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## Plug-in hybrids charge Hill Bay Area group touts cars to House panel

Edward Epstein, Chronicle Washington Bureau Thursday, May 18, 2006

**(05-18) 04:00 PDT Washington** -- Hydrogen-powered cars. Bio-diesel. Clean diesel. Vehicles propelled by ethanol, the corn-based fuel that's the dream of Midwestern farmers. Electric-gas hybrids.

They've all been featured in mini-auto shows in recent weeks on Capitol Hill, where the spike in gas prices across the country has caught Congress' attention. Members and their constituents are searching eagerly for alternatives, and the possible technologies of tomorrow have lined up for their moment in the spotlight.

Wednesday was the turn of Bay Area researchers, who brought their plug-in hybrid vehicle technology to show off for a House science subcommittee.

"Congress is starting to talk about plug-ins in the abstract. We wanted to show them in a concrete way that it's here now. We wanted to show them what's available today," said Felix Kramer, founder of the Redwood City-based nonprofit California Cars Initiative, known as CalCars.

"I brought my infrastructure with me," added Kramer, holding up a foot-long three-pronged extension cord for plugging his souped-up Toyota Prius hybrid models into household electric sockets for recharging.

CalCars has altered two Prius cars to fit expensive nickel metal hydride or lithium ion batteries and recharging devices that allow the cars to be plugged in to many household outlets for overnight recharging. The result, Kramer said, is fuel economy approaching 100 mpg, and the ability to run for 30 to 50 miles solely on the batteries.

Congress was an easy sell. "I'd buy a plug-in hybrid today, if they were available," said the subcommittee chairwoman, Rep. Judy Biggert, R-Ill., who admitted she had not even heard of the technology until recently.

The father of the plug-in hybrid technology, UC Davis engineering Professor Andrew Frank, told the committee that with federal help for research, development and testing, the new cars and trucks are within reach. Legislation to do that has been proposed in both houses of Congress, where members have suggested dozens of energy-related bills in recent weeks.

Depending on how widespread the technology becomes, plug-ins could save a good chunk of the 21 million barrels of oil the United States consumes daily, Frank added. And if plug-in hybrids are

altered to allow them to burn domestically produced ethanol, the figure will drop even further.

"With ethanol we don't have the infrastructure. With plug-ins we have the infrastructure but not the vehicles. We need to wed the two technologies," said Frank.

As with all the other technologies featured in Capitol Hill's displays, plug-ins have their problems. Batteries are very expensive and would add thousands of dollars to the cost of hybrids -- which already cost more than standard gas-fueled vehicles. The batteries are heavy, and their durability remains uncertain.

Advocates say the key is getting an automaker to adopt the technology for a small fleet that could be tested under real-life conditions. CalCars is in talks with Ford Motor Co., which already has moved into hybrids and ethanol vehicles.

In fact, while the plug-ins were shown on the House side of the Capitol, Ford was showing off its Escape Hybrid on the Senate side as its top executives -- along with those from General Motors and Daimler-Chrysler -- met with congressional leaders. They are also scheduled to meet with President Bush on June 2.

Members of Congress say they realize that no single technology will solve America's oil addiction. They hope to move on several fronts by fostering research and offering incentives.

Rep. Bob Inglis, R-S.C., took a look at the plug-ins and said he's all for them. But he said, "It would be nice if the batteries were lighter, took less time to charge and kept their charge longer."

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