

Taking a Dim View of Solar Energy

Who could possibly be against homeowners using solar panels to power their homes?
Utility companies.

By Matthew Phillips August 25, 2009

Not long ago, most homeowners saw their roofs as simply something to keep the rain out. Now they see them as a source of electricity. Despite the bad economy, or maybe because of it, the rooftop-solar industry is booming, as Americans become increasingly intrigued by the idea of turning their roofs into mini power plants and cutting their electric bills. In 2008, 33,500 rooftop solar systems were installed in the United States, a 63 percent increase over the amount of capacity installed in 2007. In California, the solar capital of country, the increase was 95 percent.

Meanwhile, the outlook for the other side of the solar industry—the large, centralized power plants— isn't so sunny. These megaprojects—think acres of desert landscape covered in thousands of solar panels sending electricity through transmission lines—controlled mostly by utility companies that have had a monopoly over the country's electricity grid since the turn of the last century, were supposed to be the key to the future of the solar industry. So far, they're getting vastly outpaced by the decentralized rooftop approach. According to the Interstate Renewable Energy Council's 2006-08 count, consumers added 522 megawatts to the grid; whereas utility generated sites added just 96 megawatts.

The disparity has utilities worried about losing their grip on the country's energy industry, and the \$130 billion residential electricity market. In some cases, utilities are actually taking direct steps to thwart rooftop solar. Two weeks ago in Colorado, the state's biggest utility, Xcel, tried passing a surcharge on homes and businesses using rooftop solar power. The public went ballistic, and with pressure from Democratic Gov. Bill Ritter, the proposal was eventually shelved. In early July, New Mexico's biggest utility, PNM, filed an official request to dramatically reduce incentives for businesses and homeowners to install solar panels, and is now fighting with state lawmakers over whether it has the right to exclusively own solar panels systems hooked up to its grid. During California's last legislative session, Southern California Edison, which serves 13 million residents, successfully lobbied against a bill that would have allowed the city of Palm Desert to pay solar users for the excess power they generate.

Editor's Note: After this story originally posted, Southern California Edison says it opposed the recent reimbursement bill because it was duplicative of a current statewide program and too localized in its effect. A SCE spokesperson says the utility is supportive of statewide efforts to assist homeowners in the sale of their solar power.

"There is across the board tension between distributed solar generation and utilities," says Adam Browning, executive director of The Vote Solar Initiative, a solar advocacy group in San Francisco. "They've had the energy pie to themselves for a century, and now facing a future where clean distributed energy will play a large part, they're looking for ways to profit from it and maintain control." Can we really blame them though? That's just capitalism right? "Part of having a monopoly is serving the public trust," says Browning. "People want solar panels on their roofs, so utilities should be working to make that happen rather than getting in the way."

It's not hard to understand why a big utility might not like the idea of homes, businesses, schools, and even government buildings being covered in solar panels. If every building in America is generating its own solar energy, that throws a big wrench into their business model. It's why utilities have historically been opposed to solar power, say solar's advocates. But as most states have passed renewable-energy standards recently, mandating that a certain percentage of their energy come from renewable sources, utilities have become reluctant players in the solar game because, frankly, they have no choice. Rather than get on board with rooftop solar, though, utilities decided to do what they do best: build a centralized system of large power plants, and make money by charging customers for taking power off the grid. While large-scale utility projects do hold the promise of generating massive amounts of electricity, so far they've delivered precious few new sources of electricity, as dozens of proposed projects are languishing in the application process. Building the thousands of miles of new transmission lines these projects require not only costs millions, it's fraught with red tape: zoning and permitting regulations, and issues like eminent domain, as lines are strung across both public and private property.

The Energy Policy Act of 2005 called for the addition of 10,000 megawatts of renewable energy on public lands by 2015, much of which was thought to be provided by big solar plants. But four years in, things are barely off the ground. The two biggest solar projects in the U.S., which are both in the Nevada desert and came online in 2007, combine to produce just 78 megawatts, 14 of which are used solely to power Nellis Air Force Base. Interior Secretary Ken Salazar says that by 2010, 13 utility projects will be under construction on public land in the Southwest, but that's still years away from generating electricity. California has the country's most aggressive renewable goal, mandating that 20 percent of its energy come from renewable sources by the end of 2010. Lawmakers are now pushing that to 33 percent by 2020. But at its current pace, it won't come close to being met. None of Southern California's four biggest utilities, Southern California Edison, San Diego Gas and Electric, Pacific Gas and Electric, and the Los Angeles Department of Water and Power, are on target largely, critics say, because they're too focused on trying to make money off big centralized plants.

"The utilities are more interested in protecting their stranglehold on the power grid and preserving their century-old business model than they are producing clean electricity," says Jim Harvey, who heads up the Joshua Tree, Calif.-based Alliance for Responsible Energy Policy, an advocacy group that's staunchly opposed to utility-generated solar power. Harvey actually believes that the country's entire renewable portfolio can be achieved through rooftop solar alone. That may be possible from a sheer megawatts perspective, but from a practical standpoint, it's way over-ambitious. With no centralized source, how do you run traffic or street lights? What if it rains for a week? We still don't have foolproof means to store solar power, so for now, distributed generation needs the grid as a backup.

This isn't to take anything away from the private-sector solar boom. In 2008, rooftop solar added more than 10 times the amount of power to the country's grid than utilities did. Maryland-based Sun Edison, the country's biggest installer of solar panels in the retail market, added more electricity to the grid last year, 25 megawatts, than did the entire utility industry. San Francisco-based SunRun has come up with a way to let homeowners make a down payment, usually about \$1,500, on what is typically a \$30,000 solar-panel system, lock in a below-market fixed rate for their electricity, then use the savings to help pay off the cost of the system.

This is all possible thanks to state and federal government subsidies, and the declining cost of producing electricity from solar panels, down to \$6 per watt from about \$9 per watt in 2006. "We're buying panels at prices I didn't think we'd see for at least another decade," says John Berger, founder of Standard Renewable Energy, a Texas-based company that provides homeowners and businesses ways to reduce their energy costs, including on-site solar generation. Berger expects to have revenues of \$50 million in 2009, this after doing \$11 million in business last year, and only \$1.5 million in 2007. He gets particularly agitated when talking about the utilities. "When solar came along, they thought they could ignore it. Then they thought they could just monopolize it. But the private sector is giving them competition, and now they're scared."