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Toledo Tries to Overcome Rust-Belt Image, Become Green Jobs Metropolis

TOPICS: Environment | Energy | Politics & Government | Alternative Energy

COMPANIES: First Solar, Inc.

By: Brooke Sopelsa, Writer/Producer | 30 Jun 2009 | 02:48 PM ET

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The glass is half full again in Toledo. The Ohio city once known as the glass-making capital of America is trying to forge a new identity as a solar energy, green jobs metropolis of the future.



University of Toledo

Thin-film solar panel.

"This is a very important growth sector for us," says Rep. Marcy Kaptur, a Democrat, whose district includes Toledo. "We're carving out a well-deserved reputation as a leading region for alternative energy research and manufacturing."

While job growth in Ohio is down, green job growth in the state is up, according to a new [study from Pew Charitable Trusts](#). According to the study, Ohio's clean energy sector grew by 7.3 percent between 1998 and 2007, while the state's overall job base fell by 2.2 percent during the same

time.

"The idle manufacturing capacity that is spread across Rust Belt states really presents enormous opportunity to locate the manufacturing of these new clean energy goods, many of which are very similar in nature to things that were being built there previously," says Benjamin Goldstein, a policy analyst at the Center for American Progress.

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Toledo, which has an unemployment rate of 12 percent, more than a point higher than the state average and nearly three points higher than the national average, is hoping to become not just Ohio's clean energy capital, but the country's. The city, the state, the University of Toledo and local entrepreneurs are working together to make this a reality.

"We have about 6,000 people at the moment employed in 15 research and manufacturing institutions that are focused entirely upon solar energy," says Toledo Mayor Marty Finkbeiner. "We would like to see over a decade that number grow from 6,000 to 20,000."

The University of Toledo is one of the driving forces behind the city's green makeover. In 2000, the university started looking at ways to support regional development, eventually deciding the best way was to develop a clean energy program, with a focus on solar energy.

"We wanted to establish one premiere area where we could be



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as good as anybody in the world," says Dr. Frank Calzonetti, vice president of research development at the University of Toledo. "We picked one area where we wanted to build a very strong core of research that would lend itself to invention and also support technology development in our area."

University of Toledo
Solar panels and the business incubator on the U. of Toledo campus.

The University of Toledo has a long history with solar energy. In the 1980s, a glass expert and Ohio native by the name of Harold McMaster used his knowledge to create solar cells. He started a business at the university called Solar Cells, which more than a decade later became **First Solar** [FSLR 158.2499 ▼ -3.9501 (-2.44%) ▲], now the largest manufacturer of thin-film solar cells in the world. Although the company is now headquartered in Tempe, Ariz., it has a manufacturing plant just outside Toledo that employs more than 700 people.

The university wanted to further what McMaster started more than two decades ago. In 2005, it started a clean and alternative energy business incubator, which has accounted for 130-plus jobs and nearly \$8 million in payroll, according to university statistics. Then in 2006, the university launched the Wright Center for Photovoltaics, a university, industry and government collaboration focused on reducing solar costs, improving technologies and transferring knowledge from the labs to the production line.

The university currently has two big energy projects in development: the School of Solar and Advanced Renewable Energy and the Scott Park campus of Energy and Innovation, a physical campus dedicated to researching renewable, alternative and sustainable energies. The university is hoping to secure \$75 million in federal stimulus funding for the projects, but they are not contingent on federal money.

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One beneficiary of the University of Toledo's clean energy initiatives is **Xunlight**, one of four graduates of the university's business incubator program. **Xunlight** develops and manufactures solar panels that can be used for commercial and residential rooftops.

Over the past two years, the company has received \$40 million in venture capital and has created 100 jobs. There are also 15 job openings on the company's Web site—not bad in a city with a 12-percent unemployment rate. The company is expected to be profitable by 2010.

Dr. Xunming Deng, the company's president and CEO, is also a professor of physics and electrical engineering at the university and directs the school's Thin Film Silicon Photovoltaic Laboratory (though he is currently on a leave of absence).

Xunlight continues to have close ties to the university and Deng says he plans to keep the business rooted in Toledo—not out of obligation but because of the advantages of a Rust Belt location.

"There was an entire infrastructure here to build auto equipment, and now we're taking advantage of that infrastructure that was underutilized to build solar equipment and make a solar industry," says Deng.

Xunlight recently moved into a 120,000-sq. ft. space that had been vacant for more than three years, which it acquired for a "very, very attractive" price.

Another underutilized asset, says Deng, is the base of skilled workers. Brad Mohring, a mechanical engineer and Toledo-native, is a good example.

Mohring, 33, worked at the same Toledo-based auto parts

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Xunlight co-founders Dr. Xunming Deng and Dr. Liwei Xu

supplier for 11 years before being laid off in 2006. Searching for a brighter future, he decided to take a job at Xunlight, which was willing to retrain former automotive and glass industry employees.

"I think the biggest change in this industry from what I was used to [in the auto industry] is the optimism," says Mohring, an engineering manager at the company.

Using a fitting cliché to sum the current economic situation in Toledo and its hopes for the clean energy industry, Rep. Marcy Kaptur said "It's always darkest before the dawn."

• **Slideshow: Hottest States For Green Jobs**

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