

## North American PHEV Demonstration

## Vehicle Technologies Program

### Charging and Driving Behavior Report for Hymotion Prius (Gridpoint data logger)

Fleet Type: Personal-use

Charging rate: Level 1

Number of households: 67

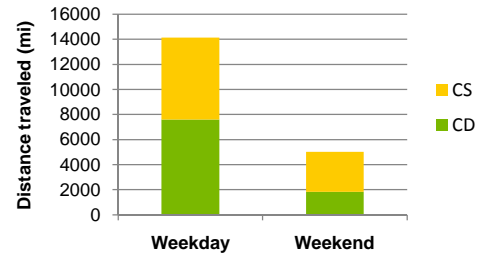
Charge control: Uncontrolled

Date range: Sep 2008 - Mar 2010

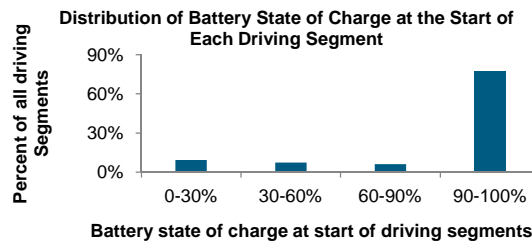
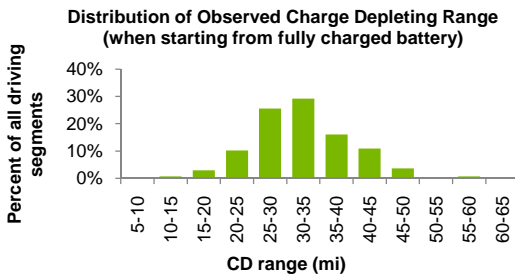
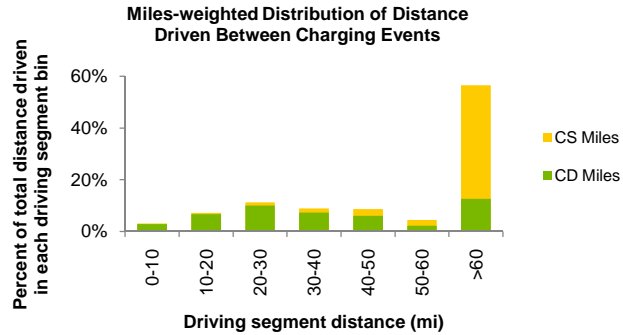
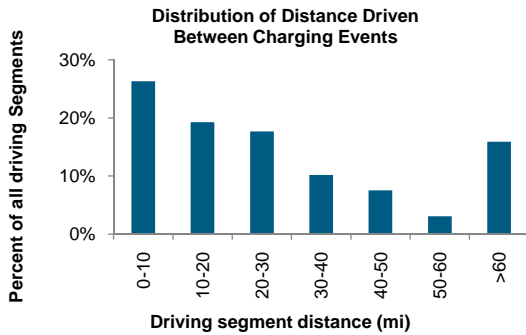
Battery Capacity: 5 kWh

	Weekday	Weekend	Overall
Number of trips	1,735	510	2,245
Total distance driven (mi)	14,142	5,026	19,168
Number of charging events	401	130	531
Charging energy consumed (AC kWh)	1,285	373	1,659
Charge depleting (CD) distance driven (mi)	7,596	1,828	9,425
Percent of total distance	54%	36%	49%
Charge sustaining (CS) distance driven (mi)	6,545	3,198	9,743
Percent of total distance	46%	64%	51%

Distance Traveled by Operating Mode

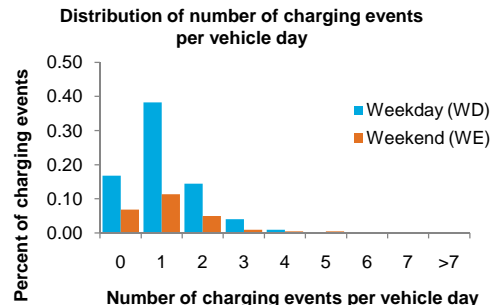
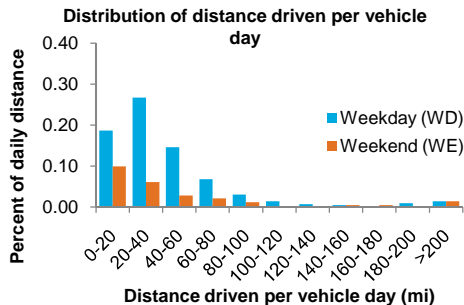


### Driving segments between charging events <sup>1</sup>



### Driving and charging per vehicle day

	Weekday	Weekend	Overall
Average number of charging events per vehicle day <sup>2</sup>	1.1	1.1	1.1
Average distance driven per vehicle day (mi) <sup>2</sup>	44.6	47.4	45.3

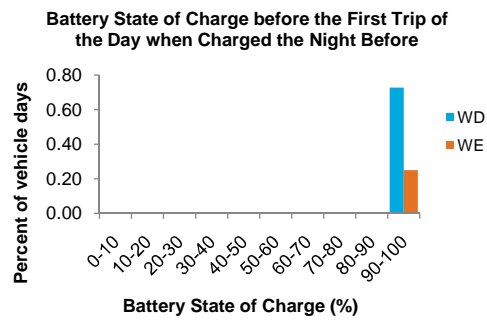
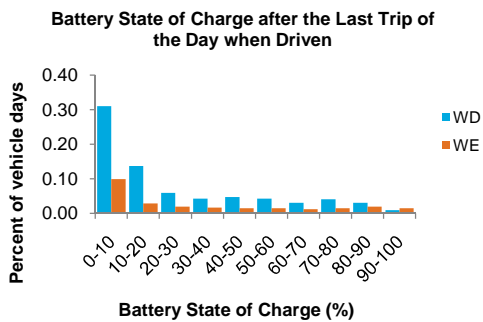
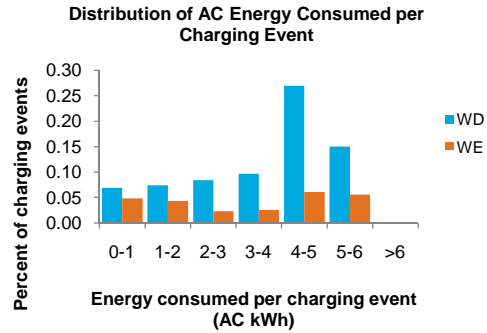
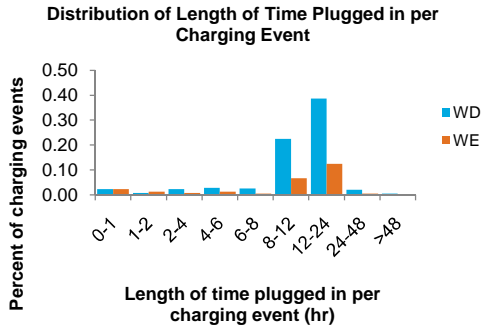


<sup>1</sup> A driving segment is defined as the combination of all trips between two consecutive charging events

<sup>2</sup> Considers only days when the vehicle was driven, not all calendar days

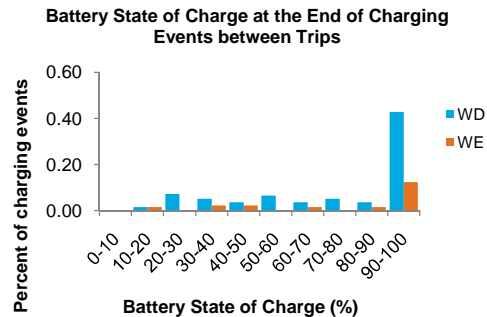
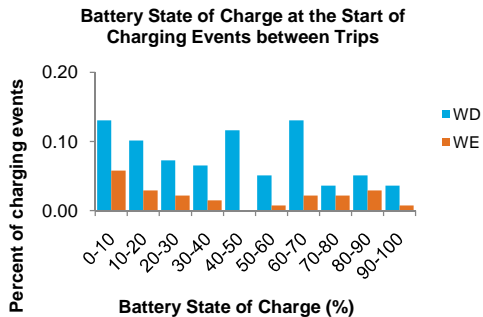
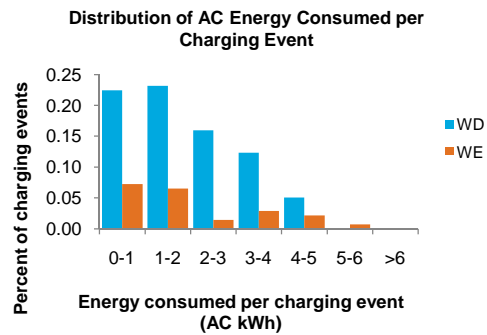
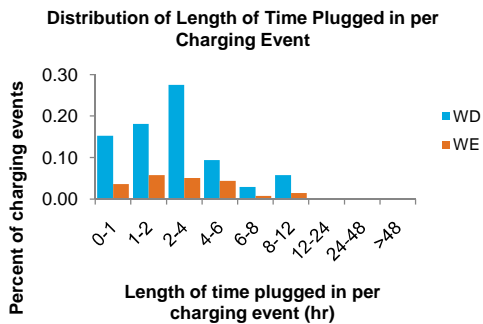
### Charging events started after all trips in a day

	Weekday	Weekend	Overall
Number of charging events	292	101	393
Percent of all charging events	55%	19%	74%
Charging energy consumed (AC kWh)	1078	315	1393
Percent of all energy consumed	65%	19%	84%

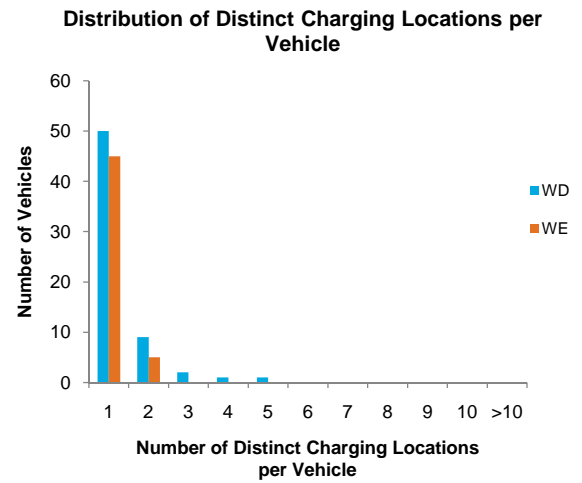
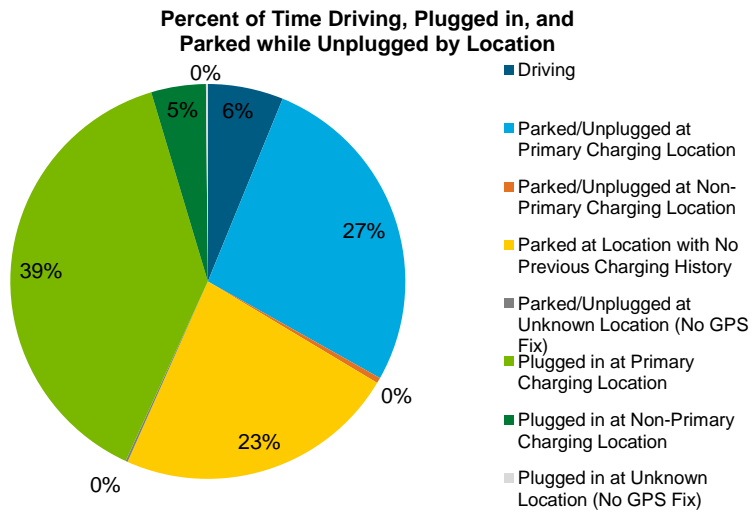


### Charging events started between trips in a day

	Weekday	Weekend	Overall
Number of charging events	109	29	138
Percent of all charging events	21%	5%	26%
Charging energy consumed (AC kWh)	207	59	266
Percent of all energy consumed	12%	4%	16%



## Vehicle Usage and Location



## PHEV Charging Impact on the Electrical Grid

Each of the 67 households in the personal-use vehicle group operated a vehicle for 4 to 6 weeks. Grid impact was assessed by sampling all charging events that occurred during each household's last week with the vehicle. All 67 weeks analyzed were assumed to occur during the same calendar week.

