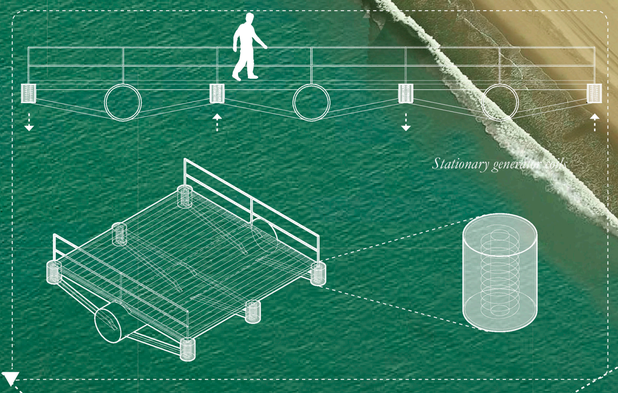
SOLAR CLOUD

Lighter than air solar collectors

PATH FOR VISITORS



Tidal Energy

Dock

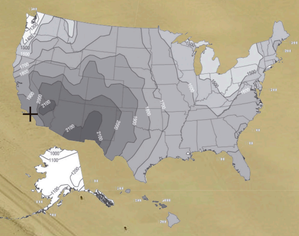
Dock

Boat storage

Water Supply

Energy Supply

Solar Energy



Source: U.S. Department of Energy

ESTIMATE KWH - 162000MWh per year

According to the U.S. Department of Energy, Santa Monica is located in an area that receives a total of 1950 kWh/year per square meter. This means an average of 5,3 kWh/m2/day. A single Balloon has a surface of 56,25 m2 covered with a layer of Thin-Film Solar Cell. With an average of 5 hours of sun every day, we obtain 1825 hours of direct sun every year. Therefore each balloon produces every year an amount of 544078 kWh.

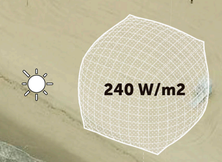
The intervention created has a total of 300 balloons, therefore the intervention produces a total of approximately 162000 MWh every year.

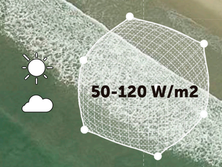
EMPLACEMENT STRATEGY

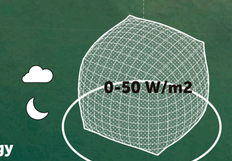
In Santa Monica Bay, the "Solar Cloud" is located in front of the shoreline with any direct pedestrian connection. This is decided to avoid any intersections with emergency labors. Instead of a pedestrian access, three docks are proposed to have maritime access. In this sense, the "Solar Cloud" will form its own island that invites people to walk through its path and to observe all the energy streams that are happening on the ocean.

The path will have different functions. Firstly, it serves as the distributor of the different clouds that compose the intervention. Its modularity will allow the intervention to grow so it can fill the entire lot if desired. Secondly, it serves to harvest tidal energy thanks to a series of generator coils that, through the movement of the different modules induced by the waves, will allow to harvest this energy. Finally, it connects the different streams that the "Solar Cloud" is collecting. This is solar energy, tidal energy and water harvesting. In this way, what the "Solar Cloud" harvests is distributed to the city from a single point.

TEMPORALITY







Climatology

Base for resting stage