## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 18
Reporting period: July 2012

## All Vehicles

07/01/2012 to 07/31/2012258

All Trips Combined

| Overall gasoline fuel economy (mpg) | 35 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 53 |
| Overall DC electrical energy consumption (DC Wh/mi) $^{2}$ | 34 |
| Total number of trips | 1,515 |
| Total distance traveled (mi) | 15,617 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 37 |
| Gasoline fuel economy (mpg) | 65 |
| DC electrical energy consumption (DC Wh/mi) ${ }^{4}$ | 639 |
| Number of trips | $74 \%$ |
| Percent of trips city \| highway | $26 \%$ |
| Distance traveled (mi) | 4,915 |
| Percent of total distance traveled | $31 \%$ |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 38 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 58 |
| Percent of trips city \| highway | $38 \%$ |
| Distance traveled (mi) | $62 \%$ |
| Percent of total distance traveled | 2,842 |
|  | $18 \%$ |
| Trips in Charge Sustaining (CS) mode7 |  |
| Gasoline fuel economy (mpg) |  |
| Number of trips | 33 |
| Percent of trips city \| highway | 683 |
| Distance traveled (mi) | $72 \%$ |
| Percent of total distance traveled | $78 \%$ |

Gasoline Fuel Economy By Trip Type



[^0]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 35 | 39 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 71 | 61 |
| Percent of miles with internal combustion engine off | $2 \%$ | $1 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 3.5 | 15.9 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 39 | 37 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 81 | 53 |
| Percent of miles with internal combustion engine off | $1 \%$ | $1 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 14.7 | 40.1 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 31 | 34 |
| Percent of miles with internal combustion engine off | $4 \%$ | $1 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 3.6 | 32.0 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 14 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.9 |
| Average distance driven between charging events (mi) | 65.6 |
| Average number of trips between charging events | 6.4 |
| Average time plugged in per charging event (hr) | 15.8 |
| Average time plugged in and drawing power (hr) | 15.3 |
| Average time charging per charging event (power >200 w) (hr) | 4.4 |
| Average energy per charging event (AC kWh) | 3.5 |
| Average charging energy per vehicle per month (AC kWh) | 49.1 |
| Total number of charging events | 238 |
| Total charging energy (AC kWh) | 834 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#QF14

07/01/2012 to 07/31/2012
17

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 38 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 85 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 52 |
| Total number of trips | 106 |
| Total distance traveled (mi) | 884 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 40 |
| Gasoline fuel economy (mpg) | 68 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | $85 \%$ |
| Percent of trips city \| highway | $45 \%$ |
| Distance traveled (mi) | 542 |
| Percent of total distance traveled | $61 \%$ |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 42 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 63 |
| Number of trips | 7 |
| Percent of trips city \| highway | $29 \% \mid 71 \%$ |
| Distance traveled (mi) | 141 |
| Percent of total distance traveled | $16 \%$ |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 32 |
| :--- | ---: |
| Number of trips | 19 |
| Percent of trips city \| highway | $68 \%$ |
| \| $32 \%$ |  |
| Percentance traveled (mi) | 201 |
|  | $23 \%$ |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^1]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 40 | 40 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 67 | 68 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 3.6 | 10.6 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 42 | 42 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 91 | 57 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 12.4 | 23.2 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 27 | 33 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 6 | 3 |
| Average trip distance (mi) | 3.8 | 25.3 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 23 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 1.4 |
| Average distance driven between charging events (mi) | 38.4 |
| Average number of trips between charging events | 4.6 |
| Average time plugged in per charging event (hr) | 10.7 |
| Average time plugged in and drawing power (hr) | 10.7 |
| Average time charging per charging event (power > 200 w) (hr) | 5.7 |
| Average energy per charging event (AC kWh) | 3.3 |
| Average charging energy per vehicle per month (AC kWh) | 75.5 |
| Total number of charging events | 23 |
| Total charging energy (AC kWh) | 75 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#24

07/06/2012 to 07/27/201213

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 39 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 18 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 56 |
| Total number of trips | 68 |
| Total distance traveled (mi) | 483 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 39 |
| Gasoline fuel economy (mpg) | 67 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 57 |
| Percent of trips city \| highway | $60 \%$ |
| Distance traveled (mi) | $40 \%$ |
| Percent of total distance traveled | 318 |
|  | $66 \%$ |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 51 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 97 |
| Percent of trips city \| highway | 3 |
| Distance traveled (mi) | $67 \% / 33 \%$ |
| Percent of total distance traveled | 38 |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 37 |
| :--- | ---: |
| Number of trips | 8 |
| Percent of trips city \| highway | $25 \% \mid 75 \%$ |
| Distance traveled (mi) | 128 |
| Percent of total distance traveled | $26 \%$ |

Gasoline Fuel Economy By Trip Type


[^2]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 37 | 40 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 80 | 55 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 3 |
| Average trip distance (mi) | 9.2 | 18.0 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 49 | 51 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 151 | 74 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 11.6 | 3.7 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 48 | 36 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 0.2 | 3.3 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 19 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 1.5 |
| Average distance driven between charging events (mi) | 103.9 |
| Average number of trips between charging events | 6.1 |
| Average time plugged in per charging event (hr) | 4.7 |
| Average time plugged in and drawing power (hr) | 4.7 |
| Average time charging per charging event (power > 200 w) (hr) | 3.2 |
| Average energy per charging event (AC kWh) | 1.9 |
| Average charging energy per vehicle per month (AC kWh) | 35.9 |
| Total number of charging events | 19 |
| Total charging energy (AC kWh) | 36 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#23

07/03/2012 to 07/31/2012
16

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 35 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 26 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 19 |
| Total number of trips | 128 |
| Total distance traveled (mi) | 1,968 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 41 |
| Gasoline fuel economy (mpg) | 69 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 26 |
| Percent of trips city \| highway | $50 \%$ |
| Distance traveled (mi) | $50 \%$ |
| Percent of total distance traveled | 326 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 43 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 43 |
| Percent of trips city \| highway | 7 |
| Distance traveled (mi) | $29 \% \mid 71 \%$ |
| Percent of total distance traveled | 252 |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 32 |
| :--- | ---: |
| Number of trips | 95 |
| Percent of trips city \| highway | $73 \% \mid 27 \%$ |
| Distance traveled (mi) | 1,390 |
| Percent of total distance traveled | $71 \%$ |

Gasoline Fuel Economy By Trip Type



[^3]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 34 | 41 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 111 | 66 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 1.0 | 34.4 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 42 | 43 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 76 | 39 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 30.2 | 31.8 |
| Average trip distance (mi) |  |  |
| Trips in Charge Sustaining (CS) mode | 28 | 34 |
| Gasoline fuel economy (mpg) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 4 | 2 |
| Average trip driving intensity ${ }^{8}$ | 6.0 | 31.1 |
| Average trip distance (mi) |  |  |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 13 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.8 |
| Average distance driven between charging events (mi) | 151.9 |
| Average number of trips between charging events | 8.8 |
| Average time plugged in per charging event (hr) | 10.5 |
| Average time plugged in and drawing power (hr) | 10.5 |
| Average time charging per charging event (power > 200 w) (hr) | 4.3 |
| Average energy per charging event (AC kWh) | 4.0 |
| Average charging energy per vehicle per month (AC kWh) | 51.9 |
| Total number of charging events | 13 |
| Total charging energy (AC kWh) | 52 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#21

07/06/2012 to 07/31/2012
21

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 33 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 60 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 44 |
| Total number of trips | 98 |
| Total distance traveled (mi) | 1,377 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 32 |
| Gasoline fuel economy (mpg) | 67 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 51 |
| Percent of trips city \| highway | $67 \%$ |
| Distance traveled (mi) | $33 \%$ |
| Percent of total distance traveled | 531 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 34 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 57 |
| Percent of trips city \| highway | 12 |
| Distance traveled (mi) | $50 \% / 50 \%$ |
| Percent of total distance traveled | 349 |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 32 |
| :--- | ---: |
| Number of trips | 35 |
| Percent of trips city \| highway | $77 \% \mid 23 \%$ |
| Distance traveled (mi) | 496 |
| Percent of total distance traveled | $36 \%$ |
|  |  |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^4]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 33 | 32 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 72 | 61 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 4 |
| Average trip distance (mi) | 8.0 | 15.3 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 36 | 33 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 80 | 42 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 23.4 | 4 |
| Average trip distance (mi) |  | 34.8 |
| Trips in Charge Sustaining (CS) mode | 32 | 32 |
| Gasoline fuel economy (mpg) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 4 | 3 |
| Average trip driving intensity ${ }^{8}$ | 5.3 | 44.0 |
| Average trip distance (mi) |  |  |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 21 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 1.0 |
| Average distance driven between charging events (mi) | 65.6 |
| Average number of trips between charging events | 4.7 |
| Average time plugged in per charging event (hr) | 5.5 |
| Average time plugged in and drawing power (hr) | 5.5 |
| Average time charging per charging event (power > 200 w) (hr) | 4.6 |
| Average energy per charging event (AC kWh) | 3.9 |
| Average charging energy per vehicle per month (AC kWh) | 82.5 |
| Total number of charging events | 21 |
| Total charging energy (AC kWh) | 82 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

| Number of vehicles: | 1 |
| :--- | :--- |
| Reporting period: | July 2012 |

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#20

07/03/2012 to 07/31/2012
15

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 32 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 15 |
| Overall DC electrical energy consumption (DC Wh/mi) $^{2}$ | 30 |
| Total number of trips | 133 |
| Total distance traveled (mi) | 691 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 36 |
| Gasoline fuel economy (mpg) | 84 |
| DC electrical energy consumption (DC Wh/mi) ${ }^{4}$ | 44 |
| Number of trips | $86 \%$ |
| Percent of trips city \| highway | $14 \%$ |
| Distance traveled (mi) | 168 |
| Percent of total distance traveled | $24 \%$ |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 39 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 6 |
| Number of trips | 109 |
| Percent of trips city \| highway | 4 |
| Distance traveled (mi) | $100 \% \mid 0 \%$ |
| Percent of total distance traveled | 46 |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 30 |
| :--- | ---: |
| Number of trips | 85 |
| Percent of trips city \| highway | $86 \% \mid 14 \%$ |
| Distance traveled (mi) | 477 |
| Percent of total distance traveled | $69 \%$ |



[^5]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 36 | 36 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 109 | 65 |
| Percent of miles with internal combustion engine off | $17 \%$ | $6 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 4.3 | 10.6 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 39 | 0 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 109 | 0 |
| Percent of miles with internal combustion engine off | $10 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 |  |
| Average trip distance (mi) | 45.9 | 0.0 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 28 | 33 |
| Percent of miles with internal combustion engine off | $16 \%$ | $6 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 5.5 | 6.3 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 8 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.5 |
| Average distance driven between charging events (mi) | 246.8 |
| Average number of trips between charging events | 14.4 |
| Average time plugged in per charging event (hr) | 26.4 |
| Average time plugged in and drawing power (hr) | 26.4 |
| Average time charging per charging event (power > 200 w) (hr) | 4.9 |
| Average energy per charging event (AC kWh) | 3.8 |
| Average charging energy per vehicle per month (AC kWh) | 30.2 |
| Total number of charging events | 8 |
| Total charging energy (AC kWh) | 30 |



Time of Day When Charging



## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

Quantum SCAQMD \#18
07/02/2012 to 07/27/2012
15

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 32 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 22 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 24 |
| Total number of trips | 83 |
| Total distance traveled (mi) | 1,097 |
|  |  |
| Trips in Charge Depleting (CD) mode |  |
| Gasoline fuel economy (mpg) | 36 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 51 |
| Percent of trips city \| highway | 19 |
| Distance traveled (mi) | $79 \% \mid 21 \%$ |
| Percent of total distance traveled | 154 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 37 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 64 |
| Number of trips | 6 |
| Percent of trips city \| highway | $17 \% \mid 83 \%$ |
| Distance traveled (mi) | 229 |
| Percent of total distance traveled | $21 \%$ |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 31 |
| :--- | ---: |
| Number of trips | 58 |
| Percent of trips city \| highway | $62 \% \mid 38 \%$ |
| Distance traveled (mi) | 714 |
| Percent of total distance traveled | $65 \%$ |

Gasoline Fuel Economy By Trip Type


[^6]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 36 | 36 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 44 | 56 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 3 |
| Average trip distance (mi) | 3.3 | 10.8 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 37 | 37 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 174 | 64 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 2 |
| Average trip distance (mi) | 0.9 | 32.5 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 29 | 31 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 1.8 | 17.6 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 8 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.5 |
| Average distance driven between charging events (mi) | 246.8 |
| Average number of trips between charging events | 14.4 |
| Average time plugged in per charging event (hr) | 33.7 |
| Average time plugged in and drawing power (hr) | 33.7 |
| Average time charging per charging event (power > 200 w) (hr) | 5.2 |
| Average energy per charging event (AC kWh) | 5.5 |
| Average charging energy per vehicle per month (AC kWh) | 44.1 |
| Total number of charging events | 8 |
| Total charging energy (AC kWh) | 44 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#17

07/02/2012 to 07/27/2012
19

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 38 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 18 |
| Overall DC electrical energy consumption (DC Wh/mi) | 2 |
| Total number of trips | 23 |
| Total distance traveled (mi) | 81 |
|  | 835 |
| Trips in Charge Depleting (CD) mode ${ }^{2}$ |  |
| Gasoline fuel economy (mpg) | 38 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 46 |
| Percent of trips city \| highway | 31 |
| Distance traveled (mi) | $87 \%$ |
| Percent of total distance traveled | $23 \%$ |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 43 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 61 |
| Number of trips | 3 |
| Percent of trips city \| highway | $0 \% \mid 100 \%$ |
| Distance traveled (mi) | 108 |
| Percent of total distance traveled | $13 \%$ |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 37 |
| :--- | ---: |
| Number of trips | 47 |
| Percent of trips city \| highway | $83 \% \mid 17 \%$ |
| Distance traveled (mi) | 507 |
| Percent of total distance traveled | $61 \%$ |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^7]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 38 | 37 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 40 | 61 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 4 |
| Average trip distance (mi) | 9.4 | 6.8 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 0 | 43 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 0 | 61 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 0.0 | 15.4 |
| Average trip distance (mi) |  |  |
| Trips in Charge Sustaining (CS) mode | 35 | 38 |
| Gasoline fuel economy (mpg) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 4 | 3 |
| Average trip driving intensity ${ }^{8}$ | 5.1 | 7.7 |
| Average trip distance (mi) |  |  |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 15 |
| :--- | ---: |
| Average number of charging events per vehicle per day when driven | 0.8 |
| Average distance driven between charging events (mi) | 131.7 |
| Average number of trips between charging events | 7.7 |
| Average time plugged in per charging event (hr) | 4.7 |
| Average time plugged in and drawing power (hr) | 4.7 |
| Average time charging per charging event (power > 200 w) (hr) | 4.7 |
| Average energy per charging event (AC kWh) | 2.3 |
| Average charging energy per vehicle per month (AC kWh) | 34.8 |
| Total number of charging events | 15 |
| Total charging energy (AC kWh) | 35 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#16

07/02/2012 to 07/31/2012
18

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 35 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 33 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 47 |
| Total number of trips | 77 |
| Total distance traveled (mi) | 818 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 36 |
| Gasoline fuel economy (mpg) | 57 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 58 |
| Percent of trips city \| highway | $85 \%$ |
| Distance traveled (mi) | $16 \%$ |
| Percent of total distance traveled | 404 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 54 |
| Percent of trips city \| highway | 5 |
| Distance traveled (mi) | $00 \%$ |
| Percent of total distance traveled | 235 |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ | $29 \%$ |
| Gasoline fuel economy (mpg) |  |
| Number of trips | 30 |
| Percent of trips city \| highway | 14 |
| Distance traveled (mi) | $71 \% \mid 29 \%$ |
| Percent of total distance traveled | 179 |

Gasoline Fuel Economy By Trip Type


[^8]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 33 | 39 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 69 | 50 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 8.6 | 28.6 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 0 | 36 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 0 | 54 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 0.0 | 33.5 |
| Average trip distance (mi) |  |  |
| Trips in Charge Sustaining (CS) mode | 28 | 30 |
| Gasoline fuel economy (mpg) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 5 | 3 |
| Average trip driving intensity ${ }^{8}$ | 0.4 | 4.5 |
| Average trip distance (mi) |  |  |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 14 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.8 |
| Average distance driven between charging events (mi) | 141.1 |
| Average number of trips between charging events | 8.2 |
| Average time plugged in per charging event (hr) | 23.9 |
| Average time plugged in and drawing power (hr) | 23.9 |
| Average time charging per charging event (power > 200 w) (hr) | 5.1 |
| Average energy per charging event (AC kWh) | 4.7 |
| Average charging energy per vehicle per month (AC kWh) | 65.6 |
| Total number of charging events | 14 |
| Total charging energy (AC kWh) | 66 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

| Number of vehicles: | 1 |
| :--- | :--- |
| Reporting period: | July 2012 |

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#13

07/03/2012 to 07/31/2012
13

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 64 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 39 |
| Total number of trips | 55 |
| Total distance traveled (mi) | 907 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 38 |
| Gasoline fuel economy (mpg) | 64 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 20 |
| Percent of trips city \| highway | $55 \% / 45 \%$ |
| Distance traveled (mi) | 263 |
| Percent of total distance traveled | $29 \%$ |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 37 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 45 |
| Percent of trips city \| highway | 6 |
| Distance traveled (mi) | $100 \%$ |
| Percent of total distance traveled | 307 |
|  | $34 \%$ |
| Trips in Charge Sustaining (CS) mode 7 |  |
| Gasoline fuel economy (mpg) |  |
| Number of trips | 35 |
| Percent of trips city \| highway | 29 |
| Distance traveled (mi) | $72 \%$ |
| Percent of total distance traveled | $28 \%$ |



[^9]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 22 | 39 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 98 | 62 |
| Percent of miles with internal combustion engine off | $8 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 3 |
| Average trip distance (mi) | 1.0 | 28.0 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 0 | 37 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 0 | 45 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 0.0 | 51.2 |
| Average trip distance (mi) |  |  |
| Trips in Charge Sustaining (CS) mode | 35 | 35 |
| Gasoline fuel economy (mpg) | $1 \%$ | $1 \%$ |
| Percent of miles with internal combustion engine off | 4 | 3 |
| Average trip driving intensity ${ }^{8}$ | 3.8 | 32.3 |
| Average trip distance (mi) |  |  |

Trip Fuel Economy Distribution By Trip Type


## Plug-in charging

| Average number of charging events per vehicle per month when driven | 11 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.8 |
| Average distance driven between charging events (mi) | 82.5 |
| Average number of trips between charging events | 5.0 |
| Average time plugged in per charging event (hr) | 22.4 |
| Average time plugged in and drawing power (hr) | 22.4 |
| Average time charging per charging event (power >200 w) (hr) | 5.1 |
| Average energy per charging event (AC kWh) | 5.2 |
| Average charging energy per vehicle per month (AC kWh) | 57.7 |
| Total number of charging events | 11 |
| Total charging energy (AC kWh) | 58 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

| Number of vehicles: | 1 |
| :--- | :--- |
| Reporting period: | July 2012 |

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#11

07/02/2012 to 07/31/201213

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 31 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 12 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 53 |
| Total number of trips | 41 |
| Total distance traveled (mi) | 210 |
|  |  |
| Trips in Charge Depleting (CD) mode |  |
| Gasoline fuel economy (mpg) | 30 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 75 |
| Percent of trips city \| highway | 36 |
| Distance traveled (mi) | $81 \%$ |
| Percent of total distance traveled | $19 \%$ |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 34 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 66 |
| Number of trips | 2 |
| Percent of trips city \| highway | $100 \% \mid 0 \%$ |
| Distance traveled (mi) | 57 |
| Percent of total distance traveled | $27 \%$ |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 31 |
| :--- | ---: |
| Number of trips | 3 |
| Percent of trips city \| highway | $67 \% \mid 33 \%$ |
| Distance traveled (mi) | 50 |
| Percent of total distance traveled | $24 \%$ |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^10]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 24 | 38 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 81 | 70 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 6 | 2 |
| Average trip distance (mi) | 2.8 | 6.1 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 34 | 0 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 66 | 0 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 56.6 | 0.0 |
| Average trip distance (mi) |  |  |
| Trips in Charge Sustaining (CS) mode | 38 | 30 |
| Gasoline fuel economy (mpg) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 5 | 4 |
| Average trip driving intensity ${ }^{8}$ | 0.1 | 1.3 |
| Average trip distance (mi) |  |  |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 7 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.5 |
| Average distance driven between charging events (mi) | 282.1 |
| Average number of trips between charging events | 16.4 |
| Average time plugged in per charging event (hr) | 40.7 |
| Average time plugged in and drawing power (hr) | 40.7 |
| Average time charging per charging event (power > 200 w) (hr) | 4.2 |
| Average energy per charging event (AC kWh) | 3.4 |
| Average charging energy per vehicle per month (AC kWh) | 23.7 |
| Total number of charging events | 7 |
| Total charging energy (AC kWh) | 24 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#10

07/06/2012 to 07/31/2012
20

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 34 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 21 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 37 |
| Total number of trips | 110 |
| Total distance traveled (mi) | 849 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 34 |
| Gasoline fuel economy (mpg) | 54 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 55 |
| Percent of trips city \| highway | $87 \%$ |
| Distance traveled (mi) | $13 \%$ |
| Percent of total distance traveled | 394 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 39 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 59 |
| Percent of trips city \| highway | $33 \% \mid 67 \%$ |
| Distance traveled (mi) | 144 |
| Percent of total distance traveled | $17 \%$ |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 32 |
| :--- | ---: |
| Number of trips | 52 |
| Percent of trips city \| highway | $90 \% \mid 10 \%$ |
| Distance traveled (mi) | 311 |
| Percent of total distance traveled | $37 \%$ |



[^11]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 32 | 39 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 60 | 45 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 13.5 | 18.2 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 31 | 40 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 54 | 60 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 1 |
| Average trip distance (mi) | 8.6 | 19.3 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 32 | 33 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 2.4 | 5.6 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 10 |
| :--- | ---: |
| Average number of charging events per vehicle per day when driven | 0.5 |
| Average distance driven between charging events (mi) | 197.5 |
| Average number of trips between charging events | 11.5 |
| Average time plugged in per charging event (hr) | 14.7 |
| Average time plugged in and drawing power (hr) | 14.7 |
| Average time charging per charging event (power > 200 w) (hr) | 5.9 |
| Average energy per charging event (AC kWh) | 4.2 |
| Average charging energy per vehicle per month (AC kWh) | 41.7 |
| Total number of charging events | 10 |
| Total charging energy (AC kWh) | 42 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

| Number of vehicles: | 1 |
| :--- | :--- |
| Reporting period: | July 2012 |

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#9

07/06/2012 to 07/31/2012
16

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 22 |
| Overall DC electrical energy consumption (DC Wh/mi) $^{2}$ | 19 |
| Total number of trips | 115 |
| Total distance traveled (mi) | 1,975 |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ |  |
| Gasoline fuel economy (mpg) | 39 |
| DC electrical energy consumption (DC Wh/mi) ${ }^{4}$ | 58 |
| Number of trips | 26 |
| Percent of trips city \| highway | $65 \%$ |
| Distance traveled (mi) | $35 \%$ |
| Percent of total distance traveled | 276 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 32 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 58 |
| Percent of trips city \| highway | 8 |
| Distance traveled (mi) | $13 \% / 88 \%$ |
| Percent of total distance traveled | 252 |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| Number of trips | 81 |
| Percent of trips city \| highway | $56 \% \mid 44 \%$ |
| Distance traveled (mi) | 1,447 |
| Percent of total distance traveled | $73 \%$ |



[^12]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 33 | 40 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 69 | 57 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 2 |
| Average trip distance (mi) | 1.6 | 27.6 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 34 | 32 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 37 | 58 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 8.6 | 34.8 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 31 | 36 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 2.9 | 36.5 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 16 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 1.0 |
| Average distance driven between charging events (mi) | 123.4 |
| Average number of trips between charging events | 7.2 |
| Average time plugged in per charging event (hr) | 2.9 |
| Average time plugged in and drawing power (hr) | 2.9 |
| Average time charging per charging event (power > 200 w) (hr) | 2.9 |
| Average energy per charging event (AC kWh) | 2.7 |
| Average charging energy per vehicle per month (AC kWh) | 43.2 |
| Total number of charging events | 16 |
| Total charging energy (AC kWh) | 43 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

| Number of vehicles: | 1 |
| :--- | :--- |
| Reporting period: | July 2012 |

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#12

07/03/2012 to 07/31/2012
17

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 34 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 14 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 24 |
| Total number of trips | 91 |
| Total distance traveled (mi) | 819 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 36 |
| Gasoline fuel economy (mpg) | 72 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 32 |
| Percent of trips city \| highway | $81 \%$ |
| Distance traveled (mi) | $19 \%$ |
| Percent of total distance traveled | 141 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 56 |
| Percent of trips city \| highway | 4 |
| Distance traveled (mi) | $0 \%$ |
| Percent of total distance traveled | $100 \%$ |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 34 |
| :--- | ---: |
| Number of trips | 55 |
| Percent of trips city \| highway | $78 \% \mid 22 \%$ |
| Distance traveled (mi) | 519 |
| Percent of total distance traveled | $63 \%$ |

Gasoline Fuel Economy By Trip Type


[^13]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 29 | 38 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 72 | 72 |
| Percent of miles with internal combustion engine off | $18 \%$ | $6 \%$ |
| Average trip driving intensity ${ }^{8}$ | 6 | 4 |
| Average trip distance (mi) | 1.9 | 12.1 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 0 | 36 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 0 | 56 |
| Percent of miles with internal combustion engine off | $0 \%$ | $4 \%$ |
| Average trip driving intensity ${ }^{8}$ | 0.0 | 22.6 |
| Average trip distance (mi) |  |  |
| Trips in Charge Sustaining (CS) mode | 31 | 35 |
| Gasoline fuel economy (mpg) | $17 \%$ | $5 \%$ |
| Percent of miles with internal combustion engine off | 5 | 3 |
| Average trip driving intensity ${ }^{8}$ | 3.2 | 10.4 |
| Average trip distance (mi) |  |  |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 8 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.5 |
| Average distance driven between charging events (mi) | 246.8 |
| Average number of trips between charging events | 14.4 |
| Average time plugged in per charging event (hr) | 19.2 |
| Average time plugged in and drawing power (hr) | 19.2 |
| Average time charging per charging event (power > 200 w) (hr) | 6.7 |
| Average energy per charging event (AC kWh) | 3.6 |
| Average charging energy per vehicle per month (AC kWh) | 28.5 |
| Total number of charging events | 8 |
| Total charging energy (AC kWh) | 29 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

| Number of vehicles: | 1 |
| :--- | :--- |
| Reporting period: | July 2012 |

## Quantum SCAQMD \#15

Date range of data received:
Number of vehicle days driven:
07/06/2012 to 07/31/2012
11

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 31 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 49 |
| Total number of trips | 77 |
| Total distance traveled (mi) | 600 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 39 |
| Gasoline fuel economy (mpg) | 73 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 60 |
| Percent of trips city \| highway | $88 \%$ |
| Distance traveled (mi) | $22 \%$ |
| Percent of total distance traveled | 225 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 40 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 61 |
| Number of trips | 5 |
| Percent of trips city \| highway | $80 \% \mid 20 \%$ |
| Distance traveled (mi) | 175 |
| Percent of total distance traveled | $29 \%$ |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 30 |
| :--- | ---: |
| Number of trips | 12 |
| Percent of trips city \| highway | $67 \% \mid 33 \%$ |
| Distance traveled (mi) | 200 |
| Percent of total distance traveled | $33 \%$ |



[^14]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 39 | 39 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 107 | 60 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 3.7 | 18.0 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 42 | 38 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 62 | 59 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 1 |
| Average trip distance (mi) | 78.1 | 13.8 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 31 | 29 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 0.9 | 4.5 |

Trip Fuel Economy Distribution By Trip Type


## Plug-in charging

| Average number of charging events per vehicle per month when driven | 13 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 1.2 |
| Average distance driven between charging events (mi) | 151.9 |
| Average number of trips between charging events | 8.8 |
| Average time plugged in per charging event (hr) | 48.0 |
| Average time plugged in and drawing power (hr) | 48.0 |
| Average time charging per charging event (power > 200 w$)(\mathrm{hr})$ | 4.4 |
| Average energy per charging event (AC kWh) | 4.7 |
| Average charging energy per vehicle per month (AC kWh) | 61.6 |
| Total number of charging events | 13 |
| Total charging energy (AC kWh) | 62 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

| Number of vehicles: | 1 |
| :--- | :--- |
| Reporting period: | July 2012 |

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#19

07/06/2012 to 07/27/2012
16

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 41 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 84 |
| Overall DC electrical energy consumption (DC Wh/mi) | 2 |
| Total number of trips | 62 |
| Total distance traveled (mi) | 147 |
|  | 880 |
| Trips in Charge Depleting (CD) mode ${ }^{2}$ |  |
| Gasoline fuel economy (mpg) | 42 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 73 |
| Percent of trips city \| highway | 105 |
| Distance traveled (mi) | $79 \% / 21 \%$ |
| Percent of total distance traveled | 551 |

Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$

| Gasoline fuel economy (mpg) | 45 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 73 |
| Percent of trips city \| highway | $98 \%$ |
| Distance traveled (mi) | $92 \%$ |
| Percent of total distance traveled | 144 |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 37 |
| :--- | ---: |
| Number of trips | 33 |
| Percent of trips city \| highway | $94 \% \mid 6 \%$ |
| Distance traveled (mi) | 184 |
| Percent of total distance traveled | $21 \%$ |

Gasoline Fuel Economy By Trip Type


[^15]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 41 | 44 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 74 | 70 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 4.5 | 8.1 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 45 | 44 |
| :--- | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 83 | 46 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 14.7 | 20.5 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 35 | 44 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 4.4 | 24.3 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 31 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 1.9 |
| Average distance driven between charging events (mi) | 28.4 |
| Average number of trips between charging events | 4.7 |
| Average time plugged in per charging event (hr) | 3.8 |
| Average time plugged in and drawing power (hr) | 3.8 |
| Average time charging per charging event (power > 200 w) (hr) | 3.0 |
| Average energy per charging event (AC kWh) | 2.4 |
| Average charging energy per vehicle per month (AC kWh) | 74.3 |
| Total number of charging events | 31 |
| Total charging energy (AC kWh) | 74 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: July 2012

Date range of data received:
Number of vehicle days driven:

## Quantum SCAQMD \#7

07/03/2012 to 07/29/2012
15

## All Trips Combined

| Overall gasoline fuel economy (mpg) | 37 |
| :---: | :---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 43 |
| Overall DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 32 |
| Total number of trips | 90 |
| Total distance traveled (mi) | 1,222 |
| Trips in Charge Depleting (CD) mode3 |  |
| Gasoline fuel economy (mpg) | 39 |
| DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh/mi)}{ }^{4}$ | 63 |
| Number of trips | 33 |
| Percent of trips city \| highway | 70\% \| $30 \%$ |
| Distance traveled (mi) | 296 |
| Percent of total distance traveled | 24\% |
| Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$ |  |
| Gasoline fuel economy (mpg) | 39 |
| DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh/mi)}{ }^{6}$ | 61 |
| Number of trips | 9 |
| Percent of trips city \| highway | 33\% \| 67\% |
| Distance traveled (mi) | 207 |
| Percent of total distance traveled | 17\% |

Trips in Charge Sustaining (CS) mode ${ }^{7}$

| Gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| Number of trips | 48 |
| Percent of trips city \| highway | $52 \% \mid 48 \%$ |
| Distance traveled (mi) | 719 |
| Percent of total distance traveled | $59 \%$ |

Gasoline Fuel Economy By Trip Type


[^16]
## Trips in Charge Depleting (CD) mode City Highway

| Gasoline fuel economy (mpg) | 35 | 40 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 69 | 61 |
| Percent of miles with internal combustion engine off | $12 \%$ | $4 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 2 |
| Average trip distance (mi) | 3.3 | 22.0 |

Trips in Charge Depleting and Charge Sustaining (CD/CS) mode

| Gasoline fuel economy (mpg) | 40 | 39 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 133 | 58 |
| Percent of miles with internal combustion engine off | $24 \%$ | $4 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 3 |
| Average trip distance (mi) | 2.3 | 33.4 |
| Trips in Charge Sustaining (CS) mode |  |  |
| Gasoline fuel economy (mpg) | 32 | 37 |
| Percent of miles with internal combustion engine off | $15 \%$ | $3 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 2 |
| Average trip distance (mi) | 2.1 | 28.9 |

Trip Fuel Economy Distribution By Trip Type


## Plug-in charging

| Average number of charging events per vehicle per month when driven | 14 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.9 |
| Average distance driven between charging events (mi) | 87.3 |
| Average number of trips between charging events | 6.4 |
| Average time plugged in per charging event (hr) | 14.6 |
| Average time plugged in and drawing power (hr) | 14.6 |
| Average time charging per charging event (power > 200 w) (hr) | 6.1 |
| Average energy per charging event (AC kWh) | 3.8 |
| Average charging energy per vehicle per month (AC kWh) | 52.9 |
| Total number of charging events | 14 |
| Total charging energy (AC kWh) | 53 |



Time of Day When Charging


Time of Day When Plugging In



[^0]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes

[^1]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^2]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^3]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^4]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^5]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^6]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^7]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^8]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^9]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^10]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^11]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^12]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^13]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^14]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^15]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

[^16]:    Notes: 1-8. Please see http://avt.inl.gov/pdf/phev/SCAQMDreportnotes.pdf for an explanation of all PHEV Fleet Testing Report notes.

