

Hydrogen to power up future auto industry

Hybrids may be the new environment-friendly craze, but hydrogen-powered cars are the wave of the future

Roman Gokhman
Campus/City Culture Reporter

Hydrogen-powered vehicles might still be a generation away, but hybrid and electric vehicles are serving as a transition between gasoline-driven cars and the future.

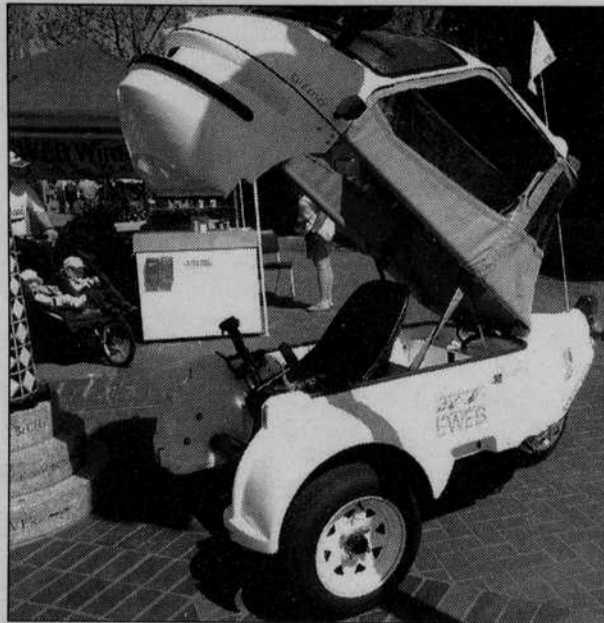
Several hybrids — combination gasoline and electric-powered vehicles — were on display at the Eugene Earth Day Celebration on Saturday. Officials at the event said the vehicles hold potential, but still need improvement.

"Electric cars are not quite there in terms of mainstream use," said Eugene Water and Electric Board Marketing Coordinator John Mitchell. "Once they go longer distances, people will buy more."

Electric cars, such as the Gizmo, one on display at the celebration, can be recharged overnight from an ordinary outlet. The Gizmo, a cross between a golf cart and a baby carriage, seats one driver. There is no steering wheel, but instead two levers at the sides of the seat. To turn left, for example, the right lever needs to be pushed forward and the left lever back.

Hybrid vehicles are typically equipped with a four-cylinder engine and a 300-volt battery. When pressure is applied to the vehicle's brakes, the battery is recharged by the engine. It is therefore unnecessary to recharge the battery overnight.

One of the vehicles on display was Honda's newest hybrid car, the 2003 Civic. While the car has all the features of the regular version, the gas mileage is better. The car sells for about \$20,000 and comes in three colors. Chuck Spresser, a representative for Kendall Honda in Eugene, said buyers are often surprised when the hybrid Civic's engine shuts off every time the car comes to a stop, and turns on automatically when the gas pedal is pushed — a conservation feature.



Electric cars, such as the Gizmo, which was displayed at the Downtown Eugene Earth Day celebration on Saturday, can be recharged overnight from an ordinary outlet. The Gizmo seats one driver and has two levers at the sides of the seat instead of a steering wheel. Danielle Hickey Emerald

"The more (hybrids) we sell, the more apt the factories are to make more," Spresser said.

Lane Regional Air Pollution Authority spokesman Morris McClellan said that in the next five years, every major car manufacturer will have a hybrid in its catalogue, and that next year, Ford is planning to market the Escape, a hybrid SUV.

"People perceive hybrids to be little tiny cars ... but the technology can be used for everything," McClellan said.

However, McClellan said problems with electric and hybrid cars include the cars' range — the distance they can be driven before having to be recharged — and the pollution that would remain because of the burning of coal needed to create electricity. Another problem, according to McClellan, is the future resale value of the vehicles.

"If this were a regular Prius," he said, pointing to a hybrid Toyota Prius, "I'd know what it'd be worth in 10 years."

The next step in automobile travel is the hydrogen fuel cell-powered vehicle. This car, which is still in the development stage, will utilize hydrogen cells as batteries. It will have no emissions, except for water and water vapor.

"It's just like a tea kettle," McClellan said.

The problem is trying to squeeze

the hydrogen into the vehicle.

"It's tough to get a lot of hydrogen into a small space," McClellan said, adding that experiments are being done to try to condense hydrogen, create hydrogen tanks that could be attached to vehicles or make engines that separate hydrogen from oxygen in water.

McClellan said hydrogen fuel cell vehicles will not be available in the near future because it will take a while to set up the resources needed to distribute hydrogen at gas stations or their equivalent.

"It will happen, but it will take a long time for the technology to develop," he said.

Contact the reporter at romangokhman@dailymerald.com.

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