

Driven By the Sun

Glass Company Finds Incentive to Go Solar

by Megan Headley

The Sussman family started looking up about a year and a half ago—up at the roof of the 60-year-old building that houses J. Sussman Inc. in Jamaica, N.Y., and beyond that, up at the sun.

Brothers Steve and David Sussman, who run the window fabrication company, began taking a hard look at installing a rooftop photovoltaic (PV) array to power their facility.

"We researched it, we had the help of the Jamaica Development Corp. locally," says Steve. "They helped us research it and find vendors. Then I had an accountant get involved and we saw this was a no-brainer situation."

"At first we were looking for a 50 kilowatt (kW) photovoltaic (PV) system," David Sussman says. "We saw that it would be paid off in two or three years. Then we thought: what if we do a 125 kW system? And [it seemed] the pay-back was the same."

According to Steve Sussman, "We put in all the numbers and it paid for itself—and with the stimulus package it actually made it so it pays for itself in two years. It's a huge project and pays for itself in two years." Though he allows that "it probably would not have paid if we didn't have the government incentives."

The incentives available might very well have been what got the Sussmans talking solar in the first place. Steve Sussman says, "We've done a number of things using government incentives. We bought this building because of that, many, many years ago." He advises getting involved in the local community, and learning what other businesses are doing, to be on the lookout for an opportunity—like this one—that's too good to pass up.

Once the decision was made, the team had to move quickly to take advantage of those incentives for the solar project.

"[The process] was pretty fast because it had to be finished before the end of the year," for the company to take advantage of the local tax breaks, David Sussman explains.

The first steps involved ensuring the system would work and the company could support a PV system—structurally and financially.

"The government is very much involved here, which

means every step of the game has to be planned out," Steve Sussman says. After filing a plan with its utility, Con Edison, the company had visits from a structural engineer from New York City Department of Buildings and reviews of its finances to ensure it was paid up on its bills.

"You have to have good credit because there's a certain amount of money up front that has to be paid," Steve Sussman says. "You have to be a pretty solvent company, without any kind of credit problems."

He adds, "You would think it's easy to just hire a company—it doesn't work that way. There are all sorts of regulations."

Up On the Rooftop

Solar Energy Systems LLC (SES) in New York installed the more than 550 panels that make up the array. Schott Solar manufactured the PV modules, while Boston-based Satcon Technology Corp. supplied the inverter.

The system is expected to provide annual energy output of 139,242 kilowatt-hours (kWh). According to SES, the system is expected to offset carbon dioxide emissions by 252,029 pounds per year, nitrogen oxide emissions by 295 pounds per year and sulfur dioxide emissions by 856 pounds per year.

The installer provided J. Sussman with a website (www.live.deckmonitoring.com/?id=j_sussman) that shows in real time how the PV array is performing.

"We can actually track how much energy we're saving every day," Steve Sussman says.

The company's electric costs have gone from approximately \$30,000 to less than \$5,000 since installing the system in August.

Too Much of a Good Thing

While the installation was relatively seamless, as Steve Sussman says, "There are always a couple of bumps in the road."

They came upon one of those "bumps" after the "on" switch was flipped.

"We turned it on Friday, went home for the weekend, we came back on Monday, and the plant was shut down,"

Find Your Incentive

The Database of State Incentives for Renewables & Efficiency (DSIRE) is a comprehensive source of information on state, local, utility and federal incentives and policies that promote renewable energy and energy efficiency. Funded by the U.S. Department of Energy, DSIRE is an ongoing project of the N.C. Solar Center and the Interstate Renewable Energy Council. To learn about incentives offered around the country, visit www.dsireusa.org.



The rooftop PV array is expected to pay for itself within two years, a win for all at the fabrication company. The office staff includes (from left) Vadim Mergold, Steve Sussman, Jon Sussman, David Sussman, Mario Ortiz, Robin Sussman, Terresa Teh, Jake Sussman and Julio Cortez.

David Sussman says. "Because we generated so much power, the neighbors had problems."

"We actually generated too much power," Steve Sussman explains.

The electric company had shut down the power as the neighbors complained of blown fuses. As a result, SES had to fine-tune the system further to produce the optimal amount of power on any given sunny day.

As Steve Sussman explains it, when the power isn't being used now on weekends, the PV actually reverses the meter.

"The New York City law is that we can't make money on generating more electricity than we use and selling it back. The most we can do is break even," David Sussman says.

Steve Sussman adds, "We're not storing it. There are certain areas in the country where you can store it and they even allow you to sell it to other areas." Not so in New York. "Every locality is different," Steve Sussman says.

Today, the rooftop array provides virtually 100 percent of the shop's electricity. The Sussmans expect it will continue to do so for a good 25 years; the inverter features a 15-year warranty, while the modules themselves come with a 25-year warranty. For a company that's been in business 105 years, 25 may seem just a blip.

To keep the system in top condition, SES drops in about every six months for routine maintenance as part of their agreement. Beyond that, both Sussmans agree little is needed to keep the PV system plugging away.

Staying Green

The company is likewise plugging away at staying green.

"We've always been very much aware of that," Steve Sussman says. "For instance we updated all our windows with all high-performance glass and we redid our roof." More recently, the company had a representative from its electric company, Con Edison, visit to review J. Sussman's facility and make recommendations as to additional actions that could save energy. "He said there's really nothing I can help you with. And I said, 'you know, I don't think this guy knows what he's talking about, I want a second opinion.' So I had another guy from Con Edison come here; he went with one of our business leaders around the whole place and said the same thing. So there's really nothing they can do to help us save energy that we haven't already done."

For other companies taking a look at going solar, Steve Sussman advises that "not everybody wants to go through that red tape, so that's something people should know: there's a lot of red tape. I think personally it was worth it and it will work for us but there is a certain amount of red tape."

For companies thinking long-term, the time it takes to get through the red tape is nothing compared to the timelessness of working off the sun's power.

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