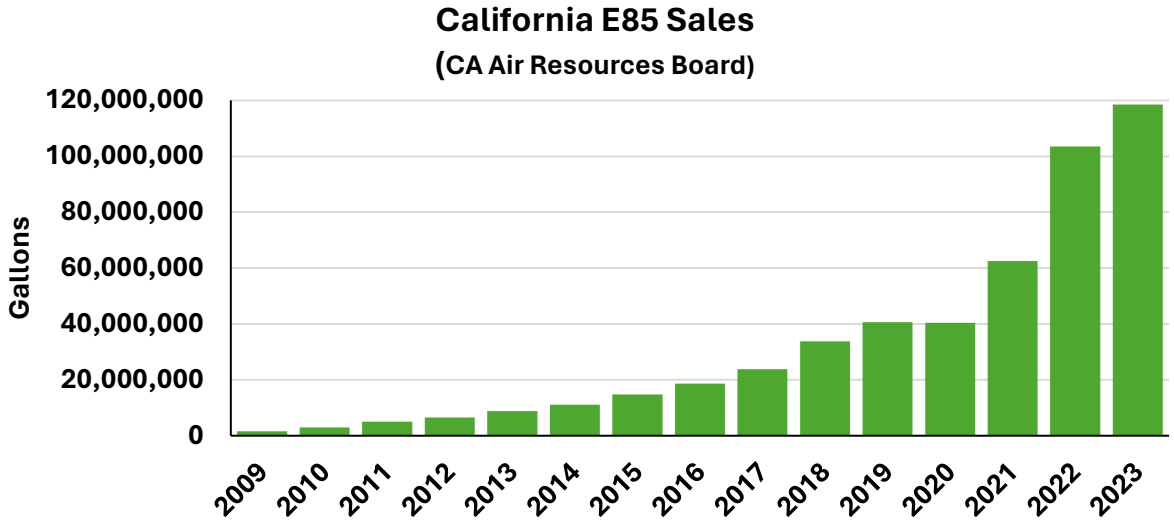
Record E85 Sales Saved California Drivers $99 Million, Cut GHG Emissions by 370,000 MT in 2023

California drivers choosing E85 **saved $99 million on fuel purchases** in 2023 and cut greenhouse gas (GHG) emissions by nearly **370,000 metric tons**. E85 is a fuel blend containing 85 percent renewable ethanol and 15 percent gasoline for use in flex fuel vehicles (FFVs). Sales of E85 set a new record of 118.5 million gallons in 2023, up 14 percent from 2022 and nearly double the volume sold in 2021, according to newly released data from the California Air Resources Board.[1]



FUEL COST SAVINGS

According to E85prices.com, the average retail price of E85 in California in 2023 was $3.17 per gallon, compared to an average price of $5.01 per gallon for E10 gasoline.[2] On average, E**85 was $1.84 per gallon cheaper than E10**, representing an average price discount of 37 percent for E85.

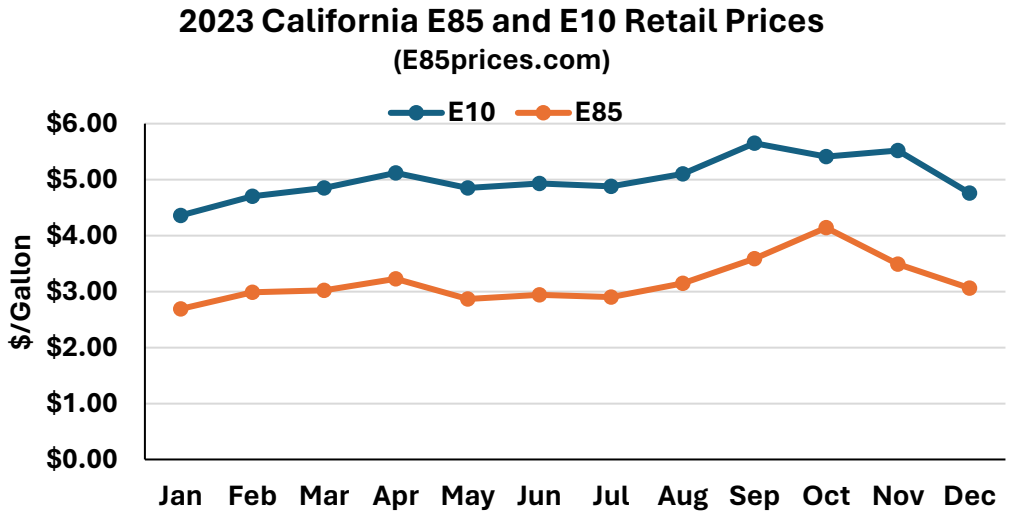
Thus, it is estimated that California drivers spent a total of $375.9 million on 118.5 million gallons of E85 in 2023. An energy-equivalent amount of E10 gasoline (94.8 million gallons) would have cost these same drivers $474.9 million, meaning consumers choosing E85 saved $99 million. With **1.34 million FFVs** on the road in California[3], this means the average FFV owner saved $74 on their annual fuel bill.

San Diego, CA Feb. 16, 2024

[1] CA Air Resources Board. https://ww2.arb.ca.gov/our-work/programs/alternative-fuels/alternative-fuels-e85-ethanol

[2] https://e85prices.com/california.html

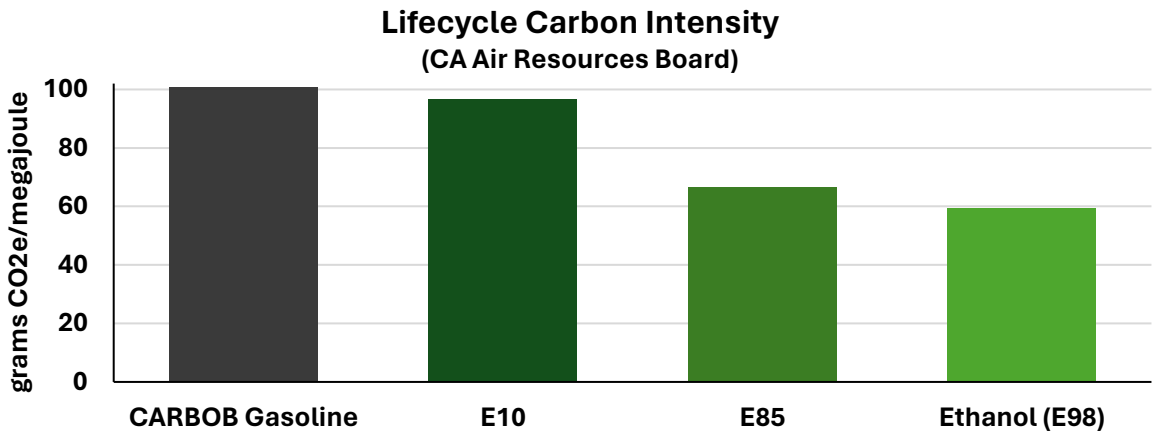
[3] U.S. DOE. https://afdc.energy.gov/vehicle-registration



GHG EMISSIONS SAVINGS

According to CARB data for 2022 and 2023, the average carbon intensity of ethanol consumed in California was 59 grams CO2-equivalent/mega joule (g/MJ).[4] This means ethanol was 41 percent less carbon intensive than CARBOB gasoline blendstock, which had an average carbon intensity of 100.7 g/MJ. Thus, we are able to estimate the carbon intensity of E85 was approximately 66.1 g/MJ and the carbon intensity of E10 was approximately 96.5 g/MJ, meaning E85 offered a 32 percent GHG reduction.

Accordingly, consumption of 118.5 million gallons of E85 resulted in GHG emissions of 689,023 metric tons. Consumption of an energy-equivalent amount of E10 gasoline (94.8 million gallons) would have caused 1,058,541 metric tons of GHG emissions. Thus, using E85 resulted in the **avoidance of 369,518 metric tons of GHG emissions**—equivalent to removing more than 82,000 gasoline-powered passenger vehicles from the road for an entire year.[5]



[4] CA Air Resources Board. https://ww2.arb.ca.gov/resources/documents/low-carbon-fuel-standard-reporting-tool-quarterly-summaries

[5] U.S. EPA. https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results