October 2020

PETROLEUM WATCH

CALIFORNIA ENERGY COMMISSION

INSIDE

REFINERY NEWS

- **Chevron El Segundo**: On August 31, emergency flaring took place due to a mechanical/ electrical malfunction according to the South Coast Air Quality Management District (SCAQMD).
- **PBF Torrance**: On September 3, emergency flaring took place due to a mechanical/electrical malfunction according to the South Coast Air Quality Management District (SCAQMD).

CALIFORNIA GASOLINE RETAIL PRICES BY BRAND

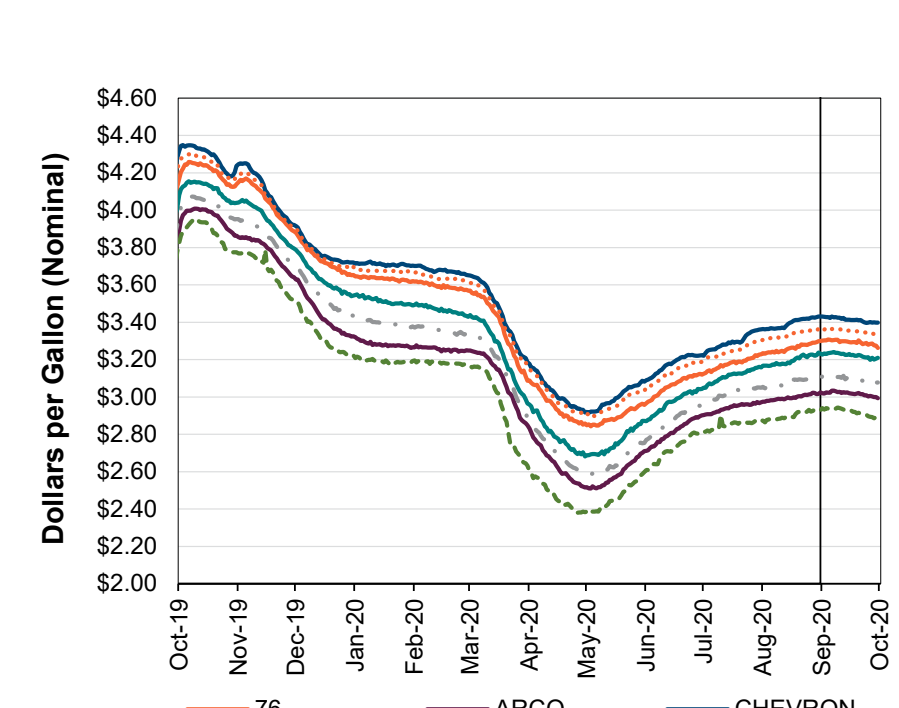
September 2020 vs. 2019

(Percentage Change)

76	13% lower
ARCO	13% lower
Chevron	13% lower
Hypermart	14% lower
Shell	14% lower
Unbranded	14% lower
Valero	13% lower

September 2020 Averages

76	$3.29
ARCO	$3.02
Chevron	$3.41
Hypermart	$2.92
Shell	$3.35
Unbranded	$3.10
Valero	$3.22



Source: California Energy Commission (CEC) analysis of Oil Price Information Service (OPIS) data

CALIFORNIA DIESEL RETAIL PRICES BY REGION

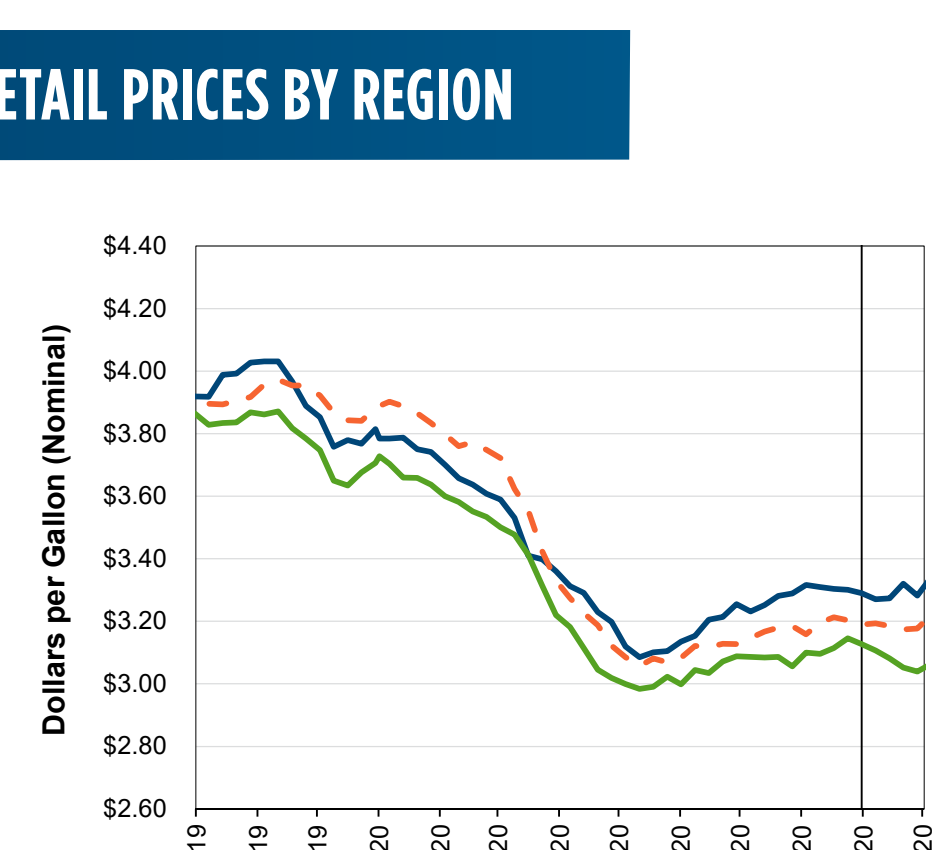
September 2020 vs. 2019

(Percentage Change)

Northern CA	15% lower
Central CA	19% lower
Southern CA	18% lower

September 2020 Averages

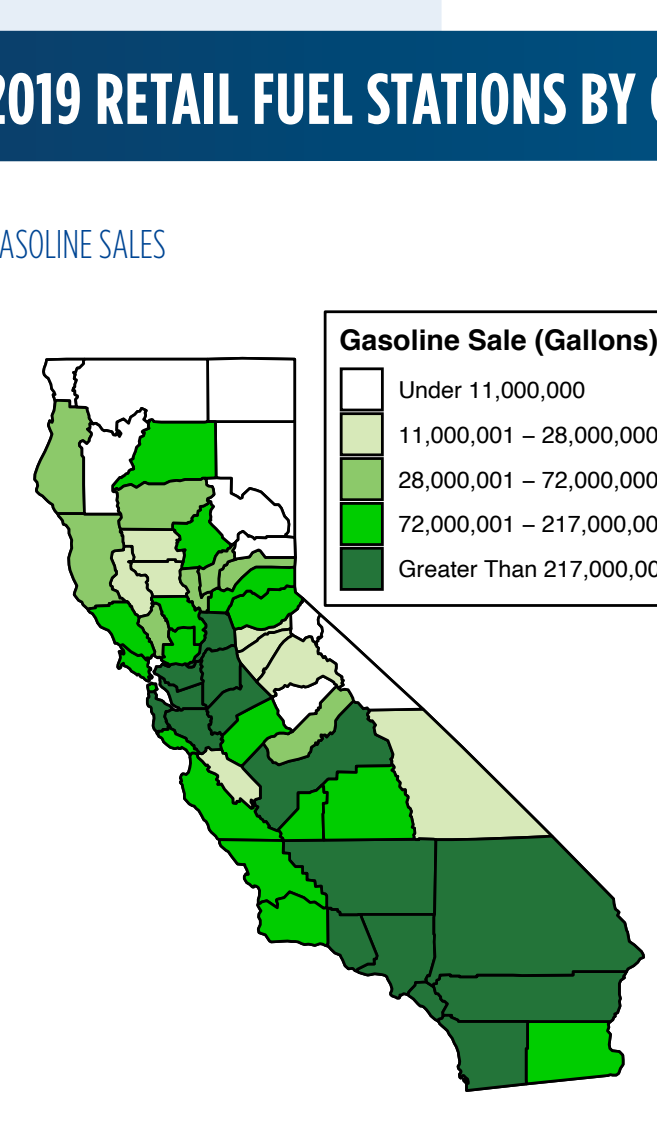
Northern CA	$3.29
Central CA	$3.08
Southern CA	$3.18



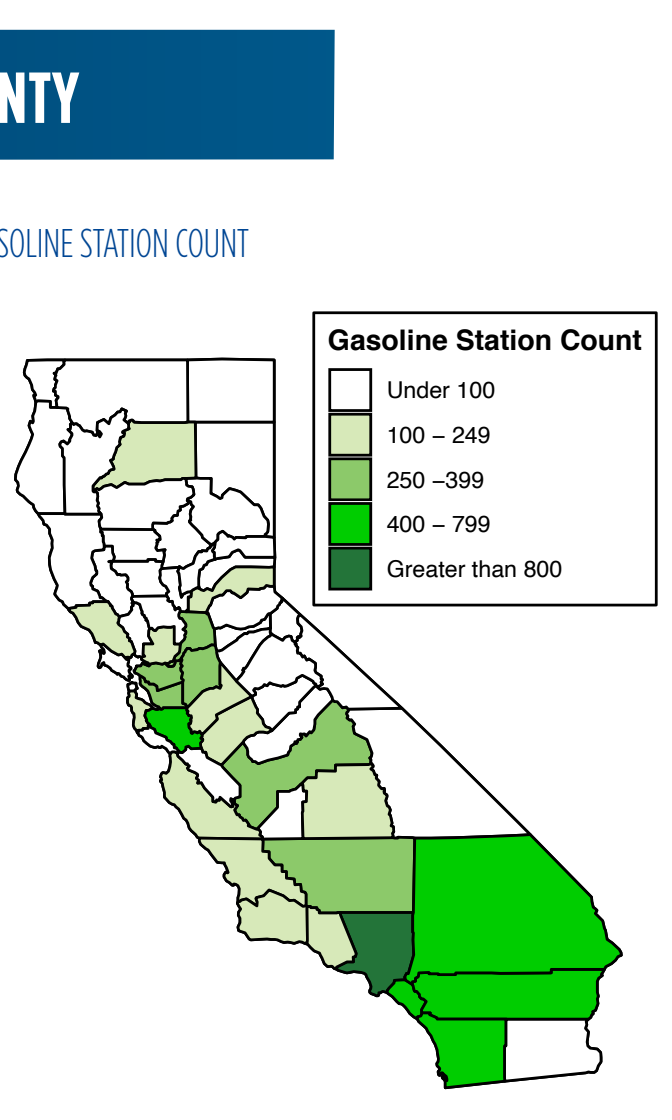
Source: CEC analysis of OPIS data

2019 RETAIL FUEL STATIONS BY COUNTY

GASOLINE SALES



GASOLINE STATION COUNT

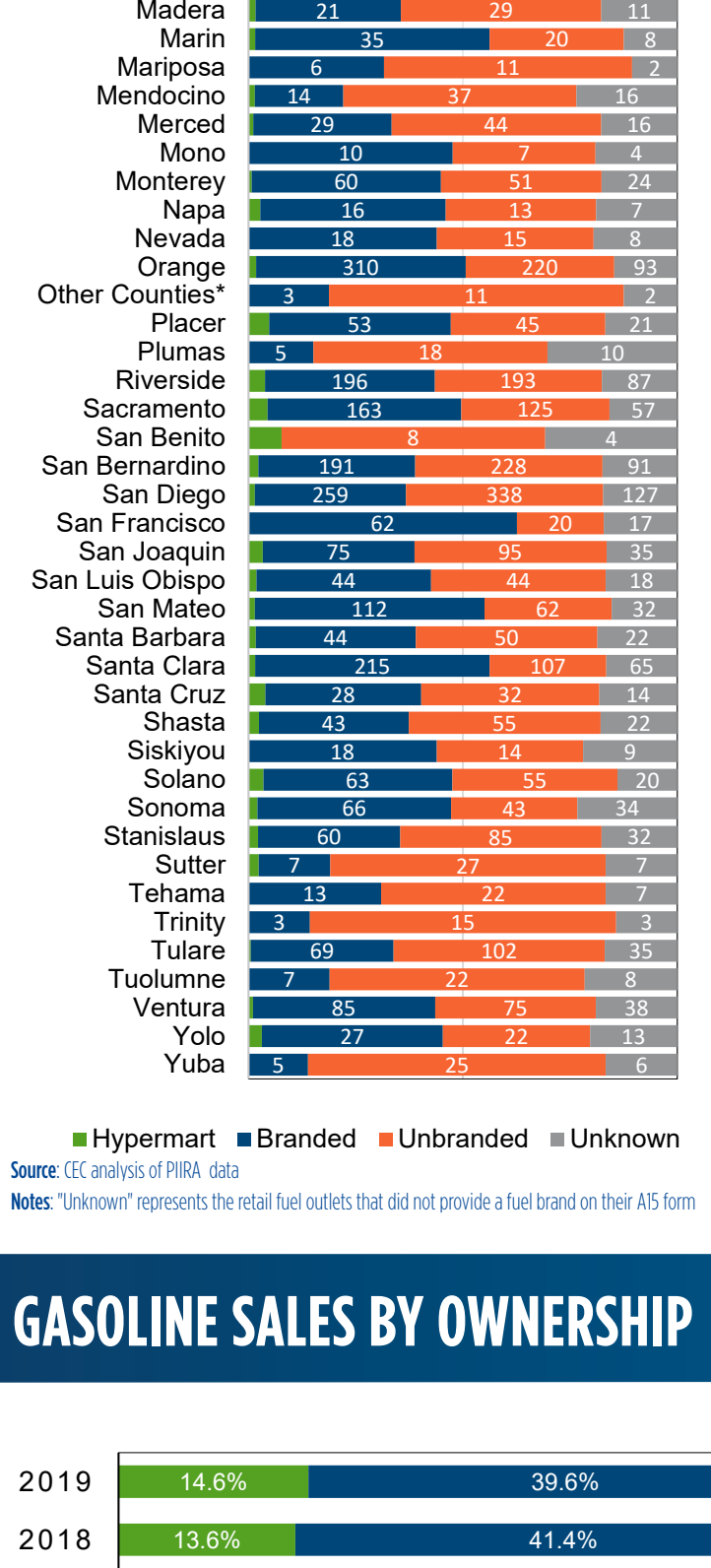


Source: CEC analysis of Petroleum Industry Information Reporting Act (PIIRA) data

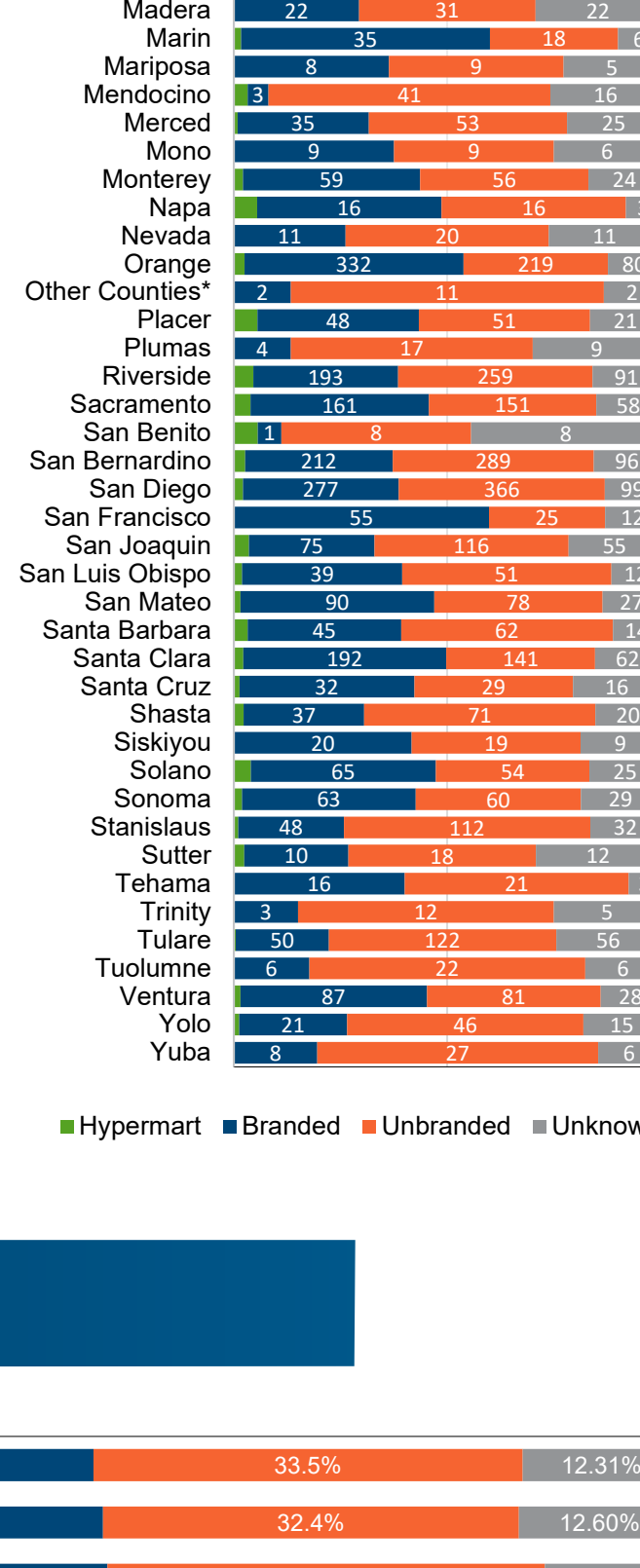
Notes: Only includes stations that filed an A15 form for the 2019 Retail Fuel Outlet Annual Report

RETAIL FUEL STATION COUNT BY BRAND

2009 STATION DISTRIBUTION



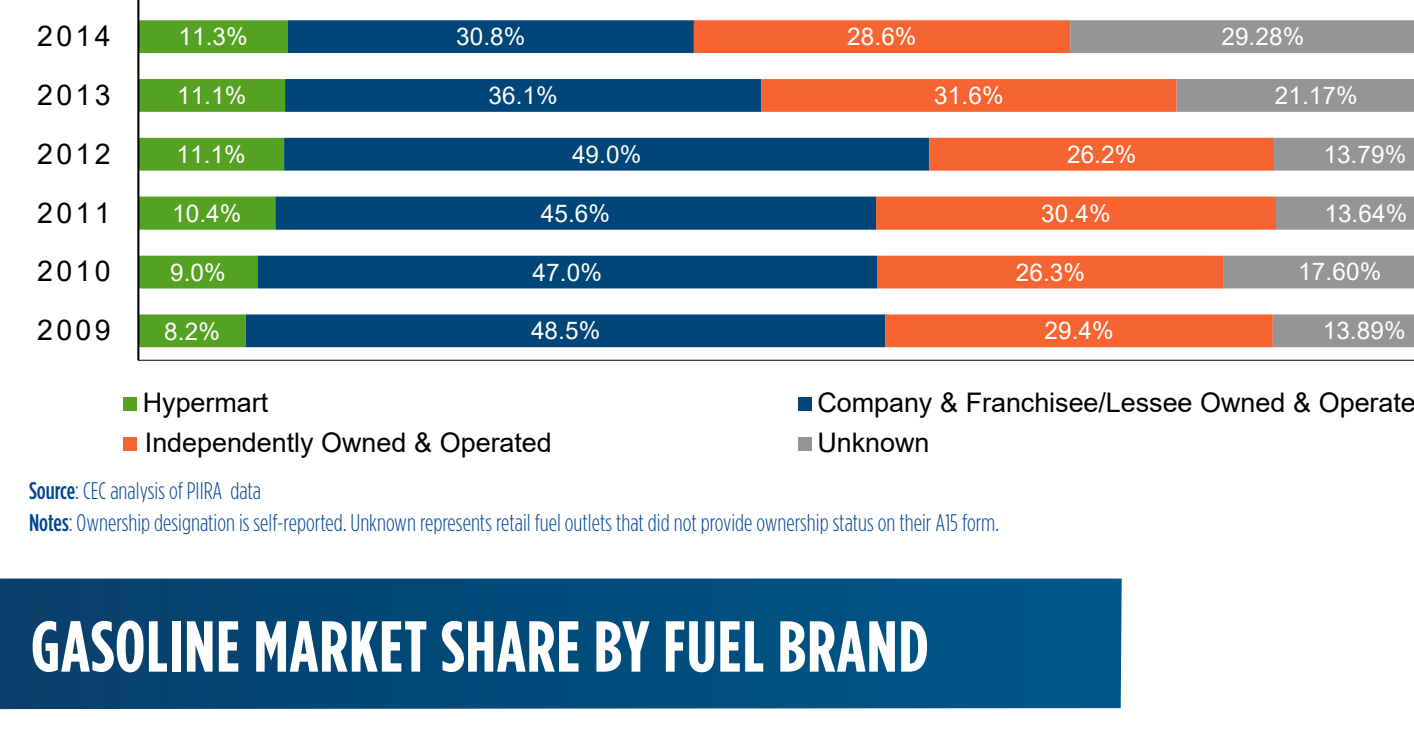
2019 STATION DISTRIBUTION



Source: CEC analysis of PIIRA data

Notes: "Unknown" represents the retail fuel outlets that did not provide a fuel brand on their A15 form

GASOLINE SALES BY OWNERSHIP



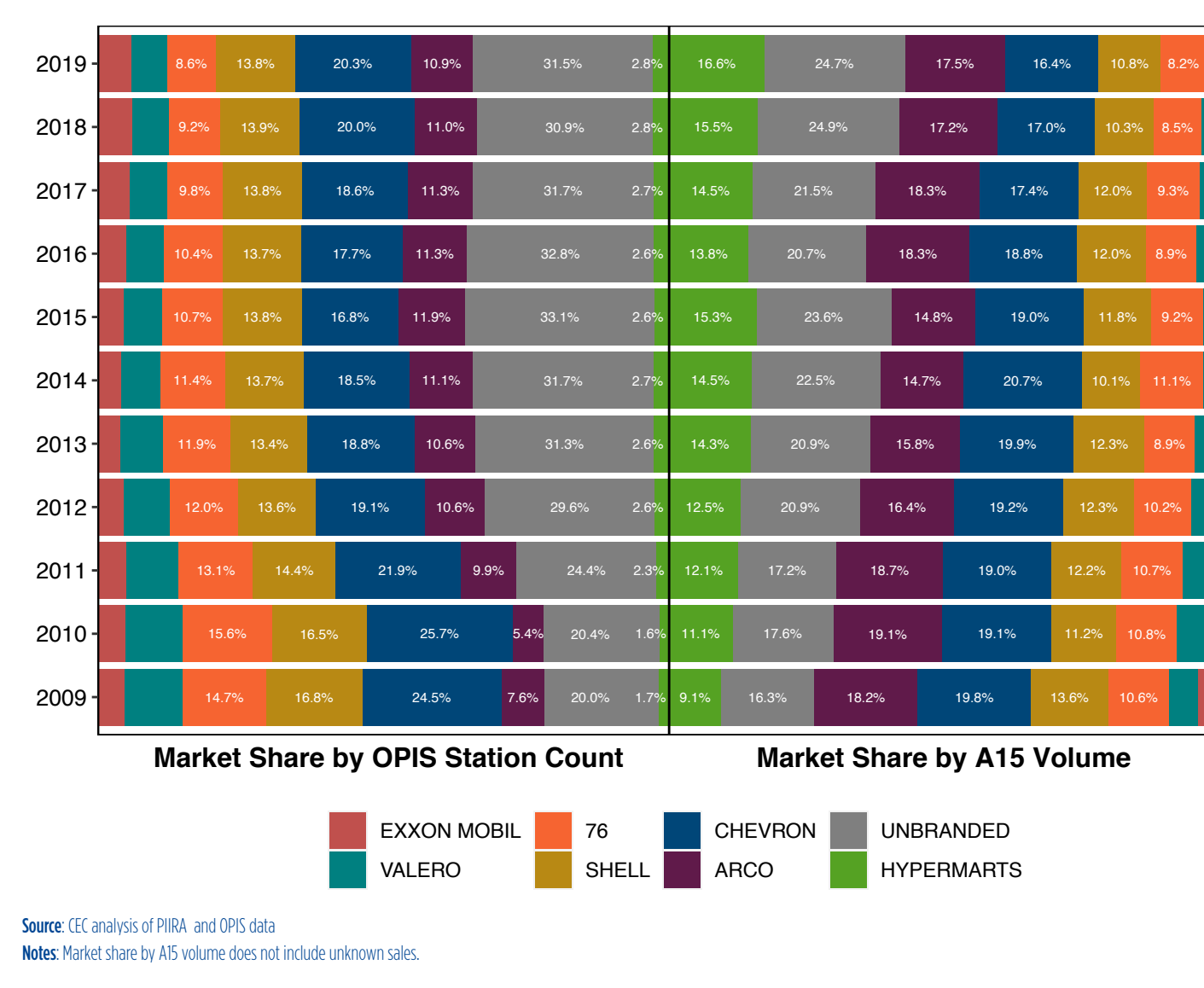
Source: CEC analysis of PIIRA data

Notes: Ownership designation is self-reported. Unknown represents retail fuel outlets that did not provide ownership status on their A15 form.

GASOLINE MARKET SHARE BY FUEL BRAND

MARKET SHARE BY OPIS STATION COUNT

MARKET SHARE BY A15 VOLUME



Source: CEC analysis of PIIRA and OPIS data

Notes: Market share by A15 volume does not include unknown sales.

FEATURED TOPIC

ANNUAL RETAIL FUEL OUTLET REPORT RESULTS: GASOLINE

The California Energy Commission (CEC) constantly seeks more efficient methods for gathering data on transportation fuels sold throughout California. Every year, retail transportation fueling stations in California file a Retail Fuel Outlet Annual Report, also known as CEC A15. This report gathers information on retail sales of gasoline, diesel, and other transportation fuels sold through fuel stations of all types. CEC staff combine these reports with data from the Oil Price Information Service (OPIS), which tracks daily gasoline prices at fuel stations.

This Petroleum Watch looks at the results of the 2019 CEC A15 reports, specifically focusing on gasoline. The data is compared to data from the past 10 years, dating back to 2009, as well as compared to OPIS' price data. CEC staff analyzes these reports using the following designations:

Types of station ownership:

- Company and franchisee/ lessee owned gas stations are managed to meet the standards of the major oil companies. Examples include stations selling branded gasoline from brands like Chevron, Shell, and ARCO.
- Independently owned gasoline stations have no association with the major oil companies. These stations usually sell unbranded fuels.
- Hypermarts are large retail suppliers of general merchandise or groceries that also sell gasoline. Examples of hypermarts are Costco, Safeway, and Sam's Club.

Types of gasoline branding:

- Branded gasoline is made by a major oil company/refiner that has its own proprietary additive package such as Techron by Chevron and V-power by Shell. Examples of branded fuels are 76, Chevron, Exxon Mobil, Shell, and Valero.
- Unbranded gasoline is manufactured to meet state or federal standards. These gasolines use a generic additive that are missing the proprietary additives found in branded gasolines. Examples of stations that sell unbranded fuels are independent stations, regional chains, and hypermarts.

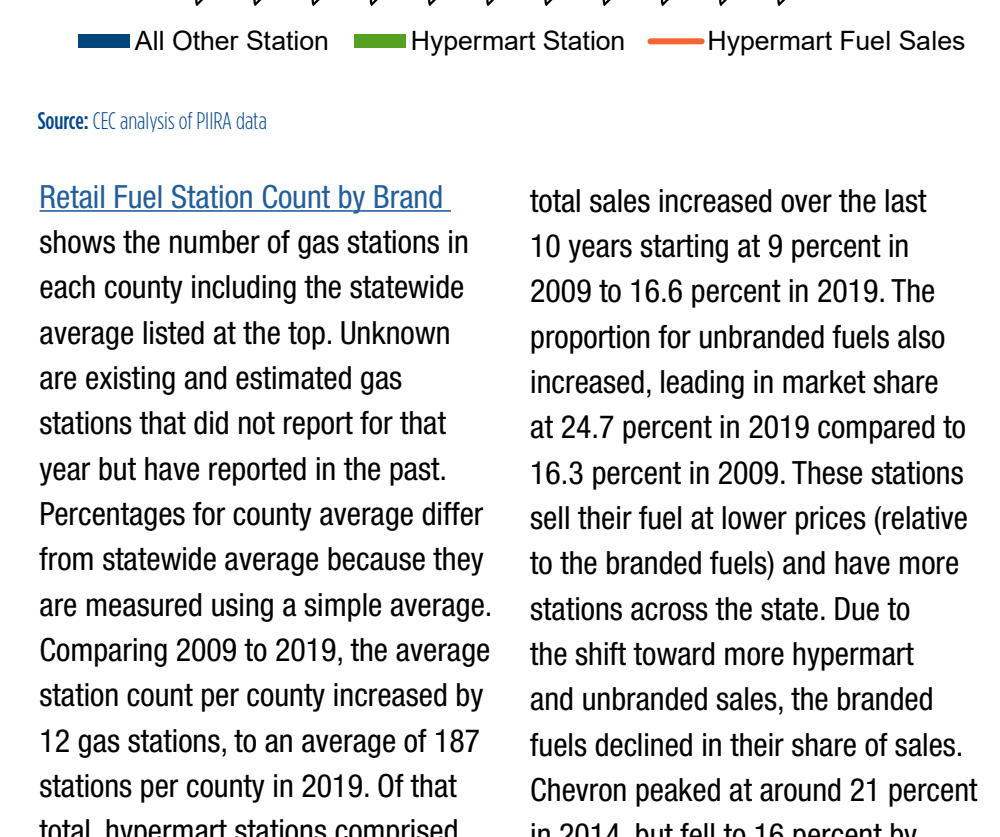
A15 RESULTS

Results of the most recent CEC A15 data collection are in 2019 Retail Fuel Stations by County. Gasoline sales in California are higher in the dark green areas on the map and tend to take place in the more densely populated counties. Gasoline station density, also indicated by dark green areas on the map, is more concentrated in those same counties with high gasoline sales. In 2019, there were 10,449 retail fuel stations operating in California. This is 659 more stations than in 2009, averaging a growth rate of 66 additional stations per year. The total count peaked in 2016 at 10,481 stations. Total gasoline sales in 2019 increased 3.6 percent since 2009.

DISTRIBUTION BY STATION OWNERSHIP

Growth in Hypermarts shows a steady increase in hypermart sales over the past 10 years. Gasoline sales at hypermart stations increased at an average rate of 0.6 percent year over year with the largest growth (one percent) between 2018 and 2019. The current number of hypermart stations remains low compared to total retail stations, making up 2.3 percent of retail fuel locations in California. While the number of hypermart stations remains low, gasoline sales at hypermarts in 2019 made up 14.6 percent of total gasoline sales.

GROWTH IN HYPERMARTS



Source: CEC analysis of PIIRA data

Retail Fuel Station Count by Brand shows the number of gas stations in each county including the statewide average listed at the top. Unknown are existing and estimated gas stations that did not report for that year but have reported in the past. Percentages for county average differ from statewide average because they are measured using a simple average. Comparing 2009 to 2019, the average station count per county increased by 12 gas stations, to an average of 187 stations per county in 2019. Of that total, hypermart stations comprised 3.3 percent per county, a 0.6 percent increase from 2009. Branded gas stations comprised 38 percent per county, a 3.7 percent decrease from 2009. Unbranded gas stations comprised 42.4 percent per county, a 3.6 percent increase from 2009. Unknown gas stations comprised 16.4 percent per county, a 0.4 percent decrease from 2009. While unbranded gas stations had a larger increase in station counts, hypermarts show the largest increase in sales.

Total Gasoline Sales by Ownership shows percentage share of three ownership designations. Ownership designations are self-reported on the CEC A15. The unknown share represents estimated gasoline sales using bootstrapping. The bootstrapping method is a statistical resampling method that uses random sampling with replacement. In this case, data collected from the A15 report is used to create a random sample and then compared to CEC adjusted gasoline sales data from the California Department of Tax and Fee Administration. In 2009, company-owned stations comprised 48.5 percent of gasoline sales statewide. In 2019, this share decreased to 39.6 percent. Independent gas stations increased in sales share 4 percent to 33.5 percent and hypermarts increased in sales share from 6 percent to 14.6 percent in the same time period. The 2019 data show that Californians are buying their gasoline from hypermarts more often.

Total gasoline sales will likely decrease for reporting year 2020 because of weakened demand caused by the COVID-19 pandemic. The pandemic has resulted in idled production at refineries not only in California but across the United States since April 2020. However, the decline in sales may not affect all station types equally, and outlets such as hypermarts could see an increase in their percent share of fuel sales.

DISTRIBUTION BY GASOLINE BRANDING

Stations report their fuel brand along with their gallon sales, allowing CEC staff to calculate market share percentages seen in Gasoline Market Share by Fuel Brand. The right side of the bar chart shows market share percentage based on the reported sales from retail stations that filed an A15 report for each year. Unknown stations are not included in this analysis, which makes these percentages differ from the sales by station ownership method. Hypermarts' proportion of total sales increased over the last 10 years starting at 9 percent in 2009 to 16.6 percent in 2019. The proportion for unbranded fuels also increased, leading in market share at 24.7 percent in 2019 compared to 16.3 percent in 2009. These stations sell their fuel at lower prices (relative to the branded fuels) and have more stations across the state. Due to the shift toward more hypermart and unbranded sales, the branded fuels declined in their share of sales. Chevron peaked at around 21 percent in 2014, but fell to 16 percent by 2019. Shell averaged nearly 12 percent year over year and keeps a 10 percent sales-based market share each year. Valero and Exxon Mobil are the smallest players in the current market, with less than 500 million gallons (less than 4 percent share) sold in 2019. All other fuel brands reported more than 1 billion gallons sold each year since 2009. While data trends in 2019 show shifts in market share, this has not always been the case in the past. It is important to note that 2019 could be a deviation from the overall trend.

The left bar chart in Gasoline Market Share by Fuel Brand uses the OPIS daily station counts to estimate market share percentage. OPIS surveys stations in the state use credit card swipes to track prices each day. By tracking each distinct price, address, and fuel brand, CEC staff creates another estimate of market share by tallying up the counts for each year and fuel brand. This method cannot speak directly to the gallons sold metric like the A15 survey. What it shows is the difference between retail site presence and volume sales. Through the OPIS-based method, hypermarts lose over 10 percent of their market share compared to the gallons sold metric due to fewer number of stations than other fuel brands. ARCO stations also show a lower market share when looking at the OPIS counts versus the reported gallons sold. Unbranded stations are the most represented in the state which explains why their share averaged over 30 percent for the last six years using the OPIS station count method.

Convenience and price are the most important factors that drivers use to choose where to fill up. The January Petroleum Watch- PDF explored how being nearer to a highway usually implied relatively higher prices at retail stations (convenience over cost). Hypermarts have the lowest prices in California but are not close to the highways and have longer waiting times. The fact that they make up a larger portion of the gallon sales suggests that many drivers will sacrifice convenience if the cost is low enough. Branded fuel stations like Chevron, Shell, or 76 are more convenient. They are close to highways, located everywhere, and there are more of them. More information is at the California Retail Fuel Outlet Annual Reporting Results.

FOR MORE INFORMATION

California's Petroleum Market

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