Advanced Electric Drive Vehicle Education Program

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Today’s Objectives

- Overview of the National Alternative Fuels Training Consortium (NAFTC)

- Overview of the Advanced Electric Drive (AED) Vehicle Education Program

- Importance of Codes & Standards in Training & Developing Training
The National Alternative Fuels Training Consortium

Mission Statement

“To improve air quality and decrease U.S. dependence on foreign oil by promoting, supporting, and expanding the use of advanced technology vehicles and alternative fuel vehicles.”

The NAFTC is a program of West Virginia University and is headquartered in Morgantown, WV.

It is the only nationwide curricula development and training organization that focuses on alternative fuel and advanced technology vehicles.
Nationwide Network of Training Centers

- The NAFTC consists of 50 National Training Centers throughout the U.S.
What we do at the NAFTC

• Curriculum Development
• Training
• Outreach and Education
• Program Management
State-of-the-Art Curriculum Development

- Over 25 courses and workshops
- Available on all types of alternative fuel and advanced technology vehicles
- Customizable to meet needs and requirements of the audience
- Codes and Standards are an essential piece of development (use of SMEs to develop training materials)
Training

- Classroom study
- Online study
- Lab activities
- Hands-on shop applications
- Review of codes and standards
- State of the Art Training Facility
Training Impact

- The NAFTC has delivered more than 1,400 technical courses, training more than 25,000 individuals from the following audiences:
  - Instructors (Train-the-Trainer)
  - Pre-service and In-service automotive technicians
  - First Responders
  - Fleet managers
  - Government and industry representatives
  - Students
  - Consumers
  - Others

- The NAFTC has conducted more than 1,500 workshops and education/awareness events with more than 550,000 attendees
Outreach and Education

- National AFV Day Odyssey
  - Largest biennial nationwide education and outreach event held to promote the use of alternative fuel and advanced technology vehicles

- The NAFTC also attends, exhibits, and presents at numerous conferences and meetings
Advanced Electric Drive Vehicle Education Program

- Funded by the US Department of Energy and AARA Funding
  - Total project funding $8,600,000
  - Federal project funding $6,900,000
  - Timeline: December 18, 2009 - December 17, 2012
AED Partners

- National Alternative Fuels Training Consortium
- NAFTC National Training Centers
- West Virginia University
- West Virginia University Research Corporation
- MotorWeek
- Advanced Vehicle Research Center
- AutoExposure
- WV and SC Department of Education
- US Dept. of Energy Clean Cities Coalition(s)
AED Vehicle Education Program

Goals

- **Goal 1:** Create an external advisory committee to provide input on project-related activities
- **Goal 2:** Develop and provide **Career and Technology Education (CTE)** teaching materials to secondary schools about advanced electric drive vehicles (grades 7-12)
- **Goal 3:** Provide **training** to in-service and pre-service personnel, mechanics/automotive technicians, and first responders to work with advanced electric drive vehicles and their supporting infrastructure
- **Goal 4:** Design, develop, and disseminate marketing and outreach materials to provide **consumer education** on EVs, HEVs, PHEVs, and FCVs
- **Goal 5:** Expand **National AFV Day Odyssey**, a nationwide, biennial, outreach event to include educating a new generation of consumers at the secondary school level of the on the subject of advanced electric drive vehicles
AED Vehicle Education Program Breakdown

Focus of Program:

- Curricula Development
- Training
- Outreach and Education
AED Vehicle Education Program
Curriculum Development

First Responder Safety Training
Develop curricula and train First Responders how to safely respond to accidents involving AED vehicles

- Instructor Manual, Participant Workbooks, and Supplementary Training Materials for 4 First Responder Safety Training Workshops (EV, HEV, PHEV and FCV)
- First Responder Safety Training Video
- Four (4) First Responder Safety Train-the-Trainer workshops (one each for EVs, HEV, PHEVs, and FCVs) for NTC instructors
AED Vehicle Education Program
Curriculum Development

Career and Technology Education (CTE)
Design, develop, and disseminate curricula and materials to secondary education instructors & students on EVs, HEVs, PHEVs, and FCVs (incorporated into state department of education systems)

- CTE Electric Drive Vehicle Curriculum
- CTE Video
- Two professional development courses for CTE instructors in SC and WV
- 10 pilot workshops in SC and WV
AED Vehicle Education Program
Curriculum Development

**Advanced Electric Drive Vehicle Technician**
Design, develop and disseminate a curriculum for pre- and in-service automotive technicians to diagnose, repair and maintain AED vehicles

- Instructor Manual, Participant Workbooks, and Supplementary Training Materials
- Advanced Electric Drive Vehicle Curriculum for Post-Secondary Schools
- Train-the-Trainer Course for the Advanced Electric Drive Vehicle Curriculum
- Vehicle Simulation & Demonstration Tool
- Electric Drive Vehicle Technician Training Video

Unique to NAFTC
AED Vehicle Education Program
Curriculum Development

Electric Infrastructure
Design, Develop and Disseminate a Curriculum for Installers/Planners of Electric Drive Vehicle Charging Stations and Equipment

- Instructor Manual, Participant Workbooks, and Supplementary Training Materials
- Advanced Electric Drive Vehicle Infrastructure Technician and Service Personnel Workshop
- Advanced Electric Drive Vehicle Infrastructure Technician and Service Personnel Train-the-Train Course
- Electric Vehicle Infrastructure Training Video

ANSI Workshop: Standards and Codes for Electric Drive Vehicles
April 5-6, 2011
AED Vehicle Education Program Training

98 Training courses to be conducted:

- Two (2) Train-the-Trainer workshops for CTE instructors
- Ten (10) pilot courses in CTE instructors in SC and WV
- Six (6) Train-the-Trainer courses for NAFTC National Training Centers
- Eighty (80) training courses provided by post-secondary schools (NAFTC National Training Centers)
AED Vehicle Education Program Training

Population reach:

- Over 20,000 students
  - High School students and instructors
  - Pre and in-service automotive technicians
  - Auto technician/maintenance instructors
  - First Responders
  - Infrastructure technicians
Education and Outreach

- National AFV Day Odyssey 2010
  - Results:
    - 105 Sites
    - 26 High School Sites
    - Nearly 200,000 Attendees
    - Approximately 75 Million Reached Through Media Exposure
Education and Outreach

- National AFV Day
  - Odyssey 2012 Goals
  - 10 Year Anniversary
  - 100 Sites
  - 50 High School Sites
  - Goal to reach 75 million
Education and Outreach

- Marketing
  - Advanced Electric Drive Toolkit and videos
  - MotorWeek television segment
  - AED 101 video
  - Trade shows and conferences
    - Nearly 38,000 reached to date
  - Strategic partnerships

- Media Relations
  - Press releases and media advisories
  - Social media
    - Facebook
    - LinkedIn
    - Twitter
Education and Outreach

- Website
  - Consumer information
  - Technical information
  - Events calendar
  - Press room and library
  - Videos and podcasts
  - Vehicle Simulation & Demonstration Software Tool
  - Consumer information area
  - White papers
  - RSS feeds and technical bulletins
AED Vehicle Education Program Impact

- Over 20,000 Students will be trained in Advanced Electric Drive technical skills
- Students will be more employable and marketable over traditional graduates
- Training will provide required critical skills needed for new technologies
- Training will continue to be offered throughout the country after project completion (with potential reach of over 100,000 individuals)
- Codes and standards information will be disseminated to nationwide audiences
2011- Year of the Electric Drive Vehicle

- Imperative that EDV codes and standards are communicated throughout the US to their target audience
- AED Vehicle Education Program will assist with this important task
Contact Information

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