

# NYSERDA Electric Vehicle Charging Infrastructure Report

Report period: October 2015 through December 2015

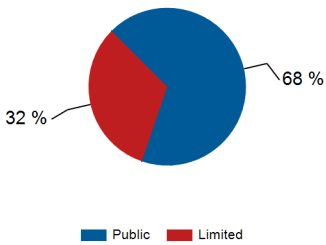
New York State



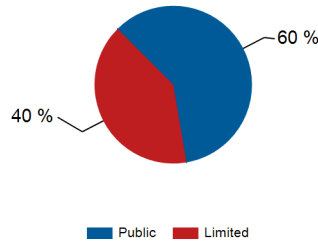
## EVSE Usage - By Access Type

	Public	Limited <sup>3</sup>	Total
Number of charging ports <sup>1</sup>	320	171	491
Number of charging events <sup>2</sup>	9,299	4,426	13,725
Electricity consumed (AC MWh)	56.23	37.78	94.01
Percent of time with a vehicle connected	4.7%	7.1%	5.5%
Percent of time with a vehicle drawing power	2.4%	2.7%	2.5%

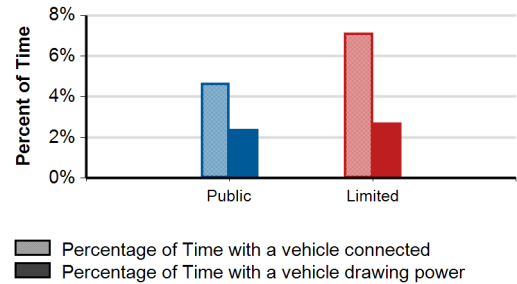
Number of Charging Events



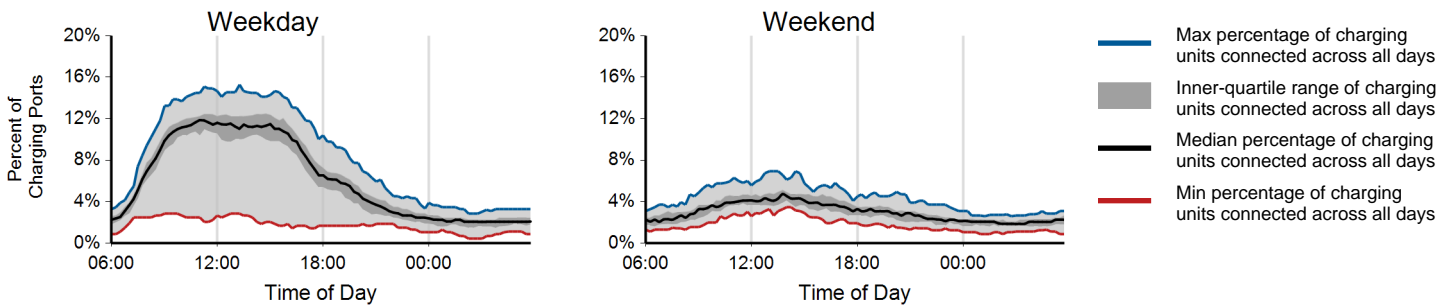
Electricity Consumed



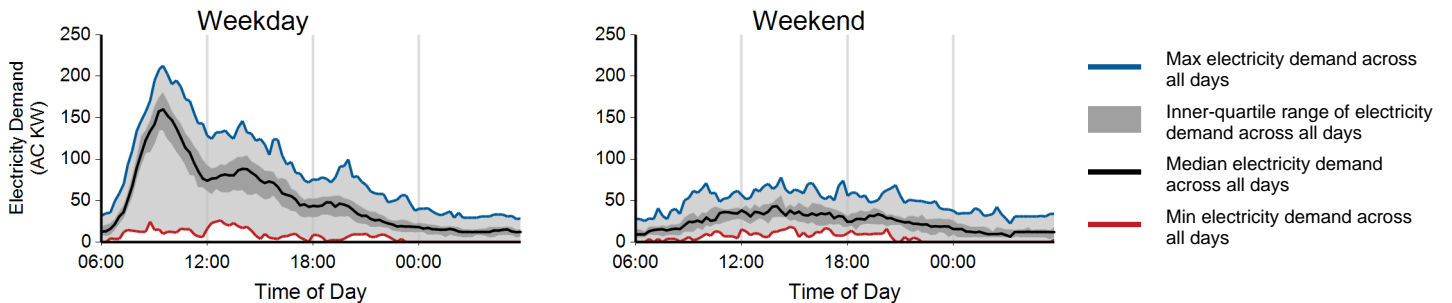
Charging Unit Utilization



## 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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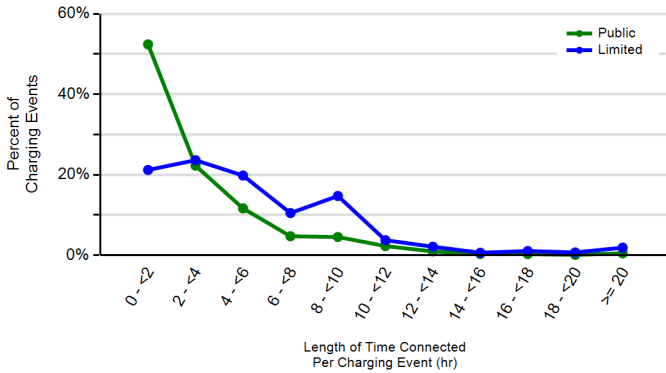


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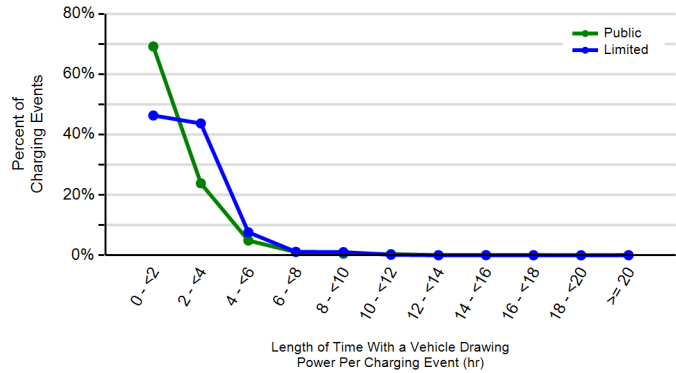
## EVSE Usage - By Access Type

	Public	Limited <sup>3</sup>
Number of charging ports <sup>1</sup>	320	171
Number of charging events <sup>2</sup>	9,299	4,426
Charging energy consumed (AC MWh)	56.2	37.8
Average percent of time with a vehicle connected per charging port	4.7%	7.1%
Average percent of time with a vehicle drawing power per charging port	2.4%	2.7%
Average number of charging events started per charging port per week	2.3	2.0
Average electricity consumed per charging port per week (AC kWh)	13.6	16.9
Average length of time with vehicle connected per charging event (hr)	3.5	6.1
Average length of time with vehicle drawing power per charging event (hr)	1.8	2.3
Average electricity consumed per charging event (AC kWh)	6.0	8.5

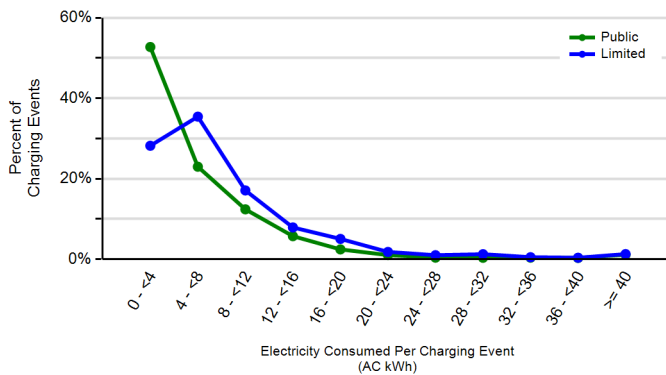
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



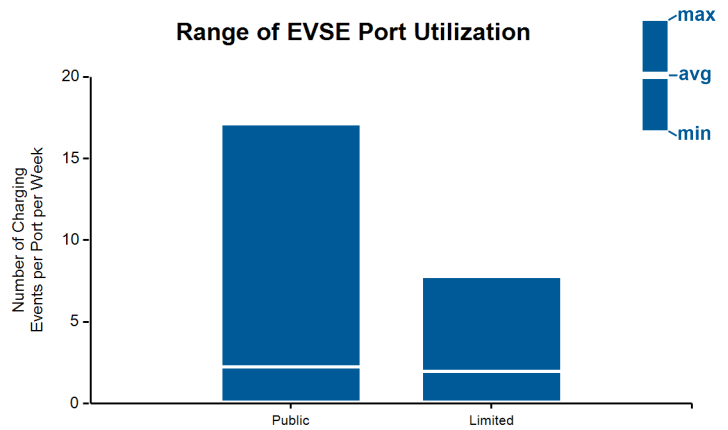
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**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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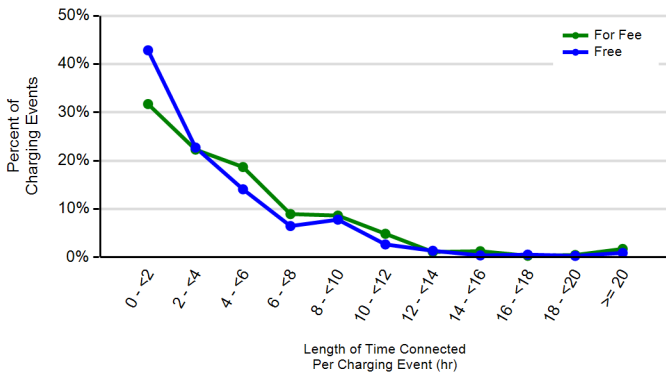
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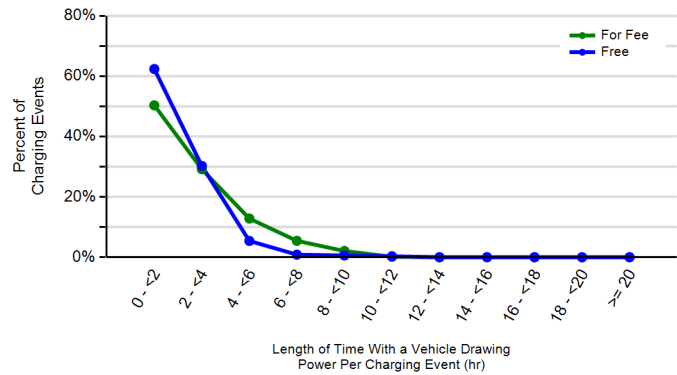
## EVSE Usage - By Required Payment

	For Fee	Free
Number of charging ports <sup>1</sup>	66	425
Number of charging events <sup>2</sup>	637	13,088
Charging energy consumed (AC MWh)	7.2	86.8
Average percent of time with a vehicle connected per charging port	2.5%	6.0%
Average percent of time with a vehicle drawing power per charging port	1.1%	2.7%
Average number of charging events started per charging port per week	0.8	2.4
Average electricity consumed per charging port per week (AC KWh)	8.5	15.8
Average length of time with vehicle connected per charging event (hr)	5.7	4.3
Average length of time with vehicle drawing power per charging event (hr)	2.5	1.9
Average electricity consumed per charging event (AC kWh)	11.3	6.6

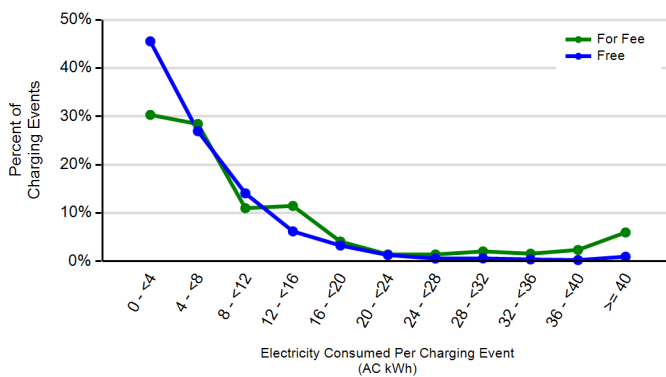
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



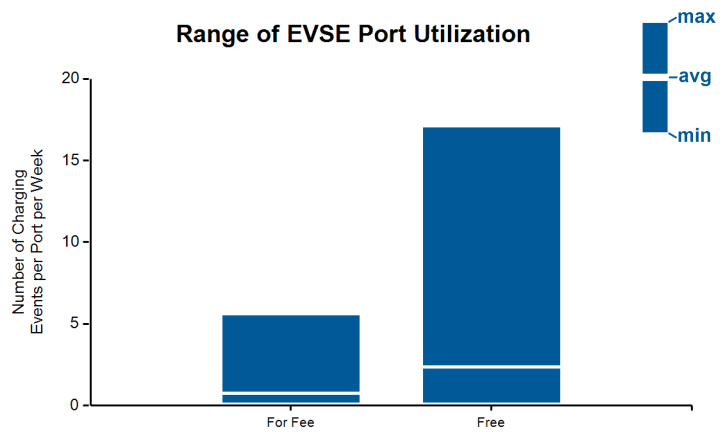
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**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.

# NYSERDA Electric Vehicle Charging Infrastructure Report

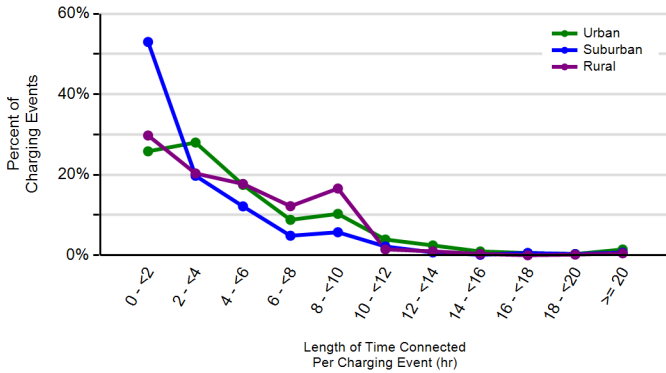
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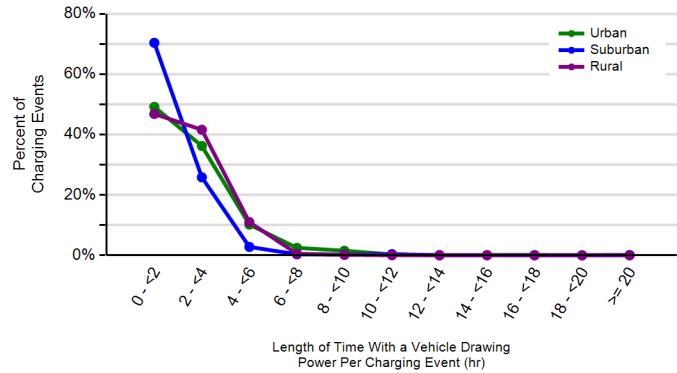
## EVSE Usage - By Land Use Type

	Urban	Suburban	Rural
Number of charging ports <sup>1</sup>	172	280	39
Number of charging events <sup>2</sup>	4,861	8,249	615
Charging energy consumed (AC MWh)	45.9	43.5	4.7
Average percent of time with a vehicle connected per charging port	7.6%	4.6%	3.3%
Average percent of time with a vehicle drawing power per charging port	3.3%	2.1%	1.6%
Average number of charging events started per charging port per week	2.2	2.3	1.2
Average electricity consumed per charging port per week (AC kWh)	20.5	12.0	9.3
Average length of time with vehicle connected per charging event (hr)	5.8	3.4	4.5
Average length of time with vehicle drawing power per charging event (hr)	2.6	1.6	2.3
Average electricity consumed per charging event (AC kWh)	9.4	5.3	7.6

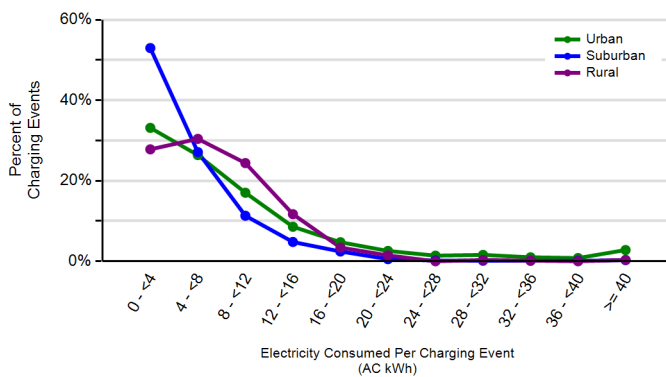
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



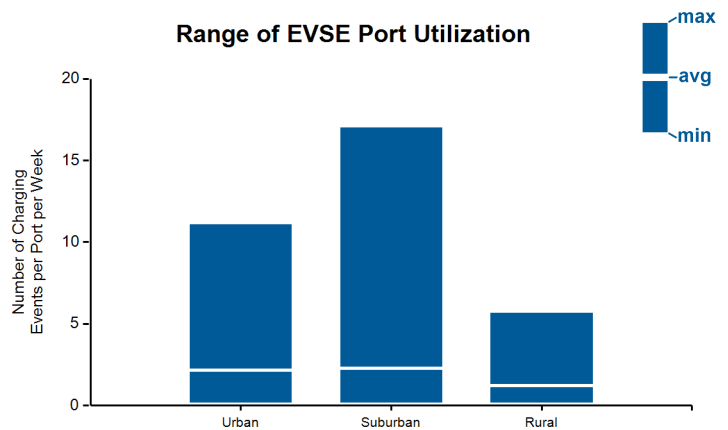
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



**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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# NYSERDA Electric Vehicle Charging Infrastructure Report

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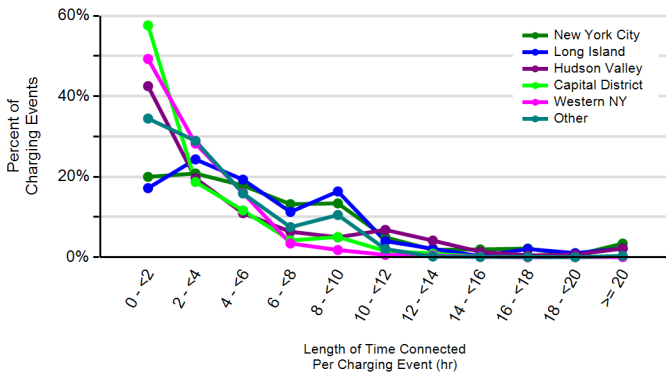


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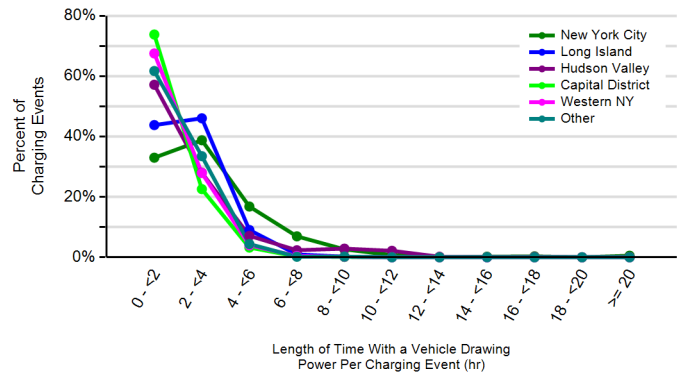
## EVSE Usage - By Region

	New York City	Long Island	Hudson Valley	Capital District	Syracuse/Central NY	Rochester/Finger Lakes	North Country	Western NY	Other <sup>3</sup>
Number of charging ports <sup>1</sup>	77	67	88	105	21	42	23	52	16
Number of charging events <sup>2</sup>	971	1,945	1,689	4,626	300	1,819	469	1,661	245
Charging energy consumed (AC MWh)	13.6	16.3	16.3	22.0	1.7	10.4	2.6	9.4	1.7
Average percent of time with a vehicle connected per charging port	6.3%	9.4%	4.2%	5.3%	2.3%	7.8%	2.3%	3.9%	2.8%
Average percent of time with a vehicle drawing power per charging port	2.3%	3.0%	2.2%	2.8%	1.2%	3.5%	1.5%	2.5%	1.5%
Average number of charging events started per charging port per week	1.0	2.2	1.5	3.4	1.2	3.3	1.6	2.5	1.3
Average electricity consumed per charging port per week (AC kWh)	13.4	18.7	14.3	16.0	6.7	18.9	9.0	14.0	8.7
Average length of time with vehicle connected per charging event (hr)	11.0	7.1	4.8	2.6	3.4	4.0	2.4	2.7	2.1
Average length of time with vehicle drawing power per charging event (hr)	4.1	2.2	2.4	1.4	1.7	1.8	1.5	1.7	3.8
Average electricity consumed per charging event (AC kWh)	14.0	8.4	9.6	4.8	5.8	5.7	5.5	5.7	6.9

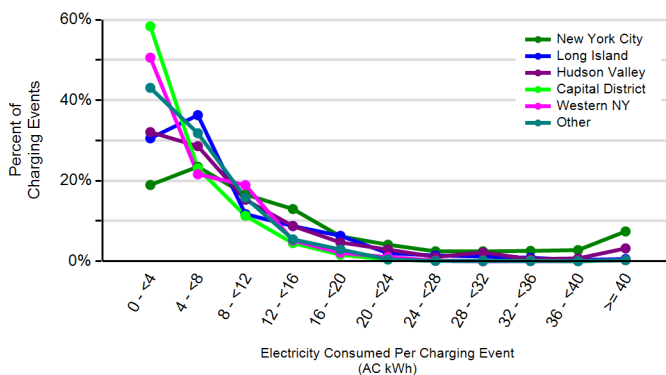
Distribution of Length of Time with a Vehicle Connected per Charging Event<sup>4</sup>



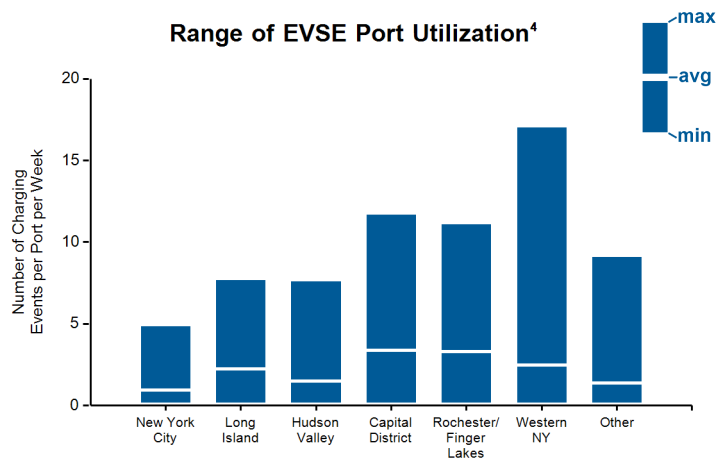
Distribution of Length of Time with a Vehicle Drawing Power per Charging Event<sup>4</sup>



Distribution of AC Energy Consumed per Charging Event<sup>4</sup>



Range of EVSE Port Utilization<sup>4</sup>



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

<sup>4</sup> Only 5 or 6 regions with the most EVSE ports are individually represented, with the remaining regions combined and shown as 'Other'.

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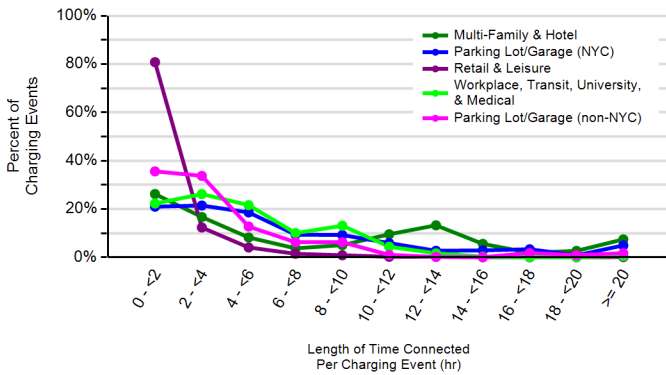
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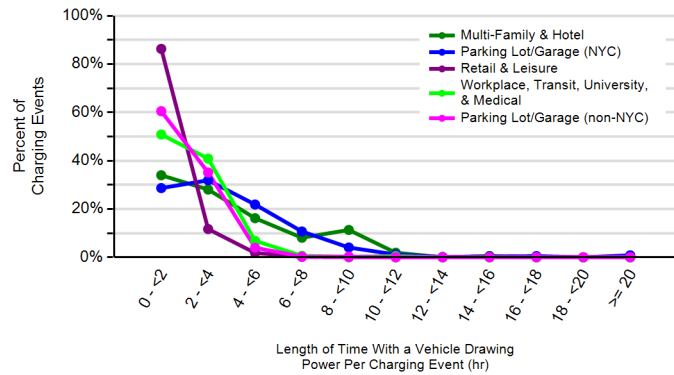
## EVSE Usage - By Venue

	Parking Lot/Garage (non-NYC)	Parking Lot/Garage (NYC)	Retail Location	Workplace	Multi-Family	Hotel	University or Medical Campus	Leisure Destination	Transit Station
Number of charging ports <sup>1</sup>	70	61	87	58	16	26	112	21	40
Number of charging events <sup>2</sup>	2,246	630	3,868	1,299	238	140	4,516	317	471
Charging energy consumed (AC MWh)	14.2	11.2	13.4	9.0	5.3	1.6	33.7	2.1	3.4
Average percent of time with a vehicle connected per charging port	7.0%	5.1%	2.4%	4.3%	7.2%	1.0%	10.2%	2.6%	2.9%
Average percent of time with a vehicle drawing power per charging port	2.8%	2.4%	2.0%	2.1%	2.9%	0.7%	4.0%	1.3%	1.4%
Average number of charging events started per charging port per week	2.5	0.8	3.5	1.7	1.1	0.4	3.1	1.2	0.9
Average electricity consumed per charging port per week (AC KWh)	15.8	14.0	12.2	11.8	25.2	4.6	23.0	7.6	6.8
Average length of time with vehicle connected per charging event (hr)	4.7	10.9	1.2	4.2	10.7	4.1	5.6	3.8	5.2
Average length of time with vehicle drawing power per charging event (hr)	1.9	5.1	1.0	2.0	4.3	2.8	2.2	1.8	2.6
Average electricity consumed per charging event (AC kWh)	6.3	17.8	3.5	6.9	22.2	11.3	7.5	6.6	7.3

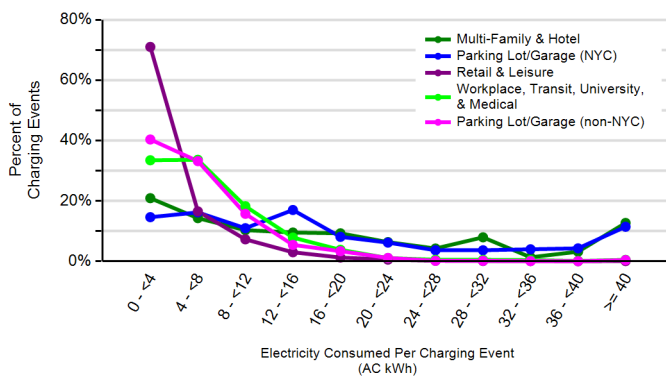
**Distribution of Length of Time with a Vehicle Connected per Charging Event**



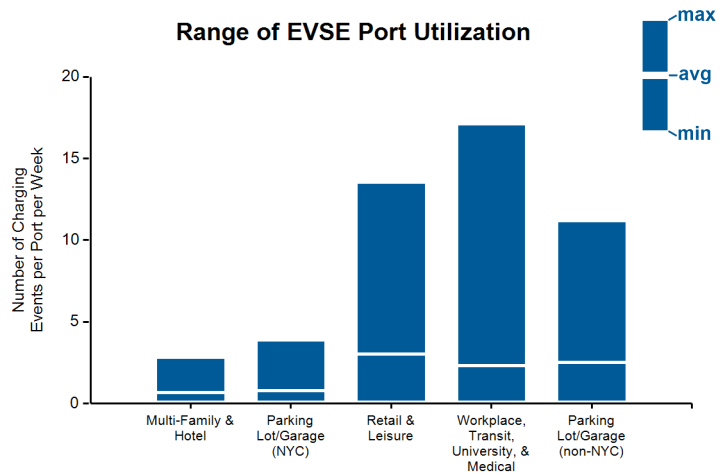
**Distribution of Length of Time with a Vehicle Drawing Power per Charging Event**



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



**Range of EVSE Port Utilization**



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