## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 17
Reporting period: October 2012

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

## All Vehicles

10/01/2012 to 10/31/2012128

All Trips Combined

| Overall gasoline fuel economy $(\mathrm{mpg})$ | 36 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 50 |
| ${\text { Overall DC electrical energy consumption }(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}}{ }^{1}$ | 22 |
| Total number of trips | 730 |
| Total distance traveled $(\mathrm{mi})$ | 9,164 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 40 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 4 |
| Number of trips | 61 |
| Percent of trips city \| highway | 225 |
| Distance traveled (mi) | $68 \% / 32 \%$ |
| Percent of total distance traveled | 1,768 |

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

| Gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 53 |
| Number of trips | 40 |
| Percent of trips city \| highway | $23 \% \mid 78 \%$ |
| Distance traveled (mi) | 1,638 |
| Percent of total distance traveled | $18 \%$ |
|  |  |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 35 |
| Number of trips | 465 |
| Percent of trips city \| highway | $70 \% \mid 30 \%$ |
| Distance traveled (mi) | 5,758 |
| Percent of total distance traveled | $63 \%$ |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^0]|  |  |  |
| :--- | :---: | :---: |
| City Highway |  |  |
| Trips in Charge Depleting (CD) mode | 37 | 41 |
| Gasoline fuel economy (mpg) | 64 | 58 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 4 | 2 |
| Average trip driving intensity ${ }^{8}$ | 4.4 | 15.3 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 43 | 35 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 75 | 51 |
| Percent of miles with internal combustion engine off | $0 \%$ | $1 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 20.3 | 47.0 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 33 | 36 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $4 \%$ | $2 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 4.0 | 31.6 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 5 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.7 |
| Average distance driven between charging events (mi) | 98.5 |
| Average number of trips between charging events | 7.8 |
| Average time plugged in per charging event (hr) | 39.8 |
| Average time plugged in and drawing power (hr) | 39.8 |
| Average time charging per charging event (power > 200 w) (hr) | 5.3 |
| Average energy per charging event (AC kWh) | 5.0 |
| Average charging energy per vehicle per month (AC kWh) | 27.1 |
| Total number of charging events | 93 |
| Total charging energy (AC kWh) | 461 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: $\quad$ 10/17/2012 to 10/29/2012
Number of vehicle days driven: 9

## Quantum SCAQMD \#8

All Trips Combined

| Overall gasoline fuel economy (mpg) | 37 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 5 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 0 |
| Total number of trips | 1,593 |
| Total distance traveled $(\mathrm{mi})$ |  |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 44 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 4 |
| Number of trips | 41 |
| Percent of trips city \| highway | $80 \% \mid 20 \%$ |
| Distance traveled (mi) | 52 |
| Percent of total distance traveled | $3 \%$ |

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

| Gasoline fuel economy (mpg) | 33 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 52 |
| Number of trips | 1 |
| Percent of trips city \| highway | $0 \%$ |
| Distance traveled (mi) | $500 \%$ |
| Percent of total distance traveled | 51 |
|  | $3 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 37 |
| Number of trips | 74 |
| Percent of trips city \| highway | $66 \%$ |
| Distance traveled (mi) | $1,44 \%$ |
| Percent of total distance traveled | $94 \%$ |



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

| Gasoline fuel economy (mpg) | 1 | 46 |  |
| :--- | ---: | :---: | :---: |
| DC electrical energy consumption (DC Wh/mi) | 875 | 41 |  |
| Percent of miles with internal combustion engine off | $0 \%$ | $1 \%$ |  |
| Average trip driving intensity 8 | 3 | 2 |  |
| Average trip distance $(\mathrm{mi})$ | 0.0 | 51.9 |  |

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

| Gasoline fuel economy (mpg) | 0 | 33 |
| :--- | :---: | :---: |
| DC electrical energy consumption (DC Wh/mi) | 0 | 52 |
| Percent of miles with internal combustion engine off | $0 \%$ | $4 \%$ |
| Average trip driving intensity ${ }^{8}$ |  | 1 |
| Average trip distance (mi) | 0.0 | 51.4 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 36 | 37 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $17 \%$ | $6 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 5.9 | 48.1 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 2 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.2 |
| Average distance driven between charging events (mi) | 796.4 |
| Average number of trips between charging events | 40.0 |
| Average time plugged in per charging event (hr) | 9.6 |
| Average time plugged in and drawing power (hr) | 9.6 |
| Average time charging per charging event (power > 200 w) (hr) | 9.6 |
| Average energy per charging event (AC kWh) | 4.0 |
| Average charging energy per vehicle per month (AC kWh) | 8.0 |
| Total number of charging events | 2 |
| Total charging energy (AC kWh) | 8 |

Time of Day When Driving


Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: 10/17/2012 to 10/26/2012
Number of vehicle days driven: 5

All Trips Combined

| Overall gasoline fuel economy (mpg) | 36 |
| :--- | :---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 88 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 18 |
| Total number of trips | 19 |
| Total distance traveled (mi) | 279 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 39 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 88 |
| Percent of trips city \| highway | 5 |
| Distance traveled (mi) | $100 \%$ |
| Percent of total distance traveled | 3 |

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

| Gasoline fuel economy (mpg) | 42 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 60 |
| Percent of trips city \| highway | 1 |
| Distance traveled (mi) | $100 \%$ |
| Percent of total distance traveled | 65 |
|  | $23 \%$ |
| Trips in Charge Sustaining (CS) mode7 |  |
| Gasoline fuel economy (mpg) | 34 |
| Number of trips | 13 |
| Percent of trips city \| highway | $62 \%$ |
| Distance traveled (mi) | $39 \%$ |
| Percent of total distance traveled | 211 |

## Quantum SCAQMD \#25



[^2]|  |  |  |
| :--- | ---: | :---: |
| City | Highway |  |
| Trips in Charge Depleting (CD) mode | 39 | 0 |
| Gasoline fuel economy (mpg) | 88 | 0 |
| DC electrical energy consumption (DC Wh/mi) | $25 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 6 |  |
| Average trip driving intensity 8 | 0.6 | 0.0 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 0 | 42 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 0 | 60 |
| Percent of miles with internal combustion engine off | $0 \%$ | $5 \%$ |
| Average trip driving intensity ${ }^{8}$ |  | 3 |
| Average trip distance (mi) | 0.0 | 64.6 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 32 | 35 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $10 \%$ | $5 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 3.6 | 36.5 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 3 |
| Average number of charging events per vehicle per month when driven | 0.6 |
| Average number of charging events per vehicle per day when driven | 93.0 |
| Average distance driven between charging events (mi) | 6.3 |
| Average number of trips between charging events | 102.4 |
| Average time plugged in per charging event (hr) | 102.4 |
| Average time plugged in and drawing power (hr) | 14.0 |
| Average time charging per charging event (power > 200 w) (hr) | 8.2 |
| Average energy per charging event (AC kWh) | 24.6 |
| Average charging energy per vehicle per month (AC kWh) | 3 |
| Total number of charging events | 25 |
| Total charging energy (AC kWh) |  |

Time of Day When Driving


Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

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

Quantum SCAQMD \#24
10/02/2012 to 10/31/2012
12

All Trips Combined

| Overall gasoline fuel economy $(\mathrm{mpg})$ | 43 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 78 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 60 |
| Total number of trips | 59 |
| Total distance traveled (mi) | 608 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 43 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{4}$ | 62 |
| Number of trips | 48 |
| Percent of trips city \| highway | $50 \% / 50 \%$ |
| Distance traveled (mi) | 425 |
| Percent of total distance traveled | $70 \%$ |

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 | 4 |
| Distance traveled (mi) | $50 \% / 50 \%$ |
| Percent of total distance traveled | 131 |
|  | $22 \%$ |
| Trips in Charge Sustaining (CS) mode7 |  |
| Gasoline fuel economy (mpg) | 38 |
| Number of trips | 7 |
| Percent of trips city \| highway | $57 \%$ |
| Distance traveled (mi) | $43 \%$ |
| Percent of total distance traveled | 52 |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


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

| Gasoline fuel economy (mpg) | 38 | 45 |
| :--- | ---: | ---: | ---: |
| DC electrical energy consumption (DC Wh/mi) | 67 | 60 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 4.7 | 13.0 |

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

| Gasoline fuel economy (mpg) | 49 | 43 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 67 | 77 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 3 |
| Average trip distance (mi) | 29.9 | 35.9 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 35 | 41 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 6.1 | 9.2 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 18 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 1.5 |
| Average distance driven between charging events (mi) | 33.8 |
| Average number of trips between charging events | 3.3 |
| Average time plugged in per charging event (hr) | 4.9 |
| Average time plugged in and drawing power (hr) | 4.9 |
| Average time charging per charging event (power >200 w) (hr) | 4.3 |
| Average energy per charging event (AC kWh) | 2.6 |
| Average charging energy per vehicle per month (AC kWh) | 47.3 |
| Total number of charging events | 18 |
| Total charging energy (AC kWh) | 47 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: $\quad 10 / 17 / 2012$ to 10/31/2012
Number of vehicle days driven: 9

All Trips Combined

| Overall gasoline fuel economy $(\mathrm{mpg})$ | 37 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 41 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 26 |
| Total number of trips | 72 |
| Total distance traveled (mi) | 1,136 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy $(\mathrm{mpg})$ | 40 |
| :--- | ---: |
| DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{4}$ | 59 |
| Number of trips | 20 |
| Percent of trips city \| highway | $65 \% \mid 35 \%$ |
| Distance traveled (mi) | 276 |
| 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) ${ }^{6}$ | 50 |
| Number of trips | 6 |
| Percent of trips city \| highway | $17 \%$ |
| Distance traveled (mi) | $83 \%$ |
| Percent of total distance traveled | 249 |
|  | $22 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 35 |
| Number of trips | 46 |
| Percent of trips city \| highway | $78 \%$ |
| Distance traveled (mi) | $22 \%$ |
| Percent of total distance traveled | 611 |

## Quantum SCAQMD \#23



[^4]|  |  |  |
| :--- | ---: | ---: |
| City | Highway |  |
| Trips in Charge Depleting (CD) mode | 40 | 41 |
| Gasoline fuel economy (mpg) | 61 | 56 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 3 | 3 |
| Average trip driving intensity ${ }^{8}$ | 12.5 | 16.2 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 44 | 38 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 63 | 46 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 53.1 | 39.1 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 33 | 35 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 3.4 | 49.0 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 11 |
| Average number of charging events per vehicle per month when driven | 1.2 |
| Average number of charging events per vehicle per day when driven | 103.2 |
| Average distance driven between charging events (mi) | 6.5 |
| Average number of trips between charging events | 4.8 |
| Average time plugged in per charging event (hr) | 4.8 |
| Average time plugged in and drawing power (hr) | 4.8 |
| Average time charging per charging event (power > 200 w) (hr) | 4.2 |
| Average energy per charging event (AC kWh) | 46.2 |
| Average charging energy per vehicle per month (AC kWh) | 11 |
| Total number of charging events | 46 |
| Total charging energy (AC kWh) |  |

Time of Day When Driving


Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: $\quad 10 / 19 / 2012$ to 10/30/2012
Number of vehicle days driven: 3

## Quantum SCAQMD \#22

All Trips Combined

| Overall gasoline fuel economy (mpg) | 37 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 175 |
| Overall DC electrical energy consumption (DC Wh/mi) |  |
| Total number of trips | 37 |
| Total distance traveled (mi) | 18 |
|  | 137 |
| Trips in Charge Depleting (CD) mode |  |
| Gasoline fuel economy (mpg) | 53 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 79 |
| Percent of trips city \| highway | 2 |
| Distance traveled (mi) | $100 \% / 0 \%$ |
| Percent of total distance traveled | 43 |

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

| Gasoline fuel economy (mpg) | 42 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 35 |
| Number of trips | 1 |
| Percent of trips city \| highway | $0 \%$ |
| Distance traveled (mi) | $400 \%$ |
| Percent of total distance traveled | 42 |
|  | $31 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 28 |
| Number of trips | 15 |
| Percent of trips city \| highway | $87 \% \mid 13 \%$ |
| Distance traveled (mi) | 52 |
| Percent of total distance traveled | $38 \%$ |



[^5]|  |  |  |
| :--- | ---: | :---: |
| City | Highway |  |
| Trips in Charge Depleting (CD) mode | 53 | 0 |
| Gasoline fuel economy (mpg) | 79 | 0 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 3 |  |
| Average trip driving intensity ${ }^{8}$ | 21.5 | 0.0 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 0 | 42 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 0 | 35 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ |  | 2 |
| Average trip distance (mi) | 0.0 | 41.9 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 25 | 31 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 7 | 4 |
| Average trip distance (mi) | 1.9 | 13.8 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 2 |
| Average number of charging events per vehicle per month when driven | 0.7 |
| Average number of charging events per vehicle per day when driven | 68.4 |
| Average distance driven between charging events (mi) | 9.0 |
| Average number of trips between charging events | 94.4 |
| Average time plugged in per charging event (hr) | 94.4 |
| Average time plugged in and drawing power (hr) | 16.6 |
| Average time charging per charging event (power > 200 w) (hr) | 12.0 |
| Average energy per charging event (AC kWh) | 24.0 |
| Average charging energy per vehicle per month (AC kWh) | 2 |
| Total number of charging events | 24 |
| Total charging energy (AC kWh) |  |

Time of Day When Driving


Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: 10/19/2012 to 10/30/2012
Number of vehicle days driven: 5

All Trips Combined

| Overall gasoline fuel economy $(\mathrm{mpg})$ | 34 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 85 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 40 |
| Total number of trips | 23 |
| Total distance traveled (mi) | 178 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 34 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 90 |
| Percent of trips city \| highway | 11 |
| Distance traveled (mi) | $73 \% \mid 27 \%$ |
| Percent of total distance traveled | 55 |

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

| Gasoline fuel economy (mpg) | 44 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 37 |
| Number of trips | 1 |
| Percent of trips city \| highway | $0 \%$ |
| Distance traveled (mi) | $100 \%$ |
| Percent of total distance traveled | 24 |
|  | $13 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 33 |
| Number of trips | 11 |
| Percent of trips city \| highway | $64 \%$ |
| Distance traveled (mi) | $36 \%$ |
| Percent of total distance traveled | 100 |

## Quantum SCAQMD \#21



[^6]|  |  |  |
| :--- | ---: | ---: |
| City | Highway |  |
| Trips in Charge Depleting (CD) mode | 38 | 25 |
| Gasoline fuel economy (mpg) | 89 | 92 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 4 | 4 |
| Average trip driving intensity ${ }^{8}$ | 5.2 | 4.5 |
| Average trip distance (mi) |  |  |

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

|  | 0 | 44 |
| :--- | ---: | :--- |
| Gasoline fuel economy (mpg) | 0 | 37 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off |  | 3 |
| Average trip driving intensity ${ }^{8}$ | 0.0 | 23.7 |
| Average trip distance (mi) |  |  |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 40 | 32 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 3 |
| Average trip distance (mi) | 2.1 | 21.4 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 2 |
| Average number of charging events per vehicle per month when driven | 0.4 |
| Average number of charging events per vehicle per day when driven | 89.2 |
| Average distance driven between charging events (mi) | 11.5 |
| Average number of trips between charging events | 86.3 |
| Average time plugged in per charging event (hr) | 86.3 |
| Average time plugged in and drawing power (hr) | 0.0 |
| Average time charging per charging event (power >200 w) (hr) | 7.5 |
| Average energy per charging event (AC kWh) | 15.1 |
| Average charging energy per vehicle per month (AC kWh) | 2 |
| Total number of charging events | 15 |
| Total charging energy (AC kWh) |  |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: $\quad 10 / 01 / 2012$ to 10/31/2012
Number of vehicle days driven: 6

Quantum SCAQMD \#18

All Trips Combined

| Overall gasoline fuel economy (mpg) | 35 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 71 |
| Overall DC electrical energy consumption (DC Wh/mi) ${ }^{2}$ | 34 |
| Total number of trips | 34 |
| Total distance traveled (mi) | 347 |
|  |  |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 35 |
| Gasoline fuel economy (mpg) | 60 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 20 |
| Percent of trips city \| highway | $80 \% \mid 20 \%$ |
| Distance traveled (mi) | 121 |
| Percent of total distance traveled | $35 \%$ |

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

| Gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 45 |
| Number of trips | 2 |
| Percent of trips city \| highway | $50 \%$ |
| Distance traveled (mi) | $50 \%$ |
| Percent of total distance traveled | 62 |
|  | $18 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 34 |
| Number of trips | 12 |
| Percent of trips city \| highway | $50 \%$ |
| Distance traveled (mi) | $50 \%$ |
| Percent of total distance traveled | 165 |



[^7]| Trips in Charge Depleting (CD) mode | City | Highway |
| :---: | :---: | :---: |
| Gasoline fuel economy (mpg) | 33 | 37 |
| DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh} / \mathrm{mi}$ ) | 68 | 51 |
| Percent of miles with internal combustion engine off | 0\% | 0\% |
| Average trip driving intensity ${ }^{8}$ | 5 | 3 |
| Average trip distance (mi) | 3.9 | 14.5 |

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

| Gasoline fuel economy (mpg) | 39 | 34 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 38 | 49 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 22.3 | 39.5 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 34 | 34 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 7.0 | 20.5 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 5 |
| Average number of charging events per vehicle per month when driven | 0.8 |
| Average number of charging events per vehicle per day when driven | 69.4 |
| Average distance driven between charging events (mi) | 6.8 |
| Average number of trips between charging events | 5.6 |
| Average time plugged in per charging event (hr) | 5.6 |
| Average time plugged in and drawing power (hr) | 4.0 |
| Average time charging per charging event (power > 200 w) (hr) | 4.9 |
| Average energy per charging event (AC kWh) | 24.7 |
| Average charging energy per vehicle per month (AC kWh) | 5 |
| Total number of charging events | 25 |
| Total charging energy (AC kWh) |  |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received:
Number of vehicle days driven: 7

All Trips Combined

| Overall gasoline fuel economy (mpg) | 36 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) |  |
| Overall DC electrical energy consumption (DC Wh/mi) |  |
| Total number of trips | 90 |
| Total distance traveled (mi) | 16 |
| Trips in Charge Depleting (CD) mode | 15 |
| Gasoline fuel economy (mpg) | 258 |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 42 |
| Percent of trips city \| highway | 77 |
| Distance traveled (mi) | 3 |
| Percent of total distance traveled | $33 \%$ |

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

| Gasoline fuel economy (mpg) | 29 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 126 |
| Percent of trips city \| highway | 2 |
| Distance traveled (mi) | $100 \% \mid$ |
| Percent of total distance traveled | 4 |
|  | $1 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{6}$ |  |
| Gasoline fuel economy (mpg) | 35 |
| Number of trips | 10 |
| Percent of trips city \| highway | $50 \%$ |
| Distance traveled (mi) | $50 \%$ |
| Percent of total distance traveled | 204 |

Quantum SCAQMD \#17
10/01/2012 to 10/30/2012


[^8]|  |  |  |
| :--- | ---: | ---: |
| City | Highway |  |
| Trips in Charge Depleting (CD) mode | 4 | 43 |
| Gasoline fuel economy (mpg) | 604 | 76 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 1 | 3 |
| Average trip driving intensity ${ }^{8}$ | 0.1 | 25.0 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 29 | 0 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 126 | 0 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 |  |
| Average trip distance (mi) | 1.8 | 0.0 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 17 | 35 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 0.2 | 40.6 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 5 |
| :--- | ---: |
| Average number of charging events per vehicle per day when driven | 0.7 |
| Average distance driven between charging events (mi) | 51.6 |
| Average number of trips between charging events | 3.0 |
| Average time plugged in per charging event (hr) | 85.7 |
| Average time plugged in and drawing power (hr) | 85.7 |
| Average time charging per charging event (power > 200 w) (hr) | 10.9 |
| Average energy per charging event (AC kWh) | 4.6 |
| Average charging energy per vehicle per month (AC kWh) | 23.1 |
| Total number of charging events | 5 |
| Total charging energy (AC kWh) | 23 |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: 10/04/2012 to 10/26/2012
Number of vehicle days driven: 5

All Trips Combined

| Overall gasoline fuel economy (mpg) | 38 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 117 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 25 |
| Total number of trips | 17 |
| Total distance traveled (mi) | 249 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 38 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 67 |
| Percent of trips city \| highway | 6 |
| Distance traveled (mi) | $83 \%$ |
| Percent of total distance traveled | 70 |

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

| Gasoline fuel economy (mpg) | 33 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) |  |
| Number of trips | 51 |
| Percent of trips city \| highway | 1 |
| Distance traveled (mi) | $100 \%$ |
| Percent of total distance traveled | 29 |
|  | $11 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{\mathbf{7}}$ |  |
| Gasoline fuel economy (mpg) | 39 |
| Number of trips | 10 |
| Percent of trips city \| highway | $80 \%$ |
| Distance traveled (mi) | $20 \%$ |
| Percent of total distance traveled | 150 |



[^9]|  |  |  |
| :--- | ---: | ---: |
| Trips in Charge Depleting (CD) mode | Highway |  |
| Gasoline fuel economy (mpg) | 24 | 40 |
| DC electrical energy consumption (DC Wh/mi) | 136 | 61 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 1.1 | 64.1 |

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

| Gasoline fuel economy (mpg) | 0 | 33 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 0 | 51 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 0.0 | 28.6 |
| Average trip distance (mi) |  | 3 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 35 | 40 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 5.7 | 52.5 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 3 |
| Average number of charging events per vehicle per month when driven | 0.6 |
| Average number of charging events per vehicle per day when driven | 82.9 |
| Average distance driven between charging events (mi) | 5.7 |
| Average number of trips between charging events | 154.3 |
| Average time plugged in per charging event (hr) | 154.3 |
| Average time plugged in and drawing power (hr) | 1.7 |
| Average time charging per charging event (power > 200 w) (hr) | 9.7 |
| Average energy per charging event (AC kWh) | 29.1 |
| Average charging energy per vehicle per month (AC kWh) | 3 |
| Total number of charging events | 29 |
| Total charging energy (AC kWh) |  |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: $\quad 10 / 02 / 2012$ to 10/31/2012
Number of vehicle days driven: 10

All Trips Combined

| Overall gasoline fuel economy $(\mathrm{mpg})$ | 34 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 13 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 10 |
| Total number of trips | 79 |
| Total distance traveled $(\mathrm{mi})$ | 581 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 28 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) | 44 |
| Number of trips | 3 |
| Percent of trips city \| highway | $67 \% / 33 \%$ |
| Distance traveled (mi) | 9 |
| Percent of total distance traveled | $1 \%$ |

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

| Gasoline fuel economy (mpg) | 47 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 56 |
| Number of trips | 1 |
| Percent of trips city \| highway | $0 \%$ |
| Distance traveled (mi) | $100 \%$ |
| Percent of total distance traveled | 29 |
|  | $5 \%$ |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 34 |
| Number of trips | 75 |
| Percent of trips city \| highway | $79 \%$ |
| Distance traveled (mi) | $21 \%$ |
| Percent of total distance traveled | 544 |

## Quantum SCAQMD \#11



[^10]|  |  |  |
| :--- | ---: | ---: |
| City | Highway |  |
| Grips in Charge Depleting (CD) mode | 24 | 30 |
| GC electrical energy consumption (DC Wh/mi) | 41 | 31 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 7 | 4 |
| Average trip distance (mi) | 1.2 | 6.2 |

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

| Gasoline fuel economy (mpg) | 0 | 47 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 0 | 56 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 0.0 | 28.5 |
| Average trip distance (mi) |  | 2 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 31 | 37 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 3 |
| Average trip distance (mi) | 4.6 | 17.2 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 4 |
| Average number of charging events per vehicle per month when driven | 0.4 |
| Average number of charging events per vehicle per day when driven | 145.3 |
| Average distance driven between charging events (mi) | 19.8 |
| Average number of trips between charging events | 1.9 |
| Average time plugged in per charging event (hr) | 1.9 |
| Average time plugged in and drawing power (hr) | 1.9 |
| Average time charging per charging event (power >200 w) (hr) | 1.9 |
| Average energy per charging event (AC kWh) | 7.5 |
| Average charging energy per vehicle per month (AC kWh$)$ | 4 |
| Total number of charging events | 7 |
| Total charging energy (AC kWh) |  |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

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

Quantum SCAQMD \#9
10/01/2012 to 10/31/2012
12

All Trips Combined

| Overall gasoline fuel economy (mpg) | 36 |
| :---: | :---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 31 |
| Overall DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 18 |
| Total number of trips | 68 |
| Total distance traveled (mi) | 829 |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ |  |
| Gasoline fuel economy (mpg) | 38 |
| DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{4}$ | 52 |
| Number of trips | 17 |
| Percent of trips city \| highway | 41\% \| 59\% |
| Distance traveled (mi) | 189 |
| Percent of total distance traveled | 23\% |
| Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$ |  |
| Gasoline fuel economy (mpg) | 39 |
| DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh/mi)}{ }^{6}$ | 39 |
| Number of trips | 4 |
| Percent of trips city \| highway | 25\% \| $75 \%$ |
| Distance traveled (mi) | 117 |
| Percent of total distance traveled | 14\% |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 35 |
| Number of trips | 47 |
| Percent of trips city \| highway | 72\% \| $28 \%$ |
| Distance traveled (mi) | 523 |
| Percent of total distance traveled | 63\% |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^11]|  |  |  |
| :--- | ---: | :--- |
| City |  |  |

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

| Gasoline fuel economy (mpg) | 49 | 37 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 79 | 30 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 22.2 | 31.5 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 34 | 35 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 1.9 | 35.2 |

Trip Fuel Economy Distribution By Trip Type


Plug-in charging

| Average number of charging events per vehicle per month when driven | 6 |
| :--- | :---: |
| Average number of charging events per vehicle per day when driven | 0.5 |
| Average distance driven between charging events (mi) | 138.2 |
| Average number of trips between charging events | 11.3 |
| Average time plugged in per charging event (hr) | 4.0 |
| Average time plugged in and drawing power (hr) | 4.0 |
| Average time charging per charging event (power >200 w) (hr) | 4.0 |
| Average energy per charging event (AC kWh) | 4.3 |
| Average charging energy per vehicle per month (AC kWh) | 25.8 |
| Total number of charging events | 6 |
| Total charging energy (AC kWh) | 26 |

Time of Day When Driving


Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

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

Quantum SCAQMD \#12
10/03/2012 to 10/30/2012
12

All Trips Combined

| Overall gasoline fuel economy (mpg) | 35 |
| :--- | ---: |
| Overall AC electrical energy consumption $(\mathrm{AC} \mathrm{Wh} / \mathrm{mi})^{1}$ | 40 |
| Overall DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 21 |
| Total number of trips | 40 |
| Total distance traveled (mi) | 717 |

Trips in Charge Depleting (CD) mode ${ }^{3}$

| Gasoline fuel economy (mpg) | 24 |
| :--- | ---: |
| DC electrical energy consumption $(\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{4}$ | 71 |
| Number of trips | 8 |
| Percent of trips city \| highway | $88 \%$ |
| Distance traveled (mi) | $13 \%$ |
| Percent of total distance traveled | 14 |

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

| Gasoline fuel economy (mpg) | 42 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 58 |
| Number of trips | 4 |
| Percent of trips city \| highway | $0 \%$ |
| Distance traveled (mi) | $100 \%$ |
| Percent of total distance traveled | 237 |
|  | $33 \%$ |
| Trips in Charge Sustaining (CS) mode7 |  |
| Gasoline fuel economy (mpg) | 33 |
| Number of trips | 28 |
| Percent of trips city \| highway | $20 \%$ |
| Distance traveled (mi) | $50 \%$ |
| Percent of total distance traveled | 465 |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^12]|  |  |  |
| :--- | ---: | ---: |
| City | Highway |  |
| Trips in Charge Depleting (CD) mode | 32 | 0 |
| Gasoline fuel economy (mpg) | 71 | 0 |
| DC electrical energy consumption (DC Wh/mi) | $12 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 5 |  |
| Average trip driving intensity ${ }^{8}$ | 2.1 | 0.0 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 0 | 42 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 0 | 58 |
| Percent of miles with internal combustion engine off | $0 \%$ | $4 \%$ |
| Average trip driving intensity ${ }^{8}$ |  | 2 |
| Average trip distance (mi) | 0.0 | 59.3 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 24 | 34 |
| :--- | ---: | ---: |
| Percent of miles with internal combustion engine off | $11 \%$ | $3 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 | 2 |
| Average trip distance (mi) | 2.1 | 31.1 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 5 |
| Average number of charging events per vehicle per month when driven | 0.4 |
| Average number of charging events per vehicle per day when driven | 143.3 |
| Average distance driven between charging events (mi) | 8.0 |
| Average number of trips between charging events | 80.2 |
| Average time plugged in per charging event (hr) | 80.2 |
| Average time plugged in and drawing power (hr) | 8.0 |
| Average time charging per charging event (power >200 w) (hr) | 5.8 |
| Average energy per charging event (AC kWh) | 28.9 |
| Average charging energy per vehicle per month (AC kWh$)$ | 5 |
| Total number of charging events | 29 |
| Total charging energy (AC kWh) |  |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

Date range of data received: 10/17/2012 to 10/27/2012
Number of vehicle days driven: 6

All Trips Combined

| Overall gasoline fuel economy (mpg) | 30 |
| :---: | :---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 81 |
| Overall DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh} / \mathrm{mi})^{2}$ | 30 |
| Total number of trips | 31 |
| Total distance traveled (mi) | 645 |
| Trips in Charge Depleting (CD) mode³ |  |
| Gasoline fuel economy (mpg) | 38 |
| DC electrical energy consumption (DC Wh/mi) ${ }^{4}$ | 69 |
| Number of trips | 12 |
| Percent of trips city \| highway | 83\% \| $17 \%$ |
| Distance traveled (mi) | 46 |
| Percent of total distance traveled | 7\% |
| Trips in both Charge Depleting \& Charge Sustaining (CD/CS) modes ${ }^{5}$ |  |
| Gasoline fuel economy (mpg) | 27 |
| DC electrical energy consumption ( $\mathrm{DC} \mathrm{Wh/mi)}{ }^{6}$ | 40 |
| Number of trips | 6 |
| Percent of trips city \| highway | 0\% \| 100\% |
| Distance traveled (mi) | 390 |
| Percent of total distance traveled | 61\% |

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

| Gasoline fuel economy (mpg) | 33 |
| :--- | ---: |
| Number of trips | 13 |
| Percent of trips city \| highway | $69 \% \mid 31 \%$ |
| Distance traveled (mi) | 209 |
| Percent of total distance traveled | $32 \%$ |

## Quantum SCAQMD \#15

6

Distance Traveled By Trip Type


[^13]|  |  |  |
| :--- | ---: | ---: |
|  | City | Highway |
| Trips in Charge Depleting (CD) mode | 23 | 39 |
| Gasoline fuel economy (mpg) | 141 | 67 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 6 | 2 |
| Average trip driving intensity ${ }^{8}$ | 0.2 | 22.0 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 0 | 27 |
| :--- | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 0 | 40 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ |  | 1 |
| Average trip distance (mi) | 0.0 | 65.0 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 34 | 33 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 5 | 2 |
| Average trip distance (mi) | 1.6 | 48.6 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 8 |
| Average number of charging events per vehicle per month when driven | 1.3 |
| Average number of charging events per vehicle per day when driven | 80.6 |
| Average distance driven between charging events (mi) | 3.9 |
| Average number of trips between charging events | 40.9 |
| Average time plugged in per charging event (hr) | 40.9 |
| Average time plugged in and drawing power (hr) | 6.3 |
| Average time charging per charging event (power >200 w) (hr) | 6.5 |
| Average energy per charging event (AC kWh) | 52.3 |
| Average charging energy per vehicle per month (AC kWh$)$ | 8 |
| Total number of charging events | 52 |
| Total charging energy (AC kWh) |  |



Time of Day When Charging


Time of Day When Plugging In


## SCAQMD Quantum Escape PHEV Report

Number of vehicles: 1
Reporting period: October 2012

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

Quantum SCAQMD \#19
10/02/2012 to 10/31/2012

All Trips Combined

| Overall gasoline fuel economy (mpg) | 38 |
| :--- | ---: |
| Overall AC electrical energy consumption (AC Wh/mi) ${ }^{1}$ | 78 |
| Overall DC electrical energy consumption (DC Wh/mi) |  |
| Total number of trips | 57 |
| Total distance traveled (mi) | 70 |
| Trips in Charge Depleting (CD) mode ${ }^{3}$ | 435 |
| Gasoline fuel economy (mpg) | 38 |
| DC electrical energy consumption (DC Wh/mi) ${ }^{4}$ | 54 |
| Number of trips | 58 |
| Percent of trips city \| highway | $819 \%$ |
| Distance traveled (mi) | 319 |
| Percent of total distance traveled | $73 \%$ |

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

| Gasoline fuel economy (mpg) | 39 |
| :--- | ---: |
| DC electrical energy consumption (DC Wh/mi) ${ }^{6}$ | 94 |
| Number of trips | 3 |
| Percent of trips city \| highway | $67 \% \mid 33 \%$ |
| Distance traveled (mi) | 59 |
| Percent of total distance traveled | $14 \%$ |
|  |  |
| Trips in Charge Sustaining (CS) mode ${ }^{7}$ |  |
| Gasoline fuel economy (mpg) | 35 |
| Number of trips | 9 |
| Percent of trips city \| highway | $89 \% \mid 11 \%$ |
| Distance traveled (mi) | 56 |
| Percent of total distance traveled | $13 \%$ |

Gasoline Fuel Economy By Trip Type


Distance Traveled By Trip Type


[^14]|  |  |  |
| :--- | :---: | :---: |
| Trips in Charge Depleting (CD) mode | 36 | 41 |
| Gasoline fuel economy (mpg) | 53 | 56 |
| DC electrical energy consumption (DC Wh/mi) | $0 \%$ | $0 \%$ |
| Percent of miles with internal combustion engine off | 4 | 3 |
| Average trip driving intensity 8 | 4.3 | 10.7 |
| Average trip distance (mi) |  |  |

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

| Gasoline fuel economy (mpg) | 34 | 42 |
| :--- | ---: | ---: | :--- |
| DC electrical energy consumption (DC Wh/mi) | 153 | 61 |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 3 | 2 |
| Average trip distance (mi) | 10.7 | 37.5 |

Trips in Charge Sustaining (CS) mode

| Gasoline fuel economy (mpg) | 35 | 0 |
| :--- | ---: | ---: | :--- |
| Percent of miles with internal combustion engine off | $0 \%$ | $0 \%$ |
| Average trip driving intensity ${ }^{8}$ | 4 |  |
| Average trip distance (mi) | 7.0 | 0.0 |

Trip Fuel Economy Distribution By Trip Type


|  |  |
| :--- | :---: |
| Plug-in charging | 12 |
| Average number of charging events per vehicle per month when driven | 1.1 |
| Average number of charging events per vehicle per day when driven | 36.2 |
| Average distance driven between charging events (mi) | 5.8 |
| Average number of trips between charging events | 33.0 |
| Average time plugged in per charging event (hr) | 33.0 |
| Average time plugged in and drawing power (hr) | 3.6 |
| Average time charging per charging event (power > 200 w) (hr) | 2.8 |
| Average energy per charging event (AC kWh) | 33.9 |
| Average charging energy per vehicle per month (AC kWh) | 12 |
| Total number of charging events | 34 |
| Total charging energy (AC kWh) |  |

Time of Day When Driving


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.

