

THE FUTURE IS ELECTRIC: LETS DRIVE TOGETHER

October 2023

EV POWERTRAIN OPTIONS IN U.S.

- **58** Battery EVs
- **→ 43** Plug-in Hybrid EVs
- 2 Fuel Cell EVs

Learn More About 2023 Q2 EV Sales

Public Charging Infrastructure

Level 2 D

DC Fast 31,920

Hydrogen
58
(57 in California)

Through June 30, 2023

PROGRESS, BUT WORK TO DO:

- 13.3 million light-duty vehicles sold in the U.S. in 2022
- EV Sales: 9.1 percent of light vehicle market in Q2 2023
- Goal of selling 8 million EVs annually by 2030 with supportive policies in

ELECTRIFYING INVESTMENTS

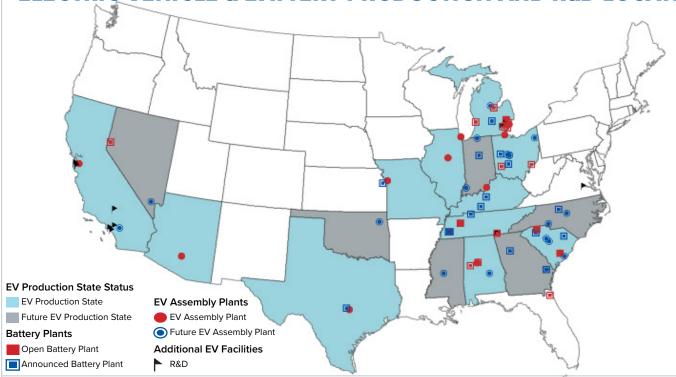
On a global scale, automakers are planning to spend an estimated \$1.2 trillion through 2030 to develop and build new battery-powered vehicles.



From new assembly plants and battery factories to retooling and upgrading existing facilities, the automotive industry is investing in vehicle electrification.

Since 2017, automakers and thier battery partners have already committed to investing over \$125 billion specifically in the U.S. to electrify products, and the U.S. continues to gain investment dollars as more of these planned investments are allocated.

ELECTRIC VEHICLE & BATTERY PRODUCTION AND R&D LOCATIONS



RESEARCH & DEVELOPMENT



In 2019, the National Science Foundation estimated the auto industry spent more than \$23B in R&D in the U.S. alone.

U.S. & CHINA GLOBAL SUBCOMPONENT CAPACITY SHARE

	Current		Under Development		
	U.S.	China	U.S.	China	
Cathode Share	0.7%	63.0%	0.0%	84.0%	
Anode Share	0.6%	84.0%	0.0%	91.0%	
Separator	3.0%	66.0%	0.0%	76.0%	
Electrolyte	7.0%	69.0%	2.0%	75.0%	

BATTERY PLANT MANUFACTUING CAPACITY IN THE U.S. INCREASING 649%



In 2020, there was about 630 GWh of global battery production capacity, which is expected to grow about 2,300 GWh by 2025.

ELECTRIC VEHICLE & BATTERY PRODUCTION AND R&D LOCATIONS

STATE	PLANT TYPE	COMPANY	MODEL	CITY	STATUS
Alabama	Battery	Mercedes-Benz U.S. International		Woodstock	Open
		Accumotive		Vance	Open
	Assembly	Hyundai	Genesis GV70	Montgomery	Coming Soon
		Mercedes-Benz U.S. International	EQE SUV	Vance	Coming Soon
			EQS SUV	Vance	On Sale Now!
Arizona	Battery	American Battery Factory		Tuscon	Announced
		KORE Power		Phoenix	Announced
	Assembly	Lucid	AIR	Casa Grande	On Sale Now!
California	Battery	Statevolt		Imperial Valley	Announced
	Assembly	Fisker/Karma		Moreno Valley	Coming Soon
		Tesla Motors	MODEL 3	Fremont	On Sale Now!
			MODEL S	Fremont	On Sale Now!
			MODEL X	Fremont	On Sale Now!
	R&D	BMW Technology Office		Mountain View	Open
		Hyundai America Technical Center, Inc. (California Proving Grounds)		California City	Open
		Hyundai-Kia Technical Center		Irvine	Open
		Hyundai America Technical Center, Inc. (Chino)		Chino	Open
		Mazda R&D		Irvine	Open
		Mitsubishi Motors R&D of America, Inc.		Cypress	Open
		Volkswagen: Innovation and Engineering Center California (IECC)		Belmont	Open
Florida	Battery	SAFT		Jacksonville	Open
Georgia	Battery	SK Innovation		Atlanta	Open
		Hyundai Motor Group (Hyundai, Kia, Genesis)		Bryan County	Announced
	Assembly	Hyundai Motor Group (Hyundai, Kia, Genesis)		Bryan County	Announced

STATE	PLANT TYPE	COMPANY	MODEL	CITY	STATUS
Illinois	Assembly	Ford	AVIATOR	Chicago	On Sale Now!
		Rivian	R1S	Normal	On Sale Now!
			R1T	Normal	On Sale Now!
Indiana	Battery	Stellantis/Samsung SDI		Kokomo	Announced
		General Motors/ Samsung SDI		New Carlisle	Announced
	Assembly	Electric Last Mile Solutions (ELMS)		Mishawaka	Coming Soon
		Toyota	SUV	Princeton	Coming Soon
Kansas	Battery	Panasonic		De Soto	Announced
Kentucky	Battery	Envision AESC		Bowling Green	Announced
		Ford		Glendale	Two Plants Announced
	Assembly	Ford	CORSAIR	Louisville	On Sale Now!
			ESCAPE	Louisville	On Sale Now!
Michigan	Battery	Ford		Rawsonville	Open
				Marshall	Announced
		General Motors		Brownstown	Open
		General Motors/LG Energy Solution		Lansing	Announced
		LG Energy Solution		Holland	Open
		AKASOL		Hazel Park	Open
		JCI Brookfield		Holland	Open
		Samsung SDI		Auburn Hills	Open
		Xalt Freudenberg		Midland	Open
	Assembly	Ford	F-150	Dearborn	On Sale Now!
		General Motors	Chevrolet Silverado	Detroit - Hamtramck & Orion Township	Coming Soon
			Cadillac CELESTIQ	Warren	Coming Soon
			BOLT EUV	Orion Township	On Sale Now!
			GMC Sierra	Detroit - Hamtramck & Orion Township	On Sale Now!
			Hummer EV Edition 1 Pickup	Detroit - Hamtramck	On Sale Now!
			Hummer EV Edition 1 SUV	Detroit - Hamtramck	Coming Soon
			BOLT EV	Orion Township	On Sale Now!
		Stellantis	Grand Cherokee 4xe	Detroit	On Sale Now!
	R&D	Nissan Technical Center North America		Farmington Hills	Open
		Hyundai America Technical Center, Inc.		Superior Township	Open
		Mitsubishi Motors R&D of America, Inc.		Ann Arbor	Open

Mississippi Assembly Nissan Canton Coming Soon Missouri Assembly Ford E-Transit Kansas City On Sale Now! Nevada Battery Panasonic/Tesla Sparks Open Tesla Motors Sparks Announced New York Battery Imperium3 Endicott Open/Expanding						
Missouri Assembly Ford E-Transit Kansas City On Sale Now! Newada Battery Panasonic/Tesla - Sparks Open New York Battery Imperium3 Endicott Open/Expanding North Carolina Battery Toyota - Greensboro Announced North Carolina Assembly Arrival Charlotte Coming Soon Ohio Battery American Battery Springboro Open Solutions General Motors/LG Warren Open General Motors/LG Energy Solution Warren Open Fill Honda/LG Energy Jeffersonville Announced Assembly Honda/LG Energy Hone EV Bast Liberty Announced Assembly Honda/LG Energy How EV Marysville (PMC) Coming Soon General Motors/LG Endurance Lordstown Coming Soon General Motors/LG Benture East Liberty Announced Macry Lordstown Motors Endurance <td< td=""><td>STATE</td><td>PLANT TYPE</td><td>COMPANY</td><td>MODEL</td><td>CITY</td><td>STATUS</td></td<>	STATE	PLANT TYPE	COMPANY	MODEL	CITY	STATUS
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New York Battery Imperium3 Endicott Open/Expanding North Carolina Battery Toyota Greensboro Announced North Carolina Battery Arrival Charlotte Coming Soon Ohio Battery American Battery Solutions Springboro Open Ohio Battery American Battery Solutions Warren Open General Motors/LG Energy Solution Warren Open Honda/ LG Energy Solution Anna Announced Assembly Honda/ LG Energy Solution East Liberty Announced Assembly Honda New EV East Liberty Announced Mew EV Maryaville (PMC) Coming Soon Lordstown Motors Endurance Lordstown Coming Soon Oklahoma Assembly Canoo Pryor Coming Soon Oklahoma Assembly BMW (assembly) Yell of the pryor Coming Soon Oklahoma Assembly Envision AESC Florence Announced Oklahoma <td< td=""><td>Missouri</td><td>Assembly</td><td>Ford</td><td>E-Transit</td><td>Kansas City</td><td>On Sale Now!</td></td<>	Missouri	Assembly	Ford	E-Transit	Kansas City	On Sale Now!
New York Battery Imperium3 Endicott Open/Expanding North Carolina Battery Toyota Greensboro Announced Assembly Arrival Charlotte Coming Soon Ohio Battery Vinfast Chatham County Coming Soon Ohio Battery Solutions Springboro Open Ferey Solution Honda (battery case) Anna Announced Honda (battery case) Jeffersonville Announced Herey Solution Berey Solution Anna Announced Honda (battery case) Jeffersonville Announced Assembly Honda New EV East Liberty Announced Mex FCEV Marysville (PMC) Coming Soon Mex FCEV Marysville (PMC) Coming Soon Oklahoma Assembly Canoo Pryor Coming Soon South BMW (assembly) Spartanburg Open Corolina Honounced Privision AESC Florence Announced	Nevada	Battery	Panasonic/Tesla		Sparks	Open
North Carolina Battery Toyota Greensboro Announced Assembly Arrival Charlotte Coming Soon Nohio Battery Vinfest Chatham County Coming Soon Ohio Battery American Battery Solutions Springboro Open Ceneral Motors/LG Energy Solution Warren Open Finergy Solution Jeffersonville Announced Finergy Solution Jeffersonville Announced Finergy Solution Jeffersonville Announced Finergy Solution Jeffersonville Announced Assembly Honda (battery case) Jeffersonville Announced Assembly Honda New EV East Liberty Announced Mex FCEV Marysville (PMC) Coming Soon Coming Soon Oklahoma Assembly Wanounced Under CEV Marysville (PMC) Coming Soon South Stellantis Wanounced Phyor Coming Soon On Sale Nowl South Battery BMW (assembly)			Tesla Motors		Sparks	Announced
Assembly Arrival Charlotte Coming Soon Vinfast Chatham County Coming Soon American Battery Solutions Seneral Motors/LG General Motors/LG Honda /LG Energy Solution New EV Manysville Announced Announced Announced New EV Marysville (PMC) Coming Soon New EV Marysville (PMC) Coming Soon Coming Soon Now GEV Marysville (PMC) Coming Soon Now GEV Marysville (PMC) Coming Soon Now GEV Marysville (PMC) Coming Soon Sale Nowl Coming Soon Marysville (PMC) Coming Soon Marysville (PMC) Coming Soon Now GEV Marysville (PMC) Coming Soon Now GEV Marysville (PMC) Coming Soon Now GEV Marysville (PMC) Coming Soon Now Gever Marysville (PMC) Coming Soon Now Marysville (PMC) Coming Soon Now Marysville (PMC) Coming Soon Now Gever Marysville (PMC) Coming Soon Now Gever Marysville (PMC) Coming Soon Now Marysville Coming Soon Now M	New York	Battery	Imperium3		Endicott	Open/Expanding
Ohio Battery American Battery Solutions Springboro Open Chio Freely Solution Warren Open Chio Honda (battery case) Anna Announced Chengry Solution Jeffersonville Announced Chenda/LG Energy Solution Jeffersonville Announced Assembly Honda New EV East Liberty Announced Assembly Honda New EV Marysville Announced Chilana Free CEV Marysville (PMC) Coming Soon Chilana Assembly Endurance Lordstown Coming Soon Oklahoma Assembly Canoo Pryor Coming Soon Obuth Battery BMW (assembly) Spartanburg Open Carolina Battery BMW (assembly) Woodruff Announced Carolina Assembly Announced Prorece Announced Carolina Assembly BMW (assembly) Froence Announced Carolina Assembly Announced Prorece Announced Carolina <	North Carolina	Battery	Toyota		Greensboro	Announced
Ohio Battery Solutions General Motors/LG General Motors General Mo		Assembly	Arrival		Charlotte	Coming Soon
Onio Battery Solutions General Motors/LG Energy Solution Honda (battery case) Honda/LG Energy Solution Assembly Honda (battery case) Honda/LG Energy Solution Assembly Honda New EV East Liberty Announced New EV Marysville Announced New EV Marysville (PMC) Coming Soon New FCEV Marysville (PMC) Coming Soon Lordstown Motors Endurance Lordstown Coming Soon Stellantis WRANGLER 4xe Toledo On Sale Now! Oklahoma Assembly Canoo Pryor Coming Soon South Carolina Battery BMW (assembly) Finence Announced Announced Finence Announced Announced Announced Announced Finence Announced Announced Finence Announced Announced Announced Announced Finence Announced Announced Announced Finence Announced Announced Announced Announced Finence Announced			Vinfast		Chatham County	Coming Soon
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Honda/LG Energy Solution Assembly Honda New EV East Liberty Announced New EV Marysville Announced New FCEV Marysville (PMC) Coming Soon New FCEV Marysville (PMC) Coming Soon Endurance Lordstown Motors Endurance Lordstown Coming Soon Stellantis WRANGLER 4xe Toledo On Sale Now! Oklahoma Assembly Canoo Pryor Coming Soon South Carolina Battery BMW (assembly) Florence Announced Florence Announced Florence Announced Florence Announced Assembly Arrival BMW M Spartanburg Open Assembly Arrival Spartanburg Open Assembly Florence Announced Pryor Coming Soon Announced Florence Announced Florence Announced Florence Announced Florence Announced Pryor Open Announced Florence Announced Florence Announced Pryor Open Announced Florence Announced Pryor Open Announced Florence Announced Pryor Open Announced Florence Announced Open Assembly Arrival Florence Announced Polestar 3 Ridgeville Ooming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon					Warren	Open
Solution Assembly Honda New EV East Liberty Announced New EV Marysville Announced New FCEV Marysville (PMC) Coming Soon New FCEV Marysville (PMC) Coming Soon Coming Soon Stellantis WRANGLER 4xe Toledo On Sale Now! Carolina Assembly Carolina Battery BMW (assembly) Florence Announced Announced Carolina Announced Carolina BMW (assembly) Florence Announced Carolina Assembly Arrival BMW XM Spartanburg Open Announced Assembly Arrival Arrival Spartanburg On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Announced Coming Soon Mercedes-Benz Vans Ridgeville Coming Soon			Honda (battery case)		Anna	Announced
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Lordstown Motors Endurance Lordstown Coming Soon				New EV	Marysville	Announced
Stellantis WRANGLER 4xe Toledo On Sale Now! Oklahoma Assembly Canoo Pryor Coming Soon South Carolina Battery BMW (assembly) Spartanburg Open BMW (assembly) Woodruff Announced Envision AESC Florence Announced Volvo Ridgeville Open Assembly Arrival Spartanburg On Sale Now! BMW XM Spartanburg On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville Coming Soon Volvo S60 Ridgeville On Sale Now! WOOVD S60 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon				New FCEV	Marysville (PMC)	Coming Soon
Oklahoma Assembly Canoo Pryor Coming Soon South Carolina Battery BMW (assembly) Spartanburg Open BMW (assembly) Woodruff Announced Florence Announced Florence Announced Ridgeville Open Rock Hill Coming Soon BMW Assembly BMW XM Spartanburg On Sale Now! Spartanburg On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville Coming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO S60 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon			Lordstown Motors	Endurance	Lordstown	Coming Soon
South Carolina Battery BMW (assembly) Florence Announced Nolvo Assembly Arrival Arrival BMW XM Spartanburg Open Open Assembly On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville On Sale Now! Volvo S60 Ridgeville On Sale Now! Volvo S60 Ridgeville On Sale Now! Volvo EX90 Ridgeville Coming Soon Mercedes-Benz Vans Exprirer North Charleston Coming Soon			Stellantis	WRANGLER 4xe	Toledo	On Sale Now!
Carolina BMW (assembly) Spartanburg Open BMW (assembly) Woodruff Announced Florence Announced Volvo Ridgeville Open Assembly Arrival BMW XM Spartanburg On Sale Now! Mercedes-Benz Vans Polestar 3 Ridgeville Coming Soon VOLVO EX90 Ridgeville Coming Soon	Oklahoma	Assembly	Canoo		Pryor	Coming Soon
Envision AESC Volvo Ridgeville Open Assembly Arrival BMW BMW XM Spartanburg On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville Coming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon		Battery	BMW (assembly)		Spartanburg	Open
Nolvo Assembly Arrival Arrival BMW BMW XM Spartanburg On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville Coming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon			BMW (assembly)		Woodruff	Announced
Assembly Arrival Rock Hill Coming Soon BMW XM Spartanburg On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville Coming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon			Envision AESC		Florence	Announced
BMW XM Spartanburg On Sale Now! X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville Coming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon			Volvo		Ridgeville	Open
X5 xDrive45e Spartanburg On Sale Now! Volvo Polestar 3 Ridgeville Coming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon		Assembly	Arrival		Rock Hill	Coming Soon
Volvo Polestar 3 Ridgeville Coming Soon VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon			BMW	BMW XM	Spartanburg	On Sale Now!
VOLVO S60 Ridgeville On Sale Now! VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon				X5 xDrive45e	Spartanburg	On Sale Now!
VOLVO EX90 Ridgeville Coming Soon Mercedes-Benz Vans eSprinter North Charleston Coming Soon			Volvo	Polestar 3	Ridgeville	Coming Soon
Mercedes-Benz Vans eSprinter North Charleston Coming Soon				VOLVO S60	Ridgeville	On Sale Now!
· · · · · · · · · · · · · · · · · · ·				VOLVO EX90	Ridgeville	Coming Soon
Scout Motors Columbia Announced			Mercedes-Benz Vans	eSprinter	North Charleston	Coming Soon
			Scout Motors		Columbia	Announced

STATE	PLANT TYPE	COMPANY	MODEL	CITY	STATUS
Tennessee	Battery	Envision AESC		Smyrna	Open
		Ford		Stanton	Announced
		General Motors/LG Energy Solution		Spring Hill	Announced
		LG Chem (Cathode Manufacturing)		Clarksville	Announced
		Volkswagen		Chattanooga	Open
		Microvast		Clarksville	Announced
	Assembly	Ford		Stanton	Coming Soon
		General Motors	Cadillac LYRIQ	Spring Hill	On Sale Now!
		Nissan	LEAF	Smyrna	On Sale Now!
		Volkswagen	ID.4	Chattanooga	On Sale Now!
	R&D	Volkswagen		Chattanooga	Open
Texas	Battery	Tesla Motors		Austin	Announced
	Assembly	Tesla Motors	Model Y	Austin	On Sale Now!
			Cybertruck	Austin	Coming Soon
Virginia	R&D	Mitsubishi Motors R&D of America, Inc.		Arlington	Open
viigiilia	Λαυ	of America, Inc.		Allington	Ореп