



North American PHEV Demonstration

Fleet Summary Report: EnergyCS Prius (Altairnano pack)

Number of Vehicles: 2 (EnergyCS Data Loggers)

Reporting Period: 2008 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	60	81
CD	73	177 ^C
CD/CS	68	
CS	47	not applicable



Vehicle Operation by Driving Modes

Trip Type	Number of Trips	Percent of Trips	Miles Driven	Percent Total Distance
All	915	--	7,312	--
CD	475	52%	1,724	24%
CD/CS	101	11%	3,157	43%
CS	339	37%	2,431	33%

Charging Events and Profiles

Average number of charging events per vehicle per month when driven	17.7
Average number of charging events per vehicle per day when driven	1.2
Average distance between charging event	33.7
Average number of trips between charging event	4.2
Average energy per charging event (DC kWh)	2.0
Average duration plugged in per charging event	21.9
Total number of charging events	217 ^D
Total charging energy (AC kWh)	590 ^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 70% - i.e., DC energy discharged to the vehicle powertrain while driving was 70% 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 42 charging events missing from the data. The total number of charging events includes the missing charging events.

^E Total charging energy consumption logged was 357 DC kWh. This is low due to missing charging event data. Net electricity consumption during vehicle driving was 413 DC kWh. Assuming a round trip efficiency of 70%, total grid to vehicle charging energy is estimated to be 590 AC kWh.