**The Infinite Energizer**

**Concept Design**

Masdar city recognized as a pure city enjoys many potentials for creating clean power which properties like intense sunlight, wind, and lack of proper public spaces. We intended to design an iconic project inspired by traditional Arab tents. This place will be ventilated and cooled in light of a huge windcatcher which makes this project unique in the city. Windcatchers were first invented by ancient Persians and then globalized in western Asia.

By courtesy of potentials for holding events and other ceremonies, a free plan will make communications between inhabitants of Masdar city.

**Power Generation Mechanism**

According to the amount and direction of and sunlight of the city, we aimed to generate pure electricity via thin-film photovoltaic panels installed on the windcatcher. In addition, wind turbines help us generate more clean power, so they were located in the entrance of the place, northwest of the site, where winds mostly directed.

Whereas many visitors gather together in this place, it is an ideal opportunity for transforming their kinetic energy into pure electricity; therefore, the power generated by walking. Each 50\*50-centimeters tiles of electricity generator by applying pressure from a person, generate 7 W power.

The project will meet itself power and associate in proving the power of the city, acting as a pure power station as well as a landmark.

**Technical information**

Solar Power:

Solar panel power output: 0.3 kW/m2

Approximate area of solar panel: 7,336 m2

Solar panel energy production per square meter (6 hours a day calculated): 13204.8 kWh per day

Total energy output per year: 4819.75 mWh/yr

Walking Power:

Estimated steps, taken by each visitor: 834 for 300 m

The total output of floor tile power generators: 583.8 kW for 100 visitors per day

Total energy output per year: 213.08 mWh/yr

Wind turbines:

Wind power output: 4.5 kW

The total output of 8 turbines: 864 kW per day

Total output per year: 315.36 mWh/yr

The total power output is 14.652 mWh/day, which equals 5348.19 mWh/year