

# TheNational

## UAE eyes portable desalination

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Texas-based Water Standard is going to transform a ship, H2 Ocean 1, into a floating desalination plant. Water Standard

Abu Dhabi // A water technology company from Texas is in talks with sovereign wealth funds and large local companies to form a joint venture to build desalination plants on giant barges off the coast of the UAE.

Water Standard, which received US\$250 million (Dh918m) in start-up capital in March, has already purchased its first ship, H2 Ocean 1, and is looking at using the Dubai shipyards to fit it out with a portable desalination plant.

“This region is absolutely one of the most fundamental centres of desalination,” said Amanda Brock, the chief executive of Water Standard. “We are really designing our first ship for the UAE and UAE conditions.”

The majority of the Middle East’s water comes from desalination plants, making supply a crucial issue. Last month, the Government launched the Arab Water Academy to research solutions to the expected shortages in the years to come. Companies such as Siemens, Veolia and General Electric are investing millions of dollars in the research and development of new desalination technologies for Middle East consumers.

The breakneck speed of development as well as the country’s numerous island projects make the prospect of ship-based desalination plants especially attractive, Ms Brock said.

“If you look at Abu Dhabi alone, with the number of projects slated to come on board, and the

projects for demand up and down the coast, you can see there is a huge need for this,” she said.

One of the company’s ships, located two to five kilometres offshore, can provide up to 300,000 cubic metres of water a day, or about 302 million litres. The ships work by siphoning water from deep under the ocean and removing any salt, minerals and organic material through a reverse osmosis membrane – a sheet pierced with minute holes that only allow water molecules to pass through. The clean water is then pumped through other filtration devices before travelling landward via pipelines laid along the ocean floor. The process is powered by diesel, but the technology used on the ships requires about half as much energy as traditional plants, which heat water and capture steam.

Lisa Henthorne, the former technology director for The Abu Dhabi Future Energy Company, better known as Masdar, joined Water Standard as an adviser several weeks ago. She said that while the Abu Dhabi Water and Electricity Authority (Adwea) and the Dubai Electricity and Water Authority (Dewa) were increasing their ability to provide desalinated water, there was a need for other options.

“There are some expectations that demand will outstrip supply in a few years,” she said.

Ms Henthorne said that one of the appeals of the ship-based plants was the reduced impact on the environment. The company’s ships would have a smaller carbon footprint than traditional plants and the concentrated brine created by the desalination process would be diffused over a large body of water, rather than dumped off the coast where it was known to kill fish and other animals.

“This technology reduces the impact on marine life and the ocean,” she said. The ships can also be built as quickly as a year and a half, compared to the three years for land-based plants, she added.

Water Standard is also hoping to earn revenues from the technology itself. It has more than 10 patents pending for its brine diffusion process and other technological aspects of the ships.

The two funds that provided the start-up capital to Water Standard were Och-Ziff Capital Management and Ospraie Ventures.