



August 17, 2009

THE FUTURE IS NOW

Del. begins training the next generation of green workers for a new economy

By *RACHEL KIPP*
The News Journal

When Dale Davis began installing solar-panel systems 10 years ago, his primary customers were "fervent environmentalists."

"It didn't matter that it cost four times as much and that it took 25 years to recoup their investment," said Davis, president of CMI Electric, a Wilmington solar contractor. "They did it because it was the right thing to do."

Interest in home weatherization, solar, wind and geothermal power isn't just about altruism anymore. In Delaware and beyond, government leaders see it as the key to lifting the state -- and the country -- out of economic turmoil.

They want to turn downsized autoworkers, steelworkers and others into the next generation of "green" workers. And when consumers decide to buy a solar system or a wind turbine for their homes, state officials want them to purchase one that was manufactured and designed here, installed and later maintained by men and women who also call Delaware home.

In the coming months, the state is launching campaigns to begin training that work force and to create the public interest needed to keep those workers on the job. In October, Delaware Technical & Community College is launching the first of what educators intend to be a slate of programs to train energy auditors, facilities managers, green power technicians and green builders.

At the same time, millions of dollars in federal money dedicated to energy efficiency will begin to fill Delaware's coffers. The Department of Energy has set aside \$54 million for Delaware in stimulus funding for weatherization, efficiency and conservation and the state's energy program, to be distributed over the next two years. State officials are planning to launch public awareness campaigns and augment existing financial incentives for consumers who go green.

"To be successful, the programs kind of have to advance simultaneously," said Collin O'Mara, secretary of natural resources and environmental control. "We believe energy efficiency is the biggest market and also where we have a lot of stimulus dollars, so it won't just be people making payments out of their pocket. We can help through the shared savings model and other types of incentives. Helping people make these advances will inflate the demand over time."

None of the stakeholders involved knows exactly what the future holds. They'll need more than just the stimulus funds to make their plans a reality at a time when state funds are limited and competition is fierce among states and private entities seeking outside aid. But they say Delaware needs to put the pieces in place -- and fast -- to position itself as a leader in what is expected to be a lucrative and sustaining industry.

First step

The training efforts are starting small, with a new 52-hour certificate program that DelTech will offer in

October to train certified energy auditors, consultants who work with consumers to identify ways to make their homes more efficient, including identifying and plugging air leaks, replacing aging appliances or installing extra insulation. Rollout of the program begins next month.

Working with a committee of state officials and business owners, DelTech decided to begin with the auditor program because it's easy to drum up consumer interest. As the programs become more ambitious, however, the costs -- and need for public education efforts -- are only going to go up.

Within the next several years, however, DelTech is hoping to launch associate degree and certificate programs on all three of its campuses to train technicians to install, operate and maintain solar- and wind-energy systems. As the Bluewater Wind farm ramps up to begin producing electricity off the Delaware coast in 2013, DelTech wants to train the "windsmiths" who service the turbines.

"It's kind of a chicken-and-egg dilemma," Smith said. "We want to be ready when the jobs are ready but we don't want to be too far ahead because we don't want the students to be trained and not have the jobs here."

Jason D. Wardrup, a certified energy auditor for Brightfields Inc., a Wilmington environmental consulting company, took part in an earlier auditor training program run by the state. He said Brightfields, which serves customers in Delaware, Maryland and Pennsylvania, does one or two energy audits a week.

"There's not that many auditors in the state right now, not too many people at all that do this, but we're trying to get the work force trained up now to meet the demand as it rises."

Davis, the president of CMI Electric, currently has to send new employees as far away as Colorado, Florida and California to be trained to work with solar-panel systems. Finding a worker locally who already has the specialized training is "very unusual," he said, but many different types of workers can be retrained to do the job.

"The whole complete process, from the time somebody says, 'Hey, I want a solar unit' until the meter is actually turning backward, has a lot of parts and a lot of parts that are very specialized and not found in another trade," said Davis, who serves on the committee that advised DelTech on the training programs.

To train someone to design a solar-panel system, or to be a

windsmith, will require millions of dollars of investment in specialized labs and equipment. For example, Smith said, DelTech needs to buy a nacelle, or the operations unit that holds a wind turbine's generator, gearbox and control system. The college needs to acquire its own, rather than work with a partner using a wind turbine to generate electricity, because students need consistent training time to go inside the nacelle, break it and learn how to fix it.

Seeking grants

DelTech and state officials are in the process of researching grant opportunities through the stimulus or other aid programs to pay for the nacelle and other equipment. Any day now, Owens campus director Ileana Smith will hear whether the federal Economic Development Administration is awarding the school \$800,000 to build "Energy House," a 3,052-square-foot green technology lab and classroom building, in Georgetown.

Intended to look like a home, the structure will be designed to LEED standards and include a geothermal heat pump, a "green" roof, and wind and solar equipment for use by students. The house design was chosen so the structure can also be used for public tours to give homeowners an idea of what a renewable-energy system might look like, and how they work.

"There's a real need for public education as to, if I go buy this thing for my house, let's say it's a [solar] cell system to make electricity for my house, or maybe just to heat my hot water heater or maybe it's a geothermal well system, what exactly do I have to do ... what is available to me as a member of the

public to get it done, basically to get the rebates," said Michael Bowman, president of the Delaware Technology Park and a member of the advisory committee for the Delaware Tech training programs.

Delaware ranked last in the nation in renewable-energy production in 2006; less than 0.05 percent of energy in that year came from renewable sources, according to a report from Gov. Jack Markell's Energy Advisory Council. But the state has passed a law mandating that by 2019, 20 percent of Delmarva Power's electricity supply must come from renewable sources.

If the programs get up and running, and if there is state-of-the-art technology to teach students, Bowman said, Delaware could become an epicenter for training a green work force that would serve the East Coast.

But Delaware needs to move fast because other states also are trying to establish themselves as leaders in green technology.

"It's early on, but we're all sort of preparing for this crush. Frankly, the stimulus money, while promised and it's big and Delaware has a good piece of it, has yet to come out," Bowman said. "But when it starts to flow, we need to get busy in a hurry because there's an 18-month burn rate and it's gone. Everybody is cautious in overinvesting in any kind of development before it flows, but at the same time, we want to be ready when it does."
