Department of Energy

Factory Brings Solar Energy Jobs to Former Steel Town

AUGUST 24, 2010



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An aerial view of AE Polysilicon's polycrystalline silicon factory in Bucks County, PA, which is expected to create 70-120 permanent jobs. | Photo Courtesy of AE Polysilicon

Like many Pennsylvania towns, Fairless Hills has a long history with manufacturing. The town in Bucks County, just across the Delaware River from Trenton, N.J., is home to the Keystone Industrial Port Complex, a manufacturing and industrial site that was once the location of a U.S. Steel plant. It's also home to a lot of workers with manufacturing experience, although they're more likely these days to make pharmaceuticals or petrochemicals than steel.

So when AE Polysilicon looked for a site suitable for its polycrystalline silicon plant, the Port Complex seemed like a natural choice.

"The plant site here is ideally suited for what we are doing. It's a brownfield site with the necessary infrastructure," says Leo Tsuo, Business Development Manager for AE Polysilicon. "This area historically has a strong, robust chemical process industry."

Building Blocks of Solar

AE Polysilicon built its Fairless Hills factory to make polycrystalline silicon -- tiny pellets of silicon intended for use in photovoltaic solar panels. The silicon is the primary constituent in 80 percent of solar panels, Tsuo says, and the company already has industrial customers ready to buy it.

As of mid-August, the factory was completed and performing test runs. Tsuo says it should ramp up commercial production and be fully operational in 2011.

At that time, the company expects to make 1,500 metric tons of crystalline polysilicon a year, with a target capacity of 1,800 metric tons a year. That's enough to make roughly 250 megawatts of solar generating capacity, according to Tsuo.

The company also estimates it will employ about 120 people full-time -- about half in manufacturing and half in administration. This is in addition to more than 200 jobs created during construction and for equipment fabrication.

But that's just the first step, says Tsuo's colleague, Senior Financial Analyst Patrick Sullivan. If the factory meets financial expectations, AE Polysilicon will expand production capacity to four times the current size and double the number of full-time employees. The tax credit does not apply to investment in the expansion, but the company plans to fund the expansion in part with the capital generated by the current facility -- meaning that the tax credit will help with the expansion as well.

Investing in Green Manufacturing

The company got an extra bit of confidence during its building phase through a \$44.85 million Advanced Energy Manufacturing Tax Credit, funded by the American Recovery and Reinvestment Act. This is a 30 percent credit for investments in manufacturing projects related to renewable energy, energy efficiency or other advanced energy technologies. The state of Pennsylvania also provided financial incentives, Tsuo added, in part because the state is interested in redeveloping areas like the Keystone Industrial Port Complex into active business districts, especially in "green" manufacturing.

Tsuo adds that others in the solar manufacturing industry have shown interest in the region. Motech, AE Polysilicon's parent company, has acquired a former solar manufacturing site in Newark, Del. -- about an hour from Fairless Hills -- and Scheuten Solar, a key investor and partner to AE Polysilicon, is actively pursuing projects in

Pennsylvania. If the trend holds, the region could become a new hub of the green energy industry.

"From an economic development standpoint, there is a cluster effect," Sullivan says.

What does this mean for me?

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