

# **VEHICLE** TECHNOLOGIES PROGRAM

# Ford Escape Advanced Research Fleet

Number of vehicles: 19 Date range of data received: 11/01/2010 to 11/30/2010

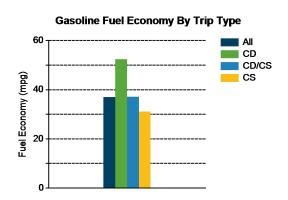
Reporting period: November 2010 Number of vehicle days driven: 304

#### All Trips Combined

Overall gasoline fuel economy (mpg)	37
Overall AC electrical energy consumption (AC Wh/mi) <sup>1</sup>	95
Overall DC electrical energy consumption (DC Wh/mi) <sup>2</sup>	63
Total number of trips	1,314
Total distance traveled (mi)	19,332

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

Gasoline fuel economy (mpg)	52
DC electrical energy consumption (DC Wh/mi) <sup>4</sup>	177
Number of trips	715
Percent of trips city   highway	81%   19%
Distance traveled (mi)	4,191
Percent of total distance traveled	22%

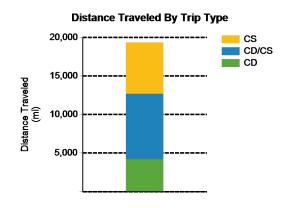


## Trips in both Charge Depleting & Charge Sustaining (CD/CS) modes<sup>5</sup>

Gasoline fuel economy (mpg)	37
DC electrical energy consumption (DC Wh/mi) <sup>6</sup>	59
Number of trips	290
Percent of trips city   highway	40%   60%
Distance traveled (mi)	8,488
Percent of total distance traveled	44%

## Trips in Charge Sustaining (CS) mode7

The in Charge Sustaining (SO) mode	
Gasoline fuel economy (mpg)	31
Number of trips	309
Percent of trips city   highway	57%   43%
Distance traveled (mi)	6,652
Percent of total distance traveled	34%



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

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

"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."

Percent of miles with internal combustion engine off

Average trip driving intensity (Wh/mi)

Average trip distance (mi)

Trips in Charge Depleting (CD) mode	City	Highway
Gasoline fuel economy (mpg)	47	59
DC electrical energy consumption (DC Wh/mi)	171	183
Percent of miles with internal combustion engine off	33%	13%
Average trip driving intensity (Wh/mi)	268	302
Average trip distance (mi)	4	15
Trips in Charge Depleting and Charge Sustaining (CD/CS) mod	le	
Gasoline fuel economy (mpg)		
Gasoline ruel economy (mpg)	45	36
DC electrical energy consumption (DC Wh/mi)	45 77	36 57
, ( ) ( )	-	
DC electrical energy consumption (DC Wh/mi)	77	57
DC electrical energy consumption (DC Wh/mi)  Percent of miles with internal combustion engine off	77 28%	57 6%
DC electrical energy consumption (DC Wh/mi)  Percent of miles with internal combustion engine off  Average trip driving intensity (Wh/mi)	77 28% 282	57 6% 322

21%

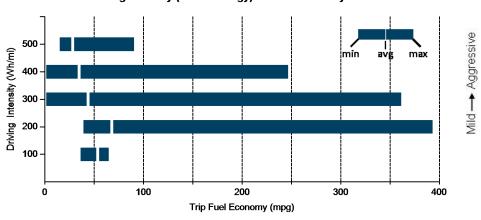
271

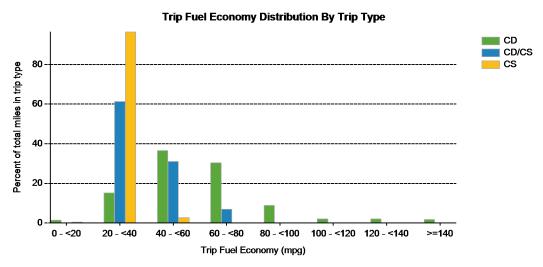
4%

330

45

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

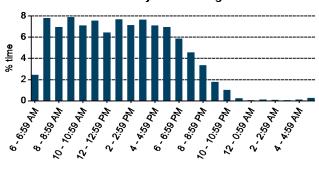




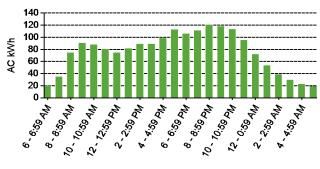
# Plug-in charging

Average number of charging events per vehicle per month when driven	37	
Average number of charging events per vehicle per day when driven	2.3	
Average distance driven between charging events (mi)	27.3	
Average number of trips between charging events	1.9	
Average time plugged in per charging event (hr)	9.4	
Average time charging per charging event (hr)	1.8	
Average energy per charging event (AC kWh)	2.6	
Average charging energy per vehicle per month (AC kWh)	96.4	
Total number of charging events	708	
Total charging energy (AC kWh)	1,832	

#### **Time of Day When Driving**



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



## Time of Day When Plugging In

