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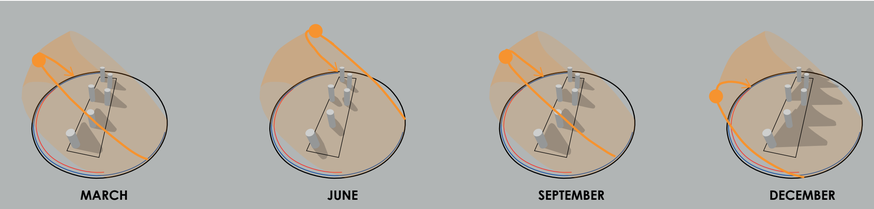
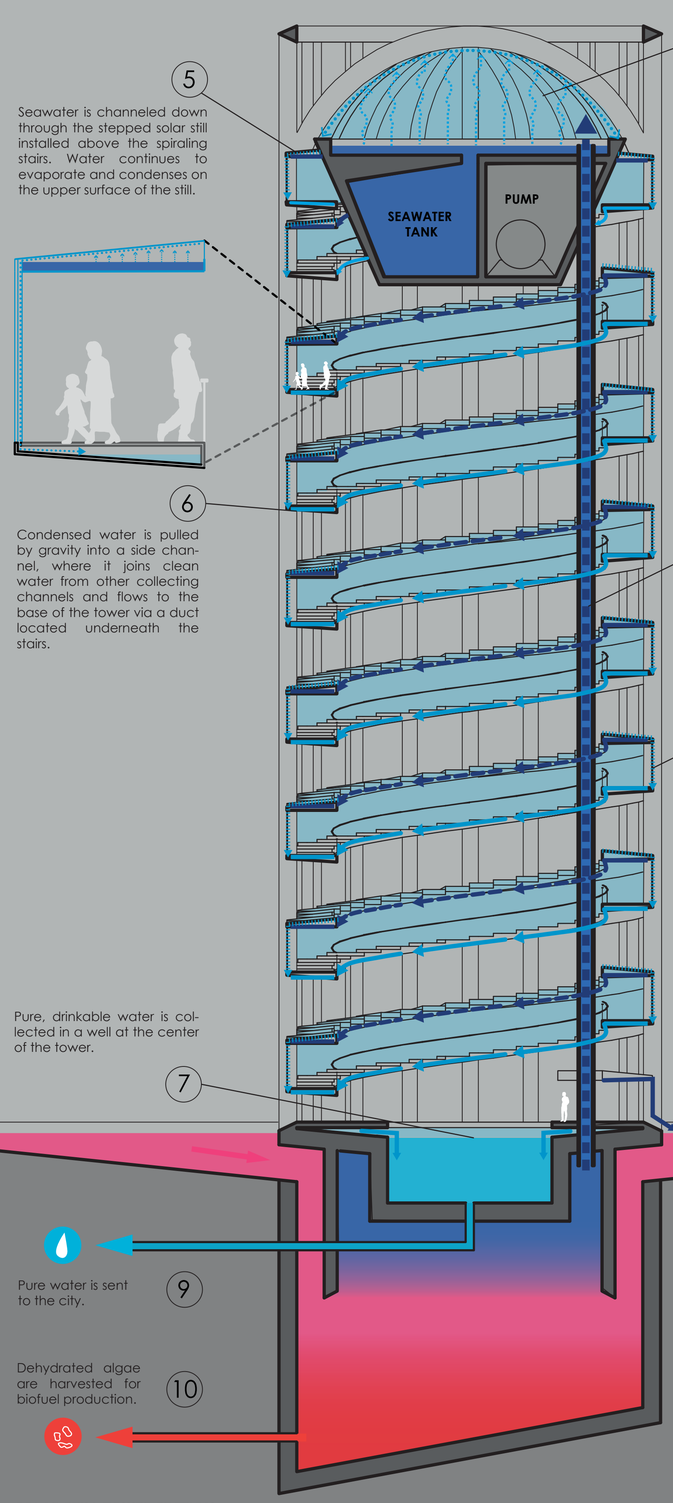
Interior of solar still tower

View of installation from interior of solar still tower



SUNSTUDY



4 A giant solar still at the top of each tower optimizes exposure to solar radiation for efficient freshwater generation. Water evaporates, leaving behind salt and contaminants, and condenses on the inner surface of the dome, where it is pulled by gravity into collecting channels around the periphery.

5 Seawater is channeled down through the stepped solar still installed above the spiraling stairs. Water continues to evaporate and condenses on the upper surface of the still.

6 Condensed water is pulled by gravity into a side channel, where it joins clean water from other collecting channels and flows to the base of the tower via a duct located underneath the stairs.

3 Salt water is pumped up to the solar still tank on top of the tower.

2 Transparent photovoltaic cells produce electricity for pumping salt water up to the tank at the top of the tower and for illuminating low-energy LED lights at night.

High-salinity water from the algae ponds, along with regular seawater, is collected under each solar still tower for desalination.

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7 Pure, drinkable water is collected in a well at the center of the tower.

Pure water is sent to the city. 9

8 Undistilled water is returned to the ocean.

Dehydrated algae are harvested for biofuel production. 10

SOLAR STILL TOWER SECTION