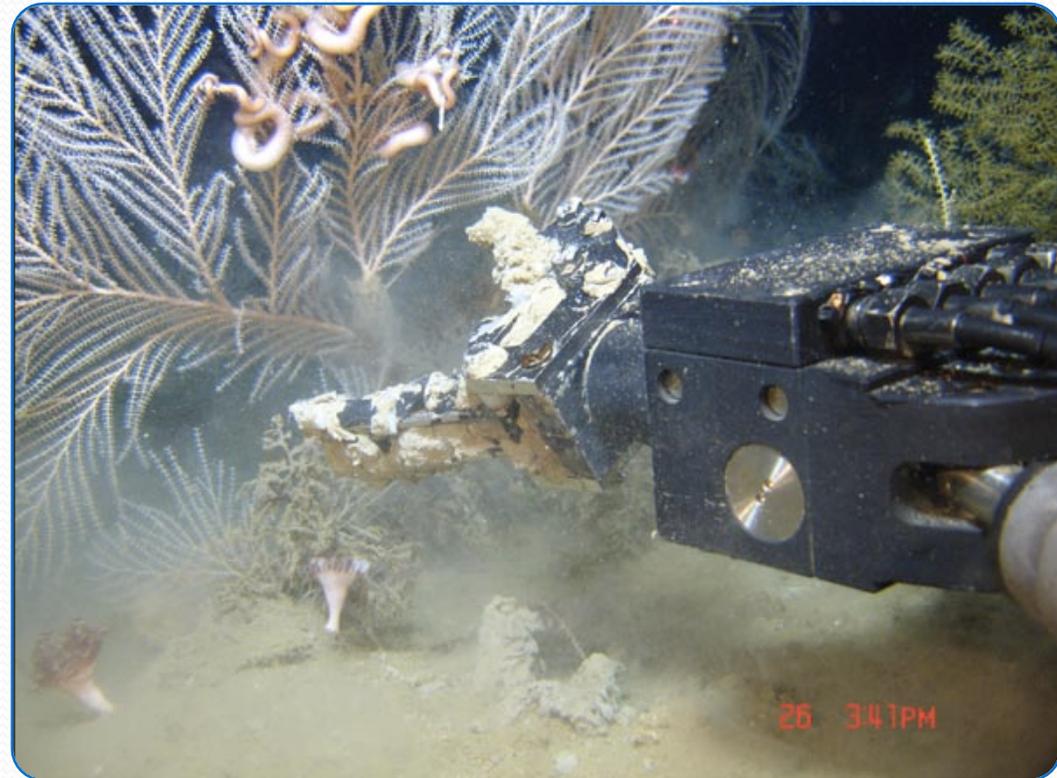
- **What they do:** OpenWater Power has developed an “aluminum-water platform technology for undersea power generation...The electrochemical system provides safe, scalable and non-toxic energy storage with extremely high energy density, promising a 10x improvement in the endurance of Unmanned Underwater Vehicles (UUVs) and sensors.”



OpenWater Power Fuel Cell

# SeaVision Underwater Solutions – Fall River, MA

- **What they do:** “SeaVision Underwater Solutions Inc. is a certified, Veteran-owned small business (VOSB) that delivers targeted survey and investigation solutions to support an increasingly diverse, global clientele in the effective management of waterfront and underwater assets.”



A SeaVision ROV in operation



## Aquabotix – Fall River, MA

- **What they do:** Aquabotix aims to be a technology leader in portable underwater vehicles. The company aims to offer ROVs that are “faster, smarter, more capable and more affordable than other inspection/observation class ROVs.”



An Aquabotix Hybrid autonomous remote vehicle

Taiwan

# Swancor Renewables – Nantou City

- **What they do:** Swancor is a “young company...that aims to become a leader in energy saving and environmental protection and safety fields.” They are developing the 130 MW Formosa1 offshore wind farm, which is expected to be operational by 2020.



Swancor offshore wind energy installation at Formosa1

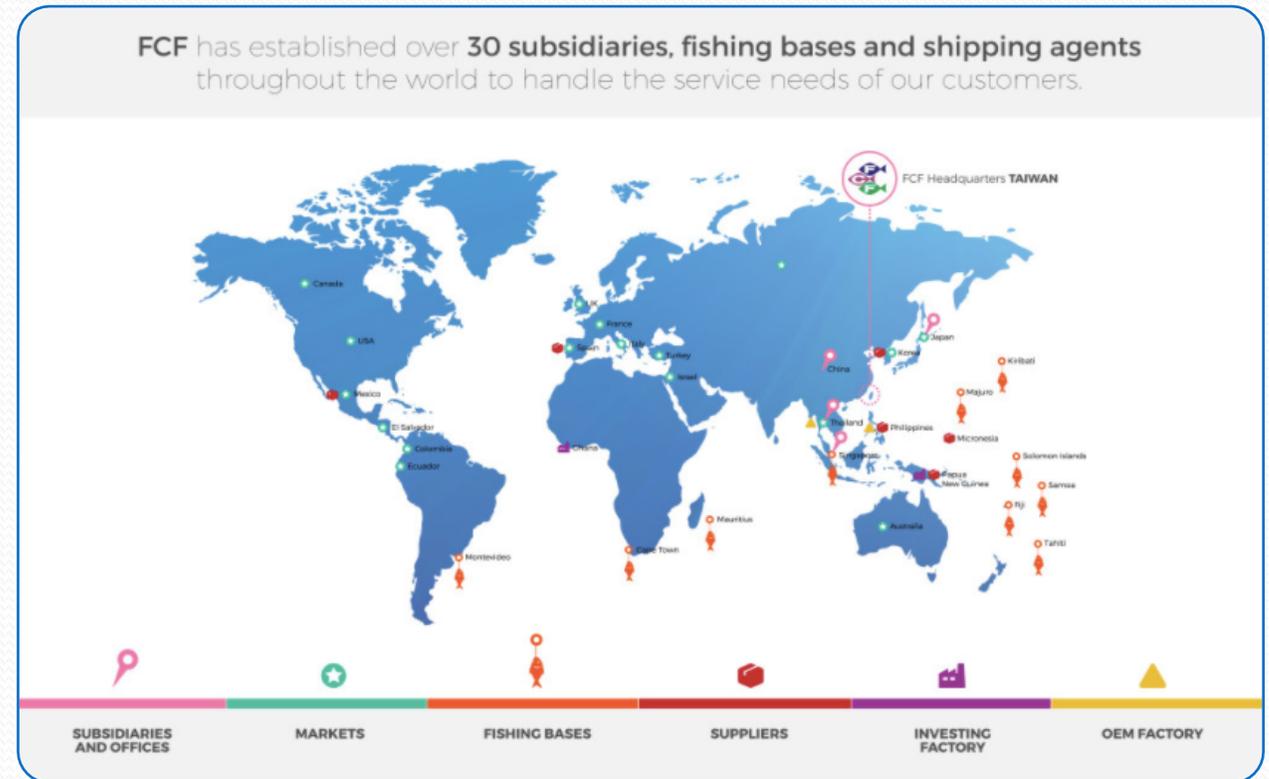
# Taiwan Generations Corp (TGC) – Taipei

- **What they do:** The company's core business is in energy consulting. With extensive experience in consulting... TGC entered the offshore wind sector in 2004. Its focus is on developing offshore windfarm projects along the west coast of Taiwan. TGC is part of the consortium developing the Fuhai offshore wind farm.



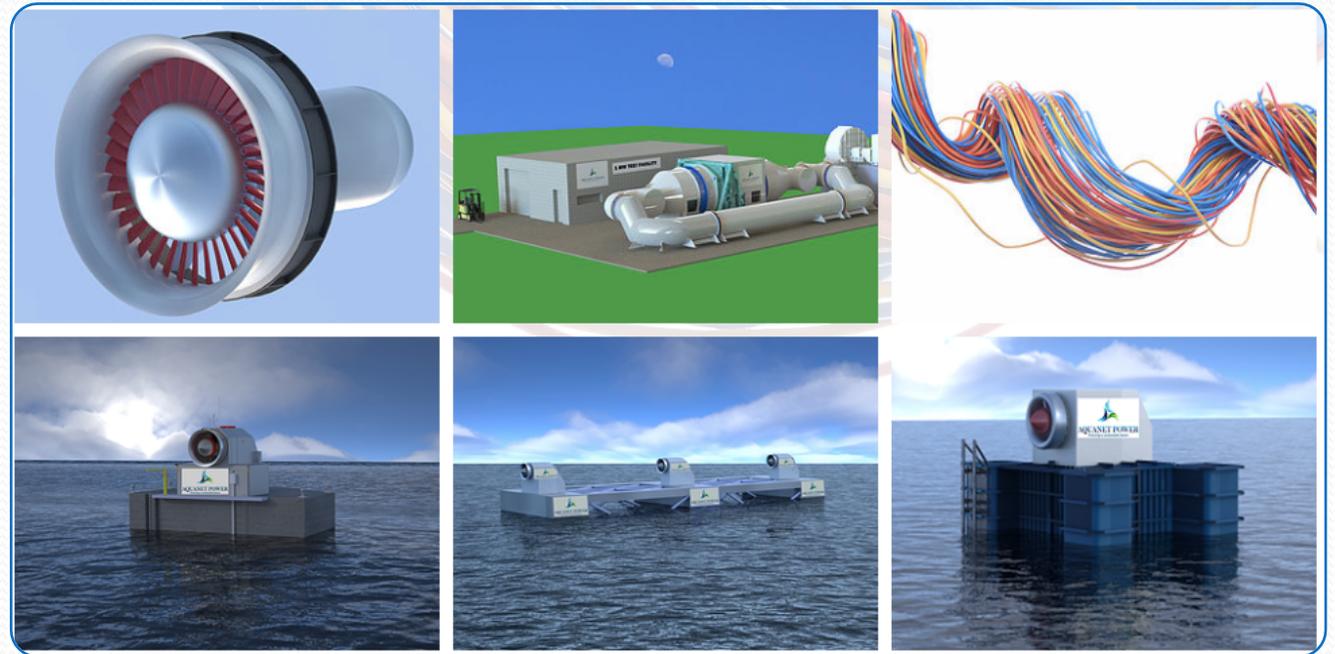
# FCF Fishery Co. Ltd – Kaohsiung, Taiwan

- **What they do:** FCF is “one of the world’s largest marine products integrated supply chain service provider companies specializing in tuna...” The company is an industry leader in promoting sustainability and traceability, and FAD-free fishing policy.



# Aquanet Power – Songshan District

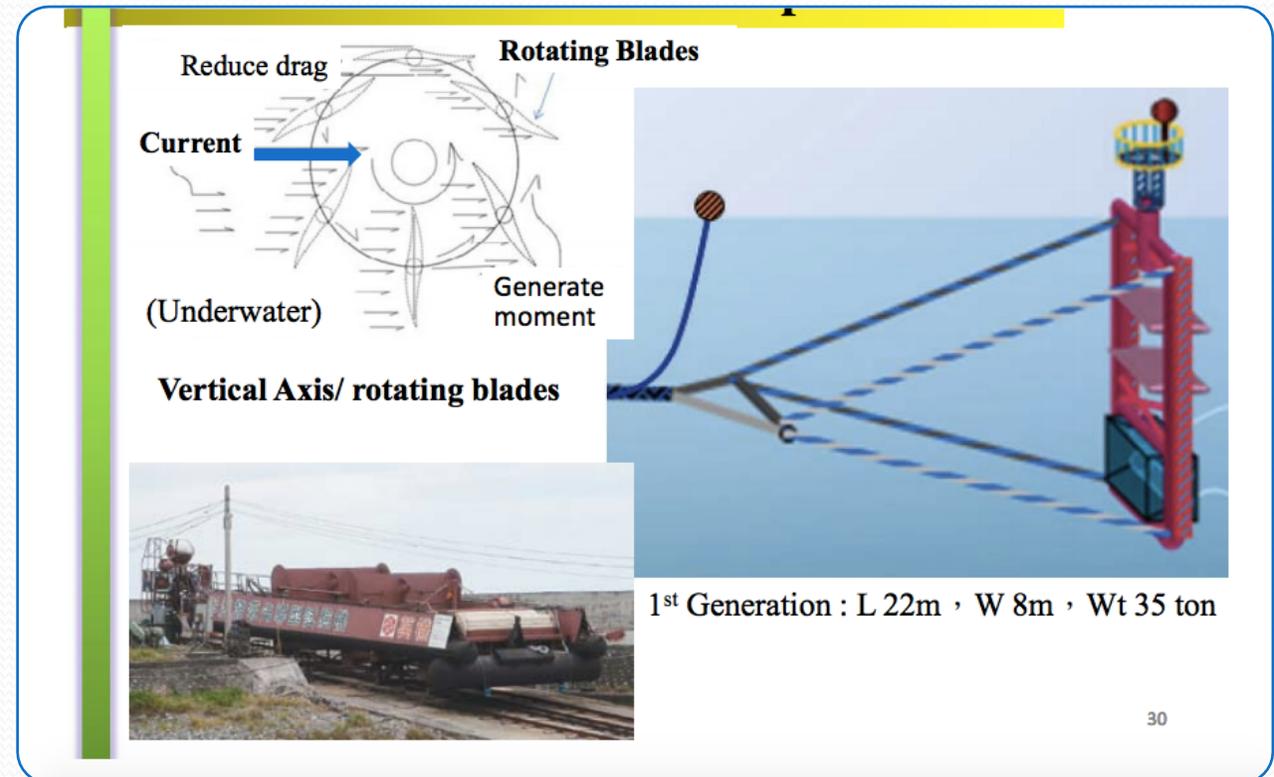
- **What they do:** The company aims to “produce clean energy from ocean waves at cost levels comparable to other matured renewable energy [technologies].” The company expects its “nearshore shallow water device, the aquaWAVE...will be cost competitive with onshore wind and fossil fuels in the next 3-5 years.”



Computer rendering of a range of Aquanet products

# Wanchi Steel Company – Kaohsiung City

- **What they do:** The company is developing floating turbines to harness wave power.



Schematic of a floating turbine developed by Wanchi

## CSBC Corporation – Kaohsiung City

- **What they do:** Established in 1937, CSBC is Taiwan's largest ship building company. Since 2013, the company has diversified into the "Green Sea Market," developing energy-efficient ships and offshore wind power, and wave power systems.



Sea trial of a 20 KW wave power generator developed by CSBC

Questions?

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