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EVSE Charger Performance Analysis

2025 Q1

BENCHMARK REPORT
APRIL 2024–MARCH 2025





2025 Q1

BENCHMARK REPORT

EVSE Charger Performance Analysis

The Transportation Energy Institute's (TEI) Charging Analytics Program (CAP) enables users to analyze the performance of DC Fast Chargers throughout North America. This report presents data relative to the performance of chargers throughout the United States.

The data is presented in different groupings, allowing readers to compare the impact on utilization of different variables, such as charger power, connector type, proximity to a particular business or proximity to a highway ramp. In addition, the data is presented in comparative clusters of counties which possess similar demographic characteristics which have a high statistical correlation to charger utilization. The data shows actual and historic charger utilization percentages, number of charging sessions, when charging sessions were initiated (day of week and time of day), how long those sessions lasted and how frequently chargers failed to initiate a charging session.

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Consumers spent an **average of 39 minutes charging their vehicles**, with session duration ranging from 35-43 minutes

300+ kW chargers averaged 332 charging sessions per month and accounted for 55.3% of all charging sessions.

100-299 kW chargers:

184 sessions/month and 29.3% of all charging sessions

50-99 kW chargers:

98 sessions/month and 15.3% of all charging sessions

0-49 kW chargers:

12 sessions/month and 0.1% of all charging sessions



71% of charging sessions occurred at chargers located **less than 1 mile from a highway ramp**



Monthly sessions at chargers near key businesses increased

from April 2024 - March 2025:



Restaurants: up 17.5% to 237 sessions



Fast Food: up 7.4% to 226 sessions



Convenience: up 49.5% to 156 sessions



Fuel Retail: up 32.3% to 170 sessions



Counties with highest average **charger utilization** at **31.1%** averaged:

Household income: \$140,956

EVs per 1,000 people: 3.4

EVs per DCFC: 71.0

People per Square KM: 7,170



Chargers equipped with **CCS and J3400 connectors** recorded highest average number of sessions per month:

CCS: 295

CCS/Chademo: 127

J3400: 240

J3400/Combo: 112





Summary of Charger Inventory in CAP

In the first quarter of 2025, the Charging Analytics Program (CAP) expanded its collection of data to include session insights from more than 35,000 DCFC charging ports in the United States, including those equipped with all connector types, including CCS, Chademo, J3400 (aka, Tesla/NACS) and various combinations. This inventory represents 67% of the 52,575 DCFC charger ports in the United States as reported by the U.S. Department of Energy. Charging sessions recorded at the DCFCs included in the CAP data set increased from 2.1 million in April 2024 to 7.9 million in March 2025. CAP enables comparison of performance among chargers based upon their location, their power rating, their connector type, their proximity to specific business types, or verticals and their proximity to a highway ramp.

Research has demonstrated that chargers can influence business activity for those businesses located within 100 meters of the charger. Based

upon this insight, CAP tracks the location of chargers that are within 100 meters of key business segments, including restaurants, fast-food restaurants, convenience stores and fueling stations. Because of the 100-meter radius, many chargers are located near multiple businesses, therefore the allocation to business verticals below may exceed the total number of chargers in the CAP dataset.



FIGURE 1. TOTAL DCFC IN DATA SET

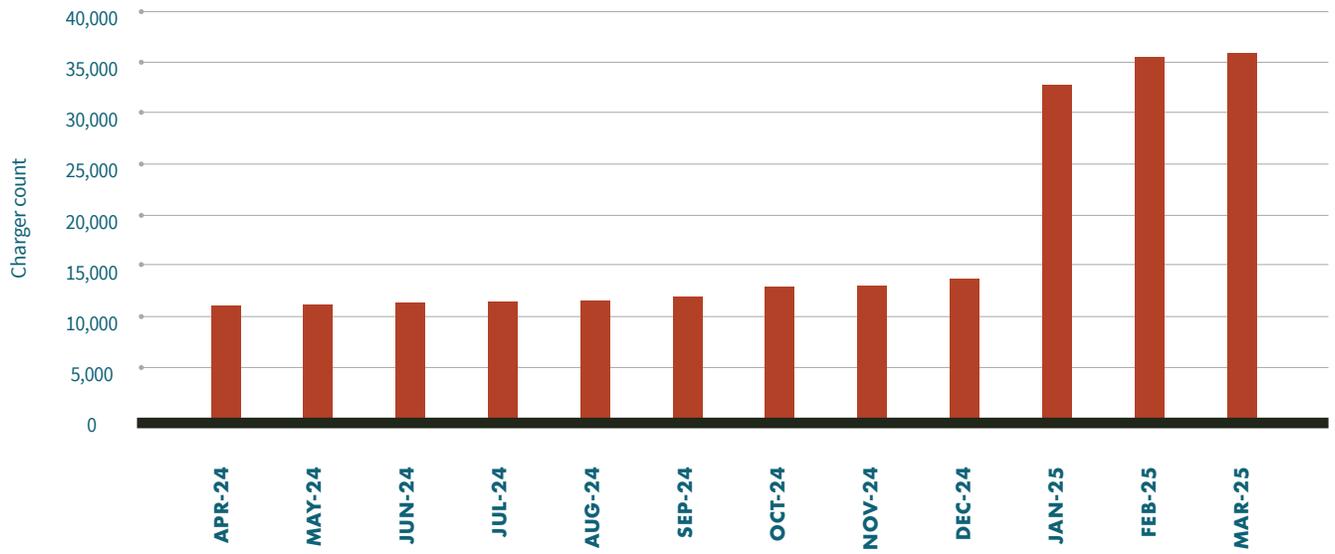


FIGURE 2. TOTAL CHARGING SESSION IN DATA SET

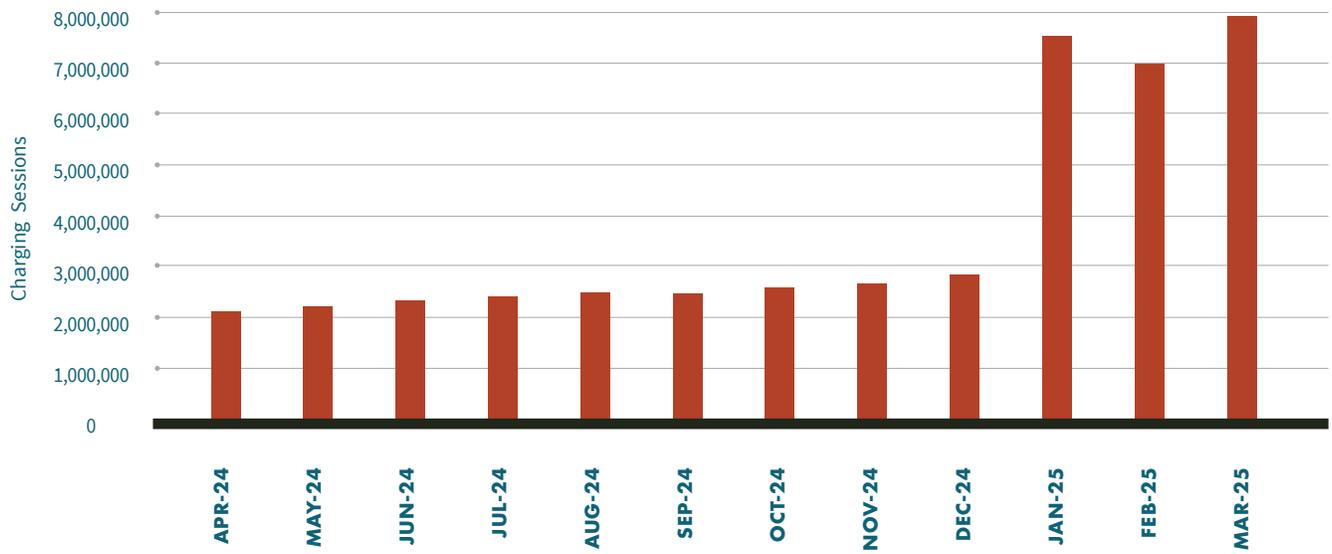


FIGURE 3. DCFC INVENTORY BY CHARGER POWER

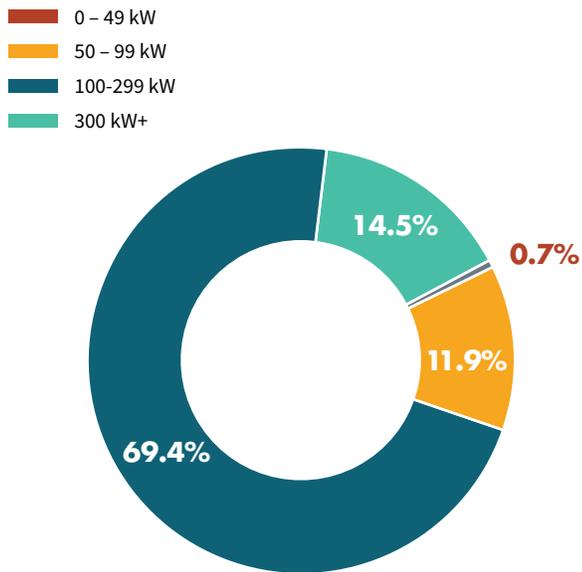


FIGURE 4. DCFC INVENTORY BY PLUG TYPE

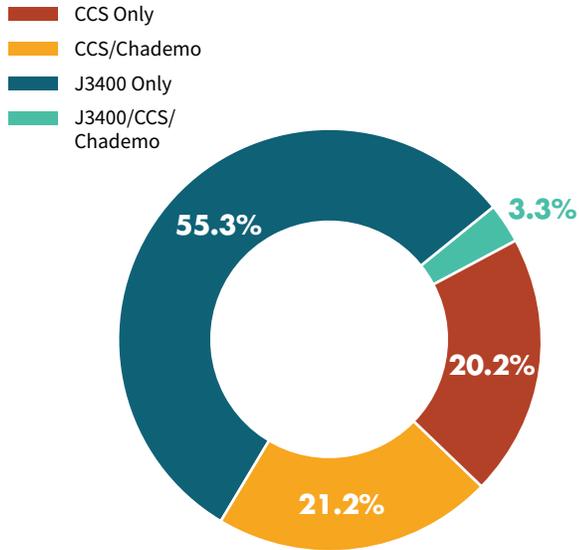


FIGURE 5. DCFC INVENTORY BY PROXIMITY TO BUSINESS VERTICAL

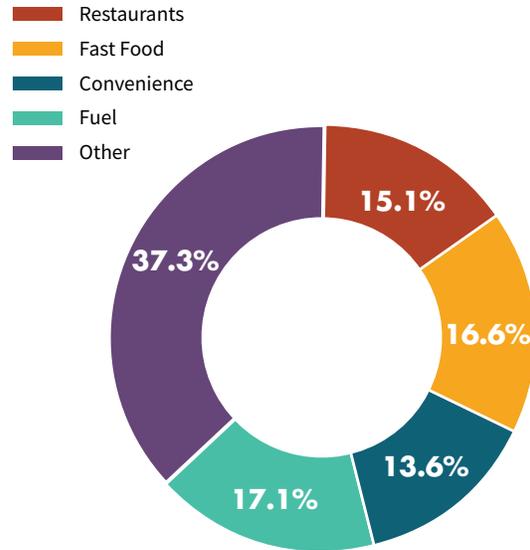


FIGURE 6. SHARE OF CHARGERS BY PROXIMITY TO BUSINESS VERTICALS

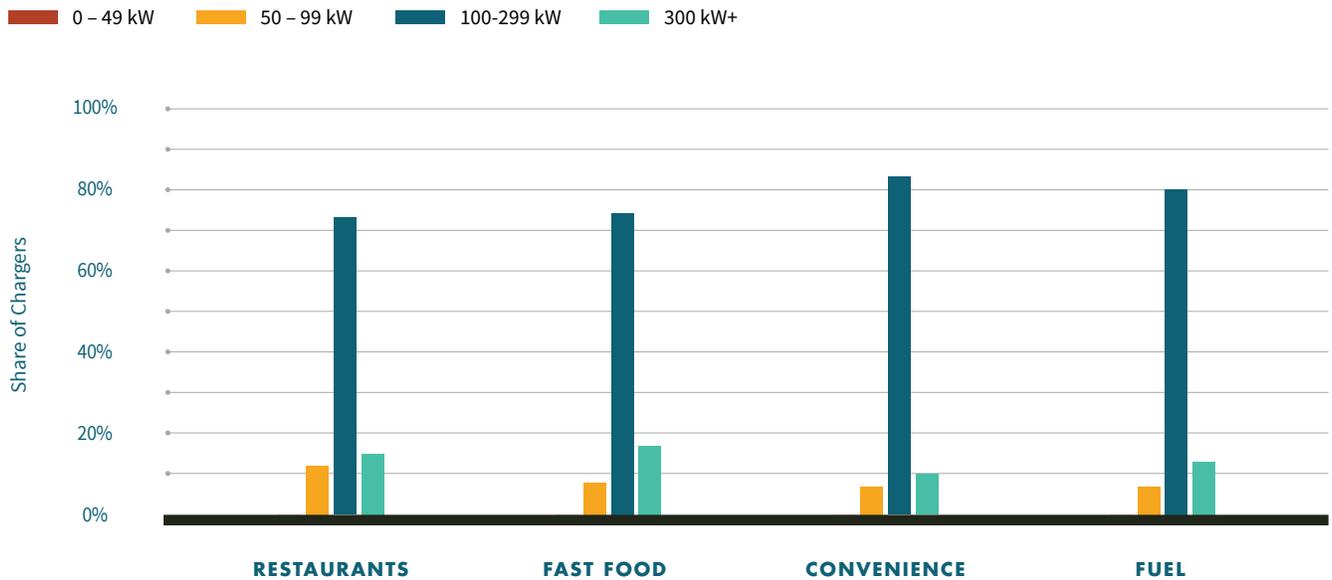




FIGURE 7. DCFC INVENTORY BY PROXIMITY TO HIGHWAY RAMP

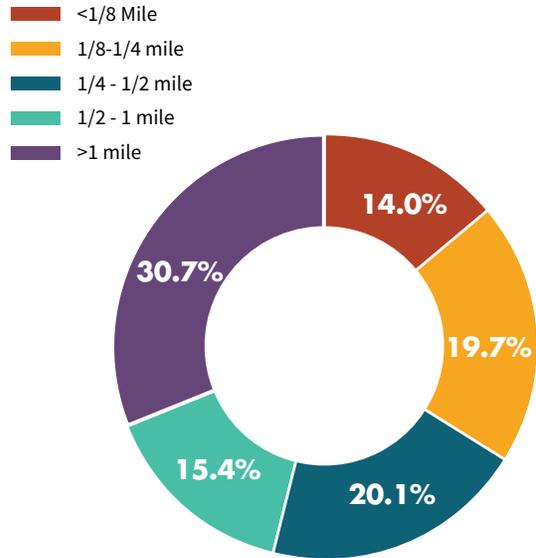
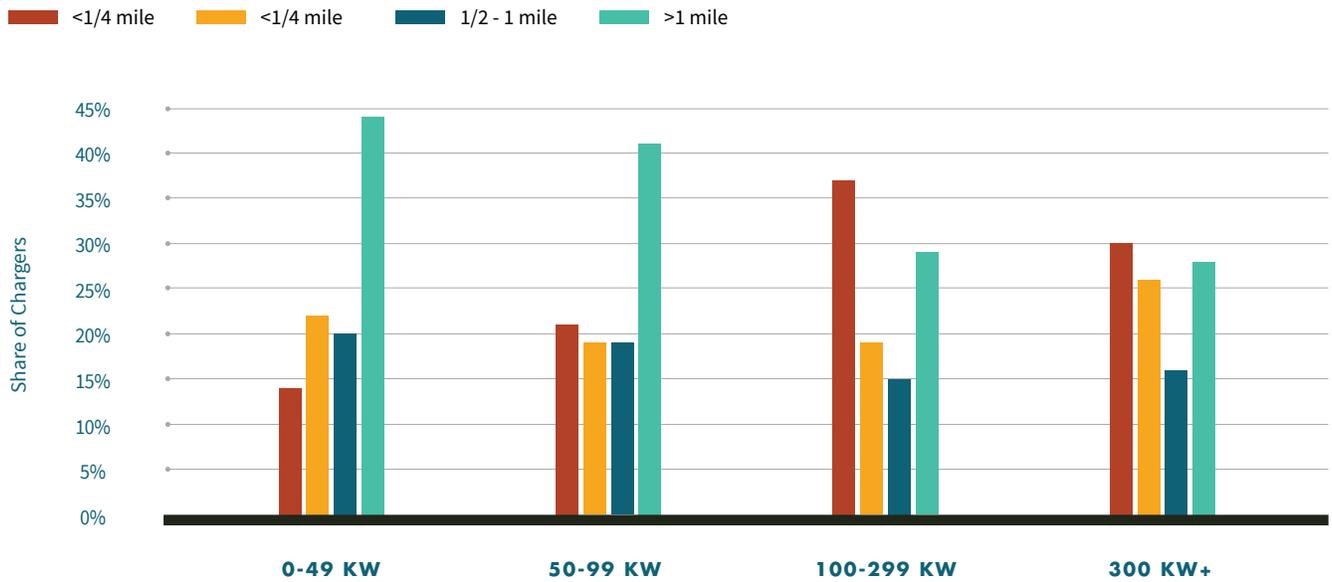


FIGURE 8. SHARE OF CHARGERS BY PROXIMITY TO HIGHWAY RAMP



DATA ANALYSIS IN THIS REPORT

In this report, the available CAP data will be presented to demonstrate the variability in performance when adjusting one data filter selection. The following chart presents all of the filter options available in CAP and identifies how these were applied to the data to provide the results contained in this report.

TABLE 1. THE FILTER OPTIONS AVAILABLE IN CAP

CATEGORY	FILTER OPTIONS	FILTERS PRESENTED
Region	National, Regional, State, County, City, Benchmark Clusters	All filters below were applied to the National and Benchmark Clusters selections
Business Verticals	Restaurant, Fast Food, Convenience Store, Fuel Retail	All options presented separately and comparatively
Distance to Highway	<1/8 mile 1/8-1/4 mile 1/4-1/2 mile 1/2 - 1 mile >1 mile	<1/4 mile 1/4 - 1/2 mile 1/2 - 1 mile >1 mile Options presented separately and comparatively
Charger Connector/Plug Type	CCS only Chademo Only J3400 Only CCS/Chademo combo CCS/J3400 combo Chademo/J3400 combo	CCS only J3400 only CCS/Chademo combo J3400 combos as one group Options presented separately and comparatively
Charger Power Capacity	0 – 49 kW 50 – 99 kW 100 – 299 kW 300 + kW	All options presented separately and comparatively

The report presents the following utilization insights for each selected filter:

- **Share of charging sessions** (Monthly April 2024 – March 2025)
- **Charging sessions per port per month** (Monthly April 2024 – March 2025)
- **Percent utilization** (Monthly April 2024 – March 2025)
- **Percent utilization by day of week** (Average April 2024 – March 2025)
- **Percent utilization by hour of day** (Average April 2024 – March 2025)
- **Charging session duration** (Monthly April 2024 – March 2025)
- **Percent of successful and failed charging attempts** (Average April 2024 – March 2025)



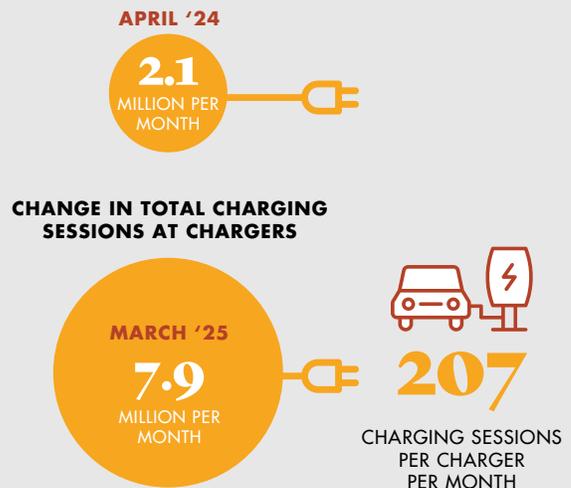
Analysis of National Charging Session and Utilization Data

When CAP began tracking DCFC utilization in September 2023, total charging sessions at chargers in the dataset totaled from 1.61 million per month. This Q1 2025 report will analyze data from charging sessions beginning in April 2024, when CAP collected data from 2.1 million sessions, through March 2025, when CAP collected data from 7.9 million sessions. During this period, the charger ports in the CAP data set averaged 207 charging sessions per charger port per month.

In this report, the term “National” is used to reference the entire aggregated data set within CAP. In addition, the term “utilization” is defined as the percent of time that the plugs are in use. This includes both successful and unsuccessful charging cycles but does not include time spent plugged in

beyond the long charge threshold as long charges are considered blocking a public charging station thereby making it unavailable for general public use.

Overall utilization averaged 17.4% over this time frame and 16.3% in March 2025. DCFCs seem to be used most frequently on the weekends, with Friday – Sunday registering the highest utilization rates. On a given day, chargers seem to be used most often between 12 p.m. and 5 p.m. On average, from April – March charging sessions lasted 39.1 minutes, but average session duration dropped to 35.4 minutes



during the first quarter after chargers equipped with J3400 connectors were included in the dataset. The data also shows that 80.1% of charging attempts during the period were successful on their first attempt, with 4.1% requiring more than one attempt to achieve a successful charging session and 15.0% of attempted sessions concluding in failure. Of note, beginning in January with the introduction of J3400 charging ports these averages improved considerably with 89.4% of attempts succeeding on the first attempt, 3.4% succeeding after the first attempt and only 7.1% concluding in failure.

FIGURE 9. AVERAGE CHARGING SESSION PER CHARGER PER MONTH

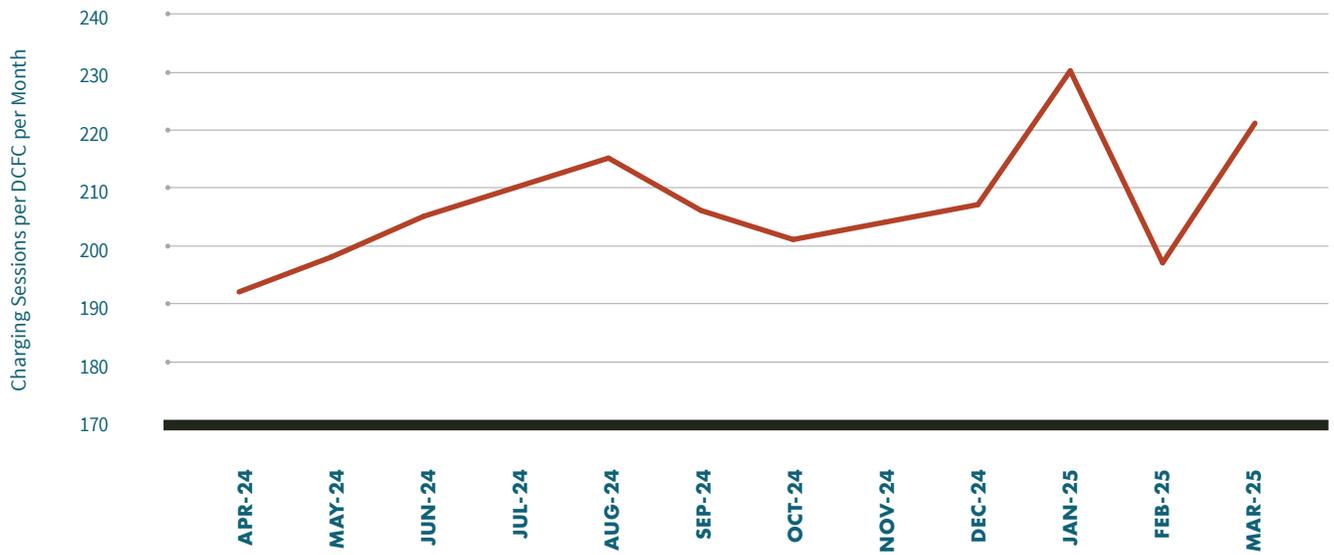


FIGURE 10. AVERAGE UTILIZATION

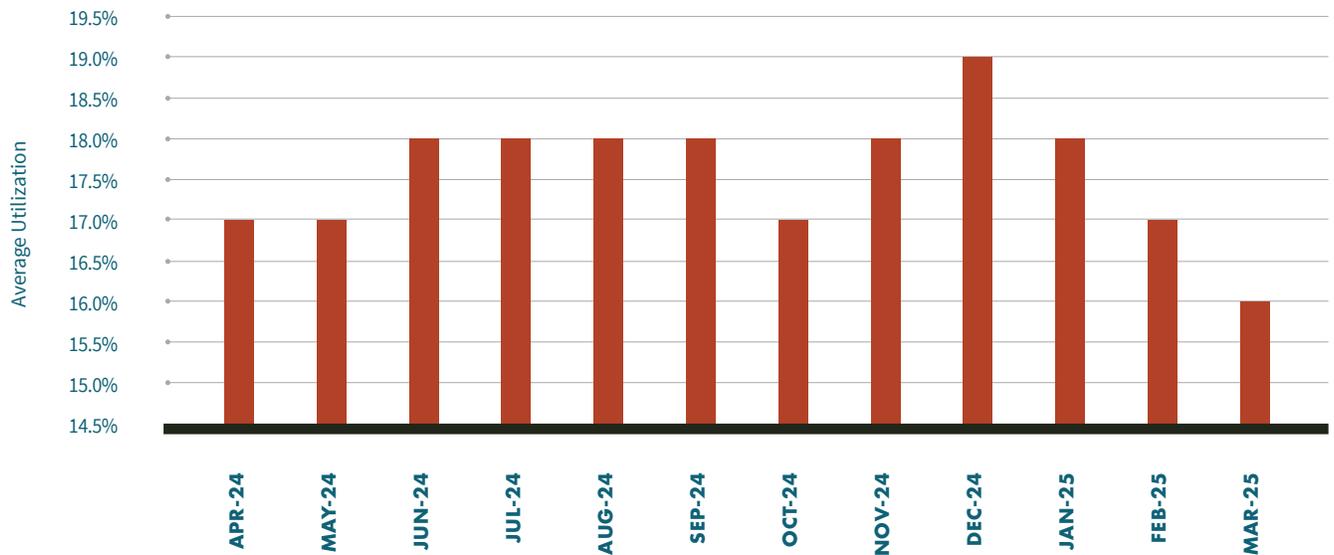


FIGURE 11. UTILIZATION BY DAY OF WEEK

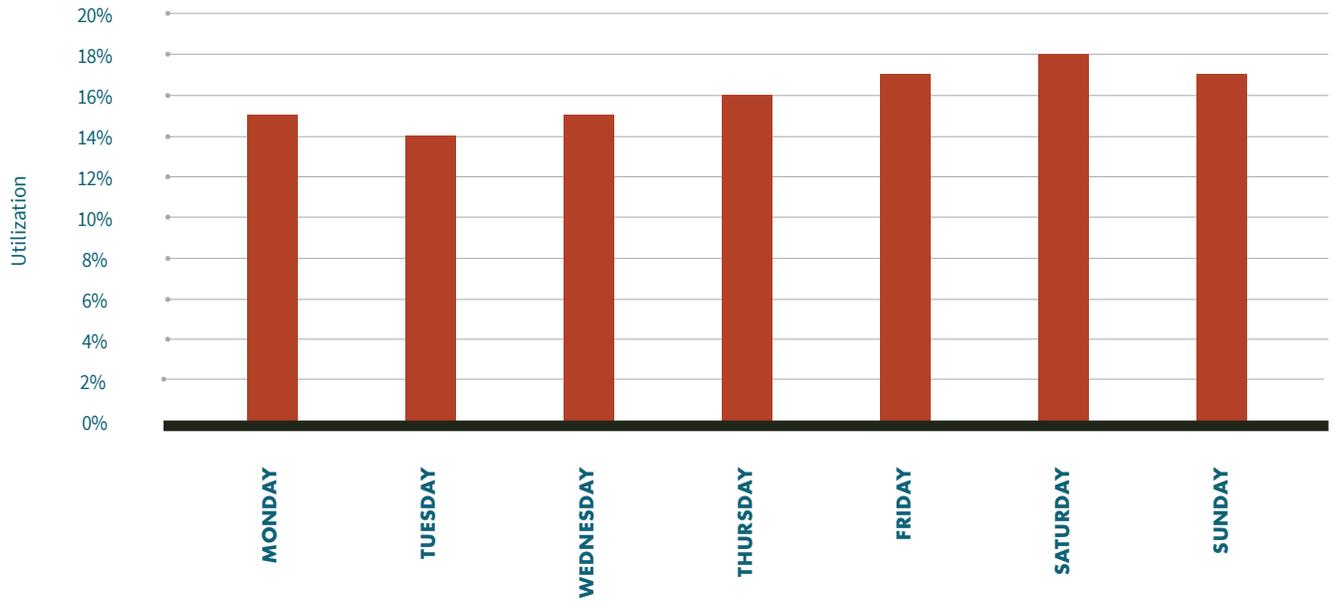


FIGURE 12. UTILIZATION BY HOUR OF DAY

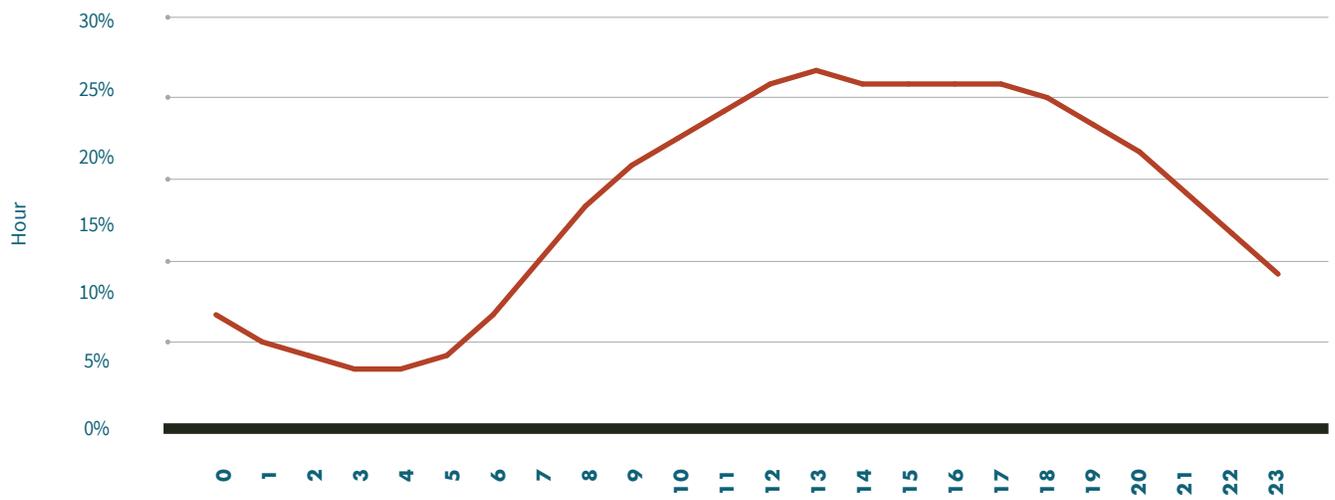


FIGURE 13. AVERAGE CHARGING SESSION DURATION

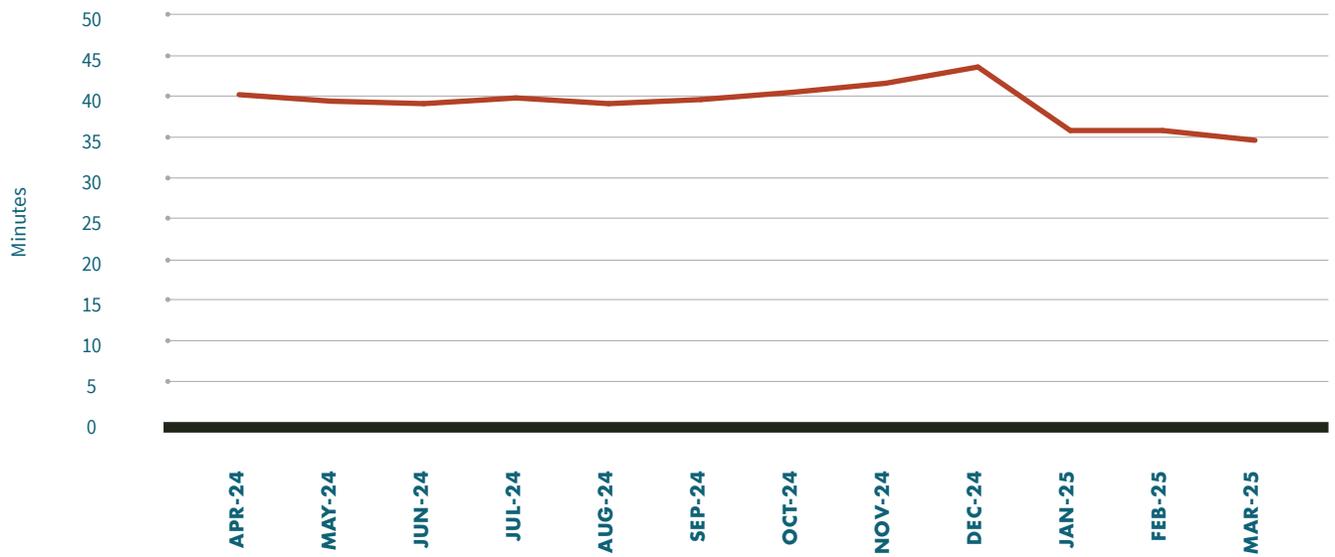
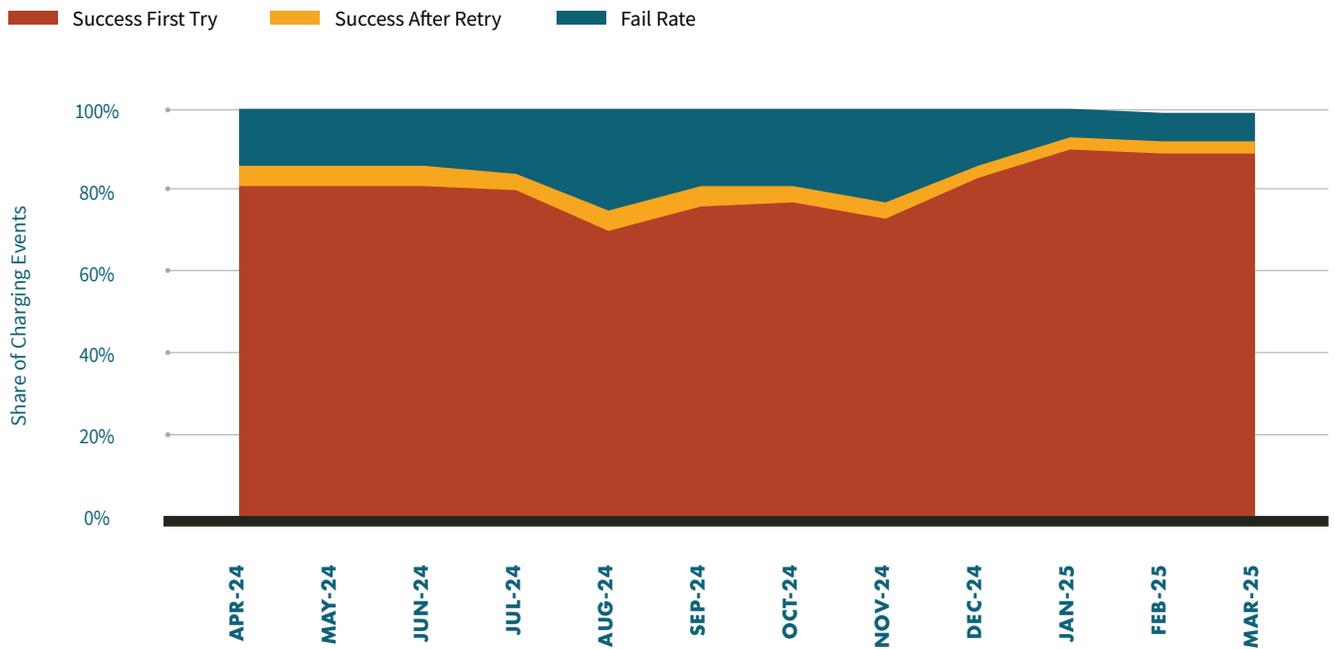
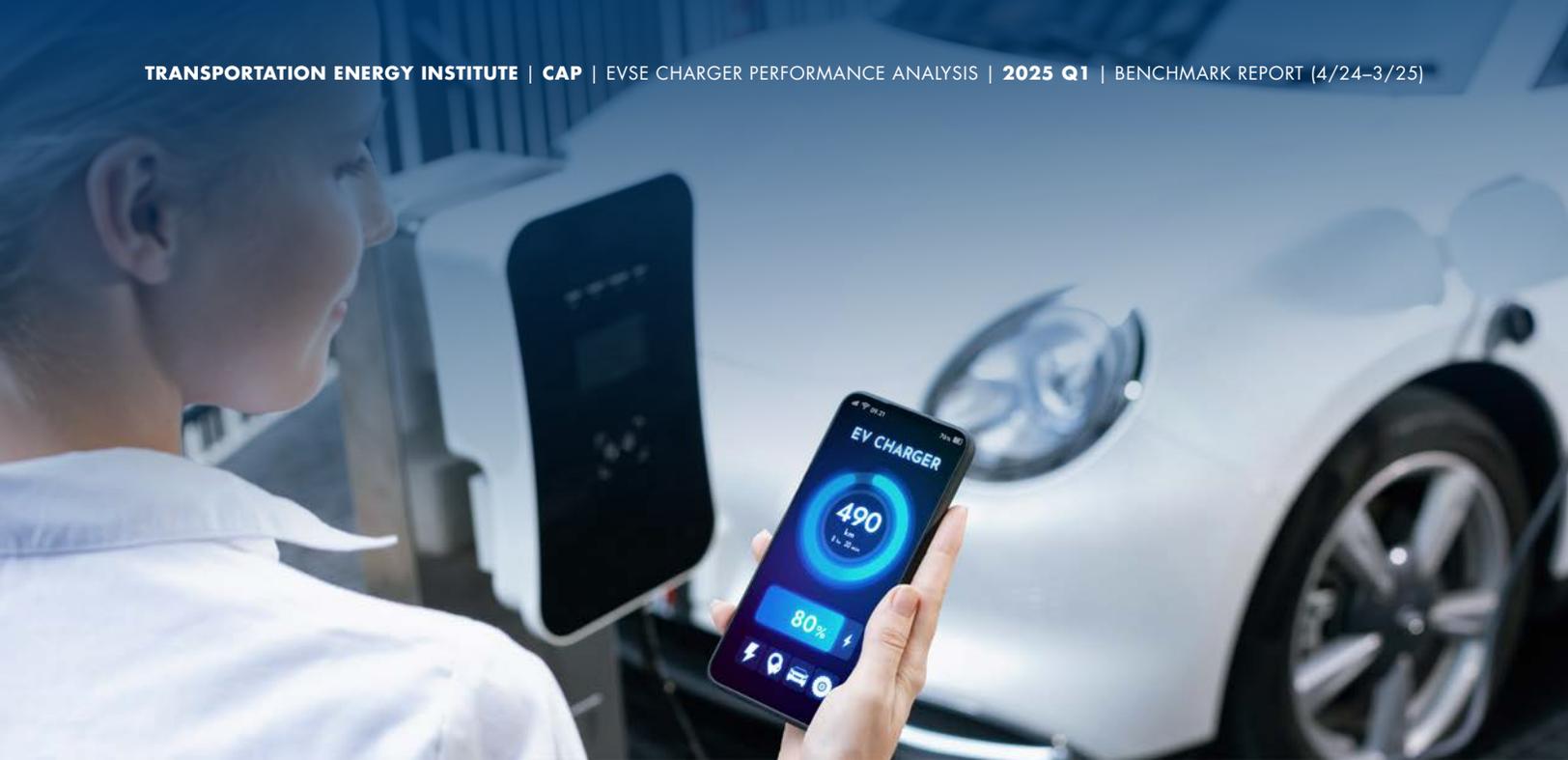


FIGURE 14. CHARGING SESSION FAILURE RATES

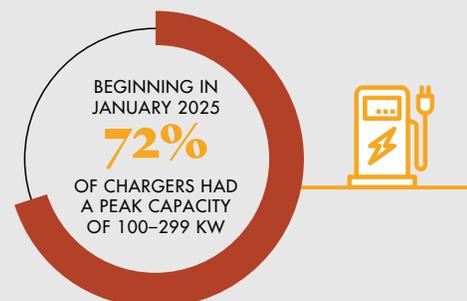




Comparison of Performance by Chargers of Different Power

The following charts compare the same metrics across chargers of different power capacity. Of the chargers in the CAP dataset for March 2025, more than 87% offered a peak charge capacity of greater than 100 kW. The introduction of chargers equipped with J3400 connectors in January 2025 also shifted the share allocation of power capacity. Until December 2024, 36% of chargers had a peak capacity of 300 kW or above. Beginning in January 2024, 72% of chargers had a peak capacity of 100 – 299 kW,

reflecting the typical power capacity provided by the data collected from 20,745 chargers equipped with J3400 connectors.



When looking at the utilization data, chargers of 300 kW or more recorded the most sessions per charger per month by a significant margin, averaging 332 sessions from April 2024 – March 2025, compared with 184 sessions for chargers 100 – 299 kW and much less for lower powered chargers. Chargers offering 100 – 299 kW capacity experienced a significant increase in average sessions per month when the J3400 data was introduced in January, jumping from an average of 173 sessions through December to 218 sessions during Q1 2025.

Utilization for 300 kW and higher chargers led the dataset, averaging 25.0% with 100 – 299 kW chargers coming in second at 16.2%. The 100 – 299 kW chargers did not experience a noticeable change in utilization with the introduction of J3400 chargers in January.

Utilization was consistent with regard to day of the week utilization, with weekends recording the highest utilization percentages for all except 0 – 49 kW chargers, which show a decline in utilization. Utilization by hour of the day showed consistent

trends for all but the lowest powered chargers, with the strongest utilization between 12 p.m. and 5 p.m.

As might be expected, the lowest powered chargers (0 – 49 kW) recorded the longest session duration with an average of 70.6 minutes per session, followed by 48.5 minutes for 50-99 kW chargers. Meanwhile, the 300 kW chargers recorded the shortest sessions duration, yet still averaged 35.5 minutes while 100 – 299 kW chargers averaged 37.8 minutes. Session duration for these chargers, however, did drop with the introduction of J3400 connectors from 39.6 minutes April – December to 32.5 minutes in Q1 2025.

The 300 kW chargers were shown to be the most reliable, recorded the lowest rate of failed charge events at 12.3% compared to a dataset average of 15.0%, while chargers with peak capacity below 100 kW averaged higher than 20% failure rates. Chargers 100 – 299 kW, with an average failure rate of 14.9%, reported a drop in failure rates from an average of 18.1% April – December to 5.1% in the first quarter of 2025.



FIGURE 15. TOTAL CHARGERS IN DATA SET BY POWER CAPACITY

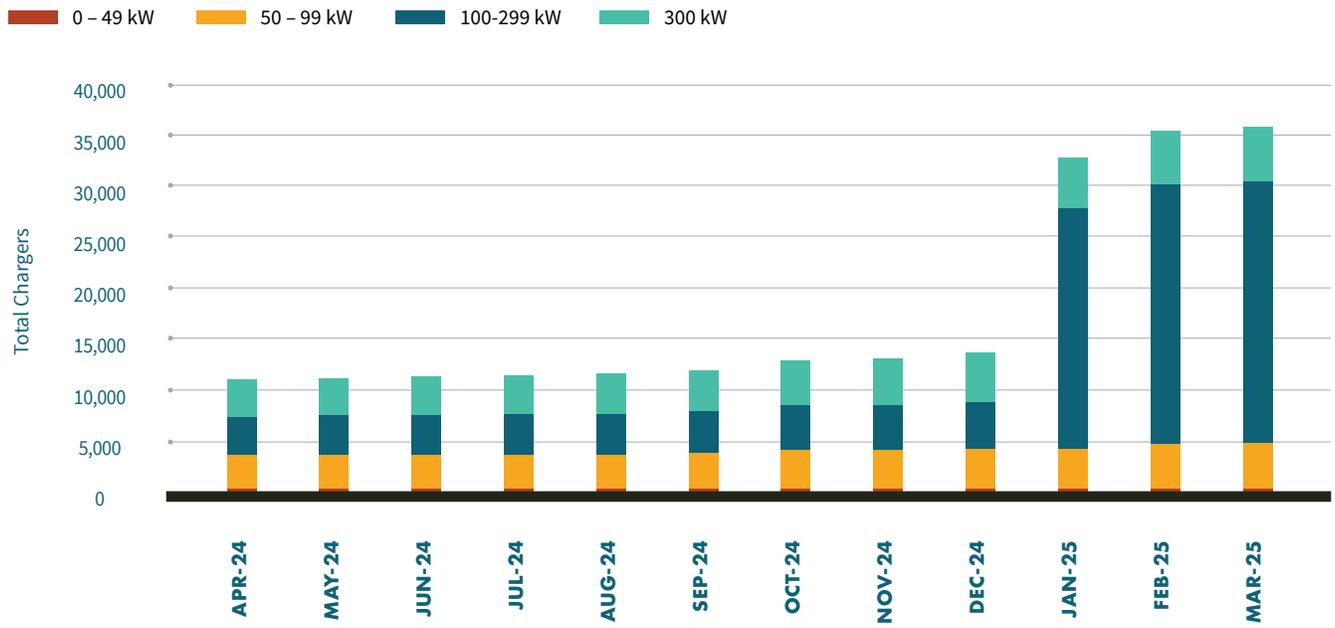


FIGURE 16. SHARE OF CHARGING SESSIONS BY POWER CAPACITY

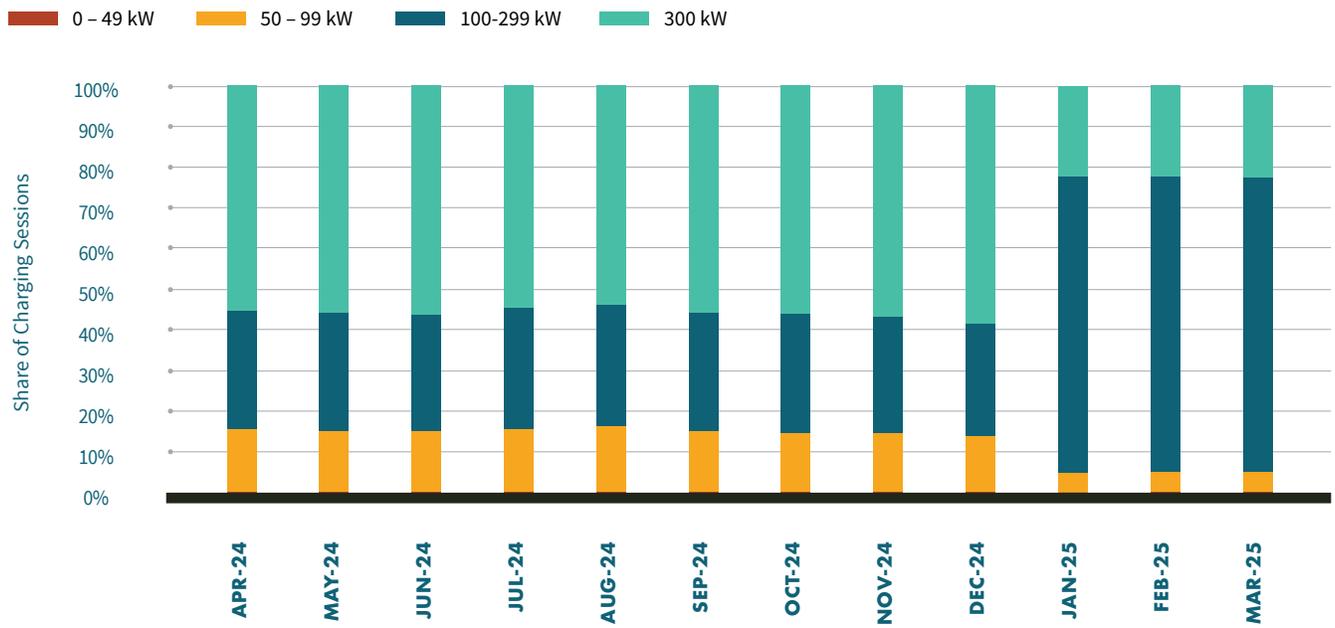


FIGURE 17. CHARGING SESSIONS PER CHARGER PER MONTH

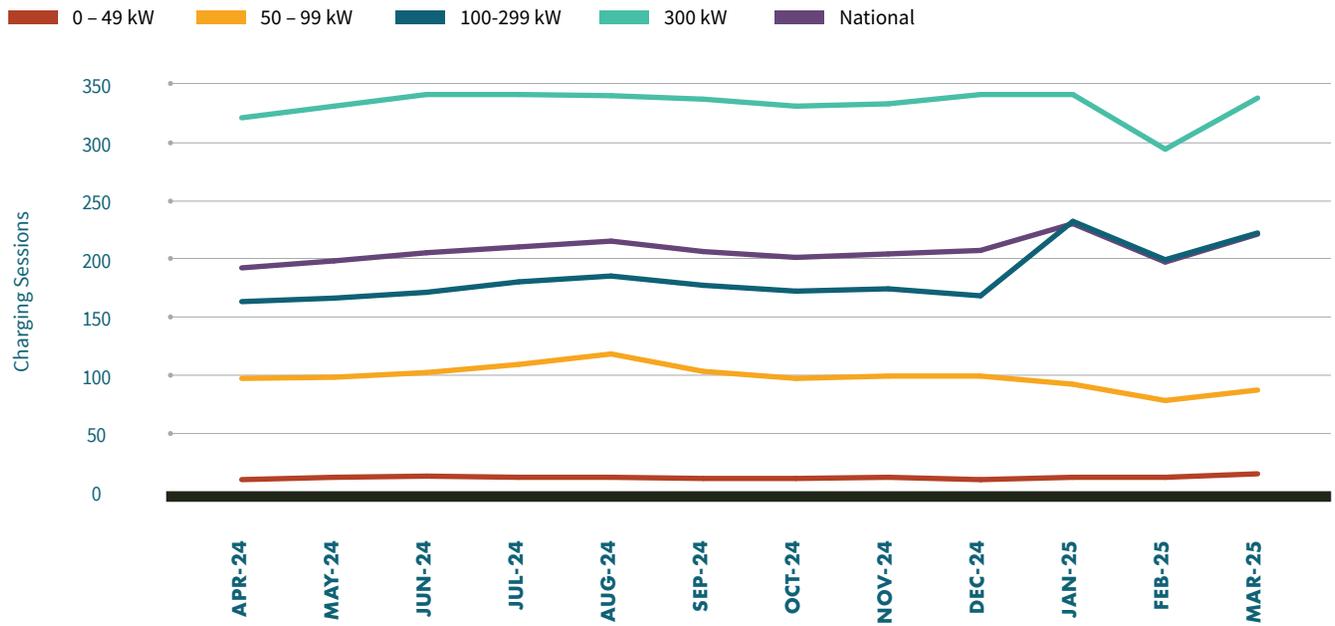


FIGURE 18. AVERAGE UTILIZATION

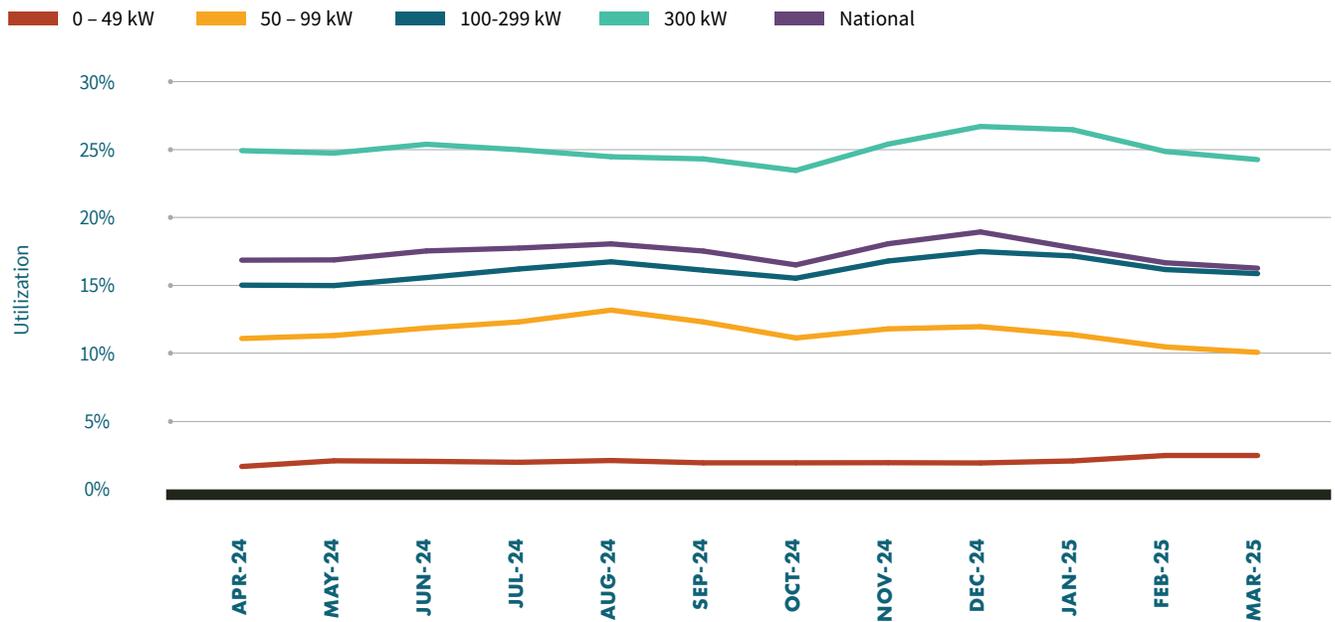


FIGURE 19. AVERAGE UTILIZATION BY DAY OF WEEK

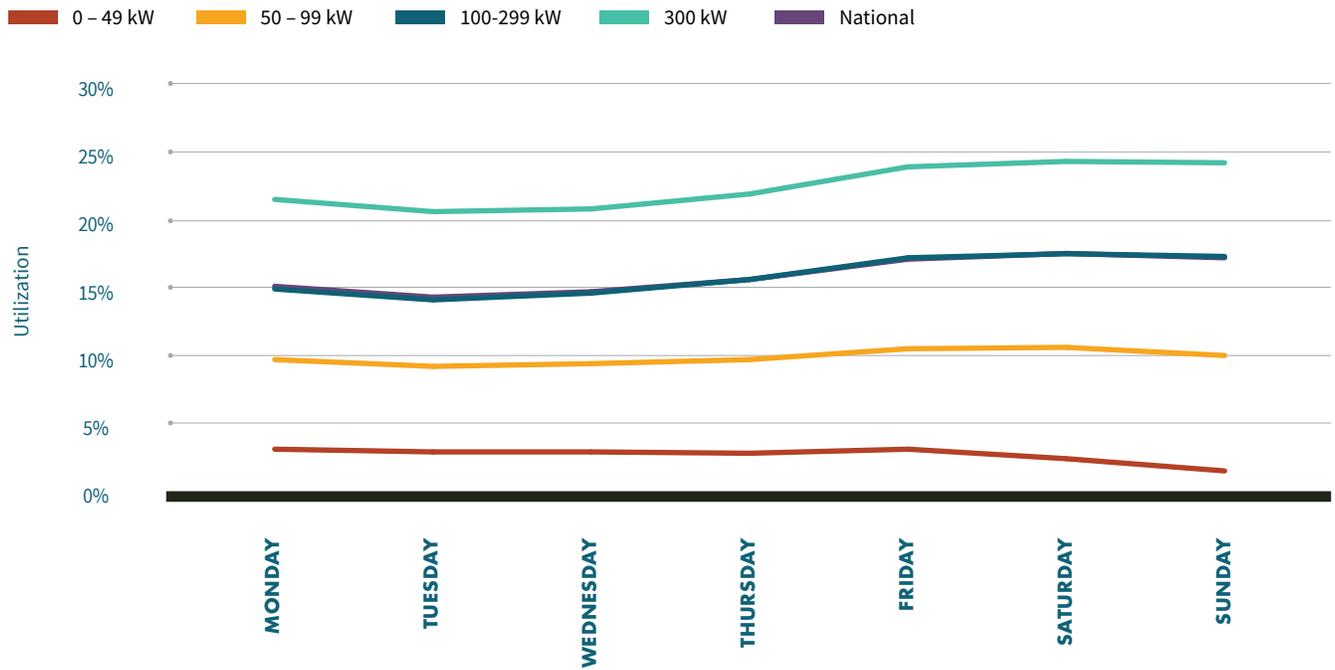


FIGURE 20. UTILIZATION BY TIME OF DAY

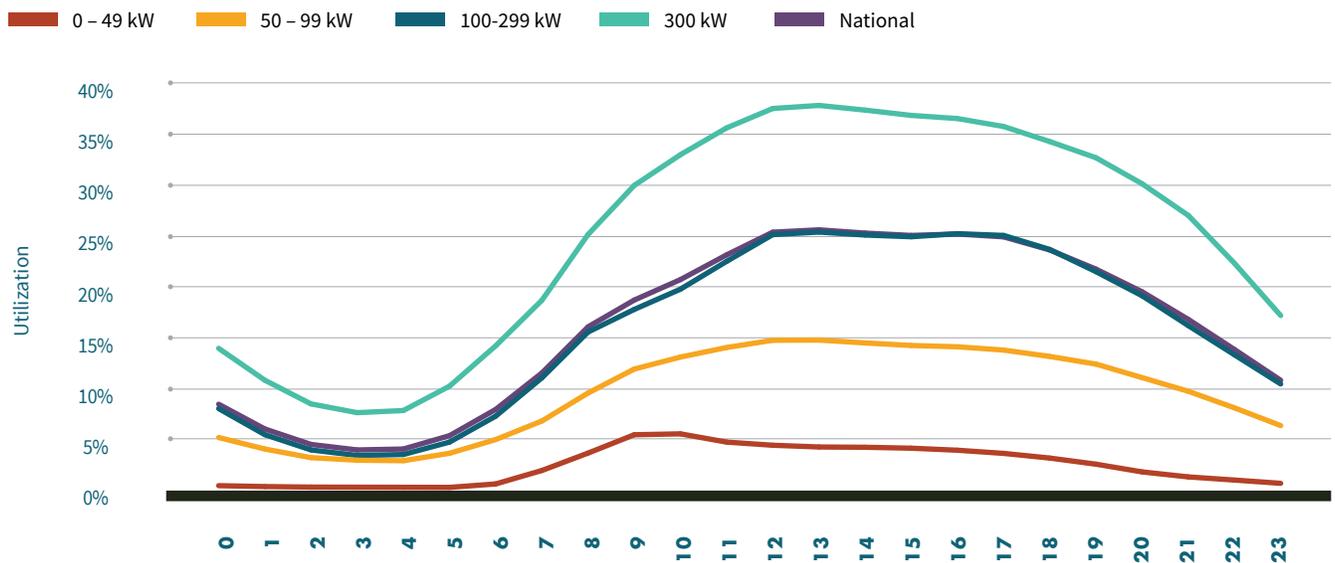


FIGURE 21. SESSION DURATION

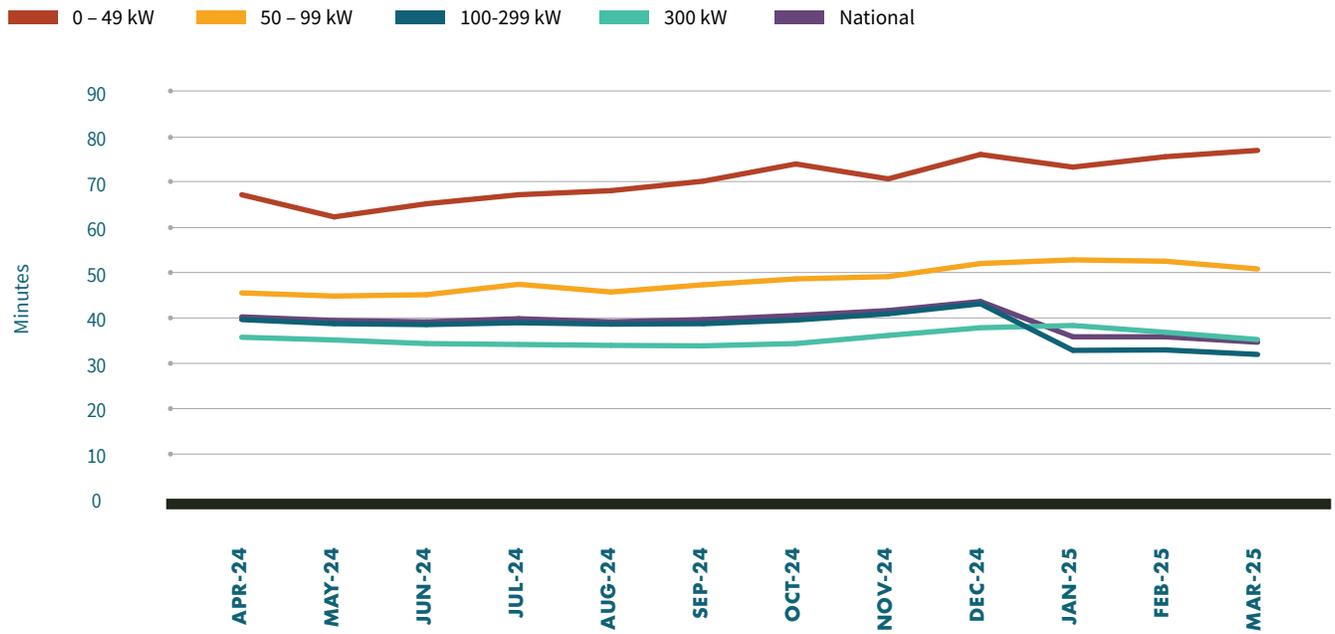


FIGURE 22. AVERAGE SUCCESS AND FAILURE RATES (APRIL 2024 - MARCH 2025)

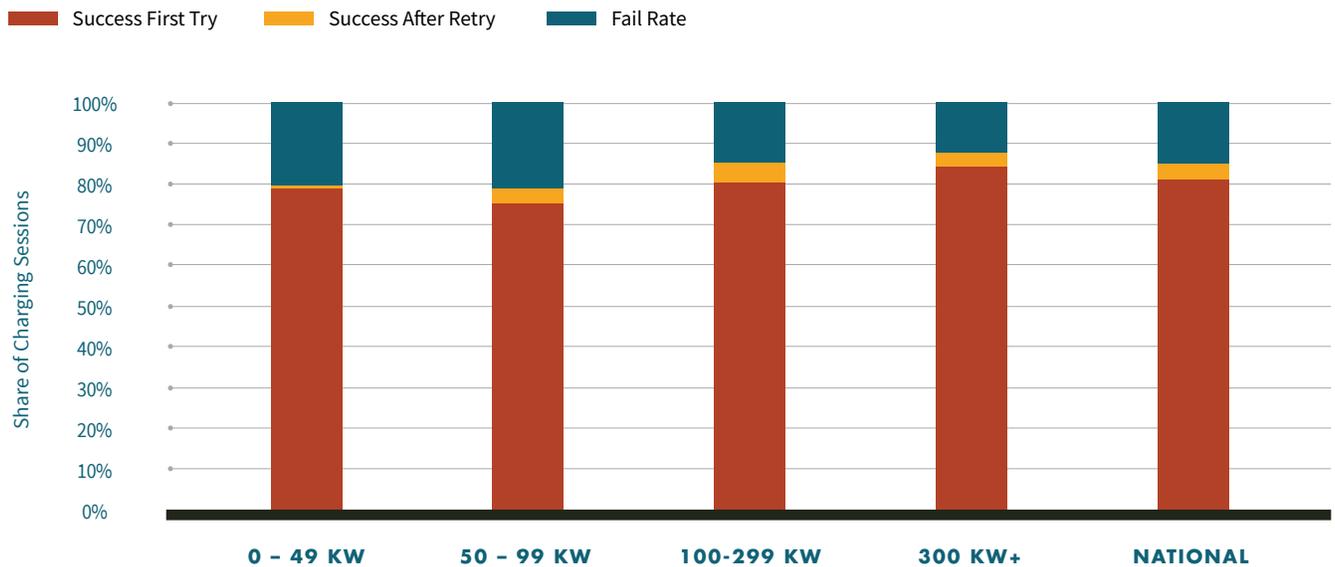


TABLE 2. SHARE OF CHARGING SESSIONS BY POWER CAPACITY

DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW
Apr-24	0.1%	15.4%	29.1%	55.5%
May-24	0.1%	15.1%	29.0%	55.8%
Jun-24	0.1%	14.9%	28.8%	56.2%
Jul-24	0.1%	15.5%	29.7%	54.7%
Aug-24	0.1%	16.2%	29.9%	53.9%
Sep-24	0.1%	14.9%	29.1%	55.9%
Oct-24	0.1%	14.5%	29.2%	56.2%
Nov-24	0.1%	14.5%	28.5%	56.9%
Dec-24	0.1%	13.8%	27.6%	58.6%
Jan-25	0.0%	4.8%	72.8%	22.3%
Feb-25	0.1%	4.9%	72.6%	22.5%
Mar-25	0.1%	4.9%	72.3%	22.7%
Average	0.1%	15.3%	29.3%	55.3%

TABLE 3. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Apr-24	10	97	163	321	192
May-24	12	98	166	331	198
Jun-24	13	102	171	341	205
Jul-24	12	109	180	341	210
Aug-24	12	118	185	340	215
Sep-24	11	103	177	337	206
Oct-24	11	97	172	331	201
Nov-24	12	99	174	333	204
Dec-24	10	99	168	341	207
Jan-25	12	92	232	341	230
Feb-25	12	78	199	294	197
Average	12	98	184	332	207
Change	45.3%	-10.4%	36.6%	5.4%	15.0%

TABLE 4. CHARGER UTILIZATION PERCENTAGE

DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Apr-24	1.7%	11.1%	15.0%	25.0%	16.9%
May-24	2.1%	11.3%	15.0%	24.8%	16.9%
Jun-24	2.1%	11.9%	15.6%	25.4%	17.6%
Jul-24	2.0%	12.3%	16.2%	25.0%	17.8%
Aug-24	2.1%	13.2%	16.8%	24.5%	18.1%
Sep-24	2.0%	12.3%	16.1%	24.3%	17.6%
Oct-24	2.0%	11.2%	15.6%	23.5%	16.5%
Nov-24	2.0%	11.8%	16.8%	25.4%	18.1%
Dec-24	2.0%	12.0%	17.5%	26.7%	19.0%
Jan-25	2.1%	11.4%	17.2%	26.5%	17.8%
Feb-25	2.5%	10.5%	16.2%	24.9%	16.7%
Mar-25	2.5%	10.1%	15.9%	24.3%	16.3%
Average	2.1%	11.6%	16.2%	25.0%	17.4%
Change	48.0%	-9.2%	5.7%	-2.7%	-3.5%

TABLE 5. CHARGER UTILIZATION BY DAY OF WEEK

DAY	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Mon	3.1%	9.7%	14.9%	21.5%	15.1%
Tues	2.9%	9.2%	14.1%	20.6%	14.3%
Wed	2.9%	9.4%	14.6%	20.8%	14.7%
Thurs	2.8%	9.7%	15.6%	21.9%	15.6%
Fri	3.1%	10.5%	17.2%	23.9%	17.1%
Sat	2.4%	10.6%	17.5%	24.3%	17.5%
Sun	1.5%	10.0%	17.3%	24.2%	17.2%



TABLE 6. CHARGER UTILIZATION BY TIME OF DAY

HOURLY	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
0	0.5%	5.2%	8.1%	14.0%	8.5%
1	0.4%	4.1%	5.5%	10.8%	6.1%
2	0.4%	3.2%	4.0%	8.5%	4.5%
3	0.3%	3.0%	3.5%	7.7%	4.0%
4	0.3%	2.9%	3.5%	7.9%	4.1%
5	0.3%	3.7%	4.8%	10.3%	5.4%
6	0.7%	5.0%	7.3%	14.2%	8.0%
7	2.0%	6.8%	11.1%	18.7%	11.6%
8	3.7%	9.6%	15.6%	25.2%	16.1%
9	5.5%	11.9%	17.8%	30.0%	18.7%
10	5.6%	13.1%	19.8%	33.0%	20.7%
11	4.8%	14.1%	22.5%	35.6%	23.2%
12	4.5%	14.8%	25.1%	37.5%	25.4%
13	4.3%	14.8%	25.4%	37.8%	25.6%
14	4.3%	14.5%	25.1%	37.4%	25.3%
15	4.2%	14.3%	24.9%	36.9%	25.1%
16	4.0%	14.1%	25.2%	36.5%	25.2%
17	3.7%	13.8%	25.1%	35.8%	24.9%
18	3.2%	13.2%	23.7%	34.3%	23.6%
19	2.6%	12.4%	21.5%	32.7%	21.8%
20	1.8%	11.1%	19.1%	30.1%	19.5%
21	1.3%	9.8%	16.2%	27.0%	16.8%
22	1.0%	8.1%	13.3%	22.3%	13.9%
23	0.7%	6.4%	10.5%	17.2%	10.8%



TABLE 7. SESSION DURATION (MINUTES)

DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Apr-24	67.2	45.5	39.6	35.7	40.2
May-24	62.3	44.8	38.7	35.1	39.4
Jun-24	65.2	45.1	38.5	34.3	39.1
Jul-24	67.2	47.4	38.9	34.1	39.8
Aug-24	68.1	45.7	38.6	33.9	39.1
Sep-24	70.2	47.3	38.7	33.8	39.6
Oct-24	74.0	48.6	39.5	34.3	40.5
Nov-24	70.7	49.1	40.9	36.1	41.6
Dec-24	76.1	52.0	43.1	37.8	43.6
Jan-25	73.3	52.8	32.8	38.3	35.8
Feb-25	75.6	52.5	32.9	36.8	35.8
Mar-25	77.0	50.8	31.9	35.2	34.6
Average	70.6	48.5	37.8	35.5	39.1
Change	14.5%	11.4%	-19.5%	-1.3%	-13.9%

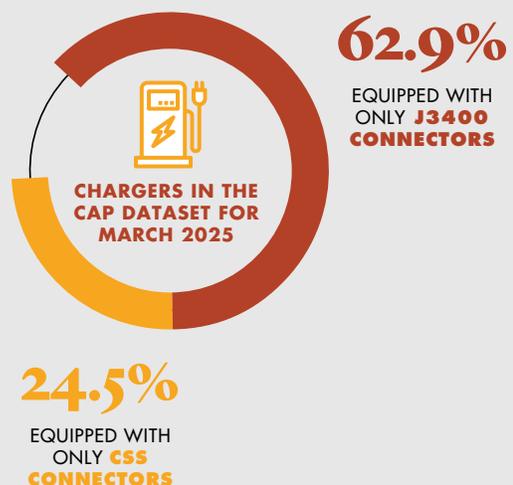
TABLE 8. SUCCESSFUL AND FAILED CHARGING EVENTS

DATE	0-49 KW			50-99 KW			100-299 KW			300+ KW		
	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate
Apr-24	90.3%	1.8%	7.9%	79.4%	6.7%	13.9%	90.3%	1.8%	7.9%	79.4%	6.7%	7.9%
May-24	91.8%	0.6%	7.5%	80.5%	5.9%	13.6%	91.8%	0.6%	7.5%	80.5%	5.9%	7.5%
Jun-24	93.6%	0.7%	5.8%	80.3%	6.4%	13.3%	93.6%	0.7%	5.8%	80.3%	6.4%	5.8%
Jul-24	89.8%	0.5%	9.7%	78.8%	3.0%	18.2%	89.8%	0.5%	9.7%	78.8%	3.0%	9.7%
Aug-24	55.6%	0.9%	43.5%	57.5%	3.4%	39.1%	55.6%	0.9%	43.5%	57.5%	3.4%	43.5%
Sep-24	72.0%	0.6%	27.4%	69.3%	3.8%	26.9%	72.0%	0.6%	27.4%	69.3%	3.8%	27.4%
Oct-24	69.8%	0.1%	30.1%	68.9%	2.7%	28.4%	69.8%	0.1%	30.1%	68.9%	2.7%	30.1%
Nov-24	52.1%	0.1%	47.8%	60.3%	2.7%	37.1%	52.1%	0.1%	47.8%	60.3%	2.7%	47.8%
Dec-24	89.4%	0.0%	10.6%	82.5%	2.0%	15.5%	89.4%	0.0%	10.6%	82.5%	2.0%	10.6%
Jan-25	86.5%	0.1%	13.5%	82.5%	1.9%	15.6%	86.5%	0.1%	13.5%	82.5%	1.9%	13.5%
Feb-25	78.6%	1.5%	19.9%	81.3%	2.1%	16.5%	78.6%	1.5%	19.9%	81.3%	2.1%	19.9%
Mar-25	76.4%	1.4%	22.2%	81.0%	2.4%	16.6%	76.4%	1.4%	22.2%	81.0%	2.4%	22.2%
Average	78.8%	0.7%	20.5%	75.2%	3.6%	21.2%	78.8%	0.7%	20.5%	75.2%	3.6%	20.5%



Comparison of Performance of Chargers with Different Connector Types

The following charts compare the same metrics across chargers equipped with different vehicle connectors, or plugs. Of the chargers in the CAP dataset for March 2025, 62.9% were equipped with only J3400 connectors, while 24.5% were equipped with only CSS connectors. This marks a significant shift in connector market share with the introduction of the J3400 dataset in January 2025. For the period April – December 2024, CCS-only chargers represented 63.9% of the chargers in the dataset.



When looking at the utilization data, from April 2024 – March 2025 (data for J3400-only chargers covers only January – March 2025), CCS-only and J3400-only chargers led the market with 247 and 250 charging sessions per port per month, respectively. The combination chargers recorded an average of 127 and 112 charging sessions per month.

CCS-only chargers maintained a clear lead in percent utilization at 22.1% compared with a national average of 17.4%. J3400-only chargers trailed at 17.2% while combination chargers recorded utilization rates of 12.9% and 11.9%.

Utilization was consistent with regard to day of the week utilization, with weekends recording the highest utilization percentages for all except 0 – 49 kW chargers, which show a decline in utilization.

Utilization by hour of the day showed consistent trends for all but the lowest powered chargers, with the strongest utilization between 12 p.m. and 5 p.m.

Combination-equipped chargers recorded the longest average session duration at 45 minutes, while J3400-connectors recorded the shortest average duration at 30 minutes. CCS-only came in at 37 minutes with the entire data set averaging 39.1 minutes.

J3400-only chargers were the most reliable, recording a failure to charge rate of only 2.3% during the first quarter of 2025. Over the entire period, CCS-only returned a failure to charge rate of 14.1% while CCS/Chademo chargers failed 19.0% of the time and J3400-combo charger failed 16.6% of the time.



FIGURE 23. TOTAL CHARGERS IN DATASET BY CONNECTOR TYPE

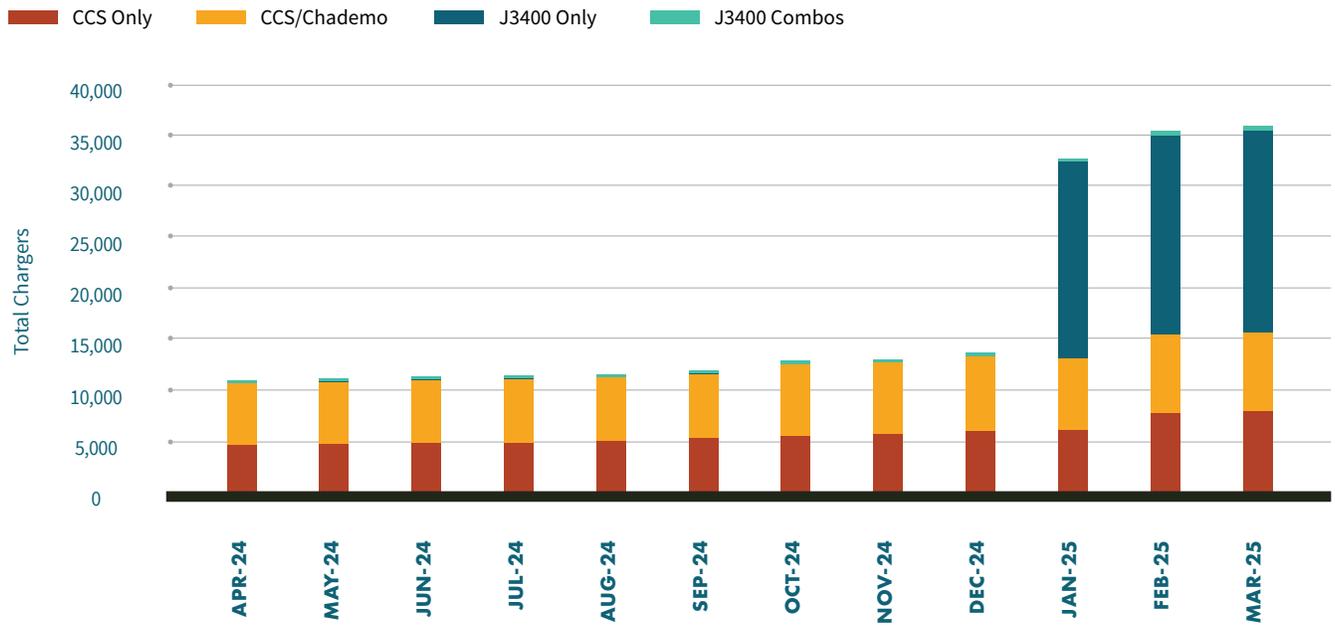


FIGURE 24. SHARE OF CHARGING SESSIONS BY CONNECTOR TYPE

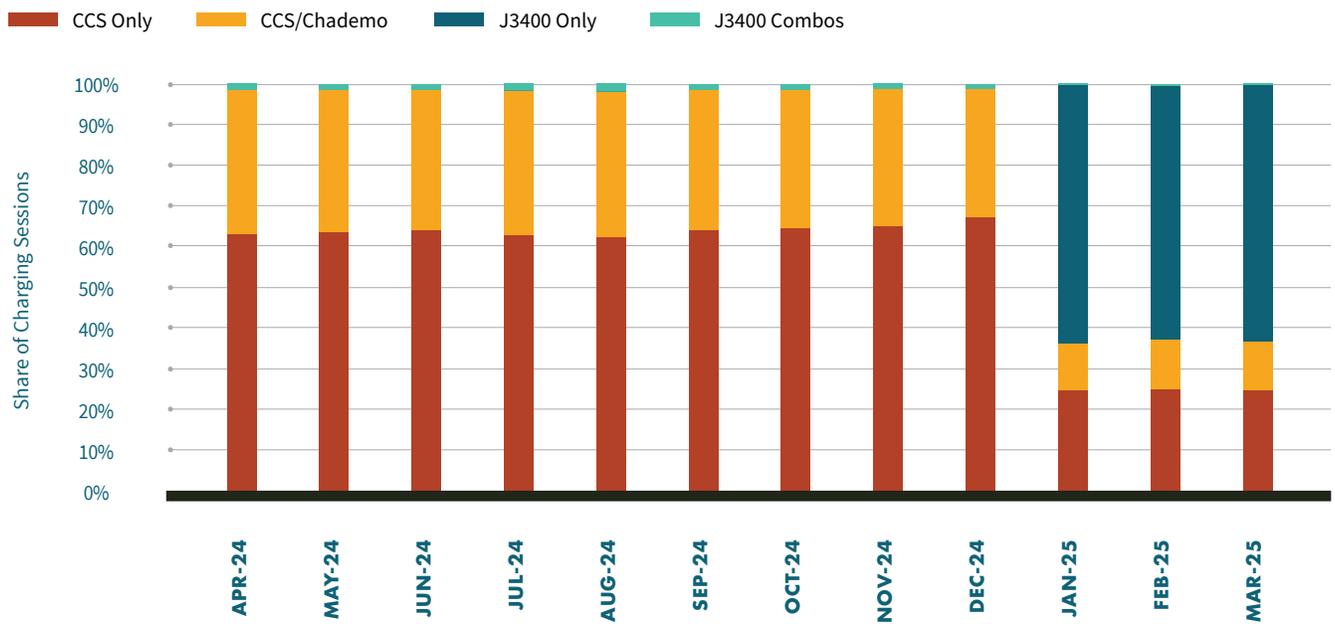


FIGURE 25. SESSIONS PER CHARGER PER MONTH

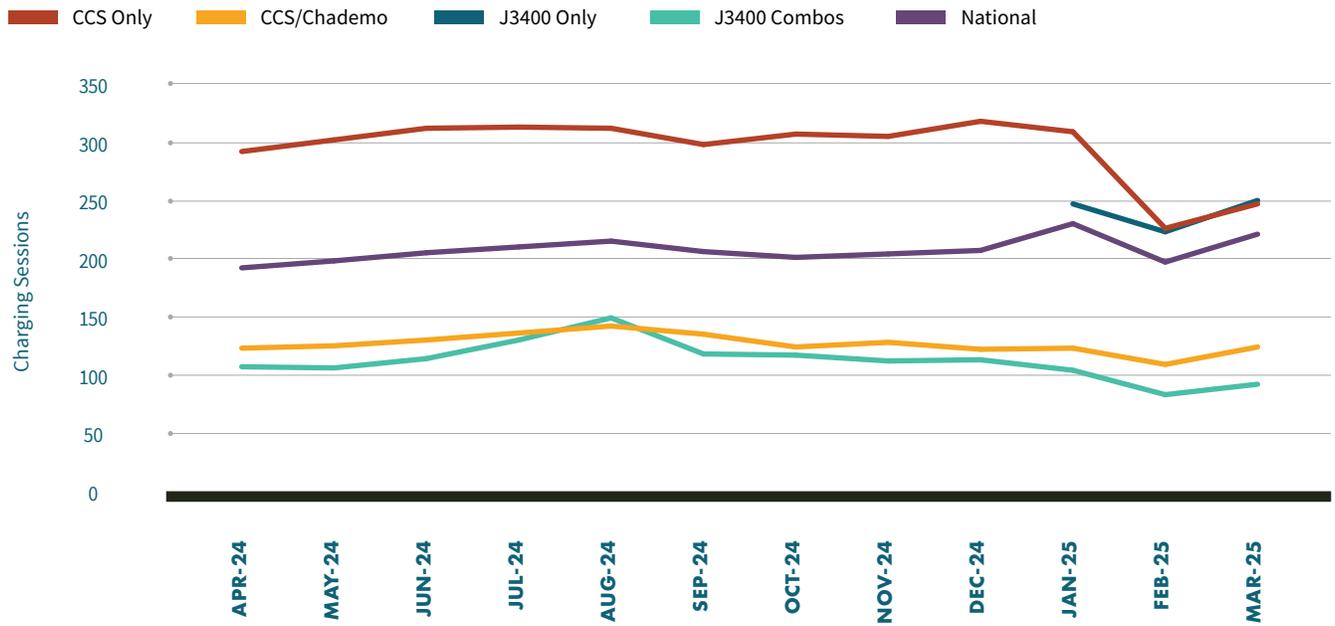


FIGURE 26. AVERAGE UTILIZATION

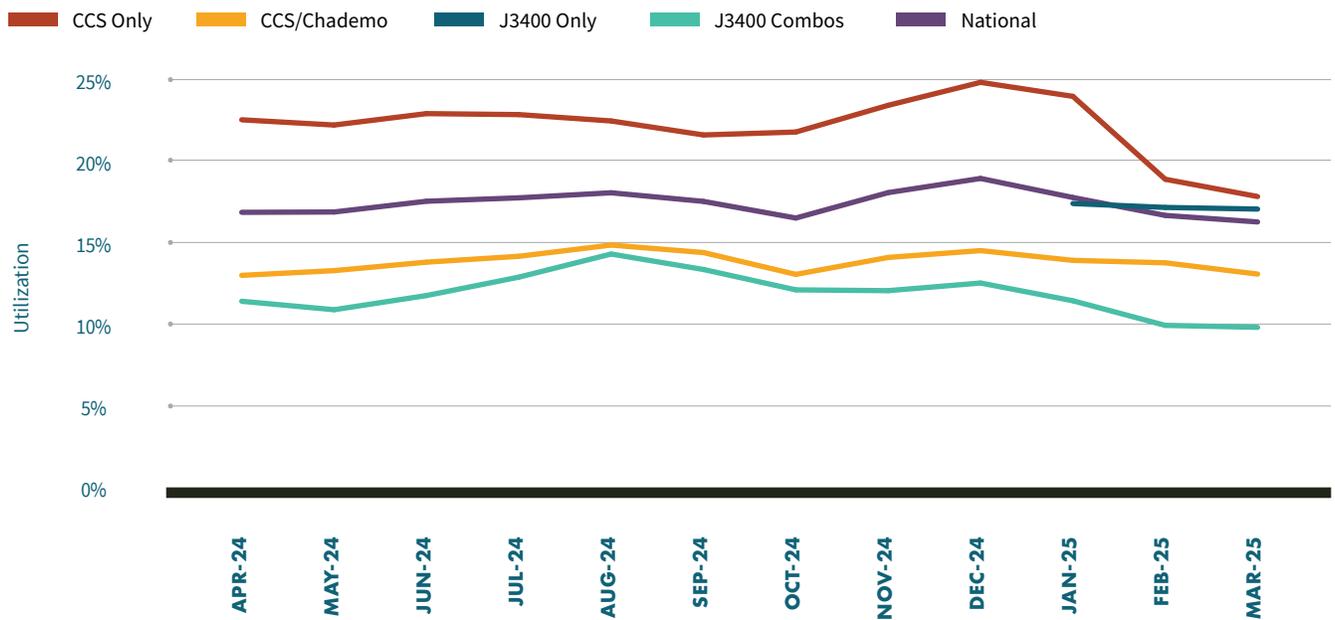


FIGURE 27. AVERAGE UTILIZATION BY DAY OF WEEK

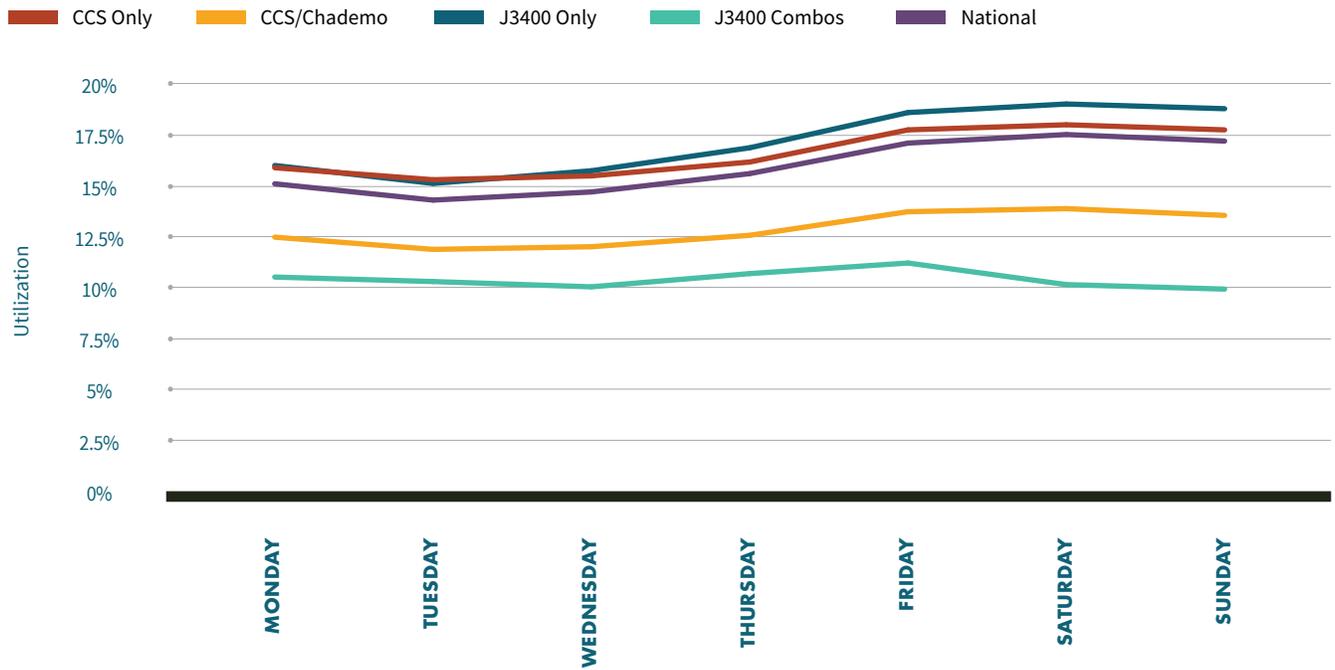


FIGURE 28. UTILIZATION BY TIME OF DAY

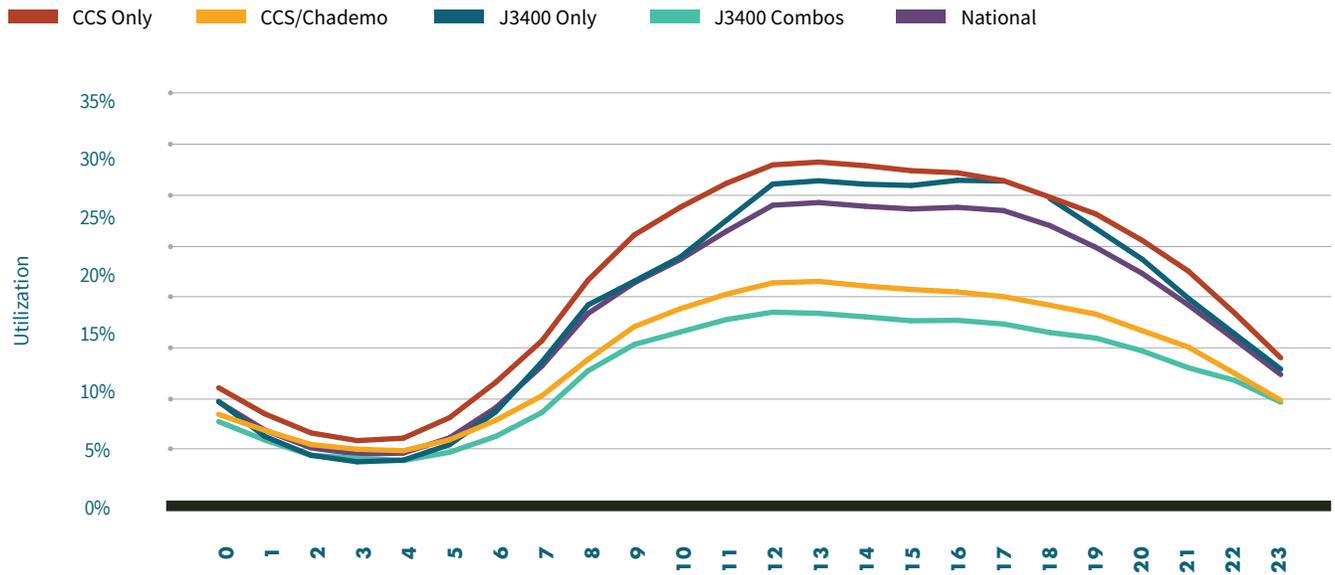


FIGURE 29. AVERAGE CHARGING SESSION DURATION IN MINUTES

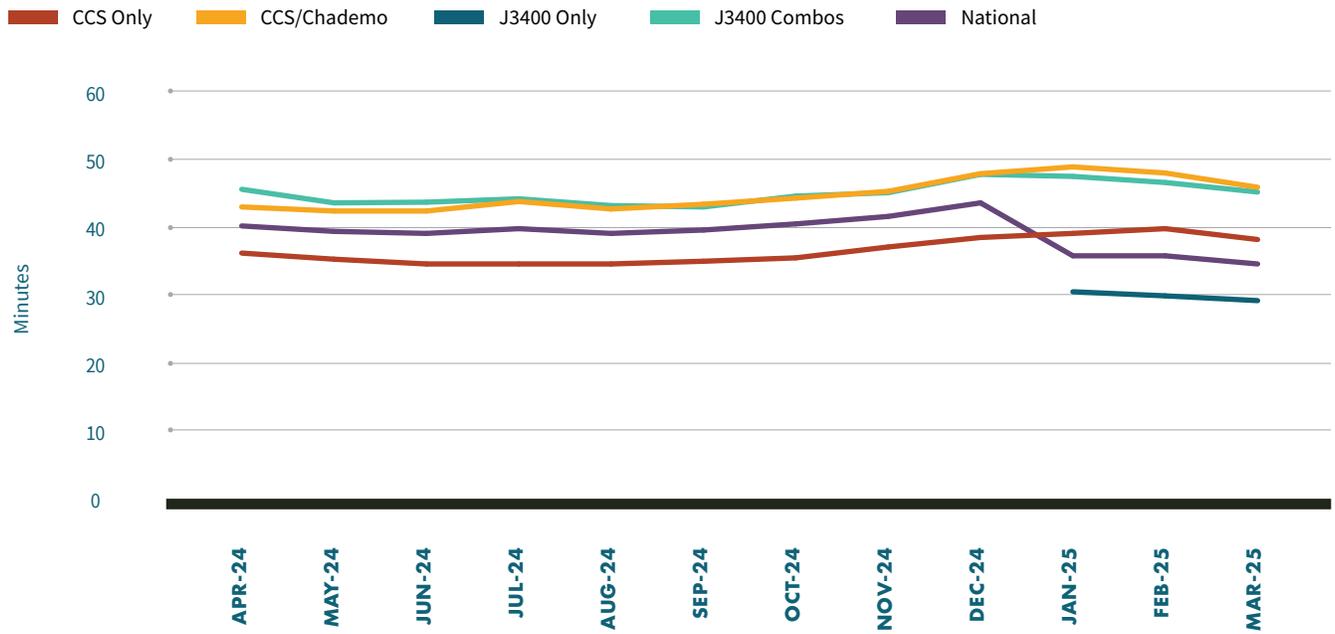


FIGURE 30. AVERAGE SUCCESS AND FAILURE RATES (APRIL 2024 - MARCH 2025)

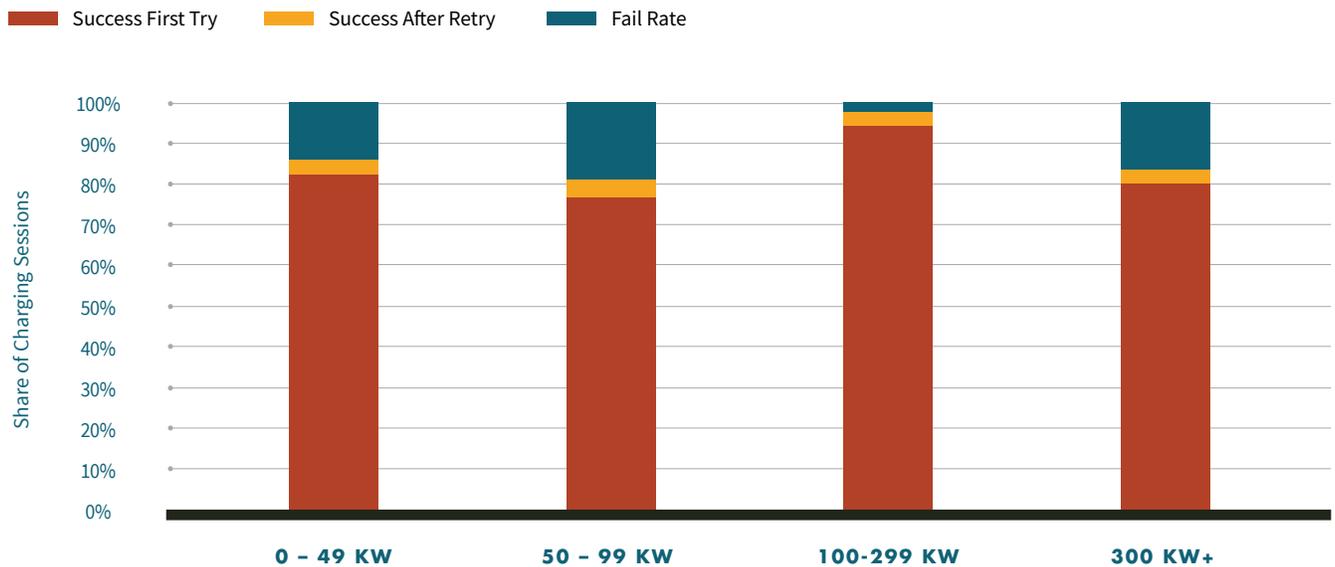


TABLE 9. SHARE OF CHARGING SESSIONS BY POWER CAPACITY

DATE	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS
Apr-24	62.9%	35.5%		1.5%
May-24	63.3%	35.1%		1.5%
Jun-24	63.8%	34.5%		1.6%
Jul-24	62.6%	35.5%		1.7%
Aug-24	62.1%	35.9%		2.0%
Sep-24	63.9%	34.4%		1.6%
Oct-24	64.4%	34.0%		1.6%
Nov-24	64.9%	33.5%		1.5%
Dec-24	67.1%	31.4%		1.4%
Jan-25	24.5%	11.5%	63.5%	0.5%
Feb-25	24.8%	12.2%	62.4%	0.5%
Mar-25	24.5%	12.1%	62.9%	0.5%
Average Jan – March 2025	24.6%	11.9%	62.9%	0.5%

TABLE 10. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Apr-24	292	123		107	192
May-24	302	125		106	198
Jun-24	312	130		114	205
Jul-24	313	136		130	210
Aug-24	312	142		149	215
Sep-24	298	135		118	206
Oct-24	307	124		117	201
Nov-24	305	128		112	204
Dec-24	318	122		113	207
Jan-25	309	123	247	104	230
Feb-25	226	109	223	83	197
Mar-25	247	124	250	92	221
Average	295	127	240	112	207

TABLE 11. CHARGER UTILIZATION PERCENTAGE

DATE	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Apr-24	22.6%	13.0%		11.4%	16.9%
May-24	22.3%	13.3%		10.9%	16.9%
Jun-24	22.9%	13.8%		11.8%	17.6%
Jul-24	22.9%	14.2%		12.9%	17.8%
Aug-24	22.5%	14.9%		14.3%	18.1%
Sep-24	21.6%	14.4%		13.4%	17.6%
Oct-24	21.8%	13.1%		12.1%	16.5%
Nov-24	23.5%	14.1%		12.1%	18.1%
Dec-24	24.9%	14.5%		12.5%	19.0%
Jan-25	24.0%	13.9%	17.4%	11.5%	17.8%
Feb-25	18.9%	13.8%	17.2%	10.0%	16.7%
Mar-25	17.9%	13.1%	17.1%	9.8%	16.3%
Average	21.1%	13.6%	16.2%	11.5%	17.4%
Change	-6.0%	-0.5%	-1.0%	-1.3%	-1.0%

TABLE 12. CHARGER UTILIZATION BY DAY OF WEEK

DAY	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Mon	15.9%	12.5%	16.0%	10.5%	15.1%
Tues	15.3%	11.9%	15.1%	10.3%	14.3%
Wed	15.5%	12.0%	15.7%	10.0%	14.7%
Thurs	16.2%	12.6%	16.9%	10.7%	15.6%
Fri	17.8%	13.7%	18.6%	11.2%	17.1%
Sat	18.0%	13.9%	19.0%	10.1%	17.5%
Sun	17.8%	13.5%	18.8%	9.9%	17.2%

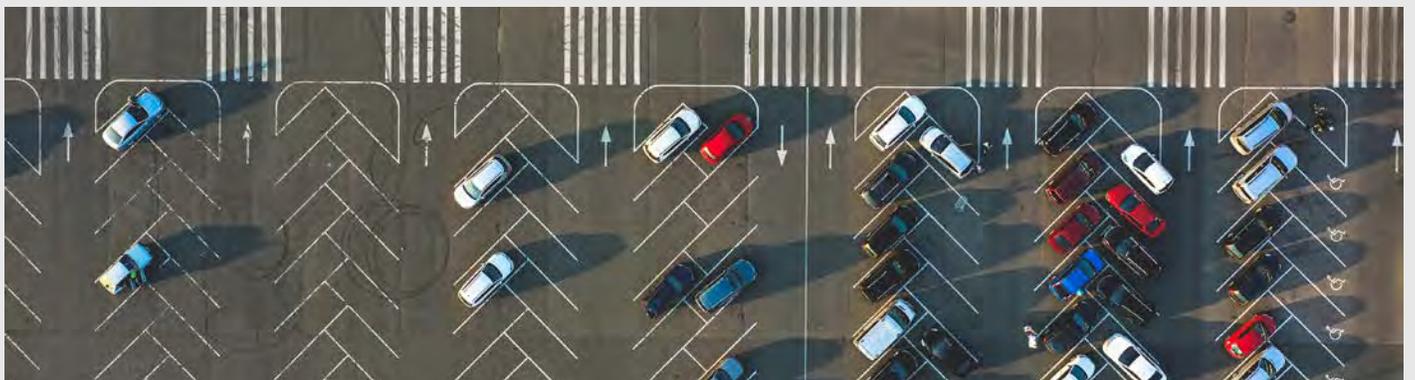


TABLE 13. CHARGER UTILIZATION BY TIME OF DAY

HOURLY	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
0	9.7%	7.4%	8.5%	6.8%	8.5%
1	7.5%	6.0%	5.5%	5.2%	6.1%
2	5.8%	4.8%	3.9%	3.9%	4.5%
3	5.2%	4.4%	3.3%	3.6%	4.0%
4	5.4%	4.3%	3.5%	3.4%	4.1%
5	7.1%	5.2%	4.8%	4.2%	5.4%
6	10.2%	6.9%	7.6%	5.5%	8.0%
7	13.7%	9.0%	11.9%	7.6%	11.6%
8	19.0%	12.1%	16.8%	11.2%	16.1%
9	22.8%	14.9%	18.9%	13.4%	18.7%
10	25.2%	16.5%	20.9%	14.5%	20.7%
11	27.3%	17.7%	24.1%	15.6%	23.2%
12	28.9%	18.7%	27.2%	16.2%	25.4%
13	29.1%	18.8%	27.5%	16.1%	25.6%
14	28.8%	18.5%	27.2%	15.8%	25.3%
15	28.4%	18.2%	27.1%	15.5%	25.1%
16	28.2%	17.9%	27.5%	15.5%	25.2%
17	27.5%	17.5%	27.5%	15.2%	24.9%
18	26.1%	16.8%	26.0%	14.5%	23.6%
19	24.6%	16.0%	23.4%	14.0%	21.8%
20	22.4%	14.6%	20.8%	12.9%	19.5%
21	19.7%	13.2%	17.4%	11.4%	16.8%
22	16.1%	10.9%	14.3%	10.3%	13.9%
23	12.3%	8.6%	11.3%	8.5%	10.8%



TABLE 14. SESSION DURATION (MINUTES)

Hour	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Apr-24	36.2	43.0		45.6	40.2
May-24	35.3	42.4		43.6	39.4
Jun-24	34.6	42.4		43.7	39.1
Jul-24	34.6	43.8		44.2	39.8
Aug-24	34.6	42.7		43.2	39.1
Sep-24	35.0	43.4		43.0	39.6
Oct-24	35.5	44.3		44.6	40.5
Nov-24	37.1	45.3		45.1	41.6
Dec-24	38.5	47.9		47.8	43.6
Jan-25	39.1	48.9	30.5	47.5	35.8
Feb-25	39.8	48.0	29.9	46.6	35.8
Mar-25	38.2	45.9	29.2	45.2	34.6
Average	37	45	30	45	39.1
Change	5.4%	6.7%	N/A	-0.9%	-13.9%

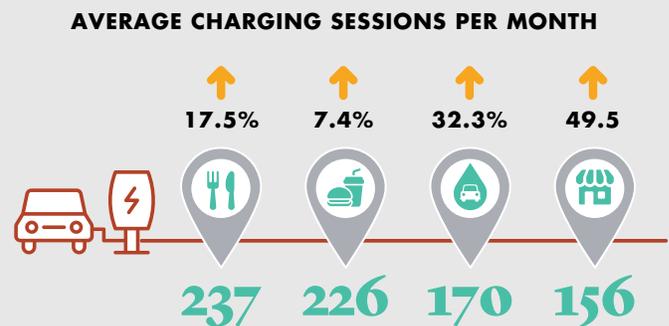
TABLE 15. SUCCESSFUL AND FAILED CHARGING EVENTS

Date	CCS ONLY			CCS/CHADEMO			J3400 ONLY			J3500 COMBOS		
	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate
Apr-24	83.8%	3.2%	12.9%	78.7%	6.5%	14.8%				90.7%	4.2%	5.1%
May-24	83.3%	3.2%	13.5%	79.4%	5.9%	14.7%				91.5%	3.3%	5.2%
Jun-24	82.4%	3.5%	14.1%	79.1%	6.2%	14.7%				90.7%	3.6%	5.6%
Jul-24	81.6%	3.6%	14.9%	77.8%	4.5%	17.7%				88.7%	2.2%	9.1%
Aug-24	79.8%	4.0%	16.2%	61.9%	5.8%	32.3%				66.0%	6.0%	28.0%
Sep-24	80.3%	4.2%	15.5%	72.0%	5.6%	22.4%				79.7%	5.5%	14.8%
Oct-24	82.2%	3.7%	14.2%	73.6%	3.7%	22.7%				55.6%	3.1%	41.3%
Nov-24	82.0%	3.9%	14.2%	66.5%	3.7%	29.9%				50.4%	2.7%	47.0%
Dec-24	84.3%	3.2%	12.5%	82.4%	2.5%	15.1%				88.5%	2.7%	8.9%
Jan-25	85.0%	3.1%	11.9%	82.9%	2.4%	14.7%	94.1%	3.7%	2.3%	86.5%	2.4%	11.0%
Feb-25	81.6%	4.3%	14.1%	82.6%	2.7%	14.6%	94.2%	3.4%	2.4%	84.3%	2.5%	13.2%
Mar-25	80.9%	4.3%	14.8%	82.6%	3.0%	14.4%	94.4%	3.3%	2.2%	87.6%	2.8%	9.6%
Average	82.2%	3.7%	14.1%	76.6%	4.4%	19.0%	94.2%	3.5%	2.3%	80.0%	3.4%	16.6%



Comparison of Charger Performance at Key Business Verticals

As described above, all DCFCs in the CAP dataset are geolocated and correlated with certain business types that are within 100 meters of the charger. The following evaluates performance of chargers within such proximity to key business types, including convenience, fuel retailer, fast food and restaurant. The data presented below includes all chargers within 100 meters of each business, but many chargers are within that distance of multiple businesses. In these situations, those chargers are included in the data for each business vertical.



From the CAP data set, chargers located near restaurants and fast-food outlets recorded the highest number of charging sessions per month with an average of 237 and 226, respectively. By comparison, convenience stores averaged 156 and fueling stations averaged 170 sessions per charger per month. Charging sessions per month per charger went up 15.0% nationally from April 2024 to March 2025, with convenience store sessions up 49.5%. This was influenced by the introduction of J3400 chargers, which supported a Q1 2025 average of 194 sessions per month compared with 144 sessions April – December 2024.

Food service facilities also recorded the highest rates of utilization, averaging 19.6% and 18.8% for restaurants and fast-food compared with 13.0% and 13.9% for chargers near convenience stores and fueling stations. Nationally, utilization decrease 3.5% from April 2024 – March 2024, with each business vertical increasing as well.

However, utilization by time of day and day of week followed consistent trends across the business verticals, with most showing highest utilization on the weekends and between 12 p.m. and 5 p.m. Charging session duration was also consistent across business verticals, ranging from 37 – 39 minutes. However, charge session duration decreased for all business verticals in Q1 2025 following introduction of data from J3400 connectors. Restaurants recorded the lowest failure to initiate a charge rate of 14.6%, with convenience stores recording the highest at 16.3%. Failure rates for all business verticals dropped in the first quarter relative to the April – December 2024 average, with restaurant chargers improving from 17.2% to 6.8%, fast-food from 17.5% to 6.8%, convenience stores from 19.6% to 6.5% and fuel retail from 18.7% to 6.8%.

FIGURE 31. TOTAL CHARGERS IN DATA SET BY BUSINESS PROXIMITY

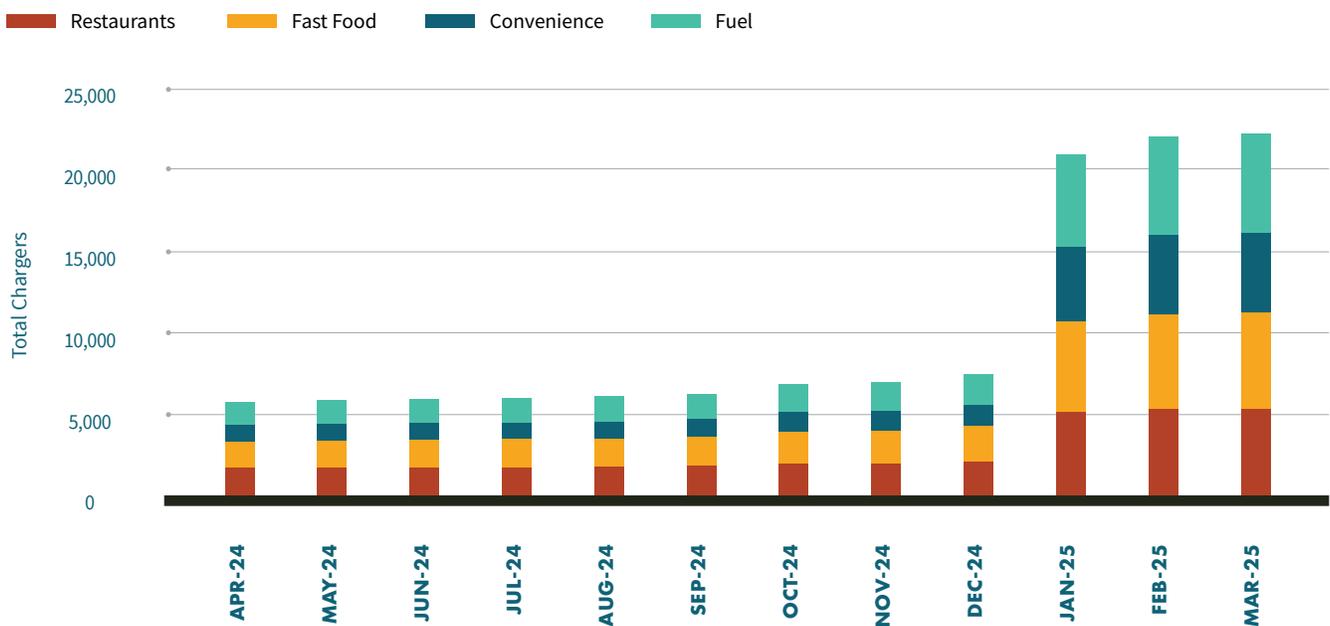


FIGURE 32. SHARE OF CHARGING SESSIONS BY BUSINESS PROXIMITY

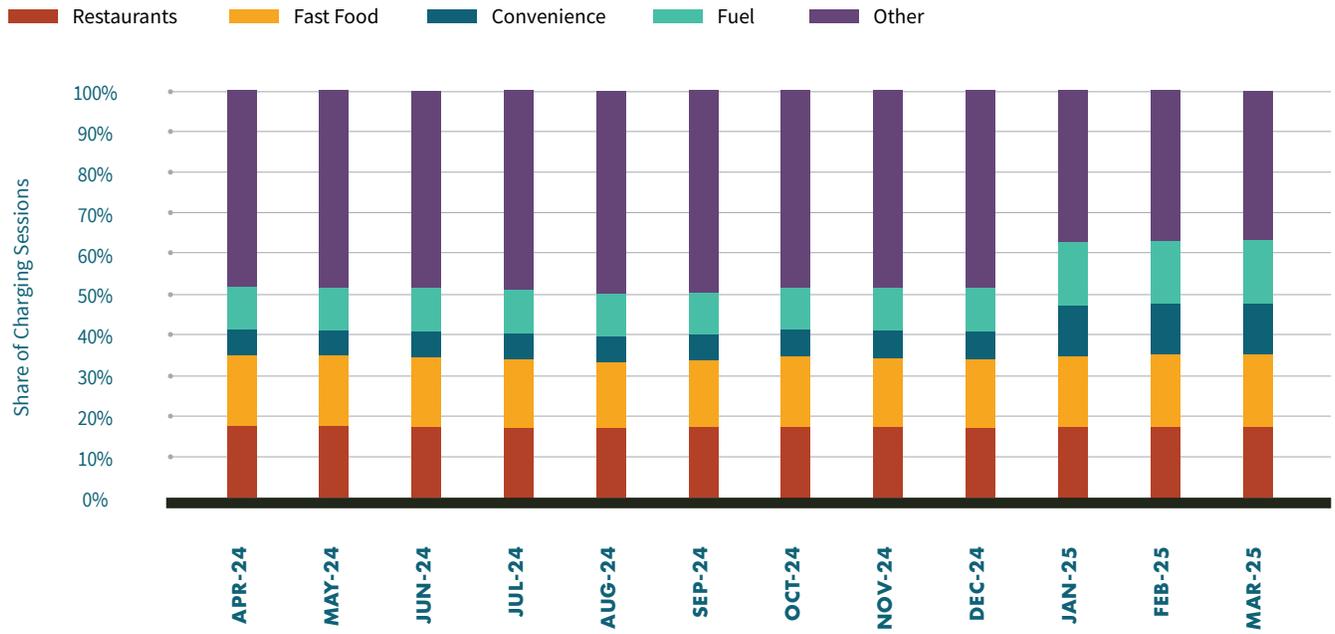


FIGURE 33. SESSIONS PER CHARGER PER MONTH

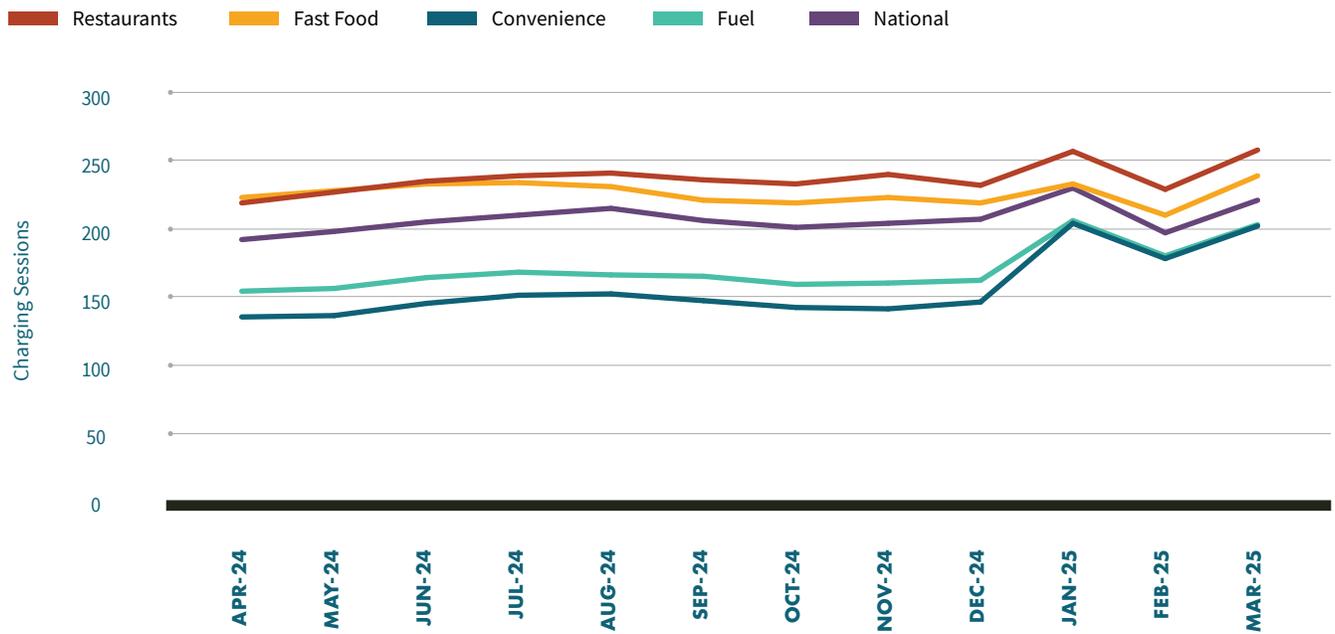


FIGURE 34. AVERAGE UTILIZATION

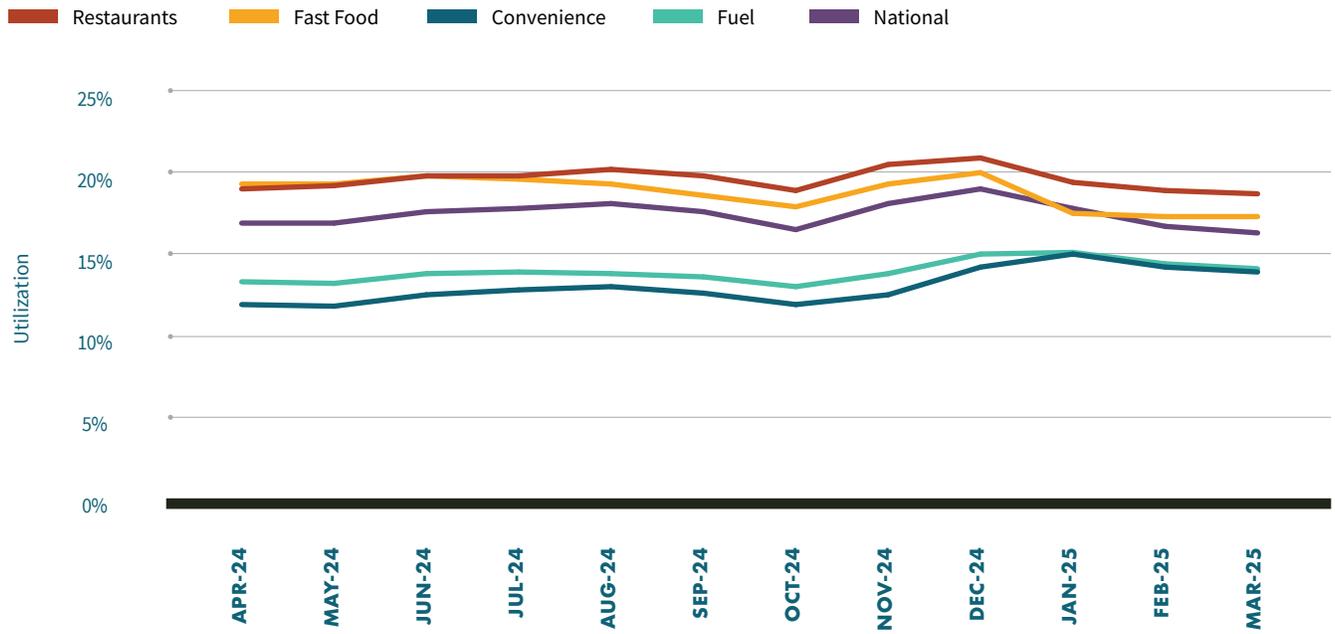


FIGURE 35. AVERAGE UTILIZATION BY DAY OF WEEK

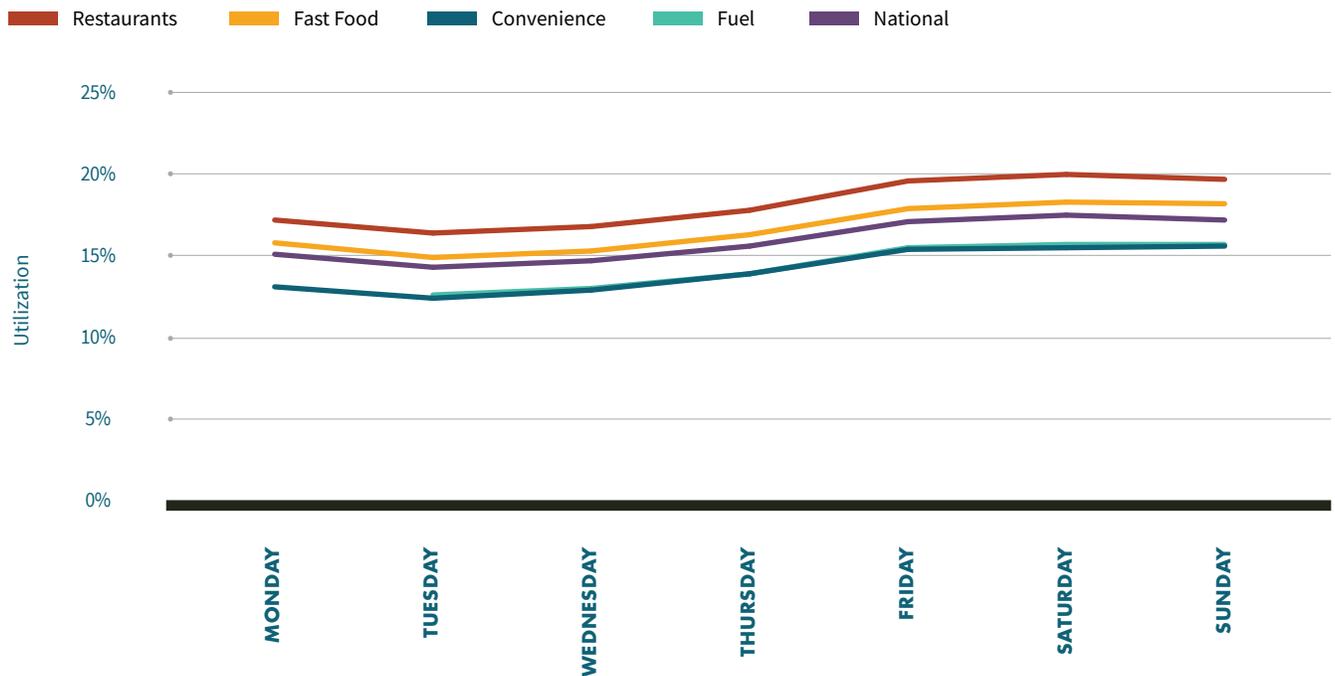


FIGURE 36. AVERAGE UTILIZATION BY TIME OF DAY

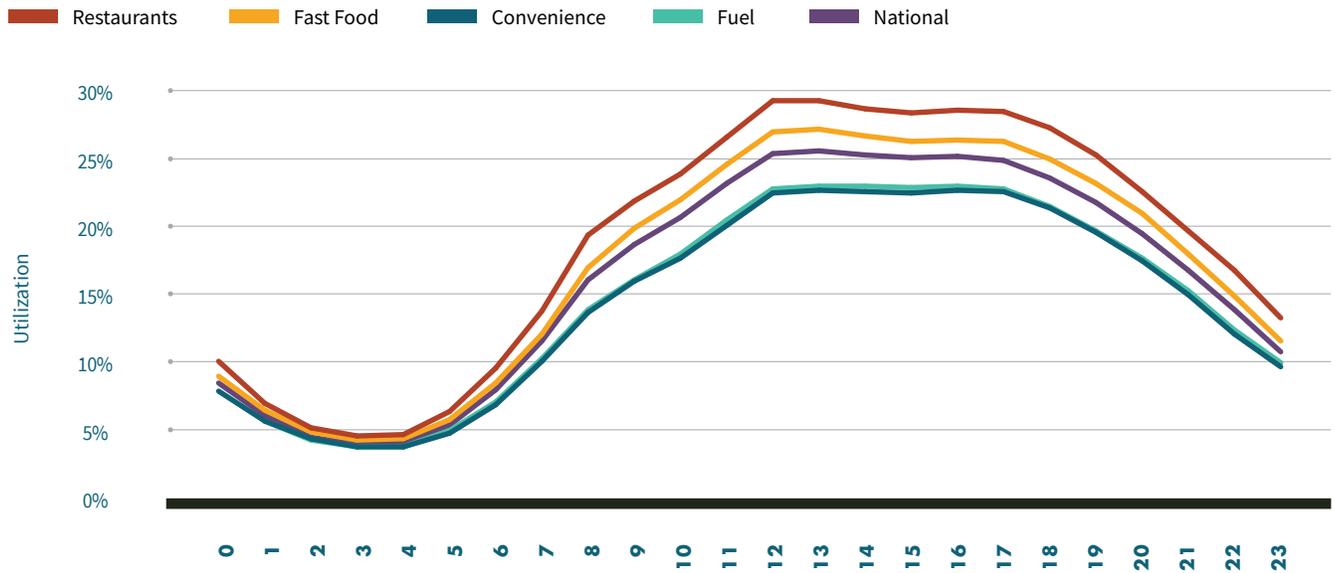


FIGURE 37. AVERAGE CHARGING SESSION DURATION IN MINUTES

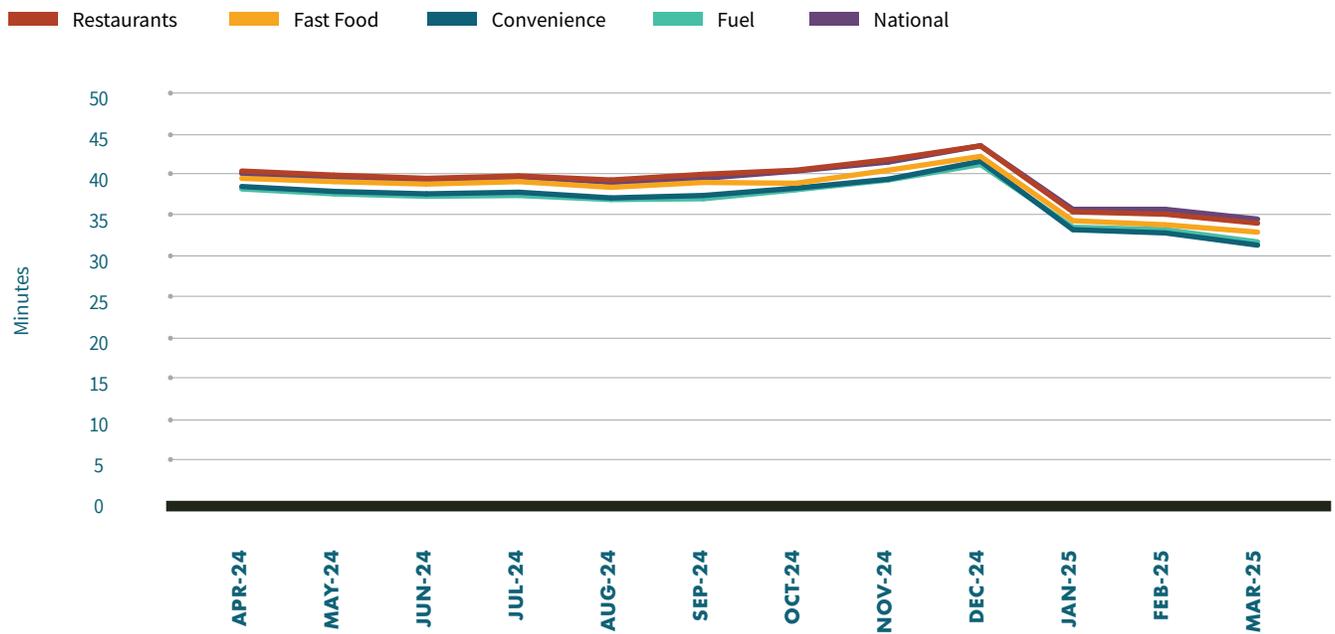


FIGURE 38. AVERAGE SUCCESS AND FAILURE RATES (APRIL 2024 - MARCH 2025)

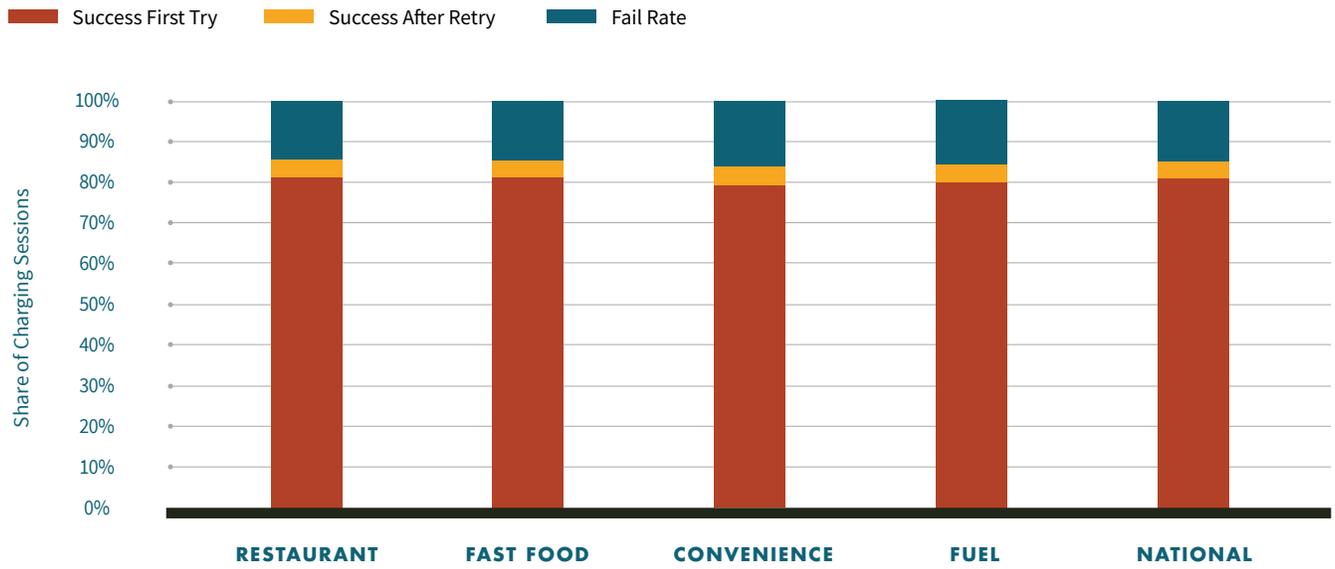


TABLE 16. SHARE OF CHARGING SESSIONS BY BUSINESS VERTICAL

DATE	RESTAURANTS	FAST FOOD	CONVENIENCE	FUEL
Apr-24	17.5%	17.4%	6.3%	10.6%
May-24	17.5%	17.4%	6.2%	10.5%
Jun-24	17.3%	17.1%	6.4%	10.7%
Jul-24	17.1%	16.8%	6.5%	10.7%
Aug-24	17.0%	16.2%	6.4%	10.3%
Sep-24	17.2%	16.4%	6.4%	10.4%
Oct-24	17.4%	17.1%	6.6%	10.5%
Nov-24	17.3%	17.0%	6.6%	10.6%
Dec-24	17.0%	16.9%	6.8%	10.8%
Jan-25	17.4%	17.3%	12.5%	15.5%
Feb-25	17.4%	17.6%	12.5%	15.5%
Mar-25	17.3%	17.8%	12.5%	15.6%
Average	17.3%	17.1%	8.0%	11.8%

TABLE 17. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	RESTAURANTS	FAST FOOD	CONVENIENCE	FUEL
Apr-24	219	223	135	154
May-24	227	228	136	156
Jun-24	235	233	145	164
Jul-24	239	234	151	168
Aug-24	241	231	152	166
Sep-24	236	221	147	165
Oct-24	233	219	142	159
Nov-24	240	223	141	160
Dec-24	232	219	146	162
Jan-25	257	233	204	206
Feb-25	229	210	178	180
Mar-25	258	239	202	203
Average	237	226	156	170
Change	17.6%	7.4%	49.5%	32.3%

TABLE 18. CHARGER UTILIZATION PERCENTAGE

DATE	RESTAURANTS	FAST FOOD	CONVENIENCE	FUEL
Apr-24	19.0%	19.3%	11.9%	13.3%
May-24	19.2%	19.3%	11.8%	13.2%
Jun-24	19.8%	19.8%	12.5%	13.8%
Jul-24	19.8%	19.6%	12.8%	13.9%
Aug-24	20.2%	19.3%	13.0%	13.8%
Sep-24	19.8%	18.6%	12.6%	13.6%
Oct-24	18.9%	17.9%	11.9%	13.0%
Nov-24	20.5%	19.3%	12.5%	13.8%
Dec-24	20.9%	20.0%	14.2%	15.0%
Jan-25	19.4%	17.5%	15.0%	15.1%
Feb-25	18.9%	17.3%	14.2%	14.4%
Mar-25	18.7%	17.3%	13.9%	14.1%
Average	19.6%	18.8%	13.0%	13.9%
Change	-1.6%	-10.5%	16.6%	6.3%

TABLE 19. CHARGER UTILIZATION BY DAY OF WEEK

DAY	RESTAURANTS	FAST FOOD	CONVENIENCE	FUEL	NATIONAL
Mon	17.2%	15.8%	13.1%	13.3%	15.1%
Tues	16.4%	14.9%	12.4%	12.6%	14.3%
Wed	16.8%	15.3%	12.9%	13.0%	14.7%
Thurs	17.8%	16.3%	13.9%	13.9%	15.6%
Fri	19.6%	17.9%	15.4%	15.5%	17.1%
Sat	20.0%	18.3%	15.5%	15.7%	17.5%
Sun	19.7%	18.2%	15.6%	15.7%	17.2%



TABLE 20. CHARGER UTILIZATION BY TIME OF DAY

HOUR	RESTAURANTS	FAST FOOD	CONVENIENCE	FUEL	NATIONAL
0	10.1%	9.0%	7.9%	7.9%	8.5%
1	7.0%	6.5%	5.7%	5.7%	6.1%
2	5.2%	4.9%	4.4%	4.3%	4.5%
3	4.6%	4.3%	3.8%	3.8%	4.0%
4	4.7%	4.4%	3.8%	3.8%	4.1%
5	6.4%	5.8%	4.8%	5.0%	5.4%
6	9.6%	8.5%	6.9%	7.1%	8.0%
7	13.8%	12.1%	10.1%	10.3%	11.6%
8	19.4%	17.0%	13.7%	13.9%	16.1%
9	21.9%	19.9%	16.0%	16.1%	18.7%
10	23.9%	22.0%	17.7%	18.0%	20.7%
11	26.6%	24.6%	20.1%	20.5%	23.2%
12	29.3%	27.0%	22.5%	22.8%	25.4%
13	29.3%	27.2%	22.7%	23.0%	25.6%
14	28.7%	26.7%	22.6%	23.0%	25.3%
15	28.4%	26.3%	22.5%	22.9%	25.1%
16	28.6%	26.4%	22.7%	23.0%	25.2%
17	28.5%	26.3%	22.6%	22.8%	24.9%
18	27.3%	25.0%	21.4%	21.5%	23.6%
19	25.3%	23.2%	19.6%	19.7%	21.8%
20	22.6%	21.0%	17.5%	17.7%	19.5%
21	19.7%	18.0%	15.0%	15.3%	16.8%
22	16.8%	14.9%	12.1%	12.4%	13.9%
23	13.3%	11.6%	9.7%	10.0%	10.8%

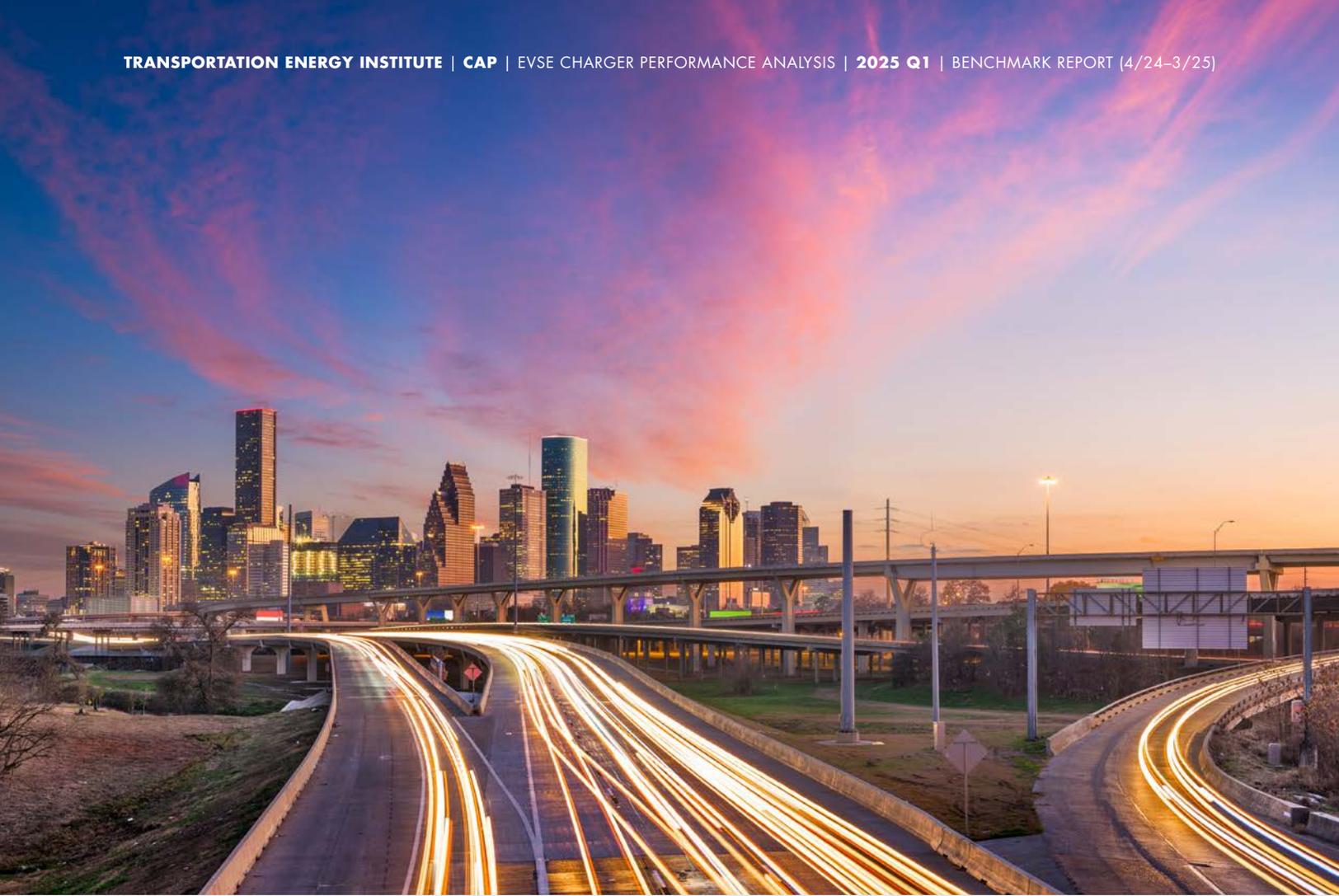


TABLE 21. SESSION DURATION (MINUTES)

Hour	Restaurants	Fast Food	Convenience	Fuel
Apr-24	40.5	39.6	38.6	38.3
May-24	40.0	39.2	38.0	37.7
Jun-24	39.6	38.9	37.7	37.4
Jul-24	39.9	39.2	37.9	37.5
Aug-24	39.4	38.5	37.2	37.0
Sep-24	40.1	39.1	37.5	37.1
Oct-24	40.6	39.0	38.4	38.2
Nov-24	41.9	40.6	39.5	39.4
Dec-24	43.6	42.3	41.7	41.3
Jan-25	35.5	34.4	33.3	33.6
Feb-25	35.2	33.9	32.9	33.3
Mar-25	34.1	33.0	31.4	31.8
Average	41	40	39	39
Change	15.5%	15.2%	15.7%	13.4%

TABLE 22. SUCCESSFUL AND FAILED CHARGING EVENTS

Date	Restaurants			Fast Food			Convenience			Fuel		
	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate
Apr-24	79.3%	5.3%	15.3%	80.3%	5.1%	14.5%	79.1%	5.3%	15.6%	79.9%	5.1%	15.0%
May-24	80.3%	4.9%	14.8%	80.7%	4.7%	14.7%	79.2%	4.9%	15.9%	80.2%	4.7%	15.0%
Jun-24	80.3%	5.2%	14.5%	79.9%	5.0%	15.1%	78.5%	5.6%	15.9%	79.1%	5.3%	15.6%
Jul-24	78.4%	4.5%	17.1%	79.1%	4.5%	16.4%	77.7%	4.8%	17.5%	78.3%	4.6%	17.1%
Aug-24	72.0%	5.2%	22.8%	71.4%	5.4%	23.2%	65.9%	6.2%	27.9%	67.6%	5.7%	26.7%
Sep-24	76.7%	5.3%	18.0%	76.2%	5.4%	18.4%	74.3%	5.9%	19.8%	75.7%	5.4%	18.9%
Oct-24	78.7%	3.3%	17.9%	77.4%	3.4%	19.2%	74.5%	4.5%	21.0%	75.8%	4.2%	20.1%
Nov-24	76.0%	3.4%	20.5%	75.7%	3.4%	20.9%	69.9%	4.5%	25.5%	71.9%	4.1%	24.0%
Dec-24	83.6%	2.7%	13.7%	82.4%	2.6%	15.0%	79.7%	3.2%	17.1%	81.6%	3.0%	15.4%
Jan-25	90.0%	3.4%	6.6%	90.3%	3.1%	6.6%	90.4%	3.4%	6.1%	90.3%	3.3%	6.4%
Feb-25	89.4%	3.5%	7.0%	89.8%	3.2%	7.0%	89.9%	3.4%	6.8%	89.6%	3.4%	7.0%
Mar-25	89.8%	3.5%	6.7%	90.0%	3.3%	6.7%	90.1%	3.2%	6.7%	89.8%	3.3%	6.9%
Average	81.2%	4.2%	14.6%	81.1%	4.1%	14.8%	79.1%	4.6%	16.3%	80.0%	4.3%	15.7%

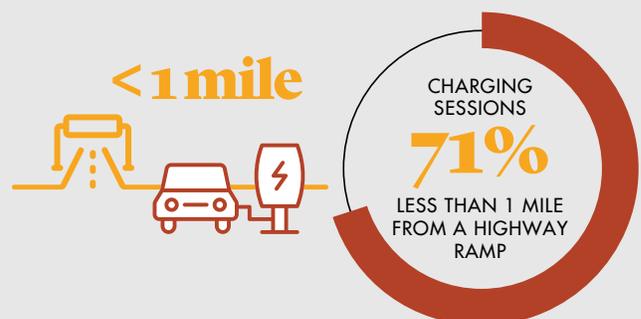


Proximity to Highway Ramps

All DCFCs in the CAP dataset are geolocated and can be organized into groups based upon their proximity to a highway ramp. The following evaluates performance of chargers within specific distances to indicate how such location may affect charger utilization.

From the CAP data set, chargers located less than 1 mile from a highway ramp recorded the highest number of charging sessions per month with an average of 205 – 244 sessions, which exceeded the

data set average of 207 sessions. Chargers located more than one mile from a ramp recorded the lowest number of sessions at 177 per month.



Chargers located $\frac{1}{4}$ - $\frac{1}{2}$ mile and $\frac{1}{2}$ - 1 mile from a ramp recorded the highest utilization rates at 20.3% and 19.4%, respectively, which exceed the national average of 17.4%. Those located further than 1 mile fell below the national average at 15.3.

Utilization by time of day and day of week followed consistent trends across the data set regardless of proximity to highway ramp, with most showing highest utilization on the weekends and between 12 p.m. and 5 p.m., similar to the national average. Charging session duration was also consistent, ranging from 37.3 to 40.5 minutes. Failure to initiate a charge did not vary significantly by charger group, with each averaging 14.7% - 16.2%. Failure rates for all chargers dropped in the first quarter relative to the April - December 2024 average, with chargers within $\frac{1}{4}$ mile of a highway ramp improving from 19.3% to 7.0%, $\frac{1}{4}$ - $\frac{1}{2}$ mile from 17.4% to 6.6%, $\frac{1}{2}$ - 1 mile from 19.6% to 6.0% and those more than 1 mile from highway 18.1% to 6.8%.



FIGURE 39. TOTAL CHARGERS IN DATA SET BY HIGHWAY RAMP PROXIMITY

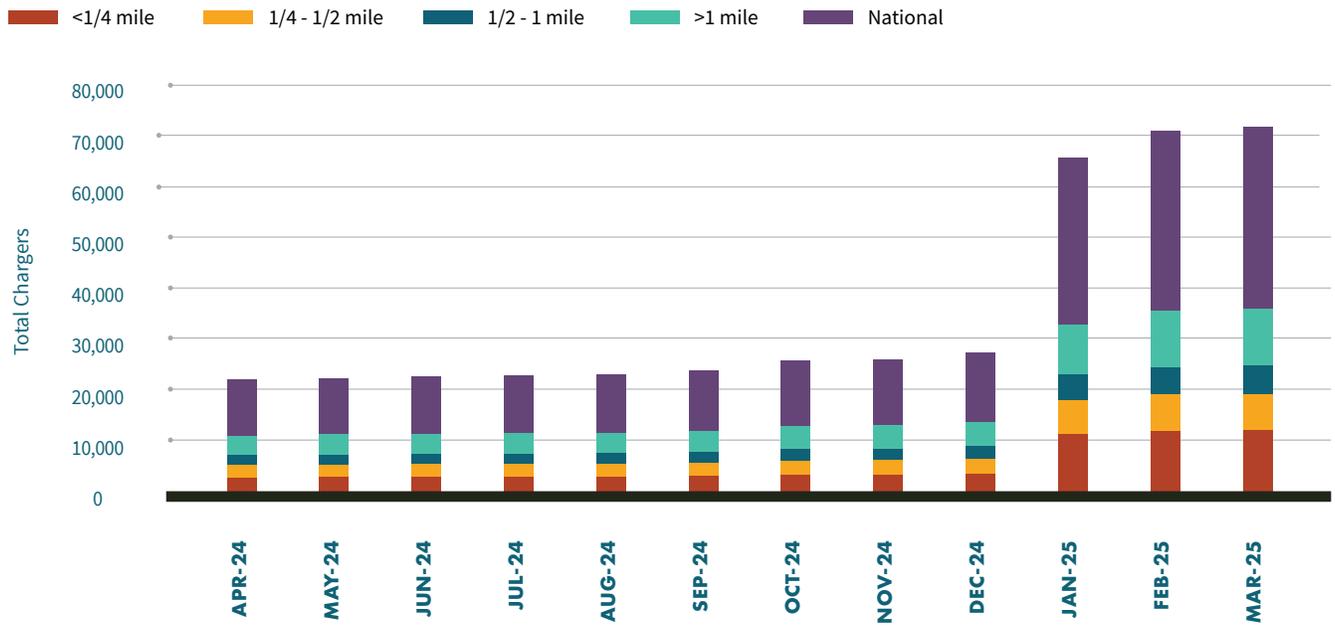


FIGURE 40. SHARE OF CHARGING SESSIONS BY HIGHWAY RAMP PROXIMITY

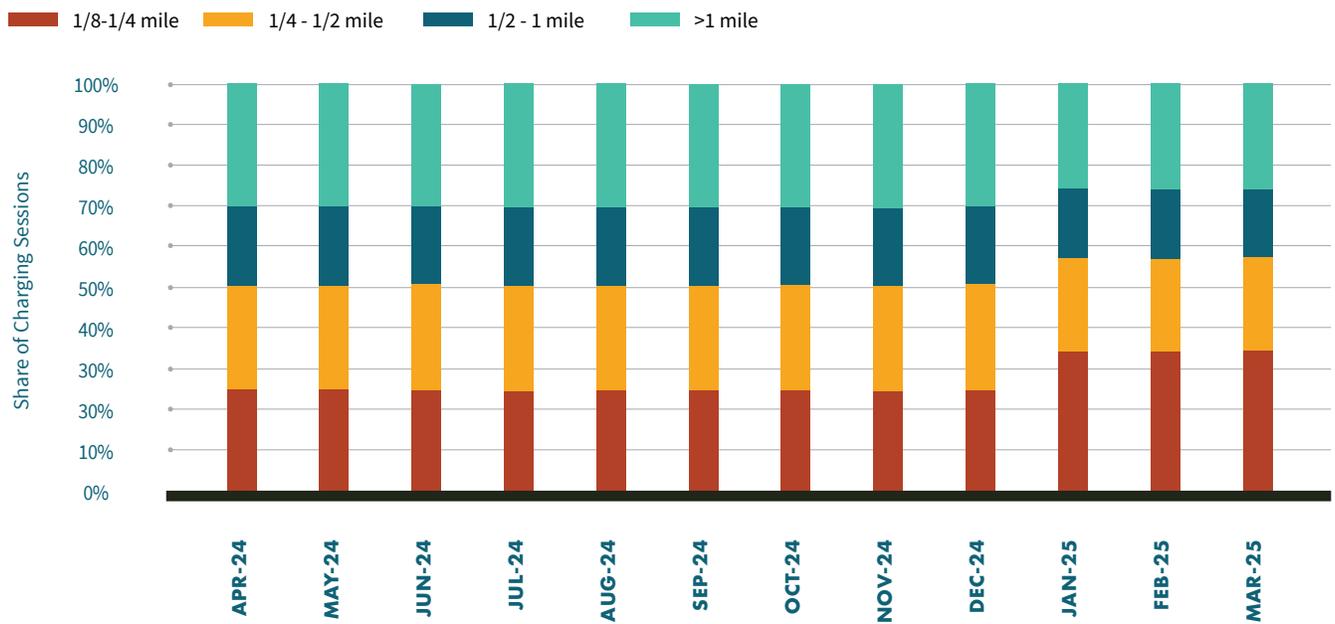


FIGURE 41. CHARGING SESSIONS PER CHARGER PER MONTH

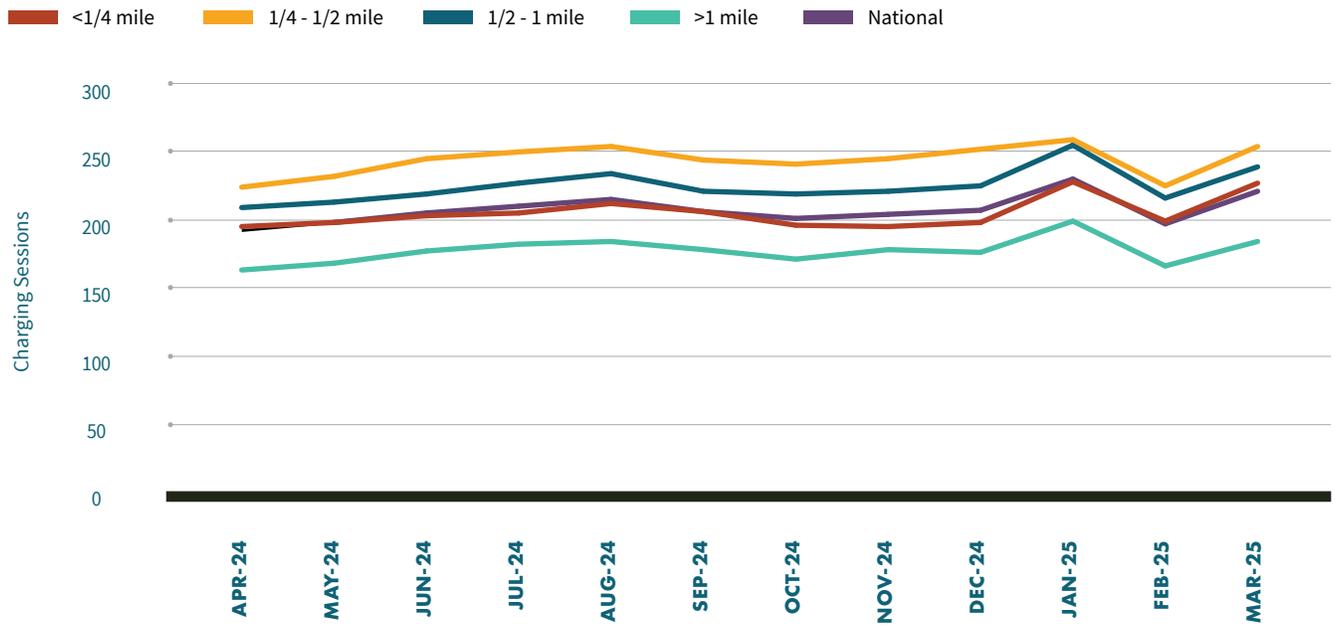


FIGURE 42. AVERAGE UTILIZATION

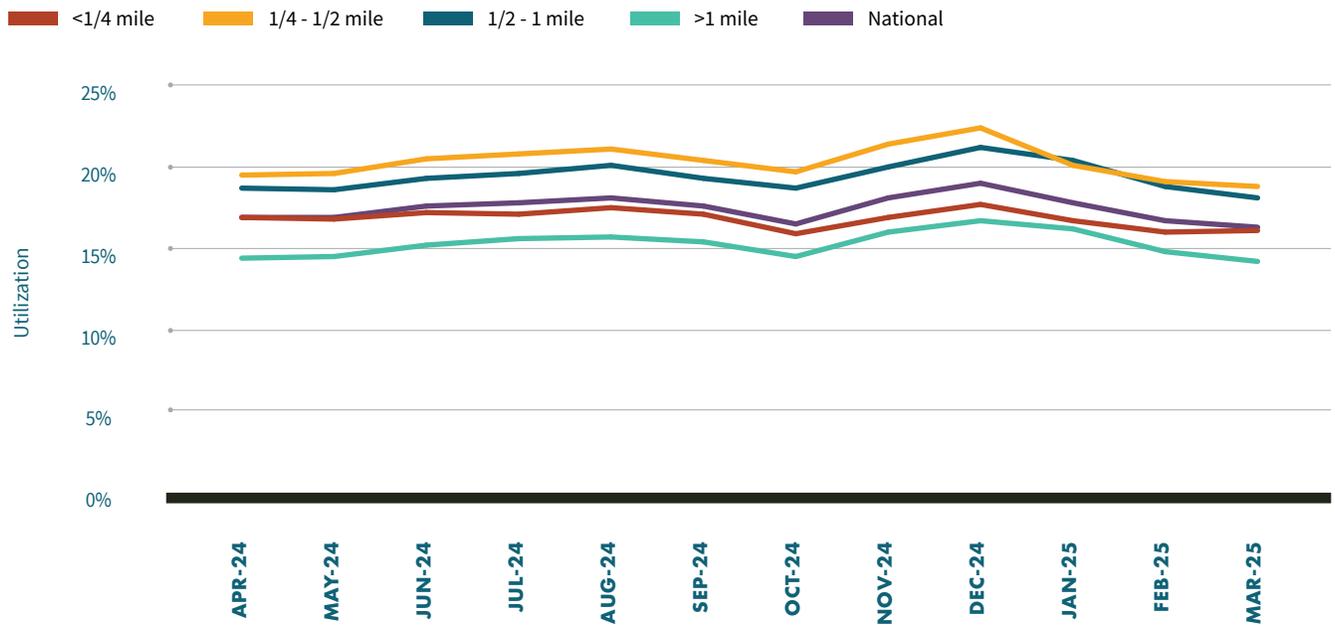


FIGURE 43. AVERAGE UTILIZATION BY DAY OF WEEK

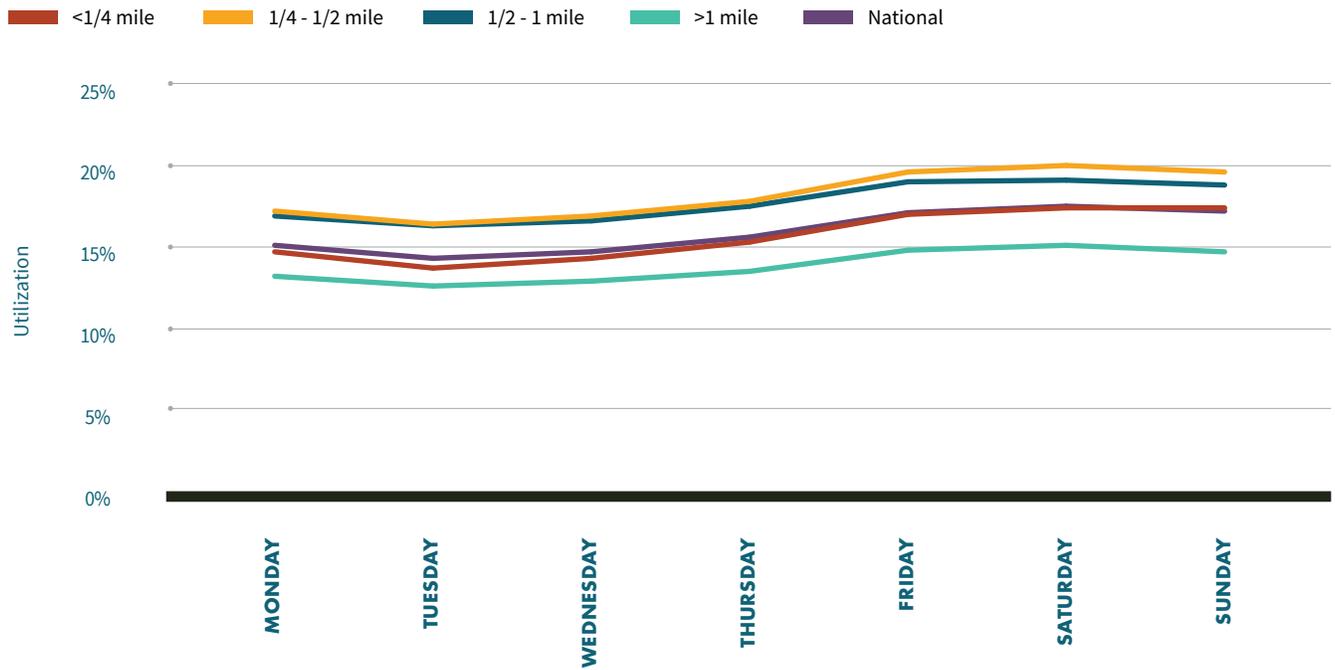


FIGURE 44. AVERAGE UTILIZATION BY TIME OF DAY

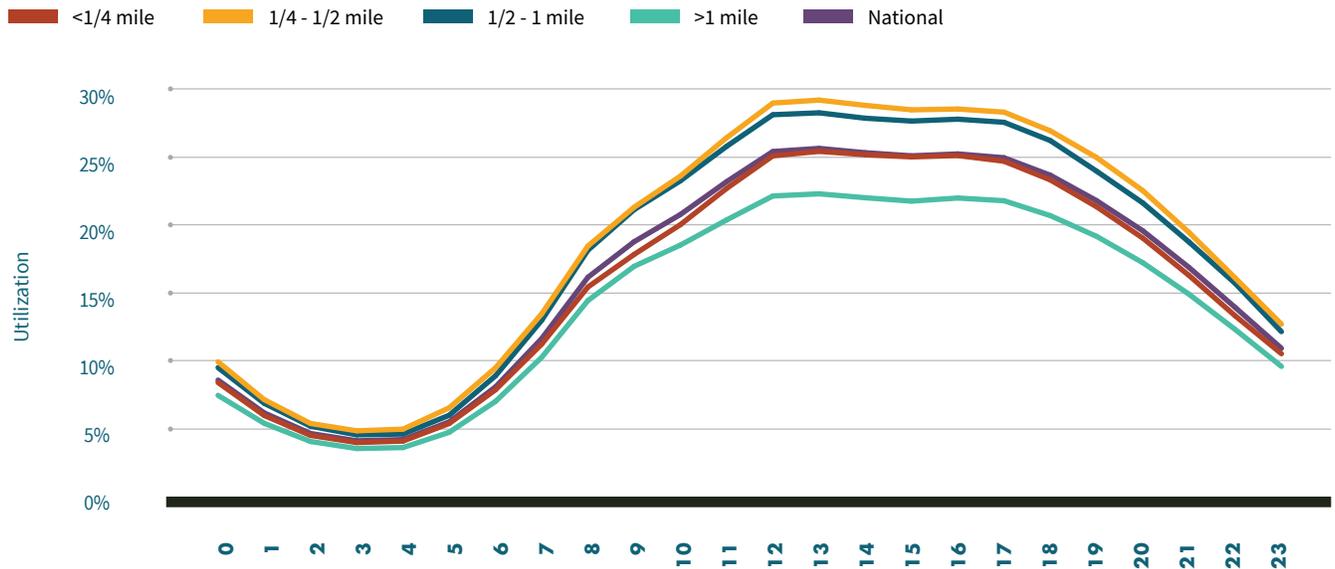


FIGURE 45. AVERAGE CHARGING SESSION DURATION IN MINUTES

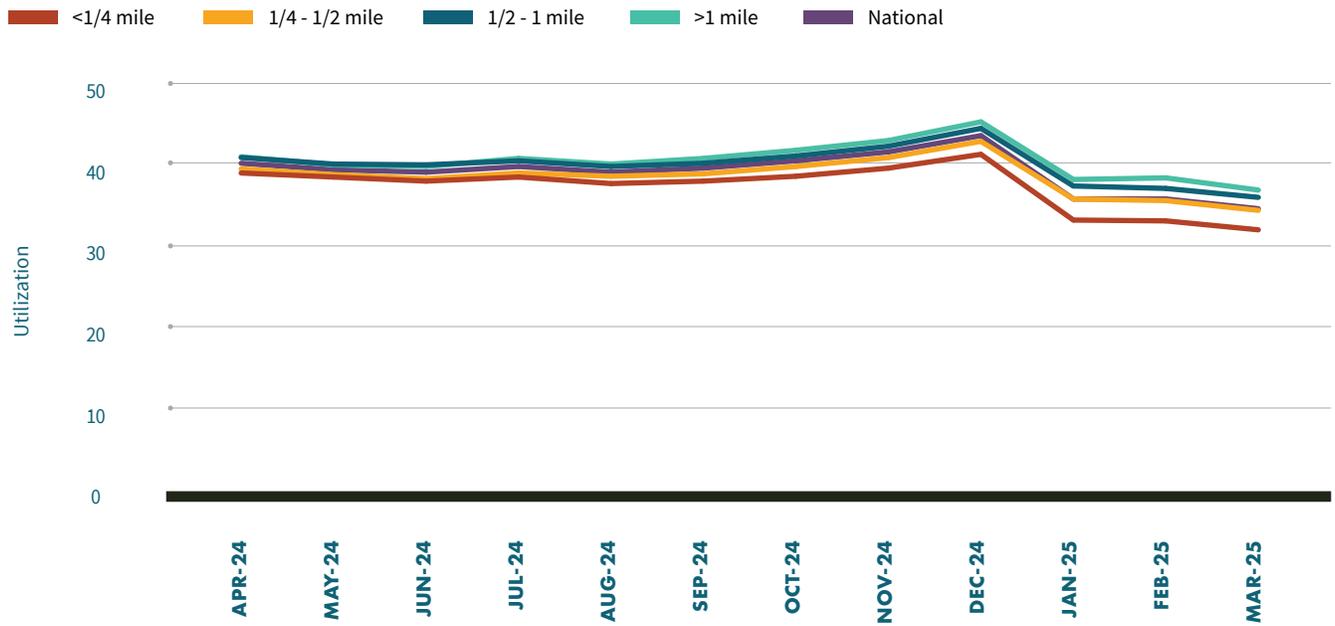


FIGURE 46. AVERAGE SUCCESS AND FAILURE RATES (APRIL 2024 - MARCH 2025)

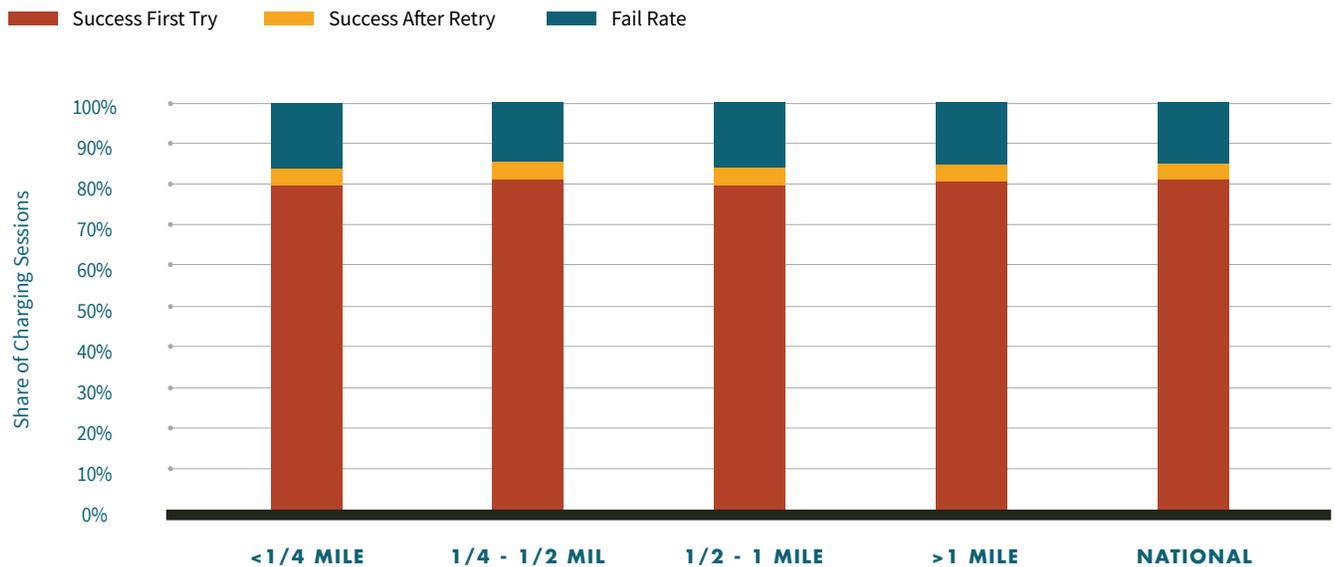


TABLE 23. SHARE OF CHARGING SESSIONS BY HIGHWAY EXIT PROXIMITY

DATE	<1/4 MILE	1/4 - 1/2 MILE	1/2 - 1 MILE	>1 MILE
Apr-24	24.8%	25.4%	19.7%	30.0%
May-24	24.8%	25.6%	19.5%	30.1%
Jun-24	24.7%	25.9%	19.1%	30.3%
Jul-24	24.4%	25.9%	19.1%	30.6%
Aug-24	24.5%	25.8%	19.3%	30.4%
Sep-24	24.6%	25.6%	19.2%	30.5%
Oct-24	24.5%	25.9%	19.1%	30.5%
Nov-24	24.4%	26.0%	18.9%	30.7%
Dec-24	24.4%	26.3%	19.1%	30.1%
Jan-25	34.0%	23.2%	17.1%	25.8%
Feb-25	34.0%	23.0%	16.9%	26.2%
Mar-25	34.4%	22.9%	16.7%	26.0%
Average	26.9%	25.1%	18.6%	29.3%

TABLE 24. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	<1/4 MILE	1/4 - 1/2 MILE	1/2 - 1 MILE	>1 MILE	NATIONAL
Apr-24	195	224	209	163	192
May-24	198	232	213	168	198
Jun-24	203	245	219	177	205
Jul-24	205	250	227	182	210
Aug-24	212	254	234	184	215
Sep-24	206	244	221	178	206
Oct-24	196	241	219	171	201
Nov-24	195	245	221	178	204
Dec-24	198	252	225	176	207
Jan-25	228	259	255	199	230
Feb-25	199	225	216	166	197
Mar-25	227	254	239	184	221
Average	205	244	225	177	207
Change	16.6%	13.3%	14.3%	12.9%	15.0%

TABLE 25. CHARGER UTILIZATION PERCENTAGE

DATE	<1/4 MILE	1/4 - 1/2 MILE	1/2 - 1 MILE	>1 MILE	NATIONAL
Apr-24	16.9%	19.5%	18.7%	14.4%	16.9%
May-24	16.8%	19.6%	18.6%	14.5%	16.9%
Jun-24	17.2%	20.5%	19.3%	15.2%	17.6%
Jul-24	17.1%	20.8%	19.6%	15.6%	17.8%
Aug-24	17.5%	21.1%	20.1%	15.7%	18.1%
Sep-24	17.1%	20.4%	19.3%	15.4%	17.6%
Oct-24	15.9%	19.7%	18.7%	14.5%	16.5%
Nov-24	16.9%	21.4%	20.0%	16.0%	18.1%
Dec-24	17.7%	22.4%	21.2%	16.7%	19.0%
Jan-25	16.7%	20.1%	20.4%	16.2%	17.8%
Feb-25	16.0%	19.1%	18.8%	14.8%	16.7%
Mar-25	16.1%	18.8%	18.1%	14.2%	16.3%
Average	16.8%	20.3%	19.4%	15.3%	17.4%
Change	-5.0%	-3.8%	-2.9%	-1.4%	-3.5%

TABLE 26. CHARGER UTILIZATION BY DAY OF WEEK

DATE	<1/4 MILE	1/4 - 1/2 MILE	1/2 - 1 MILE	>1 MILE	NATIONAL
Mon	14.7%	17.2%	16.9%	13.2%	15.1%
Tues	13.7%	16.4%	16.3%	12.6%	14.3%
Wed	14.3%	16.9%	16.6%	12.9%	14.7%
Thurs	15.3%	17.8%	17.5%	13.5%	15.6%
Fri	17.0%	19.6%	19.0%	14.8%	17.1%
Sat	17.4%	20.0%	19.1%	15.1%	17.5%
Sun	17.4%	19.6%	18.8%	14.7%	17.2%



TABLE 27. CHARGER UTILIZATION BY TIME OF DAY

DATE	<1/4 MILE	1/4 - 1/2 MILE	1/2 - 1 MILE	>1 MILE	NATIONAL
0	8.3%	9.8%	9.4%	7.4%	8.5%
1	5.9%	7.0%	6.8%	5.3%	6.1%
2	4.4%	5.3%	5.1%	4.0%	4.5%
3	3.9%	4.7%	4.4%	3.4%	4.0%
4	4.0%	4.9%	4.5%	3.5%	4.1%
5	5.3%	6.4%	5.9%	4.6%	5.4%
6	7.8%	9.4%	8.8%	6.9%	8.0%
7	11.1%	13.4%	12.9%	10.2%	11.6%
8	15.4%	18.4%	18.1%	14.4%	16.1%
9	17.8%	21.3%	21.1%	16.9%	18.7%
10	20.0%	23.6%	23.2%	18.5%	20.7%
11	22.7%	26.4%	25.8%	20.3%	23.2%
12	25.1%	29.0%	28.1%	22.1%	25.4%
13	25.4%	29.2%	28.2%	22.3%	25.6%
14	25.1%	28.8%	27.8%	22.0%	25.3%
15	25.0%	28.5%	27.6%	21.7%	25.1%
16	25.1%	28.5%	27.8%	21.9%	25.2%
17	24.7%	28.3%	27.6%	21.7%	24.9%
18	23.3%	26.9%	26.2%	20.7%	23.6%
19	21.3%	25.0%	23.9%	19.1%	21.8%
20	19.0%	22.5%	21.6%	17.2%	19.5%
21	16.2%	19.4%	18.7%	14.8%	16.8%
22	13.2%	16.0%	15.6%	12.2%	13.9%
23	10.4%	12.6%	12.1%	9.5%	10.8%



TABLE 28. SESSION DURATION (MINUTES)

DATE	<1/4 MILE	1/4 - 1/2 MILE	1/2 - 1 MILE	>1 MILE	NATIONAL
Apr-24	39.0	39.5	40.9	41.0	40.2
May-24	38.5	38.8	40.1	40.0	39.4
Jun-24	38.0	38.3	40.0	39.8	39.1
Jul-24	38.5	39.0	40.5	40.8	39.8
Aug-24	37.7	38.6	39.8	40.1	39.1
Sep-24	38.0	38.9	40.2	40.8	39.6
Oct-24	38.6	39.8	41.1	41.8	40.5
Nov-24	39.6	40.9	42.3	43.0	41.6
Dec-24	41.3	42.9	44.5	45.3	43.6
Jan-25	33.2	35.8	37.4	38.2	35.8
Feb-25	33.1	35.6	37.1	38.4	35.8
Mar-25	32.0	34.4	36.0	36.9	34.6
Average	37.3	38.5	40.0	40.5	39.1
Change	-18.0%	-12.8%	-12.1%	-10.0%	-13.9%

TABLE 29. SUCCESSFUL AND FAILED CHARGING EVENTS

DATE	< ¼ MILE			¼ - ½ MILE			½ - 1 MILE			> 1 MILE		
	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate
Apr-24	80.4%	4.9%	14.7%	79.7%	5.8%	14.5%	75.8%	5.2%	19.0%	80.6%	5.1%	14.3%
May-24	80.1%	4.6%	15.3%	81.4%	5.0%	13.5%	79.1%	4.5%	16.3%	79.9%	4.8%	15.2%
Jun-24	79.0%	5.1%	15.8%	78.9%	5.3%	15.8%	78.2%	5.3%	16.5%	79.6%	5.5%	14.9%
Jul-24	78.5%	4.4%	17.1%	78.6%	4.5%	16.9%	75.0%	4.7%	20.3%	78.8%	4.9%	16.3%
Aug-24	65.4%	6.0%	28.5%	71.4%	5.2%	23.5%	67.4%	5.4%	27.2%	68.4%	5.7%	25.9%
Sep-24	75.1%	5.5%	19.4%	77.1%	5.1%	17.8%	75.9%	5.1%	18.9%	75.6%	5.4%	19.0%
Oct-24	74.1%	4.3%	21.6%	78.2%	3.7%	18.0%	75.6%	3.4%	21.0%	76.9%	4.3%	18.7%
Nov-24	70.9%	4.1%	25.0%	75.0%	3.7%	21.3%	72.7%	3.9%	23.4%	71.3%	4.5%	24.2%
Dec-24	80.3%	3.0%	16.7%	82.0%	2.8%	15.3%	83.4%	2.7%	14.0%	82.9%	3.2%	13.9%
Jan-25	90.2%	3.3%	6.5%	90.3%	3.5%	6.2%	89.7%	4.4%	5.9%	90.7%	2.8%	6.4%
Feb-25	89.5%	3.3%	7.2%	89.5%	3.7%	6.7%	89.5%	4.2%	6.3%	89.9%	3.0%	7.2%
Mar-25	89.7%	3.2%	7.1%	89.4%	3.6%	6.9%	89.9%	4.2%	5.9%	90.2%	2.9%	6.9%
Average	79.4%	4.3%	16.2%	81.0%	4.3%	14.7%	79.4%	4.4%	16.2%	80.4%	4.3%	15.3%



Benchmarking Clusters

BENCHMARKING CLUSTER METHODOLOGY

To help current and prospective charger operators evaluate their performance relative to other installations in similar markets, CAP has organized its charger data into five distinct groups. These groups are defined based upon six key market demographics that have demonstrated a strong correlation to charger utilization levels. These demographic factors include:

Median income (90th percentile) – Represents the higher end of the income distribution within a county

Proportion of non-Tesla DCFC – Ratio of non-Tesla DC fast chargers to total DCFC, indicating charging infrastructure diversity

DCFC per PEV – Number of DCFC per plug-in electric vehicle, showing relative availability of fast charging options

Population Density – Number of people per square kilometer, serving as a proxy for urbanization

EV Registrations per 1,000 Population – Level of EV adoption in a county

Charging Station Density – Number of charging stations per square kilometer

By leveraging these factors and comparing them with the DCFC utilization in our dataset, CAP was able to identify five specific geographic groupings of counties:

Highest Density - This cluster consists of counties with the highest population densities, characterized by significant urban development and infrastructure. They have the most extensive charging networks, featuring a high concentration of charging stations relative to their area. The median household income in these counties is the highest among all clusters, indicating an affluent population with strong purchasing power. EV adoption is substantial, with a large number of EV registrations per capita. There is a high ratio of plug-in electric vehicles to DCFC stations, suggesting strong demand for charging services. The DCFC network is diverse, with a balanced presence of both Tesla and non-Tesla chargers, enhancing accessibility for a wider range of EV users. Charging station utilization rates are also the highest, reflecting both the high demand and effective deployment of charging infrastructure.

High Density - Counties in this cluster share similarities with the Highest Density group but have lower population densities and a less dense charging infrastructure. The charging station density is significantly reduced, with lower utilization rates compared to the most densely populated areas, though still higher than in other clusters. Median household incomes are high but not at the peak levels of the Highest Density cluster. EV adoption remains strong, with a considerable number of registrations per capita, but there is a decrease in the ratio of EVs to DCFC stations, indicating slightly less pressure on the charging infrastructure. The diversity of the DCFC network is present but not as pronounced.

Moderate Density - This cluster includes counties with moderate values across most variables. Population densities are lower than in urban clusters, and there is a noticeable decline in

EV registrations per capita. The charging infrastructure is less developed, with fewer charging stations relative to the area and a lower ratio of EVs to DCFC stations, suggesting reduced demand and possibly less convenience for EV users. Median household incomes are moderately high but have decreased compared to urban areas. Charging station utilization is significantly lower, about half that of the High cluster and a third of the Highest cluster, reflecting lower EV adoption and usage of the charging infrastructure.

Low Density - Counties in this cluster exhibit low population densities and modest EV adoption rates. The charging infrastructure is sparse, featuring the lowest station density across all clusters. Median household incomes are moderate but lower than in more populated areas. The DCFC network is predominantly composed of Tesla chargers, indicating limited options for non-Tesla EV owners and a lack of network diversity. Charging station utilization is the lowest among all clusters, suggesting minimal demand and highlighting the challenges of maintaining charging infrastructure in less populated regions.

Lowest Density - This cluster represents the most sparsely populated counties with the lowest median household incomes. EV adoption rates are the lowest, reflecting both economic constraints and possibly limited awareness or interest in EV technology. Interestingly, despite the low population and EV adoption, the charging station density is similar to that of the Moderate cluster. There is a relatively high proportion of non-Tesla DCFC stations, which is notable given the overall low demand. However, charging station utilization remains low, indicating that the existing infrastructure is underutilized and may not align with the current demand.

BENCHMARKING CLUSTER OVERVIEW

The division of counties within clusters was done to match DCFC performance to market characteristics, not to achieve a numerical balance among clusters. Consequently, two clusters (Highest Density and Lowest Density) have a limited number of counties represented. However, the Highest Density cluster also boasts the highest average DCFC utilization percentage. The allocation of counties was designed to provide the greatest value in comparing performance among similar locations.

FIGURE 47. COUNTIES IN EACH CLUSTER

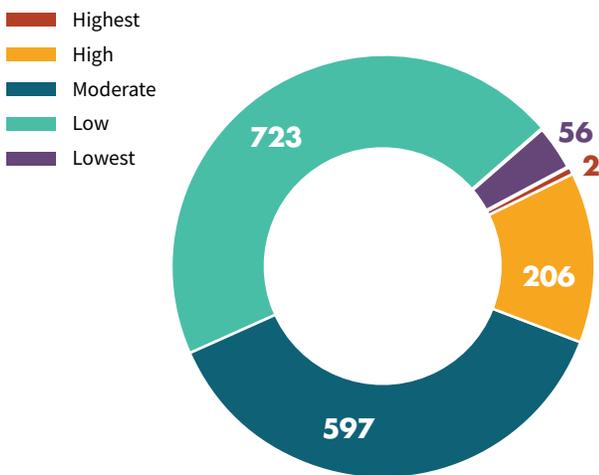


FIGURE 48. TOTAL CHARGERS IN DATA SET BY CLUSTER

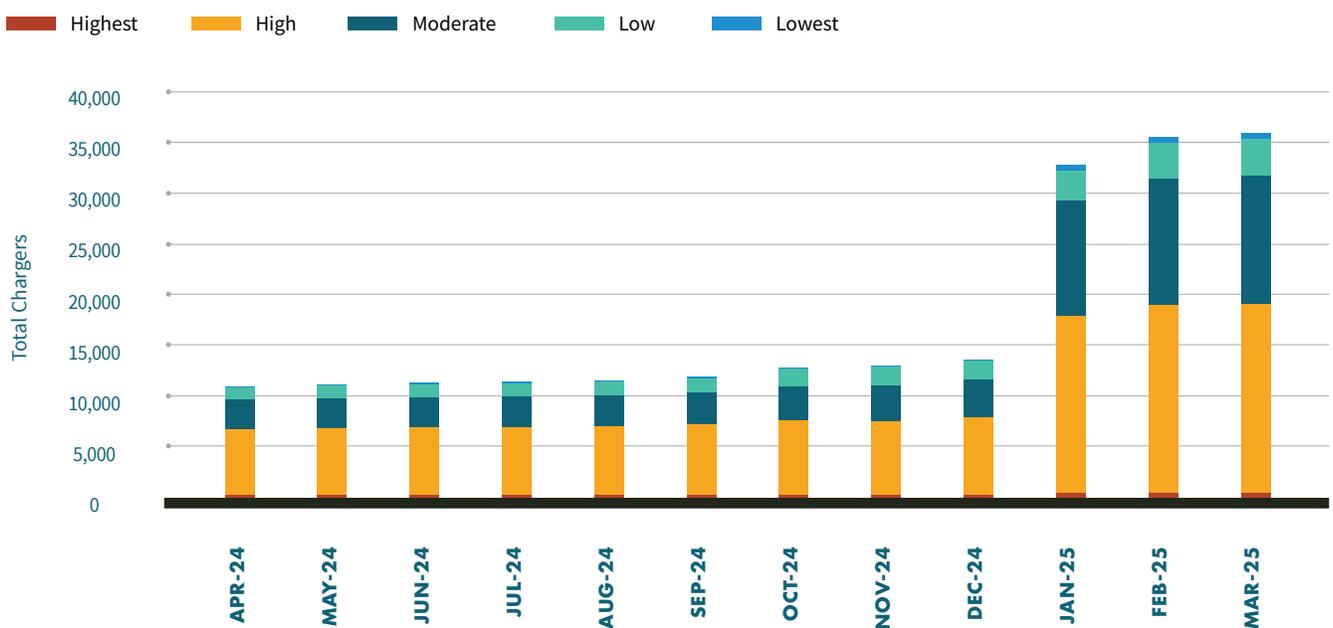


FIGURE 49. SHARE OF CHARGING SESSIONS BY CLUSTER

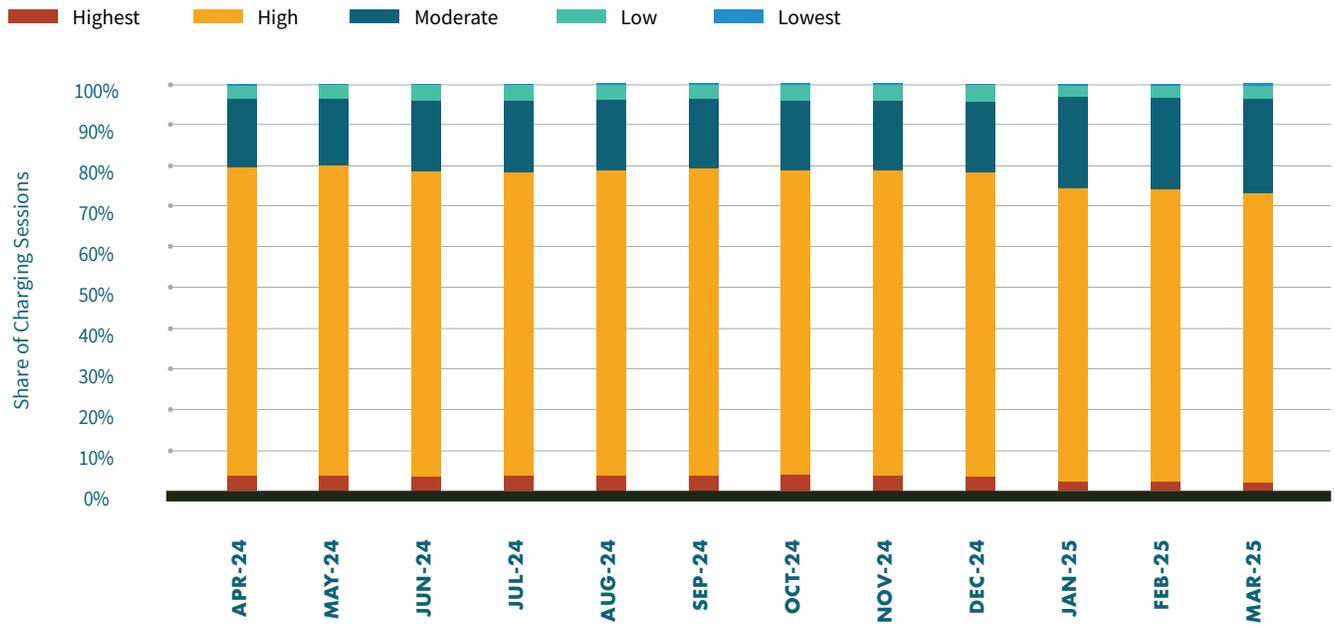


FIGURE 50. AVERAGE UTILIZATION BY CLUSTER

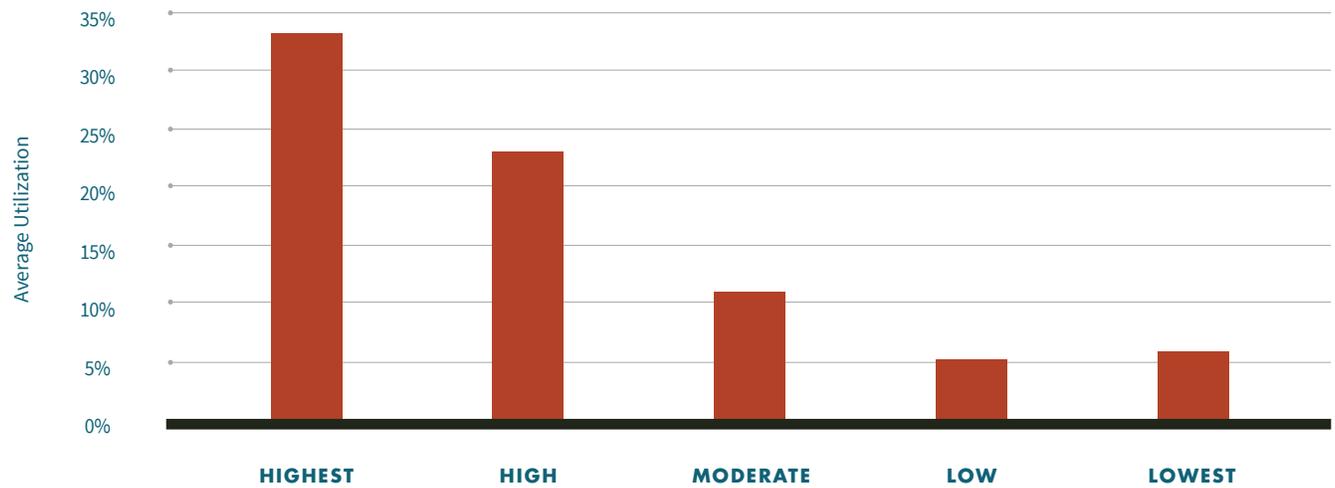
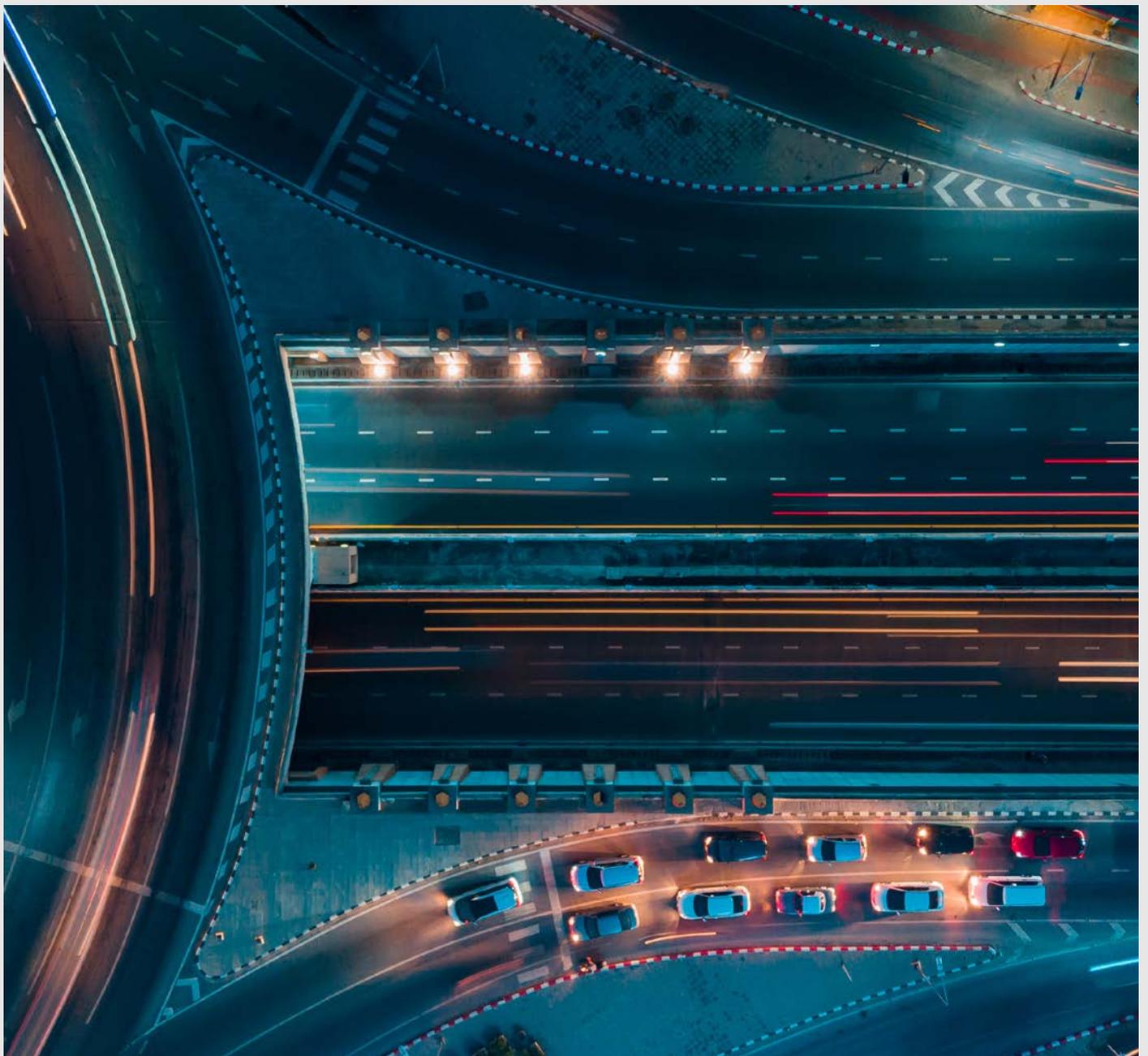


TABLE 30. BENCHMARKING CLUSTER OVERVIEW

CLUSTER	UTILIZATION	EVS/1,000 POPULATION	PEV/DCFC	MEDIAN INCOME	POPULATION DENSITY	DCFC DENSITY	DCFC TO NON-TELSA RATIO
Highest	33.10%	3.4	71.0	\$140,956	7,170.0	0.66	0.56
High	22.96%	3.8	61.0	\$130,856	439.0	0.05	0.50
Moderate	10.90%	0.8	11.0	\$80,589	129.0	0.02	0.75
Low	5.10%	0.5	19.0	\$68,810	49.0	0.00	0.01
Lowest	5.80%	0.1	0.0	\$54,530	17.0	0.01	0.56



BENCHMARKING CLUSTER COMPARATIVE ANALYSIS

The Highest and High density clusters led the nation in all categories. For charging sessions per charger month, they averaged 328 and 273 sessions, respectively, compared to a national average of 207 sessions. The Moderate, Low and Lowest clusters averaged 134, 64 and 76 sessions per charger per month.

With regards to utilization, the Highest and High clusters averaged 33.0% and 22.9% compared with a national average of 17.4%. The Moderate, Low and Lowest clusters averaged 11.1%, 5.2% and 5.7%.

Utilizations rates followed similar patterns across clusters for day of the week, mirroring national trends with weekends recording the highest

utilization. And all clusters exhibited consistent utilization during the day with highest utilization recorded between 12 p.m. and 5 p.m. Meanwhile, session duration varies considerably among the clusters, with the Highest cluster averaging 48 minutes per sessions and the Lowest cluster average 35 minutes, compared with national average of 40.

Failure to initiate a charge varied slightly among the clusters, with the Low cluster recording the highest failure rate with an average of 19.7% and the High cluster recording the lowest at 13.8%. However, failure rates for all chargers dropped in the first quarter relative to the April – December 2024 average, with the Low cluster improving from 21.7% failure to 13.7% and the High cluster improving form 16.4% to 6.1%.

FIGURE 51. SESSIONS PER CHARGER PER MONTH

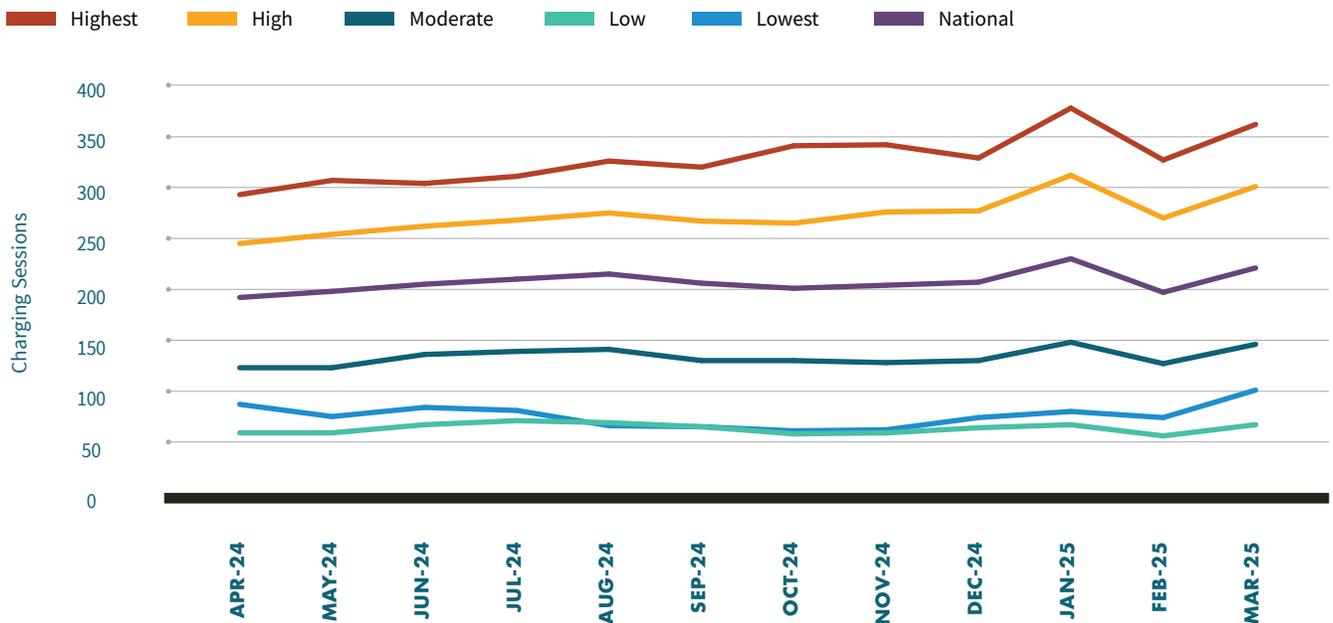


FIGURE 52. AVERAGE UTILIZATION

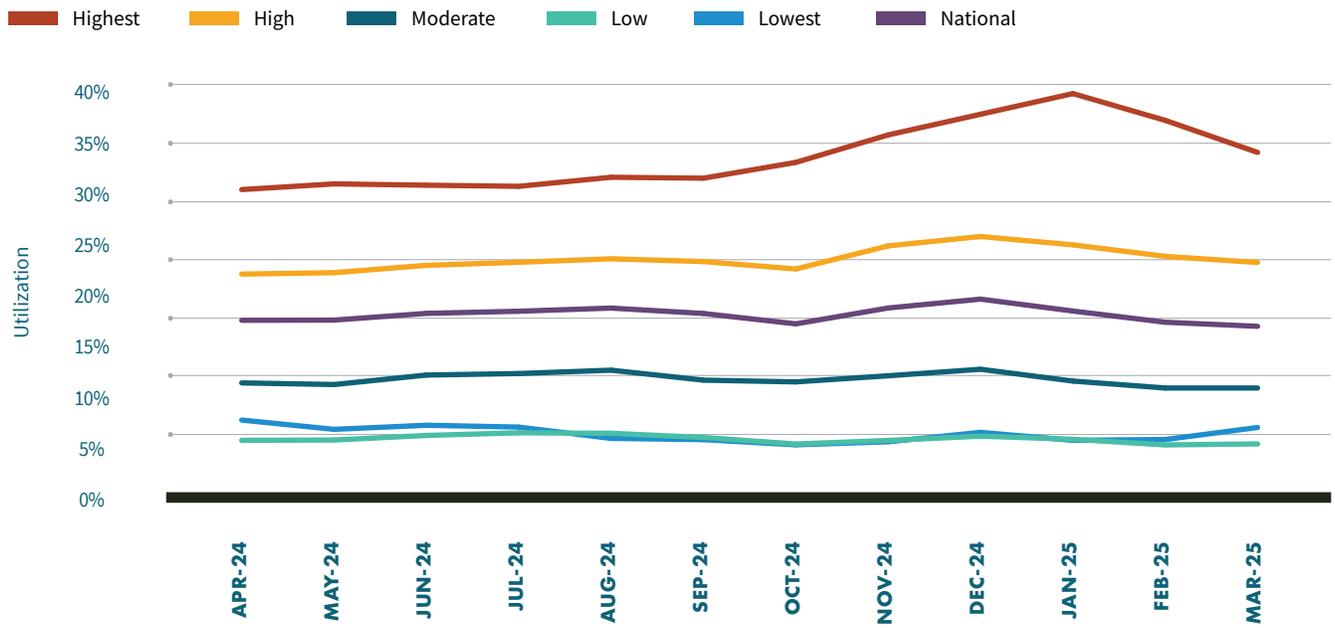


FIGURE 53. AVERAGE UTILIZATION BY DAY OF WEEK

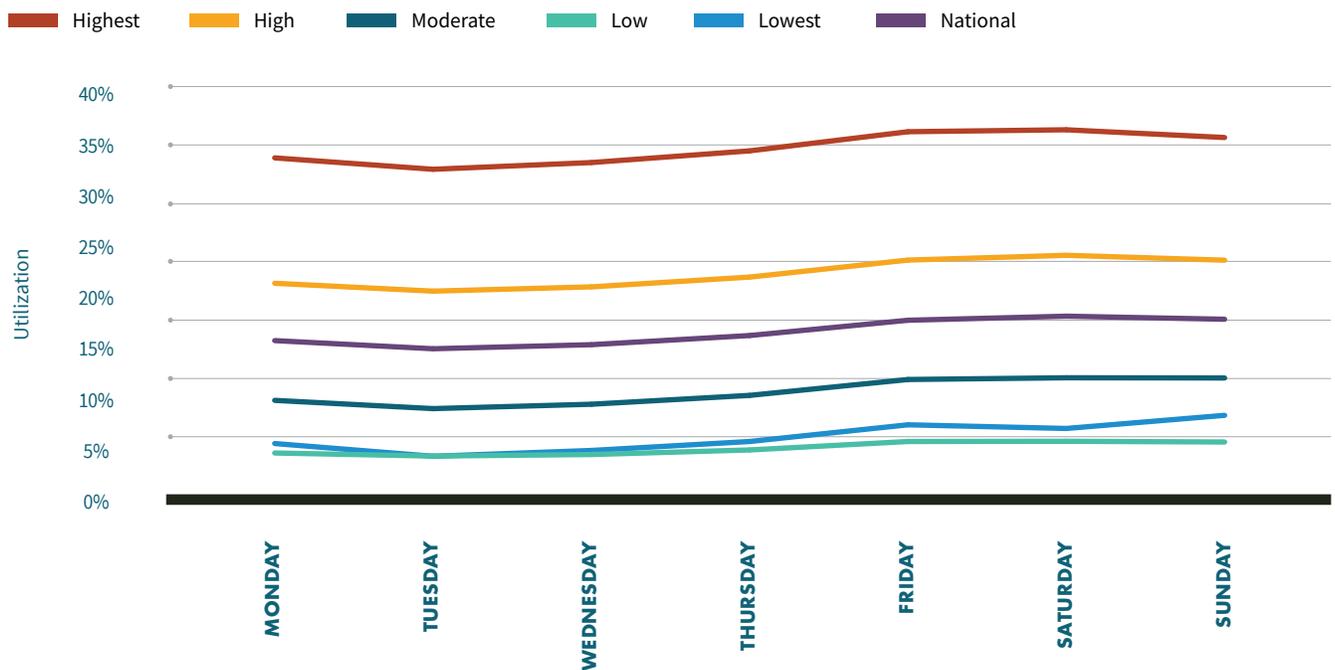


FIGURE 54. AVERAGE UTILIZATION BY TIME OF DAY

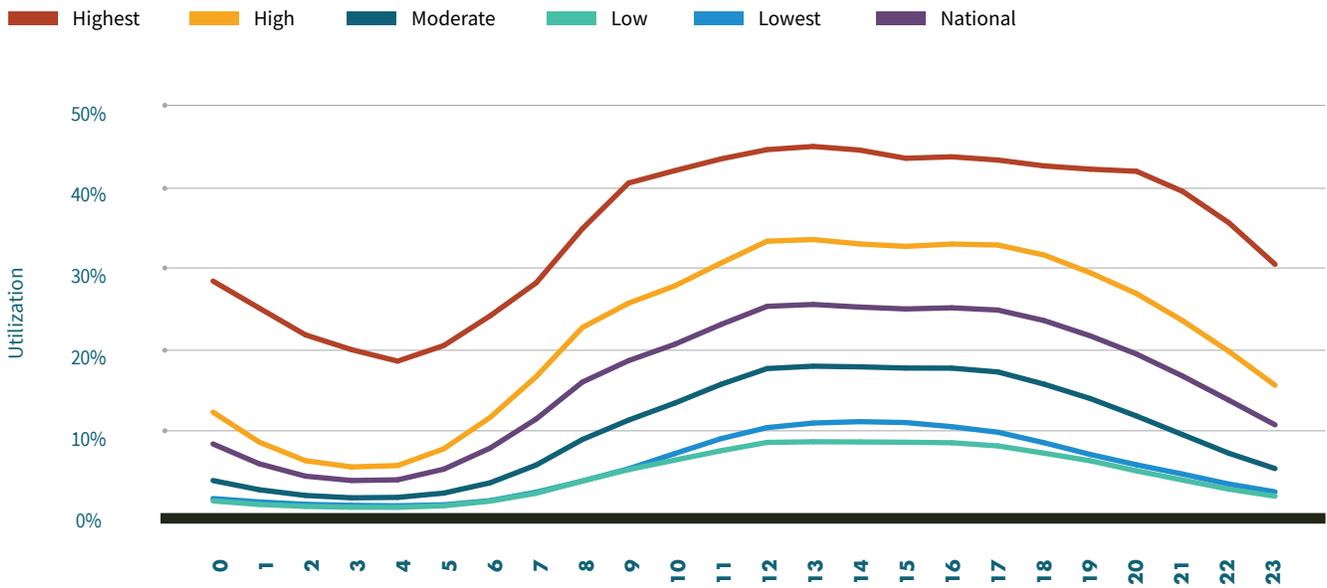


FIGURE 55. AVERAGE CHARGING SESSION DURATION IN MINUTES

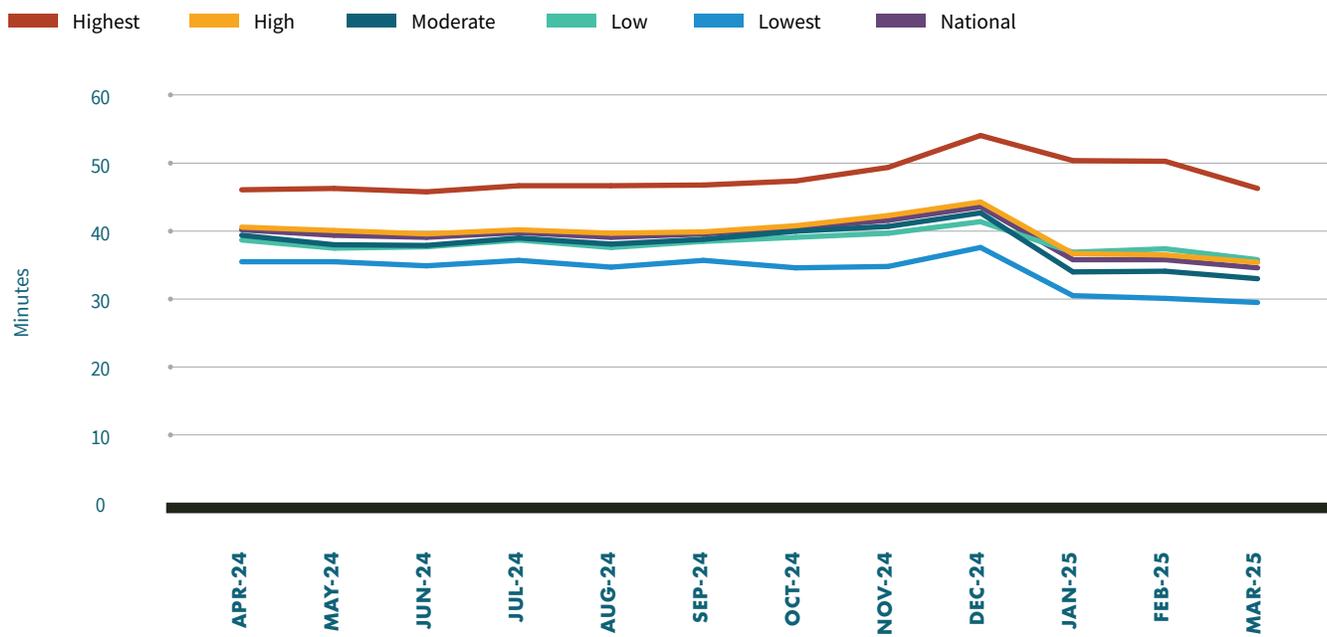


FIGURE 56. AVERAGE SUCCESS AND FAILURE RATES (APRIL 2024 - MARCH 2025)

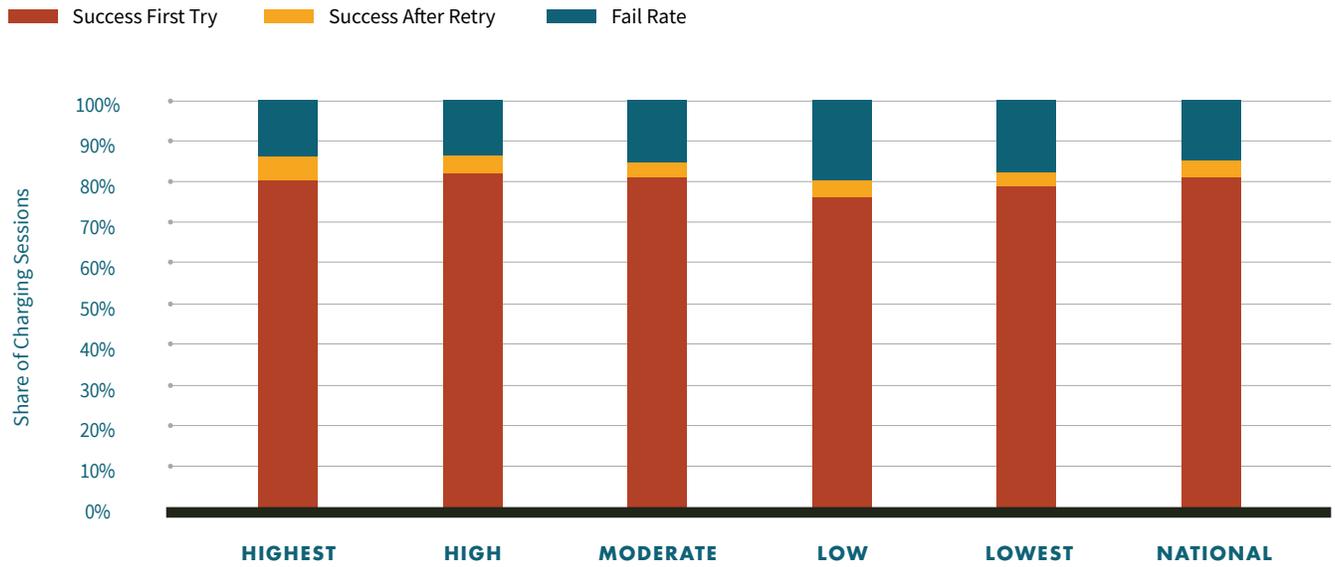


TABLE 31. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	HIGHEST	HIGH	MODERATE	LOW	LOWEST	NATIONAL
Apr-24	293	245	123	59	87	192
May-24	307	254	123	59	75	198
Jun-24	304	262	136	67	84	205
Jul-24	311	268	139	71	81	210
Aug-24	326	275	141	69	66	215
Sep-24	320	267	130	65	65	206
Oct-24	341	265	130	58	61	201
Nov-24	342	276	128	59	62	204
Dec-24	329	277	130	64	74	207
Jan-25	378	312	148	67	80	230
Feb-25	327	270	127	56	74	197
Mar-25	362	301	146	67	101	221
Average	328	273	133	64	76	207
Change	23.8%	22.9%	18.5%	12.4%	15.5%	15.0%

TABLE 32. CHARGER UTILIZATION PERCENTAGE

DATE	HIGHEST	HIGH	MODERATE	LOW	LOWEST	NATIONAL
Apr-24	29.7%	21.4%	10.7%	5.1%	7.1%	16.9%
May-24	30.3%	21.6%	10.6%	5.1%	6.2%	16.9%
Jun-24	30.2%	22.3%	11.5%	5.6%	6.6%	17.6%
Jul-24	30.1%	22.6%	11.7%	5.8%	6.4%	17.8%
Aug-24	30.9%	22.9%	12.0%	5.8%	5.3%	18.1%
Sep-24	30.9%	22.7%	11.0%	5.4%	5.2%	17.6%
Oct-24	32.4%	21.9%	10.8%	4.7%	4.7%	16.5%
Nov-24	35.1%	24.2%	11.4%	5.1%	5.0%	18.1%
Dec-24	37.1%	25.1%	12.1%	5.5%	5.9%	19.0%
Jan-25	39.2%	24.3%	10.9%	5.2%	5.1%	17.8%
Feb-25	36.5%	23.2%	10.2%	4.7%	5.2%	16.7%
Mar-25	33.4%	22.6%	10.2%	4.8%	6.4%	16.3%
Average	33.0%	22.9%	11.1%	5.2%	5.7%	17.4%
Change	12.3%	5.3%	-4.7%	-6.8%	-10.3%	-3.5%

TABLE 33. CHARGER UTILIZATION BY DAY OF WEEK

DAY	HIGHEST	HIGH	MODERATE	LOW	LOWEST	NATIONAL
Mon	33.0%	20.7%	9.2%	4.1%	5.0%	15.1%
Tues	31.9%	20.0%	8.4%	3.8%	3.7%	14.3%
Wed	32.6%	20.4%	8.8%	3.9%	4.3%	14.7%
Thurs	33.7%	21.3%	9.7%	4.4%	5.2%	15.6%
Fri	35.6%	23.0%	11.3%	5.2%	6.8%	17.1%
Sat	35.8%	23.5%	11.5%	5.2%	6.5%	17.5%
Sun	35.0%	23.0%	11.4%	5.1%	7.8%	17.2%



TABLE 34. CHARGER UTILIZATION BY TIME OF DAY

DATE	HIGHEST	HIGH	MODERATE	LOW	LOWEST	NATIONAL
0	28.5%	12.4%	4.0%	1.5%	1.8%	8.5%
1	25.2%	8.7%	2.9%	1.1%	1.4%	6.1%
2	21.9%	6.4%	2.2%	0.8%	1.1%	4.5%
3	20.1%	5.7%	1.9%	0.7%	0.9%	4.0%
4	18.7%	5.8%	1.9%	0.7%	0.9%	4.1%
5	20.6%	7.9%	2.5%	0.9%	1.0%	5.4%
6	24.2%	11.7%	3.7%	1.5%	1.5%	8.0%
7	28.3%	16.8%	5.9%	2.4%	2.6%	11.6%
8	34.9%	22.8%	9.0%	4.0%	3.9%	16.1%
9	40.5%	25.8%	11.4%	5.3%	5.4%	18.7%
10	42.1%	27.9%	13.5%	6.5%	7.3%	20.7%
11	43.5%	30.7%	15.8%	7.7%	9.1%	23.2%
12	44.6%	33.4%	17.7%	8.7%	10.5%	25.4%
13	45.0%	33.6%	18.0%	8.8%	11.1%	25.6%
14	44.6%	33.1%	18.0%	8.7%	11.2%	25.3%
15	43.6%	32.8%	17.8%	8.7%	11.1%	25.1%
16	43.8%	33.0%	17.8%	8.6%	10.6%	25.2%
17	43.3%	32.9%	17.3%	8.2%	9.9%	24.9%
18	42.6%	31.7%	15.8%	7.4%	8.6%	23.6%
19	42.2%	29.5%	14.1%	6.4%	7.2%	21.8%
20	42.0%	27.0%	11.9%	5.2%	5.9%	19.5%
21	39.5%	23.6%	9.6%	4.1%	4.8%	16.8%
22	35.6%	19.9%	7.4%	2.9%	3.6%	13.9%
23	30.6%	15.7%	5.5%	2.1%	2.6%	10.8%

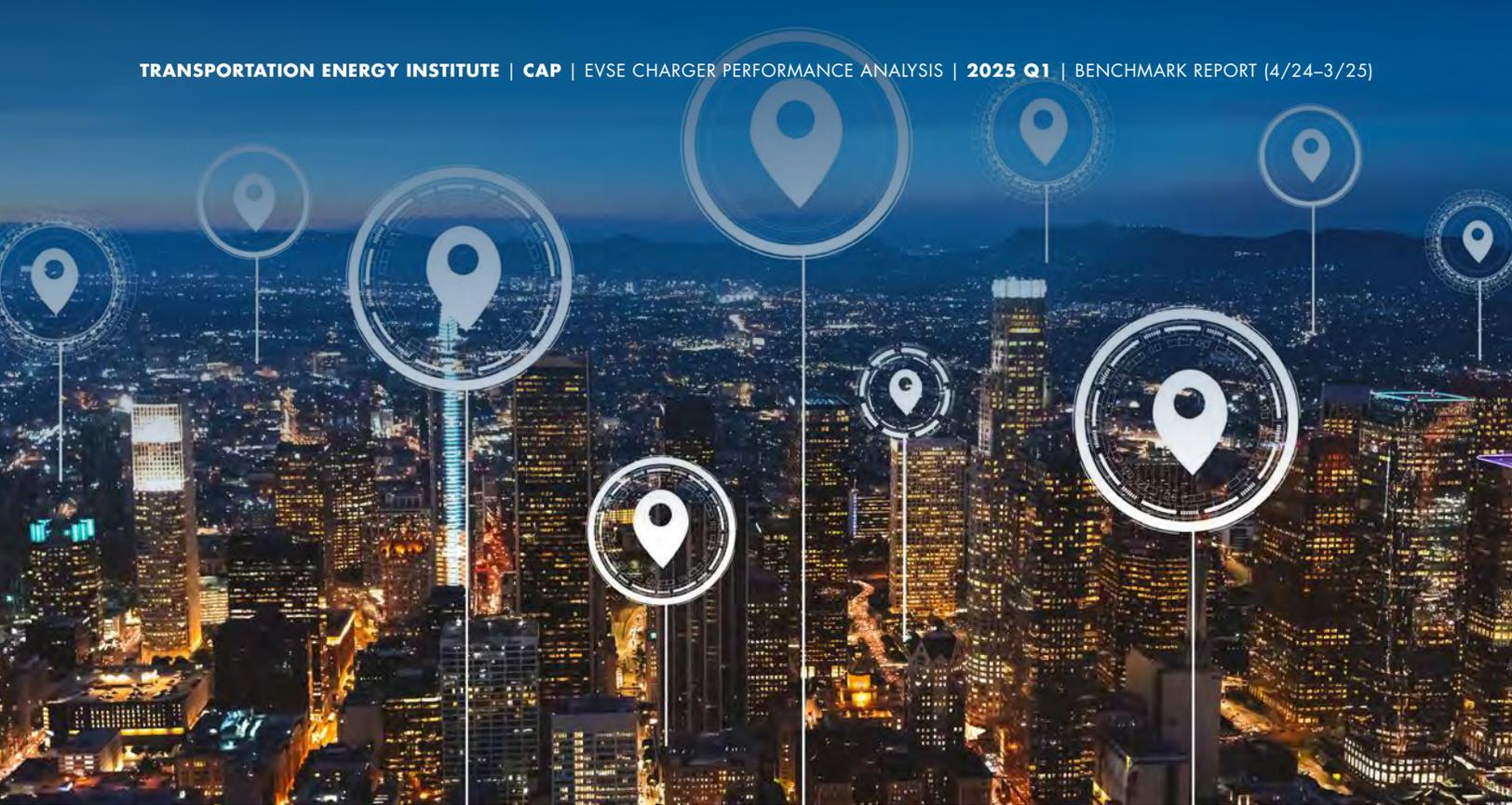


TABLE 35. SESSION DURATION (MINUTES)

DATE	HIGHEST	HIGH	MODERATE	LOW	LOWEST	NATIONAL
Apr-24	46.1	40.6	39.4	38.7	35.5	40.2
May-24	46.3	40.1	38.0	37.5	35.5	39.4
Jun-24	45.8	39.6	37.9	37.7	34.9	39.1
Jul-24	46.7	40.2	39.0	38.7	35.7	39.8
Aug-24	46.7	39.7	38.1	37.6	34.7	39.1
Sep-24	46.8	39.9	38.8	38.5	35.7	39.6
Oct-24	47.4	40.8	40.0	39.1	34.6	40.5
Nov-24	49.4	42.3	40.7	39.7	34.8	41.6
Dec-24	54.1	44.3	42.7	41.4	37.6	43.6
Jan-25	50.4	36.7	34.0	36.9	30.5	35.8
Feb-25	50.3	36.5	34.1	37.4	30.1	35.8
Mar-25	46.3	35.4	33.0	35.8	29.5	34.6
Average	48	40	39	39	35	40
Change	6.4%	-12.4%	-15.6%	-5.3%	-14.6%	-13.0%

TABLE 35. SUCCESSFUL AND FAILED CHARGING EVENTS

DATE	HIGHEST			HIGH			MODERATE			LOW			LOWEST		
	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate	Success First Try	Success After Retry	Fail Rate
Apr-24	68.1%	9.3%	22.6%	72.9%	6.3%	20.8%	76.4%	5.4%	18.1%	77.7%	5.4%	17.0%	72.3%	3.9%	23.8%
May-24	72.0%	9.4%	18.6%	77.0%	6.1%	17.0%	80.0%	4.9%	15.1%	79.7%	5.5%	14.8%	78.1%	3.2%	18.7%
Jun-24	74.5%	9.7%	15.8%	78.5%	5.9%	15.6%	80.2%	4.8%	15.0%	78.9%	4.9%	16.2%	78.2%	3.0%	18.7%
Jul-24	76.3%	9.3%	14.5%	79.2%	5.7%	15.1%	81.0%	4.8%	14.1%	79.5%	5.0%	15.5%	78.7%	2.6%	18.7%
Aug-24	78.8%	8.3%	12.9%	82.3%	5.3%	12.4%	85.0%	4.3%	10.7%	81.9%	4.9%	13.2%	86.0%	3.2%	10.7%
Sep-24	79.2%	7.7%	13.1%	80.8%	5.2%	13.9%	82.4%	4.5%	13.1%	81.1%	4.8%	14.0%	81.9%	3.7%	14.4%
Oct-24	78.9%	6.3%	14.8%	81.2%	4.8%	14.0%	82.6%	4.4%	13.1%	80.8%	4.6%	14.7%	78.1%	3.1%	18.8%
Nov-24	80.5%	6.7%	12.9%	80.8%	5.0%	14.2%	81.5%	4.8%	13.7%	80.2%	5.2%	14.6%	78.2%	3.7%	18.1%
Dec-24	79.2%	5.3%	15.6%	79.4%	4.3%	16.4%	81.0%	3.6%	15.4%	79.4%	3.6%	17.0%	78.7%	3.0%	18.3%
Jan-25	73.4%	5.9%	20.8%	72.5%	5.1%	22.5%	68.2%	4.7%	27.1%	60.0%	5.4%	34.6%	67.8%	5.1%	27.1%
Feb-25	74.4%	6.5%	19.1%	77.2%	5.0%	17.7%	75.4%	4.5%	20.0%	71.8%	5.2%	22.9%	72.2%	5.4%	22.4%
Mar-25	79.8%	4.4%	15.8%	79.5%	3.3%	17.2%	75.4%	4.0%	20.6%	68.6%	4.6%	26.8%	70.0%	4.7%	25.3%
Average	80.3%	5.8%	14.0%	81.9%	4.2%	13.8%	80.9%	3.8%	15.3%	76.1%	4.1%	19.7%	78.6%	3.7%	17.7%



Counties by Cluster

COUNTIES ASSIGNED TO EACH CLUSTER

(Alpha by state and county)

HIGHEST DENSITY

San Francisco, CA
Washington, DC
Suffolk, MA
Hudson, NJ
Kings, NY
New York, NY
Queens, NY
Philadelphia, PA
Arlington, VA
Fairfax, VA
Falls Church, VA
Lexington, VA

HIGH DENSITY

Maricopa, AZ
Alameda, CA
Contra Costa, CA
El Dorado, CA
Fresno, CA
Los Angeles, CA
Marin, CA
Monterey, CA
Napa, CA
Orange, CA
Placer, CA
Riverside, CA
Sacramento, CA
San Benito, CA
San Bernardino, CA
San Diego, CA
San Joaquin, CA
San Luis Obispo, CA

San Mateo, CA
Santa Barbara, CA
Santa Clara, CA
Santa Cruz, CA
Solano, CA
Sonoma, CA
Sutter, CA
Ventura, CA
Yolo, CA
Adams, CO
Arapahoe, CO
Boulder, CO
Broomfield, CO
Denver, CO
Douglas, CO
Eagle, CO
Garfield, CO
Jefferson, CO
Larimer, CO

Routt, CO
San Miguel, CO
Weld, CO
Fairfield, CT
Hartford, CT
Litchfield, CT
Middlesex, CT
New Haven, CT
New London, CT
Tolland, CT
New Castle, DE
Broward, FL
Collier, FL
Hillsborough, FL
Martin, FL
Miami-Dade, FL
Monroe, FL
Orange, FL
Palm Beach, FL

Pasco, FL	Carver, MN	Putnam, NY	Henrico, VA
Pinellas, FL	Dakota, MN	Richmond, NY	James City, VA
Seminole, FL	Hennepin, MN	Rockland, NY	Loudoun, VA
St. Johns, FL	Scott, MN	Saratoga, NY	Manassas, VA
Cobb, GA	Washington, MN	Suffolk, NY	Prince William, VA
DeKalb, GA	St. Charles, MO	Westchester, NY	Stafford, VA
Fayette, GA	St. Louis, MO	Delaware, OH	York, VA
Forsyth, GA	Flathead, MT	Geauga, OH	Addison, VT
Fulton, GA	Chatham, NC	Union, OH	Chittenden, VT
Greene, GA	Durham, NC	Warren, OH	Grand Isle, VT
Honolulu, HI	Mecklenburg, NC	Benton, OR	Lamoille, VT
Maui, HI	Orange, NC	Clackamas, OR	Washington, VT
Dallas, IA	Union, NC	Multnomah, OR	Windham, VT
Cook, IL	Wake, NC	Washington, OR	Windsor, VT
DuPage, IL	Douglas, NE	Allegheny, PA	Clark, WA
Lake, IL	Hillsborough, NH	Bucks, PA	King, WA
Will, IL	Merrimack, NH	Chester, PA	Kitsap, WA
Boone, IN	Rockingham, NH	Delaware, PA	Pierce, WA
Hamilton, IN	Bergen, NJ	Montgomery, PA	Snohomish, WA
Johnson, KS	Burlington, NJ	Bristol, RI	Thurston, WA
Barnstable, MA	Camden, NJ	Kent, RI	
Essex, MA	Cape May, NJ	Newport, RI	MODERATE
Hampshire, MA	Essex, NJ	Washington, RI	DENSITY
Middlesex, MA	Gloucester, NJ	Davidson, TN	Anchorage, AK
Norfolk, MA	Hunterdon, NJ	Williamson, TN	Kenai Peninsula, AK
Plymouth, MA	Mercer, NJ	Collin, TX	Baldwin, AL
Worcester, MA	Middlesex, NJ	Comal, TX	Calhoun, AL
Anne Arundel, MD	Monmouth, NJ	Dallas, TX	Conecuh, AL
Baltimore, MD	Morris, NJ	Denton, TX	Houston, AL
Calvert, MD	Ocean, NJ	Fort Bend, TX	Jefferson, AL
Carroll, MD	Passaic, NJ	Rockwall, TX	Lee, AL
Charles, MD	Somerset, NJ	Travis, TX	Limestone, AL
Frederick, MD	Sussex, NJ	Williamson, TX	Madison, AL
Harford, MD	Union, NJ	Davis, UT	Mobile, AL
Howard, MD	Los Alamos, NM	Salt Lake, UT	Montgomery, AL
Montgomery, MD	Santa Fe, NM	Summit, UT	St. Clair, AL
Prince George's, MD	Clark, NV	Utah, UT	Tuscaloosa, AL
Queen Anne's, MD	Washoe, NV	Albemarle, VA	Benton, AR
Talbot, MD	Albany, NY	Alexandria, VA	Craighead, AR
Cumberland, ME	Columbia, NY	Charlottesville, VA	Crawford, AR
Livingston, MI	Dutchess, NY	Chesterfield, VA	Pulaski, AR
Oakland, MI	Nassau, NY	Fairfax, VA	Cochise, AZ
Washtenaw, MI	Orange, NY	Fauquier, VA	Coconino, AZ

Gila, AZ	Sussex, DE	Crisp, GA	Ogle, IL
Mohave, AZ	Alachua, FL	Douglas, GA	Peoria, IL
Navajo, AZ	Bay, FL	Glynn, GA	Sangamon, IL
Pima, AZ	Brevard, FL	Gordon, GA	Williamson, IL
Pinal, AZ	Charlotte, FL	Gwinnett, GA	Winnebago, IL
Yavapai, AZ	Citrus, FL	Henry, GA	Allen, IN
Yuma, AZ	DeSoto, FL	Jenkins, GA	Daviess, IN
Amador, CA	Duval, FL	Laurens, GA	Elkhart, IN
Butte, CA	Flagler, FL	Lee, GA	Fountain, IN
Calaveras, CA	Hernando, FL	Lowndes, GA	Howard, IN
Colusa, CA	Highlands, FL	Morgan, GA	LaGrange, IN
Imperial, CA	Indian River, FL	Muscogee, GA	Lake, IN
Inyo, CA	Jackson, FL	Peach, GA	LaPorte, IN
Kern, CA	Lake, FL	Richmond, GA	Marion, IN
Kings, CA	Lee, FL	Tift, GA	Monroe, IN
Lassen, CA	Leon, FL	Black Hawk, IA	Newton, IN
Madera, CA	Madison, FL	Dubuque, IA	Porter, IN
Mariposa, CA	Manatee, FL	Franklin, IA	Shelby, IN
Mendocino, CA	Marion, FL	Henry, IA	St. Joseph, IN
Merced, CA	Nassau, FL	Johnson, IA	Steuben, IN
Modoc, CA	Okaloosa, FL	Linn, IA	Tippecanoe, IN
Mono, CA	Okeechobee, FL	Polk, IA	Vanderburgh, IN
Nevada, CA	Osceola, FL	Pottawattamie, IA	Vigo, IN
Shasta, CA	Polk, FL	Poweshiek, IA	Wayne, IN
Siskiyou, CA	Santa Rosa, FL	Scott, IA	Butler, KS
Stanislaus, CA	Sarasota, FL	Woodbury, IA	Dickinson, KS
Tehama, CA	St. Lucie, FL	Ada, ID	Jackson, KS
Trinity, CA	Sumter, FL	Bannock, ID	Leavenworth, KS
Tulare, CA	Suwannee, FL	Bonneville, ID	Lyon, KS
Tuolumne, CA	Volusia, FL	Kootenai, ID	Saline, KS
Yuba, CA	Wakulla, FL	Minidoka, ID	Sedgwick, KS
Chaffee, CO	Walton, FL	Twin Falls, ID	Shawnee, KS
Clear Creek, CO	Washington, FL	Champaign, IL	Thomas, KS
El Paso, CO	Bartow, GA	Effingham, IL	Boone, KY
Grand, CO	Bibb, GA	Iroquois, IL	Fayette, KY
Las Animas, CO	Camden, GA	Jefferson, IL	Hardin, KY
Moffat, CO	Candler, GA	Kane, IL	Jefferson, KY
Montrose, CO	Chatham, GA	Kendall, IL	Laurel, KY
Morgan, CO	Cherokee, GA	LaSalle, IL	Lyon, KY
Pitkin, CO	Clarke, GA	Livingston, IL	Madison, KY
Pueblo, CO	Clayton, GA	Madison, IL	Warren, KY
Summit, CO	Columbia, GA	McHenry, IL	Caddo, LA
Kent, DE	Coweta, GA	McLean, IL	Calcasieu, LA

East Baton Rouge, LA	Wayne, MI	Lewis and Clark, MT	Dawson, NE
Jefferson, LA	Anoka, MN	Mineral, MT	Hall, NE
Jefferson Davis, LA	Beltrami, MN	Missoula, MT	Keith, NE
Lafayette, LA	Carlton, MN	Silver Bow, MT	Lancaster, NE
Lincoln, LA	Chisago, MN	Yellowstone, MT	Lincoln, NE
Natchitoches, LA	Crow Wing, MN	Alamance, NC	Belknap, NH
Ouachita, LA	Douglas, MN	Brunswick, NC	Carroll, NH
Rapides, LA	Freeborn, MN	Buncombe, NC	Grafton, NH
St. Tammany, LA	Kandiyohi, MN	Catawba, NC	Strafford, NH
Berkshire, MA	Lake, MN	Craven, NC	Atlantic, NJ
Bristol, MA	Lyon, MN	Cumberland, NC	Salem, NJ
Hampden, MA	Nicollet, MN	Dare, NC	Warren, NJ
Allegany, MD	Nobles, MN	Davidson, NC	Bernalillo, NM
Cecil, MD	Olmsted, MN	Davie, NC	McKinley, NM
Garrett, MD	Ramsey, MN	Forsyth, NC	San Juan, NM
St. Mary's, MD	St. Louis, MN	Gaston, NC	San Miguel, NM
Wicomico, MD	Wright, MN	Granville, NC	Sierra, NM
Worcester, MD	Boone, MO	Guilford, NC	Socorro, NM
Franklin, ME	Buchanan, MO	Halifax, NC	Douglas, NV
Hancock, ME	Camden, MO	Iredell, NC	Elko, NV
Kennebec, ME	Cape Girardeau, MO	Johnston, NC	Humboldt, NV
Penobscot, ME	Clay, MO	Lee, NC	Lyon, NV
Somerset, ME	Greene, MO	Lenoir, NC	Nye, NV
York, ME	Harrison, MO	McDowell, NC	Cattaraugus, NY
Bay, MI	Jackson, MO	Nash, NC	Chautauqua, NY
Berrien, MI	Lafayette, MO	New Hanover, NC	Clinton, NY
Calhoun, MI	Marion, MO	Onslow, NC	Delaware, NY
Chippewa, MI	Newton, MO	Pitt, NC	Erie, NY
Delta, MI	Phelps, MO	Randolph, NC	Essex, NY
Genesee, MI	Platte, MO	Richmond, NC	Genesee, NY
Grand Traverse, MI	Scott, MO	Robeson, NC	Jefferson, NY
Huron, MI	St. Louis, MO	Rowan, NC	Oneida, NY
Ingham, MI	Vernon, MO	Scotland, NC	Onondaga, NY
Kalamazoo, MI	DeSoto, MS	Surry, NC	Ontario, NY
Kent, MI	Harrison, MS	Vance, NC	Oswego, NY
Macomb, MI	Lauderdale, MS	Watauga, NC	Otsego, NY
Marquette, MI	Lee, MS	Wayne, NC	Schenectady, NY
Mason, MI	Warren, MS	Burleigh, ND	Seneca, NY
Mecosta, MI	Beaverhead, MT	Cass, ND	St. Lawrence, NY
Muskegon, MI	Cascade, MT	Grand Forks, ND	Steuben, NY
Otsego, MI	Custer, MT	Stark, ND	Sullivan, NY
Ottawa, MI	Dawson, MT	Stutsman, ND	Ulster, NY
St. Clair, MI	Gallatin, MT	Buffalo, NE	Warren, NY

Allen, OH	Bedford, PA	Lawrence, SD	Leon, TX
Butler, OH	Berks, PA	Minnehaha, SD	Lubbock, TX
Cuyahoga, OH	Blair, PA	Pennington, SD	McLennan, TX
Erie, OH	Butler, PA	Roberts, SD	Midland, TX
Franklin, OH	Centre, PA	Coffee, TN	Montgomery, TX
Greene, OH	Clearfield, PA	Cumberland, TN	Nueces, TX
Guernsey, OH	Clinton, PA	Dickson, TN	Polk, TX
Hamilton, OH	Columbia, PA	Hamilton, TN	Potter, TX
Hancock, OH	Cumberland, PA	Knox, TN	Reeves, TX
Lorain, OH	Dauphin, PA	Madison, TN	Smith, TX
Lucas, OH	Erie, PA	Marion, TN	Tarrant, TX
Mahoning, OH	Franklin, PA	Putnam, TN	Tom Green, TX
Montgomery, OH	Lackawanna, PA	Rutherford, TN	Victoria, TX
Morrow, OH	Lancaster, PA	Sevier, TN	Walker, TX
Ross, OH	Lehigh, PA	Shelby, TN	Waller, TX
Sandusky, OH	Lycoming, PA	Sullivan, TN	Webb, TX
Summit, OH	Mercer, PA	Wilson, TN	Box Elder, UT
Trumbull, OH	Monroe, PA	Bell, TX	Carbon, UT
Tuscarawas, OH	Northampton, PA	Bexar, TX	Grand, UT
Williams, OH	Pike, PA	Blanco, TX	Iron, UT
Wood, OH	Tioga, PA	Bowie, TX	Juab, UT
Wyandot, OH	Washington, PA	Brazoria, TX	San Juan, UT
Carter, OK	Westmoreland, PA	Brazos, TX	Washington, UT
Rogers, OK	York, PA	Callahan, TX	Amherst, VA
Tulsa, OK	Providence, RI	Cameron, TX	Augusta, VA
Baker, OR	Aiken, SC	Culberson, TX	Bristol, VA
Clatsop, OR	Anderson, SC	El Paso, TX	Campbell, VA
Columbia, OR	Beaufort, SC	Ellis, TX	Chesapeake, VA
Deschutes, OR	Charleston, SC	Fayette, TX	Colonial Heights, VA
Douglas, OR	Clarendon, SC	Grayson, TX	Essex, VA
Harney, OR	Colleton, SC	Guadalupe, TX	Frederick, VA
Hood River, OR	Florence, SC	Hale, TX	Halifax, VA
Jackson, OR	Greenville, SC	Hamilton, TX	Hanover, VA
Josephine, OR	Horry, SC	Harris, TX	Harrisonburg, VA
Lane, OR	Jasper, SC	Hays, TX	King George, VA
Lincoln, OR	Lexington, SC	Hidalgo, TX	Madison, VA
Linn, OR	Oconee, SC	Hill, TX	Newport News, VA
Malheur, OR	Orangeburg, SC	Hopkins, TX	Norfolk, VA
Marion, OR	Richland, SC	Howard, TX	Northampton, VA
Tillamook, OR	Spartanburg, SC	Hunt, TX	Petersburg, VA
Umatilla, OR	York, SC	Jefferson, TX	Portsmouth, VA
Wasco, OR	Codington, SD	Johnson, TX	Roanoke, VA
Adams, PA	Davison, SD	Kaufman, TX	Rockbridge, VA

Salem, VA	Waukesha, WI	Talladega, AL	Baker, FL
Shenandoah, VA	Winnebago, WI	Tallapoosa, AL	Clay, FL
Smyth, VA	Berkeley, WV	Walker, AL	Columbia, FL
Spotsylvania, VA	Cabell, WV	Baxter, AR	Escambia, FL
Staunton, VA	Greenbrier, WV	Crittenden, AR	Franklin, FL
Virginia Beach, VA	Kanawha, WV	Cross, AR	Hendry, FL
Caledonia, VT	Marion, WV	Faulkner, AR	Levy, FL
Rutland, VT	Mercer, WV	Garland, AR	Putnam, FL
Adams, WA	Monongalia, WV	Independence, AR	Appling, GA
Benton, WA	Ohio, WV	Jackson, AR	Baldwin, GA
Chelan, WA	Wood, WV	Jefferson, AR	Banks, GA
Clallam, WA	Campbell, WY	Johnson, AR	Barrow, GA
Cowlitz, WA	Carbon, WY	Miller, AR	Bryan, GA
Franklin, WA	Laramie, WY	Saline, AR	Bulloch, GA
Grant, WA	Natrona, WY	St. Francis, AR	Butts, GA
Grays Harbor, WA	Sheridan, WY	Washington, AR	Carroll, GA
Kittitas, WA	Sweetwater, WY	Del Norte, CA	Catoosa, GA
Lewis, WA	Teton, WY	Glenn, CA	Chattooga, GA
Skagit, WA	Uinta, WY	Humboldt, CA	Clinch, GA
Spokane, WA		Lake, CA	Coffee, GA
Whatcom, WA		Alamosa, CO	Dade, GA
Yakima, WA		Archuleta, CO	Dawson, GA
Brown, WI	LOW DENSITY	Cheyenne, CO	Decatur, GA
Crawford, WI	Denali, AK	Custer, CO	Dougherty, GA
Dane, WI	Fairbanks North Star, AK	Delta, CO	Floyd, GA
Door, WI	Autauga, AL	Fremont, CO	Franklin, GA
Dunn, WI	Barbour, AL	Gunnison, CO	Gilmer, GA
Eau Claire, WI	Chambers, AL	Hinsdale, CO	Habersham, GA
Fond du Lac, WI	Clarke, AL	Huerfano, CO	Hall, GA
Jefferson, WI	Coffee, AL	Kit Carson, CO	Harris, GA
Juneau, WI	Colbert, AL	La Plata, CO	Houston, GA
Kenosha, WI	Cullman, AL	Lake, CO	Jackson, GA
La Crosse, WI	DeKalb, AL	Logan, CO	Jefferson, GA
Marathon, WI	Elmore, AL	Mesa, CO	Jones, GA
Marinette, WI	Etowah, AL	Mineral, CO	Liberty, GA
Milwaukee, WI	Greene, AL	Otero, CO	Lincoln, GA
Monroe, WI	Henry, AL	Ouray, CO	Macon, GA
Oneida, WI	Jackson, AL	Park, CO	Madison, GA
Outagamie, WI	Lauderdale, AL	Rio Blanco, CO	McDuffie, GA
Rock, WI	Lowndes, AL	Rio Grande, CO	Meriwether, GA
Sauk, WI	Marshall, AL	Teller, CO	Monroe, GA
Sheboygan, WI	Morgan, AL	Washington, CO	Murray, GA
Walworth, WI	Randolph, AL	Windham, CT	Newton, GA
	Russell, AL		
	Shelby, AL		

Oglethorpe, GA	Palo Alto, IA	Hancock, IN	Bossier, LA
Pickens, GA	Plymouth, IA	Hendricks, IN	Iberville, LA
Polk, GA	Sac, IA	Henry, IN	Livingston, LA
Rabun, GA	Story, IA	Jackson, IN	St. Landry, LA
Randolph, GA	Warren, IA	Jasper, IN	St. Martin, LA
Rockdale, GA	Webster, IA	Johnson, IN	St. Mary, LA
Sumter, GA	Winnebago, IA	Marshall, IN	Tangipahoa, LA
Taylor, GA	Winneshiek, IA	Miami, IN	Terrebonne, LA
Terrell, GA	Worth, IA	Montgomery, IN	Franklin, MA
Thomas, GA	Blaine, ID	Noble, IN	Dorchester, MD
Troup, GA	Boundary, ID	Posey, IN	Washington, MD
Union, GA	Canyon, ID	Putnam, IN	Androscoggin, ME
Walton, GA	Cassia, ID	Spencer, IN	Aroostook, ME
Ware, GA	Elmore, ID	Vermillion, IN	Knox, ME
Wayne, GA	Gooding, ID	Wabash, IN	Sagadahoc, ME
White, GA	Jerome, ID	Warren, IN	Waldo, ME
Whitfield, GA	Nez Perce, ID	White, IN	Alcona, MI
Hawaii, HI	Power, ID	Chase, KS	Alger, MI
Adair, IA	Shoshone, ID	Clay, KS	Allegan, MI
Audubon, IA	Valley, ID	Douglas, KS	Alpena, MI
Buena Vista, IA	Boone, IL	Gove, KS	Antrim, MI
Butler, IA	Christian, IL	Labette, KS	Benzie, MI
Carroll, IA	Coles, IL	Miami, KS	Branch, MI
Cedar, IA	Fayette, IL	Pottawatomie, KS	Cass, MI
Cerro Gordo, IA	Franklin, IL	Reno, KS	Cheboygan, MI
Cherokee, IA	Grundy, IL	Sumner, KS	Clare, MI
Decatur, IA	Henry, IL	Wyandotte, KS	Clinton, MI
Des Moines, IA	Jackson, IL	Barren, KY	Crawford, MI
Floyd, IA	Kankakee, IL	Calloway, KY	Dickinson, MI
Fremont, IA	Montgomery, IL	Daviess, KY	Eaton, MI
Hamilton, IA	Rock Island, IL	Graves, KY	Emmet, MI
Hancock, IA	St. Clair, IL	Henry, KY	Gratiot, MI
Humboldt, IA	Tazewell, IL	Hopkins, KY	Hillsdale, MI
Iowa, IA	Washington, IL	Jessamine, KY	Houghton, MI
Jackson, IA	Woodford, IL	Kenton, KY	Ionia, MI
Jasper, IA	Bartholomew, IN	McCracken, KY	Iosco, MI
Mahaska, IA	Clark, IN	Montgomery, KY	Iron, MI
Marion, IA	DeKalb, IN	Pulaski, KY	Isabella, MI
Marshall, IA	Delaware, IN	Scott, KY	Jackson, MI
Montgomery, IA	Dubois, IN	Shelby, KY	Kalkaska, MI
Muscatine, IA	Gibson, IN	Simpson, KY	Keweenaw, MI
O'Brien, IA	Grant, IN	Whitley, KY	Lapeer, MI
Page, IA	Greene, IN	Avoyelles, LA	Leelanau, MI

Lenawee, MI	Cass, MO	Park, MT	Saline, NE
Manistee, MI	Christian, MO	Anson, NC	Sarpy, NE
Midland, MI	Cole, MO	Ashe, NC	Saunders, NE
Monroe, MI	Cooper, MO	Bertie, NC	Scotts Bluff, NE
Montcalm, MI	DeKalb, MO	Bladen, NC	Seward, NE
Ogemaw, MI	Dent, MO	Burke, NC	Thayer, NE
Presque Isle, MI	Franklin, MO	Cabarrus, NC	Washington, NE
Roscommon, MI	Iron, MO	Caldwell, NC	York, NE
Saginaw, MI	Jasper, MO	Carteret, NC	Cheshire, NH
Sanilac, MI	Jefferson, MO	Cherokee, NC	Coos, NH
Shiawassee, MI	Laclede, MO	Columbus, NC	Sullivan, NH
Tuscola, MI	Lawrence, MO	Edgecombe, NC	Cumberland, NJ
Van Buren, MI	Lewis, MO	Gates, NC	Chaves, NM
Wexford, MI	Livingston, MO	Harnett, NC	Colfax, NM
Becker, MN	Macon, MO	Haywood, NC	Curry, NM
Blue Earth, MN	New Madrid, MO	Henderson, NC	Doña Ana, NM
Brown, MN	Nodaway, MO	Jackson, NC	Eddy, NM
Cook, MN	Pemiscot, MO	Macon, NC	Hidalgo, NM
Faribault, MN	Perry, MO	Pasquotank, NC	Lea, NM
Kittson, MN	Pettis, MO	Pender, NC	Lincoln, NM
Lac qui Parle, MN	Pike, MO	Perquimans, NC	Luna, NM
Le Sueur, MN	Polk, MO	Polk, NC	Mora, NM
Lincoln, MN	Randolph, MO	Sampson, NC	Otero, NM
Mahnomen, MN	St. Francois, MO	Swain, NC	Rio Arriba, NM
McLeod, MN	Stoddard, MO	Warren, NC	Roosevelt, NM
Mille Lacs, MN	Taney, MO	Wilson, NC	Sandoval, NM
Morrison, MN	Warren, MO	Yadkin, NC	Taos, NM
Mower, MN	Alcorn, MS	Barnes, ND	Torrance, NM
Otter Tail, MN	Hancock, MS	Morton, ND	Carson City, NV
Pine, MN	Hinds, MS	Richland, ND	Eureka, NV
Polk, MN	Lafayette, MS	Traill, ND	Lander, NV
Redwood, MN	Lowndes, MS	Ward, ND	Lincoln, NV
Rice, MN	Madison, MS	Brown, NE	Pershing, NV
Rock, MN	Marion, MS	Dakota, NE	White Pine, NV
Sherburne, MN	Marshall, MS	Dawes, NE	Allegany, NY
Stearns, MN	Monroe, MS	Dodge, NE	Broome, NY
Steele, MN	Montgomery, MS	Hamilton, NE	Chemung, NY
Stevens, MN	Oktibbeha, MS	Holt, NE	Cortland, NY
Adair, MO	Pontotoc, MS	Madison, NE	Franklin, NY
Atchison, MO	Washington, MS	Nemaha, NE	Greene, NY
Barry, MO	Webster, MS	Otoe, NE	Herkimer, NY
Butler, MO	Yalobusha, MS	Platte, NE	Livingston, NY
Callaway, MO	Lake, MT	Polk, NE	Madison, NY

Monroe, NY	Caddo, OK	Grant, OR	Carroll, TN
Montgomery, NY	Canadian, OK	Jefferson, OR	Chester, TN
Niagara, NY	Cherokee, OK	Klamath, OR	DeKalb, TN
Rensselaer, NY	Choctaw, OK	Polk, OR	Grainger, TN
Schoharie, NY	Cleveland, OK	Union, OR	Greene, TN
Schuyler, NY	Comanche, OK	Yamhill, OR	Hawkins, TN
Wayne, NY	Cotton, OK	Beaver, PA	Haywood, TN
Ashland, OH	Craig, OK	Cambria, PA	Henderson, TN
Ashtabula, OH	Creek, OK	Clarion, PA	Henry, TN
Athens, OH	Garfield, OK	Fayette, PA	Humphreys, TN
Auglaize, OH	Garvin, OK	Greene, PA	Jefferson, TN
Belmont, OH	Grady, OK	Indiana, PA	Lawrence, TN
Clark, OH	Haskell, OK	Jefferson, PA	Lewis, TN
Clermont, OH	Kay, OK	Juniata, PA	Lincoln, TN
Crawford, OH	Kiowa, OK	Lebanon, PA	Loudon, TN
Fairfield, OH	Latimer, OK	Luzerne, PA	Marshall, TN
Fayette, OH	Le Flore, OK	Potter, PA	Mauzy, TN
Gallia, OH	Lincoln, OK	Snyder, PA	McMinn, TN
Henry, OH	Logan, OK	Susquehanna, PA	Montgomery, TN
Highland, OH	Love, OK	Venango, PA	Obion, TN
Hocking, OH	Major, OK	Wayne, PA	Rhea, TN
Huron, OH	Muskogee, OK	Berkeley, SC	Roane, TN
Jackson, OH	Okfuskee, OK	Cherokee, SC	Robertson, TN
Knox, OH	Oklahoma, OK	Chester, SC	Smith, TN
Lake, OH	Okmulgee, OK	Chesterfield, SC	Sumner, TN
Licking, OH	Osage, OK	Edgefield, SC	Tipton, TN
Madison, OH	Pawnee, OK	Georgetown, SC	Warren, TN
Marion, OH	Payne, OK	Greenwood, SC	Washington, TN
Medina, OH	Pittsburg, OK	Lancaster, SC	Weakley, TN
Meigs, OH	Pontotoc, OK	Lee, SC	Anderson, TX
Muskingum, OH	Pottawatomie, OK	Marion, SC	Angelina, TX
Noble, OH	Pushmataha, OK	Newberry, SC	Austin, TX
Pickaway, OH	Seminole, OK	Sumter, SC	Bee, TX
Portage, OH	Sequoyah, OK	Beadle, SD	Brewster, TX
Preble, OH	Stephens, OK	Brookings, SD	Caldwell, TX
Richland, OH	Texas, OK	Brown, SD	Colorado, TX
Seneca, OH	Tillman, OK	Clay, SD	Cooke, TX
Stark, OH	Wagoner, OK	Hughes, SD	Ector, TX
Wayne, OH	Washington, OK	Lake, SD	Fannin, TX
Adair, OK	Woodward, OK	Tripp, SD	Freestone, TX
Alfalfa, OK	Coos, OR	Walworth, SD	Galveston, TX
Beckham, OK	Crook, OR	Benton, TN	Garza, TX
Bryan, OK	Curry, OR	Bradley, TN	Gillespie, TX

Gregg, TX	Hopewell, VA	Taylor, WI	De Baca, NM
Grimes, TX	Lancaster, VA	Trempealeau, WI	Guadalupe, NM
Hardin, TX	Louisa, VA	Washington, WI	Quay, NM
Henderson, TX	Lynchburg, VA	Waupaca, WI	Union, NM
Karnes, TX	Martinsville, VA	Waushara, WI	Mineral, NV
Kendall, TX	Montgomery, VA	Wood, WI	Custer, OK
Kerr, TX	New Kent, VA	Boone, WV	McClain, OK
La Salle, TX	Page, VA	Harrison, WV	McIntosh, OK
Medina, TX	Prince George, VA	Jackson, WV	Murray, OK
Orange, TX	Richmond, VA	Putnam, WV	Morrow, OR
Palo Pinto, TX	Roanoke, VA	Randolph, WV	Dillon, SC
Panola, TX	Rockingham, VA	Lincoln, WY	Brule, SD
Parker, TX	Suffolk, VA		Jones, SD
Refugio, TX	Sussex, VA	LOWEST	Atascosa, TX
Robertson, TX	Washington, VA	DENSITY	Bastrop, TX
Rusk, TX	Waynesboro, VA	Butler, AL	Brooks, TX
San Jacinto, TX	Williamsburg, VA	Marion, AL	Crockett, TX
San Patricio, TX	Winchester, VA	Franklin, AR	Eastland, TX
Taylor, TX	Wythe, VA	Hempstead, AR	Hardeman, TX
Titus, TX	Bennington, VT	Monroe, AR	Kimble, TX
Uvalde, TX	Franklin, VT	La Paz, AZ	Live Oak, TX
Val Verde, TX	Orange, VT	Lincoln, CO	Madison, TX
Van Zandt, TX	Orleans, VT	Prowers, CO	Nolan, TX
Washington, TX	Asotin, WA	Hamilton, FL	Pecos, TX
Wharton, TX	Columbia, WA	Jefferson, FL	Beaver, UT
Wichita, TX	Douglas, WA	Taylor, FL	Emery, UT
Wilbarger, TX	Jefferson, WA	Charlton, GA	Emporia, VA
Wise, TX	Okanogan, WA	Emanuel, GA	Prince Edward, VA
Wood, TX	Wahkiakum, WA	Lanier, GA	
Cache, UT	Walla Walla, WA	Pulaski, GA	
Kane, UT	Whitman, WA	Quitman, GA	
Millard, UT	Barron, WI	Seminole, GA	
Rich, UT	Burnett, WI	Stewart, GA	
Sevier, UT	Chippewa, WI	Telfair, GA	
Uintah, UT	Columbia, WI	Ellis, KS	
Weber, UT	Dodge, WI	Logan, KS	
Botetourt, VA	Grant, WI	Russell, KS	
Caroline, VA	Jackson, WI	Ohio, KY	
Franklin, VA	Lincoln, WI	Ascension, LA	
Fredericksburg, VA	Manitowoc, WI	Grenada, MS	
Greensville, VA	Portage, WI	Duplin, NC	
Hampton, VA	Racine, WI	Thomas, NE	
Henry, VA	St. Croix, WI	Cibola, NM	



About the Charging Analytics Program

The Charging Analytics Program (CAP) accelerates the return on investment for installing and operating electric vehicle charging stations. Businesses get access to the latest aggregated EV market and charging deployment data across the U.S. plus insights on when, where and how EV chargers are being used. Reports and interactive maps that get down to the street level will help site hosts fine-tune their strategy for successfully entering the EV charging market.

CAP evaluates markets at the national, state/provincial, and local levels to determine when they might be ready to support additional charging stations based on data from a wide variety of sources to create benchmark analyses. CAP cross-references these insights with utilization data collected from EV chargers currently in operation to inform EV charging deployment decisions.

For more information about CAP, contact Executive Director Karl Doenges (kdoenges@transportationenergy.org)

About the Transportation Energy Institute

The Transportation Energy Institute, founded by NACS in 2013, is a 501(c)(4) nonprofit research-oriented think tank dedicated to evaluating the market issues related to vehicles and the fuels that power them. By bringing together diverse stakeholders of the transportation and fuels markets, the Institute helps to identify opportunities and challenges associated with new technologies and to facilitate industry coordination to help ensure that consumers derive the greatest benefit.

The Transportation Energy Institute commissions and publishes comprehensive, fact-based research projects that address the interests of the affected stakeholders. Such publications will help to inform both business owners considering long-term investment decisions and policymakers considering legislation and regulations affecting the market. Research is independent and unbiased, designed to answer questions, not advocate a specific outcome. Participants in the Transportation Energy Institute are dedicated to promoting facts and providing decision makers with the most credible information possible so that the market can deliver the best in vehicle and fueling options to the consumer.

For more about the Transportation Energy Institute visit transportationenergy.org

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