

# NYSERDA Electric Vehicle Charging Infrastructure Report



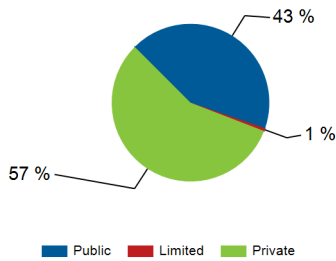
Report period: October 2013 through December 2013

New York State

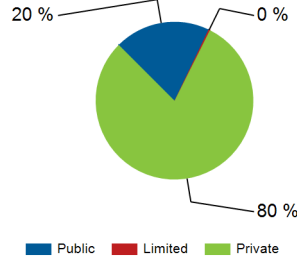
## EVSE Usage - By Access Type

	Public	Limited <sup>3</sup>	Private	Total
Number of charging ports <sup>1</sup>	148	9	19	176
Number of charging events <sup>2</sup>	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%

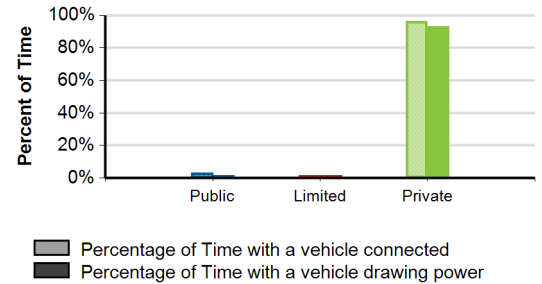
Number of Charging Events



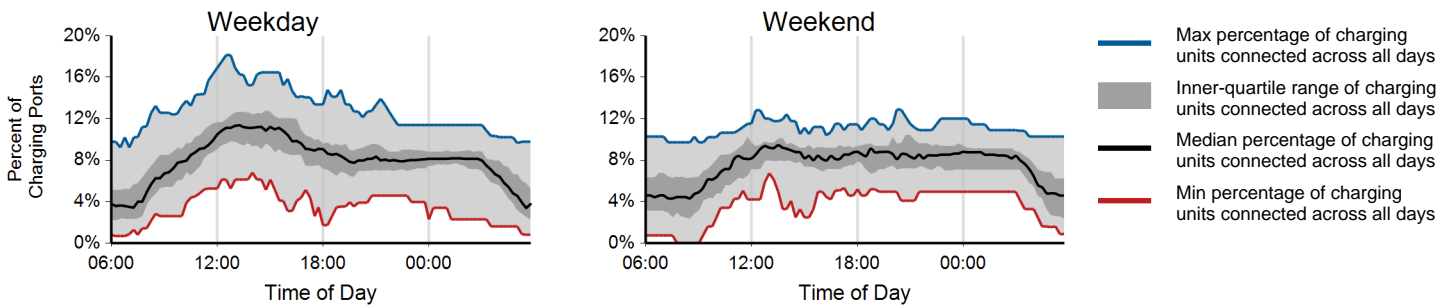
Electricity Consumed



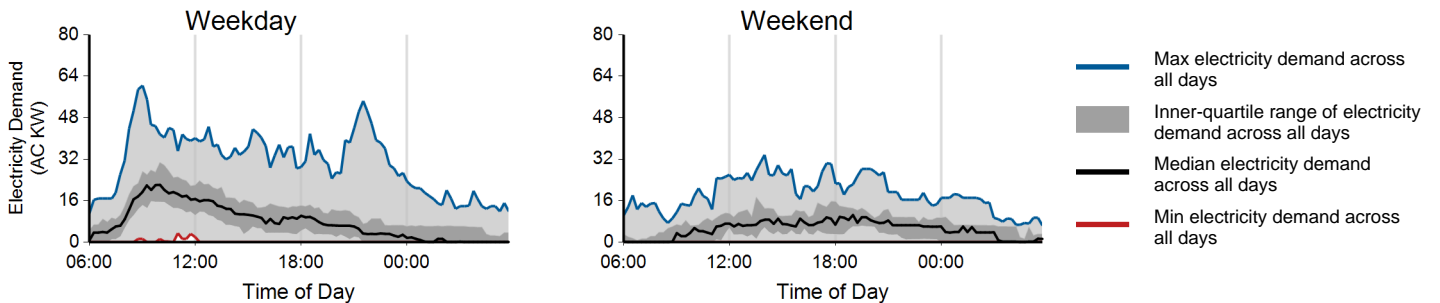
Charging Unit Utilization



## 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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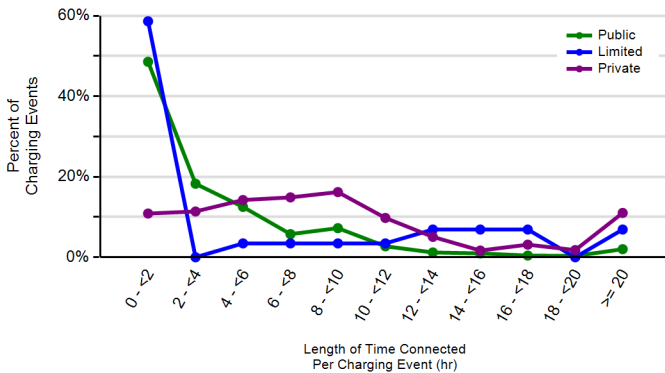


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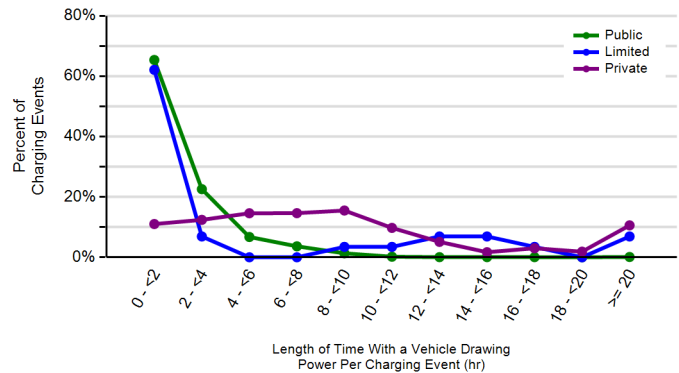
## EVSE Usage - By Access Type

	Public	Limited <sup>3</sup>	Private
Number of charging ports <sup>1</sup>	148	9	19
Number of charging events <sup>2</sup>	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

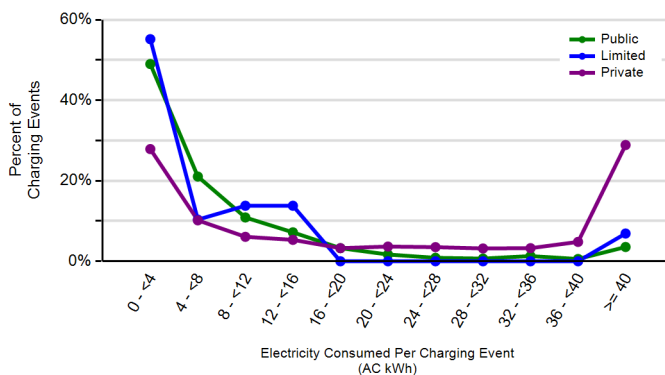
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



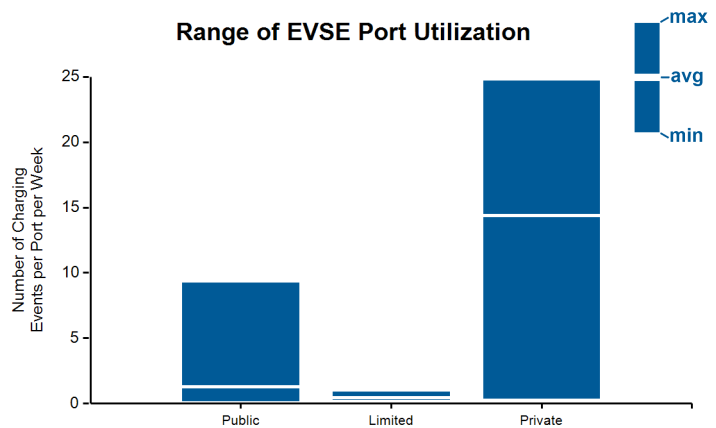
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**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.

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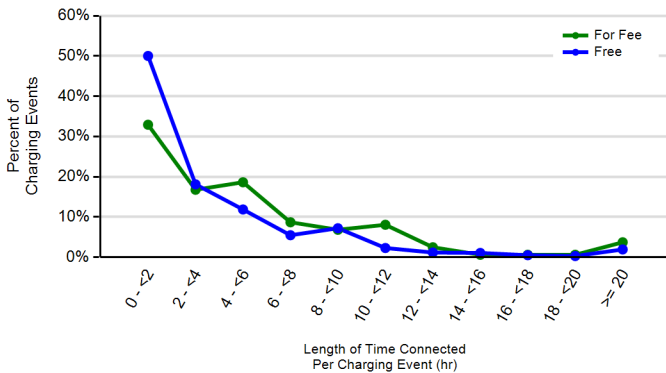


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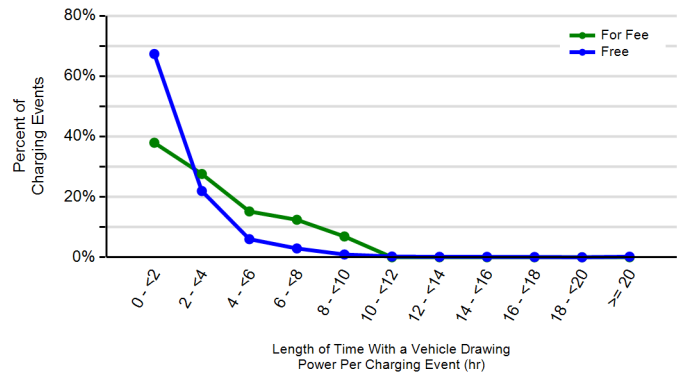
## EVSE Usage - By Required Payment<sup>3</sup>

	For Fee	Free
Number of charging ports <sup>1</sup>	33	124
Number of charging events <sup>2</sup>	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

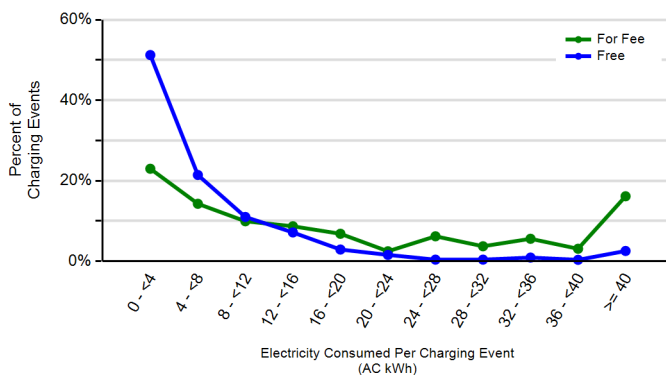
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



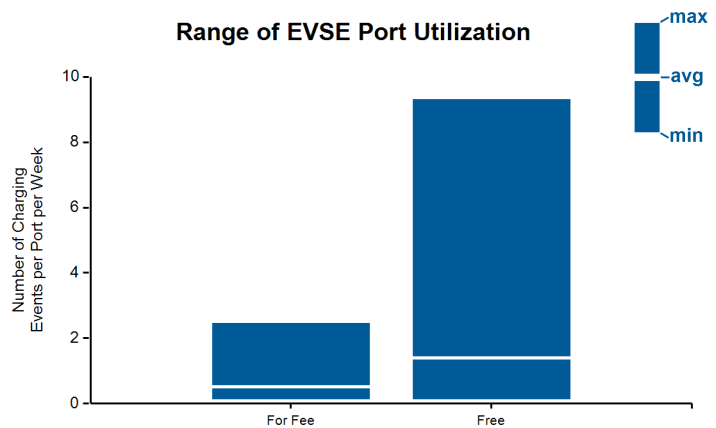
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**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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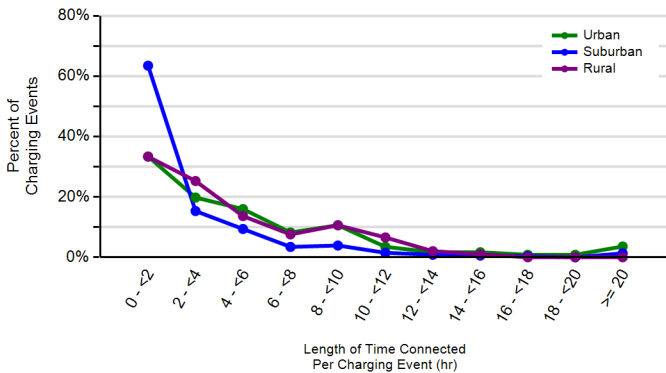


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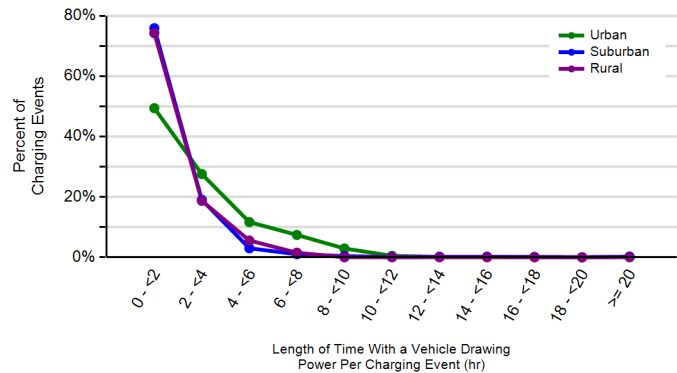
## EVSE Usage - By Land Use Type<sup>3</sup>

	Urban	Suburban	Rural
Number of charging ports <sup>1</sup>	71	66	20
Number of charging events <sup>2</sup>	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

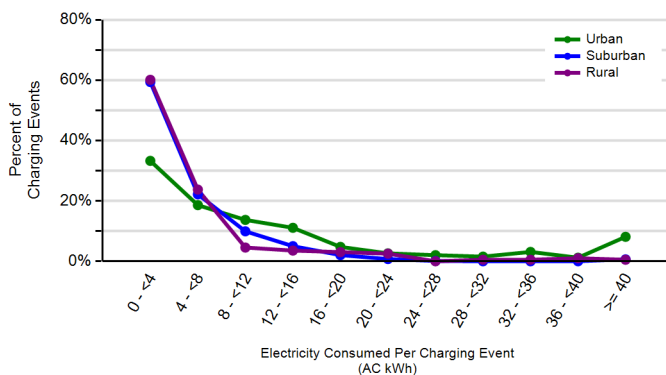
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



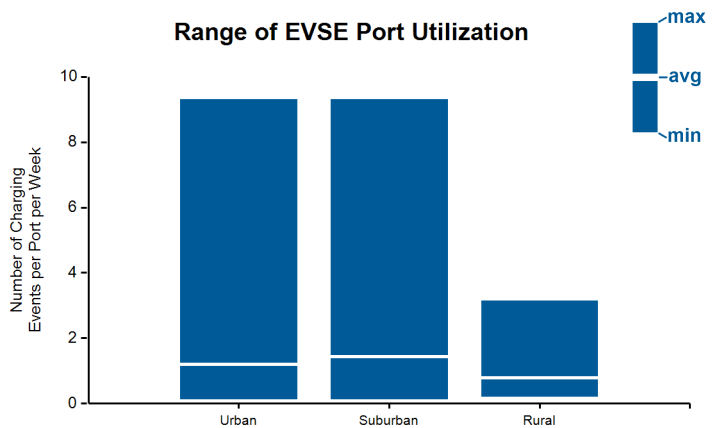
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



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



**Range of EVSE Port Utilization**



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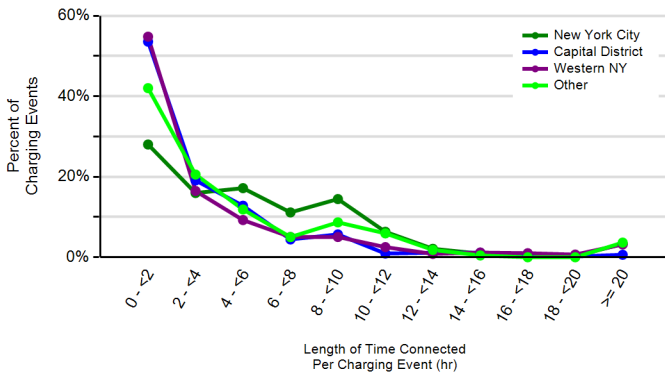


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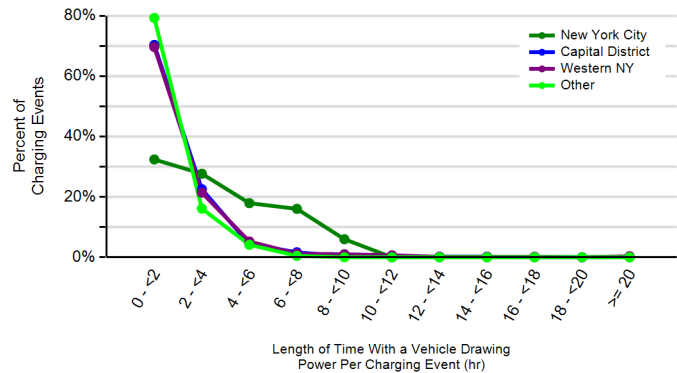
## EVSE Usage - By Region<sup>3</sup>

	New York City	Capital District	Syracuse/Central NY	Western NY	Other <sup>4</sup>
Number of charging ports <sup>1</sup>	40	60	10	29	18
Number of charging events <sup>2</sup>	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

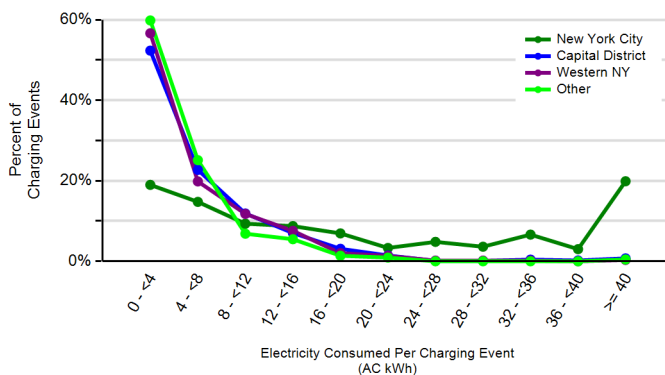
Distribution of Length of Time with a Vehicle Connected per Charging Event<sup>5</sup>



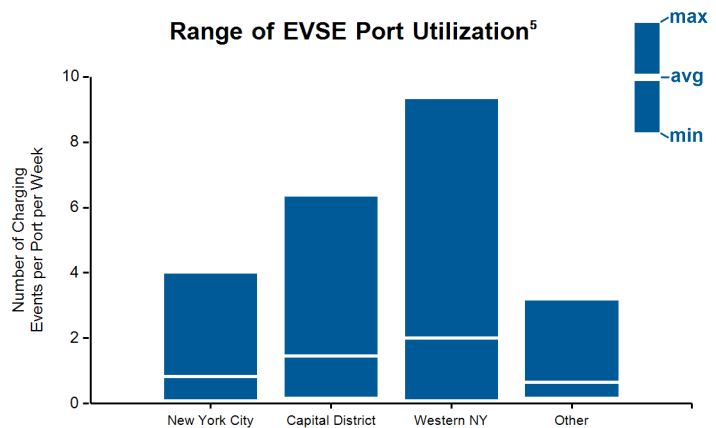
Distribution of Length of Time with a Vehicle Drawing Power per Charging Event<sup>5</sup>



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

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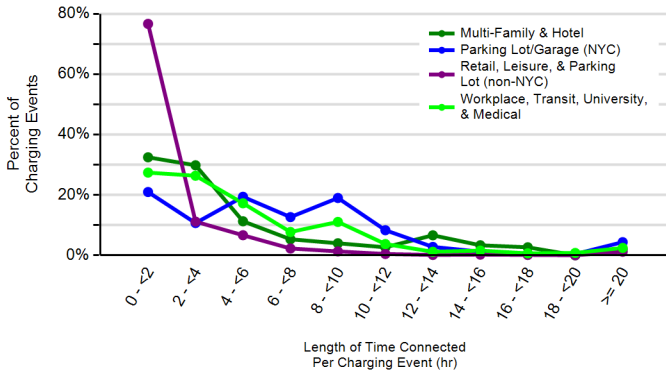
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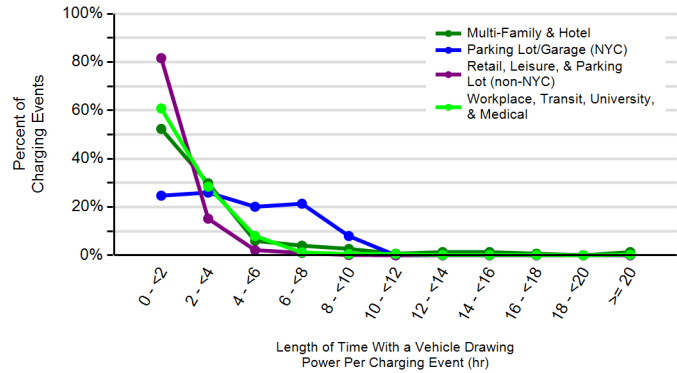
## EVSE Usage - By Venue<sup>3</sup>

	Parking Lot/Garage (NYC)	Retail Location	Hotel	University or Medical Campus	Other <sup>4</sup>
Number of charging ports <sup>1</sup>	36	45	20	36	20
Number of charging events <sup>2</sup>	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

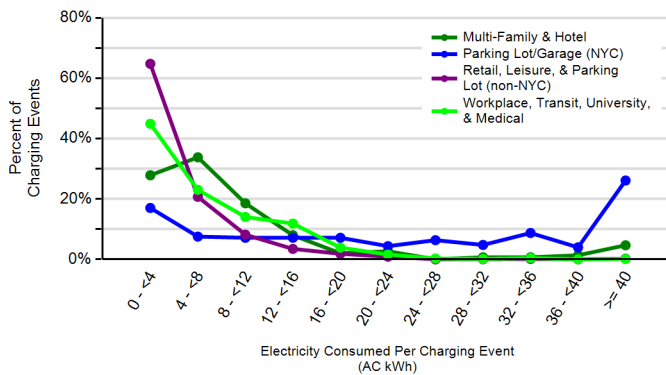
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



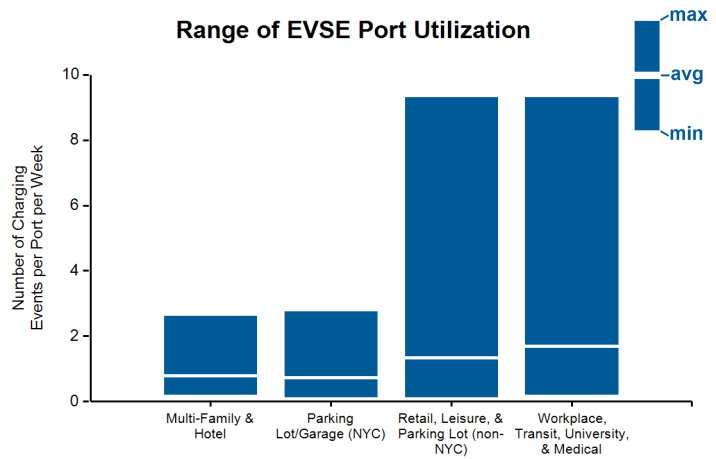
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**Distribution of AC Energy Consumed per Charging Event**



**Range of EVSE Port Utilization**



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