

DOE News Release

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DOE Issues Arizona Public Service Alternative Fuel (Hydrogen) Pilot Plant Design Report

The U.S. Department of Energy, through its Advanced Vehicle Testing Activity, issued a design report for the Arizona Public Service Alternative Fuel (hydrogen) Pilot Plant. The pilot plant in Phoenix is a model alternative fuel refueling system, generating and dispensing hydrogen, compressed natural gas (CNG) and hydrogen/CNG blends (HCNG). The plant is used daily to fuel internal combustion engine vehicles operating on hydrogen and HCNG blends in Arizona Public Service's fleet.

The pilot plant's hydrogen system includes production, compression, storage and fuel dispensing. The purity of the hydrogen produced at the pilot plant exceeds 99.999 percent. Hydrogen is produced using an electrolysis process that separates water into hydrogen and oxygen. The plant also compresses natural gas for use as a motor fuel.

The pilot plant, and the hydrogen and HCNG internal combustion engine test vehicles, are operated through a public/private sector partnership agreement between DOE's Advanced Vehicle Testing Activity, Electric Transportation Applications, Arizona Public Service, and the DOE's Idaho National Engineering and Environmental Laboratory.

In addition to reducing the use of petroleum, using hydrogen and HCNG as fuels in internal combustion engine vehicles provides air emissions benefits. Burning hydrogen in internal combustion engines also supports development of the hydrogen infrastructure needed for fuel cell vehicles.

Visit <http://avt.inel.gov/hydrogen.html> to find the Pilot Plant Design Report and information on the DOE's hydrogen internal combustion engine vehicle testing.

DOE, through its Advanced Vehicle Testing Activity, conducts baseline performance, accelerated reliability and fleet testing on advanced technology vehicles. The Advanced Vehicle Testing Activity is a component of DOE's Office of FreedomCAR and Vehicle Technologies Program.

The Advanced Vehicle Testing Activity light-duty vehicle evaluations are managed for the DOE Office of Energy Efficiency and Renewable Energy from the INEEL in

Idaho Falls, Idaho. For more information on this and other testing activities, visit the Advanced Vehicle Testing Activity Web page at <http://avt.inel.gov> or contact Jim Francfort (francfje@inel.gov, 208-526-6787).

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