

Volume 1, Number 1: July 2002

## Is Bush's FreedomCAR Hot Air?

### ITS-Davis Director Dan Sperling weighs in in the new *Issues in Science and Technology*.

Daniel Sperling, Director of ITS-Davis, believes there is some merit in the Bush administration's decision to redirect federal funds away from a nine-year-old Clinton-era research program for more fuel-efficient cars toward one with a narrower emphasis on hydrogen fuel-cell technology. However, he argues, the new Bush plan must not be allowed to undermine immediate, short-term support for reducing fuel consumption and emissions.

"Fuel cell vehicles are not likely to gain significant sales before 2010, and perhaps even later," he writes in the just-published spring issue of the journal, *Issues in Science and Technology*. "Given the reality of slow vehicle turnover, this means that fuel cells would not begin to make a dent in fuel consumption until at least 2015. Thus, if oil consumption and carbon dioxide emissions are to be restrained, more immediate policy action will be needed. If little or nothing is done in these areas, the Bush administration will continue to face the justifiable criticism that FreedomCAR is a means of short-circuiting the strengthening of the corporate average fuel economy [CAFE] standards."

In the article, Sperling reviews the history of the Clinton administration's program, Partnership for a New Generation of Vehicles (PNGV), which enjoyed high-level administration support (including from then-Vice President Al Gore) and operated through a complex partnership of federal agencies, national labs, carmakers and automotive suppliers. It set a goal of bringing to market by 2004 a family sedan with triple the fuel economy of today's vehicles (about 80 mpg), while still being affordable and safe.

In January, the Bush Administration announced it was scrapping the partnership and introduced FreedomCAR, which would focus federal funds on development of hydrogen-fuel-cell-powered vehicles. The announcement was greeted with skepticism among environmentalists, who felt the new plan would do nothing to decrease America's dependence on foreign oil for at least a decade, and by some business interests, who decried government support for what they consider an implausible technology.

In fact, Sperling pointed out, FreedomCAR (the "CAR" stands for cooperative automotive research) is hardly a major departure from the older program. "Fuel cell research and development was already gaining a greater share of PNGV funding (from about 15 percent of the DOE PNGV funds in the mid 1990s to about 30 percent in 2001)," he wrote. The increase in fuel cell funding came about as automakers increasingly withheld their knowledge of hybrid electric technology and withdrew from publicly funded research on hybrids, because they

FreedomCAR: Energy Security  
for America's Transportation

David Garman  
Assistant Secretary  
Energy Efficiency and Renewable Energy  
U.S. Department of Energy

"FreedomCAR: Energy Security for America's Transportation," remarks by David Garman, Asst. Secy., Energy Efficient and Renewable Energy, U.S. Dept. of Energy. [Text](#). [Slides](#).

[ITS-Davis' Fuel Cell Vehicle Center](#)

[ITS-Davis' Fuel Cell Vehicle Modeling Program](#)

[The ITS-Davis e-news account of Sperling's congressional testimony on FreedomCAR \(go to March 2002 in archives\).](#)

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were bringing their own hybrid vehicles to market.

"Viewed strictly as an updating of PNGV, FreedomCAR is a fruitful redirection of federal R&D policy and a positive, albeit first step toward the hydrogen economy," Sperling wrote.

However, a major shortcoming is the lack of any incentives for automakers to engage with energy companies to develop a system to manufacture and distribute the hydrogen fuel that fuel cells need. "This will likely limit the overall effectiveness of the program, because uncertainty about hydrogen supply and distribution is arguably the single biggest factor slowing the transition to fuel cell vehicles," he wrote.

Sperling suggested a better use of limited funds would be to support "small innovative technology companies and larger technology companies that are not already major automotive suppliers; and universities, because of their expertise in basic research, but equally because they will train the industry engineers and scientists who will design and build these vehicles in the future."

He also recommended basic research on materials and subsystems that could be applied across a broader spectrum of electric-drive vehicles; storage and distribution technologies for hydrogen; and interim incentives for automakers to produce more efficient vehicles that use cleaner fuels.

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### **A reprise of links included in this article:**

ITS-Davis launched the [Fuel Cell Vehicle \(FCV\) Center](#) in 1998. Research ranges from fundamental scientific studies of fuel cells, systems and vehicles, to analyses of market demand and government policy.

ITS-Davis' Fuel Cell Vehicle Center houses the [Fuel Cell Vehicle Modeling Program](#) whose goal is to develop an accurate and realistic simulation model for a fuel cell vehicle.

ITS-Davis Director Sperling also testified before congress on this subject. For an account of his testimony, go to the [ITS-Davis e-news](#) (go to March 2002 in archives).

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