Hydrogen-powered tour stops in Delaware (The News Journal)

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Hal Lewis watched longingly as the hydrogen fuel cell-powered Honda FCX Clarity rolled past him.

Behind the wheel of the burgundy sedan was self-proclaimed bad driver Rep. Mike Castle, R-Del.

"How'd he get to drive it?" Lewis, who owns H&R Auto Service in Kennett Square, Pa., asked jealously. "I'd love to drive one."

The Honda led a caravan of seven hydrogen-powered cars, SUVS and even a minivan, from automakers BMW, Toyota, Nissan, Hyundai and Volkswagen, that stopped Thursday morning at the University of Delaware's Bob Carpenter Center. The university's own hydrogen bus brought up the rear of the caravan.

Newark was stop No. 10 of 31 on the two-week, 18-state Hydrogen Road Tour. The tour is designed to promote the commercial viability of clean-energy cars and highlight the need for funding to get more in production and on the road. Sponsored by the federal transportation and energy departments, the California Fuel Cell Partnership, the National Hydrogen Association, and nine auto manufacturers, including Ford and GM, the trek, which got under way Monday, stretches from Maine to California.

"Hydrogen energy is a viable alternative," said Paul Brubaker, research and innovative technology director for the U.S. transportation department, as he stood in front of the line of shiny new cars, many painted with logos identifying them as hydrogen fuel cell vehicles. "Hydrogen technology is not in a ubiquitous fashion yet, but it has the potential. These look, feel, act, respond - even smell - like vehicles in the showroom. These vehicles are road-ready."

The advantage of hydrogen-powered cars, beyond reducing dependence on foreign oil, is their complete lack of emissions, said Ajay Prasad, a mechanical engineering professor who heads UD's fuel cell bus program.

"No carbon dioxide, no soot," he said. "The only product coming out of the tail pipe is water."

Miller marvels at motorists' gullibility and reliance on fossil fuels in general. He stopped using oil to heat his home last winter and now uses wood stoves.

Pam Davis topped off the tank of her Cadillac Escalade on Wednesday at Cumberland Farms Gulf station on U.S. 202 in Fairfax, where 87 octane was priced at $3.66.9.

The fuel cell -- located under the center console in the Honda but still leaving plenty of room for cup holders -- electro-chemically converts the hydrogen, combined with oxygen, to electric power, which drives the motor.

"There are no moving parts, so it's almost like a battery," Prasad said.

Three weeks ago, Honda leased its first FCX Clarity. About 200 are expected to be leased, for about $600 a month, during the next three years.

But Delawareans shouldn't expect to get a hydrogen vehicle just yet.

The Hondas, which have a range of about 280 miles per hydrogen fill-up, will be available mostly in southern California, where a nascent network of about two dozen hydrogen filling stations already has been established, said Ryan Harty, fuel cell vehicle engineer for Honda.

Delaware, by comparison, has just one such filling station -- Air Liquide in Newark, where UD's bus fills up -- making it impractical to introduce the vehicles here yet, even if more were available.

A grant from the Federal Transit Administration, which has funded UD's hydrogen bus, will allow two more hydrogen stations, one in Wilmington and one in Dover, to be opened in the next few years, said Michael Smith, president and chief operating officer for Houston-based Air Liquide Advanced Technologies U.S. LLC.

Prasad said opening more stations could entice auto makers to make the clean cars available here.

"With three stations in the state, per capita, Delaware would be a leader in the nation," he said.

Hydrogen cars aren't as conceptual as most people believe, Castle said, but that doesn't mean there aren't a lot of challenges still to be tackled, from building the infrastructure to improving the technology.

"It's not inexpensive," he said. "But our auto manufacturers need to understand these changes are coming. We'll probably need to offer tax credits to make these changes. But what we're seeing today is clearly a step in the right direction."

Lewis, the Kennett Square mechanic, was disappointed that no U.S. makers showcased their cars in Newark -- Ford and GM are participating but not at every stop. His shop is certified to service hybrid cars, and he was excited to learn more about hydrogen as another alternative fuel.

"I'm a techno nut," he said. "It's a good possibility that this is the future."

Robert Riddle and Jeff Vanniekerk, both of Newark, rode their bikes to campus to see the cars on display.

"I'm impressed, I'd absolutely get one," Riddle said. "My favorite was BMW; now it's anything with a hydrogen fuel cell."