

Scientists study new options for solar power

Scripts Howard News Service

Josh Mark had always wanted solar panels on his home.

They don't pollute. They take some pressure off the monthly electric bill. And, as Mark says, it rescues some coal or natural gas from the power plant's flames.

The only problem: he couldn't find one to fit his suburban Los Angeles home.

"I've been looking for years and there hadn't been any real mainstream system," said Mark, who works for Fox Broadcasting in Hollywood. "They've all been this take-your-whole-house-off-the-grid type thing that costs a ton of money and it's a little overboard."

But while surfing the Internet in September, serendipity led Mark to the Web page of Siemens Solar, a German company with a factory right up the road in Camarillo. It had just announced a new line of "Earth-save" solar kits that would generate power from people's roofs and send those wants to California's electric lines. Mark's house could actually make a bit of power for the state.

The timing was perfect. With California's dicey power situation and a generous rebate program offered by his utility company, the Los Angeles Department of Water and Power, Mark — and hundreds of neighbors — wanted to catch a little sunshine for about half the cost.

The state will pay \$3 for every watt of solar energy. While it doesn't sound like much, it would save \$3,000 on a one-kilowatt system — which is one of the smaller systems. And the Los Angeles Department of Water and Power went a step further, offering to pay \$5 a watt if the solar panels were made in the Los Angeles area.

Now that Siemens Solar Industries has opened a plant in Los Angeles County, the Marks are the third family in the area to take advantage of the

On the Web

- www.siemenssolar.com
- www.bpsolar.com
- www.greenla.com

For a list of incentive programs in your area:

www.dcs.ncsu.edu/solar/dsire/dsire.cfm

rebate, which paid for \$5,600 of their \$10,000 one-kilowatt system.

Though he hasn't received his first electricity bill since his meter began running backward, Mark expects his investment will slice his bill by at least a third.

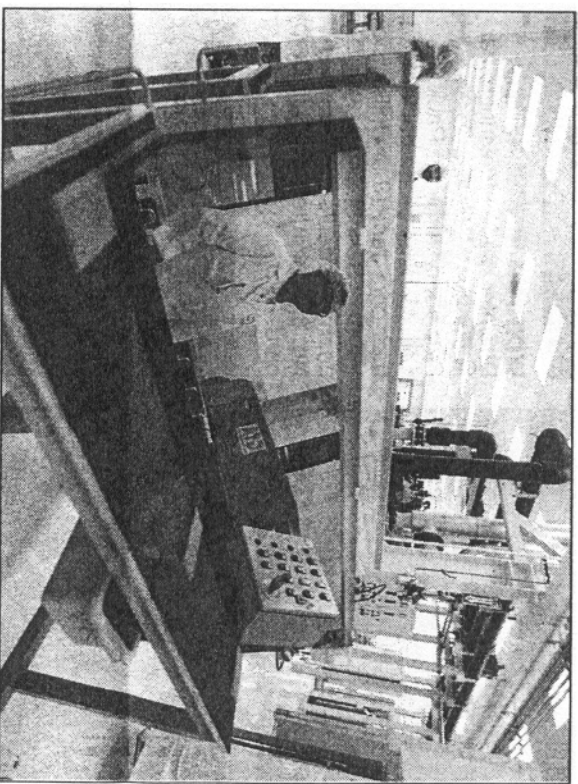
A typical home needs about three or four kilowatts for all its electricity. So companies like Siemens Solar and BP Solar, headquartered in Maryland and with offices in California and Virginia, continue to work on new technologies that can cram more powerful solar cells into smaller and cheaper panels.

Both companies, for instance, just began selling thin-film solar panels, which look like reflective black glass. They're slightly more efficient than panels with individual solar cells, but still more expensive now.

BP engineers also are developing cheap, translucent solar panels that could replace windows on large office buildings. And, like Siemens, BP hopes to sell panels for home roofs in the next few years.

The entire industry only spun out about 252 megawatts last year, globally. That's about a quarter of what one mid-sized natural gas power plant churns out.

Though companies have enjoyed steep increases in sales — about 30 percent over the last five years — most interest comes from countries like Japan and Germany where energy is expensive and government subsidies are common. Even though the industry was



Ignacio Corral, an engineer at Siemens Solar Industries in Camarillo, admires a new set of thin-film solar panels fresh off the assembly line. The 2-foot-by-5-foot panels look like reflective black glass and can churn out 100 watts of electricity. SCRIPTS HOWARD NEWS SERVICE PHOTO

born out of the U.S. energy crisis of the 1970s, Americans have been slow to embrace the concept. It didn't help that by the time researchers developed efficient and inexpensive panels, energy prices had plunged back down.

For much of the '80s, the solar industry couldn't shake labels of "alternative energy source" associated with hard-core conservationists living on remote mountaintops. Interest, money for research and corporate investments waned.

"Now people are asking for 25 years' worth of power right away," Albertson said.

But because the 30-year-old industry has yet to come of age — accounting for less than 1 percent of U.S. energy consumption — some still are skeptical about whether solar will ever become a legitimate energy source.

"We just cannot get solar power to market without tons of subsidies," said Chris Horner, a policy analyst from the Competitive Enterprise Institute, a free-market think tank in Washington. "It's because they can't compete with cheaper fossil fuels like coal and natural gas."

Others who have watched the solar sector evolve are more optimistic.

Bob Johnson, a solar marketing analyst, said he has never seen a better opportunity for solar to shine in his 24 years in the business.

"This is a technology that can help you regain your control over your energy future," Johnson said. "And that's a key point, particularly for people getting into the upper echelon of their lives. When I retire, I want some certainty as to my energy costs of my home."