

Categorie Premio **Accessibilità** **Sostenibilità** **Qualità della vita**

Product Name Solar lillies

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Description of innovation social values

- product category
- formal and functional features
- problems solved by innovation
 - user
 - field of application

Well-Tech Award 2009, Innovation Technology Prize

In cities all over the world there are disused water ways, canals and rivers. Often they become the focus for regeneration and for most people offer an improved quality of life and environment. Our project proposes to stimulate river activity and change by proposing that the surface of the water is used to harness the power of solar energy on a large scale.

The energy created can be easily transformed, stored and exported to the grid and will reduce the carbon footprint of the city.

The idea references large natural lily pads that are optimised for efficient photosynthesis, so the design is inspired by nature.

These solar lilies can be moved and dismantled and are simply tethered to the river bed, integrated motors can rotate the discs so their orientation to the sun is maximised throughout the day. Because of the proposed siting in the environment they will be visible to the public and therefore can increase public awareness of this type of technology normally sited on roofs.

At night using led. lighting surplus power can be used to light the discs creating a visual spectacle of glowing discs on the river. We are developing a design that can integrate a

Description of technical features

- operations
- technology

The photo voltaic technology is designed and laid out according to the optimal position required for the site latitude and the solar lilies are tethered on cables that are motorised so the disc can rotate constantly tracking the sun.

This will optimise the efficiency of the technology.

Other features include a simple pump and spray system to keep the panels clean using filtered river water (this is often a problem with pv as they can get dirty) and ionisation below water to locally clean the river.

Dimensions

The dimensions vary in diameter from 5m – we are looking to prototype at this scale to 30 meters diameter.

Materials

Steel, and recycled plastic protective ring.

Certifications

None yet applied for

Benefits for environment

Reduction in CO2 emissions, potential large scale applications. "light touch" of technology - easy to re use and reposition.

Benefits for human being

Well ness, connection with natural systems, public realm improvements, low energy lighting and clean energy.