

## Market Trends - Model Year 2024

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**PETER HUETHER** 

After a turbulent few years of supply-chain problems and high costs due in part to the Covid-19 pandemic, the automotive market shifted toward normalcy in 2023. Last year, as supply-chain issues eased and inventory levels improved, sales were up 12% compared to 2022, at 15.5 million cars. Prices were also down 3.5% compared to 2022, though they are still higher than pre-pandemic levels. However, 2023 did see some disruption due to the six-week autoworker strike that led to a record contract for workers at GM, Ford, and Stellantis. While the strike didn't impact prices overall and only affected a few factories producing a few models, the higher wages and new agreements could have longer-term impacts, including for the transition to electric vehicles (EVs). The transition to EVs and the need for new plants to produce the necessary batteries was an undercurrent to the strike and negotiations. In the end, GM and Stellantis agreed to extend the newly settled contract to EV battery plant workers. Ford does not wholly own its battery plants, but unionization among its battery suppliers is now much more likely under the new contract.

Automakers that had a <u>particularly strong year</u> include GM, which sold 14% more vehicles in 2023 compared to 2022; Kia, with sales up 14% and its highest sales figure ever in the United States; and Mazda, with a 23% increase in sales largely thanks to its crossover vehicles.

On the policy front, in 2023 the Environmental Protection Agency (EPA) and the Department of Transportation proposed rules to reduce emissions and fuel consumption, respectively, from new vehicles. The EPA proposal in particular would significantly reduce emissions from new vehicles and lead the United States on a path toward greater electrification. These rules will affect new vehicles from model years 2027 to 2032 and are expected to be finalized early this year. At the <a href="state-level">state-level</a>, eight states and DC adopted California's Advanced Clean Cars II standard in 2023, which will fully electrify new vehicle sales in those jurisdictions by 2035. California is <a href="allowed to set">allowed to set</a> vehicle standards stronger than those at the federal level, and other states are allowed to adopt the same standards, a major incentive in the market to improve efficiency and lower emissions.

In 2023 the National Electric Vehicle Infrastructure (NEVI) program opened its <u>first</u> EV charging station. The Ohio station will be the first in a network of 500,000 chargers around the country that will make it easier for drivers to recharge away from home and help support the EV market.

## **Electric Vehicles**

Last year was another record year for EVs, with 1.2 million sold, achieving a market share of 7.6% of new car sales (compared to 5.9% in 2022). Headlines last year, however, were frequently dominated by claims of the EV market slowing down and that buyers are no longer interested in going electric, leading automakers to slow investment in EVs. In reality, EV sales were up 46%, and this alarm from automakers may have more to do with worries about profitability, especially as Telsa lowered its prices for its best-selling vehicles. The rate of growth in EV sales may be below the tremendous increase we saw in 2022, with sales up 65% in that year compared to 2021, but this is to be expected as EVs' market share increases. As EVs mature and take up a larger share of the market, year-over-year sales increases should be closer to the figure for the passenger vehicle market overall. Ford is one company that spoke of softening demand, saying that purchases of its F-150 Lightning were lower than expected. As a result,

Ford will <u>reduce its future production</u> of the model, despite sales of the vehicle being up 54% compared to 2022.

Tesla <u>remained the U.S. EV sales leader</u>: it captured 55% of the EV market in 2023, and its Model Y accounts for one-third of the EV market. However, this is a decline from 65% in 2022 despite the automaker offering steep discounts to maintain its dominance. GM had a good year for EVs, with <u>sales</u> of its Bolt EV and EUV up 63%—both cars were among the bestselling EVs nationwide. Despite this success, GM still plans on reimagining the Bolt and has complained about a <u>lack of demand</u> for EVs. Hyundai also had a good year, with sales of its Ioniq 5 SUV up 48% (for comparison, the automaker saw an 11% increase for all sales).

Automakers continue to invest in EVs to varying degrees, evident in the wide range in the share of their sales that are EVs. On the upper end of EV sales (excluding all-EV automakers like Tesla), many German automakers are continuing to focus on EVs: over 12% of BMW sales were EVs, followed by VW, Mercedes, and Audi at about 11% each. At the bottom are Japanese brands that have historically been leaders on hybrid-vehicle technology but have been slow to fully electrify their offerings. The lowest performing is Toyota, with only 0.5% of its sales being EVs, followed by Subaru, Lexus (a division of Toyota), and Nissan at 1–2%.

EVs have historically been more expensive than conventional gasoline-powered vehicles, but in 2023 that gap narrowed: EV prices were down 18%. This was largely due to large price cuts from Tesla, but it also reflects improvements in EV inventory and supply chains as well as increased competition from traditional automakers. Two-thirds of passenger EVs sold in the United States were under \$40,000 after accounting for the federal tax credit, showing the value of reasonably priced EVs.

Battery raw material prices <u>were also down</u> in 2023 compared to the year prior, although still up compared to 2020. Lithium-ion battery <u>prices fell</u> 14% in 2023, a record low, after an unusual price increase in 2022. Battery costs are a major component of EV prices, so their continued decline is a positive sign for greater EV market penetration.

In 2023, <u>many major automakers</u> announced they are adopting Tesla's North America Charging Standard, enabling their vehicles to use Tesla's large charging network. Ford was the first to announce it is adopting the standard, followed by GM. Ultimately, all major automakers have adopted Tesla's charging standard except Stellantis, which is still in discussions with Tesla.

## **Internal Combustion Engine Vehicles**

While there have been many advancements over the past decade in technologies that improve fuel efficiency, new internal combustion engine vehicles (ICEVs) <u>have not gotten more efficient</u> as a whole in recent years. The efficiency gains (and emissions reductions) we've seen recently in new vehicles is entirely because of increased sales of EVs, plug-in hybrids, and fuel-cell vehicles. However, this is partially due to the change in the mix of ICEVs sold—sales of SUVs and trucks (usually the least efficient in an automaker's lineup) are increasingly outpacing sales of sedans. Within each vehicle type (e.g., sedan, car SUV, minivan, etc.), efficiency <u>has continued to rise</u> thanks to new and ever more innovative technologies.

2023 was a record year not only for EVs but <u>also for traditional hybrid vehicles</u>, the latter reaching 8.3% of sales, <u>about four times as many</u> as plug-in hybrid vehicles. Hybrid sales actually grew faster than EVs, with <u>year-over-year sales</u> up 65%, as automakers increasingly hybridize their conventional offerings. Hybrids can be an affordable, high-efficiency option for those who may not be ready to purchase an EV. Toyota, which popularized the technology, is still a leader in hybrids: 29% of its <u>vehicles sold last year</u> were plug-in or traditional hybrids. Toyota plans on offering its highly popular Camry model only as a

hybrid in the coming years, which will continue to accelerate hybrid sales. German automakers are also big sellers of hybrids: about 30% of sales from Mercedes and BMW and 17% of VW's sales were hybrids in 2022 (the latest year such data are broken down by automaker).

## **Greener Choices Are Available to Everyone**

GreenerCars is ACEEE's annual assessment of every new model in the U.S. light-duty vehicle market. It is based on a lifecycle assessment of the greenhouse gas and criteria pollutant emissions from the production, use, and disposal of each vehicle. Green scores are generated for each model and can be used to assess how green a vehicle is.

When it comes to buying a new vehicle, the most environmentally friendly step for a driver is simple: they should evaluate their needs and budget, then look for suitable models with the highest green scores. Even though most of our top 2024 ratings go to vehicles with some form of electrification, all vehicle classes feature nationally available gasoline-powered vehicles that score significantly better than average.

Our <u>Greener Choices</u> table highlights top-scoring vehicles available in almost all major market segments. The list includes only cars with automatic transmission. In the past, manual transmission versions of vehicles on the Greener Choices List often had higher fuel economy, but this is less common today thanks to advances in continuously variable and automatic transmissions. The good news: anyone can find cleaner and more-efficient vehicles throughout the market. The Greenercars.org <u>database</u> lists hundreds of vehicles beyond those listed in the Greener Choices table.

Buying green does more than fulfill a personal commitment to reducing pollution and protecting the environment: it sends a signal to manufacturers. As more consumers buy green, automakers will increasingly view environmentally friendly design as a market opportunity rather than an obligation. They will be motivated to invest in better technology, leading to greener vehicles in the years ahead.

The average car or light truck runs for 15 years or more thanks to increasing vehicle durability. Even if you don't keep your new vehicle for more than a few of those years, the choice you make now will expand the options available to used-car buyers in the future. So instead of putting another gas guzzler on the roads, the greener choice you make today can help cut pollution for years to come.