

High US gasoline prices are causing Americans to turn to energy-efficient vehicles, a trend that could have an enormous and long-term impact on gasoline demand, some experts say. *Kate Fazzini* investigates

# Out of gas

★ Gasoline use by automobiles accounts for 66% of the total use of oil in the US, way above the global average of 40%. Soaring gasoline prices have already caused Americans to cut back on their mileage this year, as well as increasing purchases of more energy-efficient vehicles. If this trend continues, gasoline demand could be dented by up to 25%, according to some experts. While driving less may be a temporary phenomenon, energy-efficient cars could become a permanent fixture due to recent advances in green-hybrid technology, experts believe.

US regular gasoline prices peaked at an average \$4.05 in mid-July this year, according to the Energy Information Administration, the statistics arm of the US Department of Energy. That compares with an average of \$2.97 at the same time last year, \$2.91 two years ago, and \$1.49 per gallon just five years ago for mid-July prices.

This has caused Americans to trim their miles driven by billions. Distances travelled fell by 12.2 billion miles, or 4.7% in June 2008 compared with June 2007, according to the US Department of Transportation. The downtrend began in November. From November 2007 to June 2008, Americans drove 53.2 billion fewer

miles. Throughout the whole of the oil shocks of the 1970s, Americans curbed their driving by only 49.3 billion miles.

As a result, US gasoline demand fell by an average of 132,200 barrels a day, or 1.4%, from a year ago in the first five months of 2008, according to the US Department of Energy.

High gas prices have pushed many new car buyers to move to green technologies. Hybrid cars account for just over 3% of new car sales – that’s up from 1% in 2005 and growing even while the overall market for new cars recedes.

“For the first time, the auto industry has a technological answer to high gasoline prices,” explains Patrick McVeigh, president and chief investment officer of Boston-based investment firm Reynders McVeigh Capital Management. McVeigh predicts green technology in car manufacturing will be the norm within just a few decades. He cites a 2008 study by the IBM Institute for Business Value, which conducted interviews with executives at the 10 biggest car companies worldwide and concluded that “all autos will have some level of hybridisation by 2020”.

“Over the next 20 years, we can probably assume the average miles-per-gallon to go from around 23 to 50,” McVeigh said. “Even assuming a growth in the number of cars worldwide, this would result in a 25% drop in the use of gasoline.”

Not all sources agree that hybrids will drive gasoline demand down significantly. The International Energy Agency predicts hybrid production will account for 0.3% of worldwide car production by 2010, 0.7% in 2020 and 1% by 2030. But McVeigh says this resigns hybrids to a “meaningless” role in auto production, which is not realistic.

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Patrick McVeigh, Reynders McVeigh Capital Management

More US consumers than ever are switching on to electric/hybrid cars



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## Green giants

Here's a comparison of some of the most fuel-efficient, entry-level vehicles in the US market-place currently available from four of the biggest manufacturers.

### Toyota

**Product:** Prius Hybrid

**MPG:** 45 city/48 highway

**Special features:** The Prius is the best-known, best-selling hybrid vehicle in the US. Toyota sold 181,221 Prius hybrids in 2007, up nearly 70% from 106,971 Prius deliveries in 2006. It features a 1.5-litre hybrid-electric engine, similar in size to its entry-level gas-powered model, the Corolla.

**MSRP:** \$22,000

### GM

**Product:** Chevy Cobalt

**MPG:** 25 city, 36 highway

**Special features:** The Chevy Cobalt, a gasoline-only vehicle, replaced the well-known Chevy Cavalier as the manufacturer's entry-level car model several years ago, with a standard 2.2-litre engine. The Chevy Fuse, a plug-in electric-gasoline hybrid that promises up to 40 miles of drive time before the vehicle switches over to gasoline, is set to launch in 2010. GM's only hybrid vehicles currently on the market are large trucks and SUVs.

**MSRP:** \$15,070

### Ford

**Product:** Ford Fusion

**MPG:** 20 city, 29 highway

**Special features:** The car features a 16-valve Duratec I4 engine, manufactured with four valves per cylinder, giving this vehicle one of the Ford's most notable miles-per-gallon ratings in an all-gas vehicle. A Ford Fusion hybrid has long been rumoured to be in the works, but the company has not set an official launch date. Ford has also put emphasis on FFVs (fuel flexible vehicles), which can utilise E85, a blend of 85% ethanol and 15% gasoline.

**MSRP:** \$18,135

### Honda

**Product:** Civic Hybrid

**MPG:** 40 city, 45 highway

**Special features:** Though Honda has some cheaper models, this mid-sized one is currently the Japanese automaker's lowest-cost hybrid. A gas-electric engine and continuously variable transmission (CVT) combines an automatic transmission with the fuel efficiency of a manual transmission.

An idle-stop feature automatically shuts off the car's gasoline engine when a driver breaks, saving gas. Next year, Honda will re-introduce its small hybrid vehicle, the Insight, which was the first hybrid car sold in the US (the Toyota Prius was introduced in Japan in 1997, and later in the US in 2000).

**MSRP:** \$23,550

**“We think we’ve seen a significant change in the US consumer... fuel economy as a ‘reason-for-purchase’ has sky-rocketed up the list and we’ve seen a sea change in segment mix in the second quarter”**

Frederick Henderson, president and chief operating officer, GM

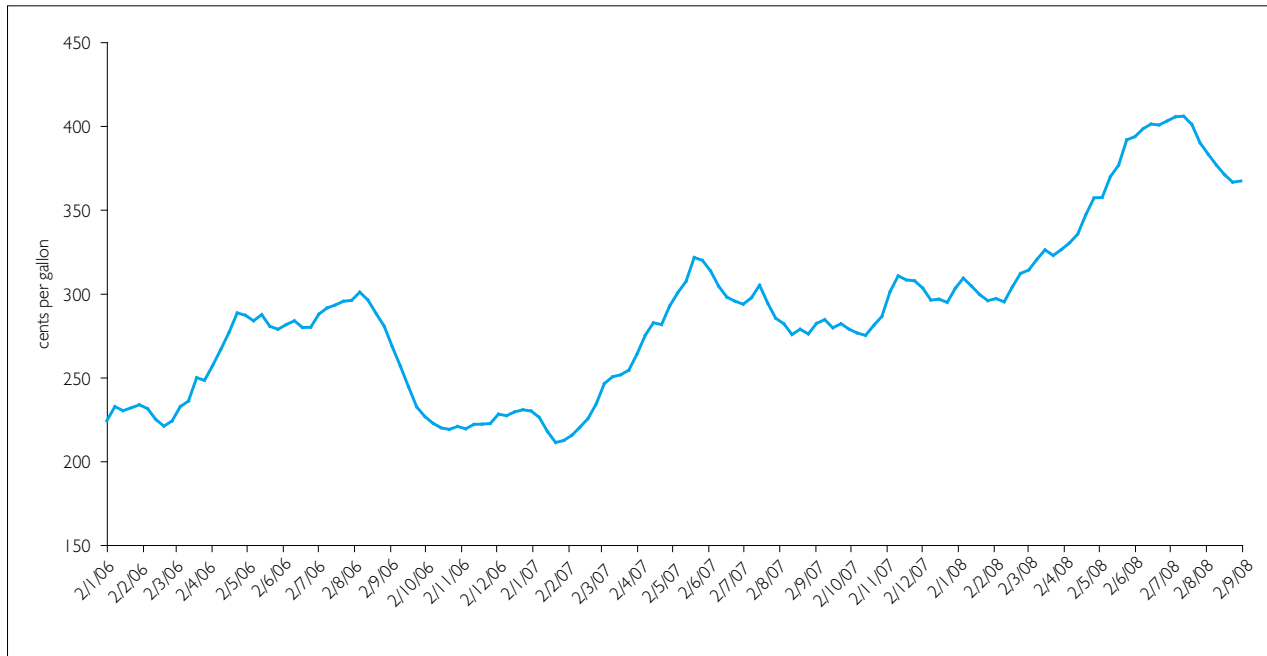
He’s not alone. John Hummel, president and chief investment officer of Wilton, Connecticut-based AIS Group, predicts that within the next five years, there will be a major move by the US government to invest in fuel savings technology or alternative fuel sources, further pushing the market-place towards green products whether the consumer market prefers it or not.

For example, both candidates in the US presidential election have outlined specific goals for investment in green auto technology. Barack Obama’s ‘New Energy for America’ plan includes a primary goal of putting “one million Plug-In Hybrid cars – cars that can get up to 150 miles per gallon – on the road

by 2015”. John McCain has proposed the ‘Clean Car Challenge’ to automakers, which includes a \$5,000 consumer tax credit for the purchase of a zero carbon emission car. Both candidates’ plans outline a number of other challenges, tax credits and new tighter standards on automobiles.

Legislating and creating big incentives such as these could be a major deciding factor driving the hybrid market-place forward. This is an important point, as there is a precedent in how consumers react when gas prices roll back from historic highs. “If you go back to the early 1980s, as prices started coming off, people went back to their old habits,” explains Hummel. And while he does not believe gasoline prices will ease significantly in the US, he notes that it only takes a small decline in the price of gasoline – say 10% – for consumers to feel more comfortable with their previous gas-consuming habits.

That won’t be the case with hybrids, argues McVeigh. “The trend to hybrids is clearly in place regardless of gasoline prices primarily because hybrids are a superior technology,” he says. “In other ‘green’ areas, consumers are often asked to pay more for an inferior, though



**F1. US weekly retail gasoline prices**

Retail prices of ‘regular’ conventional gasoline, from January 2006 to September 2008 Source: US Energy Information Administration

'greener' product. This has always been a tough sale. But with hybrid autos, consumers are getting a better product."

### The carmakers

The best-selling hybrid car in the US so far has been the Toyota Prius. Sales of the gas-electric hybrid have risen despite an overall decline in the sale of other models in the US. Toyota sold 181,221 Prius hybrids in 2007, up nearly 70% from 106,971 Prius deliveries in 2006.

By May 2008, the Ford F-150 series pick-up truck, the long-time bestselling automobile in the US, was outsold by the more gas efficient Honda Civic, Toyota Corolla, Toyota Camry and Honda Accord, in that order.

"The US carmakers have clearly been dragging their feet, particularly compared with the Japanese," says McVeigh.

General Motors (GM) saw \$15.5 billion in losses in the second quarter, the fourth-straight quarterly loss for the company. GM had been criticised for being too slow to join the hybrid fray. Adding to critics' arsenals, it invested in the creation and marketing of ever-larger SUVs – notably the Hummer and H2 gas-guzzlers – while competitors Toyota and Honda promoted hybrid and gas-efficient models. In a telling move, GM announced in early August it was considering a sale of the Hummer brand.

Frederick Henderson, president and chief operating officer of GM, addressed investors at the company's second-quarter earnings conference, saying he expects consumer preference for high-efficiency vehicles to continue. But the price of gas is a big factor, he added. At that time, Henderson said GM expected oil to stay in a range of \$120 to \$150 per barrel for the long term and that the automaker had, in fact, planned its future business around that range. At the time of writing, oil is around \$100 per barrel.

Regarding green automobiles, he says: "Certainly we think we've seen a significant change in the US consumer. We think fuel economy as a 'reason-for-purchase' has skyrocketed up the list from where it was before, and we've seen a sea change in segment mix right in front of us in the second quarter."

The carmaker acted on these observations by unveiling the Chevy Volt. The Volt is a concept car, slated to go to market by 2010, which mixes electric auto technology with



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gasoline. The car's 'E-Flex Propulsion System' promises the user around 40 miles or less drive time on electricity alone, using no gasoline at all. The Volt was featured in a high-profile ad campaign during the Beijing Olympics.

Still, Henderson told investors, "If fuel prices were to fall significantly, I am 100% certain that we will be able to react," ostensibly by shifting the GM product mix back to traditional gasoline-centric vehicles.

However, if other experts are right, it may be legislation, not consumer choice driving future automobile purchase decisions. Terry Higgins, executive director, refining, for Houston-based Hart Energy Consulting, reiterates the opinion that national fuel economy legislation – not consumer preference nor gas prices – will drive the future of hybrid automobiles.

"From the technology side, there is some buy-in by consumers. But it's not so much an issue of what the consumer wants, but what will be available to the consumer," he says. **ER**

**Driving force:  
some observers anticipate  
that US legislation –  
not consumer preference  
nor gas prices – will  
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