



## Vehicle Technologies Program

### North American PHEV Demonstration

Fleet Summary Report - Hymotion Prius (V2Green data logger)

Number of vehicles: 85

Reporting Period: April 2009

Date range of data received:

4/1/2009 to 4/30/2009

Number of days the vehicles were driven: 30

#### All Trips Combined

Overall gasoline fuel economy (mpg)	52
Total number of trips	6728
Total distance traveled (mi)	59423

#### Trips in Charge Depleting (CD) mode \*

Gasoline fuel economy (mpg)	67
Number of trips	3472
Percent of trips city / highway	88.60% / 11.40%
Distance traveled (mi)	16226
Percent of total distance traveled	27.31%

#### Trips in combined Charge Depleting and Charge Sustaining (CD/CS) modes\*\*

Gasoline fuel economy (mpg)	55
Number of trips	703
Percent of trips city / highway	54.20% / 45.80%
Distance traveled (mi)	15385
Percent of total distance traveled	25.89%

#### Trips in Charge Sustaining (CS) mode\*\*\*

Gasoline fuel economy (mpg)	45
Number of trips	2553
Percent of trips city / highway	73.20% / 26.80%
Distance traveled (mi)	27812
Percent of total distance traveled	46.80%

Number of trips when the plug-in battery pack was turned off by the vehicle operator <sup>^</sup>	395
Distance traveled with plug-in battery pack turned off (mi) <sup>^^</sup>	6901

\* Trips when the plug-in battery pack charge is depleted to propel the vehicle throughout entire trip

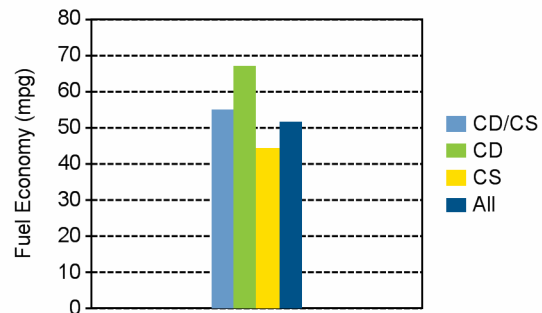
\*\* Trips when the plug-in battery pack is depleted to propel the vehicle for a portion of the trip, but is fully depleted prior to the end of the trip

\*\*\* Trips when the plug-in battery pack is not used to propel the vehicle - either the plug-in battery is fully depleted before the beginning of the trip, or the plug-in battery pack is turned off

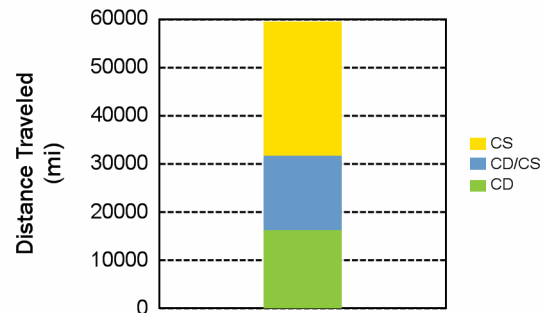
<sup>^</sup> "Number of trips with plug-in battery pack turned off by the vehicle operator" is a subset of number of trips in combined CD/CS and CS mode

<sup>^^</sup> "Distance traveled with plug-in battery pack turned off" is a subset of distance traveled in combined CD/CS and CS modes

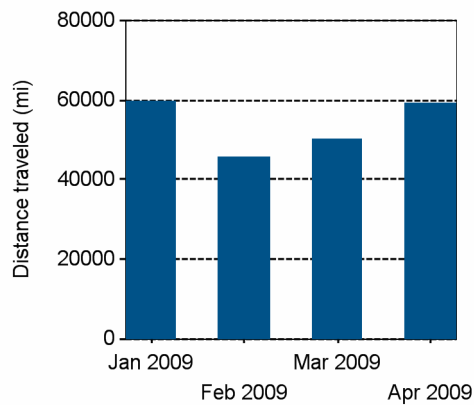
#### Gasoline Fuel Economy By Trip Type



#### Distance Traveled By Trip Type

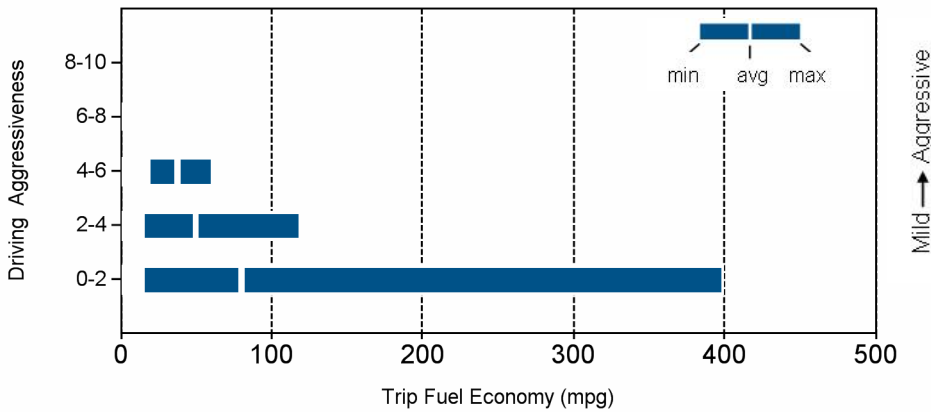


#### Miles Logged by Month This Year



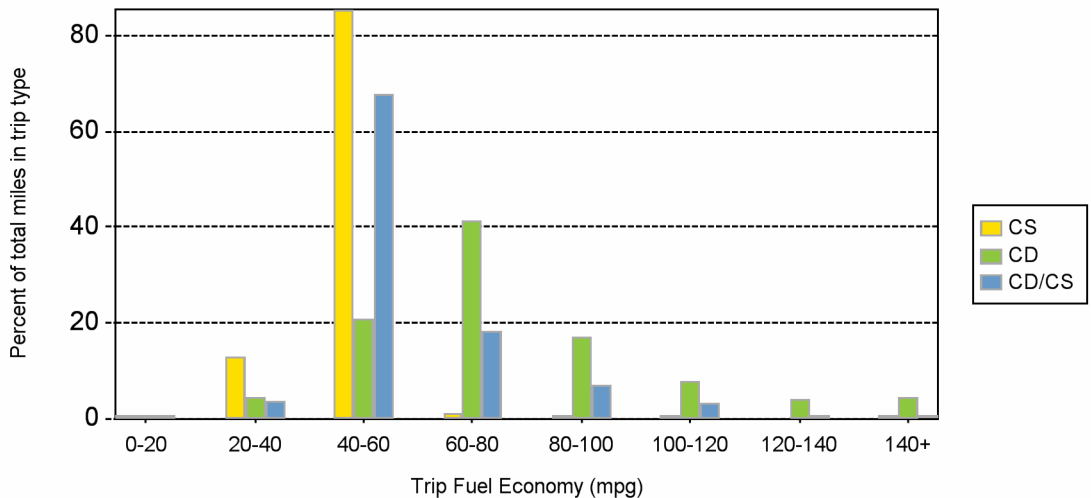
Trips in Charge Depleting (CD) mode		
	City	Highway
Gasoline fuel economy (mpg)	66	69
Percent of miles in electric-only mode	32.00%	9.00%
Average trip aggressiveness (on scale 0 - 10)	1.1	1.4
Average trip distance (mi)	3.1	16.6
Trips in combined Charge Depleting and Charge Sustaining (CD/CS) modes		
Gasoline fuel economy (mpg)	62	53
Percent of miles in electric-only mode	25.00%	6.00%
Average trip aggressiveness (on scale 0 - 10)	1.6	1.4
Average trip distance (mi)	8.1	38.2
Trips in Charge Sustaining (CS) mode		
Gasoline fuel economy (mpg)	40	46
Percent of miles in electric-only mode	22.00%	5.00%
Average trip aggressiveness (on scale 0 - 10)	1.5	1.6
Average trip distance (mi)	4.0	29.8

### Effect Of Driving Aggressiveness on Fuel Economy This Year



Aggressiveness factor is based on accelerator pedal position. The more time spent during a trip at higher accelerator pedal position, the higher the trip aggressiveness.

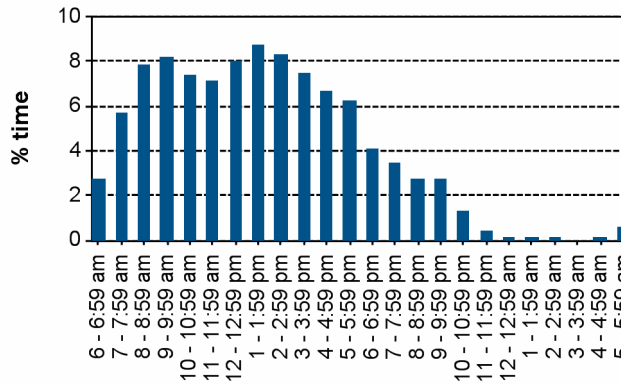
### Trip Fuel Economy Distribution By Trip Type



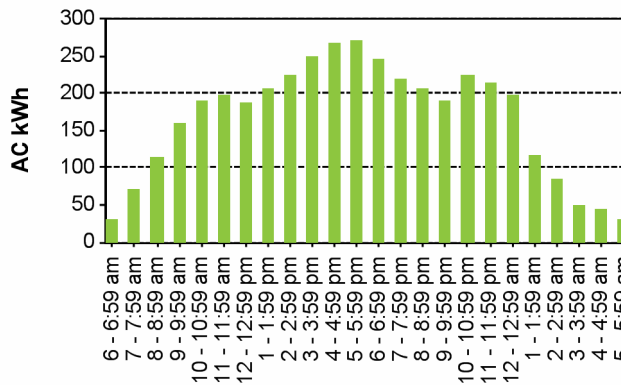
## Plug-in charging

Average number of charging events per vehicle per month when driven	18
Average number of charging events per vehicle per day when vehicle driven	1.1
Average distance between charging events	38.7
Average number of trips between charging events	4.4
Average duration of charging event (hr) *	16.9
Average energy per charging event (AC kWh)	2.6
Average charging energy per vehicle per month (AC kWh)	47.0
Total number of charging events	1535
Total charging energy (AC kWh)	3993

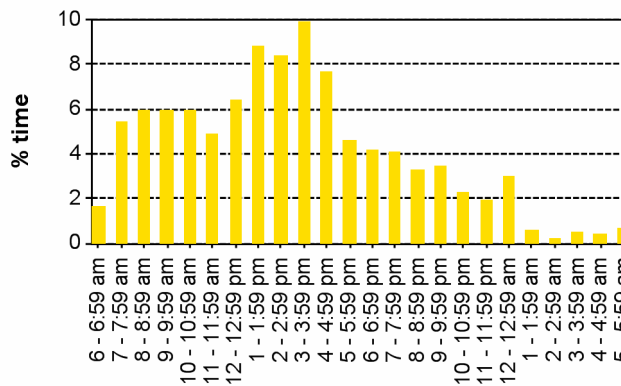
**Time of Day When Driving**



**Time of Day When Charging**



**Time at the Start of Charging Events**



\*Average duration of charging event is the average length of time per charging event when the vehicle was plugged into the electrical grid. Electrical energy was not necessarily drawn during the entire period when the vehicle was plugged in.