

North American PHEV Demonstration

Monthly report for: Madison 1

Vehicle ID:

Reporting Period: October 2009

Vehicle Technologies Program

Date range of data received:

10/1/2009 to 10/31/2009

Number of days when the vehicle was driven: 30

All Trips Combined

Overall gasoline fuel economy (mpg)	61
Overall AC electrical energy consumption (AC Wh/mi)	115
Overall DC electrical energy consumption (DC Wh/mi)	88
Total number of trips	170
Total distance traveled (mi)	908

Trips in Charge Depleting (CD) mode *

Gasoline fuel economy (mpg)	81
DC electrical energy consumption (DC Wh/mi)	161
Number of trips	117
Percent of trips city / highway	95% / 5%
Distance traveled (mi)	488
Percent of total distance traveled	54%

Trips in both Charge Depleting and Charge Sustaining (CD/CS) modes**

Gasoline fuel economy (mpg)	61
DC electrical energy consumption (DC Wh/mi)	99
Number of trips	12
Percent of trips city / highway	83% / 17%
Distance traveled (mi)	72
Percent of total distance traveled	8%

Trips in Charge Sustaining (CS) mode***

Gasoline fuel economy (mpg)	46
Number of trips	41
Percent of trips city / highway	73% / 27%
Distance traveled (mi)	349
Percent of total distance traveled	38%

Number of trips when the plug-in battery pack was turned off by the vehicle operator[^] 0

Distance traveled with plug-in battery pack turned off by the vehicle operator(mi)^{^^} 0

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

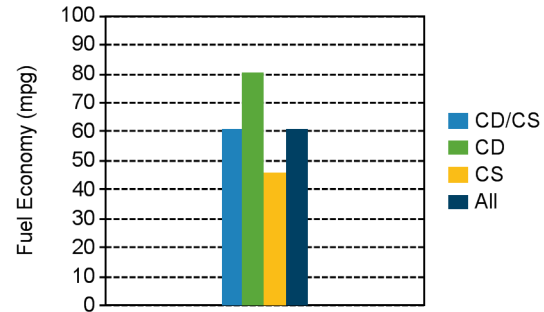
** Trips when the plug-in battery pack is depleted to propel the vehicle for a portion of the trip, but is fully depleted prior to the end of the trip

*** 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

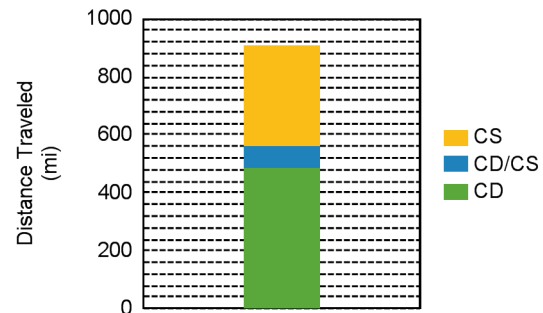
[^] "Number of trips with plug-in battery pack turned off by the vehicle operator" is a subset of number of trips in combined CD/CS and CS mode

^{^^} "Distance traveled with plug-in battery pack turned off by vehicle operator" is a subset of distance traveled in combined CD/CS and CS modes

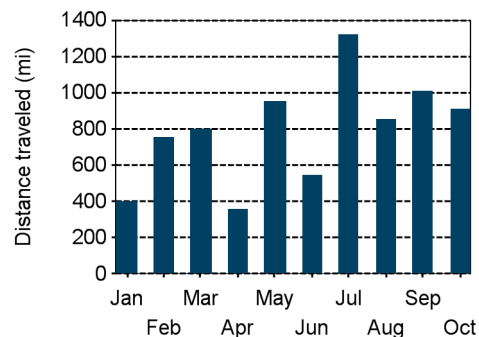
Gasoline Fuel Economy By Trip Type



Distance Traveled By Trip Type

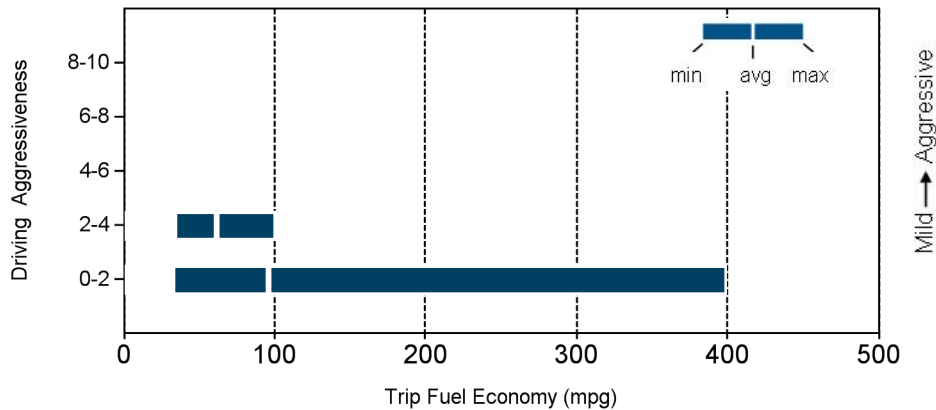


Miles Logged by Month This Year



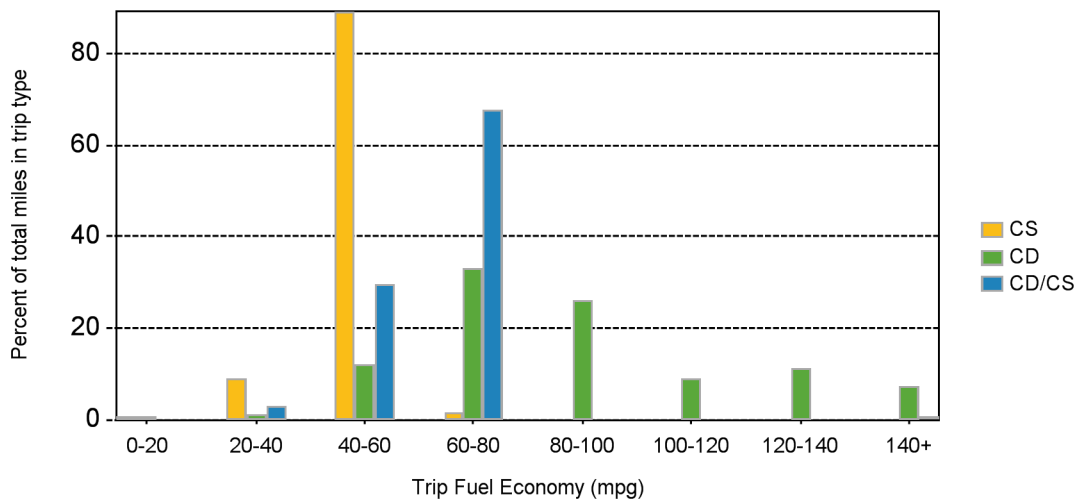
Trips in Charge Depleting (CD) mode		City	Highway
Gasoline fuel economy (mpg)		83	71
DC electrical energy consumption (DC Wh/mi)		167	124
Percent of miles with internal combustion engine off		33%	5%
Average trip aggressiveness (on scale 0 - 10)		1.3	1.7
Average trip distance (mi)		3.7	12.1
Trips in combined Charge Depleting and Charge Sustaining (CD/CS) modes			
Gasoline fuel economy (mpg)		61	62
DC electrical energy consumption (DC Wh/mi)		98	103
Percent of miles with internal combustion engine off		16%	13%
Average trip aggressiveness (on scale 0 - 10)		1.5	1.1
Average trip distance (mi)		4.9	11.3
Trips in Charge Sustaining (CS) mode			
Gasoline fuel economy (mpg)		42	48
Percent of miles with internal combustion engine off		21%	6%
Average trip aggressiveness (on scale 0 - 10)		1.0	1.5
Average trip distance (mi)		3.2	23.1
Average ambient temperature this month:		48 deg F	

Effect Of Driving Aggressiveness on Fuel Economy This Month



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. The above plot excludes trips with distance less than 1 mile.

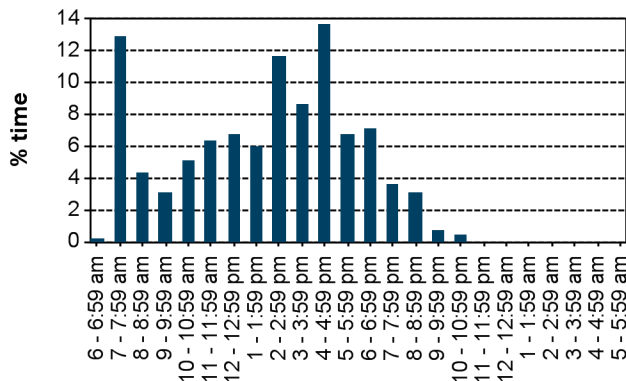
Trip Fuel Economy Distribution By Trip Type This Month



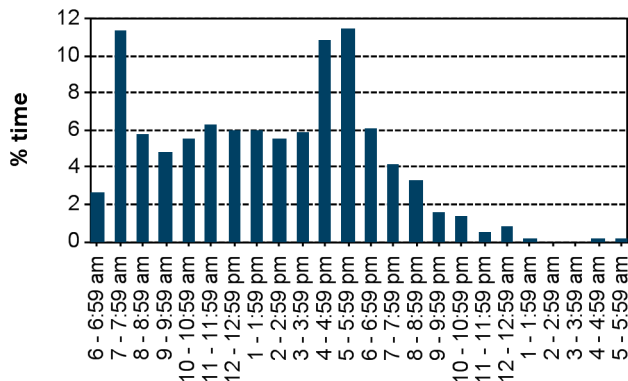
Plug-in charging

Number of charging events	39
Average number of charging events per day when vehicle driven	1.3
Average distance driven between charging events (mi)	23.3
Average number of trips between charging events	4.4
Average time plugged in per charging event (hr)	6.2
Average time charging per charging event (hr)	2.6
Average energy per charging event (AC kWh)	2.7
Total charging energy (AC kWh)	104.3

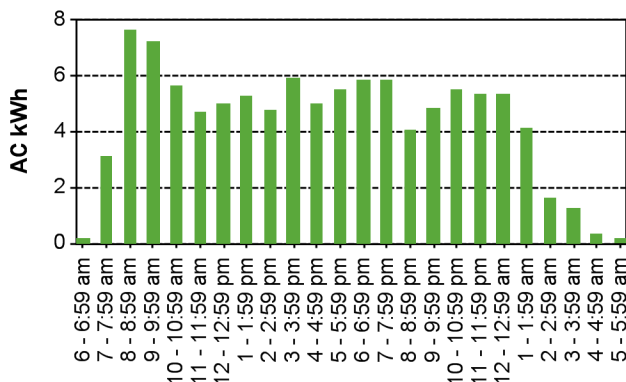
Time of Day When Driving - This Month



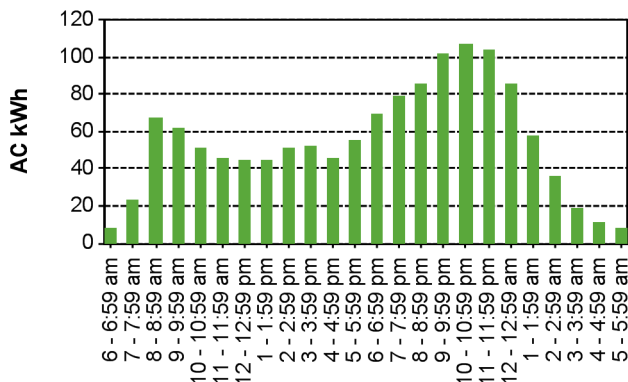
Time of Day When Driving - Lifetime



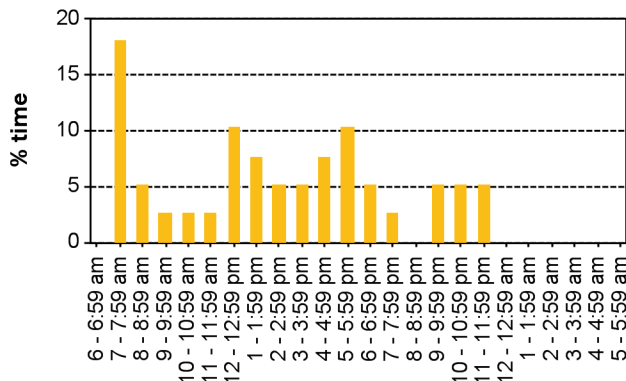
Time of Day When Charging - This Month



Time of Day When Charging - Lifetime



Time of Day When Plugging In - This Month



Time of Day When Plugging In - Lifetime

