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Solar energy fails to surge

By Joel Eskovitz
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After making great strides in the 1970s, solar energy has failed to make the surge that many thought it would in Arizona, where the sun shines almost 300 days a year.

The state was the first to require its utilities to produce renewable energy, mandating that 1 percent of all energy come from renewable sources by 2005. But only half of that must be solar. And finding the cause for this perceived slowdown is a tricky endeavor.

"There's been a failure of will," said Renz Jennings, who generated the requirement during his 14-year tenure on the Arizona Corporation Commission. "The utilities really like solar as a lab experiment but they have a hard time moving into a deployment stage."

The main obstacle for mainstream solar use is economics. Nonrenewable sources are still cheaper, and after the deregulation of the electric industry, most companies fear that making changes that would impose a greater burden on their customers.

It's like any new technology, Peter Dreyfuss of the Department of Energy said. Like computers or televisions, solar panels have needed 20 years to become commercially viable, efficient and aesthetically pleasing.

Dreyfuss serves as the national coordinator for the Million Solar Roofs Program, which is an effort to place one million panels on

roofs nationwide by 2010. The premise of the program lies in the theory of economies of scale, in which an increase of production will lower the actual cost of the product.

In the first three years of the program, 70,000 solar roofs have been installed. Arizona is in the forefront of the drive, which includes 47 local and state communities.

Dreyfuss was particularly impressed with the state's Civano-Tucson Solar Village.

This community is a cooperative endeavor among the city of Tucson, various government agencies and private groups. Every home employs a solar water heating device and every house is constructed with energy efficiency as the top priority. Fifty homes are occupied, and most of the first 190 lots have been sold, said John Laswick, the manager of Tucson's Sustainable Communities Program.

The popularity of this community and other utilities programs indicates that more people are willing to pay a bit extra to make solar energy affordable in the long run.

Arizona Public Service Co. and Salt River Project both offer customers the option of adding a few dollars to their monthly energy bill in return for receiving part of their energy from solar sources.

APS also has 32 customers, scattered from Casa Grande to Sedona, who are completely self-sufficient using solar energy because they are far enough away from power lines to make solar a wiser economic move.

Experts predict a more interconnected system, in which energy can move in both directions through a network. That day could be coming sooner, said Marc Fioravanti, the strategic director for the Utility Photovoltaic Group, a partnership between the Department of Energy and the utilities.

He cited the Institute of Electrical and Electronic Engineer's January passage of a new safety standard as a watershed moment in creating an interconnection between homes and grids.

"It really provides the necessary level of comfort that there are technologically safe ways to operate (the system)," he said.

State Rep. Barry Wong said the government now has to play a role in kick-starting the industry, especially since it subsidizes petroleum

and natural gas, creating an unfair market situation for solar energy.

The Legislature passed several of his bills, reinstating sales tax exemptions for installing solar products, creating a $5,000 tax deduction for homeowners who purchase high energy efficient homes and requiring the state to use solar as 10 percent of its energy source within the next 10 years.

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