

**VALIDATING YOUR CLEAN TECHNOLOGY NICHE AND PATHWAY:**

*Monroe Community College/Los Angeles Trade Technical College*



**Rochester, NY**  
**Enrollment: 17,699**

**The Challenge:** After state support for several renewable energy courses waned, Monroe Community College (MCC), like many colleges in the post-federal stimulus era, had to reassess which clean technology workforce offerings merited future investment. MCC's longer-term objective was to create seamless pathways from its workforce curriculum (e.g., solar thermal training) into existing credit programming by pairing industry-recognized training and credentials with credit courses and degree programs. MCC's challenge was that there is little clear labor market data to show which clean technology industries and occupations may grow or emerge in the Finger Lakes region.

**The Solution:** Los Angeles Trade Technical College (LATTC) mentors Marcy Drummond and Marcia Wilson worked with MCC staff to use LATTC's forthcoming environmental analysis tool, "Defining Your College's Competitive Advantage in the Emerging Green Economy: A Blueprint for Building High Quality, Green Programs of Study." The tool helps colleges identify the environmental factors that would likely determine which clean technology occupations will be in high demand and around which training programs should be built. For example, colleges can use the tool to begin to understand their regional capacity for clean technology innovation (e.g., is more local investment capital going to wind or energy storage industries?) And, colleges can learn to examine the attitudes of their local residents toward concepts like sustainable development (e.g., would my community push for local policies that might incent certain clean technology growth?) <http://college.lattc.edu/green/green-competitive-advantage-guide/>

MCC completed the exercises to help validate the importance of renewable energies (solar, in particular) and energy efficiency as training targets. Most critical, MCC subsequently used the tool to bridge noncredit programming to credit-based degrees in these occupational areas. Through a new career pathway approach, MCC will be integrating its once stand-alone solar thermal technology certificate program into its existing Associate in Applied Science in heating, ventilation, and air conditioning and refrigeration. With the help of LATTC, MCC will be using a "stackable" certificates model. This model, which has proven to be successful in helping student achievement, provides students a clear set of foundational, industry-recognized competencies as they work toward shorter-term certifications. These certifications are stacked as the student completes credit courses progressing toward an associate degree and beyond. The model has only just begun to be adapted to clean-technology-related industry sectors.

"Through this mentoring program, we are making strides to leverage our existing sustainability courses into a broader and stronger program that will likely attract more students and put them on a path toward real careers in our community," said Todd Oldham, vice president of workforce development at MCC.



Mentoring session at AACC's Workforce Development Institute conference, San Diego, January 2013.  
Left-right: Dr. Marcia Wilson, Director of Institutional Effectiveness and Innovation, LATTC; Dr. Marcy Drummond, Vice President of Institutional Effectiveness and Innovation, LATTC; Dr. Todd Oldham, Vice President, Economic Development and Innovative Workforce Services, Monroe CC

**BUILDING THE ORGANIZATIONAL INFRASTRUCTURE FOR COLLEGEWIDE SUSTAINABILITY:**

*Rose State College/Lane Community College*



**Midwest City, OK**  
**Enrollment: 8,150**

**The Challenge:** Rose State College (RSC) faced the challenge of leveraging the passion of a small number of campus sustainability champions into a larger institutional green movement. In doing so, it would give credibility and structure to an emergence of scattered green activities.

**NEW INSTITUTIONAL SUSTAINABILITY PRINCIPLES AT ROSE STATE COLLEGE**

(sample from college's policy and procedures manual)

- Nurture environmental stewardship and literacy across the curriculum.
- Commit to the design and construction of campus facilities using green building materials and methods.
- Expect all members of the college community (administration, faculty, staff, and students) to consider environmental stewardship in day-to-day decisions.
- Engage the community in open dialogue about sustainability and sharing insights and models of responsible practice.



Lane Community College faculty member Roger Ebbage mentors energy management students.

**The Solution:** RSC paired with Lane Community College (LCC) and Roger Ebbage, head of the Northwest Energy Education Institute and a faculty member at LCC. Ebbage built one of the first community college energy management programs in the U.S. and was instrumental in leveraging that program into a broader, college-wide sustainability movement. LCC was one of the first community colleges to sign the American College and University Presidents’ Climate Commitment.

Over the course of the Mentor Connect program, Ebbage helped RSC build a structure for the college’s sustainability efforts, advising in the creation of a college-wide sustainability task force and providing guidance for a master sustainability plan. Ebbage also helped RSC identify regional opportunities for large-scale energy efficiency project partnerships.

One example is Tinker Air Force Base, located in RSC’s service area. The base recently announced the Air Force’s largest retrofit project (\$80.6 million) to meet an energy reduction goal of 30 percent. The project could be a training and learning opportunity for students across sustainability program disciplines.

Ebbage’s site visit to RSC coincided with the college president’s announcement of the inclusion of sustainability in the college policy and procedures manual. This act provided the formal commitment needed to crystallize the college’s activities related to sustainability, including a campus recycling program and free training for certified nursing assistants in reducing hospital waste and conserving water.

The relationship with LCC during the Mentor Connect program has produced several short-term outcomes for RSC that will help expand the college’s sustainability expertise:

- An RSC facilities staff member attended LCC’s two-week energy management certification institute, an advanced certification program.
- Two faculty members attended LCC’s one-week Summer Energy Educator Series, a five-day training to help community college faculty develop energy management degree programs.
- RSC has been brought in as a partner on a national renewable energy curriculum development grant spearheaded by LCC.

Stan Greil, Rose State’s vice president of workforce development, describes his college’s sustainability efforts as “life before Roger and life after Roger. ... We would not have been able to accomplish what we have as in institution without this help.”

## INFUSING SUSTAINABILITY THROUGHOUT:

*Clover Park Technical College/Santa Fe Community College*



Lakewood, WA

Enrollment: 4,738

**The Challenge:** Clover Park Technical College (CPTC) had already achieved a number of sustainability-related successes on campus, from a cross-program vermicomposting program to a campus “green day” to popular training programs in automotive hybrid vehicles and sustainable building science. The challenge for the college was to better integrate these activities as part of a broader institutional commitment to sustainability.

“We wanted to improve our college’s organizational alignment to the point that sustainability becomes part of our DNA,” remarked Mabel Edmonds, CPTC’s vice president of workforce development. One of Edmonds’ near-term objectives is to infuse sustainability across disciplines within its career and technical programs.

**The Solution:** CPTC partnered with Santa Fe Community College (SFCC) and Randy Grissom, dean of economic and workforce development and director of the Sustainable Technologies Center. SFCC was one of the first community colleges in the country to develop an institutional “green” vision and mission. Sustainability and ecological awareness have become guiding principles for all institutional practices, from facilities planning to workforce development to academic programming.

SFCC shared program design, curriculum examples, and its documented process for embedding sustainability in the general education curriculum. It shared templates for faculty to determine which courses qualify as “sustainability-focused,” where there were gaps in the overall curriculum, and how to revamp student learning outcomes.

## SANTA FE COMMUNITY COLLEGE: CAMPUS TRANSFORMED AROUND SUSTAINABILITY

- Biomass heating system that meets 85 percent of the college’s peak heating demand
- Campuswide composting
- Solar photovoltaics for electric power generation
- Sustainable Technologies Center with programs in biomass, green building, small wind, smart grid, solar, and water conservation
- Course requirements in sustainable living and health and wellness

CPTC sent both the vice president of workforce development and the college’s chief financial officer to SFCC for a site visit. Their joint visit was designed to integrate the college’s resource planning with the green and clean technology-related education and training on campus.

Since the site visit, CPTC President John Walstrum has encouraged the strategic planning committee to incorporate sustainability into the institution’s long-term plan. The college’s vice president for operations and college relations will be using SFCC’s sustainability governance model as a guide in that process. SFCC’s model lays out the institution’s sustainability-related policies and the roles and responsibilities of administrators, faculty, and staff in overseeing and executing an integrated set of sustainability activities. These planning documents will set the path for CPTC’s next step of building sustainability modules to integrate across the curriculum.

## CONCLUSION

The SEED Center’s Mentor Connect program demonstrates the power of peer-to-peer networking. Programs like this will be critical as more institutions seek to transform their campus around a commitment to sustainability yet lack the resources to launch new programs. The first Mentor Connect cohort includes stories of real change with promising outcomes on college campuses. Most important is the potential for these colleges to continue to share curricula, best practices, and green innovation as part of a long-term relationship.



MENTOR BIO PAGE



**MARCY DRUMMOND**, *Vice President of Institutional Effectiveness and Innovation, Los Angeles Trade Technical College (LATTC)*

Drummond spearheaded LATTC’s Green College Initiative and has served as a member of the National Commission on Energy Policy’s Task Force on America’s Future Energy Jobs and Green For All’s national Green Pathways Out of Poverty Community of Practice. In 2008, she was awarded the Green Achievement Award for Workforce Development by an Individual by Green Technology Magazine. Drummond and her team recently released the report, “Defining Your College’s Competitive Advantage in the Emerging Green Economy: A How-to Guide to Building High Quality, Strategic Green Programs of Study,” which includes a tool to help colleges assess their niche in the clean technology industry workforce.



**ROGER EBBAGE**, *Energy Management Program Coordinator, Lane Community College (LCC)*

Ebbage has been the energy management program coordinator at LCC in Eugene, Ore., since 1992 and has made the program an international model for energy education. He holds an interdisciplinary Master of Arts in environmental studies and industrial arts with a passive solar design emphasis. He is also an Association of Energy Engineers-certified energy manager, a California certified energy auditor, and a Bonneville Power Administration-certified energy auditor and inspector. He recently received his second Energy Manager of the Year award from the Oregon Chapter of the Association of Professional Energy Managers and Innovator of the Year award from the League for Innovation in the Community College. Ebbage serves as the director of the Northwest Energy Education Institute.



**RANDY GRISSOM**, *Dean, Economic and Workforce Development; Director, Sustainable Technologies Center, Santa Fe Community College (SFCC)*

Grissom serves as the dean of economic and workforce development and director of the Sustainable Technologies Center (STC) housed in the Trades and Advanced Technology Center. The new 45,000-square-foot facility includes a learning laboratory with interactive design features that include rainwater catchment; solar systems for hot water, electricity, heating, and air conditioning; small wind for electricity; and a presentation space for demonstrations and training sessions. The STC’s academic programs are an integral part of SFCC’s strategy to infuse sustainability across its curriculum.



**ROBERT “BUTCH” GROVE**, *Associate Vice President for Creativity, Sustainability, and College Improvement, Wake Technical Community College (WTCC)*

Grove served as the project manager for the North Carolina Community College System initiative called the Code Green Super Curriculum Improvement Project (CIP). The CIP revitalized more than 80 Associate in Applied Science programs. Before managing the Code Green Super CIP, Grove served in various roles at WTCC, including an instructor in engineering technology, department head for several programs, and dean of the Computer and Engineering Technologies Division.



**BRIAN LOVELL**, *Director of the Green Technologies Academy, Georgia Piedmont Technical College (GPTC)*

Lovell has spent his career in the building automation industry and started Synergy Automation in 1998. In the summer of 2007, Lovell joined GPTC and initiated a commercial refrigeration program that has gained national attention. Following the successful launch of the commercial refrigeration program, GPTC began a Building Automation Systems program, the first Associate in Applied Science in the United States for building automation. GPTC and its partners recently were awarded a prestigious \$3.5 million, four-year Advanced Technological Education grant from the National Science Foundation.



**HOLLY M. WIER**, *Faculty, Biology, Davidson County Community College (DCCC)*

Weir organized and led DCCC’s Green Team, a cross-functional committee comprising faculty and staff whose objectives include imbuing sustainability into the college culture—from student life to curriculum. As the college’s environment sector project director, she also provided statewide leadership for North Carolina’s landmark Super Curriculum Improvement Project process. Her course load at the college includes: introduction to renewable energy technology; principles of biology; General Biology I and II; environmental biology; basic anatomy and physiology; and Anatomy and Physiology I and II.



**MARCIA WILSON**, *Director of Institutional Effectiveness and Innovation, Los Angeles Trade Technical College (LATTC)*

Wilson has worked at LATTC for more than 12 years as a program director and grant writer focusing on workforce development and secondary/postsecondary partnerships. Wilson was formerly the director of green workforce development programs at LATTC and worked closely with administrators and faculty to garner funding for and develop numerous green programs of study at the college. Wilson is a co-author of the LATTC report, “Defining Your College’s Competitive Advantage in the Emerging Green Economy: A How-to Guide to Building High Quality, Strategic Green Programs of Study.”