

## Cleaner cars are coming, environmental magazine reports

by Bend\_Weekly\_News\_Sources

Interest in cleaner and greener auto technology is exploding, according to a comprehensive article in the March/April 2007 issue of *E* — The Environmental Magazine. From fuel cells to plug-in hybrids, the industry is showing more research and development zeal than at any time since the halcyon days of 1900, when gasoline, steam and electric vehicles (EVs) were competing in the marketplace. Toyota Prius hybrid With seesawing gasoline prices and uncertainty about the future of oil, consumers are finally focusing on fuel economy and looking beyond big sports utility vehicles (SUVs) for their next vehicle. A consumer survey by the influential J.D. Power and Associates last summer found that an amazing 57 percent of respondents would consider buying a hybrid car for their next vehicle, and 49 percent would consider a car powered by E85 ethanol. Another survey, by Frost & Sullivan, found that 80 percent are more concerned about fuel prices than they were a year ago. Despite these numbers — and the fact that cars like the Toyota Prius are proliferating on U.S. roads, — hybrids still made up slightly more than one percent of the market in 2006. But by 2013, J.D. Power predicts they'll have taken five percent. This year, expect to see a wide range of new hybrids on the market, from the compact Honda Fit Hybrid (with fuel economy in the mid-50s) to the Toyota Sienna seven-seat minivan (approximately 40 mpg). You'll even be able to buy a hybrid version of the Chevy Tahoe (though expect only a 25 percent improvement over the SUV's 17 mpg). Indeed, after a protracted period of sticker shock at the pumps, the public is showing interest in a range of cleaner automotive technologies, from hybrids to fuel cells, battery vehicles, plug-in hybrids and cars that run on biodiesel. Still, consumers remain quite confused about both the potential and the timetable for these technologies, and much of what they think they know is wrong. For instance, it is still commonly believed that hybrid vehicles need to be plugged in. Here's some of what's happening:

**Hybrids** Although hybrid sales slowed somewhat at the end of 2006 as gas prices eased and the federal credit was halved (it went, for example, from \$3,150 for the top-selling Toyota Prius to \$1,575), 2006 was still a banner year, with 251,803 hybrids sold. There are now more than 550,000 on U.S. roads. More than 200,000 hybrids were sold in 2005, doubling the 88,000 sold in 2004. A plethora of new hybrid models are on the way.

**Diesel** Diesel vehicles are largely anathema to environmentalists and California clean air regulators, but they're becoming a majority on the roads of Europe (where green consciousness is almost a given) and they deserve a second look in the U.S., where their numbers can only go up. The good news for diesel partisans is the federally mandated low-sulfur (below 15 parts per million) diesel fuel that went on the market at up to 76,000 American filling stations late last year. It's the cleanest diesel fuel in the world.

**Biodiesel** There are several forms of bio fuel, and the categories can confuse the novice. Biodiesel, in blends with standard diesel of five to 100 percent, has been refined to work without modification in any newer diesel vehicle. With a kit from companies like Greasecar, diesels can burn 100 percent vegetable oil, which can be sourced and filtered from restaurants for a wholly recycled fuel. Biodiesel, which offers both improved emissions and the opportunity to thumb your nose at fossil fuel, is still largely a grassroots enterprise, with enthusiasts banding together in co-ops.

**The Future with Batteries and Fuel Cells** If any one technology can replace the internal-combustion engine, it's the fuel cell, which doesn't burn anything but instead converts hydrogen (stored in a tank as liquid or gas) to electricity. And its only tailpipe emission is water vapor. Fuel cells were invented in the mid-19th century and have since provided electric power on NASA space missions, but they're only now becoming practical for ground transportation. And Electric vehicles (EVs) are showing promise, especially with the advent of high-output, lightweight lithium-ion (li-ion) batteries. In 2007, America's auto fleet is hardly green, but it's getting greener.

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