WWW.FUELECONOMY.GOV 17

HYBRID-ELECTRIC VEHICLES

It's no accident the most fuel-efficient vehicles in some classes for the 2006 model year are hybrid-electric vehicles (HEVs). Hybrids combine the best features of the internal combustion engine with an electric motor and can significantly improve fuel economy without sacrificing performance or driving range. HEVs may also be configured to provide increased performance or provide electrical power to auxiliary loads such as power tools.

HEVs are primarily propelled by an internal combustion engine (ICE), just like conventional vehicles. However, they also convert energy normally wasted during coasting and braking into electricity, which is stored in a battery until needed by the electric motor. The electric motor assists the engine when accelerating or hill climbing and at low speeds where internal combustion

engines are least efficient. Unlike all-electric vehicles, HEVs now being offered do not need to be plugged into an external source of electricity to be recharged; conventional gasoline and regenerative braking provide all the energy the vehicle needs.

Potential buyers should also be aware that the federal government is currently offering tax incentives for HEVs. Some states also offer incentives. Additional information on HEVs, including tax incentives, can be found at www.fueleconomy.gov.

Annual fuel cost is estimated assuming 15,000 miles of travel each year (55% city and 45% highway) and a gasoline fuel cost of \$2.20 per gallon (regular unleaded).

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	Trans Type / Speeds Eng Size / Cylinders	MPG City / Hwy Annual Fuel Cost	Battery Size / Type		Trans Type / Speeds Eng Size / Cylinders	MPG City / Hwy Annual Fuel	, <u> </u>
	TWO SE	<u>ATERS</u>		SPORT L	ITILITY	VEHICLE	ES 2WD
HONDA Insight		57/56 \$591 . 60/66 \$525 .		FORD Escape Hybrid 2WD	AV 2.3/4	36/31 \$1,000	330 V, Ni-MH
	COMPAC	T CARS		LEXUS RX 400h 2WD	AV/ 0.0/C	22/00 \$1.000	OOO V/ NI: MILI
HONDA Civic Hybrid	AV 1.3/4 .		158 V, Ni-MH	TOYOTA Highlander Hybrid 2WD	AV 3.3/6	33/28 \$1,099	288 V, Ni-MH
HONDA Accord Hybrid	A-5 3.0/6 .	25/34 \$1,178 .	144 V, Ni-MH	FORD Escape Hybrid 4WD	AV 2.3/4	33/29 \$1,066	330 V, Ni-MH
TOYOTA Prius	AV 1.5/4 .	60/51 \$601 .	202 V, Ni-MH	LEXUS RX 400h 4WD	AV 3.3/6	31/27 \$1.138	288 V. Ni-MH
STANDAR	RD PICKL	JP TRUCI	KS 2WD			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,
CHEVROLET C15 Silverado Hybrid 2WI	O A-4 5.3/8 .	18/21 \$1,736 .	42V, Lead-acid	MAZDA Tribute Hybrid 4WD MERCURY	AV 2.3/4	33/29 \$1,066	330 V, Ni-MH
GMC				Mariner Hybrid 4WD	AV 2.3/4	33/29 \$1,066	330 V, Ni-MH
C15 Sierra Hybrid 2WD STANDAR			-	TOYOTA Highlander Hybrid 4WD	AV 3.3/6	31/27 \$1,138	288 V, Ni-MH
CHEVROLET K15 Silverado Hybrid 4WE	D. A-4 5.3/8 .	17/19 \$1,835 .	42V, Lead-acid				
GMC K15 Sierra Hybrid 4WD	A-4 5.3/8 .	17/19 \$1,835 .	42V, Lead-acid				

COMPRESSED NATURAL GAS VEHICLES

This section supplies the driving range and fuel economy values for vehicles that operate on compressed natural gas (CNG). CNG fuel is normally dispensed in "equivalent gallons," where one equivalent gallon is equal to 121.5 cubic feet of CNG. Therefore, the fuel economy values are shown in miles per gallon-equivalent. Annual fuel cost estimates are based on an average fuel price of \$1.25 per gasoline equivalent gallon of CNG.

The driving range is shown in miles and represents the distance the vehicle can travel on a full tank (or tanks) of fuel during combined city and highway driving (55% city and 45% highway).

At the time of printing there were no data available for compressed natural gas vehicles. Please check the Fuel Economy Guide's web site (www.fueleconomy.gov) for updates.

18 WWW.FUELECONOMY.GOV

ETHANOL FLEXIBLE-FUEL VEHICLES

This section contains the fuel economy and driving range values for ethanol flexible-fuel passenger cars and light trucks. These vehicles are designed to operate on gasoline, E85 (a mixture of 85% ethanol and 15% gasoline), or any mixture of the two fuels. Annual fuel cost is estimated assuming 15,000 miles of travel each year (55% city and 45% highway) and an average fuel cost of \$2.00 per gallon for E85, \$2.20 per gallon for regular unleaded gasoline, and \$2.40 per gallon for premium unleaded gasoline.

Fuel economy and driving range values are shown for both gasoline and E85. When operating your FFV on mixtures of gasoline and E85, such as when alternating between using these fuels, your driving range and fuel economy values will be somewhere between those listed for the two fuels, depending on the actual percentage of gasoline and E85 in the tank.

	Trans Type / Speeds	Eng Size / Cylinders	MPG City / Hwy	Annual Fuel Cost	Fuel	Range (miles)		Trans Type / Speeds	Eng Size / Cylinders	MPG City / Hwy	Annual Fuel Cost	Fuel	Range (miles)
	MID:	SIZE	CA	RS			DODGE						
CHEVROLET Monte Carlo	A-4	3.5/6.	. 16/24	\$1,578	E85	330	Ram 1500 Pickup 4WD	A-5	4.7/8 .		. \$3,000 . \$2,538		
CHRYSLER			21/31	\$1,320	Gas	430	F-150 Pickup 4WD FFV	A-4	5.4/8 .		. \$2,727 . \$2,201		
Sebring 4-door (2-Mode)			21/28	. \$1,376	Gas	390	GMC K1500 Sierra 4WD	. A-4	5.3/8 .				
DODGE					Gas		NISSAN Titan 4WD	Δ-5	5.6/9				310/330
Stratus 4-door (2-Mode)			21/28 . 15/20	\$1,376 \$1,764	Gas E85	390 270					. \$2,201		420/450
	ΙΔΕ	2GE	21/28 CAR	. ,	Gas	390	DODGE						
CHEVROLET	LAI	KGE	CAI				DODGE Caravan 2WD	A-4	3.3/6 .		. \$2,142 . \$1,571		
Impala	A-4	3.5/6.			E85 Gas		SPORT U	TIL	ITY	VEH	ICLE	S 21	WD
FORD Crown Victoria			17/25	. \$1,650	Gas	370	C1500 Avalanche 2WD			14/19	. \$2,062	.Gas	420/610
Taurus	A-4	3.0/6 .			E85 Gas		C1500 Tahoe 2WD			14/19 . 11/15	. \$2,062 . \$2,307	. Gas . E85	420/610
LINCOLN Town Car	A-4	4.6/8 .		. ,	E85 Gas		DODGE Durango 2WD	A-5	4.7/8 .	.9/11	. \$3,000	.E85	260
MERCURY Grand Marquis	A-4	4.6/8 .			E85		GMC C1500 Yukon 2WD	Δ_1	5 3/Q		. \$2,538		
STANDAR	D PI	CKL	JP T	RUC	KS 2	WD				15/20	. \$1,940	.Gas	420/610
CHEVROLET C1500 Silverado 2WD	A-4	5.3/8 .	. 12/16	\$2,142	E85	310/480	C1500 Yukon XL 2WD				. \$2,062	.Gas	310/480 420/610
DODGE			16/20	\$1,835	Gas	420/610	CHEVROLET K1500 Avalanche 4WD	A-4	5 3/8	11/14	\$2 499	F85	310/440
Ram 1500 Pickup 2WD	A-5	4.7/8.			E85 Gas		K1500 Suburban 4WD			14/18 . 11/14	. \$2,062 . \$2,499	. Gas . E85	420/580
F-150 Pickup 2WD FFV	A-4	5.4/8 .			E85		K1500 Tahoe 4WD	. A-4	5.3/8 .				310/440 420/580
GMC C1500 Sierra 2WD	A-4	5.3/8.				310/480 420/610	DODGE Durango 4WD	A-5	4.7/8 .		. \$3,000 . \$2,538		
NISSAN Titan 2WD	A-5	5.6/8 .		: 1			GMC K1500 Yukon 4WD			14/18	. \$2,062	.Gas	420/580
STANDAR	n el	CKL			Gas	420/450	K1500 Yukon XL 4WD	A-4	5.3/8 .				310/440 420/580
CHEVROLET K1500 Silverado 4WD			. 11/14	\$2,307	E85								

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FUEL CELL VEHICLES

Fuel cell vehicles (FCVs) may not reach the mass market for a decade or more, but a limited number will be available for sale or lease in 2005-06 to demonstration fleets in areas with a readily accessible hydrogen supply. FCVs are propelled by electric motors powered by fuel cells, which produce electricity from the chemical energy of hydrogen. Fuel cell technology is more efficient than internal combustion engines and environmentally cleaner—the only byproduct of a hydrogen fuel cell is water. However, many challenges must be overcome before FCVs are mass-marketed and sold at local dealerships. For more information about FCVs, visit www.fueleconomy.gov and the Hydrogen, Fuel Cells & Infrastructure Technologies Program Web site at www.eere.energy.gov/hydrogenandfuelcells/.

			ı	Miles per Kilogram	
	Motor	Energy Storage Device	Fuel	(City/Hwy)	Range (miles)
		SUBCOMPACT	CARS		
HONDA					
FCX	80 kW DC Brushless	Ultra Capacitor, 9.2 Farad	Hydrogen	62/51	210
MERCEDES	-BENZ				
F-Cell	65 kW Induction	200 V Ni-MH Battery	Hydrogen	57-58	100
		COMPACT C	ARS		
FORD					
Focus FWD	65 kW AC Induction	216 V Ni-MH	Hydrogen	48/53	200

kw = kilowatts; DC = direct current; AC = alternating current

DIESEL VEHICLES

Diesel-powered vehicles typically get 30-35% more miles per gallon than comparable vehicles powered by gasoline. Diesel engines are inherently more energy efficient, and diesel fuel contains 10% more energy per gallon than gasoline. In addition, new advances in diesel engine technology have improved performance, reduced engine noise and fuel odor, and decreased emissions of harmful air pollutants. New low-sulfur diesel fuels available beginning in 2006 will help reduce emissions from these vehicles even more.

Annual fuel costs below are estimated assuming 15,000 miles of travel each year (55% city and 45% highway) and a diesel fuel cost of \$2.05 per gallon.

	Trans Type / Speeds		MPG City / Hwy	Annual Fuel Cost	Notes / Abbreviations
SUBCO	MPA	<u>ct c</u>	ARS		
VOLKSWAGEN New Beetle	A-S6	. 1.9/4	. 35/42		
COMI	PACT	CA	RS		
VOLKSWAGEN Golf Jetta	A-S5 M-5	. 1.9/4 . 1.9/4	. 33/44 . 36/41	\$830 \$809	T T

	Trans Type / Speeds	Eng Size / Cylinders	MPG City / Hwy	Annual Fuel Cost	Notes / Abbreviations
MID	SIZE	CA	2 5		
MERCEDES-BENZ E320 CDI SPORT UTILI					
JEEP Liberty/Cherokee 4WD	A-5	2.8/4 .	22/26	\$1,338	