Resolute Marine Energy, Inc. (“RME”) is commercializing the world’s first wave-driven desalination system (trade named “Wave2OTM”) that operates solely on mechanical power and thus requires no connections to an electrical grid.

Wave2OTM is tailored to the needs of coastal communities in water scarce area where a solution to persistent water shortages is urgently needed and where Wave2OTM has the unique advantage of filling a large gap in the market between utility-scale and micro-scale fresh water production systems.

Wave2OTM consists of several wave energy converters deployed close to shore that pressurize seawater which is piped ashore to drive a seawater reverse-osmosis desalination system. The brine (saline byproduct of the RO process) is fully diluted before it is returned to sea and thus does not harm the environment.

A sustainable solution to the urgent problem of water scarcity in coastal communities

Water scarcity runs rampant throughout our world with 1.1 billion people having no access to safe water. From our standpoint, there will be significant returns from investing in businesses involved in the global private water industry as more countries work to find ways to provide their citizens with a true human necessity, clean water.”

Alex Seagle
Cape Verde has a relatively small population spread across a nine-island archipelago. Approximately 84% of its 530,000 inhabitants have access to a water distribution network but constant water shortages create stressful living conditions for the entire population.

Cape Verde’s renewable water availability is only 537 m$^3$ per person per year, the second lowest of any country in sub-Saharan Africa and water scarcity makes Cape Verde reliant upon desalination to meet 85 percent of its needs. Cape Verde will need to supply an additional 1,100 m$^3$/person/year to meet the minimum standards set forth by the World Water Organization (1,700 m$^3$/person/year).

This problem is exacerbated by high electricity costs due to its remote location (500 km from the African coast) and absence of indigenous energy resources which make the average cost of water €3.70/m$^3$ which is the highest in Africa and among the highest in the world.

In Cape Verde, a 4,000 m$^3$/day Wave$^2$O™ plant can produce enough water to cover the needs of 48,000 people at an attractive cost of €1.30/m$^3$ before cost of financing, a price almost 3x cheaper than the average cost of production and a very compelling value proposition for our local customer, Electra.

**Business case:**

**Wave$^2$O™ in Cape Verde**

“...Because the system runs on free energy from ocean waves, it is a perfect fit for our immediate needs. The need is critical and Wave$^2$O™’s economics and localized approach are very compelling.”

Alexandre Fontes
CEO Electra