

## Tiger Teams Assist Coalitions with AFV Challenges

Clean Cities Technical Assistance Teams (Tiger Teams) provide alternative fuel vehicle (AFV) and infrastructure technical expertise to Clean Cities coalitions nationwide, assisting when coalitions encounter barriers that challenge local resources. Tiger Team assistance includes planning for and implementing AFVs and infrastructure, developing educational and training tools, and evaluating AFV-related legislation. The Tiger Team project is managed for the U.S. Department of Energy by the National Renewable Energy Laboratory.

This fact sheet contains a comprehensive list of projects initiated or completed since inception of the Tiger Teams in 2001. Although, for each project, the team of technical experts is charged with developing solutions for specific problems, the resulting models, tools, and templates can be applied to help other coalitions address similar challenges. For more information or to apply for Tiger Team assistance, visit the Clean Cities Web site at [www.ccities.doe.gov](http://www.ccities.doe.gov) or contact your Clean Cities coordinator.



### Planning for AFV Success

**Building infrastructure partnerships in California.** A Tiger Team hosted the 2002 California AFV and Fueling Infrastructure Partnership Workshop, which provided fleet managers and fuel providers with a forum for identifying needs and creating the necessary fueling infrastructure.

**Defining school bus infrastructure in Long Beach.** The Long Beach, New York School District wants to make a positive contribution to local air quality. It worked with a Tiger Team to develop a preliminary CNG school bus fueling and maintenance facility plan.

**Planning for AFVs at Milwaukee's airport.** General Mitchell International Airport has approximately 137 fleet vehicles as well as support equipment with AFV potential. A Tiger Team helped create the *General Mitchell International Airport Strategic Plan* ([www.ccities.doe.gov/pdfs/gmia\\_afv\\_strategy\\_plan.pdf](http://www.ccities.doe.gov/pdfs/gmia_afv_strategy_plan.pdf)), which outlined a path to full AFV integration.

**Creating an AFV implementation plan at Philadelphia's airport.** Philadelphia International Airport aims to gain economic and environmental advantages by using AFVs. A Tiger Team helped produce a plan that could result in a new AFV station and 124 AFVs at the airport.

**Assessing medium- and heavy-duty vehicle markets for alternative fuels.** Medium- and heavy-duty trucks are a major target for reducing petroleum consumption and emissions. A Tiger Team analyzed the market for alternative and heavy-duty vehicles and made research, development, and demonstration recommendations to DOE.

### Assessing the availability of alternative fuel school buses.

Alternative fuel school buses are gaining acceptance, but there are obstacles to complete market acceptance. A Tiger Team gathered information from bus manufacturers, engine manufacturers, and bus purchasers on design and market potential for such buses.

**Determining how airports can obtain AFVs through GSA-like procurement.** The U.S. General Services Administration provides lists of vehicles and prices, which a variety of organizations can use to acquire vehicles. A Tiger Team investigated establishing a similar system for procurement of AFVs by airports.

**Comparing emissions of AFVs and conventionally fueled vehicles.** A Tiger Team compared the emissions of AFVs and conventional vehicles for the Central Ohio Clean Fuels Coalition, which used the information to support inclusion of AFVs in the State Implementation Plan. This could result in 1,000 AFVs and 1 million gallons of annual petroleum displacement.



Philadelphia International Airport

Rick McMullin, PHL/PIX 13265



## Implementing Alternative Fuel Vehicles and Infrastructure

**Assessing CNG stations in Washington, D.C.** The Washington, D.C. area has numerous natural gas fleets. A Tiger Team and the Washington Metropolitan Clean Cities coalition are working with fleets to analyze the stations that service these fleets and determine potential sites for new ones.

**Developing specifications for alternative fuel dispenser charge card readers.** A Tiger Team developed design and performance specifications for alternative fuel dispenser charge card readers. See *Reliable, Universal, Open Architecture for Card Access to Dispense Alternative Fuels* ([www.afdc.doe.gov/pdfs/31619.pdf](http://www.afdc.doe.gov/pdfs/31619.pdf)).

**Assisting Washington Metro Transit with implementation of a new CNG station.** A Tiger Team is supporting the Washington Metropolitan Transit Authority in implementing a new CNG fueling station at its Four Mile Run facility in Washington, D.C.

**Developing facility specs to help transit agency add CNG buses to its fleet.** This Tiger Team project helped the Washington Metropolitan Area Transit Authority incorporate CNG transit buses. Specifications were developed for modifying the agency's bus maintenance and CNG fueling facilities. The agency has 164 CNG buses and will be ordering 175 more.

**Providing CNG bus purchasing technical assistance.** This ongoing project allows Clean Cities coalitions to tap into Tiger Team expertise when incorporating natural gas buses into their fleets. The team has provided assistance to the Beaumont, Texas metropolitan planning organization and the Atlanta metro area.

**Bringing the CNG bus concept to Beaumont.** A Tiger Team helped the East Texas Regional Planning Commission develop preliminary CNG transit bus fueling and maintenance facility plans for the city of Beaumont, Texas.

## Developing Educational and Training Tools

**Producing a natural gas transit bus training resource guide.** A Tiger Team developed a resource guide that points transit managers and maintenance personnel to sources of AFV-related training. See *Alternative Fuels and Vehicles Training Resource Guide for Transit Districts* ([www.ccities.doe.gov/pdfs/32534.pdf](http://www.ccities.doe.gov/pdfs/32534.pdf)).

**Helping school districts obtain DOE funding for alternative fuel school buses.** DOE awards grants for purchasing and implementing alternative fuel school buses. A Tiger Team developed the *Alternative Fuel School Bus Proposal Tutorial* ([www.ccities.doe.gov/pdfs/bustutor.pdf](http://www.ccities.doe.gov/pdfs/bustutor.pdf)) to help states and school districts prepare effective funding proposals.

**Disseminating information about the Natural Gas Transit Users Group.** The Natural Gas Transit Users Group (TUG) promotes

natural gas vehicle technology in transit fleets. It addresses issues such as equipment maintenance, safety, and new technology evaluations and provides access to Tiger Team technical assistance. A Tiger Team published *Transit Users Group Supports Transit Agencies with Natural Gas Buses* ([www.ccities.doe.gov/pdfs/tug.pdf](http://www.ccities.doe.gov/pdfs/tug.pdf)) to publicize TUG's activities.

**Supporting Clean Cities coalition implementation.** The goal of the Clean Cities Development Demonstration Project is to create strong, self-sustaining coalitions that produce measurable results. A Tiger Team is assisting in the implementation of this project by identifying coalitions with high potential and helping a selected coalition fulfill its potential.

## Evaluating AFV Legislation

**Helping a North Carolina coalition assess proposed AFV legislation.** North Carolina's Triangle Clean Cities Coalition, with Tiger Team analytical assistance, spearheaded a bill that promotes AFV use in North Carolina. See *Tiger Teams Help Submit Bill to Raise Money for AFVs, Infrastructure* ([www.ccities.doe.gov/tiger\\_housebill1213.html](http://www.ccities.doe.gov/tiger_housebill1213.html)).

**Defining benefits of AFV legislation for Missouri businesses and stakeholders.** A Tiger Team analyzed Missouri legislation aimed at stimulating use of alternative fuels, showing that the bill could displace 300 million gallons of petroleum while producing economic and environmental benefits.

**Creating AFV opportunities with Texas truckers, fleet operators.** Heavy-duty AFVs offer important emission benefits. A Tiger Team educated Texas truckers and fleet operators about new Texas legislation that provides incentives for reducing emissions in truck fleets.

For more information or to apply for Tiger Team assistance, visit the Clean Cities Web site at [www.ccities.doe.gov](http://www.ccities.doe.gov) or contact your Clean Cities coordinator.

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### A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

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