

Rotating Solar House

Heliotrope is a rotating solar house with solar panels that generate five times the energy that the house consumes.

German architect Rolf Disch built Heliotrope to follow the sun throughout the day. The structure features triple panes of thermally insulated glass to strike a balance between letting light in and keeping the house cooler inside.

A giant 6.6-kilowatt-capacity rooftop solar panel called the Sun Sail slurps up the rays of energy, pumping them into the home and grid. Solar thermal collectors on balcony railings act as water heaters and radiators. On cloudy days, the house can be heated with wood chips and solar thermal heating.

The Sun Sail itself rotates separately from the house, adjusting itself to the best possible position at all times. This gives it a 30% to 40% advantage in energy production over traditional rooftop solar panels.

The house is green inside as well. Waste water goes through a purification system for reuse, and rain water collects in a rooftop basin. The toilet system turns human waste into compost.

Disch resides in the prototype himself. Two other Heliotropes have been built to date, each costing about \$2 million to build.

<http://techcrunch.com/2010/08/20/rotating-solar-house-generates-five-times-the-energy-it-consumes/>

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2011 Nova Award Nomination 22

