

## Ballard Announces Fuel Cell Timetable

Ken Thomas

WASHINGTON - A leading developer of hydrogen fuel cells for automobiles announced a timetable Tuesday for making the technology more feasible by 2010.

Canadian-based Ballard Power Systems Inc. said it would demonstrate a commercially viable fuel cell "stack," which uses hydrogen fuel to generate electricity in vehicles, in five years.

By 2010, Ballard said its fuel cell stack would be more durable, cost-effective and better able to start in freezing conditions.

The company said its "road map" would follow targets set by the U.S. Energy Department and help automakers chart the development of the technology.

"We're showing through our actions and not just words that this technology is real and by 2010 we'll be able to demonstrate its commercial viability," said Dennis Campbell, Ballard's president and chief executive.

Fuel cells convert hydrogen and oxygen into water to produce electricity. Unlike batteries that go dead after the reactive chemicals are used up, fuel cells can be replenished with hydrogen and oxygen. The technology has been used in experimental vehicles and as a power supply for some buildings.

President Bush has pushed a \$1.7 billion research program to develop hydrogen as America's next energy source and predicted Americans will drive cars operated by hydrogen-powered fuel cells in two decades.

Most major automakers are developing fuel cells but say the cost of the vehicles and a lack of fueling stations make them unmarketable at this time.

Ballard's announcement, made to coincide with the National Hydrogen Association's annual conference in Washington, was aimed at skeptics who question whether the technology will be practical and economical in the future.

Critics note that some hydrogen is produced from natural gas and other fossil fuels, and they stress the need for the development of a safe and cost-effective way to store and distribute hydrogen, a highly flammable gas.

Nick Cappa, a DaimlerChrysler AG spokesman on advanced technology, said several steps would need to be taken before the technology could become widely used. DaimlerChrysler has more than 100 fuel-cell vehicles, the auto industry's largest fleet.

"Although it may be feasible for fuel-cell technology to make that leap in 2010, that does not necessarily mean the market is ready for it," Cappa said. "It does not necessarily mean the infrastructure will be there."

General Motors Corp. spokesman Scott Fosgard said the company has spent more than \$1 billion on fuel-cell technology and has said it could be commercially viable by 2010.

"It's great that more than one company is saying this now, and I think what you're seeing is a growing industry will to make this happen," Fosgard said.

Ford Motor Co. called the timetable "pretty optimistic."

"We believe that fuel cell vehicles may begin to be viable in the next 10 to 15 years," said Ford spokesman Ed Lewis. "However, it's impossible to predict when we'll begin to see huge numbers of vehicles on the roads."

David Friedman, research director of the Union of Concerned Scientists' Clean Vehicles Program, said Ballard was announcing "important goals" but said the availability of the fuel would be a major obstacle.

"If they can achieve it, it will definitely help bring fuel-cell vehicles to the roads," Friedman said. "The big problem is, where's the hydrogen?"

The Burnaby, British Columbia-based company is partially owned by DaimlerChrysler and Ford, but Campbell said the technology would be "available to all comers" in the auto industry.

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