

Numeric data used to plot the figures in Faraday Insight 14

The numerical data given here is supplied for the purposes of digital accessibility. Data is given as used to plot figures in the Insight, and the number of significant figures used should not be taken as implying the level of precision of the models.

Figure 1: UK public chargers by speed

Year	Number of slow chargers	Number of fast chargers	Number of rapid chargers	Number of ultra chargers	Total number of chargers
2016	910	4663	823	150	6546
2017	968	6002	961	262	8193
2018	1297	7846	1571	340	11054
2019	3366	10718	2411	476	16971
2020	4570	12464	3142	788	20964
2021	7247	16047	3874	1290	28458
2022 (YTD)	8515	19934	4327	2084	34860

Figure 2: Publicly available EV charging devices by UK region (2020-22)

Local Authority / Region Name	Charging devices per 100,000 population in July 2022	Charging devices per 100,000 population in July 2021	Charging devices per 100,000 population in July 2020
London	116.4	83.2	57.5
Scotland	54.7	46.9	35.0
England	48.6	36.4	27.3
United Kingdom	47.7	36.3	27.3
South East	44.0	35.3	27.0
North East	43.1	33.1	30.4
South West	39.5	30.3	25.2
Wales	37.6	28.9	20.6
West Midlands	36.2	26.7	17.4
East Midlands	35.3	26.3	19.9
East of England	33.2	25.0	17.9
Yorkshire	29.2	20.9	17.3
North West	27.2	22.0	20.1
Northern Ireland	17.3	17.4	16.5

Figure 4: Public chargers required over the 2030-50 period

	Number of public charging points required in 2030 / thousands	Number of public charging points required in 2040 / thousands	Number of public charging points required in 2050 / thousands
On-street/local	270	460	520
Inter-urban	8.5	10.0	10.5
Total	280	470	530

Figure 6: Minimum time required to charge hypothetical battery packs with different maximum driving ranges

Charge power / kWh	Time to fully recharge / h (hypothetical range 300 miles)	Time to fully recharge / h (hypothetical range 500 miles)
0.5	9326.4	259.1
1.0	77.7	129.5
1.5	51.8	86.4
2.0	38.9	64.8
2.5	31.1	51.8
3.0	25.9	43.2
3.5	22.2	37.0
4.0	19.4	32.4
4.5	17.3	28.8
5.0	15.5	25.9
5.5	14.1	23.6
6.0	13.0	21.6
6.5	12.0	19.9
7.0	11.1	18.5
7.5	10.4	17.3
8.0	9.7	16.2
8.5	9.1	15.2
9.0	8.6	14.4
9.5	8.2	13.6
10.0	7.8	13.0
12.0	6.5	10.8
14.0	5.6	9.3
16.0	4.9	8.1
18.0	4.3	7.2
20.0	3.9	6.5
22.0	3.5	5.9
24.0	3.2	5.4
26.0	3.0	5.0
28.0	2.8	4.6
30.0	2.6	4.3
35.0	2.2	3.7
40.0	1.9	3.2
45.0	1.7	2.9
50.0	1.6	2.6
55.0	1.4	2.4
60.0	1.3	2.2
65.0	1.2	2.0
70.0	1.1	1.9
75.0	1.0	1.7
80.0	1.0	1.6

Charge power / kWh	Time to fully recharge / h (hypothetical range 300 miles)	Time to fully recharge / h (hypothetical range 500 miles)
85.0	0.9	1.5
90.0	0.9	1.4
95.0	0.8	1.4
100.0	0.8	1.3
105.0	0.7	1.2
110.0	0.7	1.2
115.0	0.7	1.1
120.0	0.6	1.1
125.0	0.6	1.0
130.0	0.6	1.0
135.0	0.6	1.0
140.0	0.6	0.9
145.0	0.5	0.9
150.0	0.5	0.9
155.0	0.5	0.8
160.0	0.5	0.8
165.0	0.5	0.8
170.0	0.5	0.8
175.0	0.4	0.7
180.0	0.4	0.7
185.0	0.4	0.7
190.0	0.4	0.7
195.0	0.4	0.7
200.0	0.4	0.6
205.0	0.4	0.6
210.0	0.4	0.6
215.0	0.4	0.6
220.0	0.4	0.6
225.0	0.3	0.6
230.0	0.3	0.6
235.0	0.3	0.6
240.0	0.3	0.5
245.0	0.3	0.5
250.0	0.3	0.5
255.0	0.3	0.5
260.0	0.3	0.5
265.0	0.3	0.5
270.0	0.3	0.5
275.0	0.3	0.5
280.0	0.3	0.5
285.0	0.3	0.5
290.0	0.3	0.4
295.0	0.3	0.4
300.0	0.3	0.4

Charge power / kWh	Time to fully recharge / h (hypothetical range 300 miles)	Time to fully recharge / h (hypothetical range 500 miles)
305.0	0.3	0.4
310.0	0.3	0.4
315.0	0.2	0.4
320.0	0.2	0.4
325.0	0.2	0.4
330.0	0.2	0.4
335.0	0.2	0.4
340.0	0.2	0.4
345.0	0.2	0.4
350.0	0.2	0.4
355.0	0.2	0.4
360.0	0.2	0.4
365.0	0.2	0.4
370.0	0.2	0.4
375.0	0.2	0.3
380.0	0.2	0.3
385.0	0.2	0.3
390.0	0.2	0.3
395.0	0.2	0.3
400.0	0.2	0.3

Figure 7: Calculated revenue and degradation costs from V2G services

Duration / Years	V2 Revenue / £	Cost of V2G Degradation / £	Total / £
0	513	-88.1	424.9
1	513	-176.2	336.8
2	513	-264.2	248.8
3	513	-352.3	160.7
4	513	-389	124
5	513	-450.2	62.8
6	513	-511.4	1.6
7	513	-572.5	-59.5
8	513	-633.7	-120.7