

TRAIN THE TRAINER



NFPA's Alternative Fuel Vehicle Safety Training Course

Hosted at the **Green Transportation Summit & Expo**
Portland Expo Center
Portland, OR
April 10, 2017—8:00am—5:00pm
FREE for First Responders

Please join us for the NFPA “Train the Trainer” Alternative Fuel Vehicles Safety Training Program. This course was created to provide guidance on how to safely deal with emergency situations involving alternative fuel passenger vehicles, trucks, buses and commercial fleet vehicles. The recently revised training now covers electric, hybrid, fuel cell and gaseous fuel vehicles, including CNG, LNG, and LPG.

The program is FREE for a total of 125 members. Space is limited and based upon the discretion of your department’s point of contact.

In 2015, NFPA received grant funding through the Department of Energy to expand its comprehensive Alternative Fuel Vehicles Safety Training Program, including its fire service Train the Trainer program. This instructor led course is comprised of videos, animations, slides and activities covering the following:

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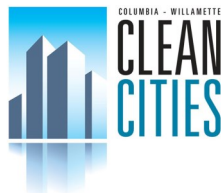
- ∴ Introduction to hybrid, electric, fuel cell & gaseous fuel vehicles
- ∴ Basic electrical concepts
- ∴ Vehicle systems & charging/refueling infrastructure
- ∴ Initial response procedures
- ∴ Identification methods, Immobilization, disabling, Emergency operations
 - * Unanticipated vehicle movement, electric shock hazards
 - * Toxic and flammable gas build-up. Electrolyte skin contact
 - * Extrication, vehicle and battery fires, submersion
 - * High Voltage battery damage, battery re-ignition
 - * Incidents involving charging stations & refueling stations
- ∴ Field Evolutions—including actual AFV’s

TO REGISTER, PLEASE VISIT: <https://nfpatrainthetrainer.eventbrite.com>

For questions, please contact: **Brian Trice (503) 688-0989 or triceb@linnbenton.edu**



**ALTERNATIVE
FUEL VEHICLES**
SAFETY TRAINING PROGRAM





ALTERNATIVE FUEL VEHICLES SAFETY TRAINING PROGRAM

NFPA's Alternative Fuel Vehicles Safety Training Course

NFPA's Alternative Fuel Vehicles Safety Training provides firefighters with the information necessary to respond to emergency situations involving all alternative fuel vehicles on our roadways, including electric, hybrid, hydrogen fuel cell, and gaseous fuels such as CNG (Compressed Natural Gas), LNG (Liquefied Natural Gas), LPG (Liquid Propane Gas), and their recharging/refueling stations. This comprehensive full day instructor-led train-the-trainer course is tailored for those responsible for conducting training or training officers, and is comprised of videos, animations, slides, activities, and field evolutions involving AFVs. The curriculum covers:

Module I—Introduction

- Program Overview
- Myths vs. Realities
- History of AVSs

Module II—Basic Electrical Concepts & Hazards

- Basic Electrical Terms
- Understanding Electrical Circuits
- How Electricity Affects the Body

Module III—P/HEV & EV Systems & Safety Features

- Vehicle Types
- P/HEV and EV Components
- P/HEV and EV System Operations
- Charging Stations

Module IV—Initial Response

- Initial Response Actions
- Vehicle Identification
- Vehicle Immobilization
- Disabling Procedures

Module v—P/HEV & EV Emergency Operations

- Extrication Operations
- High-Voltage (HV) Battery Breach
- Vehicle Submersion
- HV Vehicle Fires & Re-Ignition
- Incidents Involving Charging Stations
- Post Incident Vehicle Handling
- Case Studies

Module VI— Fuel Cell Vehicles

- Fuel Cell Technology
- System Components & Devices
- Hydrogen Fueling Stations
- Electrolysis
- Tune Trailers
- Emergency Operations

Module VII—Gaseous Fuel Vehicles

- Introduction
 - ◆ CNG—Compressed Natural Gas
 - ◆ LNG— Liquefied Natural Gas
 - ◆ LPG—Liquefied Propane Gas
- Vehicle Applications
- System Types

Module VIII—Understanding Gaseous Fuels

- Understanding Gaseous Fuels
- Gaseous Fuel Types & Properties

Module IX—Gaseous Fuel Vehicle Systems & Operations

- Introduction to Gaseous Fuel Systems
- Fuel Storage & Distribution
 - ◆ Tanks & Cylinders
 - ◆ Fuel Distribution
 - ◆ Safety Systems

Module X—Gaseous Fuel Stations

- Fueling Stations
 - ◆ CNG
 - ◆ LNG
 - ◆ LPG
- Fueling Station Safety Systems

Module XI—Gaseous Fuel—Initial Response Procedures

- Identification
- Immobilization
- Disabling Procedures

Module XII—Gaseous Fuel—Emergency Response Procedures

- Crashes & Extrication

For More Information Contact: triceb@linnbenton.edu