



North American PHEV Demonstration

Fleet Summary Report: EnergyCS Prius (Altairnano pack)

Number of Vehicles: 2 (EnergyCS Data Loggers)

Reporting Period: January – June 2009 Summary

Vehicle Technologies Program

Advanced Vehicle Testing Activity

Energy Consumption

Trip Type ^A	Fuel Economy (mpg)	Electric energy consumption (AC Wh per mile ^B)
All	57	63
CD	61	119 ^C
CD/CS	64	
CS	48	not applicable



Vehicle Operation by Driving Modes

Trip Type	Number of Trips	Percent of Trips	Miles Driven	Percent Total Distance
All	685	--	5,050	--
CD	463	68%	1,801	36%
CD/CS	51	7%	1,590	31%
CS	171	25%	1,659	33%

Charging Events and Profiles

Average number of charging events per vehicle per month when driven	12.9
Average number of charging events per vehicle per day when driven	1.0
Average distance between charging event	39.1
Average number of trips between charging event	5.3
Average energy per charging event (DC kWh)	2.9
Average duration plugged in per charging event	14.8
Total number of charging events	129 ^D
Total charging energy (AC kWh)	317 ^E

^A CD trip – PHEV battery charge is being depleted the entire trip. CS trip – the battery charge is being sustained the entire trip because the PHEV battery was fully depleted before starting the trip. CD/CS trip – the trip started in CD mode but changed to CS mode before trip end.

^B Based on round trip charging-to-driving efficiency of 81% - i.e., DC energy discharged to the vehicle powertrain while driving was 81% of the AC kWh consumed while charging.

^C Calculation considers miles in CD trips and the CD portion of the mixed CD/CS trips

^D Based on tracing state of charge (SOC) between events in chronological order, there are 16 charging events missing from the data. The total number of charging events includes the missing charging events.

^E Net electricity consumption during vehicle driving was 257 DC kWh. Total charging energy (AC kWh) is DC electricity consumption during driving divided by round trip efficiency of 81%.



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