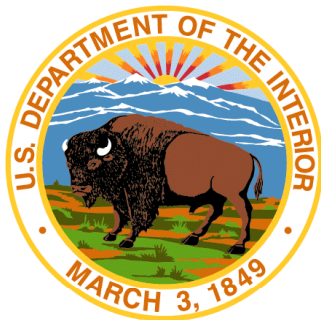


Electric Trams: Alternative Fuel Vehicles At Cape Cod National Seashore



National Park Service Expands Alternative Fuels Fleet

If you're among the millions visiting national parks in the U.S. during the next few years, you'll be breathing a little easier because a growing number of vehicles serving the parks will not be powered by gasoline or diesel fuel. The national parks are adding more vehicles using alternative fuels as part of a federal program to reduce vehicle pollution in those treasured environments.

The program is sponsored by the U.S. Department of Energy (DOE), U.S. Department of the Interior (DOI), DOE's National Renewable Energy Laboratory (NREL), and the National Park Service (NPS). The objective is to demonstrate how using alternative fuel vehicles (AFV) can improve the environment at the parks, while allowing the vehicles to perform efficiently and cost-effectively.

About the Electric Trams

Two of the "cleaner air" vehicles at the Cape Cod National Seashore—electric tram buses—had their engines upgraded and new charging equipment installed. The modified buses originally were "hybrid" vehicles, built to operate on propane and electric power. The engines were converted to all-electric power but they could not keep the pace needed to transport visitors. Now the remodeled buses can more efficiently transport up to 60 passengers at a time from an inland parking lot to Coast Guard Beach. Before the upgrades, the buses had to be taken out of service every few hours for recharging. These remodeled buses rejoin the all-electric fleet at Cape Cod National Seashore, where other all-electric trams have been transporting visitors since 1998.



Two upgraded 60-passenger electric tram buses like this one transport visitors from a parking area to Coast Guard Beach at the Cape Cod National Seashore.

The What & Why of Alternative Fuels

Alternative vehicle fuels include electricity, ethanol, methanol, natural gas, propane, and biodiesel. These fuels are currently powering a variety of commercial, personal, and government vehicles, including heavy-duty long-haul trucks, garbage packers and dump trucks, snow plows, package delivery vans, buses, taxicabs, and passenger cars.

Government agencies and many companies are in partnerships to expand the use of alternative fuels in vehicles. They share the national concern for the environment and recognize the need to reduce the nation's dependence on petroleum from foreign sources. The transportation sector currently accounts for approximately two-thirds of all U.S. petroleum use and roughly one-fourth of the total U.S. energy consumption.

Visit the "clean air" partners

U.S. Department of Energy (DOE), <http://www.doe.gov/>

DOE's Office of Transportation Technologies, <http://www.ott.doe.gov/>

DOE's Alternative Fuels Data Center, <http://www.afdc.doe.gov/>

U.S. Department of the Interior, <http://www.doi.gov/>

National Park Service, <http://www.nps.gov/> or Cape Cod National Seashore at <http://www.nps.gov/caco/home.html>

For additional information about the alternative fuel vehicles used at Cape Cod National Seashore, contact Ben Pearson, 508-349-3788, Ext. 232.

For information about alternative fuels, contact Helen Latham at Battelle, 614-424-4062 or lathamh@battelle.org.

Other AFV Locations

Alternative fuels are now being used in nearly 600 light-duty and transit vehicles in national parks and facilities nationwide. In addition to electricity, the alternative fuels powering these vehicles include compressed natural gas (CNG), ethanol, methanol, propane, and biodiesel. The first alternative fuel vehicle in this program—a CNG-powered trash packer—began service in December 1997 at the National Capital Parks' Central District in Washington, D.C.

Here are examples of other parks and facilities participating in this federal program where you can see a heavy- or medium-sized alternative fuel vehicle at work or have the opportunity to ride in one.

Park/Facility Location	Fuel	Vehicle Type
Grand Canyon National Park, AZ	CNG	Dump Trucks
Gateway National Recreation Area, NY	Electric	Tram
Cumberland Island National Seashore, GA	Electric	Tram Engine
Bureau of Indian Affairs Schools, NM	CNG	School Buses
Zion National Park, UT	Electric	Tram Engines
LBJ National Historic Park, TX	Electric	Bus
George Washington National Parkway	CNG	Maintenance trucks

Before the new or re-powered alternative fuel vehicles can be used, park facilities may need to be modified, such as by installing fuel storage facilities and dispensing equipment. People who refuel, repair, or drive the vehicles may need to be trained in using the new fuels. Information is collected to judge the performance of the vehicles, cost-effectiveness, and emission reductions.



These scenes from the Cape Cod National Seashore are among the many attractions for visitors.