



*Community college and business leaders discuss green career paths at AACC's SEED Summit this month.
Photo: Greg Lebrick/Gateway Technical College*

Partnerships key to college sustainability efforts

By Ellie Ashford, Published October 12, 2012

Community colleges making a commitment to sustainability in partnership with business and industry were highlighted at a recent summit convened by the American Association of Community Colleges' SEED Center.

“We want green sustainability to be infused into everything a college does,” said Todd Cohen, director of SEED (Sustainability Education and Economic Development). “We’re pushing community colleges to move toward a green evolution.”

To help them accomplish that goal, SEED has issued a report, “The Community College Green Genome Framework,” with a checklist of 47 indicators that colleges can use as a self-assessment tool. At the summit earlier this month, SEED presented its inaugural Green Genome Awards to five community colleges that integrate sustainability and clean technology workforce development into their DNA.

The summit was held at Gateway Technical College (GTC) in Wisconsin, which offers a variety of green initiatives, including programs in freshwater engineering, solar energy, geothermal energy and urban farming; a Center for Sustainable Living, featuring a house “off the grid”; and a Green Scholars program that recognizes environmentally conscious students.

Solar panels and small wind turbines power some of the energy used by the college, and the grounds feature a prairie with native plants and an herb garden used by culinary students.

GTC President Bryan Albrecht views the college as “a model for sustainability in the community.” He believes infusing sustainability into a college is not just about job training and energy efficiency; it’s also important to encourage social responsibility among students.

Some of the equipment in GTC’s technical programs was donated by locally based Snap-On Inc., which provided \$8,000 and a set of tools to each Genome Award winner: Butte College (California), Central Carolina Community College (North Carolina), West Virginia University at Parkersburg, Delta College (Michigan), and Hillsborough Community College (Florida). Snap-On Chairman and CEO Nicholas Pinchuk told summit participants: “Technical education has never been more important. You are the watchers on the wall of our future prosperity.”

The smart grid

When it comes to energy, “we’re in a period of transformational change right now,” said Wanda Reder, vice president of Power Systems Services at S&C Electric Co. and chair of the Institute of Electrical and Electronics Engineers’ (IEEE) Smart Grid Task Force.

With the smart grid, “We’re fundamentally rethinking how we deliver energy,” Reder said. “Grid modernization is inevitable,” but it will cost \$880 billion. It’s also going to require skilled workers with “complexities of competencies,” while at the same time, the industry will need to replace about 35 percent of the workforce, which is expected to retire by 2015.

In addition to engineers, the industry needs skilled people to manage large substation batteries, storage at the consumer site, cybersecurity, reliability testing and monitoring.

“The smart grid is multidisciplinary,” Reder said, noting that workers need to understand markets and consumers, as well as technology.

Community colleges can play a huge role not only in training people for smart grid entry-level jobs, but also in serving as feeder schools for people pursuing engineering degrees at universities and for retraining existing workers in the new technologies, she said.

New jobs in other alternative energy areas also require workers with broad skills, said Jennifer Hayes, of Dow Chemical Co.’s Michigan Operations, which produces solar shingles, batteries, filters and other specialty products.

Technicians not only need hands-on mechanical skills and an understanding of chemical processes, they have to be competent in the “soft skills,” such teamwork and attention to detail, Hayes said. The company has a three-year program to train people for its talent development pipeline that includes a partnership with Delta College (Michigan)

Building automation

A huge wave of retirements is also hitting the HVAC industry.

“We’re facing a crisis point,” said Greg Josefchuk, strategic partners leader at Trane, a company owned by Ingersoll Rand.

There are few programs that teach about building automation systems (BAS), Josefchuk said, so, to help meet the demand for skilled workers, Trane is creating HVAC community college-based “Centers of Excellence.” The model is being tested at GTC, which is using Trane equipment to prepare students for jobs producing, repairing and installing energy-efficient building systems.

“We’re looking for certain core competencies. It’s no longer about fixing a particular piece of equipment. It’s about understanding systems,” Josefchuk said.

Georgia Piedmont Technical College (GPTC) sees BAS—which encompasses HVAC, security, access controls and related systems—as a huge opportunity for job growth. The industry outlook for BAS is \$5 billion in the U.S. and \$15 billion in the world market, said Brian Lovell, director of the Green Technologies Academy at GPTC.

BAS involves efforts to make existing buildings more energy efficient, Lovell said. When GPTC was facing a dwindling facilities budget, he had students in the energy program work on retrofitting campus buildings.

Since GPTC developed a BAS program in 2008, it’s attracted 60 corporate partnerships, he said. Kele Corp. has provided \$1 million in in-kind equipment and helped design a lab, which has become a testing site for new Kele products.

Successful partnerships

The Pacific Northwest Center of Excellence for Clean Energy (PNCECE), based at Centralia College (Washington) is a partnership of community colleges, universities, labor unions and utility companies in five states, with the goal of developing curricula to train people for the energy industry and provide career pathways. PNCECE developed skills standards based on workforce needs and education programs to prepare workers for several types of jobs related to the smart grid, said Executive Director Barbara Hins-Turner.

The Illinois Green Economy Network (IGEN) helps community colleges share best practices and form partnerships to advance sustainability and grow the green economy, said IGEN Executive Director Julie Elzanati. IGEN used a Trade Adjustment Assistance Community College and Career Training grant from the U.S. Labor Department to help 17 Illinois colleges create 32 green degree and certificate programs, mostly online, in such areas as agriculture and natural resources, advanced manufacturing and transportation.

Heartland Community College (HCC) in Illinois used funding from IGEN and a grant from the U.S. Agriculture Department to create a “food hub network” to help small farmers expand their markets for specialty crops and encourage consumers to rely more on locally grown food.

It’s not just about promoting healthy living; programs like that also promote economic development. More than 90 percent of the dollars spent on food products in 32 counties in central Illinois go to farms and producers outside the region, said Mary Beth Trakinat, HCC’s vice president of continuing education. If consumers diverted just 15 percent of their food budgets to locally grown produce, it would generate \$640 million for that region