

VEHICLE TECHNOLOGIES PROGRAM

PHEV Accelerated Testing Results – Jan. 2009

Advanced Vehicle Testing Activity



2007 Energy CS Prius

VIN #
JTDKKB20U767508841

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

Accelerated testing was completed in October 2008 and the final results can be found in the table to the right. The Energy CS Prius averaged 66.1 mpg over the 5,596 miles of testing (5,440-mile goal). Based on an electricity cost of 10 cents per kWh and a gasoline cost of \$3.00 per gallon, the fuel cost was 0.77 cents per mile for electricity and 4.54 cents per mile for gasoline, for a total fuel cost of 5.31 cents per mile for the Energy CS Prius PHEV. The Prius HEVs tested by the AVTA averaged 44 mpg, so the conventional HEV Toyota Prius fuel cost would average 6.82 cents per mile.

If the Energy CS Prius PHEV were operated for 100,000 miles at 66.1 mpg, it would use 1,513 gallons of gasoline while the HEV Prius would use 2,273 gallons of gasoline over 100,000 miles at 44 mpg – 50% more gasoline than the Energy CS PHEV Prius.

This testing also documented over 100+ mpg testing results when the Energy CS PHEV Prius vehicle is driven in urban applications, so depending how this vehicle is operated, actual petroleum savings can be much greater.

EnergyCS Prius – Accelerated Testing

Cycle (mi)	Urban (10 mi)	Highway (10 mi)	Charge (hr)	Reps (N)	Total (mi)	Electricity		Gasoline	
						kWh	Gals	MPG	
10	1	0	4	60	600	115.58	4.78	128.1	
20	1	1	8	30	600	86.21	7.95	77.9	
40	4	0	12	15	600	25.00	14.29	42.7	
40	2	2	12	5	600	31.52	11.05	56.1	
40	0	4	12	5	600	32.44	11.36	55.5	
60	2	4	12	10	600	65.00	5.90	103.7	
80	2	6	12	8	640	39.04	10.09	65.8	
100	2	8	12	6	600	22.67	8.81	70.8	
200	2	18	12	3	600	12.98	10.46	57.8	
Total	2540	3100	984	147	5440	Weighted Average		66.1	

Each total distance slightly greater than 600 miles. HEV version = 44 mpg



For more information contact:
EERE Information Center
1-877-EERE-INF (1-877-337-3463)
www.eere.energy.gov
Or <http://avt.inl.gov>



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