



PETROLEUM WATCH

California Energy Commission

June 2015

Recent Petroleum News and Outside Analyses

Prices

- **California Gasoline Prices:** Gasoline price differences between California and the rest of the United States continued to increase in May. California was \$1.06 higher than the nation average during the third week in May.
- **California Gasoline Prices:** California gasoline prices are at the highest weekly average for 2015, finishing at \$3.81 for the week of May 18, 2015.

Refining News

- **Tesoro Golden Eagle Martinez Refinery:** Completed restart during May and is fully operational.
- **ExxonMobil Torrance Refinery:** Production continues at reduced rates as the facility recovers from the February 18 explosion and the March 11 fire.
- **Phillips 66 Santa Maria Refinery:** Production has been reduced due to the leak of an oil pipeline offshore southern California. The pipeline supplies the 45,000-barrels-per-day facility with a substantial portion of its petroleum.
- **Chevron El Segundo Refinery:** Throughout May large-scale planned maintenance has reduced production at this 290,000-barrel-per-day facility. Maintenance is scheduled to last until mid-June.
- **Washington State Refineries:** Two refineries in Washington state that sometimes provide gasoline or diesel to California have had outages in May that will continue into June; this could reduce the amount of gasoline or diesel that these two refineries might ordinarily sell into the California market.

State and Federal Policy News

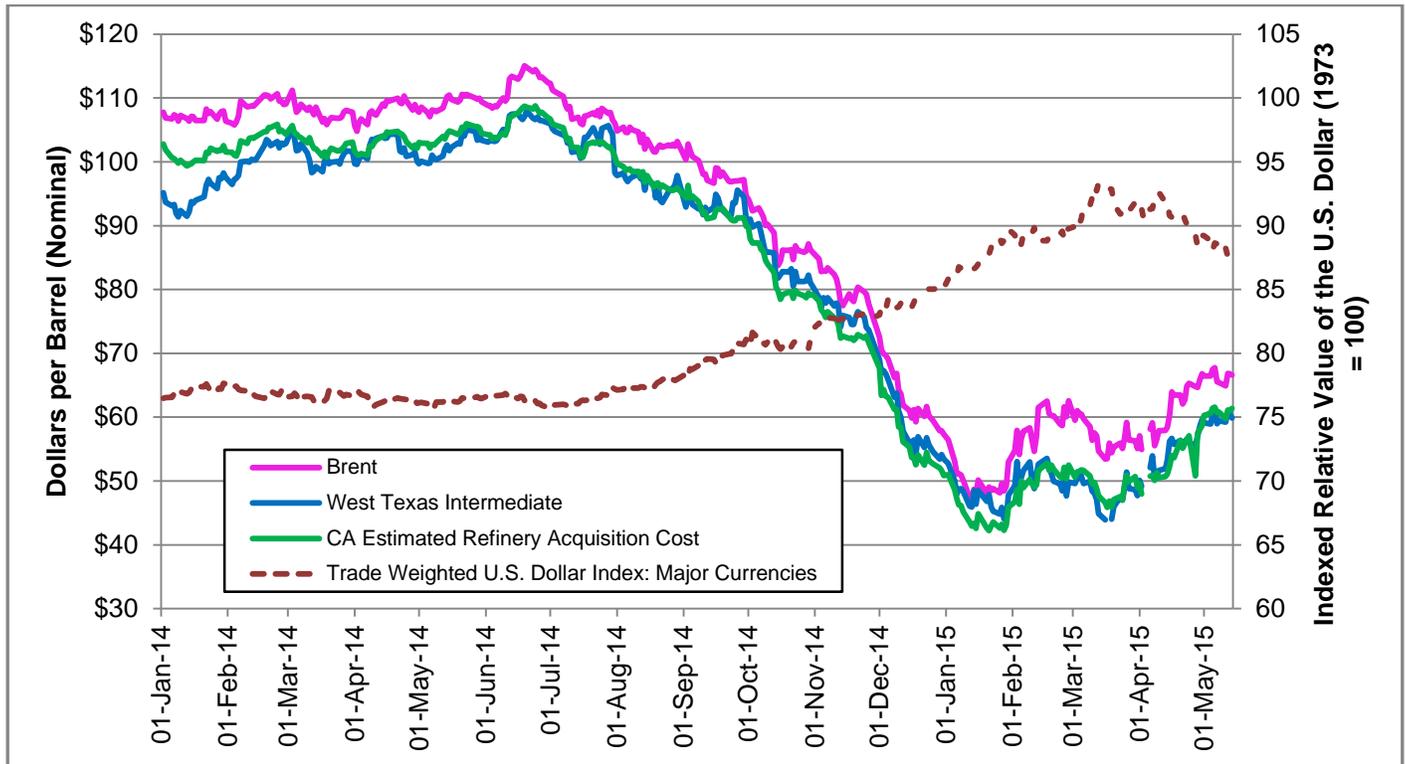
No news to report.

Outside Analysis

Nothing to report.

Crude Oil Prices

Figure 1: Daily West Coast Spot Crude Oil Prices, January 2014 to Present



Source: Energy Information Administration, Oil Price Information Service, and Federal Reserve Bank of St. Louis.

Crude oil prices increased in May, with the California Estimated Refiner Acquisition Cost¹ (CA-RAC) of crude oil estimated at \$60.87 a barrel on May 18, 2015 (see **Figure 1**), an increase of 8 percent over the April average. The May increase in prices continues a trend that began in mid-March. These are the highest crude oil prices seen in 2015, although they remain substantially lower than a year ago.

This upward trend in crude oil prices has been accompanied by a weakening in the U.S. dollar on the international exchange markets (dotted line in **Figure 1**). Using the FRED² index of the United States (U.S.) dollar against the major currencies, the average purchasing power of the dollar is down 3 percent from the April average. This is the first noteworthy decline of the dollar in 2014 or 2015. Nevertheless, since the January lows, the dollar has increased 3 percent, while the price of oil is up 35 percent.

¹ California Estimated Refiner Acquisition Cost was created as an estimate of the average price of crude oil paid by California refineries. It is created using California refinery input proportions of California crude, Alaskan crude, and foreign crude and multiplying them by the prices of San Joaquin Valley, Alaskan North Slope, and Brent crude oil, respectively.

² Federal Reserve Economic Data, provided by St. Louis Federal Reserve Bank.

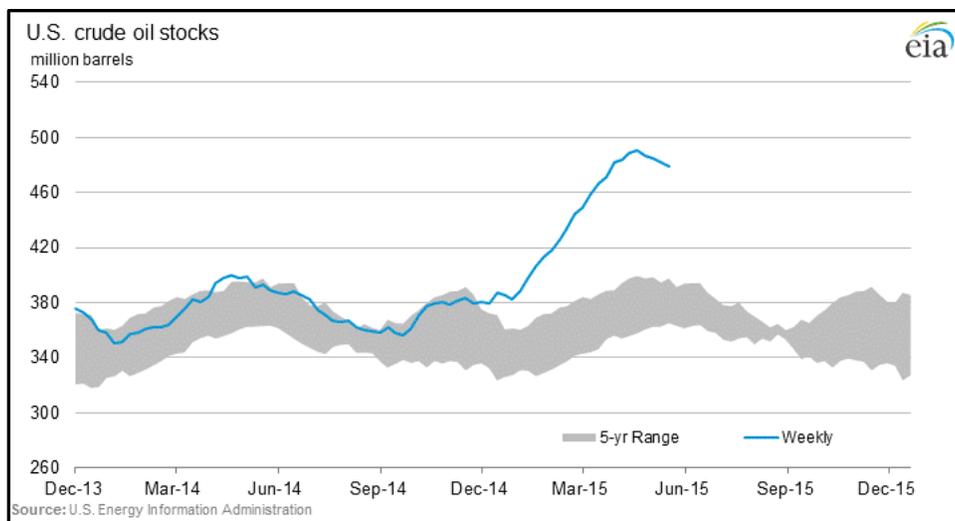
<u>Crude Oil Prices</u>	
<u>May 2014 vs 2015</u> (Percent Change)	
WTI	42% lower
Brent	39% lower
CA-RAC	42% lower
<u>April 2015 Averages</u>	
WTI	\$54.45
Brent	\$61.14
CA-RAC	\$53.28
<u>May 18, 2015</u>	
WTI	\$59.44
Brent	\$66.27
CA-RAC	\$60.87

Crude Oil Production and Storage

Both prices and output of petroleum have been increasing during most of 2015, but during the past month the amount of crude oil in storage has fallen and production growth has slowed. Nevertheless, storage inventories remain high and production continues to increase.

- U.S. crude oil output continues to increase according to the Energy Information Administration (EIA): production of crude oil in the United States has risen 4.8 percent during the first five months of 2015 to 9.6 million barrels per day. In 2014, this increase was only 3.2 percent.
- Imports of Canadian crude oil have fallen to 2.7 million barrels per day over the past month, moving back toward the 2014 levels, according to EIA data. These imports had risen sharply in the first four months of 2015, reaching 3.2 million barrels per day in April.
- Although lower than last month, the amount of crude oil stored in the United States remains at historically high levels. (See **Figure 2**.) Storage levels have fallen from a peak of 491 million barrels in April to 479 million barrels on May 22, which is 22 percent higher than year-ago levels of 393 million barrels.

Figure 2: U.S. Crude Oil Inventories, December 2013 to Present



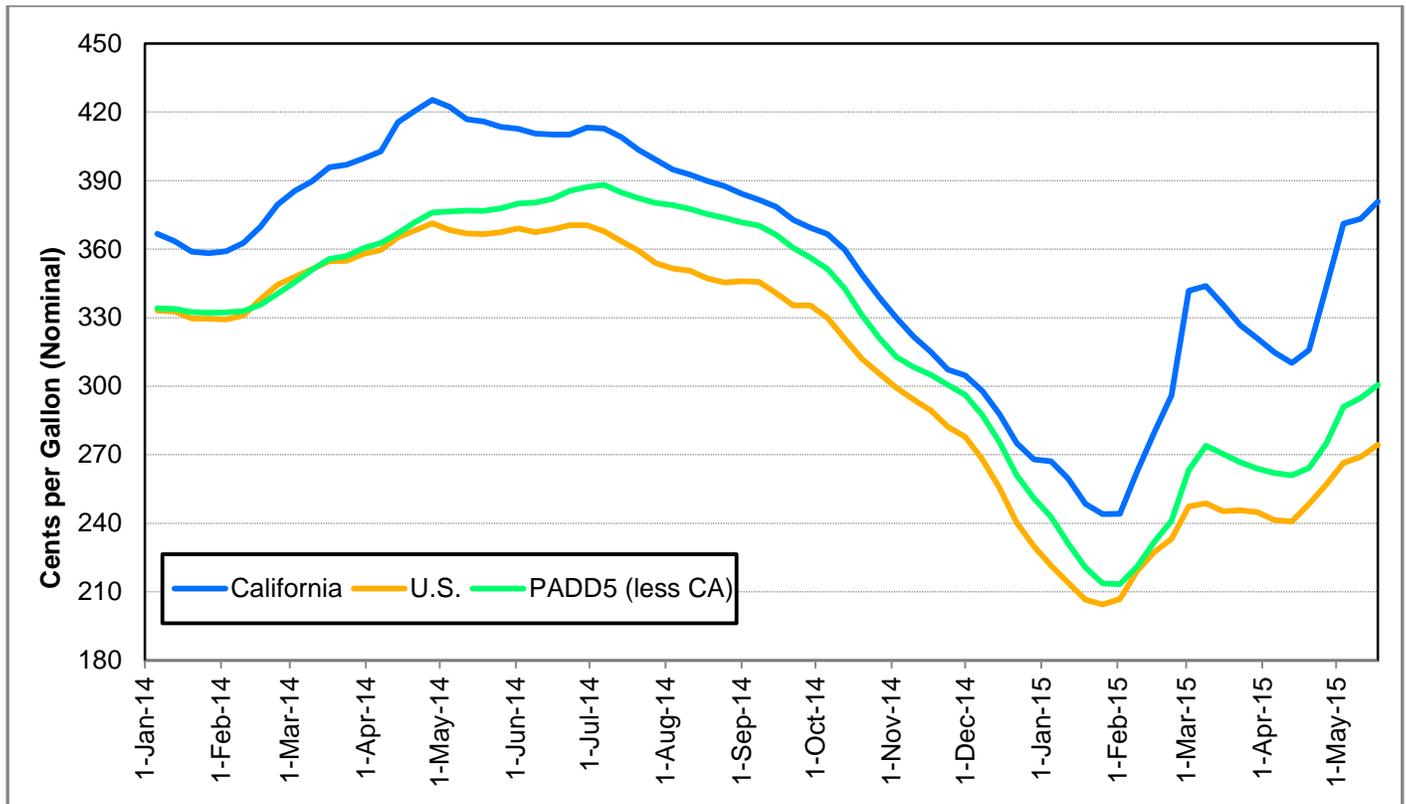
Source: EIA.

- The growth of Saudi Arabian output has slowed substantially, showing gains of less than 1 percent from March to April. This is much slower growth than was seen from February to March, but production continues to increase, according to statistics from the Organization of the Petroleum Exporting Countries (OPEC). Total OPEC production shows a similarly small monthly increase.

The slowdown of output growth and decline in both storage and Canadian imports is a step toward resolving the contradiction of rising trends in both price and quantity supplied that was noted last month.

Gasoline and Diesel Retail Prices and Margins

Figure 3: Regular Grade Gasoline Retail Prices, California vs. PADD5⁴ vs. United States



Source: EIA.

California gasoline prices rose during most of April and into early May. Although crude oil prices have continued to make new highs for 2015, after a sizable dip during April, gasoline prices have risen even faster than crude oil prices.

California gasoline prices remain higher than usual when compared with U.S. gasoline prices, with the difference sitting at \$1.06 in the third week of May. This is a sharp increase from the already high difference of 67 cents seen during the third week of April. The difference is much higher than the 2014 average difference of 39 cents and is now at the highest level of the year. This large difference is likely due at least in part to the long list of refinery outages noted on page 1.

Regular Gasoline Prices

May 2014 vs 2015 (Percent Change)

California	11% lower
U.S.	27% lower
West Coast	22% lower

April 2015 Averages

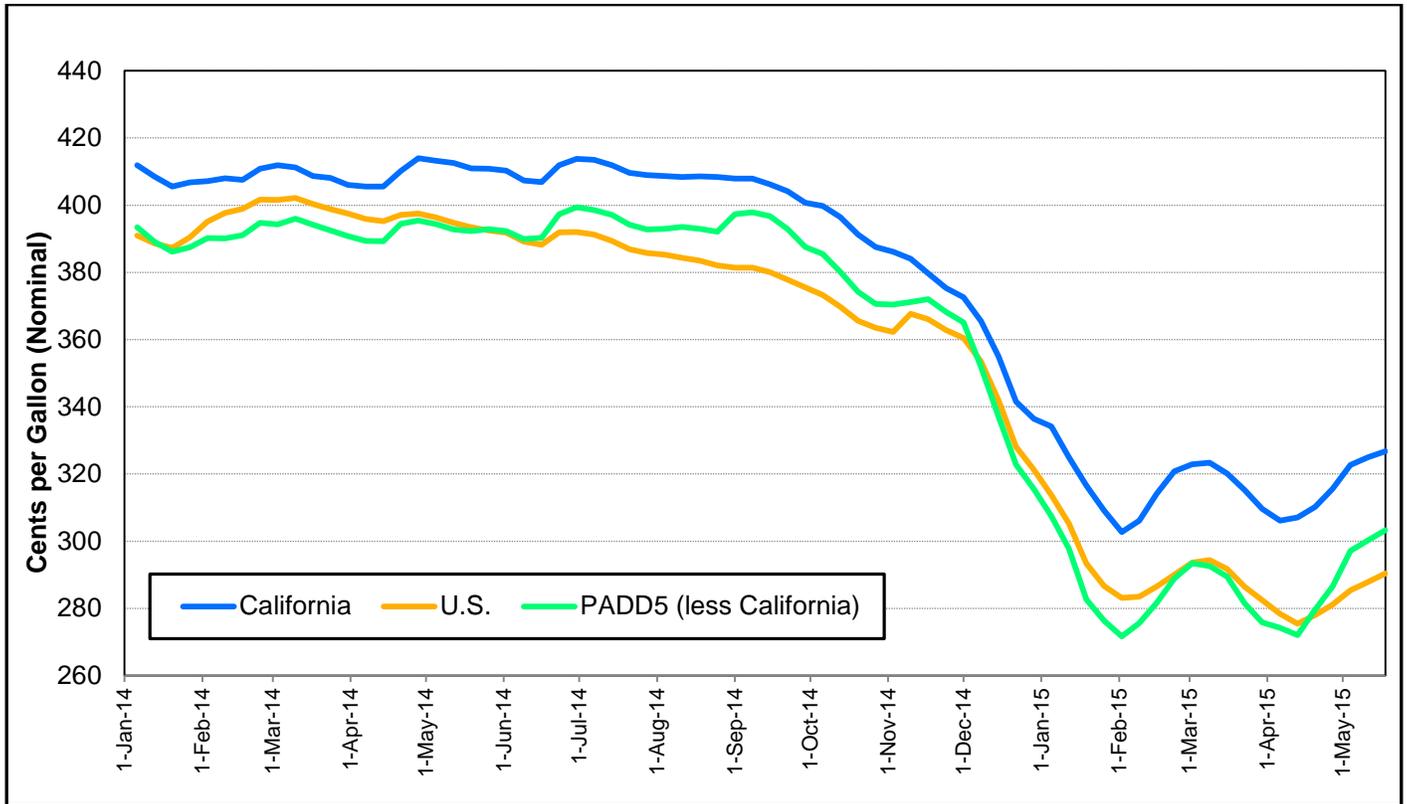
California	\$3.21
U.S.	\$2.47
West Coast	\$2.66

Week of May 18, 2015

California	\$3.81
U.S.	\$2.74
West Coast	\$3.01

³ PADD stands for *Petroleum Administration for Defense Districts*. PADD 5 includes the states of Hawaii, Alaska, Washington, Oregon, California, Nevada, and Arizona. West Coast is being defined as all PADD 5 states less California for this report.

Figure 4: No. 2 Diesel Ultra-Low-Sulfur Retail Prices, California vs. PADD5 vs. United States



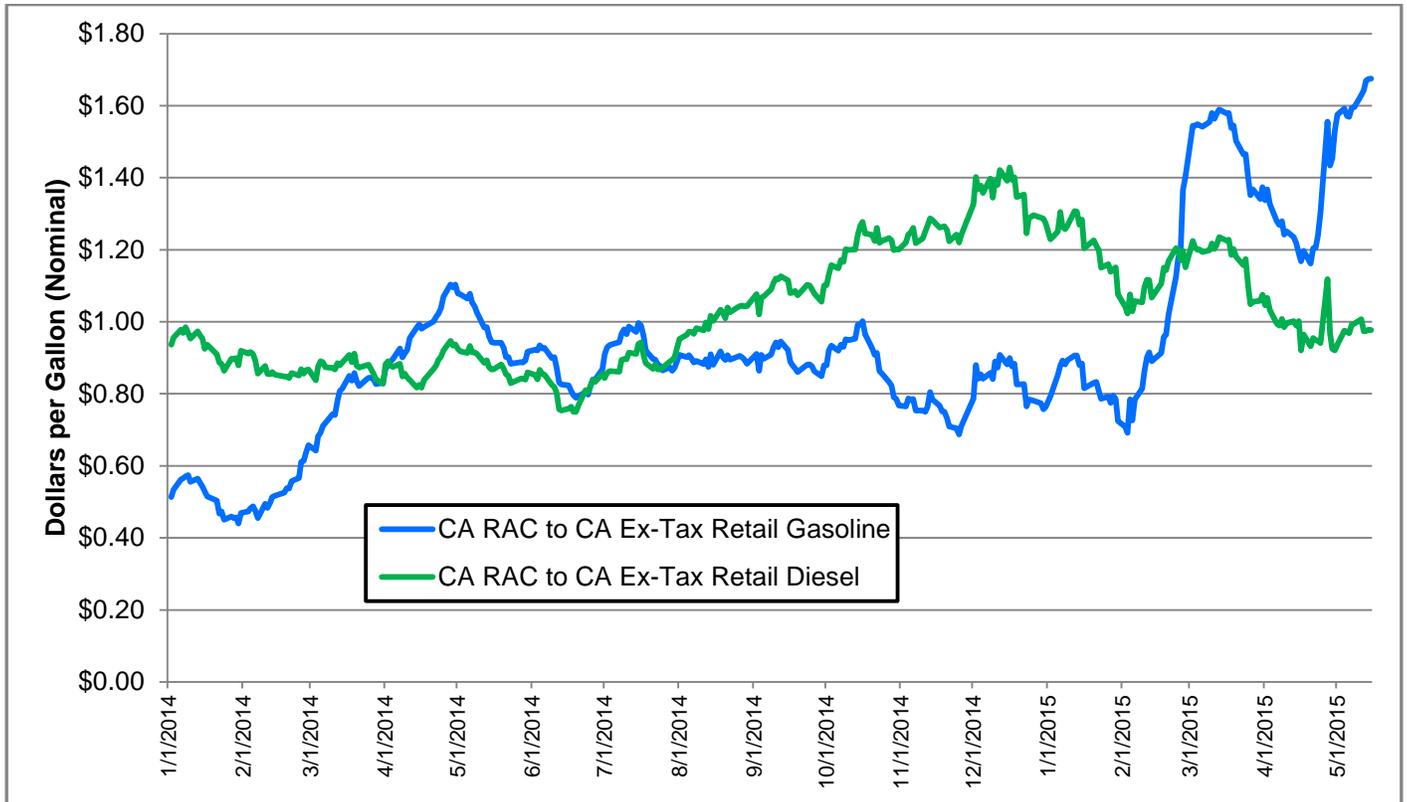
Source: EIA.

The price of California diesel has not rebounded from the 2015 low to the same extent as the price of gasoline. After increasing during most of April and May, the price reached \$3.27, which is below the 2015 high of \$3.34, which occurred on January 5.

Like California gasoline prices, California diesel prices remain higher than usual when compared with U.S. gasoline prices, with the difference sitting at 37 cents in the third week of May, which is a new high for 2015. This differential is about twice as high as the 2014 average difference of 18 cents. The California refinery outages seem to have had less effect on diesel prices than on gasoline prices.

<u>Diesel Prices</u>	
<u>May 2014 vs 2015</u> (Percent Change)	
California	21% lower
U.S.	27% lower
West Coast	24% lower
<u>April 2015 Averages</u>	
California	\$3.10
U.S.	\$2.78
West Coast	\$2.78
<u>Week of May 18, 2015</u>	
California	\$3.27
U.S.	\$2.90
West Coast	\$3.03

Figure 5: CA-RAC to Ex-Tax California Gasoline and Diesel Margins



Source: EIA and Oil Price Information Service.

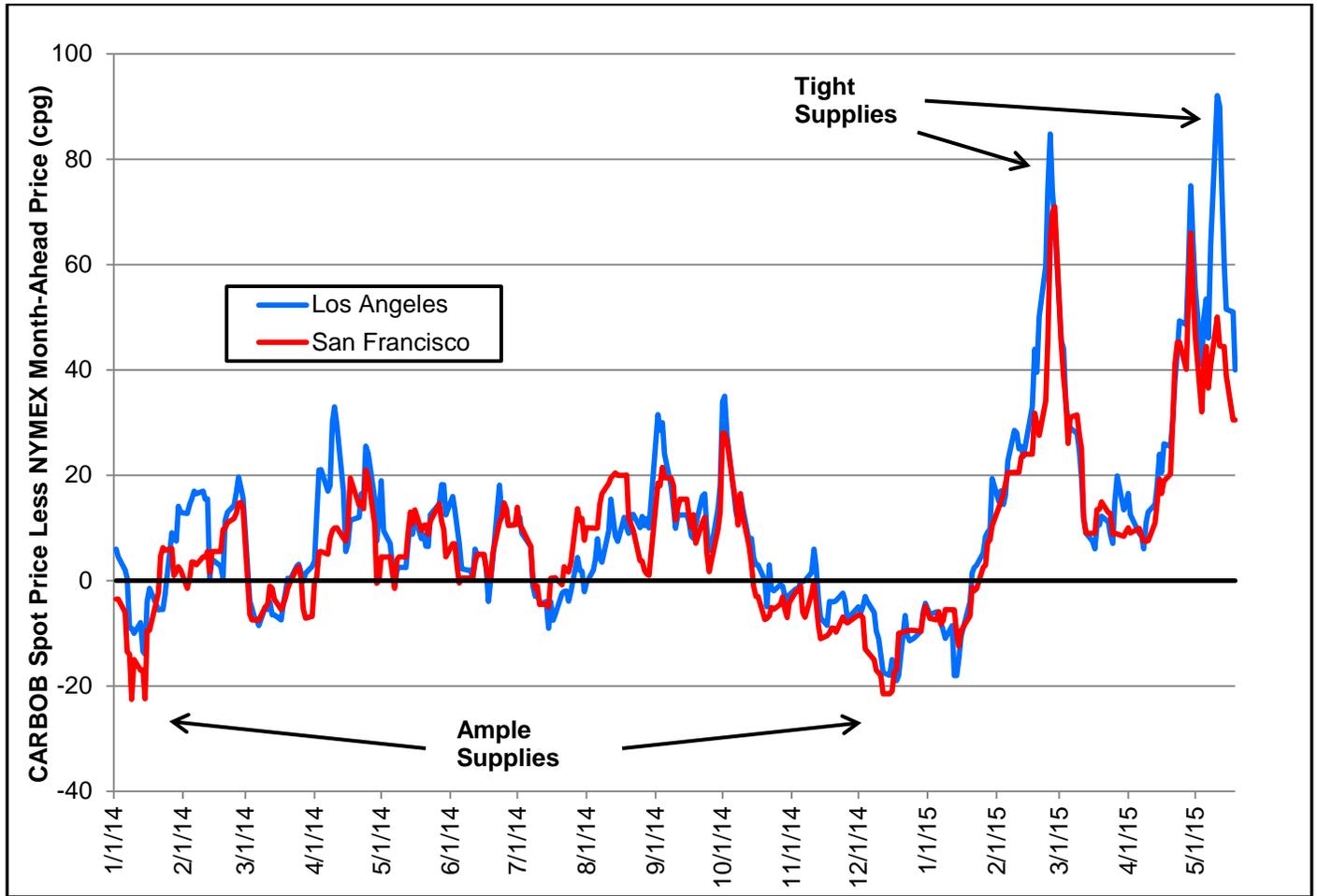
The average May 18 CA-RAC-to-ex-tax retail margin⁴ was \$1.67 for regular gasoline and 98 cents for diesel (see **Figure 4**). Gasoline and diesel margins have shown divergent trends over the past month: the gasoline margin has increased 51 cents, while the diesel margin fell 6 cents from April levels.

The refinery outages during May, which were noted on page 1, would likely explain at least part of the sharp increase in gasoline margins. When this increase is added to the increase in crude oil prices, a large portion of the gasoline price increase could be explained. In any case, gasoline margins have risen and now exceed the highs of March 2015, without affecting diesel margins, which remain near their average 2014-2015 levels.

Crude to Retail Margins	
May 2014 vs 2015 (Percent Change)	
Gasoline	67% higher
Diesel	11% higher
April 2015 Averages	
Gasoline	\$1.35
Diesel	\$1.04
May 18, 2015	
Gasoline	\$1.67
Diesel	\$0.98

⁴ The RAC-to-retail margin refers to the difference between the retail price and the refiners acquisition cost for crude oil. Thus, it includes all costs of producing gasoline or diesel. "Ex-tax" refers to the removal of all California taxes on the price of fuel, which is done to remove any distortions from taxes that may affect this calculation.

Figure 6: California Spot Gasoline to NYMEX Futures Price Spread



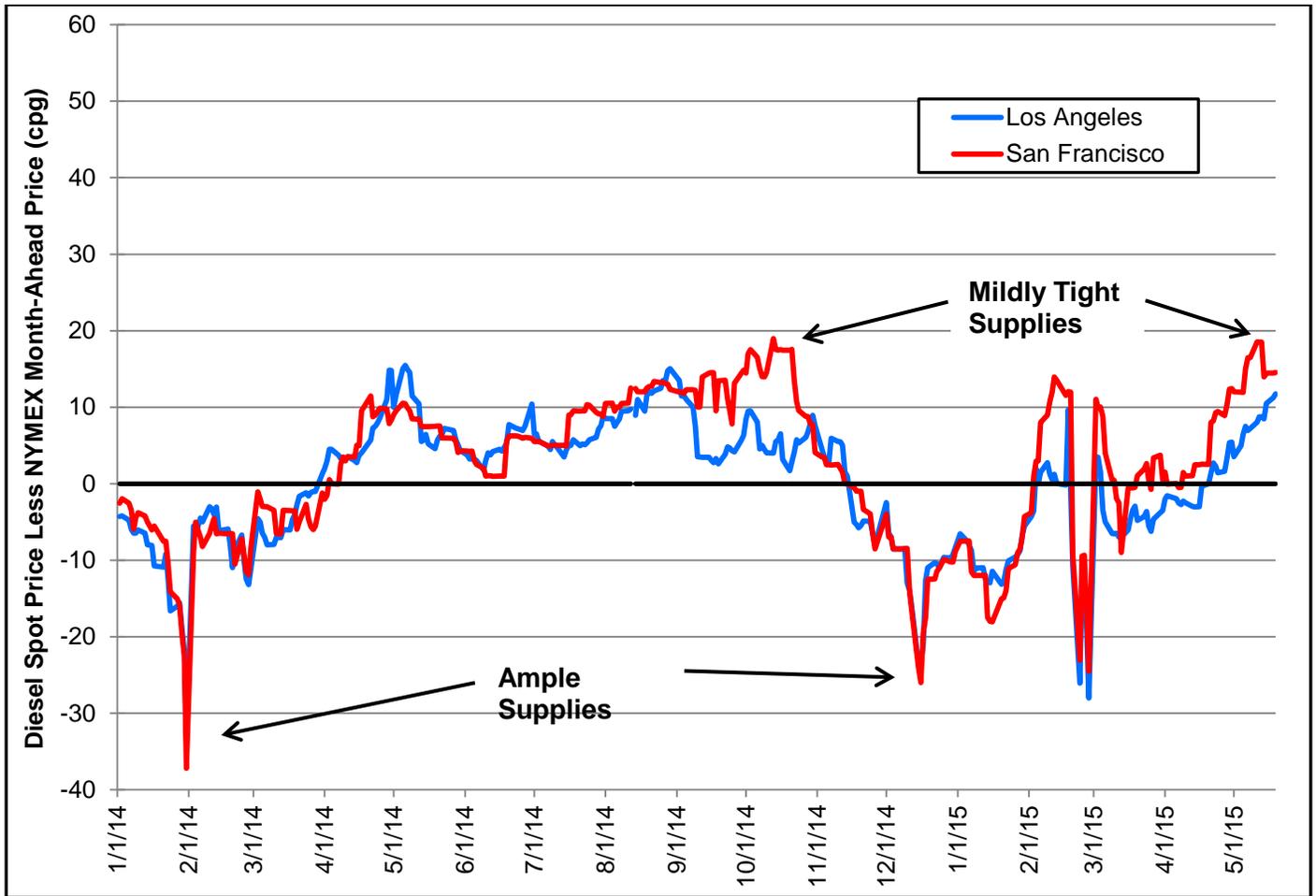
Source: EIA and Oil Price Information Service.

The spot-futures spread⁵ peaked on February 18, the date of the Torrance refinery explosion, due to the unexpected decrease in gasoline production. (See Figure 6.) It peaked again on April 29, and in Los Angeles it peaked a third time on May 11. The latter peaks are related to the refinery outages noted on page 1 and resulting brief spikes in demand to purchase gasoline on the wholesale market in order to make up for the lost production.

<u>Gasoline Spot-Futures Spread</u>	
<u>May 2014 vs 2015</u> (cents)	
Los Angeles	50¢ higher
San Fran.	33¢ higher
<u>May 2015 Averages</u>	
Los Angeles	59¢
San Francisco	40¢

⁵ A higher spread between the state's spot fuel prices and the New York Mercantile Exchange (NYMEX) futures price indicates supplies are tighter in California, and a lower or negative spread indicates the market is relatively well-supplied compared to the rest of the country. The NYMEX futures price reflects the national market, while California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) is a gasoline blend unique to California and is usually sold at a premium to the NYMEX.

Figure 7: California Spot Diesel to NYMEX Futures Price Spread



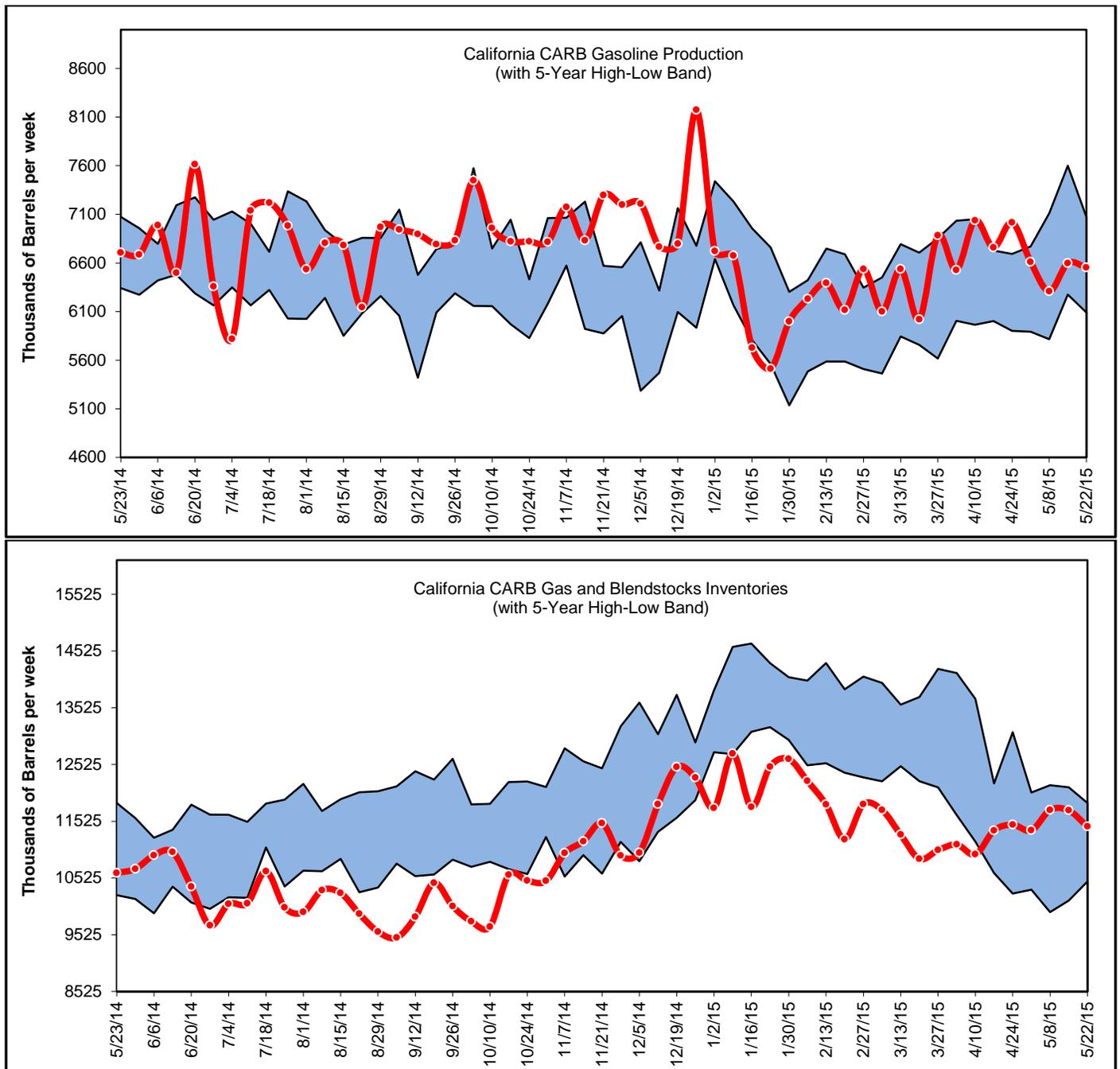
Source: EIA and Oil Price Information Service.

In spite of the refinery outages and in stark contrast to the gasoline market, the diesel market is only mildly tight at the present time. The diesel market appears to have gone from being amply supplied in late 2014 and early 2015 to a mildly undersupplied situation. (See Figure 7.) At no time during 2014 and 2015 has the diesel market approached the extremely tight situations observed in the gasoline market during recent months.

<u>Diesel Spot-Futures Spread</u>	
<u>May 2014 vs 2015</u> (cents)	
Los Angeles	unchanged
San Fran.	8¢ higher
<u>April 2015 Averages</u>	
Los Angeles	8¢
San Francisco	15¢

California Gasoline and Diesel Production and Inventories

Figure 7: Gasoline Production and Inventories

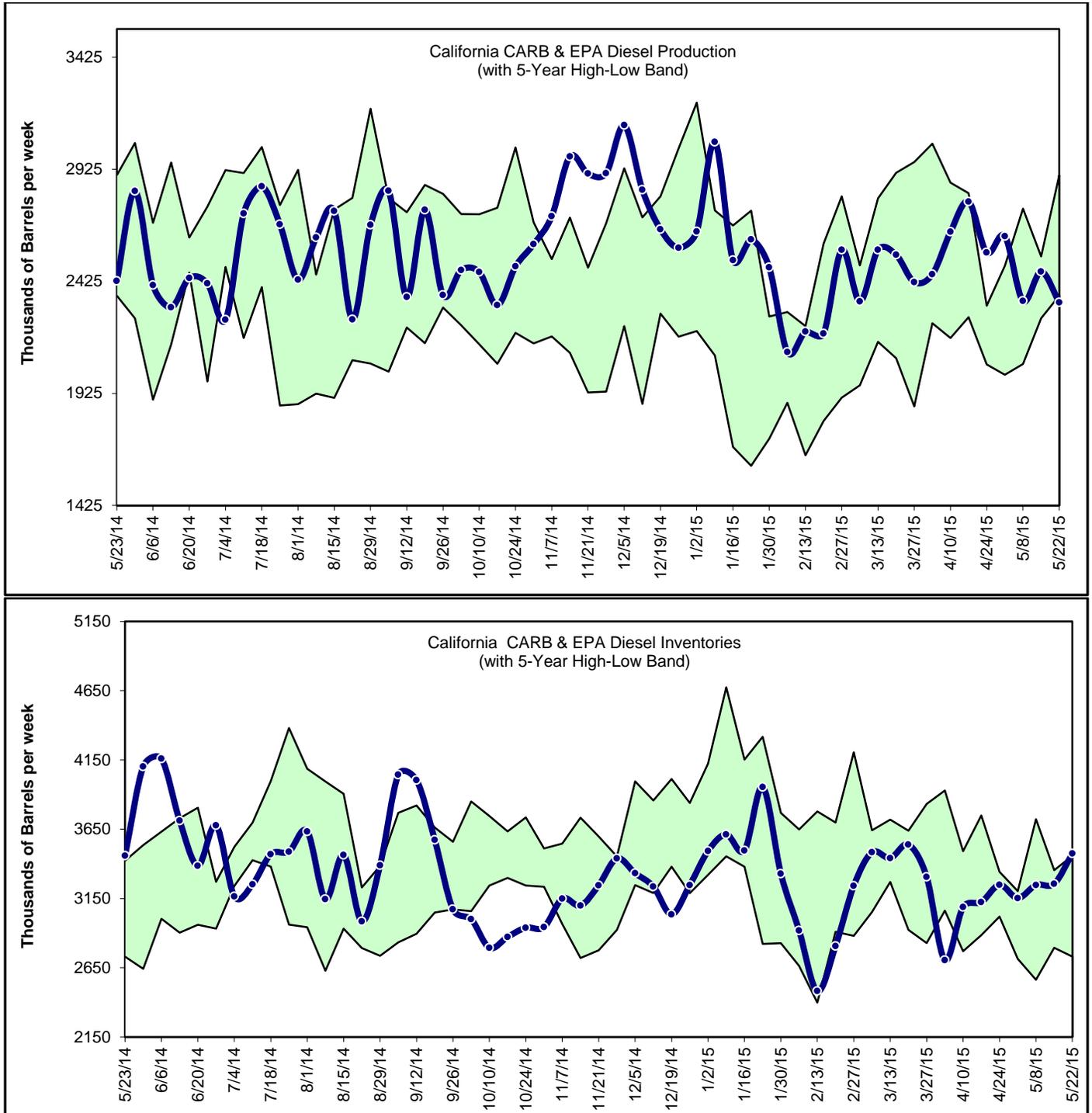


Source: Petroleum Industry Information Reporting Act data.

California gasoline production continues to stay within about 500,000 barrels of 6.5 million barrels per week and has done so since mid-February. Since late March, inventories have been moving upward with some variation, going from 10.8 million barrels to the current level of 11.4 million barrels.

During almost all of April and May, gasoline production and inventories have managed to stay within the five-year bands in spite of the refinery outages. Production is at about the same level as a year ago, and inventories are about 900,000 barrels higher.

Figure 8: Diesel Production and Inventories



Source: Petroleum Industry Information Reporting Act data.

Diesel production has fallen since mid-April and has moved from the top of the five-year band to the bottom. In spite of this, diesel inventories have moved in the opposite direction during the same period and are now just above the five-year band.

Current production and inventory levels are nearly the same as a year ago.