

THE JOURNAL REPORT: INVESTING IN ENERGY

A Green Course

Towns hope to cash in by preparing students for renewable-energy jobs

BY STEPHANIE SIMON

The dusty ranching town of Tucumcari, N.M., measures the promise of renewable energy by the number of chicken-fried steaks sold at the Rockin' Y's Roadhouse and rooms booked at the Blue Swallow Motel.

These days, both those numbers are growing.

The town of 5,000 sits on historic Route 66, but that doesn't bring in many visitors anymore. What keeps the place humming is a 250-foot-tall wind turbine and the classrooms and laboratories nearby, at the North American Wind Research and Training Center.

Students from across the nation and overseas come for two-year degrees that prepare them for jobs as turbine technicians. Researchers come to investigate questions such as how turbines affect bat migration. Tourists stop by, too, curious about the huge spinning blades. In an off-the-beaten-track town with a poverty rate of 22%, that economic activity is a big deal.

"They do help fill up the motels and they do eat in our restaurants," says Pat Vanderpool, executive director of the Greater Tucumcari Economic Development Corp. "It's created a little energy."

Communities across the nation are looking to renewable energy to do the same for them. So they're investing in training centers to prepare workers for careers designing, manufacturing, installing and repairing solar panels, wind turbines and other green-energy systems.

The outlook for those careers is uncertain, but that hasn't stopped a huge boom in training programs. The goal: Bring in students for a short-term economic boost, and brand the community as a hot spot for renewable energy, in hopes of luring companies that can create jobs and spur long-term growth.

The programs run the gamut. A grant from the state of California helped a consortium of colleges and research institutes in



AIMING HIGH Thomas Smith, studying wind energy technology, atop the wind turbine at Mesalands Community College in New Mexico

San Diego launch a program in algae biotechnology, the business of turning algae into fuel. In Reno, Nev., Truckee Meadows Community College used state grants and private investment to launch classes in solar technology and energy-efficiency auditing. The college will soon open the first degree program in the nation to train geothermal-plant operators. And in Aurora, Colo., a former Sam's Club has been converted into the Ecotech Institute, billed as the first and only college in the U.S. dedicated exclusively to preparing students for careers in renewable energy.

Scores of other degree programs in various aspects of renewable energy have sprung up across the nation, as well—so many, in fact, that competition for students "is getting fierce," says Jim Morgan, director of the wind center at Mesalands Community College in Tucumcari.

Many of the programs are too new to have firm data on employment rates for their graduates. The jobs they train students for range from wind-turbine technician and solar installer, paying \$30,000 to \$40,000 a year, to research analyst positions that pay twice that. The

training can cost anywhere from \$3,500 to \$35,000, depending on whether it's at a community college or a for-profit institution like Ecotech.

Uneven Prospects

Skeptics wonder whether there will be enough green jobs for all these green graduates.

"We have had patchy to non-existent information about what occupations will be important and what type of jobs there will be," says Mark Muro, a senior fellow at the Brookings Institution and co-author of a new report on green jobs, "Sizing the Clean Economy."

The report concludes that certain segments, including wind, solar and smart grid, "added jobs at a torrid pace" in recent years, but Mr. Muro cautions that even those industries are developing unevenly and unpredictably, leading to mismatches between available jobs and skilled labor. "There's too much training in some areas and not enough in others," he says.

The difficulties come across in a federal audit of the Labor Department released last month. The agency received \$500 million from the 2009 stimulus act

for a "Green Jobs" program, which aimed to train at least 115,000 workers. As of June 30, just 26,000 had completed training—and just 8,000 had found work, according to Elliot Lewis, an auditor with the department's Office of Inspector General.

A similar audit this fall of the Department of Energy found that it struggled to create green jobs despite a huge influx of stimulus funds—and that some of the jobs created didn't work out well. There was a push, for instance, to train workers to weatherize homes to make them more energy-efficient, but the audit found that "substandard workmanship" plagued the program.

Fred Lucero, who runs a green-job training program in Richmond, Calif., says he has had trouble placing some of his graduates in stable jobs. "The market is glutted with people with solar certification and energy-efficiency certification," he says. His biggest success: Training workers to clean up asbestos, lead and other hazardous materials from abandoned factories and polluted land. "That's the original green job," Mr. Lucero says, "but it's not sexy like solar."

Employers say they're not

necessarily looking for workers with newly minted degrees in green energy. Jeff Metts, president of Astraeus Wind Energy Inc., a growing firm in Eaton Rapids, Mich., that makes wind-turbine components, says he hired laid-off auto workers for his best-paying jobs because they had experience handling massive machinery. Wind-power company RES Americas generally looks for workers with engineering experience and trains them in-house on skills specific to turbines, says Doug Nieb, vice president of human resources.

Anecdotal Success

Despite the challenges—and despite headline-grabbing failures like the bankruptcy of solar-panel maker Solyndra LLC—boosters say there are and will be plenty of opportunities for workers trained in renewable-energy industries.

The Danish company Vestas Wind Systems A/S prefers to fill its manufacturing plant in Pueblo, Colo., with employees trained at a local community college, in a program it helped design. As for jobs installing and maintaining turbines, applicants with degrees in that field "have a

head start over other potential employees because they have the fundamental skills and knowledge," says Vestas spokeswoman Aili Jokela. "It's crucial." Vestas currently has 500 jobs open across the U.S.

The Natural Resources Defense Council, an environmental advocacy group, recently launched a website that tracks green-energy job announcements. Many are small: a wind farm in Illinois that will create up to 10 full-time jobs; expansion of a solar-panel component factory in California that will add 30 positions. But there have been a few big announcements lately, including General Electric Co.'s plan to build a \$300 million solar thin-film plant in Aurora, which is expected to create about 350 jobs, each paying at least \$50,000 a year.

The numbers fall far short of President Obama's 2008 campaign pledge to create five million green jobs. "But things are happening," says Cai Steger, an energy-policy analyst for the Natural Resources Defense Council. Tales of growth so far are just "little anecdotes," he says, "but they're anecdotes around the country."

Adam Chrisman offers up one such anecdote. The 23-year-old was studying biology at a small college in Pennsylvania when he heard about the wind training program in New Mexico. He enrolled, drawn by the chance to do hands-on work in a brand-new industry. The first time he climbed the turbine was "a little spooky," he says. But he came to love it.

Mr. Chrisman got an internship last summer at a wind farm in Illinois and has a standing offer for a full-time job there when he graduates next spring, he says. For now, he's living and spending money in Tucumcari and bringing his parents and girlfriend to New Mexico for visits. "It seems like a good thing for the community," he says.

Ms. Simon is a staff reporter for The Wall Street Journal's Dallas bureau. She can be reached at stephanie.simon@wsj.com.