NYSERDA Electric Vehicle Charging Infrastructure Report

Report period: October 2013 through December 2013 New York State

43 %

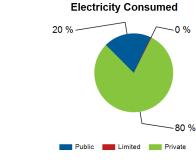
EVSE Usage - By Access Type	Public	Limited ³	Private	Total
Number of charging ports ¹	148	9	19	176
Number of charging events ²	2,086	29	2,763	4,878
Electricity consumed (AC MWh)	16.56	0.26	67.67	84.49
Percent of time with a vehicle connected	3.3%	1.7%	96.2%	12.6%
Percent of time with a vehicle drawing power	1.5%	1.4%	93.3%	10.8%

Number of Charging Events

Limited

57 %

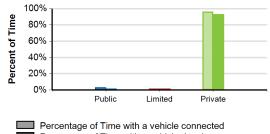
Public



Charging Unit Utilization

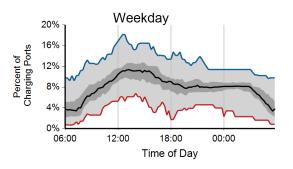
Idaho National Laboratory

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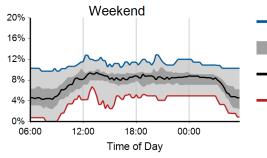


Percentage of Time with a vehicle drawing power

Charging Availability: Range of Percentage of All Charging Ports with a Vehicle Connected versus Time of Day⁴

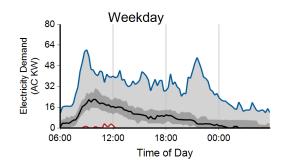


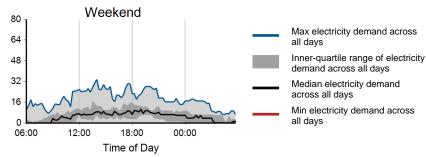
Private



Max percentage of charging units connected across all days Inner-quartile range of charging units connected across all days Median percentage of charging units connected across all days Min percentage of charging units connected across all days

Charging Demand: Range of Aggregate Electricity Demand versus Time of Day⁴ for All Charging Ports





¹ Includes all EVSE ports in use during the reporting period and have reported data to INL.

² A charging event is defined as the period when a vehicle is connected to a charging unit, during which power is transferred.

- ³ Limited Access EVSE are primarily for use by employees or tenants (including paying guests at hotels) and are placed where these EV drivers would normally park, but others (such as visitors or customers) may be able to plug in on a more limited basis.
- ⁴ Weekends start at 6:00am on Saturday and end 6:00am Monday local time.



max

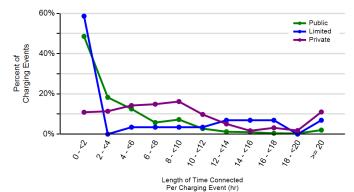
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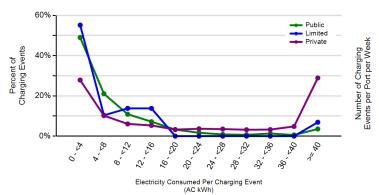
Report period: October 2013 through December 2013

EVSE Usage - By Access Type	Public	Limited ³	Private
Number of charging ports ¹	148	9	19
Number of charging events ²	2,086	29	2,763
Charging energy consumed (AC MWh)	16.6	0.3	67.7
Average percent of time with a vehicle connected per charging port	3.3%	1.7%	96.2%
Average percent of time with a vehicle drawing power per charging port	1.5%	1.4%	93.3%
Average number of charging events started per charging port per week	1.3	0.5	14.4
Average electricity consumed per charging port per week (AC KWh)	10.1	4.2	352.4
Average length of time with vehicle connected per charging event (hr)	4.3	6.0	11.2
Average length of time with vehicle drawing power per charging event (hr)	2.0	5.1	10.9
Average electricity consumed per charging event (AC kWh)	7.9	8.9	24.5

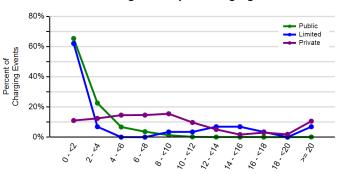
Distribution of Length of Time with a Vehicle Connected per Charging Event



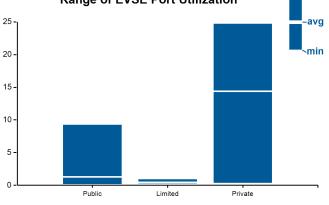
Distribution of AC Energy Consumed per Charging Event



Distribution of Length of Time with a Vehicle Drawing Power per Charging Event



Length of Time With a Vehicle Drawing Power Per Charging Event (hr) Range of EVSE Port Utilization



¹ Includes all EVSE ports in use during the reporting period and have reported data to INL.

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³ Limited Access EVSE are primarily for use by employees or tenants (including paying guests at hotels) and are placed where these EV drivers would normally park, but others (such as visitors or customers) may be able to plug in on a more limited basis.





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Electricity Consumed Per Charging Event (AC kWh)

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² A charging event is defined as the period when a vehicle is connected to a charging unit, during which power is transferred.

🕳 For Fee

Free

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³ Only includes data from EVSE providing Public or Limited access.

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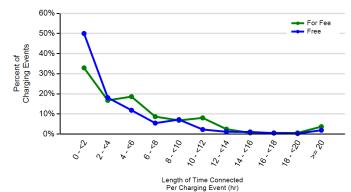
Advanced Vehicle Testing Activity

NYSERDA Electric Vehicle Charging Infrastructure Report

Report period: October 2013 through December 2013

EVSE Usage - By Required Payment ³	For Fee	Free
Number of charging ports ¹	33	124
Number of charging events ²	161	1,954
Charging energy consumed (AC MWh)	3.0	13.8
Average percent of time with a vehicle connected per charging port	1.7%	3.5%
Average percent of time with a vehicle drawing power per charging port	0.9%	1.6%
Average number of charging events started per charging port per week	0.5	1.4
Average electricity consumed per charging port per week (AC KWh)	9.8	9.9
Average length of time with vehicle connected per charging event (hr)	5.6	4.2
Average length of time with vehicle drawing power per charging event (hr)	3.0	1.9
Average electricity consumed per charging event (AC kWh)	18.8	7.1

Distribution of Length of Time with a Vehicle Connected per Charging Event



Distribution of AC Energy

Consumed per Charging Event

60%

40%

20%

0%

0.14

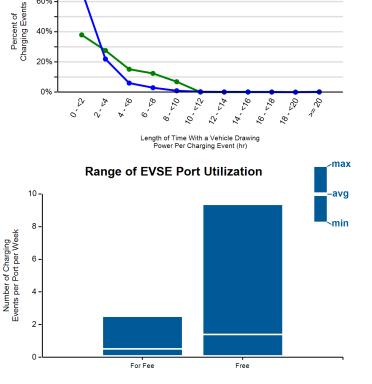
Percent of Charging Events

Distribution of Length of Time with a Vehicle Drawing Power per Charging Event

80%

60%

40%





For Fee

Free



¹ Includes all EVSE ports in use during the reporting period and have reported data to INL.

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Electricity Consumed Per Charging Event (AC kWh)

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² A charging event is defined as the period when a vehicle is connected to a charging unit, during which power is transferred.

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³ Only includes data from EVSE providing Public or Limited access.

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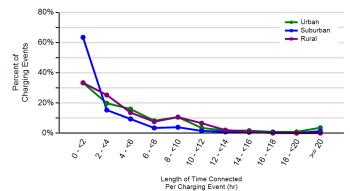
Advanced Vehicle Testing Activity

NYSERDA Electric Vehicle Charging Infrastructure Report

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EVSE Usage - By Land Use Type ³	Urban	Suburban	Rural
Number of charging ports ¹	71	66	20
Number of charging events ²	839	1,078	198
Charging energy consumed (AC MWh)	10.4	5.3	1.1
Average percent of time with a vehicle connected per charging port	3.9%	2.9%	2.0%
Average percent of time with a vehicle drawing power per charging port	2.0%	1.3%	0.7%
Average number of charging events started per charging port per week	1.2	1.4	0.8
Average electricity consumed per charging port per week (AC KWh)	14.8	7.1	4.4
Average length of time with vehicle connected per charging event (hr)	5.5	3.4	4.3
Average length of time with vehicle drawing power per charging event (hr)	2.8	1.5	1.6
Average electricity consumed per charging event (AC kWh)	12.4	4.9	5.5

Distribution of Length of Time with a Vehicle Connected per Charging Event



Distribution of AC Energy

Consumed per Charging Event

80%

60%

40%

20%

0%

0.14

Percent of Charging Events

Distribution of Length of Time with a Vehicle Drawing Power per Charging Event

80%

Percent of Charging Events

Number of Charging Events per Port per Week

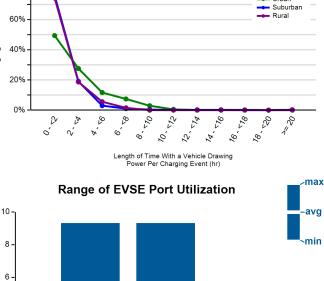
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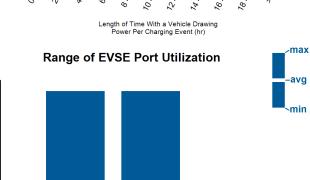
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Urban

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. Suburban

Rural



- Urban

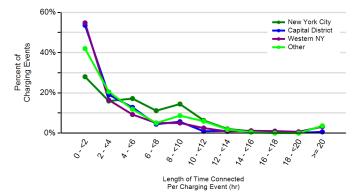
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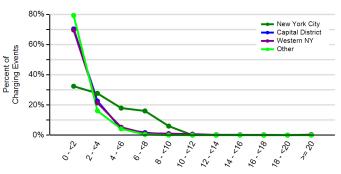
EVSE Usage - By Region ³	New York City	Capital District	Syracuse/Central NY	Western NY	Other ⁴
Number of charging ports ¹	40	60	10	29	18
Number of charging events ²	332	969	55	595	164
Charging energy consumed (AC MWh)	6.8	5.8	0.2	3.2	0.8
Average percent of time with a vehicle connected per charging port	3.0%	2.7%	0.5%	5.6%	0.7%
Average percent of time with a vehicle drawing power per charging port	1.7%	1.5%	0.4%	2.2%	3.2%
Average number of charging events started per charging port per week	0.8	1.5	0.5	2.0	0.7
Average electricity consumed per charging port per week (AC KWh)	16.7	8.7	2.2	10.8	3.4
Average length of time with vehicle connected per charging event (hr)	6.1	3.1	1.6	4.7	1.5
Average length of time with vehicle drawing power per charging event (hr)	3.4	1.8	1.2	1.9	7.6
Average electricity consumed per charging event (AC kWh)	20.4	6.0	4.0	5.4	4.7

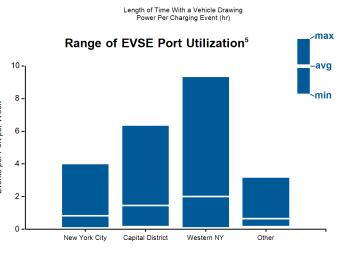
Distribution of Length of Time with a Vehicle Connected per Charging Event⁵



Distribution of AC Energy Consumed per Charging Event⁵ 60% New York City
Capital District Number of Charging Events per Port per Week Western NY Percent of Charging Events Other 40% 20% 0% 512 912 ð ¢ 20 N 00 ĉ ŝ 80 B ó ଚ N 6 2 æ ŝ æ ð

Distribution of Length of Time with a Vehicle Drawing Power per Charging Event⁵





¹ Includes all EVSE ports in use during the reporting period and have reported data to INL.

Electricity Consumed Per Charging Event (AC kWh)

² A charging event is defined as the period when a vehicle is connected to a charging unit, during which power is transferred.

³ Only includes data from EVSE providing Public or Limited access.

⁴ Regions with less than 10 EVSE ports are not individually represented, and are combined and reported as 'Other'.

⁵ Only the 3 regions with the most EVSE ports are individually represented, with the remaining regions combined and shown as 'Other'.



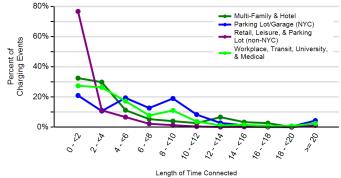


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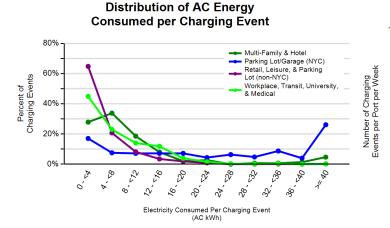
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EVSE Usage - By Venue ³	Parking Lot/Garag (NYC)	Retail Location	Hotel	University or Medical Campus	Other ⁴
Number of charging ports ¹	36	45	20	36	20
Number of charging events ²	253	868	151	696	147
Charging energy consumed (AC MWh)	6.2	3.7	1.5	4.3	1.1
Average percent of time with a vehicle connected per charging port	3.1%	1.9%	2.3%	4.5%	5.1%
Average percent of time with a vehicle drawing power per charging port	1.7%	1.1%	1.4%	1.9%	1.4%
Average number of charging events started per charging port per week	0.7	1.6	0.8	1.7	0.8
Average electricity consumed per charging port per week (AC KWh)	17.7	6.6	7.6	10.4	6.1
Average length of time with vehicle connected per charging event (hr)	7.3	2.1	4.9	4.6	10.8
Average length of time with vehicle drawing power per charging event (hr)	3.9	1.2	3.0	1.9	3.0
Average electricity consumed per charging event (AC kWh)	24.5	4.3	9.7	6.2	7.6

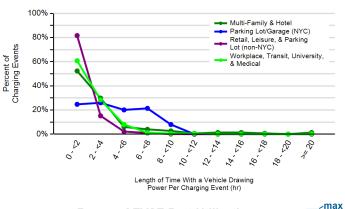
Distribution of Length of Time with a Vehicle Connected per Charging Event

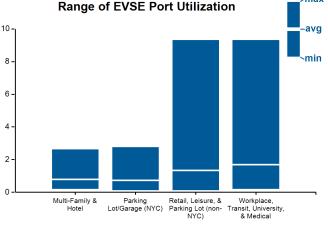


Length of Time Connected Per Charging Event (hr)



Distribution of Length of Time with a Vehicle Drawing Power per Charging Event





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