

Fuel Cell Technologies Office

Energy Department Announces SimpleFuel Winner of the \$1 Million H2 Refuel H-Prize

Today the Energy Department announces SimpleFuel as the winner of the \$1 million H2 Refuel H-Prize Competition. Launched in October 2014, the H2 Refuel H-Prize Competition challenged America's innovators to deploy an on-site hydrogen generation system, using electricity or natural gas, to fuel hydrogen vehicles, that can be used in homes, community centers, small businesses, or similar locations.

SimpleFuel's home scale refueling appliance can provide a 1-kilogram fill to vehicles in 15 minutes or less at 700 bar using hydrogen produced via electrolysis, with a cost-effective design that minimizes setback distances and reduces the physical footprint of the system. SimpleFuel is a collaboration of three companies: Ivys Energy Solutions (Massachusetts), McPhy Energy N.A. (Massachusetts), and PDC Machines (Pennsylvania).

Data collection began in September 2016 to evaluate the system based on the technical and cost criteria laid out in the guidelines. An open house was held on November 9, 2016, to provide an opportunity for the public to get a look at the system. Testing of Simple Fuel's system was completed on December 21, 2016. Over 180 kilograms of hydrogen were dispensed and all the technical criteria were met during the testing phase.

The two-year H2 Refuel H-Prize competition asked applicants to design, install, and test refueling systems used in homes, community centers, businesses, or similar locations to generate and dispense hydrogen to small fleet vehicles. Home fueling projects like these could be an integral part of the continued deployment of hydrogen infrastructure across the country to support more transportation energy options for U.S. consumers, including fuel cell electric vehicles (FCEVs).

Hydrogen infrastructure remains the most critical barrier to the widespread adoption of FCEVs. Both government and industry are focused on identifying actions to encourage early adopters of FCEVs, by conducting coordinated technical and market analysis and leveraging other alternative fueling infrastructure to enable cost reductions and economies of scale. For example, infrastructure being developed for alternative fuels such as natural gas, as well as fuel cell applications including combined heat and power, backup power and fuel cell forklifts, can help pave the way for mainstream hydrogen vehicle infrastructure.

For more information on the H2 Refuel H-Prize Competition, visit hydrogenprize.org. The H-Prize is administered for the U.S. Department of Energy by the Hydrogen Education Foundation.