

# The Biggest New Thing in Solar May Be Coming Soon to a Highway Near You

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*Rendering of a Solar Roadway. Solar Roadways*

**Project in Missouri will test whether highways can become a new source of power.**

By [Kevin J. Ryan](#), Staff writer, Inc.

Until now, capturing [solar energy](#) generally has meant placing panels on roofs or, at the industrial level, in large open fields.

That might be changing. According to [Curbed](#), a rest stop in Missouri is about to become the home of an experiment to create roadways covered with energy-producing solar panels--and it's one of several such experiments about to kick off throughout the world.

The rest stop, along Route 66 in Conway, Missouri, will include about 50 solar panels covered in durable glass. To start, the panels will be used on the sidewalk, with the goal of powering the building at the rest stop.

The project is from [Solar Roadways](#), an Idaho-based startup founded by husband-and-wife duo Scott and Julie Brusaw. The company previously raised \$2.2 million through an Indiegogo crowdfunding campaign, and it received a \$750,000 contract from the U.S. Department of

Transportation to conduct tests in 2011. The Conway test pilot is part of Missouri's Road2Tomorrow initiative to create futuristic highways.

If this phase is successful, the next step for the pilot could be to try the panels in the rest stop's parking lot, then the entrance and exit ramps. The eventual goal is to move onto streets and highways.

As envisioned by Solar Roadways, the roads would heat themselves--meaning little to no work to maintain them in winter--and have lights that could replace street signs and warn drivers of impediments ahead. They'd create energy much in the way that rooftop solar panels do.

So why is this necessary? While homeowners can use solar energy to power their houses, governments need to come up with their own solutions to produce clean energy on a massive scale. This often requires large, open spaces and additional disruption to the landscape to create large solar panels or wind turbines.

Using roadways would let governments capture energy from areas where infrastructure already exists. Sten de Wit, a spokesman for Netherlands-based SolaRoad, which is creating technology similar to that of Solar Roadways, told Curbed that the Netherlands has twice as much road space as roof space, which could make the option attractive.

And the roads could also be monetized, providing a second source of revenue beyond tolls for major roads--a possibility sure to attract any government.

First the technology will need to be proven, beginning with small-scale projects under foot traffic like the Missouri rest stop. The glass panels will then have to face the weight of vehicles, followed by vehicles moving at high speeds. They'll have to allow tire traction as well or better than cement. Depending on their location, they'd also have to survive snow and ice in the winter, plus the temperature changes that contribute to potholes--although the self-heating feature envisioned by Solar Roadways could solve much of that.

Similar projects are taking place overseas. In France, road construction company Colas is currently testing Wattway, a centimeter-thick layer that's applied on top of existing roads to produce solar energy. And SolaRoad, the company in the Netherlands, is testing its own products along stretches of bike paths.

Even if the experiments prove successful, price will be an obstacle. An engineer at Wattway told Curbed the costs of the solar-powered roads are far more expensive than the cost to build standard roadways. But that could change, once the roads achieve their full potential for creating revenue-producing energy. And refining the manufacturing process is sure to drive down costs over time.

The race to upend the solar industry is seemingly underway. In August, Elon Musk announced that SolarCity is developing aesthetically pleasing [solar roofs](#). Other companies, like Los Angeles-based Rayton Solar, are trying to lower costs by [drastically reducing](#) the amount of silicon required to manufacture the panels.

Ninety-nine percent of the energy used in the U.S. currently comes from sources other than solar.

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