

Dubai to test turbine that converts humidity into potable water

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A two-year test for the experimental device, developed by the French company Eole Water, will start in Dubai this year on an artificial island owned by the Emirates Marine Environmental Group (EMEG), in the Waterfront.

"If all goes well we'd love to purchase it and keep it there on a more permanent basis," said Amie Lenkowiec, a project manager at EMEG. "This is an exciting development and could work for other islands that don't have access to drinking water." The test, which will cost about Dh6.7 million, including equipment and maintenance of the turbine, will be funded entirely by Eole Water. "It's mostly for them to make sure their turbine works properly," said Ms Lenkowiec, adding EMEG will receive fresh water for its offices because of the cooperation.

The wind turbine is 24 metres tall, and its rotor has a diameter of 13 metres. It works by pulling in air that is heated to become steam, then condensed. The condensation is filtered in the main stem of the turbine, eventually becoming drinking water.

Marc Parent, the chief executive of Eole Water, estimated that the device would collect an average of 100 litres of water an hour. "This could really solve the problem of access to water in the UAE," Mr Parent said. "There's a lot of interest from islands on The World for this project, because although they are surrounded by water, none of it is drinkable."

It is the second time Eole Water has tested one of its devices in the Emirates. From October last year to March this year, the company tested a similar device in Mussaffah. The initial test, costing the company about Dh225,000, was largely a success with the device producing an average of about 62 litres of water an hour.

The first test involved a machine that was connected to the main electricity grid. But the latest project is off-grid, with the condensing and filtering system driven by wind power from the turbine, and a single solar energy panel. Mr Parent said there were few concerns over whether the technology would work. "We've tested the main system before in Abu Dhabi," he said. "The technology is strong. The wind turbine and solar panel is very standard and it's not a big transition."

Mr Parent said the prospect of customers in the region was not the only reason behind the decision to conduct tests in the Emirates. "This is a difficult environment. There is a lot of salt and sand in the atmosphere," he said. "If it works under these challenging conditions then it will work anywhere."

Ali Al Suweidi, president and founder of EMEG, said the technology had much potential for the UAE. "This is something very special for the Emirates and the idea of making water from humidity in the air is a very innovative one," Mr Al Suweidi said. "We will look at the results of this experiment with interest."

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