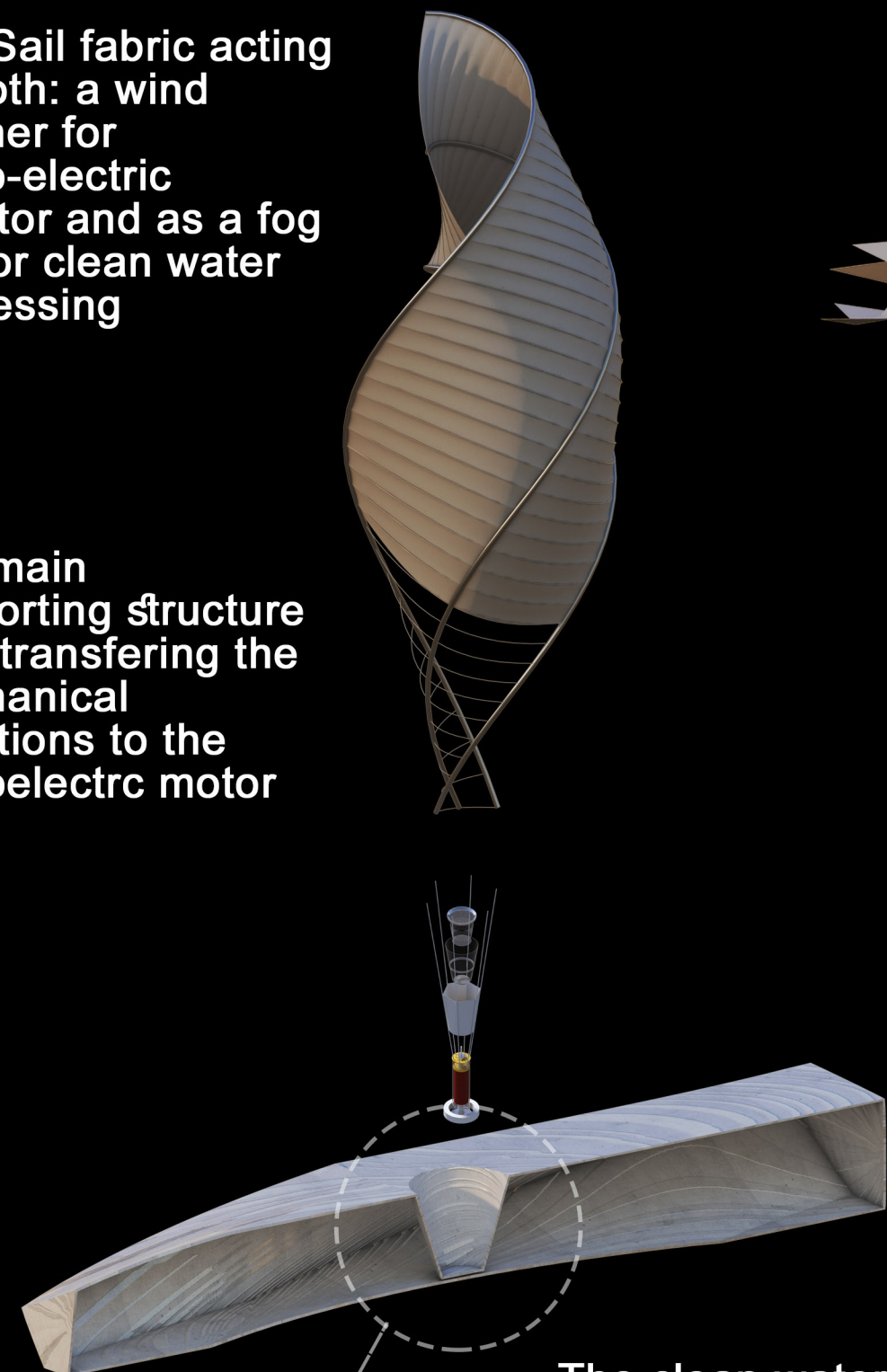


Fly-around of the 4 models

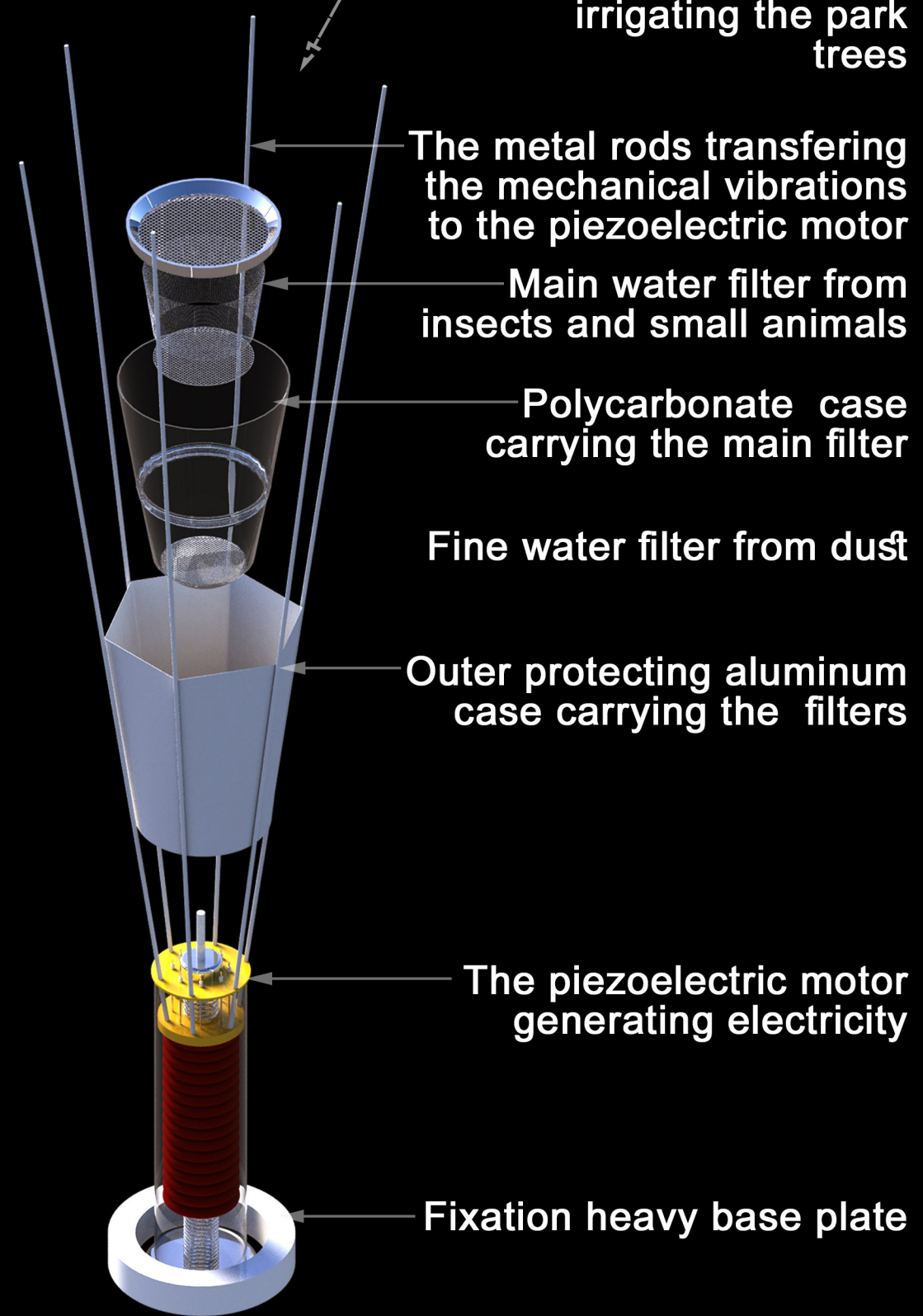


The Sail fabric acting as both: a wind catcher for piezo-electric vibrator and as a fog net for clean water harnessing

The main supporting structure rods transferring the mechanical vibrations to the piezoelectric motor



The clean water tank harnessed from fog stored to be used in irrigating the park trees



The metal rods transferring the mechanical vibrations to the piezoelectric motor

Main water filter from insects and small animals

Polycarbonate case carrying the main filter

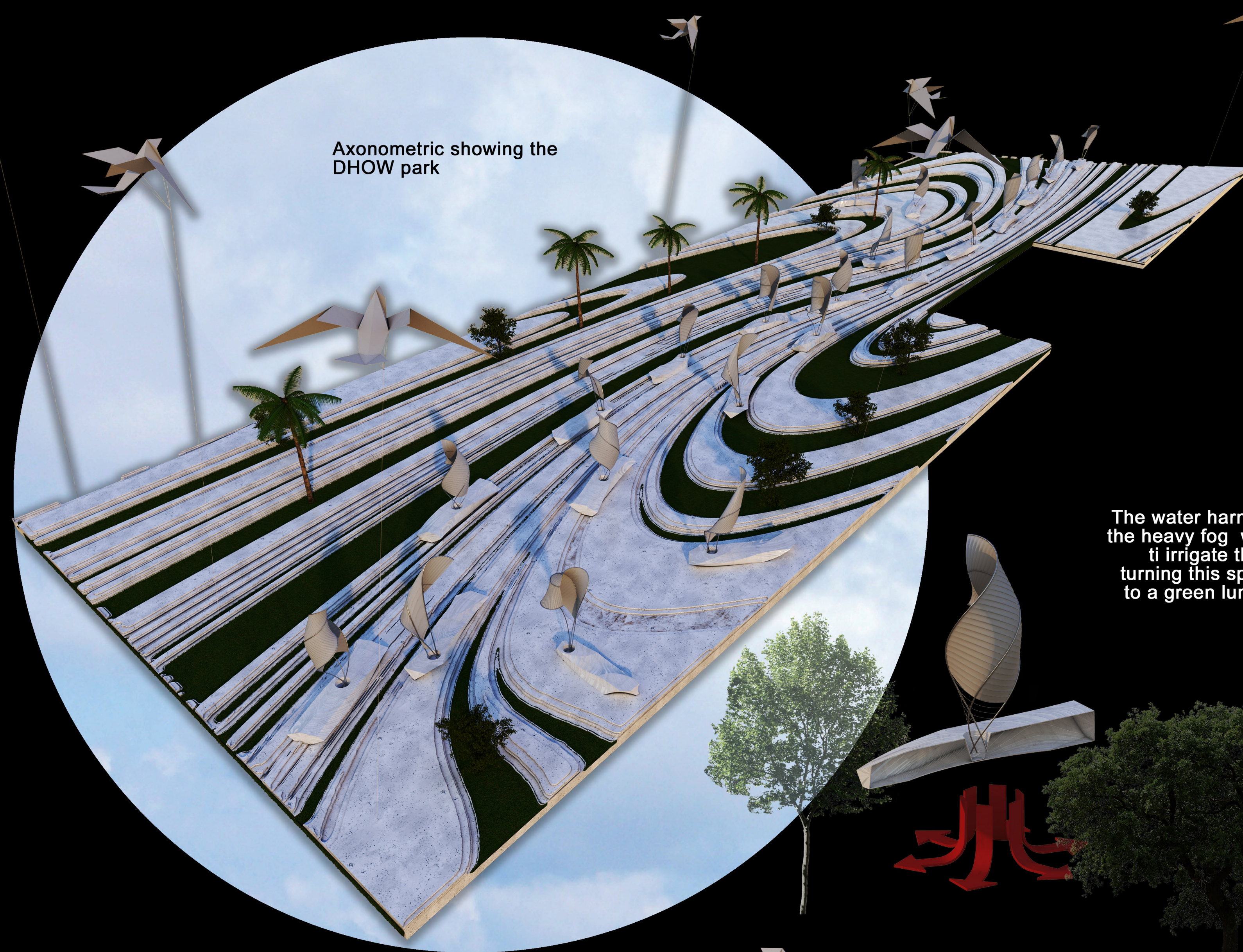
Fine water filter from dust

Outer protecting aluminum case carrying the filters

The piezoelectric motor generating electricity

Fixation heavy base plate

Exploded isometric explaining the hybrid-system of energy generation and water harnessing unit (DHOW sail)



Axonometric showing the DHOW park

The water harnessed from the heavy fog will be used to irrigate the park and turning this spot by years to a green lung inside the city

THE BASIC ENERGY AND WATER CALCULATIONS

FIRST THE ENERGY CALCULATIONS

1. The ground DHOW unit can generate 1.2 MWH per day  
 2. The sky unit represented in the Origami bird kite can generate 2.3 MWH perday  
 $(21 \text{ Dhow unit} \times 1.2 \text{ MWH} \times 365) + (7 \text{ Skysail kite} \times 2.3 \text{ MWH} \times 365) = 15,074.5 \text{ MWH per year}$

SECOND THE FOG WATER HARNESSING

The DHOW ground units accordingly to the surface area of its fabric will have the capacity to harness 5 gallons perday on an average basis,  $21 \text{ unit} \times 5 \text{ gallons} \times 365 \text{ day} = 12,775 \text{ gallons per year}$

The bird kite skysail technology is design mimicing the flocks or birds found in the sky or UAE over the coastal parts used the origami approach

These kite sails are based upon Airborne wind energy (AWE) which depends on generation of wind energy by the use of aerodynamic or aerostatic power. This technology is able to harvest high altitude winds. In contrast to wind turbines, which use a tower to reach higher altitudes, the airborne wind energy systems (awes) are airborne.

