Charging Analytics Program

EVSE Charger Performance Analysis

2025 Q3

BENCHMARK REPORT
OCTOBER 2024–SEPTEMBER 2025

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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 influence on utilization based upon a difference in a key variable, such as charger power, connector type or proximity to a particular business. 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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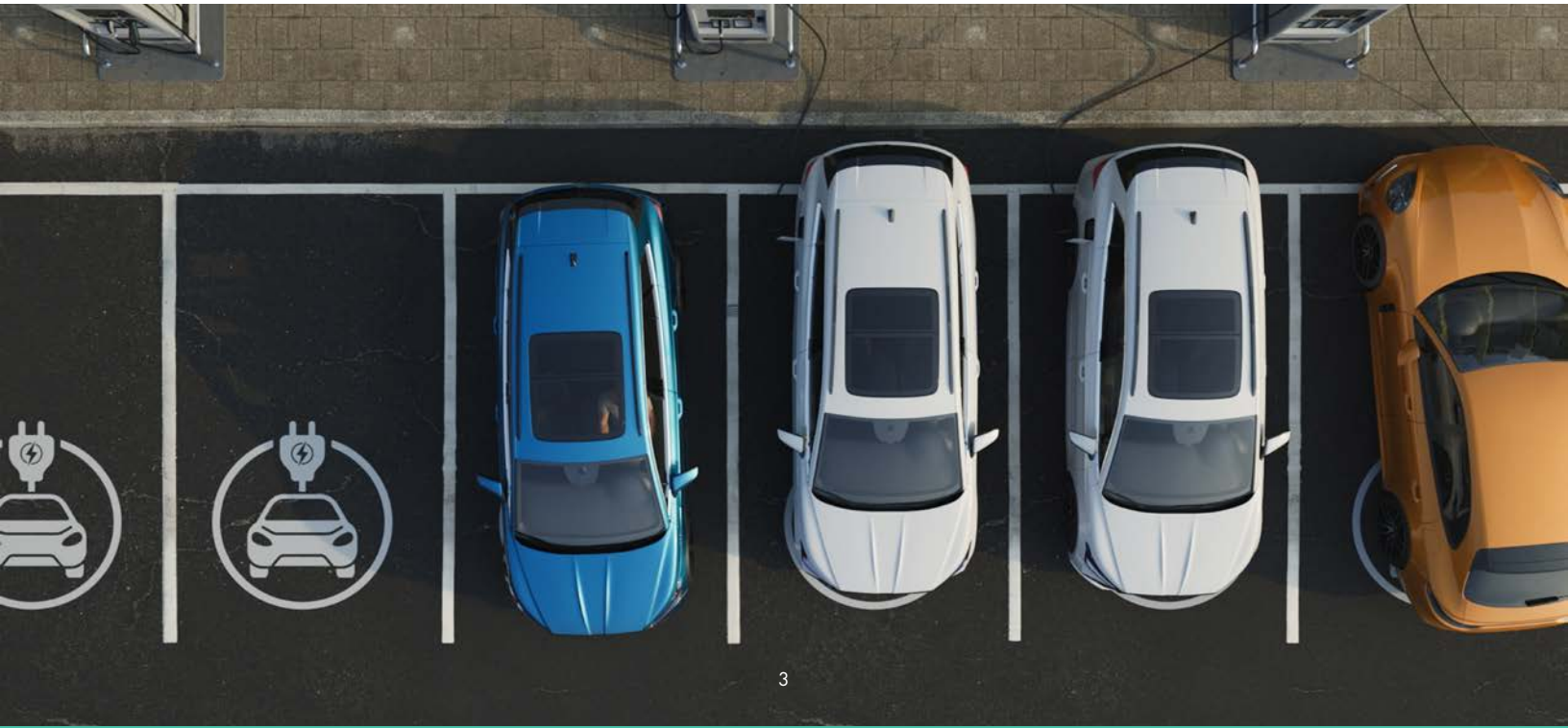


The number of DCFC ports in the data set increased 81% over the 12 months ending in September:

Connector	Total Ports	12-Month Change
National	57,343	81%
CCS	13,502	109%
J3400	34,474	95%
CCS-Chademo	7,557	10%
J3400 Combos	864	123%

There were twice as many chargers located near restaurant as near convenience stores and they accounted for 28% of all charging sessions over the 12-month period.

Vertical	Charging Ports	Share of Sessions	Avg Utilization
Restaurants	28,846	28.2%	17.3%
Convenience Stores	14,362	11.3%	13.3%
Supermarkets	10,215	10.9%	18.6%

Chargers 300 kW or higher accounted for 26.2% of charger ports in the nation and recorded the most sessions per port per month:

Charger	Market Share	Sessions
300 kW+	26.2%	246
100 – 299 kW	56.8%	216
50 – 99 kW	15.7%	104
0 – 49 kW	1.4%	29

Drivers spent on average 355 hours per month charging at stations equipped with CCS chargers and 1,528 hours at stations equipped with J3400 chargers.

Connector Type	Sessions per Month	Session Duration	Ports per Station	Total Time Charging Station per Month
CCS	191	34.9	3.2	355 hours
J3400	251	29.7	12.3	1,528 hours

Charging sessions per month increased for all business hosts, with supermarkets recording the most growth:

- **Restaurant:** 5.1% to 231
- **Convenience:** 5.7% to 183
- **Supermarkets:** 6.7% to 239

Consumers use public fast chargers most often:

Friday – Sunday

17.9% utilization vs 15.1% other days

12 pm – 6 pm

25.0% utilization vs 13.1% rest of the day

About the Data

The Transportation Energy Institute partners with Paren to obtain the data that powers the Charging Analytics Program (CAP) and deliver insights derived from that data. The data is collected daily from publicly available sources, compiled on a monthly basis and then delivered to CAP for analysis and presentation.

Paren is transforming the EV charging industry with real-time data solutions that set the standard for reliability and transparency. The data platform covers 95%+ of fast charging ports across the USA and Canada, processing over 100M events per day and aggregating insights for 13M fast charging sessions on a monthly basis. The platform is trusted by leading automakers, charge point operators and has quickly become a source of truth for operators and the media.

Summary of Charger Inventory in CAP

In the third quarter of 2025, the Charging Analytics Program (CAP) continued to expand its collection of data to include session insights from more than 57,000 DCFC charging ports in the United States, including those equipped with all connector types - CCS, Chademo, J3400 (aka, Tesla/NACS) and various combinations. This inventory represents 89% of the nearly 65,000 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 11.8 million in June 2025 to 12.1 million in September 2025. CAP enables comparison of performance among chargers based upon their location, their power rating, their connector type and their proximity to specific business types (or verticals).

A 2024 study by the Massachusetts Institute of Technology (MIT)[1] 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.

1 https://mobility.mit.edu/biblio/zheng-effects-electric-vehicle-charging-stations-economic-vitality-local/

FIGURE 1. TOTAL DCFC IN DATA SET

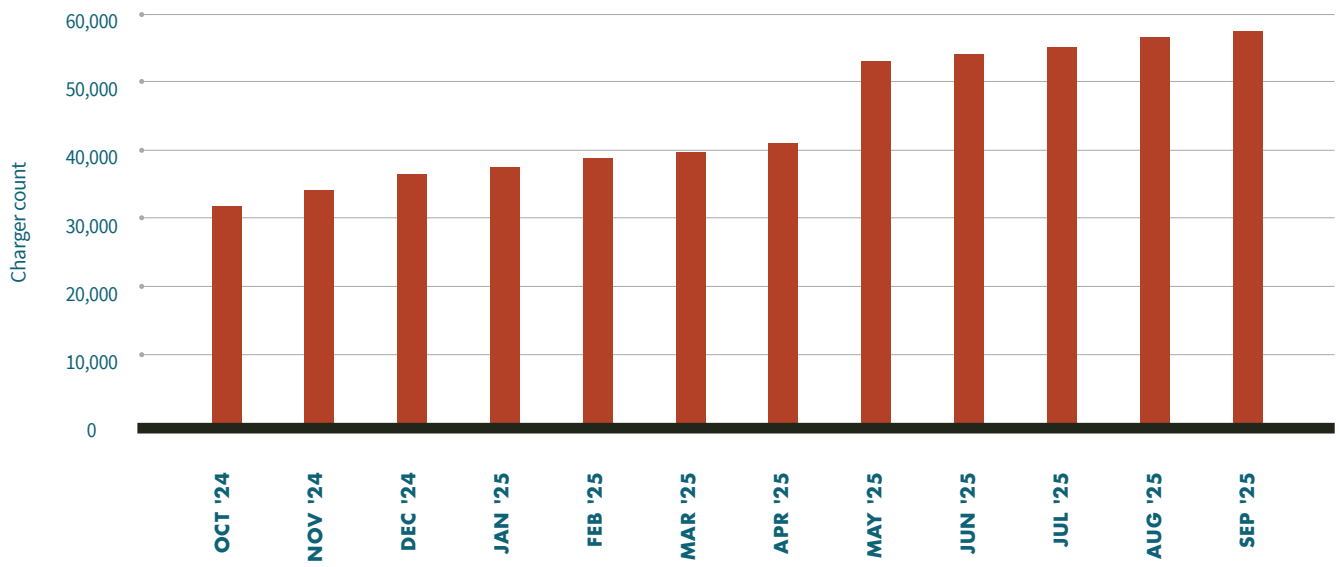


FIGURE 2. TOTAL CHARGING SESSION IN DATA SET

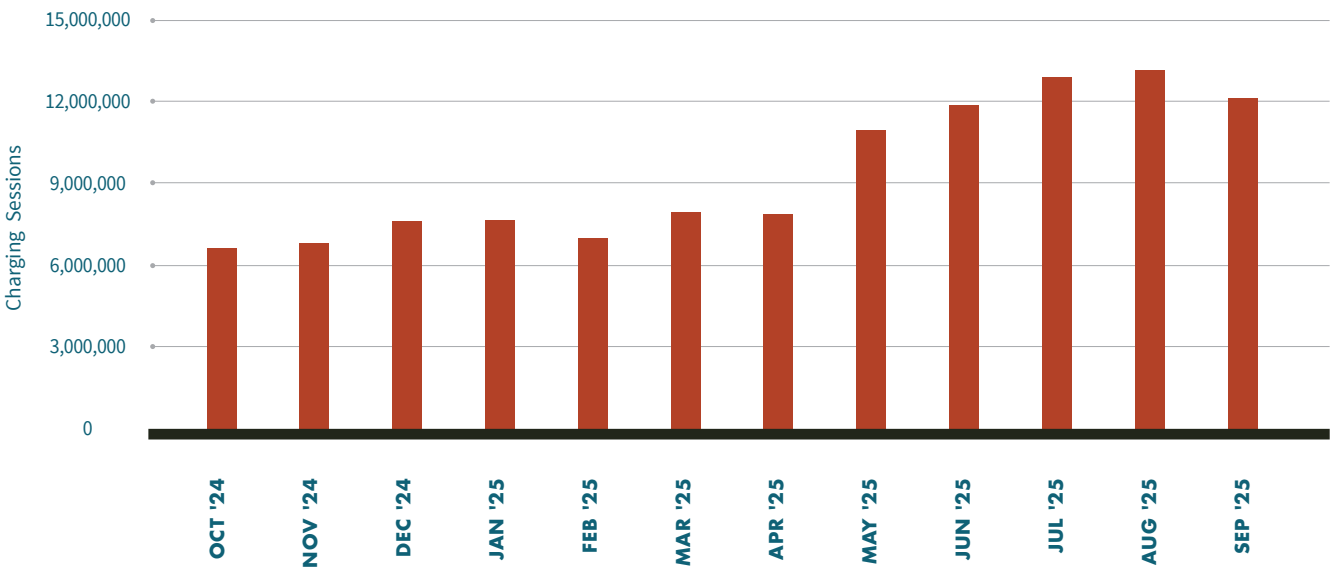


FIGURE 3. DCFC INVENTORY BY CHARGER POWER

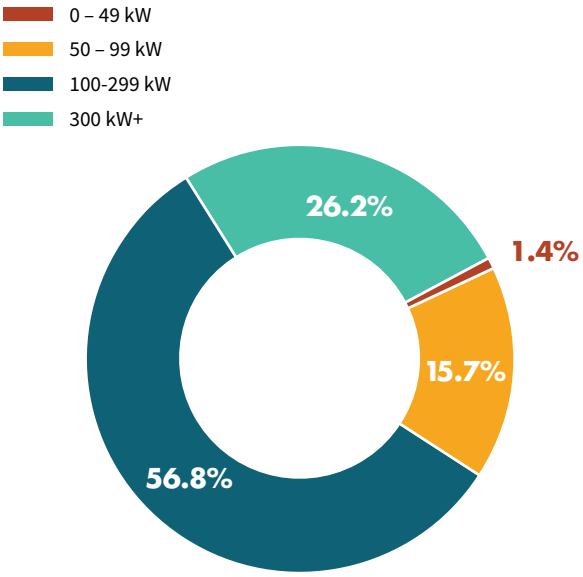


FIGURE 4. DCFC INVENTORY BY PLUG TYPE

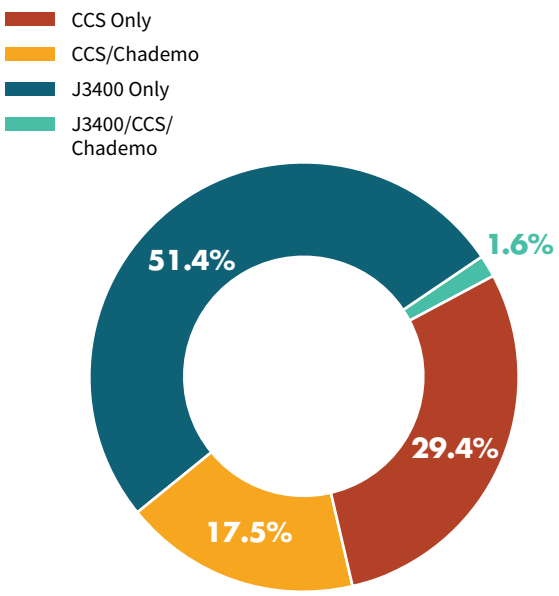
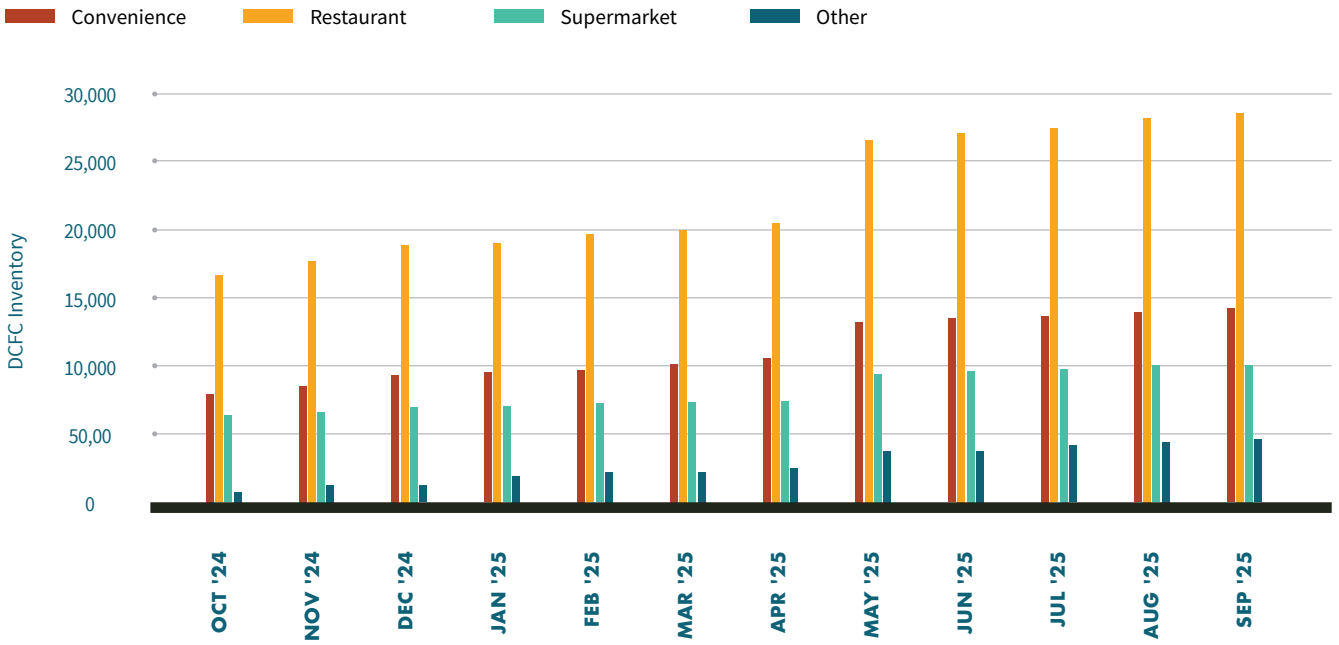
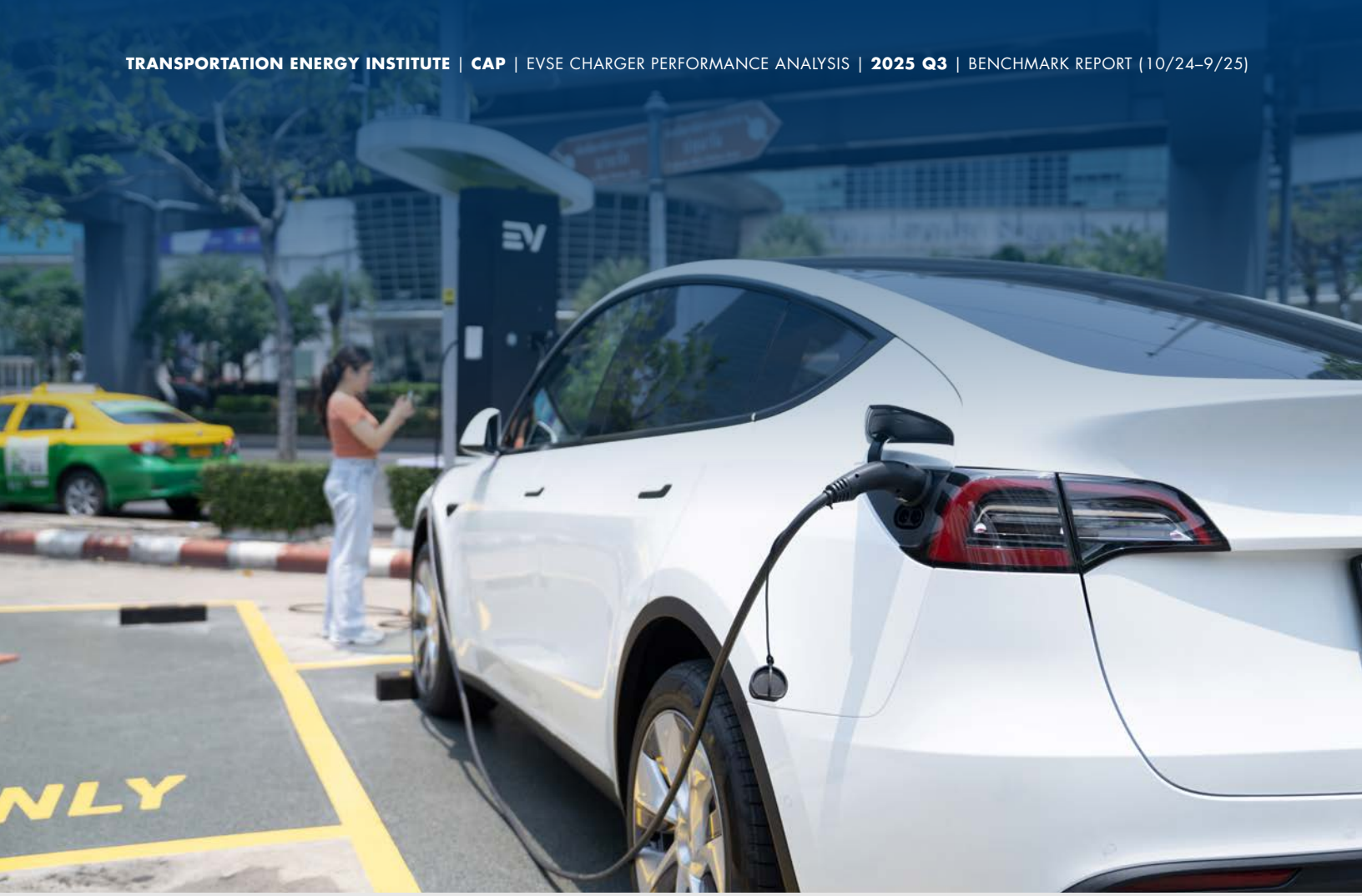


FIGURE 5. DCFC INVENTORY BY PROXIMITY TO BUSINESS VERTICAL





Business Opportunities from Customer Dwell Time

Generating revenue from charging operations requires business intelligence around selling electrons and in-store sales. Insights into how the customer behaves and how the charger is used are critical to making business decisions. The data contained in this report provides significant insight into the utilization of DCFCs throughout the United States, with specific focus on key distinguishing characteristics. Each data set provides unique perspective about the performance of chargers and their potential benefit to the companies that invest in their installation and operation. Below is a high-level summary of key data points and how they relate to business opportunities, expressed in terms of hours spent each month per port at a business offering a charger.

TABLE 1. SUMMARY OF CUSTOMER DWELL TIME IN Q3 2025

Q3 AVERAGES	UTILIZATION	PEAK UTILIZATION 12 pm – 6 pm	SESSION/ MONTH	SESSION DURATION in Minutes	TOTAL TIME CHARGING per Port per Month in Hours
National	16.3%	24.9%	226	30.9	116
Convenience	13.6%	21.3%	203	28.9	98
Restaurant	17.6%	26.7%	247	30.6	126
Supermarket	18.7%	28.1%	259	31.0	134
Other	16.6%	25.5%	231	30.9	119
J3400 Chargers	18.7%	29.2%	279	29.2	136
CCS Chargers	13.2%	19.7%	167	32.7	91

From the data presented in Table 1, businesses that host a DCFC have the opportunity to market directly to consumers who typically spend more than 100 hours charging their vehicle while on site. Considering that very few locations offer just one charging port, the amount of time spent on location is magnitudes higher than the amount shown above.

For example, the average number of CCS ports located at a station was 3.2. The data shows that during the third quarter drivers charging at a CCS port spent 91 hours per month on location; with 3.2 ports, the average amount of time spent on location by all EV drivers was 355 hours. Over the past year, the number of CCS ports more than doubled to 13,502, although their share declined from 25.8% of ports to 17.8%. Charging sessions per port also declined 40%, from 264 per month in October 2024 to 159 in September 2025 while utilization dropped from 21.4% to 12.7%.

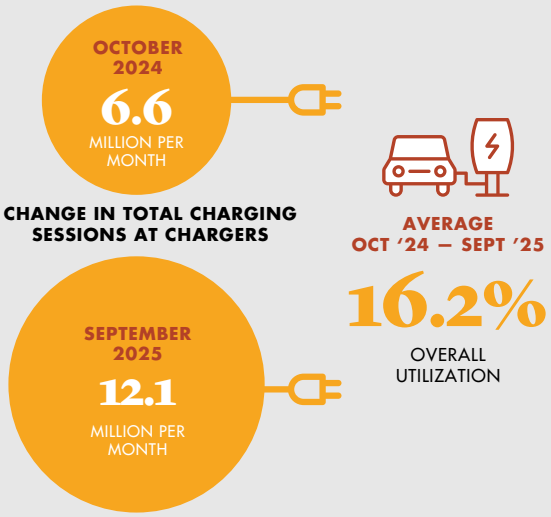
Meanwhile, the average number of J3400 ports located at a station was 12.3. The data shows that during the third quarter drivers charging at a J3400 port spent 136 hours per month on location; with 12.3 ports, the average amount of time spent on location by all EV drivers was 1,528 hours. Over the past year, the number of J3400 ports has almost doubled to 34,474 and their share has increased from 61.0% to 74.1%. Charging sessions per port increased from 226 per month in October 2024 to 258 in September 2025 and utilization increased from 14.9% to 17.7%.

The data indicates a strong business opportunity associated with charger operations, although such opportunity is not evenly distributed among stations and varies significantly throughout the day and week. As will be demonstrated in other sections of this report, market dynamics, geography, charger peak speed and proximity to key business types will affect utilization, session count and overall business opportunity. In addition, the data on utilization by day of week and time of day indicates strategic staffing and promotional efforts could yield results when focused on peak hours. Also, there are trends around what type of connector the industry is deploying and what the customer, which could influence overall utilization. This report is presented to help provide empirical data to help those interested in the business of charging to more effectively evaluate the opportunities that charging may provide.

Analysis of National Charging Session and Utilization Data

This Q3 2025 report analyzes data from charging sessions beginning in October 2024, when CAP collected data from 6.6 million sessions, through September 2025, when CAP collected data from 12.1 million sessions. During this period, the charger ports in the CAP data set averaged 208 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. Sessions longer than this threshold are considered blocking a public charging station, thereby making it unavailable for general public use.



Overall utilization averaged 16.2% over this time frame. Utilization was lowest in April when chargers were used an average of 14.9% of the time and highest in December when they were used 17.3% of the time. There was not a consistent trend presented by the utilization data over the time period included in this analysis.

DCFCs seem to be used most frequently on the weekends, with Friday – Sunday averaging 17.9% compared with 15.1% Monday – Thursday. These utilization values are the exact same as those reported for the 12-month period ending June 2025 indicating strong consistency in utilization throughout the week.

On a given day, consistent with the prior report chargers seem to be used most often between 12 p.m. and 6 p.m., when utilization averaged 25.0%. Between 6 am and 12 noon, utilization averaged 15.8% and between 6 pm and 11 pm utilization averaged 19.3%. On average, charging sessions lasted 32.7 minutes, peaking at 35.3 minutes in January and steadily decreasing to 30.8 minutes in September.

The data shows that 89.8% of charging attempts during the 12-month period were successful on their first attempt, with 4.5% requiring more than one attempt to achieve a successful charging session and 5.7% of attempted sessions concluding in failure. Overall failure rates had declined significantly towards the end of 2024 and through the summer but then began to trend upwards again in August 2025 and ended the period at 5.2% failure in September 2025.

FIGURE 6. AVERAGE CHARGING SESSIONS PER CHARGER PER MONTH

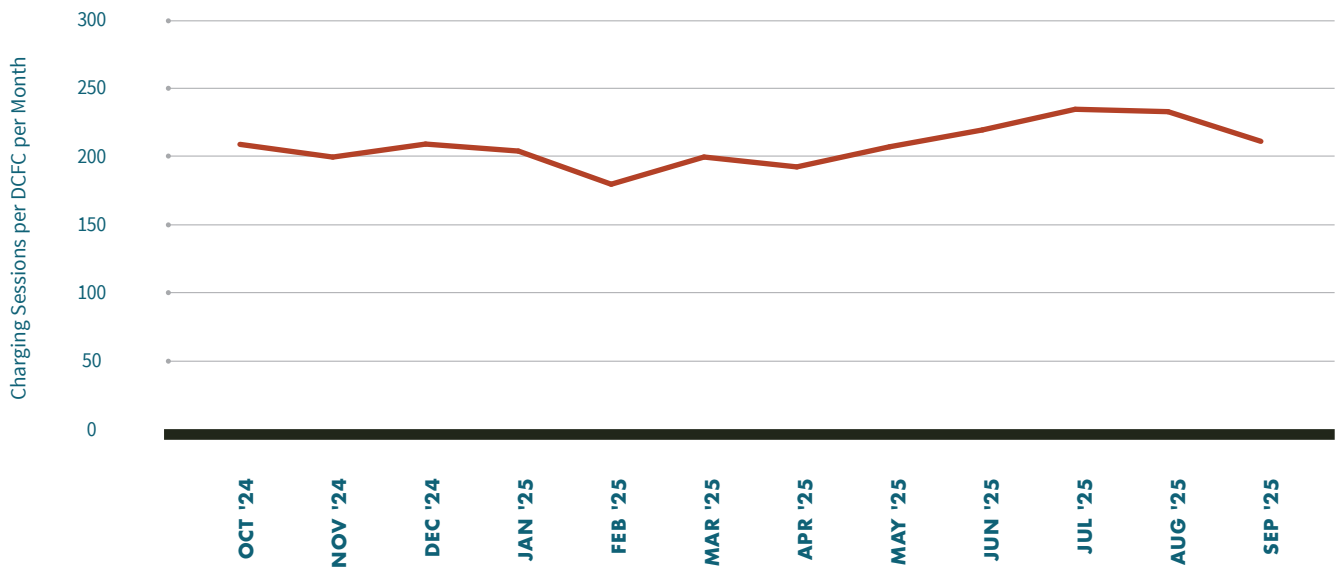


FIGURE 7. AVERAGE UTILIZATION

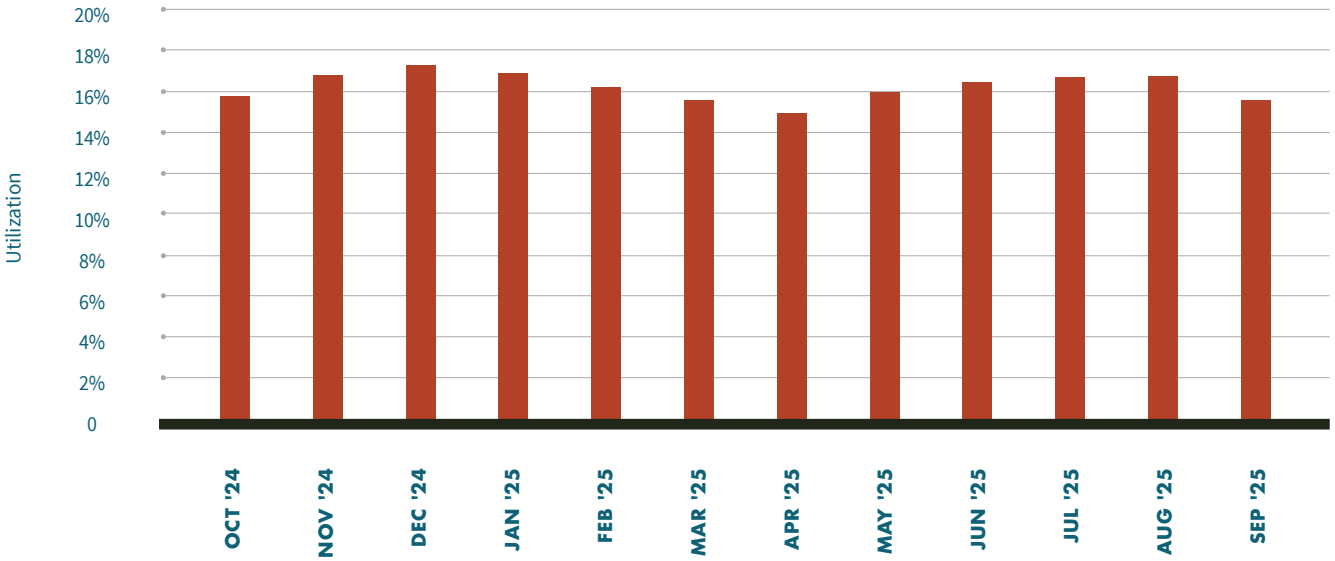


FIGURE 8. UTILIZATION BY DAY OF WEEK

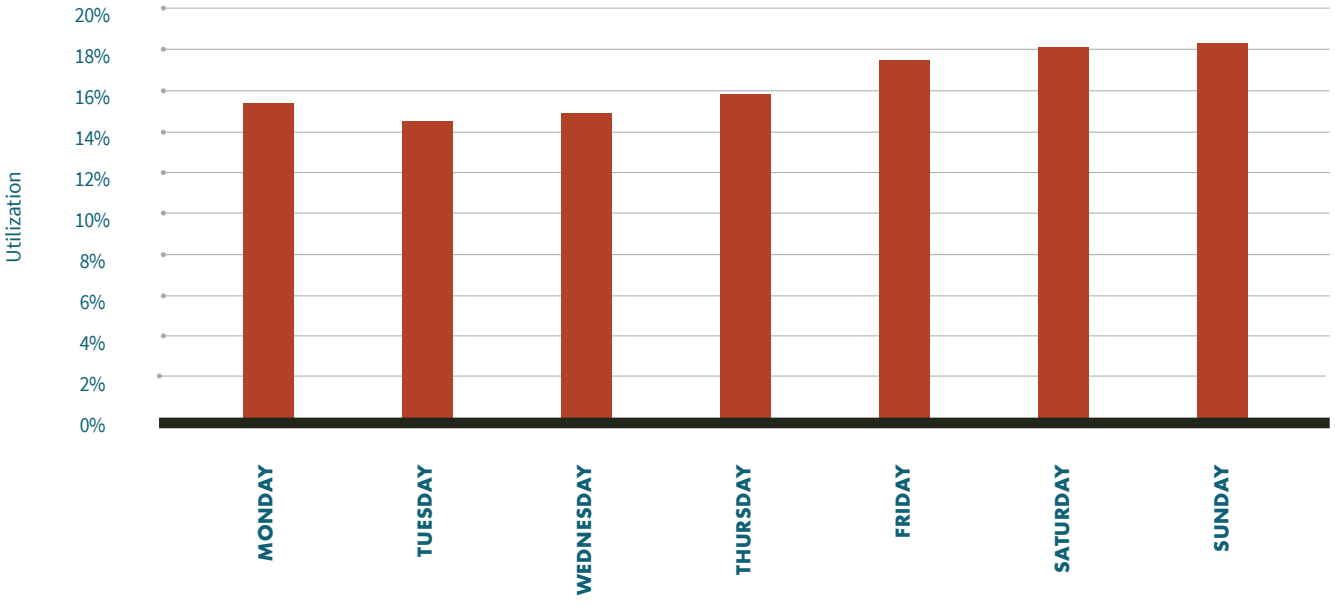


FIGURE 9. UTILIZATION BY HOUR OF DAY

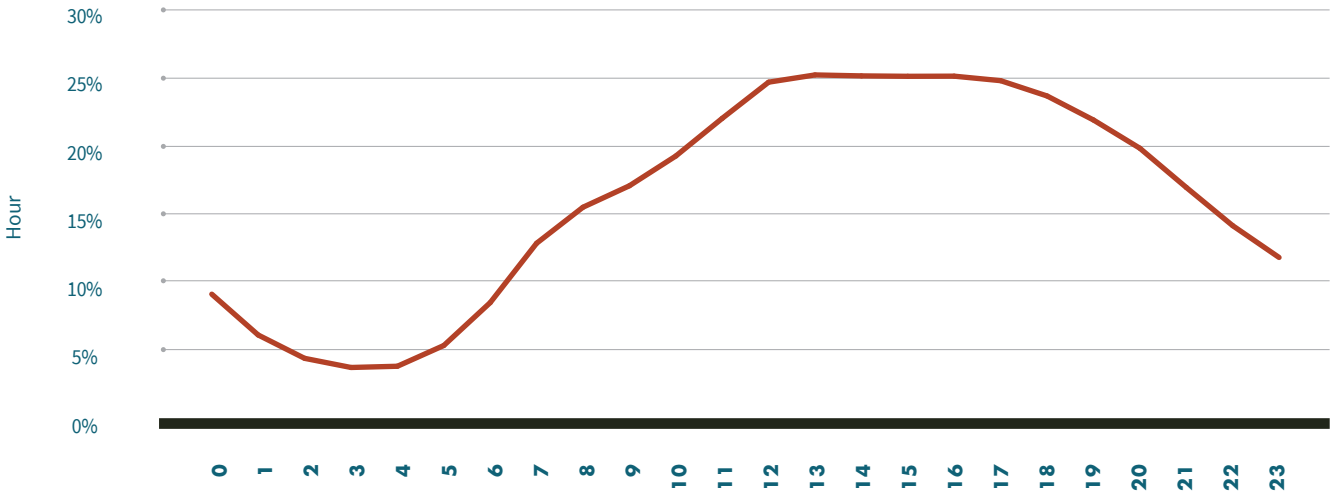


FIGURE 10. AVERAGE CHARGING SESSION DURATION

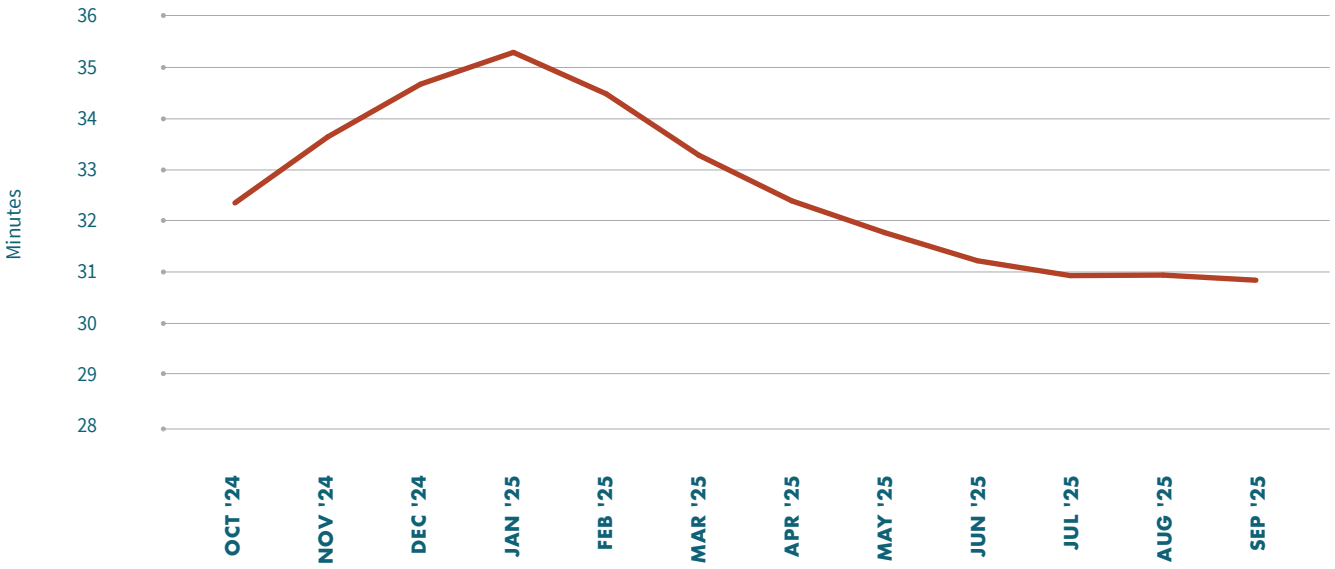


FIGURE 11. CHARGING SESSION FAILURE RATES

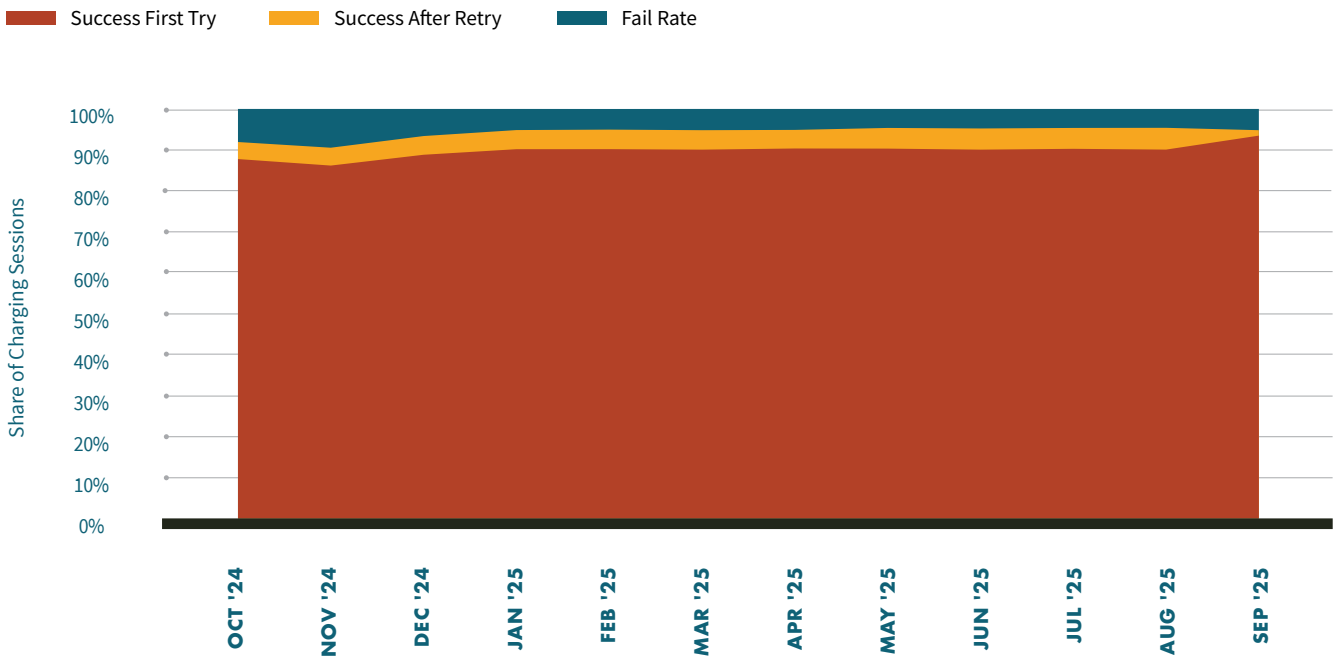
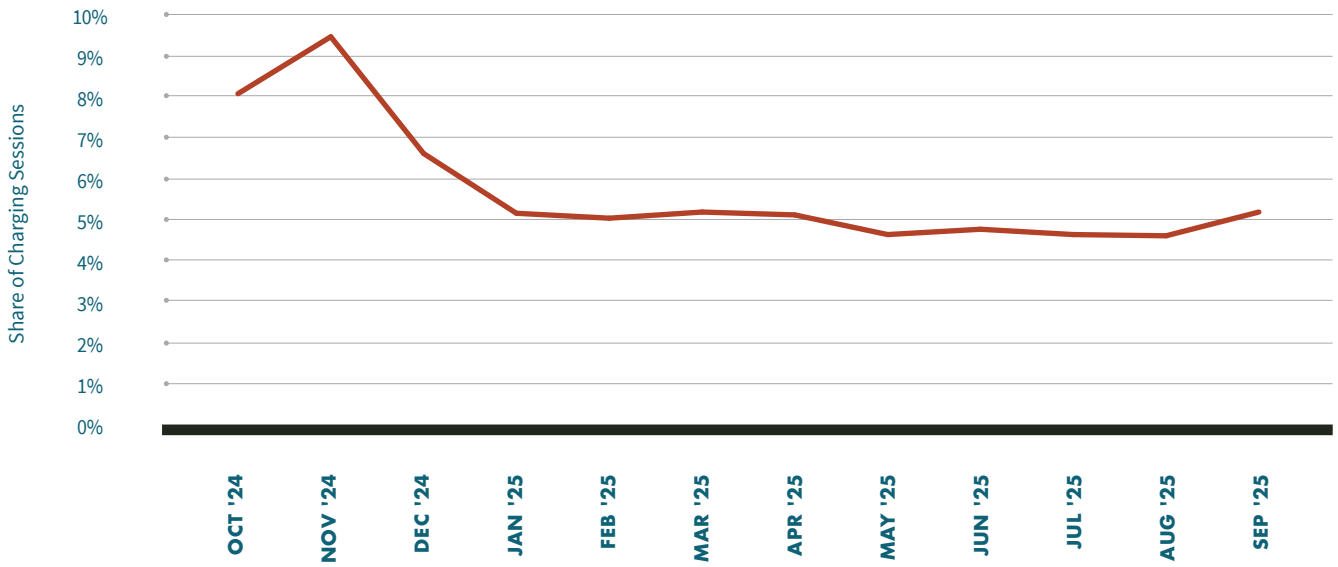
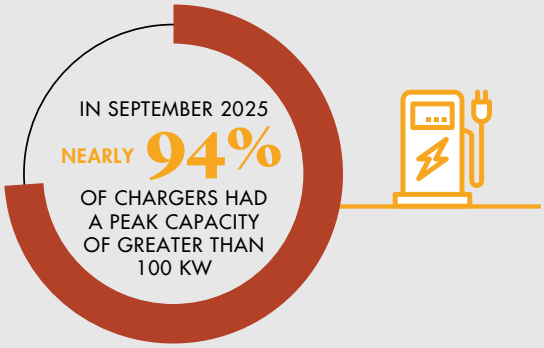


FIGURE 12. FAIL RATE



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 September 2025, nearly 94% offered a peak charge capacity of greater than 100 kW. Those rated 100 – 299 kW accounted for 64.5% of chargers, influenced heavily by the market presence of J3400-equipped chargers.



When looking at the utilization data, chargers of 300 kW or more recorded the most sessions per charger per month, averaging 246 sessions from October 2024 – September 2025 and recorded their highest session count in March 2025 at 254. Chargers with a peak power of 100 – 299 kW averaged 216 sessions and recorded their highest session count of 247 during the month of July. Session count for the higher-powered chargers fluctuated throughout the 12-month period, with a slight tapering off in Q3 2025.

Utilization for 300 kW and higher chargers led the dataset, averaging 19.7% with 100 – 299 kW chargers coming in second at 15.9%. Utilization of the highest-powered chargers declined consistently over the 12-month period, with a net drop of 19.9%, whereas utilization of 100-299 kW chargers increased modestly by 3.4%.

Utilization was consistent with regard to the day of the week, with weekends recording the highest utilization percentages for all except 0 – 49 kW chargers, which showed a slight decline in utilization. The highest-powered chargers averaged a utilization of 19.3% from Friday – Sunday compared with 16.3% the rest of the week, while 100-299 kW chargers averaged 18.1% on the weekends and 15.1% on the weekdays.

Utilization by hour of the day also showed consistent trends for all but the lowest powered chargers, with the strongest utilization between 12 p.m. and 6 p.m. During this time of day, 300 kW or more powerful chargers averaged 26.7% utilization and 100 – 299 kW chargers averaged 25.3%. Together, these higher-powered chargers averaged 16.5% utilization between 6 am and 12 Noon and 20.2% between 6 pm and 11 pm.

As might be expected, the lowest powered chargers (0 – 49 kW) recorded the longest session duration with an average of 59.5 minutes per session, followed by 47.4 minutes for 50-99 kW chargers. Meanwhile, the 100-299 kW chargers recorded the shortest average session duration at 31.1 minutes while 300 kW and higher chargers averaged 33.0 minutes. Session duration for the higher-powered chargers had declined slightly since January but was largely stable from May to September.

The 100-299 kW chargers were shown to be the most reliable, recording the lowest rate of failed charge events at 4.2% followed by 300 kW and higher chargers at 7.2%, compared to a dataset average of 5.7%. Chargers with peak capacity below 100 kW averaged higher than 17.3% failure rates. Failure rates for higher-powered chargers consistently decreased over the 12-month period, although there was an uptick for 300 kW and higher chargers at the end of Q3.

FIGURE 13. TOTAL CHARGERS IN DATA SET BY POWER CAPACITY

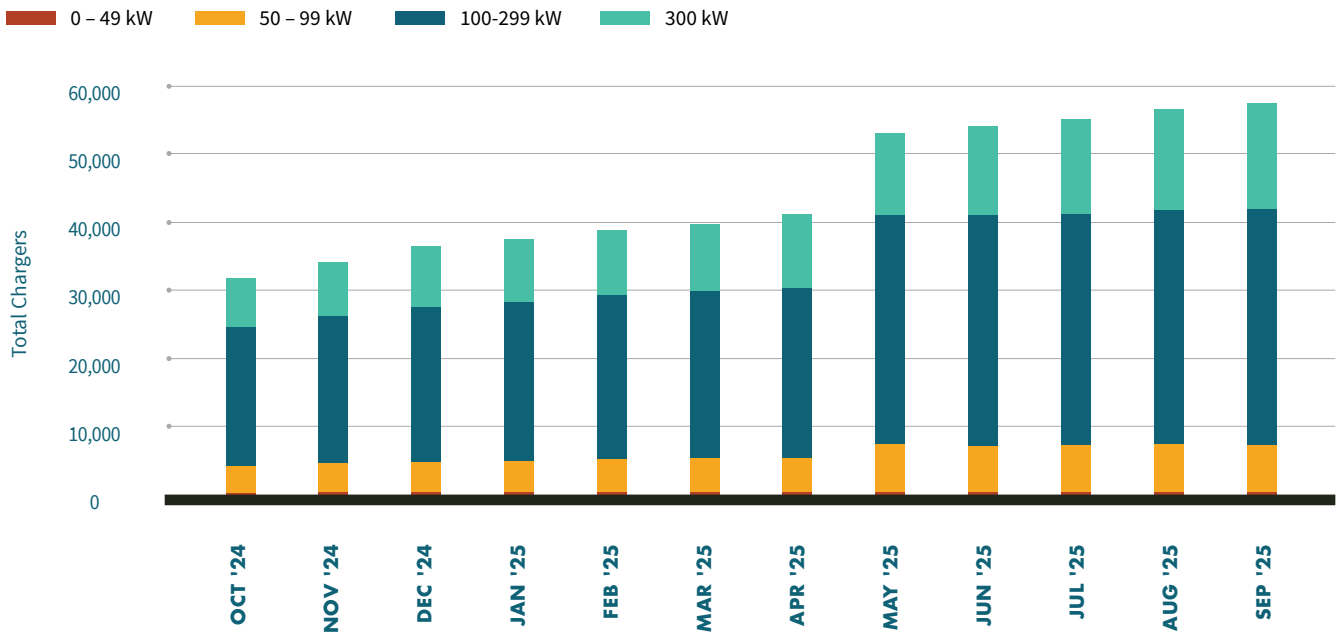


FIGURE 14. SHARE OF CHARGING SESSIONS BY POWER CAPACITY

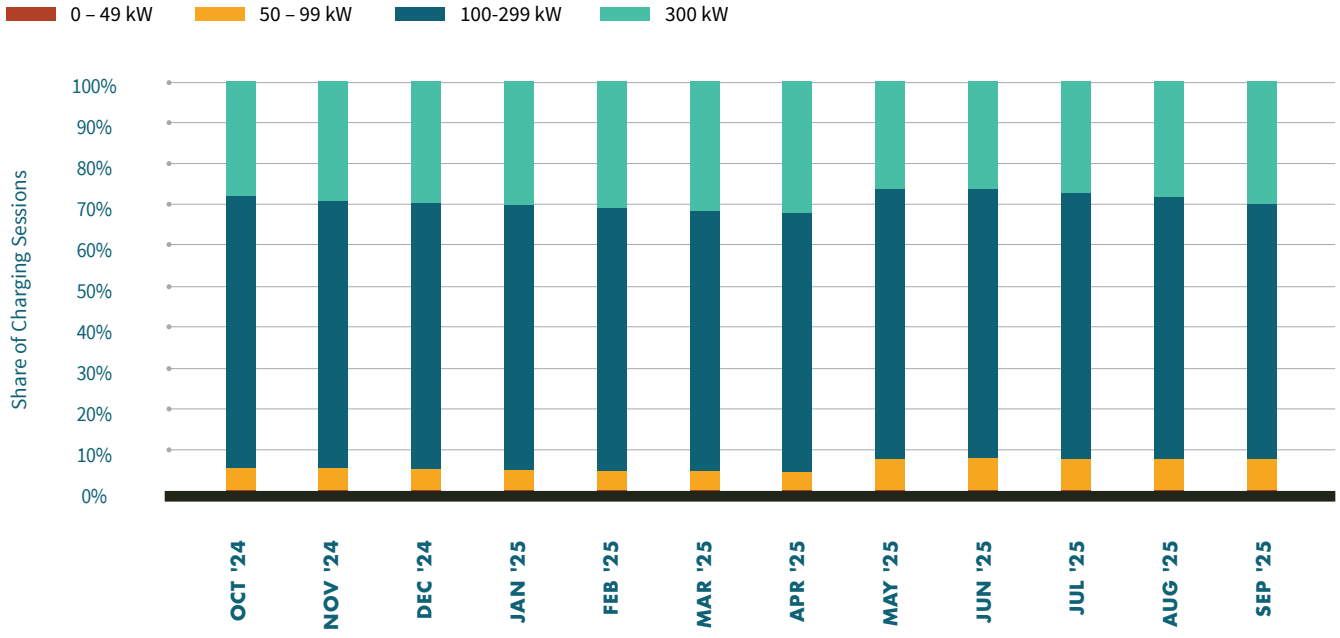


FIGURE 15. CHARGING SESSIONS PER CHARGER PER MONTH

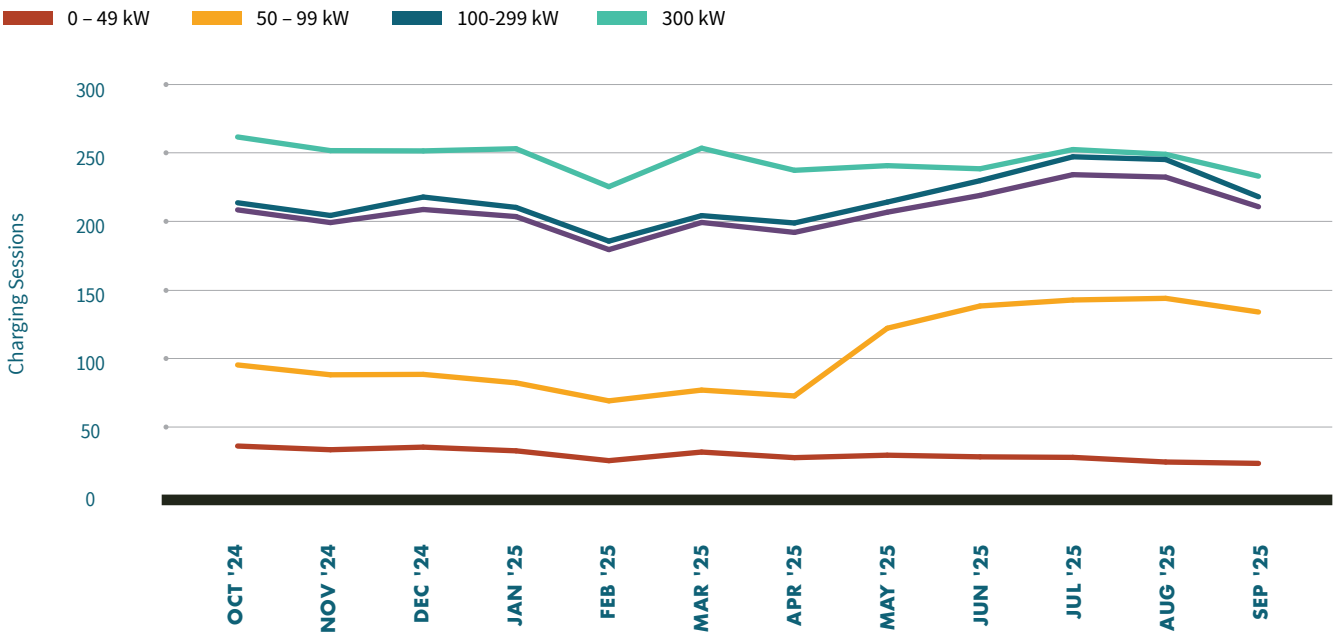


FIGURE 16. AVERAGE UTILIZATION

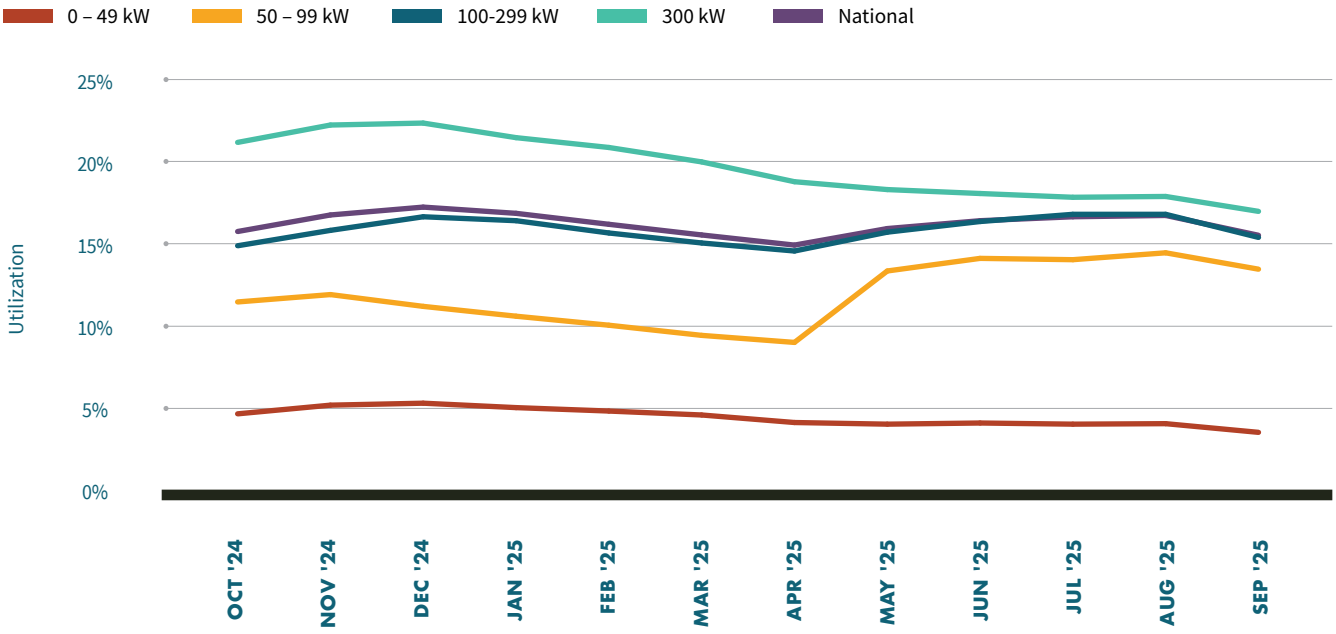


FIGURE 17. AVERAGE UTILIZATION BY DAY OF WEEK

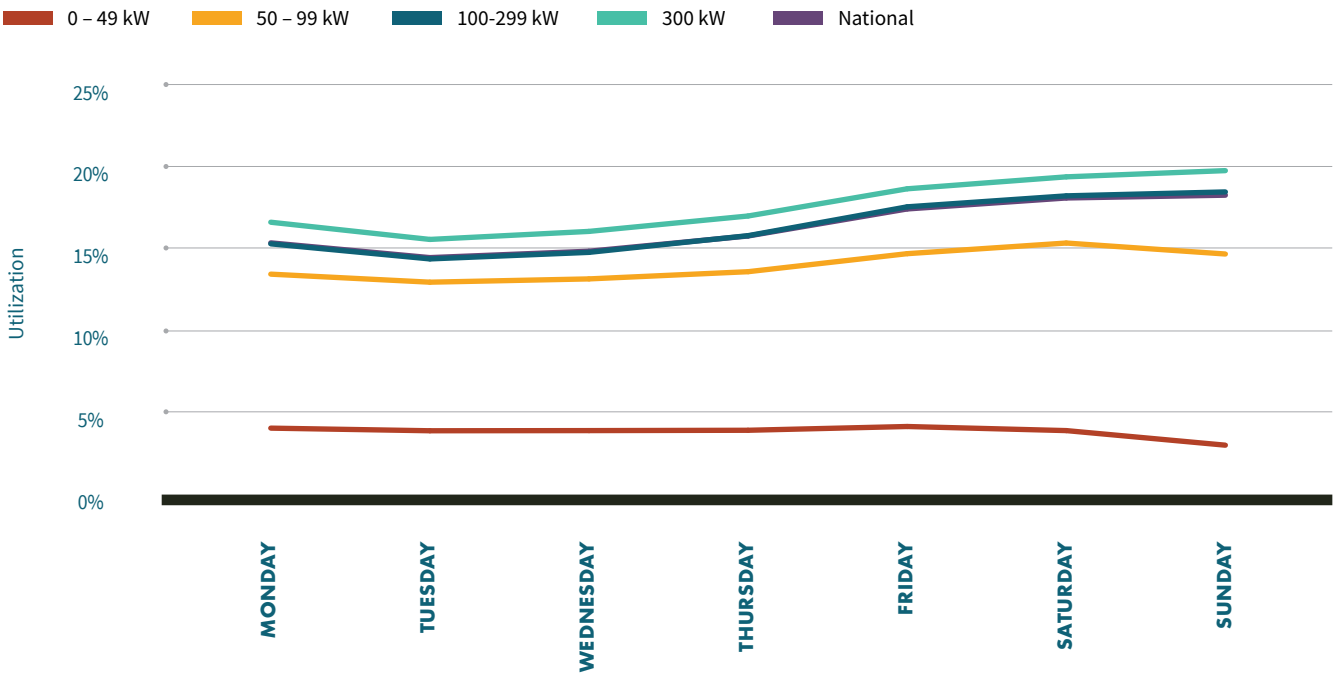


FIGURE 18. UTLIZATION BY TIME OF DAY

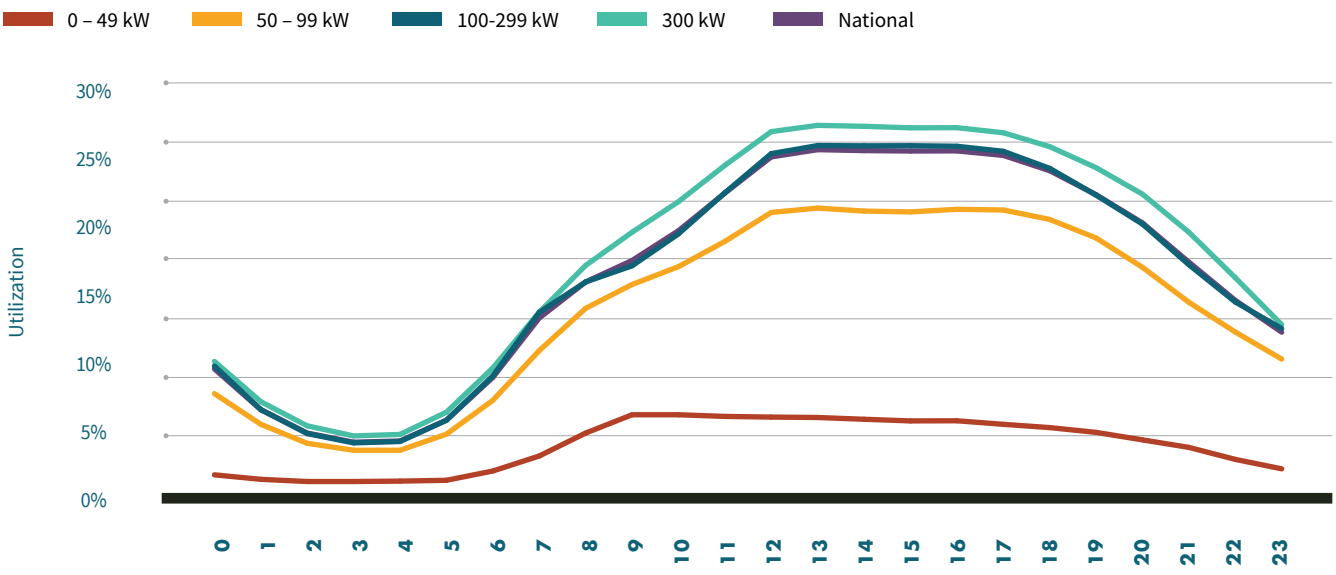


FIGURE 19. SESSION DURATION

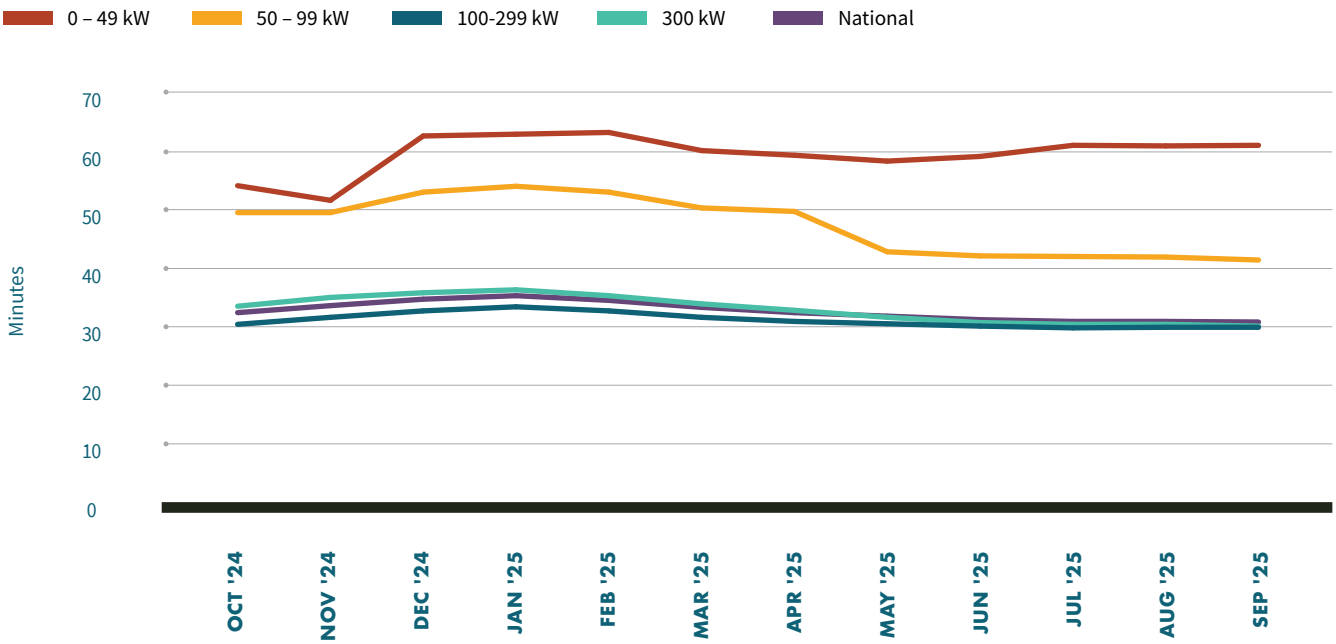


FIGURE 20. AVERAGE SUCCESS AND FAILURE RATES

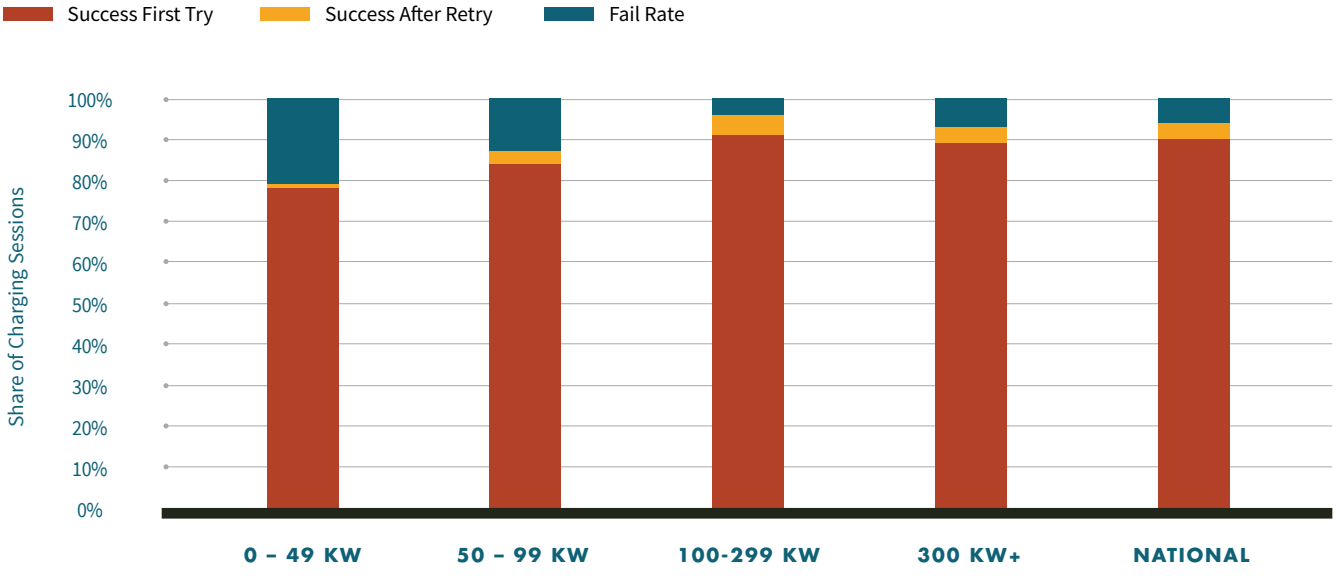


FIGURE 21. FAILURE RATES OVER TIME

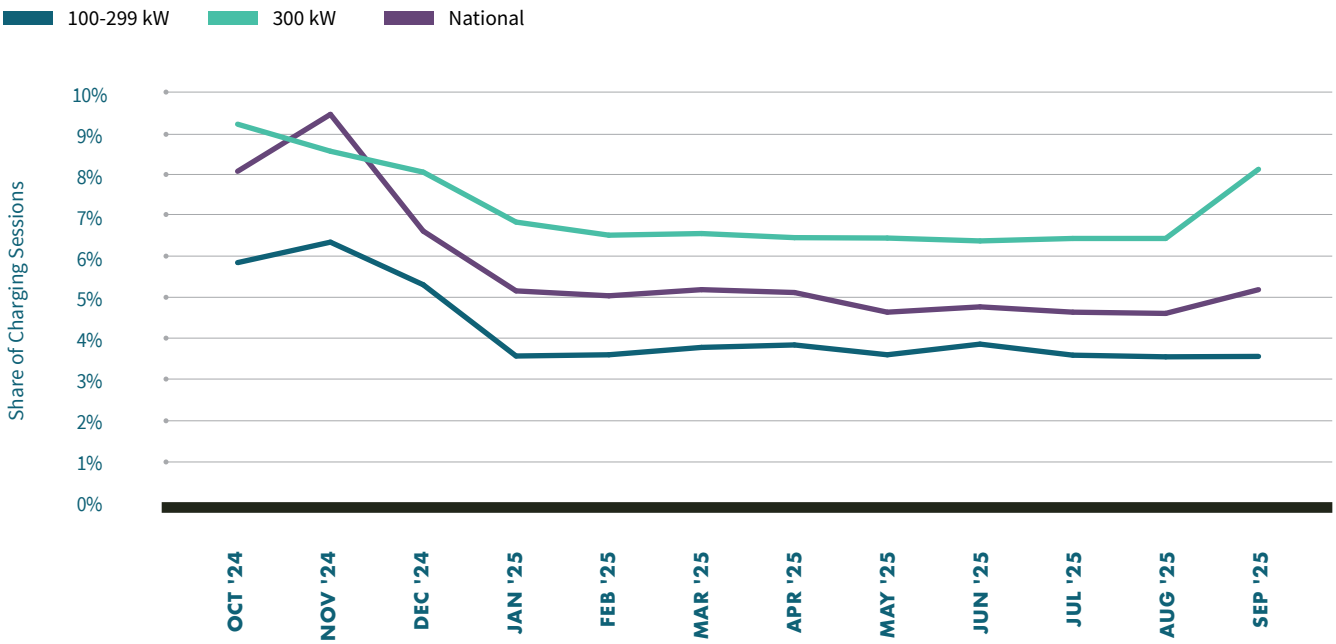


TABLE 2. SHARE OF CHARGERS BY POWER CAPACITY

DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW
Oct '24	0.1%	5.5%	66.3%	28.0%
Nov '24	0.2%	5.5%	65.0%	29.3%
Dec '24	0.2%	5.2%	64.9%	29.8%
Jan '25	0.1%	4.9%	64.7%	30.3%
Feb '25	0.1%	4.8%	64.1%	31.1%
Mar '25	0.1%	4.8%	63.3%	31.8%
Apr '25	0.1%	4.6%	63.1%	32.2%
May '25	0.1%	7.8%	65.9%	26.2%
Jun '25	0.1%	7.9%	65.6%	26.4%
Jul '25	0.1%	7.6%	65.1%	27.3%
Aug '25	0.1%	7.6%	64.1%	28.2%
Sep '25	0.1%	7.7%	62.3%	30.0%
Average	**0.1%**	**6.1%**	**64.5%**	**29.2%**

TABLE 3. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Oct '24	35.6	95.0	213.8	262.0	208.6
Nov '24	32.9	87.8	204.5	252.0	199.3
Dec '24	34.8	88.1	218.0	251.8	208.9
Jan '25	32.1	81.9	210.4	253.4	203.7
Feb '25	24.9	68.7	185.7	225.6	179.5
Mar '25	31.2	76.6	204.4	253.8	199.4
Apr '25	27.1	72.3	199.0	237.6	192.1
May '25	28.9	121.9	214.3	241.0	206.9
Jun '25	27.7	138.2	230.0	238.7	219.2
Jul '25	27.3	142.6	247.5	252.8	234.4
Aug '25	23.9	143.8	245.5	249.3	232.6
Sep '25	**22.9**	**133.8**	**218.2**	**233.3**	**210.9**
Average	**29.1**	**104.2**	**215.9**	**245.9**	**208.0**
Change	-35.7%	40.8%	2.1%	-11.0%	1.1%

TABLE 4. CHARGER UTILIZATION PERCENTAGE

DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Oct '24	4.6%	11.5%	14.9%	21.2%	15.8%
Nov '24	5.2%	11.9%	15.8%	22.3%	16.8%
Dec '24	5.3%	11.2%	16.7%	22.4%	17.3%
Jan '25	5.0%	10.6%	16.4%	21.5%	16.9%
Feb '25	4.8%	10.0%	15.7%	20.9%	16.2%
Mar '25	4.6%	9.4%	15.1%	20.0%	15.6%
Apr '25	4.1%	9.0%	14.6%	18.8%	14.9%
May '25	4.0%	13.4%	15.7%	18.3%	15.9%
Jun '25	4.1%	14.1%	16.4%	18.1%	16.4%
Jul '25	4.0%	14.0%	16.8%	17.9%	16.7%
Aug '25	4.0%	14.5%	16.8%	17.9%	16.7%
Sep '25	3.5%	13.5%	15.4%	17.0%	15.5%
Average	**4.4%**	**11.9%**	**15.9%**	**19.7%**	**16.2%**
Change	**-24.4%**	**17.5%**	**3.4%**	**-19.9%**	**-1.5%**

TABLE 5. CHARGER UTILIZATION BY DAY OF WEEK

DAY	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Mon	4.1%	13.5%	15.3%	16.6%	15.4%
Tues	3.9%	13.0%	14.4%	15.6%	14.5%
Wed	3.9%	13.2%	14.8%	16.1%	14.9%
Thurs	3.9%	13.6%	15.8%	17.0%	15.8%
Fri	4.2%	14.7%	17.6%	18.7%	17.4%
Sat	3.9%	15.4%	18.2%	19.4%	18.1%
Sun	3.0%	14.7%	18.5%	19.8%	18.3%

TABLE 6. CHARGER UTILIZATION BY TIME OF DAY

HOUR	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
0	1.3%	7.3%	9.3%	9.6%	9.1%
1	1.0%	5.0%	6.1%	6.7%	6.1%
2	0.8%	3.6%	4.4%	4.9%	4.4%
3	0.8%	3.1%	3.7%	4.2%	3.7%
4	0.9%	3.1%	3.8%	4.3%	3.8%
5	0.9%	4.3%	5.3%	5.9%	5.3%
6	1.6%	6.8%	8.6%	9.2%	8.5%
7	2.7%	10.4%	13.2%	13.2%	12.8%
8	4.4%	13.5%	15.5%	16.7%	15.5%
9	5.7%	15.3%	16.6%	19.1%	17.0%
10	5.7%	16.6%	19.0%	21.3%	19.2%
11	5.6%	18.4%	22.0%	24.0%	22.0%
12	5.6%	20.6%	24.9%	26.5%	24.6%
13	5.5%	20.9%	25.5%	26.9%	25.2%
14	5.4%	20.7%	25.4%	26.9%	25.1%
15	5.3%	20.6%	25.4%	26.8%	25.1%
16	**5.3%**	**20.8%**	**25.4%**	**26.8%**	**25.1%**
17	5.0%	20.7%	25.0%	26.4%	24.7%
18	4.8%	20.0%	23.8%	25.4%	23.6%
19	4.4%	18.7%	21.8%	23.8%	21.9%
20	3.9%	16.5%	19.7%	21.9%	19.8%
21	3.3%	14.0%	16.7%	19.1%	16.9%
22	2.5%	11.8%	14.0%	15.8%	14.1%
23	1.8%	9.8%	12.1%	12.3%	11.8%

TABLE 7. SESSION DURATION (MINUTES)

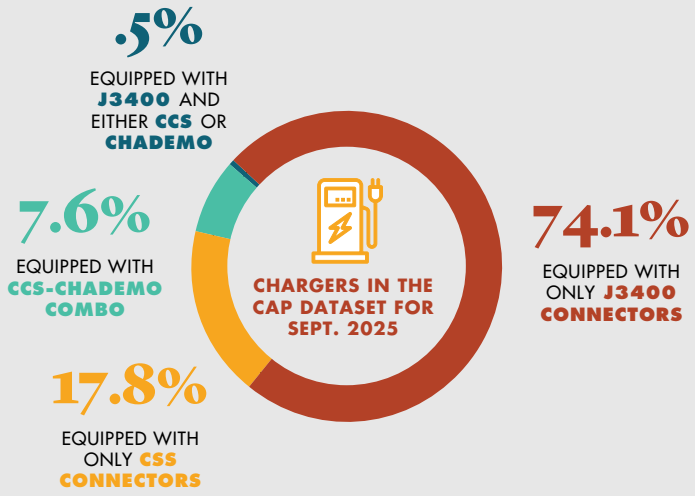
DATE	0-49 KW	50-99 KW	100-299 KW	300+ KW	NATIONAL
Oct '24	54.1	49.5	30.4	33.5	32.4
Nov '24	51.6	49.5	31.6	35.0	33.6
Dec '24	62.6	53.0	32.7	35.8	34.7
Jan '25	62.9	54.0	33.4	36.3	35.3
Feb '25	63.2	53.0	32.7	35.3	34.5
Mar '25	60.1	50.3	31.6	33.9	33.3
Apr '25	59.3	49.7	30.9	32.8	32.4
May '25	58.3	42.8	30.5	31.6	31.8
Jun '25	59.1	42.1	30.1	30.7	31.2
Jul '25	61.0	42.0	29.8	30.4	30.9
Aug '25	60.9	41.9	29.9	30.4	30.9
Sep '25	61.0	41.4	29.9	30.1	30.8
Average	**59.5**	**47.4**	**31.1**	**33.0**	**32.7**
Change	**12.9%**	**-16.3%**	**-1.8%**	**-10.0%**	**-4.7%**

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
Oct '24	67.7%	0.3%	32.0%	73.6%	2.3%	24.1%	89.4%	4.7%	5.9%	87.4%	3.3%	9.2%
Nov '24	46.6%	0.4%	52.9%	61.6%	2.1%	36.3%	88.6%	5.1%	6.4%	87.9%	3.5%	8.6%
Dec '24	90.7%	1.0%	8.4%	83.8%	2.4%	13.8%	89.4%	5.3%	5.3%	88.6%	3.4%	8.1%
Jan '25	83.9%	1.0%	15.1%	83.7%	2.2%	14.1%	90.9%	5.6%	3.6%	89.9%	3.3%	6.8%
Feb '25	82.7%	0.8%	16.4%	84.2%	2.5%	13.3%	91.0%	5.4%	3.6%	89.6%	3.9%	6.5%
Mar '25	73.9%	0.8%	25.3%	84.2%	2.8%	13.0%	90.9%	5.3%	3.8%	89.4%	4.1%	6.6%
Apr '25	88.1%	0.8%	11.1%	85.3%	2.6%	12.1%	91.2%	5.0%	3.8%	89.5%	4.0%	6.5%
May '25	88.9%	0.8%	10.4%	88.9%	4.2%	7.0%	90.9%	5.5%	3.6%	89.4%	4.2%	6.5%
Jun '25	87.1%	1.0%	11.9%	89.1%	4.2%	6.7%	90.4%	5.7%	3.9%	89.5%	4.1%	6.4%
Jul '25	81.8%	1.3%	16.9%	89.1%	4.2%	6.7%	90.8%	5.6%	3.6%	89.3%	4.2%	6.4%
Aug '25	81.8%	1.5%	16.7%	89.1%	4.6%	6.4%	90.6%	5.8%	3.6%	89.1%	4.4%	6.4%
Sep '25	60.8%	0.8%	38.5%	92.8%	1.2%	6.0%	95.0%	1.4%	3.6%	90.7%	1.1%	8.1%
Average	77.8%	0.9%	21.3%	83.8%	2.9%	13.3%	90.8%	5.0%	4.2%	89.2%	3.6%	7.2%

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 September 2025, 74.1% were equipped with only J3400 connectors, while 17.8% were equipped with only CSS connectors. CCS-Chademo combo chargers represented 7.6% of the dataset and chargers equipped with J3400 and either CCS or Chademo represented just 0.5% of the dataset.



When looking at the utilization data, from October 2024 – September 2025, J3400-only chargers led the market with 251 charging sessions per port per month, followed by CCS-only chargers at 191 session per month. The combination chargers recorded an average of 117 charging sessions per port per month for CCS-Chademo and 75 for J3400 combinations. Monthly sessions for J3400 chargers recorded their highest value of 290 in August, while CCS-only charger sessions declined from an average of more than 200 monthly sessions at the end of 2024 to 158 sessions in September.

J3400-only and CCS-only chargers led all configurations in percent utilization at 18.4% and 16.6%, respectively. Considering these two connectors combined for more than 90% of chargers in the dataset, it is not surprising that their utilization is close to the national average of 16.2%. Utilization of CCS-only charges declined consistently throughout the 12-month period, dropping from 21.4% to 12.7%. Meanwhile, J3400-only chargers recorded an increase in utilization from 14.9% in October to 17.7% in September, peaking at 19.3% in August.

Utilization was consistent with regard to the day of the week utilization, with weekends recording the highest utilization percentages. Utilization by hour of the day showed consistent trends, with the strongest utilization between 12 p.m. and 6 p.m. During this peak period, CCS-only chargers averaged 19.7% utilization while J3400 chargers averaged 29.2%. Between 6 am and Noon, these chargers averaged 12.9% and 18.1%, respectively, and 15.4% and 22.3% between 6 pm and 11 pm.

Combination-equipped chargers recorded the longest average session duration at 45.2 and 45.8 minutes, while J3400-connectors recorded the shortest average duration at 29.7 minutes. CCS-only came in at 34.9 minutes with the entire data set averaging 32.7 minutes. While session duration was relatively consistent in 2025, there was a slight trend of shorter charging sessions for all connector types.

J3400-only chargers were the most reliable, recording a failure to charge rate of only 2.7%, followed by CCS-only chargers at 9.7%. Combination chargers, which recorded a significant decrease in failure rates at the beginning of 2025, averaged failure rates of 13.8% and 12.9% over the 12-month period. Meanwhile, CCS-only chargers showed a decrease in failure rates during 2025 but a slight increase in the third quarter, whereas J3400-chargers showed a consistent decrease over the 12-months, reducing failure rates by almost half.

FIGURE 22. TOTAL CHARGERS IN DATASET BY CONNECTOR TYPE

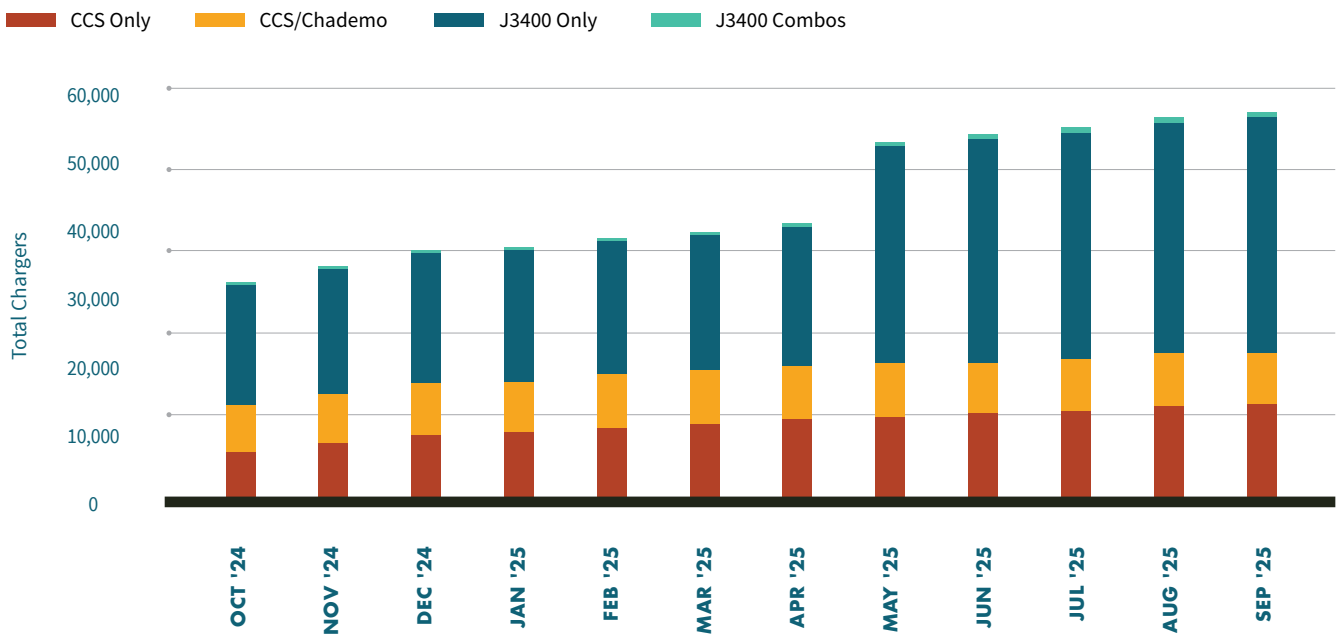


FIGURE 23. SHARE OF CHARGING SESSIONS BY CONNECTOR TYPE

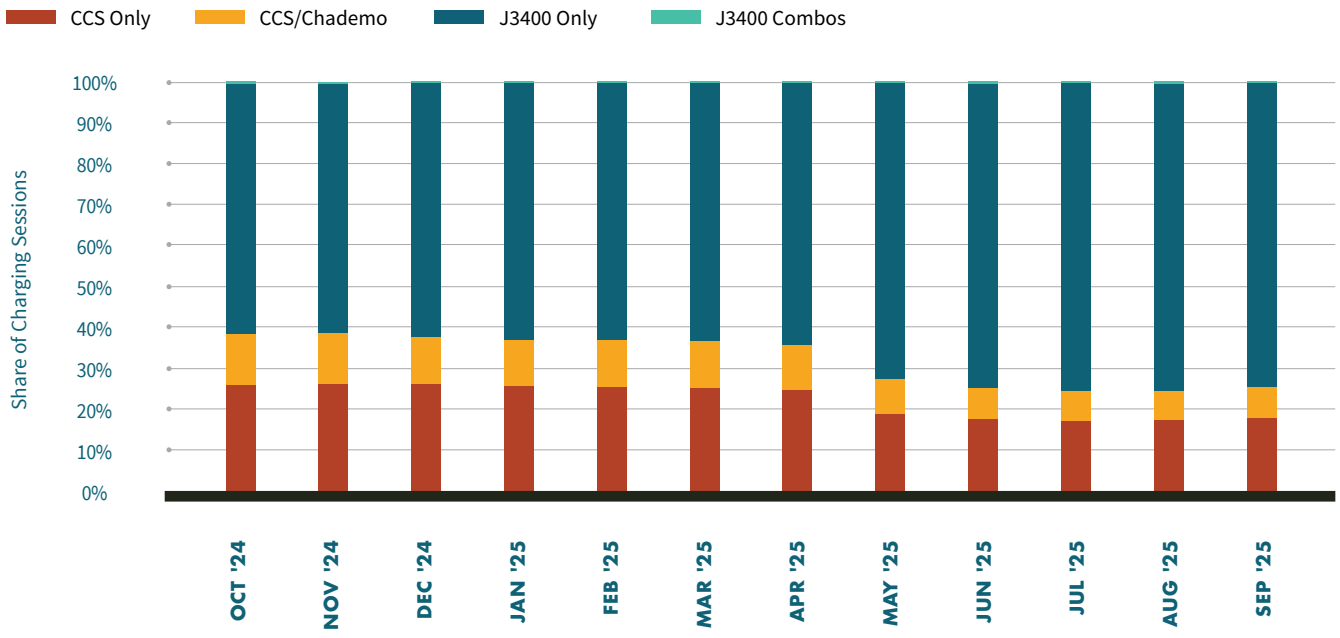


FIGURE 24. SESSIONS PER CHARGER PER MONTH

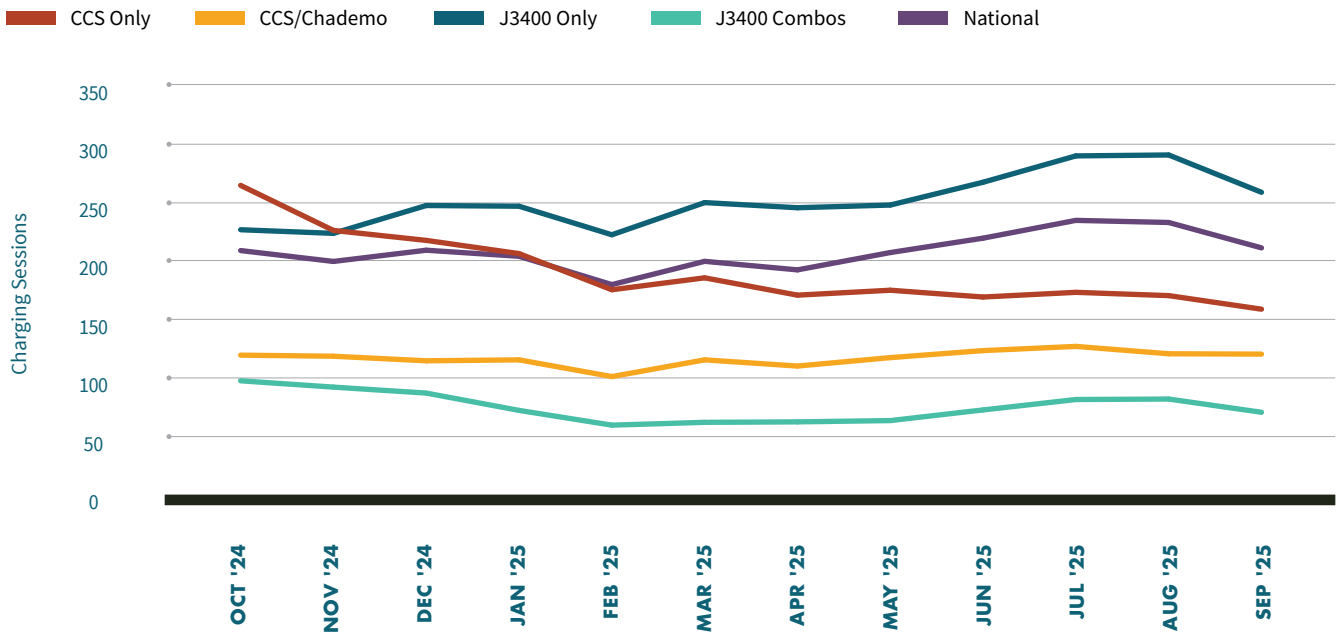


FIGURE 25. AVERAGE UTILIZATION

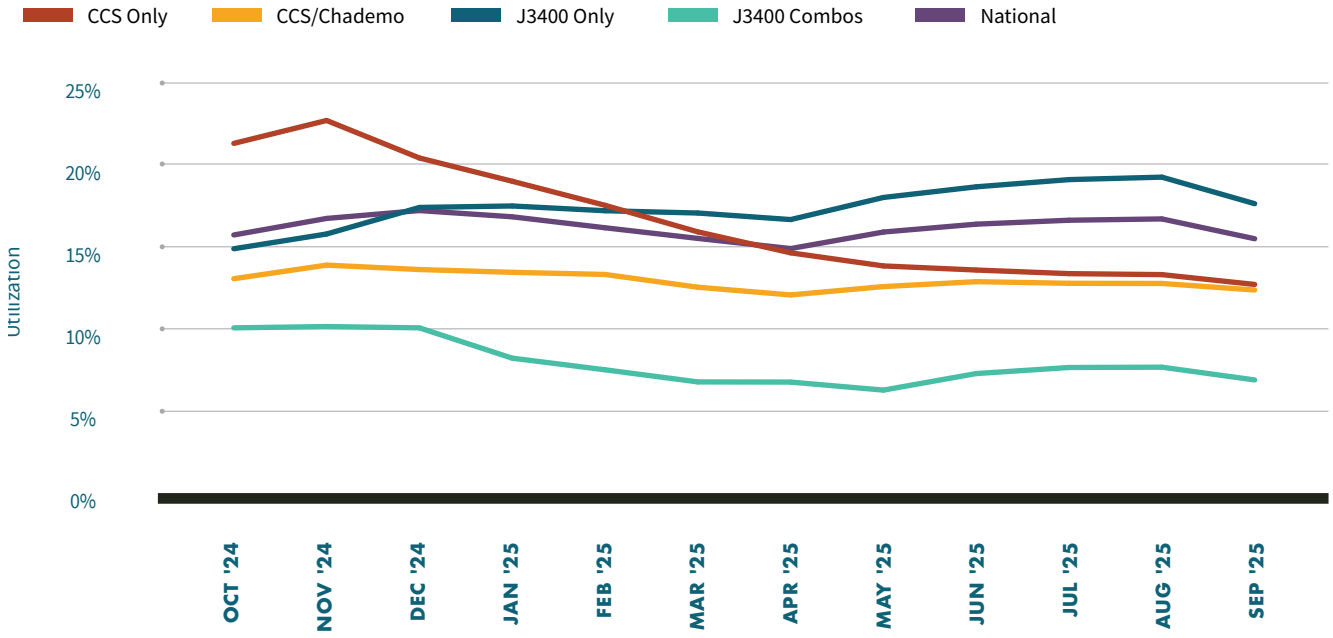


FIGURE 26. AVERAGE UTILIZATION BY DAY OF WEEK

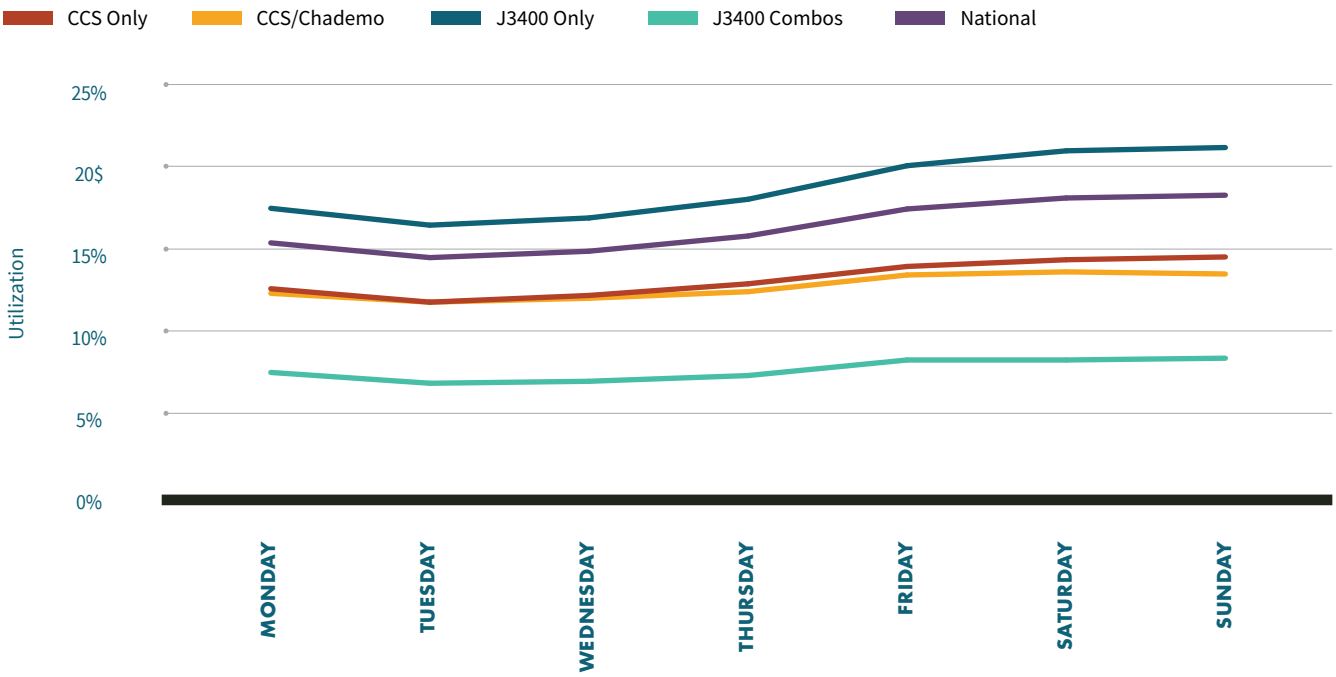


FIGURE 27. UTLIZATION BY TIME OF DAY

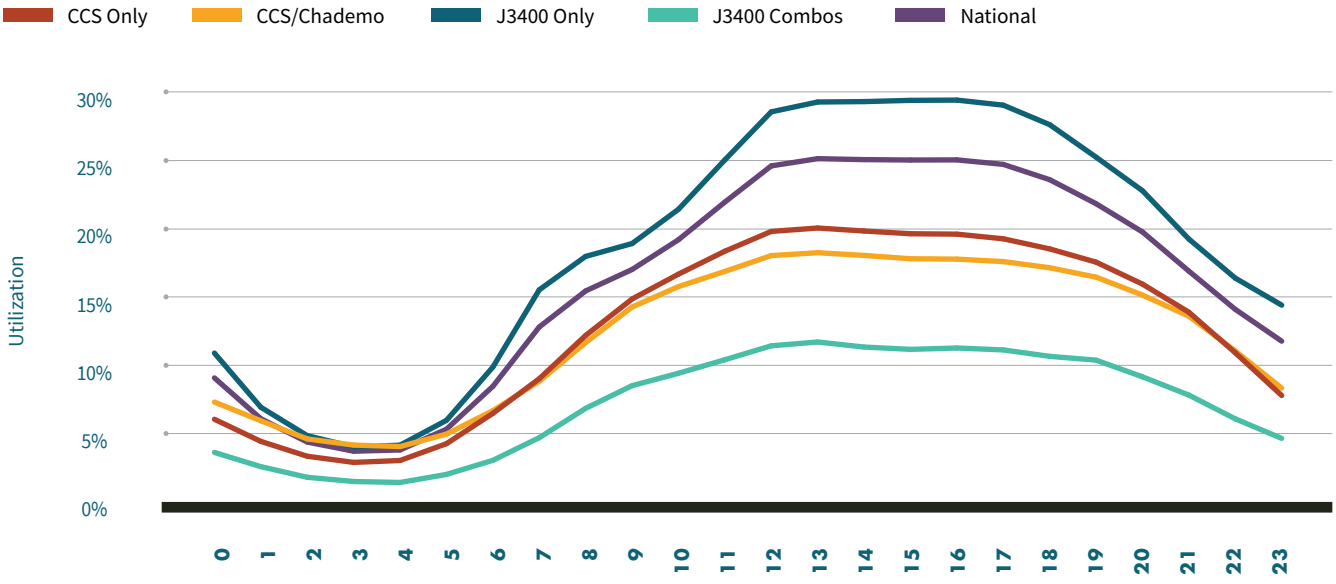


FIGURE 28. AVERAGE CHARGING SESSION DURATION IN MINUTES

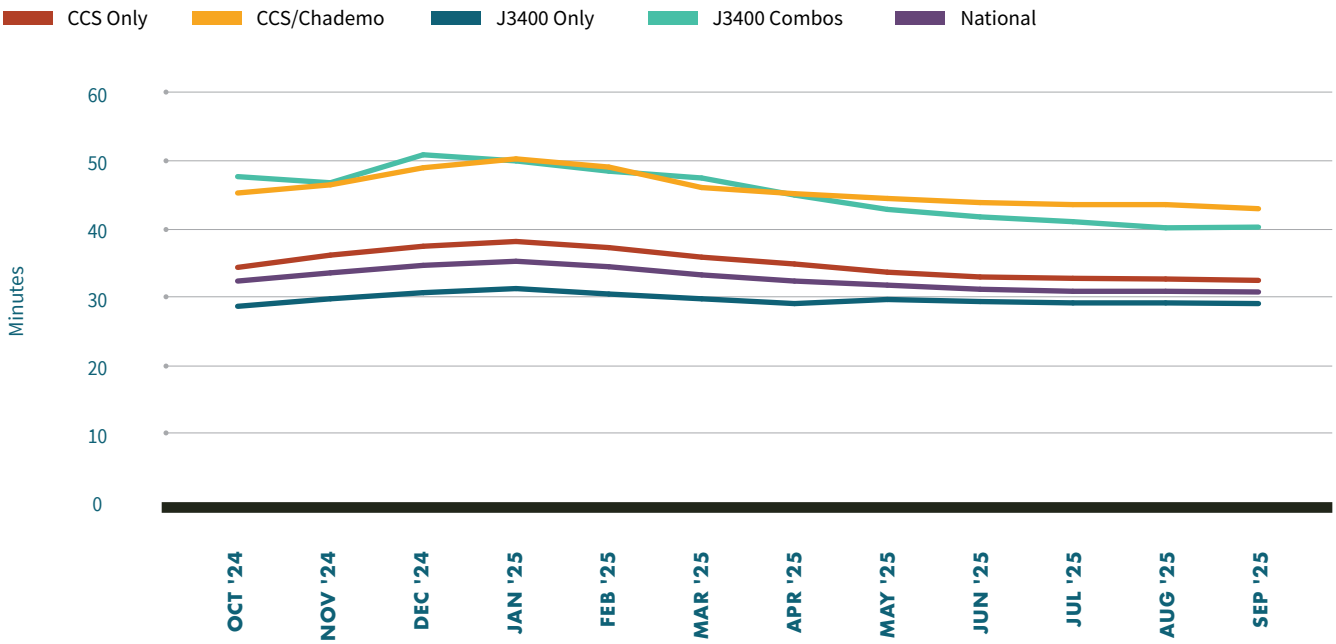


FIGURE 29. AVERAGE SUCCESS AND FAILURE RATES

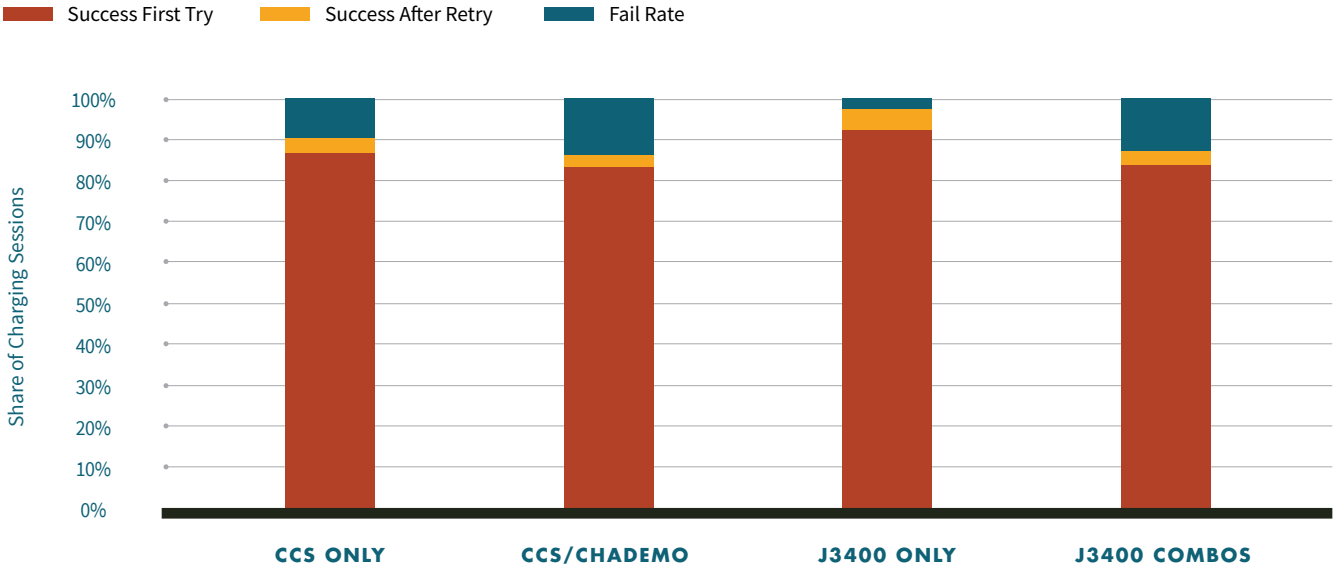


FIGURE 30. FAILURE RATES OVER TIME

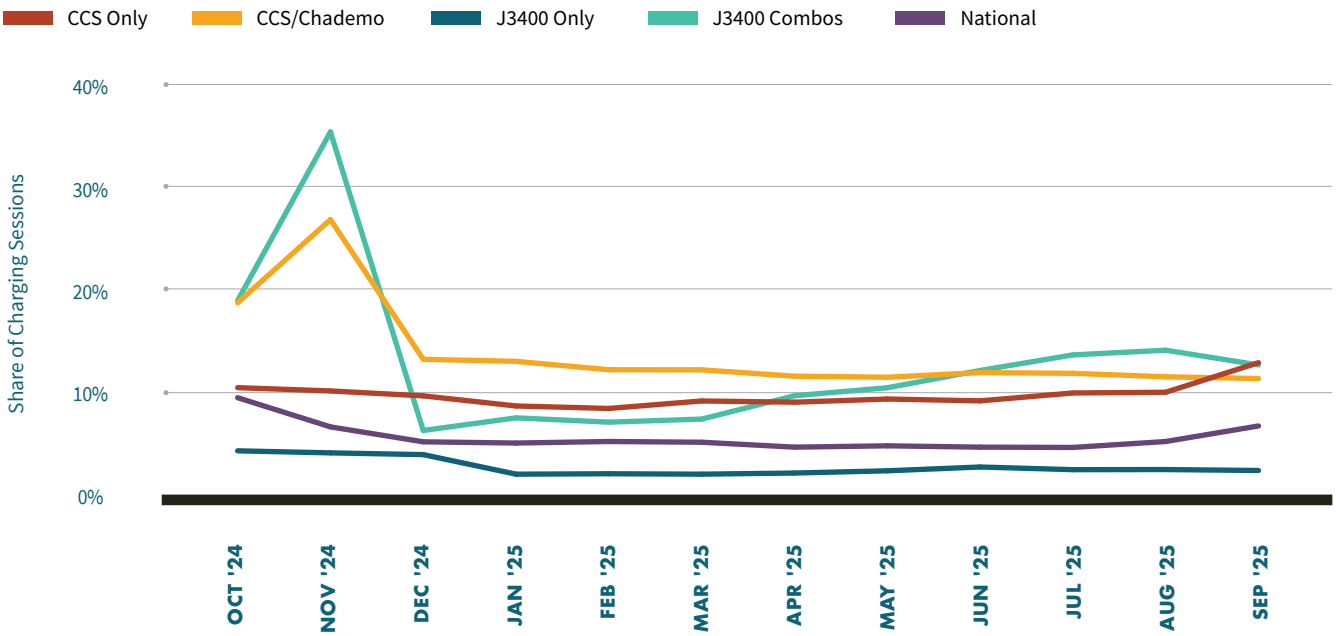


TABLE 9. SHARE OF CHARGING SESSIONS

DATE	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS
Oct '24	25.8%	12.6%	61.0%	0.6%
Nov '24	26.0%	12.5%	60.8%	0.6%
Dec '24	26.0%	11.6%	61.9%	0.5%
Jan '25	25.5%	11.3%	62.7%	0.5%
Feb '25	25.3%	11.5%	62.7%	0.5%
Mar '25	25.0%	11.5%	63.0%	0.5%
Apr '25	24.6%	11.1%	63.8%	0.5%
May '25	18.8%	8.5%	72.3%	0.4%
Jun '25	17.4%	7.8%	74.2%	0.5%
Jul '25	16.9%	7.5%	75.1%	0.5%
Aug '25	17.1%	7.2%	75.1%	0.5%
Sep '25	17.8%	7.6%	74.1%	0.5%
Average	**19.7%**	**8.7%**	**67.2%**	**0.5%**

TABLE 10. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Oct '24	264.3	119.2	226.4	97.3	208.6
Nov '24	225.8	118.3	223.3	91.9	199.3
Dec '24	217.3	114.4	247.1	86.8	208.9
Jan '25	206.0	115.2	246.5	72.0	203.7
Feb '25	175.1	100.9	222.1	59.4	179.5
Mar '25	185.3	115.2	249.6	61.8	199.4
Apr '25	170.5	109.9	245.2	62.2	192.1
May '25	174.7	117.1	247.5	63.3	206.9
Jun '25	168.9	123.1	267.0	72.4	219.2
Jul '25	172.9	126.7	289.5	81.3	234.4
Aug '25	170.1	120.4	290.3	81.7	232.6
Sep '25	158.5	120.1	258.4	70.4	210.9
Average	**190.8**	**116.7**	**251.1**	**75.0**	**208.0**
Change	**-40.0%**	**0.8%**	**14.2%**	**-27.7%**	**1.1%**

TABLE 11. CHARGER UTILIZATION PERCENTAGE

DATE	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Oct '24	21.4%	13.1%	14.9%	10.1%	15.8%
Nov '24	22.8%	13.9%	15.8%	10.2%	16.8%
Dec '24	20.5%	13.7%	17.4%	10.1%	17.3%
Jan '25	19.0%	13.5%	17.5%	8.2%	16.9%
Feb '25	17.6%	13.4%	17.2%	7.5%	16.2%
Mar '25	16.0%	12.6%	17.1%	6.8%	15.6%
Apr '25	14.7%	12.1%	16.7%	6.8%	14.9%
May '25	13.9%	12.6%	18.1%	6.3%	15.9%
Jun '25	13.6%	12.9%	18.7%	7.3%	16.4%
Jul '25	13.4%	12.8%	19.1%	7.7%	16.7%
Aug '25	13.3%	12.8%	19.3%	7.7%	16.7%
Sep '25	12.7%	12.4%	17.7%	6.9%	15.5%
Average	**16.6%**	**13.0%**	**17.5%**	**8.0%**	**16.2%**
Change	**-40.3%**	**-5.3%**	**18.4%**	**-31.5%**	**-1.5%**

TABLE 12. CHARGER UTILIZATION BY DAY OF WEEK

DAY	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Mon	12.6%	12.3%	17.5%	7.5%	15.4%
Tues	11.8%	11.8%	16.5%	6.8%	14.5%
Wed	12.2%	12.0%	16.9%	6.9%	14.9%
Thurs	12.9%	12.4%	18.0%	7.3%	15.8%
Fri	13.9%	13.4%	20.1%	8.2%	17.4%
Sat	14.3%	13.6%	21.0%	8.2%	18.1%
Sun	14.5%	13.5%	21.2%	8.3%	18.3%

TABLE 13. CHARGER UTILIZATION BY TIME OF DAY

HOUR	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
0	6.1%	7.3%	10.9%	3.6%	9.1%
1	4.4%	6.0%	6.9%	2.6%	6.1%
2	3.4%	4.6%	4.9%	1.8%	4.4%
3	2.9%	4.2%	4.0%	1.5%	3.7%
4	3.0%	4.1%	4.2%	1.4%	3.8%
5	4.3%	5.0%	6.0%	2.0%	5.3%
6	6.5%	6.7%	9.9%	3.1%	8.5%
7	9.0%	8.8%	15.5%	4.7%	12.8%
8	12.2%	11.7%	18.0%	6.9%	15.5%
9	14.9%	14.3%	18.9%	8.5%	17.0%
10	16.7%	15.8%	21.4%	9.4%	19.2%
11	18.4%	16.9%	25.1%	10.4%	22.0%
12	19.8%	18.1%	28.6%	11.4%	24.6%
13	20.1%	18.3%	29.3%	11.7%	25.2%
14	19.9%	18.1%	29.3%	11.4%	25.1%
15	19.7%	17.8%	29.4%	11.2%	25.1%
16	**19.6%**	**17.8%**	**29.4%**	**11.3%**	**25.1%**
17	19.3%	17.6%	29.1%	11.1%	24.7%
18	18.5%	17.2%	27.6%	10.7%	23.6%
19	17.6%	16.5%	25.3%	10.4%	21.9%
20	16.0%	15.2%	22.8%	9.2%	19.8%
21	13.9%	13.6%	19.3%	7.8%	16.9%
22	10.9%	11.1%	16.4%	6.1%	14.1%
23	7.8%	8.3%	14.4%	4.7%	11.8%

TABLE 14. SESSION DURATION (MINUTES)

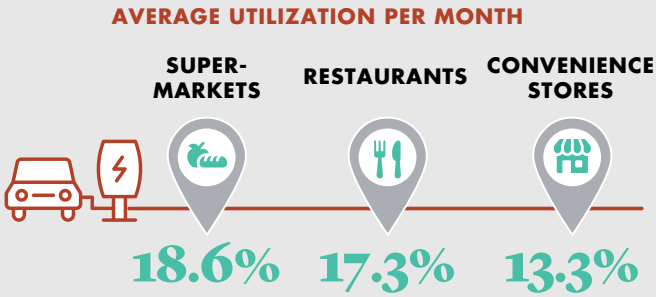
HOUR	CCS ONLY	CCS/CHADEMO	J3400 ONLY	J3400 COMBOS	NATIONAL
Oct '24	34.4	45.3	28.7	47.7	32.4
Nov '24	36.2	46.5	29.8	46.8	33.6
Dec '24	37.5	49.0	30.7	50.9	34.7
Jan '25	38.2	50.3	31.3	50.0	35.3
Feb '25	37.3	49.1	30.5	48.5	34.5
Mar '25	35.9	46.1	29.8	47.5	33.3
Apr '25	34.9	45.2	29.1	45.0	32.4
May '25	33.7	44.5	29.7	42.9	31.8
Jun '25	33.0	43.9	29.4	41.8	31.2
Jul '25	32.8	43.6	29.2	41.1	30.9
Aug '25	32.7	43.6	29.2	40.2	30.9
Sep '25	32.5	43.0	29.1	40.3	30.8
Average	**34.9**	**45.8**	**29.7**	**45.2**	**32.7**
Change	**-5.5%**	**-5.2%**	**1.5%**	**-15.5%**	**-4.7%**

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
Oct '24	86.0%	3.6%	10.5%	78.2%	3.1%	18.7%	91.0%	4.7%	4.3%	76.2%	4.8%	19.0%
Nov '24	86.3%	3.6%	10.1%	69.9%	3.2%	26.9%	90.9%	5.0%	4.1%	59.6%	5.0%	35.4%
Dec '24	87.0%	3.4%	9.7%	84.1%	2.7%	13.2%	90.6%	5.5%	3.9%	90.8%	2.9%	6.3%
Jan '25	88.2%	3.1%	8.7%	84.5%	2.5%	13.0%	92.2%	5.8%	2.0%	89.5%	3.0%	7.5%
Feb '25	87.4%	4.2%	8.4%	84.9%	2.9%	12.2%	92.5%	5.4%	2.0%	90.1%	2.8%	7.1%
Mar '25	86.6%	4.3%	9.2%	84.4%	3.4%	12.2%	92.8%	5.2%	2.0%	89.9%	2.8%	7.4%
Apr '25	86.5%	4.4%	9.0%	85.2%	3.2%	11.6%	93.0%	4.9%	2.1%	87.0%	3.4%	9.7%
May '25	86.3%	4.4%	9.3%	85.3%	3.3%	11.5%	92.2%	5.5%	2.3%	85.8%	3.8%	10.4%
Jun '25	86.7%	4.2%	9.2%	84.8%	3.3%	11.9%	91.6%	5.7%	2.7%	84.0%	3.9%	12.1%
Jul '25	85.9%	4.2%	9.9%	84.8%	3.3%	11.9%	92.0%	5.5%	2.4%	82.6%	3.8%	13.7%
Aug '25	85.7%	4.3%	10.0%	85.1%	3.4%	11.5%	91.8%	5.8%	2.5%	82.1%	3.8%	14.1%
Sep '25	85.7%	1.4%	12.9%	87.7%	1.0%	11.3%	96.3%	1.3%	2.4%	86.2%	1.2%	12.7%
Average	86.5%	3.8%	9.7%	83.2%	2.9%	13.8%	92.2%	5.0%	2.7%	83.6%	3.4%	12.9%

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 stores, restaurants and supermarkets. 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, in September 2025 50.3% of chargers were located within 100 meters of a restaurant, while 25.0% were near a convenience store and 17.8% were near a supermarket. Over the 12-month period, 28.2% of charging sessions were conducted at chargers near restaurants, 11.3% were near convenience stores and 10.9% were near supermarkets.

Chargers located near supermarkets recorded the highest number of charging sessions per month with an average of 239. Restaurants followed at 226 sessions and convenience stores averaged 183 sessions. Monthly sessions at chargers near all business verticals peaked in July and then tapered off throughout the third quarter. However, all chargers increased their session count over the 12-months, with those near supermarkets showing the greatest growth at 6.7%, followed by convenience stores at 5.7% and restaurants at 5.1%.

Chargers near supermarkets recorded the highest average utilization at 18.6%, followed by those near restaurants at 17.3% and those near convenience stores at 13.3%. All chargers followed a similar trend over 12 months with utilization dipping around April and then increasing into the summer before declining towards the end of the third quarter.

Utilization by day of week and time of day followed consistent trends across the business verticals, with most showing highest utilization on the weekends and between 12 p.m. and 6 p.m. During this time of day, supermarkets averaged 28.1% utilization, restaurants averaged 26.7% and convenience stores averaged 21.3%. Utilization between 6 am and 12 noon averaged 18.4%, 17.2% and 13.0% respectively while utilization between 5 pm and 11 pm averaged 22.3%, 20.8% and 15.9%.

Charging session duration was relatively consistent across business verticals, averaging 32.8 minutes near supermarkets, 32.2 minutes near restaurants and 30.7 minutes near convenience stores. Chargers near each vertical experienced decreased session duration beginning in January, with sessions in September nearly 5 minutes shorter at convenience stores, 4 minutes shorter at restaurants and 4.5 minutes shorter at supermarkets.

Supermarkets recorded the highest failure to initiate a charge rate of 5.8% compared with 5.4% at both restaurants and convenience stores. Failure rates declined for all business at the start of 2025, but trended slightly up at the end of the third quarter.

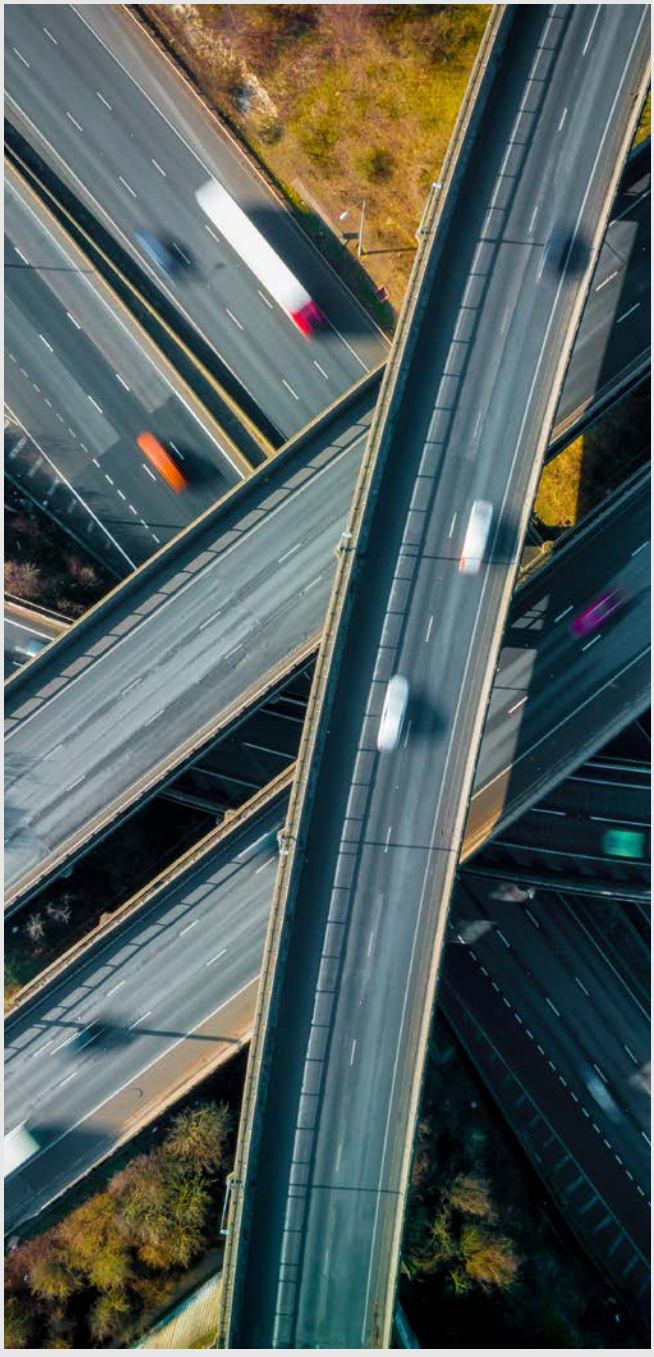


FIGURE 31. TOTAL CHARGERS IN DATA SET BY BUSINESS PROXIMITY

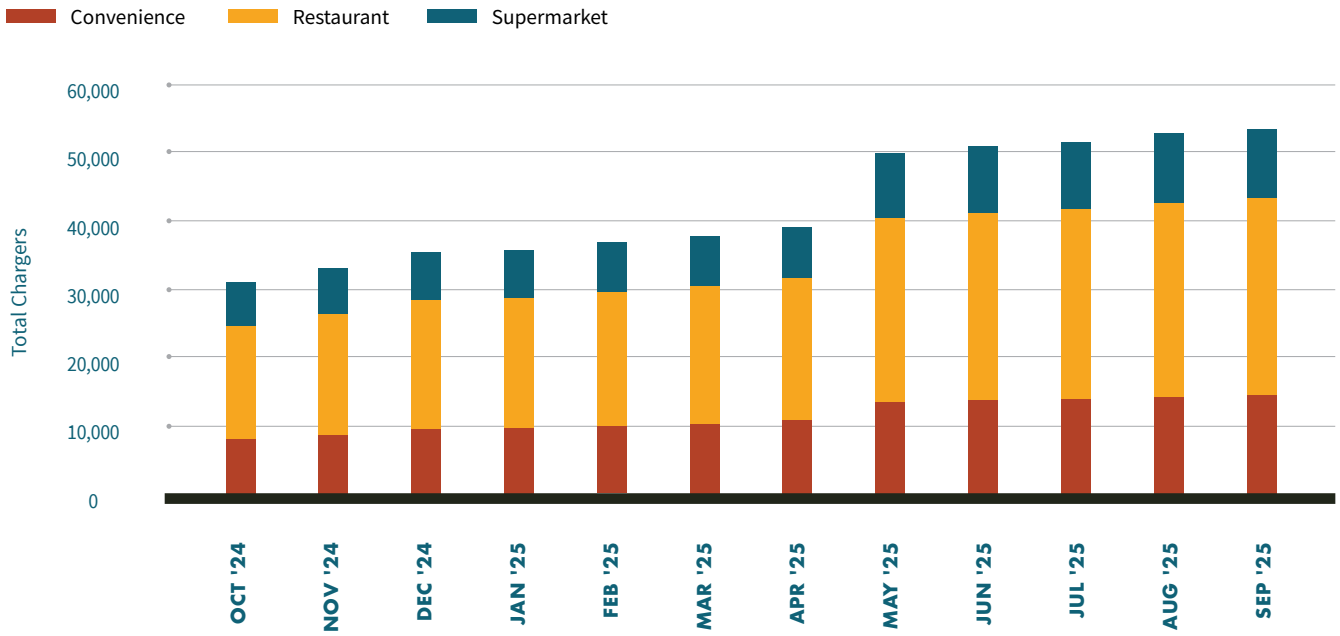


FIGURE 32. SHARE OF CHARGING SESSIONS BY BUSINESS PROXIMITY

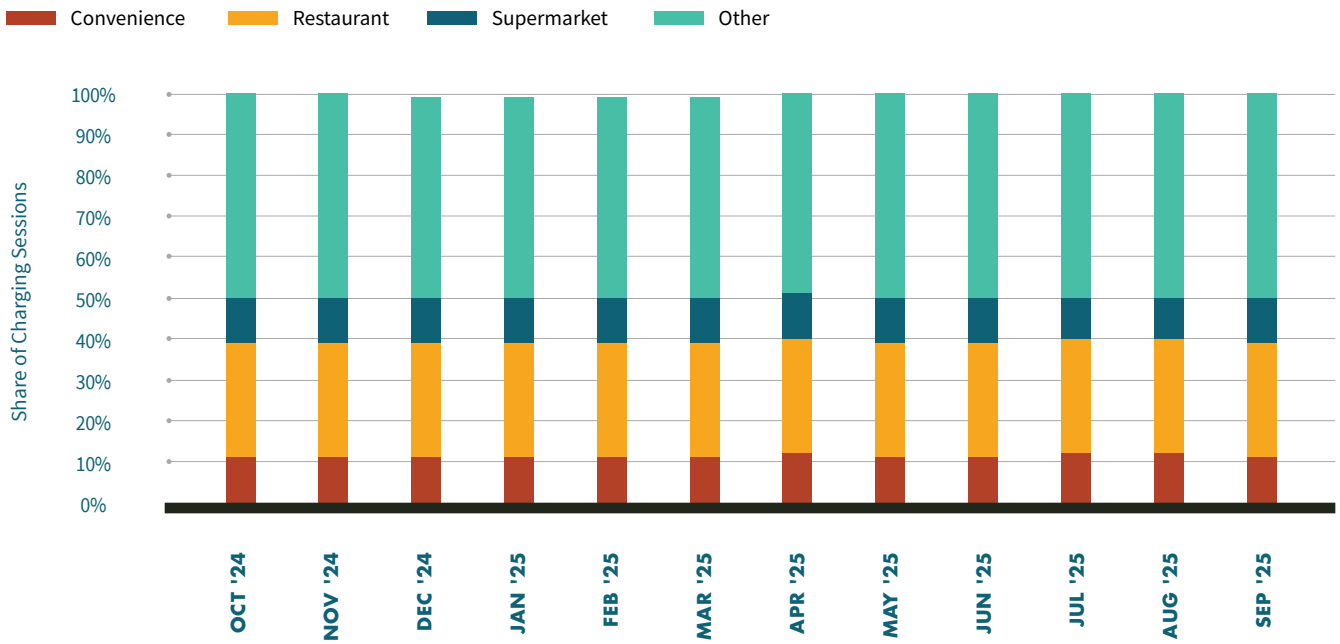


FIGURE 33. SESSIONS PER CHARGER PER MONTH

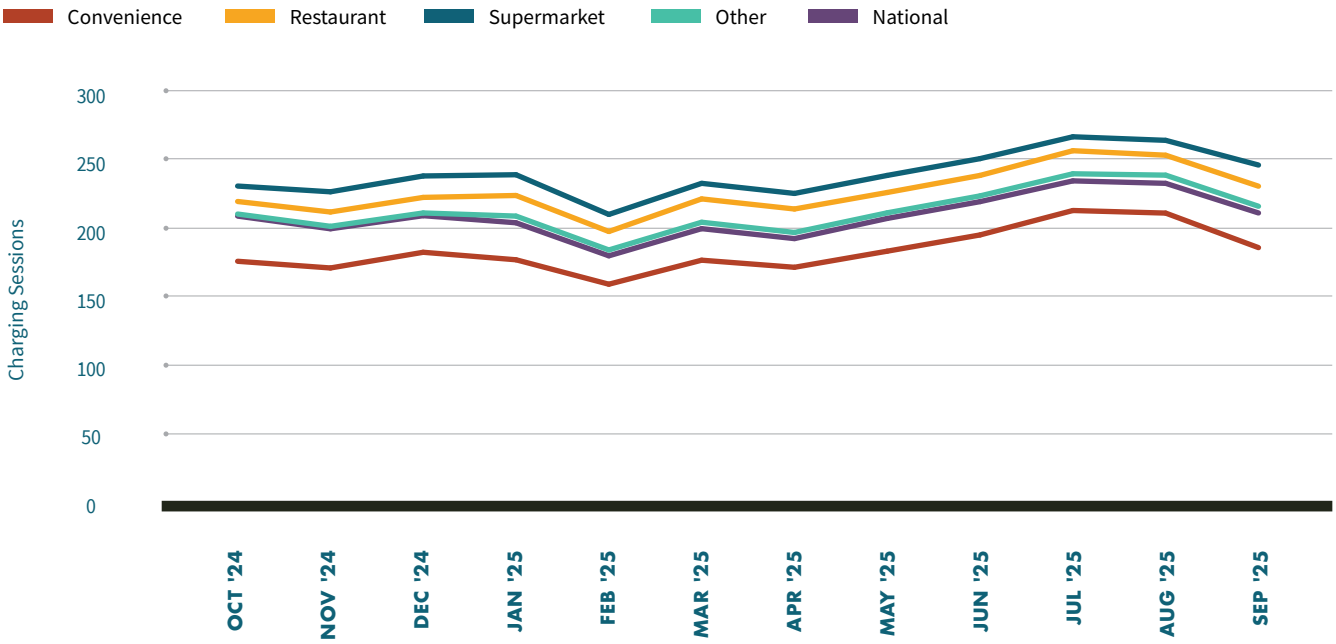


FIGURE 34. AVERAGE UTILIZATION

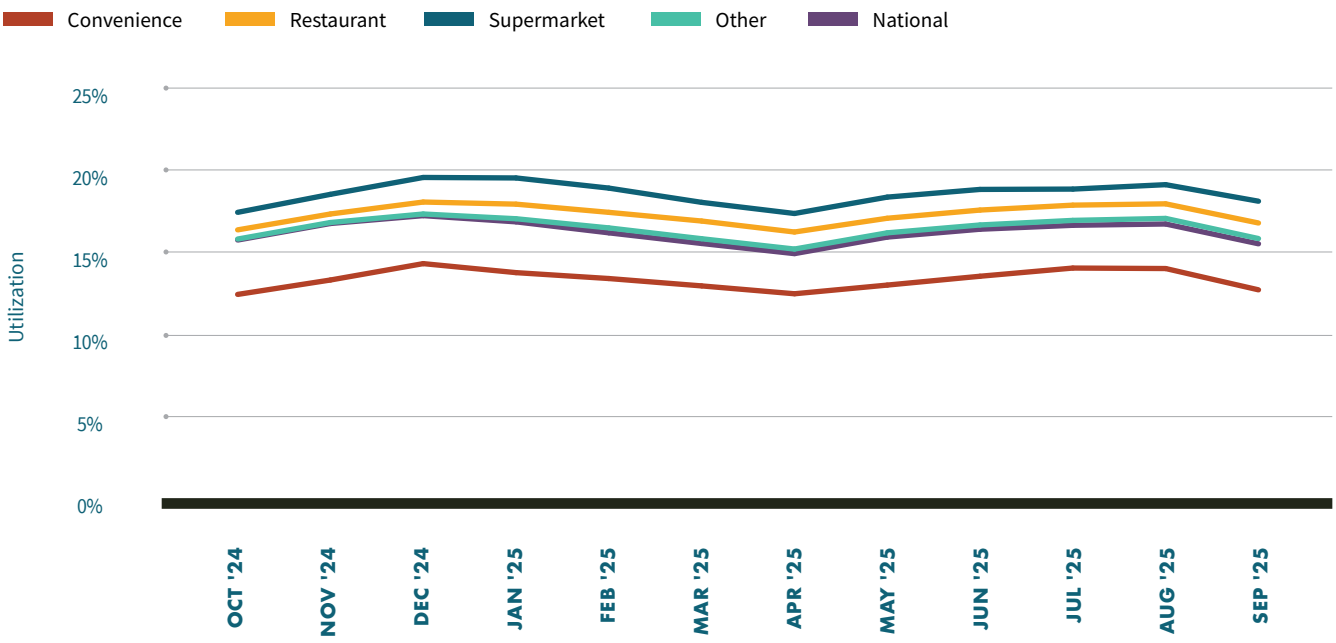


FIGURE 35. AVERAGE UTILIZATION BY DAY OF WEEK

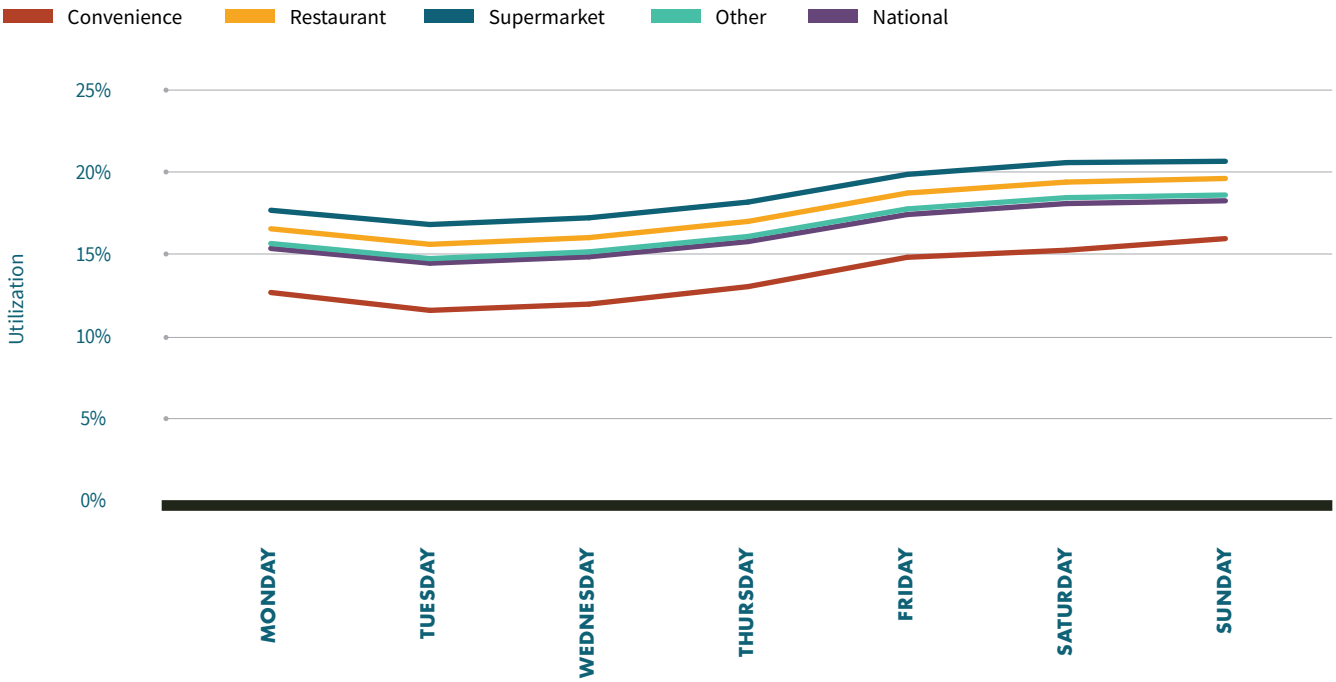


FIGURE 36. AVERAGE UTILIZATION BY TIME OF DAY

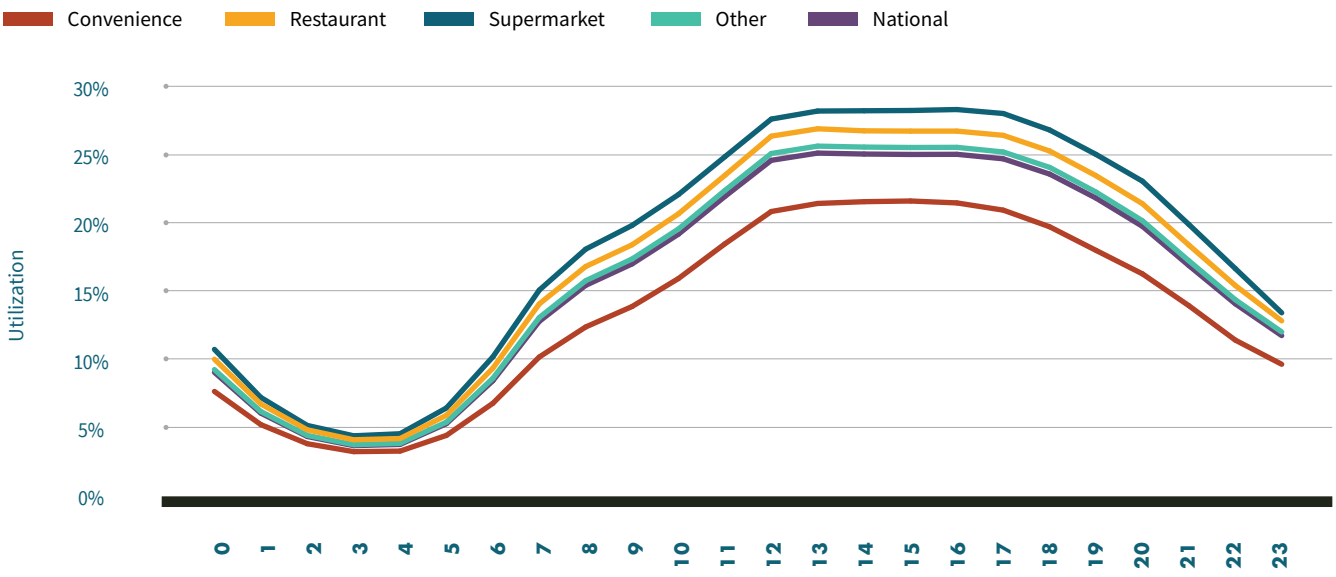


FIGURE 37. AVERAGE CHARGING SESSION DURATION IN MINUTES

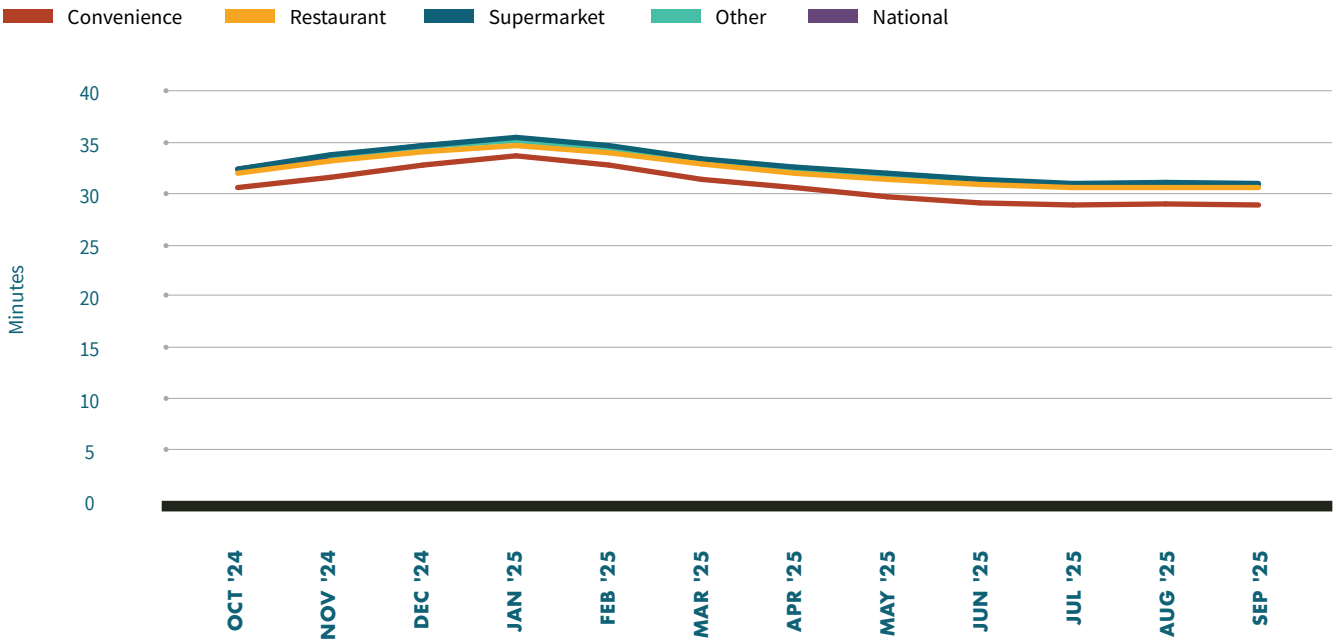


FIGURE 38. AVERAGE SUCCESS AND FAILURE RATES

FIGURE 39. FAILURE RATES OVER TIME

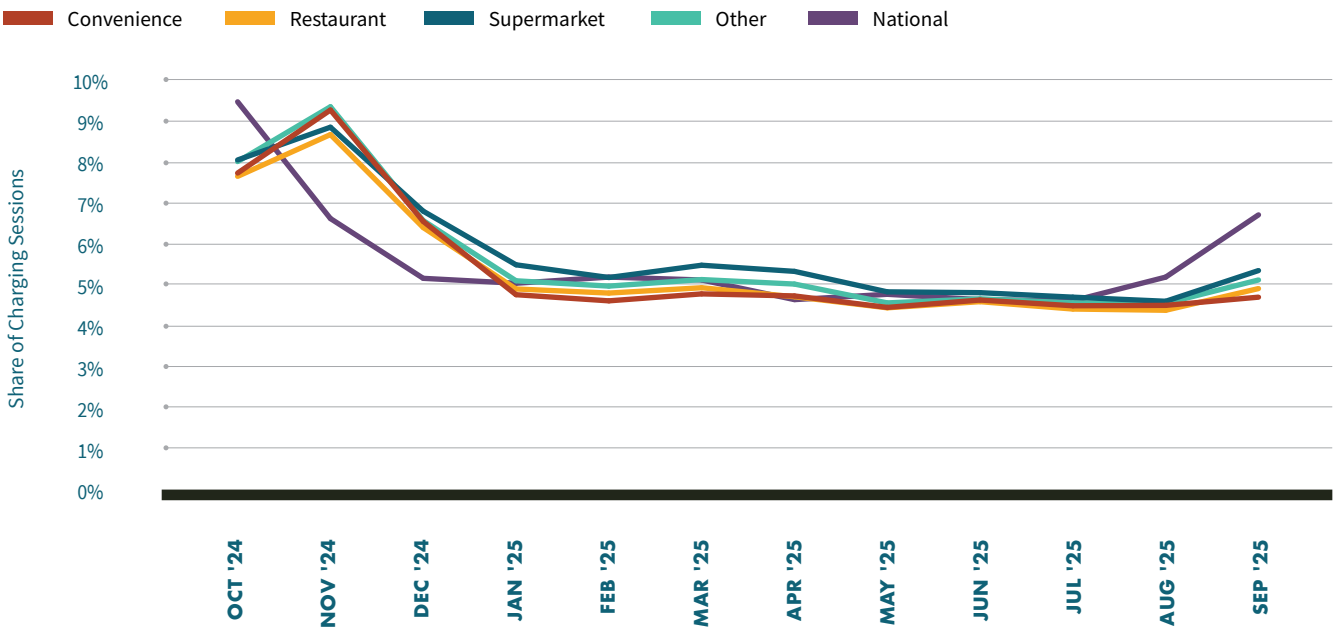


TABLE 16. SHARE OF CHARGING SESSIONS

DATE	CONVENIENCE	RESTAURANT	SUPERMARKET	OTHER
Oct '24	10.8%	28.3%	11.4%	49.6%
Nov '24	10.9%	28.2%	11.3%	49.6%
Dec '24	11.4%	28.1%	11.1%	49.4%
Jan '25	11.2%	28.3%	11.2%	49.3%
Feb '25	11.3%	28.3%	11.1%	49.3%
Mar '25	11.5%	28.4%	11.0%	49.2%
Apr '25	11.7%	28.3%	10.8%	49.2%
May '25	11.4%	28.2%	10.6%	49.9%
Jun '25	11.4%	28.1%	10.5%	50.0%
Jul '25	11.6%	28.1%	10.4%	50.0%
Aug '25	11.5%	28.0%	10.4%	50.1%
Sep '25	11.3%	28.1%	10.6%	50.0%
Average	**11.3%**	**28.2%**	**10.9%**	**49.6%**

TABLE 17. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	CONVENIENCE	RESTAURANT	SUPERMARKET	OTHER	NATIONAL
Oct '24	175.5	219.3	230.6	210.1	208.6
Nov '24	170.6	211.6	226.4	201.1	199.3
Dec '24	182.1	222.3	238.0	210.9	208.9
Jan '25	176.6	223.7	238.9	208.6	203.7
Feb '25	158.7	197.3	209.8	183.8	179.5
Mar '25	176.3	221.2	232.6	204.1	199.4
Apr '25	171.1	213.8	225.2	196.6	192.1
May '25	182.9	225.9	238.4	211.0	206.9
Jun '25	194.8	238.4	250.7	223.4	219.2
Jul '25	212.7	256.5	266.7	239.6	234.4
Aug '25	210.8	253.2	264.1	238.6	232.6
Sep '25	185.5	230.5	246.0	215.8	210.9
Average	**183.1**	**226.1**	**238.9**	**212.0**	**208.0**
Change	**5.7%**	**5.1%**	**6.7%**	**2.7%**	**1.1%**

TABLE 18. CHARGER UTILIZATION PERCENTAGE

DATE	CONVENIENCE	RESTAURANT	SUPERMARKET	OTHER	NATIONAL
Oct '24	12.4%	16.4%	17.5%	15.8%	15.8%
Nov '24	13.3%	17.4%	18.6%	16.8%	16.8%
Dec '24	14.3%	18.1%	19.6%	17.4%	17.3%
Jan '25	13.8%	18.0%	19.6%	17.1%	16.9%
Feb '25	13.4%	17.5%	18.9%	16.5%	16.2%
Mar '25	13.0%	16.9%	18.1%	15.8%	15.6%
Apr '25	12.5%	16.3%	17.4%	15.2%	14.9%
May '25	13.0%	17.1%	18.4%	16.2%	15.9%
Jun '25	13.6%	17.6%	18.9%	16.7%	16.4%
Jul '25	14.1%	17.9%	18.9%	17.0%	16.7%
Aug '25	14.0%	18.0%	19.1%	17.1%	16.7%
Sep '25	12.7%	16.8%	18.1%	15.9%	15.5%
Average	**13.3%**	**17.3%**	**18.6%**	**16.4%**	**16.2%**
Change	**2.3%**	**2.6%**	**3.9%**	**0.2%**	**-1.5%**

TABLE 19. CHARGER UTILIZATION BY DAY OF WEEK

DAY	CONVENIENCE	RESTAURANT	SUPERMARKET	OTHER	NATIONAL
Mon	12.7%	16.6%	17.7%	15.7%	15.4%
Tues	11.6%	15.6%	16.8%	14.8%	14.5%
Wed	12.0%	16.0%	17.2%	15.2%	14.9%
Thurs	13.0%	17.0%	18.2%	16.1%	15.8%
Fri	14.8%	18.8%	19.9%	17.8%	17.4%
Sat	15.3%	19.4%	20.6%	18.5%	18.1%
Sun	16.0%	19.6%	20.7%	18.6%	18.3%

TABLE 20. CHARGER UTILIZATION BY TIME OF DAY

HOUR	CONVENIENCE	RESTAURANT	SUPERMARKET	OTHER	NATIONAL
0	7.7%	10.1%	10.8%	9.3%	9.1%
1	5.3%	6.8%	7.3%	6.2%	6.1%
2	3.9%	4.9%	5.2%	4.5%	4.4%
3	3.3%	4.2%	4.4%	3.8%	3.7%
4	3.3%	4.2%	4.6%	3.9%	3.8%
5	4.5%	5.9%	6.5%	5.4%	5.3%
6	6.8%	9.4%	10.2%	8.7%	8.5%
7	10.2%	14.1%	15.1%	13.1%	12.8%
8	12.4%	16.8%	18.1%	15.8%	15.5%
9	13.9%	18.4%	19.9%	17.4%	17.0%
10	16.0%	20.7%	22.1%	19.6%	19.2%
11	18.5%	23.5%	24.9%	22.4%	22.0%
12	20.9%	26.4%	27.6%	25.1%	24.6%
13	21.5%	26.9%	28.2%	25.7%	25.2%
14	21.6%	26.8%	28.3%	25.6%	25.1%
15	21.6%	26.8%	28.3%	25.6%	25.1%
16	**21.5%**	**26.8%**	**28.3%**	**25.6%**	**25.1%**
17	21.0%	26.5%	28.1%	25.2%	24.7%
18	19.8%	25.3%	26.8%	24.1%	23.6%
19	18.0%	23.5%	25.1%	22.3%	21.9%
20	16.3%	21.4%	23.1%	20.2%	19.8%
21	14.0%	18.4%	19.9%	17.3%	16.9%
22	11.5%	15.5%	16.7%	14.4%	14.1%
23	9.7%	12.9%	13.5%	12.1%	11.8%

TABLE 21. SESSION DURATION (MINUTES)

DATE	CONVENIENCE	RESTAURANT	SUPERMARKET	OTHER	NATIONAL
Oct '24	30.6	32.0	32.4	32.3	32.4
Nov '24	31.6	33.2	33.8	33.6	33.6
Dec '24	32.8	34.1	34.7	34.6	34.7
Jan '25	33.7	34.7	35.5	35.2	35.3
Feb '25	32.8	34.0	34.7	34.4	34.5
Mar '25	31.4	32.9	33.4	33.2	33.3
Apr '25	30.6	32.0	32.6	32.3	32.4
May '25	29.7	31.4	32.0	31.7	31.8
Jun '25	29.1	30.9	31.4	31.2	31.2
Jul '25	28.9	30.6	31.0	30.9	30.9
Aug '25	29.0	30.6	31.1	30.9	30.9
Sep '25	28.9	30.6	31.0	30.8	30.8
Average	**30.7**	**32.2**	**32.8**	**32.6**	**32.7**
Change	**-5.7%**	**-4.4%**	**-4.2%**	**-4.6%**	**-4.7%**

TABLE 22. SUCCESSFUL AND FAILED CHARGING EVENTS

DATE	CONVENIENCE			RESTAURANT			SUPERMARKET			OTHER		
	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
Oct '24	88.3%	4.0%	7.7%	88.1%	4.2%	7.7%	87.8%	4.2%	8.1%	87.8%	4.2%	8.0%
Nov '24	86.5%	4.3%	9.3%	87.0%	4.4%	8.7%	86.9%	4.3%	8.9%	86.3%	4.4%	9.4%
Dec '24	88.9%	4.6%	6.6%	88.9%	4.7%	6.4%	88.7%	4.5%	6.8%	88.9%	4.6%	6.6%
Jan '25	90.6%	4.7%	4.8%	90.4%	4.7%	4.9%	89.8%	4.7%	5.5%	90.2%	4.7%	5.1%
Feb '25	90.8%	4.6%	4.6%	90.4%	4.8%	4.8%	90.0%	4.8%	5.2%	90.3%	4.8%	5.0%
Mar '25	90.8%	4.4%	4.8%	90.3%	4.8%	4.9%	89.8%	4.8%	5.5%	90.1%	4.7%	5.1%
Apr '25	90.9%	4.4%	4.7%	90.8%	4.5%	4.7%	90.1%	4.6%	5.3%	90.5%	4.5%	5.0%
May '25	91.0%	4.6%	4.5%	90.5%	5.1%	4.4%	90.0%	5.2%	4.8%	90.4%	5.0%	4.6%
Jun '25	90.6%	4.8%	4.6%	90.2%	5.2%	4.6%	89.9%	5.3%	4.8%	90.2%	5.2%	4.7%
Jul '25	90.8%	4.7%	4.5%	90.4%	5.2%	4.4%	90.1%	5.2%	4.7%	90.4%	5.1%	4.6%
Aug '25	90.7%	4.9%	4.5%	90.2%	5.4%	4.4%	90.0%	5.5%	4.6%	90.1%	5.3%	4.6%
Sep '25	94.1%	1.2%	4.7%	93.8%	1.3%	4.9%	93.3%	1.4%	5.4%	93.6%	1.3%	5.1%
Average	90.3%	4.2%	5.4%	90.1%	4.5%	5.4%	89.7%	4.5%	5.8%	89.9%	4.5%	5.6%

Comparison of Charger Performance in Nation's Top 5 MSAs

The chargers in the dataset are identified by geolocation. For this report, chargers located within the five metropolitan statistical areas (MSAs) with the largest populations were grouped together. Performance metrics from the top five MSAs are presented below and include:

- **Chicago-Naperville-Elgin**
- **Dallas-Fort Worth-Arlington**
- **Houston-The Woodlands-Sugar Land**
- **Los Angeles-Long Beach-Anaheim**
- **New York-Newark-New Jersey**

TABLE 23. SNAPSHOT OF FIVE METROPOLITAN STATISTICAL AREAS (MSAS)

	CHICAGO	DALLAS	HOUSTON	LOS ANGELES	NEW YORK	NATIONAL
# DCFCs	1,069	883	852	3,949	2,037	
Sessions/Month	217.3	256.7	203.8	409.6	286.1	208
% Utilization	18.7%	20.1%	15.8%	32.7%	25.2%	16.2%
Session Duration	36.0	32.6	31.8	33.4	36.9	32.7
Fail Rate	5.0%	5.3%	6.0%	5.3%	5.6%	5.6%

Table 23 is a quick snapshot of each of these MSAs

LOS ANGELES

Among these five MSAs, Los Angeles was the largest market with nearly 4,000 DCFCs. Despite the significant population of DCFCs, each port in Los Angeles generated more than 400 sessions per month. Assuming each station offered an average of four charging ports, with an average session duration of 33.4 minutes, this level of traffic translates into 1,640 customers spending an average of more than 900 hours per month at the DCFC station. Utilization averaged 32.7% and was consistent throughout the 12-month period. Throughout the day, however, utilization peaked between 12 Noon and 8 pm averaging 42.8%. Reliability of chargers in the Los Angeles MSA improved over the analysis period, averaging a failure to charge rate of 5.3% but down from an average of 7.3% in fourth quarter 2024.

NEW YORK

The second largest market for DCFCs, New York MSA offered 2,037 charging ports and generated an average of 286 sessions per port. With an average session duration of 36.9 minutes, and again assuming an average of four ports per station, this translates to 1,144 customers spending more than 700 hours at a charging station. Utilization averaged 25.2% and was relatively consistent throughout the 12-month period. Throughout the day, utilization peaked between 12 Noon and 8 pm averaging 32.3%. Reliability of chargers in the New York MSA improved over the analysis period, averaging a failure to charge rate of 5.6% but down from an average of 7.4% in fourth quarter 2024.

CHICAGO

The third largest market for DCFCs, Chicago MSA offered 1,069 charging ports and generated an average of 217 sessions per port. With an average session duration of 36.0 minutes, and again assuming an average of four ports per station, this translates to 868 customers spending more than 520 hours at a charging station. Utilization averaged 18.7% and was strongest around the turn of the year, averaging 21.9% November 2024 – February 2025. Throughout the day, utilization peaked between 12 Noon and 8 pm averaging 24.0%. Reliability of chargers in the Chicago MSA improved over the analysis period, averaging a failure to charge rate of 5.0% but down from an average of 6.8% in fourth quarter 2024.

DALLAS

The Dallas MSA operated 883 DCFC charging ports and generated an average of 257 sessions per port. With an average session duration of 32.6 minutes, and again assuming an average of four ports per station, this translates to 1,027 customers spending nearly 560 hours at a charging station. Utilization averaged 20.1% and was relatively consistent throughout the 12-month period. Throughout the day, utilization peaked between 12 Noon and 8 pm averaging 28.9%. Reliability of chargers in the Dallas MSA improved over the analysis period, averaging a failure to charge rate of 5.3% but down from an average of 7.5% in fourth quarter 2024.

HOUSTON

The Houston MSA operated 852 DCFC charging ports and generated an average of 204 sessions per port. With an average session duration of 31.8 minutes, and again assuming an average of four ports per station, this translates to 816 customers spending about 430 hours at a charging station. Utilization averaged 15.8% and was relatively consistent throughout the 12-month period. Throughout the day, utilization peaked between 12 Noon and 8 pm averaging 24.2%. Reliability of chargers in the Houston MSA improved over the analysis period, averaging a failure to charge rate of 6.0% but down from an average of 8.2% in fourth quarter 2024.

FIGURE 40. TOTAL CHARGERS IN DATA SET IN TOP 5 MSAs

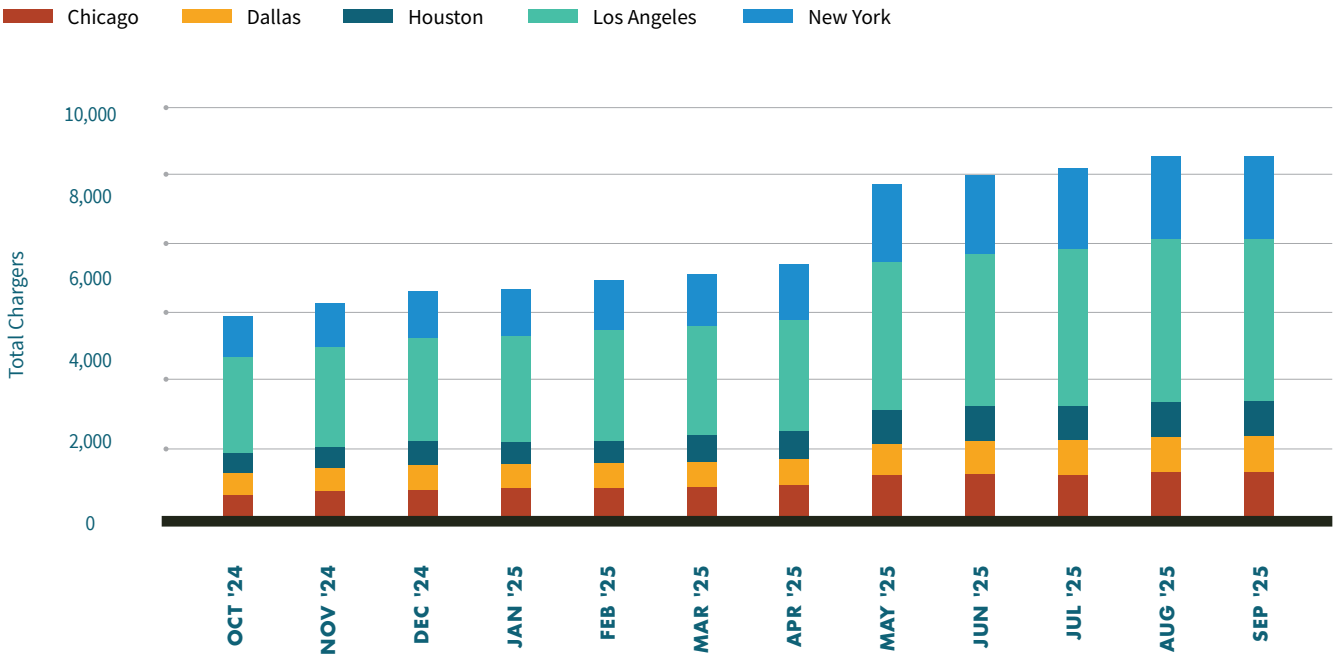


FIGURE 41. SESSIONS PER CHARGER PER MONTH

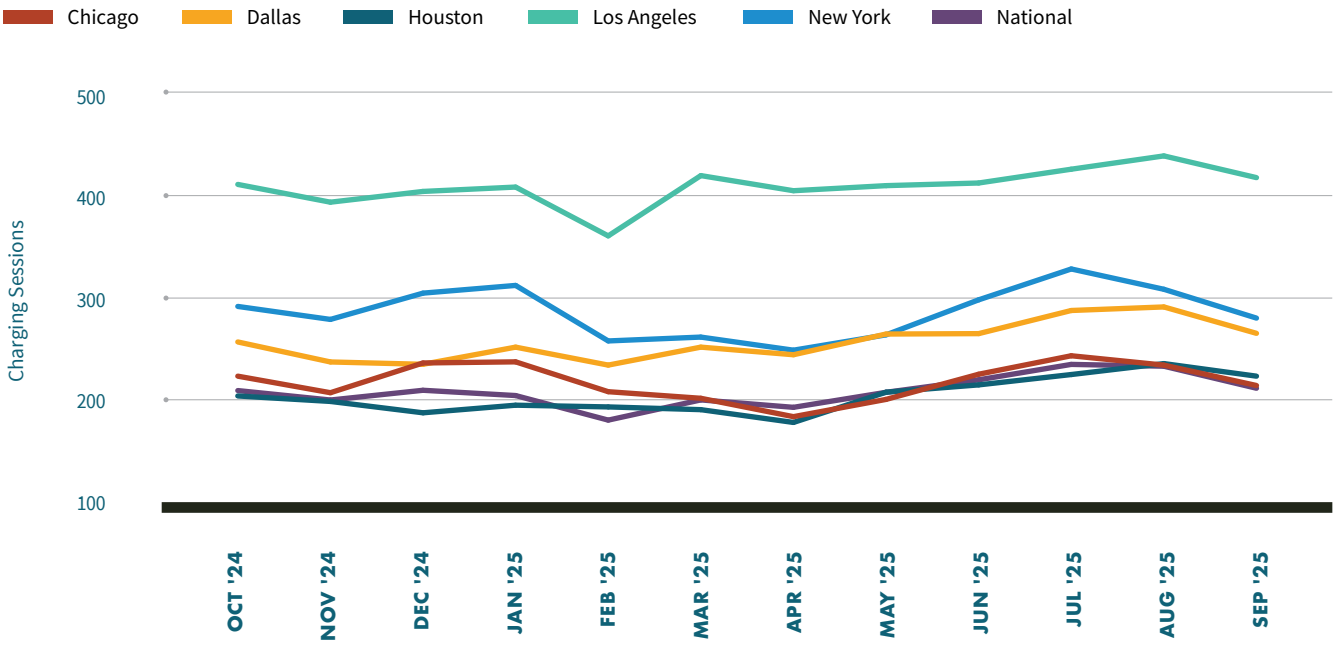


FIGURE 42. AVERAGE UTILIZATION

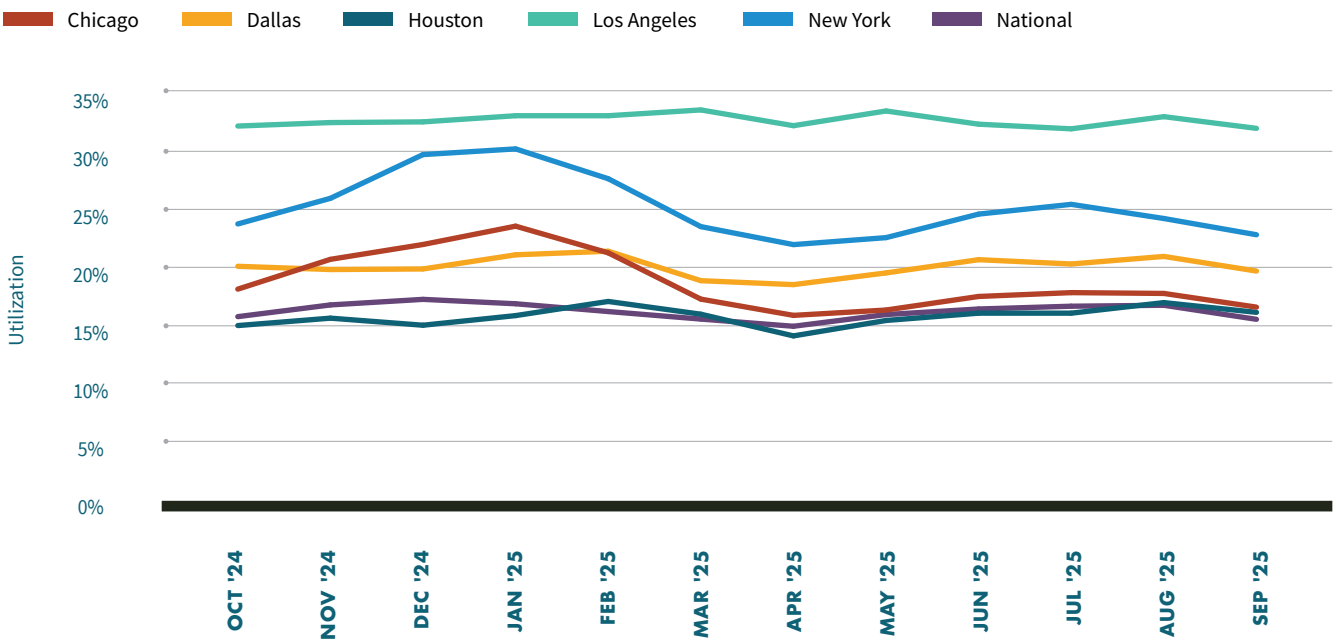


FIGURE 43. AVERAGE UTILIZATION BY DAY OF WEEK

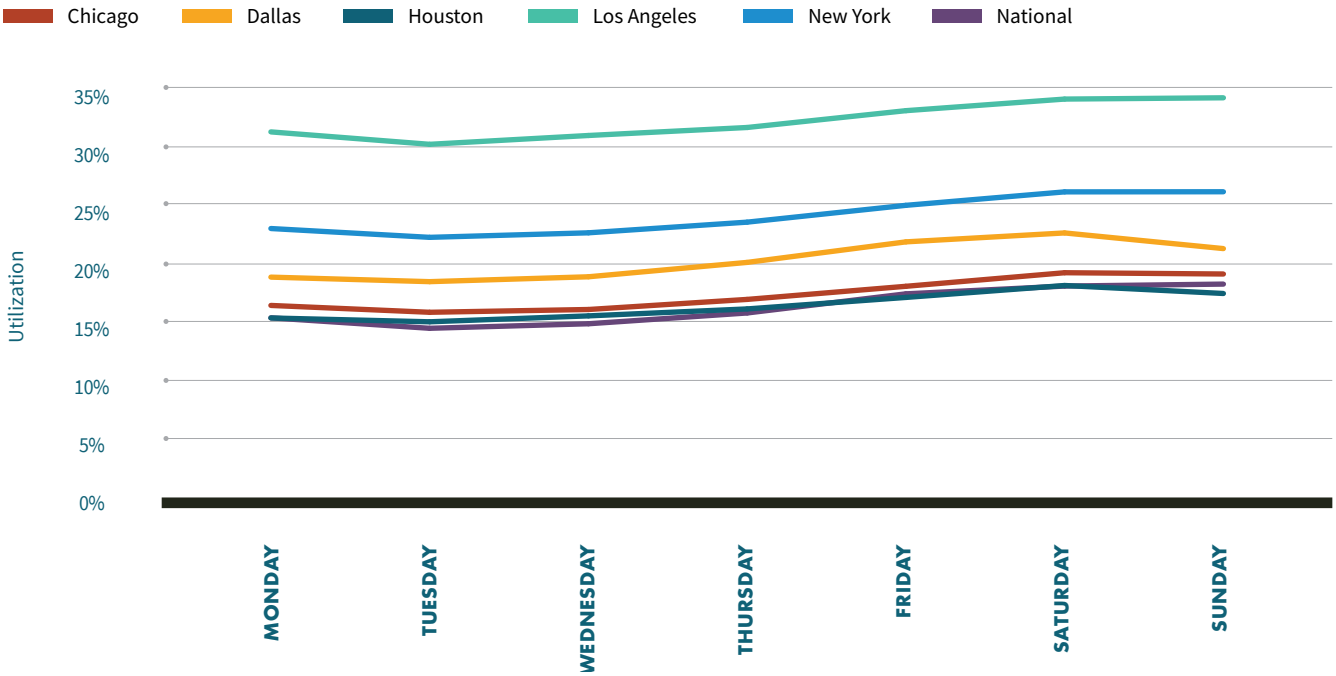


FIGURE 44. AVERAGE UTILIZATION BY TIME OF DAY

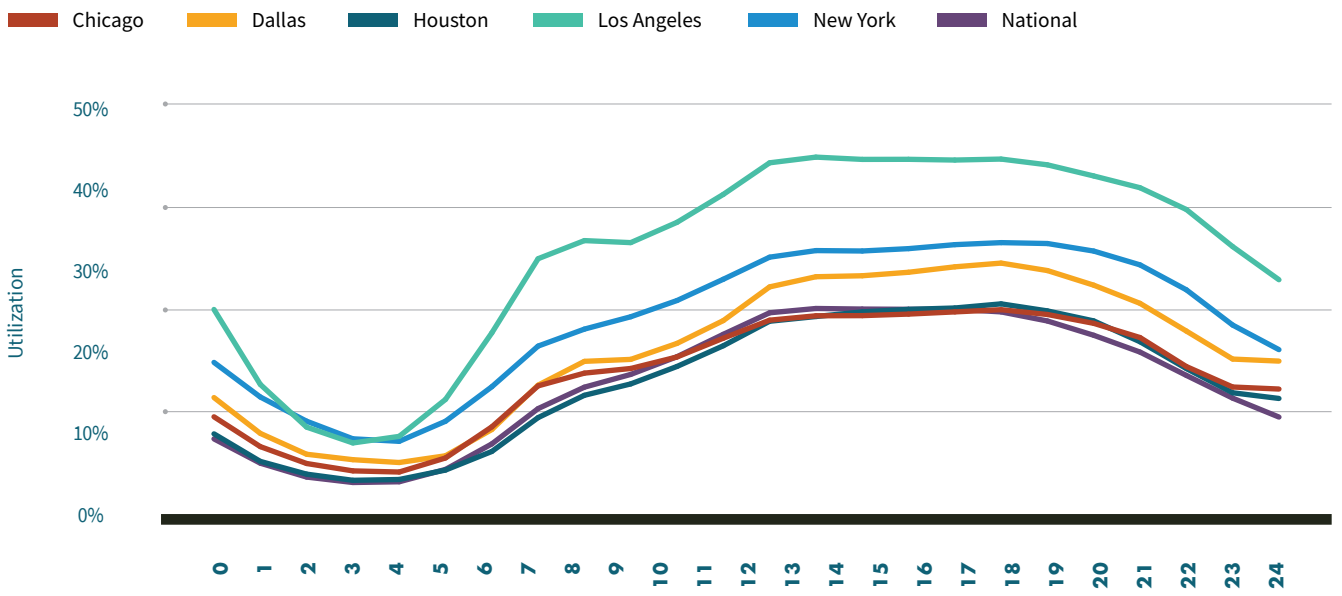


FIGURE 45. AVERAGE CHARGING SESSION DURATION IN MINUTES

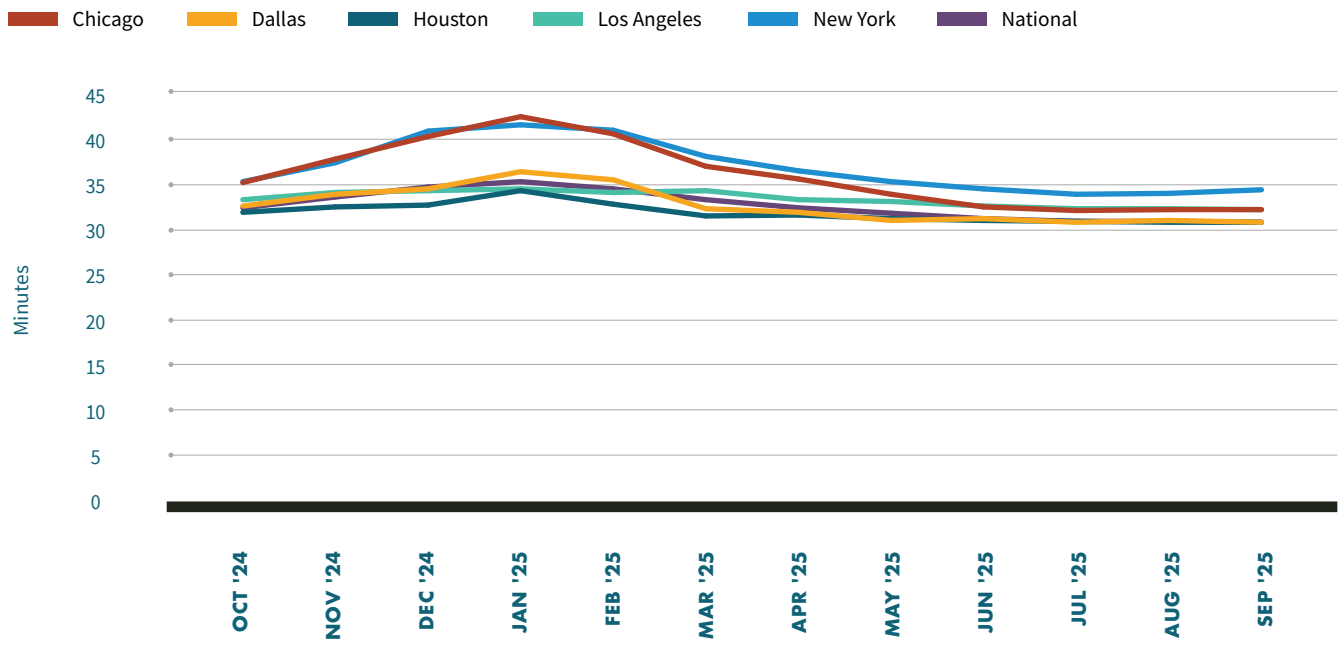


FIGURE 46. AVERAGE SUCCESS AND FAILURE RATES

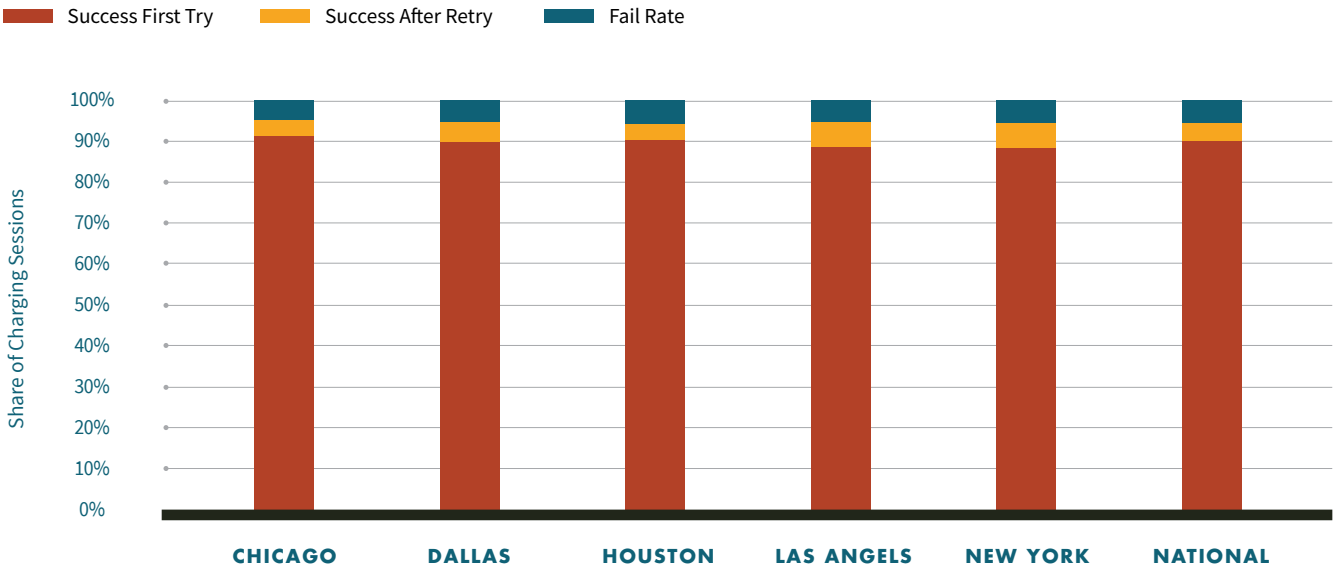


FIGURE 47. FAILURE RATES OVER TIME

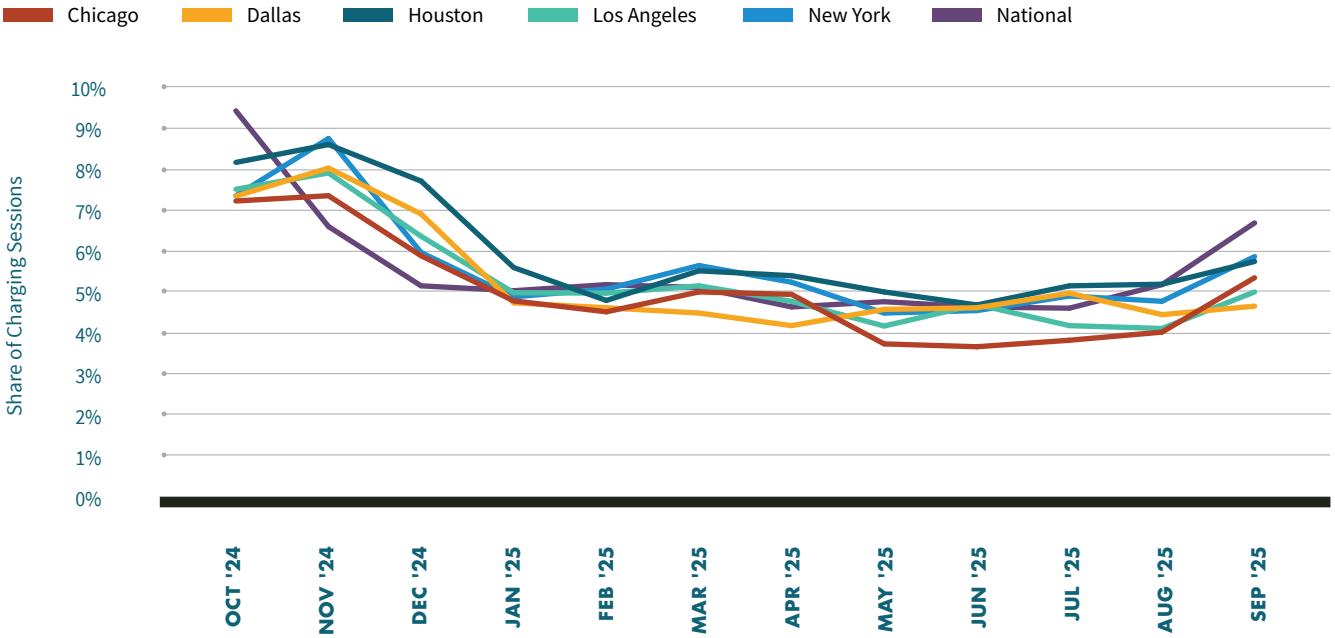


TABLE 24. CHARGING SESSIONS PER CHARGER PER MONTH

DATE	CHICAGO	DALLAS	HOUSTON	LOS ANGELES	NEW YORK	NATIONAL
Oct '24	222.8	256.5	203.3	411.7	291.5	208.6
Nov '24	206.5	236.8	197.9	394.2	278.7	199.3
Dec '24	235.8	234.5	186.7	404.8	304.6	208.9
Jan '25	236.9	251.4	194.2	409.1	312.2	203.7
Feb '25	207.5	233.7	192.5	361.0	257.5	179.5
Mar '25	201.0	251.4	189.8	420.4	261.3	199.4
Apr '25	182.9	243.9	177.2	405.5	248.4	192.1
May '25	199.9	264.3	207.0	410.5	263.5	206.9
Jun '25	224.7	264.7	214.2	413.1	298.0	219.2
Jul '25	242.9	287.5	224.4	426.7	328.4	234.4
Aug '25	233.7	291.0	235.2	439.8	308.4	232.6
Sep '25	213.6	265.0	222.8	418.4	280.0	210.9
Average	**217.3**	**256.7**	**203.8**	**409.6**	**286.1**	**208.0**
Change	**-4.1%**	**3.3%**	**9.6%**	**1.6%**	**-4.0%**	**1.1%**

TABLE 25. CHARGER UTILIZATION PERCENTAGE

DATE	CHICAGO	DALLAS	HOUSTON	LOS ANGELES	NEW YORK	NATIONAL
Oct '24	18.1%	20.1%	15.0%	32.2%	23.8%	15.8%
Nov '24	20.7%	19.8%	15.6%	32.5%	26.0%	16.8%
Dec '24	22.0%	19.9%	15.0%	32.6%	29.7%	17.3%
Jan '25	23.6%	21.1%	15.9%	33.1%	30.2%	16.9%
Feb '25	21.3%	21.4%	17.1%	33.1%	27.7%	16.2%
Mar '25	17.3%	18.9%	16.0%	33.6%	23.5%	15.6%
Apr '25	15.9%	18.5%	14.1%	32.2%	22.0%	14.9%
May '25	16.3%	19.5%	15.4%	33.5%	22.6%	15.9%
Jun '25	17.5%	20.7%	16.1%	32.4%	24.6%	16.4%
Jul '25	17.8%	20.3%	16.1%	32.0%	25.4%	16.7%
Aug '25	17.8%	21.0%	17.0%	33.0%	24.2%	16.7%
Sep '25	16.6%	19.7%	16.1%	32.0%	22.8%	15.5%
Average	**18.7%**	**20.1%**	**15.8%**	**32.7%**	**25.2%**	**16.2%**
Change	**-8.5%**	**-2.0%**	**7.6%**	**-0.6%**	**-3.9%**	**-1.5%**

TABLE 26. CHARGER UTILIZATION BY DAY OF WEEK

DAY	CHICAGO	DALLAS	HOUSTON	LOS ANGELES	NEW YORK	NATIONAL
Mon	16.4%	18.9%	15.4%	31.4%	23.1%	15.4%
Tues	15.9%	18.5%	15.0%	30.3%	22.3%	14.5%
Wed	16.1%	18.9%	15.5%	31.1%	22.7%	14.9%
Thurs	17.0%	20.2%	16.1%	31.8%	23.6%	15.8%
Fri	18.1%	21.9%	17.1%	33.2%	25.1%	17.4%
Sat	19.3%	22.7%	18.2%	34.2%	26.2%	18.1%
Sun	19.2%	21.3%	17.5%	34.3%	26.2%	18.3%

TABLE 27. CHARGER UTILIZATION BY TIME OF DAY

HOUR	CHICAGO	DALLAS	HOUSTON	LOS ANGELES	NEW YORK	NATIONAL
0	11.8%	14.2%	9.7%	25.0%	18.5%	9.1%
1	8.1%	9.8%	6.3%	15.8%	14.3%	6.1%
2	6.1%	7.2%	4.8%	10.5%	11.3%	4.4%
3	5.2%	6.5%	4.0%	8.6%	9.1%	3.7%
4	5.0%	6.2%	4.1%	9.4%	8.8%	3.8%
5	6.7%	7.0%	5.3%	14.0%	11.3%	5.3%
6	10.6%	10.2%	7.5%	22.1%	15.5%	8.5%
7	15.6%	15.7%	11.7%	31.3%	20.5%	12.8%
8	17.2%	18.6%	14.5%	33.5%	22.6%	15.5%
9	17.8%	18.9%	15.9%	33.3%	24.1%	17.0%
10	19.2%	20.9%	18.0%	35.8%	26.1%	19.2%
11	21.5%	23.7%	20.6%	39.2%	28.8%	22.0%
12	23.7%	27.8%	23.6%	43.1%	31.5%	24.6%
13	24.3%	29.1%	24.2%	43.8%	32.3%	25.2%
14	24.3%	29.2%	24.7%	43.5%	32.2%	25.1%
15	24.5%	29.6%	25.0%	43.5%	32.5%	25.1%
16	**24.7%**	**30.3%**	**25.2%**	**43.4%**	**33.0%**	**25.1%**
17	25.0%	30.7%	25.7%	43.6%	33.3%	24.7%
18	24.4%	29.8%	24.9%	42.8%	33.2%	23.6%
19	23.3%	28.0%	23.6%	41.5%	32.2%	21.9%
20	21.6%	25.8%	21.1%	40.0%	30.5%	19.8%
21	18.0%	22.4%	17.8%	37.3%	27.5%	16.9%
22	15.5%	18.9%	14.8%	32.8%	23.1%	14.1%
23	15.2%	18.7%	14.1%	28.7%	20.1%	11.8%

TABLE 28. SESSION DURATION (MINUTES)

DATE	CHICAGO	DALLAS	HOUSTON	LOS ANGELES	NEW YORK	NATIONAL
Oct '24	35.2	32.6	31.9	33.3	35.3	32.4
Nov '24	37.8	33.9	32.5	34.1	37.4	33.6
Dec '24	40.3	34.5	32.7	34.3	40.9	34.7
Jan '25	42.5	36.4	34.3	34.5	41.6	35.3
Feb '25	40.6	35.5	32.8	34.1	41.0	34.5
Mar '25	37.0	32.3	31.5	34.3	38.1	33.3
Apr '25	35.6	31.9	31.6	33.3	36.5	32.4
May '25	33.9	31.0	31.2	33.1	35.3	31.8
Jun '25	32.5	31.2	31.0	32.6	34.5	31.2
Jul '25	32.1	30.8	30.9	32.3	33.9	30.9
Aug '25	32.2	31.0	30.8	32.3	34.0	30.9
Sep '25	32.2	30.8	30.8	32.2	34.4	30.8
Average	**36.0**	**32.6**	**31.8**	**33.4**	**36.9**	**32.7**
Change	**-8.6%**	**-5.4%**	**-3.4%**	**-3.4%**	**-2.6%**	**-4.7%**

TABLE 29. SUCCESSFUL AND FAILED CHARGING EVENTS

DATE	CHICAGO			DALLAS			HOUSTON			LOS ANGELES		
	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
Oct '24	88.3%	4.0%	7.7%	88.1%	4.2%	7.7%	87.8%	4.2%	8.1%	87.8%	4.2%	8.0%
Nov '24	86.5%	4.3%	9.3%	87.0%	4.4%	8.7%	86.9%	4.3%	8.9%	86.3%	4.4%	9.4%
Dec '24	88.9%	4.6%	6.6%	88.9%	4.7%	6.4%	88.7%	4.5%	6.8%	88.9%	4.6%	6.6%
Jan '25	90.6%	4.7%	4.8%	90.4%	4.7%	4.9%	89.8%	4.7%	5.5%	90.2%	4.7%	5.1%
Feb '25	90.8%	4.6%	4.6%	90.4%	4.8%	4.8%	90.0%	4.8%	5.2%	90.3%	4.8%	5.0%
Mar '25	90.8%	4.4%	4.8%	90.3%	4.8%	4.9%	89.8%	4.8%	5.5%	90.1%	4.7%	5.1%
Apr '25	90.9%	4.4%	4.7%	90.8%	4.5%	4.7%	90.1%	4.6%	5.3%	90.5%	4.5%	5.0%
May '25	91.0%	4.6%	4.5%	90.5%	5.1%	4.4%	90.0%	5.2%	4.8%	90.4%	5.0%	4.6%
Jun '25	90.6%	4.8%	4.6%	90.2%	5.2%	4.6%	89.9%	5.3%	4.8%	90.2%	5.2%	4.7%
Jul '25	90.8%	4.7%	4.5%	90.4%	5.2%	4.4%	90.1%	5.2%	4.7%	90.4%	5.1%	4.6%
Aug '25	90.7%	4.9%	4.5%	90.2%	5.4%	4.4%	90.0%	5.5%	4.6%	90.1%	5.3%	4.6%
Sep '25	94.1%	1.2%	4.7%	93.8%	1.3%	4.9%	93.3%	1.4%	5.4%	93.6%	1.3%	5.1%
Average	90.3%	4.2%	5.4%	90.1%	4.5%	5.4%	89.7%	4.5%	5.8%	89.9%	4.5%	5.6%

DATE	NEW YORK		
	Success First Try	Success After Retry	Fail Rate
Oct '24	88.3%	4.0%	7.7%
Nov '24	86.5%	4.3%	9.3%
Dec '24	88.9%	4.6%	6.6%
Jan '25	90.6%	4.7%	4.8%
Feb '25	90.8%	4.6%	4.6%
Mar '25	90.8%	4.4%	4.8%
Apr '25	90.9%	4.4%	4.7%
May '25	91.0%	4.6%	4.5%
Jun '25	90.6%	4.8%	4.6%
Jul '25	90.8%	4.7%	4.5%
Aug '25	90.7%	4.9%	4.5%
Sep '25	94.1%	1.2%	4.7%
Average	90.3%	4.2%	5.4%

Charging Analytics Program

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)

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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.

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