

9-1-2010

Driving On Empty

Julie O'Connor
Wayne State University

Follow this and additional works at: <http://digitalcommons.wayne.edu/newscience>

Recommended Citation

O'Connor, Julie (2010) "Driving On Empty," *New Science*: Vol. 18: Iss. 1, Article 7.
Available at: <http://digitalcommons.wayne.edu/newscience/vol18/iss1/7>

This Article is brought to you for free and open access by DigitalCommons@WayneState. It has been accepted for inclusion in New Science by an authorized administrator of DigitalCommons@WayneState.



Electrifying the Economy
Educating the Workforce



Driving on Empty

by Julie O'Connor

With the growing need to create more efficient, cost effective, high performance and environmentally friendly vehicles, the automotive industry is quickly transforming its reliance on fossil fuels to electricity. In the near future, electric drive vehicles will be as mainstream as a microwave oven because of their tremendous potential to lessen our dependence on gasoline and protect our environment from harmful emissions.

As the automotive industry transforms, there will be an increased need for a new pipeline of automotive workers who have skills necessary for the advancement and maintenance of electric vehicles, plug-in hybrid electric vehicles and fuel cell vehicles. To meet future industry needs, engineers, automotive technicians and technologists must have education and experience in advanced automotive technologies. With no specific training and education programs in existence, automobile manufacturers are currently training electric drive vehicle engineers in-house, ultimately raising manufacturing costs and delaying product development and launch.

Wayne State University is partnering with Macomb Community College and NextEnergy to meet this need through a new electric drive vehicle engineering program, known as E3 – Electrifying the Economy, Educating the Workforce. With the help of a \$5 million U.S. Department of Energy grant funded by the American Recovery and Reinvestment Act (ARRA), the three partners will

build educational programs in support of President Barack Obama's goal of having one million plug-in hybrid electric vehicles on the road by 2015.

"The objective of this program is to prepare our current and future workforce with the education and skills necessary for the advancement and maintenance of electric drive vehicles," said Hilary Ratner, vice president for research at Wayne State, and chair of E3's executive advisory board. "It is our intent to ensure we have the most innovative curriculum that can meet the needs of the automotive industry as energy policy evolves over the next few years. This is a key area of growth in the automotive area, and this partnership with Macomb Community College and NextEnergy will provide the next generation of automotive workers with critical skills necessary for engineers and technicians to advance and support electric drive vehicles."

The program will develop and implement a comprehensive set of advanced educational programs in electric drive vehicles including a master's degree in electric drive vehicle engineering; a bachelor's degree in electric transportation technology; an associate's degree in automotive technology and electronic engineering technology; and an undergraduate concentration and graduate certificate program in electric drive vehicle engineering.

"These components and systems are very much in a state of rapid scientific and technological



About Simon Ng:

Dr. Ng received his B.S.E, M.S.E. and Ph.D. in chemical engineering from the University of Michigan. He joined Wayne State University in 1986.

development," said Simon Ng, interim associate dean of research in the College of Engineering, and project director for the E3 program. "Through this program, we will be able to partner with industry to train a new generation of skilled workforce with the highest level of engineering and technology education."

The program will also host national workshops, offer education opportunities for the general public, K-12 teachers and first responders; and will create a web site to serve as a main portal of the most comprehensive and up-to-date information in electric drive vehicle technology and educational programs in the nations.

"In addition to educating the workforce of the future, this partnership will contribute to the economic growth of Michigan, the Great Lakes region, and the nation," said Ng. "We are at a critical point in automotive history, and this transformative program is essential in meeting the goals of our nation's leaders."

For more information about E3, visit: www.eng.wayne.edu/eve

In Partnership With:

