

PETROLEUM WATCH

CALIFORNIA ENERGY COMMISSION

INSIDE

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REFINERY NEWS

- Chevron Richmond:** On February 9, a pipeline leak near the refinery released an estimated 600 gallons of petroleum and water mixture into the San Francisco Bay ([Cal OES, Reuters](#)).
- Phillips 66 Wilmington:** On February 11, unplanned emergency flaring took place at the refinery due to an equipment breakdown ([Cal OES, South Coast AQMD](#)).

CALIFORNIA GASOLINE RETAIL PRICES BY BRAND

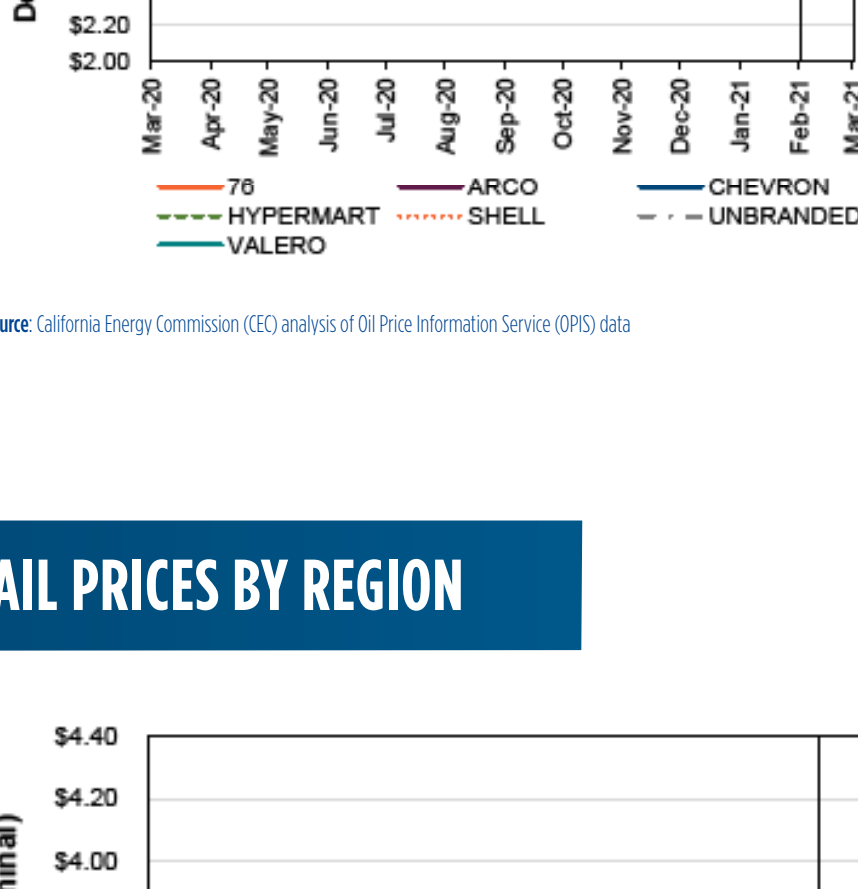
February 2021 vs. 2020

(Percentage Change)

76	No Change
ARCO	2% higher
Chevron	1% higher
Hypermart	No Change
Shell	No Change
Unbranded	No Change
Valero	No Change

February 2021 Averages

76	\$3.59
ARCO	\$3.31
Chevron	\$3.72
Hypermart	\$3.17
Shell	\$3.65
Unbranded	\$3.37
Valero	\$3.46



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

CALIFORNIA DIESEL RETAIL PRICES BY REGION

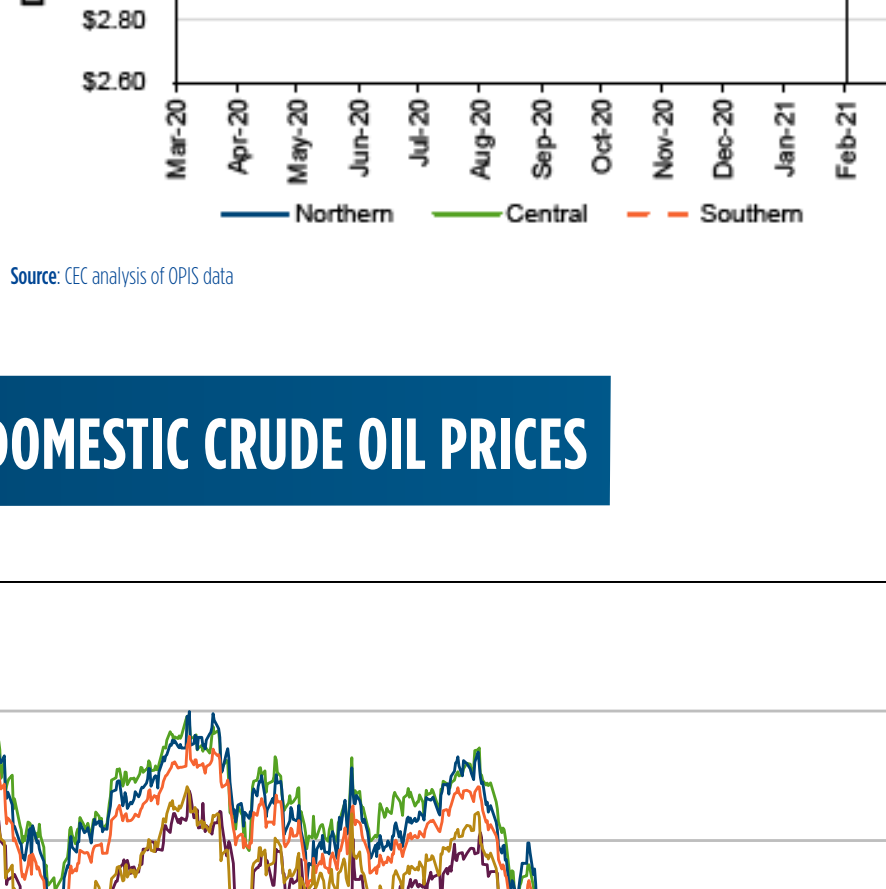
February 2021 vs. 2020

(Percentage Change)

Northern CA	1% lower
Central CA	2% higher
Southern CA	4% lower

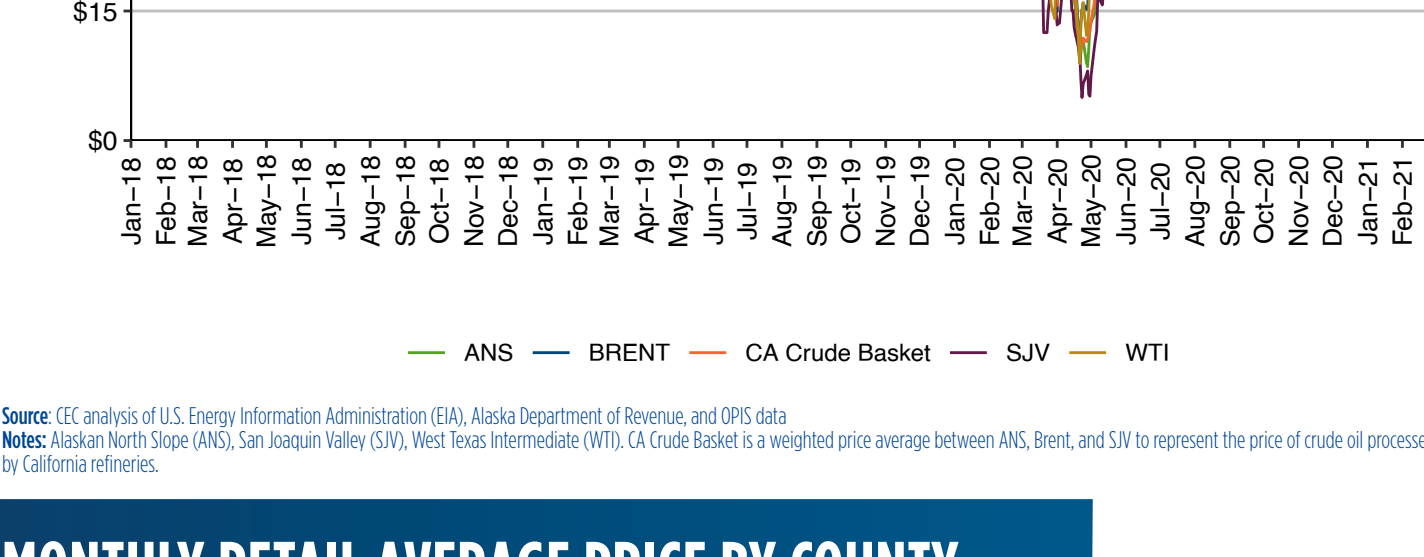
February 2021 Averages

Northern CA	\$3.63
Central CA	\$3.50
Southern CA	\$3.63



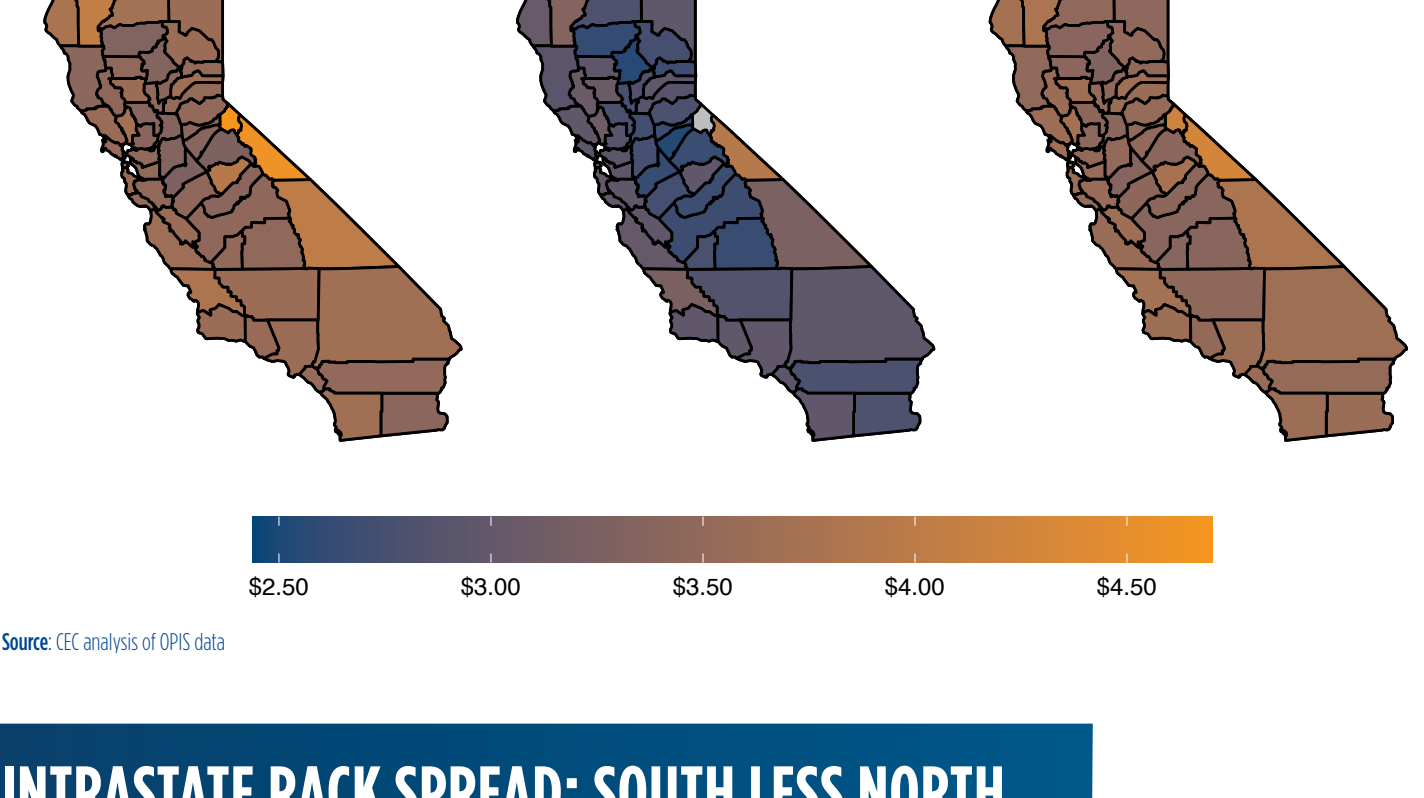
Source: CEC analysis of OPIS data

INTERNATIONAL AND DOMESTIC CRUDE OIL PRICES



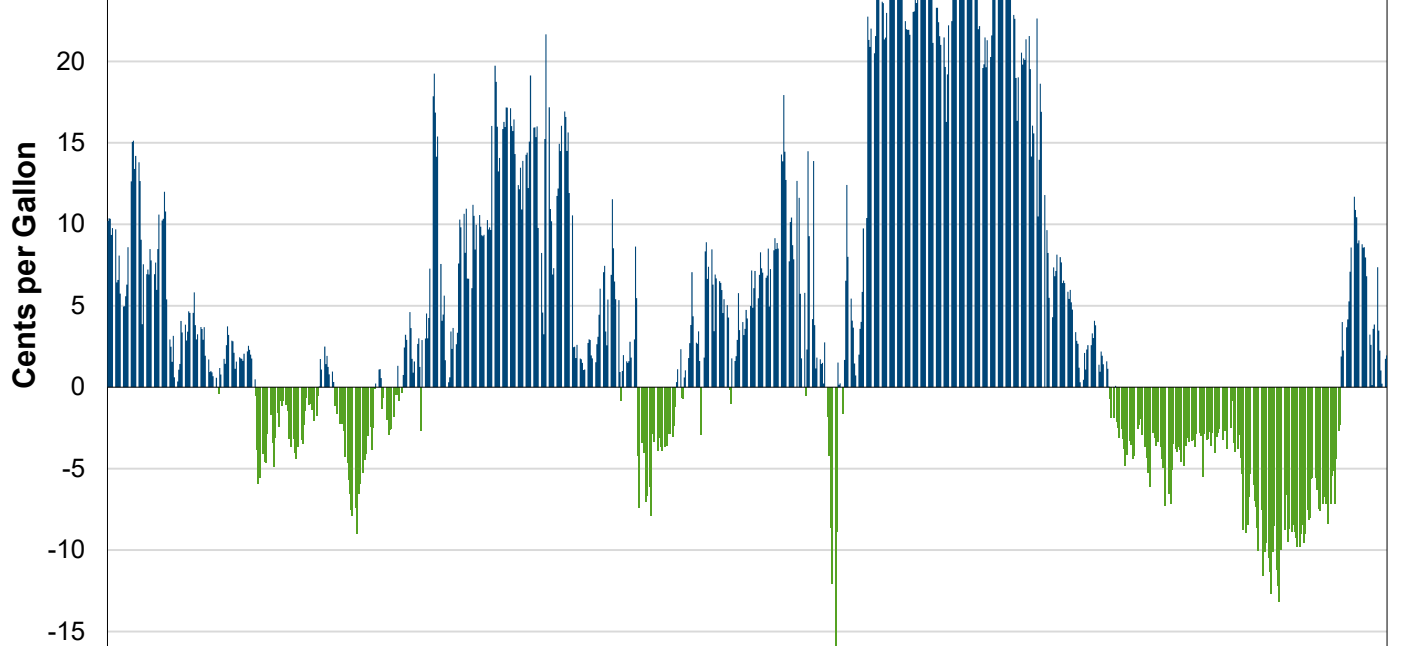
Source: CEC analysis of U.S. Energy Information Administration (EIA), Alaska Department of Revenue, and OPIS data. Notes: Alaskan North Slope (ANS), San Joaquin Valley (SJV), West Texas Intermediate (WTI). CA Crude Basket is a weighted price average between ANS, Brent, and SJV to represent the price of crude oil processed by California refineries.

MONTHLY RETAIL AVERAGE PRICE BY COUNTY



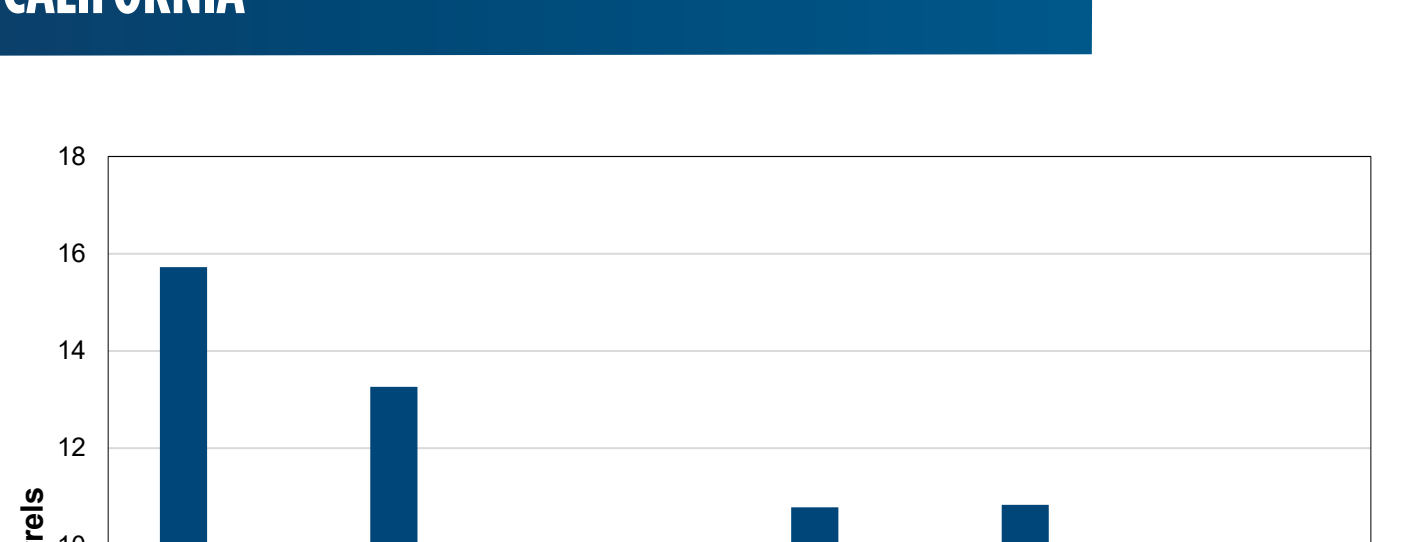
Source: CEC analysis of OPIS data

INTRASTATE RACK SPREAD: SOUTH LESS NORTH



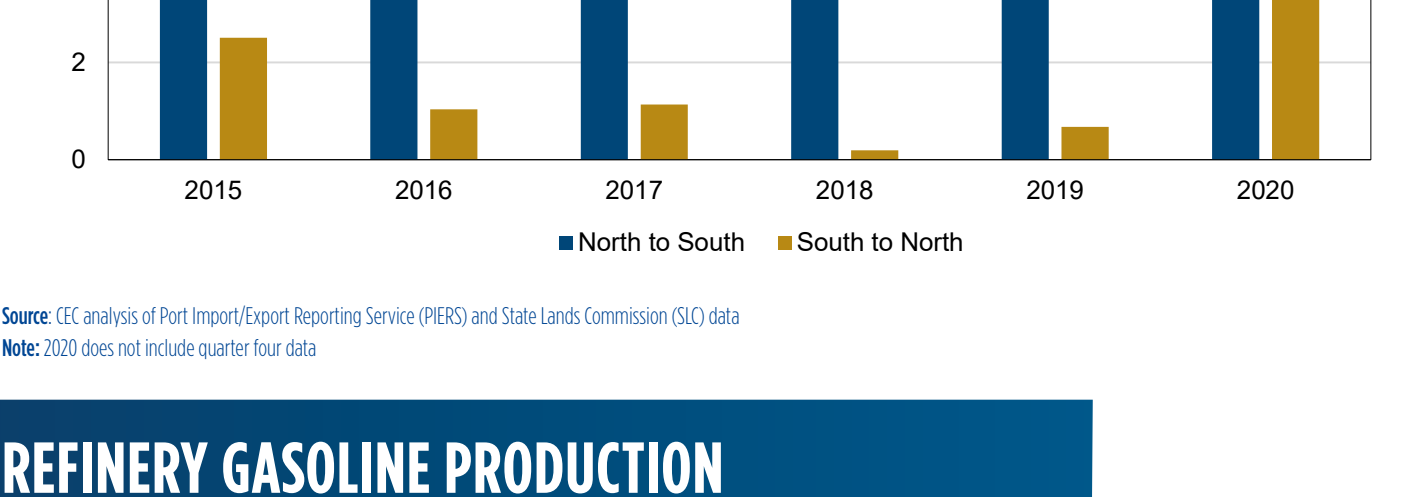
Source: CEC analysis of OPIS data

GASOLINE PRODUCT MOVEMENTS WITHIN CALIFORNIA



Source: CEC analysis of Port Import/Export Reporting Service (PIERS) and State Lands Commission (SLC) data. Note: 2020 does not include quarter four data

REFINERY GASOLINE PRODUCTION



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

FEATURED TOPIC

GASOLINE RETAIL PRICES RETURN TO PRE-PANDEMIC LEVELS

In 2020, the average price for a gallon of gasoline in California was \$3.05. In April 2020, gasoline prices averaged less than \$3.00 per gallon. By February 2021, gasoline prices returned to pre-pandemic levels.

CRUDE PRICES INCREASING

Factors such as taxes, distribution, refining, and marketing costs all contribute to the price of gasoline, however the price of crude oil is the largest component. When changes in crude oil prices occur, it directly affects prices across the supply chain. The Energy Information Administration (EIA) estimates that about half (52 percent in January 2021) the price of regular gasoline comes from the cost of the crude oil alone.

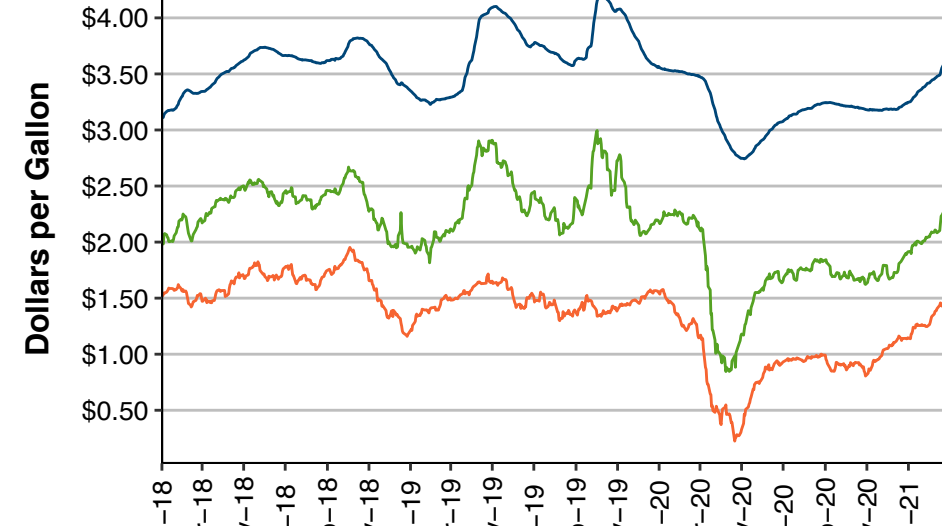
Crude prices are now higher than they were a year ago in February 2020, just before widespread stay-at-home orders. [International and Domestic Crude Prices](#) shows the rise in crude oil prices since November 2020 across both domestic and international markets. California uses a mixed crude slate composed of Alaskan North Slope (ANS), internal California crude oil represented by San Joaquin Valley (SJV), and foreign crude oil represented by Brent International (Brent). The CA Crude Basket price (uses) a weighted price average of all three based on the percentage of [annual oil supply sources to California](#). Since the beginning of the upward trend in November 2020, the CA Crude Basket price has increased by 47 percent from \$39.30 to \$57.90 per barrel in February 2020. Even West Texas Intermediate (WTI), which dropped below \$0.00 in April, is up 15 percent from the February 2020 average.

CALIFORNIA RETAIL PRICES

In February 2020, before the stay-at-home orders in March, the California gasoline price average was \$3.47 per gallon. During the peak of stay-at-home orders in April 2020, the state average was \$2.82. The price at the pump in February 2021 is nearly the same as a year ago, with a state average of \$3.49 per gallon. The heatmap of county averages in [Monthly Retail Average Price by County](#) shows the change in monthly averages from these three periods. Major metropolitan counties, such as Los Angeles or Santa Clara, averaged a higher monthly price than the year before.

The county averages show that changes in retail price generally affect the whole state rather than certain regions, with a few exceptions. Modoc is currently the only county with prices under \$3.00 per gallon. Alpine, Inyo, and Mono counties usually have the highest prices, but the smallest sales volume compared to the rest of the state (less than 1 percent of total 2019 sales reported). It is more expensive to distribute

CALIFORNIA GASOLINE MARKET PRICES



Source: CEC analysis of EIA and OPIS data

fuel to remote mountain locations, so prices tend to lag or experience little to no change in these regions.

WHOLESALE GASOLINE

Rack prices, what some retail stations pay for their supply, represent the wholesale cost of gasoline. This is the price of gasoline before taxes, fees, marketing costs, and distribution costs are accounted for. [California Gasoline Market Prices](#) shows the relationship between price, rack price, and retail gasoline price. Converting the crude oil price to a per gallon metric highlights it as the underlying driver behind prices at the wholesale and retail levels. Aside from any refinery issues that may occur, rack prices follow the same trends as the CA Crude Basket.

Historically, Southern California rack prices average several cents higher than Northern California rack prices. [Intrastate Rack Spread: South less North](#) shows the daily difference between wholesale prices among the two regions since 2018. Between November 2019 and April 2020, the Southern California rack premium was consistently the widest it had ever been. That difference narrowed as demand for gasoline dropped and in June 2020 Northern rack prices became higher for a seven-month time period. The Southern California rack premium decreased in the time when Marathon Refinery began to idle their facility. The decreased gasoline production for the region caused a sustained Northern California rack premium between July 2020 and the rest of 2020. At the end of January 2021, the South less North rack spread flipped again, which is another sign of California's petroleum market returning to pre-pandemic norms.

REFINERY GASOLINE PRODUCTION

California retail prices might have returned to pre-pandemic levels, but gasoline production in the state has not according to [Refinery Gasoline Production](#). In February 2021, Northern California refineries produced an average of 2.4 million barrels of gasoline per week (27 percent decrease from same time last year). Most of the decline in Northern California gasoline can be attributed to reduced refining

capacity. The 2019 average weekly gasoline production decreases by 17.4 percent when Marathon Martinez Refinery production is omitted. Refineries in Southern California produced 13 percent less gasoline than the previous year, but still produced about one million barrels more gasoline per week than refineries in Northern California.

Finished gasoline products transfer between Northern and Southern California depending on the situation. Product transfers between regions are usually due to an emergency or a contract obligation that needs to be fulfilled by a certain date. Finished products or blend stocks that are not provided in time by local refineries get imported from out of state, both domestic and foreign. Finished product imports, both intrastate and out of state, can only come in through marine barges, so delivery time matters when choosing where to import from.

[Gasoline Product Movements Within California](#) compares the annual marine imports and exports of gasoline between Northern and Southern California. Northern California exports more gasoline to Southern California than the other way around. These amounts are relatively small compared to the total annual gasoline production. For example, in 2019 there was a total of 11.5 million barrels of gasoline moved intrastate, which is roughly equivalent to two weeks of total instate production.

TAKEAWAYS

Gasoline prices will continue to rise through 2021 if the [price of crude continues to rise](#). The Organization of Petroleum Exporting Countries (OPEC) [plan to maintain their production cuts](#) and United States crude oil production is also declining, both of which cause upward pressure on crude prices.

Factors from the demand side could cause upward pressure as well. Vaccine rollouts, easing of travel and business capacity restrictions, and the reopening of schools would increase demand and cause prices to rise in addition to any supply cuts or [gasoline inventory draws](#).

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