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# Electric Vehicles Sales and Policy Review

National Academies of Science, Engineering and Technology  
Assessment of Technologies for Improving the Fuel Economy of Light-Duty  
Vehicles

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21 October, 2021



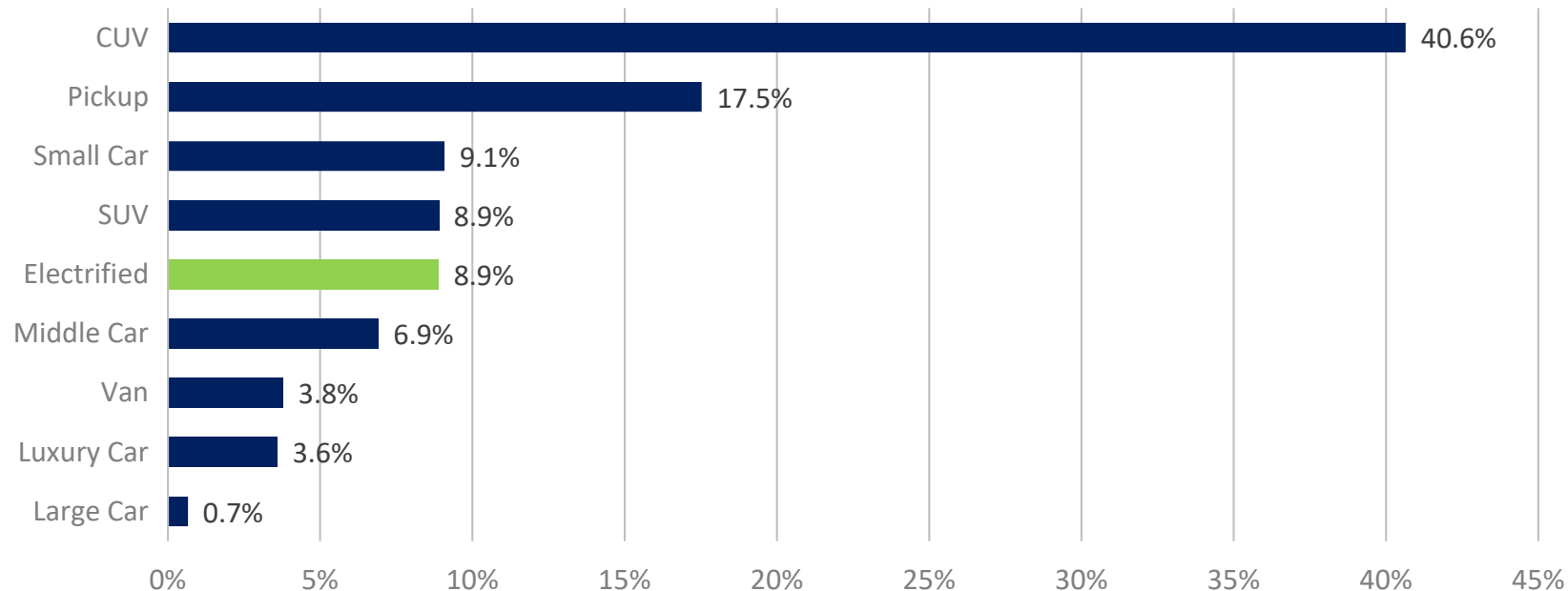
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# Electric Vehicle Sales and Demographics

# Electrified vehicles take up 8.9% of the LV market

## Market Share: Segment Breakdown

U.S. Light Vehicle Sales 2021 YTD Through September



Note: Electrified Segment consists of BEVs, HEVs and PHEVs; all other segments are sales exclusive of Hybrid models

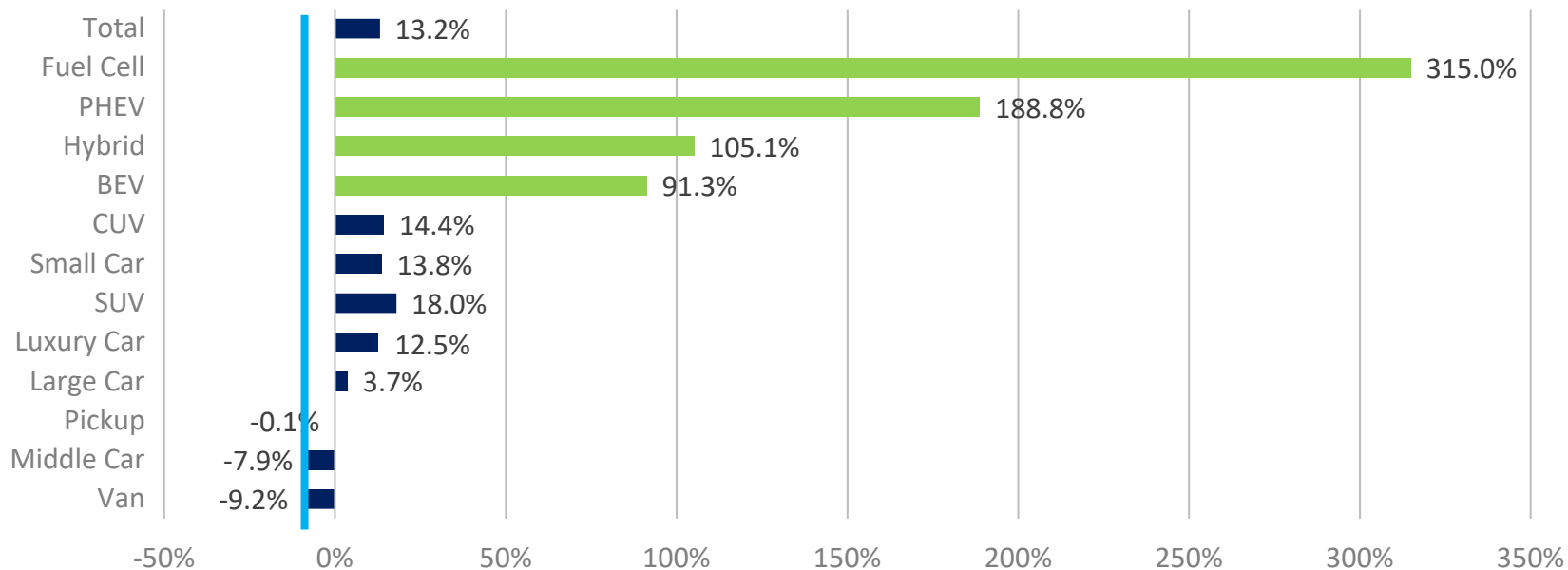
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Source: Wards Automotive Reports and CAR Research

# Electrified vehicles see a massive increase in year-to-date sales since last year

## Segment Breakdown: U.S. Light Vehicles Sales Percent Change

2021 YTD vs. 2020 YTD Through September



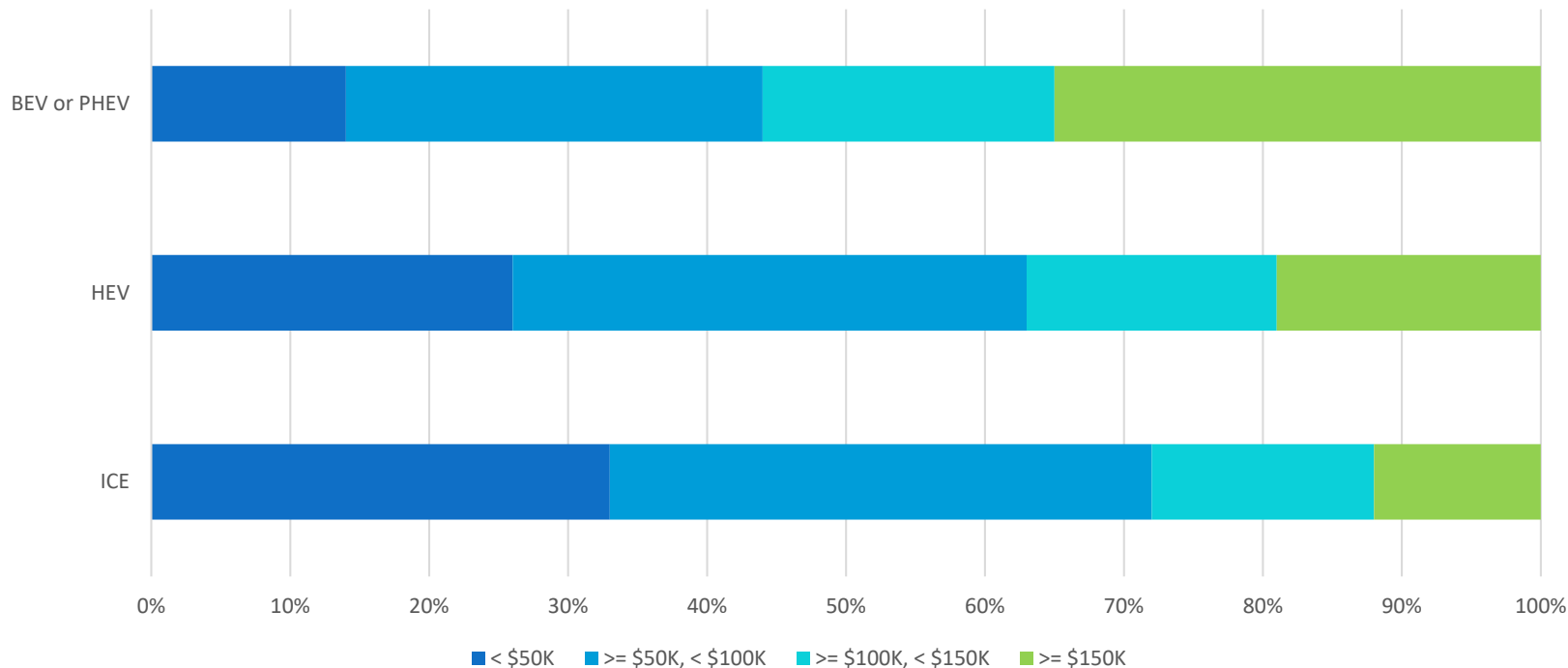
Note: All other segments are sales exclusive of Hybrid models

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Source: Wards Automotive Reports and CAR Research

# New vehicle buyers with > \$100K income buy 56% of BEVs & PHEVs & 37% of HEVs

Based on 2011-2015 California Clean Vehicle Rebate Project data



# EVs are changing the narrative



## REGULATORY

Global regulations are quickly moving to lower-carbon transportation



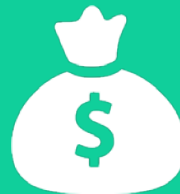
## TECHNOLOGY

Technology is more capable with longer range & lower costs



## PRODUCT

EVs will soon be available in every segment—from compacts to pickups



## FINANCE

Investors are rewarding market disruptors & sustainable companies



## MARKET

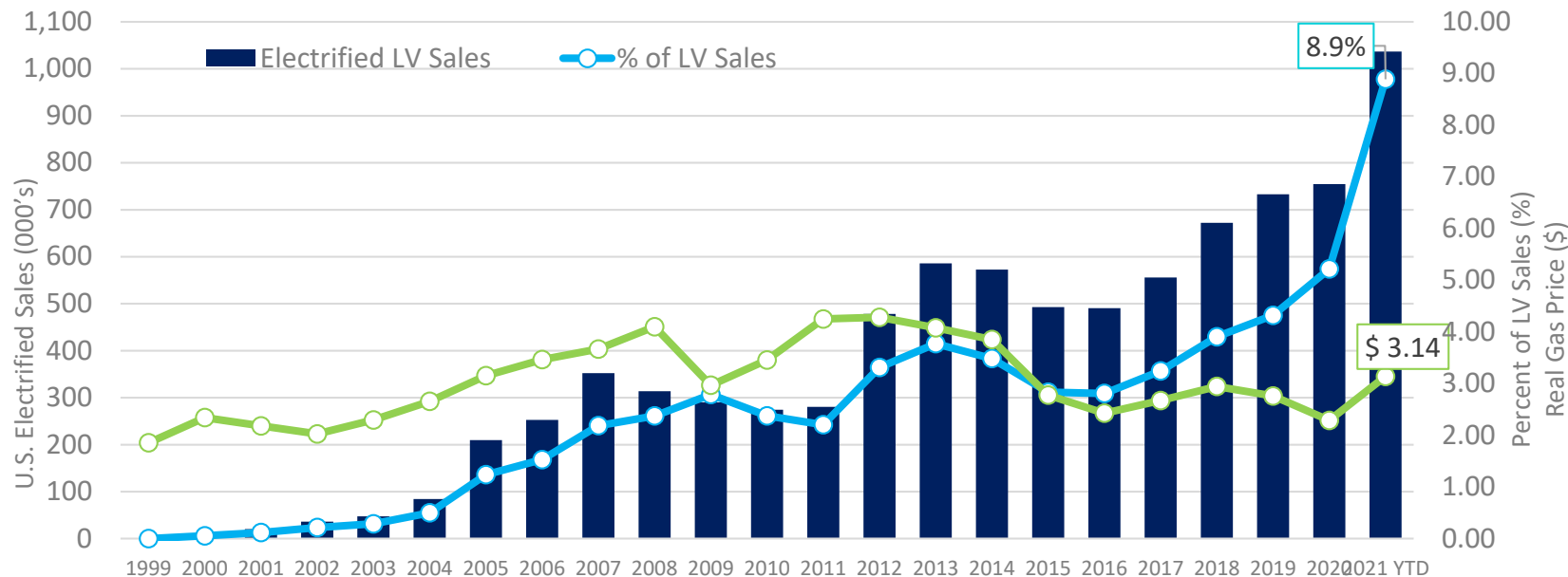
EV market share is increasing—unrelated to real gas prices



# U.S. electrified vehicle sales no longer rise & fall with the real price of gasoline

## U.S. Electrified Light Vehicle Sales & Market Share

1999 – 2021 September YTD



Note: Electrified vehicles consist of BEV, HEV, Fuel Cell, and PHEV

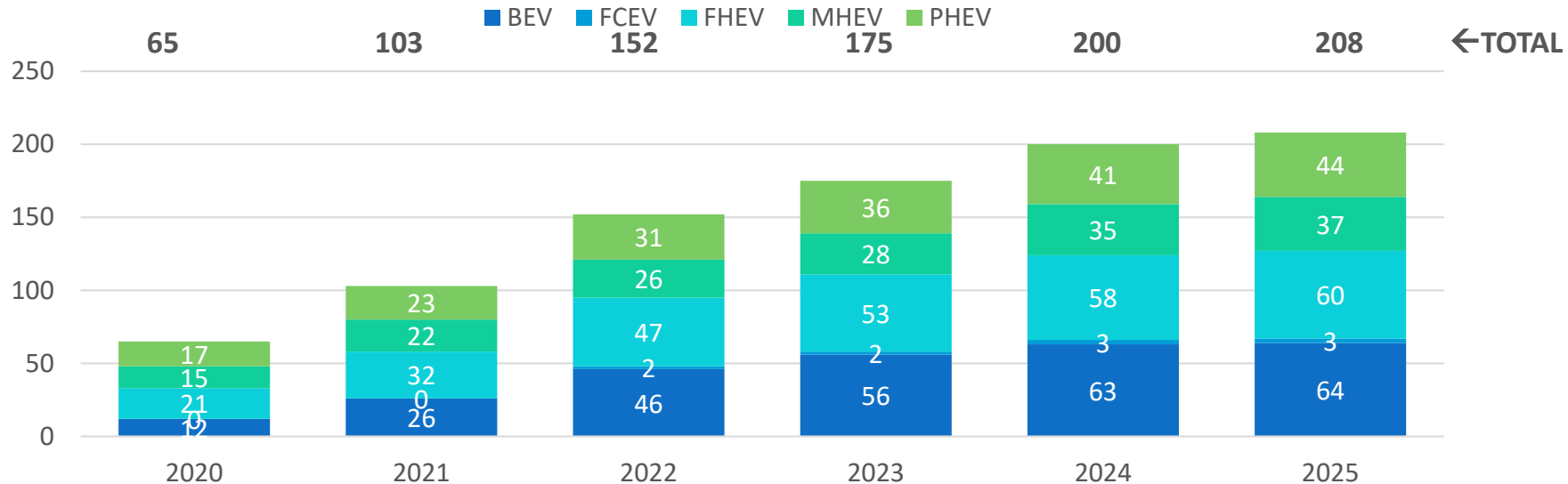
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Source: Wards Automotive Reports (from 2010 and on), HybridCars.com and CAR Research

# Electric/Electrified Models Will Proliferate

## 2020 – 2025 Forecast

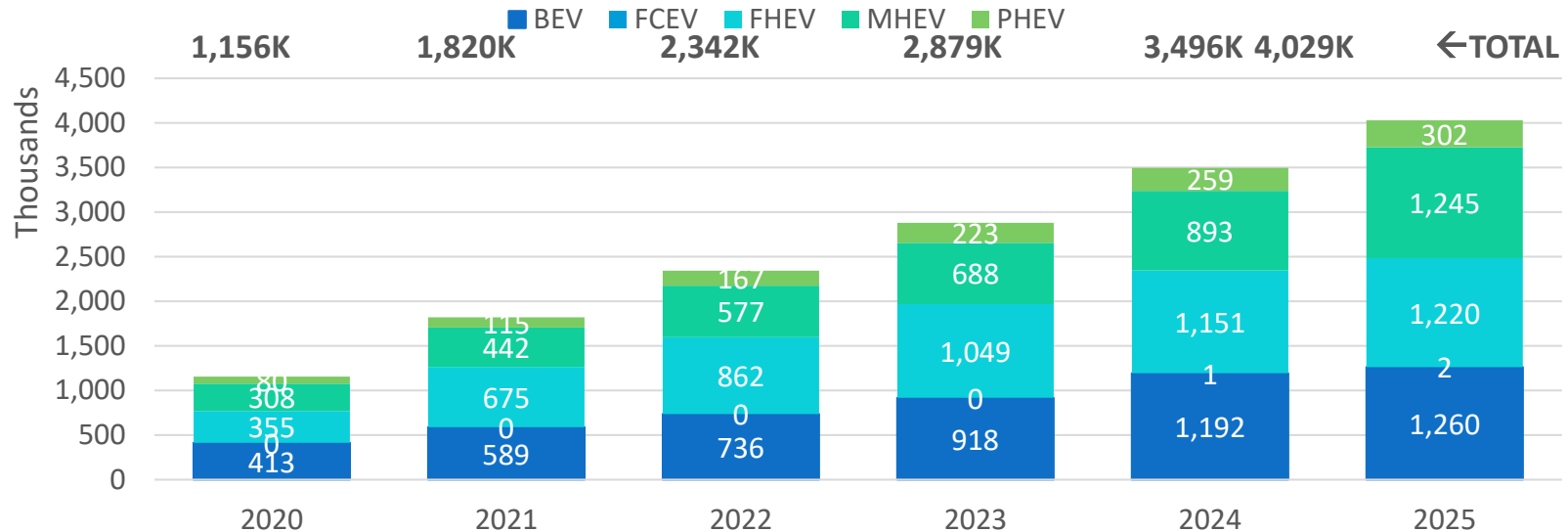
### NUMBER OF ELECTRIC/ELECTRIFIED NAMEPLATES PRODUCED IN NORTH AMERICAN PLANTS





# Electric/Electrified Production Volume Outlook 2020 – 2025 Forecast

## TOTAL ELECTRIC/ELECTRIFIED VEHICLES PRODUCED IN NORTH AMERICAN PLANTS





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# Policy

# Biden Administration Executive Order

## The path to 50%

- Announced 5 August 2021 at White House ceremony attended by representatives from General Motors, Ford, Stellantis, and UAW
- Goal of 50% sales of emissions-free vehicles by 2030
- Emissions-free vehicles defined as
  - Battery Electric Vehicles (BEV)
  - Plug-In Hybrid Electric Vehicles (PHEV)
  - Fuel Cell Electric Vehicles (FCEV)
- Automakers' pledges to meet the targets are voluntary
  - Critics point out they will not be held to the commitments
  - But prior company announcements and industry forecasts show the automakers already on a likely path to achieve compliance by 2030

# Biden's automotive policy strongly supports industry shift to electrified & electric vehicles



## INVEST

- USD 7.5 billion for charging infrastructure
- Government EV purchases
- Consumer incentives
  - Made in USA
  - Aimed at “middle class”



## REVERSE

- Re-enter Paris Accords
- Withdraw from California Clean Air Act lawsuits
- Revise the Trump rules and set new fuel economy & greenhouse gas regulations



## STRENGTHEN

- U.S. research & development
- U.S. supply chains for
  - Critical technologies
  - Raw materials



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# Thank You

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