

## DOE'S FREEDOM CAR PROGRAM TO ACCELERATE STATIONARY FUEL CELLS

federal fund for automotive fuels cells will help drive the market for statinary fuel cells

(PRWEB) January 30, 2002 -- DOE'S FREEDOM CAR PROGRAM TO ACCELERATE STATIONARY FUEL CELLS

North American Stationary Fuel Cell Shipment Forecast (Millions of Dollars) go to:<u>www.vdc-corp.com/fc</u>

VDC Natick, Massachusetts - On Wednesday, January 8, the Secretary of Energy, Spencer Abraham, announced that \$1.5 billion in U.S. government subsidies would be re-allocated to further develop fuel cell technologies for automotive applications. The program, called Freedom CAR (Cooperative Automotive Research), was developed by DaimlerChrysler Corporation, Ford Motor Company, General Motors Corporation, the U.S. Department of Energy and the U.S. Council for Automotive Research. Freedom CAR will replace a \$1.5 billion, eight-year project aimed at developing high mileage per gallon engine powered vehicles.

What does this \$1.5 billion in government funding mean to the stationary fuel cell marketplace? For the fuel cell companies pursuing automotive applications such as Ballard and United Technologies Fuel Cells, this will probably result in considerable government subsidized research and development funding. For the rest of the fuel cell world, the answer is not as simple.

For the automotive fuel cell market to directly impact the stationary fuel cell market, fuel cell vehicles must achieve commercial success. A number of requirements are necessary for fuel cell vehicles to effectively commercialize:

- $\hat{A}$  The fuel cell vehicle must have lower emissions than an internal combustion engine
- $\hat{A}$ · Its driving performance must be at least equal to that of an internal combustion engine
- $\hat{A}$ · It must provide profits for automotive manufacturers and fuel cell companies
- $\hat{A}$ · It must provide profits for energy companies by means of its fuel supply

To meet these requirements, automotive fuel cells must overcome a number of technical barriers. Most important is the need to further develop hydrogen-reforming technologies, which are used to convert hydrogen rich fuels (gasoline, natural gas, methanol, etc.) to pure hydrogen. Without this technology, a hydrogen infrastructure will need to be constructed at a very high cost. There are also significant size, weight, and noise requirements placed on automotive fuel cells. These fuel cells must finally meet stringent safety standards on the federal, state, and local levels.

According to VDC analyst Nathan Andrews, "Once these requirements are met and fuel cell vehicles commercialize, the increases in fuel cell production will help to significantly drop prices. The research to meet these requirements will also assist in the development of stationary fuel cell systems." Andrews goes on to say that this allocation of funds is likely to push the stationary fuel cell market towards VDC's best-case scenario.



anticipates that this government spending will accelerate the stationary fuel cell market to achieve significant growth through 2005. Beyond 2005 the possibilities for both stationary and automotive fuel cells are tremendous. The Freedom CAR program will go a long way in assisting fuel cell development, but for these markets to reach their true potentials, industry participants will need to take matters into their own hands.

About the Study

This report, "The North American Market For Grid Power Solutions: Distributed Generation & Ride-Through Technologies", is an analysis of the current size and future growth of the North American market for five products: fuel cells, microturbines, flywheels, battery UPSs, and static transfer switches. This multiclient study is designed to provide subscribers with relevant and up-to-date market intelligence to support strategic marketing and product planning decisions. The report includes:

 $\hat{A}$  · Segmentation by product categories, major end user groups, power output (kW), commercialization dates, geographic regions, and channels of distribution;

 $\hat{A}$  Analysis of integrated power systems incorporating distributed generation and ride-through technologies;

 $\hat{A}$ · Identification of end user preferences, motivations, and market niches;

 $\hat{A}$  Major regulations and influences, technology trends, and utility needs that affect the future of this market;

 $\hat{A}$  Discussion of the industry structure, strategic relationships, and the influences generated by the various types of participants;

 $\hat{A}$ · North American vendor market share data;

 $\hat{A}$  Profiles on the leading North American suppliers/developers of fuel cells, microturbines, flywheels, battery UPSs and static transfer switches; and

 $\hat{A}$  · Recommendations providing insight into current and future market opportunities in this highly competitive marketplace.

Venture Development Corporation, a technology market research and strategy firm, was founded in 1971 by graduates of Harvard Business School and MIT. Over the years, VDC has developed and fine-tuned a unique and highly successful methodology for forecasting and analyzing dynamic technology markets. VDC has extensive experience in providing analysis in power conversion and control markets. This includes multiclient and custom consulting engagements in a broad spectrum of related topics including power supply and power management integrated circuits, uninterruptible power supplies, flywheel backups, microturbines, AC/DC switching power supplies, DC/DC converters, and others.

For further information about "The North American Market For Grid Power Solutions: Distributed Generation & Ride-Through Technologies" or any other VDC report or service, contact Marc Regberg, Vice President; or Nathan Andrews, Project Manager, at:

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