

# Outlook for Electric Vehicle Sales Under the Inflation Reduction Act

## Implications for Auto Finance

July 12, 2023

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The Fifth Biennial Conference on Auto Lending  
Federal Reserve Bank – Philadelphia



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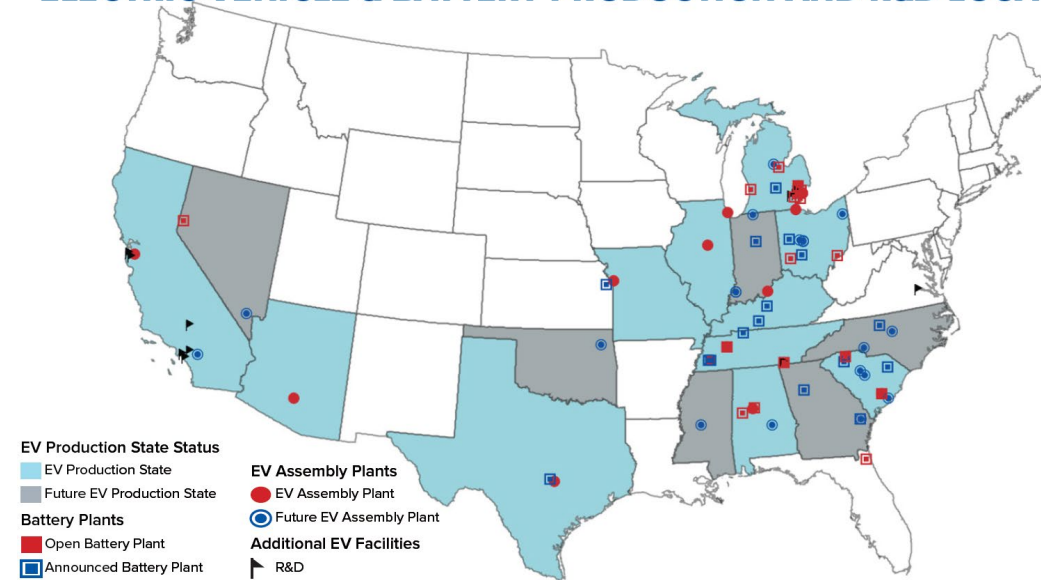
V O L V O

# The Future Is Electric

**With the right complementary policies in place**, the auto industry is poised to accept the challenge of driving EV purchases to between 40 and 50 percent of new vehicle sales by the end of the decade.

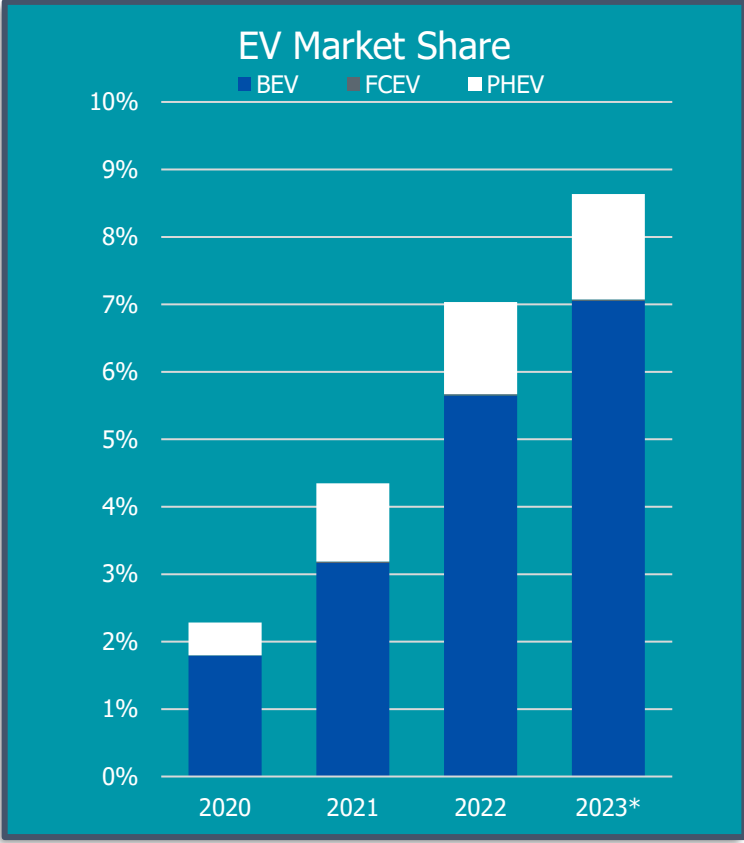
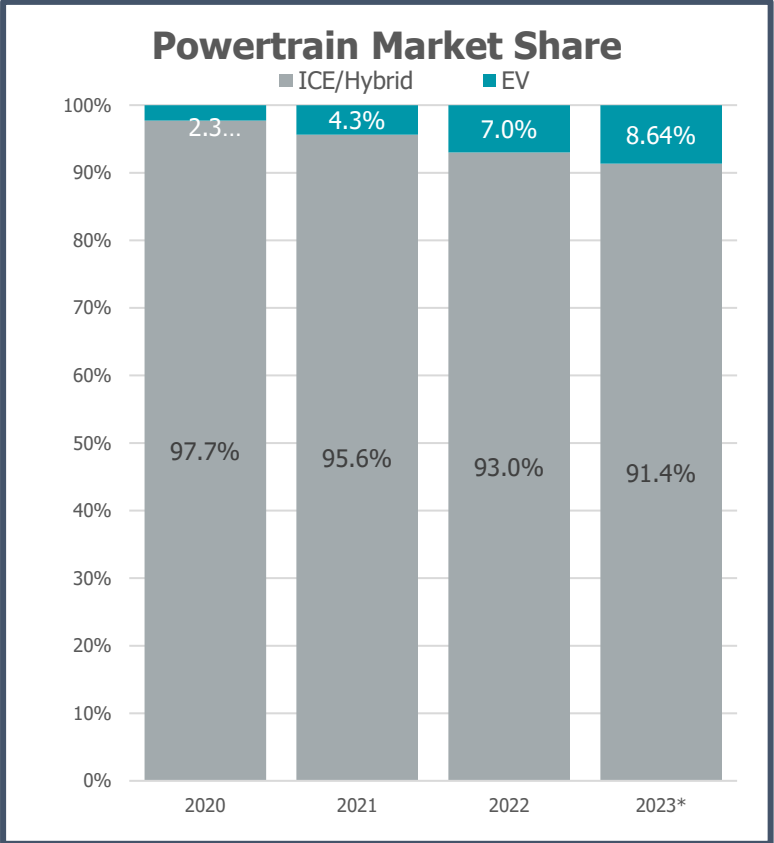
*-Auto Innovators (Aug. 5, 2021)*

**ELECTRIC VEHICLE & BATTERY PRODUCTION AND R&D LOCATIONS**



- \$115+ Billion in U.S. Investment by autos and battery partners since 2017
- \$1.2 Trillion Global EV Investment by 2030
- Battery manufacturing capacity set to grow 424% by 2025

# What are customers buying?

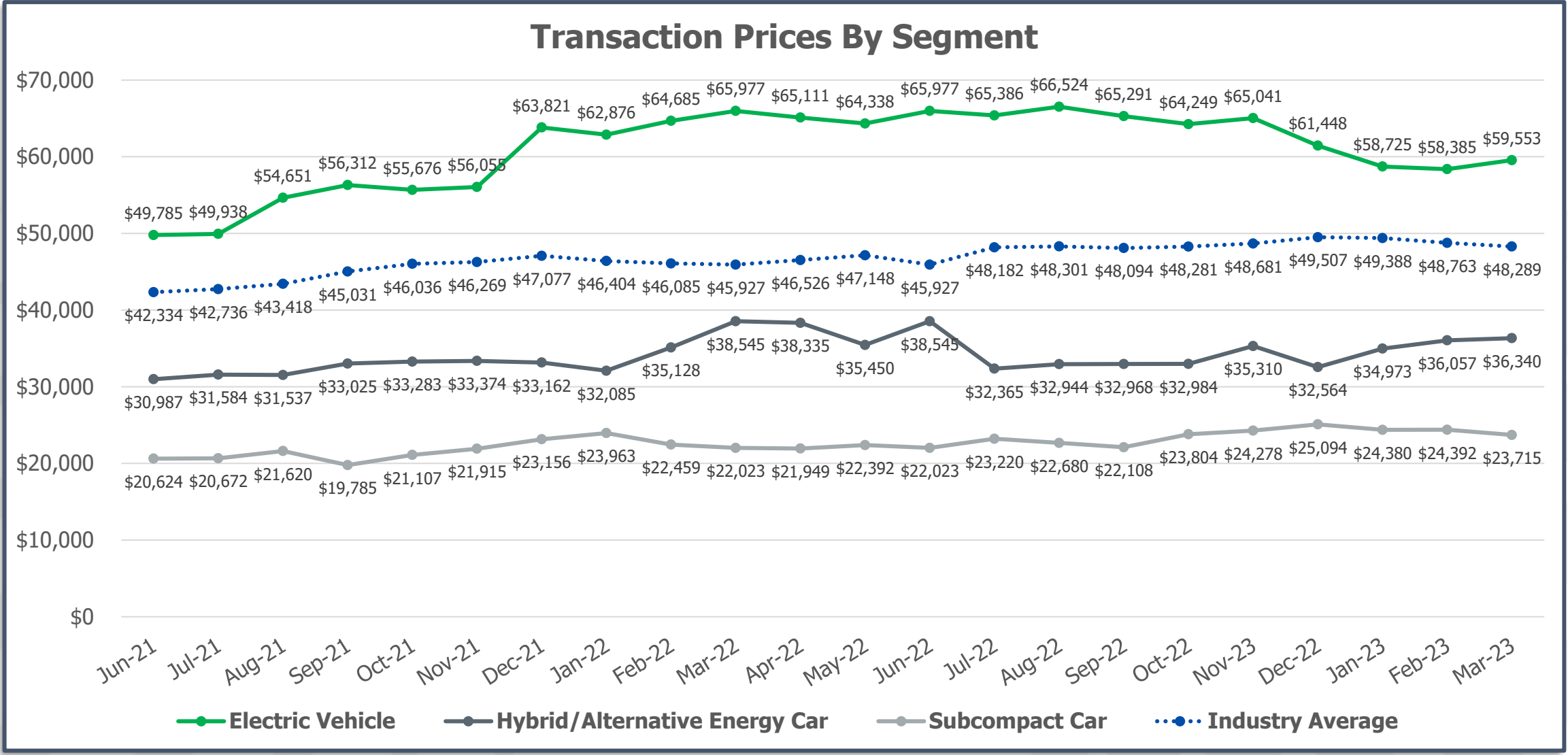


**EV MODEL AVAILABILITY**  
*97 Vehicle Models Sold in Q1 2023:*

- 55 Battery Electric Vehicles
  - 20 Cars
  - 29 Utility Vehicles
  - 4 Pickups
  - 2 Vans
- 40 Plug-in Hybrid Vehicles
  - 14 Cars
  - 25 Utility Vehicles
  - 1 Van
- 2 Fuel Cell Electric Vehicles
  - 1 Car
  - 1 Utility Vehicle

*See more information about [EV CHOICE HERE](#)*

# Vehicle Affordability



# Outstanding IRA Guidance & Questions

# Clean Commercial Vehicle Credit (\$7,500)

- 30D tax credit is effectively a consumer tax credit wrapped in industrial policy
- Early 2023 was the “high water mark” for eligible vehicles
  - 43% - or 39 out of 91 EVs for sale in the U.S. were eligible for \$7,500 30D tax credit
- **As of July 5<sup>th</sup>, just 18 vehicles qualify for all or half of the \$7,500 tax credit (30D)**

The screenshot shows the website [www.fueleconomy.gov](http://www.fueleconomy.gov), which is the official U.S. government source for fuel economy information. The page is titled "Tax Incentives" and lists three categories of incentives:

- New Plug-in and Fuel Cell Electric Vehicles Purchased in or after 2023:** Get a tax credit of up to \$7,500 for new vehicles purchased in or after 2023! (Accompanied by an image of a silver SUV).
- Pre-Owned Plug-in and Fuel Cell Electric Vehicles Purchased in or after 2023:** Get a credit of up to \$4,000 for used vehicles purchased from a dealer for \$25,000 or less! The amount equals 30% of purchased price, with a maximum credit of \$4,000. Other requirements apply. (Accompanied by an image of a yellow car).
- New Plug-in and Fuel Cell Electric Vehicles Purchased Before 2023:** Get a tax credit of up to \$7,500 for new vehicles purchased before 2023! The amount varies based on battery capacity and manufacturer phase-out. (Accompanied by an image of a red car).

On the right side of the page, under "ALSO IN THIS SECTION...", there are links to "Tax Incentives", "Credits for New Vehicles Purchased in 2023 or After", "Credits for Pre-owned Vehicles Purchased in 2023 or After", "Credits for New Vehicles Purchased Before 2023", and "Frequently Asked Questions".

At the bottom of the page, there are links for "Contacts", "Download EPA's MPG Ratings", "Find and Compare Cars", "USA.gov", "Info for Auto Dealers", "Privacy/Security", and "Feedback". A footer note states: "This website is administered by Oak Ridge National Laboratory for the U.S. Department of Energy and the U.S. Environmental Protection Agency."

<https://fueleconomy.gov/feg/taxcenter.shtml>

# Inflation Reduction Act

## **30D: Clean Vehicle Credit**

### Foreign Entity of Concern

- Jan. 2024 – Battery Components
- Jan. 2025 – Critical minerals

### Transfer Authority to Qualified Dealers

- Jan. 2024

## **45X: Advanced Manufacturing Production Credit (2023-2032)**

### How will Treasury implement the Battery Credit?

\$35 per kWh cells

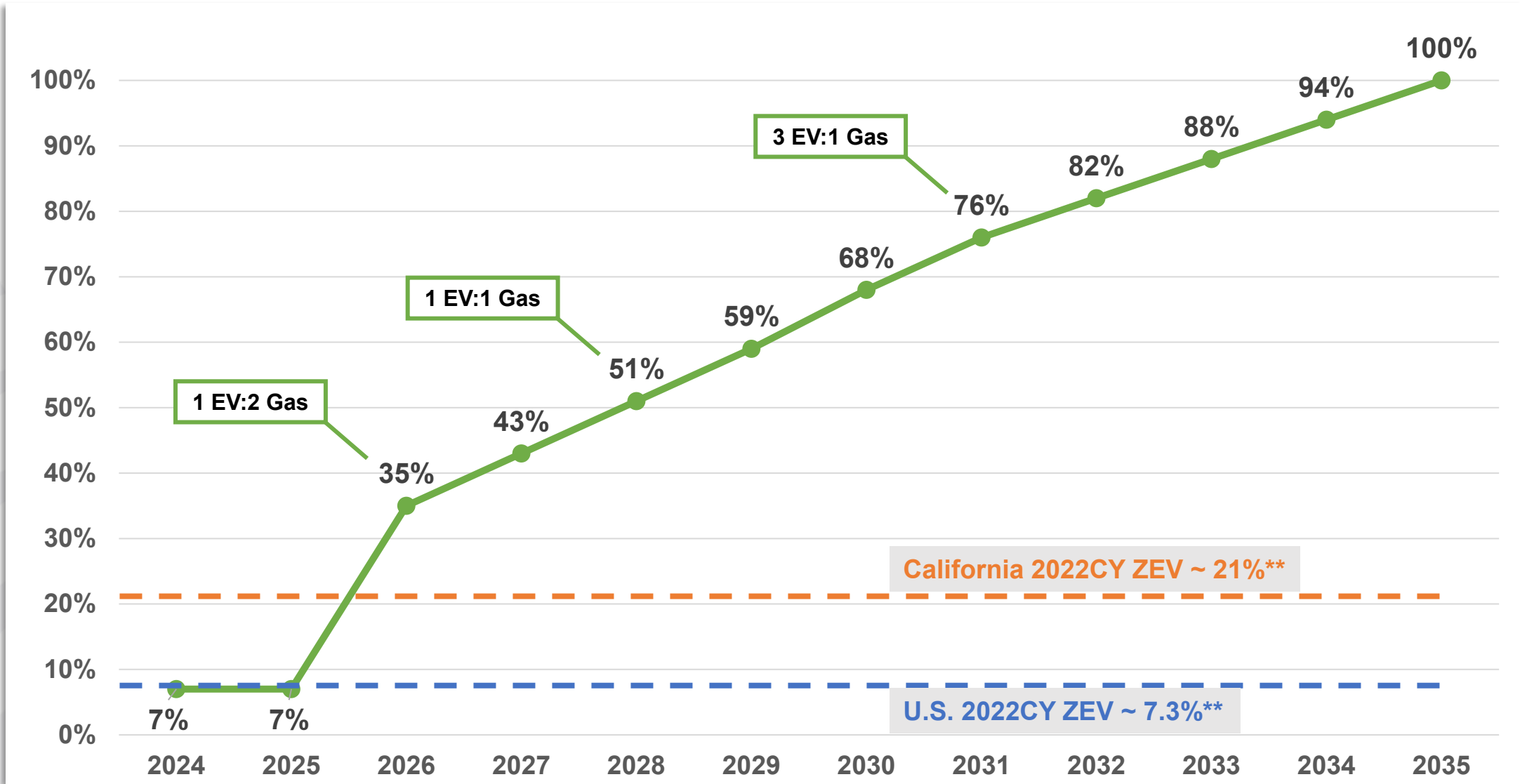
\$10 per kWh battery module (>7 kWh)



# State and Federal Regulatory Outlook

- CA ZEV
- EPA Greenhouse Gas/Criteria
- DOT Corporate Average Fuel Economy (CAFE)

# California ACC II – ZEV\* Mandate



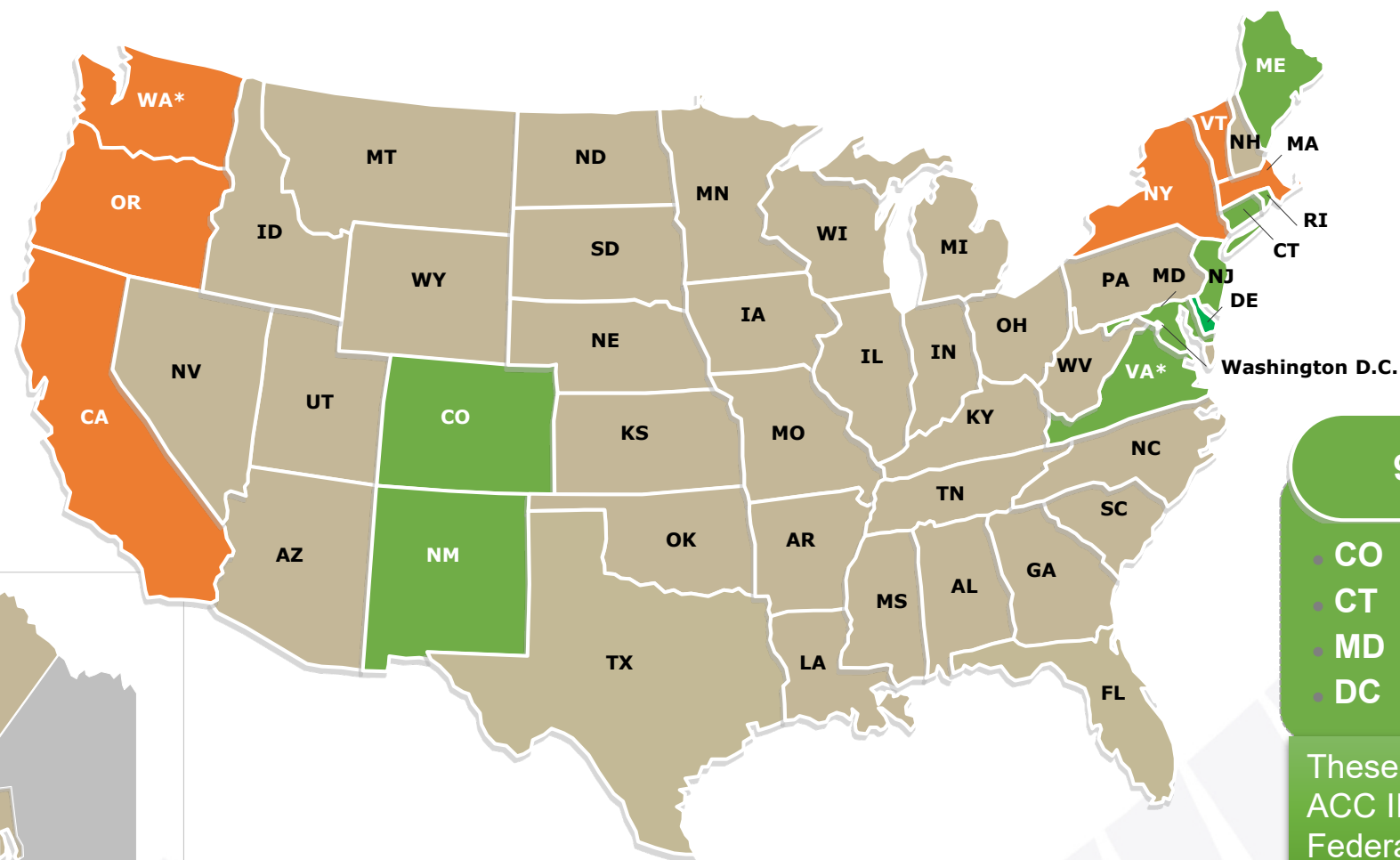
\* ZEV includes PHEV, BEV, and FCEV

\*\* See: <https://www.autosinnovate.org/resources/electric-vehicle-sales-dashboard>

# ZEV States (~ 35% of U.S. Market)

States that have adopted ACC II

- CA • OR
- MA • VT
- NY • WA



9 ZEV States\*

- CO • NJ • VA\*
- CT • NM
- MD • RI
- DC • DE

These states must adopt ACC II or they revert to Federal standards.

# EPA Proposed GHG and Criteria Standards (MY27-32)

## Projected U.S. Fleet Average GHG & BEV

- Publicly released April 12th
- Published in Federal Register on May 5th
- 60-Day Comment Period closed July 5<sup>th</sup>

MY	Combined GHG Car/Truck**	% Stringency Increase	Projected <u>BEV</u> Car/Truck
<b>2026*</b>	186	10%*	
<b>2027</b>	152	18%	36%
<b>2028</b>	131	13%	45%
<b>2029</b>	111	15%	55%
<b>2030</b>	102	8%	60%
<b>2031</b>	93	9%	63%
<b>2032</b>	82	11%	67%

**\* Part of 2022-26 Standards – 10% is the largest increase in 2022-26 timeframe.**

**\*\* Current GHG emissions ~ 230 g/mile**

# EPA Proposed GHG Alternatives (BEV Ratio)

- EPA asked for comment on 3 alternatives
  - More stringent
  - Less stringent
  - Slower ramp in early years

	2027	2028	2029	2030	2031	2032
<b>No Action</b>	32%	42%	49%	52%	52%	54%
<b>Proposed</b>	37%	45%	55%	61%	64%	68%
<b>Alternate 1</b>	38%	47%	55%	63%	68%	72%
<b>Alternate 2</b>	37%	46%	51%	57%	61%	65%
<b>Alternate 3</b>	36%	45%	50%	55%	62%	68%

\* Includes California ZEV mandate impacts. May differ slightly from “headline” values due to state-specific distribution requirements.



# ALLIANCE FOR AUTOMOTIVE INNOVATION

*Transforming Personal Mobility*

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