

North American PHEV Demonstration

Monthly report for: Madison 1

Vehicle ID:

Reporting Period: November 2009

Vehicle Technologies Program

Date range of data received:

11/1/2009 to 11/30/2009

Number of days when the vehicle was driven: 21

All Trips Combined

Overall gasoline fuel economy (mpg)	50
Overall AC electrical energy consumption (AC Wh/mi) ¹	76
Overall DC electrical energy consumption (DC Wh/mi) ²	50
Total number of trips	108
Total distance traveled (mi)	1125

Trips in Charge Depleting (CD) mode ³

Gasoline fuel economy (mpg)	72
DC electrical energy consumption (DC Wh/mi) ⁴	156
Number of trips	65
Percent of trips city / highway	85% / 15%
Distance traveled (mi)	313
Percent of total distance traveled	28%

Trips in both Charge Depleting and Charge Sustaining (CD/CS) modes ⁵

Gasoline fuel economy (mpg)	48
DC electrical energy consumption (DC Wh/mi) ⁶	21
Number of trips	6
Percent of trips city / highway	33% / 67%
Distance traveled (mi)	336
Percent of total distance traveled	30%

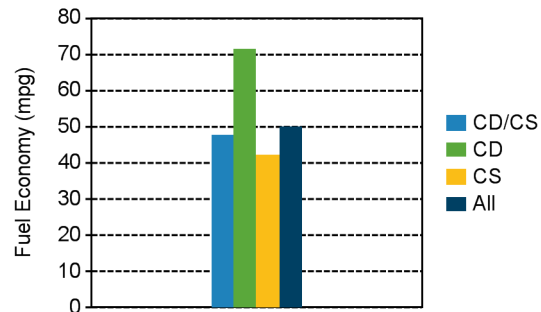
Trips in Charge Sustaining (CS) mode ⁷

Gasoline fuel economy (mpg)	42
Number of trips	37
Percent of trips city / highway	76% / 24%
Distance traveled (mi)	475
Percent of total distance traveled	42%

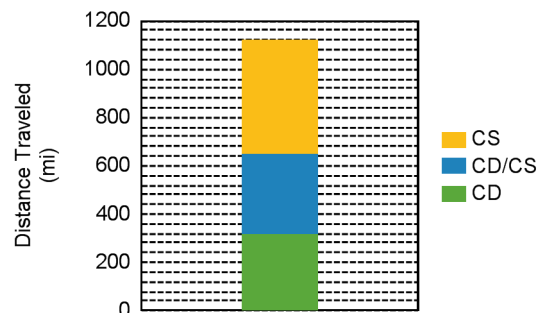
Number of trips when the plug-in battery pack was turned off by the vehicle operator ⁸ 0

Distance traveled with plug-in battery pack turned off by the vehicle operator(mi) ⁹ 0

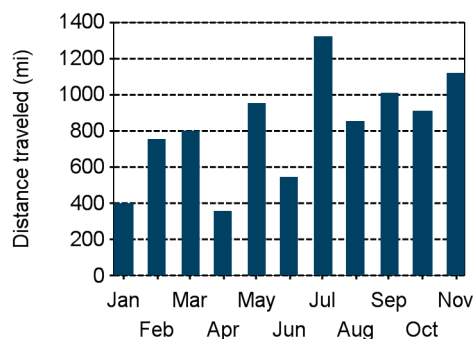
Gasoline Fuel Economy By Trip Type



Distance Traveled By Trip Type



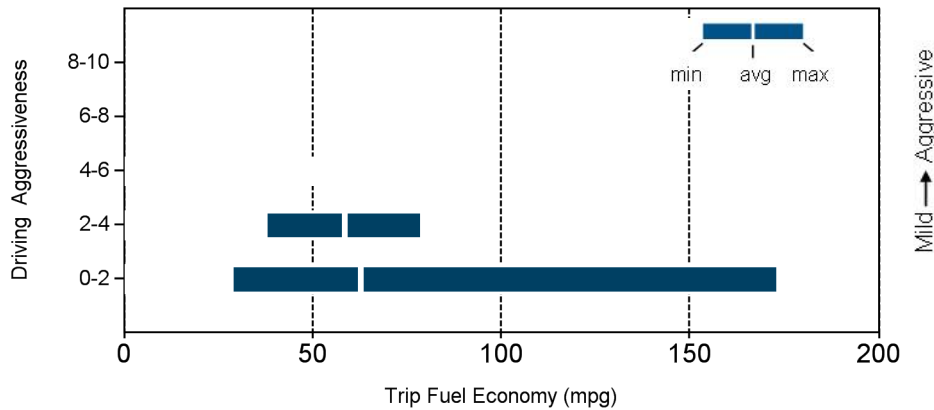
Miles Logged by Month This Year



Notes: 1 - 9. Please see <http://avt.inel.gov/phev/reportnotes> for an explanation of all PHEV Fleet Testing Report notes.

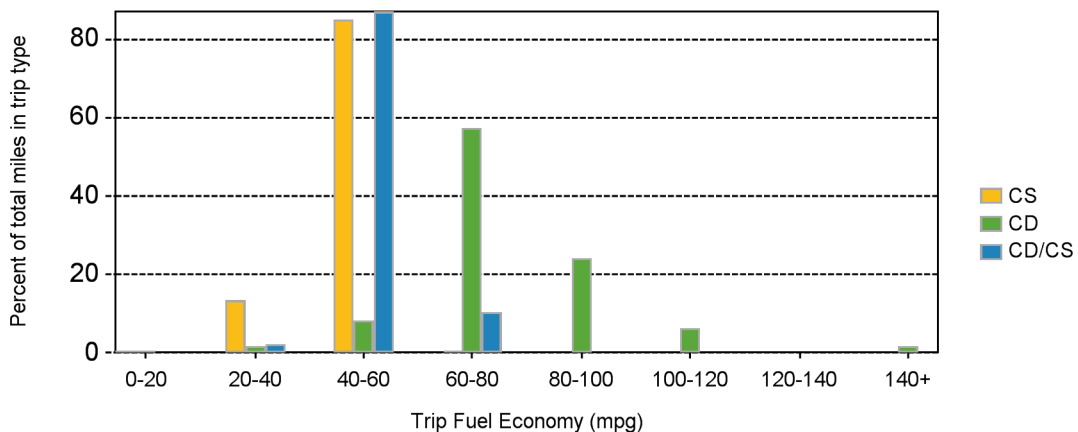
Trips in Charge Depleting (CD) mode		
	City	Highway
Gasoline fuel economy (mpg)	70	75
DC electrical energy consumption (DC Wh/mi)	167	137
Percent of miles with internal combustion engine off	25%	6%
Average trip aggressiveness (on scale 0 - 10)	1.2	1.9
Average trip distance (mi)	3.6	11.7
Trips in combined Charge Depleting and Charge Sustaining (CD/CS) modes		
Gasoline fuel economy (mpg)	59	48
DC electrical energy consumption (DC Wh/mi)	66	20
Percent of miles with internal combustion engine off	21%	2%
Average trip aggressiveness (on scale 0 - 10)	0.8	1.3
Average trip distance (mi)	3.7	82.2
Trips in Charge Sustaining (CS) mode		
Gasoline fuel economy (mpg)	36	44
Percent of miles with internal combustion engine off	17%	2%
Average trip aggressiveness (on scale 0 - 10)	1.0	0.7
Average trip distance (mi)	3.2	42.9
Average ambient temperature this month:	47 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.

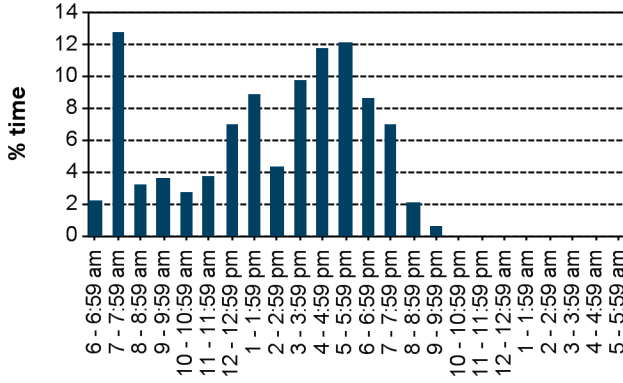
Trip Fuel Economy Distribution By Trip Type This Month



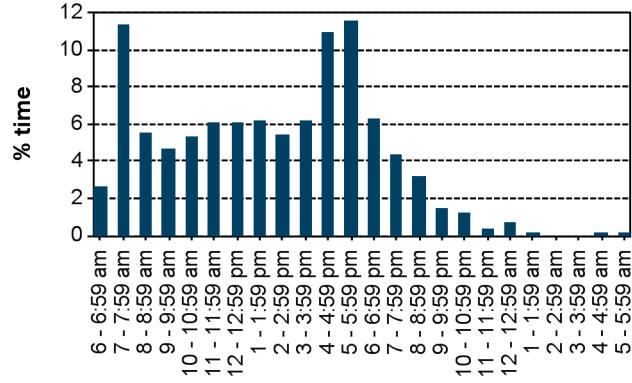
Plug-in charging

Number of charging events	36
Average number of charging events per day when vehicle driven	1.7
Average distance driven between charging events (mi)	31.2
Average number of trips between charging events	3.0
Average time plugged in per charging event (hr)	14.1
Average time charging per charging event (hr)	1.8
Average energy per charging event (AC kWh)	2.4
Total charging energy (AC kWh)	85.8

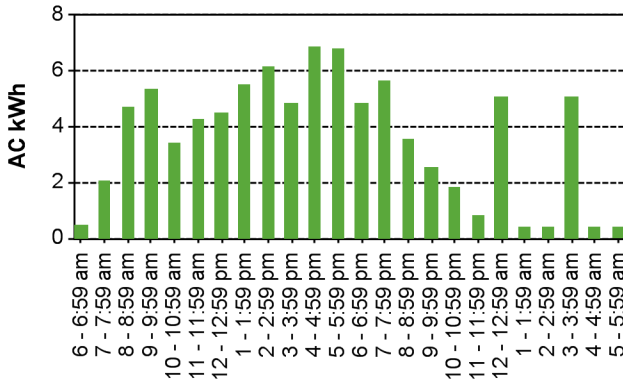
Time of Day When Driving - This Month



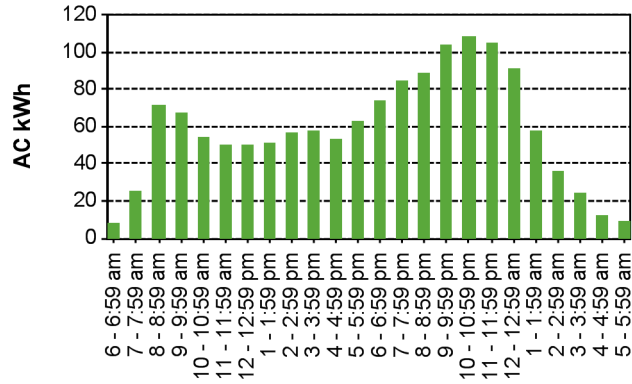
Time of Day When Driving - Lifetime



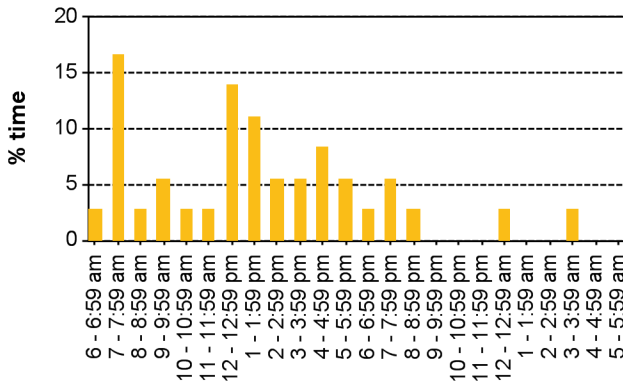
Time of Day When Charging - This Month



Time of Day When Charging - Lifetime



Time of Day When Plugging In - This Month



Time of Day When Plugging In - Lifetime

