Sun tornado

**Architecture comrade with nature (sun, water, wind, soil)**

The use of the renewable energy resource symbol is the concept of form: sun, wind and wave.

The function of each symbol is related to the source.

Sun: The solar energy generator of the company, which looks like a glass ball on a steel frame. The device that can follow the movement of the Sun will be able to focus 10,000 times more sunlight ( and the light of the moon ) 10,000 times more, and therefore, 35 per cent of the most common photovoltaic systems.

Wind: The original symbol that looks like a tornado is made up of rings from solar panels. that receives energy from the sun and is displayed in the night as lighting .It is in the productive element that receives hot air into a cool air and enters into space .It has a central core used for a city hall.

Wave: The ceilings that look like the sea wave are caused by the flow of air into the set.

In order to design the plan of the set, the plan of the Masdar city is modeled and the main axes are placed in order to obtain the desired wind .walls are also designed to create air flow.

Photovoltaic cells convert light into an [electric current](https://en.wikipedia.org/wiki/Electric_current) using the [photovoltaic effect](https://en.wikipedia.org/wiki/Photovoltaic_effect). The array of a [photovoltaic power system](https://en.wikipedia.org/wiki/Photovoltaic_power_system), produces direct current (DC) power which fluctuates with the sunlight's intensity. For practical use this usually requires conversion to certain desired voltages or alternating current (AC), through the use of [inverters](https://en.wikipedia.org/wiki/Solar_inverter). Multiple solar cells are connected inside modules. Modules are wired together to form arrays, then tied to an inverter, which produces power at the desired voltage, and for AC, the desired frequency/phase. Also the generated solar power can save in battery to use this electricity at night.

Solar panels on roof cylinder with a base radius of 18.5 meter and a height of 28 meter, can generate about 100 Kilowatt hour power so the main power supply of building are this solar panels.

Every time your foot strikes the ground, the ground deflects slightly (depending on how stiff your floor/ground is). This deflection can be used to recover energy and generate electricity. So we can install a series of floor tiles in 50 meter section of the 126 meter course in active street. (about 352 tiles), that generate power from the humans' footfall. A foot stomp that depresses a single tile by five millimeters produces between one and seven watts. This tiles named “energy harvesting tiles” which produces about 8.3 Kw/h of energy. A foot stomp that depresses a single tile by five millimeters produces between one and seven watts. The power thus generated can be used to run low-voltage equipment such as power outlets to charge laptops or mobiles.

Furthermore for generate electricity we use spherical sun power generator prototype called the beta. ray which created by [Rawlemon](http://www.rawlemon.com/) company, on top of the building. This technology will combine spherical geometry principles with a dual axis tracking system, allowing twice the yield of a [conventional solar panel](http://www.alternative-energy-news.info/technology/solar-power/photo-voltaics/) in a much smaller surface area.