

Categorie Premio

Accessibilità

Sostenibilità

Qualità della vita

Product name

SunHopes

Company name

Designer

Dr. Pini Gurfil
Arch. Dr. Joseph Cory

Sphere of activity

Clean Energy
SunHopes is a breakthrough product in the field of solar energy, developed by Dr. Pini Gurfil and Dr. Joseph Cory of the Technion, Israel Institute of Technology.

Certifications

Runner-up in the RE:Vision Design Competition, USA, 2007

Italian dealer

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Product and innovations description

We suggest using a lighter-than-air helium-filled platform containing embedded photovoltaic arrays (PVA) in order to extract electrical power from the incoming solar radiation.

SunHopes does not require any surface area, a resource that is often scarce in urban areas. *SunHopes* offers, therefore, a cost-effective, lightweight, mobile, modular and adaptable means for generating solar energy without occupying any dedicated ground.

Technology / Operations

Lightweight, thin-film photovoltaic cells are attached to the exterior surface of large helium balloons levitating at altitudes ranging from a few meters to a few hundred meters. The balloon interior is treated to prevent helium loss so as to maximize maintenance-free operation time. The electricity generated by the cells is then conducted to the ground using electrical cables, designed to minimize transport losses.

Materials

thin-film photovoltaic cells and balloons.

Dimensions

Various in size and shapes (a potential diameter of 1-10 meter for each balloon).

Benefits to the environment

These features can be used for a myriad of potential applications, including electric car recharge units, off-grid electricity generation for camping, yachts and golf courses, power farms with energy from the air and vegetation on the ground, secondary electrical units for residential consumers, and scientific applications.

Benefits to the human being

The goal is to develop an efficient, portable, land area-independent, inexpensive and reliable energy source for all, thus contributing to promoting society by decentralizing and diversifying energy resources while generating an ecological coherence between humans and nature.

More products with important innovation in accessibility and sustainability

In Geotectura studio we are in the final stage of designing a dew collector device named WatAir, a solar bus stop, 1 square meter house for homeless people and much more. You can find more info at: www.geotectura.com