

Should You Buy a More Fuel-Thrifty Ride?

Fuel is expensive, but still cheaper than car payments.

By Tom Wilson of MSN autos



Icon of the SUV era, the Ford Explorer and its ilk suffer from poor resale values. Still, they offer excellent utility and, carefully operated, are often best kept rather than traded-in on a fuel miser.

Now that fuel prices have everyone's attention, there's a sense of panic surrounding fuel economy. Many are ready to ditch their present vehicles in favor of something with less thirsty drinking habits. If your current vehicle is near the end of its life, then moving fuel economy higher up the priority list when shopping for a new car is a no brainer. But does it make sense to sell a newer car in the mainstream of its life in favor of a fuel miser?

To answer this now burning question, you must consider how fuel mileage figures into the larger picture of car ownership. Don't forget fixed costs such as the purchase price, down payment, sales tax, loan interest, depreciation, insurance and license fees. Then count the more obvious operating costs such as fuel, oil, filters, tires and other consumables. It's the total of these costs that you need to consider when reacting to skyrocketing fuel costs.

Generally, it's the fixed costs that get people into trouble when changing vehicles. Because such costs are typically buried in resale values, and don't obviously come out of your checkbook each month, they are easy to overlook. Of these "hidden" fixed costs, depreciation is the most insidious.

Used cars are worth less than new cars. If you're thinking about trading in your current vehicle on a new car, you're selling a less valuable used car to buy a new one. The real gotcha is depreciation, which takes away your car's value faster than you build equity via your loan payments.

The Trade-In Wallop

If you're buying a new car mainly to save on gas money, how do the numbers work out? Figuring the answer is fraught with assumptions, but say you have a 2006 **Ford Explorer** with a 4.0-liter V6 engine, for which you paid \$29,000. You're averaging 18 mpg and driving 12,000 miles per year. If regular gasoline costs \$4.30 per gallon, your fuel costs are 12,000 miles/18 mpg = 666 gallons x \$4.30/gallon = \$2,864 per year.



Perhaps the happiest execution of a hybrid powertrain into a standard sedan, the Honda Civic Hybrid boasts 40/45 mpg (city/hwy) for \$22,600.



Hybrids can offer more than mileage benefits. The \$28,305 Ford Escape Hybrid – a definite cost premium – is smoother and more pleasant to drive than its 4-cylinder gas counterpart.



With its affordable price and high mileage, the Toyota Prius typically offers one of the quickest returns when paying for a hybrid. Still, it normally takes multiple years of use to rationalize.



The hybrid Yukon/Tahoe twins are reasonable choices for those who still need the space and towing abilities, but you'll need a calm throttle foot to see mileage benefits.

You notice the **Honda Civic Hybrid** looks pretty good at 40/45 mpg (city/hwy) — double the mileage you're getting now. But a 2008 Civic Hybrid retails for \$22,600, and when you try to trade in your Explorer, the salesman coughs once and looks concerned. Turns out your two-year-old Explorer is worth maybe \$19,000 to \$20,000 retail, and the Honda dealer's used car department really doesn't want an SUV to "unload" on someone else, so they offer you \$15,000 for it.

Awkward discussions ensue, and you realize it cost you \$14,000 in depreciation alone to drive the Explorer for two years. It'd be worth it to keep the Explorer another two years to get more value out of it. But you want the fuel savings now, so you go forward with the deal.

Years Until Break-Even

Ignoring the massive depreciation hit, by subtracting the Explorer's trade-in value from the Civic's sale price means that in simple terms it cost you \$7,600 to move from 18 mpg to 42 mpg. You still drive the same 12,000 miles per year and gasoline is still \$4.30/gallon (we hope). That means in the next year you'll buy only 286 gallons of regular for an annual fuel bill of \$1,230. Great, you save \$1,633 in gasoline in the first year, and at that rate, it takes 4.6 years to pay for the vehicle switch.

Factor in the federal tax credit of \$525 on the Honda Civic Hybrid if you buy before the end of 2008, and you'll knock half a year off the time required to pay for the increased fuel economy. Just the same, it will take four years to pay for the move to the economy car.

Discuss: Have you run the numbers on your current ride?

But as you've already guessed, this is an extreme example. The Honda is nice, but won't tow the boat to the lake or comfortably haul a big dog to the park. What if you opt for a 2008 **Ford Escape Hybrid**? The 2-wheel-drive Escape Hybrid retails for \$28,305 in base form and nets about 32 mpg. Now it costs \$13,305 to move to 32 mpg. The annual fuel savings is \$1,251.

Dividing the extra cost of the new Escape by the fuel savings, we find it takes 10.6 years to make up the difference. Even with the tax credit for the Escape Hybrid, it will still take nine years to have the extra economy pay off. And you might as well sell the ski boat, since you can't pull it anymore. The Escape Hybrid can only tow 1,000 pounds.

The point is, even at \$5 a gallon, you can buy many gallons of fuel for the cost of moving from one like vehicle to another. If you have a big pickup truck and use it, you aren't going to be happy replacing it with an economy car. If you're driving a newer V6 sedan and move to a small hybrid or diesel-powered sedan just for the fuel economy savings, the numbers typically won't work for the better part of a decade or more.



New MPG Choices

But what if you're far enough along in your current car that it's time to trade in? Then you have several vehicle types and fuel options to consider. Much depends on how you drive and, once again, a few minutes noodling with a

calculator and vehicle specifications can clarify which direction to

take.

Generally your choices are a traditional gasoline-powered economy car; a gasoline-electric hybrid; and soon, a new generation of diesel cars and trucks. We all know what a straight gasoline vehicle is like, so we'll move on to the current darlings — **hybrids**.

Hybrids are wonderful in dense urban driving because their electric components are efficient in stop-and-go traffic. But on the open highway the hybrid powertrain is mostly excess weight, as the gasoline engine does the heavy freeway lifting.

Because of their second powertrain, hybrids also cost more than their conventional siblings. The "hybrid penalty" hovers around \$4,000 but can be larger. The question is, how long does it take for the hybrid's reduced fuel consumption to pay for its higher initial price?

Where You Get Miles

To figure the difference, calculate the annual fuel cost for both the standard and hybrid models in *your* type of driving, then divide the extra cost of the hybrid by the annual fuel cost savings. That will give you the number of years required for the hybrid to pay for itself.

Depending on how you rack up miles, econo-hybrids such as the Toyota Prius could pay off their premium in around three years. In straight highway driving, the hybrid will never pay for itself, but a hybrid taxicab might pay for itself in months.

In extreme cases, such as the V6-powered **Lexus GS 350** luxury sedan and its V8-motivated **GS 450h** hybrid counterpart, the approximate \$9,300 premium for the hybrid calculates to over 50 years to justify itself in terms of fuel savings. Granted, the GS 450h does better against the similar 8-cylinder GS 460, needing only 5.7 years to equalize, but all three cars are close in performance and intent, illustrating the need to do the math before buying.

Discuss: Have you run the numbers on your current ride?

The trick is accurately forecasting a hybrid's fuel economy to your specific driving. The Feds helped this year by re-evaluating the EPA fuel consumption figures to more accurately reflect real-world driving. Still, the more stops and starts the better the hybrid does over its conventional counterpart.

Diesel for the Open Road

Have a long freeway commute? Then think diesel; they get fabulous fuel economy on the open road and are OK in town, too. Generally, a diesel goes 30 percent farther on a gallon of fuel than a gasoline engine. But diesel engines cost more to manufacture than gasoline engines, so there is also a "diesel penalty" in the sticker price and diesel fuel cost more as well. Even so, on long highway stretches diesels rule. Ask any trucker.

In the end, there is no one magic technology for everyone. Before you trade-in, you'll need to calculate as many ownership costs as possible before deciding on a fuel and powertrain type, not to mention a make and model. Do the math, and you should find the most painless way out of the current fuel-price mess.

Longtime Road & Track contributor Tom Wilson's credits include local racing championships, three technical engine books and hundreds of

freelance articles.

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