

Budget Messages

Benefits

Fuel Cell Vehicles are the essential ingredient of a green transportation future.

Why fuel cells?

- The car of the future will be an electric car.
- Some will be powered by batteries (battery electric), some by gasoline or diesel engines and batteries in combination (hybrids and plug-in hybrids) and some by batteries and fuel cells (fuel cell hybrids).
- What makes fuel cells different is they deliver on-board performance, range, vehicle size and creature comforts without burning any fuel.
- The more fuel cell vehicles, the greater the benefits.
- The National Academy of Sciences (NAS) and others say fuel cell vehicles are necessary to achieve our pollution reduction and energy security goals.
- Fuel cells can be used in all types of vehicles, from scooters to locomotives. Other clean technologies are not suited to the full range of transport vehicles.

Portfolio Approach

Our demand for oil is huge – U.S. drivers use 20 billion gallons of gasoline annually. Vehicles are lasting longer – half the cars on America’s roads are nine years old or older. Thus, ALL the pathways to energy and environmental security and revitalizing the U.S. auto industry, are “long term.” Success will take our best efforts and require deployment of all the available technology options – more efficient engines, biofuels, hybrid vehicles, battery vehicles and fuel cells.

- Other technologies will help, but only with hydrogen and fuel cells can we reduce greenhouse gas pollution by 80% from 1990 levels – the level scientists say we need to achieve to stabilize the planet.
- With fuel cell vehicles we can break our national addiction to oil; the NAS says a strategy that includes biofuels, efficiency improvements and fuel cell vehicles can effectively eliminate gasoline demand within 40 years.
- Hydrogen fuel cells can reduce and ultimately eliminate nearly all smog and soot pollution from vehicles.

Jobs

The government’s own studies estimate that commercializing fuel cells can create nearly 700,000 new jobs in 41 industries, many of them in hard-hit states like Michigan and Ohio.

Infrastructure Costs

We can afford the cost of moving to hydrogen fuel and fuel cell cars. In fact the National Academy of Sciences estimates that installing enough fueling stations for 5 million fuel cell cars would cost about \$1 billion a year over the next 15 years. The oil industry spends more than \$1 billion a week supporting gasoline and diesel sales.

The NAS estimates that the average cost premium for fuel cell vehicles over the next 15 years will be about \$7,000 per car.

- This is less than the \$7,500 incentive the U.S. government will be paying for plug-in hybrid vehicles, which have gasoline engines, when those vehicles come to market.
- The first fuel cell vehicles will be more expensive, but over time fuel cell vehicles are expected to be cheaper than battery vehicles.

Consumer Benefits

Fuel cell vehicles will save consumers money, too. The 72 miles per gallon (EPA rated) Honda FCX Clarity fuel cell vehicle costs *less per mile today to drive* than the comparable Honda Accord, Toyota Camry or Chevrolet Malibu, which get 25 mpg (EPA rated). As hydrogen prices decline, or gasoline increases (we used \$2.30 a gallon) the owner's savings will increase.

Consistency

In 2003, the U.S. Government launched a 10-year program to develop hydrogen fuel cell vehicles to move the United States away from oil and to eliminate smog and global warming pollution. Eliminating the program now, just as the program is paying off, is all too typical of the Department's auto programs. It's the equivalent of Attention Deficit Disorder. We need to stay the course.

Now entering its seventh budget year, the program is delivering the goods.

- Fuel cell vehicles by the hundreds are on the road, achieving more than 70 miles per gallon in high performing family size cars.
- These cars have covered several million miles in road tests to date, many in the hands of average Americans who are participating in real-world testing or, for a lucky few, leasing FCV's.
- There is still work to do to get costs down and durability up, but engineers know the pathway to low cost production, and are confident fuel cell vehicles will be cost competitive.
- We also need to build enough hydrogen fueling stations for the thousands of fuel cell vehicles auto makers say will be on the road within the next few years. Yet the Obama Administration has proposed to throw away all this success by cutting the hydrogen motor fuel program from the 2010 budget.

Consequences of Inconsistency

The U.S. in past years invested heavily in advanced battery research, and then in hybrid vehicle research, but it was the Koreans and Japanese who commercialized those technologies. Now we are buying our batteries and hybrid vehicles back from Asia. We can avoid that fate with fuel cell vehicles, but only if we stay the course.

Development Progress

But it would be a mistake to abandon work on hydrogen fuel cell vehicles just as the technology has begun showing its full promise. This is not a science experiment. These are real cars with real marketability and real benefits.

- The newest vehicles get 72 miles per gallon equivalent with no compromise in creature comforts.
- The best vehicles have achieved 100,000 mile durability and more than 400 mile range.
- Hydrogen production costs are competitive with gasoline even at today's prices.
- Projected vehicle costs have been cut by 75%.
- These are accomplishments of the Department's own program.
- It would truly be a government waste to squander them by walking away just as success is in sight.

International Competition

If we don't develop and build fuel cell vehicles here in the U.S. we will be buying them from Europe and Asia.

- Daimler Benz has announced it will begin building production models of a new B-Class fuel cell vehicle and plans to be selling 100,000 units a year within a few years.
- Toyota, Honda and other auto companies participating in the Fuel Cell Commercialization Conference of Japan have agreed to pursue a large scale pilot fleet and committed to 2015 as the commercialization date.
- Japan's government has committed up to \$50 million to support hydrogen infrastructure development in up to five regions of Japan.
- Substantial fuel cell programs are under way in China, Taiwan, Korea, the UK and in Europe.
- India has made a major commitment to hydrogen as a fuel supplement and fuel cells for reliable power supply.
- Daimler has announced plans for a new bus, with London, Hamburg and several other cities planning advanced bus trials.