The Best of Both Worlds

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Car buyers in the 1950s wanted rocket fins and chrome, lots of chrome. Twenty years later, gas-guzzlers were out and Japanese imports were in.Today electric engines are the rage. Car buyers are once again demanding fuel economy and General Motors has answered the call with the Volt, "the most innovative product on the market," according to Byron Shaw, the director of GM's Advanced Technology Silicon Valley Office in Palo Alto.

The Volt was designed to meet the demands of today's marketplace. According to a Consumer Reports survey, 93 percent of Volt owners said they would "definitely" buy the car again. When it comes to performance, the study states that the Volt is one of the 10 most fuel-efficient cars since 1984.

"It doesn't require you to change your habits in any way," Shaw says. "Yet if you choose to do so, you can become among the greenest, most sustainable operators of personal mobility on the planet."

Today's consumers are more interested in a vehicle's practicality and functionality than horsepower or curves.

In a practical sense, the integration of the Voltec powertrain is one of the Volt's main features. According to Shaw, some of the Chevy Volt's technology was developed by startups in Silicon Valley.

The Voltec powertrain (formerly known as E-Flex) is where the Volt gets its name. The car's battery, which uses lithium-ion cells, makes it an electric vehicle first and a hybrid second.

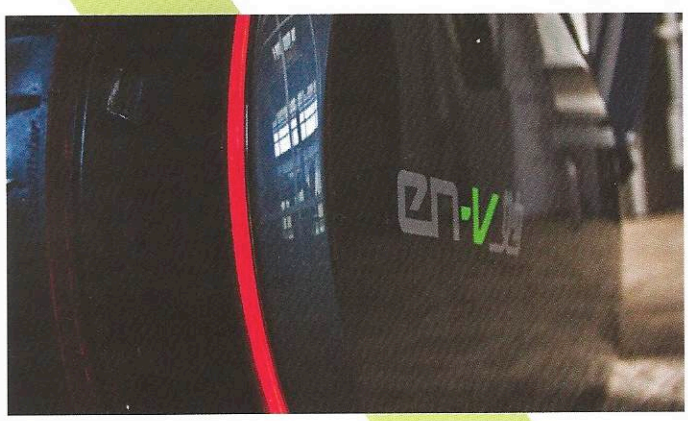
The Voltec powertrain "enables you to plug in when you can and use gas when you have to," Shaw says.

The Volt electric is the first of its kind to be powered exclusively by the car's electric motor. Drivers are able to go the first 25-50 miles using electricity. After the electric limit is reached, the Volt's nine-gallon tank allows it to travel an additional 325 miles.

Even though environmental purists frown on burning fossil fuels, using gas as a backup makes sense. Drivers need not become anxious about finding an outlet.

When it comes to the Volt's functionality, GM uses OnStar smartphone applications that allow the driver to control applications from various online services. Pandora Internet Radio, Bluetooth and GPS navigation are just some of the possibilities. The technology is compatible with a variety of smartphones, including iOS, BlackBerry and Android operating systems.

Shaw admits that more work can be done on the voice-recognition software. The company wants drivers to use regular, everyday speech. For example, a driver would say "crack" the window instead of "Car, lower driver window point three inches."



Exploring Independence

New technology means the driver has more distractions, one of the major causes of car accidents. The 2009 National Highway Traffic Safety Administration reported nearly 5,500 people died and almost 450,000 were injured as a result of driver distraction.

To help combat the problem, GM is working with many of Silicon Valley's leading companies including Cisco, Google, Apple, HP, Nokia and others.

GM's newest concept vehicle, its EN-V, is the best example of what the company is doing to combat distractions. The EN-V was formerly known as PUMA (Personal Urban Mobility and Accessibility). Segway and GM jointly developed the prototype. Sensors and technology that allow the EN-V to communicate with other vehicles could increase personal safety.

If a car up ahead starts to brake, then sensors in the vehicle would detect the change and brake. Instead of a stop-and-go motion that results in accidents, a smooth transition would make it more comfortable for the occupants.

Shaw also says sensors in the car would take into account external environmental conditions. If it started to snow outside, sensors would adjust accordingly. The vehicle may slow down and turn off the radio to decrease driver distraction.

The EN-V seats two and has the same packing density as a city bus. The number of people that can be moved per mile per lane equals the number who use public transportation.

Not only does GM offer some safety solutions, its EN-V also offers a solution to another problem as well — increased urban mobility through the use of personal vehicles.

Much like the Volt, the EN-V is electric. Consumers can travel 24 miles before the battery needs to be recharged using a regular outlet. ■

GM's EN-V Maio "Magic" concept model photographed at its advanced technology office in Palo Alto.