**Life Source**

The world is at constant change and part of that change is the inevitable way to global warming. But how did we come this far what urge us to go through that path. If we search how it started and look to its source, people by nature have needs. And as we develop those needs, we introduce some approaches for our survival. Basic necessities which then develop to convenience and then lifestyle until we forget why we are doing it and what we are living for.

Our aim is to design a structure that symbolizes life and how it grows out from the earth coming from its source to constantly remind people that energy doesn’t have to be harmful. That it can be beautiful and beneficial if thought carefully.

The concept is based on the word MASDAR which means “Source” in Arabic. The illuminated pathway leading to the land art is a picture of element coming together forming life energy.

The pathway is made up of illuminated cement. This cement without crystals can absorb [solar energy](https://inhabitat.com/tag/solar-energy/) and emit it as [light](https://inhabitat.com/tag/light/) at night. The light-emitting product could [last for 100 years](http://www.invdes.com.mx/tecnologia-ms/item/1220-buscan-iluminar-carreteras-con-cemento-emisor-de-luz.html) and provide light for [around 12 hours](http://www.invdes.com.mx/tecnologia-ms/item/1220-buscan-iluminar-carreteras-con-cemento-emisor-de-luz.html) at night. The intensity of light emitted [can be changed](http://www.invdes.com.mx/tecnologia-ms/item/1220-buscan-iluminar-carreteras-con-cemento-emisor-de-luz.html) so it doesn’t overwhelm drivers or cyclists. The light glows as a cool [green or blue](http://www.invdes.com.mx/tecnologia-ms/item/1220-buscan-iluminar-carreteras-con-cemento-emisor-de-luz.html).

<https://inhabitat.com/glow-in-the-dark-cement-could-illuminate-dark-highways-without-electricity/>

Its shape is designed specifically to attract more air and as the pathway becomes smaller the wind energy increases. Inside the structure are several turbines with separate panel to generate more electricity.

Solar strips were installed in the face of the helix giving 360 degrees to maximize most abundant source of energy. Solar powered led were installed to provide light and visual attraction at night.

Another component added in this structure considering its shape is the rainwater collector that will be used to water the vegetation and water feature to control temperature.

Furthermore, due to the extreme heat of UAE desert. It is highly considered to put as much shade from the sun, which then minimize solar gain in the area. We propose planting vegetations and trees in the area with specific height restrictions in consideration to our designed structure.

Seating area is provided to with each individual charging stations so people can benefit from the structure’s energy may it for leisure, entertainment or business.

Overall objective is to reduce the building footprint and maximize the open public space with the help of orientation and passive cooling. Materials used with the structure were considered in terms of their environmental impact. Introducing recycled materials and rapidly renewable materials specifically assigned in developing the structure.

**Power generation estimation:**

*Solar power:*

Solar power output: .3kw /m²

Solar panel production per square meter. Calculated 13 hours a day: 3.9kWh/day

The area of solar strip in helix1: (105.23 m² per helix) x 4 nos

The area of solar strip in helix2: (199.62 m² per helix) x 2 nos

Total area of solar panel strip is: 420.92 m² + 399.24 m² = 820.16

Total energy output per day: 3198.624 kWh/day

As per <https://www.timeanddate.com/sun/united-arab-emirates/dubai>

*Wind power:*

Wind power output: 25.6833 km/h

Power output per turbine: 0.394 kW/h or 9.456kW per day x 18 nos

Total energy output: 170.208 kWh/day