

PLACE IN THE SUN

Burgeoning solar industry powers jobs, energy savings

By **BRIAN PEDERSEN**
brianp@lvb.com

Solar power is on the rise across all industry segments in the region, leading to more jobs for manufacturers, installers, project managers and research and development.

It's a trend that can be seen nationally, as well.

Last year, one in 50 new jobs created in the nation was in the solar industry, according to data from National Solar Jobs Census, a program of The Solar Foundation, a non-profit based in Washington, D.C.

Furthermore, the data showed solar jobs increased at least 20 percent per year for the past four years. In 2016, the solar industry produced 260,077 new solar jobs, a jump from 208,859 in 2015. Since 2010, the number of new solar jobs has steadily increased each year.

The falling cost of solar energy and the continuation of renewable energy tax credits are creating a favorable environment for businesses to install solar projects.

"When structured correctly, solar projects are cash-flow positive in the first year and throughout the project," said Jim Kurtz, president of RER Energy Group of Muhlenberg Township. "The power of solar you generate on-site. It's cleaner, it's more efficient. Once people start using solar power, they tend to want to continue using it."

SPECIAL REPORT

ENERGY

MORE INSIDE

- Risks remain, but fracking still an essential source. **Page 9**
- Infrastructure stifles growth of wind power. **Page 10**
- More Americans backing renewable energy. **Page 12**

Fifty percent of his 2016 revenue came from repeat customers, he said.

Jack Pfunder, president and CEO of Manufacturers Resource Center in Hanover Township, Lehigh County, said his organization worked with RER Energy about eight years ago to help it get financing through the Pennsylvania Sunshine grant program, which provides funding for solar projects.

"There were a number of companies, about 15, that we helped

get financing through the Sunshine grant," Pfunder said. "I know a lot of the companies, even today, said it was a good deal for them."

He has since partnered with RER Energy for programs and events and noted that Kurtz's firm is growing because of the increase in solar array activity.

Pfunder said he is starting to see more interest in solar power projects in this region.

"Manufacturers are talking about it," he said.

SOLAR SAVINGS

With solar power projects, companies pay for their energy cost up front. Afterward, a company's electricity costs are locked in at 3 to 4 cents per kilowatt hour for the next 20 to 30 or more years. Maintenance costs are extremely low for solar clients since solar arrays involve no moving mechanical parts.

Most businesses today are paying 6 cents to 10 cents per kilowatt hour for traditional energy, depending on their location, and that will increase over time, Kurtz said.

Rooftops are bombarded with sunlight, which heats buildings and creates higher energy bills, particularly as larger warehouses and industrial buildings sprout throughout the Greater Lehigh Valley.

Using solar panels on a roof, then, can lower air conditioning bills as well as heating costs, he said.

MAKING A STATEMENT

Natural gas prices have risen 50 percent over the past 18 months, which means the nation is now a net exporter of natural gas, a driver for increased electricity prices going forward.

Domestic prices are moving toward higher international price levels, Kurtz said.

"Solar doesn't work for everyone, but when it does, it's an economical, powerful driver," he said. "It makes a statement for their employees, leaves a positive impression on employees as well."

COSTS SLASHED BY 45 PERCENT

Solar works particularly well for companies that will be occupying buildings for a long time.

AGP Plastics Inc. of Trumbauersville recently installed a solar roof on its manufacturing facil-



FILE PHOTO

Solar panels: Using them on a roof can lower heating and air conditioning costs.

ity and should see a six-year return on its investment, said Ed Bolton, an owner and vice president of the company.

"We expect to reduce our energy costs 45 percent per year," Bolton said. "We saw a significant reduction here in April. It hasn't operated for a full year yet."

Bolton said his company bought the system through RER Energy, which supervised the installation.

INCENTIVES FOR INSTALLATION

Costs to install solar arrays vary significantly by facility, Kurtz said. Commercial solar arrays cost about \$1.60 to \$2.50 per square foot, depending on the roof type and other characteristics of the system, Kurtz said.

Incentives still cover the majority of those costs.

These include the Federal Investment Tax Credit, which covers 30 percent of the project cost, and the Modified Accelerated Cost Recovery System, which allows for depreciation over five years for an asset that should last more than 30 years, Kurtz said.

This leads to another 30 percent

to 40 percent of the project cost reimbursed to the employer in the form of reduced tax payments.

ECONOMIC BOOST

The increased use of solar power is also boosting jobs in that sector, as it takes an integrated team to develop a project, including different types of engineers, office personnel and project managers to coordinate the construction, Kurtz said.

"We partner with a lot of engineering firms," Kurtz said. "We have 20 people who help us on a daily basis across our offices. We are doing projects across the U.S."

SUMMER SPELLS LOWER BILLS

While the winter months do not offer as much sun, the summer months make up for it, Bolton said.

"The one thing you can be sure of in manufacturing is you're always going to be using electricity," he said. "In my opinion, it [solar power] is the technology that's going to win in the future."

Most people could drive past AGP Plastics' building and not notice any change, Bolton said, describing the solar technology as unobtrusive.

"It doesn't really change the landscape or visibility," he said. "It's as low impact as alternative energy can get."

ENERGY DIVERSITY

While solar power has been growing nationally and in Pennsylvania, some see the need for a diverse energy portfolio rather than championing any one source as the best.

"We are absolutely growing nationally and in Pennsylvania," said Darlene Robbins, president of the Northeast Pennsylvania Manufacturers & Employers Association in Pottsville. "Solar jobs are growing 17 times faster

than the U.S. economy. The solar business has benefited from the falling costs of solar energy, and generous tax credits have helped make it more affordable for businesses and homeowners to install solar panels."



Robbins

However, she said, there's value to power supply diversity. Over time, the power production costs change because of the uncertainty around the future prices of those fuels, which translates into uncertainty around the costs of producing those fuels, she said.

"A diverse portfolio is the most effective tool," Robbins said.

NOT ANY ONE SOURCE

Furthermore, while tax incentives have helped the solar industry, those incentives could be here today, gone tomorrow, Robbins said.

She cited a 2014 survey in which 94 percent of Americans said they believe it's important to maintain a diversity of electricity prices.

"I applaud solar growth," Robbins said. "I applaud natural gas and, of course, coal. Not any one energy source is the answer."

