Crossing Park

In addition to the consideration of the energy installation, this site should be a key open space for the east and west venues of Unicom Masdar City, so it will be very open and capable of carrying out various activities in it; therefore I first defined it as “Crossing Park”, which is designed to allow people to enjoy the installation and the landscape.

The device selected for use is a vortex bladeless wind engine designed by the Spanish team of engineers. The principle is to use the theorem of vortex shedding to capture eddy currents in the air; it is simple and light in shape, and its setting density is limited to only two of it. Outside the radius of the radius. Another important point is that it captures relatively low winds and is very capable of capturing low speed winds.

At the same time, its cost is also the lowest of its kind.

When thinking about how to maximize its efficiency, we apply the ancient element of the wall, and also a symbol of the historical streets of Arabi, using the wall to make the wind create eddy currents in different directions, in order to maximize efficiency.

At the same time, we design the material of the wall into a metal piece that can rotate with the wind and is connected with the pressure cable. It is designed to provide people with better interactivity and to let them feel the direction of the wind. They touch components and make electricity.

Material & Price

The material of the vortex-free generator is mainly carbon brazing, and the main material of the wall is recycled metal. The material of the large wall is made of LED glass, in order to display good light and shadow effect and give people information at night.

The vortex bladeless single cost is $4.50 per watt, and the single generation is 60W. There are a total of 50 units in the entire site, which can supply electricity to about 200 households. In addition, it can be passed through the wall of the pressure cable.

All construction materials are calculated at a total of $15 per watt, which is lower than the competition requirements.

Environment Influence

Because the generator has no blades, there is no noise, and the amplitude of the shaking is very small. The height of the size is about 12m, which will not affect the flying animals in the sky, and the light in the night is softer.

Its lightness and portability reduce all kinds of damage to animals