



*Addendum to the FreedomCAR and Fuel Partnership Plan to
Integrate Electric Utility Industry Representatives*

February 2009

Introduction

On June 20, 2008 the DOE’s Assistant Secretary of Energy Efficiency and Renewable Energy announced the expansion of the FreedomCAR and Fuel Partnership by the inclusion of two electric utility companies. The purpose of this Addendum is to describe the role of the electric utility companies. It supplements but does not amend the FreedomCAR and Fuel Partnership Plan dated March, 2006.

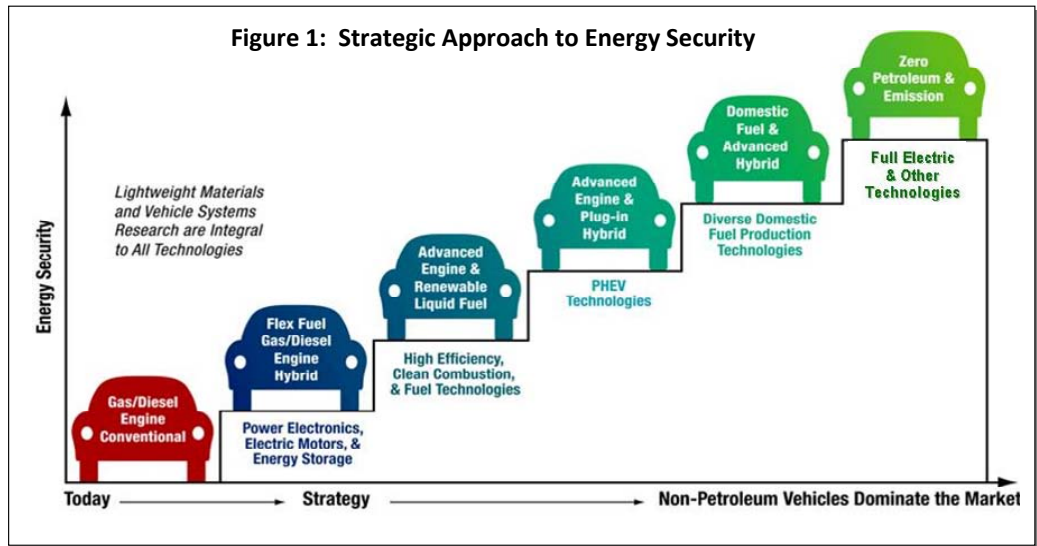
Background

Recognizing the energy security concerns of increasing reliance on imported oil and the environmental impact of automobiles in the US, the FreedomCAR Partnership was established in 2002 by DOE and the US-based automotive manufacturers to cooperate on research to reduce fuel consumption and harmful emissions of passenger vehicles; the major initiative was R&D to enable affordable hydrogen fuel cell vehicles and the national hydrogen infrastructure to support them. The membership was expanded in 2003 to include major energy companies to facilitate coordination between fuel cell vehicle technology and the hydrogen fuel infrastructure – and the FreedomCAR and Fuel Partnership[†] (the Partnership) was formed.

In response to the Advanced Energy Initiative of 2006, the development of plug-in hybrid electric vehicles (PHEVs) and the need for coordination between electric-based vehicle technology and the electric utility infrastructure, the Partnership was expanded to include representatives of the electric utility industry in June 2008 with the same status as the other Partners.

The Partners now include the United States Department of Energy (DOE); representatives of the US auto industry, including the United States Council for Automotive Research LLC (USCAR), Chrysler LLC, Ford Motor Company and General Motors Corporation; fuel suppliers, including BP America, Chevron Corporation, ConocoPhillips, Exxon Mobil Corporation and Shell Hydrogen LLC; electric utilities, DTE Energy and Southern California Edison (SCE). These (and other) utilities are already involved with the auto industry in related activities and the Partnership is expected to expand to broaden representation of the industry (i.e., utilities and grid operators) as the goals, roles and responsibilities of the related technical teams are defined.

The ultimate objective of the Partnership remains the same – a clean and sustainable transportation energy future that reduces the nation’s dependence on foreign oil and minimizes regulated emissions and CO₂, yet preserves freedom of mobility and vehicle choice for consumers. The electric power grid is a key element of DOE’s approach to energy security to develop a spectrum of technologies that lead to a non-petroleum future (Figure 1), which takes advantage of investments in renewable energy to work toward a flexible, clean and reliable power generation and distribution system in the future. The utility partners will help examine the vehicle-grid interface for charging and communication requirements as well as the long term impact of electric-based transportation on electricity distribution.

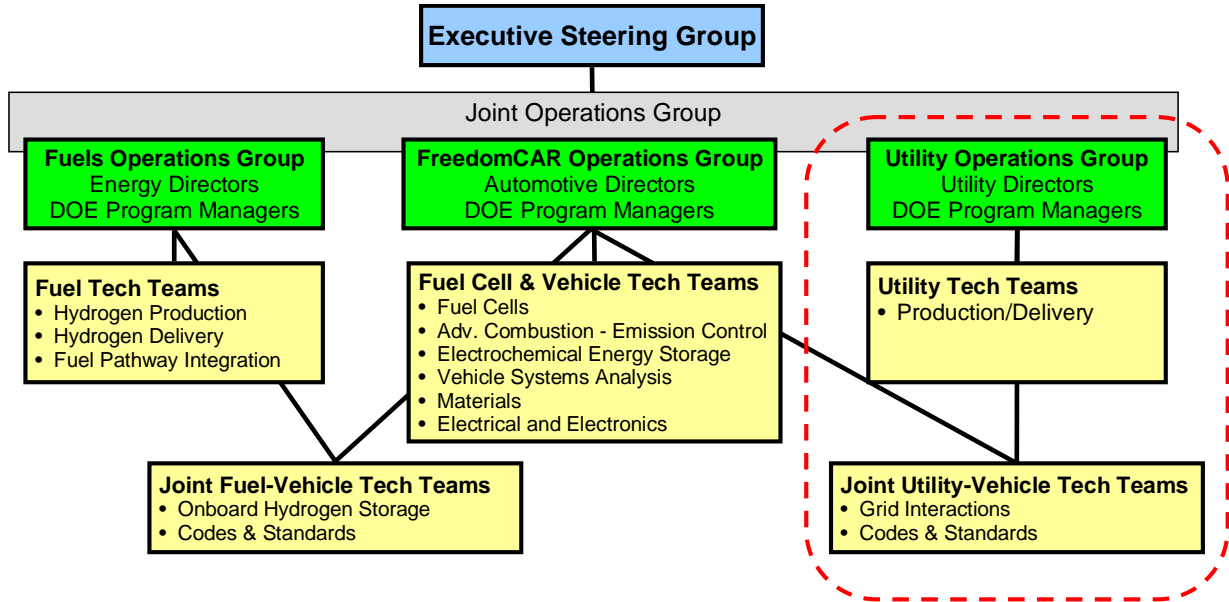


[†] The FreedomCAR and Fuel Partnership is not a legal entity and it is not intended that the “partners” have the responsibilities or rights of legal partners. Rather, everywhere that “Partnership” and “partners” are used they are used in an informal sense to denote participants working together towards the stated goals of the group.

Organization and Structure

The addition of the Utilities to the Partnership results in changes to the FreedomCAR and Fuel Partnership organization as highlighted in the red dashed box in Figure 2.

Figure 2: FreedomCAR and Fuel Partnership Structure



Executive Steering Group (ESG) – A senior executive (e.g. vice president or presidential level) from each of the utility partners will be added to the ESG and will participate as appropriate. Its roles and responsibilities remain unchanged.

Operations Groups – A new Utility Operations Group will be added. Utility Directors will also participate in Joint Operations Group meetings as appropriate.

Technical Teams – The incorporation of the utilities into the Partnership facilitates the addition of the Production/Delivery, Grid Interaction and Codes & Standards Tech Teams to address issues specific to electric-based transportation as shown in Figure 2.

Technical Scope and Objectives

Component/subsystem goals that have previously been established for 2010 and 2015 remain the same. Goals related to the electric infrastructure, grid interaction and related codes & standards will be defined as soon as practical.