



Award Abstract #1700708

Northwest Engineering and Vehicle Technology Exchange (NEVTEX)

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ABSTRACT

The West Coast region of the United States has demonstrated significant business development and political commitment to the emerging electric drive industry, which includes electric and hybrid electric vehicles (EV/HEV) and hydrogen fuel cell vehicles. Worldwide, the market is growing steadily, with Japan leading the way and the United States coming in second. Oregon, Washington and California report nearly one-third of all EV/HEV ownership in the United States. There is wide recognition that current automotive training programs for students and technicians need to be dramatically redesigned to guarantee mastery of these emerging, advanced vehicle systems. The investigative team of this ATE project will address this need by working with selected automotive industry and community college partners to create a standardized approach for training and certifying electric drive technicians. Once completed, the proposed training standards will serve to spearhead a process with the long-term goal of instituting a licensing process for these highly skilled workers who are working with high voltage and high-pressure gaseous fuels. The project team will develop and implement outreach activities aimed at increasing the enrollment of underrepresented groups, including women, Latinos, and Native Americans, in automotive technology programs and career pathways at community colleges. Emphasis will be placed on disseminating and sharing all products and outcomes at national meetings and through a website that will be developed to highlight this project.

The project will identify training categories for electric drive vehicle maintenance and safety. A template will be created for each training category that defines the associated training activities. The overall goal being to develop standardized training for electric drive technicians. Simultaneously, the investigative team will work with content area and industry experts to develop a method to validate skills acquisition. Digital badges will be considered as one way to credential learner outcomes. The training standards and credentialing system will be vetted by industry and educator team members and upon approval, the standards and credentialing system will be tested at 10 businesses and 20 community colleges. Outcomes and training materials will be shared regionally and nationally with appropriate organizations and stakeholders. Once a framework for training and credentialing has been validated by these organizations, the investigative team will meet with governmental agencies in the Western States to discuss the institutionalizing of licensing procedures for electric drive technicians. In the United States, there is currently no standardized credential or licensure requirement for technicians who work with high voltage systems and high-pressure gaseous fuels. As a point of comparison, technicians who work with commercial or residential high voltage or heating, ventilation, and air conditioning (HVAC) systems must be licensed by each State. The same must also be done for EV/HEV technician who work with high voltage systems and high-pressure gaseous fuels.

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