



General Motors, US Government Joins Forces to Boost Hydrogen Storage

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([PRWEB](#)) April 3, 2005 -- General Motors (GM) and the Department of Energy (DOE) Sandia National Laboratories have joined forces to create, design and test a new and advanced method for storing hydrogen based on metal hydrides. The success of this project is important in making the fuel cell vehicle competitive with gasoline-powered automobiles when it comes to driving range. In a press release last January, DOE elucidated that metal hydrides, formed when metal alloys are combined with hydrogen, can absorb and store hydrogen in their structures. When subjected to heat, the hydrides release the hydrogen. This hydrogen can then be combined with oxygen to produce electricity. This is how a fuel-cell system works.

GM and Sandia have commenced a four-year, \$10 million program to develop and test tanks that store hydrogen in a complex hydride called sodium aluminum hydride, also known as sodium alanate. The mission is to develop a solid-state hydrogen storage tank with more capacity for hydrogen on a fuel-cell vehicle than current conventional storage methods can. They also hope to create a new tank design that is suitable to any type of solid state hydrogen storage.

"We are designing a hydrogen storage system with challenging thermal management requirements and limits on volume and weight," says Chris Moen, manager of science and engineering technologies at Sandia. "Our staff researchers are excited to apply their unique, science-based design and analysis capabilities to engineer a viable solution."

This program is part of a determined effort to improve the hydrogen storage capabilities aboard a fuel-cell vehicle to equal the driving range of a tank of gas. This will make fuel-cell systems more acceptable to consumers. Currently, the most common methods of storage are liquid and compressed gas, but neither of the two has been able to provide the needed range and running time for fuel cell vehicles.

GM is the world's largest vehicle manufacturer selling nearly 8.6 million units in 2003, or about 15 percent of the global market.

Meanwhile, another lucrative segment of the automotive market is auto parts. One of the leading names when it comes to online auto parts is Auto Parts Train, a trusted and reliable supplier of auto parts and accessories, including GM parts for various models. Their easy-to-use website at <http://www.partstrain.com/ShopByVehicle/GMC> features all their GM parts is certified secure.

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