

ELEMENTARY ARTICLE: Will Your First Car Be An HEV?

Today, most people in the United States drive cars that run on gasoline. By the time you're ready to buy your first car, you will have lots of choices. You will be able to choose from cars that run on electricity, natural gas, ethanol, propane, or a mixture of fuels.

Gasoline-powered cars can produce harmful emissions. Many areas of the country must find ways to improve their air quality. One way is to put fewer or cleaner cars on the road. Car makers are working on several kinds of cars that run on clean-burning fuels or go farther on a gallon of gasoline.



The Honda Insight hybrid is a sporty two-seater that gets more than 60 miles per gallon.

THE HYBRID ELECTRIC VEHICLE (HEV)

One of the best kind of new cars is already being manufactured. It is the **hybrid electric vehicle**, or **HEV** (*hybrid means combination or mixture*). HEVs have a gasoline engine and an electric motor with a battery. HEVs can run on the electric motor for short trips, using the gasoline engine for longer trips and higher speeds. Some HEVs can go twice as far as a regular car on the same amount of fuel. And they have the same power and performance.

When you drive an HEV, it seems the same as driving a regular car—except that there is no noise when the electric motor is running the car. When you stop at a red light, for example, the gasoline engine shuts off. The car is totally quiet. When the light turns green and you step on the accelerator, the electric motor starts the car moving. The gasoline engine kicks in as you need more power and speed.

The battery that powers the electric motor doesn't have to be recharged. The engine recharges the batteries whenever they are low. The braking system captures excess energy when the driver uses the brakes. This energy is also used to recharge the batteries.

ENVIRONMENTAL IMPACT

HEVs may be the best kind of new car for the next 10 to 20 years, especially for individuals. They provide the same performance as regular cars, and they are better for the environment, reducing air pollutants by up to one-half.



The Honda Civic is available now at local car dealerships as a hybrid electric vehicle.

HYBRIDS TODAY AND TOMORROW

There are several HEVs on the market today. The Honda Insight is a two-seater that gets 60 mpg and can go 700 miles on a tank of gasoline. Honda is also producing a Civic hybrid that gets more than 50 mpg. The Toyota Prius is a five-seat sedan that gets over 50 mpg and can go 500 miles before refilling.

By 2004, there will be at least seven hybrid models for sale. Ford will offer a hybrid SUV—the Escape HEV—and Chrysler, and Toyota also have hybrid SUVs in the works. There will also be Dodge Ram and GM hybrid trucks. In the long term, Toyota plans to offer hybrids in most of its models.