

PETROLEUM WATCH

CALIFORNIA ENERGY COMMISSION

INSIDE

- Gasoline Retail Prices by Brand
- Diesel Retail Prices by Region
- California Refinery Weekly Production
- California Jet Fuel Production By Region
- California State and Regional Utilization Rates

Featured Topic:
California Refinery Utilization

REFINERY NEWS

- Nothing to report.

CALIFORNIA GASOLINE RETAIL PRICES BY BRAND

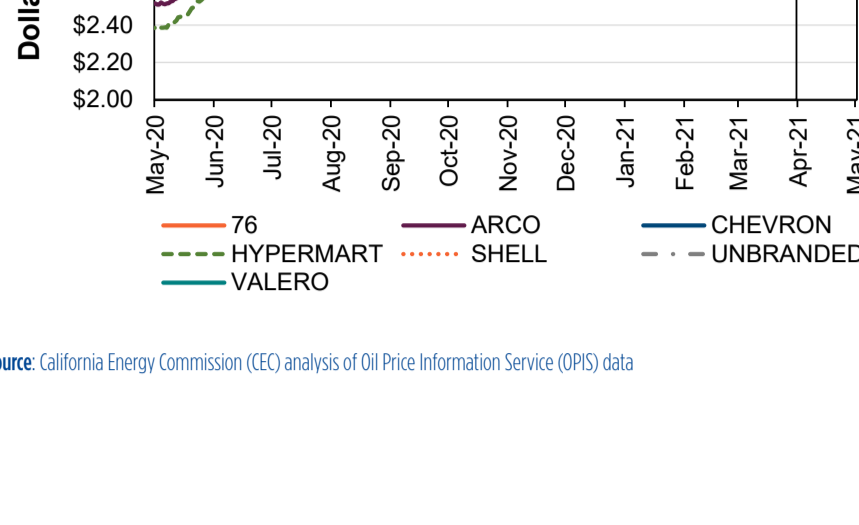
April 2021 vs. 2020

(Percentage Change)

76	37% higher
ARCO	43% higher
Chevron	37% higher
Hypermart	47% higher
Shell	36% higher
Unbranded	41% higher
Valero	40% higher

April 2021 Averages

76	\$4.04
ARCO	\$3.77
Chevron	\$4.13
Hypermart	\$3.62
Shell	\$4.08
Unbranded	\$3.82
Valero	\$3.93



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

CALIFORNIA DIESEL RETAIL PRICES BY REGION

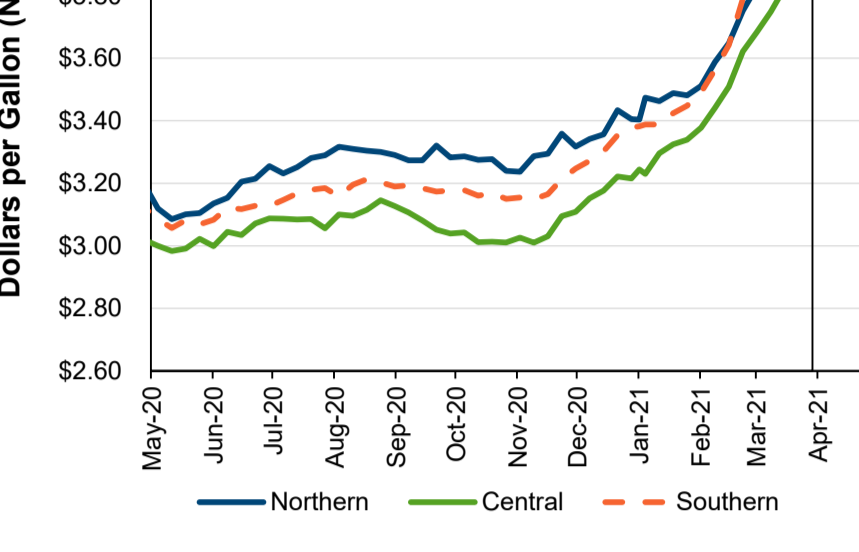
April 2021 vs. 2020

(Percentage Change)

Northern CA	20% higher
Central CA	23% higher
Southern CA	23% higher

April 2021 Averages

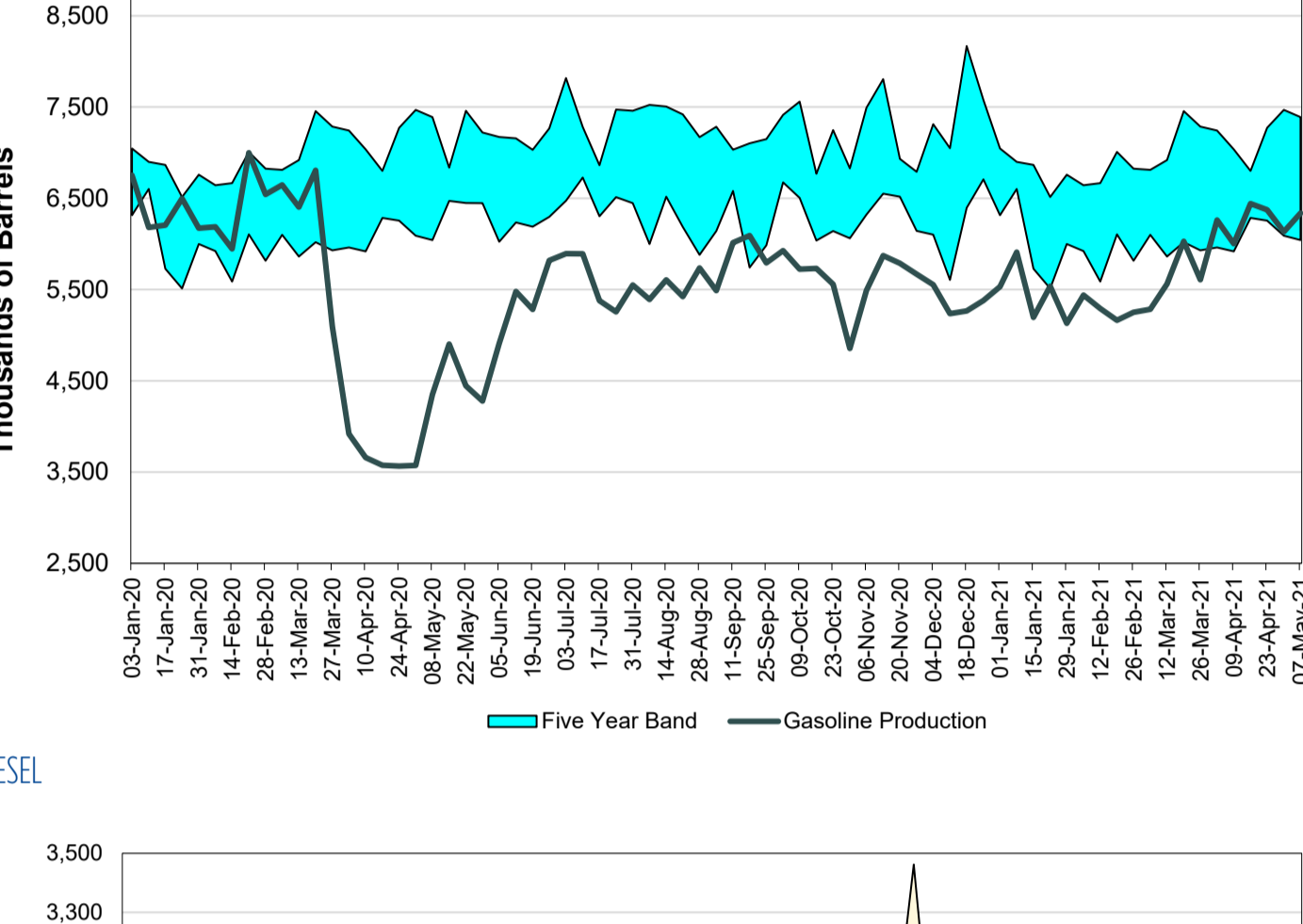
Northern CA	\$3.94
Central CA	\$3.82
Southern CA	\$3.96



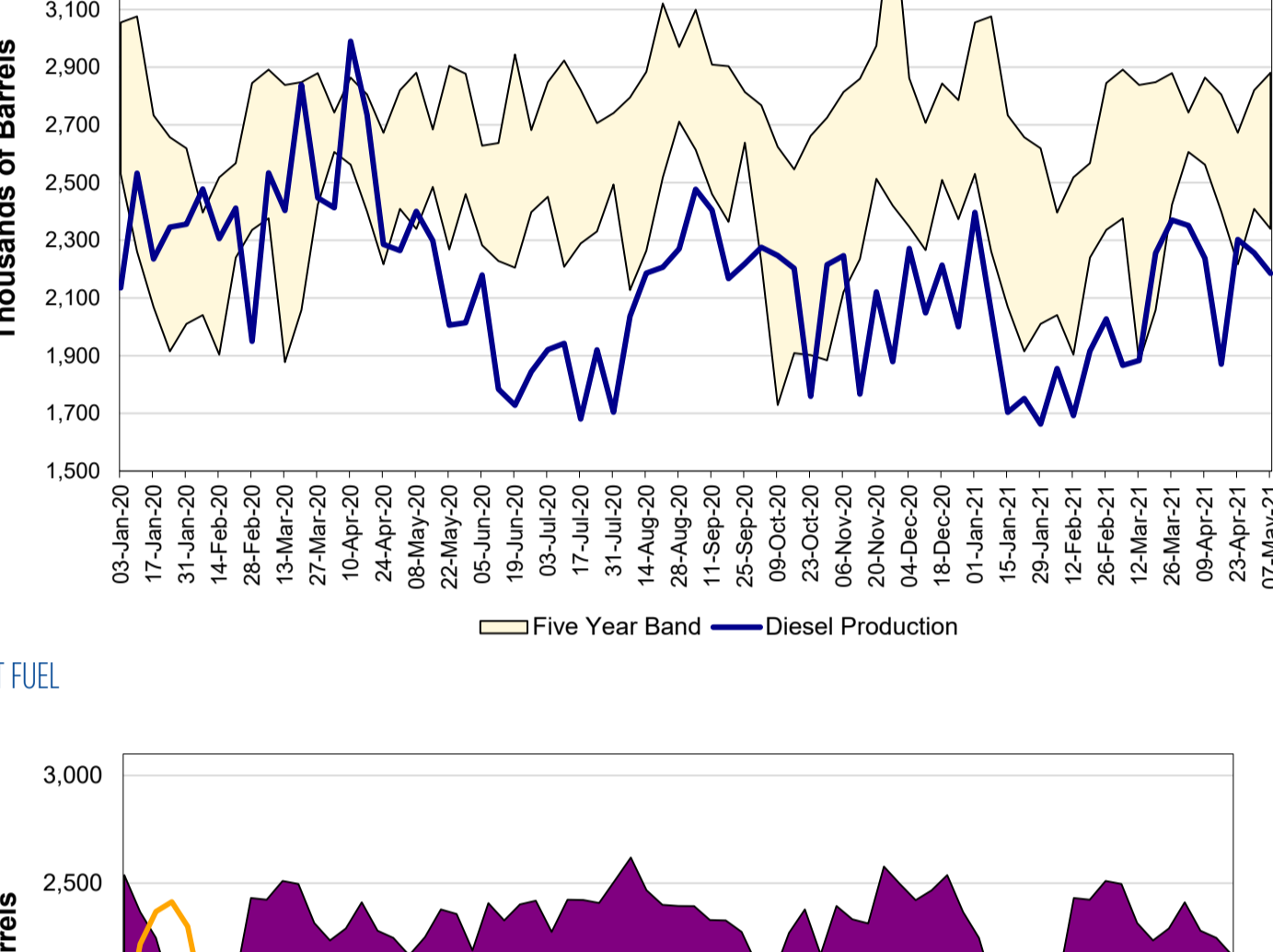
Source: CEC analysis of OPIS data

CALIFORNIA REFINERY WEEKLY PRODUCTION

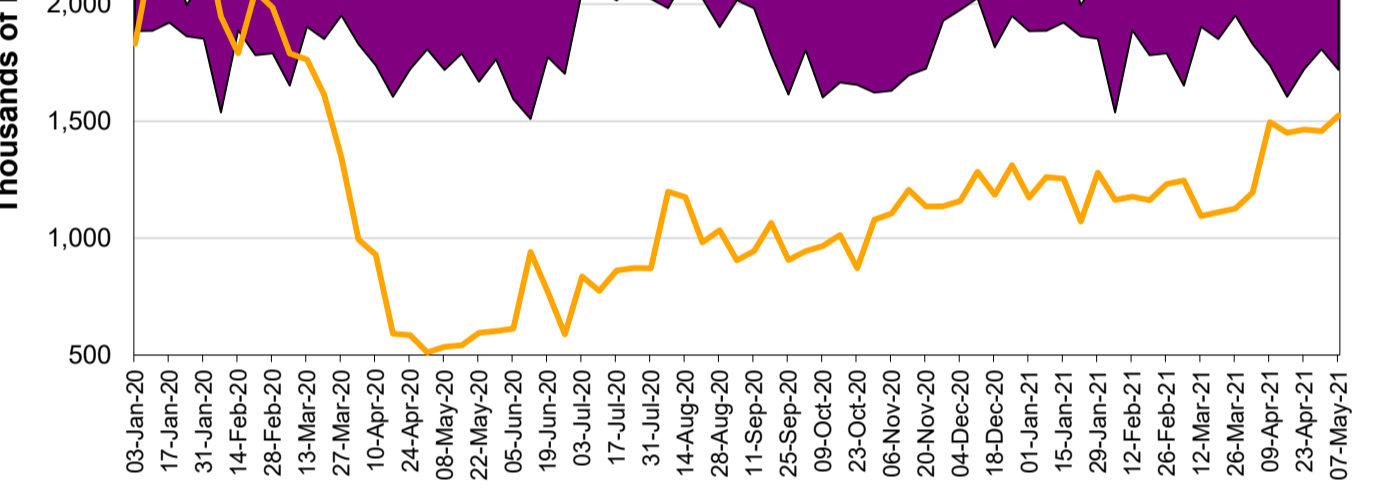
GASOLINE



DIESEL



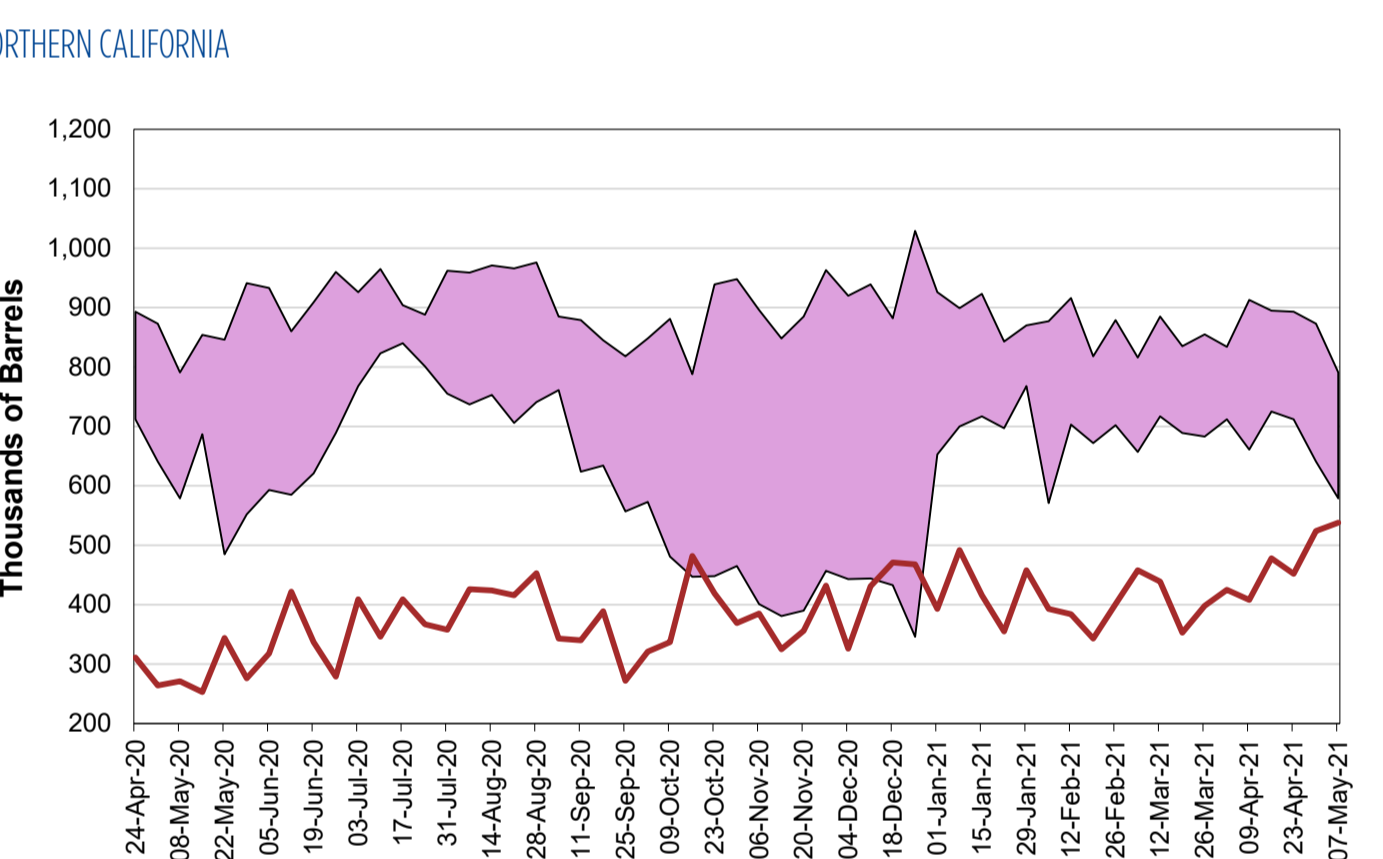
JET FUEL



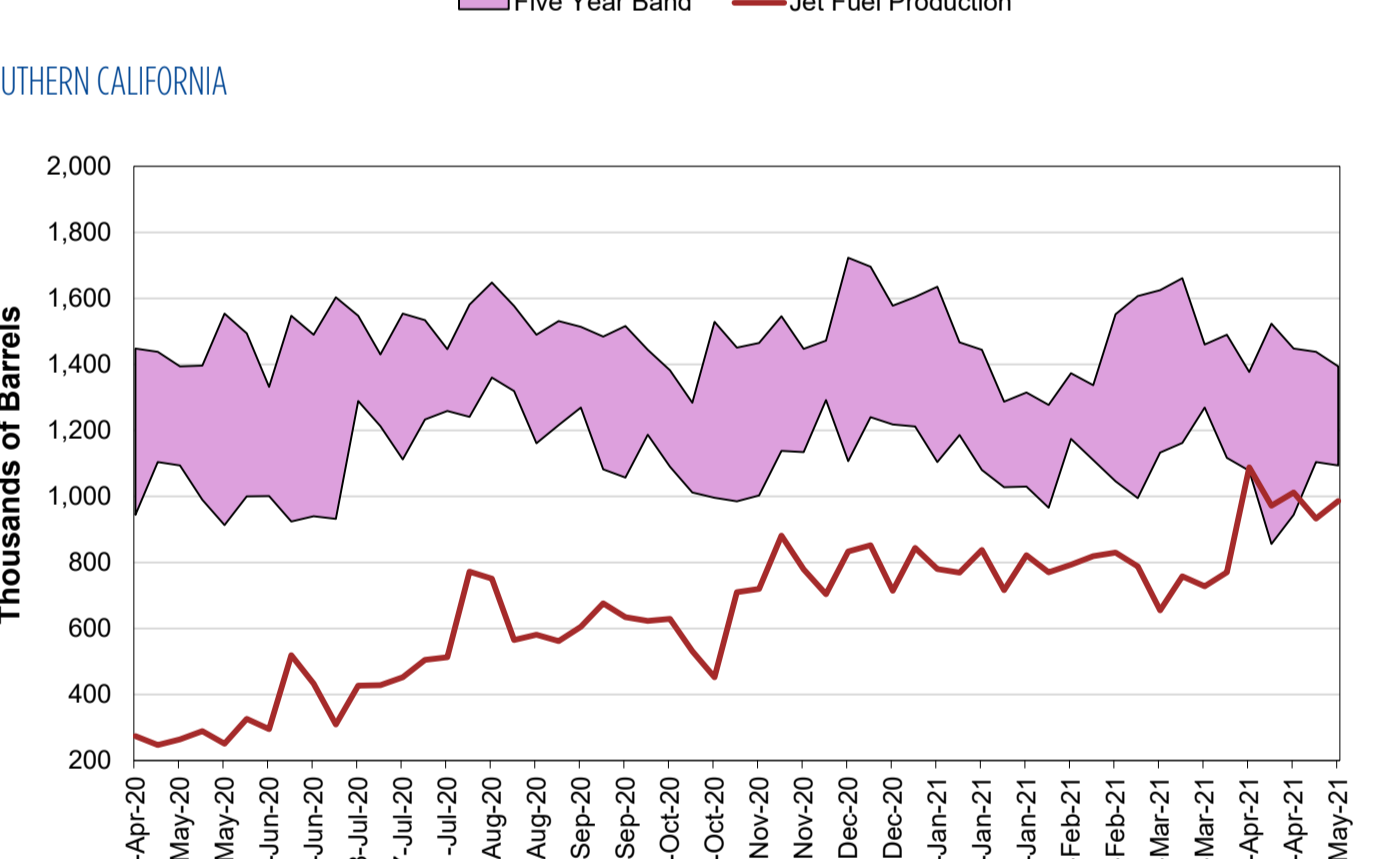
Source: CEC analysis of Petroleum Industry Information Reporting Act (PIIRA) data

CALIFORNIA JET FUEL PRODUCTION BY REGION

NORTHERN CALIFORNIA



SOUTHERN CALIFORNIA



Source: CEC analysis of PIIRA data

FEATURED TOPIC

CALIFORNIA REFINERY UTILIZATION

The California Energy Commission's Weekly Fuels Watch Report tracks the weekly production and inventory of transportation fuels in California.

It provides a breakdown of the three main refined products from the previous week, as well as residual products and the amount of crude oil input to refineries. The Weekly Fuels Watch report provides production numbers, weekly percent changes, and annual percent changes. These metrics can signal movements in California fuel demand. For example, if production for a certain fuel goes up while the inventory depletes, that could signal demand is increasing. Alternatively, if inventories build while production remains stagnant (or decreases), that could signal a decrease in demand.

The Weekly Fuels Watch charts track the historical output of California refineries. For each fuel type there is statewide, northern, and southern charts. The charts show weekly production and inventory levels over the past year along with the maximum and minimum values for each week within the past five years, referred to as a five-year band. The band provides context for current, seasonal, and regional trends. Demand is slowing when inventories climb closer to the top of the five-year band or if production is closer to the bottom of the five-year band. Throughout most of 2020, production levels were below the five-year minimum but are now slowly returning to the pre-pandemic levels within the bands.

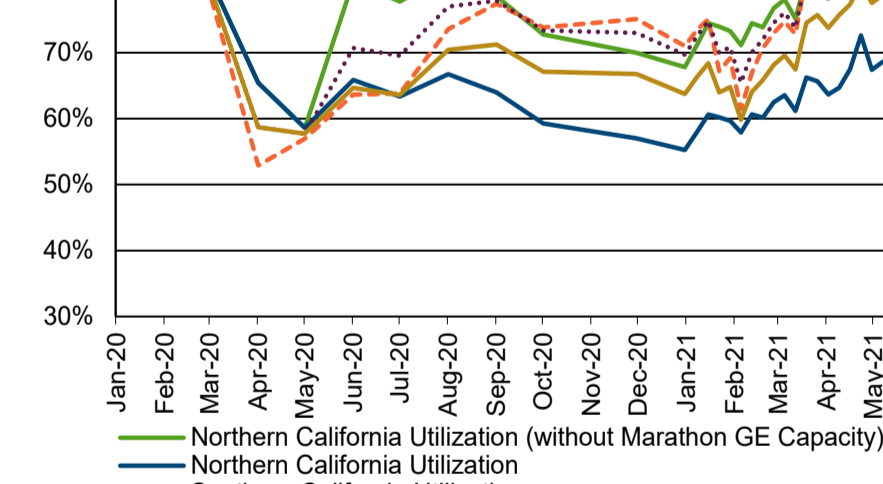
REFINERY PRODUCTION

California Refinery Weekly Production shows charts for three transportation fuels: gasoline, diesel, and jet fuel. As gasoline prices return to pre-pandemic levels, and slowly push above \$4.00 per gallon in California's retail market, there has been a steady rise in gasoline production to accommodate the increasing demand. The Gasoline Production graph shows production slowly making a steady return to the five-year band by March of 2021 as gasoline demand increased.

Diesel demand was least affected by the pandemic, so diesel production remained relatively stable compared to gasoline and jet fuel. Refineries adjusted their slates to divert jet fuel production into diesel without needing to lower their utilization rates. The Diesel Production graph shows that production did not stray far from the five-year band.

Out of the three main transportation fuels, jet fuel production took the hardest hit during the pandemic. California refineries cut nearly half of daily jet fuel production, which reduced the jet fuel proportion of annual refinery slate from 15.4 percent in 2019 to 10.8 percent in 2020. Jet fuel production has steadily increased since the initial drop

CALIFORNIA STATE AND REGIONAL UTILIZATION RATES



Source: CEC analysis of PIIRA data

in March 2020 but has not reached pre-pandemic levels. In the first quarter of 2020, weekly jet fuel production averaged 7 percent above the low production level of the five-year band. During the next three quarters, jet fuel production averaged 60 percent, 51 percent, and 38 percent below minimum production levels of the five-year band, in succession. Jet fuel production still lagged during the first quarter of 2021, averaging 35 percent below minimum production of the five-year band. Northern California Jet Fuel Production reached the five-year band minimum in October 2020, averaging 394 thousand barrels per week October through December. In January 2021 the five-year band shrinks and Northern California jet fuel production averages 40 percent below the low levels of the five-year band. Northern California production has not yet returned to pre-pandemic levels, possibly because the demand for jet fuel still hasn't fully recovered. Southern California Jet Fuel Production reached the five-year band minimum on April 9, 2021.

REFINERY UTILIZATION

The CEC maintains a complete list of California refineries and which ones produce transportation fuels. In 2019, California's total transportation fuels refining capacity was 1,885,371 barrels per day. In 2021, capacity decreased to 1,723,871 barrels per day with Northern California comprising 707,871 barrels per day and Southern California comprising 1,016,000 barrels per day. This reduction is due to the idling of Marathon Golden Eagle refinery (161,500 barrels per day) in April 2020. The shut down of Marathon Golden Eagle refinery reduced capacity in Northern California by 18.6 percent. In October, Marathon announced plans to convert its Golden Eagle facility into a renewable diesel plant, which is estimated to produce 48,000 barrels per day of renewable diesel when it becomes fully operational in 2023.

The utilization rate represents the rate at which crude oil is being processed. Utilization rates are calculated by dividing volume of crude inputs by crude refining capacity. The State and Regional Utilization Rates chart depicts

regional, statewide, northern, and southern utilization rates, as well as statewide and northern with Marathon Golden Eagle refinery utilization removed. Only refineries producing transportation fuels are included in these calculations. When Marathon Golden Eagle refinery is removed from the equation, the utilization rates increase. From April 2020 onward, Marathon Golden Eagle was running at minimal rates (low utilization rates) bringing the regional and statewide rates down. When Marathon Golden Eagle is removed, it provides a more accurate look at how the region is performing since March 2020.

The utilization rates at the start of 2020 ran from 83.3 percent to 88.8 percent. The stay-at-home order, beginning in March 2020, reduced demand for transportation fuels and refineries decreased crude oil inputs. California's annual utilization rate in 2020 was 69.8 percent. By comparison, 2015 annual utilization rate for California refineries was 88.3 percent (as shown in the chart as a dashed line). In February 2021, utilization rates started increasing, and by April 23, 2021, the total California utilization rate without Marathon Golden Eagle reached 88.2 percent utilization.

TAKEAWAYS

Jet fuel has yet to return to pre-pandemic levels. Air travel, especially internationally, may not fully recover this year. Utilization rates are closing in at pre-pandemic levels, but California now operates with lower total production capacity with Marathon Golden Eagle refinery capacity removed. This capacity may increase over the next few years as the pandemic triggered stay-at-home order provided the opportunity for refineries to retrofit and future-proof themselves to operate in a clean energy economy. Refineries have started to change production capabilities, such as switching to producing renewable diesel, in response to California's climate policies and will continue to evolve.

Gavin Newsom
Governor

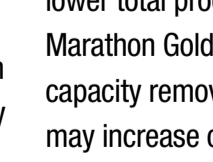
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