February 2021

PETROLEUM WATCH

CALIFORNIA ENERGY COMMISSION

INSIDE

REFINERY NEWS

- **Chevron El Segundo:** On January 27 and 28, process upsets occurred resulting in unplanned flaring according to regulatory filings with the South Coast Air Quality Management District (AQMD) and California Governor's Office of Emergency Services (Cal OES).
- **Valero Wilmington:** Between January 29 and February 25, planned flaring is scheduled to take place relating to turnaround activity according to regulatory filings with the South Coast Air Quality Management District (AQMD).

CALIFORNIA GASOLINE RETAIL PRICES BY BRAND

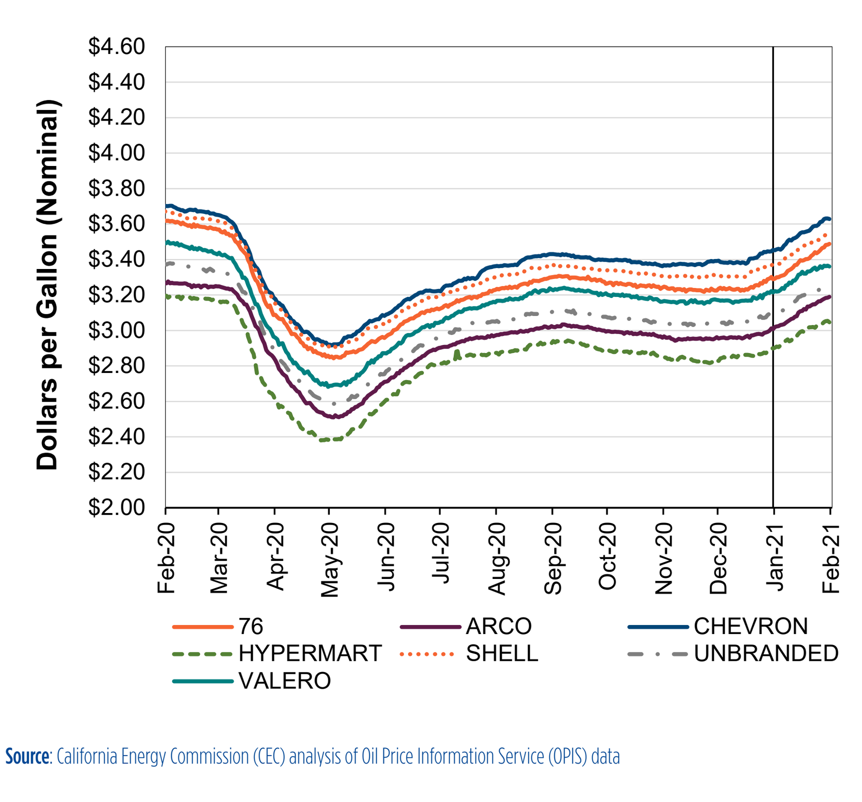
January 2021 vs. 2020

(Percentage Change)

76	7% lower
ARCO	5% lower
Chevron	4% lower
Hypermart	7% lower
Shell	6% lower
Unbranded	6% lower
Valero	6% lower

January 2021 Averages

76	$3.39
ARCO	$3.11
Chevron	$3.54
Hypermart	$2.98
Shell	$3.46
Unbranded	$3.18
Valero	$3.30



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

CALIFORNIA DIESEL RETAIL PRICES BY REGION

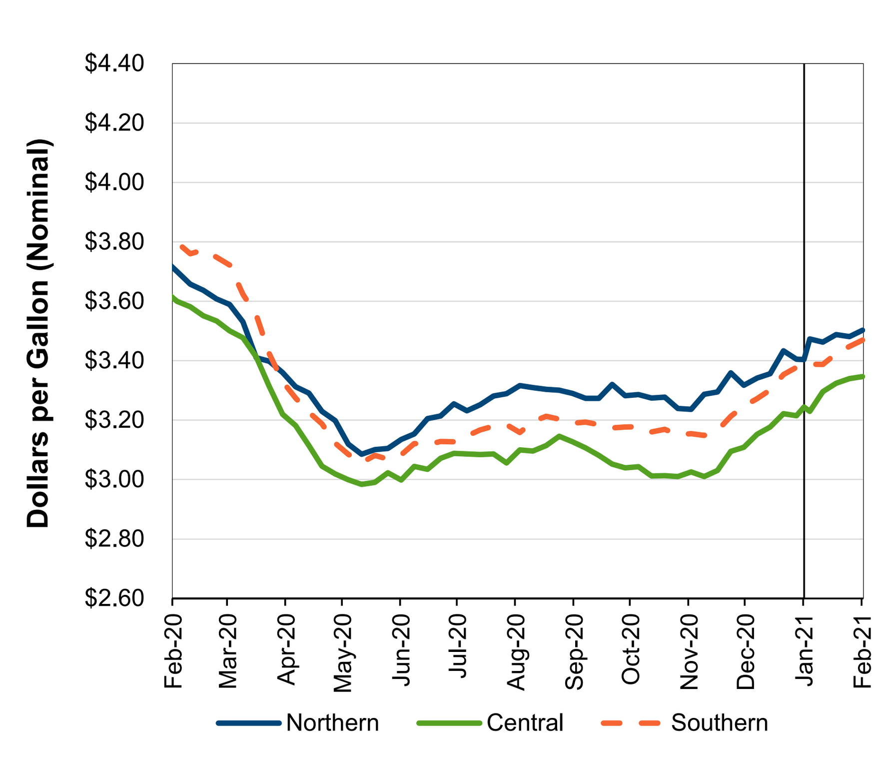
January 2021 vs. 2020

(Percentage Change)

Northern CA	8% lower
Central CA	10% lower
Southern CA	12% lower

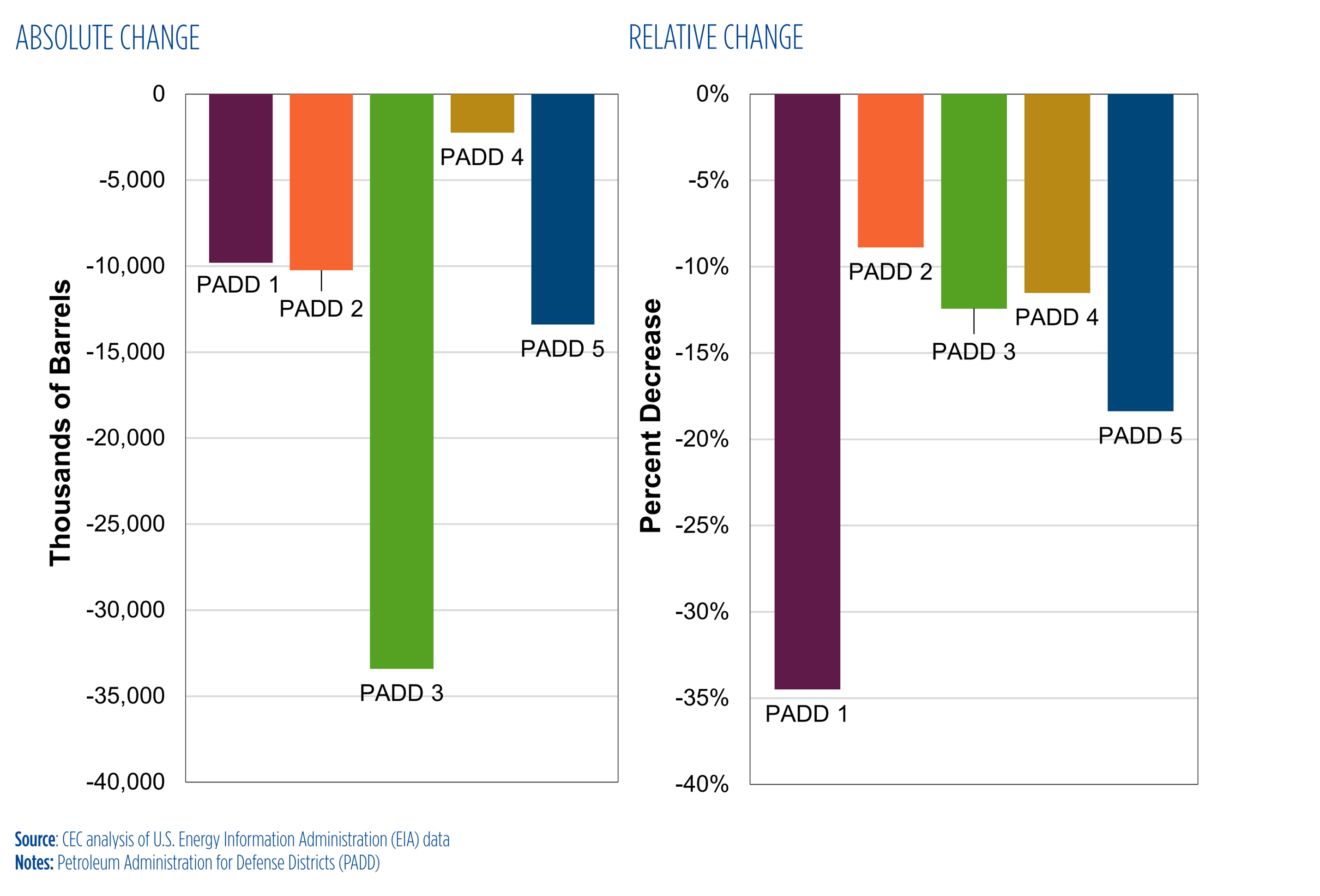
January 2021 Averages

Northern CA	$3.47
Central CA	$3.29
Southern CA	$3.41



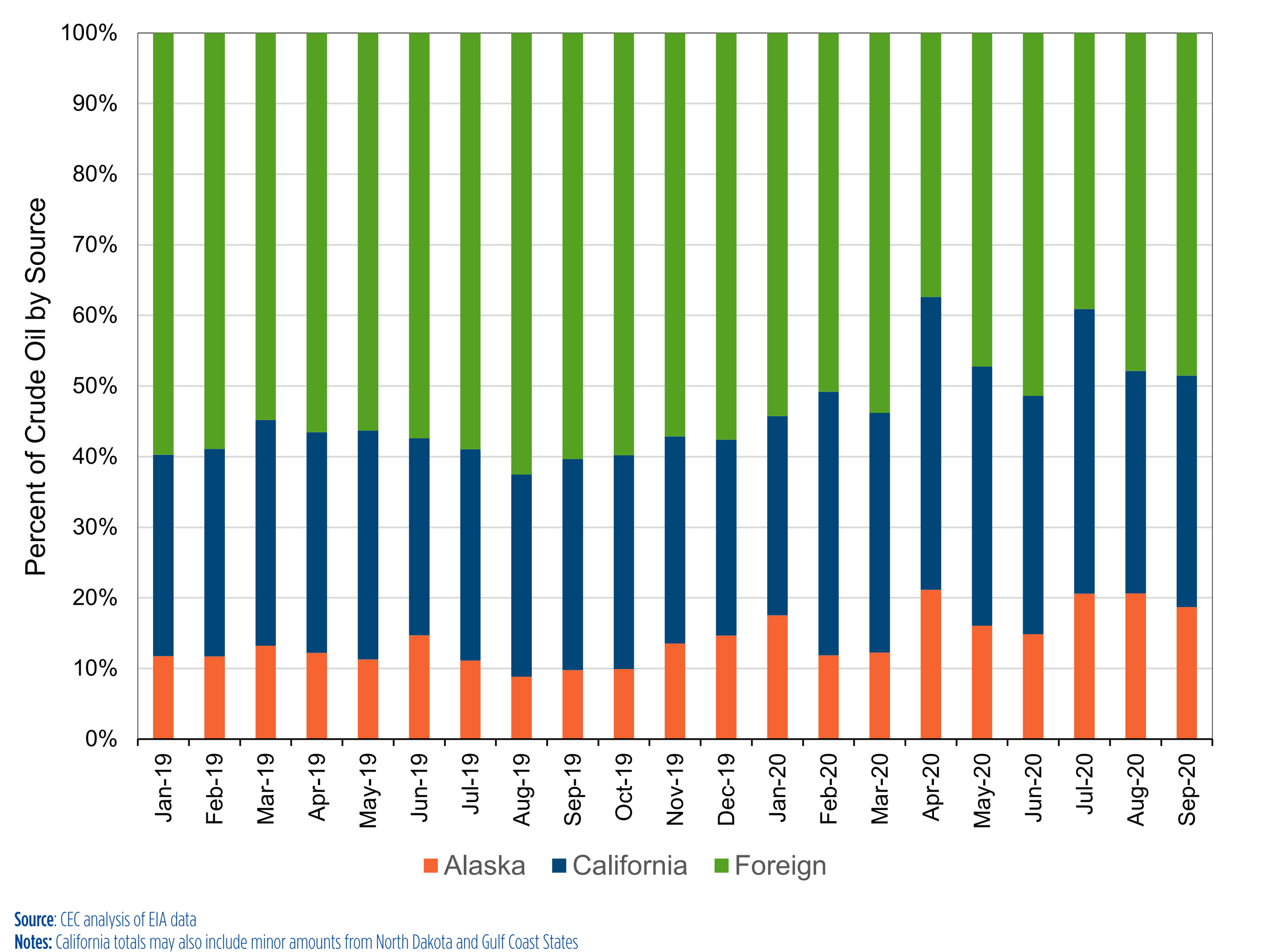
Source: CEC analysis of OPIS data

CRUDE OIL INPUTS 2019 VS 2020 QUARTER 1 TO QUARTER 3 (Q1-Q3)



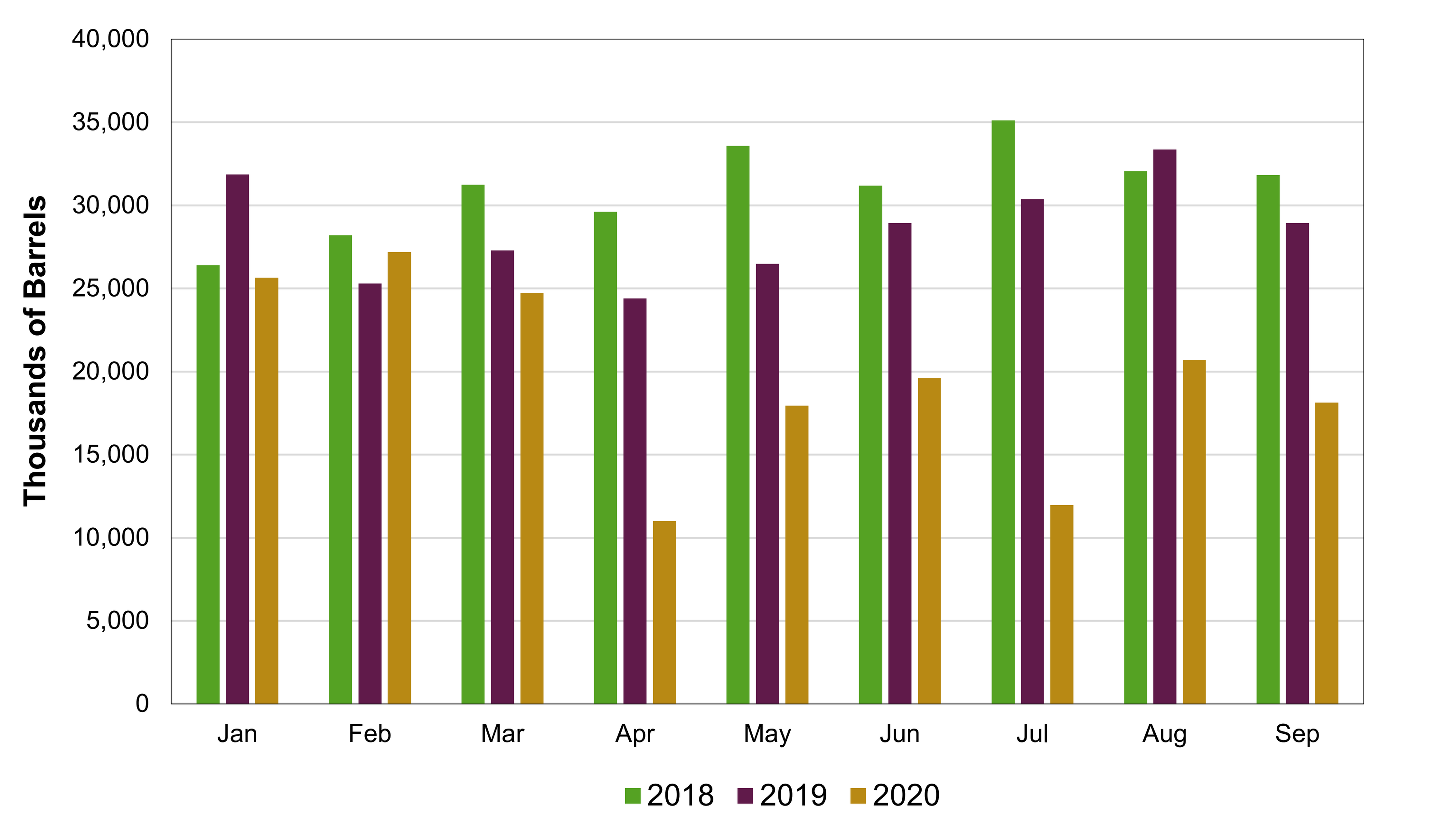
Source: CEC analysis of U.S. Energy Information Administration (EIA) data
Notes: Petroleum Administration for Defense Districts (PADD)

CRUDE OIL SUPPLY SOURCES TO CALIFORNIA



Source: CEC analysis of EIA data
Notes: California totals may also include minor amounts from North Dakota and Gulf Coast States

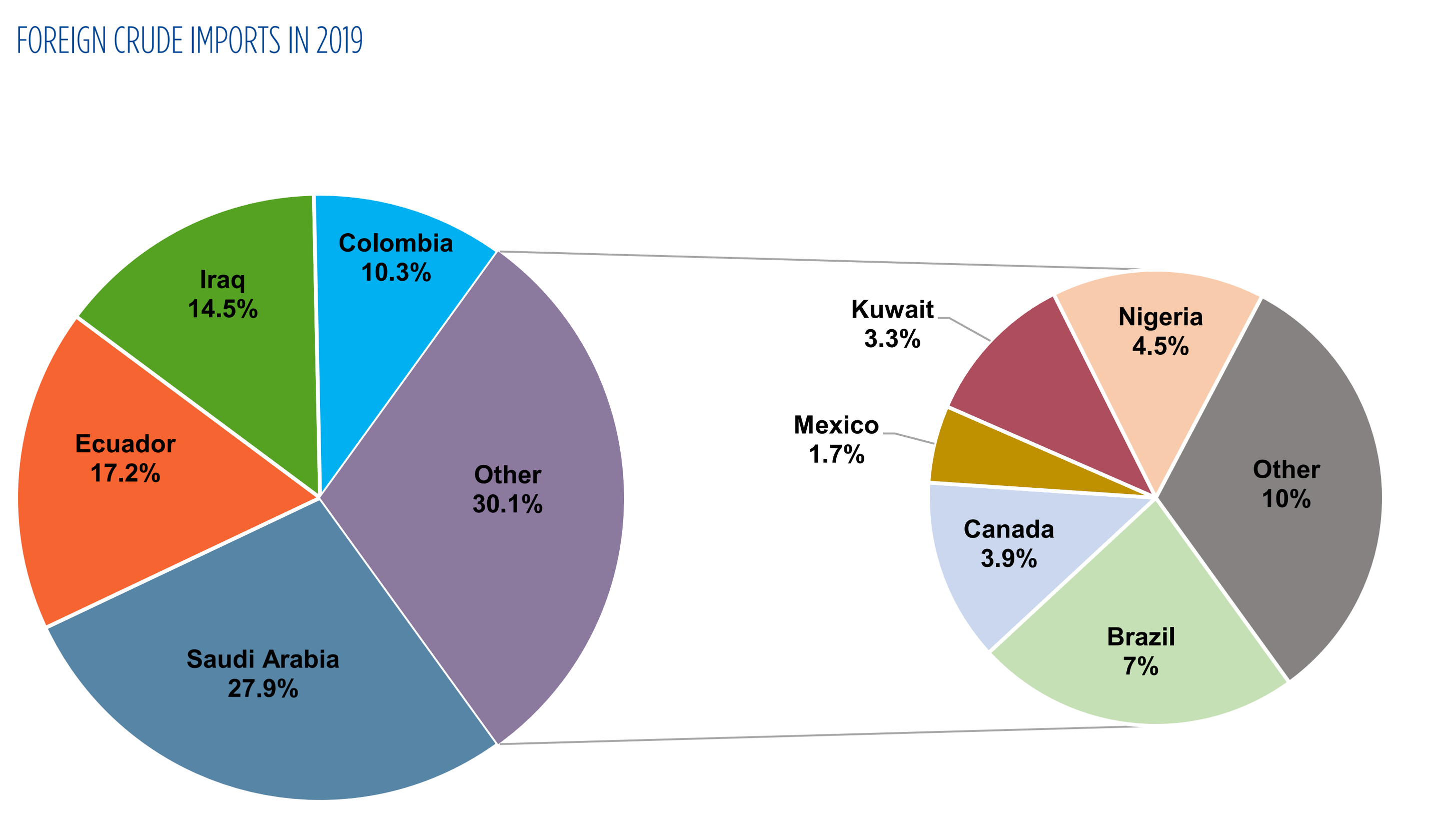
FOREIGN CRUDE OIL IMPORTS TO CALIFORNIA 2018-2020 (Q1-Q3)



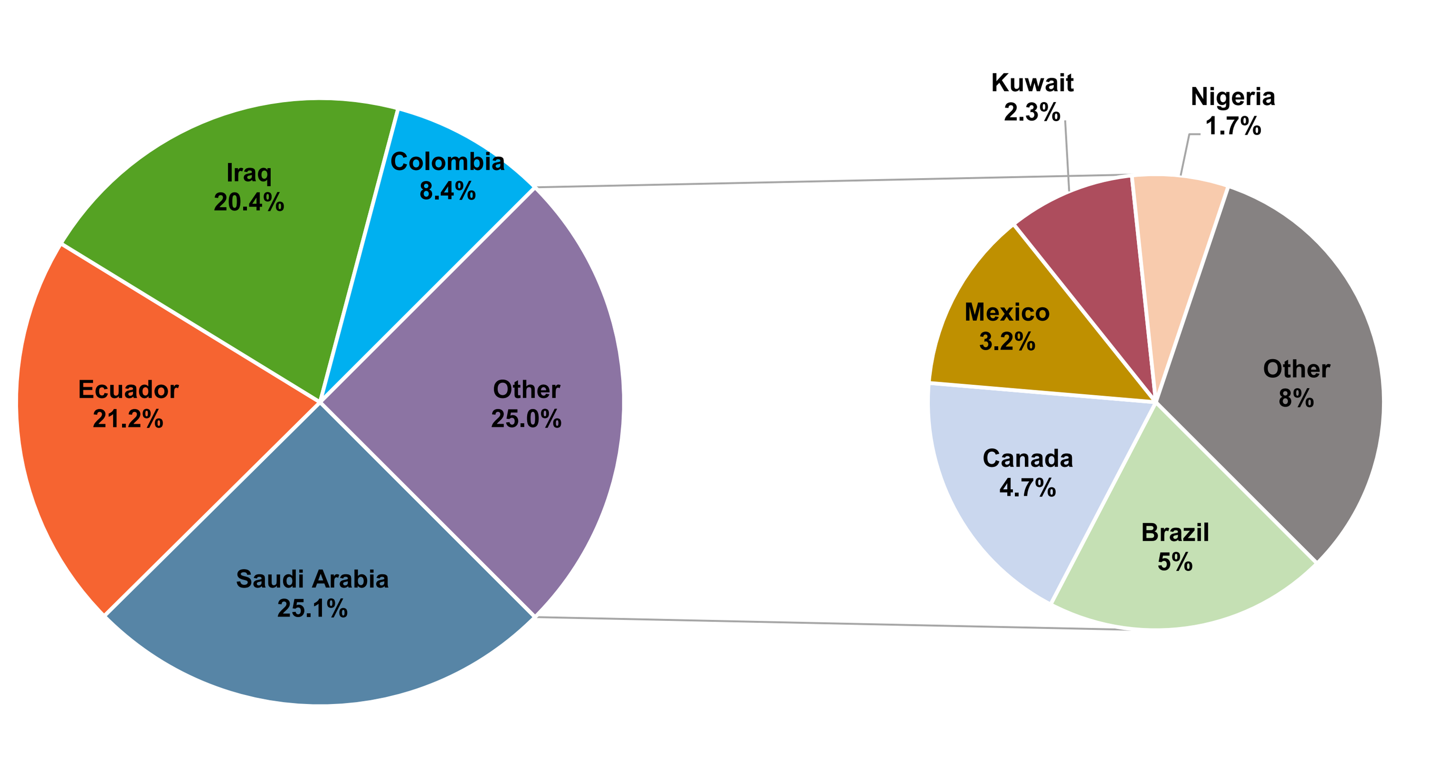
Source: CEC analysis of Port Import/Export Reporting Service (PIERS) data and State Lands Commission (SLC) data

SHARE OF FOREIGN CRUDE OIL IMPORTS TO CALIFORNIA 2019 VS 2020 (Q1-Q3)

FOREIGN CRUDE IMPORTS IN 2019



FOREIGN CRUDE IMPORTS IN 2020



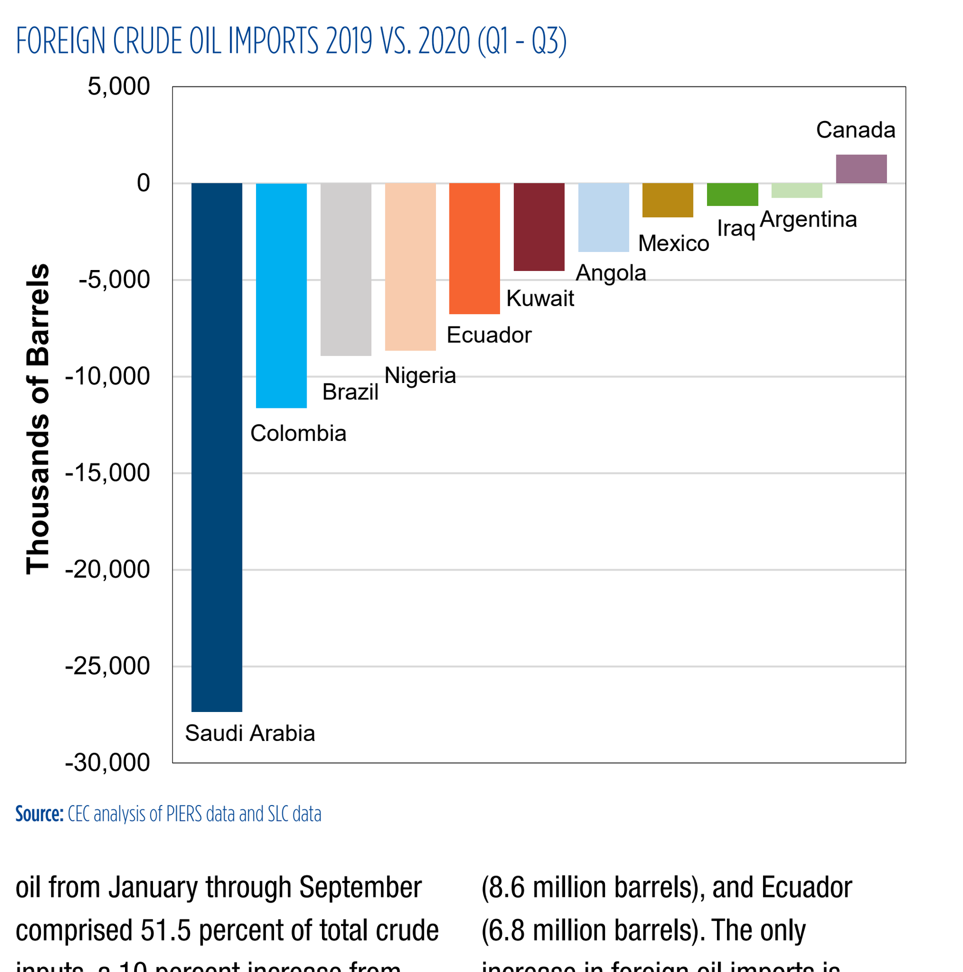
Source: CEC analysis of PIERS data and SLC data

FEATURED TOPIC

FOREIGN CRUDE OIL IMPORTS DECLINE IN 2020

The effects of COVID-19 on travel and general economic activity have significantly reduced demand for transportation fuels and crude oil. Refineries across the United States have processed less crude oil to meet the reduced demand. As California's refineries purchased less crude oil, imports decreased and changed the refiner's mix of foreign and domestic crude oils.

FOREIGN CRUDE OIL IMPORTS 2019 VS. 2020 (Q1 - Q3)



Source: CEC analysis of PIERS data and SLC data

U.S. CRUDE OIL TRENDS

Refineries across the United States processed less crude oil in 2020. Crude Oil Inputs 2019 VS 2020 shows the declining monthly average of net crude oil inputs by PADD (Petroleum Administration for Defense Districts) over the first three quarters of 2019 and 2020. The greatest cuts occurred in PADD 3 at an average of 33.4 million barrels less per month than in 2019. Viewing these numbers as a percent change, PADD 3 is down 12.4 percent since 2019 while PADD 1 has the largest decrease of 34.5 percent since 2019 input levels. PADD 3, with its large refining capacity and access to cheaper domestic crude, supplies most of the east coast (PADD 1) via pipeline connections. PADD 1 refining capacity is much smaller in comparison to PADD 3, but covers the remaining demand not supplied by PADD 3. With reduced demand, the baseline of products supplied by PADD 3 covers most products needed, decreasing the necessity of refining from PADD 1.

CALIFORNIA CRUDE OIL TRENDS

The decrease in crude oil demand has altered where California sources its crude oil. Crude Oil Supply Sources To California shows the monthly ratios of crude oil sources to California refineries. Prior to COVID-19, California refineries processed a majority of foreign crude oil, followed by California crude oil, and then Alaska crude oil. In 2019, domestic crude oil (both Alaska and lower 48 states) from January through September comprised 41.6 percent of total crude inputs to California refineries. In 2020, domestic crude oil from January through September comprised 51.5 percent of total crude inputs, a 10 percent increase from 2019. During the same time period, share of foreign crude oil fell from 58.4 percent of crude oil inputs to 48.5 percent. Crude oil produced in California and Alaska now supplies a larger share of the shrinking crude oil demand at California refineries.

Foreign Crude Oil Imports To California Quarter 1 to Quarter 3 shows the foreign crude oil imports over 3 quarters. Since imports can fluctuate based on supply, demand, and other market forces, this graph includes 2018 to provide another example of fluctuations during a normal year. The largest decreases in 2020 occurred in April and July. Since 2019, crude oil imports dropped by 60.2 percent in April at the start of travel restrictions, then dropped by 66.6 percent in July. There were no significant travel restrictions in July, however this chart shows large demand destruction during a time where it is historically peak travel during the summer months.

CRUDE OIL TRENDS BY COUNTRY

Foreign Crude Oil Imports 2019 VS 2020 (Q1 – Q3) shows how much foreign crude oil California refiners have imported compared to 2019 over the first three quarters. Foreign crude imports are down, led by Saudi Arabia with a decrease of 27.4 million barrels. Other countries with significant reductions include Colombia (11.6 million barrels), Brazil (8.9 million barrels), Nigeria (8.6 million barrels), and Ecuador (6.8 million barrels). The only increase in foreign oil imports is from Canada. California refiners imported an extra million barrels, taking advantage of the temporary discount when Canadian crude oil prices hit -$37.00 a barrel in April.

Share of Foreign Crude Oil Imports To California shows the market share of crude oil by country of origin in the first three quarters of 2019 and 2020. The top three countries that California imports oil from, Saudi Arabia, Ecuador, and Iraq, collectively accounted for 66.7 percent of foreign crude oil imports in the first three quarters of 2020. This increases their relative market share by 7 percent over 2019. This is despite the fact that California refineries imported collectively 35.2 million barrels less in 2020 than in 2019. This increase in market share came at the expense of the market share of other countries, particularly Colombia, Brazil, and Argentina.

Large oil producers cut back production to reduce the oversupply and inventory created by the reduced demand during the pandemic. The Organization of Petroleum Exporting Countries (OPEC) currently maintains a multilateral agreement to limit production and Saudi Arabia announced additional voluntary production cuts for February and March. California refiners' demand for more foreign crude oil will depend on how quickly California recovers from COVID-19 and fuel demand returns to pre-pandemic levels.

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