

# CRACK ON THE GROUND

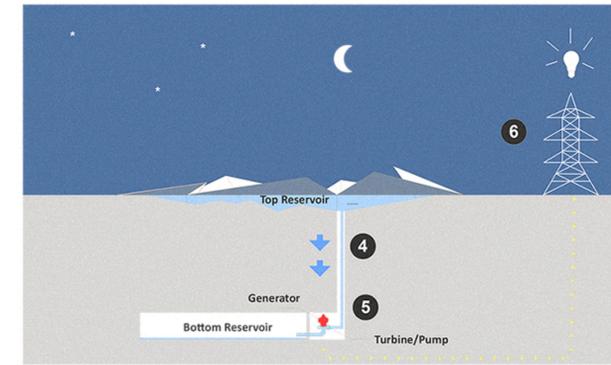
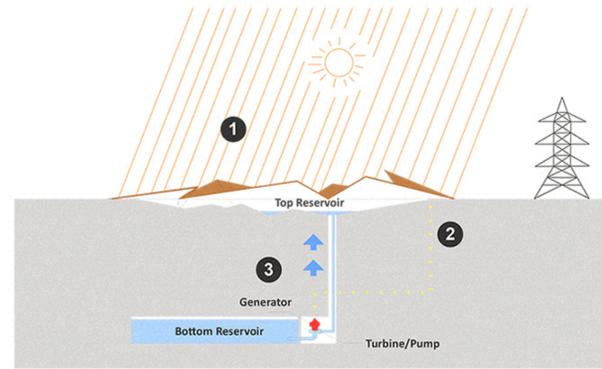


## THE CONCEPT

Climate change is real and the mankind is responsible. Where there were giant lakes and rivers before, there are deserts now. Where there were deserts before, there are floods now. The landscapes, cities and environment are changing rapidly affecting people and the Earth. We can see huge cracks on the ground caused by global warming. For that reason, we have to change the way that we have produced energy during last centuries, and of course, we have to stop to consume fossil fuel.

The first step is to become conscious and awaken.

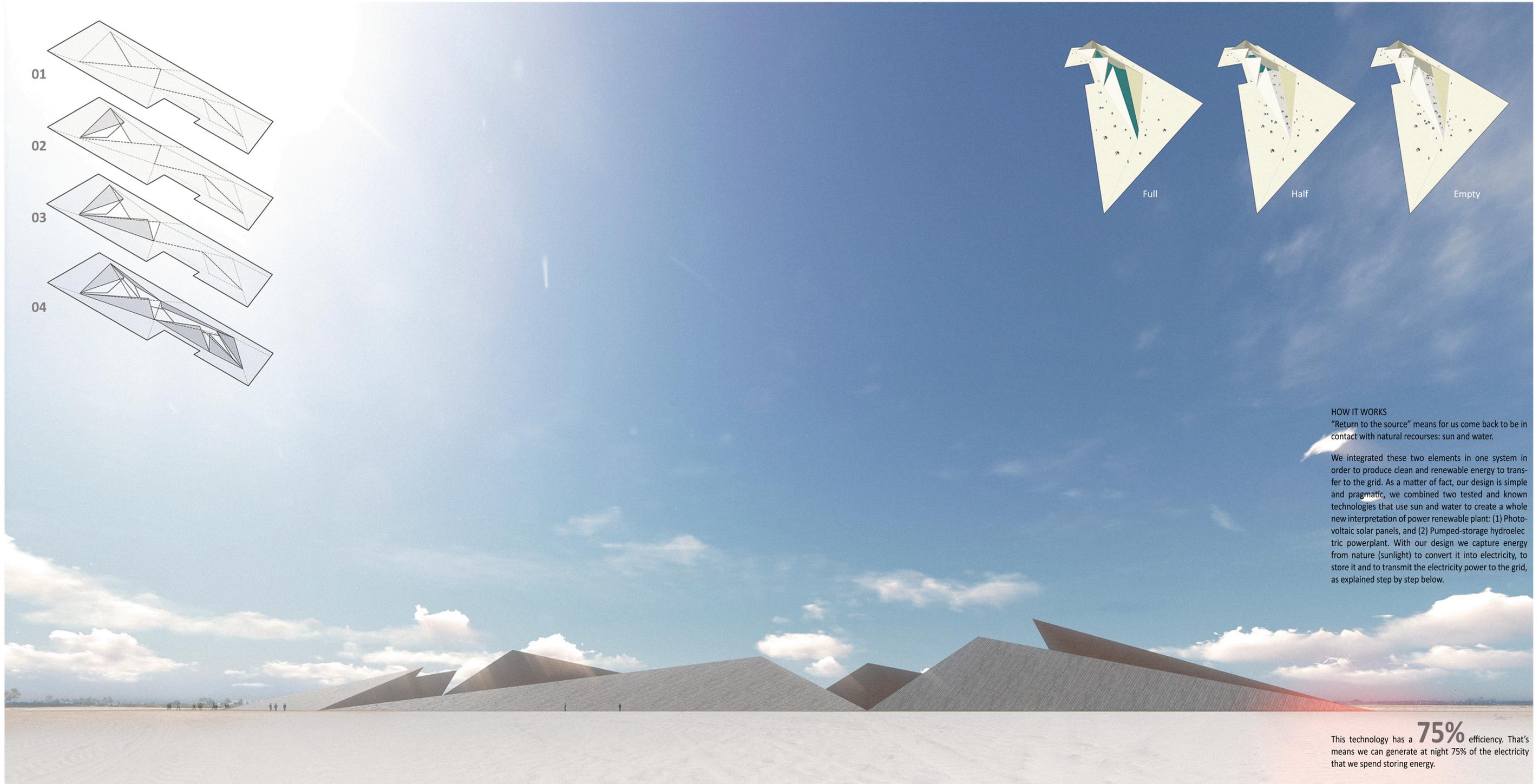
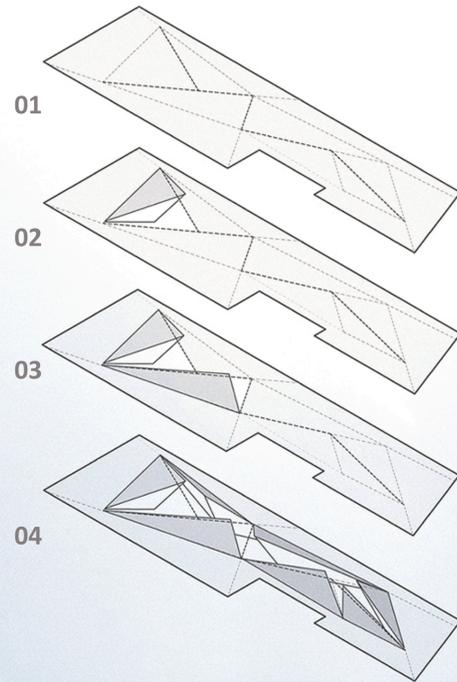
Our work is aimed at showing how the Earth reacts to human impact and is also an invitation to take a moment to reflect upon. The project is a metaphor and also an architectural synthesis of changes in landscape, for that reason it looks like a bottom of a lake without water because of drought. We took that esthetic idea and we created a new public space in the form of a crack, where people can live a spatial experience of a place that constantly changes.



- 1 Sunlight falls on high capacity solar panels during daylight hours. The solar panels convert the sun's energy into electricity
- 2 Renewable energy solar used to pump water to upper reservoir during the day
- 3 Water is pumped from lower reservoir to the upper reservoir during the day
- 4 At night when demand increase or when sun energy is not available, water falls from upper reservoir
- 5 Water runs through turbine creating electricity
- 6 Clean and renewable energy (electricity) is transfer to the system

photovoltaic solar panels + pumped-storage hydroelectric powerplant

## CONCEPT DIAGRAM



## HOW IT WORKS

"Return to the source" means for us come back to be in contact with natural recourses: sun and water.

We integrated these two elements in one system in order to produce clean and renewable energy to transfer to the grid. As a matter of fact, our design is simple and pragmatic, we combined two tested and known technologies that use sun and water to create a whole new interpretation of power renewable plant: (1) Photovoltaic solar panels, and (2) Pumped-storage hydroelectric powerplant. With our design we capture energy from nature (sunlight) to convert it into electricity, to store it and to transmit the electricity power to the grid, as explained step by step below.

This technology has a **75%** efficiency. That's means we can generate at night 75% of the electricity that we spend storing energy.