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Community Colleges Collaborate to Meet the Clean Energy Training Needs of California's Transportation Industry

Alternative Fuel Vehicles Training

By Jon Wollenhaupt

To meet the challenge of keeping California's workforce productive and highly skilled, the state's community colleges are successfully developing multi-college partnerships designed to meet the regional and statewide workplace training and educational needs of employers. These partnerships refute past claims that the community college system is too large and cumbersome to meet employers' ever-changing workforce training and education demands.

An example of a successful, multi-college partnership is the collaboration among the Advanced Transportation and Alternative Energy (ATRE) centers of four community colleges: Cerritos, Long Beach City, El Camino, and City College of San Francisco. For more than five years, these colleges have been working in close partnership to deliver customized workplace training and education to municipalities and transit agencies statewide. Together, they have developed curricula, fostered industry relationships, and met the immediate training needs of municipalities and public transit agencies statewide.

The Advanced Transportation and Alternative Energy Program



The community colleges' ATRE training program provides students and current workers with education and

training in an array of clean energy technologies that form a critical part of California's strategy to mitigate the impact of climate change and reduce the state's dependency on foreign energy sources.

Employment Training Panel Funding Spurs College Partnership

The multi-college collaboration began in 2011 when El Camino College in Torrance, Calif., was awarded multiple contracts by the Employment Training Panel (ETP) to deliver workforce training programs to municipalities seeking to deploy advanced transportation and alternative fuel technologies.

The ETP contracts awarded to El Camino College were derived through the Alternative Renewable Fuel and Vehicle Technology Program (Assembly Bill 118) and the California Energy Commission. Under AB 118, the ETP contracts could take advantage of more flexible employer requirements and be used to offset the costs of job-skills training for public entities. ETP funding is normally intended for private for-profit employers subject to the Employment Training Tax.

The initial ETP AB118 contracts were awarded in 2011. Subsequently, ETP has provided an average of \$3 million annually for workforce training supporting the development and deployment of alternative and renewable fuels as well as advanced transportation technologies.



Stewart Knox, executive director of ETP, explains, “We receive \$2 million to \$3 million a year from the California Energy Commission to fund alternative energy training programs. In total, we’ve received roughly \$15 million through the ARFVTP. This funding gives us an unique opportunity to work with municipalities through our multiple employer contractors through contractors like El Camino and other community colleges.”

El Camino College’s working relationship with ETP was the starting point for the ATRE program partnership. “ETP contacted us because we’ve had a successful track record as a contractor in administering their contracts,” says Eldon Davidson, director for the Center of Customized Education at El Camino College. “To meet the grant requirements, we collaborated closely with the Advanced Transportation and Renewable Energy programs at Cerritos, Long Beach City College, and City College of San Francisco. We’ve created a long-term, successful partnership that leverages each college’s contract education, career technical education, and academic programs.”

Janet Malig, deputy sector navigator/advanced transportation, California Community Colleges, describes the collaborative efforts of the four colleges to win the contracts. “The ETP funding presented a significant opportunity for our ATRE programs,” she says “It was the first time ETP had offered funding for alternative energy training for public entities. Therefore, we made a strategic decision to partner with El Camino and the other community colleges to pursue those funds. Together, we had the expertise to cover all the requirements of the funds and to address the considerable training needs of municipalities and transit districts.”

The ongoing, five-year collaboration among the colleges’ ATRE programs has been focused on providing alternative fuel and vehicle training in a variety of clean air technologies for light- and heavy-duty vehicles, including hybrid-electric, electric, compressed natural gas, liquefied natural gas, and other systems.

“These short-term, customized training programs were not-for-credit and delivered through the contract education program—the side of our community colleges that delivers customized training solutions and courses that fit the methods and culture of businesses,” Davidson explains. “The training programs that contract education develops and delivers ultimately strengthen the for-credit programs because the curriculum has been developed with industry input and has been beta-tested.”

Training Courses and Topics Provided by the ATRE Centers Include:

- Cummings ISL-G Level 1
- Insite Software
- Cummins ISL-G Level 2
- Compressed Natural Gas Cylinder Safety
- Westport GS LNG
- Engine Control Systems & Diagnostics
- Electrical Voltmeter
- First Responder Safety Training
- Electrical Diagnostics & Scan Tools
- Hybrid Diagnosis and Repair

Contract Education’s Role Within a Community College

The mission of a college’s contract education department is to enhance local and regional economic development through designing, developing, and implementing customized training for business and industry. Contract education strives to provide employers with high-quality training and education that helps develop a competitive and productive workforce.

ETP’s Knox describes the role of contract education as “the side of a community college that provides responsive workplace training and education to the state’s private and public employers. It is the

component of the community college system that is uniquely positioned to respond quickly and effectively to employers' short-term training needs."

Contract Education Outreach Keeps Community Colleges on the Forefront of Industry Trends

"Many people within the community college system do not realize that contract education staffers are the ones who help keep the colleges on the forefront of industry," says Malig. "We are out meeting with industry executives daily. In those interactions, we gain knowledge of the latest industry trends and advances. In those conversations, we also promote the academic units and the career technical education programs of the colleges. We become aware of the employee skills gaps that are hindering organizational productivity and how to develop curricula and training programs that address those gaps."

Jerry Bernstein, deputy sector navigator, advanced transportation, at San Francisco City College, used his industry research and outreach efforts to find a match for ETP funding with the Bay Area Rapid Transit (BART). "For the ATRE partnership, we looked at the transportation trends here in the San Francisco Bay Area," he says. "We contacted the five transit districts and found they were transitioning from diesel to electric and hybrid vehicles. Our outreach efforts led us to find a great opportunity to underwrite electrical technician training for BART."

Knox adds, "The community colleges are a key partner of ours in developing outreach to employer groups, with contract education being the frontline player for marketing and gathering knowledge about the training needs of industry. We use the industry intelligence contract education provides us to develop funds that meet employers' training needs. We currently have contracts with 10 or 12 colleges and are looking to grow the number we work with and the industry sectors served by their contracts. Last year, we funded \$13 million to \$14 million worth of workplace training programs directly through the community colleges."

Measurable Outcomes of the Multi-College Partnership:

- A total of 57 California public employers, county regional transits, cities, municipalities, and businesses

"Our employees received training on the latest advances with Cummins CNG engines and components, and use of diagnostic equipment, which enables them to perform efficient, cost-effective repairs. Because of this training, they are better able to identify damaged or questionable defects. The availability of local instruction is key to helping our technicians stay abreast of the changes in automotive technologies and in maintaining our fleets at optimal efficiency for environmental and operational needs."

Donald Wilkes, Director, Transportation Services Division, Los Angeles Unified School District

that are engaged in alternative and renewable fuel and vehicle technologies participated in the training program.

- A total of 1,213 participants were trained, including 890 mechanics and 323 firefighters and police officers who participated in First Responder Safety Training.
- The program delivered 36,552 hours of student instruction.

Peter Davis, sector navigator for ATRE programs, California Community Colleges, describes the outcomes of this multi-college collaboration: "We have learned to work together better as community colleges. Because of this partnership, we have deeper shared industry knowledge and insights, which helps us win more contracts and deliver better workplace training. These successes bring many benefits to the colleges. The beta-tested training curriculum we've developed with our industry partners also helps to strengthen the colleges' career technical education programs."

Dana Friez, workforce development training manager, Long Beach City College, found significant benefits accrued to her program and clients from the multi-college partnership. "Because of this partnership, we have been able to provide our clients' employees with affordable, high-quality training," she says. "Many of these organizations are smaller transit agencies and city

services departments that do not have money in their budgets to provide employees with training to improve their skills. The importance of the ETP funding that offset the cost of training for our clients cannot be overstated.”

Clients for the Community College Alternative Fuel and Vehicle Maintenance Program Include:

- Bay Area Rapid Transit
- Burbank Water and Power
- City of Anaheim
- City of Glendale Public Works
- City of Huntington Beach
- City of Santa Monica
- City of Torrance
- Complete Coach (bus manufacturer)
- Culver City Transit
- Gold Coast Transit District
- Long Beach Transit
- Los Angeles County Department Public Works
- Los Angeles Unified School District
- MV Transit
- Omnitrans

“I initially spoke with Janet Malig of Cerritos College about the ETP funded training programs. After explaining the nature of our fleet to her, which is composed of heavy-duty vehicles that run on compressed natural gas (CNG), she coordinated our training to be given at the Advanced Transportation Technology Center (ATTC) at her partner college, Long Beach City College. It was great that the ATTC had the Cumming CNG engines on-site for instruction. Over a two-year period, I've sent 25 technicians there for training on the Cummins ISL-G CNG Electronic Engine Management Software System. My technicians received a very high level of training delivered by very knowledgeable instructors. They are now versed in the diagnostics required to repair the heavy-duty vehicles in our fleet that include street sweepers, dump trucks, sewer trucks and other large road repair vehicles.”

Mark Heighes, LA County Public Works, Power Equipment Technician Supervisor

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About the Employment Training Panel

The Employment Training Panel (ETP) provides funding to employers to assist in upgrading the skills of their workers through training that leads to good-paying, long-term jobs. The ETP was created in 1982 by the California State Legislature and is funded by California employers through a special payroll tax. The ETP is a funding agency, not a training agency. Businesses determine their own training needs and how to provide training. ETP staff is available to assist in applying for funds and other aspects of participation.