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June 2019

EXECUTIVE SUMMARY

As West Texas Intermediate (WTI) crude oil prices decreased by more than 10.0 percent between May and June, U.S. petroleum markets achieved several notable milestones in June:

- ▶ Record U.S. crude oil production (12.2 million barrels per day, mb/d) was sustained despite less drilling;
- ▶ Record crude oil exports of 3.3 mb/d helped reduce U.S. net petroleum imports to just 1.3 mb/d;
- ▶ Refinery inputs, the 2nd highest ever for June, drove petroleum inventories above the 5-year average; and,
- ▶ Petroleum demand reached its highest level for June since 2005.

These results highlight how the growth in domestic production has driven prices lower at home and abroad. Prices remained cushioned in mid-July even as [BSEE reported](#) preparations for Tropical Storm Barry shut-in more than 1.0 mb/d of oil production along the U.S. Gulf Coast. The total domestic supply of liquids increased by 1.9 mb/d compared with June 2018, leading the world and compensating for supply cuts by OPEC nations.

If there was any weakness in the results, it was that the strong U.S. petroleum demand seen in the first half of 2019 included year-on-year decreases for gasoline and distillates/diesel fuel despite lower prices. By several indications, the [freight trucking sector appeared to be in a recession](#). As distillate demand and inventories are key inputs to API's economic indicator, the API D-E-I (Distillate Economic Indicator) decreased by 0.2 percentage points in June with a three-month average level of -0.2, which has accurately captured the slowing of U.S. industrial production. Please see the [following chart](#) for comparisons.

JUNE HIGHLIGHTS (Click hyperlinks to advance to any section)**Demand**

- **U.S. petroleum demand (21.0 mb/d) rebounded to its highest for June since 2005**
 - In the first half of 2019, gasoline demand fell by 0.2 percent y/y.
 - Distillate demand (4.1 mb/d) accelerated in June.
 - Second strongest jet fuel demand for June (1.8 mb/d).
 - Marine shipping drove residual fuel oil demand higher in June.
 - Strongest refinery and petrochemical other oils demand (5.1 mb/d) for June since 2006.

Prices & Macroeconomy

- **Domestic and international crude oil prices decreased by 10 percent between May and June.**
- **U.S. leading economic indicators slipped but remain at relatively strong levels.**

Supply

- **Oil production records for the U.S. (12.2 mb/d) and Texas (5.0 mb/d) sustained despite less drilling.**

International trade

- **Record U.S. petroleum exports (8.4 mb/d) and decreased imports improved the U.S. petroleum trade balance by 1.6 mb/d y/y in June.**

Industry operations

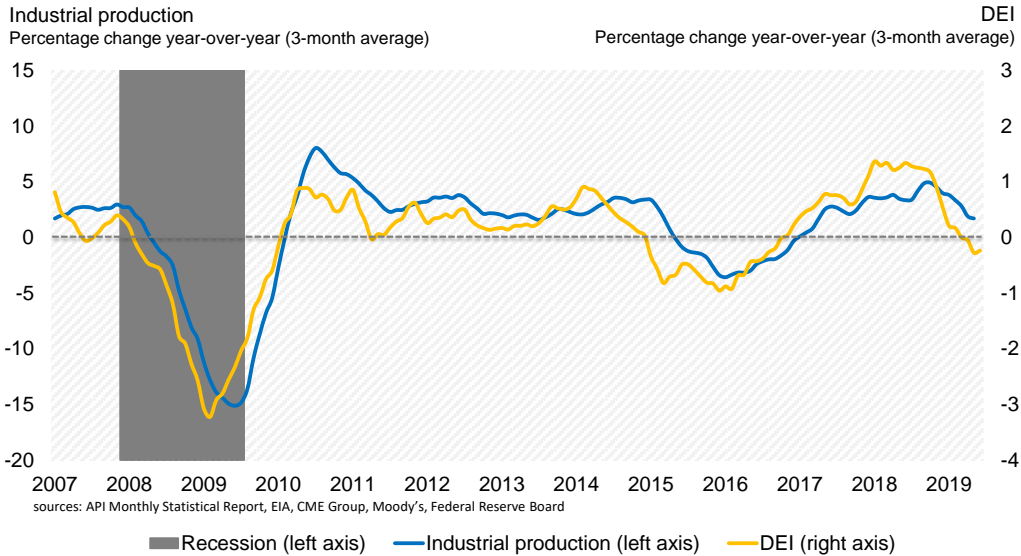
- **June refinery throughput and capacity utilization increased as refinery outages decreased.**

Inventories

- **Refined products drove total inventory building in June.**

The API D-E-I (Distillate Economic Indicator) – June 2019

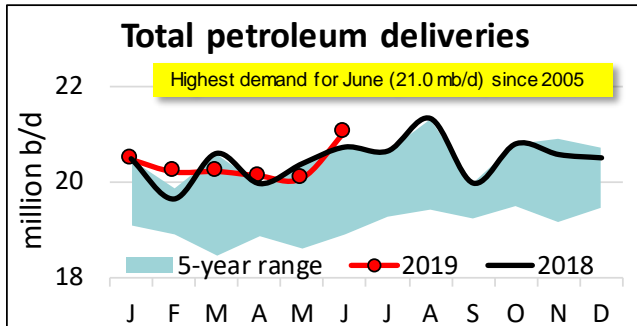
➤ The DEI value of -0.2 for June and three-month average of -0.2 suggests a continued slowing of industrial production



Details by section

Demand

U.S. petroleum demand (21.0 mb/d) rebounded to its highest for June since 2005

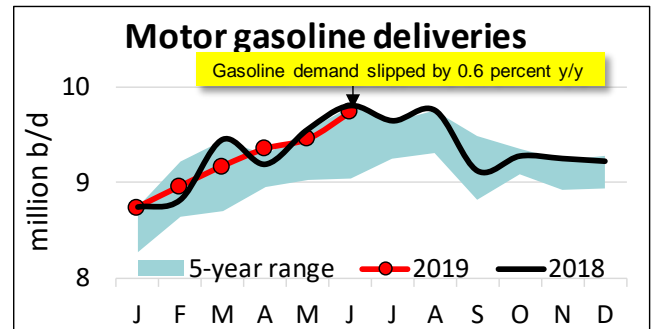


Petroleum demand growth accelerated in June due to a combination of the summer driving season and lower prices.

U.S. petroleum demand, as measured by total domestic petroleum deliveries, was 21.0 mb/d in June. This was an increase of 4.8 percent from May and 1.5 percent compared with June 2018. Through the first half of the year, petroleum demand rose by 0.3 percent compared with the first half of 2018.

Gasoline

In the first half of 2019, gasoline demand fell by 0.2 percent y/y



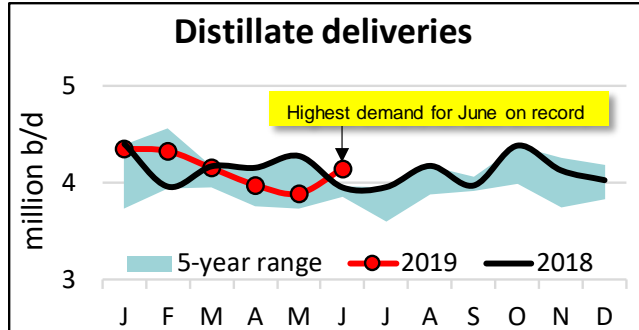
Consumer gasoline demand, measured by total motor gasoline deliveries, was 9.7 mb/d in June. This was a seasonal increase of 3.0 percent from May but a decrease of 0.6 percent compared with June 2018 – even as gasoline prices were 5.6 percent below those of June 2018 according to the [American Automobile Association \(AAA\)](#).

Year-to-date through June, gasoline demand fell by 0.2 percent y/y, despite gasoline prices that were 5.7 percent lower than those in the first half of 2018. The overall level of demand was solid, but

this was the first time since 2013 that gasoline demand failed to grow in the first half of the year.

Distillate Fuel Oil

Distillate demand (4.1 mb/d) accelerated in June



In June, distillate deliveries of 4.1 mb/d – a record for the month of June – increased by 6.5 percent from May and 4.8 percent over June 2018.

However, through the first half of 2019, distillate demand fell by 0.4 percent from the same period one year ago despite average diesel prices that were 0.6 percent lower than those from the first half of 2018, according to [AAA](#).

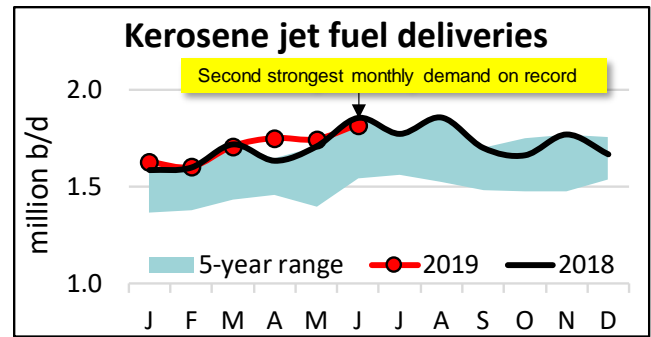
About 96.0 percent of distillate demand in June was for ultra-low sulfur distillate (ULSD), which is mainly used in heavy-duty transportation, including road freight trucking and agriculture. The fuel data corroborate reports by ACT Research that [the U.S. trucking sector appears to be experiencing a recession](#).

The remainder (4.0 percent) of distillate demand was high-sulfur distillate fuel (HSD), which is a heating fuel in the residential and commercial sectors and a marine fuel when blended to upgrade heavy fuel oil. In June, HSD deliveries of 149 thousand barrels per day (kb/d) increased by 35.5 percent from May and 30.7 percent compared with June 2018.

Kerosene Jet Fuel

Second strongest jet fuel demand for June (1.8 mb/d)

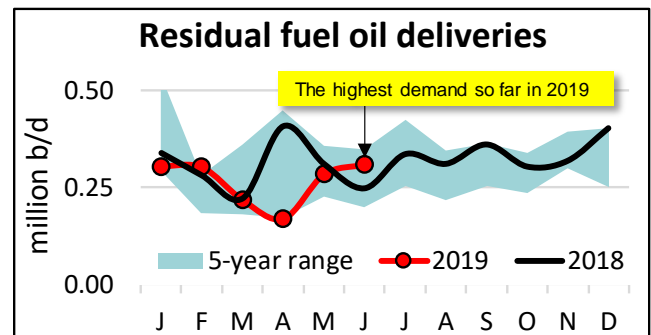
Kerosene jet fuel demand, at 1.8 mb/d in June, increased seasonally by 4.2 percent from May but decreased by 1.9 percent compared with June 2018.



Consistent with reports by the [International Air Transport Association \(IATA\)](#), passenger demand was solid with slower growth. However, [air cargo freight remained weak](#) in response to slower global trade and economic growth.

Residual Fuel Oil

Marine shipping drove residual fuel oil demand higher in June

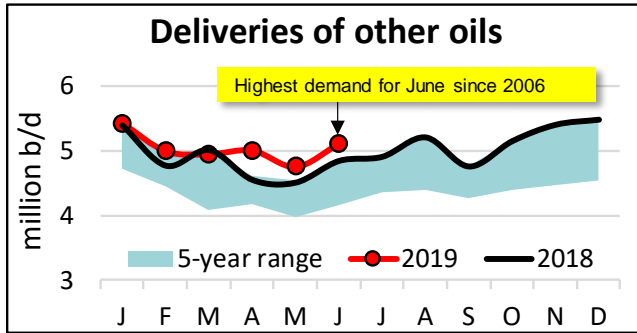


Residual fuel oil demand was 308 kb/d in June, which represented an increase of 8.8 percent from May and 23.2 percent versus June 2018.

Residual fuel oil is used in electric power production, space heating, marine vessel bunkering and other industrial applications. Marine shipping was a main driver, and the [Baltic Dry Shipping Index](#) of ship charter rates increased by more than 20 percent in June and by another 34 percent through mid-July to reach its highest levels since January 2014, so global trade appears to have picked up in some sectors.

Other Oils

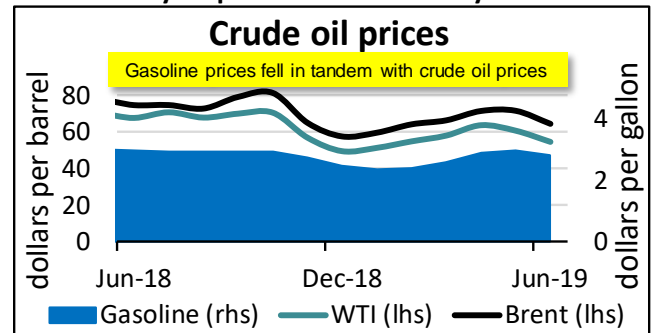
Strongest refinery and petrochemical other oils demand (5.1 mb/d) for June since 2006



Refining and petrochemical demand for liquid feedstocks, naphtha, and gasoil (“other oils”) was 5.1 mb/d in June, an increase of 7.4 percent from May and 5.9 percent above June 2018. This was the highest other oils demand for June since 2006.

Prices

Domestic and international crude oil prices decreased by 10 percent between May and June

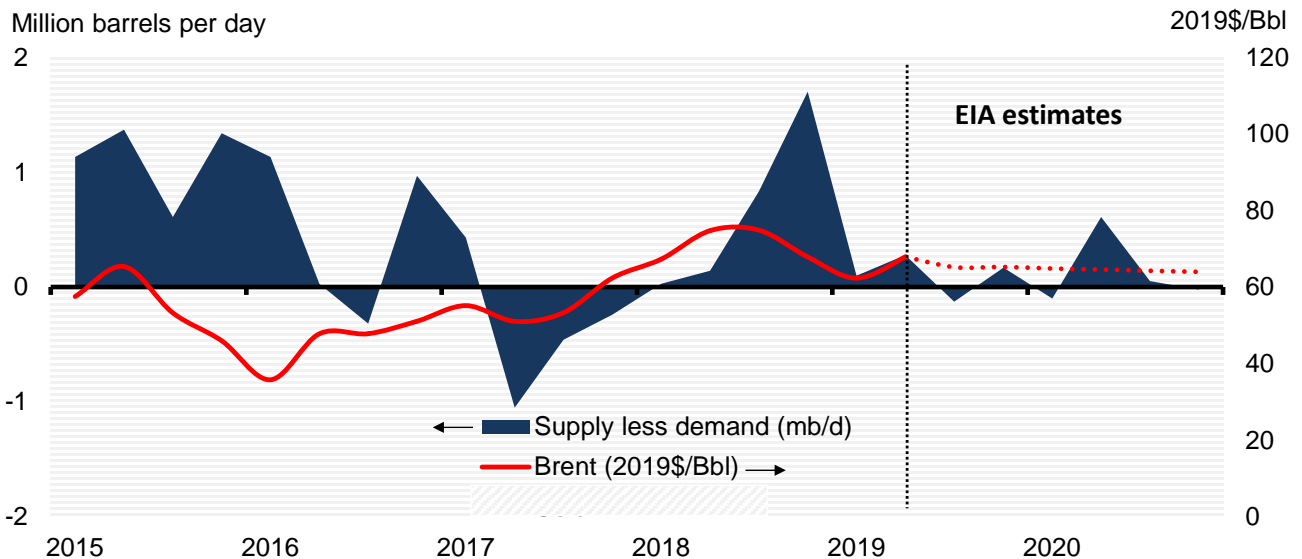


Domestic WTI crude oil prices averaged \$54.66 per barrel in June, a decrease of 10.1 percent (\$6.17 per barrel) from May and 19.5 percent (\$13.21 per barrel) from June 2018. By contrast, international Brent crude oil prices averaged \$64.22 per barrel, down 10.0 percent from May.

EIA suggests the global oil market should be balanced

EIA estimates global oil demand growth to slow in 2019 and be met almost entirely by the U.S.

EIA global supply/demand estimates as of July 2019



sources: EIA STEO (July 2019), Bloomberg

As prices fell, the difference between domestic and international crude oil prices narrowed by nearly \$1.00 per barrel to \$9.56 per barrel in June.

As domestic and international crude oil prices fell and the summer driving season continued, the average U.S. gasoline price decreased to \$2.80 per gallon in June from \$2.95 per gallon in May, according to [AAA](#) reports.

[EIA estimates](#) that global oil markets have recently been balanced and that Brent crude oil prices could remain steady in coming quarters.

Macroeconomy

U.S. leading economic indicators slipped but remain at relatively strong levels

API's D-E-I (Distillate Economic Indicator), which includes industry fundamentals, prices and interest rates, decreased by 0.2 percentage points in June with a three-month average of -0.2, which suggested a continued slowing in industrial production.

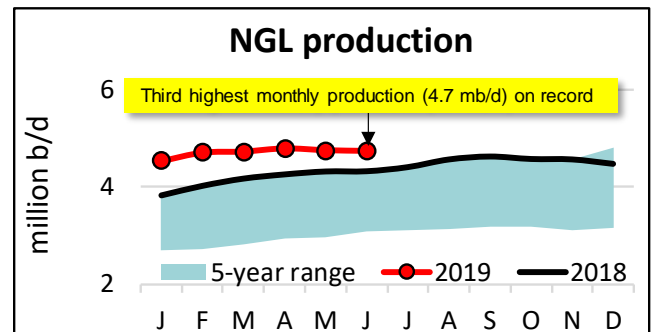
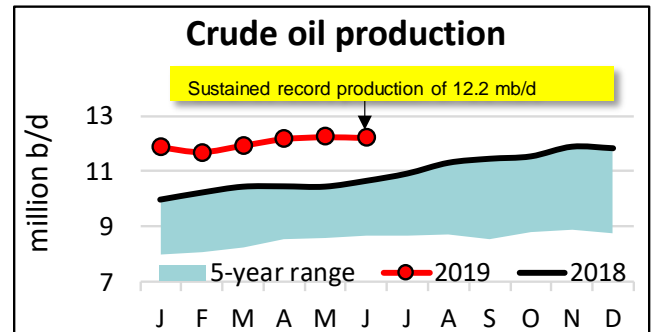
The [Institute for Supply Management's Purchasing Managers Index \(PMI\)](#) registered 51.7 in June, which was an decrease of 0.4 percentage points from a reading of 52.1 in May. Any value above 50.0 suggests an expansion. New orders remained flat, while production and employment increased. Growth occurred in 12 of the 18 manufacturing sectors surveyed, which was one more than in May.

The [University of Michigan's consumer sentiment index](#) slipped to a reading of 98.2 in June from 100.0 in May. The overall level of consumer sentiment remained strong. However, the survey suggested the decline was due to households with incomes in the top third of the distribution, who mentioned the negative impact of tariffs.

According to the [Bureau of Labor Statistics \(BLS\)](#), labor markets remained near record-low unemployment. The unemployment rate rose by 0.1 percentage points to 3.7 percent even though U.S. non-farm payrolls grew by 224,000 in June.

Supply

Oil production records for the U.S. (12.2 mb/d) and Texas (5.0 mb/d) sustained despite less drilling



In June, the U.S. sustained its world-leading U.S. crude oil production of 12.2 mb/d as well as natural gas liquids production of 4.7 mb/d. Oil production in Texas also held steady at 5.0 mb/d in June.

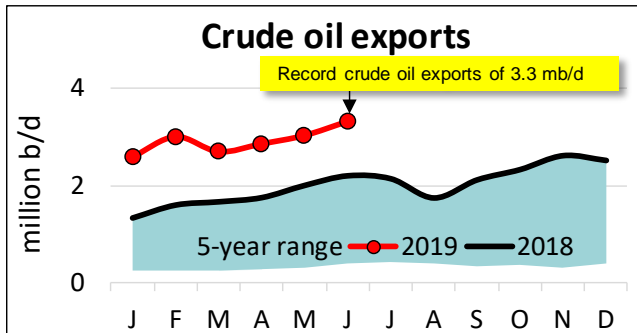
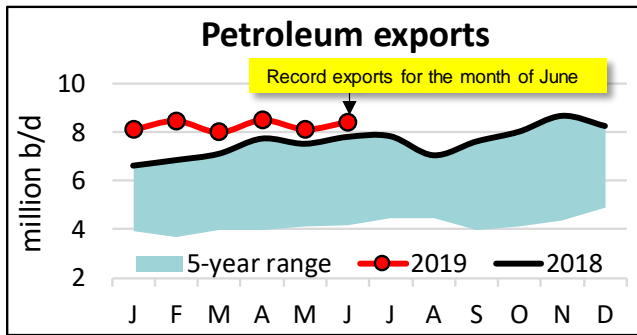
The strong oil production came despite less drilling activity this quarter. [Baker Hughes](#) reported an average of 805 oil-targeted rigs in Q2 2019 falling to 784 as of July 12, 2019. Activity was down from 848 oil-targeted rigs running in Q1 2019.

However, as highlighted in the latest [API Industry Outlook](#), pipeline infrastructure expansions in the Permian basin have enabled some drilled but uncompleted well (DUCs) to be brought to market. The [U.S. Energy Information Administration \(EIA\)](#) reported that the backlog of DUCs decreased in June at the same time as the WTI-Brent differential narrowed, suggesting more effective market flows.

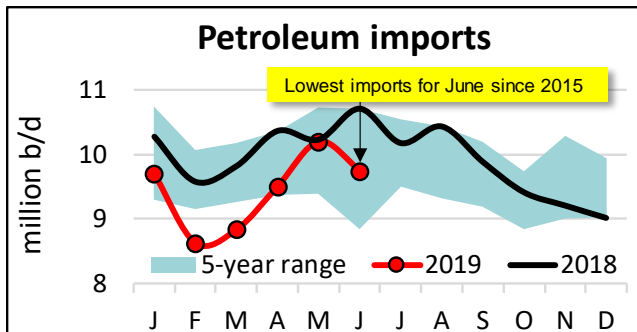
In preparation for Tropical Storm Barry, the [Bureau of Safety and Environmental Enforcement \(BSEE\)](#) reported that more than 1.0 mb/d of oil and 1.2 billion cubic feet per day (bcf/d) of natural gas production were temporarily shut-in on the U.S. Gulf Coast.

International trade

Record U.S. petroleum exports (8.4 mb/d) and decreased imports improved the U.S. petroleum trade balance by 1.6 mb/d y/y in June



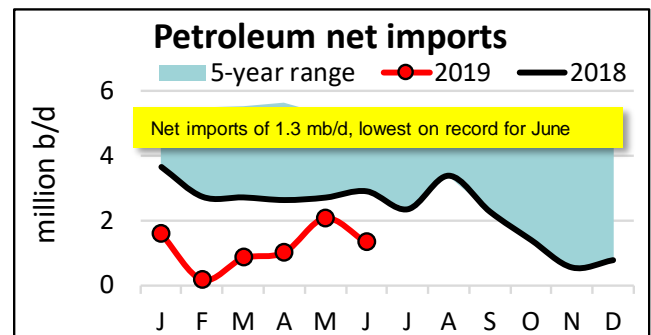
Total U.S. petroleum exports – crude oil and refined products – hit a record for the month of June at 8.4 mb/d. This was an increase of 3.6 percent from May and 7.9 percent versus June 2018. The increase was driven mainly by crude oil exports, which set a new record at 3.3 mb/d.



At the same time, U.S. imports of crude oil and refined products both fell between May and June. Total petroleum imports were 9.7 mb/d in June, down 4.4 percent from May and 9.0 percent from June 2018.

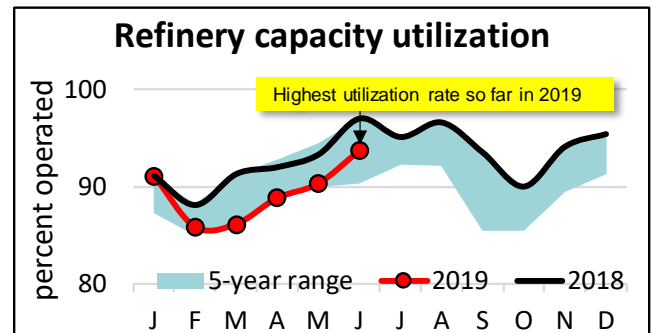
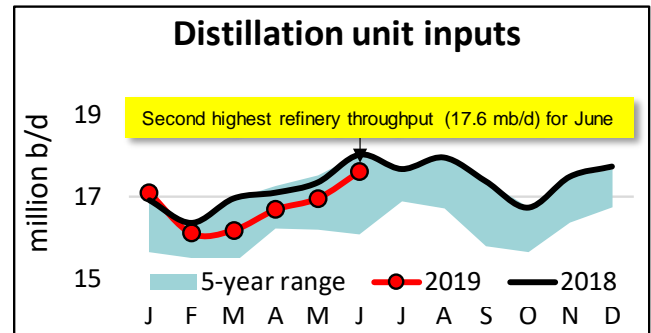
Through the first half of the year, petroleum imports decreased by 7.1 percent or more than 0.7 mb/d. This marked continued U.S. progress towards becoming a petroleum net exporter.

Overall, U.S. petroleum net imports were 1.3 mb/d in June, down by 1.6 mb/d compared with June 2018 – a testament to the U.S. energy revolution.



Industry operations

June refinery throughput and capacity utilization increased as refinery outages decreased

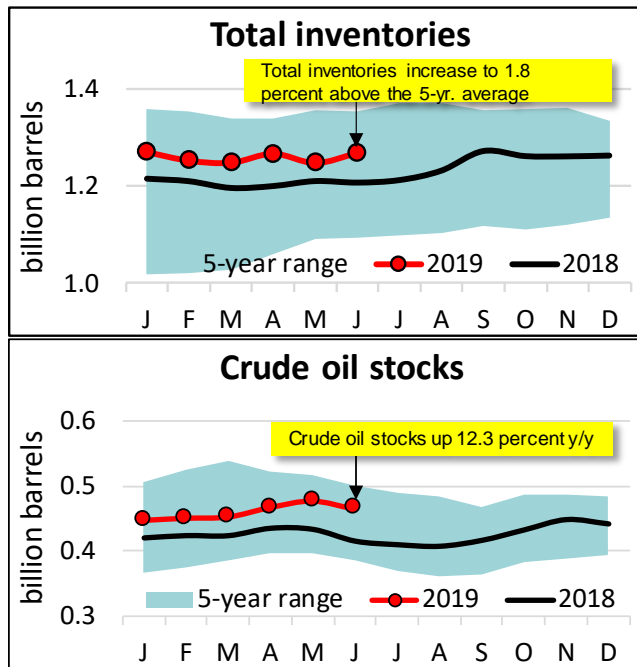


In June, gross inputs to U.S. refineries were 17.6 mb/d and implied a capacity utilization rate of 93.7 percent.

The difference of 0.7 kb/d higher gross inputs in June than May tracked closely with the 0.6 mb/d decrease in refinery outages, reported by Bloomberg.

Inventories

Refined products drove total inventory building in June



In June, total petroleum inventories, including crude oil and refined products but excluding the Strategic Petroleum Reserve, were 1.27 billion barrels. This was an increase of 0.1 percent from May and 5.1 percent above June 2018 – to a level that was 1.8 percent above the 5-year average.

Within the June total, crude oil inventories of 0.47 billion barrels decreased by 2.7 percent from May but were 12.3 percent above those of June 2018. Meanwhile, refined product stocks rose by 4.2 percent between May and June and 1.3 percent y/y.

ESTIMATED UNITED STATES PETROLEUM BALANCE¹
(Daily average in thousands of 42 gallon barrels)

| Disposition and Supply | June | | | Year-to-Date | | |
|--|-------------------|---------|----------|-------------------|---------|----------|
| | 2019 ² | 2018 | % Change | 2019 ³ | 2018 | % Change |
| Disposition: | | | | | | |
| Total motor gasoline..... | 9,739 | 9,798 | (0.6) | 9,240 | 9,261 | (0.2) |
| Finished reformulated..... | 3,194 | 3,324 | (3.9) | 2,992 | 3,109 | (3.8) |
| Finished conventional..... | 6,545 | 6,475 | 1.1 | 6,248 | 6,152 | 1.6 |
| Kerosene-jet..... | 1,818 | 1,854 | (1.9) | 1,710 | 1,684 | 1.6 |
| Distillate fuel oil..... | 4,144 | 3,954 | 4.8 | 4,140 | 4,155 | (0.4) |
| ≤ 500 ppm sulfur..... | 3,995 | 3,840 | 4.0 | 4,038 | 3,994 | 1.1 |
| ≤ 15 ppm sulfur..... | 3,989 | 3,838 | 3.9 | 4,024 | 3,982 | 1.0 |
| > 500 ppm sulfur..... | 149 | 114 | 30.7 | 102 | 161 | (36.6) |
| Residual fuel oil..... | 308 | 250 | 23.2 | 263 | 303 | (13.2) |
| All other oils (including crude losses)..... | 5,108 | 4,823 | 5.9 | 5,051 | 4,836 | 4.5 |
| Reclassified ⁴ | (104) | 27 | na | (66) | 48 | na |
| Total domestic product supplied..... | 21,013 | 20,705 | 1.5 | 20,339 | 20,286 | 0.3 |
| Exports..... | 8,414 | 7,801 | 7.9 | 8,257 | 7,270 | 13.6 |
| Total disposition..... | 29,427 | 28,506 | 3.2 | 28,596 | 27,557 | 3.8 |
| Supply: | | | | | | |
| Domestic liquids production | | | | | | |
| Crude oil (including condensate)..... | 12,204 | 10,672 | 14.4 | 12,013 | 10,386 | 15.7 |
| Natural gas liquids..... | 4,740 | 4,326 | 9.6 | 4,709 | 4,155 | 13.3 |
| Other supply ⁵ | 1,236 | 1,273 | (2.9) | 1,210 | 1,234 | (1.9) |
| Total domestic supply..... | 18,180 | 16,271 | 11.7 | 17,932 | 15,775 | 13.7 |
| Imports: | | | | | | |
| Crude oil (excluding SPR imports)..... | 7,315 | 8,480 | (13.7) | 7,114 | 7,948 | (10.5) |
| From Canada..... | 4,093 | 3,985 | 2.7 | 3,880 | 3,748 | 3.5 |
| All other..... | 3,222 | 4,495 | (28.3) | 3,234 | 4,200 | (23.0) |
| Products..... | 2,431 | 2,226 | 9.2 | 2,332 | 2,220 | 5.0 |
| Total motor gasoline (incl. blend.comp).... | 822 | 868 | (5.3) | 741 | 728 | 1.8 |
| All other..... | 1,609 | 1,358 | 18.5 | 1,591 | 1,492 | 6.7 |
| Total imports..... | 9,746 | 10,706 | (9.0) | 9,446 | 10,168 | (7.1) |
| Total supply..... | 27,926 | 26,977 | 3.5 | 27,378 | 25,943 | 5.5 |
| Stock change, all oils..... | (1,501) | (1,529) | na | (1,218) | (1,613) | na |
| Refinery Operations: | | | | | | |
| Input to crude distillation units..... | 17,627 | 18,044 | (2.3) | 16,786 | 17,133 | (2.0) |
| Gasoline production..... | 10,223 | 10,326 | (1.0) | 9,991 | 9,966 | 0.3 |
| Kerosene-jet production..... | 1,876 | 1,893 | (0.9) | 1,755 | 1,778 | (1.3) |
| Distillate fuel production..... | 5,364 | 5,406 | (0.8) | 5,128 | 5,031 | 1.9 |
| Residual fuel production..... | 416 | 348 | 19.5 | 372 | 424 | (12.3) |
| Operable capacity..... | 18,808 | 18,598 | 1.1 | 18,787 | 18,586 | 1.1 |
| Refinery utilization ⁶ | 93.7% | 97.0% | na | 89.3% | 92.2% | na |
| Crude oil runs..... | 17,221 | 17,666 | (2.5) | 16,466 | 16,778 | (1.9) |

1. Total supply, i.e., production plus imports adjusted for net stock change is equal to total disposition from primary storage. Total disposition from primary storage less exports equals total domestic products supplied. Information contained in this report is derived from information published in the API *Weekly Statistical Bulletin* and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2. Based on API estimated data converted to a monthly basis.

3. Data for most current two months are API estimates. Other data come from U.S. Energy Information Administration (including any adjustments).

4. An adjustment to avoid double counting resulting from differences in product classifications among different refineries and blenders.

5. Includes unaccounted-for crude oil, withdrawals from the SPR when they occur, processing gain, field production of other hydrocarbons and alcohol, and downstream blending of ethanol.

6. Represents "Input to crude oil distillation units" as a percent of "Operable capacity".

R: Revised. na: Not available.

ESTIMATED UNITED STATES PETROLEUM BALANCE¹
(Daily average in thousands of 42 gallon barrels)

| | June 2019 | May 2019 | June 2018 | % Change From | |
|---|--------------|-------------|--------------|---------------|----------|
| | | | | Month Ago | Year Ago |
| Stocks (at month-end, in millions of barrels): | | | | | |
| Crude oil (excluding lease & SPR stocks)..... | 466.0 | 478.7 | 414.8 | (2.7) | 12.3 |
| Unfinished oils..... | 96.9 | 99.7 | 92.6 | (2.8) | 4.7 |
| Total motor gasoline..... | 230.9 | 232.8 | 240.3 | (0.8) | (3.9) |
| Finished reformulated..... | 0.0 | 0.0 | 0.0 | (0.2) | (5.0) |
| Finished conventional..... | 22.5 | 22.6 | 24.7 | (0.4) | (8.7) |
| Blending components..... | 208.4 | 210.2 | 215.6 | (0.9) | (3.3) |
| Kerosene-jet..... | 39.9 | 38.8 | 40.8 | 2.8 | (2.1) |
| Distillate fuel oil..... | 127.3 | 130.3 | 120.4 | (2.3) | 5.7 |
| ≤ 500 ppm sulfur..... | 118.1 | 120.1 | 112.1 | (1.7) | 5.3 |
| ≤ 15 ppm sulfur..... | 115.0 | 117.6 | 107.8 | (2.2) | 6.7 |
| > 500 ppm sulfur..... | 9.2 | 10.2 | 8.3 | (9.8) | 11.2 |
| Residual fuel oil..... | 29.0 | 28.9 | 30.0 | 0.3 | (3.4) |
| All other oils..... | 278.6 | 257.9 R | 268.3 | 8.0 | 3.8 |
| Total all oils..... | 1,268.6 | 1267.1 R | 1,207.2 | 0.1 | 5.1 |