

# The American EV Transition: Looking Ahead While Lagging Behind



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# China is posting some impressive EV numbers

PEV sales (BEV + PHEV): **1.37 M (2020) → 12.9 M (2024)**

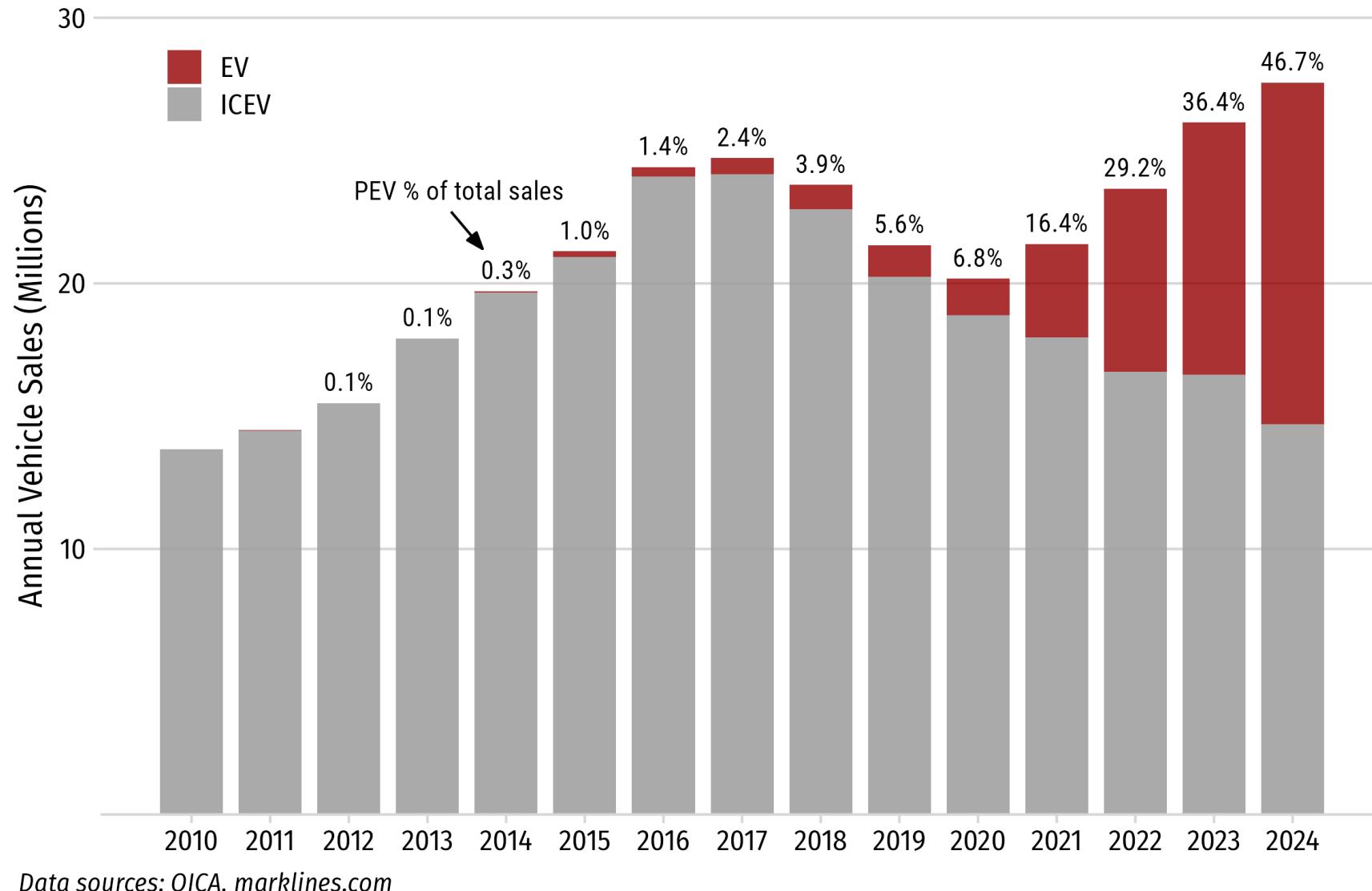
(46.7% of sales)

PEV exports (BEV + PHEV): **0.2 M (2020) → 1.28 M (2024)**

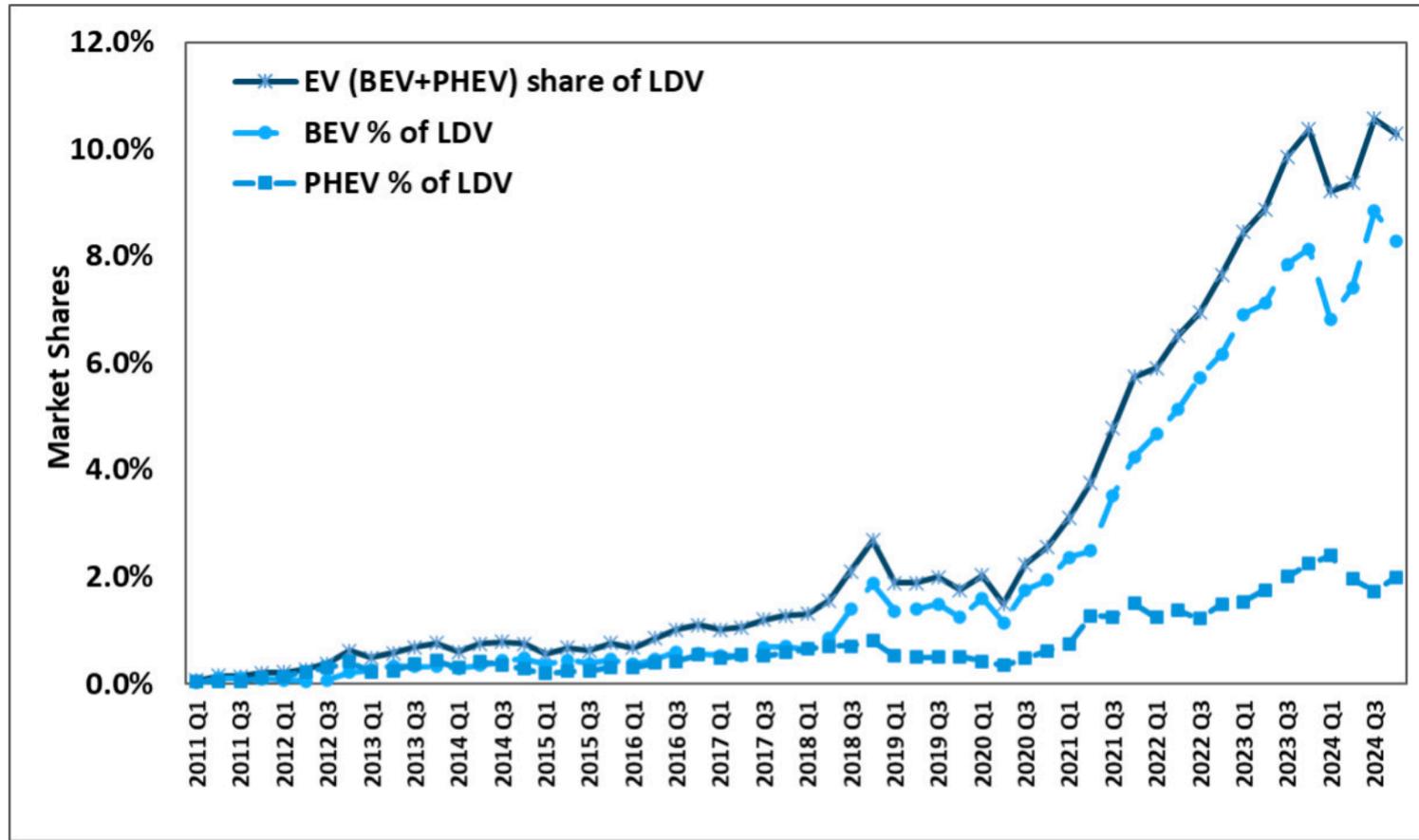
(25% of vehicle exports)

## In China, PEV sales grow while ICEV sales slow

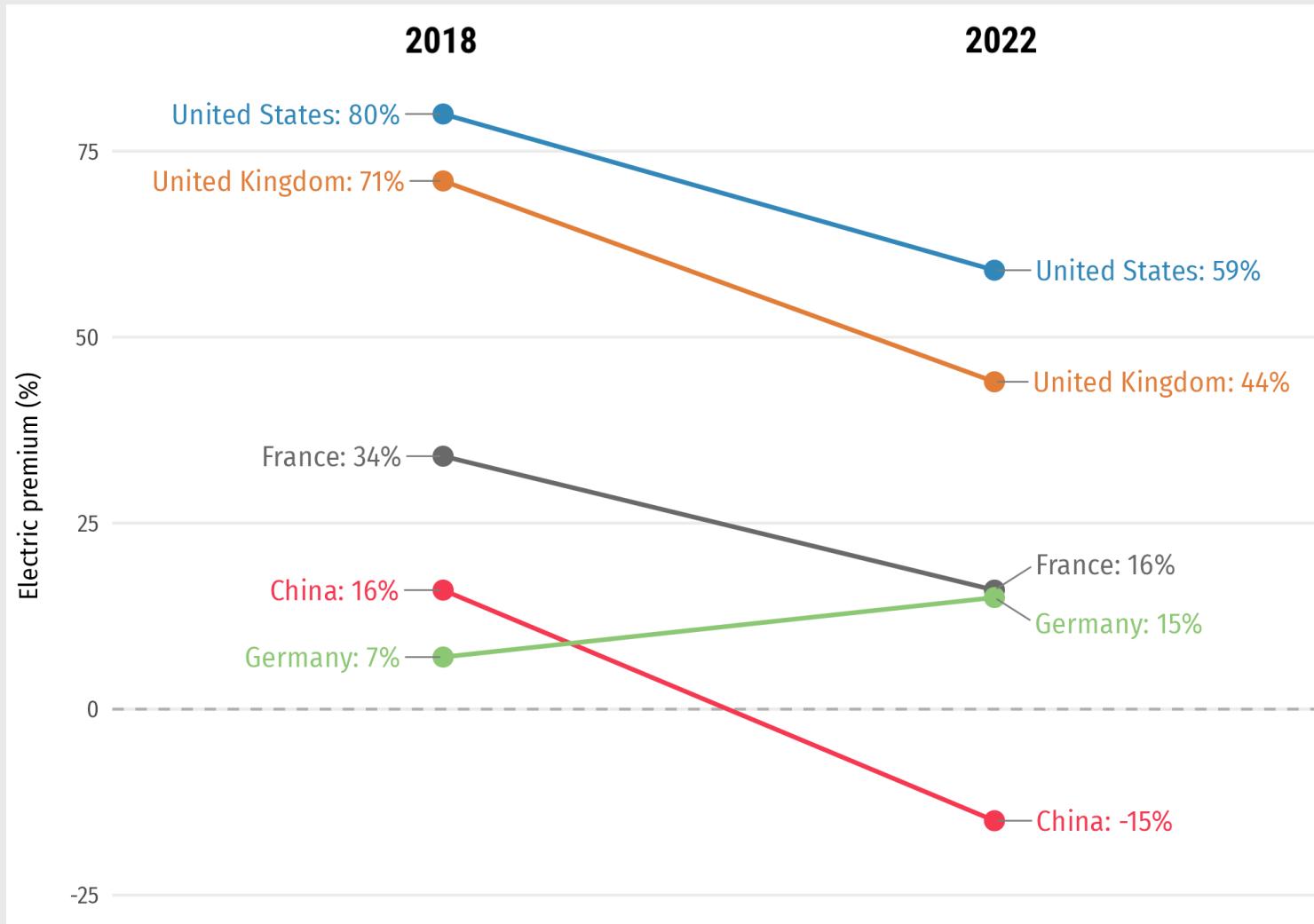
After peaking in 2017, internal combustion engine vehicle (ICEV) sales have declined for 7 straight years



# EV sales in US reaching ~10% of sales



Source: Argonne National Lab, <https://www.anl.gov/ev-facts/model-sales>



The EV sector has an affordability problem (except in China)

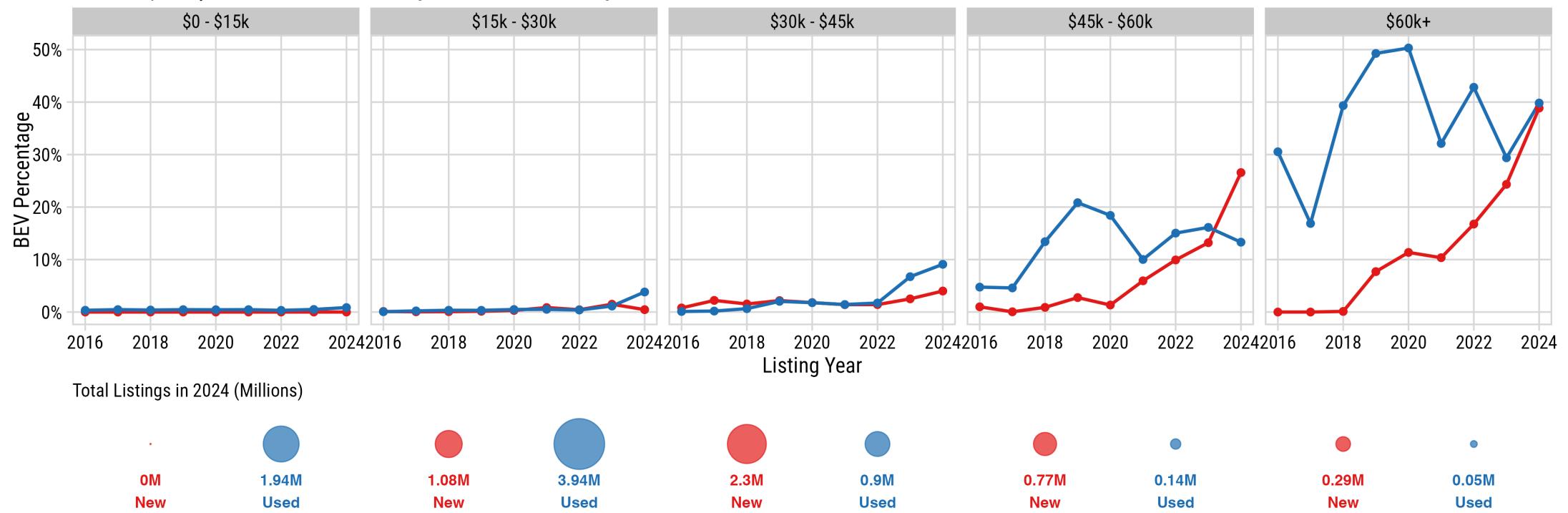
Source: <https://www.iea.org/reports/global-ev-outlook-2024/executive-summary>

# BEVs Concentrated in High-Price Segments in US

**In 2024, only 2.2% of new and 3.6% of used listings under \$45,000 were BEVs**

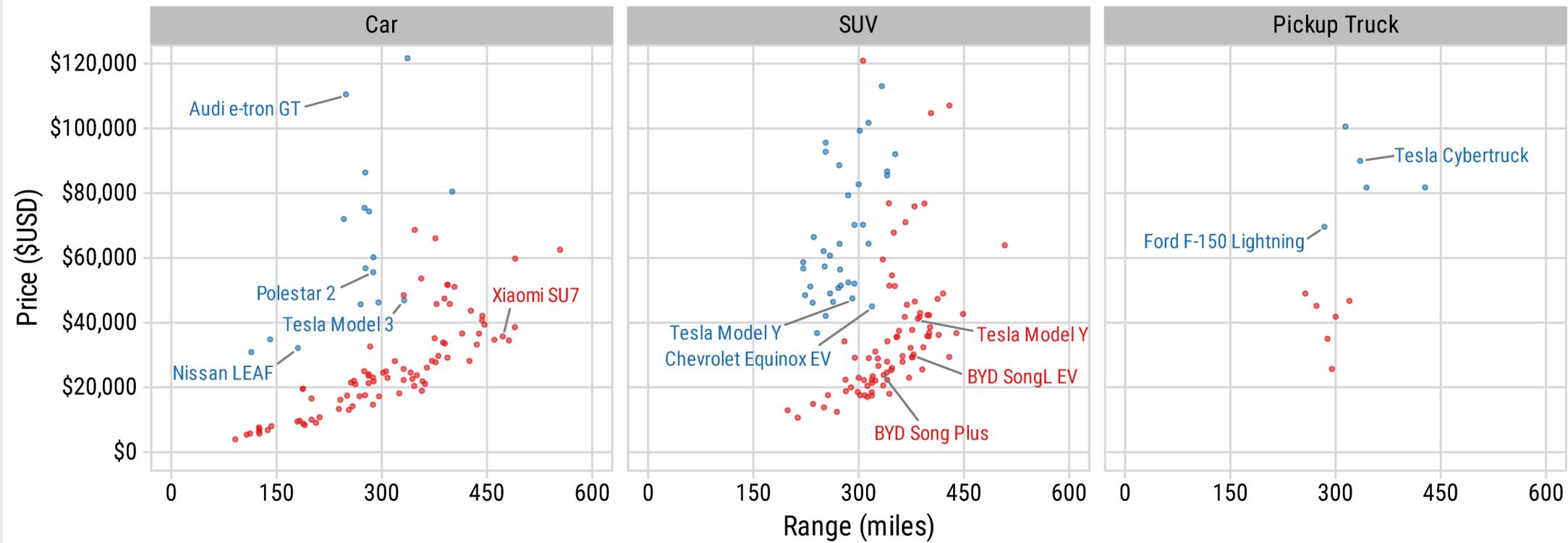
## BEV Affordability Gap: BEVs Concentrated in High-Price Segments

In 2024, BEVs comprised just 2.2% of new vehicle listings and 3.6% of used listings under \$45,000



# China offers more affordable BEVs across all range categories

Price vs. Range for all Model Year 2024 BEVs in **China** and the **USA**



Data scraped from autocango.com (China) and carsheet.io (USA)

The biggest competitor  
to an American EV  
is not a Chinese EV...

...it's a gas car

## Top 4 Selling Vehicles in **China**

**Xiaomi SU7**

\$30,171 - \$41,909



**BYD Song**

\$24,721 - \$38,555



**Geely Xingyuan**

\$ 9,615 - \$13,667



**Tesla Model Y**

\$36,822 - \$43,809



## Top 4 Selling Vehicles in **USA**

**Toyota RAV4**

\$29,250 - \$38,955



**Honda CRV**

\$30,100 - \$41,100



**Ford F-150**

\$44,095 - \$79,005



**Chevrolet Silverado**

\$42,700 - \$70,000



# Strategic Implications

**Global Market Share Erosion:** U.S. autos will not be competitive abroad without affordable EVs

**Trade Imbalance:** U.S. could go from net vehicle *exporter* to *importer* (U.S. exported \$15B in vehicles and parts to Canada in 2024 

**Employment Impacts:** U.S. auto employs 10.1 million Americans, \$730B in annual paychecks

# Strategic Response Options

**North American Integration:** Create sufficient scale with Canada and Mexico partnerships 

**Sustained Policy Support:** Maintain IRA incentives during transition

**Battery Manufacturing Focus:** Prioritize domestic production  
(Platform for commercializing next-gen US technologies)

**Targeted Innovation:** Leverage R&D strengths in breakthrough areas

**Strategic Chinese Partnerships:** Form tech relationships for market access, e.g. licensing agreements and FDI

# Thanks!

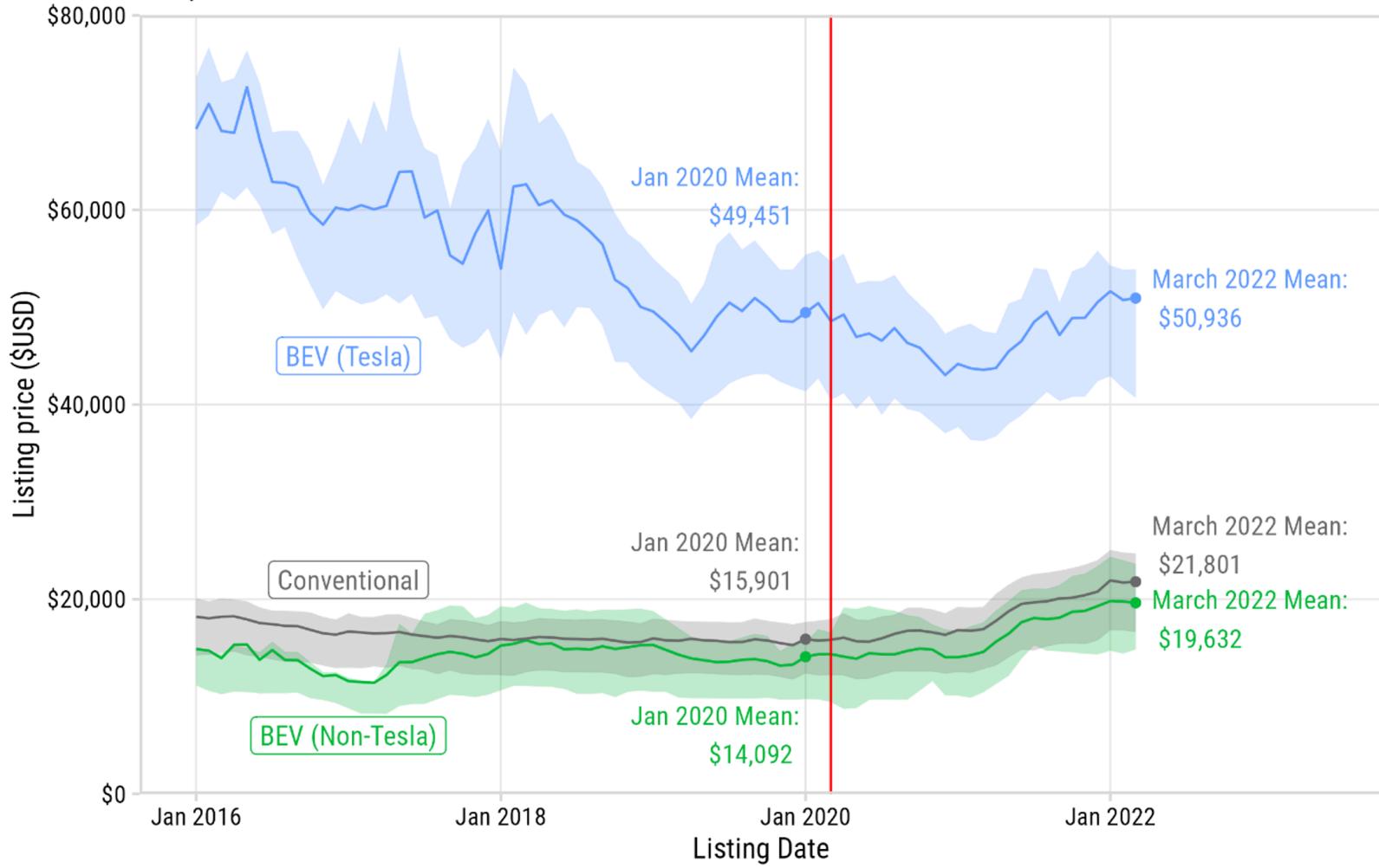
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# Extra Slides

## Used market listing prices are substantially higher post-COVID19

Prices inflation-adjust to constant 2019 \$USD

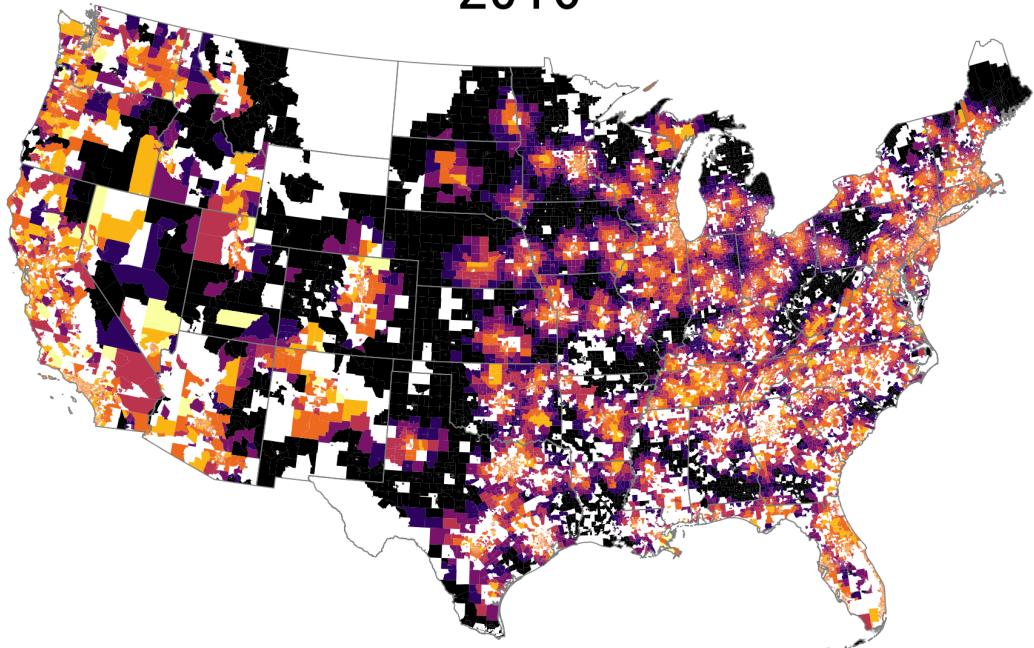


Used market is more affordable, but post-COVID prices are up in all markets, not just EVs

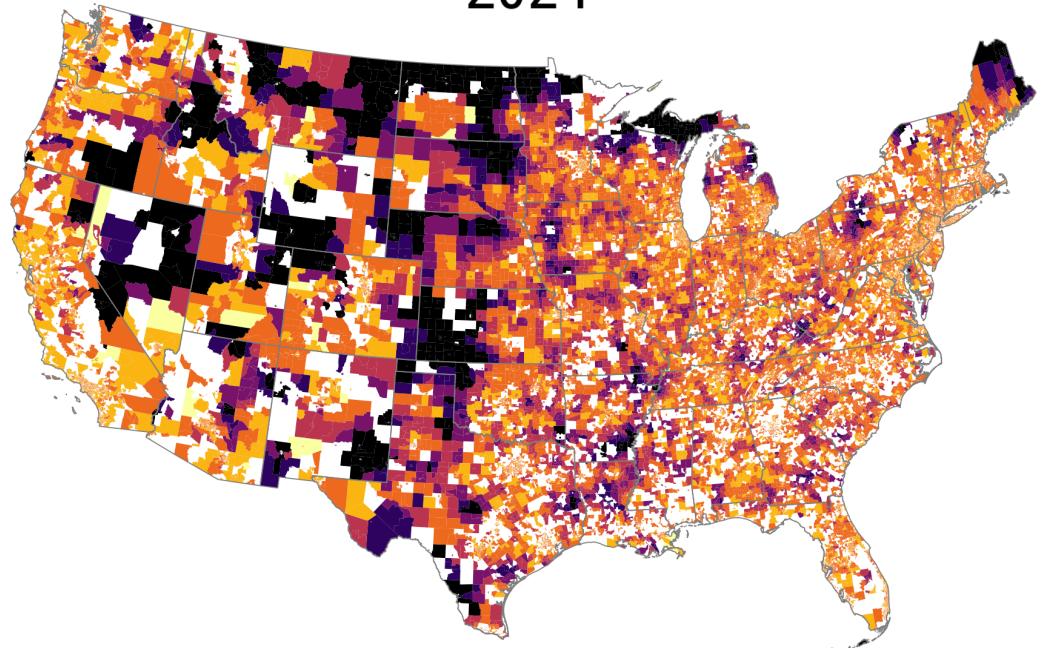
Source: Roberson, Laura A., \*Pantha, S., & Helveston, J.P. (2024) "Battery-Powered Bargains? Assessing Electric Vehicle Resale Value in the United States" Environmental Research Letters.

# The BEV Deserts of America

2016



2024



Additional travel time to nearest <\$25,000 BEV (Minutes)



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