

A Hummer That Gets 100 MPG?

April 23 2009, by Miranda Marquit



A plug-in hybrid hummer with better gas mileage than the Prius?

(PhysOrg.com) -- One of the more interesting vehicles unveiled at the the Society of Automotive Engineers World Congress in Detroit is an electric Hummer that gets, according to its developer Raser Technologies, 100 miles per gallon. This electric hybrid plug-in Hummer is being billed as better than a Prius in terms of environmental friendliness. And maybe it is. My Prius "only" gets about 55 miles per gallon on average.

Raser Technologies is a company based in Provo, Utah. For years, Raser has been developing hybrid truck engines designed to make trucks --- which are the most popular vehicle in the U.S. -- more environmentally friendly. Indeed, between concerns about the environment and worries about dependence on foreign oil, it is no surprise that this most-American of vehicles is getting a makeover. Soon, Raser hopes, businesses and families will be able to make use of the roomy Hummer while getting gas mileage that will be the envy of compact car drivers.



The hybrid Hummer will be charged with a 110 volt outlet (taking eight hours), and is compatible with a 220 volt outlet (cutting charging time to four hours). A four-cylinder engine also helps recharge the lithium battery after the power is reduced through driving. However, this separate engine is not attached to the drive train. The first 40 miles of driving is done entirely with the electric engine. After that, the hybrid feature kicks in. The hybrid Hummer has a range of 400 miles, but the fact that few people would drive so far on a regular basis is part of the reason that Raser can claim the vehicle gets 100 mpg. Jalopnik offers some math that exposes the long-range fuel economy of the electric Hummer:

"For the first sixty miles the Raser Hummer runs in all EV mode and from there it will run on a constantly operating generator, resulting in an asymptotic decline in average fuel economy. It does get the dramatic 100 MPG fuel economy the company claims -- as long as you don't go further than 60 miles in a day. The actual, long-range economy is a less headline-grabbing 33 MPG."

Gas Fuel Economy		75% of Drivers		Doubles the fuel Econom of the Gas Hummer	
Miles Driven per Day	40	50	65	200+	
Gas Fuel Economy	Unlimited	165 mpg	100 mpg	33 mpg	

Table: Raser Technologies, Inc.

Even so, this is pretty impressive for a vehicle on the scale as the Hummer. The Hummer isn't expected to be in commercial production until 2011. The price hasn't been set, but it is estimated that the hybrid engine alone is likely to add between \$15,000 and \$20,000 to whatever the base price ends up being. Obviously, it will be up to incentives and



tax breaks for energy efficient vehicles to bring the electric Hummer's price down to something that is more generally affordable.

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