

# **INL Fleet Vehicle Characterization Study for the U.S. Department of Navy**

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## **ABSTRACT**

Idaho National Laboratory worked with the U.S. Department of Navy to collect and evaluate data from federal fleet vehicle operations in the San Diego area. This study collected and evaluated data to validate the introduction and use of advanced battery electric vehicles (BEV) in fleet applications.

Findings are reported on vehicle and mission characterizations to support the successful introduction of BEVs into military base fleets.

Individual observations of these vehicles provide the basis for recommendations related to BEV adoption and whether a BEV can fulfill the mission requirements as currently defined.



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# INL Fleet Vehicle Characterization Study for the U.S. Department of Navy

## 1. PROJECT OBJECTIVE

The objective of Idaho National Laboratory study for the U.S. Department of Navy was to perform analysis on light-duty internal combustion engine (ICE) vehicles that are operating in four United States Marine Corps fleets in order to identify candidate vehicles for replacement by battery electric vehicles (BEVs). This report documents the results of this study.

The above objective was accomplished by conducting the following four tasks:

1. **Data collection:** Coordinated with the fleet manager to collect data on agency fleet vehicles. Data were provided to Idaho National Laboratory (INL) via the fleet management tool, Networkfleet®, and consisted of an activity detail report and the stop detail reports, which included vehicle trip data.
2. **Data analysis and review:** Examined data collected by data loggers and fleet vehicle characteristics to describe typical fleet activity.
3. **Battery electric vehicle (BEV) implementation feedback:** Provide feedback to fleet personnel and the U.S. Navy on selection criteria for replacement BEVs in their specific fleet vehicle missions.
4. **Observations and recommendations:** Provide actionable information to introduce BEVs into agency fleet operations.

Data collected or received from the ICE vehicles include trip distance, idle time, time between uses, and parking locations. The reports provided data at 2-minute intervals and the collection period for this analysis was from August 1, 2014, to July 1, 2015.

Fleet managers may use the information supplied in this report to help them identify which vehicles are candidates for replacement by BEVs based on historical use. BEVs are preferred because of the greater potential reduction of greenhouse gas emissions, fuel cost, and petroleum usage, but they are not likely to be suitable for all vehicle missions.

## 2. METHODS

### 2.1 Fleet Vehicle Selection

Agency fleet managers selected fleet vehicles for this study and provided basic information for each vehicle, including its managing base, primary vehicle mission, vehicle make, model, and model year.

The U.S. Navy identified 73 vehicles in their fleet for this assessment (Table 1). The vehicles span four operational Marine Corps installations (i.e., Marine Corps Logistics Base (MCLB) Barstow, Marine Corps Base (MCB) Camp Pendleton, Marine Corps Air Station (MCAS) Miramar, and Marine Corps Air Ground Combat Center (MCAGCC) 29 Palms). The fleet manager assessed the wide range of vehicles and made selections of high-interest, representative vehicles based on vehicle missions and vehicle type/class.

Table 1. Vehicle mission.

Vehicle Mission	Study Vehicles
MCLB Barstow	5
MCB Camp Pendleton	53
MCAS Miramar	14
MCAGCC 29 Palms	1

## 2.2 Data Collection

Data collection occurred by vehicle identification, which was identified by base operations and a vehicle identification number or agency-assigned vehicle number. INL received no information related to the vehicle operator and provided no raw data to fleet managers. In this manner, INL did not collect, analyze, or report on driving habits of individual drivers.

### 2.2.1 Data Captured

Data consisted of key-on events, key-off events, and location, which were logged approximately every 2 minutes while the vehicle was on.

From these data points, the following information was available for evaluation:

- Trip start and stop time and location
- Trip distance and duration
- Idle start time, location, and duration
- Stop start time, location, and duration.

## 2.3 Data Analysis

### 2.3.1 Definitions

INL analyzed the vehicle's activity detail to determine the vehicle's daily usage, which was comprised of trips, stops, and idle events that occurred during a day. The following list provides definitions of these terms:

1. **Trip:** A trip begin with a key-on event and ended with the next key-off event.
2. **Parking event:** A vehicle parking event included the time between the key-off of the previous trip to the key-on of the next trip.
3. **Idle time:** Idle time was the amount of time a vehicle spends stationary after a key-on event when the vehicle was not moving for a period of 3 minutes or longer.
4. **Trip travel time:** Trip travel time was the amount of time between key-on and the next key-off, including idle time.

### 2.3.2 Data Evaluation

Processing data involved removal of null values and aggregation by different spatial and temporal scales. Aggregation was by day and trip to produce figures showing the patterns of use. Section 4 presents these results. INL observations are included in Section 5.

Statistical data analysis uses Microsoft® Excel, SQL Server 2012, and Matlab® software. Frequency distributions summarize the travel behavior of each vehicle and vehicle mission during the study period. Rounding of the tables and figures are to three significant digits.

### 2.3.3 Battery Electric Vehicle Range Estimates

In order to determine if existing ICE vehicles in the Marine Corps fleets can be replaced by BEVs, INL had to establish the likely range of BEVs being offered during model year 2015. The Model Year 2015 Fuel Economy Guide<sup>a</sup> lists BEVs the U.S. Navy may procure with ranges from 82 miles (Chevrolet Spark EV) to 93 miles (Kia Soul Electric). A mid-point of 87.5 miles per charge was assumed (Table 2). However, these ranges were established without the real-world use of accessory loads (e.g., cabin

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<sup>a</sup> <https://www.fueleconomy.gov/feg/pdfs/guides/FEG2015.pdf>

comfort) that drivers demand, and it is known that battery range is reduced over time. Therefore, INL used the method described as follows to estimate BEV range after approximately 5 years of use.

Table 2. Estimated real-world BEV range at 5 years and approximately 50,000 miles.

Model	Fuel Economy Guide Range	Estimated Range with Accessories (15% Reduction)	Estimated Range at 5 Years (15% Reduction)
<b>Chevrolet Spark</b>	82	69.7	59
<b>Midpoint</b>	87.5	74.4	63
<b>Kia Soul</b>	93	79.05	67

INL testing of BEVs has established that one test cannot be representative of the range every driver in every section of the United States will achieve. Testing by INL of the 2013 Nissan Leaf<sup>b</sup> and the 2013 Ford Focus<sup>c</sup> demonstrated energy efficiencies of 133.4 Wh/mile to 458.7 Wh/mile for the Leaf. This translates to 7.5 to 2.2 kW/ mile. The variation is due to temperatures and speeds when testing. In addition, Nissan Leafs (with between 45,000 and 55,000 miles) operating as part of The EV Project in Los Angeles and San Diego were examined during 1,645 trips; they had an average range of 64.9 miles.

Based on the 6 months of operating data INL received, the internal combustion engine vehicles in the Marine Corps fleets averaged between 45,000 and 55,000 miles over a 5-year period. Therefore, The EV Project's 64.9-mile range appears reasonable when compared to the Table 2 calculations. As another example, range testing conducted by INL for Leafs charged at normal Level 2 charge infrastructure experienced range reductions of 21%, on average, at 50,000 test miles.<sup>d</sup> Use of the 15% reduction for capacity fade over 50,000 miles seems to be a conservative estimate given that the areas the Marine BEVS will be operated in will not be as hot as the area the INL-tested Leafs operated in. Many other range reduction results can be referenced if needed.

### 3. VEHICLES

#### 3.1 Vehicle Missions

Vehicle mission is an important characteristic in the fleet study. Based on information provided by the Marine Corps fleet managers, INL presumes that all vehicles in this study are pool vehicles. The pool vehicles in this study consisted of compact sedans, midsize sedans, small trucks, and full-size trucks.

<sup>b</sup> <http://avt.inl.gov/pdf/fsev/fact2013nissanleaf.pdf>

<sup>c</sup> <http://avt.inl.gov/pdf/fsev/fact2013fordfocus.pdf>

<sup>d</sup> [http://avt.inl.gov/pdf/prog\\_info/IEA\\_DCFCImpactStudySept2014.pdf](http://avt.inl.gov/pdf/prog_info/IEA_DCFCImpactStudySept2014.pdf)

## 4. U.S. DEPARTMENT OF NAVY ANALYSIS

### 4.1 U.S. Department of Navy Fleet

The U.S. Navy provided reports for 73 vehicles in their fleets at four operating bases in the San Diego mission area. Table 3 shows the breakdown of these vehicles by vehicle type and by base.

Table 3. Navy fleet vehicles by U.S. Environmental Protection Agency type.

Department	Description	Sedan Midsize	SUV	Minivan	Van Cargo	Van Pass	Truck	Total
MCLB Barstow	Marine Corps Logistics Base	1	—	1	—	1	2	5
MCB Camp Pendleton	Marine Corps Base Camp Pendleton	14	—	7	—	12	20	53
MCAS Miramar	Marine Corps Air Station	3	—	4	—	2	5	14
MCAGCC 29 Palms	Marine Corps Air Ground Combat Center	1	—	—	—	—	—	1
Total		19	—	12	—	15	27	73

### 4.2 Vehicles Selected for Monitoring

Seventy-three vehicles were included in the study at INL. Table A-1 in Appendix A presents an index of vehicles in tabular form, including vehicle make, model, year, and base. Selection of monitored vehicles was completed by U.S. Navy personnel. The objective of this selection was to determine viable BEV replacement candidates.

Appendix B provides a detailed summary analysis of each individual vehicle included in this study. The information from this analysis is presented by grouping the vehicles into their respective bases of operation. Because the base missions vary considerably, INL choose to group these mission areas and evaluate them separately. This will ensure that mission gaps are not created by recommended replacements.

### 4.3 Data Validity

INL data collection took place from August 1, 2014, through July 1, 2015. Vehicle data sheets (presented in Appendix B) detail the summary information plots and statistics related to each vehicle.

Five of the vehicles listed did not have any data collected in the analysis time period. One vehicle did not provide enough information to form a reliable recommendation. Table 4 shows this information by mission location.

Table 4. Base evaluations showing percent studied.

Vehicle Mission	Study Vehicles	Total Reported	Percent Studied
MCLB Barstow	5	4	80.0%
MCB Camp Pendleton	53	50	94.3%
MCAS Miramar	14	13	92.9%
MCAGCC 29 Palms	1	1	100.0%

## 4.4 MCLB Barstow Vehicle Pool Evaluation

### 4.4.1 Site Information

At MCLB Barstow, data were collected from one mid-size sedan, one passenger van, and two small trucks.

Incorporation of BEVs into the pool mission is a definite possibility. Pool vehicles used for shorter trips qualify for BEV replacement, while other pool vehicle activities that are used for longer trips may require range beyond that of the available BEVs.

### 4.4.2 Summary for Pool Vehicles

Appendix B provides the vehicle data sheets for each of the pool vehicles monitored. This section aggregates data for all pool vehicles for MCLB Barstow. Table 5 summarizes pool vehicle travel during the study period for those days when the vehicle was driven. Vehicle use occurred primarily between 0800 and 2200 hours daily. The vehicles were driven 22,959 miles and logged 1,277 hours of operation. Vehicle 5B-G413964H did not provide data and was excluded from the summary and range analyses, because inclusion of the vehicle would skew the results in both cases.

Table 5. MCLB Barstow evaluation.

Pool Summary	
Total Distance (miles)	22,959.2
Total Drive Time (hours)	1,277
Daily Average Trip Distance (miles)	36.0
Percent of Days Driven	49%

Table 6 summarizes how often a pool vehicle exceeded the low, medium, and high electric vehicle ranges. The BEV ranges specified for low, medium, and high-range BEVs represent the expected single-charge ranges of BEVs that are currently available.

Table 6. MCLB Barstow range analysis.

	EV Range		
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
<b>5B-294399</b>	59	14%	8
	63	9%	5
	67	9%	5
<b>5B-G410512G</b>	59	5%	10
	63	3%	7
	67	3%	6
<b>5B-G410523G</b>	59	8%	20
	63	6%	14
	67	5%	12
<b>5B-G414199H</b>	59	20%	29
	63	20%	29
	67	19%	27

#### **4.4.3 Individual Vehicle Observations Compared to 59, 63, and 67-Mile Range Limits**

1. Vehicle ID 5B-294399, Sedan

This vehicle was driven 56 days of the 334 days in the study period (16.7%). The vehicle exceeded the 59-mile range limit on 8 days (14%). The vehicle exceeded the 63-mile range limit on 5 days (9%). The vehicle exceeded the 67-mile range limit on 5 days (9%). As shown in the vehicle data sheet in Appendix B, the vehicle performed a moderate number of short trips per day, possibly allowing daytime charge events.

This mid-sized sedan may be replaced with a BEV, provided that another vehicle is available for the long-range driving this vehicle occasionally supported. Charging can be accomplished overnight or on days when the vehicle is not driven.

2. Vehicle ID 5B-G410512G, Passenger Van

This vehicle was driven 205 days of the 334 days in the study period (61.3%). The vehicle exceeded the 59-mile range limit on 10 days or (5%). The vehicle exceeded the 63-mile range limit on 7 days (3%). The vehicle exceeded the 67-mile range limit on 6 days (3%). As shown in the vehicle data sheet in Appendix B, the vehicle performed a moderate number of short trips per day, possibly allowing daytime charge events.

This passenger van may be replaced with a BEV, provided that another vehicle is available for the long-range driving this vehicle occasionally supported. Charging can be accomplished overnight or on days when the vehicle is not driven.

3. Vehicle ID 5B-G410523G, Small Truck

This vehicle was driven 250 days of the 334 days in the study period (74.8%). The vehicle exceeded the 59-mile range limit on 29 days (8%). The vehicle exceeded the 63-mile range limit on 29 days (6%). The vehicle exceeded the 67-mile range limit on 27 days (5%). As shown in the vehicle data sheet in Appendix B, the vehicle performed a moderate number of short trips per day, possibly allowing daytime charge events.

This small truck may be replaced with a BEV, provided that another vehicle is available for the long-range driving this vehicle occasionally supported. Charging can be accomplished overnight or on days when the vehicle is not driven.

4. Vehicle ID 5B-G413964H, Minivan

No data were provided for this vehicle over the study period.

5. Vehicle ID 5B-G414199H, Small Truck

This vehicle was driven 143 days of the 334 days in the study period (42.8%). The vehicle exceeded the 59-mile range limit on 27 days (20%). The vehicle exceeded the 63-mile range limit on 27 days (20%). The vehicle exceeded the 67-mile range limit on 27 days (19%). As shown in the vehicle data sheet in Appendix B, the vehicle performed a moderate number of short trips per day, possibly allowing daytime charge events.

This small truck may be replaced with a BEV, provided that another vehicle is available for the long-range driving this vehicle occasionally supported. Charging can be accomplished overnight or on days when the vehicle is not driven.



## 4.5 MCB Camp Pendleton Vehicle Pool Evaluation

### 4.5.1 Site Information

At MCB Camp Pendleton, data were collected from 13 mid-size sedans, 17 vans, nine small trucks, and 11 trucks for a total of 50 vehicles.

Incorporation of BEVs into the pool mission is a definite possibility. Pool vehicles used for shorter trips qualify for BEV replacement, while other pool vehicle activities used for longer trips may require range beyond that of available BEVs.

### 4.5.2 Summary for Pool Vehicles

Appendix B provides the vehicle data sheets for each of the pool vehicles monitored. This section aggregates data for all pool vehicles for MCB Camp Pendleton. Table 7 summarizes pool travel during the study period for those days when the vehicle was driven. Vehicle use occurred primarily between 0800 and 2200 hours daily. The vehicles were driven a total of 256,824 miles and logged 7,733 hours of operation. Vehicles 5L-G109773K, 5L-G414871K, 5L-G414872K, and 5L-G416051H did not provide a sufficient amount of data; therefore, they were excluded in the summary and range analyses, because inclusion of the vehicles would skew the results in both cases.

Table 7. MCB Camp Pendleton evaluation.

Pool Summary	
Total Distance (miles)	256,823.5
Total Drive Time (hours)	7,733
Daily Average Trip Distance (miles)	33.6
Percent of Days Driven	43.2%

Table 8 summarizes how often a pool vehicle exceeds the low, medium, and high electric vehicle ranges. The BEV ranges specified for low, medium, and high-range BEVs represent the expected single-charge ranges of BEVs that are currently available.

Table 8. MCB Camp Pendleton range.

	EV Range		
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
<b>5L-294266</b>	59	9%	10
	63	9%	10
	67	9%	10
<b>5L-294267</b>	59	5%	5
	63	3%	3
	67	3%	3
<b>5L-294274</b>	59	7%	7
	63	5%	5
	67	3%	3
<b>5L-294277</b>	59	6%	4
	63	6%	4
	67	5%	3
<b>5L-G106206H</b>	59	22%	37
	63	21%	36
	67	20%	34

	EV Range		
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
<b>5L-G106208H</b>	59	36%	32
	63	34%	31
	67	33%	30
<b>5L-G106501H</b>	59	6%	6
	63	6%	6
	67	6%	6
<b>5L-G107279L</b>	59	17%	34
	63	15%	30
	67	13%	25
<b>5L-G109766K</b>	59	5%	9
	63	5%	9
	67	5%	9
<b>5L-G109768K</b>	59	13%	22
	63	12%	21
	67	12%	20
<b>5L-G109769K</b>	59	12%	28
	63	10%	24
	67	9%	21
<b>5L-G109771K</b>	59	17%	10
	63	17%	10
	67	13%	8
<b>5L-G136271L</b>	59	1%	1
	63	1%	1
	67	1%	1
<b>5L-G410487G</b>	59	15%	19
	63	12%	16
	67	10%	13
<b>5L-G410489G</b>	59	23%	40
	63	20%	34
	67	18%	31
<b>5L-G410514G</b>	59	38%	10
	63	35%	9
	67	35%	9
<b>5L-G411436F</b>	59	2%	4
	63	2%	4
	67	2%	4
<b>5L-G411447F</b>	59	35%	33
	63	33%	31
	67	30%	28
<b>5L-G411466F</b>	59	9%	13
	63	7%	10
	67	6%	9
<b>5L-G411467F</b>	59	2%	3
	63	1%	2
	67	1%	2
<b>5L-G414389H</b>	59	19%	36

EV Range			
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
5L-G414405H	63	14%	27
	67	12%	24
	59	4%	7
	63	3%	5
5L-G414428H	67	3%	5
	59	12%	20
	63	12%	20
	67	11%	18
5L-G414430H	59	28%	58
	63	27%	55
	67	25%	52
	59	18%	15
5L-G414438H	63	18%	15
	67	18%	15
	59	9%	18
	63	7%	13
5L-G414440H	67	6%	11
	59	8%	16
	63	6%	12
	67	5%	10
5L-G414500L	59	21%	13
	63	21%	13
	67	20%	12
	59	15%	29
5L-G414511L	63	13%	25
	67	11%	21
	59	2%	3
	63	2%	3
5L-G414513L	67	1%	1
	59	1%	2
	63	1%	1
	67	1%	1
5L-G414867K	59	11%	12
	63	11%	12
	67	11%	12
	59	9%	14
5L-G414868K	63	6%	10
	67	5%	8
	59	0%	0
	63	0%	0
5L-G421041D	67	0%	0
	59	8%	18
	63	6%	13
	67	5%	11
5L-G421775L	59	36%	96
	63	32%	85

	EV Range		
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
5L-G421922L	67	29%	78
	59	18%	11
	63	13%	8
5L-G422169G	67	13%	8
	59	45%	57
	63	44%	56
5L-G422206H	67	44%	55
	59	28%	34
	63	26%	32
5L-G422215H	67	25%	31
	59	49%	125
	63	42%	107
5L-G422227H	67	40%	102
	59	22%	33
	63	21%	31
5L-G422233H	67	21%	31
	59	5%	8
	63	3%	5
5L-G422235H	67	3%	4
	59	8%	13
	63	8%	13
5L-G422467K	67	7%	11
	59	1%	2
	63	0%	1
5L-G422482K	67	0%	0
	59	27%	41
	63	27%	40
5L-G422486K	67	25%	38
	59	7%	13
	63	6%	11
5L-G422785H	67	5%	10
	59	12%	25
	63	11%	23
5L-G422884H	67	10%	20
	59	1%	2
	63	1%	1
5L-G422886H	67	1%	1
	59	5%	6
	63	4%	4
	67	2%	2

#### 4.5.3 Vehicle Observations Compared to 63-Mile Range Limit

Because this motor pool is much larger than the Barstow motor pool, analysis was performed by assigning the vehicles into groups rather than by a vehicle-by-vehicle analysis, including the following groups:

- Replacement recommended no impact
- Replacement impact of 1 to 10 days (replacement possible; however, either additional study is required or the stakeholder can make a decision based on need or future vehicle utilization)
- Replacement impact greater than 10 days
- No recommendation provided (due to insufficient data).

Because the midpoint 63-mile range compares reasonably to real world results, it provided a useful basis of comparison across the vehicle groups.

**4.5.3.1 Vehicle Replacement No Impact.** Analysis of these vehicles indicates that their daily usage may or may not exceed the 63-mile range limit. These vehicles may be replaced by BEVs, with the assumption that the motor pool vehicles not recommended for replacement will be able to support the rare days when these vehicles were used to support long-distance driving. No vehicles meet a no impact condition.

**4.5.3.2 Vehicle Replacement Impact of 1 to 10 Days.** Analysis of these vehicles indicates that their daily usage may or may not exceed the 63-mile range limit, but it occurs for a higher number of trips and the frequency is enough that it warrants cautious consideration or additional study prior to replacing the vehicle with a BEV. Based on the statistics, it appears that operational risk or impact could be presented by going forward with BEV replacement. The following 22 vehicles have an impact of 1 to 10 days:

- |               |               |               |
|---------------|---------------|---------------|
| • 5L-294266   | • 5L-G410514G | • 5L-G421041D |
| • 5L-294267   | • 5L-G411436F | • 5L-G421922L |
| • 5L-294274   | • 5L-G411466F | • 5L-G422233H |
| • 5L-294277   | • 5L-G411467F | • 5L-G422467K |
| • 5L-G106501H | • 5L-G414405H | • 5L-G422884H |
| • 5L-G109766K | • 5L-G414513L | • 5L-G422886H |
| • 5L-G109771K | • 5L-G414867K |               |
| • 5L-G136271L | • 5L-G414869K |               |

**4.5.3.3 Vehicle Replacement Impact of Greater Than 10 Days.** Analysis of these vehicles indicates that their daily usage frequently exceeds the 63-mile range limit and their high utilization (i.e., number of trips per day) makes supplemental charging during daytime operations difficult to meet the mission objectives. Consideration of the transportation of cargo and personnel also factors into this recommendation. Based on the statistics, it appears that replacing these vehicles would present high operational risk or impact. The following 27 vehicles have an impact of greater than 10 days. Replacement with a BEVs represents a significant risk to the operational mission:

- |               |               |               |
|---------------|---------------|---------------|
| • 5L-G106206H | • 5L-G410489G | • 5L-G414440H |
| • 5L-G106208H | • 5L-G411447F | • 5L-G414488L |
| • 5L-G107279L | • 5L-G414389H | • 5L-G414500L |
| • 5L-G109768K | • 5L-G414428H | • 5L-G414511L |
| • 5L-G109769K | • 5L-G414430H | • 5L-G414868K |
| • 5L-G410487G | • 5L-G414438H | • 5L-G421775L |

- 5L-G421920L
- 5L-G422169G
- 5L-G422206H
- 5L-G422215H
- 5L-G422227H
- 5L-G422235H
- 5L-G422482K
- 5L-G422486K
- 5L-G422785H

**4.5.3.4 No Recommendation Provided.** Not enough data were available to provide a recommendation for replacement of the following four vehicles. Additional study would be required to determine if these vehicles can be replaced by BEVs. These vehicles are as follows:

- 5L-G109773K
- 5L-G414871K
- 5L-G414872K
- 5L-G416051H

## 4.6 MCAS Miramar Vehicle Pool Evaluation

### 4.6.1 Site Information

At MCAS Miramar, data were collected from three mid-size sedans, five vans, two small trucks, and three full size trucks for a total of 13 vehicles.

Incorporation of BEVs into the pool mission is a definite possibility. Pool vehicles used for shorter trips qualify for BEV replacement, while other pool vehicle activities that are used for longer trips may require range beyond that of available BEVs.

### 4.6.2 Summary for Pool Vehicles

Appendix B provides the vehicle data sheets for each of the pool vehicles monitored. This section aggregates data for all pool vehicles for MCAS Miramar. Table 9 summarizes pool travel during the study period for those days when the vehicle was driven. Vehicle use occurred primarily between 0800 and 2200 hours daily. The vehicles were driven 54,072 miles and logged 1603 hours of operation. Vehicle 5M-414515L did not provide a sufficient amount of data; therefore, it was excluded in the summary and range analyses, because inclusion of the vehicle would skew the results in both cases.

Table 9. MCAS Miramar evaluation.

Pool Summary	
Total Distance (miles)	54,071.8
Total Drive Time (hours)	1,603
Daily Average Trip Distance (miles)	27.3
Percent of Days Driven	42.4%

Table 10 summarizes how often a pool vehicle exceeds the low, medium, and high electric vehicle ranges. The BEV ranges specified for low, medium, and high-range BEVs represent the expected single-charge ranges of BEVs that are currently available.

Table 10. MCAS Miramar range analysis.

EV Range			
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
5M-G106209H	59	18%	31
	63	18%	31
	67	16%	28

EV Range			
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
<b>5M-G106212H</b>	59	6%	9
	63	6%	9
	67	6%	9
<b>5M-G136272L</b>	59	16%	21
	63	15%	20
	67	13%	18
<b>5M-G414171H</b>	59	3%	3
	63	3%	3
	67	3%	3
<b>5M-G414446H</b>	59	5%	8
	63	2%	5
	67	1%	3
<b>5M-G414516L</b>	59	5%	7
	63	5%	7
	67	4%	6
<b>5M-G414859K</b>	59	46%	39
	63	44%	37
	67	41%	35
<b>5M-G414860K</b>	59	8%	12
	63	8%	12
	67	7%	11
<b>5M-G422183G</b>	59	43%	39
	63	41%	37
	67	40%	36
<b>5M-G422205H</b>	59	29%	49
	63	28%	48
	67	28%	47
<b>5M-G422890H</b>	59	17%	35
	63	17%	35
	67	16%	34
<b>5M-G422891H</b>	59	6%	8
	63	5%	7
	67	4%	6
<b>5M-G423185H</b>	59	5%	9
	63	5%	9
	67	5%	9

### 4.6.3 Vehicle Observations Compared to a 63-Mile Range Limit

Analysis of the vehicles required the vehicles to be aggregated into the following groups due to the size of the motor pool:

- Replacement recommended no impact
- Replacement impact of 1 to 10 days (however, either additional study is required or the stakeholder can make a decision based on need or future vehicle utilization)
- Replacement impact greater than 10 days
- No recommendation provided (due to no data available or insufficient data for a result).

**4.6.3.1 Vehicle Replacement No Impact.** Analysis of these vehicles indicates that their daily usage may or may not exceed the 63-mile range limit. These vehicles may be replaced by BEVs, with the assumption that motor pool vehicles not recommended for replacement will be able to support the rare days when these vehicles were used to support long-distance driving. No vehicles meet a no impact condition.

**4.6.3.2 Vehicle Replacement Impact of 1 to 10 Days.** Analysis of these vehicles indicates that their daily usage may or may not exceed the 63-mile range limit, but it occurs for a higher number of trips and the frequency is enough that it warrants cautious consideration or additional study prior to replacing the vehicle with a BEV. Based on the statistics, it appears that operational risk or impact could be presented by going forward with BEV replacement. The following six vehicles have an impact of 1 to 10 days:

- 5M-G106212H
- 5M-G414446H
- 5M-G422891H
- 5M-G414171H
- 5M-G414516L
- 5M-G423185H

**4.6.3.3 Vehicle Replacement Impact of Greater Than 10 Days.** Analysis of these vehicles indicates that their daily usage frequently exceeds the 63-mile range limit and their high utilization (i.e., number of trips per day) makes supplemental charging during daytime operations difficult to meet the mission objectives. Consideration of the transportation of cargo and personnel also factors into this recommendation. Based on the statistics, it appears that replacing these vehicles would present high operational risk or impact. The following seven vehicles have an impact of greater than 10 days. Replacement with a BEVs represents a significant risk to the operational mission.

- 5M-G106209H
- 5M-G414860K
- 5M-G414859K
- 5M-G136272L
- 5M-G422890H
- 5M-G422183G
- 5M-G422205H

**4.6.3.4 No Recommendation Provided.** Not enough data were available to provide a recommendation for replacement of one vehicle. Additional study would be required to determine if this vehicle can be replaced by a BEV. The vehicle is 5M-G414515L.

## 4.7 MCAGCC 29 Palms Vehicle Pool Evaluation

### 4.7.1 Site Information

At MCAGCC 29 Palms, data were collected from only a single mid-size sedan.

Incorporation of BEVs into the pool mission is a definite possibility. Pool vehicles used for shorter trips qualify for BEV replacement, while other pool vehicle activities used for longer trips may require range beyond that of available BEVs.



#### 4.7.2 Summary for Pool Vehicle

Appendix B provides the vehicle data sheet for the pool vehicle monitored. This section aggregates data for the MCAGCC 29 Palms pool vehicle. Table 11 summarizes pool vehicle travel during the study period for those days when the vehicle was driven. Vehicle use occurred primarily between 0800 and 2200 hours daily. The vehicle was driven 5,688 miles and logged 279 hours of operation.

Table 11. MCAGCC 29 Palms evaluation.

Pool Summary	
Total Distance (miles)	5,688.2
Total Drive Time (hours)	279
Daily Average Trip Distance (miles)	18.5
Percent of Days Driven	91.9%

Table 12 summarizes how often a pool vehicle exceeds the low, medium, and high electric vehicle ranges. The BEV ranges specified for low, medium, and high-range BEVs represent the expected single-charge ranges of BEVs that are currently available.

Table 12. MCAGCC 29 Palms range analysis.

	EV Range		
	Low Range, Medium Range, High Range	Percentage of Days Vehicle Exceeds Electric Vehicle Range	Number of Days Vehicle Exceeds Electric Vehicle Range
<b>5P-G130225A</b>	59	2%	6
	63	2%	5
	67	1%	4

#### 4.7.3 Individual Vehicle Observation(s) Compared to 59, 63, and 67-Mile Range Limits

##### 1. Vehicle ID 5P-G130225A, Sedan

This vehicle was driven 274 days of the 334 days in the study period (82.0%). The vehicle exceeded the 59-mile range limit on 6 days (2%). The vehicle exceeded the 63-mile range limit on 5 days (2%). The vehicle exceeded the 67-mile range limit on 4 days (1%). As shown on the vehicle data sheet in Appendix B, the vehicle performed a moderate number of short trips per day, possibly allowing for daytime charge events.

This compact sedan vehicle may be replaced with a BEV, provided that another vehicle is available for the long-range driving this vehicle occasionally supported. Charging can be accomplished overnight or on days when the vehicle is not driven.

## 5. OBSERVATIONS

INL appreciates the opportunity to present the results of this evaluation for these 73 specific vehicles. Observations for possible follow-up actions include the following:

**Infrastructure Planning:** In conjunction with the replacement plan, evaluation of U.S. Navy sites for placement of PEV charging infrastructure could be beneficial. INL has significant experience in this area and such plans will consider fleet vehicle charging needs and the convenience that charging infrastructure provides employees and visitors. This planning also considers the existing facility electrical distribution

system. Vehicle home base considerations factor into the ratio of PEVs to electric vehicle supply equipment units to maintain all vehicles at operational readiness.

**Additional Investigations:** A more thorough examination of the quantities and types of fleet vehicles within each usage category may be beneficial to quantify additional fleet replacements by PEVs. In particular, an investigation of vehicles that essentially stay within one military installation and those that regularly transit between bases may be helpful in providing details of long-duration trips. Also, a detailed analysis that focuses more on daily use of the vehicles (such as vehicle parking locations and durations, frequency of long-trip distances by vehicle, and time-of-use metrics) to provide a finer view for future replacement strategies may be beneficial.

## Appendix A

### U.S. Navy Vehicle Index

Table A-1. INL vehicle index.

Vehicle No.	Vehicle Index					
	Vehicle Label	Make	Model	Year	Type	Base
1	5B-294399	Ford	Fusion	2010	Sedan	MCLB Barstow
2	5B-G410512G	Chevrolet	Uplander LS	2008	Van	MCLB Barstow
3	5B-G410523G	Chevrolet	Colorado	2008	Small pickup	MCLB Barstow
4	5B-G413964H	Dodge	Caravan	2009	Van	MCLB Barstow
5	5B-G414199H	Dodge	Dakota	2009	Small pickup	MCLB Barstow
6	5L-294266	Chevy	Malibu	2009	Sedan	MCB Camp Pendleton
7	5L-294267	Chevy	Malibu	2009	Sedan	MCB Camp Pendleton
8	5L-294274	Chevy	Malibu	2009	Sedan	MCB Camp Pendleton
9	5L-294277	Chevy	Malibu	2009	Sedan	MCB Camp Pendleton
10	5L-G106206H	Pontiac	G6	2009	Sedan	MCB Camp Pendleton
11	5L-G106208H	Pontiac	G6	2009	Sedan	MCB Camp Pendleton
12	5L-G106501H	Pontiac	G6	2009	Sedan	MCB Camp Pendleton
13	5L-G107279L	Chevy	Malibu	2011	Sedan	MCB Camp Pendleton
14	5L-G109766K	Ford	Fusion Hybrid	2011	Sedan	MCB Camp Pendleton
15	5L-G109768K	Ford	Fusion Hybrid	2011	Sedan	MCB Camp Pendleton
16	5L-G109769K	Ford	Fusion Hybrid	2011	Sedan	MCB Camp Pendleton
17	5L-G109771K	Ford	Fusion Hybrid	2011	Sedan	MCB Camp Pendleton
18	5L-G109773K	Ford	Fusion Hybrid	2011	Sedan	MCB Camp Pendleton
19	5L-G136271L	Ford	Focus	2012	Sedan	MCB Camp Pendleton
20	5L-G410487G	Chevrolet	Uplander LS	2008	Van	MCB Camp Pendleton
21	5L-G410489G	Chevrolet	Uplander LS	2008	Van	MCB Camp Pendleton
22	5L-G410514G	Chevrolet	Uplander LS	2008	Van	MCB Camp Pendleton
23	5L-G411436F	Chevrolet	Uplander	2007	Van	MCB Camp Pendleton
24	5L-G411447F	Chevrolet	Uplander	2007	Van	MCB Camp Pendleton
25	5L-G411466F	Chevrolet	Uplander	2007	Van	MCB Camp Pendleton
26	5L-G411467F	Chevrolet	Uplander	2007	Van	MCB Camp Pendleton
27	5L-G414389H	Dodge	Caravan	2009	Van	MCB Camp Pendleton
28	5L-G414405H	Dodge	Caravan	2009	Van	MCB Camp Pendleton
29	5L-G414428H	Dodge	Dakota SXT	2009	Small pickup	MCB Camp Pendleton
30	5L-G414430H	Dodge	Dakota SXT	2009	Small pickup	MCB Camp Pendleton
31	5L-G414438H	Dodge	Dakota	2009	Small pickup	MCB Camp Pendleton
32	5L-G414440H	Dodge	Dakota	2009	Small pickup	MCB Camp Pendleton
33	5L-G414488L	Dodge	Grand Caravan	2011	Van	MCB Camp Pendleton
34	5L-G414500L	Dodge	Grand Caravan	2011	Van	MCB Camp Pendleton

Vehicle Index						
Vehicle No.	Vehicle Label	Make	Model	Year	Type	Base
35	5L-G414511L	Ram	Dakota	2011	Small pickup	MCB Camp Pendleton
36	5L-G414513L	Ram	Dakota	2011	Small pickup	MCB Camp Pendleton
37	5L-G414867K	Ford	Ranger	2010	Small pickup	MCB Camp Pendleton
38	5L-G414868K	Ford	Ranger	2010	Small pickup	MCB Camp Pendleton
39	5L-G414869K	Ford	Ranger	2010	Small pickup	MCB Camp Pendleton
40	5L-G414871K	Dodge	Grand Caravan	2010	Van	MCB Camp Pendleton
41	5L-G414872K	Dodge	Grand Caravan	2010	Van	MCB Camp Pendleton
42	5L-G416051H	Dodge	Grand Caravan	2009	Van	MCB Camp Pendleton
43	5L-G421041D	Chevrolet	Silverado	2006	Pickup	MCB Camp Pendleton
44	5L-G421775L	Ford	F-150	2011	Pickup	MCB Camp Pendleton
45	5L-G421920L	Ford	F-150	2011	Pickup	MCB Camp Pendleton
46	5L-G421922L	Ford	F-150	2011	Pickup	MCB Camp Pendleton
47	5L-G422169G	Chevrolet	Express	2008	Van	MCB Camp Pendleton
48	5L-G422206H	Chevrolet	Express 1500	2009	Van	MCB Camp Pendleton
49	5L-G422215H	Chevrolet	Express	2009	Van	MCB Camp Pendleton
50	5L-G422227H	Ford	F-150	2009	Pickup	MCB Camp Pendleton
51	5L-G422233H	Ford	F-150	2009	Pickup	MCB Camp Pendleton
52	5L-G422235H	Ford	F-150	2009	Pickup	MCB Camp Pendleton
53	5L-G422467K	Chevrolet	Silverado 1500	2010	Pickup	MCB Camp Pendleton
54	5L-G422482K	Chevrolet	Express	2010	Van	MCB Camp Pendleton
55	5L-G422486K	Chevrolet	Express	2010	Van	MCB Camp Pendleton
56	5L-G422785H	Chevrolet	Silverado	2010	Pickup	MCB Camp Pendleton
57	5L-G422884H	Chevrolet	Silverado	2010	Pickup	MCB Camp Pendleton
58	5L-G422886H	Chevrolet	Silverado	2010	Pickup	MCB Camp Pendleton
59	5M-G106209H	Pontiac	G6	2009	Sedan	MCAS Miramar
60	5M-G106212H	Pontiac	G6	2009	Sedan	MCAS Miramar
61	5M-G136272L	Ford	Focus	2012	Sedan	MCAS Miramar
62	5M-G414171H	Dodge	Dakota	2009	Small pickup	MCAS Miramar
63	5M-G414446H	Dodge	Dakota	2009	Small pickup	MCAS Miramar
64	5M-G414515L	Dodge	Grand Caravan	2011	Van	MCAS Miramar
65	5M-G414516L	Dodge	Grand Caravan	2011	Van	MCAS Miramar
66	5M-G414859K	Dodge	Grand Caravan	2010	Van	MCAS Miramar
67	5M-G414860K	Dodge	Grand Caravan	2010	Van	MCAS Miramar
68	5M-G422183G	Chevrolet	Express	2008	Van	MCAS Miramar
69	5M-G422205H	Chevrolet	Express	2009	Van	MCAS Miramar
70	5M-G422890H	Chevrolet	Silverado 1500	2010	Pickup	MCAS Miramar
71	5M-G422891H	Chevrolet	Silverado 1500	2010	Pickup	MCAS Miramar
72	5M-G423185H	Chevrolet	Silverado 1500	2010	Pickup	MCAS Miramar

Vehicle No.	Vehicle Index					
	Vehicle Label	Make	Model	Year	Type	Base
73	5P-G130225A	Honda	Civic	2009	Sedan	MCAGCC 29 Palms

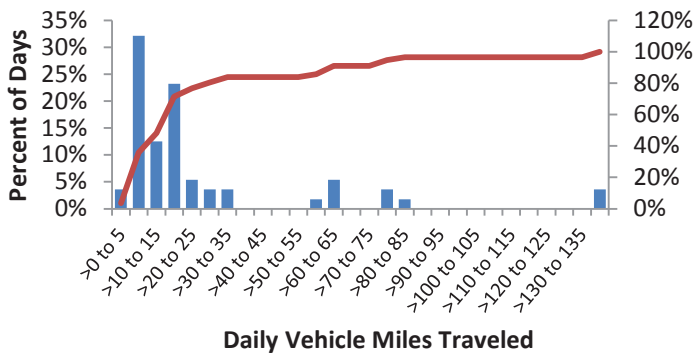
# **Appendix B**

## **U.S. Navy Vehicle Data Sheets**

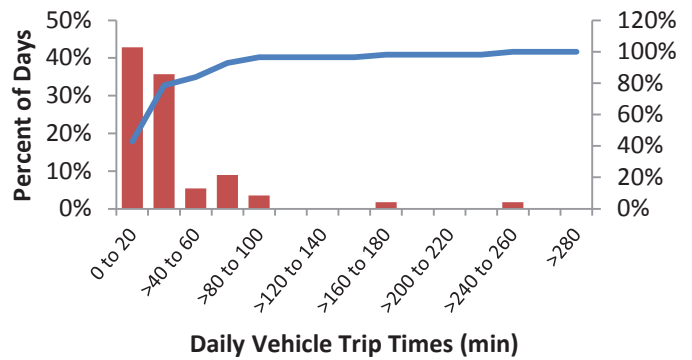
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 Model Year: 2010  
 Vehicle Make: FORD  
 Vehicle Model: FUSION  
 Body Type: sedan

Total Number of Days with Driving 56  
 Average Number of Trips 15.9  
 Average Trip Distance 28.2  
 Total Number of Trips 891  
 Total Distance (miles) 1580.6  
 Total Trip Duration (minutes) 1949

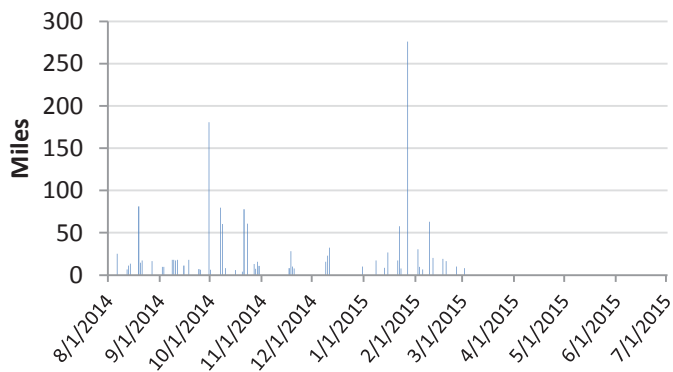
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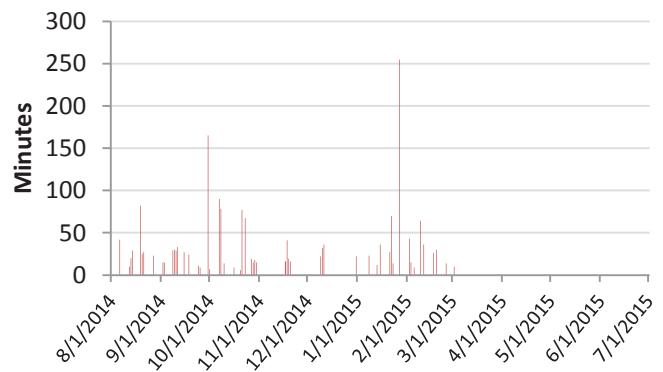
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**

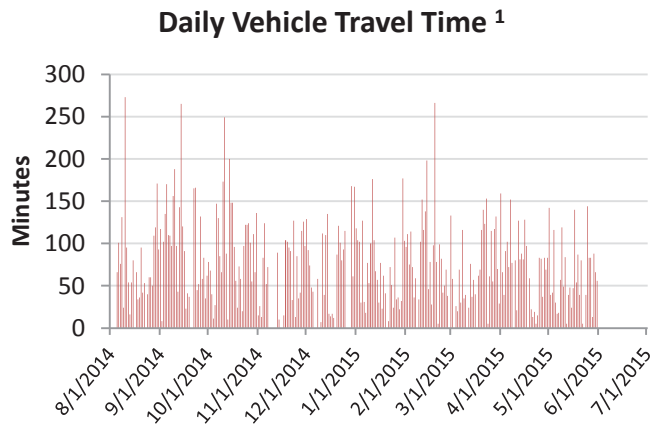
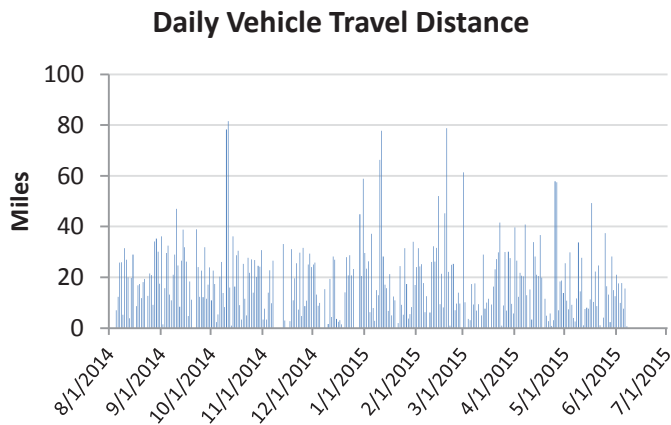
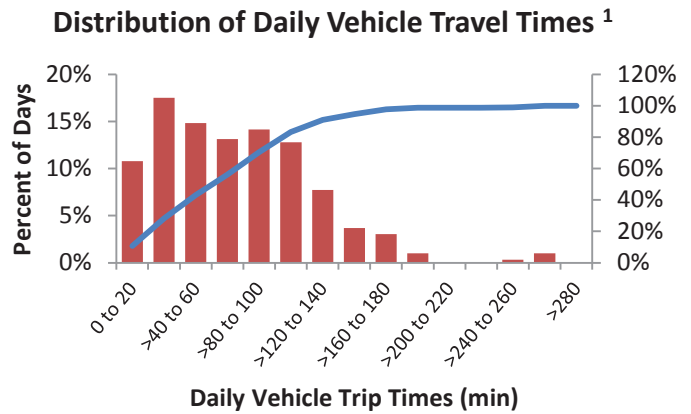
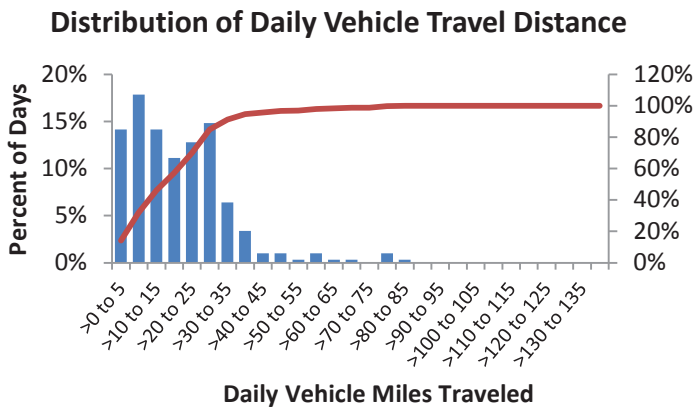


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	14%	8
63	9%	5
67	9%	5

Vehicle: 5P-G130225A  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Honda  
 Vehicle Model: Civic  
 Body Type: sedan

Total Number of Days with Driving 274  
 Average Number of Trips 11.7  
 Average Trip Distance 18.8  
 Total Number of Trips 3532  
 Total Distance (miles) 5688.2  
 Total Trip Duration (minutes) 23208



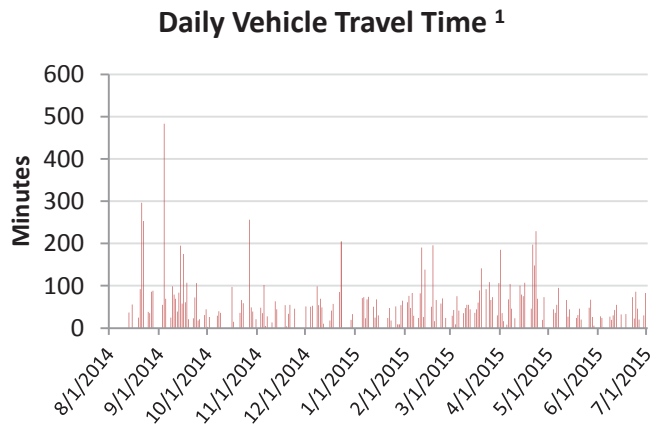
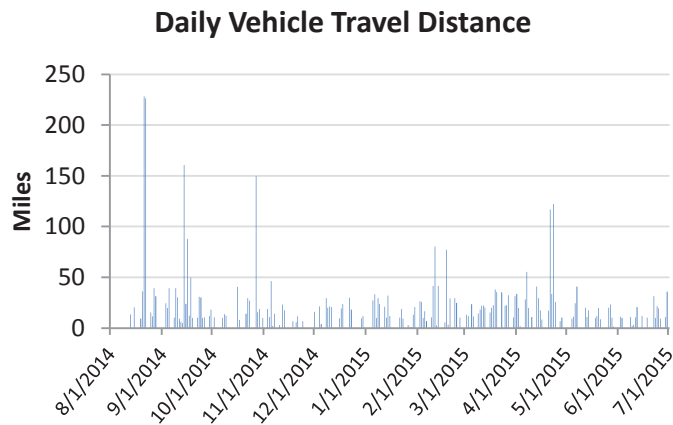
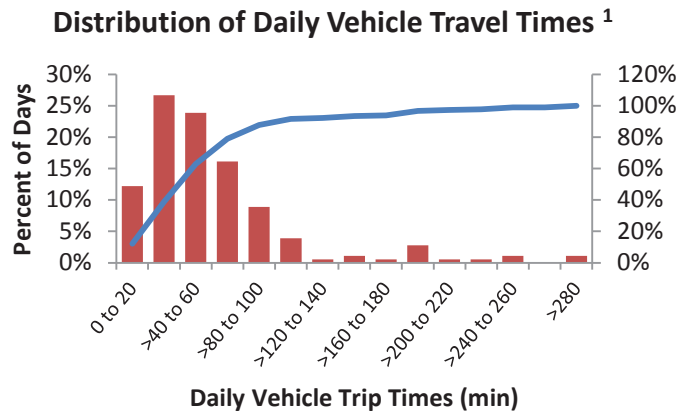
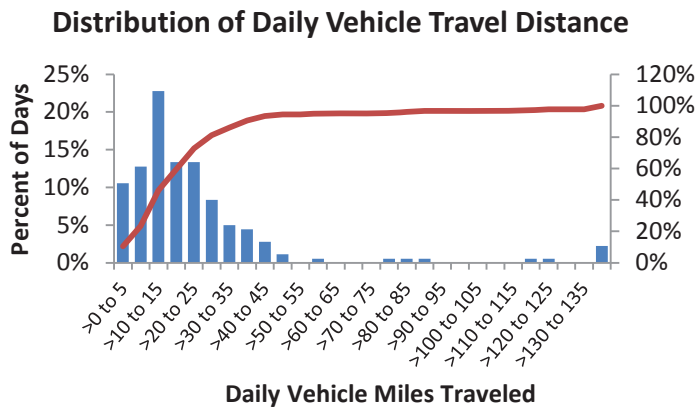
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	2%	6
63	2%	5
67	1%	4



Vehicle: 5M-G423185H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Silverado 1500  
 Body Type: pickup

Total Number of Days with Driving 180  
 Average Number of Trips 5.8  
 Average Trip Distance 23.8  
 Total Number of Trips 1042  
 Total Distance (miles) 4289.9  
 Total Trip Duration (minutes) 11324

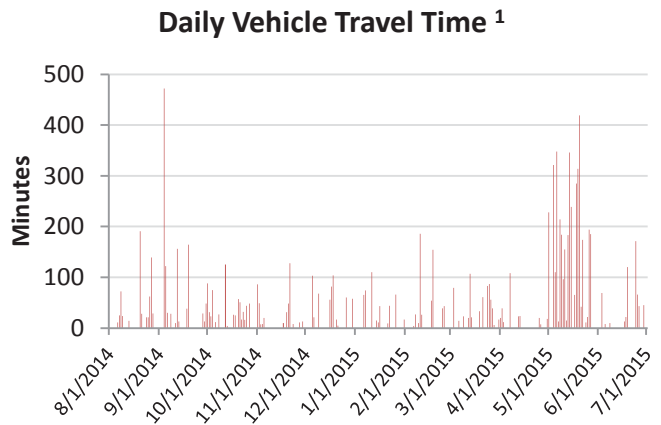
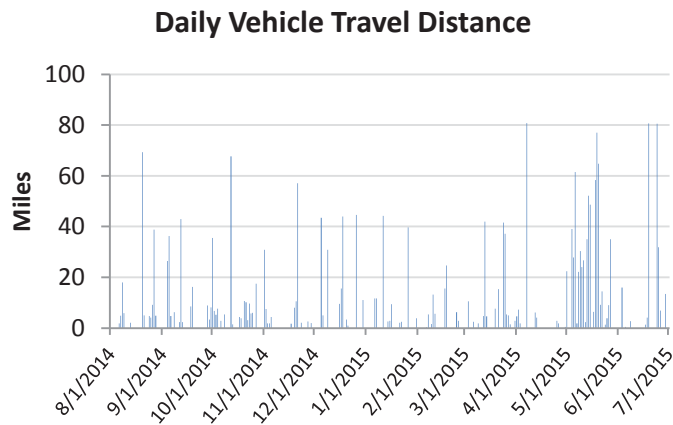
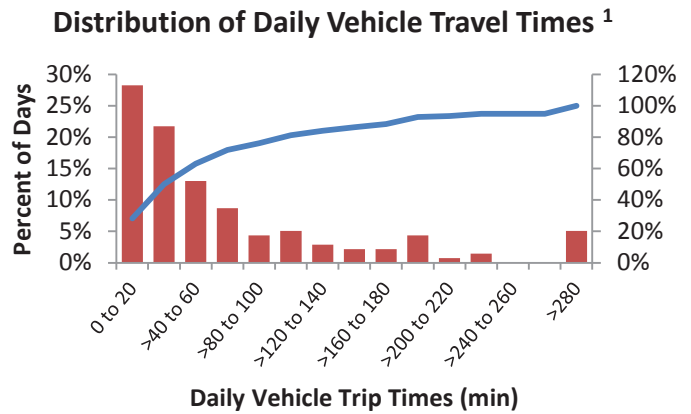
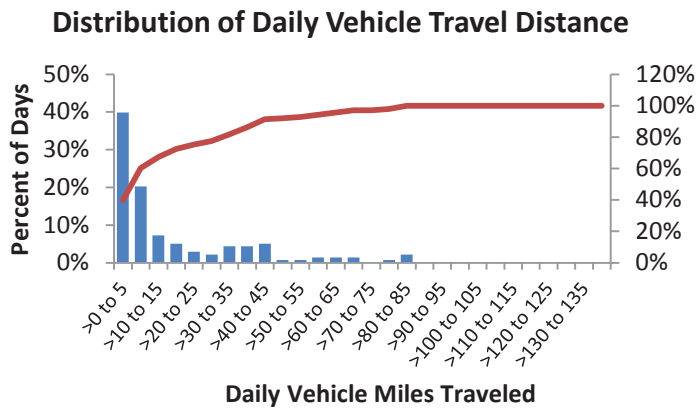


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	5%	9
63	5%	9
67	5%	9

Vehicle: 5M-G422891H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Silverado 1500  
 Body Type: pickup

Total Number of Days with Driving 138  
 Average Number of Trips 6.8  
 Average Trip Distance 16.6  
 Total Number of Trips 944  
 Total Distance (miles) 2286.4  
 Total Trip Duration (minutes) 10098



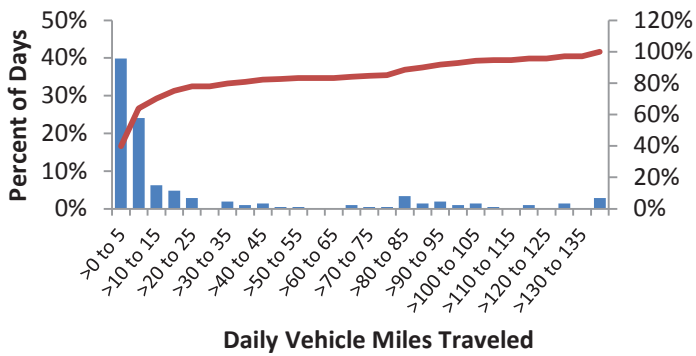
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	6%	8
63	5%	7
67	4%	6

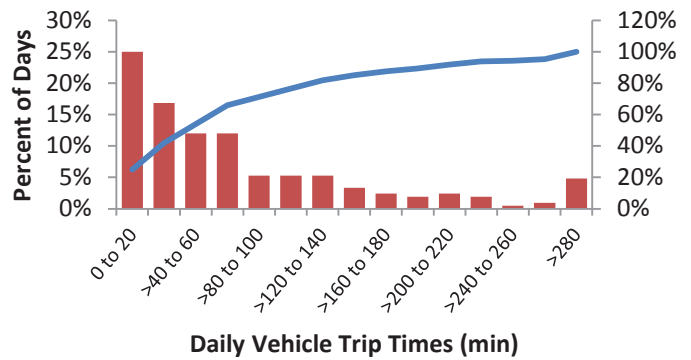
Vehicle: 5M-G422890H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Silverado 1500  
 Body Type: pickup

Total Number of Days with Driving 208  
 Average Number of Trips 5.8  
 Average Trip Distance 28.8  
 Total Number of Trips 1201  
 Total Distance (miles) 5984.4  
 Total Trip Duration (minutes) 17740

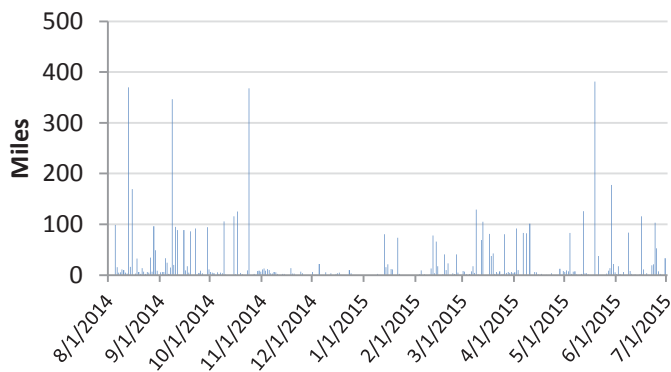
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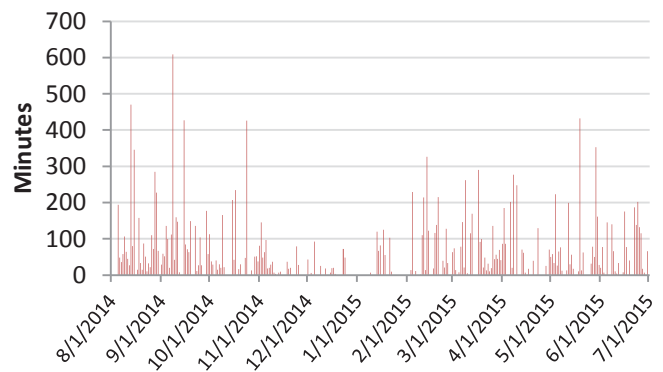
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**

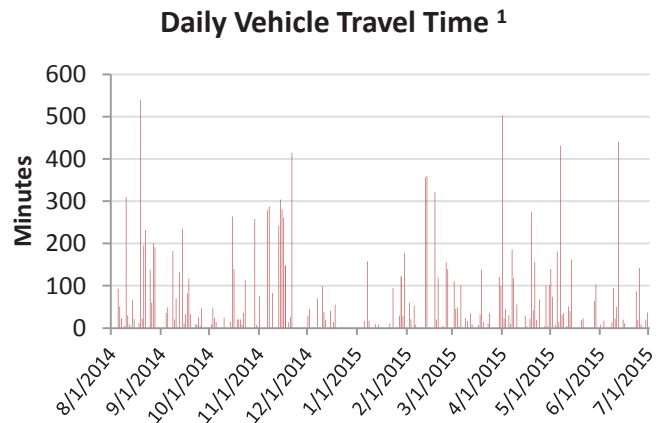
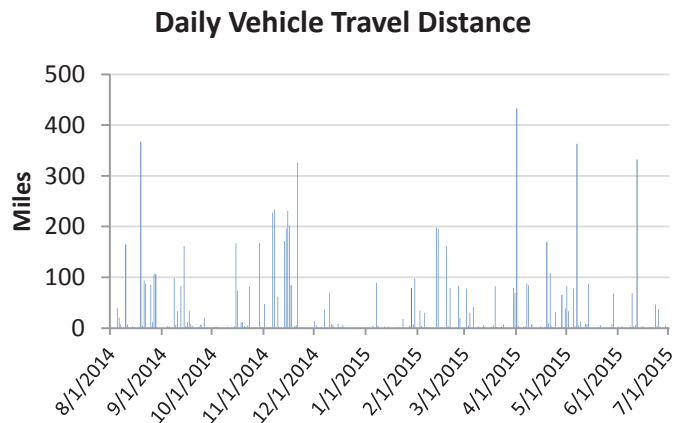
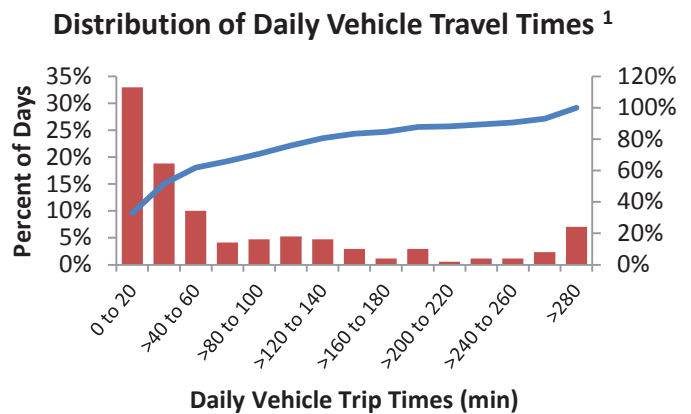
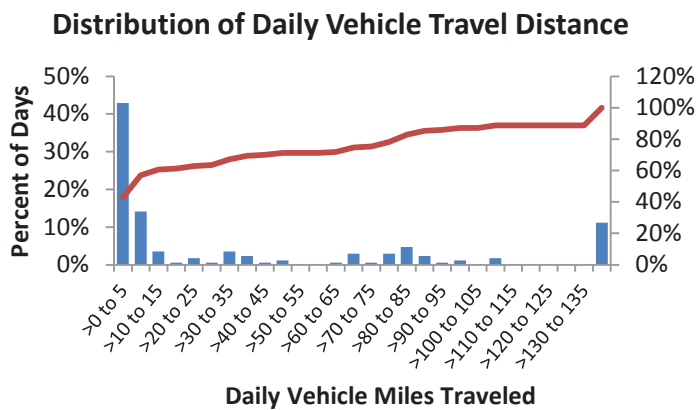


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	17%	35
63	17%	35
67	16%	34

Vehicle: 5M-G422205H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Chevrolet  
 Vehicle Model: Express  
 Body Type: van

Total Number of Days with Driving 170  
 Average Number of Trips 4.7  
 Average Trip Distance 46.9  
 Total Number of Trips 807  
 Total Distance (miles) 7975.0  
 Total Trip Duration (minutes) 14473

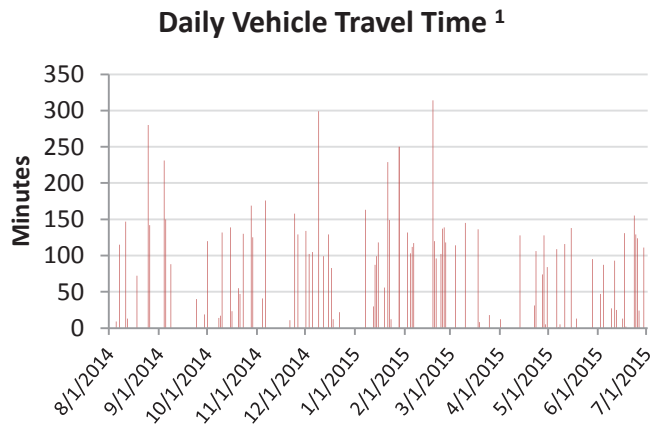
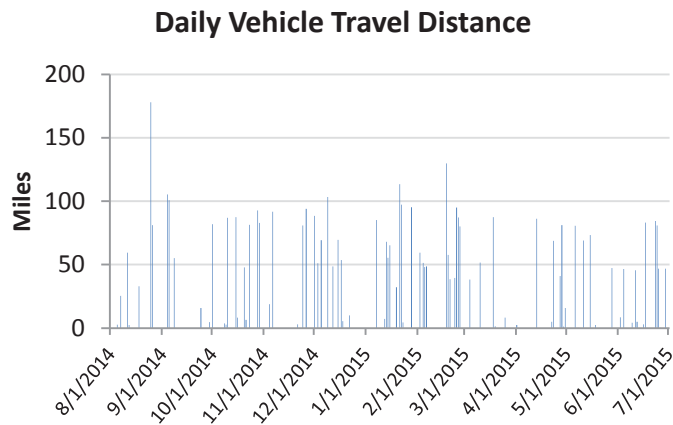
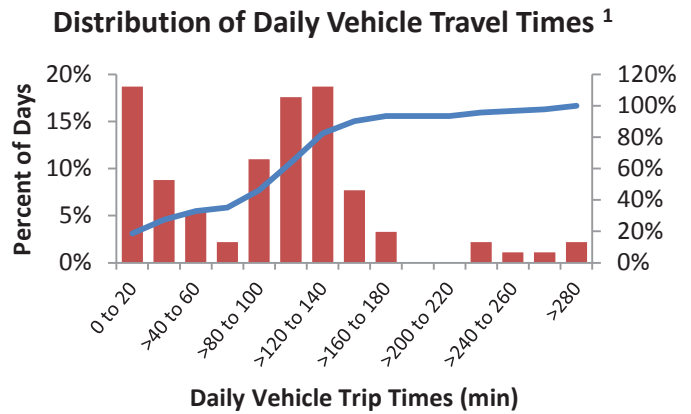
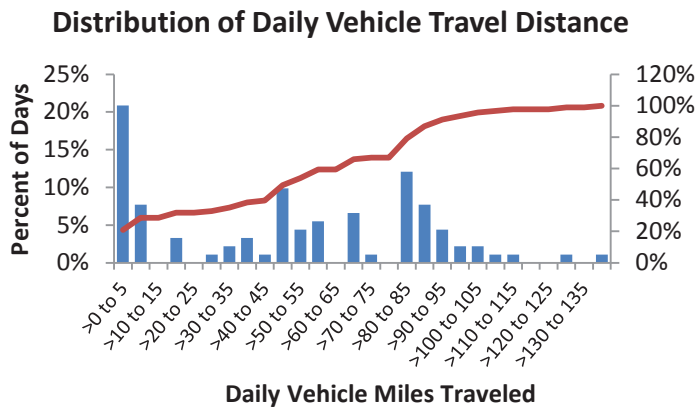


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	29%	49
63	28%	48
67	28%	47

Vehicle: 5M-G422183G  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2008  
 Vehicle Make: Chevrolet  
 Vehicle Model: Express  
 Body Type: van

Total Number of Days with Driving 91  
 Average Number of Trips 4.2  
 Average Trip Distance 50.6  
 Total Number of Trips 381  
 Total Distance (miles) 4605.6  
 Total Trip Duration (minutes) 8894



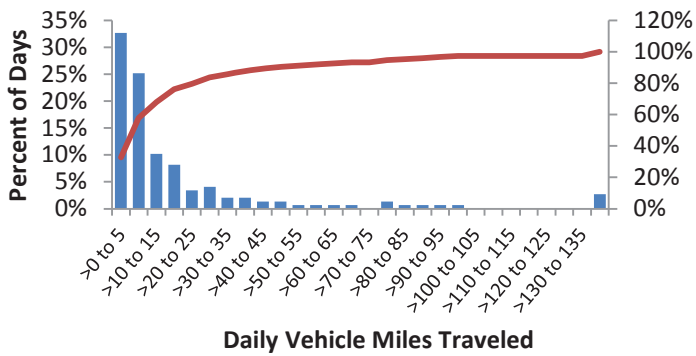
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	43%	39
63	41%	37
67	40%	36

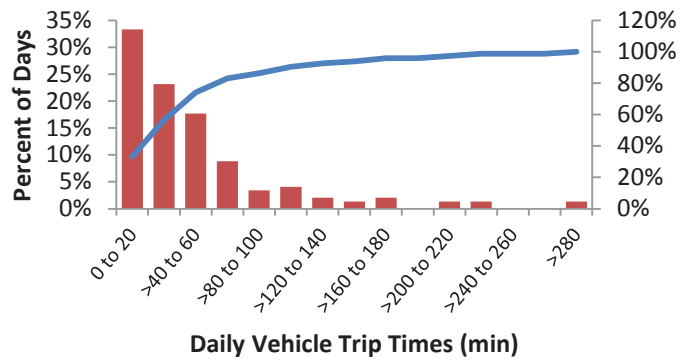
Vehicle: 5M-G414860K  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Dodge  
 Vehicle Model: Grand Caravan  
 Body Type: van

Total Number of Days with Driving 147  
 Average Number of Trips 4.6  
 Average Trip Distance 21.5  
 Total Number of Trips 680  
 Total Distance (miles) 3159.7  
 Total Trip Duration (minutes) 7828

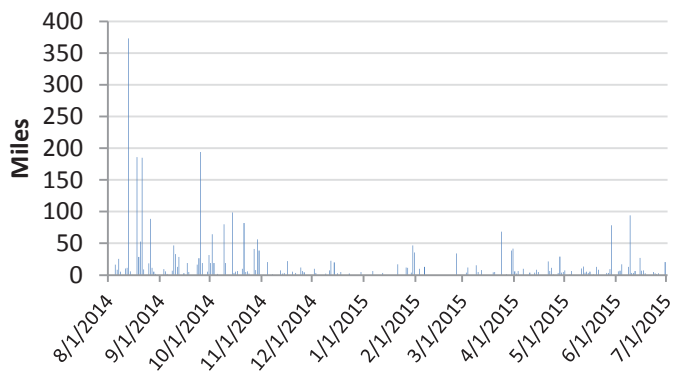
**Distribution of Daily Vehicle Travel Distance**



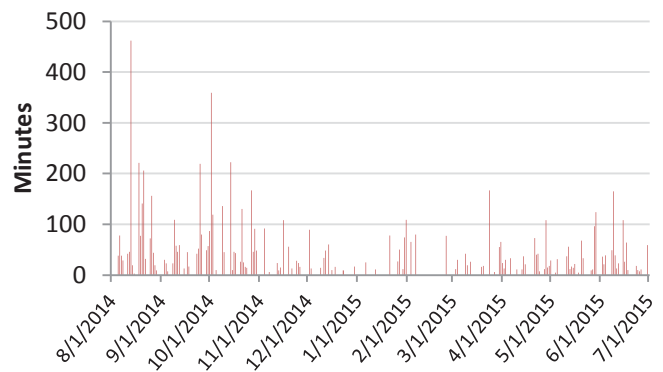
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**

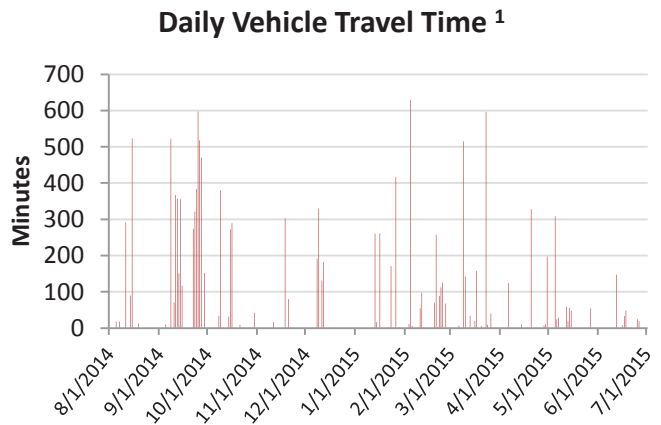
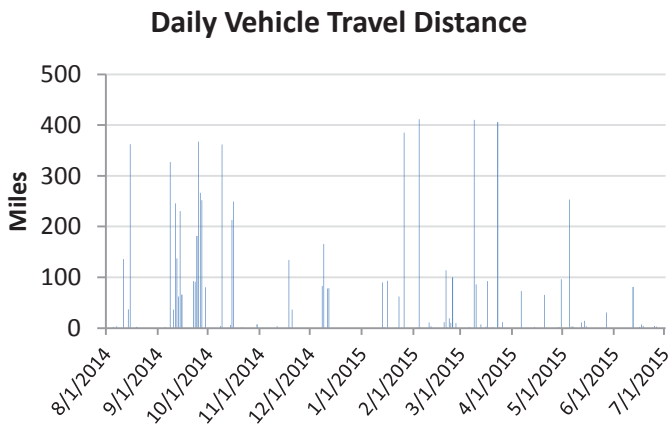
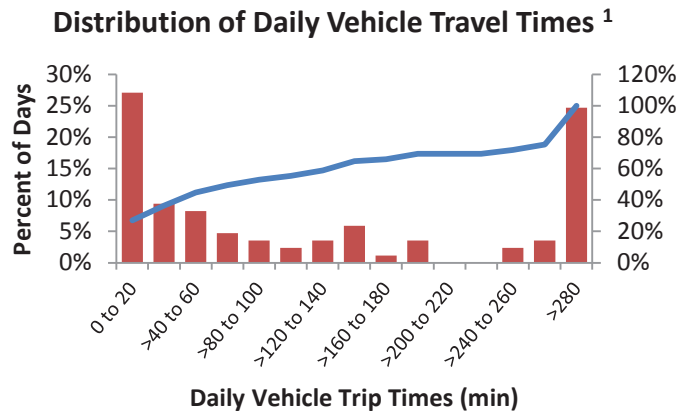
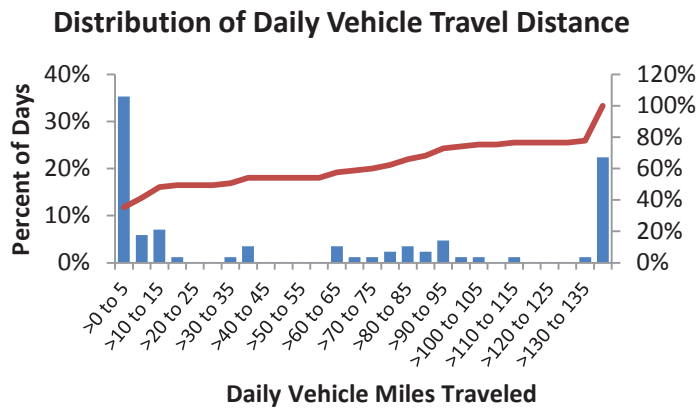


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	8%	12
63	8%	12
67	7%	11

Vehicle: 5M-G414859K  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Dodge  
 Vehicle Model: Grand Caravan  
 Body Type: van

Total Number of Days with Driving 85  
 Average Number of Trips 5.8  
 Average Trip Distance 87.2  
 Total Number of Trips 495  
 Total Distance (miles) 7412.2  
 Total Trip Duration (minutes) 13637

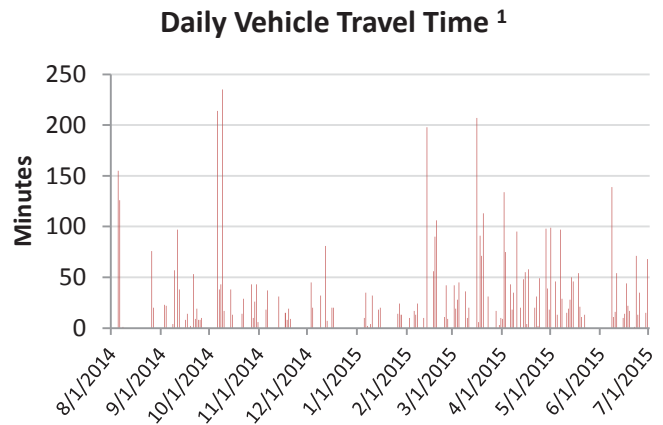
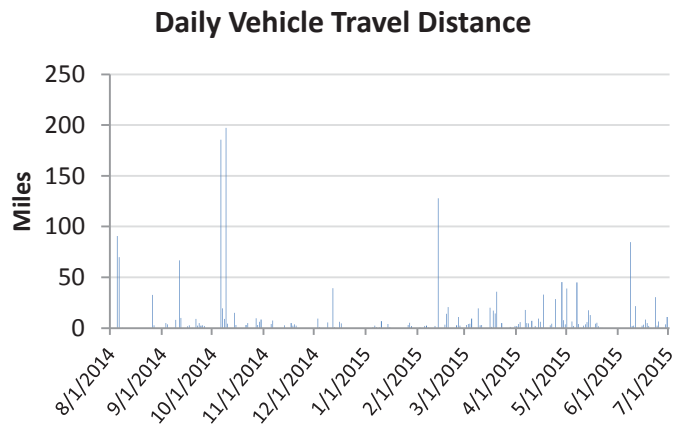
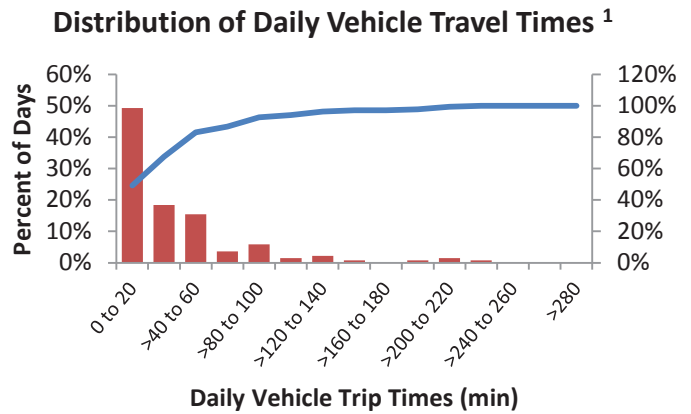
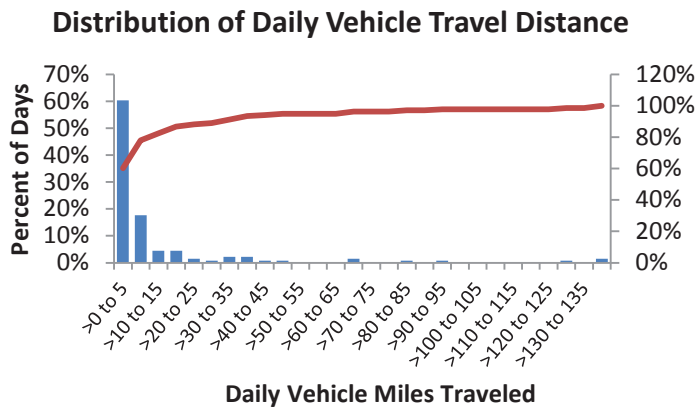


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	46%	39
63	44%	37
67	41%	35

Vehicle: 5M-G414516L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: Dodge  
 Vehicle Model: Grand Caravan  
 Body Type: van

Total Number of Days with Driving 136  
 Average Number of Trips 4.2  
 Average Trip Distance 13.0  
 Total Number of Trips 565  
 Total Distance (miles) 1764.4  
 Total Trip Duration (minutes) 5310



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	5%	7
63	5%	7
67	4%	6



Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5M-G414515L

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2011

Dodge

Grand Caravan

van

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

1

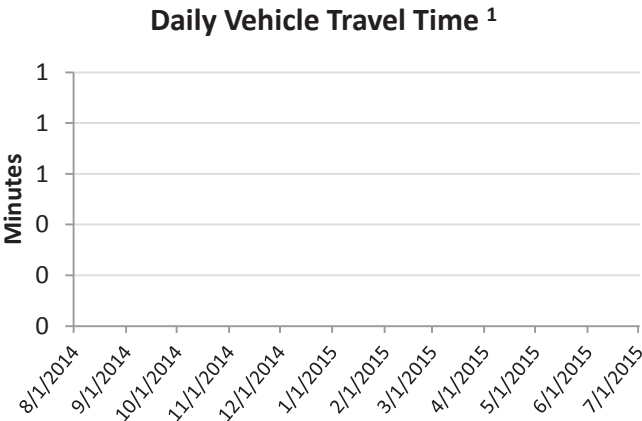
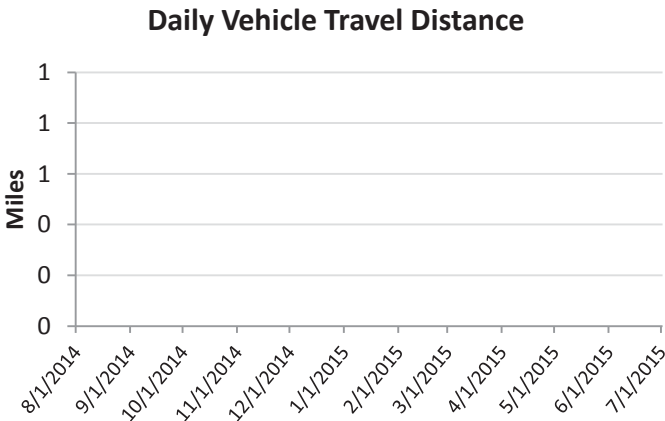
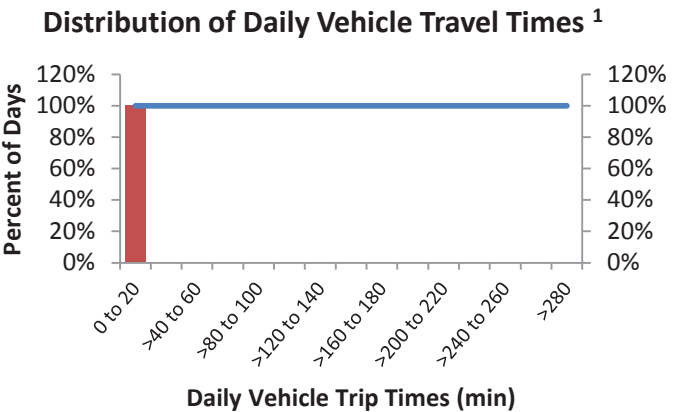
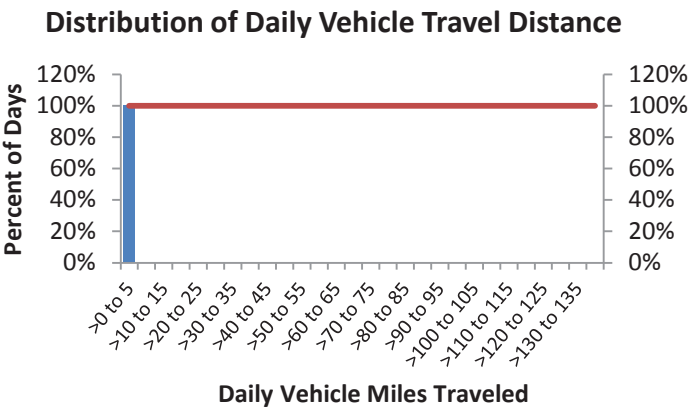
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0.0

0

0.0

0

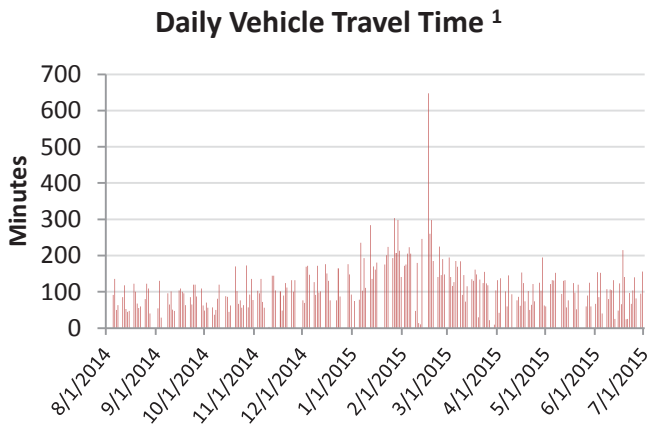
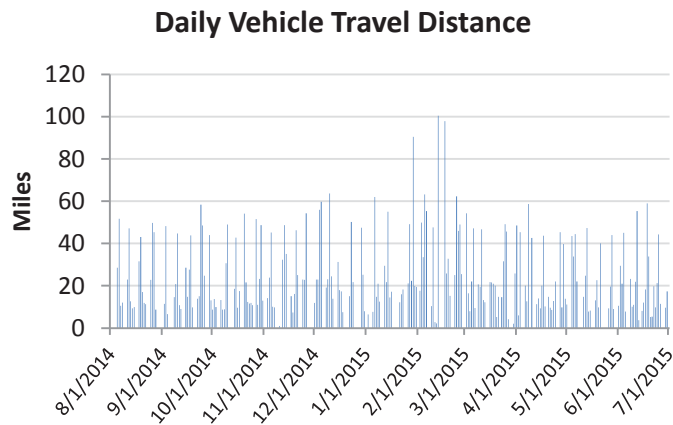
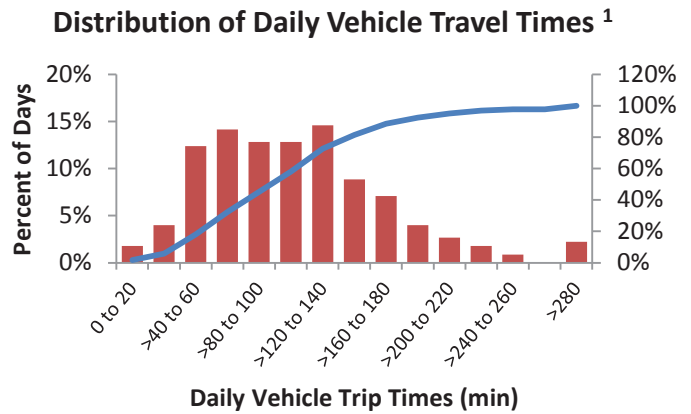
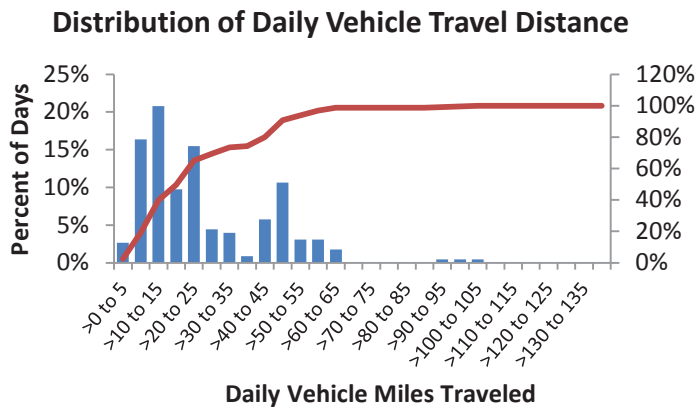


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	0%	0
63	0%	0
67	0%	0

Vehicle: 5M-G414446H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Dodge  
 Vehicle Model: Dakota  
 Body Type: small pickup

Total Number of Days with Driving 226  
 Average Number of Trips 12.7  
 Average Trip Distance 25.4  
 Total Number of Trips 2859  
 Total Distance (miles) 5743.2  
 Total Trip Duration (minutes) 25967

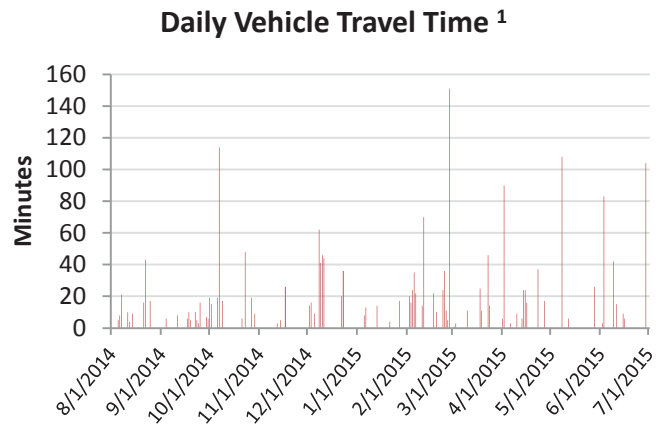
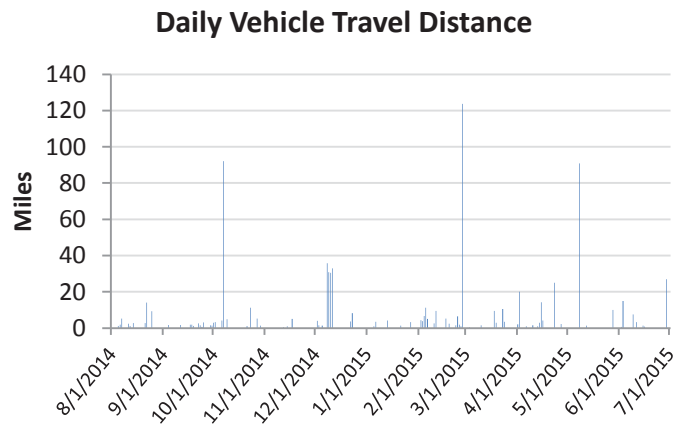
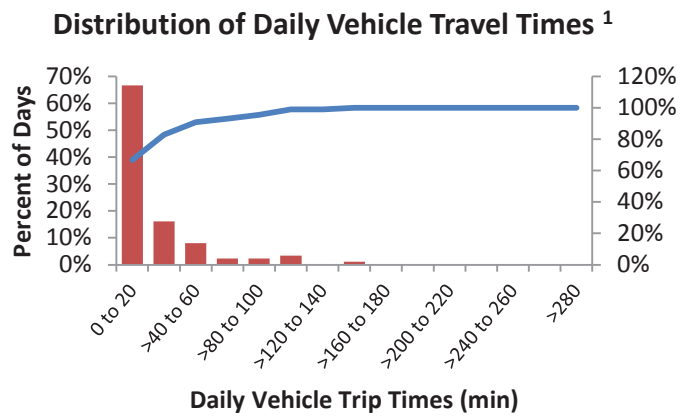
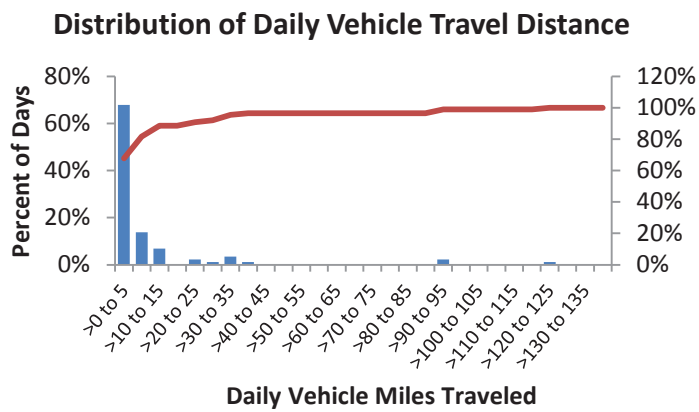


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	4%	8
63	2%	5
67	1%	3

Vehicle: 5M-G414171H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Dodge  
 Vehicle Model: Dakota  
 Body Type: small pickup

Total Number of Days with Driving 87  
 Average Number of Trips 3.4  
 Average Trip Distance 9.2  
 Total Number of Trips 298  
 Total Distance (miles) 799.5  
 Total Trip Duration (minutes) 2064

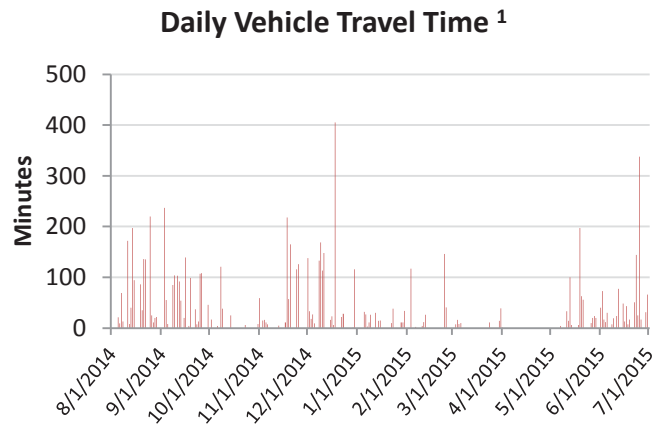
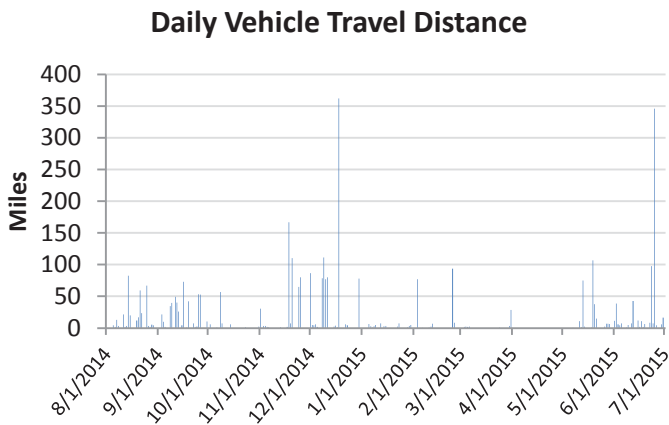
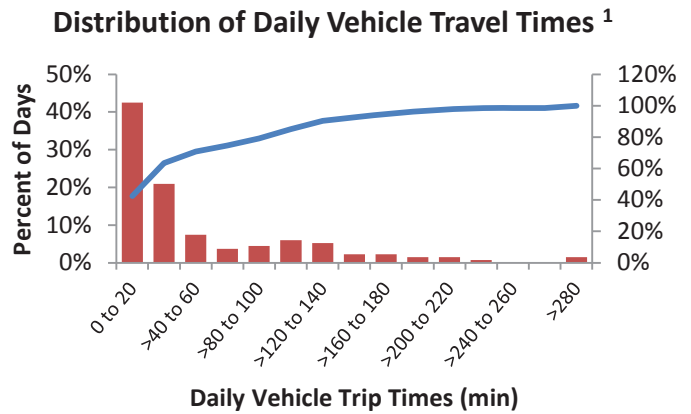
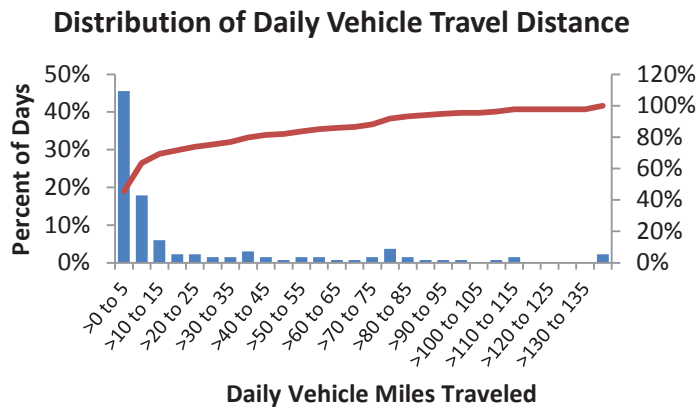


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	3%	3
63	3%	3
67	3%	3

Vehicle: 5M-G136272L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2012  
 Vehicle Make: FORD  
 Vehicle Model: Focus  
 Body Type: sedan

Total Number of Days with Driving 134  
 Average Number of Trips 4.5  
 Average Trip Distance 25.9  
 Total Number of Trips 608  
 Total Distance (miles) 3467.2  
 Total Trip Duration (minutes) 7429

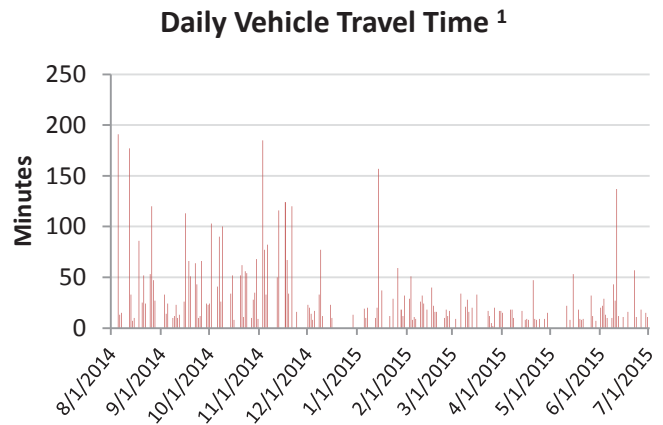
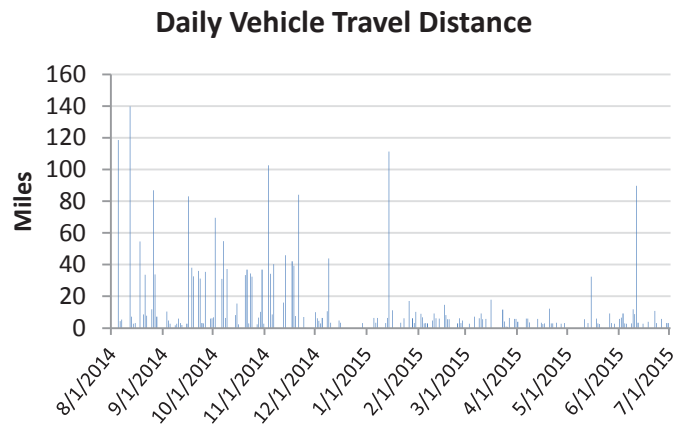
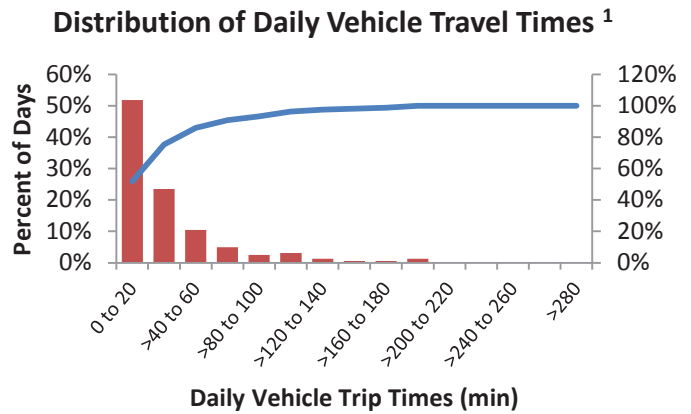
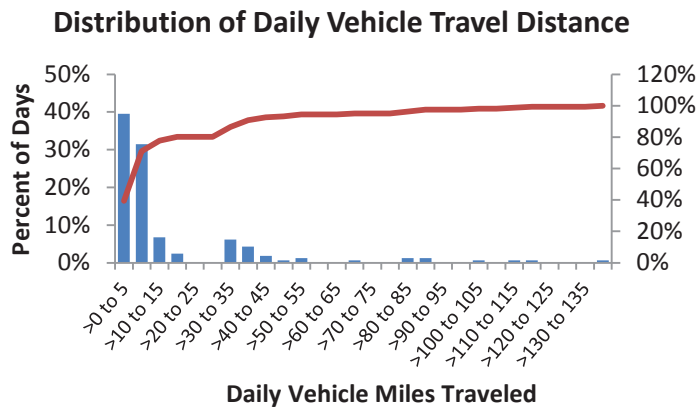


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	16%	21
63	15%	20
67	13%	18

Vehicle: 5M-G106212H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Pontiac  
 Vehicle Model: G6  
 Body Type: sedan

Total Number of Days with Driving 162  
 Average Number of Trips 4.4  
 Average Trip Distance 15.3  
 Total Number of Trips 711  
 Total Distance (miles) 2484.7  
 Total Trip Duration (minutes) 5419



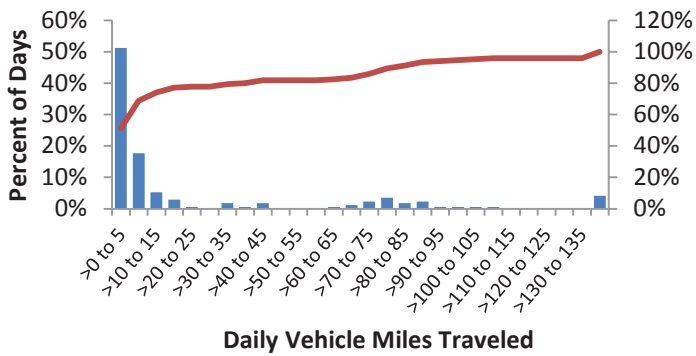
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	6%	9
63	6%	9
67	6%	9

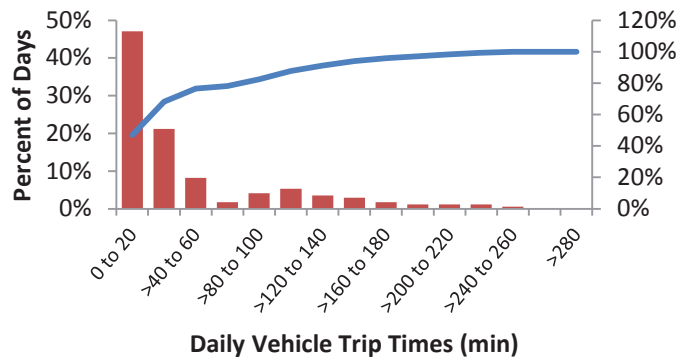
Vehicle: 5M-G106209H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Pontiac  
 Vehicle Model: G6  
 Body Type: sedan

Total Number of Days with Driving 170  
 Average Number of Trips 5.2  
 Average Trip Distance 24.1  
 Total Number of Trips 880  
 Total Distance (miles) 4099.6  
 Total Trip Duration (minutes) 8072

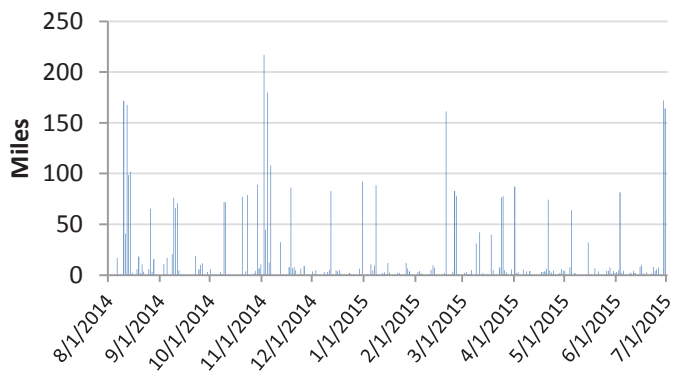
**Distribution of Daily Vehicle Travel Distance**



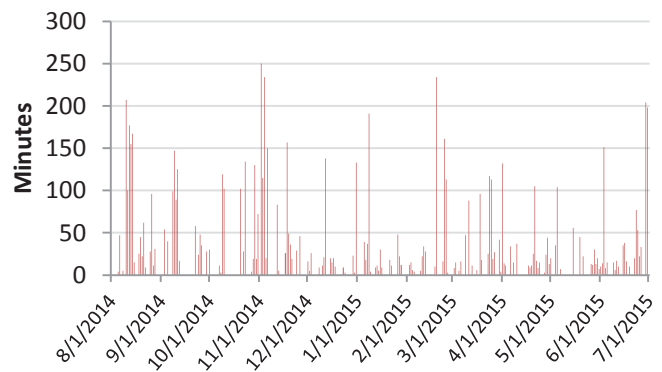
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**

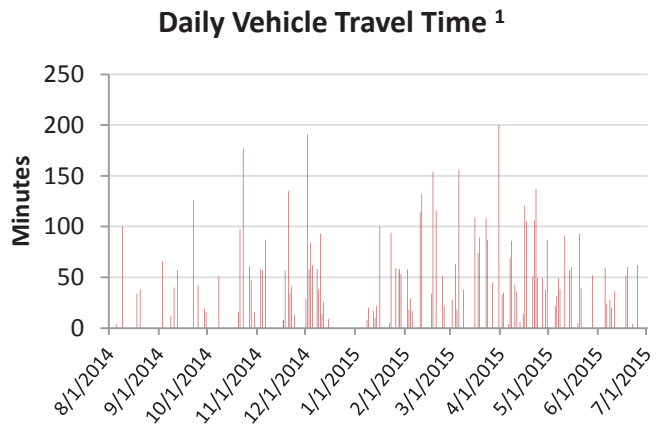
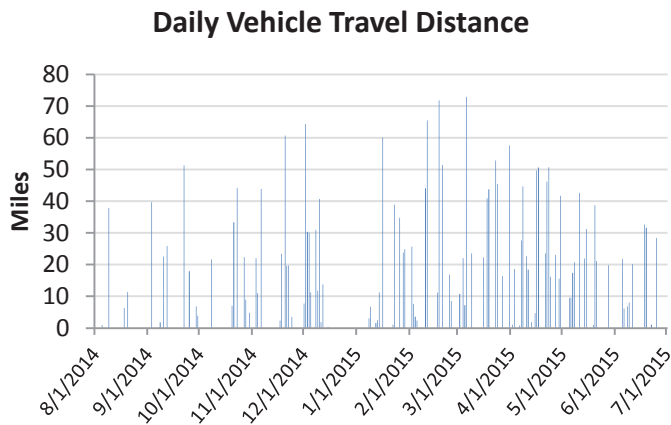
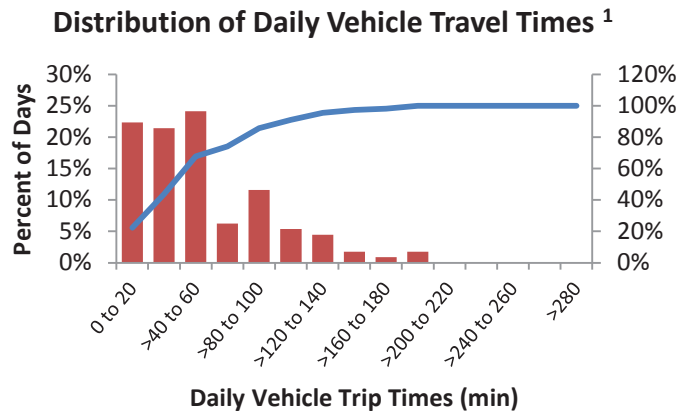
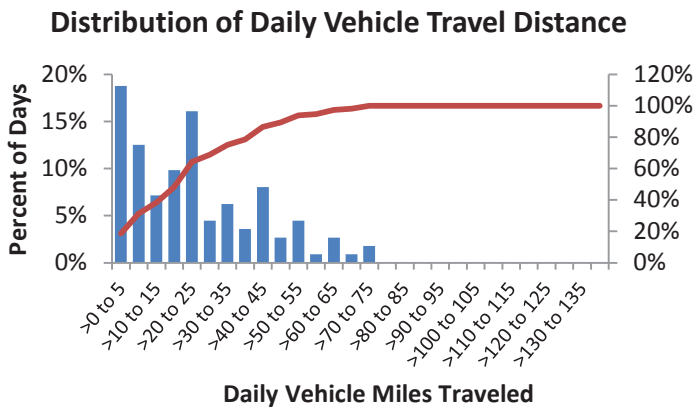


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	18%	31
63	18%	31
67	16%	28

Vehicle: 5L-G422886H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Silverado  
 Body Type: pickup

Total Number of Days with Driving 112  
 Average Number of Trips 4.0  
 Average Trip Distance 23.2  
 Total Number of Trips 451  
 Total Distance (miles) 2598.8  
 Total Trip Duration (minutes) 6330

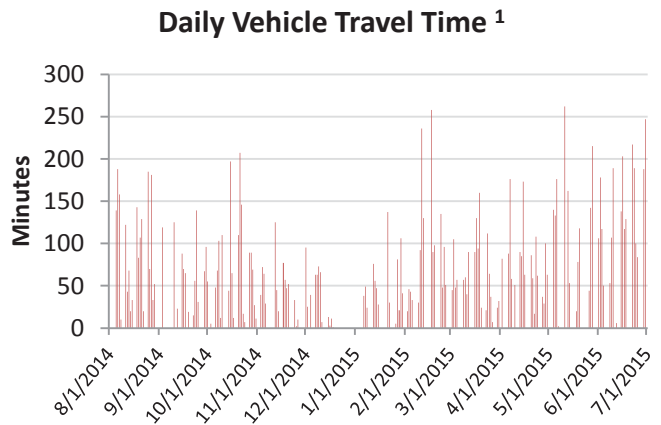
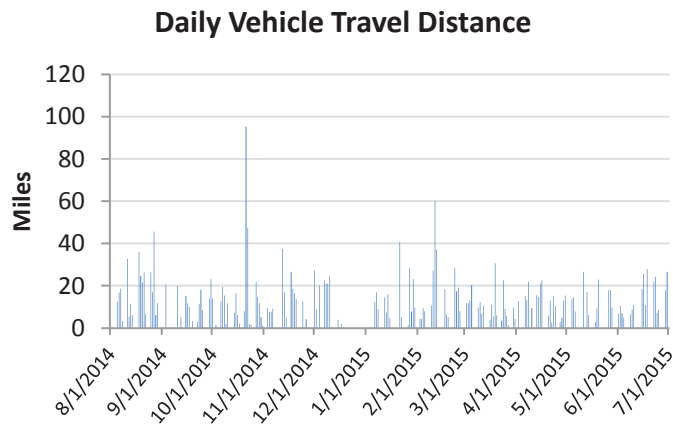
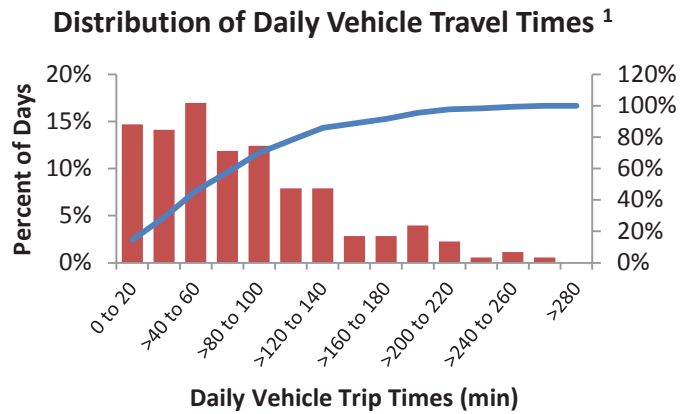
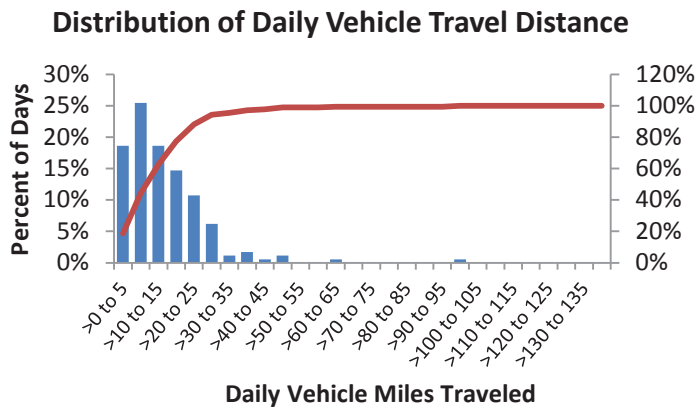


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	5%	6
63	4%	4
67	2%	2

Vehicle: 5L-G422884H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Silverado  
 Body Type: pickup

Total Number of Days with Driving 177  
 Average Number of Trips 5.6  
 Average Trip Distance 13.9  
 Total Number of Trips 999  
 Total Distance (miles) 2457.9  
 Total Trip Duration (minutes) 14151



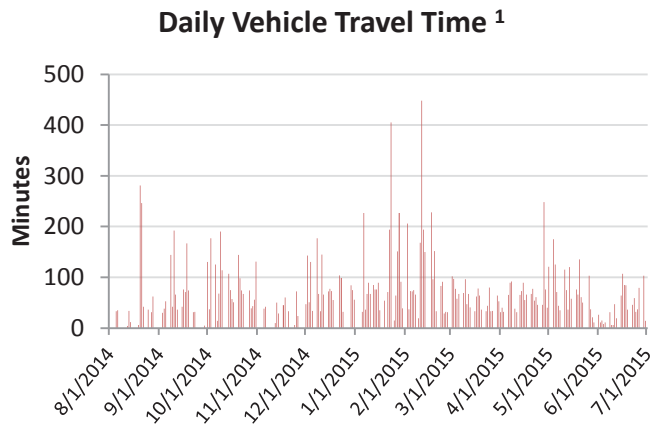
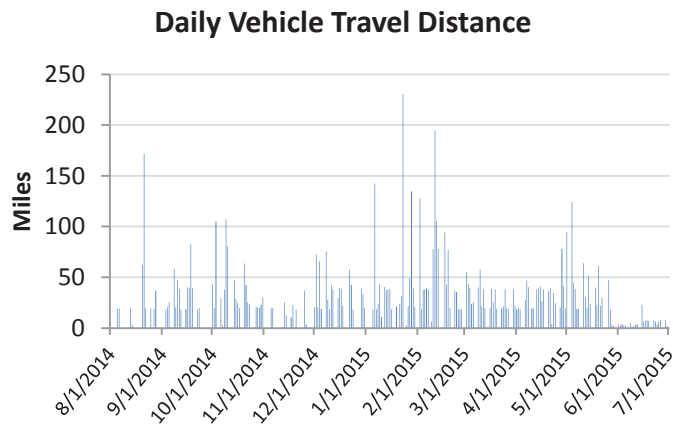
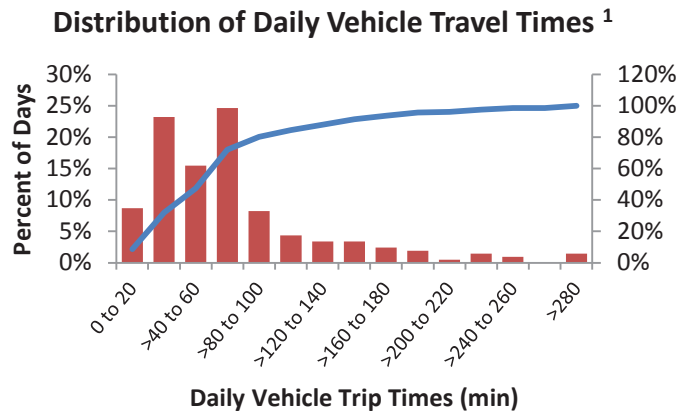
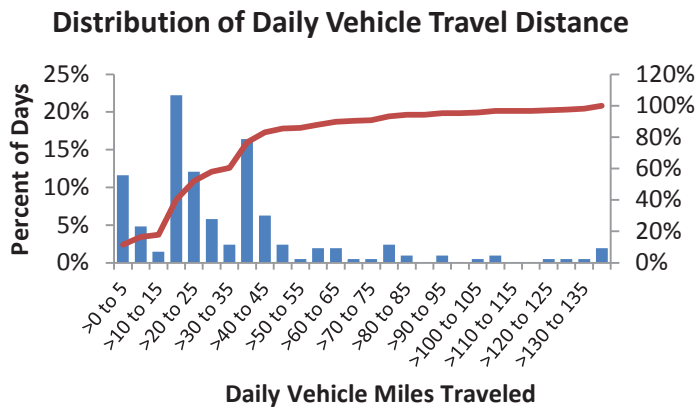
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	1%	2
63	1%	1
67	1%	1



Vehicle: 5L-G422785H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Silverado  
 Body Type: pickup

Total Number of Days with Driving 207  
 Average Number of Trips 6.3  
 Average Trip Distance 33.9  
 Total Number of Trips 1294  
 Total Distance (miles) 7015.5  
 Total Trip Duration (minutes) 15571

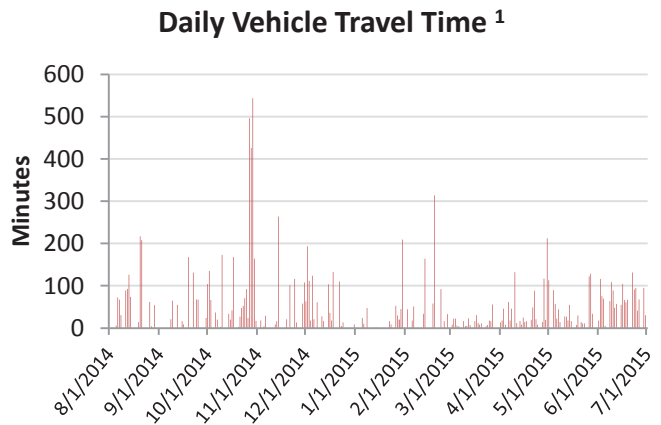
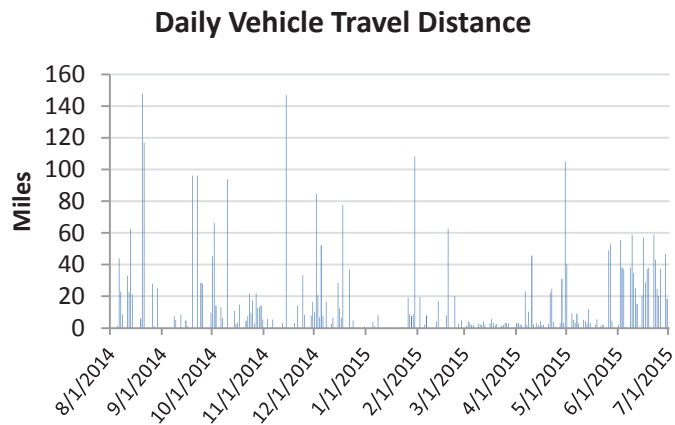
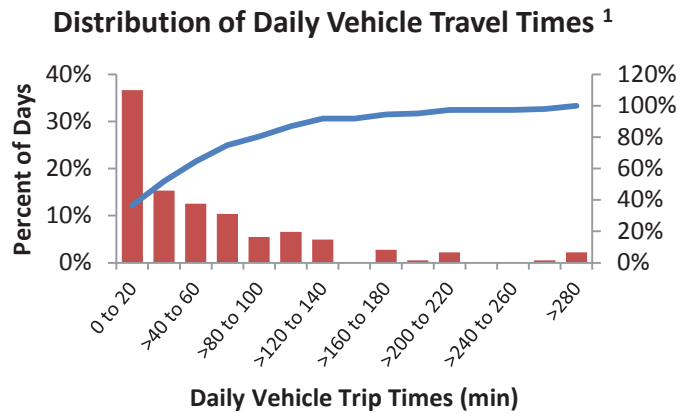
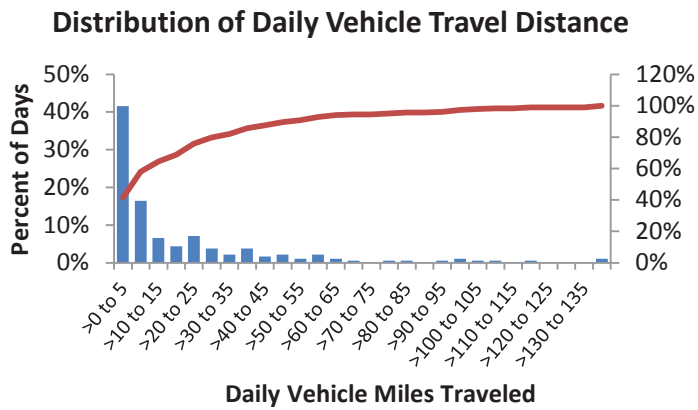


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	12%	25
63	11%	23
67	10%	20

Vehicle: 5L-G422486K  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Express  
 Body Type: van

Total Number of Days with Driving 183  
 Average Number of Trips 5.2  
 Average Trip Distance 19.0  
 Total Number of Trips 950  
 Total Distance (miles) 3482.7  
 Total Trip Duration (minutes) 11290

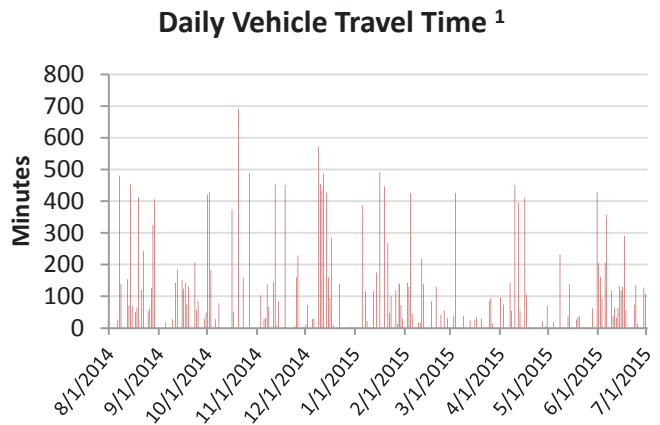
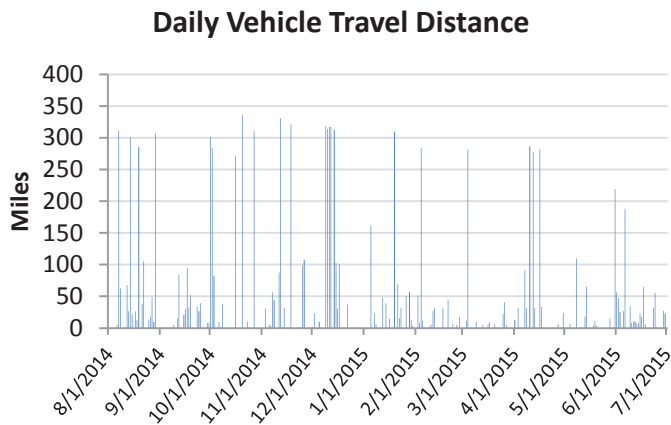
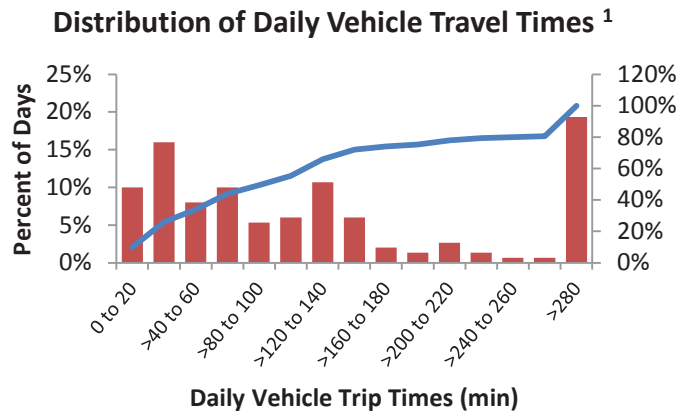
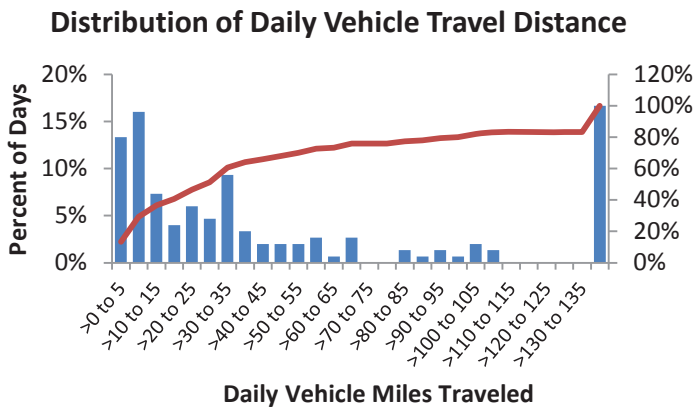


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	7%	13
63	6%	11
67	5%	10

Vehicle: 5L-G422482K  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Chevrolet  
 Vehicle Model: Express  
 Body Type: van

Total Number of Days with Driving 150  
 Average Number of Trips 5.2  
 Average Trip Distance 71.7  
 Total Number of Trips 783  
 Total Distance (miles) 10756.5  
 Total Trip Duration (minutes) 22992



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	27%	41
63	27%	40
67	25%	38

Vehicle:

5L-G422467K

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2010

Vehicle Make:

Chevrolet

Vehicle Model:

Silverado 1500

Body Type:

pickup

Total Number of Days with Driving

200

Average Number of Trips

7.4

Average Trip Distance

26.4

Total Number of Trips

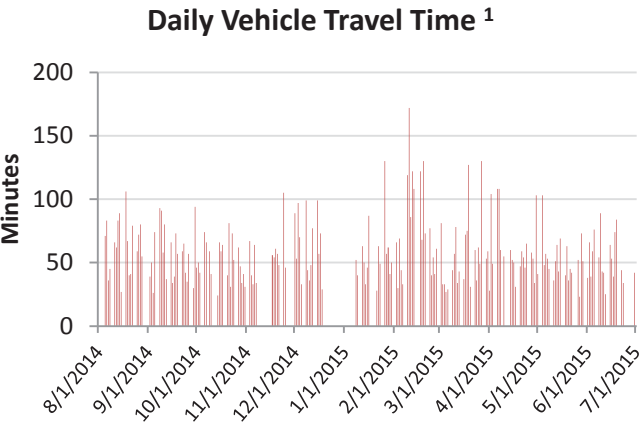
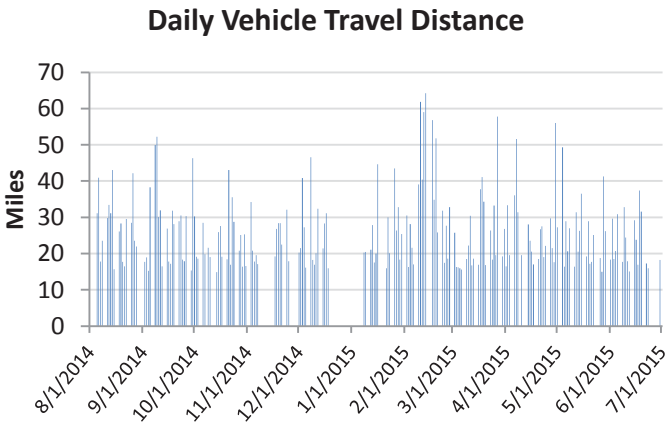
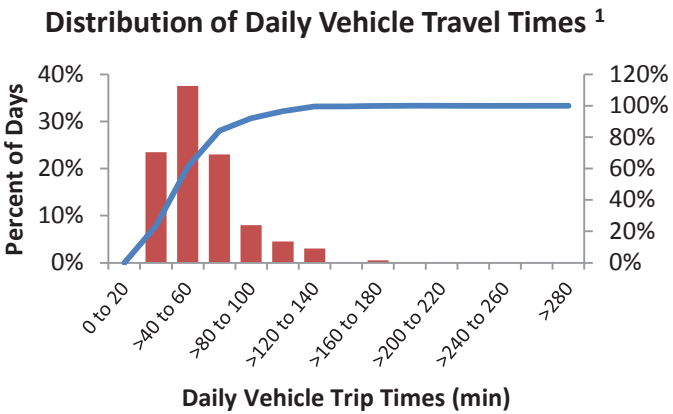
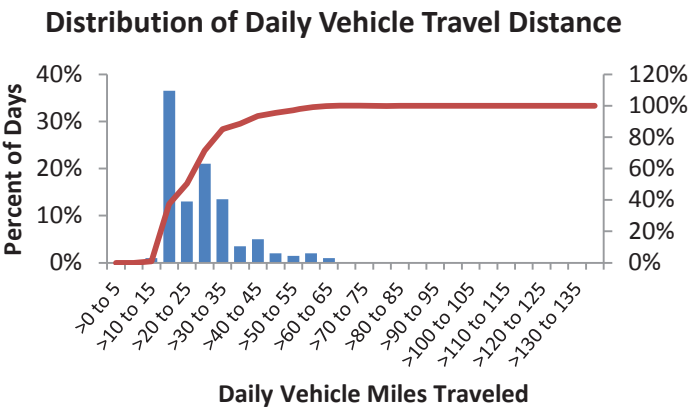
1477

Total Distance (miles)

5278.8

Total Trip Duration (minutes)

11852

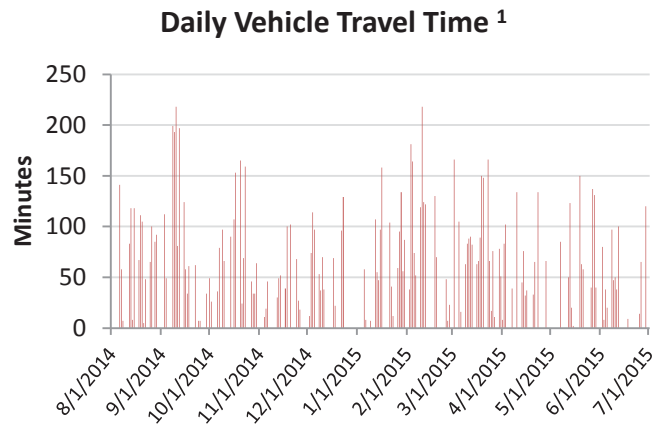
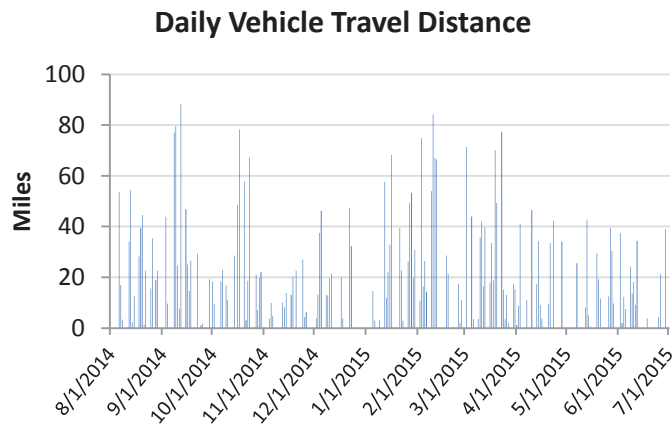
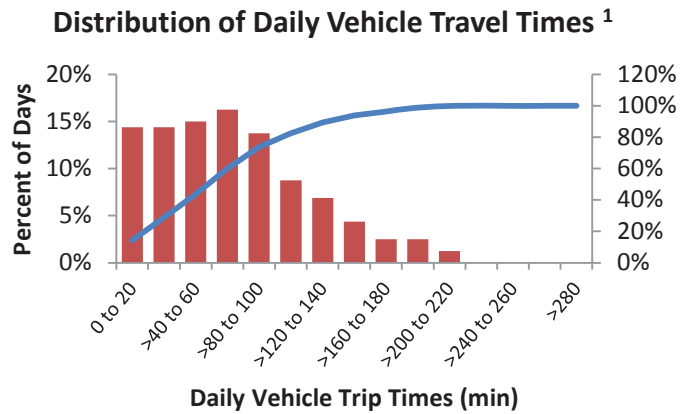
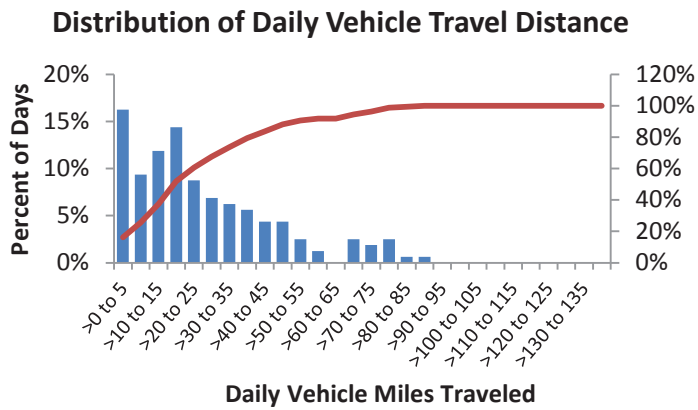


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	1%	2
63	0%	1
67	0%	0

Vehicle: 5L-G422235H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: FORD  
 Vehicle Model: F-150  
 Body Type: pickup

Total Number of Days with Driving 160  
 Average Number of Trips 7.3  
 Average Trip Distance 25.5  
 Total Number of Trips 1160  
 Total Distance (miles) 4080.5  
 Total Trip Duration (minutes) 11925

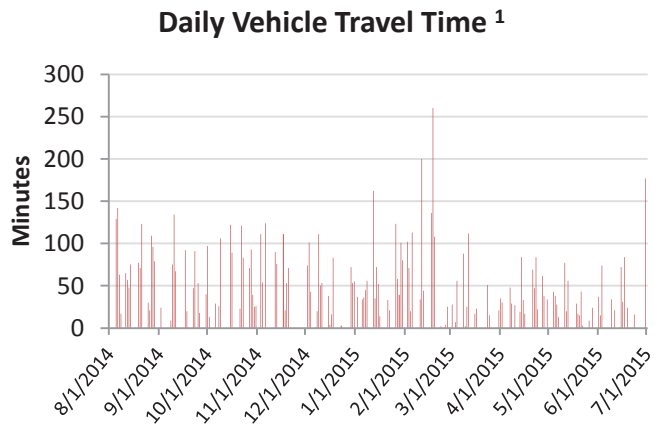
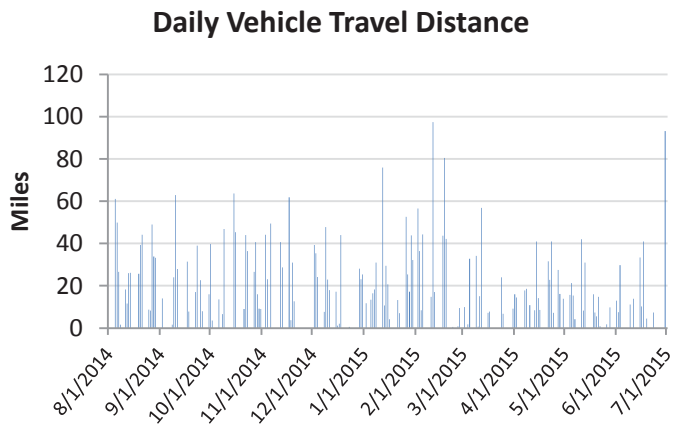
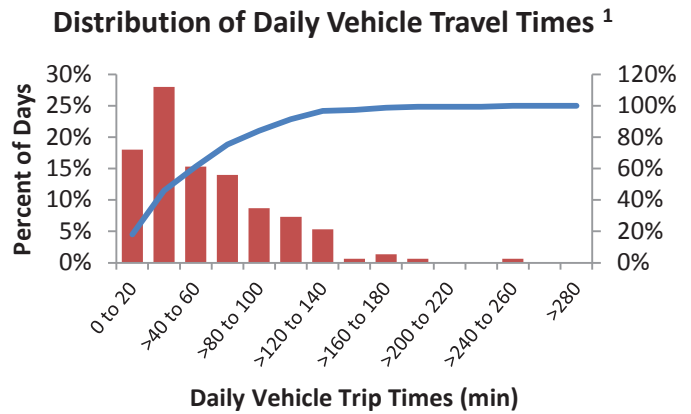
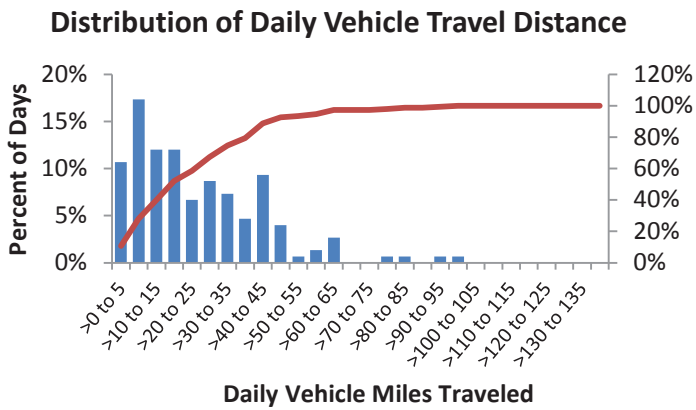


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	8%	13
63	8%	13
67	7%	11

Vehicle: 5L-G422233H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: FORD  
 Vehicle Model: F-150  
 Body Type: pickup

Total Number of Days with Driving 150  
 Average Number of Trips 5.1  
 Average Trip Distance 24.2  
 Total Number of Trips 769  
 Total Distance (miles) 3625.5  
 Total Trip Duration (minutes) 8562



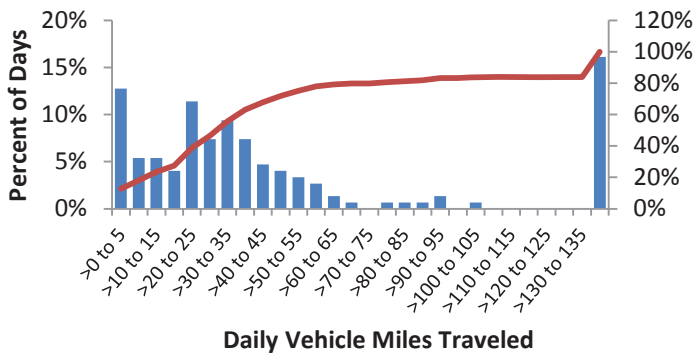
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	5%	8
63	3%	5
67	3%	4

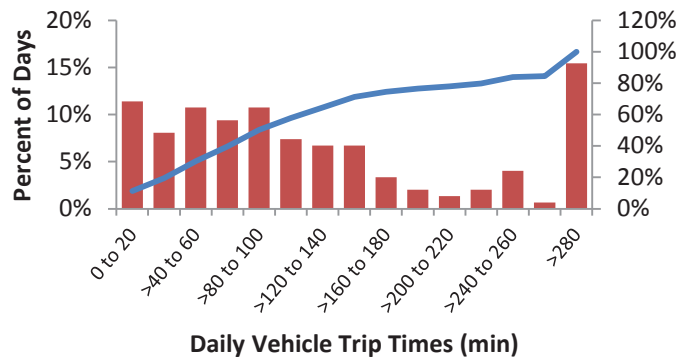
Vehicle: 5L-G422227H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: FORD  
 Vehicle Model: F-150  
 Body Type: pickup

Total Number of Days with Driving 149  
 Average Number of Trips 4.6  
 Average Trip Distance 58.5  
 Total Number of Trips 685  
 Total Distance (miles) 8711.3  
 Total Trip Duration (minutes) 21202

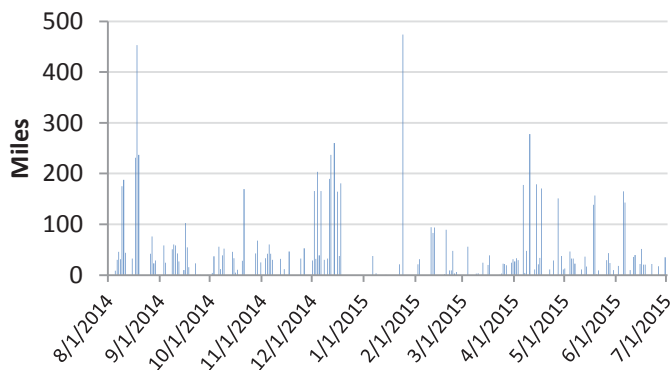
**Distribution of Daily Vehicle Travel Distance**



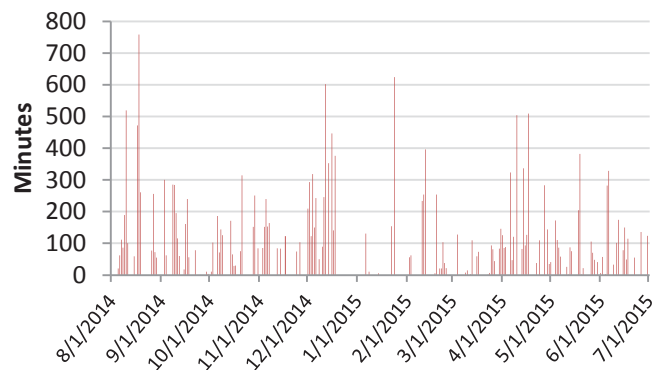
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**



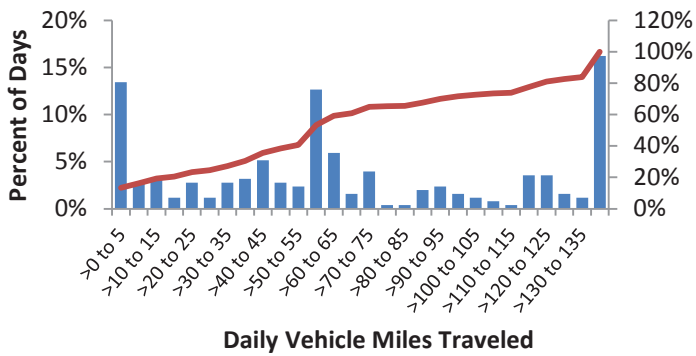
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	22%	33
63	21%	31
67	21%	31

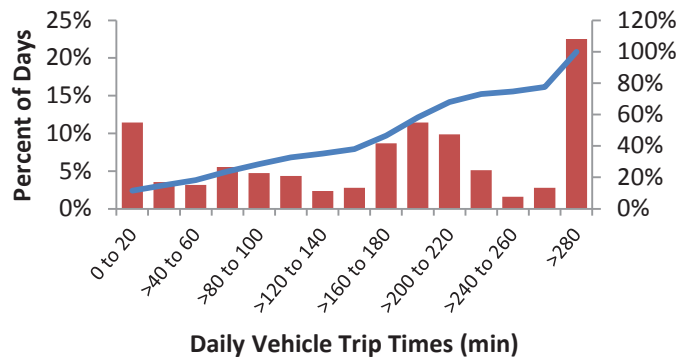
Vehicle: 5L-G422215H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Chevrolet  
 Vehicle Model: Express  
 Body Type: van

Total Number of Days with Driving 253  
 Average Number of Trips 7.3  
 Average Trip Distance 76.0  
 Total Number of Trips 1859  
 Total Distance (miles) 19219.2  
 Total Trip Duration (minutes) 48249

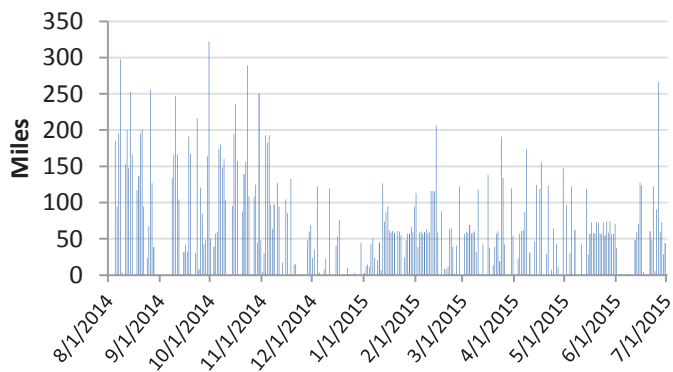
**Distribution of Daily Vehicle Travel Distance**



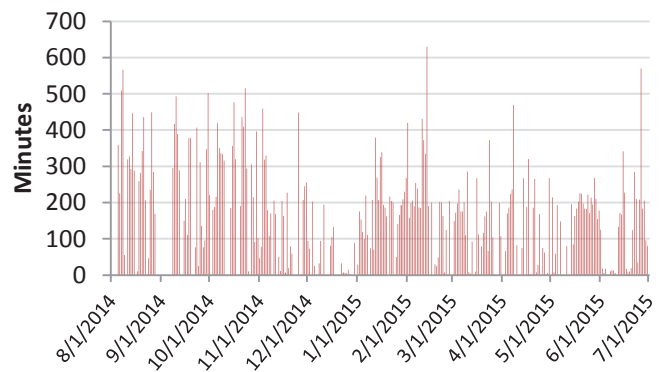
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

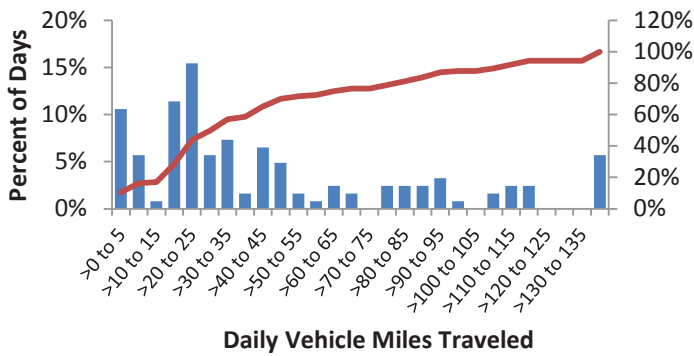
EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	49%	125
63	42%	107
67	40%	102



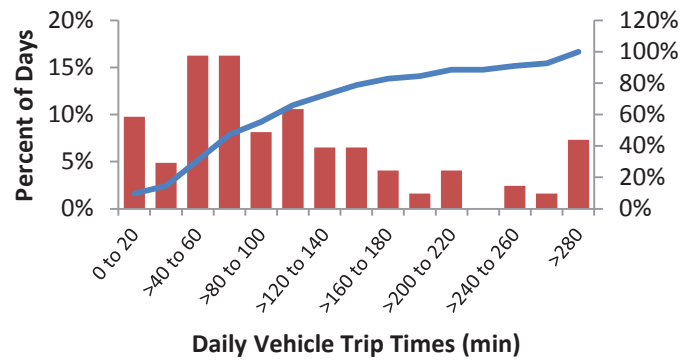
Vehicle: 5L-G422206H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Chevrolet  
 Vehicle Model: Express 1500  
 Body Type: van

Total Number of Days with Driving 123  
 Average Number of Trips 5.5  
 Average Trip Distance 49.0  
 Total Number of Trips 682  
 Total Distance (miles) 6021.3  
 Total Trip Duration (minutes) 14973

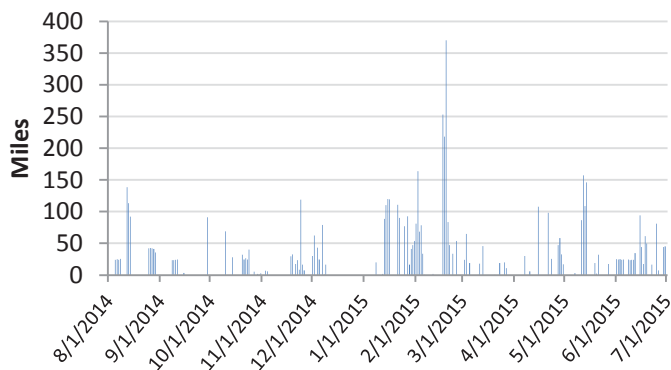
**Distribution of Daily Vehicle Travel Distance**



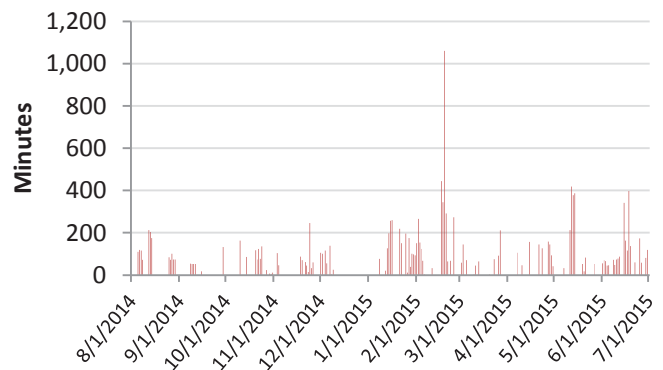
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**

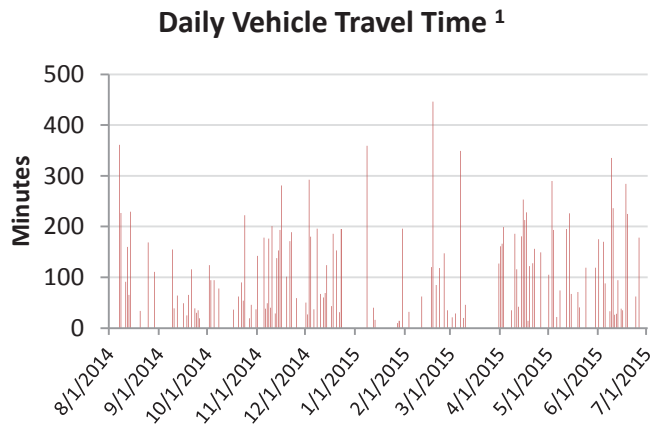
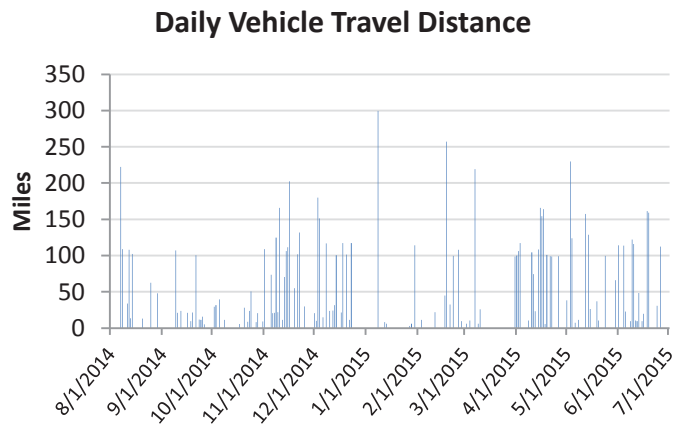
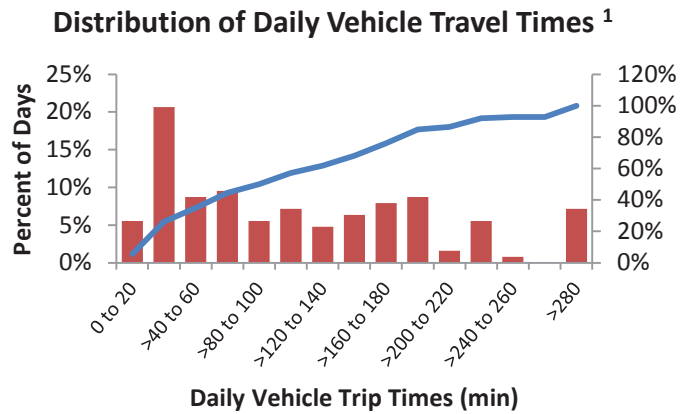
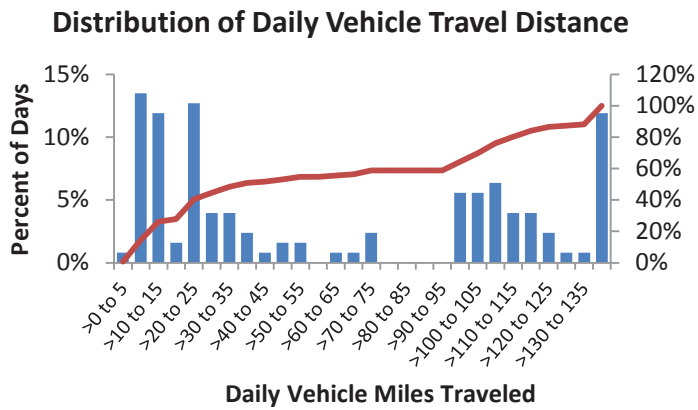


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	28%	34
63	26%	32
67	25%	31

Vehicle: 5L-G422169G  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2008  
 Vehicle Make: Chevrolet  
 Vehicle Model: Express  
 Body Type: van

Total Number of Days with Driving 126  
 Average Number of Trips 3.5  
 Average Trip Distance 68.5  
 Total Number of Trips 436  
 Total Distance (miles) 8637.0  
 Total Trip Duration (minutes) 15037

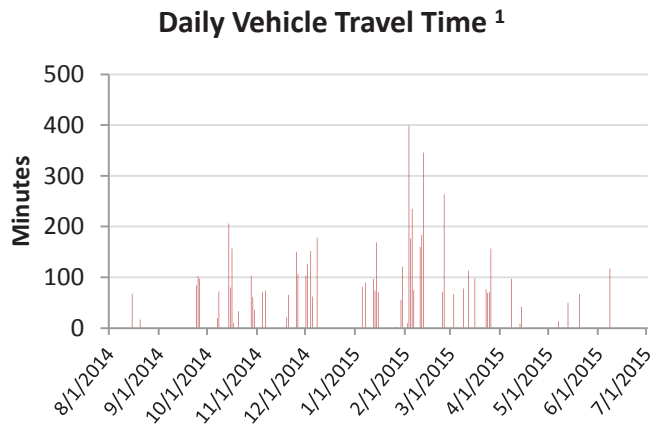
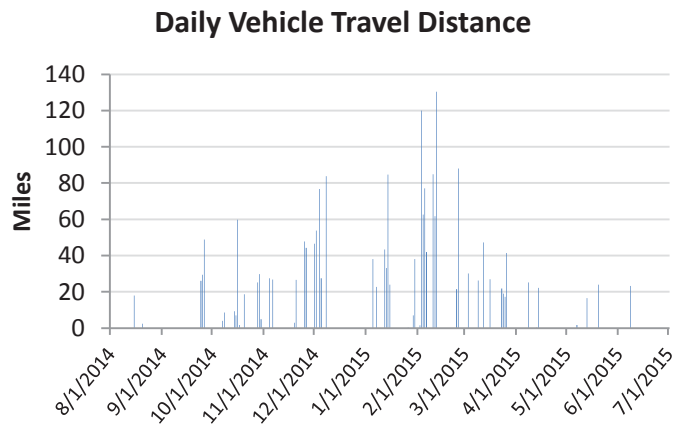
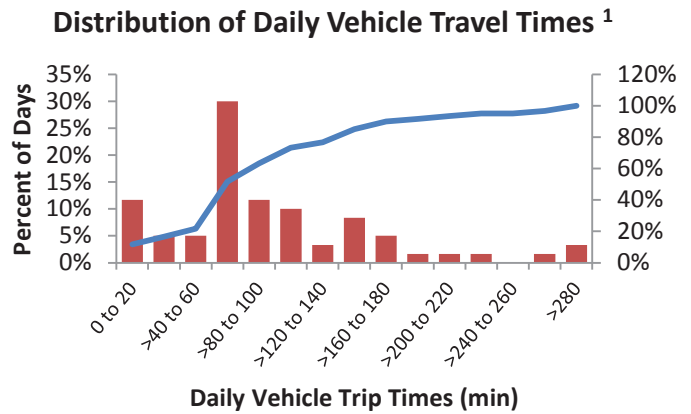
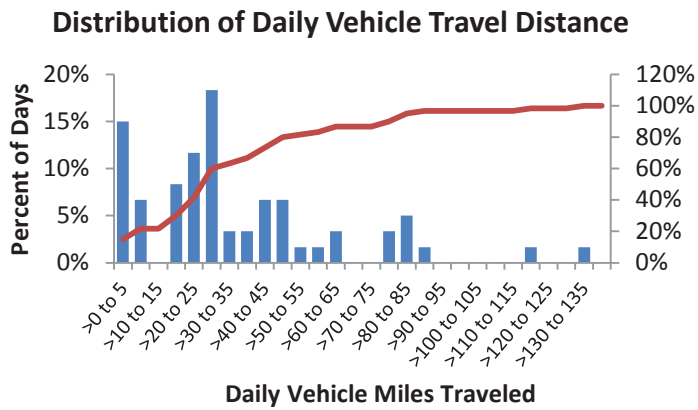


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	45%	57
63	44%	56
67	44%	55

Vehicle: 5L-G421922L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: FORD  
 Vehicle Model: F-150  
 Body Type: pickup

Total Number of Days with Driving 60  
 Average Number of Trips 3.7  
 Average Trip Distance 34.7  
 Total Number of Trips 220  
 Total Distance (miles) 2080.8  
 Total Trip Duration (minutes) 6059

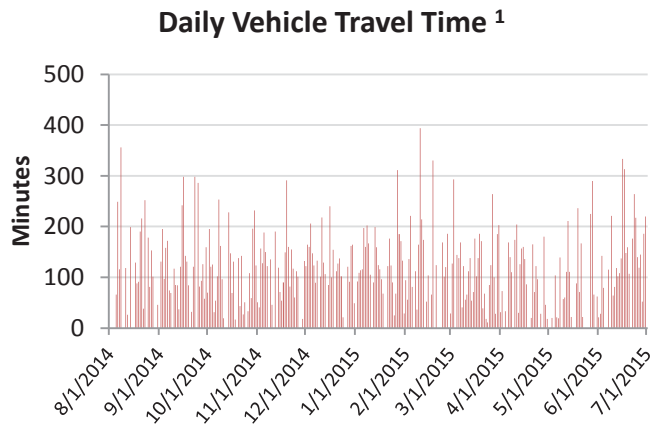
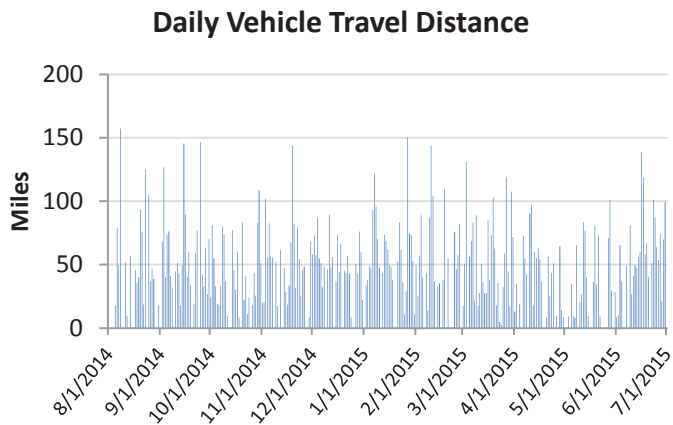
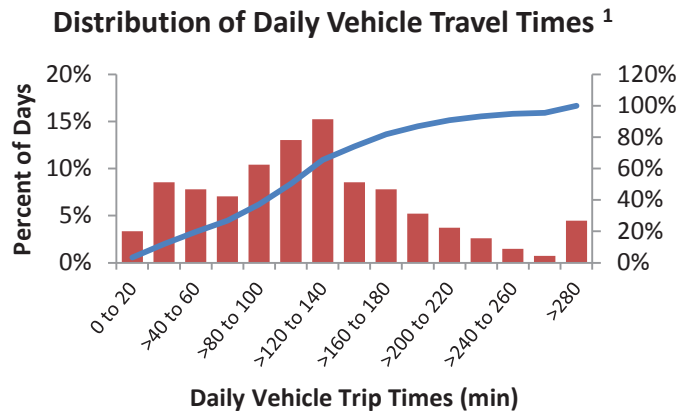
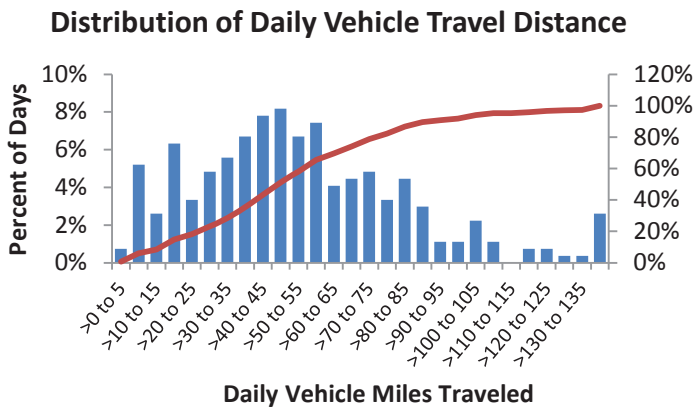


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	18%	11
63	13%	8
67	13%	8

Vehicle: 5L-G421920L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: FORD  
 Vehicle Model: F-150  
 Body Type: pickup

Total Number of Days with Driving 269  
 Average Number of Trips 6.9  
 Average Trip Distance 53.4  
 Total Number of Trips 1846  
 Total Distance (miles) 14373.6  
 Total Trip Duration (minutes) 33650

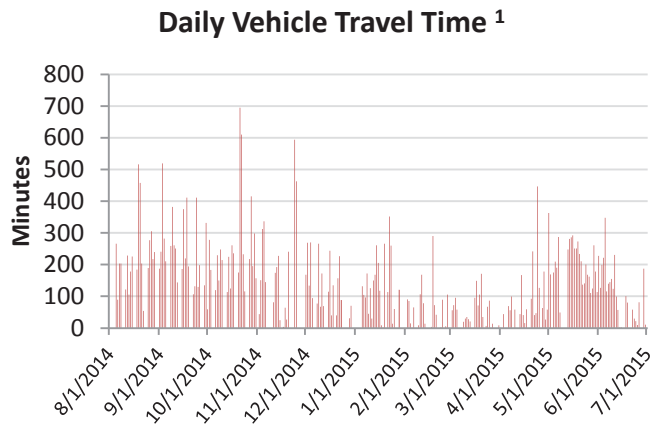
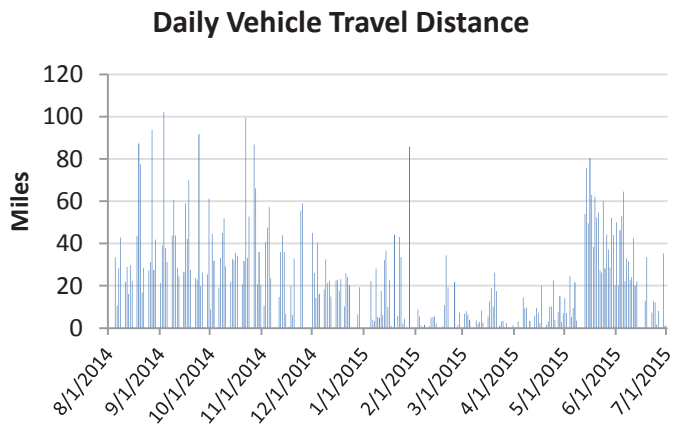
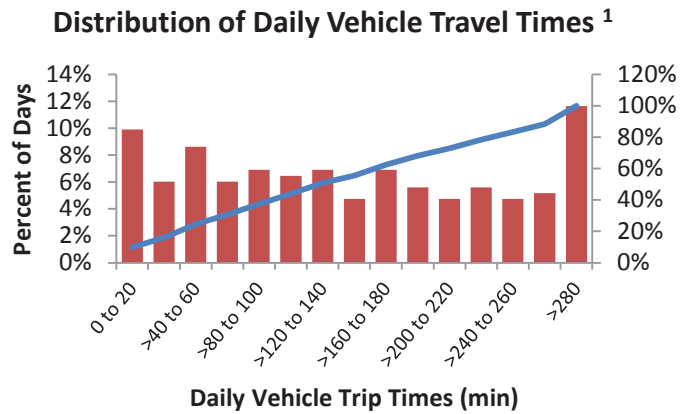
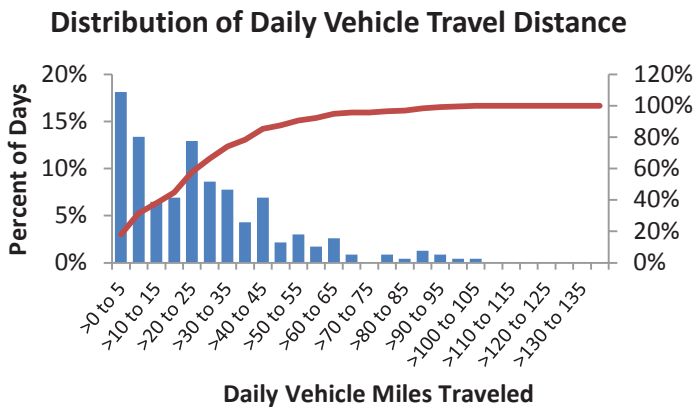


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	36%	96
63	32%	85
67	29%	78

Vehicle: 5L-G421775L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: FORD  
 Vehicle Model: F-150  
 Body Type: pickup

Total Number of Days with Driving 232  
 Average Number of Trips 12.4  
 Average Trip Distance 25.4  
 Total Number of Trips 2886  
 Total Distance (miles) 5882.2  
 Total Trip Duration (minutes) 36586



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	8%	18
63	6%	13
67	5%	11

Vehicle:

5L-G421041D

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2006

Vehicle Make:

Chevrolet

Vehicle Model:

Silverado

Body Type:

pickup

Total Number of Days with Driving

163

Average Number of Trips

4.4

Average Trip Distance

18.5

Total Number of Trips

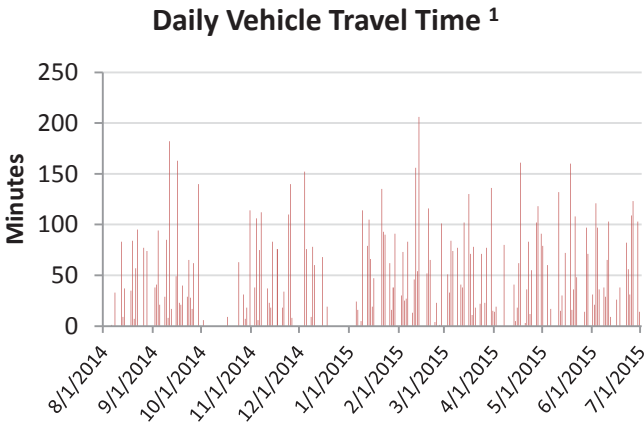
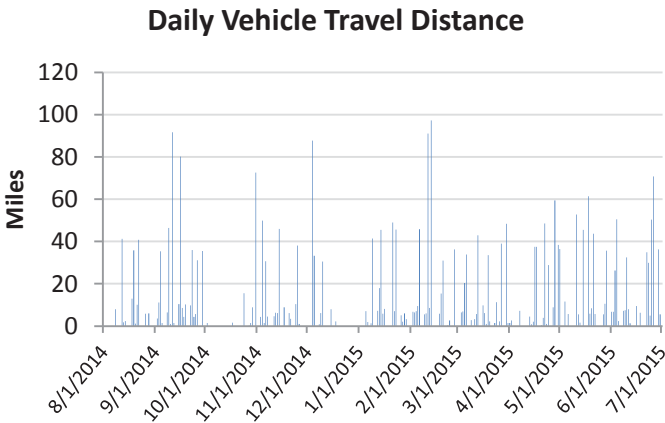
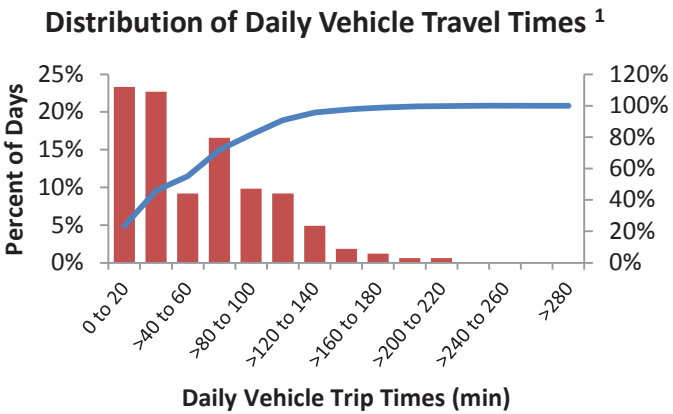
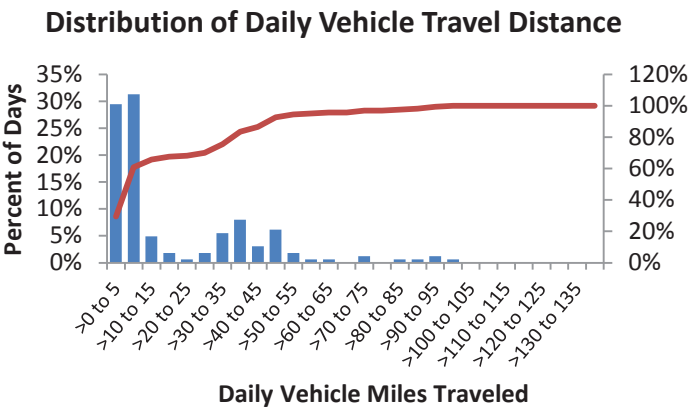
724

Total Distance (miles)

3016.0

Total Trip Duration (minutes)

9552



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	6%	9
63	4%	7
67	4%	7

Vehicle:

5L-G416051H

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2009

Vehicle Make:

Dodge

Vehicle Model:

Grand Caravan

Body Type:

van

Total Number of Days with Driving

1

Average Number of Trips

0.0

Average Trip Distance

0.0

Total Number of Trips

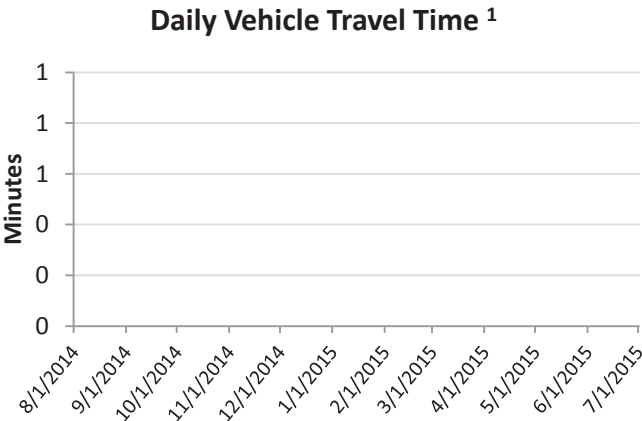
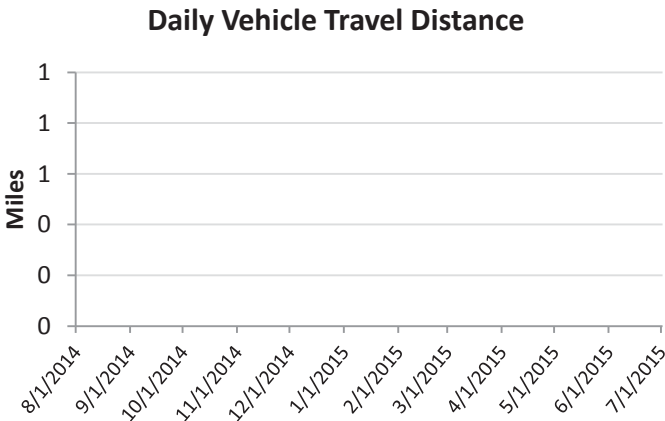
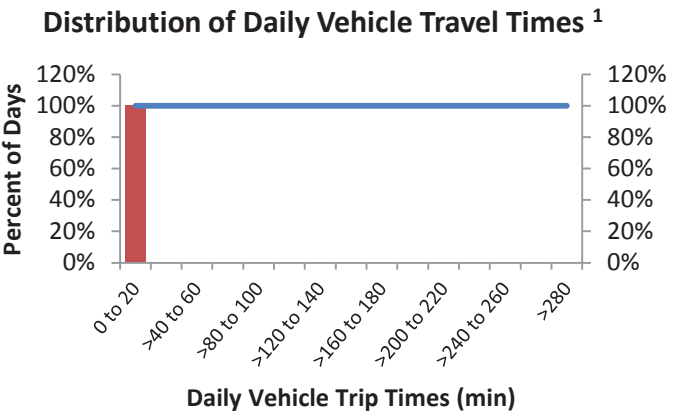
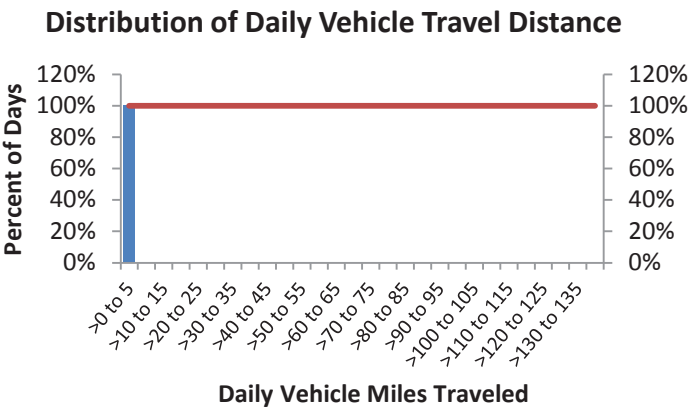
0

Total Distance (miles)

0.0

Total Trip Duration (minutes)

0



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	0%	0
63	0%	0
67	0%	0

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G414872K

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2010

Dodge

Grand Caravan

van

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

1

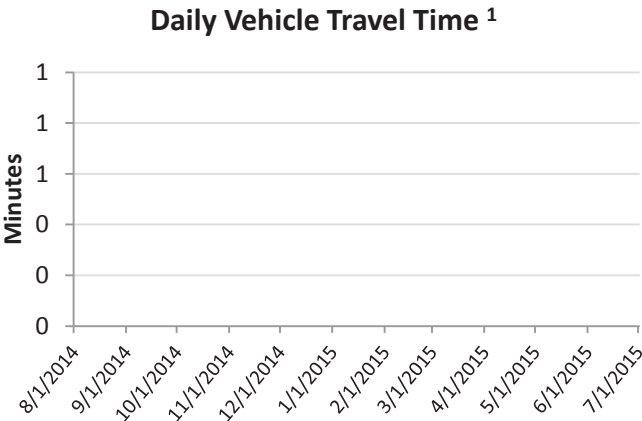
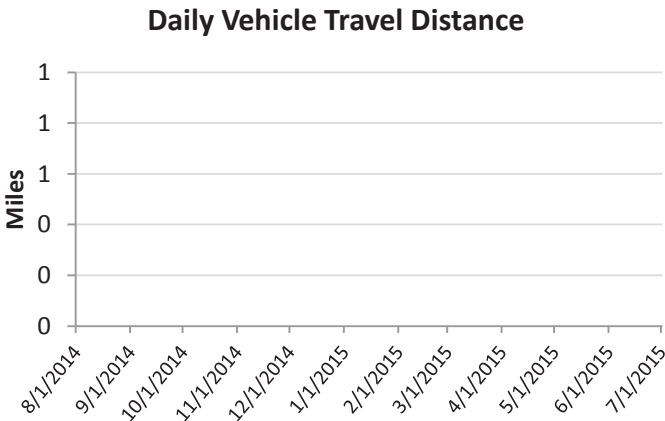
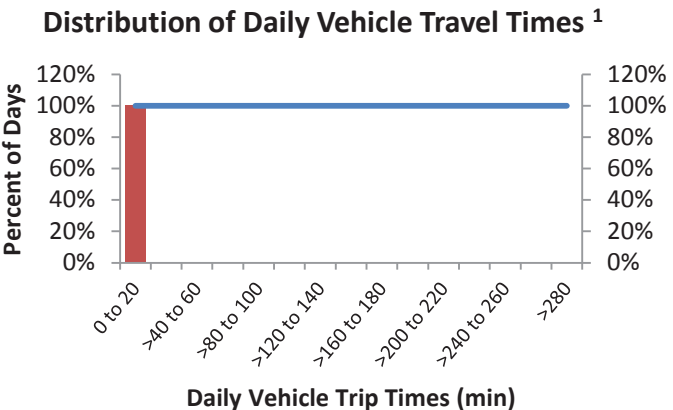
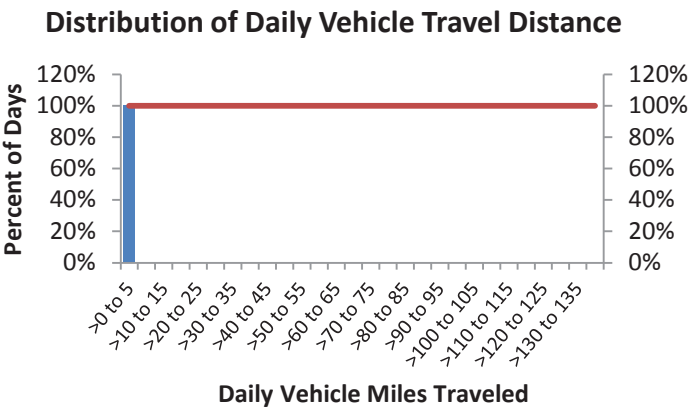
0.0

0.0

0

0.0

0



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

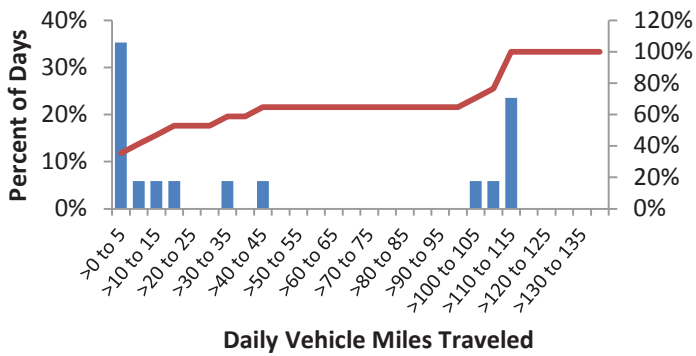
EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	0%	0
63	0%	0
67	0%	0



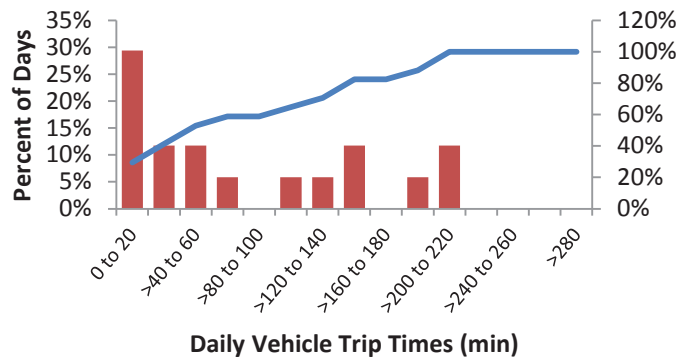
Vehicle: 5L-G414871K  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2010  
 Vehicle Make: Dodge  
 Vehicle Model: Grand Caravan  
 Body Type: van

Total Number of Days with Driving 17  
 Average Number of Trips 6.2  
 Average Trip Distance 46.1  
 Total Number of Trips 105  
 Total Distance (miles) 784.2  
 Total Trip Duration (minutes) 1470

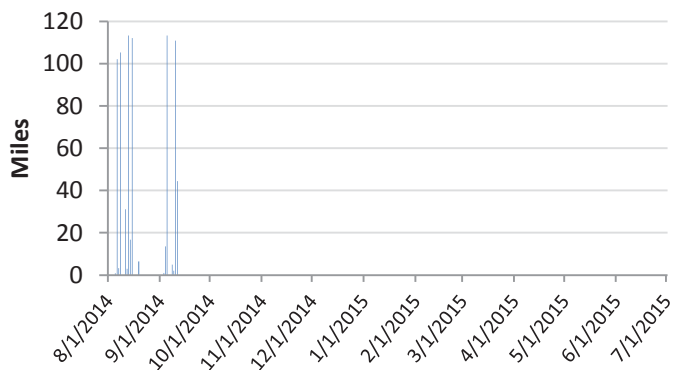
**Distribution of Daily Vehicle Travel Distance**



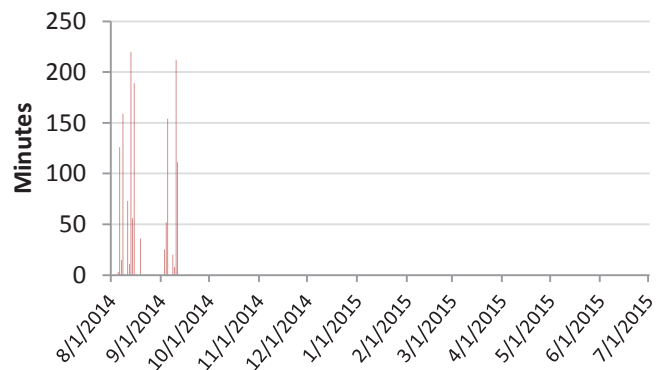
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	35%	6
63	35%	6
67	35%	6

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G414869K

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2010

FORD

Ranger

small pickup

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

164

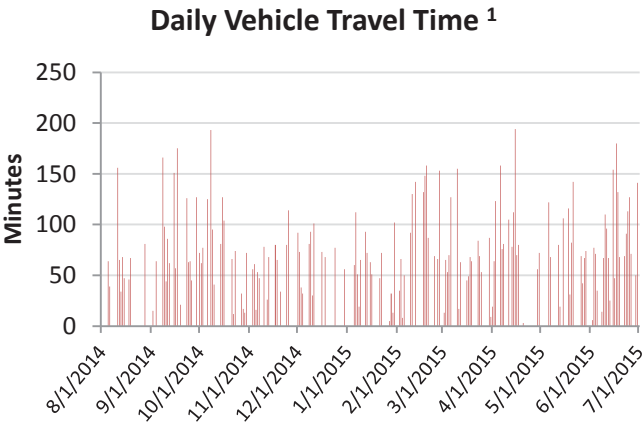
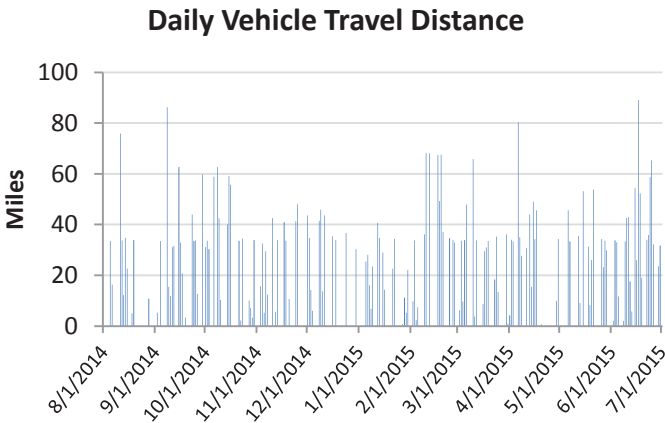
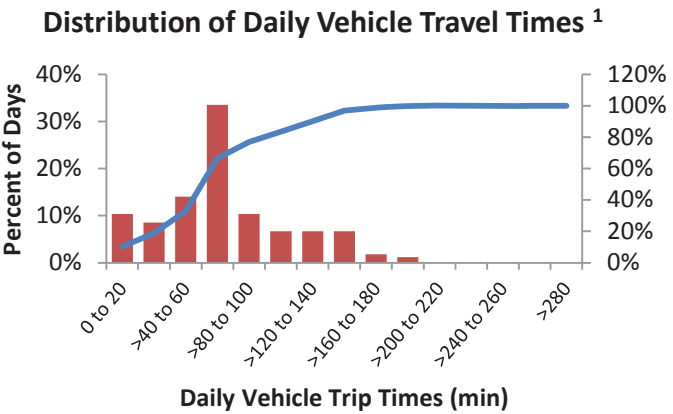
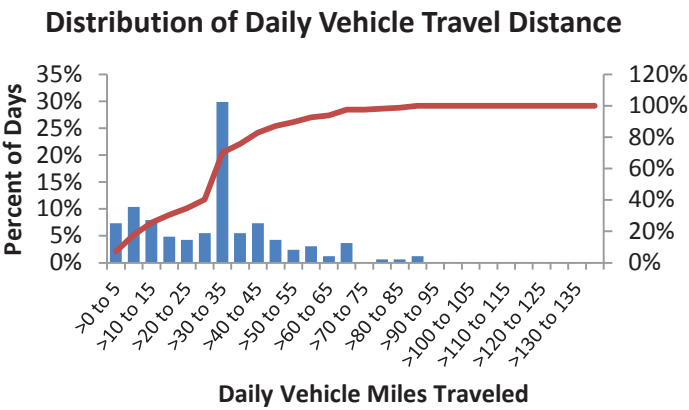
4.9

30.6

804

5022.9

12290



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	9%	14
63	6%	10
67	5%	8

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G414868K

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2010

FORD

Ranger

small pickup

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

105

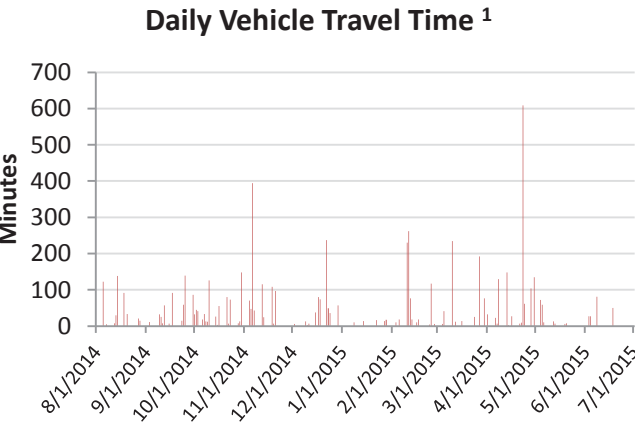
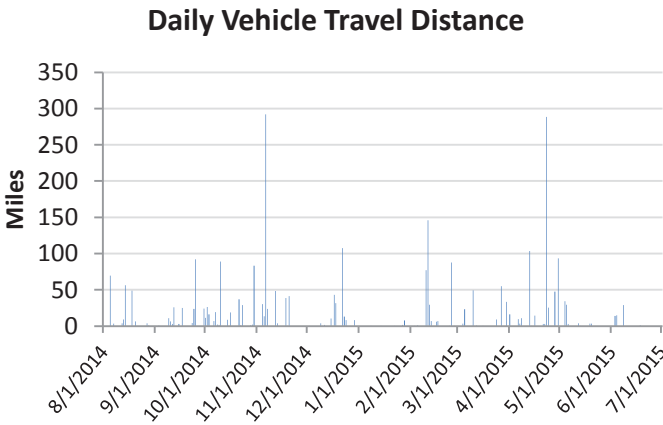
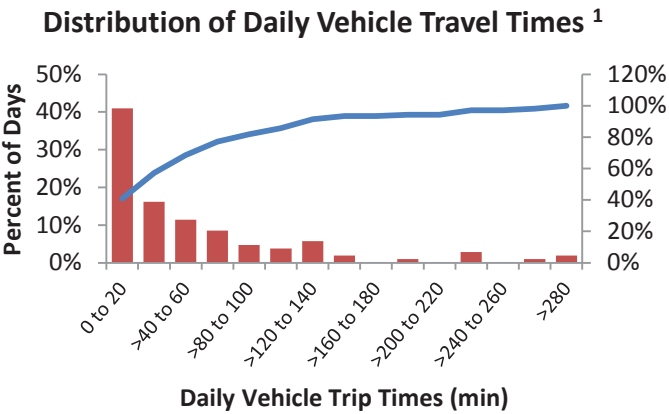
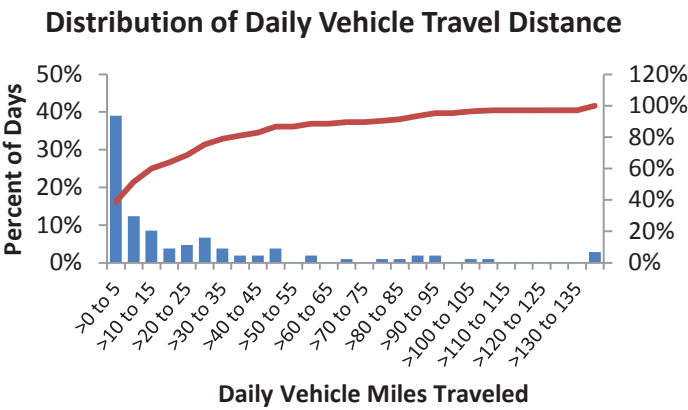
5.0

26.6

529

2794.8

6323

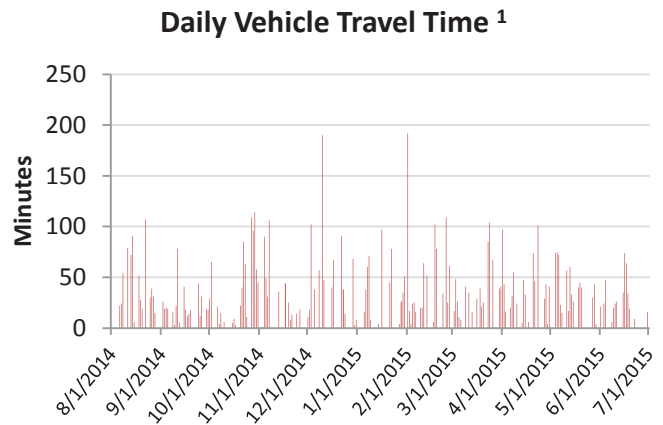
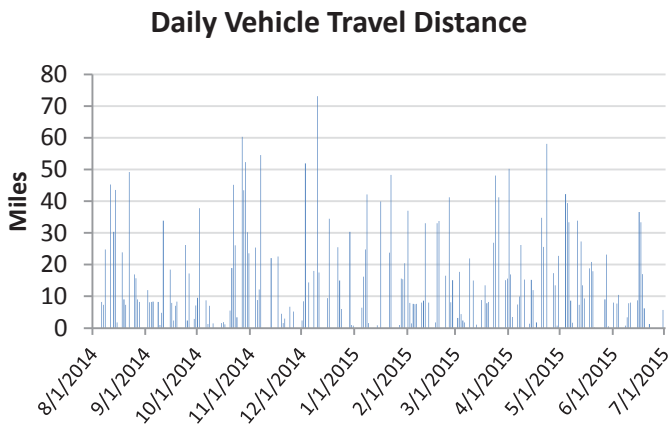
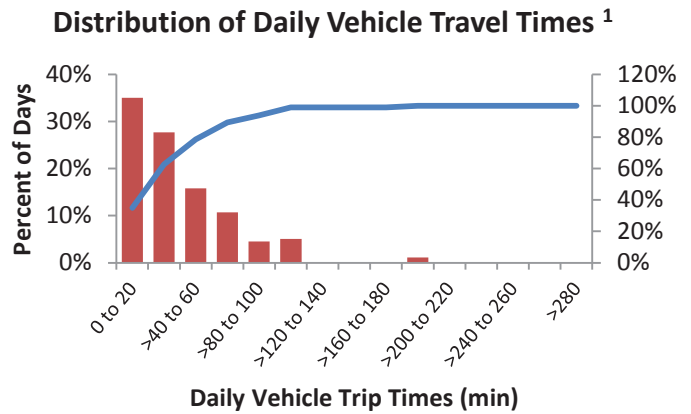
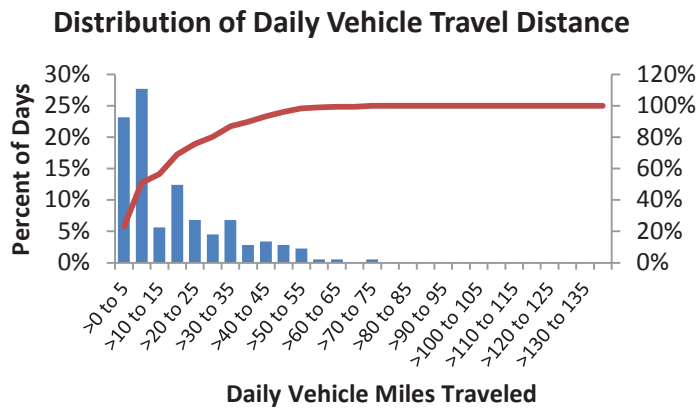


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	11%	12
63	11%	12
67	11%	12

Vehicle:	5L-G414867K
Report Period:	8/1/2014 00:00:00 - 7/1/2015 00:00:00
Model Year:	2010
Vehicle Make:	FORD
Vehicle Model:	Ranger
Body Type:	small pickup

Total Number of Days with Driving	177
Average Number of Trips	4.9
Average Trip Distance	16.5
Total Number of Trips	868
Total Distance (miles)	2919.4
Total Trip Duration (minutes)	6954

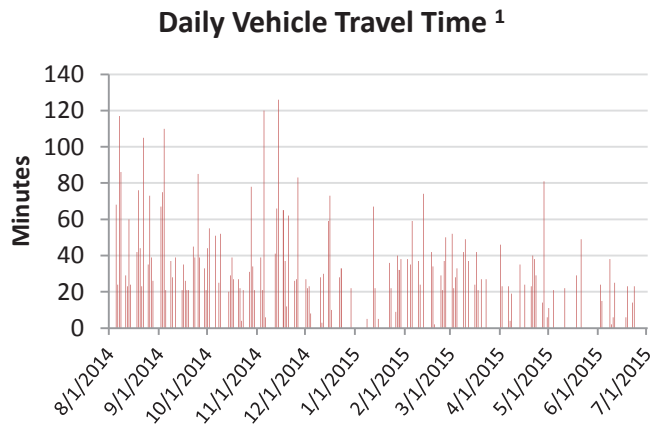
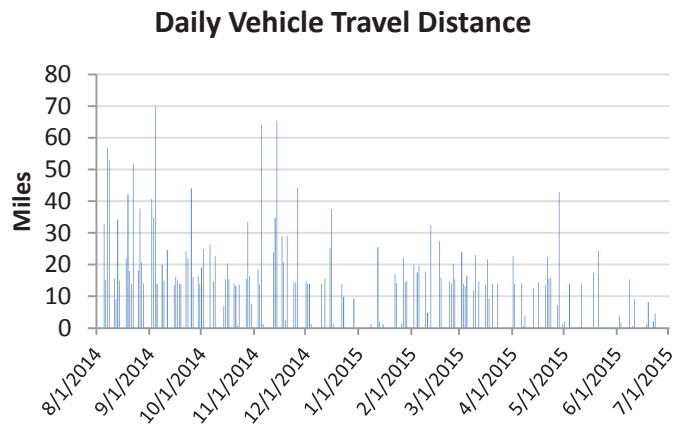
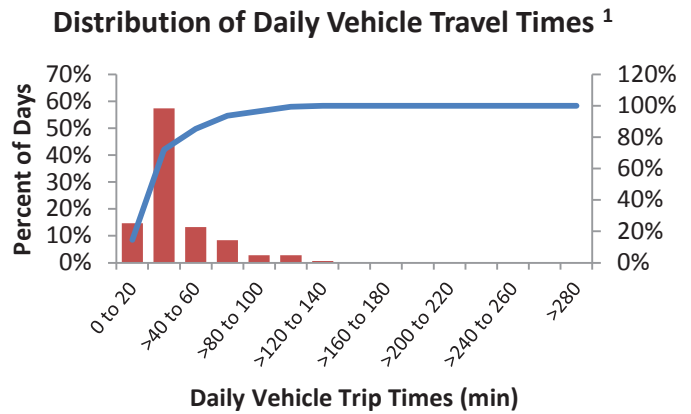
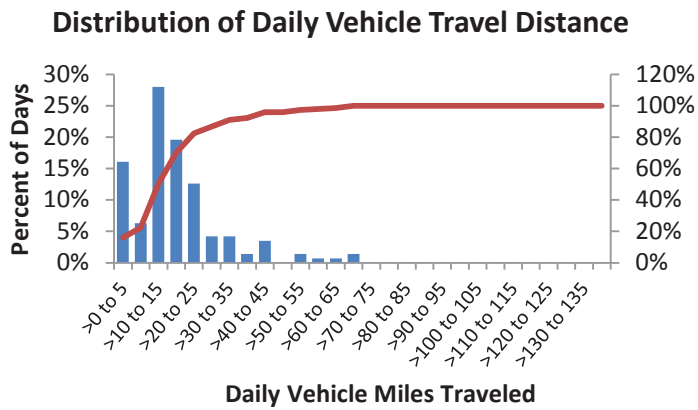


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	1%	2
63	1%	1
67	1%	1

Vehicle: 5L-G414513L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: RAM  
 Vehicle Model: Dakota  
 Body Type: small pickup

Total Number of Days with Driving 143  
 Average Number of Trips 3.5  
 Average Trip Distance 18.0  
 Total Number of Trips 495  
 Total Distance (miles) 2569.9  
 Total Trip Duration (minutes) 5209

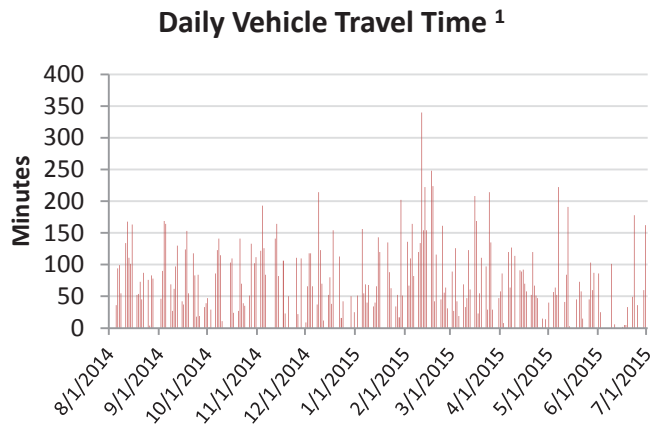
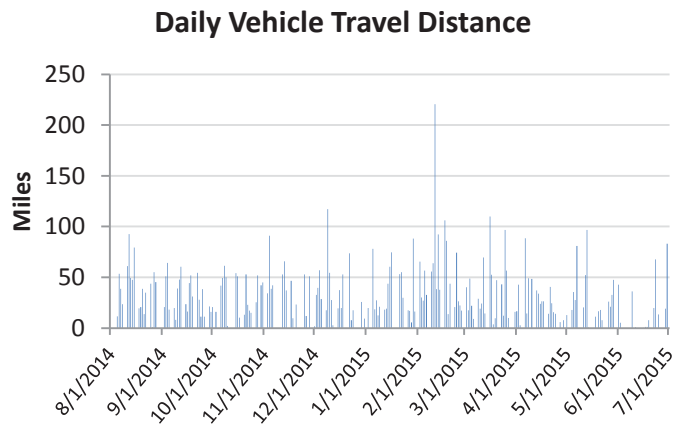
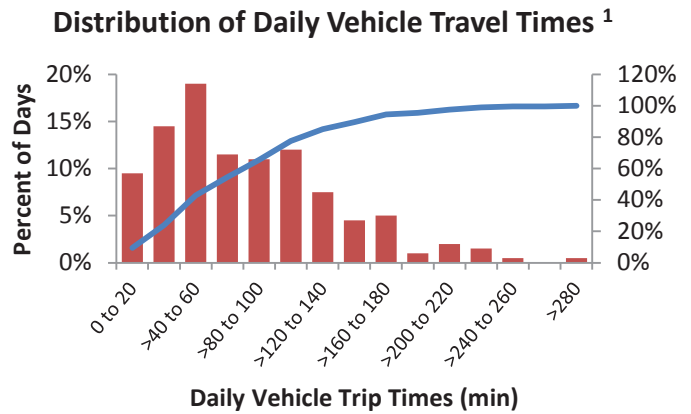
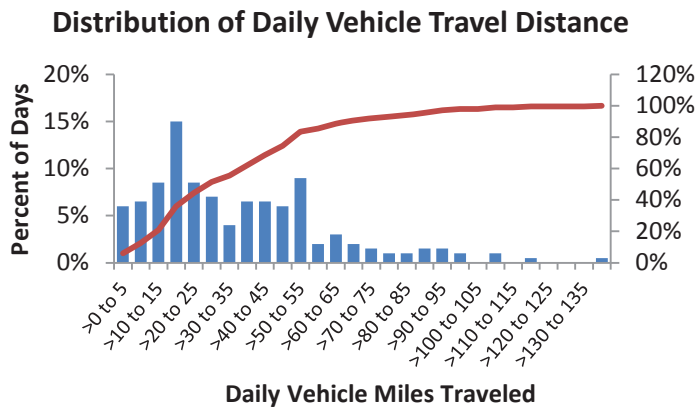


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	2%	3
63	2%	3
67	1%	1

Vehicle: 5L-G414511L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: RAM  
 Vehicle Model: Dakota  
 Body Type: small pickup

Total Number of Days with Driving 200  
 Average Number of Trips 6.0  
 Average Trip Distance 35.8  
 Total Number of Trips 1199  
 Total Distance (miles) 7157.9  
 Total Trip Duration (minutes) 16647

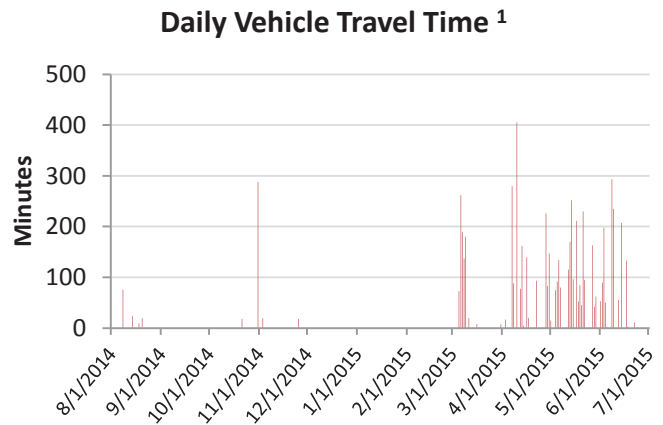
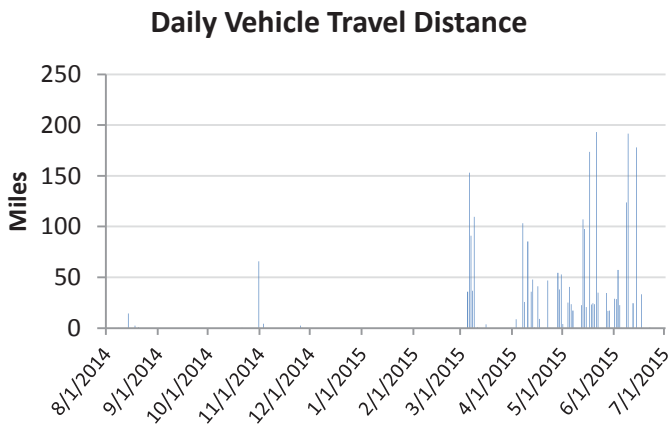
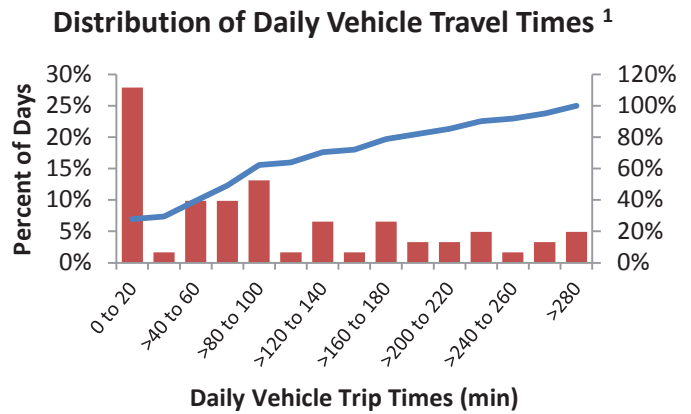
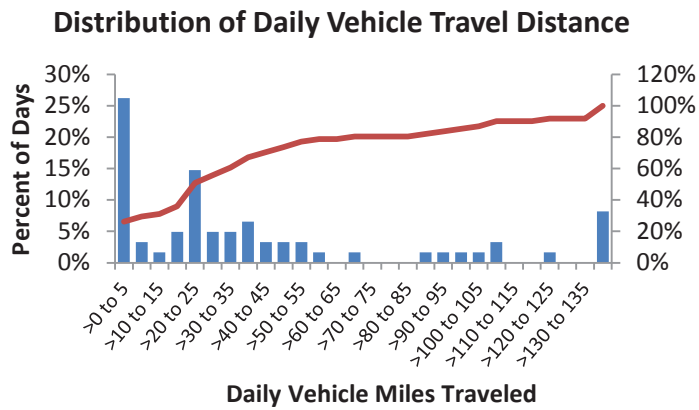


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	15%	29
63	13%	25
67	11%	21

Vehicle: 5L-G414500L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: Dodge  
 Vehicle Model: Grand Caravan  
 Body Type: van

Total Number of Days with Driving 61  
 Average Number of Trips 3.9  
 Average Trip Distance 43.6  
 Total Number of Trips 240  
 Total Distance (miles) 2659.3  
 Total Trip Duration (minutes) 6434

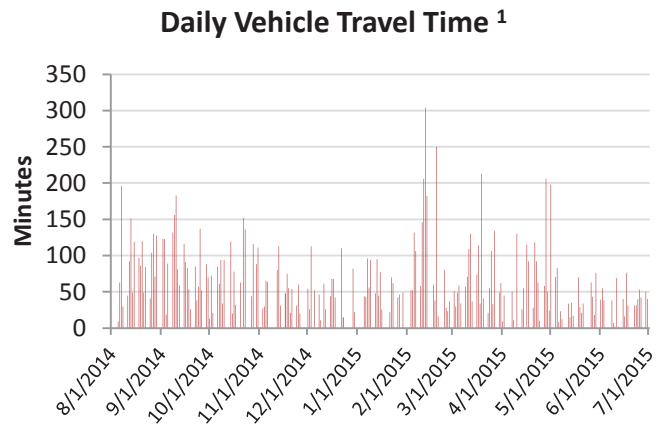
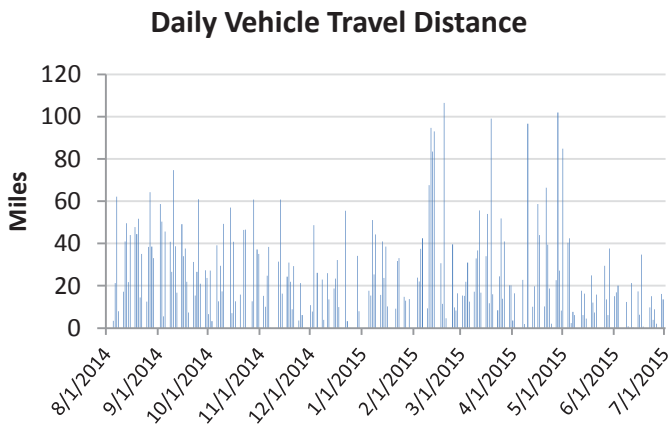
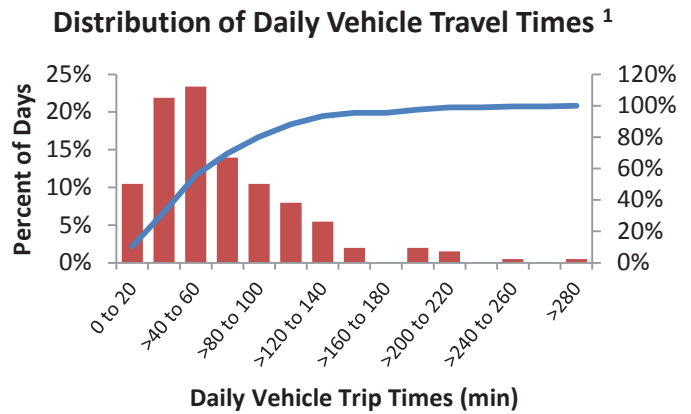
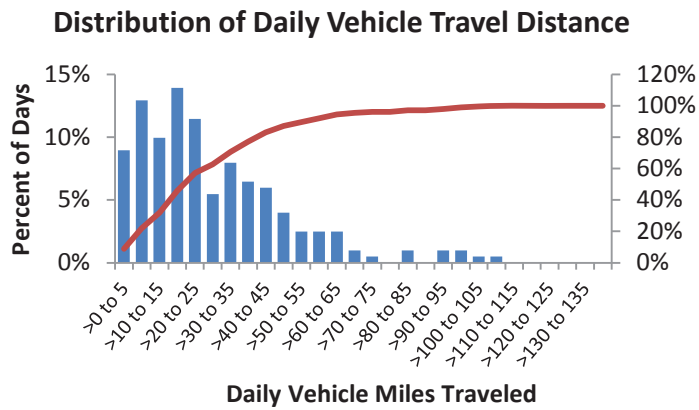


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	21%	13
63	21%	13
67	20%	12

Vehicle:	5L-G414488L
Report Period:	8/1/2014 00:00:00 - 7/1/2015 00:00:00
Model Year:	2011
Vehicle Make:	Dodge
Vehicle Model:	Grand Caravan
Body Type:	van

Total Number of Days with Driving	201
Average Number of Trips	6.0
Average Trip Distance	27.4
Total Number of Trips	1199
Total Distance (miles)	5517.0
Total Trip Duration (minutes)	13552



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	8%	16
63	6%	12
67	5%	10



Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G414440H

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2009

Dodge

Dakota

small pickup

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

192

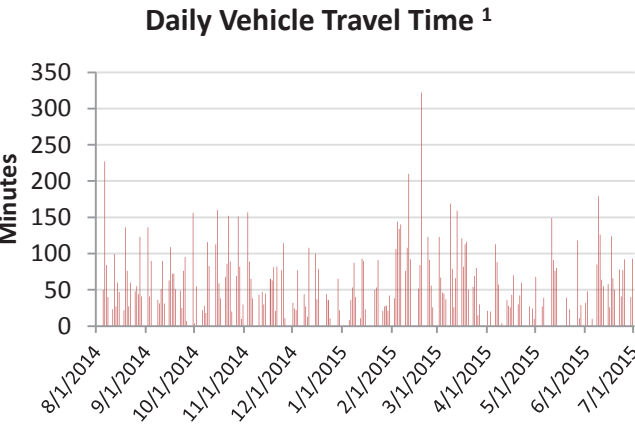
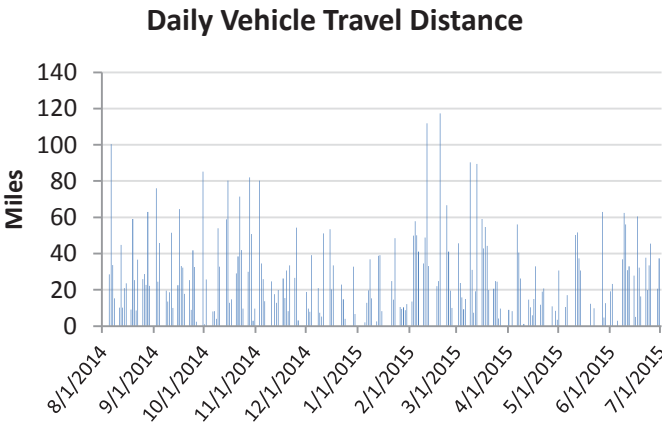
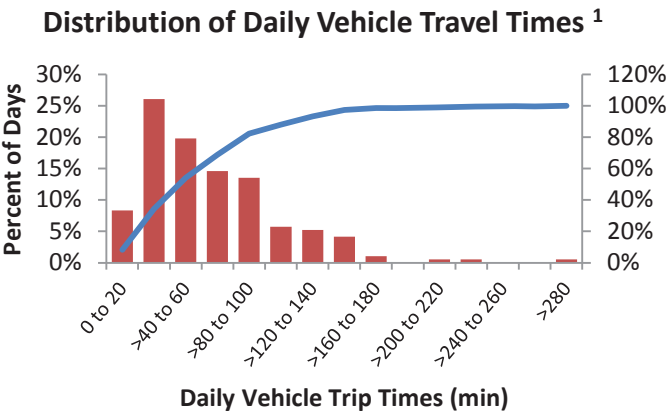
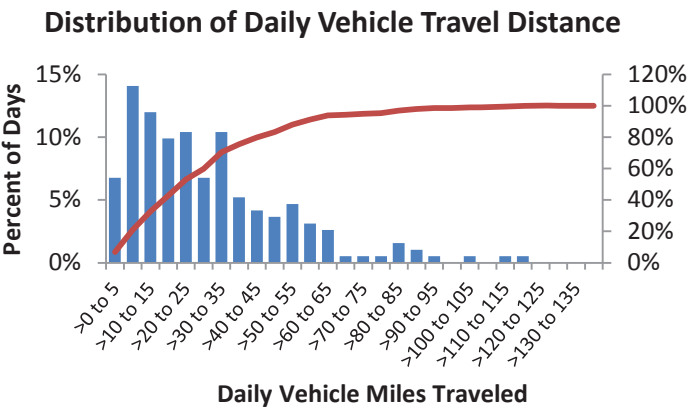
5.7

29.1

1097

5589.5

12708

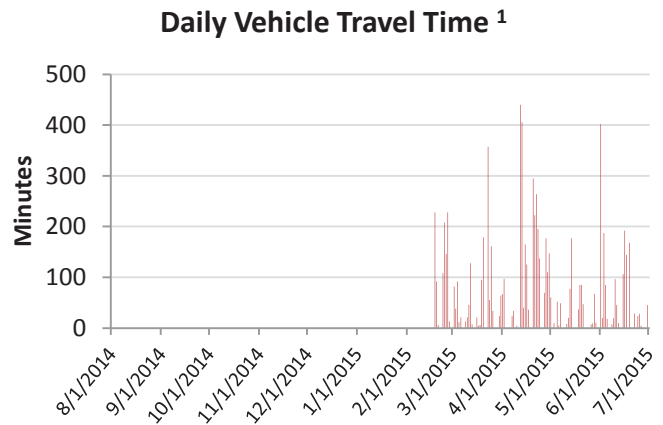
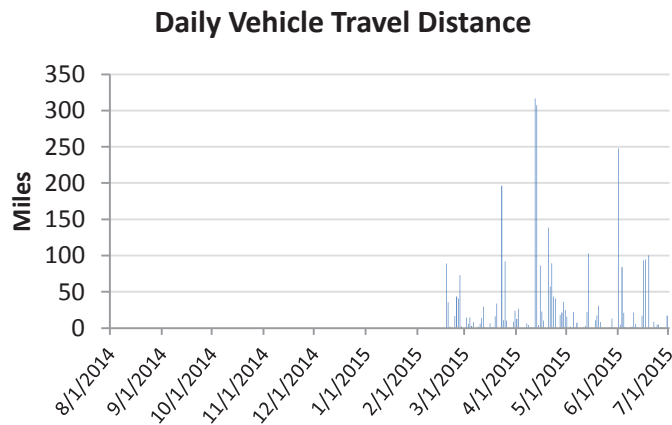
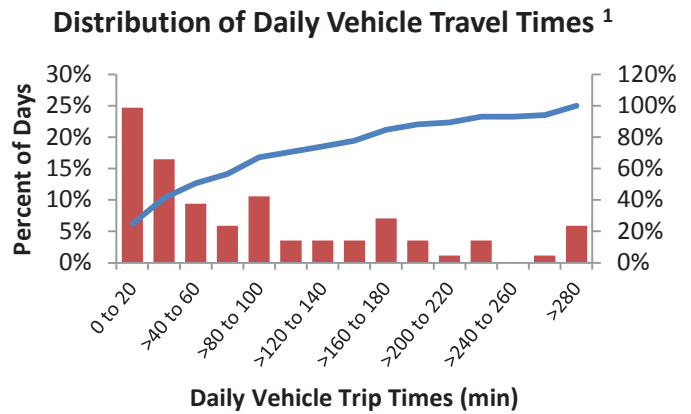
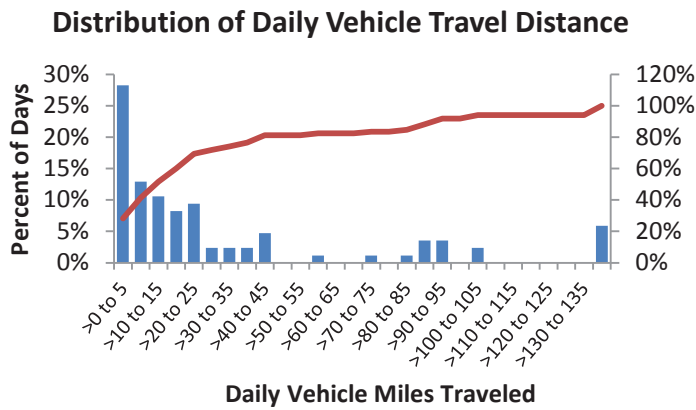


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	9%	18
63	7%	13
67	6%	11

Vehicle: 5L-G414438H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Dodge  
 Vehicle Model: Dakota  
 Body Type: small pickup

Total Number of Days with Driving 85  
 Average Number of Trips 6.6  
 Average Trip Distance 36.1  
 Total Number of Trips 565  
 Total Distance (miles) 3065.5  
 Total Trip Duration (minutes) 7981



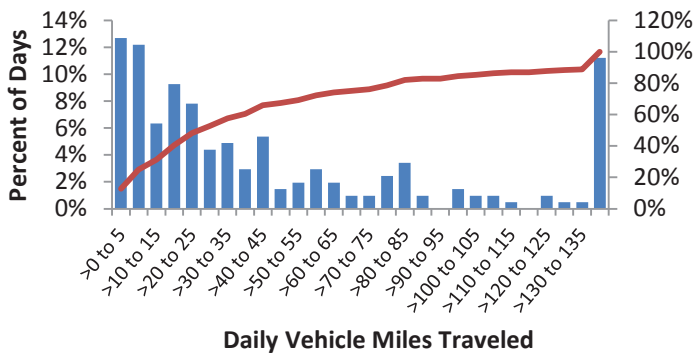
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	18%	15
63	18%	15
67	18%	15

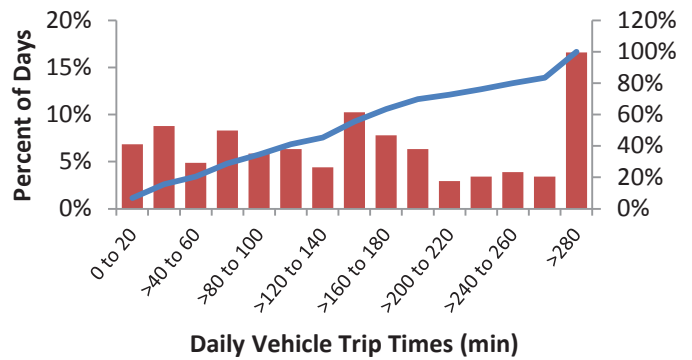
Vehicle: 5L-G414430H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Dodge  
 Vehicle Model: Dakota SXT  
 Body Type: small pickup

Total Number of Days with Driving 205  
 Average Number of Trips 8.3  
 Average Trip Distance 62.5  
 Total Number of Trips 1709  
 Total Distance (miles) 12810.2  
 Total Trip Duration (minutes) 37508

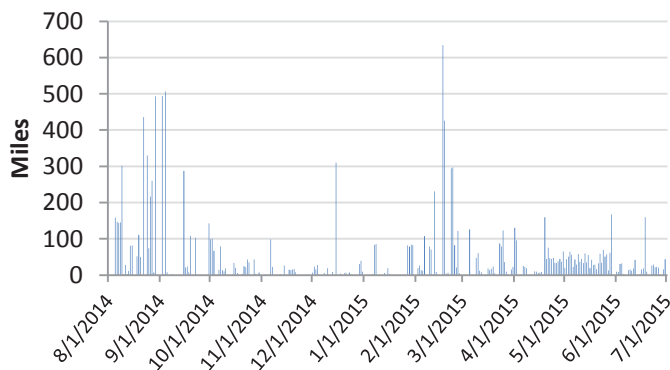
**Distribution of Daily Vehicle Travel Distance**



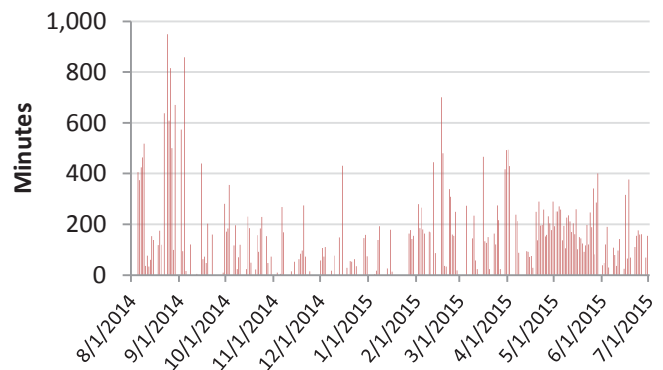
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	28%	58
63	27%	55
67	25%	52

Vehicle:

5L-G414428H

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2009

Vehicle Make:

Dodge

Vehicle Model:

Dakota SXT

Body Type:

small pickup

Total Number of Days with Driving

163

Average Number of Trips

5.0

Average Trip Distance

31.3

Total Number of Trips

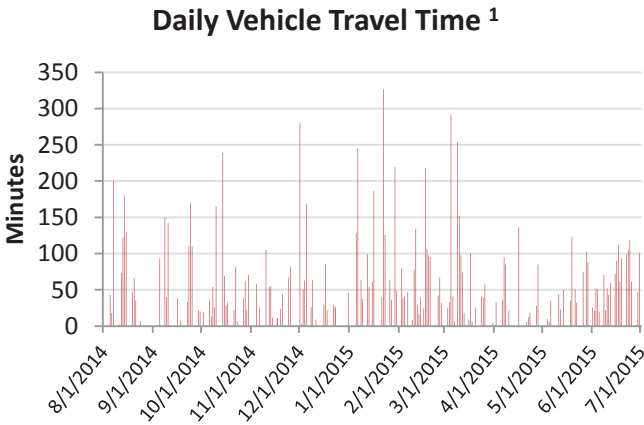
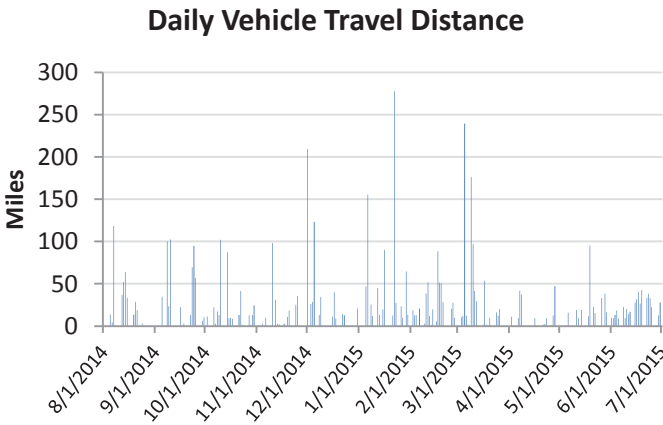
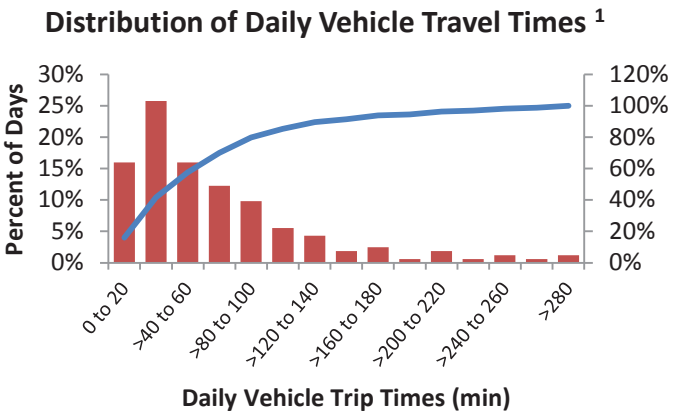
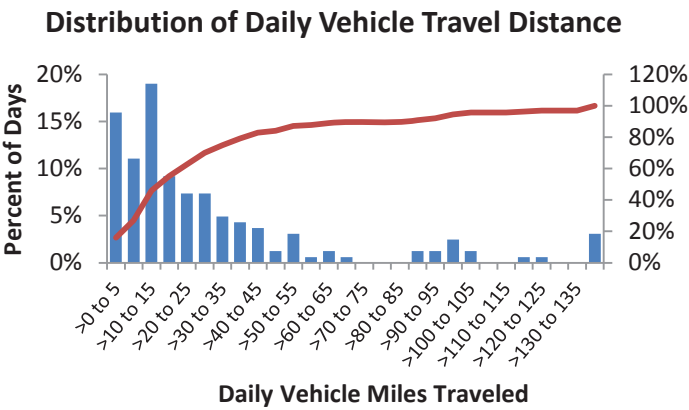
808

Total Distance (miles)

5096.0

Total Trip Duration (minutes)

11093



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

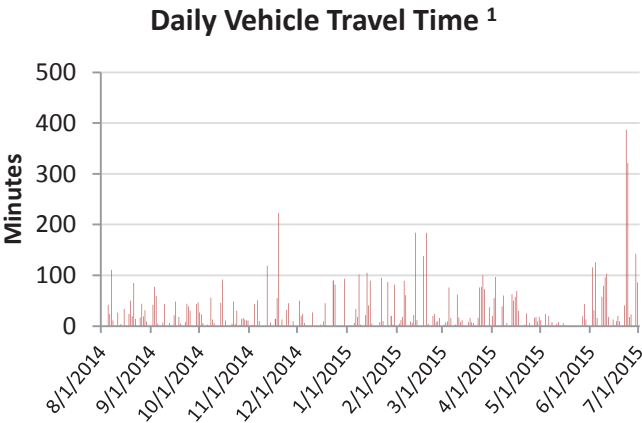
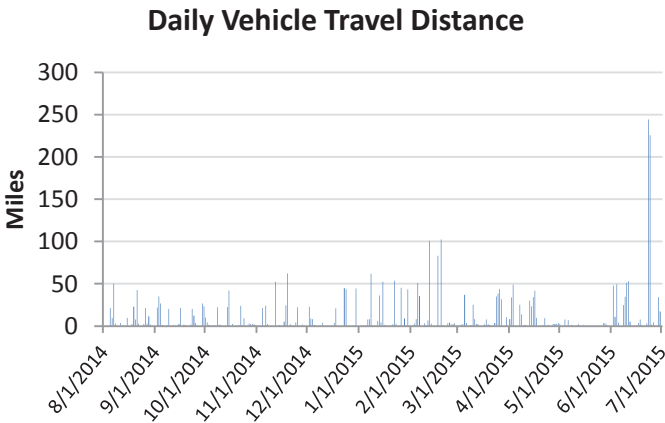
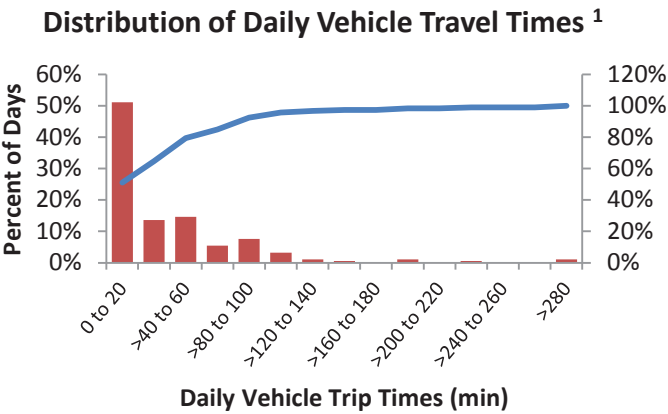
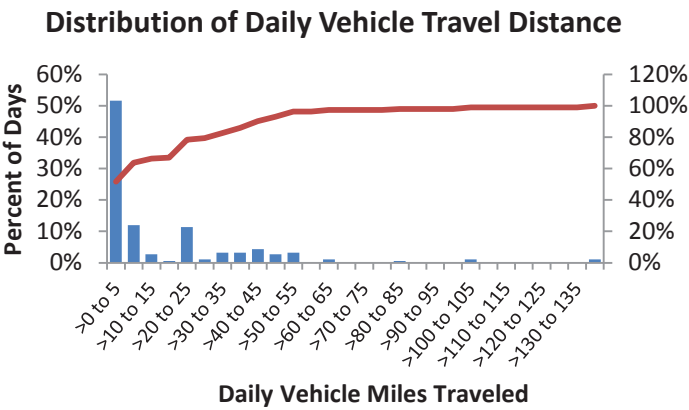
EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	12%	20
63	12%	20
67	11%	18

Vehicle:
Report Period:
Model Year:
Vehicle Make:
Vehicle Model:
Body Type:

5L-G414405H
8/1/2014 00:00:00 - 7/1/2015 00:00:00
2009
Dodge
Caravan
van

Total Number of Days with Driving
Average Number of Trips
Average Trip Distance
Total Number of Trips
Total Distance (miles)
Total Trip Duration (minutes)

184
4.0
17.3
741
3180.6
7311

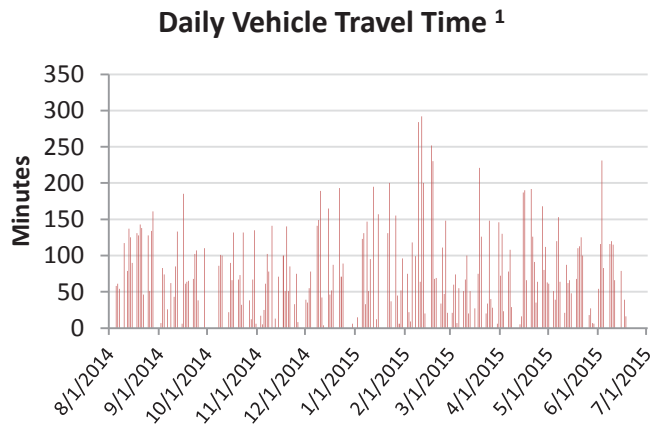
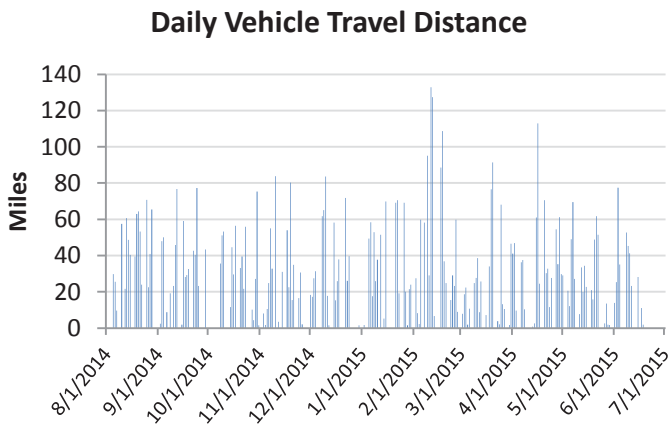
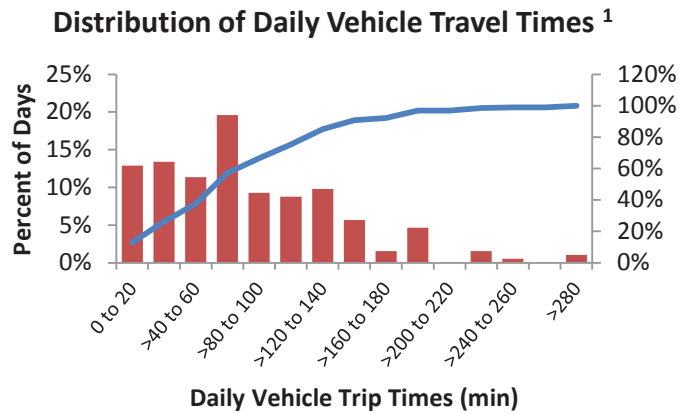
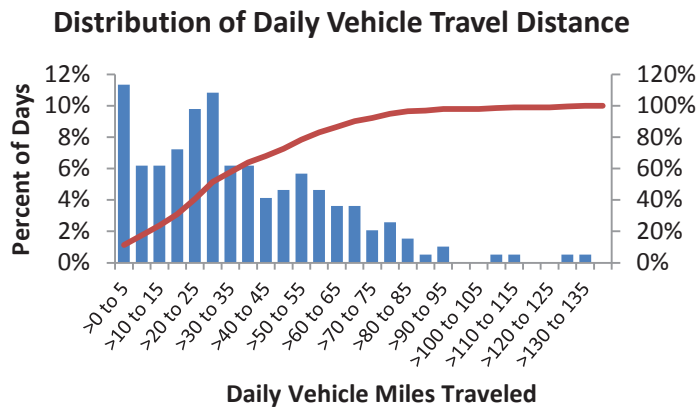


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	4%	7
63	3%	5
67	3%	5

Vehicle: 5L-G414389H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Dodge  
 Vehicle Model: Caravan  
 Body Type: van

Total Number of Days with Driving 194  
 Average Number of Trips 6.0  
 Average Trip Distance 35.2  
 Total Number of Trips 1156  
 Total Distance (miles) 6832.3  
 Total Trip Duration (minutes) 16193

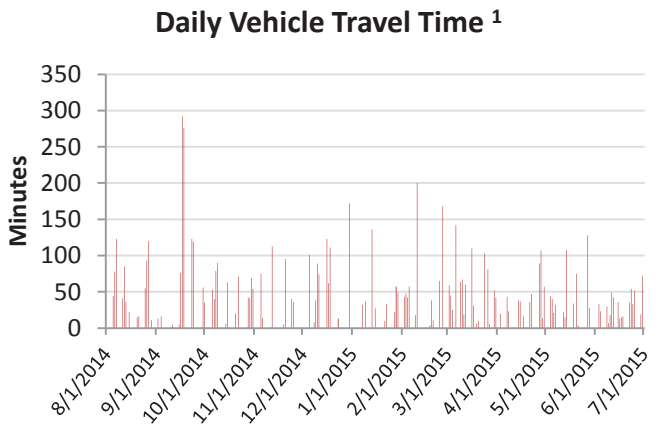
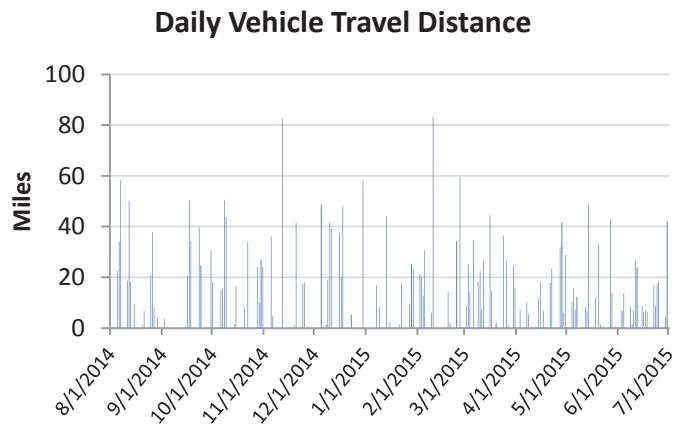
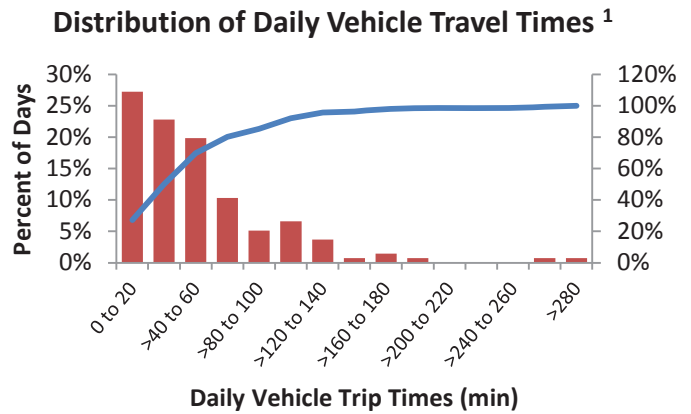
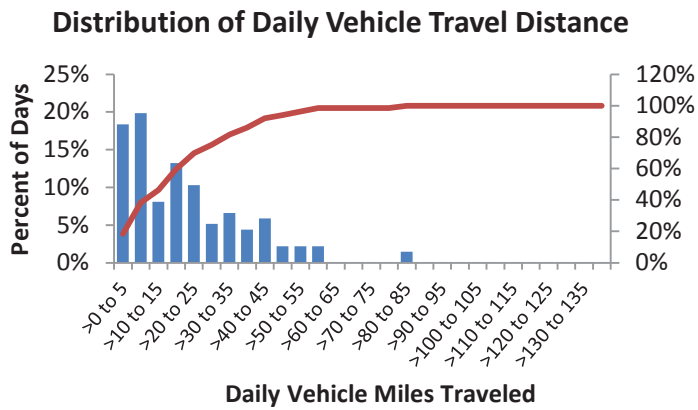


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	19%	36
63	14%	27
67	12%	24

Vehicle: 5L-G411467F  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2007  
 Vehicle Make: Chevrolet  
 Vehicle Model: Uplander  
 Body Type: van

Total Number of Days with Driving 136  
 Average Number of Trips 4.5  
 Average Trip Distance 19.9  
 Total Number of Trips 616  
 Total Distance (miles) 2706.4  
 Total Trip Duration (minutes) 7198

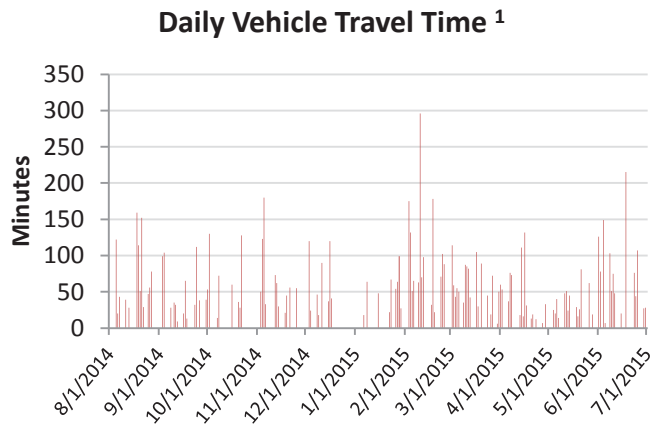
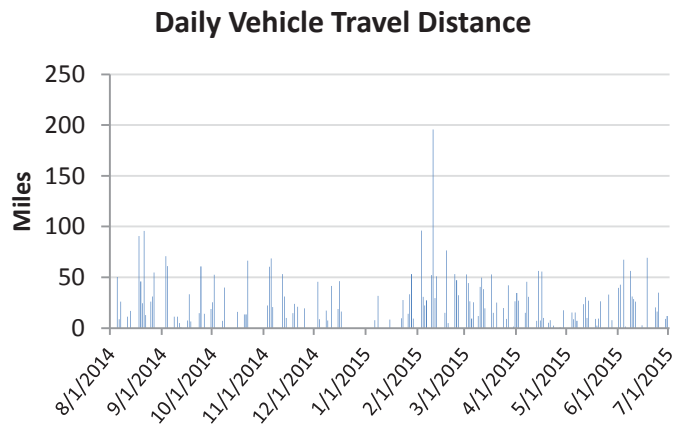
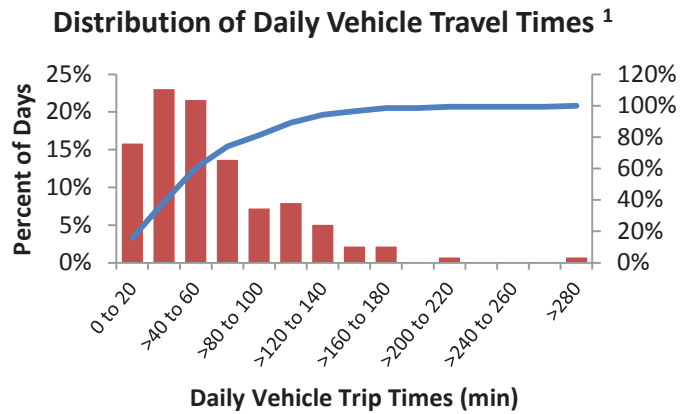
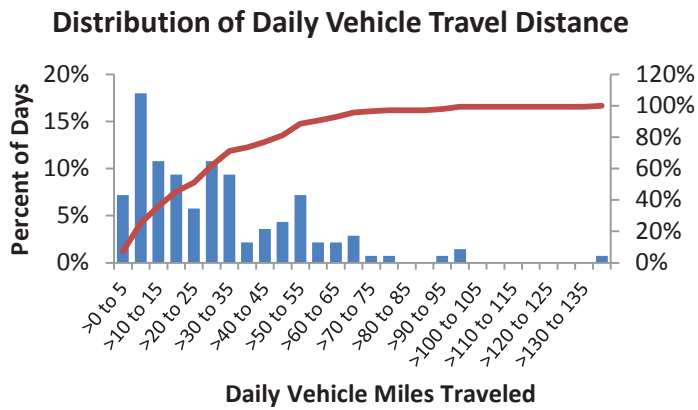


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	2%	3
63	1%	2
67	1%	2

Vehicle: 5L-G411466F  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2007  
 Vehicle Make: Chevrolet  
 Vehicle Model: Uplander  
 Body Type: van

Total Number of Days with Driving 139  
 Average Number of Trips 4.7  
 Average Trip Distance 29.0  
 Total Number of Trips 652  
 Total Distance (miles) 4035.0  
 Total Trip Duration (minutes) 8628



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	9%	13
63	7%	10
67	6%	9



Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G411447F

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2007

Chevrolet

Uplander

van

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

93

5.3

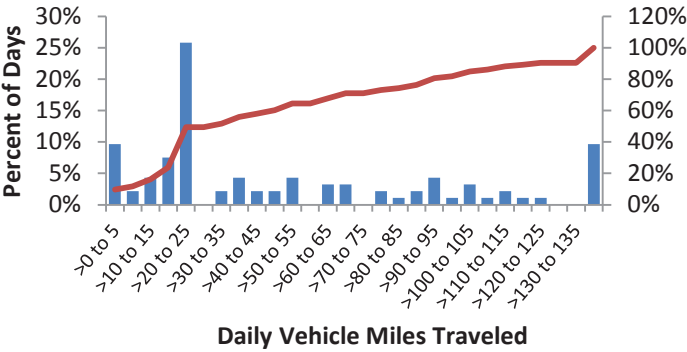
61.9

495

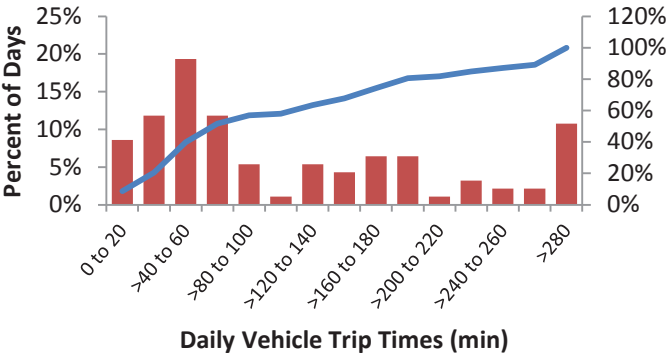
5752.8

11761

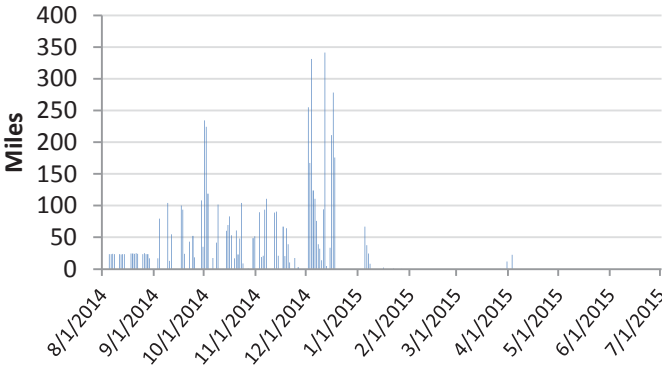
Distribution of Daily Vehicle Travel Distance



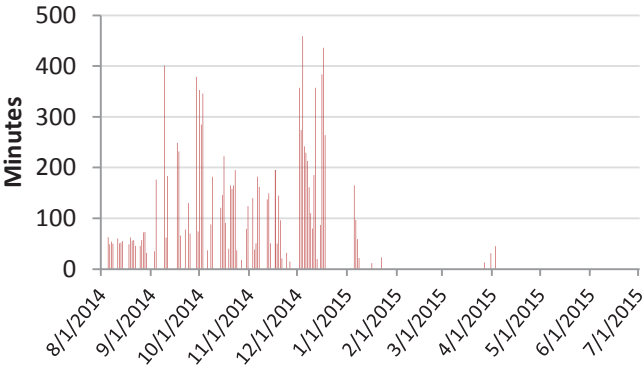
Distribution of Daily Vehicle Travel Times <sup>1</sup>



Daily Vehicle Travel Distance



Daily Vehicle Travel Time <sup>1</sup>



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	35%	33
63	33%	31
67	30%	28

Vehicle:

5L-G411436F

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2007

Vehicle Make:

Chevrolet

Vehicle Model:

Uplander

Body Type:

van

Total Number of Days with Driving

255

Average Number of Trips

6.9

Average Trip Distance

11.3

Total Number of Trips

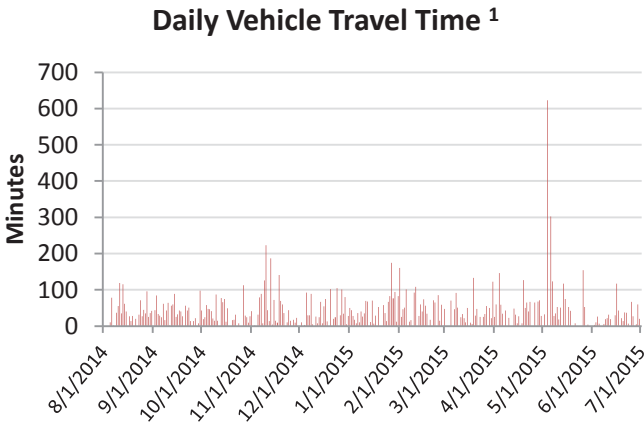
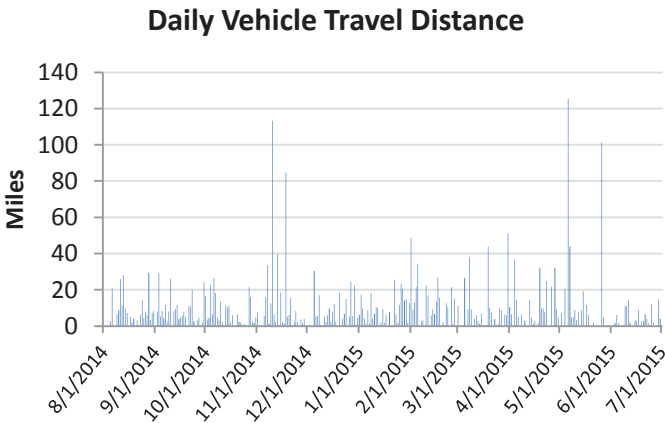
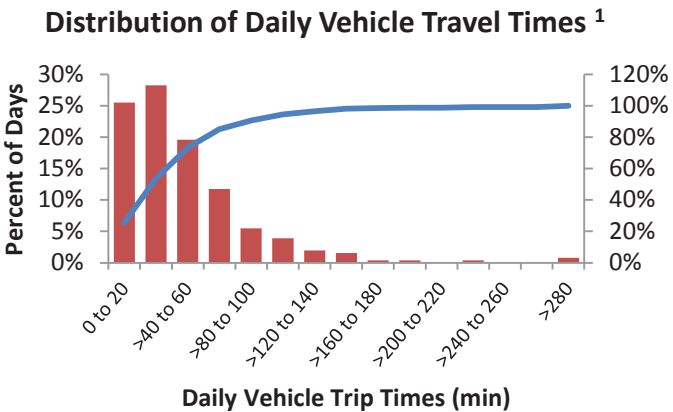
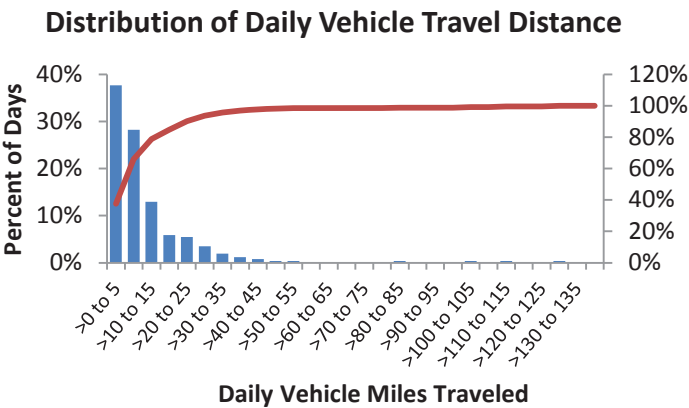
1772

Total Distance (miles)

2878.5

Total Trip Duration (minutes)

12531



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	2%	4
63	2%	4
67	2%	4

Vehicle:

5L-G410514G

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2008

Vehicle Make:

Chevrolet

Vehicle Model:

Uplander LS

Body Type:

van

Total Number of Days with Driving

26

Average Number of Trips

5.6

Average Trip Distance

52.9

Total Number of Trips

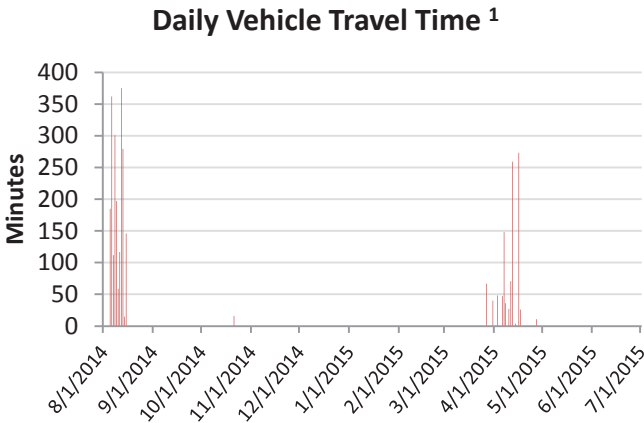
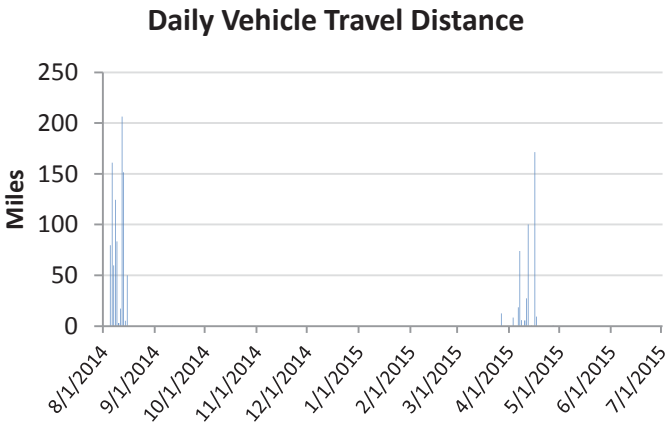
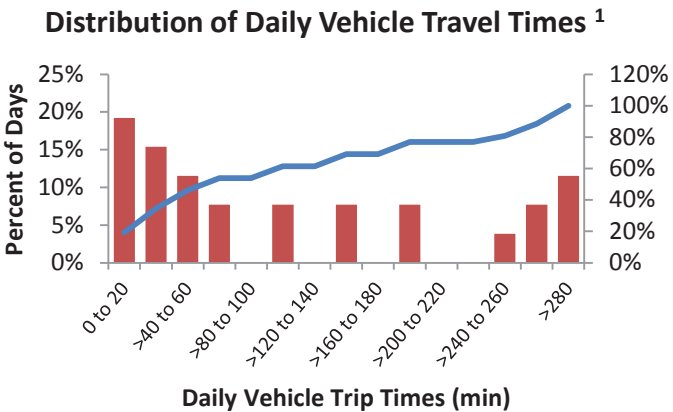
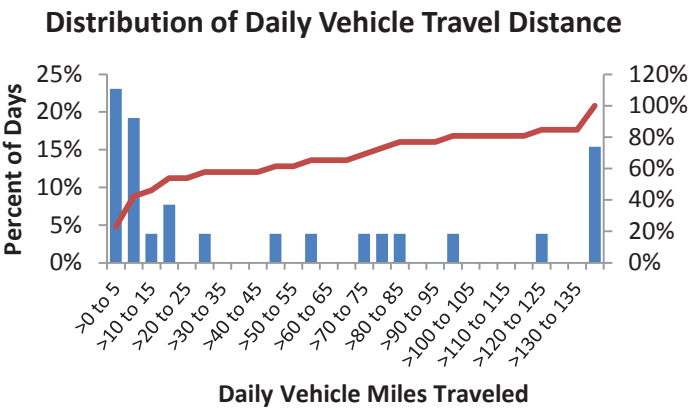
146

Total Distance (miles)

1375.5

Total Trip Duration (minutes)

3221



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	38%	10
63	35%	9
67	35%	9

Vehicle:

5L-G410489G

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2008

Vehicle Make:

Chevrolet

Vehicle Model:

Uplander LS

Body Type:

van

Total Number of Days with Driving

174

Average Number of Trips

5.3

Average Trip Distance

40.7

Total Number of Trips

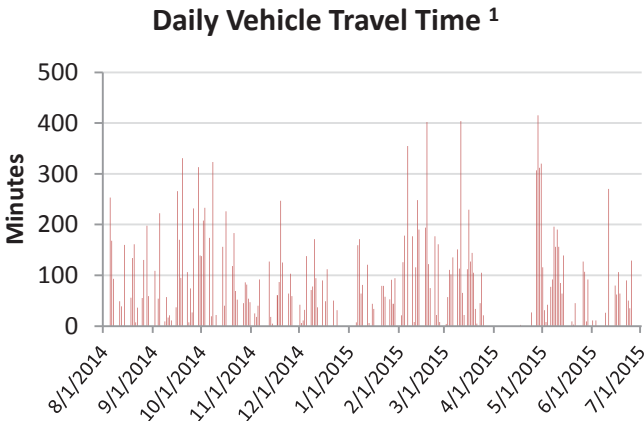
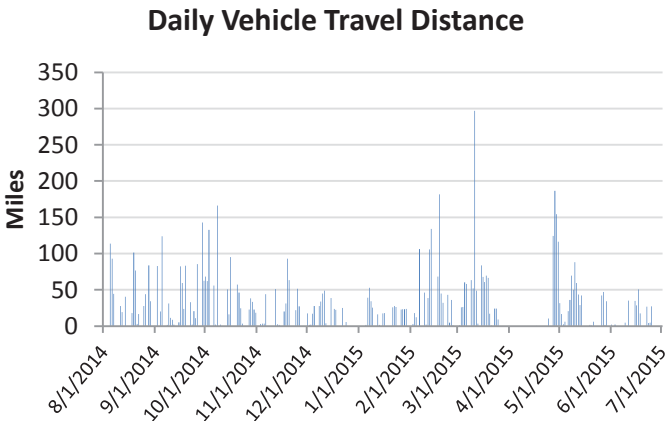
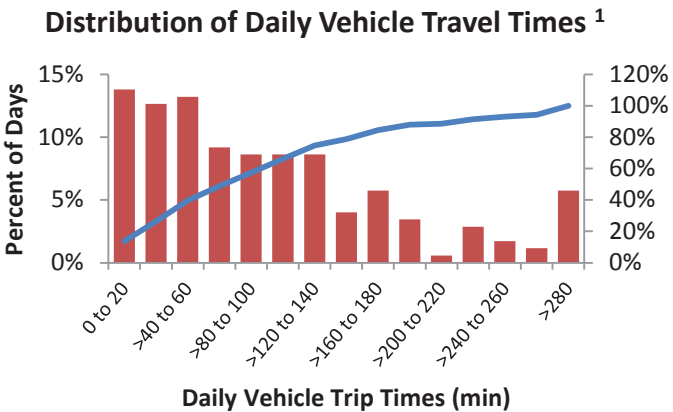
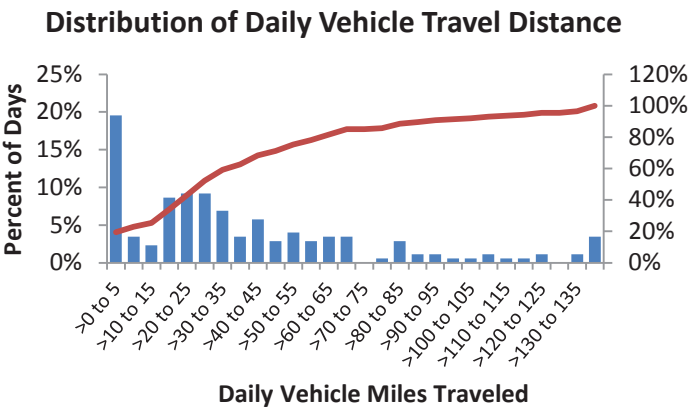
915

Total Distance (miles)

7081.9

Total Trip Duration (minutes)

18170



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	23%	40
63	20%	34
67	18%	31

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G410487G

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2008

Chevrolet

Uplander LS

van

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

130

5.5

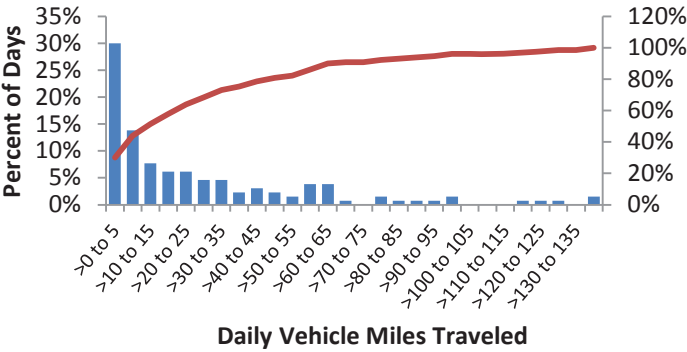
27.0

710

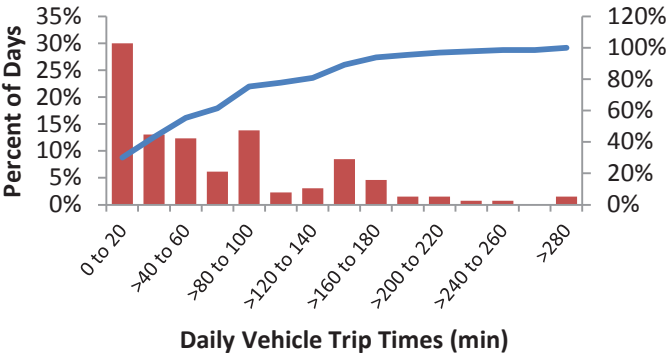
3507.5

9341

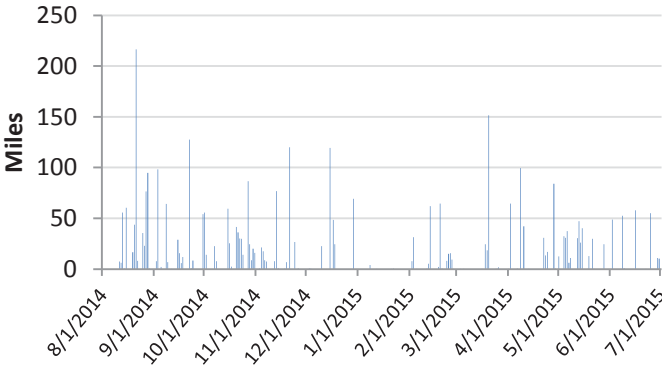
Distribution of Daily Vehicle Travel Distance



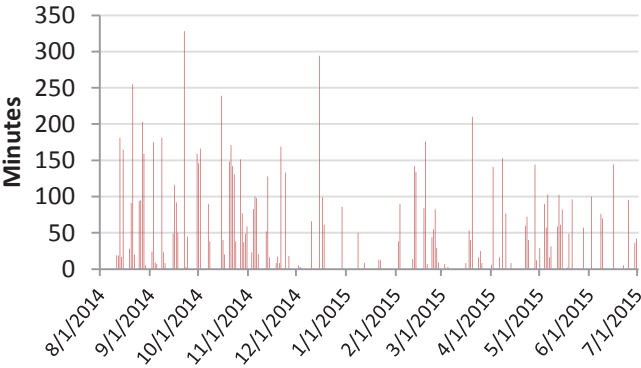
Distribution of Daily Vehicle Travel Times <sup>1</sup>



Daily Vehicle Travel Distance



Daily Vehicle Travel Time <sup>1</sup>



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	15%	19
63	12%	16
67	10%	13

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G136271L

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2012

FORD

Focus

sedan

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

72

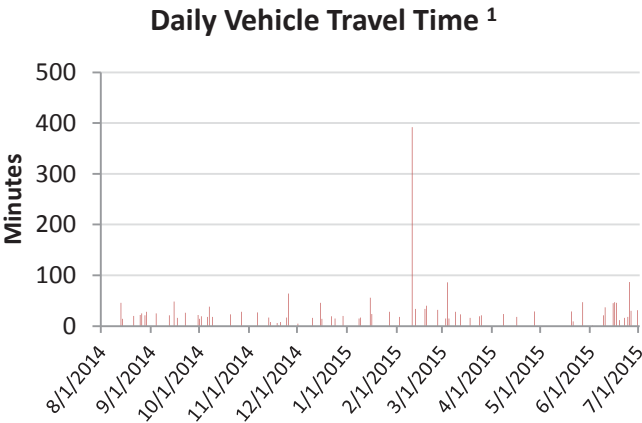
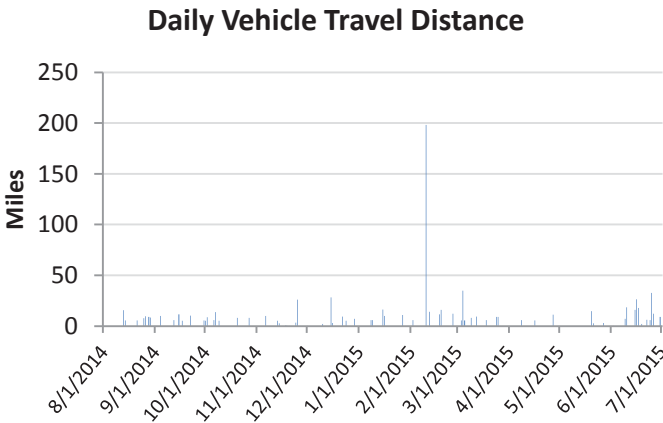
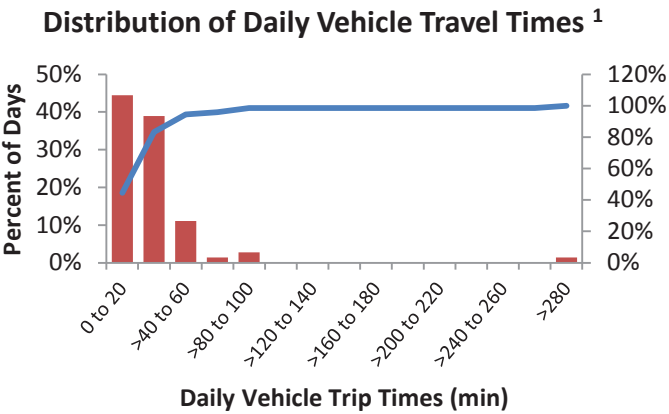
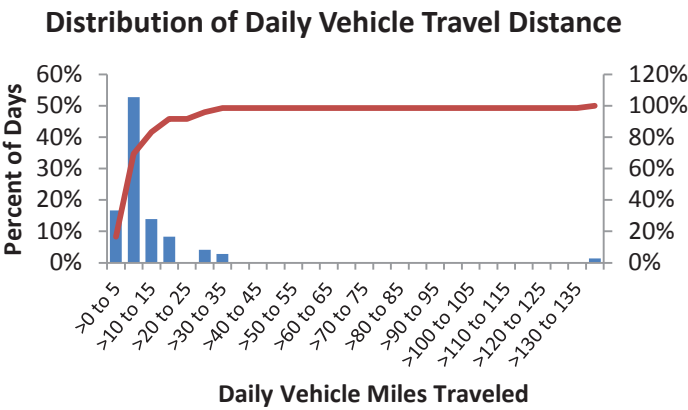
2.9

11.9

209

857.3

2235



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	1%	1
63	1%	1
67	1%	1

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G109773K

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2011

FORD

Fusion Hybrid

sedan

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

1

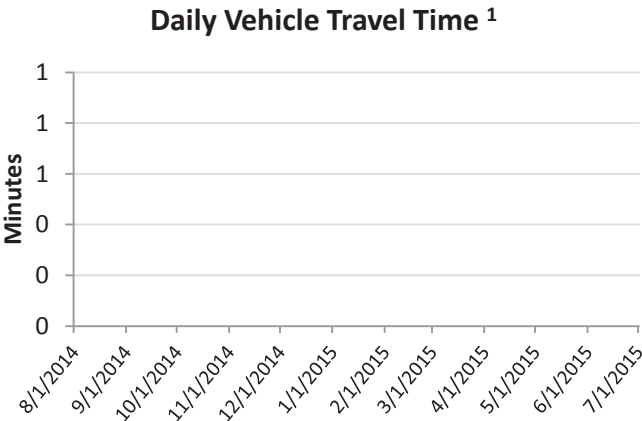
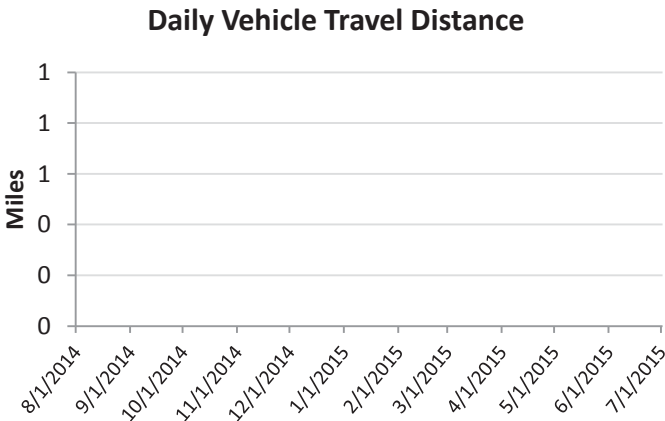
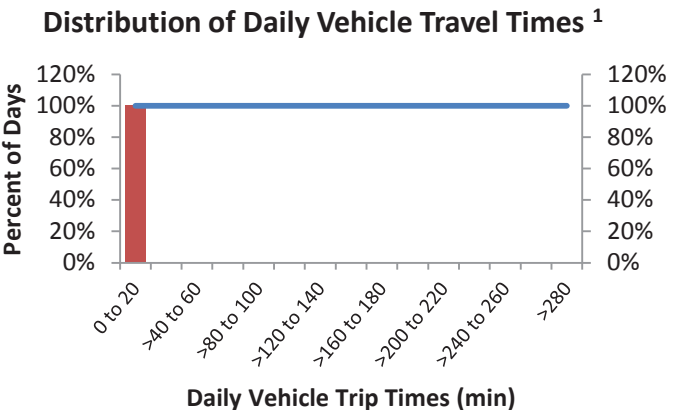
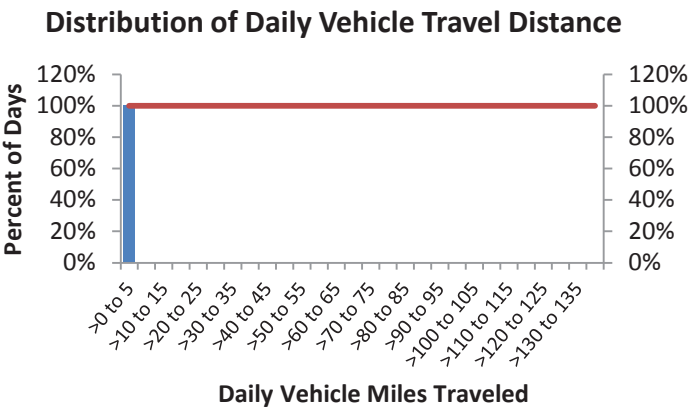
0.0

0.0

0

0.0

0



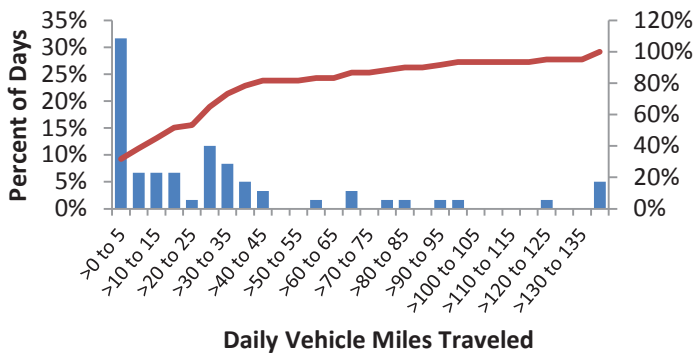
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	0%	0
63	0%	0
67	0%	0

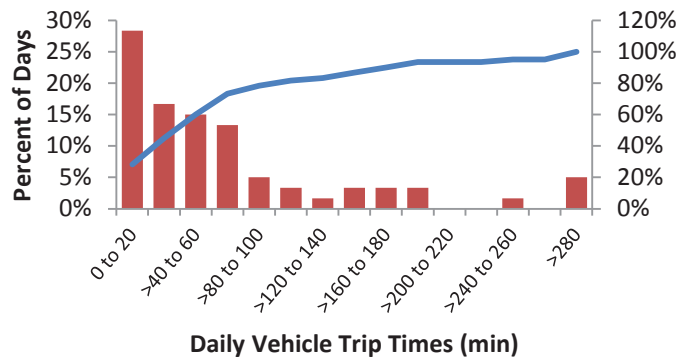
Vehicle: 5L-G109771K  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: FORD  
 Vehicle Model: Fusion Hybrid  
 Body Type: sedan

Total Number of Days with Driving 60  
 Average Number of Trips 5.3  
 Average Trip Distance 39.3  
 Total Number of Trips 323  
 Total Distance (miles) 2356.1  
 Total Trip Duration (minutes) 4530

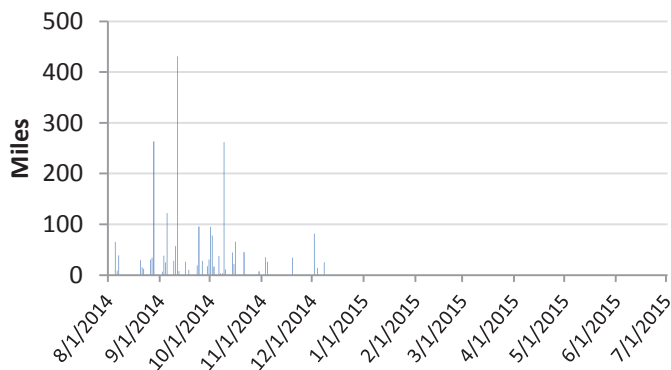
**Distribution of Daily Vehicle Travel Distance**



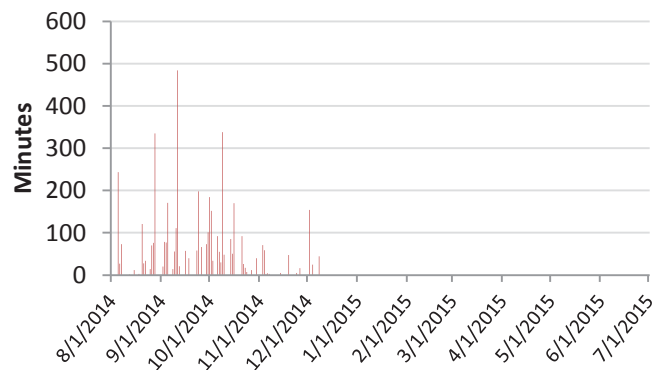
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**



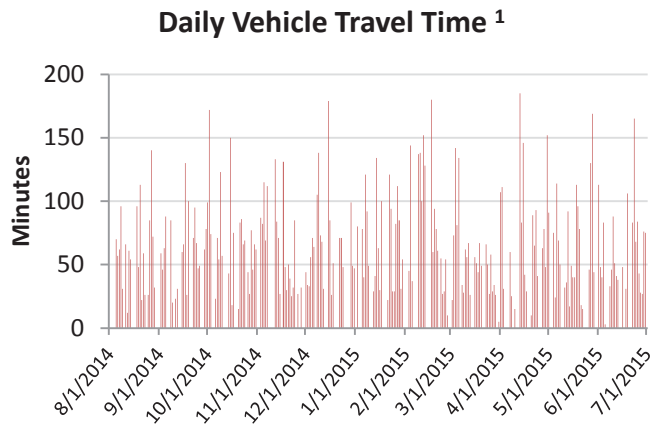
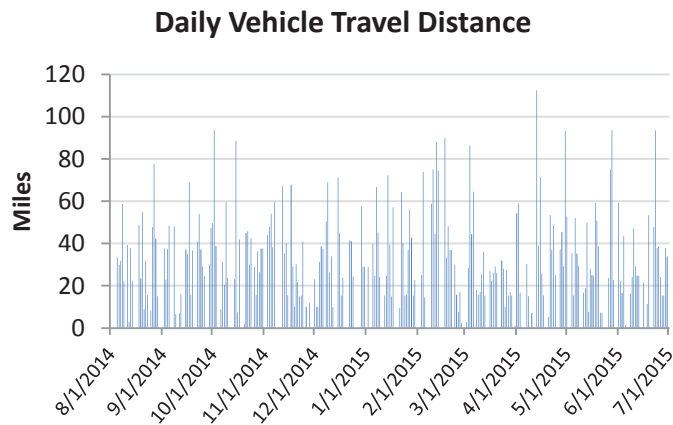
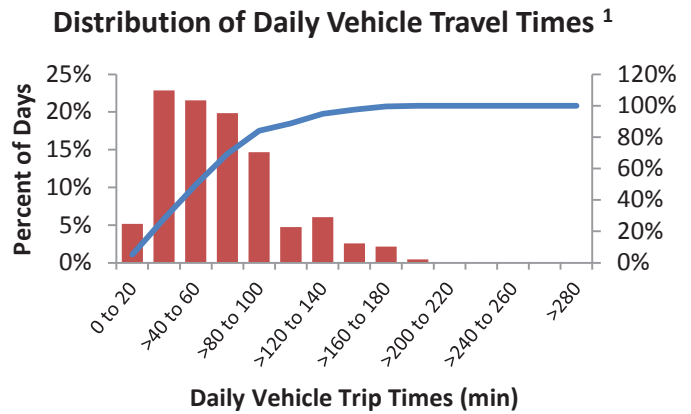
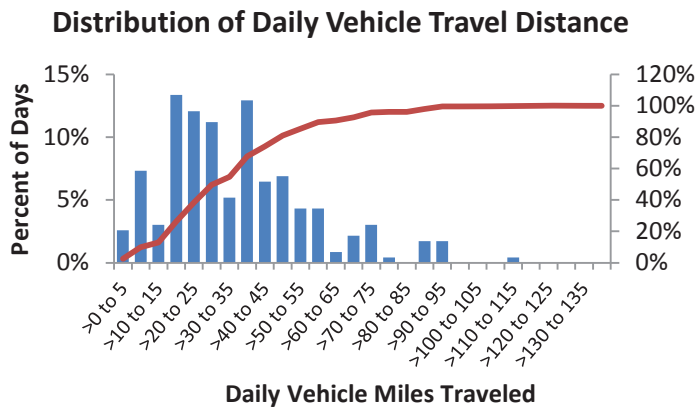
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	17%	10
63	17%	10
67	13%	8



Vehicle: 5L-G109769K  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: FORD  
 Vehicle Model: Fusion Hybrid  
 Body Type: sedan

Total Number of Days with Driving 232  
 Average Number of Trips 5.1  
 Average Trip Distance 34.7  
 Total Number of Trips 1180  
 Total Distance (miles) 8040.8  
 Total Trip Duration (minutes) 15477



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	12%	28
63	10%	24
67	9%	21

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G109768K

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2011

FORD

Fusion Hybrid

sedan

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

170

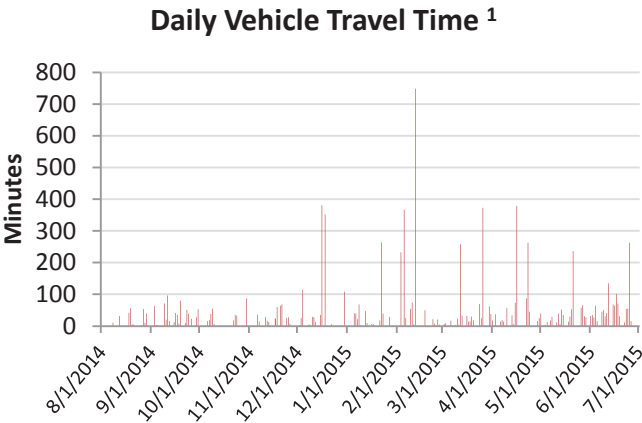
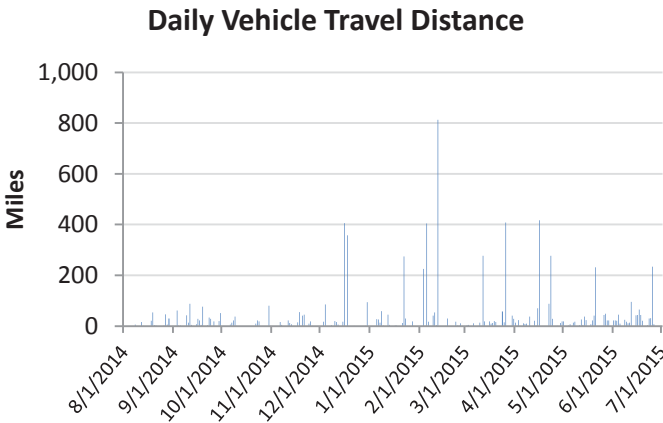
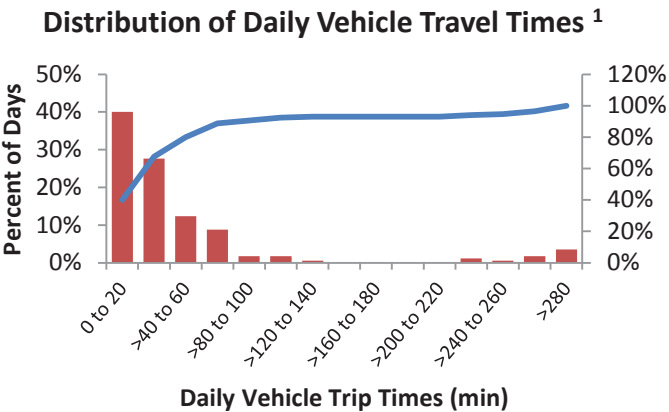
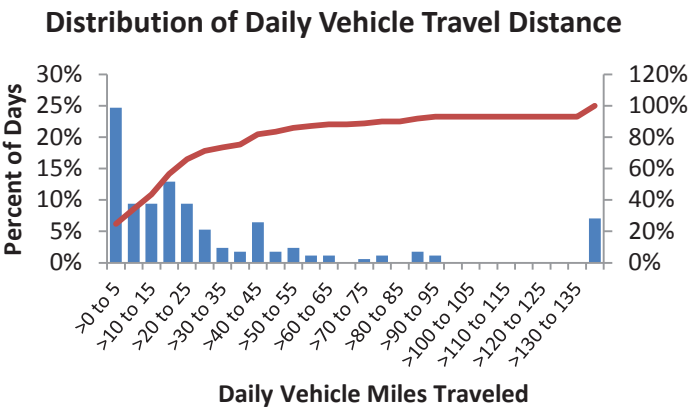
17.9

45.2

3036

7681.6

9029



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	13%	22
63	12%	21
67	12%	20

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G109766K

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2011

FORD

Fusion Hybrid

sedan

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

174

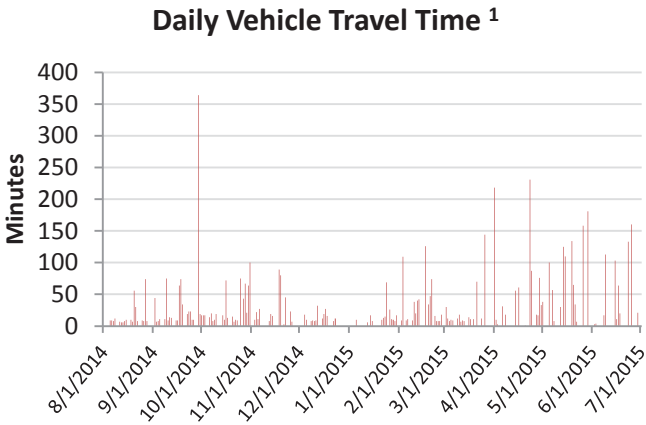
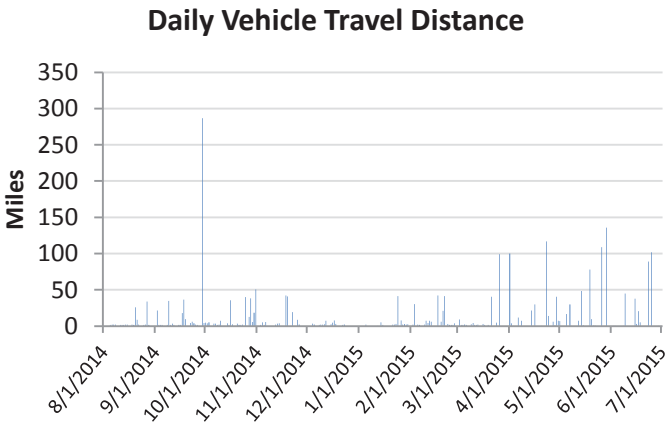
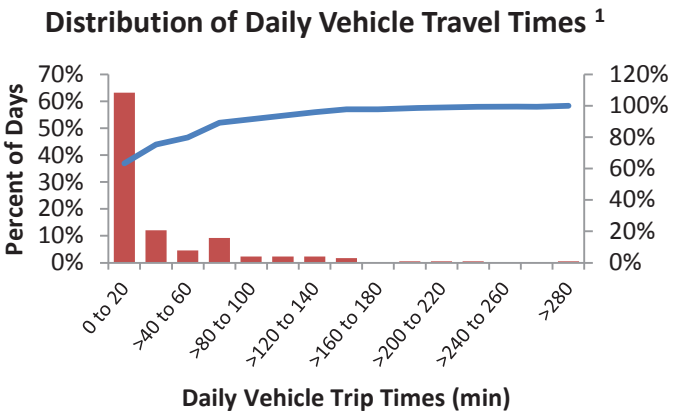
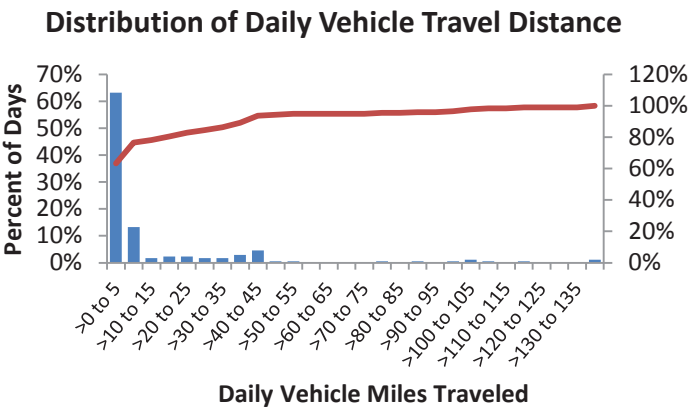
4.4

14.4

768

2505.0

6115

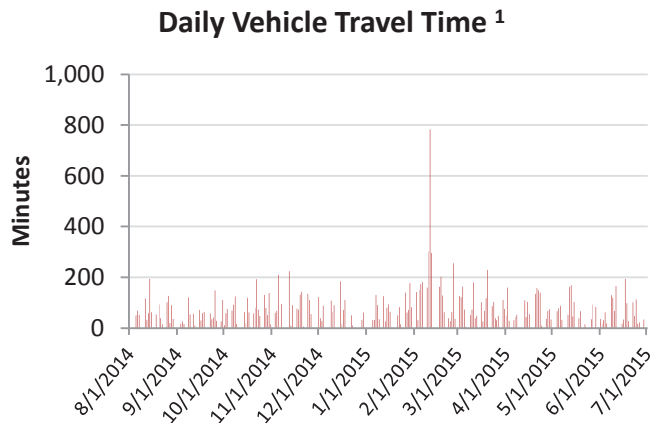
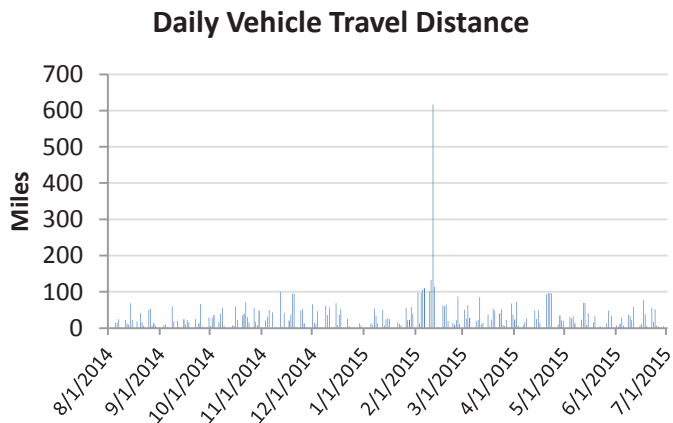
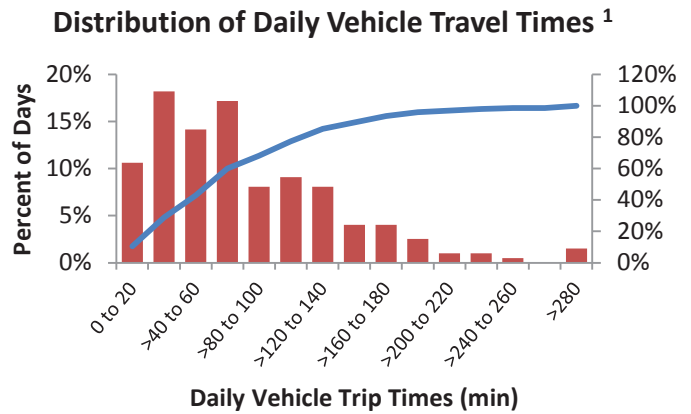
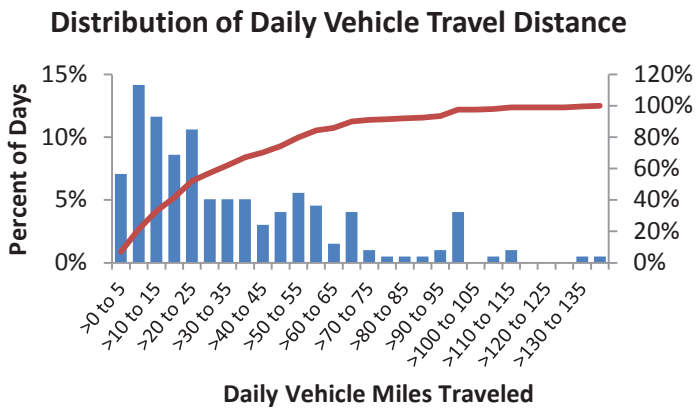


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	5%	9
63	5%	9
67	5%	9

Vehicle: 5L-G107279L  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2011  
 Vehicle Make: Chevy  
 Vehicle Model: Malibu  
 Body Type: sedan

Total Number of Days with Driving 198  
 Average Number of Trips 6.0  
 Average Trip Distance 36.2  
 Total Number of Trips 1187  
 Total Distance (miles) 7168.7  
 Total Trip Duration (minutes) 16758



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	17%	34
63	15%	30
67	13%	25

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-G106501H

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2009

Pontiac

G6

sedan

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

107

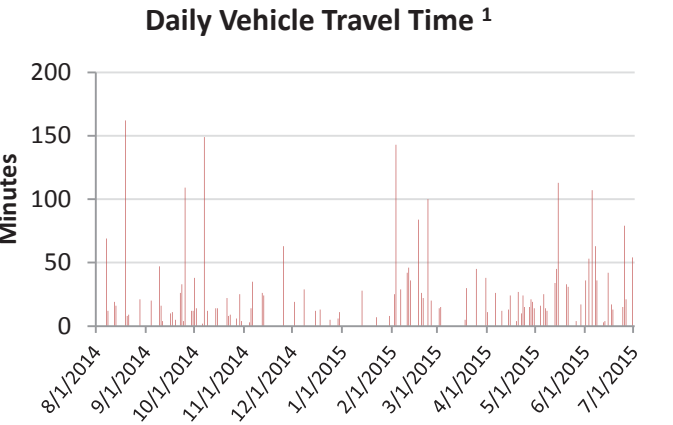
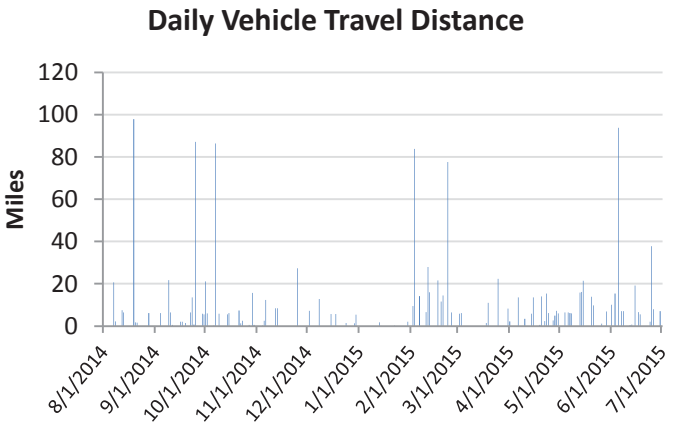
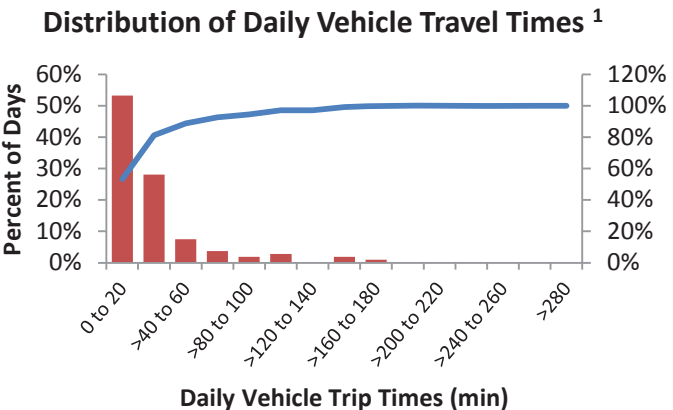
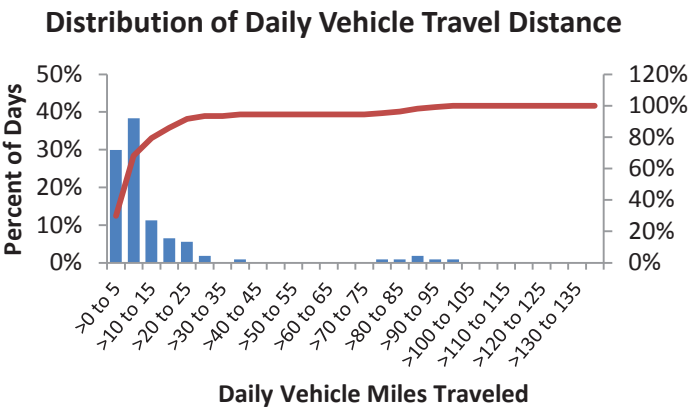
2.9

12.5

308

1339.5

3087

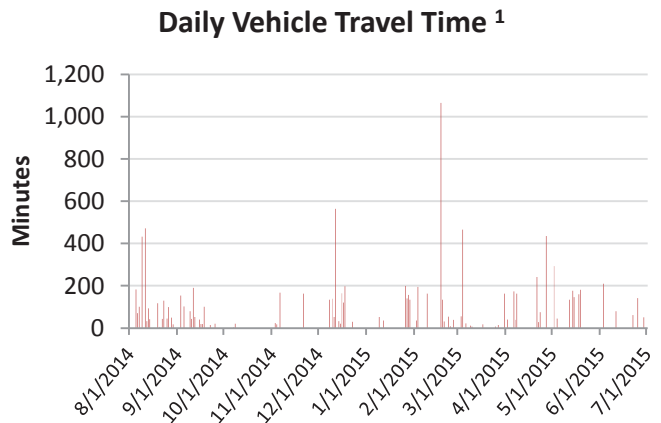
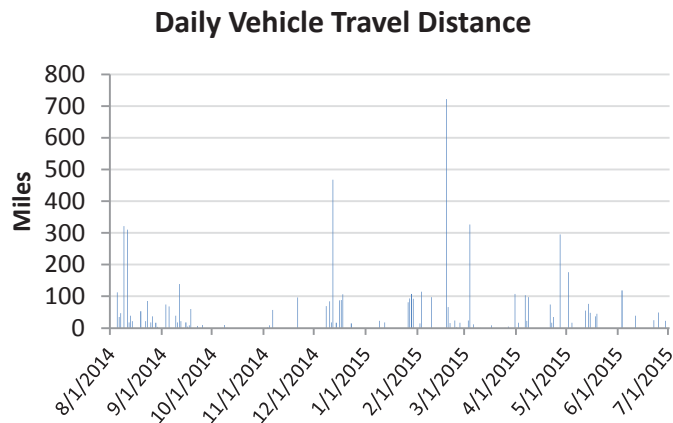
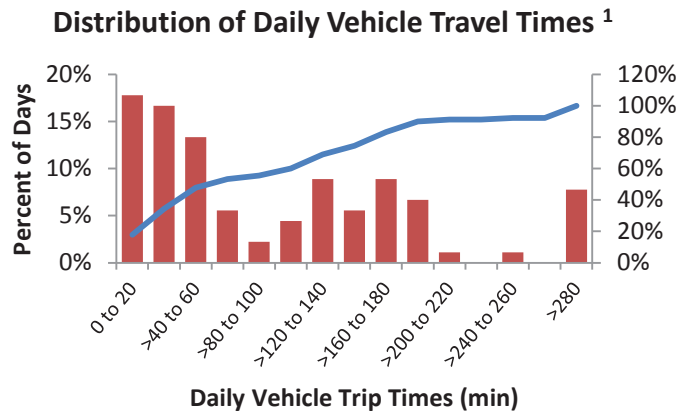
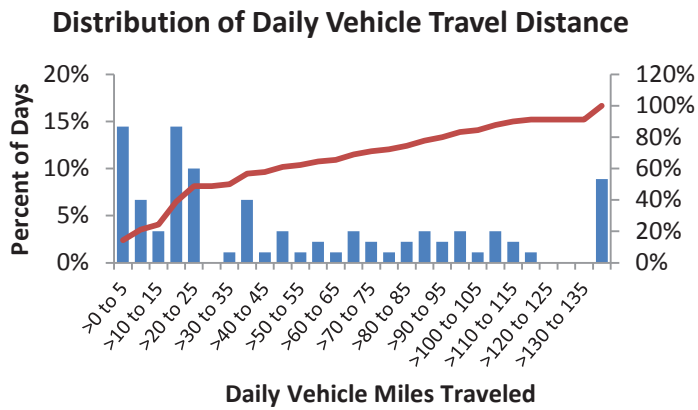


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	6%	6
63	6%	6
67	6%	6

Vehicle: 5L-G106208H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Pontiac  
 Vehicle Model: G6  
 Body Type: sedan

Total Number of Days with Driving 90  
 Average Number of Trips 4.7  
 Average Trip Distance 67.5  
 Total Number of Trips 420  
 Total Distance (miles) 6072.2  
 Total Trip Duration (minutes) 10690

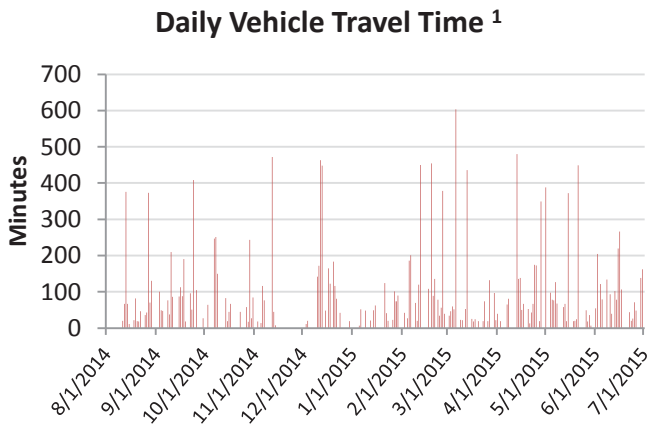
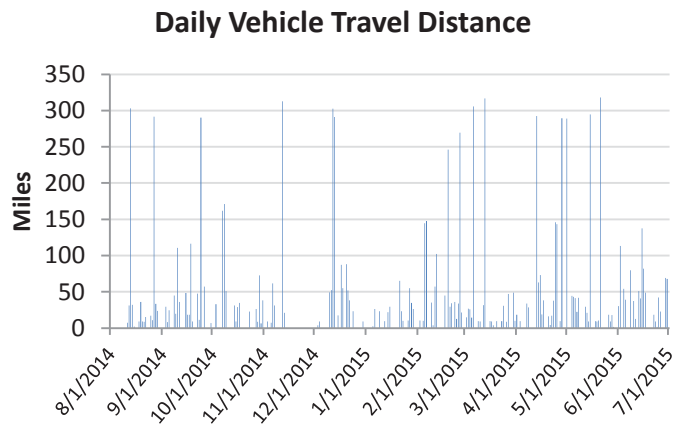
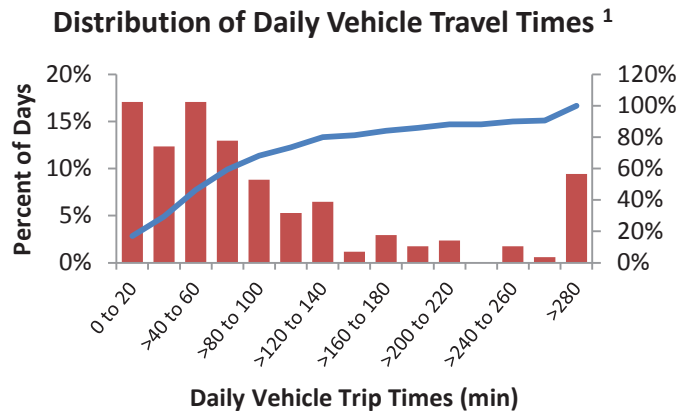
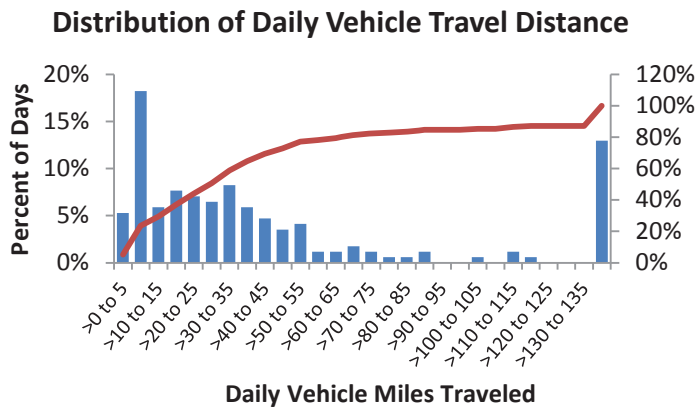


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	36%	32
63	34%	31
67	33%	30

Vehicle: 5L-G106206H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Pontiac  
 Vehicle Model: G6  
 Body Type: sedan

Total Number of Days with Driving 170  
 Average Number of Trips 5.3  
 Average Trip Distance 58.1  
 Total Number of Trips 898  
 Total Distance (miles) 9885.2  
 Total Trip Duration (minutes) 18270

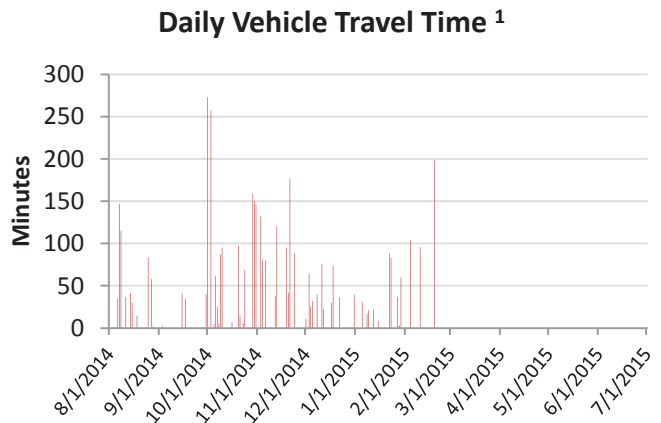
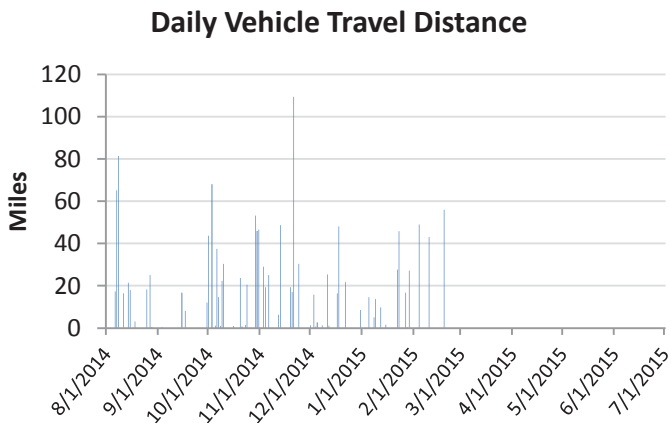
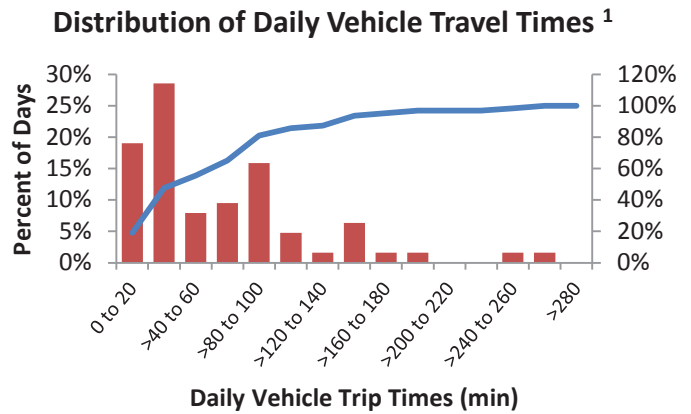
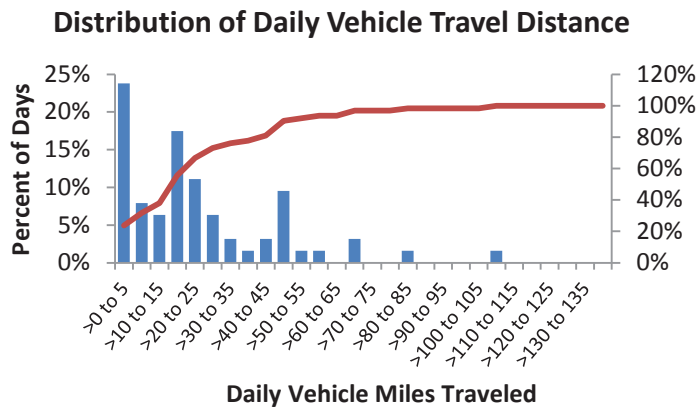


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	22%	37
63	21%	36
67	20%	34

Vehicle: 5L-294277  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Chevy  
 Vehicle Model: Malibu  
 Body Type: sedan

Total Number of Days with Driving 63  
 Average Number of Trips 4.8  
 Average Trip Distance 23.4  
 Total Number of Trips 300  
 Total Distance (miles) 1472.7  
 Total Trip Duration (minutes) 4212



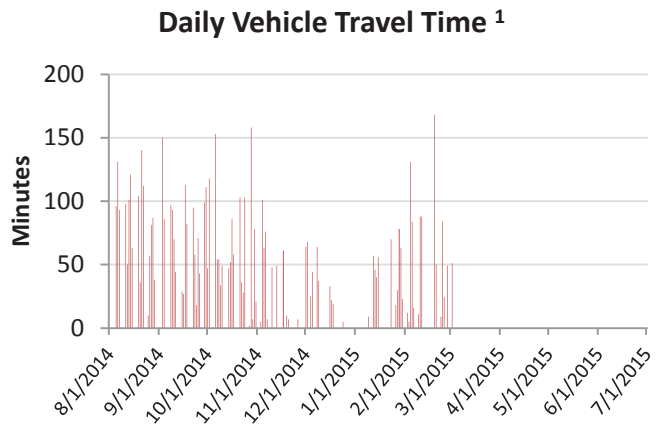
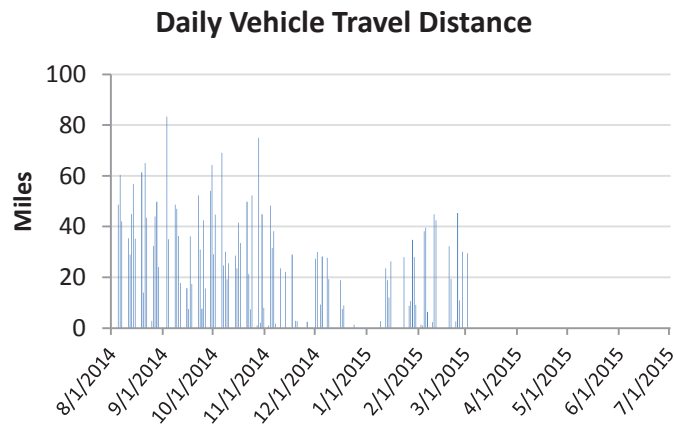
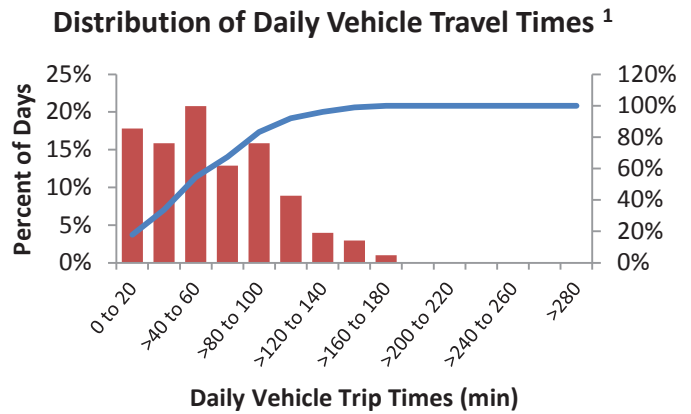
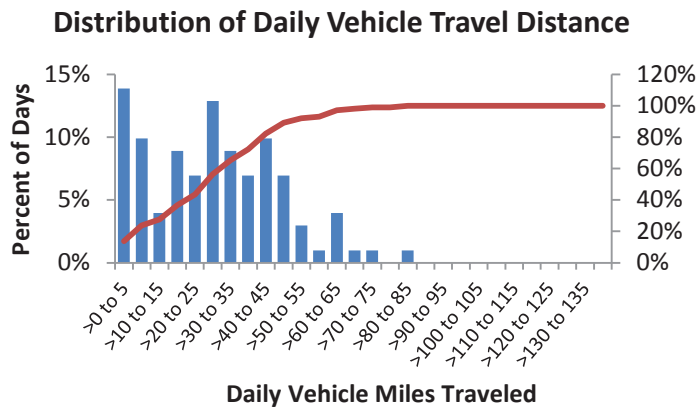
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	6%	4
63	6%	4
67	5%	3



Vehicle: 5L-294274  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Chevy  
 Vehicle Model: Malibu  
 Body Type: sedan

Total Number of Days with Driving 101  
 Average Number of Trips 8.0  
 Average Trip Distance 28.3  
 Total Number of Trips 804  
 Total Distance (miles) 2862.4  
 Total Trip Duration (minutes) 6167



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	7%	7
63	5%	5
67	3%	3

Vehicle:

5L-294267

Report Period:

8/1/2014 00:00:00 - 7/1/2015 00:00:00

Model Year:

2009

Vehicle Make:

Chevy

Vehicle Model:

Malibu

Body Type:

sedan

Total Number of Days with Driving

106

Average Number of Trips

8.8

Average Trip Distance

22.3

Total Number of Trips

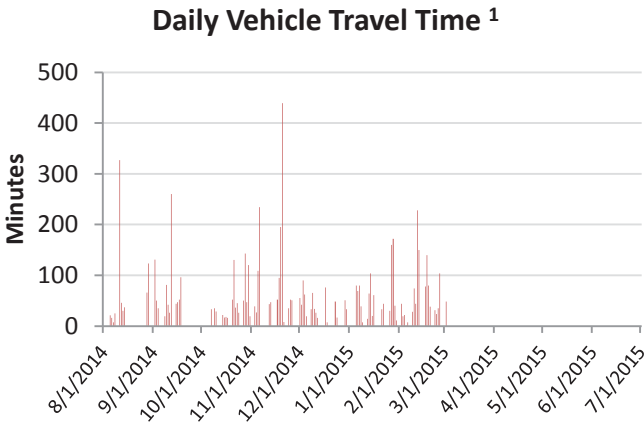
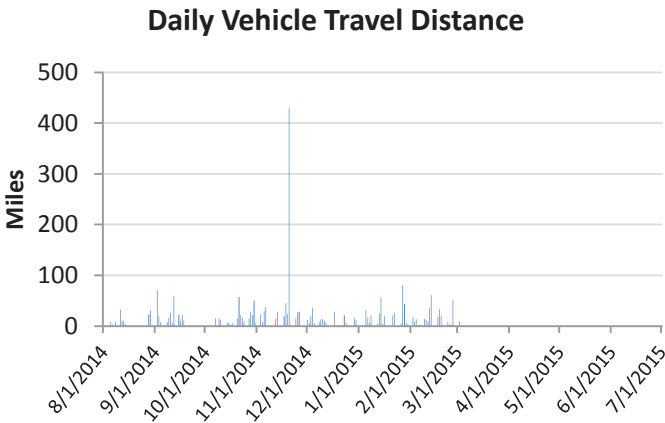
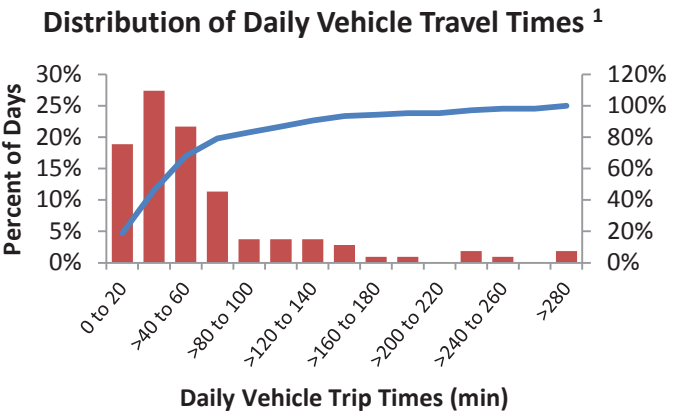
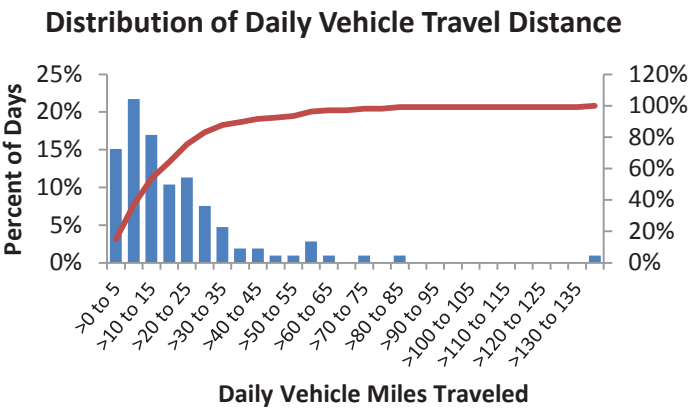
932

Total Distance (miles)

2360.0

Total Trip Duration (minutes)

6742



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	5%	5
63	3%	3
67	3%	3

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5L-294266

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2009

Chevy

Malibu

sedan

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

113

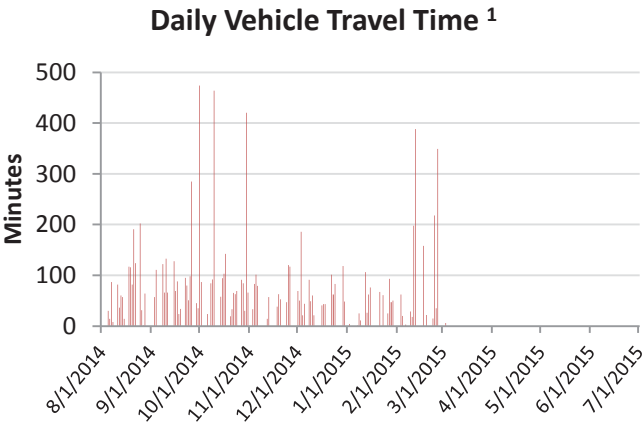
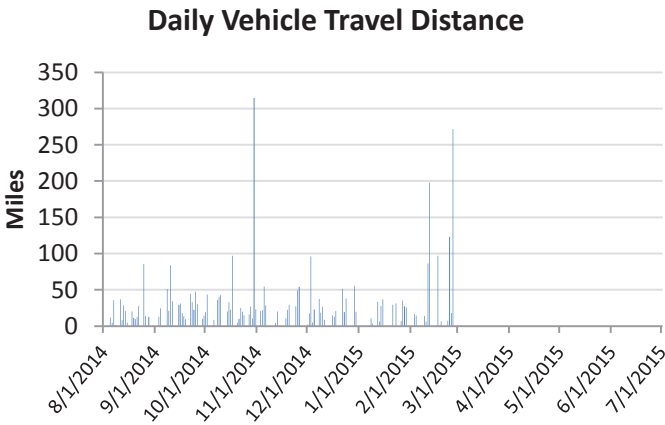
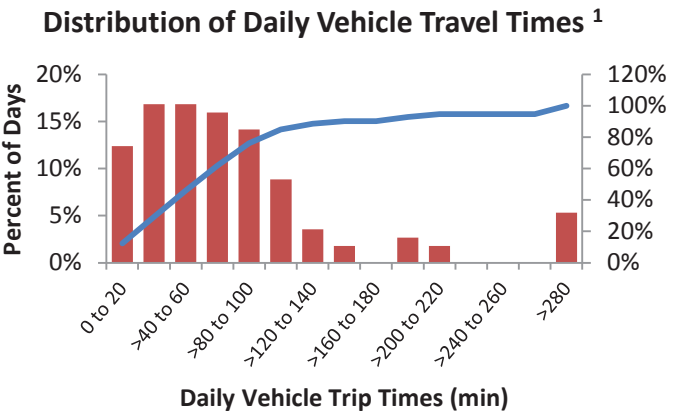
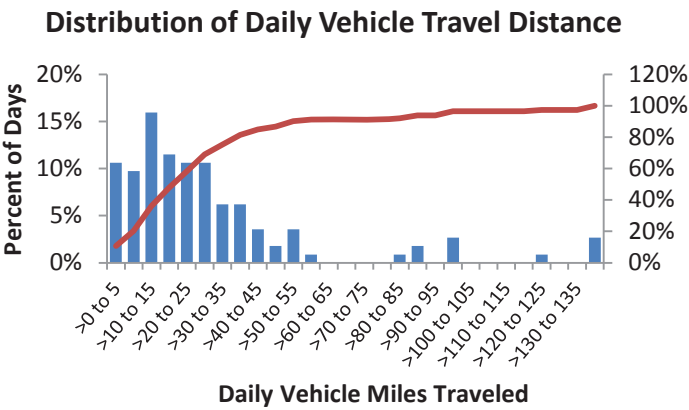
9.9

32.3

1120

3647.3

9575

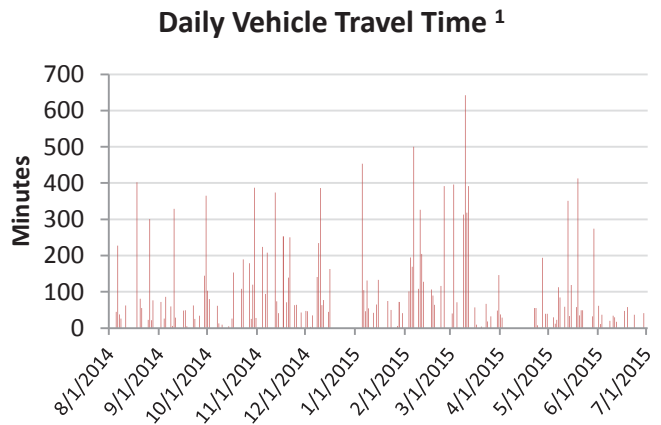
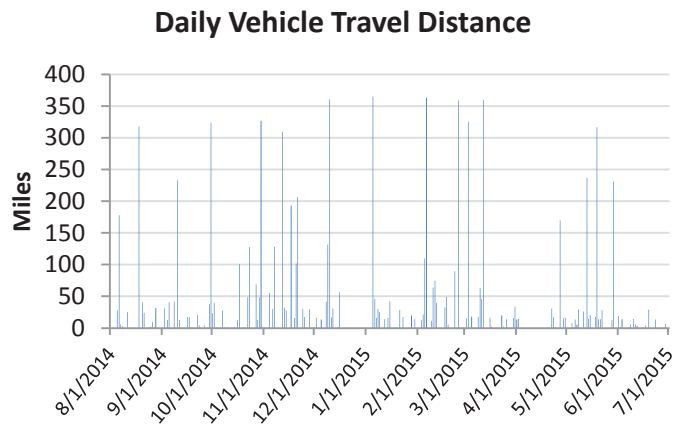
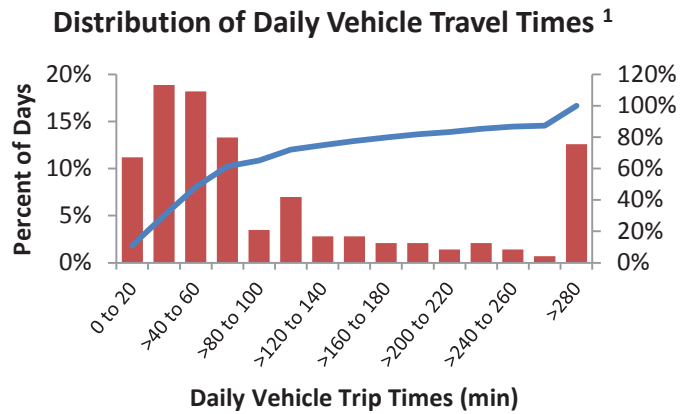
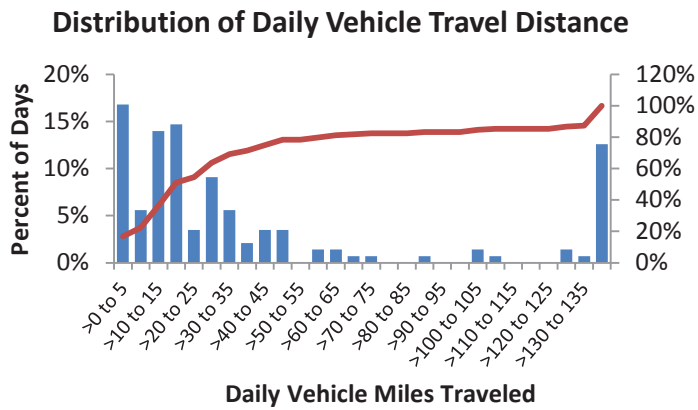


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	9%	10
63	9%	10
67	9%	10

Vehicle: 5B-G414199H  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2009  
 Vehicle Make: Dodge  
 Vehicle Model: Dakota  
 Body Type: small pickup

Total Number of Days with Driving 143  
 Average Number of Trips 5.2  
 Average Trip Distance 58.4  
 Total Number of Trips 744  
 Total Distance (miles) 8356.4  
 Total Trip Duration (minutes) 16233



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	20%	29
63	20%	29
67	19%	27

Vehicle:

Report Period:

Model Year:

Vehicle Make:

Vehicle Model:

Body Type:

5B-G413964H

8/1/2014 00:00:00 - 7/1/2015 00:00:00

2009

Dodge

Caravan

van

Total Number of Days with Driving

Average Number of Trips

Average Trip Distance

Total Number of Trips

Total Distance (miles)

Total Trip Duration (minutes)

1

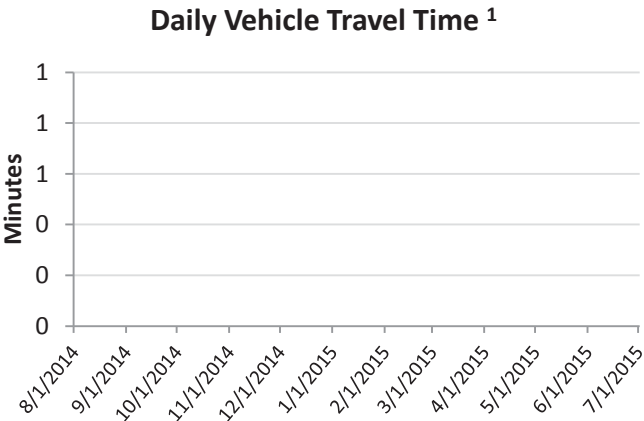
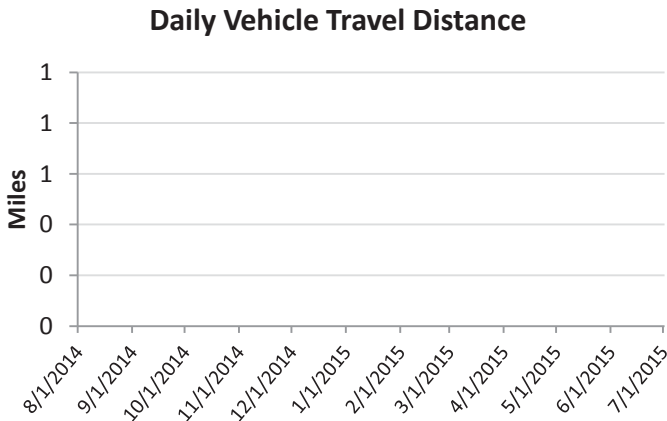
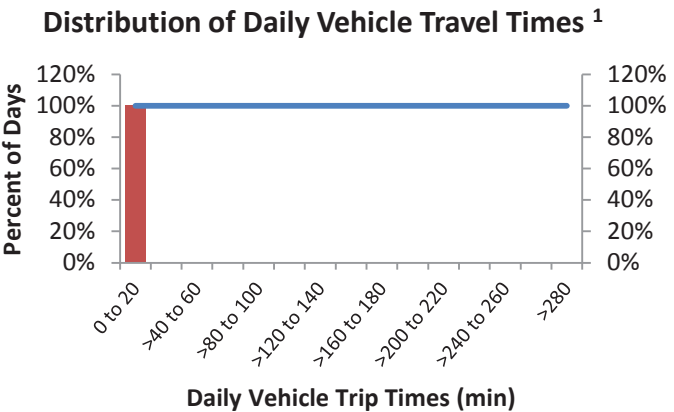
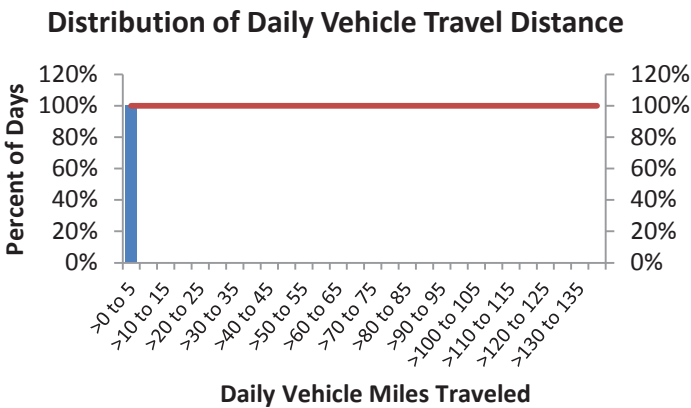
0.0

0.0

0

0.0

0



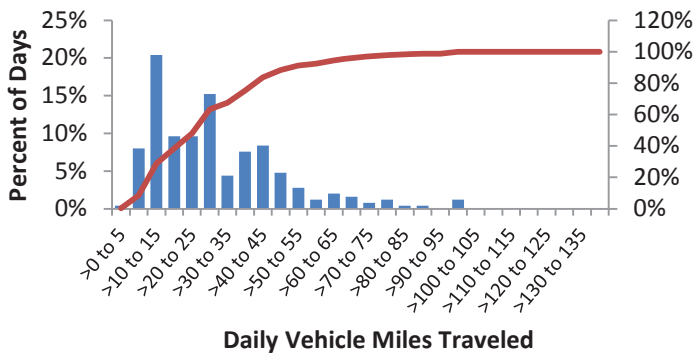
Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	0%	0
63	0%	0
67	0%	0

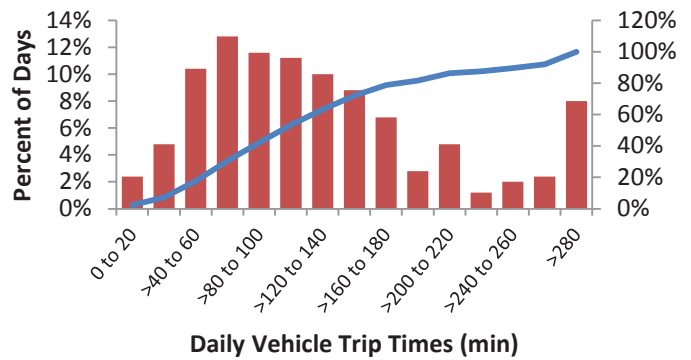
Vehicle:	5B-G410523G
Report Period:	8/1/2014 00:00:00 - 7/1/2015 00:00:00
Model Year:	2008
Vehicle Make:	Chevrolet
Vehicle Model:	Colorado
Body Type:	small pickup

Total Number of Days with Driving	250
Average Number of Trips	7.7
Average Trip Distance	29.0
Total Number of Trips	1923
Total Distance (miles)	7239.3
Total Trip Duration (minutes)	33433

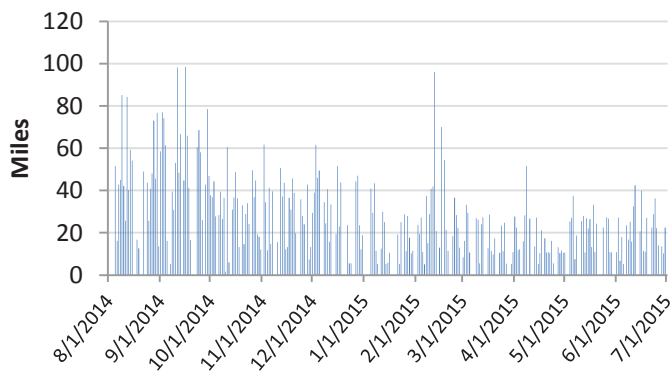
**Distribution of Daily Vehicle Travel Distance**



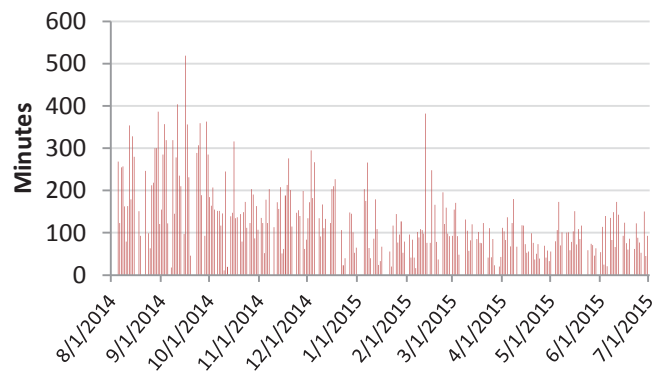
**Distribution of Daily Vehicle Travel Times <sup>1</sup>**



**Daily Vehicle Travel Distance**



**Daily Vehicle Travel Time <sup>1</sup>**

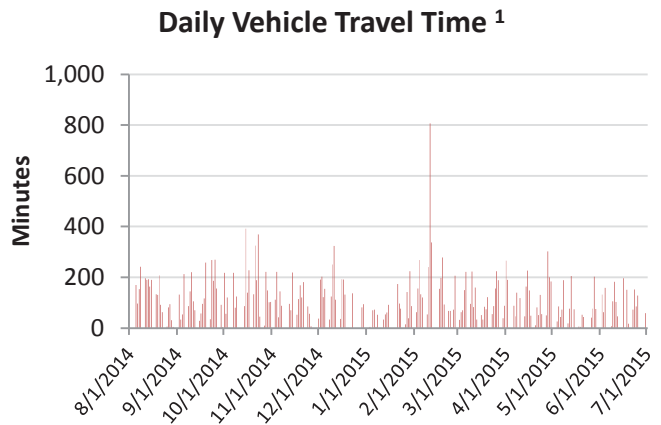
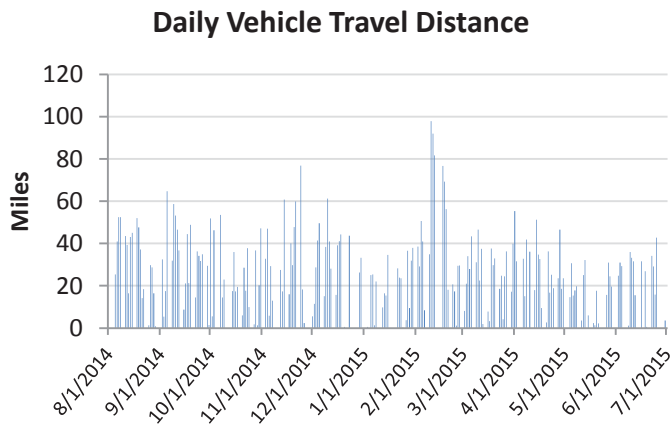
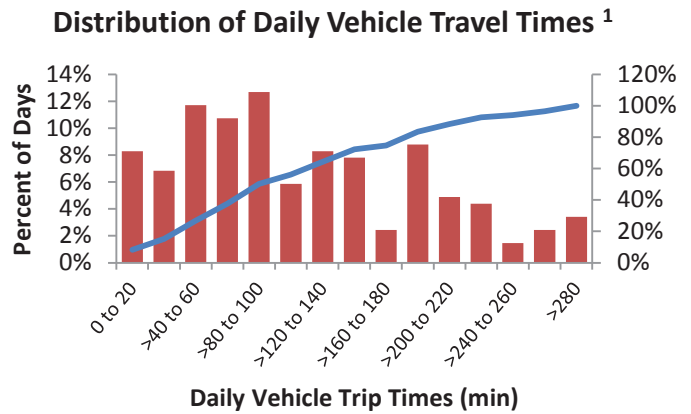
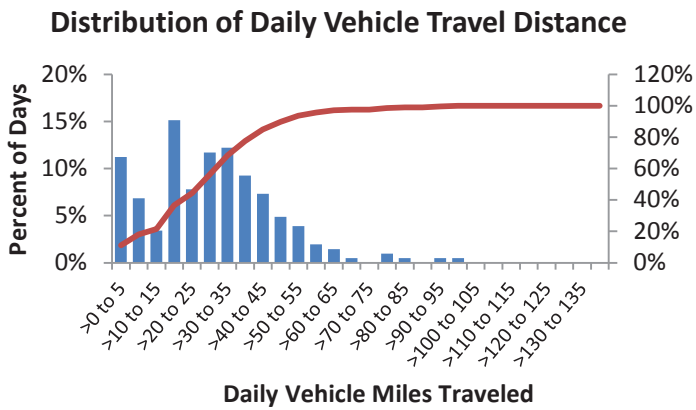


Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	8%	20
63	6%	14
67	5%	12

Vehicle: 5B-G410512G  
 Report Period: 8/1/2014 00:00:00 - 7/1/2015 00:00:00  
 Model Year: 2008  
 Vehicle Make: Chevrolet  
 Vehicle Model: Uplander LS  
 Body Type: van

Total Number of Days with Driving 205  
 Average Number of Trips 7.9  
 Average Trip Distance 28.2  
 Total Number of Trips 1619  
 Total Distance (miles) 5782.9  
 Total Trip Duration (minutes) 24990



Note 1: Travel time includes all time when vehicle is in the "key on" state, even when the vehicle is not moving

EV Range	Percentage of days vehicle exceeds EV range	Number of days vehicle exceeds EV range
59	5%	10
63	3%	7
67	3%	6