

Made in the shade

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By Alexandra Gross

Getting in a car after it's been sitting in the hot summer sun can make for an uncomfortable experience. For this reason—and to harness renewable energy—San Diego-based Envision Solar created the Solar Tree and Solar Grove parking lot systems. They're based on biomimicry: The eight-panel array of a single Tree absorbs sunlight, both storing and generating energy. The construction elements of the Trees form the canopy, shading up to 10 vehicles, the support structure is the “trunk” and underground wiring the “taproot.”



The Solar Tree parking system can store and generate solar energy.

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CEO Robert Noble considers these “solar integrated building systems” an example of smart design. “This is a case where the efficiency of technology is so closely related to its aesthetic that they are inseparable,” says Noble.

One Solar Grove will displace upwards of 338,905 lbs. of CO₂, and the bio-swales of the parking lot island's energy and lighting systems can also filter and trap contaminated runoff.

And in April 2009, Envision Solar unveiled the CleanCharge/Solar Tree System, a prototype solar-powered electric-hybrid charging station, at a Capitol Hill Earth Day event.