The Advanced Transportation and Logistics Sector of the California Community Colleges was awarded $3.5 million by the California Energy Commission

to increase career awareness in the clean fuels transportation field for high school students in underserved communities — regions impacted by poor air quality and those serving minority populations.

Equipment and Supply Purchases

The Switch Lab Electric Vehicle Kit was purchased by 49 of the 50 funded high schools and includes 72 volt DC lead acid batteries, unpainted chassis, all required wiring, two seats, lights, seat belts and windscreen. This kit is designed to be assembled and easily disassembled, so that students can use it year after year. Schools also purchased tools necessary to complete the electric vehicle (EV) build, including electrical glove kits, insulated tools, safety hooks.

Funding was also used by three schools to purchase used EVs or hybrids to work on in their auto shops. One school purchased a dual port EV charging station including installation.

In lieu of the Switch Lab EV Kit, Schurr High School purchased tools and supplies used to assemble a Shell Eco-marathon competition vehicle.

ZEV Curriculum Implemented

Funded schools purchased curriculum materials from The Switch Lab along with their EV project kits. Materials included textbooks, class lectures, homework assignments, class research assignments, lab kits, and a curriculum club membership.

Faculty Trained

The EV kit vendor trained 62 instructors, including community college faculty, to learn how to build the Switch EV. The training included components training, basic electricity, wiring and mechanics. Each of the 21 workshops held was four and a half days in length, with morning lectures followed by hands-on building and lab projects in the afternoons.

– Continued Over

Advanced Transportation and Logistics

Cerritos College

Prepared for: California Energy Commission

Prepared by: Advanced Transportation and Logistics Initiative, Cerritos Community College District

Student Impacts

The Switch EV kit and curriculum was implemented in existing automotive and other related Career and Technical Education (CTE) programs on funded high school campuses. Courses that include new ZEV curriculum through CEC funding will impact an estimated **3,750 students each year**.

Student Feedback

A post-class survey was offered to students who participated in the Zero-Emissions Vehicle High School Pilot Project. There were 519 students who submitted responses to the survey questions. **Results revealed that approximately 70 percent of respondents would consider a career in clean fuel transportation as a result of taking the class.** Eighty-six percent would recommend the class to others interested in the field. Students also reported what they found most valuable about the class and how the class could be improved.

While matriculation agreements exist between many high school automotive programs and their local community colleges, there were new agreements established as a result of this project, which will directly benefit students who wish to continue their education in this area.

The most common response by instructors when asked to share a student success story, was that their students had a desire to continue their education in clean transportation with the goal of working in this field. Instructors reported some of their students are enrolling in community college or other trade schools to learn more, interning for local businesses, and/or have obtained paid work in the field.

Because of the implementation of this project, campuses have benefitted from strengthened relationships with industry, enhanced recruitment efforts, increased enrollment, and expanded campus support and involvement.

High School Award Presentations

Contractor with the CEC visited 21 funded schools during which each school was presented with an award plaque for their participation in this project. Plaques were shipped to the schools that did not receive in-person visits.

Additional Outcomes

High School instructors appreciate the opportunities the CEC funding has created for them and their students. Because of the implementation of this project, campuses have benefitted from strengthened relationships with industry, enhanced recruitment efforts, increased enrollment, and expanded campus support and involvement.