

North American PHEV Demonstration

Monthly report for: **Madison 1**

Vehicle ID:

Reporting Period: **February 2011**

Vehicle Technologies Program

Date range of data received:

2/11/2011 to 2/28/2011

Number of days when the vehicle was driven: 16

All Trips Combined

Overall gasoline fuel economy (mpg)	41
Overall AC electrical energy consumption (AC Wh/mi) ¹	73
Overall DC electrical energy consumption (DC Wh/mi) ²	61
Total number of trips	92
Total distance traveled (mi)	667

Trips in Charge Depleting (CD) mode ³

Gasoline fuel economy (mpg)	49
DC electrical energy consumption (DC Wh/mi) ⁴	170
Number of trips	57
Percent of trips city / highway	93% / 7%
Distance traveled (mi)	200
Percent of total distance traveled	30%

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

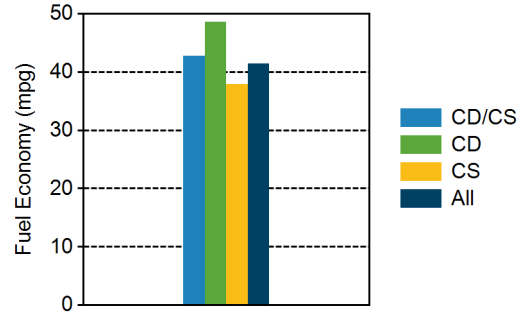
Gasoline fuel economy (mpg)	43
DC electrical energy consumption (DC Wh/mi) ⁶	54
Number of trips	6
Percent of trips city / highway	33% / 67%
Distance traveled (mi)	118
Percent of total distance traveled	18%

Trips in Charge Sustaining (CS) mode ⁷

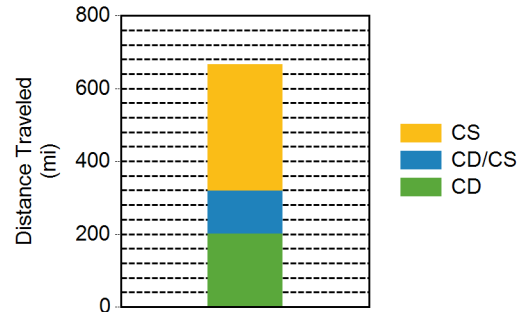
Gasoline fuel economy (mpg)	38
Number of trips	29
Percent of trips city / highway	52% / 48%
Distance traveled (mi)	348
Percent of total distance traveled	52%

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

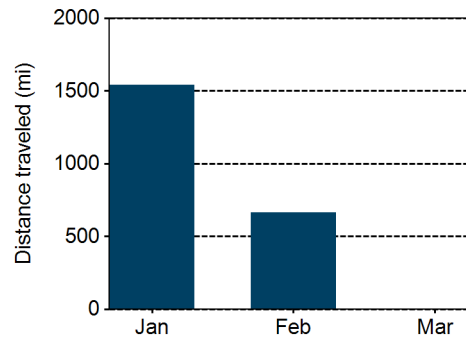
Gasoline Fuel Economy By Trip Type



Distance Traveled By Trip Type



Miles Logged by Month This Year



Notes: 1 - 9. Please see <http://avt.inl.gov/pdf/phev/ReportNotes.pdf> or an explanation of all PHEV Fleet Testing Report notes.

Trips in Charge Depleting (CD) mode

	City	Highway
Gasoline fuel economy (mpg)	47	57
DC electrical energy consumption (DC Wh/mi)	179	128
Percent of miles with internal combustion engine off	16%	11%
Average trip aggressiveness (on scale 0 - 10)	1.5	1.9
Average trip distance (mi)	3.1	8.7

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

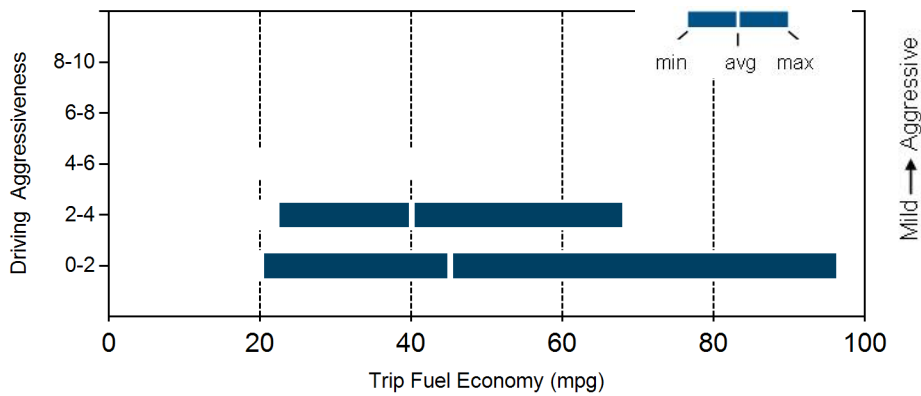
Gasoline fuel economy (mpg)	45	42
DC electrical energy consumption (DC Wh/mi)	116	47
Percent of miles with internal combustion engine off	25%	4%
Average trip aggressiveness (on scale 0 - 10)	1.2	1.8
Average trip distance (mi)	6.6	26.2

Trips in Charge Sustaining (CS) mode

Gasoline fuel economy (mpg)	29	40
Percent of miles with internal combustion engine off	11%	5%
Average trip aggressiveness (on scale 0 - 10)	1.4	1.9
Average trip distance (mi)	3.4	21.2

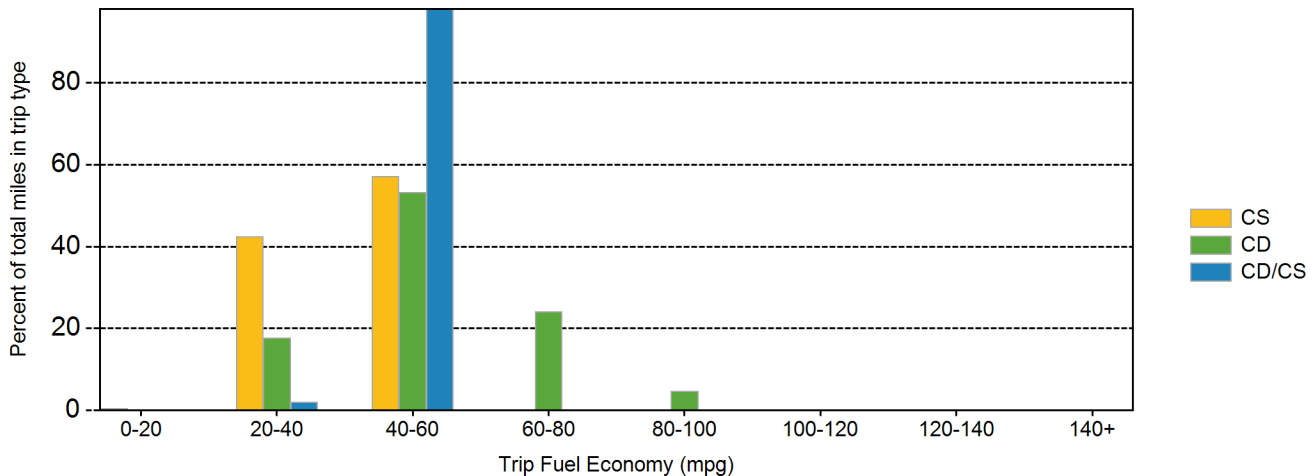
Average ambient temperature this month: 34 deg F

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.

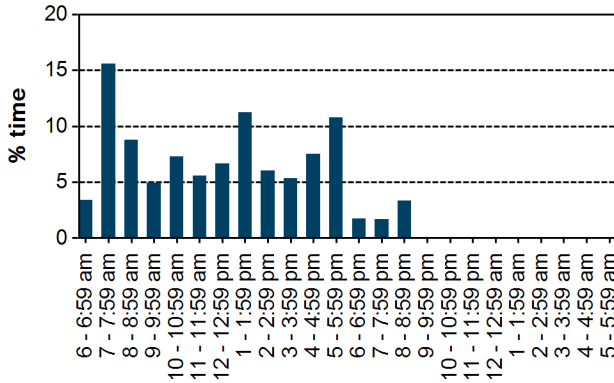
Trip Fuel Economy Distribution By Trip Type This Month



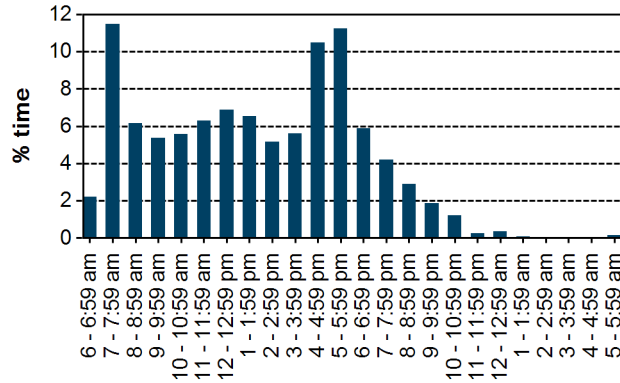
Plug-in charging

Number of charging events	14
Average number of charging events per day when vehicle driven	0.9
Average distance driven between charging events (mi)	47.6
Average number of trips between charging events	6.6
Average time plugged in per charging event (hr)	26.7
Average time charging per charging event (hr)	3.0
Average energy per charging event (AC kWh)	3.5
Total charging energy (AC kWh)	48.6

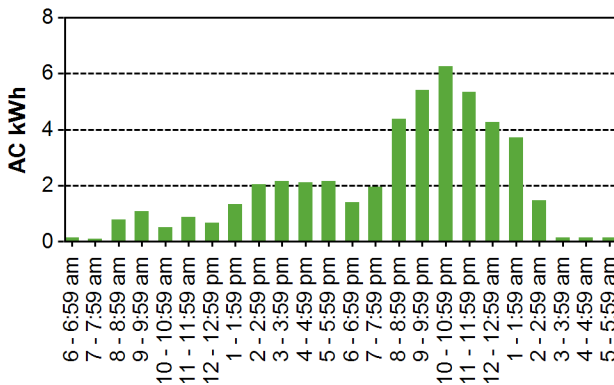
Time of Day When Driving - This Month



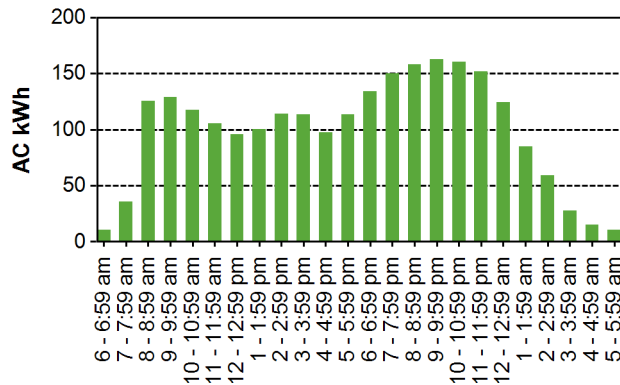
Time of Day When Driving - Lifetime



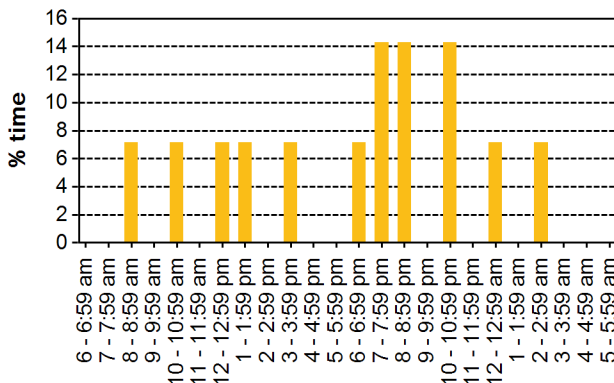
Time of Day When Charging - This Month



Time of Day When Charging - Lifetime



Time of Day When Plugging In - This Month



Time of Day When Plugging In - Lifetime

