

North American PHEV Demonstration

Monthly report for: Consumers Energy

Vehicle ID:

Reporting Period: 5/2010

Vehicle Technologies Program

Date range of data received:

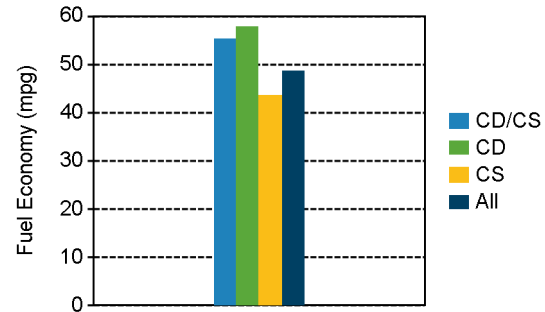
5/3/2010 to 5/24/2010

Number of days when the vehicle was driven: 18

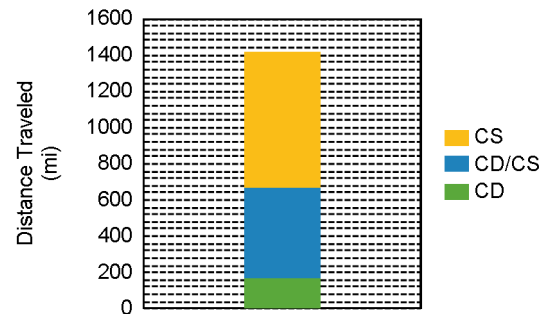
All Trips Combined

Overall gasoline fuel economy (mpg)	49
Overall AC electrical energy consumption (AC Wh/mi) ¹	49
Overall DC electrical energy consumption (DC Wh/mi) ²	33
Total number of trips	90
Total distance traveled (mi)	1415
Trips in Charge Depleting (CD) mode ³	
Gasoline fuel economy (mpg)	58
DC electrical energy consumption (DC Wh/mi) ⁴	121
Number of trips	31
Percent of trips city / highway	61% / 39%
Distance traveled (mi)	170
Percent of total distance traveled	12%
Trips in both Charge Depleting and Charge Sustaining (CD/CS) modes ⁵	
Gasoline fuel economy (mpg)	55
DC electrical energy consumption (DC Wh/mi) ⁶	52
Number of trips	13
Percent of trips city / highway	8% / 92%
Distance traveled (mi)	492
Percent of total distance traveled	35%
Trips in Charge Sustaining (CS) mode ⁷	
Gasoline fuel economy (mpg)	44
Number of trips	46
Percent of trips city / highway	50% / 50%
Distance traveled (mi)	752
Percent of total distance traveled	53%
Number of trips when the plug-in battery pack was turned off by the vehicle operator ⁸	14
Distance traveled with plug-in battery pack turned off by the vehicle operator(mi) ⁹	291

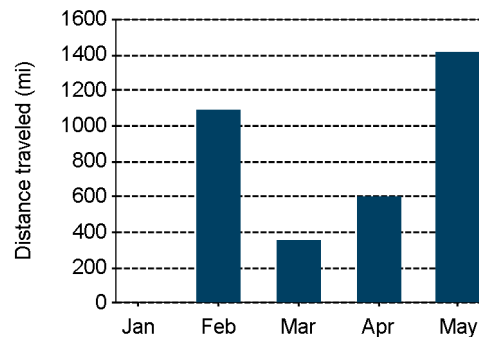
Gasoline Fuel Economy By Trip Type



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.

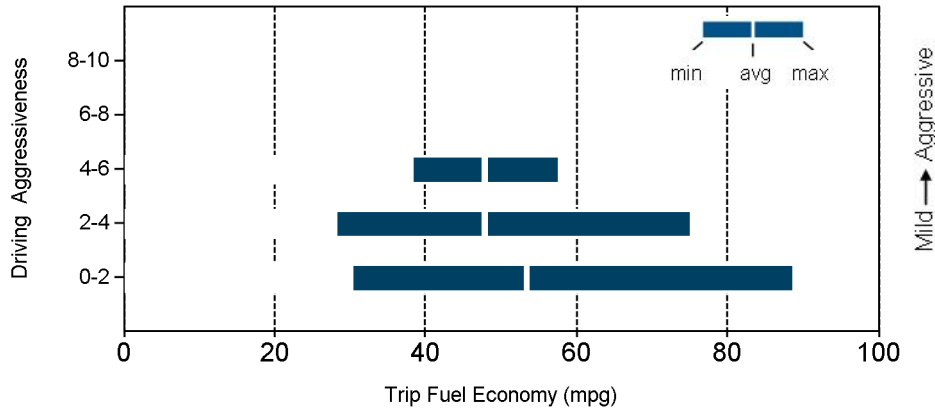
Trips in Charge Depleting (CD) mode	City	Highway
Gasoline fuel economy (mpg)	51	61
DC electrical energy consumption (DC Wh/mi)	143	112
Percent of miles with internal combustion engine off	35%	18%
Average trip aggressiveness (on scale 0 - 10)	1.9	2.7
Average trip distance (mi)	2.4	10.4

Trips in combined Charge Depleting and Charge Sustaining (CD/CS) modes	City	Highway
Gasoline fuel economy (mpg)	44	55
DC electrical energy consumption (DC Wh/mi)	80	52
Percent of miles with internal combustion engine off	56%	11%
Average trip aggressiveness (on scale 0 - 10)	1.7	1.7
Average trip distance (mi)	1.0	41.0

Trips in Charge Sustaining (CS) mode	City	Highway
Gasoline fuel economy (mpg)	40	44
Percent of miles with internal combustion engine off	23%	7%
Average trip aggressiveness (on scale 0 - 10)	1.8	2.1
Average trip distance (mi)	3.8	28.9

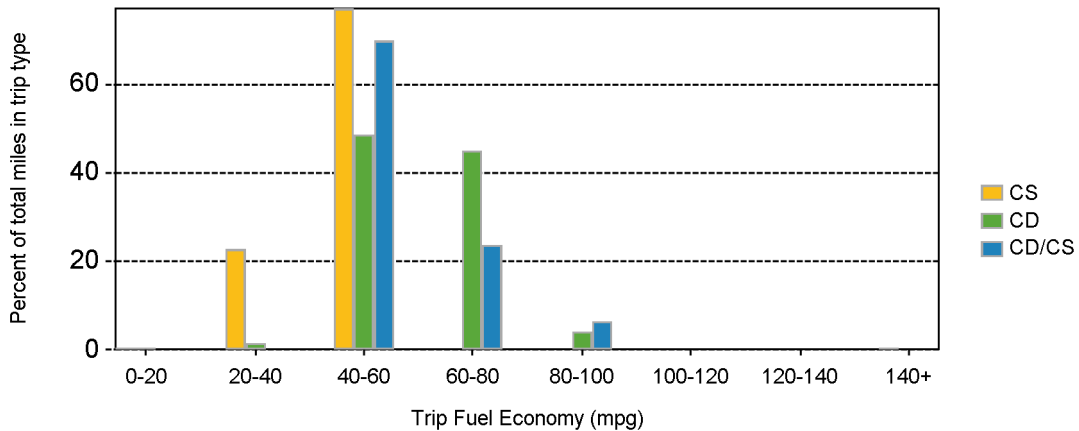
Average ambient temperature this month: 64 deg F

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.

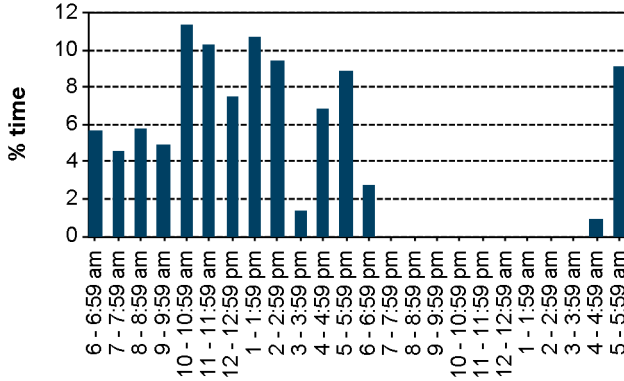
Trip Fuel Economy Distribution By Trip Type This Month



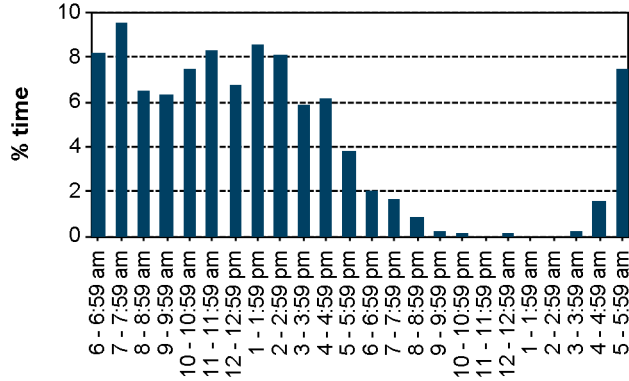
Plug-in charging

Number of charging events	28
Average number of charging events per day when vehicle driven	1.6
Average distance driven between charging events (mi)	50.5
Average number of trips between charging events	3.2
Average time plugged in per charging event (hr)	16.2
Average time charging per charging event (hr)	2.1
Average energy per charging event (AC kWh)	2.5
Total charging energy (AC kWh)	69.1

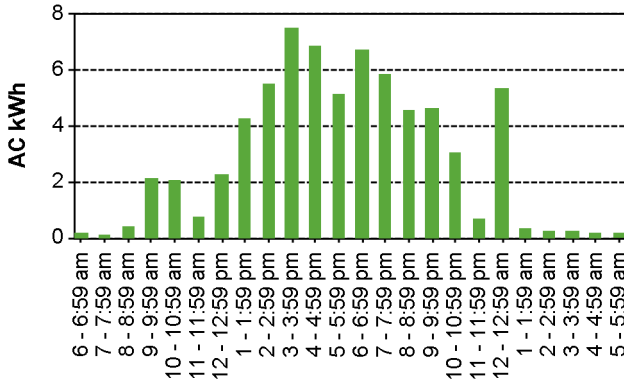
Time of Day When Driving - This Month



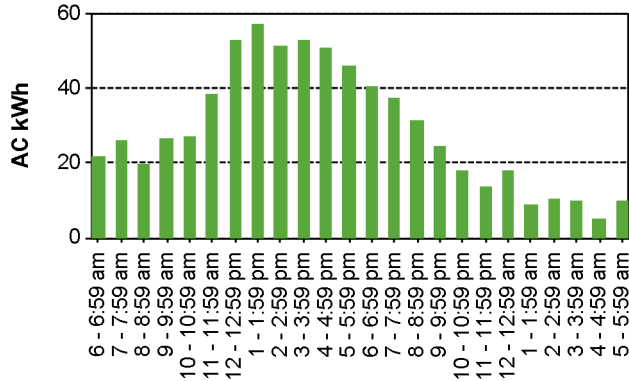
Time of Day When Driving - Lifetime



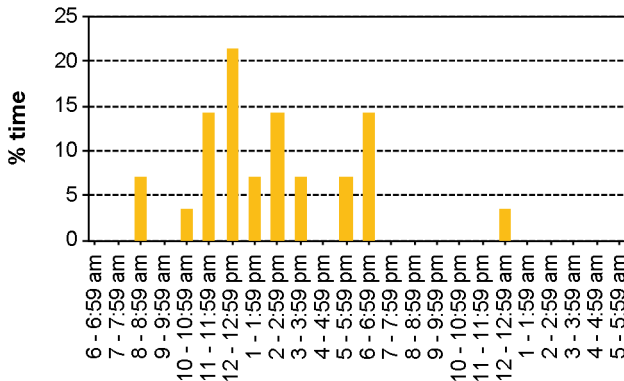
Time of Day When Charging - This Month



Time of Day When Charging - Lifetime



Time of Day When Plugging In - This Month



Time of Day When Plugging In - Lifetime

