Catching Rays

Energy-saving solar panels are back, and now they can generate electricity.

By Tom Skevin

Following the path of the bell-bottom and the Volkswagen Beetle, another 1970s trend is making a comeback: solar energy.

Increasing environmental awareness, the soaring costs of heating oil, and last summer's record high temperatures are making utilities and consumers again look to the sun for power.

While the solar panels that first hit the rooftops of homes to heat water in the late Seventies and early Eighties remain effective, technological advances have made it possible to convert the sun's rays into household electricity.

"It has mutated and come back," says Peter Rusil, director of housing and building technology at the New Jersey Institute of Technology in Newark. "It's not at the stage where people can go down to Home Depot and buy some, but it's coming."

Experts advise anyone considering the newest solar technology — known as photovoltaics — to look at it as a supplemental energy source because it cannot yet compete economically with electric and gas utilities. As a primary energy source, solar power is used mostly in rural areas not served by power grids, where it is cheaper than having utility companies extend power lines.

Test programs

Public Service Electric and Gas Co., New Jersey's largest utility, is testing a three-kilowatt system in the Bergen County town of Maplewood.

"This is pretty indicative of the state-of-the-art [system] they could install today," says Harry Roman, a 30-year PSE&G veteran, adding that all New Jersey utilities are under state mandate to introduce forms of renewable energy like solar into their systems.

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Photo: Rich Bonte of Solar Living in Netoang inspecting solar panels on the roof of a home in Oakland.
metropolitan-area energy company with a solar power initiative. The Long Island Power Authority chose 30 homes from a lottery pool of 5,000 for its Solar Pioneers pilot program.

Two 3-by-5-foot panels attached to each home generate 500 to 600 watts of electricity daily — enough to run a small to medium-sized refrigerator, LIPA spokesman Michael Lowndes says.

“We anticipate that these installations should yield enough electricity to defray [a customer’s] annual electrical bill $100,” he says.

Lowndes estimates each installation, which LIPA covered, would cost homeowners $4,000 to $5,000. However, a $100 annual savings and an initial cost of at least $4,000 means Long Island customers break-even point would be 20 years, after factoring in tax breaks and rebates.

**Initial costs vs. energy savings**

Such a lengthy break-even period begs the question of whether such installations are worth it.

“If it’s important to you in terms of clean energy, then yeah,” says Lowndes. “We’re very optimistic — you’ve got to start somewhere.

However, one Morris County contractor says he is not ready to jump on the latest solar-powered bandwagon.

“Over the years, the market has shifted to where I would now say 95 percent of our work is pool heating and the remaining 5 percent is domestic hot water,” says Rich Bente of Solar Living in Newton, N.J. “Twenty years ago, we were talking opposite. People didn’t care what the [installation] cost was. They realized they were conserving energy. The country was in that mode.”

Bente, formerly of River Edge, installs systems in New Jersey, New York, Pennsylvania, and beyond. “We’ve been doing it now for 28 years,” says Plautz, who owns the company.

In 1985, when government tax credits dried up, he says, “People are looking for comfort. They’re not looking for conservation — and I’m still very pro-conservation.”

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