

# NYSERDA Electric Vehicle Charging Infrastructure Report



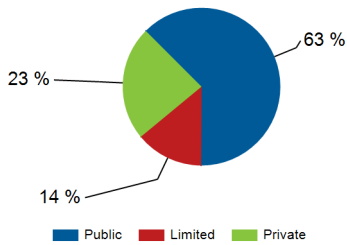
Report period: October 2014 through December 2014

New York State

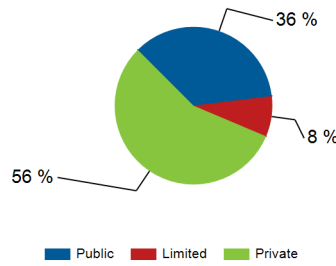
## EVSE Usage - By Access Type

	Public	Limited <sup>3</sup>	Private	Total
Number of charging ports <sup>1</sup>	237	89	27	353
Number of charging events <sup>2</sup>	6,143	1,366	2,305	9,814
Electricity consumed (AC MWh)	40.06	9.36	63.28	112.70
Percent of time with a vehicle connected	4.7%	2.8%	46.1%	7.5%
Percent of time with a vehicle drawing power	2.3%	1.5%	42.8%	5.3%

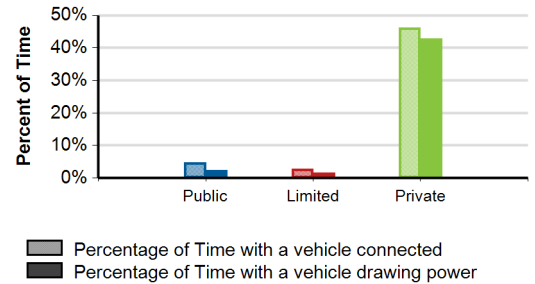
Number of Charging Events



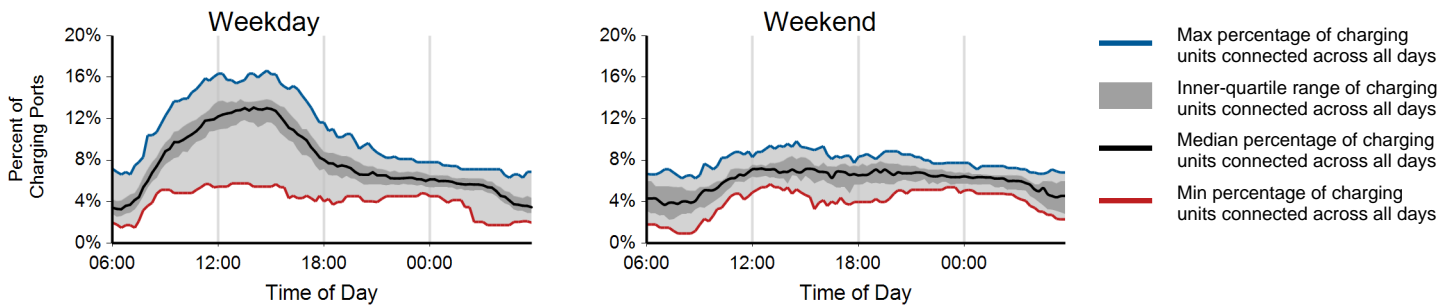
Electricity Consumed



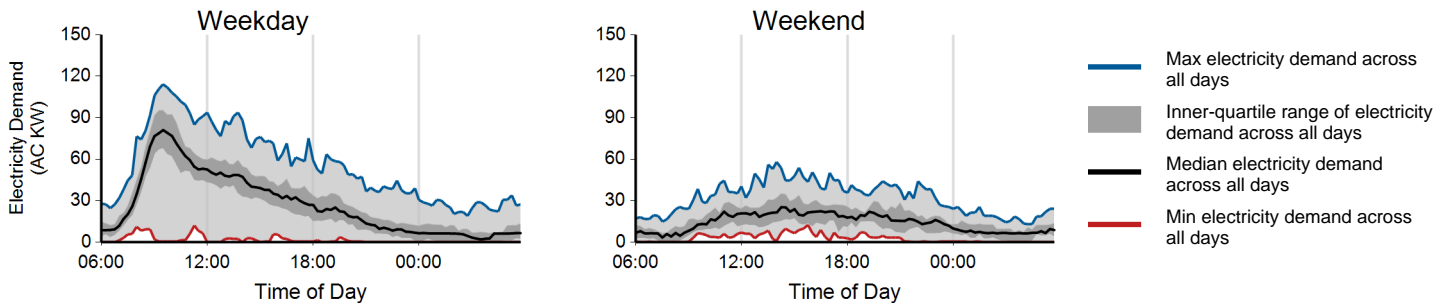
Charging Unit Utilization



## Charging Availability: Range of Percentage of All Charging Ports with a Vehicle Connected versus Time of Day<sup>4</sup>



## Charging Demand: Range of Aggregate Electricity Demand versus Time of Day<sup>4</sup> for All Charging Ports



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

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

<sup>3</sup> 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.

<sup>4</sup> Weekends start at 6:00am on Saturday and end 6:00am Monday local time.

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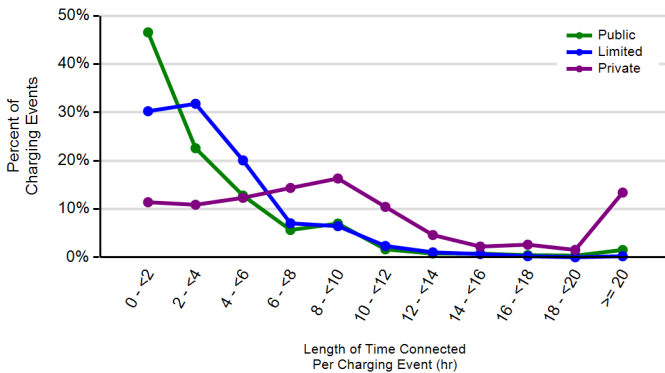


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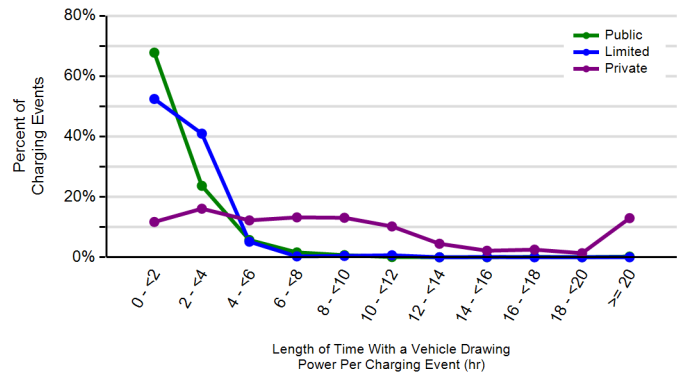
## EVSE Usage - By Access Type

	Public	Limited <sup>3</sup>	Private
Number of charging ports <sup>1</sup>	237	89	27
Number of charging events <sup>2</sup>	6,143	1,366	2,305
Charging energy consumed (AC MWh)	40.1	9.4	63.3
Average percent of time with a vehicle connected per charging port	4.7%	2.8%	46.1%
Average percent of time with a vehicle drawing power per charging port	2.3%	1.5%	42.8%
Average number of charging events started per charging port per week	2.0	1.2	6.5
Average electricity consumed per charging port per week (AC kWh)	13.1	8.4	178.3
Average length of time with vehicle connected per charging event (hr)	4.0	3.9	11.9
Average length of time with vehicle drawing power per charging event (hr)	1.9	2.0	11.1
Average electricity consumed per charging event (AC kWh)	6.5	6.9	27.5

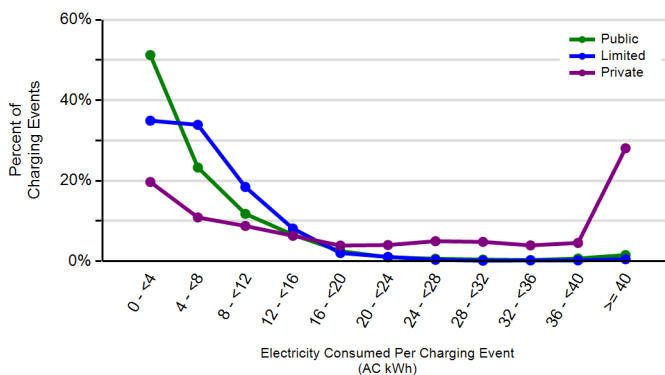
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



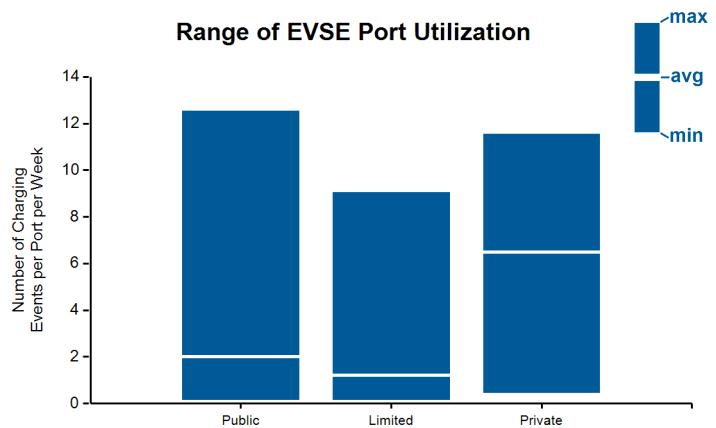
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**Distribution of AC Energy Consumed per Charging Event**



**Range of EVSE Port Utilization**



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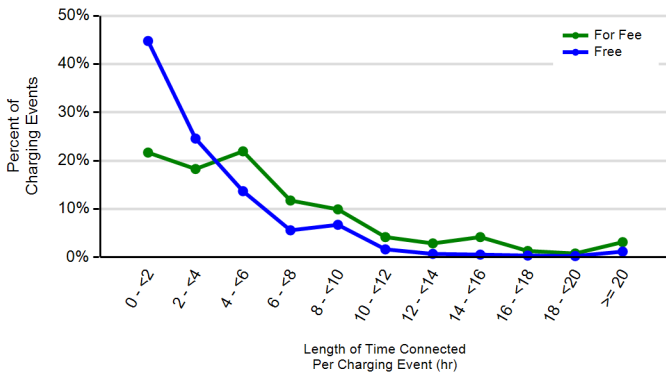


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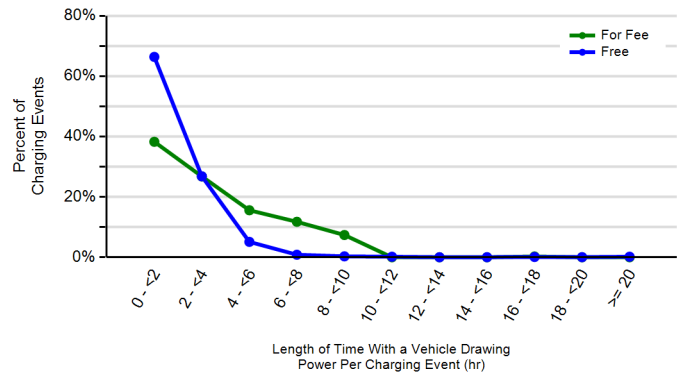
## EVSE Usage - By Required Payment<sup>3</sup>

	For Fee	Free
Number of charging ports <sup>1</sup>	51	275
Number of charging events <sup>2</sup>	383	7,126
Charging energy consumed (AC MWh)	6.8	42.7
Average percent of time with a vehicle connected per charging port	2.6%	4.5%
Average percent of time with a vehicle drawing power per charging port	1.2%	2.3%
Average number of charging events started per charging port per week	0.6	2.0
Average electricity consumed per charging port per week (AC kWh)	10.9	12.0
Average length of time with vehicle connected per charging event (hr)	7.0	3.8
Average length of time with vehicle drawing power per charging event (hr)	3.4	1.9
Average electricity consumed per charging event (AC kWh)	17.7	6.0

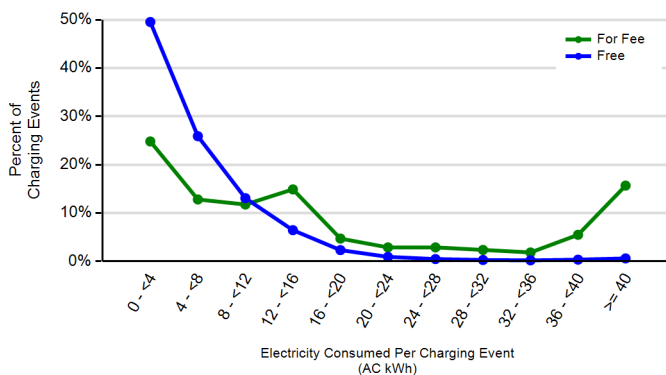
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



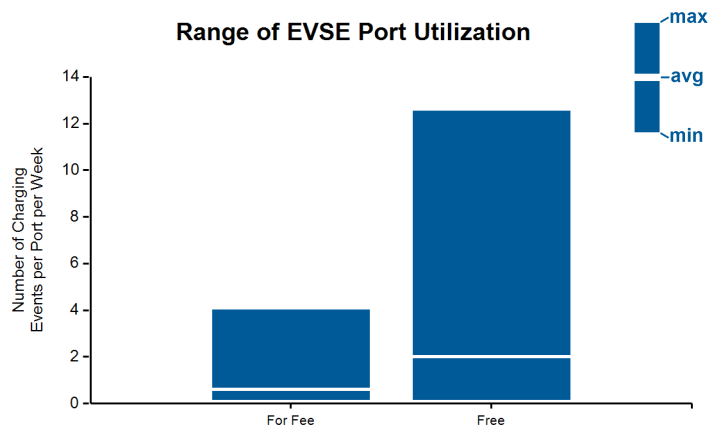
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**Distribution of AC Energy Consumed per Charging Event**



**Range of EVSE Port Utilization**



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

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

<sup>3</sup> Only includes data from EVSE providing Public or Limited access.

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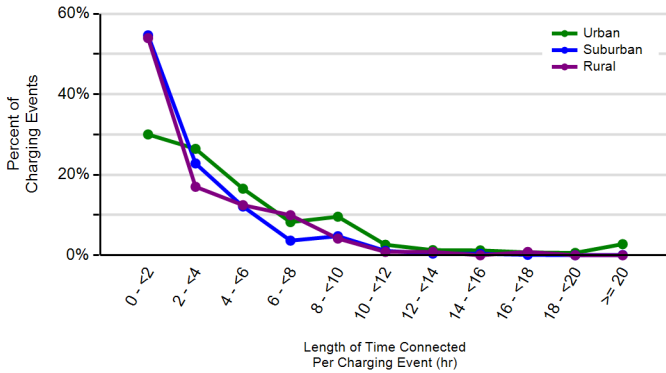


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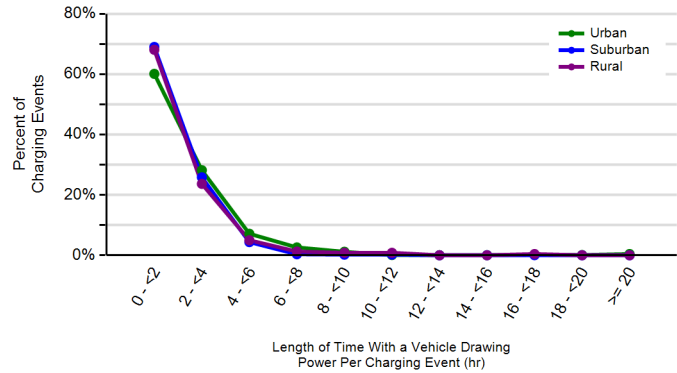
## EVSE Usage - By Land Use Type<sup>3</sup>

	Urban	Suburban	Rural
Number of charging ports <sup>1</sup>	126	172	28
Number of charging events <sup>2</sup>	3,362	3,906	241
Charging energy consumed (AC MWh)	26.9	20.8	1.7
Average percent of time with a vehicle connected per charging port	6.9%	2.8%	1.2%
Average percent of time with a vehicle drawing power per charging port	3.0%	1.7%	0.7%
Average number of charging events started per charging port per week	2.1	1.8	0.7
Average electricity consumed per charging port per week (AC kWh)	16.8	9.4	4.8
Average length of time with vehicle connected per charging event (hr)	5.5	2.7	3.0
Average length of time with vehicle drawing power per charging event (hr)	2.4	1.6	1.8
Average electricity consumed per charging event (AC kWh)	8.0	5.3	7.2

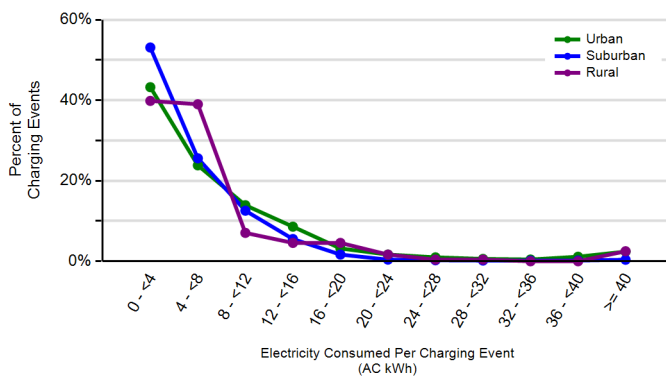
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



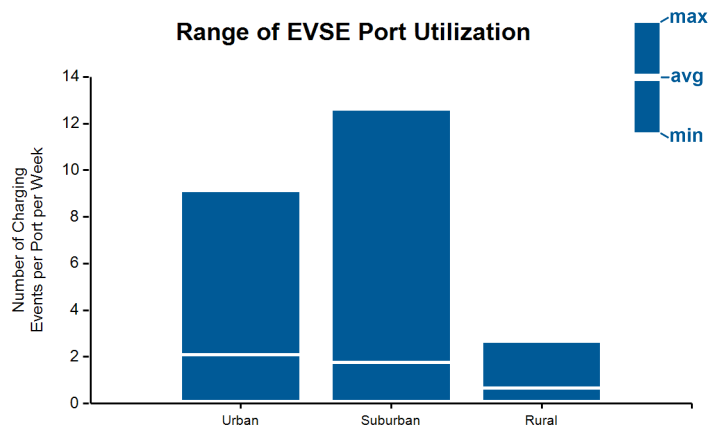
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**Distribution of AC Energy Consumed per Charging Event**



**Range of EVSE Port Utilization**



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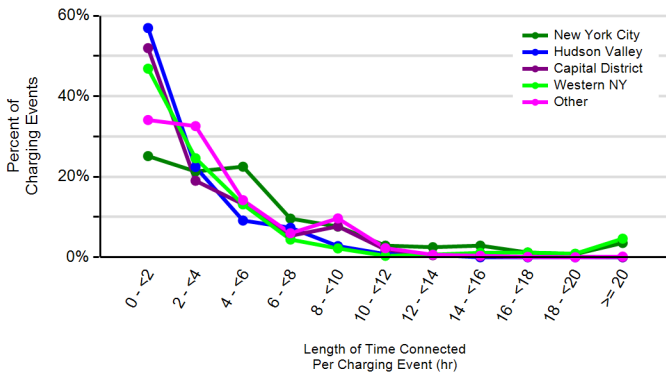


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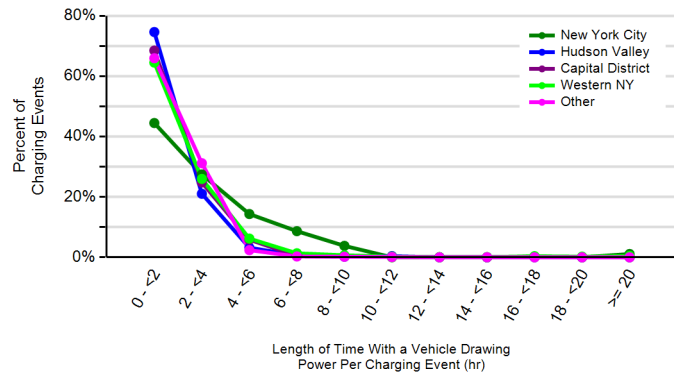
## EVSE Usage - By Region<sup>3</sup>

	New York City	Long Island	Hudson Valley	Capital District	Syracuse/Central NY	Rochester/Finger Lakes	North Country	Western NY	Other <sup>4</sup>
Number of charging ports <sup>1</sup>	60	29	35	88	13	28	16	43	14
Number of charging events <sup>2</sup>	760	605	504	2,778	163	1,052	127	1,362	158
Charging energy consumed (AC MWh)	10.6	3.8	2.7	15.6	1.0	5.5	0.7	8.5	1.0
Average percent of time with a vehicle connected per charging port	4.3%	3.3%	1.7%	4.3%	2.1%	7.6%	1.3%	6.9%	1.0%
Average percent of time with a vehicle drawing power per charging port	2.2%	1.9%	1.1%	2.3%	1.2%	3.0%	0.7%	3.0%	0.8%
Average number of charging events started per charging port per week	1.0	1.7	1.2	2.4	1.0	2.9	0.6	2.4	0.9
Average electricity consumed per charging port per week (AC kWh)	14.1	10.8	6.3	13.5	6.3	14.9	3.5	15.0	5.5
Average length of time with vehicle connected per charging event (hr)	7.2	3.2	2.5	3.0	3.6	4.5	3.3	4.8	1.5
Average length of time with vehicle drawing power per charging event (hr)	3.7	1.8	1.5	1.6	2.0	1.8	1.7	2.1	2.0
Average electricity consumed per charging event (AC kWh)	14.0	6.3	5.3	5.6	6.4	5.2	5.5	6.2	6.4

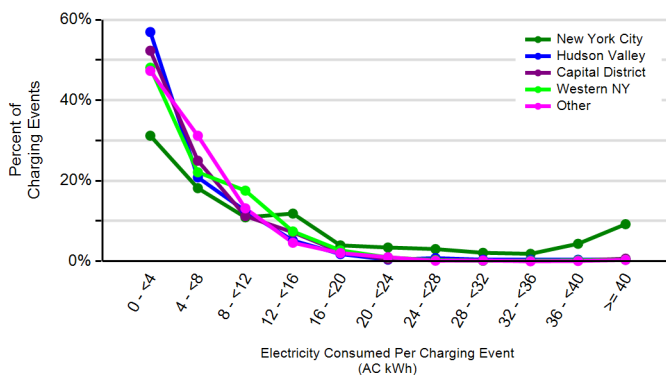
Distribution of Length of Time with a Vehicle Connected per Charging Event<sup>5</sup>



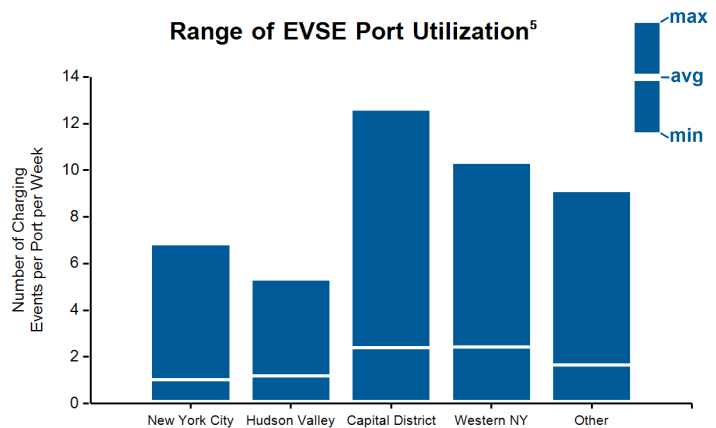
Distribution of Length of Time with a Vehicle Drawing Power per Charging Event<sup>5</sup>



Distribution of AC Energy Consumed per Charging Event<sup>5</sup>



Range of EVSE Port Utilization<sup>5</sup>



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

<sup>5</sup> Only the 4 regions with the most EVSE ports are individually represented, with the remaining regions combined and shown as 'Other'.

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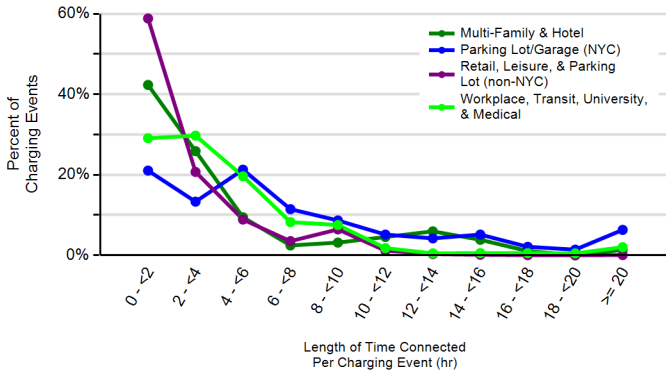
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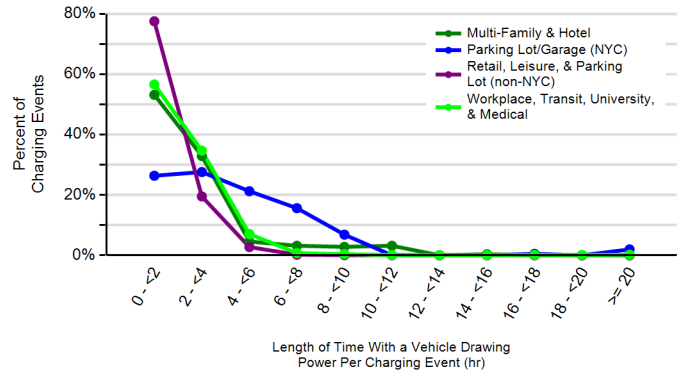
## EVSE Usage - By Venue<sup>3</sup>

	Parking Lot/Garage (non-NYC)	Parking Lot/Garage (NYC)	Retail Location	Workplace	Hotel	University or Medical Campus	Leisure Destination	Transit Station
Number of charging ports <sup>1</sup>	40	51	55	53	30	61	16	16
Number of charging events <sup>2</sup>	1,501	428	1,839	976	260	2,121	312	46
Charging energy consumed (AC MWh)	8.1	8.8	6.8	6.7	2.4	14.6	1.7	0.2
Average percent of time with a vehicle connected per charging port	6.8%	4.0%	1.9%	5.9%	1.8%	6.2%	3.1%	0.3%
Average percent of time with a vehicle drawing power per charging port	3.0%	2.1%	1.6%	2.1%	1.0%	3.3%	1.6%	0.2%
Average number of charging events started per charging port per week	2.9	0.7	2.5	1.4	0.7	2.8	1.5	0.2
Average electricity consumed per charging port per week (AC KWh)	15.5	13.8	9.4	9.7	6.3	19.1	8.0	1.0
Average length of time with vehicle connected per charging event (hr)	3.9	10.0	1.2	6.9	4.6	3.8	3.5	1.8
Average length of time with vehicle drawing power per charging event (hr)	1.7	5.2	1.1	2.4	2.0	1.8	1.3	
Average electricity consumed per charging event (AC kWh)	5.4	20.6	3.7	6.8	9.4	6.9	5.4	4.1

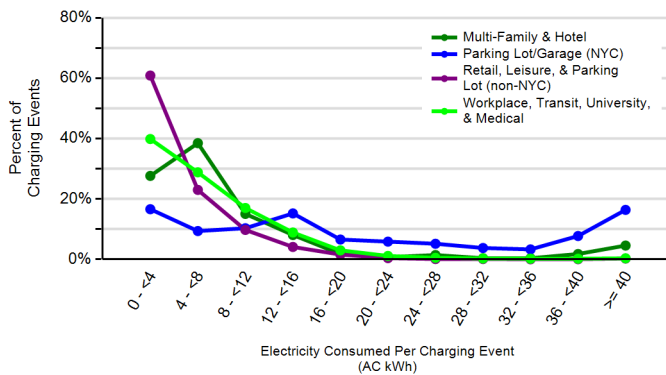
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



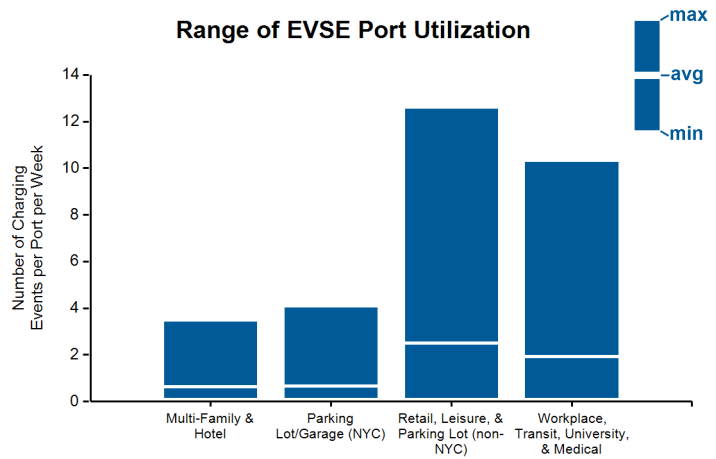
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



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**Range of EVSE Port Utilization**



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