

# VEHICLE TECHNOLOGIES PROGRAM

# Ford Escape Advanced Research Fleet

Number of vehicles: 18 Date range of data received: 12/01/2011 to 12/31/2011

Reporting period: December 2011 Number of vehicle days driven: 277

# All Trips Combined

Overall gasoline fuel economy (mpg)	39
Overall AC electrical energy consumption (AC Wh/mi) <sup>1</sup>	110
Overall DC electrical energy consumption (DC Wh/mi) <sup>2</sup>	77
Total number of trips	1,661
Total distance traveled (mi)	14,806

## Trips in Charge Depleting (CD) mode<sup>3</sup>

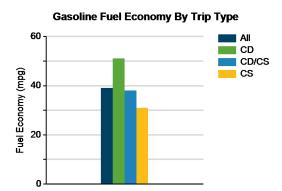
Gasoline fuel economy (mpg)	51
DC electrical energy consumption (DC Wh/mi) <sup>4</sup>	165
Number of trips	839
Percent of trips city   highway	78%   22%
Distance traveled (mi)	5,185
Percent of total distance traveled	35%

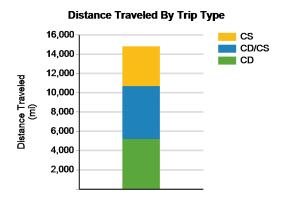
### Trips in both Charge Depleting & Charge Sustaining (CD/CS) modes<sup>5</sup>

Gasoline fuel economy (mpg)	38
DC electrical energy consumption (DC Wh/mi) <sup>6</sup>	60
Number of trips	331
Percent of trips city   highway	53%   47%
Distance traveled (mi)	5,493
Percent of total distance traveled	37%

### Trips in Charge Sustaining (CS) mode<sup>7</sup>

Gasoline fuel economy (mpg)	31
Number of trips	491
Percent of trips city   highway	76%   24%
Distance traveled (mi)	4,127
Percent of total distance traveled	28%







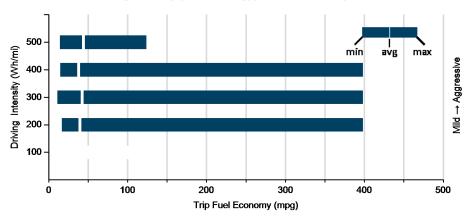
Notes: 1 - 7. Please see http://avt.inl.gov/pdf/phev/fordreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

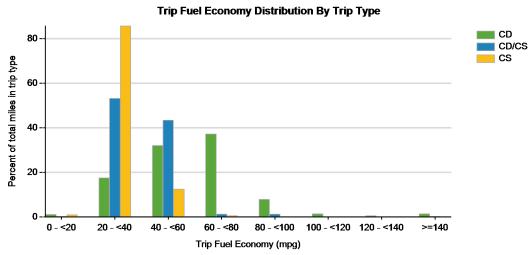
Since these vehicles are flex-fuel capable, some driving events are conducted with E-85, which may decrease fuel economy results

<sup>&</sup>quot;The Ford Escape Advanced Research Fleet was designed as a demonstration of customer duty cycles related to plug-in electric vehicles. The vehicles used in this demonstration have not been optimized to provide the maximum potential fuel economy."

Trips in Charge Depleting (CD) mode	City	Highway
Gasoline fuel economy (mpg)	48	54
DC electrical energy consumption (DC Wh/mi)	163	167
Percent of miles with internal combustion engine off	32%	9%
Average trip driving intensity (Wh/mi)	282	317
Average trip distance (mi)	3	16
Trips in Charge Depleting and Charge Sustaining (CD/CS) mode		
Gasoline fuel economy (mpg)	38	38
DC electrical energy consumption (DC Wh/mi)	55	62
Percent of miles with internal combustion engine off	26%	8%
Average trip driving intensity (Wh/mi)	300	320
Average trip distance (mi)	6	28
Trips in Charge Sustaining (CS) mode		
Gasoline fuel economy (mpg)	31	32
Percent of miles with internal combustion engine off	25%	6%
Average trip driving intensity (Wh/mi)	302	316
Average trip distance (mi)	3	25

## Effect Of Driving Intensity (Wheel Energy) on Fuel Economy This Month



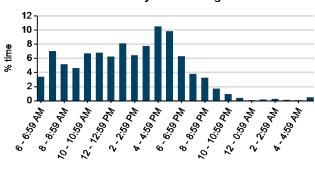




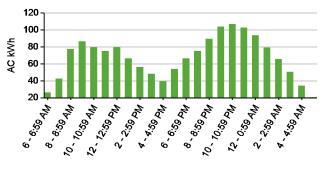
# Plug-in charging

Average number of charging events per vehicle per month when driven	30	
Average number of charging events per vehicle per day when driven	1.9	
Average distance driven between charging events (mi)	27.5	
Average number of trips between charging events	3.1	
Average time plugged in per charging event (hr)	5.9	
Average time charging per charging event (hr)	2.1	
Average energy per charging event (AC kWh)	3.0	
Average charging energy per vehicle per month (AC kWh)	90.6	
Total number of charging events	539	
Total charging energy (AC kWh)	1,631	

### Time of Day When Driving



#### **Time of Day When Charging**



## Time of Day When Plugging In

