

**The**

**2025**

**EPA Automotive  
Trends Report**

Fuel Economy and Technology since 1975

**Executive Summary**



EPA-420-S-26-001 February 2026

*This technical report does not necessarily represent final EPA decisions, positions, or validation of data reported to the EPA by manufacturers. It is intended to present technical analysis of issues using data that are currently available and that may be subject to change. Historic data have been adjusted, when appropriate, to reflect the result of investigations by the EPA or any other corrections necessary to maintain data integrity.*

*The purpose of the release of such reports is to facilitate the exchange of technical information and to inform the public of technical developments. This edition of the report supersedes all previous versions.*

# Executive Summary

Since 1975, the U.S. Environmental Protection Agency (EPA) has collected data on every new light-duty vehicle model produced for sale in the United States. These data are collected to support several important national programs, including the EPA criteria pollutant standards, the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) Corporate Average Fuel Economy (CAFE) standards, and vehicle Fuel Economy and Environment labels. This report contains a uniquely comprehensive analysis of the automotive industry since 1975, based on the EPA's expansive data set, and provides transparency to the public on data collected by the Agency.

In February 2026, the EPA finalized a rulemaking that eliminated greenhouse gas (GHG) standards for light-, medium-, and heavy-duty vehicles and engines for past and future model years. This report has likewise eliminated sections that in previous versions evaluated compliance with the eliminated GHG standards.

The data behind this report was generated either from testing performed by the EPA at the National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan or directly from manufacturers using official EPA test procedures. All data in this report for model years 1975 through 2024 are **final** data submitted to the EPA and the NHTSA as part of the regulatory process. In some cases, this report will show data for model year 2025, which are **preliminary** and based on data, including projected production volumes, provided to the EPA by automakers prior to releasing vehicles for sale to the public. These data may change significantly before being finalized.

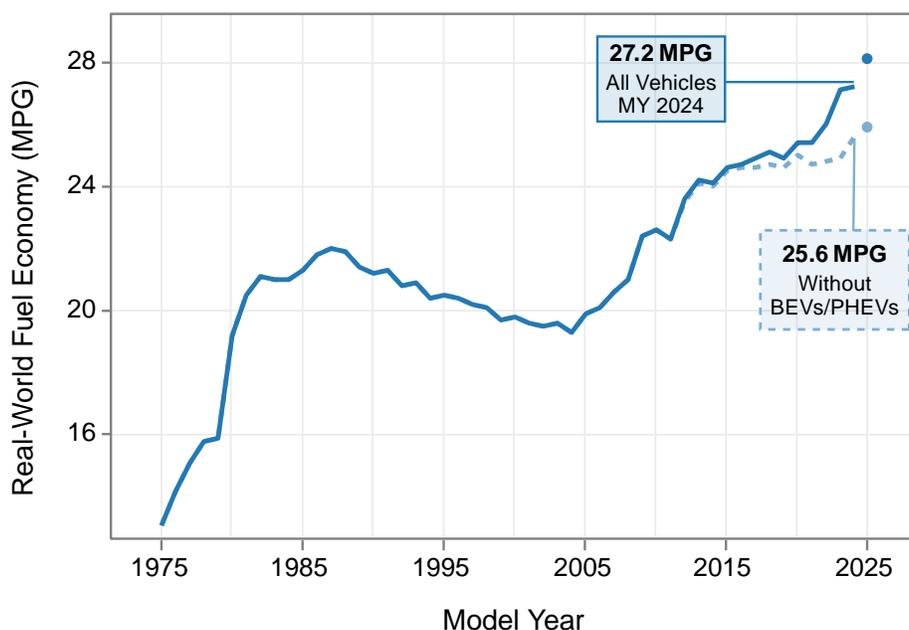
The fuel economy data in this report are **estimated real-world** data which are measured using a series of standardized laboratory tests that account for the range of operating conditions encountered by an average driver. This data encompasses results from additional testing compared to CAFE data and should not be compared directly to reported CAFE fuel economy compliance values.

This iteration of the report includes additional analysis on the impact of battery electric vehicles (BEVs) and plug-in hybrid vehicles (PHEVs). These vehicles have fundamentally different characteristics than other vehicles and understanding these differences and the impact these vehicles are having on overall trends as their production changes over time is important to explore. To download the full report, or to explore the data using the EPA's interactive data tools, visit the report website at [www.epa.gov/automotive-trends](http://www.epa.gov/automotive-trends).

## Average new vehicle fuel economy continues to increase.

In model year 2024, the recent trend of increasing new vehicle real-world fuel economy continued, as shown in Figure ES-1. The average model year 2024 new vehicle increased fuel economy by 0.1 mpg to a record high 27.2 mpg. Average new vehicle fuel economy has improved 16 out of the last 20 years and has increased 41% compared to model year 2004. Preliminary model year 2025 data, shown as a dot in Figure ES-1, suggest that average new vehicle fuel economy will continue to increase in model year 2025.

**Figure ES-1. Estimated Real-World Fuel Economy**



Overall fuel economy trends are due to changes in the mix of vehicles produced each year and evolving vehicle technology. New vehicle production has been trending towards sport utility vehicles (SUVs) for many years (Figure ES-2) and many new technologies have been developed and adopted (Figure ES-5). In particular, the production of BEVs and PHEVs have noticeably influenced overall trends in recent years. Without BEVs and PHEVs, the average new vehicle real-world fuel economy in 2024 was 1.7 mpg lower.<sup>1,2</sup>

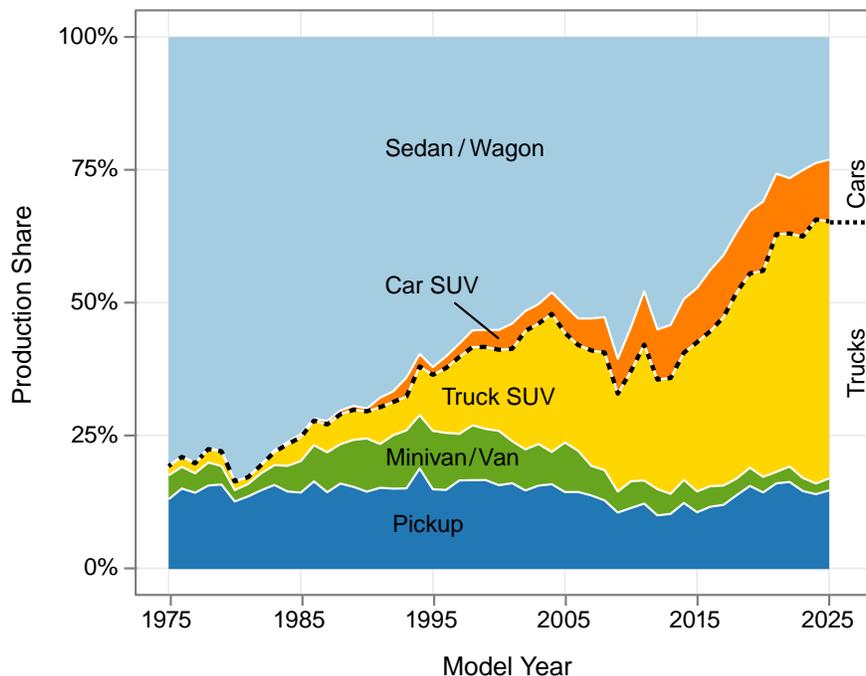
- 1 Throughout this report, the fuel economy of BEVs and PHEVs are measured in terms of miles per gallon of gasoline equivalent, or mpge. These values are included in fleetwide fuel economy (mpg) values unless noted.
- 2 The EPA generally uses unrounded values to calculate values in the text, figures, and tables in this report. This approach results in the most accurate data but may lead to small apparent discrepancies due to rounding.

## The overall industry continues to shift toward SUVs.

The NHTSA's CAFE regulations provide definitions to determine if light-duty vehicles are considered passenger vehicles (i.e. cars) or non-passenger vehicles (i.e. trucks), for regulatory purposes<sup>3</sup>. In model year 2024, 34% of all new vehicles were cars and 66% of all new vehicles were trucks under NHTSA regulations. This report further disaggregates vehicles into five vehicle types: sedan/wagon, car SUV, truck SUV, pickup truck, and minivan/van. The distinction between car and truck SUVs is based on the regulatory definitions of cars and trucks, such that SUVs that are four-wheel drive or above a weight threshold (6,000 pounds gross vehicle weight) are generally regulated as trucks and classified as truck SUVs for this report. The remaining two-wheel drive SUVs are subject to car standards and classified as car SUVs.

The clear long-term trend in the distribution of vehicle types has been a shift from sedan/wagons towards truck SUVs and car SUVs. This trend continued in model year 2024, compared to model year 2023, as production shifted towards truck SUVs and away from all other vehicle types. Truck SUVs alone now account for half of all new vehicle production. The distribution of production share since 1975 is shown in Figure ES-2.

**Figure ES-2. Production Share by Vehicle Type**



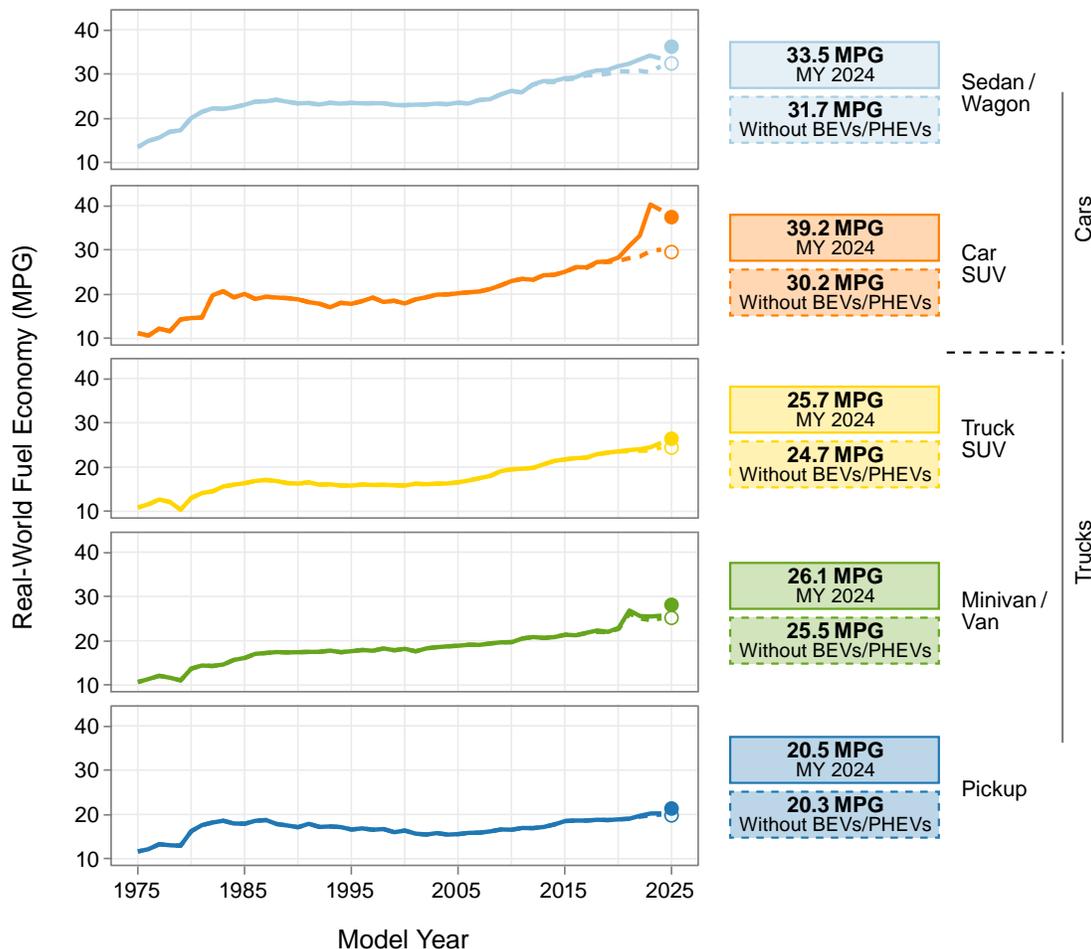
3 Appendix F contains a more detailed description of car and truck definitions.

## Overall fuel economy trends have been impacted by changes in technology and market shifts.

Since 1975, each vehicle type has increased fuel economy. All vehicle types, except pickups, have more than doubled the fuel economy they achieved in 1975. In model year 2024, compared to 2023, fuel economy for truck SUVs increased by 1.0 mpg to a new high of 25.7 mpg. Minivans/vans also increased fuel economy, while fuel economy for pickups remained unchanged from the prior year. Sedan/wagons and car SUVs had lower fuel economy in model year 2024.

Over time, the market has shifted away from more efficient vehicle types towards less efficient vehicle types. This ongoing market shift has offset some of the fleetwide benefits that otherwise would have been achieved from the increased fuel economy within each vehicle type. The fuel economy trends for each vehicle type are shown in Figure ES-3.

**Figure ES-3. Fuel Economy by Vehicle Type**



Within each vehicle type, BEVs and PHEVs increased average fuel economy to varying degrees. In model year 2024, 30% of car SUVs were BEVs, and an additional 3% were PHEVs. This led to a 9.0 mpg increase in fuel economy for car SUVs. Sedan/wagon fuel economy was 1.8 mpg higher due to 7% BEVs and 1% PHEVs, and truck SUV fuel economy was 1.0 mpg higher due to 4% BEVs and 4% PHEVs. Minivan/van fuel economy was 0.6 mpg higher due to 5% PHEVs (and no BEVs), while pickup fuel economy was 0.3 mpg higher, due to 2% BEVs (and no PHEVs).

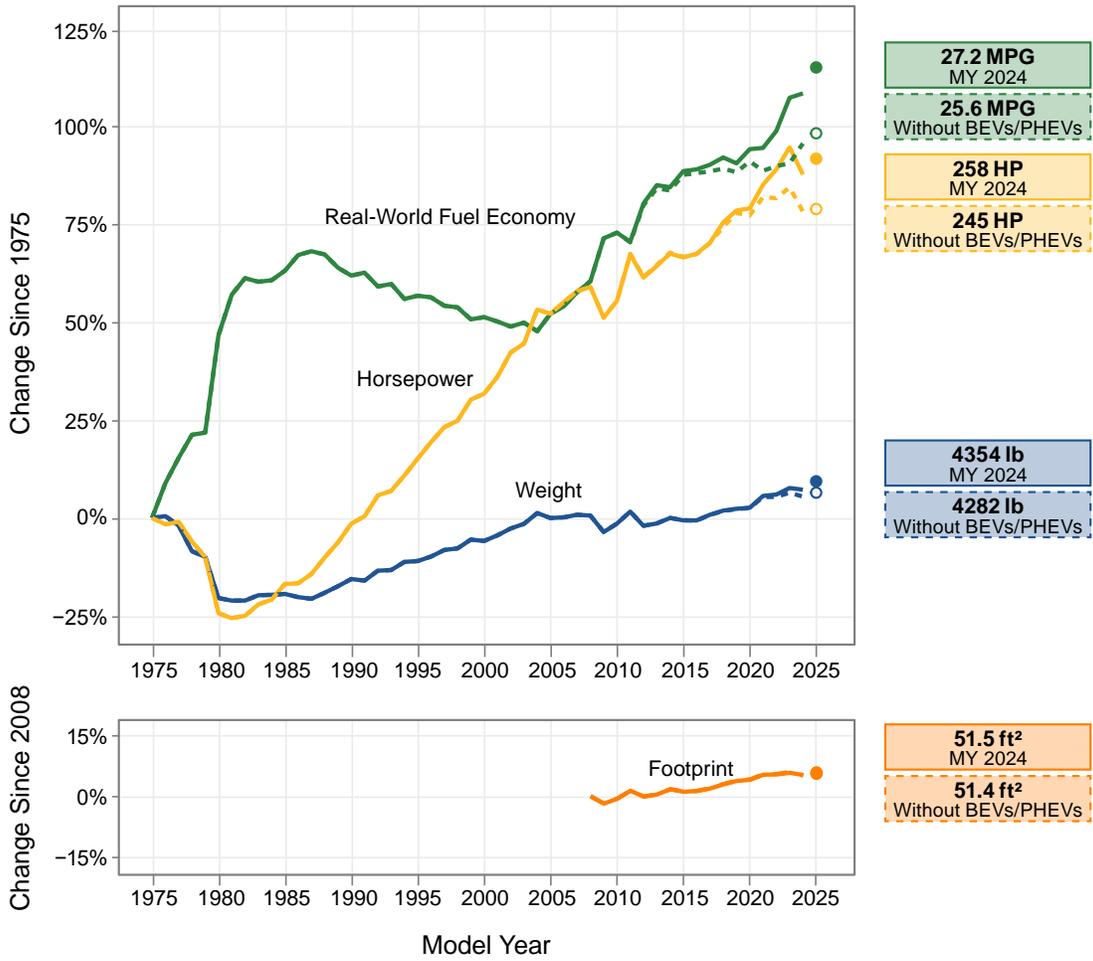
## **Average new vehicle fuel economy, horsepower, weight, and footprint have all generally increased in recent years.**

As the market trends shown above have changed over time, vehicle power, weight, and size have also changed. These four key metrics are dependent on evolving technology and market shifts and are not independent – increasing vehicle weight, power, or size, is likely to result in lower fuel economy. The trends in each of these metrics since 1975 is illustrated in Figure ES-4.

Over the history of this report, there have been three distinct phases in the relationships between fuel economy, power, weight, and size. Between 1975 and the early 1980s, average new vehicle fuel economy increased rapidly, while vehicle weight and horsepower fell. For the next twenty years, average new vehicle weight and horsepower steadily increased, while fuel economy steadily decreased. Since 2004, fuel economy, horsepower, and weight have all generally increased together. Vehicle size, measured as the “footprint” or area enclosed by the four tires, has also been generally increasing since the EPA began tracking it in 2008. Recent trends have been driven by market shifts towards SUVs, which have increased average new vehicle weight and power, and technology changes within each vehicle type, which have generally increased average new vehicle fuel economy and further increased power.

In model year 2024, compared to 2023, fuel economy increased while average new vehicle weight, horsepower, and footprint all fell slightly (less than 5%). This is due in part to lower production of BEVs in model year 2024, as BEVs fell from 10% to 7% of all new vehicles, and because BEVs are on average more efficient, powerful, and heavier than comparable vehicles. Without BEVs and PHEVs, the average model year 2024 new vehicle fuel economy was lower by 1.7 mpg, power was lower by 13 hp, weight was lower by 72 pounds, and footprint was slightly lower by 0.1 square feet.

**Figure ES-4. Percent Change in Real-World Fuel Economy, Horsepower, Weight, and Footprint**



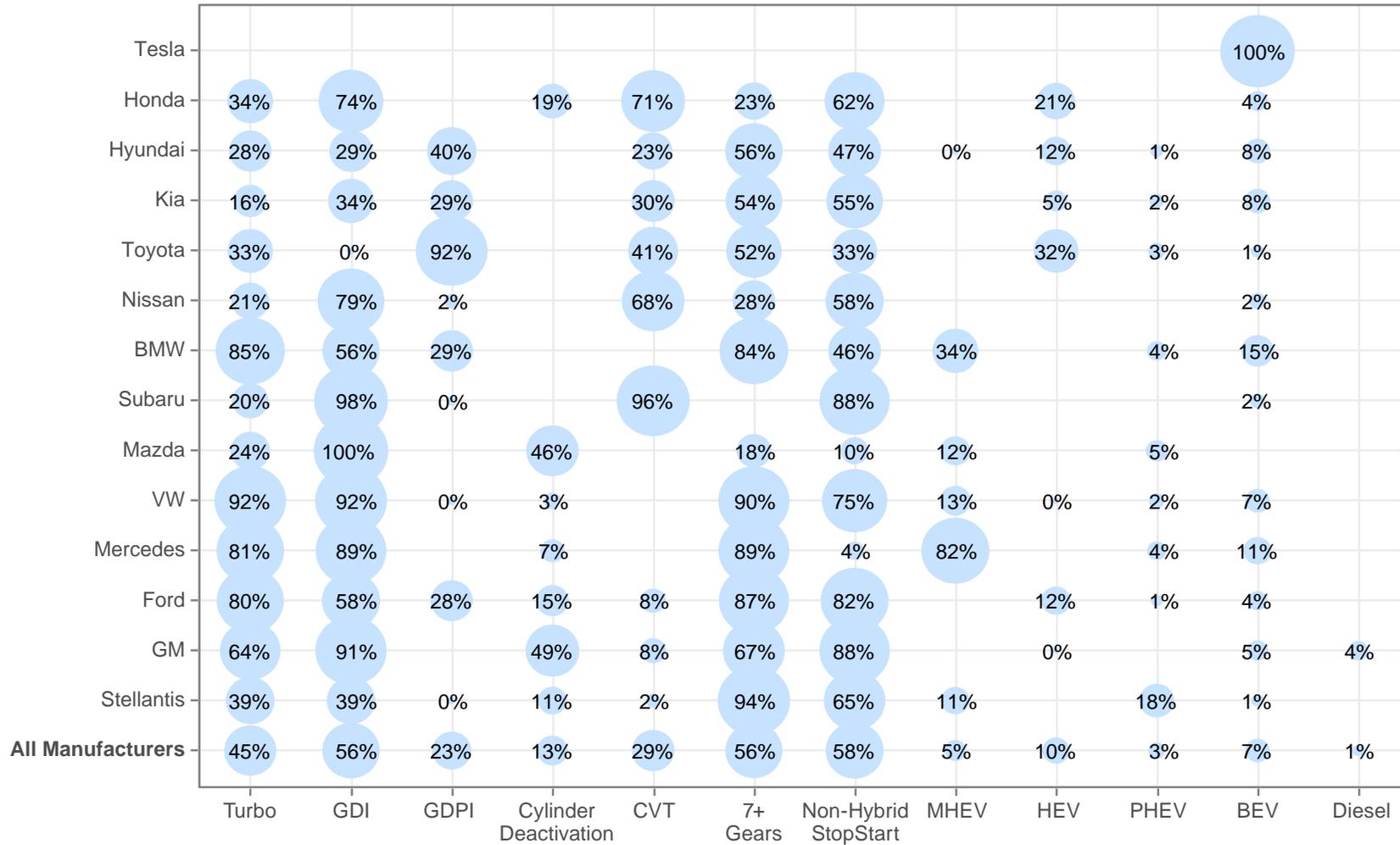
## Manufacturers are applying a wide array of advanced technologies.

Innovation in the automobile industry has led to a wide array of technology available to manufacturers to achieve fuel economy, performance goals, and meet regulatory requirements. Figure ES-5 illustrates manufacturer-specific technology usage for model year 2024, with larger circles representing higher usage rates. Each of the fourteen largest manufacturers has adopted multiple technologies, with many manufacturers achieving very high adoption rates across several technologies. Manufacturers' strategies to develop and adopt new technologies are unique and can vary significantly. Each manufacturer is choosing technologies that best meet the design requirements of their vehicles, and in many cases, that technology is changing quickly.

Engine technologies such as turbocharged engines ("Turbo") and gasoline direct injection (GDI) allow for more efficient engine design and operation. A growing number of engines use gasoline direct injection and port fuel injection (GDPI) systems, which can switch between direct injection and port injection, depending on the engine conditions. Cylinder deactivation allows for use of only a portion of the engine when less power is needed, while stop/start systems ("Non-hybrid Stop/Start") can turn off the engine entirely at idle to save fuel.

Hybrid vehicles use a larger battery to recapture braking energy and provide propulsion power when necessary, allowing for a smaller, more efficiently operated engine. The hybrid category includes "strong" hybrid systems (HEV) that can temporarily power the vehicle without engaging the engine and "mild" hybrid systems (MHEV) that cannot propel the vehicle on their own. PHEVs have both a gasoline engine and a battery that can be charged from an external electricity source and generally operate on electricity until the battery is depleted or cannot meet driving needs. BEVs employ a battery pack that is externally charged and an electric motor that is used exclusively for propulsion, and BEVs do not have an onboard gasoline engine. Transmissions that have more gear ratios, or speeds, allow the engine to more frequently operate near peak efficiency. Two categories of advanced transmissions are shown in Figure ES-3: transmissions with seven or more discrete speeds ("7+Gears") and continuously variable transmissions (CVTs). Vehicles that operate on diesel fuel ("Diesel") instead of gasoline are also shown in figure ES-5.

Figure ES-5. Technology Share for Large Manufacturers, Model Year 2024



## Most manufacturers increased fuel economy over the last five years

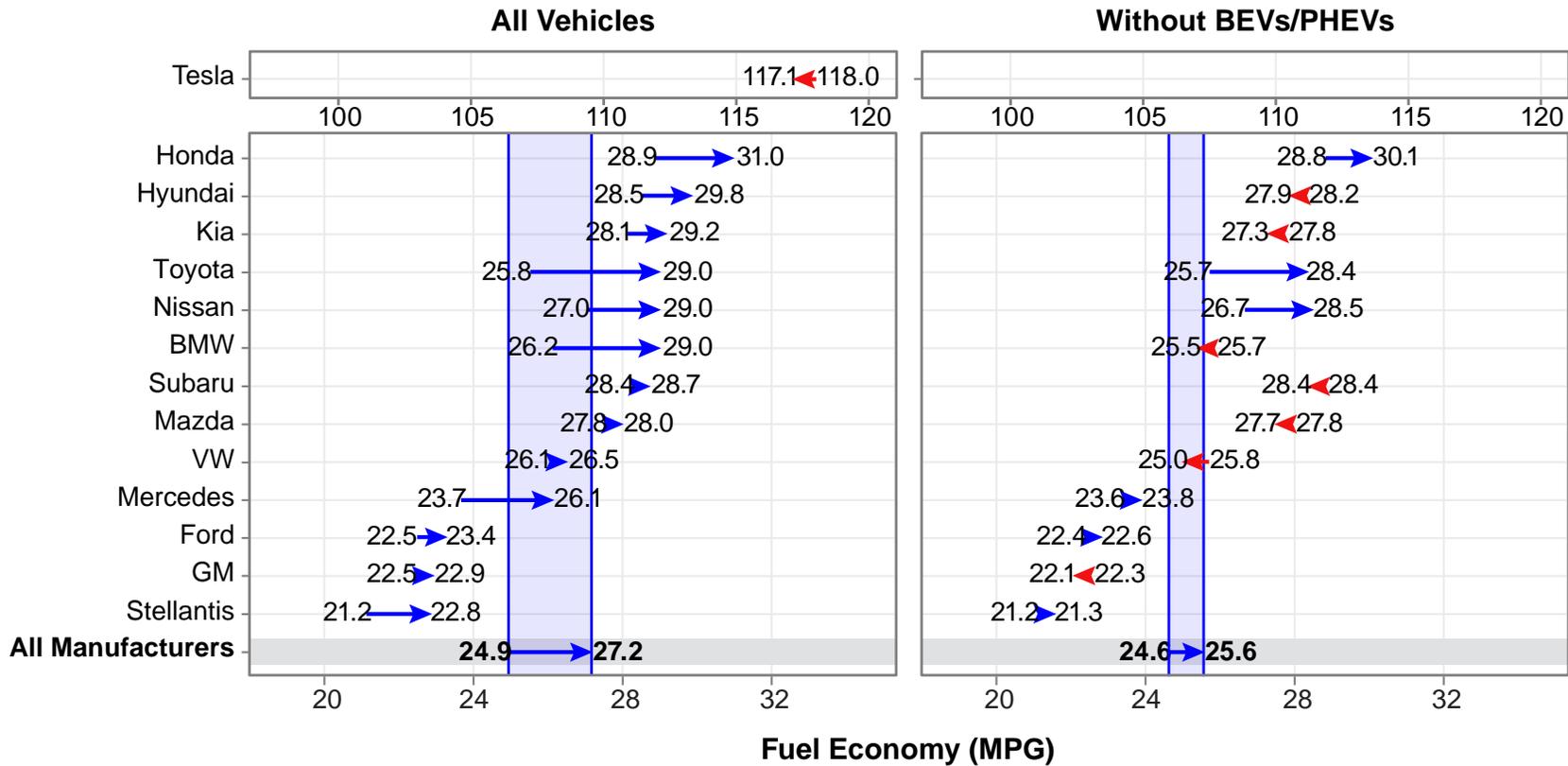
As with the broader fleet, changes to manufacturer-specific new vehicle fuel economy depend on changes in both vehicle design and the mix of vehicle types produced. Vehicles often undergo significant changes, or redesigns, once every few years, allowing for the introduction of new technologies and significant changes to fuel economy. The approximate length of a vehicle redesign cycle is about five years, and it is likely that most vehicles have undergone design changes in this period. It is also likely that any significant changes to the mix of vehicles will be visible over this period. Therefore, evaluating manufacturer performance over a five-year span instead of a single year can result in a more accurate depiction of recent manufacturer trends. Manufacturer fuel economy trends over the last five years are shown in Figure ES-6.

Over the last five years, 13 of the 14 largest manufacturers selling vehicles in the U.S. increased estimated real-world fuel economy. Toyota had the highest increase between model years 2019 and 2024, at 3.3 mpg. Toyota was followed by BMW, which increased fuel economy 2.8 mpg, and Mercedes, which increased 2.4 mpg. Tesla was the only manufacturer that had decreasing fuel economy between model years 2019 and 2024, due to a large growth in production of car SUVs.

For model year 2024 alone, Tesla's all-electric fleet had the highest fuel economy of all large manufacturers at 117.1 mpg. Tesla was followed by Honda at 31.0 mpg, Hyundai at 29.8 mpg, and Kia at 29.2 mpg. Stellantis had the lowest new vehicle fuel economy of the large manufacturers in model year 2024 at 22.8 mpg, followed by GM at 22.9 mpg, and Ford at 23.4 mpg.

Increasing penetration of BEVs and PHEVs impacted fuel economy improvements between model years 2019 and 2024 for nearly all manufacturers, but to different extents. Figure ES-6 also shows the results for each manufacturer excluding BEVs and PHEVs. The largest impact of excluding these vehicles is for BMW, which achieved a 2.8 mpg increase in fuel economy overall, but had a small decrease in fuel economy when excluding BEVs and PHEVs. Seven manufacturers that had overall fuel economy improvements show decreasing fuel economy between model year 2019 and 2024 when BEVs and PHEVs are excluded. Conversely, manufacturers such as Toyota show a large increase in fuel economy between 2019 and 2024 with or without BEVs and PHEVs. For Toyota, this is due in part to increasing production of strong hybrid vehicles.

**Figure ES-6. Changes in Estimated Real-World Fuel Economy for Large Manufacturers, Model Years 2019 - 2024**



## The automotive industry continues to innovate and evolve.

The automotive industry has continually evolved since the introduction of this report over 50 years ago. Manufacturers continue to innovate and introduce new technologies and vehicles that have increased fuel economy, perform better, and meet the needs of consumers. This report, which is a snapshot of the data collected by the EPA in support of several important regulatory programs, provides transparency to the public about an important portion of the American economy.

To download the full report, or to explore the data using the EPA's interactive data tools, visit the report webpage at [www.epa.gov/automotive-trends](http://www.epa.gov/automotive-trends).