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techVISION21

Inside  
February 2006  
VIEW

## TechVision21 Inside View Special

### Spotlight on Hydrogen and Fuel Cells: National Energy Policy Act of 2005, Grants and R&D Funding

On August 8, 2005, President Bush signed the National Energy Policy Act of 2005, the first comprehensive national energy policy in a decade. The Act's goals include encouraging energy efficiency and conservation, and promoting alternative and renewable energy sources.

*The legislation authorizes more than \$4 billion during FY 06-10 for hydrogen and fuel cell R&D, demonstration, grant, and procurement programs.* The President had already proposed his FY 06 budget when the Act was signed and the new programs authorized. The President's FY 07 budget request (due in February) will offer an early indicator of how Washington feels about funding these programs at or near their authorized funding levels. *If eligible, start planning now for tapping these funding streams.*

**Overview of Hydrogen and Fuel Cell Programs**  
*Unless otherwise stated, figures represent total authorized funding for FY 06-10 period.*

**Advanced Vehicles Demonstration Program:** This competitive grant program would fund up to 30 geographically dispersed advanced vehicle demonstration projects. Grant recipients will be limited to state and local government agencies, and metropolitan transportation authorities. Applications must include a registered participant in the Clean Cities initiative. Projects are limited to \$15 million with a 50 percent cost share. Grant funds can pay for: alternative fuel vehicles (including neighborhood electric vehicles); fuel cell vehicles; ultra-low sulfur diesel vehicles; acquiring and installing fueling infrastructure; and operation and maintenance of vehicles, infrastructure and equipment. **Authorized at \$200 million.**

**Fuel Cell Transit Bus Demonstration:** This competitive grant program would fund 5-year projects to demonstrate up to 25 fuel cell transit buses (with necessary infrastructure) in five geographically dispersed locations. **Authorized at \$50 million.**

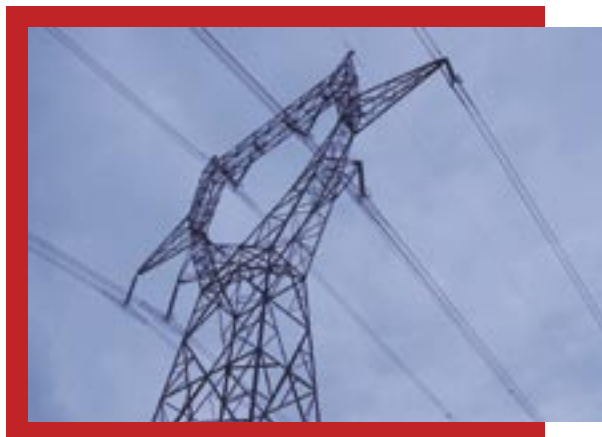


**Clean School Bus Program:** This competitive grant program would fund up to half the cost of replacing older school buses with alternative fuel school buses or ultra-low sulfur diesel fuel buses, or retrofitting them to reduce emissions. Eligible grant recipients include state and local governments, contractors that provide school bus service, and nonprofit school transportation associations. Grant recipients must provide at least 15-20 percent of the funds for new buses. Funds may also be used to acquire alternative fuel infrastructure. **Authorized at \$110 million for FY 06-07.**

**Fuel Cell School Buses:** This program would enter into cooperative agreements with private companies to develop fuel cell school buses, and with two or more units of local government currently using natural gas school buses to demonstrate the fuel cell buses. The non-federal cost share must be at least 20 percent for infrastructure and 50 percent for vehicles. **Authorized at \$25 million for FY 06-09.**

**Government Procurement of Fuel Cell Vehicles and Hydrogen Energy Systems:** To stimulate the market, technology development, and government procurement, Federal agencies with light- or heavy-duty vehicle fleets are directed to lease or purchase fuel cell vehicles and hydrogen energy systems to meet any applicable energy savings goals. Funds would go to Federal agencies to pay the difference between the cost of fuel cell vehicles and hydrogen energy systems, compared to other vehicles and systems. The Energy Department is authorized to provide similar incentives to state agencies. **Authorized at \$105 million for FY 08-10.**

**Government Procurement of Stationary, Portable, and Micro Fuel Cells:** To stimulate the market and technology development, Federal agencies that use electrical power from stationary, portable, or micro-portable devices are directed to lease or purchase a stationary, portable, or micro fuel cell to meet energy savings goals. Funds would go to Federal agencies for these purchases. **Authorized at \$350 million.**



**Hydrogen Supply and Fuel Cell R&D:** Substantial funds are authorized for R&D on technologies related to the production, purification, distribution, storage, and use of hydrogen energy, fuel cells, and related infrastructure. Research is to demonstrate and commercialize the use of hydrogen for transportation, utility, industrial, commercial, and residential applications. The Energy Department would partner with universities to carry out basic and applied research on hydrogen and fuel cells, including research on materials, subsystems, manufacturability, maintenance, and safety. Partnerships with the private sector would focus on: hydrogen production from diverse energy sources, use of hydrogen for electric power generation, safe delivery and storage of hydrogen or hydrogen fuels, advanced vehicle technologies, fuel cell development, and manufacturing of hybrid vehicle technologies. Research may be carried out using competitive, merit-based programs, or by funding nationally recognized university research centers or Federal laboratories. **Hydrogen Supply R&D authorized at \$1 billion, and Fuel Cell Technologies R&D authorized at \$850 million.**

**Demonstration Projects:** The Energy Department is authorized to fund demonstration projects that involve using hydrogen and related products at existing facilities or installations such as office buildings, military bases, vehicle fleet centers, transit bus authorities, or units of the National Park System, with special emphasis on use in national parks, remote island areas, and on Indian tribal land. Demonstration projects should focus on vehicle, portable, and stationary fuel cell and hydrogen-based energy technologies in light- and heavy-duty vehicles, fleet vehicles, industrial and farm vehicles, and commercial and

residential electric power generation. The program is authorized to fund prototype, pilot fleet, and infrastructure for regional hydrogen supply corridors along the U.S. interstate highway system. Demonstrations may also explore the use of several hydrogen-related fuels. In addition, funding is authorized for system design concepts for advanced composite vehicles, and for local distributed energy systems. The local distributed energy systems are to incorporate renewable hydrogen products, off-grid electricity production, and fleet applications in industrial or commercial services, using stationary, portable, micro, and mobile fuel cells in high-density commercial or residential building complexes or agricultural communities. Cost sharing may be required for these programs. **Authorized at \$1.3 billion.**

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## About techvision21

With a powerful combination of business, technology and government expertise, TechVision21 can help your company:

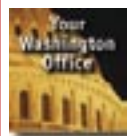
- Pinpoint and secure Federal funding and market opportunities;
- Navigate e-Business rules and regulations; and
- Promote and protect your interests in Washington.

### Our Services Include:



#### Research & Analysis:

TechVision21's market research, economic analysis, and policy insights will keep you ahead of the curve...and ahead of the competition.



#### Your Washington Office:

Our team of Executive Branch and Capitol Hill veterans will help you set your goals, craft your strategy and message, open doors and get results.



#### Federal Funding:

TechVision21 can help you pinpoint and secure federal funding and market opportunities.

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