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ELECTRIC VEHICLE QUARTERLY REPORT

SECOND QUARTER, 2024

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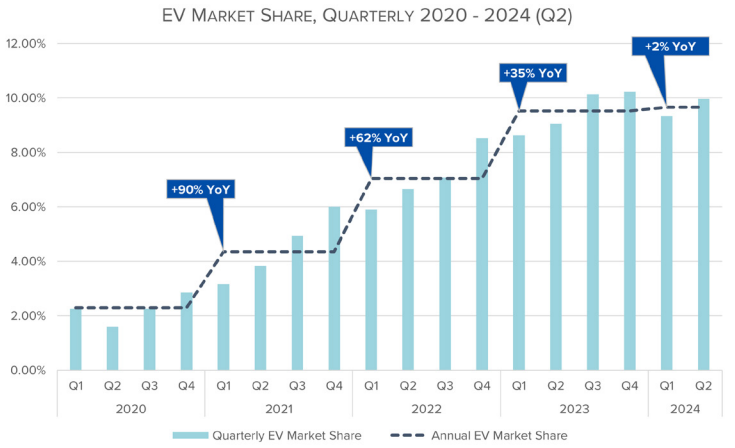
ELECTRIC VEHICLE SALES OVERVIEW (Q2 2024)

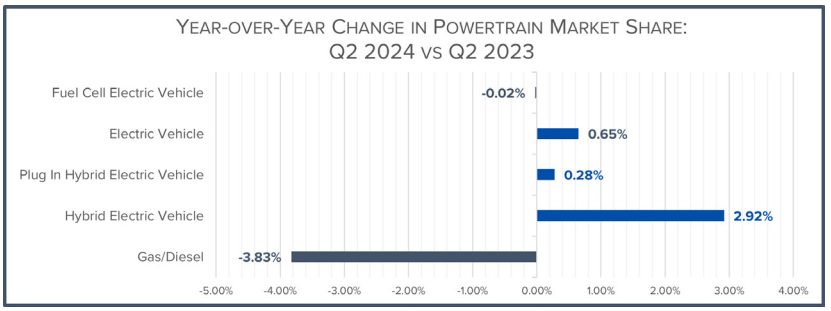
In the second quarter of 2024, automakers sold about 386,000 electric vehicles (EVs, including battery, plug-in hybrid, and fuel cell electric vehicles) in the United States, representing nearly 10 percent of overall light-duty vehicle sales. This represents a 0.6 percentage point (pp) market share increase over the first quarter of 2024 amounting to an increase of about 42,000 vehicle sales. EV sales volume in the second quarter is the highest on record, about 8,300 vehicles more than the next highest quarter (Q3 in 2023).

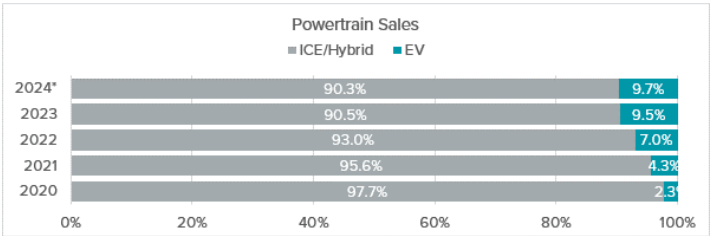


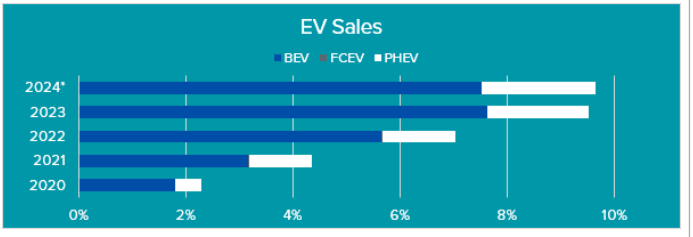
* See appendix - A for month-by-month EV market share

Year-over-year (YoY), market share increased 0.9 pp from the second quarter of 2023. The total volume of all light-duty sales in Q2 2024 was down 1.1 percent from Q2 2023, while the volume for EVs increased 9 percent (an increase of about 31,000 vehicles). For comparison, internal combustion engine (ICE) vehicle market share decreased by 3.8 pp during Q2 2024 compared to the same period last year. Nearly all of ICE market share was displaced by gains of traditional hybrids and electric vehicles, offset slightly by market share losses from FCEVs.

More than 730,000 EVs were sold in the first half of 2024, 9.7 percent of all light vehicle sales and an increased market share of 0.81 pp over the first half of 2023. The total volume of all light-duty sales for the first half of the year is up 1.4 percent from the same period a year ago, while the volume for EVs increased 10.6 percent (an increase of about 70,000 vehicles).



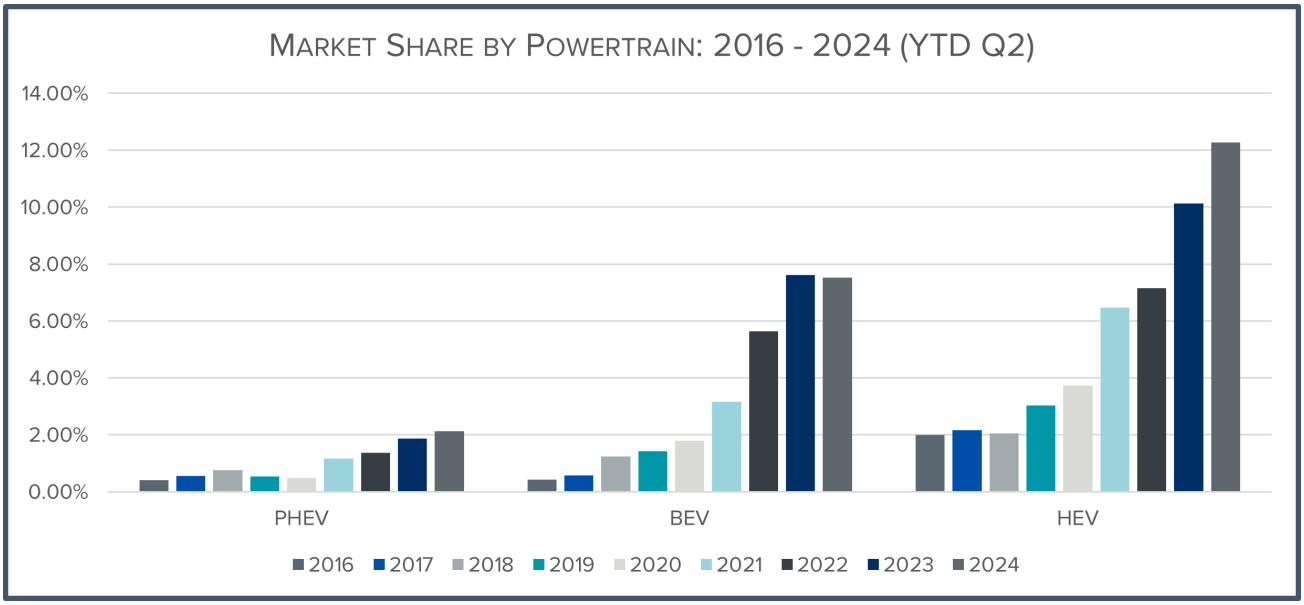


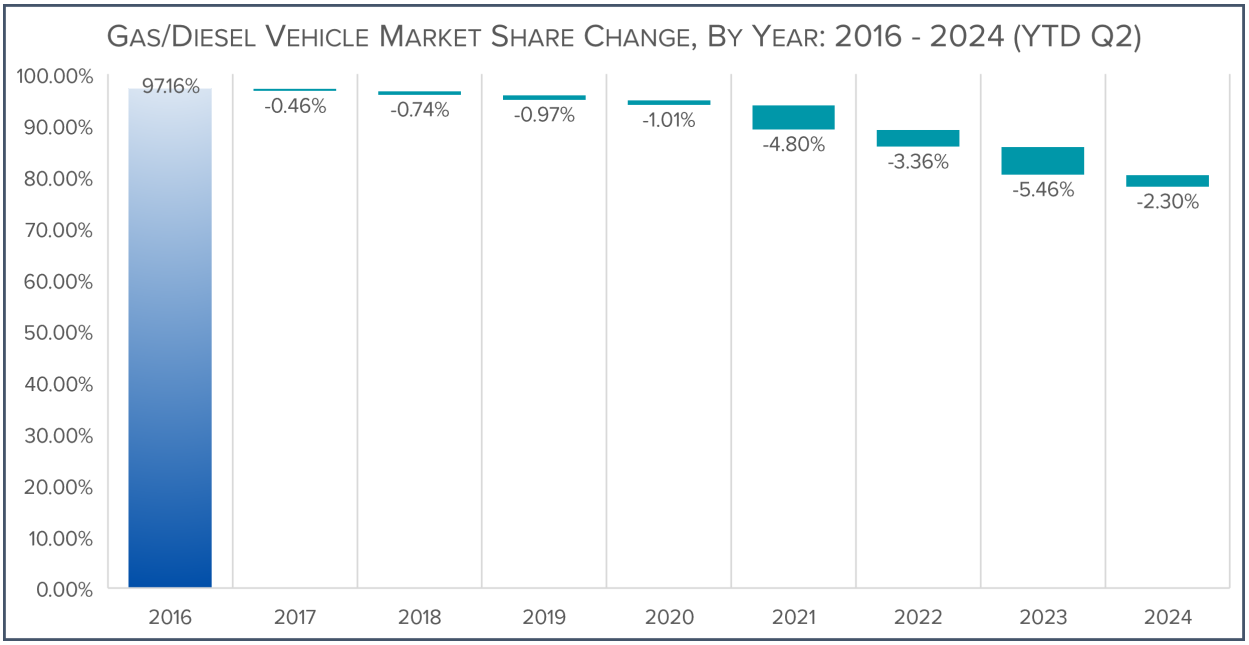


*Through Q2 2024

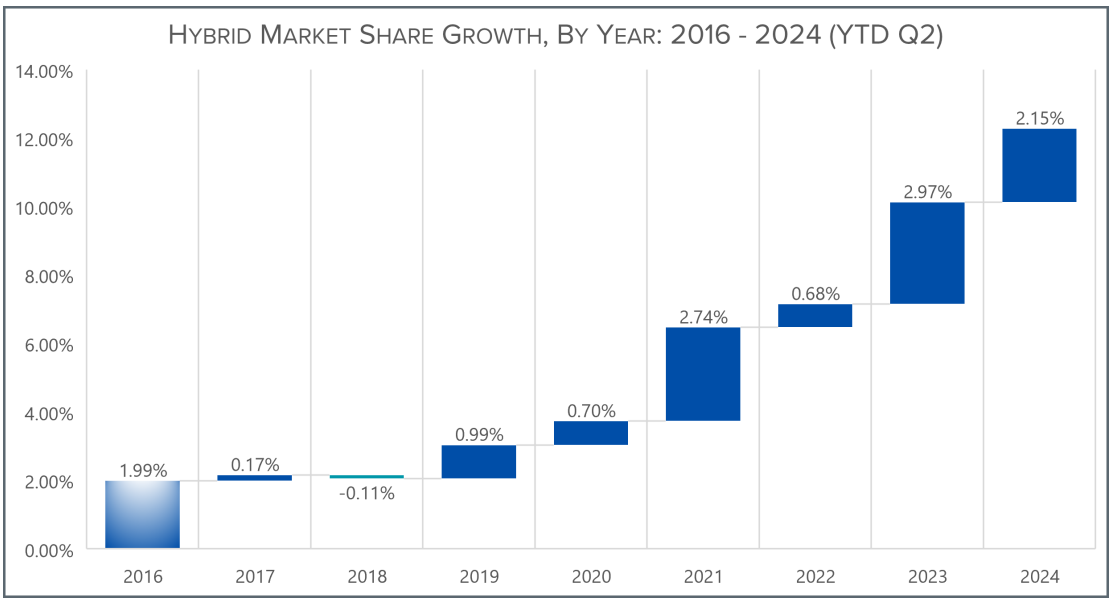
EVOLVING MARKET SHARE OF POWERTRAINS: 2016 - 2024

From 2016 through the second quarter of 2024, traditional internal combustion engine (ICE) market share has steadily declined. In 2016, ICE vehicles comprised more than 97 percent of all vehicle sales. Through the second quarter of 2024, the year-to-date ICE share dropped to 78 percent for an overall loss of 19.1 pp. That said, the ICE market share loss was replaced by increases in share of traditional hybrids, BEVs, and PHEVs. Traditional hybrids made up most of the alternative vehicle gains (+10.3 pp) followed by BEVs (+7.1 pp) and PHEVs (+1.7 pp) over the last eight and a half years.

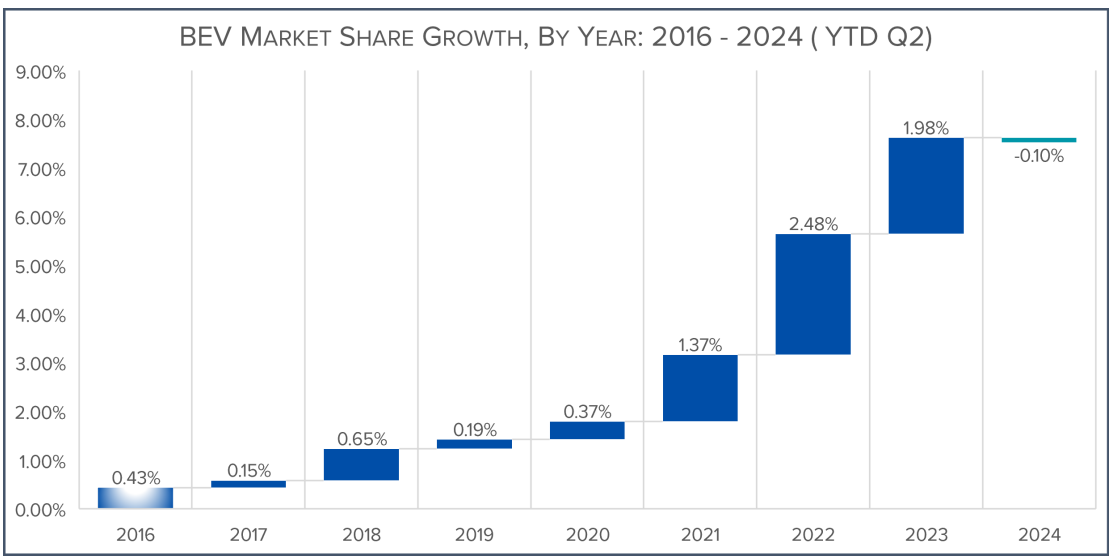




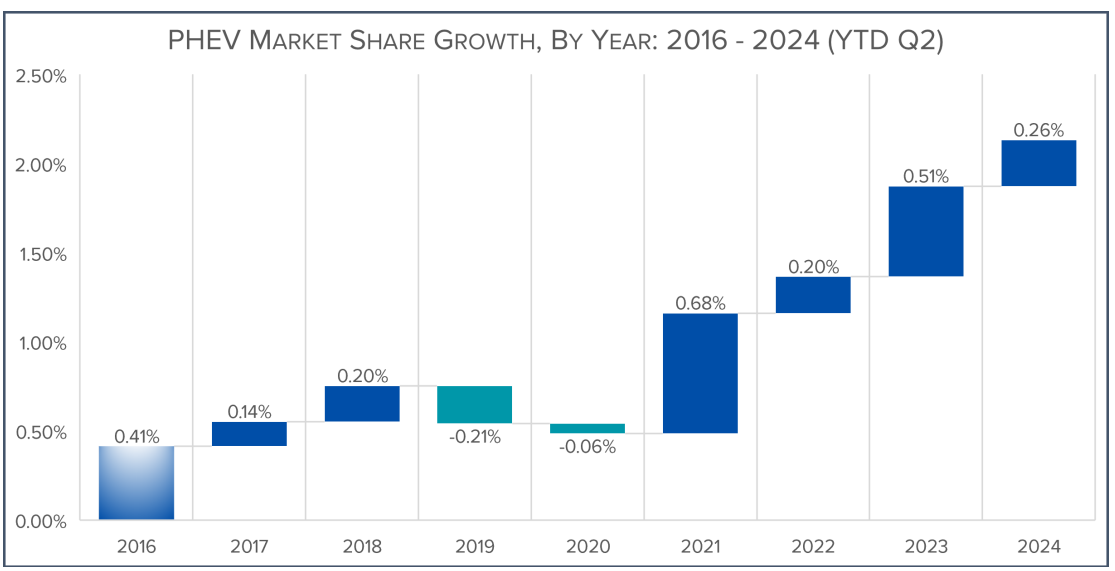
Hybrid market share grew from 2 percent in 2016 to 12.3 percent through Q2 2024 (+10.3 pp):



BEV market share grew from .43 percent in 2016 to 7.5 percent through Q2 2024 (+7.1 pp):



PHEV market share grew from .41 percent in 2016 to 2.1 percent through Q2 2024 (+1.7 pp):



See Additional Historic Data on EV Sales

ELECTRIC VEHICLE SALES BY SEGMENT

EV Model Availability

117 Vehicle Models Sold in Q2 2024:

68 Battery Electric Vehicles
- 20 Cars
- 38 Utility Vehicles
- 5 Pickups
- 5 Vans

47 Plug-in Hybrid Vehicles
- 17 Cars
- 29 Utility Vehicles
- 1 Van

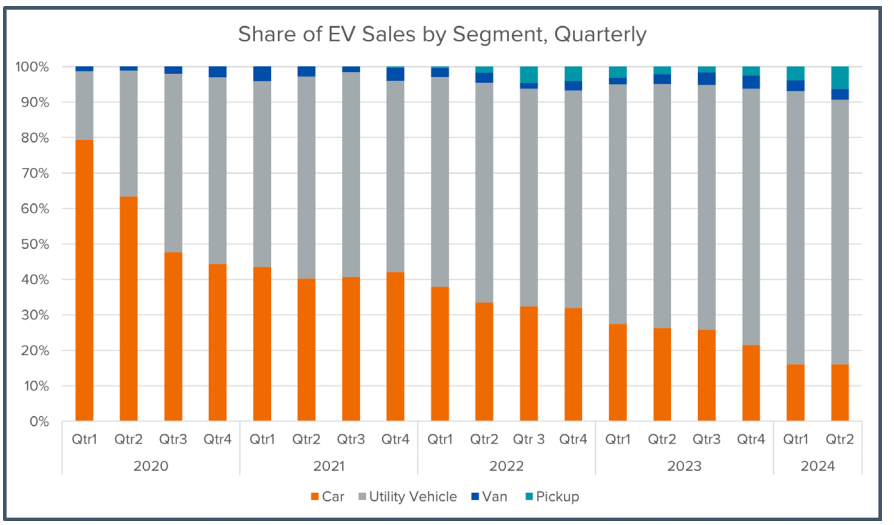
2 Fuel Cell Electric Vehicles
- 1 Car
- 1 Utility Vehicle

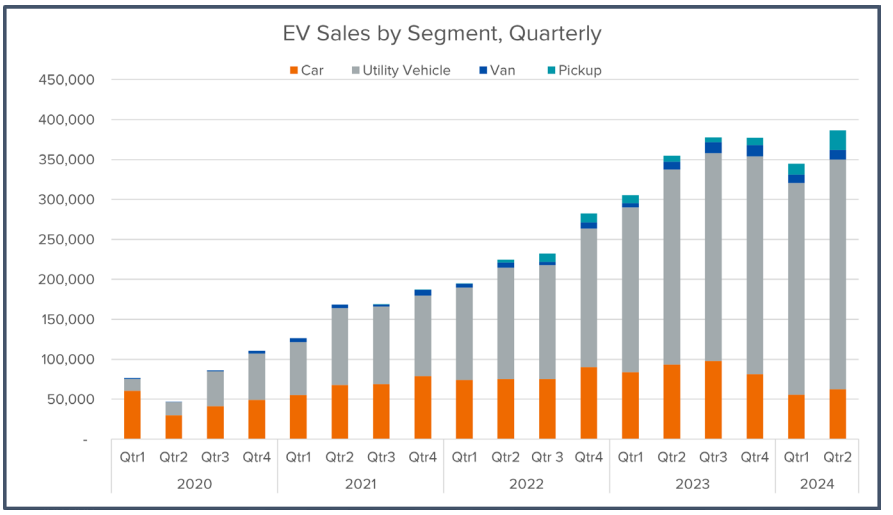
See more information about ***EV CHOICE HERE***

For a list of EVs that qualify for the federal government's new clean vehicle tax credit of up to $7,500 ***CLICK HERE***.

While passenger cars once dominated the EV market, manufacturers continue to introduce new models to satisfy a variety of consumer needs. Utility vehicle (UV) offerings continue to grow, and while electric pickup trucks are a relatively new entry to the market (making their commercial debut in September 2021), there are 5 models available now, with more expected soon. As a result, non-car segments are continuing to make gains, and in the second quarter of 2024, light truck (UVs, minivans, and pickups) sales comprised 84 percent of the EV market – a 10 pp increase over the second quarter of 2023.

Quarterly sales of BEV and PHEV UVs have grown from about 19 percent of EVs at the start of 2020 to 75 percent in the second quarter of 2024. Nearly 44,000 more UVs were sold in the second quarter of 2024 than the second quarter of 2023.

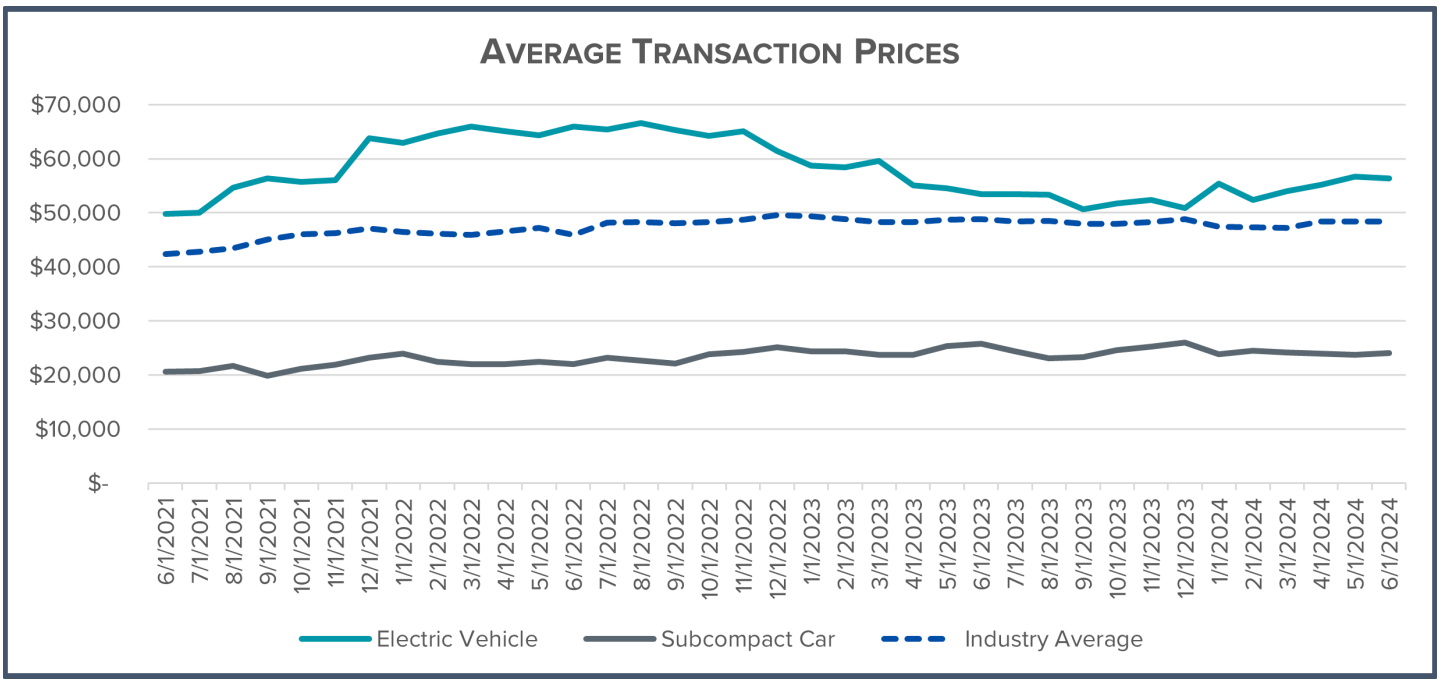




Source: Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1, 2020 –June 30, 2024

ELECTRIC VEHICLE TRANSACTION PRICES

"The average transaction price of [EVs] in the United States, not including any government incentives, decreased from $57,405 in January 2024 to $56,371 in June 2024, according to data from Cox Automotive. [EV] transaction prices were 21.1 percent higher than the overall average light-duty vehicle transaction price in January 2024 and 15.9 percent higher in June 2024."[1]



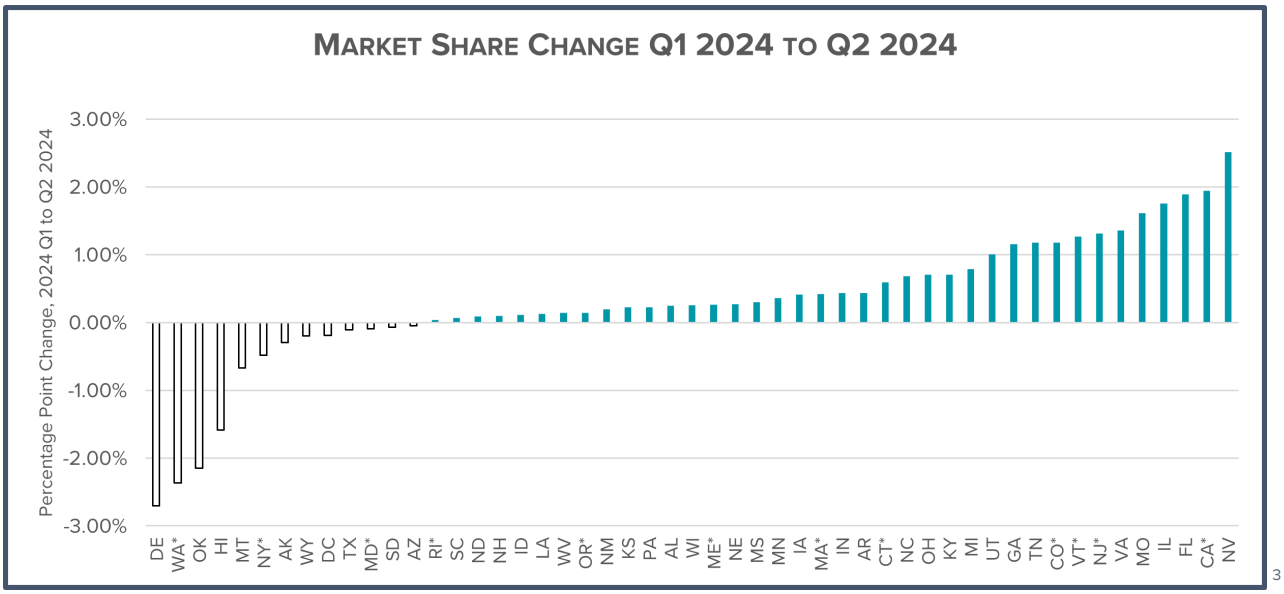
(Compiled from Kelley Blue Book Press Releases, 6/2021 – 6/2024)

[1] EIA, In-Brief Analysis, "U.S. share of electric and hybrid vehicle sales increased in the second quarter of 2024," 8/26/2024

ELECTRIC VEHICLE SALES BY STATE

For the Second Quarter of 2024:

California continued to lead the nation in EV sales, with BEVs, PHEVs and FCEVs making up nearly 27 percent of new light-duty vehicle registrations in the second quarter of 2024. There are currently ten additional states[2] and the District of Columbia with new EV registrations above 10 percent. Three-quarters of the states saw market share growth in Q2 vs. Q1 – twelve states saw a market share improvement of one percentage point or more. Nevada led all states, quarter over quarter, with an increase of 2.51 pp; Delaware decreased the most (-2.7 pp).



[3]

Year-over-year, for the second quarter of 2024, the market share of new EVs registered increased in all but seven states[4]. Nine states witnessed an increased market share of EVs by 2 pp or more. Making the largest increases were Colorado[5] (7.7 pp), Hawaii (4.9 pp), Nevada (4.7 pp), and Vermont (3.4 pp).

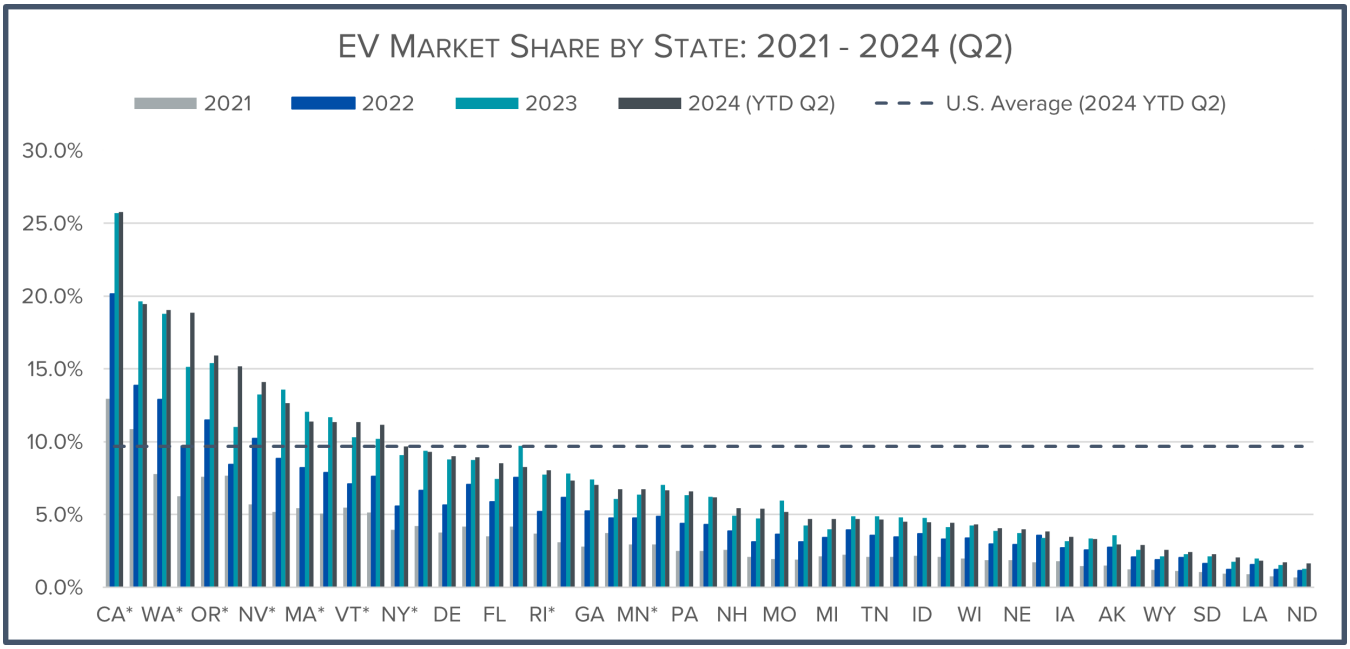
For the First Half of 2024:

Through the first half of the year, EV sales represented 9.7 percent of the market – a 0.8 pp increase over the same period of 2023. Nearly 26 percent of sales in California were EVs, but Colorado realized the greatest increase in market share, year-over-year with a 6.9 pp increase. Following Colorado, the states with the largest market share gains were Hawaii (4.5 pp), Oklahoma[6] (3.6 pp), Vermont (2.9 pp) and New York (2.1). Fourteen states increased their year-over-year EV market share by 1 pp or more. Nine states decreased.

While some states continue to have strong EV sales, nine states had new EV registrations of less than 3 percent; three of those states were under 2 percent. All states had a market share above 1 percent for new EV sales.

Year to date (through Q2), eleven states and the District of Columbia had an EV market share above 10 percent while three states had an EV market share under 2 percent; California was the only state above 20 percent.[7]

[2] States with more than a 10 percent market share of EVs: California, Colorado, District of Columbia, Washington, Oregon, Nevada, Hawaii, New Jersey, Vermont, Massachusetts, Connecticut, and Maryland.
[3] *Denotes states that have adopted California's ZEV program
[4] The seven states are: Delaware, Virginia, Arkansas, Missouri, Arizona, Massachusetts, and New Jersey
[5] Colorado taxpayers are eligible for a state tax credit of $5,000 for the purchase or lease of a new EV on or after July 1, 2023 with a manufacturer's suggested retail price (MSRP) up to $80,000. Lease agreements must have an initial term of at least two years. Beginning January 1, 2024, Coloradans purchasing an EV with an MSRP up to $35,000 will be eligible for an additional $2,500 tax credit.
[6] Oklahoma is often an outlier due to fleet registrations.
[7] Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1, 2021 – June 30, 2024



*Denotes states that have adopted California's ZEV program

2024 EV Market Share by State (YTD Q2)[8]

1	CA*	25.78%	**11**	VT*	11.35%	**21**	GA	7.03%	**31**	MI	4.69%	**41**	IA	3.45%
2	DC	19.44%	**12**	CT*	11.15%	**22**	ME*	6.74%	**32**	NM	4.69%	**42**	KY	3.33%
3	WA*	19.03%	**13**	NY*	9.67%	**23**	MN*	6.74%	**33**	TN	4.64%	**43**	AK	2.93%
4	CO*	18.86%	**14**	AZ	9.30%	**24**	NC	6.65%	**34**	KS	4.50%	**44**	AL	2.89%
5	OR*	15.90%	**15**	DE	8.99%	**25**	PA	6.58%	**35**	ID	4.47%	**45**	WY	2.58%
6	HI	15.18%	**16**	UT	8.93%	**26**	TX	6.16%	**36**	IN	4.43%	**46**	AR	2.41%
7	NV*	14.09%	**17**	FL	8.53%	**27**	NH	5.44%	**37**	WI	4.32%	**47**	SD	2.25%
8	NJ*	12.63%	**18**	VA*	8.24%	**28**	OK	5.40%	**38**	SC	4.06%	**48**	WV	2.03%
9	MA*	11.37%	**19**	RI*	8.02%	**29**	MO	5.16%	**39**	NE	3.99%	**49**	LA	1.83%
10	MD*	11.36%	**20**	IL	7.31%	**30**	OH	4.70%	**40**	MT	3.84%	**50**	MS	1.72%
												51	ND	1.62%

[8] *Denotes states that have adopted California's ZEV program; Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1, 2024 – June 30, 2024

Second Quarter 2024, New Light-Duty Vehicle Registrations By Powertrain					Change In Market Share (2024 Q2 vs 2023 Q2), New Light-Duty Vehicle Registrations Powertrain			
State	Advanced Powertrain Market Share				Advanced Powertrain Market Share (Percentage Point Change)			
	PHEV	BEV	FCEV	EV Total	PHEV	BEV	FCEV	EV Total
AK	0.66%	2.13%	0.00%	2.80%	-0.19	-0.43	0.00	-0.62
AL	0.57%	2.43%	0.00%	3.01%	0.01	0.64	0.00	0.65
AR	0.49%	2.14%	0.00%	2.63%	-0.06	0.55	0.00	0.50
AZ	1.13%	8.15%	0.00%	9.28%	-0.20	-0.19	0.00	-0.39
CA*	3.22%	23.48%	0.02%	26.72%	0.10	0.92	-0.21	0.80
CO*	5.49%	13.94%	0.00%	19.43%	1.23	6.49	0.00	7.72
CT*	3.86%	7.57%	0.00%	11.43%	0.64	1.48	0.00	2.11
DC	6.03%	13.32%	0.00%	19.35%	2.22	-1.53	0.00	0.69
DE	2.45%	5.11%	0.00%	7.56%	0.52	-2.26	0.00	-1.74
FL	1.28%	8.18%	0.00%	9.46%	0.43	2.17	0.00	2.60
GA	0.77%	6.83%	0.00%	7.60%	0.12	0.34	0.00	0.46
HI	4.54%	9.84%	0.01%	14.39%	3.57	1.34	0.00	4.91
IA	0.96%	2.69%	0.00%	3.65%	0.07	0.70	0.00	0.78
ID	1.19%	3.34%	0.00%	4.53%	-0.10	0.54	0.00	0.44
IL	1.30%	6.91%	0.00%	8.22%	0.23	0.51	0.00	0.74
IN	0.88%	3.76%	0.00%	4.64%	0.01	1.16	0.00	1.17
KS	1.04%	3.57%	0.00%	4.62%	0.19	-0.03	0.00	0.16
KY	0.67%	2.95%	0.00%	3.62%	-0.14	0.89	0.00	0.75
LA	0.42%	1.47%	0.00%	1.89%	0.03	0.21	0.00	0.24
MA*	3.60%	7.97%	0.00%	11.57%	-0.49	0.17	0.00	-0.32
MD*	2.40%	8.91%	0.00%	11.31%	-0.07	0.96	0.00	0.89
ME*	2.98%	3.88%	0.00%	6.86%	0.69	0.99	0.00	1.68
MI	1.04%	4.07%	0.00%	5.11%	-0.06	1.11	0.00	1.05
MN*	1.86%	5.05%	0.00%	6.90%	0.59	0.60	0.00	1.18
MO	2.71%	3.22%	0.00%	5.94%	-0.18	-0.31	0.00	-0.49
MS	0.39%	1.47%	0.00%	1.86%	-0.03	0.68	0.00	0.65
MT	1.12%	2.41%	0.00%	3.53%	0.12	0.61	0.00	0.73
NC	1.09%	5.89%	0.00%	6.98%	0.15	-0.08	0.00	0.07
ND	0.55%	1.12%	0.00%	1.67%	-0.02	0.62	0.00	0.60
NE	1.20%	2.93%	0.00%	4.13%	0.13	0.76	0.00	0.89
NH	2.41%	3.08%	0.00%	5.49%	0.85	0.14	0.00	0.99
NJ*	2.79%	10.45%	0.00%	13.25%	0.26	-0.52	0.00	-0.26
NM	1.06%	3.72%	0.00%	4.78%	-0.07	0.63	0.00	0.56
NV*	1.61%	13.79%	0.00%	15.40%	-0.08	4.77	0.00	4.70
NY*	3.66%	5.78%	0.00%	9.44%	0.33	0.79	0.00	1.13
OH	1.08%	3.95%	0.00%	5.03%	0.11	0.87	0.00	0.98
OK	3.49%	0.86%	0.00%	4.35%	2.86	-0.39	0.00	2.47
OR*	4.02%	11.95%	0.00%	15.97%	0.93	1.66	0.00	2.59
PA	2.19%	4.51%	0.00%	6.69%	0.06	0.23	0.00	0.29
RI*	3.37%	4.67%	0.00%	8.04%	0.43	0.79	0.00	1.22
SC	1.13%	2.97%	0.00%	4.09%	0.37	0.08	0.00	0.44
SD	0.79%	1.43%	0.00%	2.22%	0.01	0.48	0.00	0.49
TN	0.55%	4.65%	0.00%	5.20%	-0.07	1.43	0.00	1.36
TX	0.73%	5.38%	0.00%	6.11%	0.11	0.23	0.00	0.34
UT	1.55%	7.87%	0.00%	9.41%	0.11	2.17	0.00	2.27
VA*	1.60%	7.31%	0.00%	8.91%	0.31	-1.25	0.00	-0.95
VT*	4.37%	7.56%	0.00%	11.93%	0.99	2.45	0.00	3.44
WA*	2.73%	15.14%	0.00%	17.87%	-0.38	1.06	0.00	0.68
WI	1.04%	3.41%	0.00%	4.45%	0.13	0.42	0.00	0.55
WV	0.72%	1.38%	0.00%	2.10%	0.16	0.39	0.00	0.55
WY	0.78%	1.71%	0.00%	2.49%	0.03	0.55	0.00	0.58
U.S.	1.96%	7.99%	0.00%	9.96%	0.28	0.65	-0.02	0.91

*Denotes states that have adopted California's ZEV program

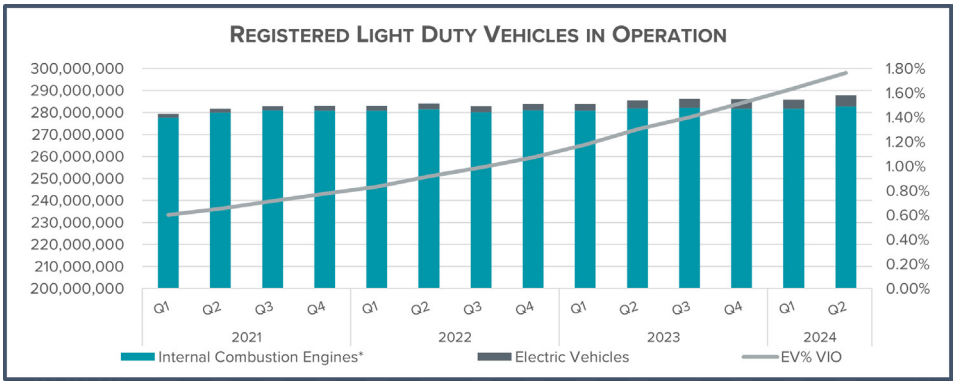
Source: Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1 – June 30, 2023, and January 1 – June 30, 2024

2024 New Light-Duty Vehicle Registrations By Powertrain (YTD Q2)					Change In Market Share (2024 vs 2023 YTD Q2), New Light-Duty Vehicle Registrations Powertrain			
State	Advanced Powertrain Market Share				Advanced Powertrain Market Share (Percentage Point Change)			
	PHEV	BEV	FCEV	EV Total	PHEV	BEV	FCEV	EV Total
AK	0.62%	2.31%	0.00%	**2.93%**	-0.26	-0.45	0.00	**-0.72**
AL	0.59%	2.30%	0.00%	**2.89%**	-0.06	-0.43	0.00	**0.50**
AR	0.46%	1.95%	0.00%	**2.41%**	0.07	-0.34	0.00	**0.27**
AZ	1.44%	7.86%	0.00%	**9.30%**	-0.24	0.10	0.00	**0.13**
CA*	3.49%	22.25%	0.03%	**25.78%**	-0.20	-0.79	0.17	**0.81**
CO**	6.20%	12.66%	0.00%	**18.86%**	-2.27	-4.61	0.00	**6.88**
CT*	3.98%	7.17%	0.00%	**11.15%**	-1.00	-0.85	0.00	**1.84**
DC	5.21%	14.24%	0.00%	**19.44%**	-1.16	1.11	0.00	**0.05**
DE	2.41%	6.59%	0.00%	**8.99%**	-0.55	-0.14	0.00	**0.70**
FL	1.14%	7.39%	0.00%	**8.53%**	-0.26	-1.55	0.00	**1.81**
GA	0.88%	6.15%	0.00%	**7.03%**	-0.19	0.16	0.00	**0.03**
HI	5.54%	9.64%	0.00%	**15.18%**	-4.55	0.03	0.00	**4.52**
IA	0.98%	2.47%	0.00%	**3.45%**	-0.14	-0.41	0.00	**0.55**
ID	1.36%	3.11%	0.00%	**4.47%**	-0.12	-0.24	0.00	**0.36**
IL	1.36%	5.95%	0.00%	**7.31%**	-0.26	0.35	0.00	**-0.08**
IN	1.01%	3.42%	0.00%	**4.43%**	-0.15	-0.65	0.00	**0.80**
KS	1.14%	3.37%	0.00%	**4.50%**	-0.33	0.06	0.00	**0.27**
KY	0.66%	2.66%	0.00%	**3.33%**	0.10	-0.41	0.00	**0.31**
LA	0.54%	1.30%	0.00%	**1.83%**	-0.11	0.17	0.00	**-0.06**
MA*	3.90%	7.46%	0.00%	**11.37%**	-0.29	0.08	0.00	**0.21**
MD*	2.70%	8.66%	0.00%	**11.36%**	-0.40	-0.78	0.00	**1.17**
ME*	3.23%	3.52%	0.00%	**6.74%**	-0.94	-0.48	0.00	**1.42**
MI	1.04%	3.65%	0.00%	**4.69%**	0.06	-0.77	0.00	**0.72**
MN*	1.77%	4.97%	0.00%	**6.74%**	-0.51	-0.49	0.00	**1.00**
MO	1.83%	3.33%	0.00%	**5.16%**	0.17	0.12	0.00	**-0.29**
MS	0.41%	1.30%	0.00%	**1.72%**	-0.05	-0.40	0.00	**0.46**
MT	1.23%	2.61%	0.00%	**3.84%**	-0.21	-0.56	0.00	**0.77**
NC	1.07%	5.57%	0.00%	**6.65%**	-0.07	0.34	0.00	**-0.27**
ND	0.57%	1.06%	0.00%	**1.62%**	0.05	-0.46	0.00	**0.41**
NE	1.27%	2.73%	0.00%	**3.99%**	-0.22	-0.56	0.00	**0.78**
NH	2.44%	3.01%	0.00%	**5.44%**	-0.90	0.04	0.00	**0.86**
NJ*	2.90%	9.73%	0.00%	**12.63%**	-0.60	0.66	0.00	**-0.06**
NM	1.05%	3.64%	0.00%	**4.69%**	0.09	-0.32	0.00	**0.23**
NV*	1.66%	12.42%	0.00%	**14.09%**	-0.02	-1.36	0.00	**1.38**
NY*	4.44%	5.23%	0.00%	**9.67%**	-1.39	-0.68	0.00	**2.06**
OH	1.17%	3.53%	0.00%	**4.70%**	-0.24	-0.61	0.00	**0.85**
OK	4.50%	0.90%	0.00%	**5.40%**	-3.92	0.32	0.00	**3.60**
OR*	4.47%	11.43%	0.00%	**15.90%**	-1.20	-0.24	0.00	**1.43**
PA	2.49%	4.09%	0.00%	**6.58%**	-0.69	-0.10	0.00	**0.79**
RI*	3.63%	4.39%	0.00%	**8.02%**	-0.98	-0.56	0.00	**1.53**
SC	1.04%	3.01%	0.00%	**4.06%**	-0.26	-0.16	0.00	**0.42**
SD	0.78%	1.48%	0.00%	**2.25%**	0.04	-0.35	0.00	**0.31**
TN	0.56%	4.08%	0.00%	**4.64%**	0.08	-0.01	0.00	**-0.07**
TX	0.85%	5.31%	0.00%	**6.16%**	-0.19	-0.06	0.00	**0.25**
UT	1.58%	7.36%	0.00%	**8.93%**	-0.13	-0.78	0.00	**0.91**
VA*	1.50%	6.74%	0.00%	**8.24%**	-0.24	1.78	0.00	**-1.54**
VT*	4.30%	7.05%	0.00%	**11.35%**	-1.25	-1.68	0.00	**2.93**
WA*	3.21%	15.81%	0.00%	**19.03%**	-0.20	-1.75	0.00	**1.96**
WI	0.94%	3.38%	0.00%	**4.32%**	-0.05	-0.47	0.00	**0.52**
WV	0.68%	1.35%	0.00%	**2.03%**	-0.12	-0.35	0.00	**0.47**
WY	0.86%	1.72%	0.00%	**2.58%**	-0.10	-0.64	0.00	**0.73**
U.S.	**2.13%**	**7.52%**	**0.00%**	**9.66%**	**-0.50**	**-0.32**	**0.02**	**0.81**

*Denotes states that have adopted California's ZEV program
Source: Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1 – June 30, 2023, and January 1 – June 30, 2024
**Note: Colorado taxpayers are eligible for a state tax credit of $5,000 for the purchase or lease of a new EV on or after July 1, 2023 with a manufacturer's suggested retail price (MSRP) up to $80,000. Lease agreements must have an initial term of at least two years. Beginning January 1, 2024, Coloradans purchasing an EV with an MSRP up to $35,000 will be eligible for an additional $2,500 tax credit.

REGISTRATIONS AND CHARGING / REFUELING

Share of Registered EVs In U.S. Light-Duty Fleet Continues to Increase Incrementally. As sales of EVs increase, so does the total number of EVs operating on U.S. roads. There are now nearly 5.1 million EVs in operation in the United States (1.76 percent of all light vehicles in operation). EVs represented more than 1 percent of total vehicles in operation (VIO) for the first time at the end of 2022. The electric vehicles in operation (E-VIO) of 1.76 percent is an increase of 0.46 pp since the second quarter of 2023 and nearly three times the EV VIO from the first quarter in 2021 (0.60 percent).[9]



U.S. Public Charging Infrastructure: Overview

While the U.S. Department of Energy notes that roughly 80 percent of all EV charging occurs at home, reliable and convenient access to workplace and public charging and refueling stations help to support customers who purchase EVs or are considering purchasing an EV. Workplace and public charging infrastructure not only eases perceived "range anxiety" concerns but also increases consumer awareness of the technology. In addition, achieving the EV market share envisioned by state and/or federal regulators will require moving beyond customers who have access to charging via privately-owned single-family dwellings.

How Available are NEVI Funded Chargers?

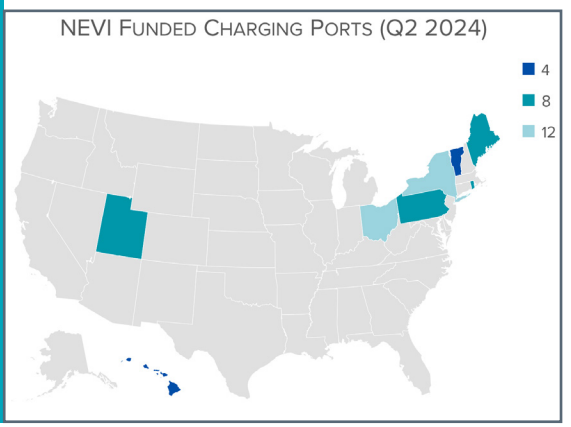
Through Q2 of 2024:

- 8 States Have Installed Charging Ports
- 64 Fash Charging Ports Intalled in 15 Locations

States with NEVI funded charging ports:

1. New York (12)
2. Ohio (12)
3. Maine (8)
4. Pennsylvania (8)
5. Rhode Island (8)
6. Utah (8)
7. Hawaii (4)
8. Vermont (8)

The bipartisan Infrastructure Investment and Jobs Act (IIJA) that was signed into law in November 2021 includes $5 billion in funding for states to establish a nationwide EV charging network (NEVI) every 50 miles along highway corridors and provides $2.5 billion in competitive grants to deploy publicly available EV charging and other alternative fuel stations through 2026. NEVI funding provides funding to states to strategically deploy charging infrastructure and to establish an interconnected network of publicly available charging. There are currently 45,592 distinct locations with 133,939 Level 2 (L2) ports and/or 43,391 DC Fast charging ports. See more on charging locations by state below.



Here is a snapshot of publicly available EV charging and refueling infrastructure[10] available across the United States at the end of the second quarter of 2024[11]:

[9] Registered vehicles in operation compiled by Alliance for Automotive Innovation with data provided by S&P Global Mobility as of June 30, 2024
[10] "Stations" denotes stations as counted and identified by U.S. Department of Energy Alternative Fuels Data Center. Stations Differs from number of locations as many stations can be at a singular location. Locations denotes unique addresses.
[11] Charging information from U.S. Department of Energy Alternative Fuels Data Center, stations in operation as of June 30, 2024

Level 2: 56,002 Locations, 133,939 EVSE Ports
DC Fast: 10,338 Locations, 43,391 EVSE Ports
Hydrogen Refueling: 58 Stations (57 are in California)
U.S. Total: *65,083[12] Locations, 177,330 EVSE Ports*

See Recommended Attributes for EV Charging Stations

State	Locations	L2 Ports	DC Fast Ports	State	Locations	L2 Ports	DC Fast Ports
AK	60	91	30	MT	119	188	207
AL	322	626	431	NC	1,303	3,236	1,168
AR	285	731	155	ND	84	125	92
AZ	908	2,605	1,042	NE	218	387	180
CA	8,896	34,569	11,664	NH	194	399	203
CO	1,631	4,227	1,048	NJ	999	2,696	1,130
CT	936	2,814	537	NM	239	441	299
DC	260	992	62	NV	407	1,350	746
DE	168	377	234	NY	3,111	10,691	1,611
FL	2,733	7,500	2,539	OH	1,286	2,958	909
GA	1,336	3,871	1,248	OK	308	450	844
HI	279	709	85	OR	1,011	2,331	891
IA	337	534	352	PA	1,339	3,437	1,119
ID	177	329	162	RI	208	644	95
IL	1,016	2,426	1,075	SC	452	977	506
IN	491	1,001	620	SD	92	134	118
KS	309	886	240	TN	638	1,576	580
KY	268	595	233	TX	2,508	6,668	2,748
LA	212	457	265	UT	589	2,003	447
MA	1,799	6,661	871	VA	1,116	3,188	1,184
MD	1,381	3,788	994	VT	326	859	177
ME	404	836	242	WA	1,503	4,526	1,261
MI	1,094	2,622	765	WI	514	1,024	479
MN	679	1,517	577	WV	126	288	151
MO	691	2,183	519	WY	91	134	123
MS	139	282	133	**US. Total**	**45,592**	**133,939**	**43,391**

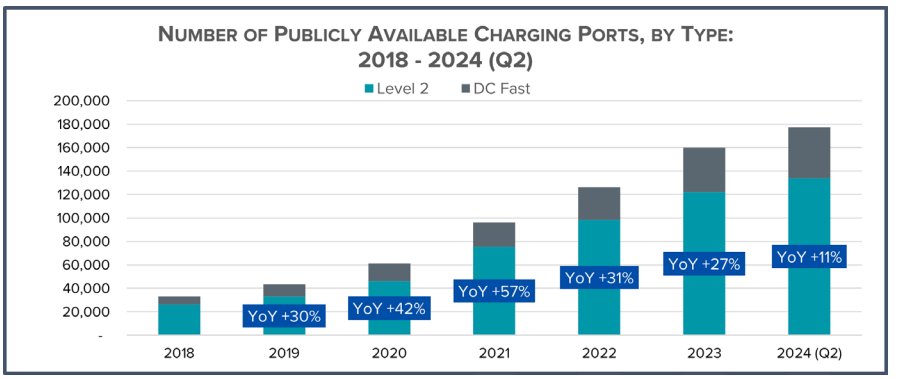
Level 2 Chargers and DC Fast Chargers. Both Level 2 and DC Fast charging play important roles in electrifying the light-duty vehicle fleet. However, the key difference between Level 2 and DC Fast chargers is how quickly each will charge an EV's battery. Level 2 equipment is common for home, workplace, and public charging with longer dwell times. Level 2 chargers can fully charge a BEV from empty in 4-10 hours and a PHEV from empty in 1-2 hours. DC Fast charging equipment enables rapid charging of BEVs in 20 minutes to 1 hour along heavy-traffic corridors, in city centers, at transportation hubs, and fleet depots. Wider installation of Level 2 chargers, DC Fast chargers, and hydrogen fueling will be necessary to support wider-scale adoption of EVs.

The number of public Level 2 charging increased 10 percent at the end of the second quarter of 2024 over 2023. DC Fast chargers increased 14 percent. Total charging ports increased 11 percent from the end of 2023.[13] (For context, E-VIO increased 17 percent from the end of 2023 to the end of the second quarter of 2024.)

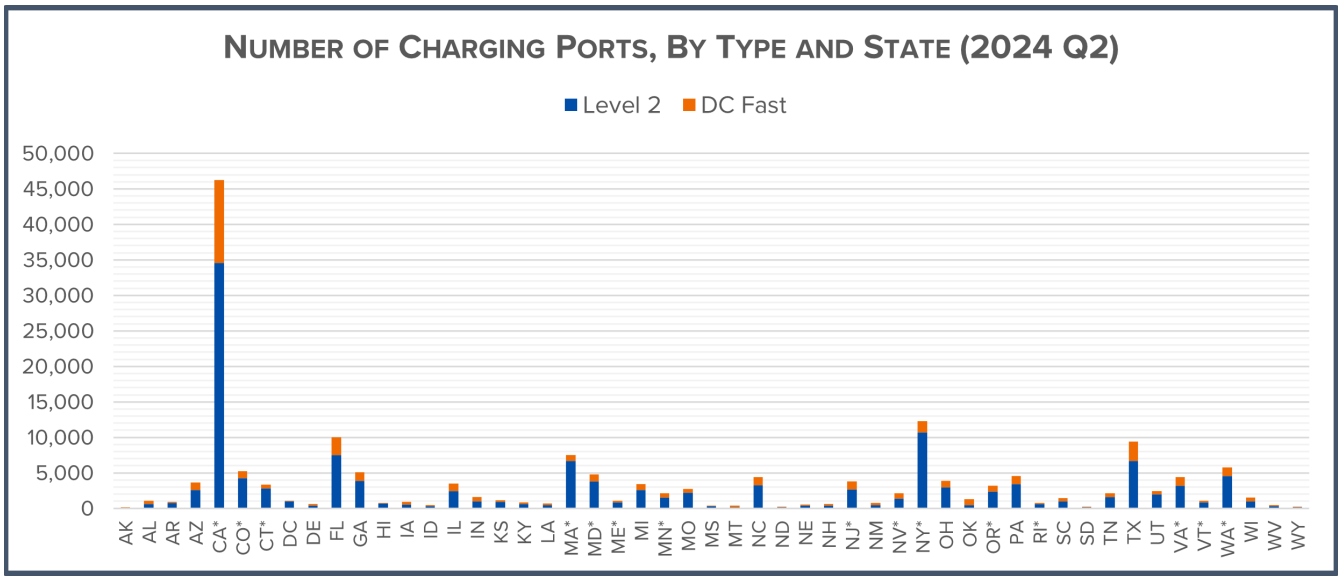
Through June 30, 2024, 60 Percent of Installed DC Fast Charging Ports Were on the Tesla Network (North American Charging Standard)[14]:

» **After Tesla opened their previously proprietary chargers (in November 2022), at least 18 EV manufacturers have announced that they will move to Tesla's North America Charging Standard.**

DC Fast Charger Ports by Network		
Network	**Ports**	**%Total**
Tesla (NACS)	25,967	60%
All Other Networks	17,424	40%
Total	43,391	100%



Note: prior editions of this report excluded proprietary chargers, however Tesla opened their previously proprietary chargers in November 2022 and their "North American Charging Standard" will be widely adopted by automakers.
[12] Some station locations have both Level 2 and DC Fast installed.
[13] Charging information from U.S. Department of Energy Alternative Fuels Data Center, stations in operation as of 6/30/2024
[14] Charging information from U.S. Department of Energy Alternative Fuels Data Center, 6/30/2024; does not include J1772 or CHAdeMO connectors



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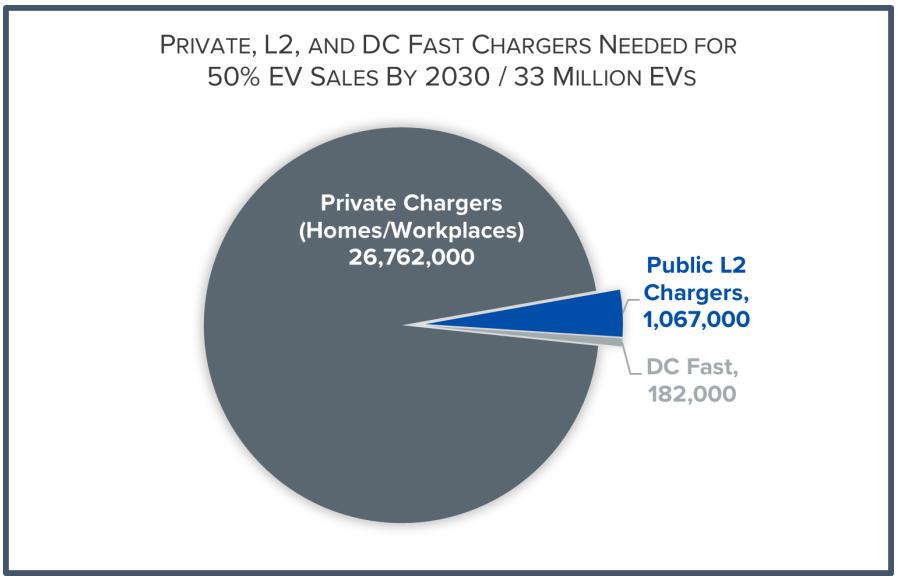
Infrastructure Investment Necessary

An assessment by the U.S. National Renewable Energy Laboratory (NREL) released in June 2023 estimated that a network of 28 million charging ports would be necessary to support 50 percent EV sales by 2030 (and 33 million EVs on the road).[16] NREL estimates that 96 percent of those charging ports would be privately accessible L1 and L2 chargers located at single-family homes, multifamily properties, and workplaces. The remaining 4 percent (1,249,000 ports) would be split between public L2 and high-speed DC Fast charging ports, with L2 making up 85 percent of those public chargers.



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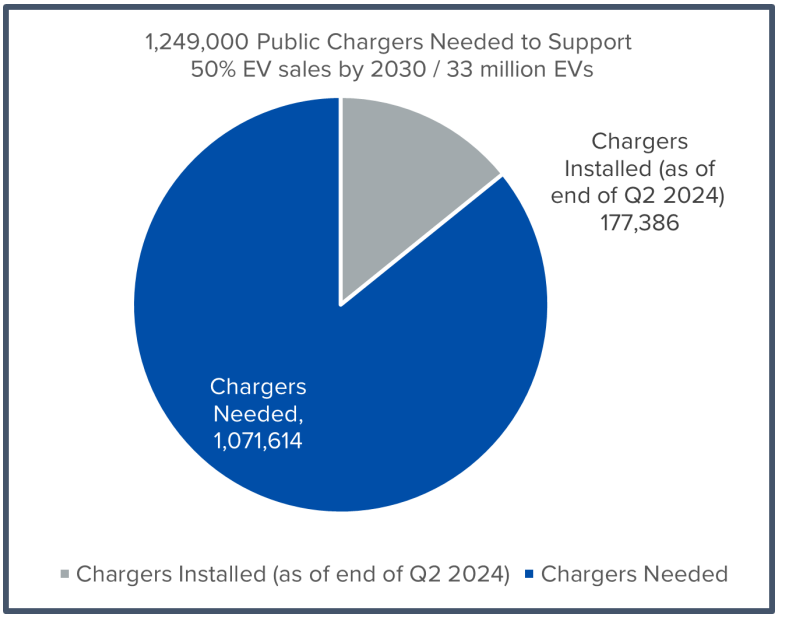
At the end of Q2 2024, there were about 177,000 public charging ports across the country and 5.1 million EVs on the road. Total installed public charging ports are about 17 percent of the needed estimate to support EV penetration by 2030 according to NREL.

More than 1 million additional public chargers (933,061 L2 and 138,609 DC Fast) will need to be installed to satisfy the necessary infrastructure estimate by 2030. This means that between the end of Q2 2024 and December 31, 2030, 451 chargers need to be installed every day, for the next 6.5 years. Or 3 chargers every 10 minutes through the end of 2030.

[15] Charging information from U.S. Department of Energy Alternative Fuels Data Center, stations in operation as of 6/30/2024; *Denotes states that have adopted California's ZEV program.
[16] National Renewable Energy Laboratory, "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure," June 2023
[17] National Renewable Energy Laboratory, "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure," June 2023



Between the end of Q2 2024 and December 31, 2030, 451 chargers need to be installed every day, for the next 6.5 years. Or 3 chargers every 10 minutes through the end of 2030.

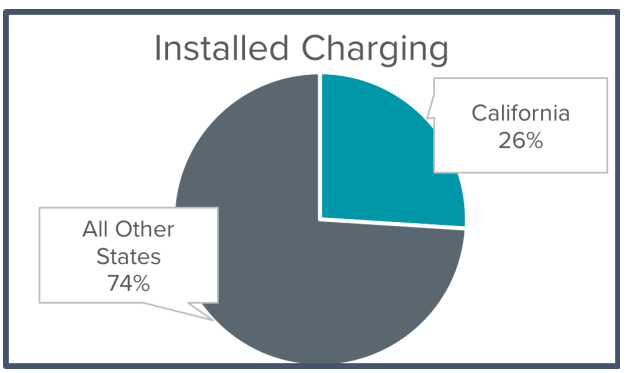
The Cost of This Substantial Infrastructure Necessity Will Largely Fall on Consumers and Commercial Real Estate Owners as They Install Home and Workplace Charging. According to NREL,[18] a national capital investment of $53–$127 billion in charging infrastructure is needed by 2030 (including as much as $72 billion for private residential charging) to support 33 million EVs. The large range of potential costs is a result of variable and evolving equipment and installation costs across charging networks, locations, and site designs[19]. Notably, the estimates exclude the cost of grid upgrades and distributed energy resources. The estimated cumulative capital investment includes[20]:

- $22–$72 billion for privately accessible Level 1 and Level 2 charging ports
- $27–$44 billion for publicly accessible fast charging ports
- $5–$11 billion for publicly accessible Level 2 charging ports

Infrastructure Disparities by Geography

Geographic disparities in charging infrastructure are pervasive. At the end of Q2 2024, more than a quarter of all public charging infrastructure was in California, which had 34 percent of all registered EVs.

Alliance for Automotive Innovation is proactively engaging to enable the automotive industry's transformation to electric vehicles through state-level engagement actions such as participation in the Joint Office of Energy and Transportation's Electric Vehicle Working Group, development of a lithium-ion battery recycling policy framework, recommendations for attributes of EV charging stations, and recommendations for the implementation of IRA EV tax credits[21].



[18] National Renewable Energy Laboratory, "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure," June 2023
[19] Various state and federal incentives are available to consumers or businesses that install EV charging infrastructure, including from power utilities.
[20] National Renewable Energy Laboratory, "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure," June 2023
[21] Alliance for Automotive Innovation, Blog, What We Know (and Don't Know) About the New EV Tax Credit Rules, 12/20/2022; Alliance for Automotive Innovation, blog Foreign Entity of Concern: Finally... Some Clarity, 12/1/2023

Vehicles in Operation and Charging by State

Public Charging Outlets And Registerd EVs (as of 6/30/2024)								
	EV Level 2	EV DC Fast	H2** Fueling	Total	Percent EVs of Total VIO***	Share of Registered EVs****	EVs Per Charger	EVs Per 10K Residents
AK	91	30	-	121	0.65%	0.07%	31	51.23
AL	626	431	-	1,057	0.38%	0.38%	18	38.20
AR	731	155	-	886	0.37%	0.21%	12	34.39
AZ	2,605	1,042	-	3,647	1.85%	2.52%	35	172.30
CA*	34,569	11,664	57	46,290	5.51%	33.85%	37	440.89
CO*	4,227	1,048	-	5,275	2.49%	2.70%	26	232.72
CT*	2,814	537	-	3,351	1.69%	1.03%	16	144.38
DC	992	62	-	1,054	3.66%	0.25%	12	183.93
DE	377	234	-	611	1.43%	0.26%	21	125.90
FL	7,500	2,539	-	10,039	1.73%	6.60%	33	148.11
GA	3,871	1,248	-	5,119	1.23%	2.32%	23	106.61
HI	709	85	1	795	3.05%	0.68%	44	241.90
IA	534	352	-	886	0.49%	0.31%	18	49.32
ID	329	162	-	491	0.71%	0.28%	29	72.72
IL	2,426	1,075	-	3,501	1.37%	2.73%	40	110.28
IN	1,001	620	-	1,621	0.65%	0.80%	25	58.88
KS	886	240	-	1,126	0.62%	0.36%	16	61.34
KY	595	233	-	828	0.43%	0.35%	21	38.77
LA	457	265	-	722	0.34%	0.26%	18	28.31
MA*	6,661	871	-	7,532	2.20%	2.39%	16	172.97
MD*	3,788	994	-	4,782	2.12%	2.14%	23	175.92
ME*	836	242	-	1,078	1.21%	0.32%	15	116.14
MI	2,622	765	-	3,387	0.88%	1.48%	22	74.89
MN*	1,517	577	-	2,094	1.06%	1.10%	27	97.11
MO	2,183	519	-	2,702	0.72%	0.81%	15	66.70
MS	282	133	-	415	0.20%	0.12%	15	20.86
MT	188	207	-	395	0.44%	0.15%	19	67.10
NC	3,236	1,168	-	4,404	1.05%	2.03%	23	94.88
ND	125	92	-	217	0.23%	0.04%	9	23.76
NE	387	180	-	567	0.54%	0.22%	20	57.29
NH	399	203	-	602	1.25%	0.33%	28	119.20
NJ*	2,696	1,130	-	3,826	2.42%	3.55%	47	194.01
NM	441	299	-	740	0.79%	0.32%	22	75.83
NV*	1,350	746	-	2,096	2.56%	1.28%	31	203.87
NY*	10,691	1,611	-	12,302	2.01%	4.54%	19	117.77
OH	2,958	909	-	3,867	0.76%	1.59%	21	68.48
OK	450	844	-	1,294	1.32%	1.20%	47	150.59
OR*	2,331	891	-	3,222	2.54%	1.94%	31	232.58
PA	3,437	1,119	-	4,556	1.07%	2.33%	26	91.22
RI*	644	95	-	739	1.35%	0.23%	16	107.57
SC	977	506	-	1,483	0.58%	0.62%	21	58.38
SD	134	118	-	252	0.31%	0.06%	12	33.99
TN	1,576	580	-	2,156	0.70%	0.96%	23	68.22
TX	6,668	2,748	-	9,416	1.19%	5.81%	31	96.69
UT	2,003	447	-	2,450	1.83%	1.10%	23	163.93
VA*	3,188	1,184	-	4,372	1.46%	2.23%	26	129.73
VT*	859	177	-	1,036	2.57%	0.28%	14	221.14
WA*	4,526	1,261	-	5,787	2.89%	3.98%	35	258.56
WI	1,024	479	-	1,503	0.71%	0.76%	26	65.56
WV	288	151	-	439	0.30%	0.10%	11	27.30
WY	134	123	-	257	0.31%	0.04%	8	35.70
U.S.	**133,939**	**43,391**	**56**	**177,386**	**1.76%**	**100.00%**	**29**	**151.53**

*Denotes states that have adopted California's ZEV program; **Hydrogen count denotes stations
*** VIO is vehicles in operation; **** State share of U.S. Total
Source: Figures compiled by Alliance for Automotive Innovation with registered vehicle data provided by S&P Global Mobility as of June 30, 2024; Charging information from U.S. Department of Energy Alternative Fuels Data Center, as of 6/30/2024

REGISTRATIONS

EV registrations as a share of all registered light-duty vehicles are 1.76 percent (as of June 30, 2024). There are more than 287 million registered light-duty vehicles in the U.S.

At the end of Q2 2024, California accounted for 34 percent of all registered light-duty EVs in the U.S.

States with highest portion of total EVs registered:

1. CA* (1,717,934, 5.51%)
2. DC (12,488, 3.66%)
3. HI (34,716, 3.05%)
4. WA* (202,013, 2.89%)
5. VT* (14,318, 2.57%)
6. NV* (65,121, 2.56%)
7. OR* (98,460, 2.54%)
8. CO* (136,786, 2.49%)
9. NJ* (180,249, 2.42%)
10. MA* (121,104, 2.20%)

States with worst ratio of registered EVs per public charger:

1. OK
2. NJ*
3. HI
4. IL
5. CA*
6. AZ
7. WA*
8. FL
9. TX
10. NV

Read more about automaker plans for an ***ELECTRIC FUTURE HERE***

SPOTLIGHT ON:
THE IMPORTANCE OF SECURING THE EV SUPPLY CHAIN

Leadership in automotive technology and manufacturing has underpinned a century of U.S. economic growth and innovation. However, the continued leadership of the auto industry in the United States and our global competitiveness is not a forgone conclusion. The ability of the auto industry to maintain its position in the global economy will be determined, in part, by the transition to electrification. And the success of that transition will hinge on the ability to secure, localize and diversity the EV supply chain.

Nations around the world are moving aggressively to lead the development and deployment of electrified technologies. These same nations have clearly recognized that those that lead the development and deployment of these technologies will also guide the development of international standards, control supply chains, and drive international markets. For example, China, with a 15-year head start on electrification, currently controls the market on major segments of the global EV supply chain – including mining and processing of critical minerals like lithium, cobalt and graphite used in EV batteries.

The transition to electrification is not just a tectonic shift within the industry, but also a harbinger of vast opportunities: rewriting global supply chains, rebuilding the domestic industrial base, creating jobs, and underpinning American economic and national security. However, for the U.S. to realize the full potential of the opportunities that come with this shift, the EV supply chain needs to be secured, localized, and diversified. Failure to do so will risk being left dependent on and exposed to foreign competitors and their ability to manipulate the market for materials, components, or finished products through market dominance and trade distorting practices.

Reducing Exposure to Dependency on Foreign Sources

The EV supply chain, particularly for battery components and critical minerals (lithium, cobalt, nickel, graphite), is heavily dependent on foreign sources, especially from countries like China. This dependency makes the U.S. vulnerable to geopolitical risks, trade disputes, and supply chain disruptions. By localizing and diversifying the supply chain, the U.S. can reduce its vulnerability over time to these external pressures and ensure a more stable and secure supply of essential materials.

Automakers and battery manufacturers have invested heavily in EVs, with much of their $125 billion commitment focused downstream – on finished vehicles and battery cell production. Over 900 GWhs of battery cell production are expected to be added in the U.S. by 2030 (more than an 800% increase over current capacity). As important as these investments are, much more attention needs to be focused on upstream and midstream supply chain development – specifically critical mineral mining and processing.

"Converting mined mineral supplies into chemicals suited to the battery industry is mostly dominated by production in China.

- "Lithium chemicals are the only critical battery minerals in which less than 75% of this year's supply is forecast to be located outside of China.
- "Despite so much mined manganese having no Chinese involvement, 97% of manganese sulphate suitable for batteries is produced in China.
- "Although there is significant synthetic graphite production spread around the world, supply of material suitable for use in battery anodes is mostly located in China, with only 2% located outside of the country."[22]

Four U.S. Graphite Mines in the Works:

"At present, the US produces no natural graphite but has four mines in various stages of development, according to Benchmark's Natural Graphite Forecast. The four assets are operated by Redbird Bluebird, Westwater Resources, Graphite One Resources, and South Star Battery Metals."

-Benchmark Mineral, 8/21/2024

[22] How Much Of The Global Battery Supply Chain Is Owned By Chinese Companies?" Benchmark Mineral, 8/22/2024

"Very little active material and cell production has no Chinese involvement

» "This year 99% of cathode active material and 93% of anode active material production are forecast to be produced either in China or involve a Chinese company. This is forecast by Benchmark to drop to 85% for both by 2030.

» "Chinese involvement in cell production is forecast to drop from 84% today to 70% in 2030."[23]

Economic Growth and Job Creation

The auto industry is a major driver of the U.S. economy, supporting 10 million jobs coast-to-coast. Every direct job in vehicle manufacturing creates another 10.5 American jobs. These are not just auto jobs – these are jobs throughout communities and the economy necessary to support our manufacturing sector – which provides $650 billion in payroll compensation as well as more than $220 billion in federal and state revenue annually. As a result, every $1 added to the economy by vehicle manufacturing creates an additional $3.45 in economic value. It's not only imperative that the auto sector's economic contributions be preserved throughout the transition to expanded electrification, but also strengthened by capitalizing on new growth opportunities.

Localizing and diversifying the EV supply chain will promote domestic manufacturing, catalyzing significant economic growth. It can create new jobs not just in manufacturing, but also mining, research and development, and other related sectors. By fostering a localized supply chain, including key allies and partners, the U.S. can further strengthen the domestic auto industry and drive innovation and economic competitiveness.

As noted earlier, automakers and battery manufacturers have made considerable investments downstream, committing to $125 billion in investments and outlaying more than $123.7 billion for more than 80 projects and creating 114,000 jobs across 18 states[24]:

» More than $90 billion has been outlaid for EV battery production facilities in the U.S., creating an estimated 65,000 jobs.

» An additional $33 billion has been committed to EV assembly projects creating an additional 48,000 jobs.

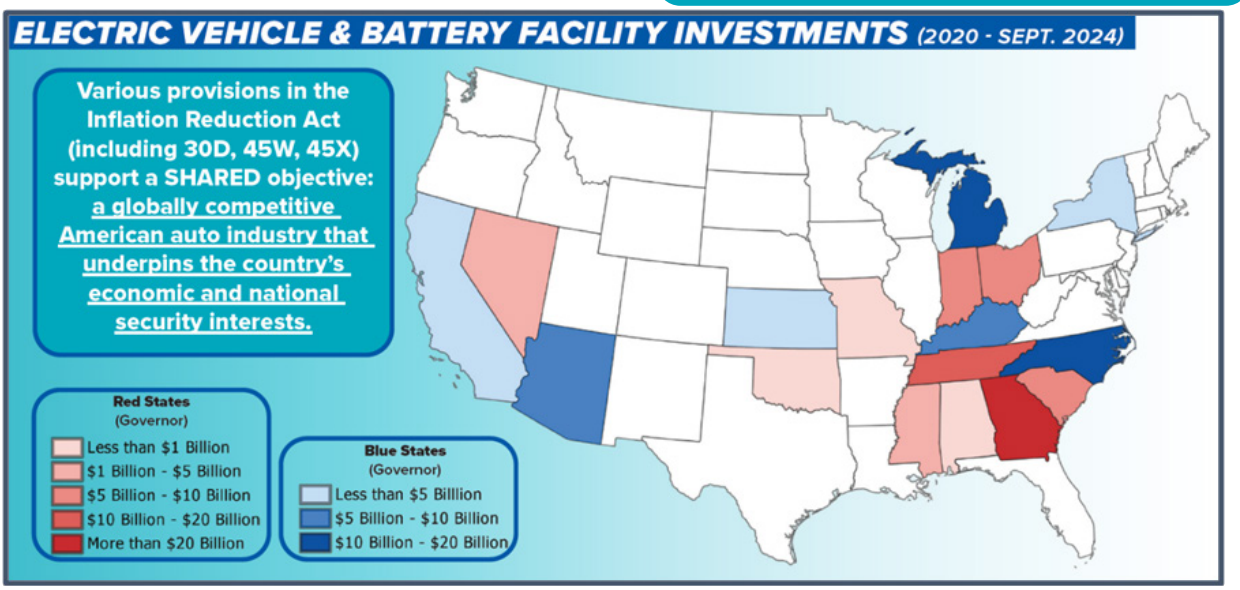
» $68.3 billion in the South

» $41.8 billion in the Midwest

» $13.3 billion in the West

» $0.3 billion in the Northeast

See more on the EV Investment Dashboard



[23] "How Much Of The Global Battery Supply Chain Is Owned By Chinese Companies?" Benchmark Mineral, 8/22/2024
[24] Compiled from company reports, press statements, and other media; investments from 2020 – September 2024

With a localized and diversified supply chain, companies and research institutions can collaborate more closely, leading to faster advancements in technology and innovation within the EV sector.

» E2 estimates an additional $128 million committed to clean vehicle R&D in the past two years, with more than 1,200 jobs associated with those announcements.[25]

Each of these jobs and investments will create indirect and induced benefits throughout the communities, states, and regions where they are located.

CASE STUDY: AESC | BATTERY MANUFACTURING PLANT | FLORENCE, SC

In 2022, AESC announced the construction of a new battery manufacturing plant in Florence, South Carolina. Initially, AESC committed $810 million in 2022, followed by another $810 million announced in December 2023, and then an additional $1.5 billion was announced in March 2024, bringing the overall investment to $3.12 billion by 2026. With operations slated to begin in 2027, AESC plans to employ 2,700 people when fully operational.

The annual operations of the proposed AESC battery plant would support a total of **4,900** jobs (direct, indirect, and induced) across the South Carolina region.

$406 million in Labor Income would be supported in South Carolina due to annual operations of the AESC battery plant.

The annual spending on operations would support **$628 million** in contribution to GDP and **$1.6 billion** in output across South Carolina.

Approximately **$143.7 million** in local, state, and federal tax revenue would be generated by annual operations, including sales tax and income tax.

This study used IMPLAN 2022 Data and the IMPLAN calculation process to estimate the economic impact from operations of the AESC – Battery Plant (Storage Battery Manufacturing) in Florence, SC on the South Carolina region. The financial expenditures and assumptions used to generate the results included in this report were imputed and entered into IMPLAN by Alliance for Automotive Innovation. All results are reported in 2024 dollars.

Global Competitiveness

The global EV market is highly competitive, with countries like China and members of the European Union making significant investments. By localizing and diversifying the supply chain, the U.S. can enhance its competitiveness in the global EV market and ensure it remains a key player in the automotive industry of the future.

Two decades ago, the U.S. was the leading manufacturer of automobiles in the world. Today, it remains one of the global leaders, manufacturing approximately 10 million vehicles in the U.S., and more than 16 million across North America. But the U.S. position in the global market has been dramatically outpaced by China. At the turn of the century, China was manufacturing around 2 million vehicles. Today, it manufactures 30 million vehicles and has capacity for nearly 50 million. Almost one-third of that production was for new energy – or electrified – vehicles. Put differently, China is manufacturing EVs on a scale equivalent to the entire vehicle manufacturing output of the U.S. auto industry.

Almost 14 million new EVs were registered globally in 2023, accounting for around 18 percent of all vehicles sold, an increase from 14 percent in 2022 and only 2 percent in 2018. **Nearly 95 percent of all global EV sales were in China (60 percent), Europe (25 percent) and the United States (10 percent).**

[25] E2, https://e2.org/announcements/, Accessed 9/4/2024

While China's domestic sales of EVs have increased (nearly one-third of all new vehicles sales in 2023), so too have their EV exports. In fact, China's EV exports are nearly as high as all U.S. vehicle exports: In 2023, China exported 1.5 million EVs.[26] The U.S. exports (average of last 5 years of data) 1.7 million new vehicles, across all powertrain types.

While Chinese EV exports to the U.S. are minimal, Chinese EV exports to Europe have soared in recent years. More than 438,000 EVs were imported from China into the EU in 2023. And China's market share in EU battery-electric sales has climbed from around 3 percent to over 20 percent in the past three years.[27]

The cost advantage provided by China's early entry into the EV space cannot be overstated: "EVs sell in China for the equivalent of $34,400, considerably lower than the $55,242 average selling price in the US.[28]" Due to government subsidies, cheap labor rates, increased scale, vertical integration, and importantly less expensive battery prices, Chinese exports (even with tariffs) provide an attractive cost comparison for consumers.

Bringing down the cost of batteries, and thus EVs, through supply chain localization, diversification, and vertical integration (to further provide for innovation, cost cutting, and business efficiencies) will be imperative if the U.S. wants to continue to compete in the global market.

Energy Independence

A localized EV supply chain supports the broader goal of reducing dependency on foreign oil, hence aligning with the U.S. strategy of achieving greater energy independence. Localizing battery production is essential for securing the energy infrastructure needed to support a growing number of electrified vehicles.

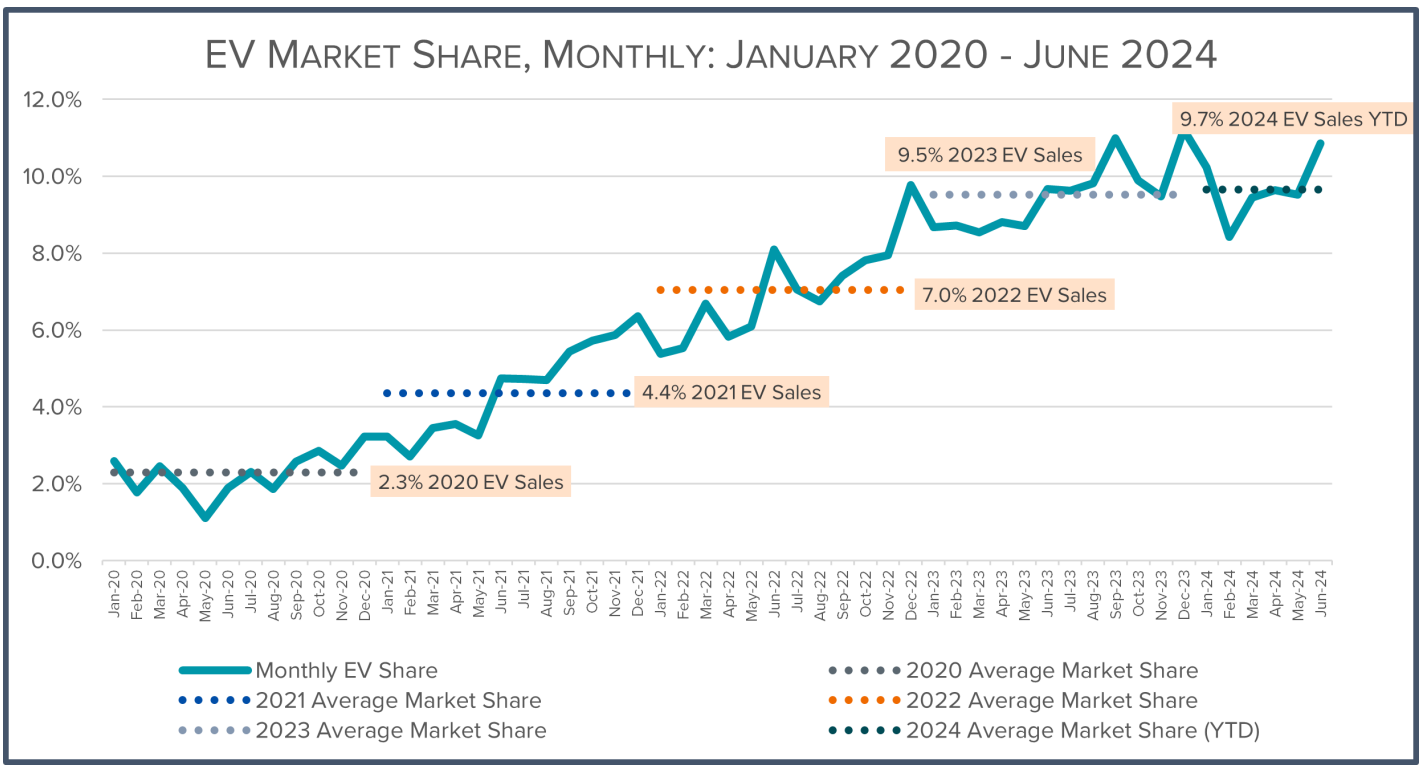
According to the U.S. Department of Energy[29], "the transportation sector accounts for approximately 30% of total U.S. energy needs and 70% of U.S. petroleum consumption. Using more energy efficient vehicles like hybrid and electric vehicles supports the U.S. economy and helps diversify the U.S. transportation fleet. The multiple fuel sources used to generate electricity results in a more secure energy source for the electrified portion of the transportation sector. All of this adds to our nation's energy security."

Since the electricity to power EVs in the U.S. is produced from domestic and diverse sources, localized production can help support the shift away from foreign sources of oil and toward renewable energy sources.

While the next decade will define which nations shape the future of automotive innovation and manufacturing, actions taken to localize the supply chain now will help the U.S. remain at the forefront of innovation that is critical to our national and economic security.

[26] "How The EU Could Tackle Subsidised Imports Of Chinese EVs," Benchmark Minerals, 4/10/2024
[27] ACEA, Fact Sheet: EU-China Vehicle Trade, Accessed 9/5/2024
[28] Shiv Shivaraman, "China Has An Electric Vehicle Advantage But Can It Maintain Its Edge?," World Economic Forum, 6/17/2024
[29] U.S. Department of Energy, Alternative Fuels Data Center, Accessed 9/5/2024

APPENDIX - A


EV Market Share, Monthly: January 2020 - June 2024
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
9.7% 2024 EV Sales YTD
9.5% 2023 EV Sales
7.0% 2022 EV Sales
4.4% 2021 EV Sales
2.3% 2020 EV Sales
Jan-20 Feb-20 Mar-20 Apr-20 May-20 Jun-20 Jul-20 Aug-20 Sep-20 Oct-20 Nov-20 Dec-20 Jan-21 Feb-21 Mar-21 Apr-21 May-21 Jun-21 Jul-21 Aug-21 Sep-21 Oct-21 Nov-21 Dec-21 Jan-22 Feb-22 Mar-22 Apr-22 May-22 Jun-22 Jul-22 Aug-22 Sep-22 Oct-22 Nov-22 Dec-22 Jan-23 Feb-23 Mar-23 Apr-23 May-23 Jun-23 Jul-23 Aug-23 Sep-23 Oct-23 Nov-23 Dec-23 Jan-24 Feb-24 Mar-24 Apr-24 May-24 Jun-24
Monthly EV Share
2020 Average Market Share
2021 Average Market Share
2022 Average Market Share
2023 Average Market Share
2024 Average Market Share (YTD)