



Vol. 45 No. 8

Published September 22, 2021

August 2021

### EXECUTIVE SUMMARY

In August, U.S. consumer sentiment experienced one of its sharpest drops on record since 1978, according to the [University of Michigan's consumer sentiment index](#). However, you would never know it from the strength of U.S. petroleum demand, which rose to 21.3 million barrels per day and exceeded its August 2019 level, which was among the strongest months in the past decade. Summer travel and freight transportation contributed positively to the monthly increase, but other oils – that is, intermediate products in refining and petrochemicals – led the rise (up 6.9% from July) and represented 27.9% of U.S. total petroleum demand.

By contrast, U.S. crude oil and natural gas liquids production fell in August despite the highest oil prices for the month since 2014. With demand that outpaced supply, crude oil inventories decreased to their lowest for the month since 2018 and to within 4.7% of the bottom of the five-year range. Additionally, the U.S. was a petroleum net importer in August and for five out of the past six months.

API's Distillate Economic Indicator™ suggested continued growth of U.S. industrial production and broader economic activity (please see the following [chart](#) for details).

Other highlights:

- Summer driving sustained the highest gasoline demand in two years.
- Trucking drove the highest distillate demand since February 2020.
- Air travel demand propelled highest jet fuel demand since February 2020.

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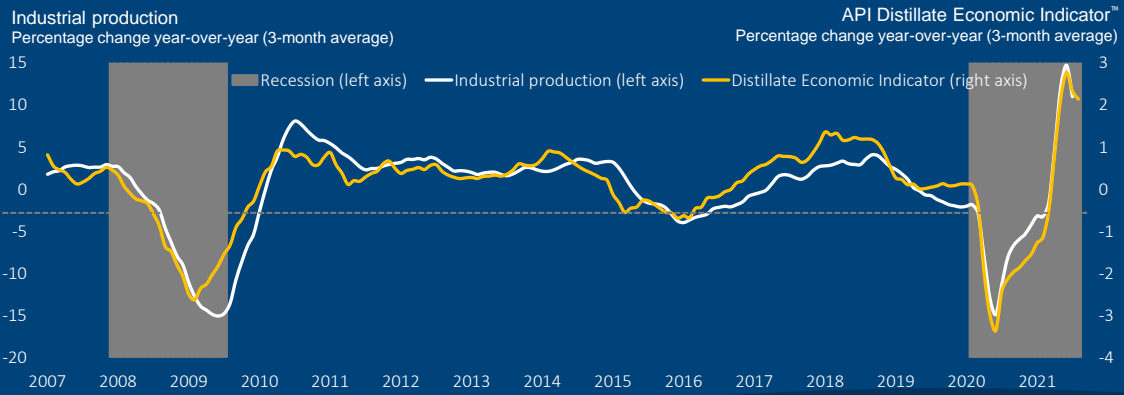
- **Refinery inputs and capacity utilization edged down.**

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- **Lowest crude oil inventories for August since 2018.**

# API's Distillate Economic Indicator™ - August 2021

The Distillate Economic Indicator™ value of +2.0 for August 2021 and three-month average of +2.1 signaled continued growth of U.S. industrial production and broader economic activity



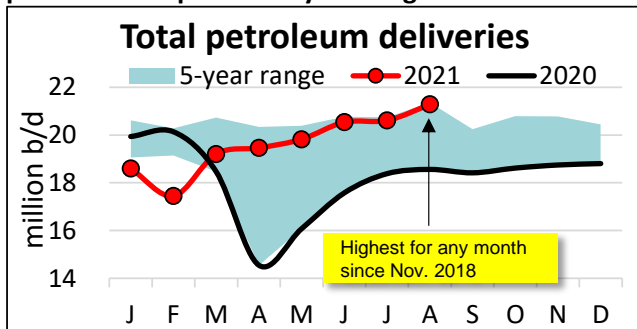
sources: API Monthly Statistical Report; EIA; CME Group; Moody's, Federal Reserve Board; API Team calculations



## Details by section

### Demand

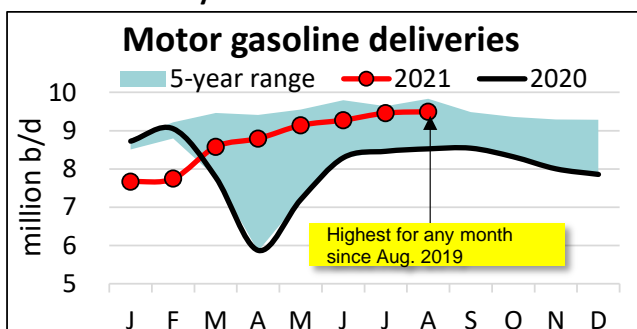
**Strong U.S. petroleum demand (21.3 mb/d) pierced the top of the 5-year range**



U.S. petroleum demand, as measured by total domestic petroleum deliveries, was 21.3 mb/d in August – its highest for any month since November 2018 and 0.6% above of its level in August 2019. This was an increase of 3.3% from July, reflecting solid summer travel despite ongoing effects of the COVID-19 pandemic.

### Gasoline

**Summer driving sustained the highest gasoline demand in two years**

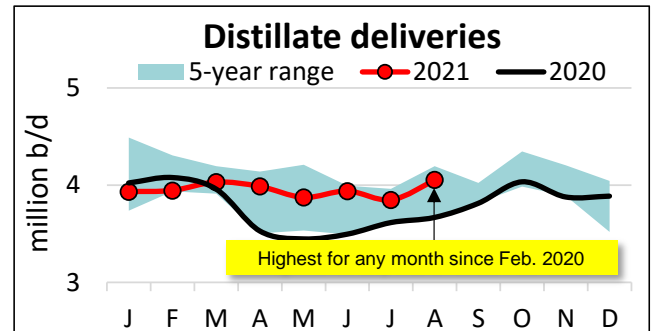


Consumer gasoline demand, measured by motor gasoline deliveries, of 9.5 mb/d in August increased by 0.4% from July and was the highest for any month since August 2019.

Deliveries of reformulated-type gasoline (consumed primarily in urban areas) rose by 0.9% m/m to 3.1 mb/d, while those of conventional gasoline (mainly in rural areas) increased by 0.1% m/m to 6.4 mb/d.

### Distillate Fuel Oil

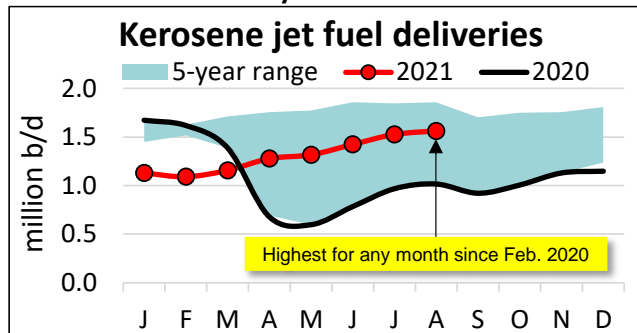
**Trucking drove the highest distillate demand since Feb. 2020**



Distillate deliveries of 4.1 mb/d increased by 5.4% from July and were 0.6% over those of August 2019. [DAT iQ industry trendlines](#) showed stronger monthly truck freight activity in August, with spot truck posts up by 3.3% m/m and loads up by 11.9% from July.

### Kerosene Jet Fuel

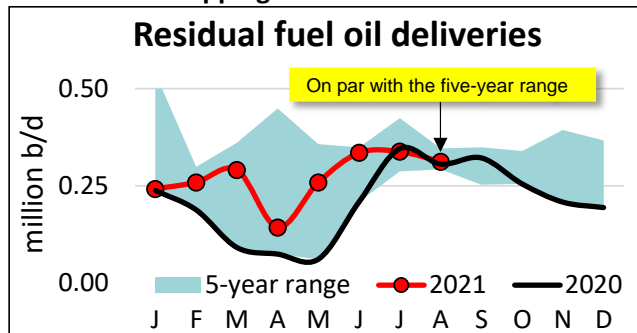
**Air travel demand propelled highest jet fuel demand since February 2020**



'K-jet' deliveries rose by 2.3% m/m to 1.6 mb/d in August, the strongest demand since February 2020 but 15.1% below that of August 2019. However, [Flightradar24](#) high-frequency data showed that tracked flights decreased by 3.5% m/m in August, suggesting a timing difference between deliveries and consumption.

### Residual Fuel Oil

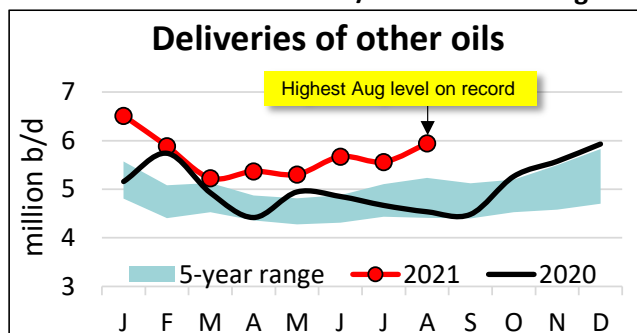
**Solid marine shipping and residual fuel oil demand**



Deliveries of residual fuel oil, which is used in electric power production, space heating, industrial applications and as a marine bunker fuel, were 0.3 mb/d in August. This was a decrease of 7.7% from July but solidly within the five-year range as marine shipping remained [strong](#).

### Naphtha, Gasoil, Propane, Propylene "Other Oils"

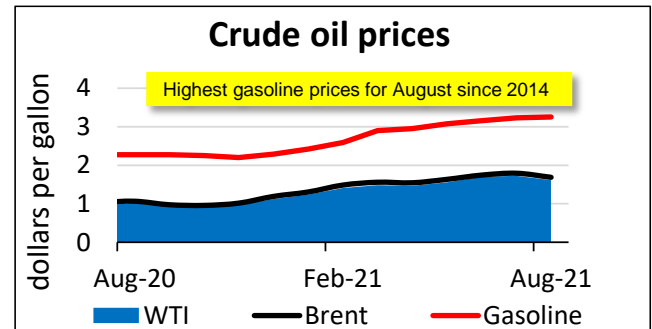
**Other oils demand of 5.9 mb/d a record for August**



Deliveries of liquid feedstocks, such as naphtha, gasoil, and propane/propylene ("other oils") used primarily in refining and petrochemical manufacturing, were 5.9 mb/d in August – the highest on record for August and 16.1% over their August 2019 level. This reflected strong refining activity and petrochemical demand for films/packaging and medical plastics.

### Prices

**Highest gasoline prices for August since 2014**



In August, West Texas Intermediate (WTI) crude oil prices decreased by 6.6% m/m to \$67.73 per barrel (\$1.61 per gallon). Brent crude oil spot prices averaged \$70.75 per barrel (\$1.68 per gallon), and the Brent-WTI price differential widened to \$3.45 per barrel, generally reflecting transportation costs.

As crude oil remained the top input cost in making gasoline per [EIA](#), relatively strong crude oil prices corresponded with increased gasoline prices in August. The U.S. average conventional gasoline price was \$3.26 per gallon in August, up by 0.7% (\$0.02 per gallon) from July, according to [AAA](#). This was the highest gasoline price for the month since August 2014.

### Macroeconomy

**Leading indicators point towards growth industrial growth but consumer concerns**

API's Distillate Economic Indicator™, which is based primarily on diesel/distillate supply, demand, and inventories, had a reading of 2.0 in August and a three-month average of 2.1, suggesting that U.S. industrial production and broader economic activity have continued to grow.

The Institute for Supply Management's manufacturing Purchasing Managers Index (PMI) had a reading of 59.9 in August, a 0.4 percentage

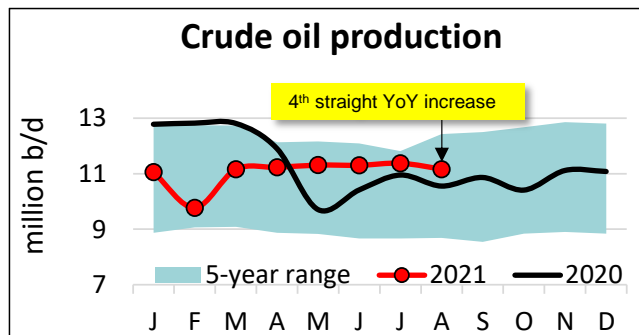
point increase from July. Index values above 50.0 suggest an expansion, and the manufacturing PMI exceeded that threshold for a 15<sup>th</sup> consecutive month after a contraction in April 2020. Within the index, measures of production, inventories, new export orders and the backlog of orders increased from July. However, the measures of prices, employment, and supplier deliveries each slowed. Fifteen of the 18 manufacturing industries surveyed reported growth in August.

The [University of Michigan’s consumer sentiment index](#) dropped by 13.4% m/m to a reading of 70.3 in August (70.3) from 81.2 in July. The Sentiment Index has only recorded larger losses in six other monthly surveys since 1978. The survey attributed August’s decrease to “dashed hopes that the pandemic would end soon” and did not interpret the change as implying an imminent economic downturn, but noted it could have a lasting impact on consumer spending.

According to the [Bureau of Labor Statistics \(BLS\)](#), the unemployment rate fell by 0.2% to 5.2% in August, and non-farm payrolls increased by a preliminary estimate of 235,000.

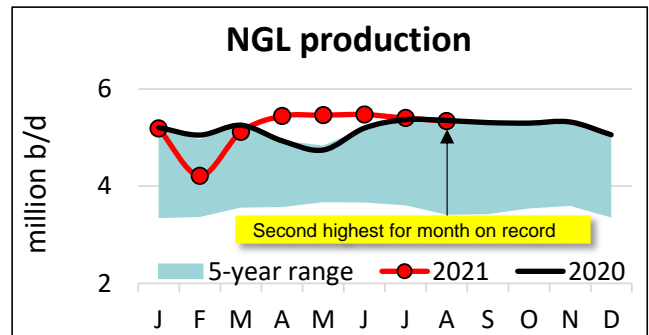
**Supply**

**U.S. crude oil production and NGL production slipped in August**



In August, U.S. crude oil production fell to 11.2 mb/d, a 1.9% m/m (0.2 mb/d) decrease.

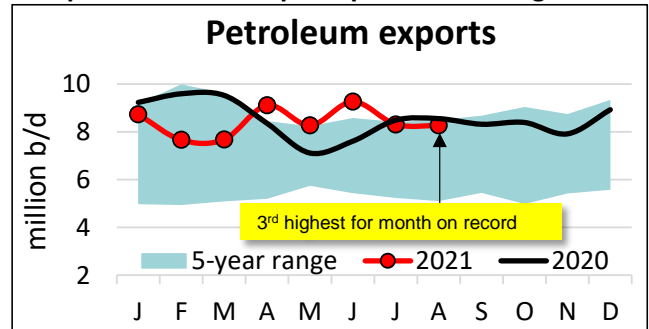
[Baker Hughes](#) reported 400 active oil-directed rigs in August, a 4.9% m/m increase but 47% less than the 758 rigs that ran in August 2019.



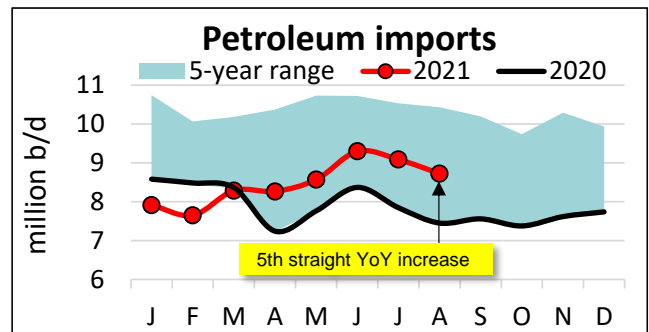
By contrast, natural gas-directed drilling decreased by 3.0% in August despite spot prices that averaged \$4.06 per million Btu, their highest for the month since 2010. U.S. natural gas natural gas liquids production (NGLs) of 5.3 mb/d in August slipped by 1.1% m/m and 0.2% y/y.

**International trade**

**U.S. petroleum net imports persisted in August**



U.S. total petroleum exports of 8.3 mb/d in August fell by 0.4% m/m as higher crude oil exports were more than offset by lower refined product exports.

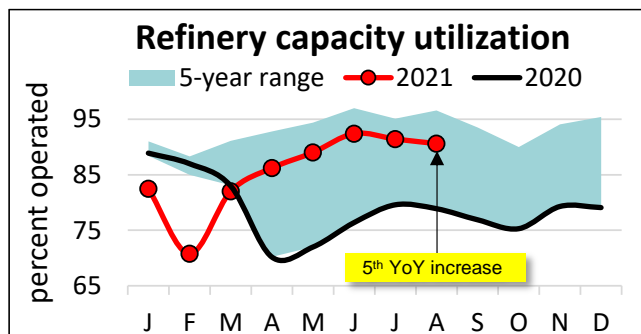
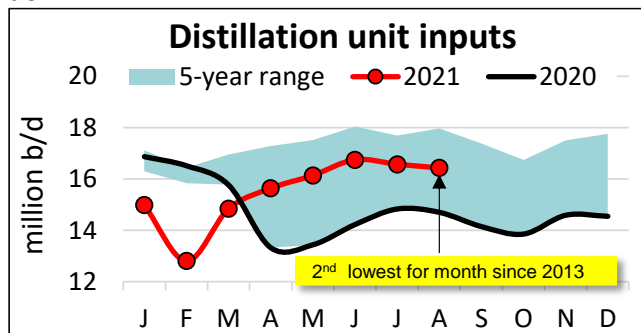


By comparison, U.S. total petroleum imports of 8.7 mb/d in August fell by 4.0% m/m due to lower crude oil imports.

Consequently, the U.S. remained a petroleum net importer of 0.4 mb/d in August and has been a net importer for five of the past six months.

**Industry operations**

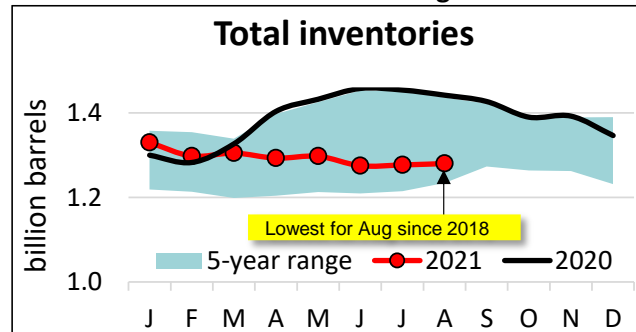
**Refinery inputs and capacity utilization edged down**



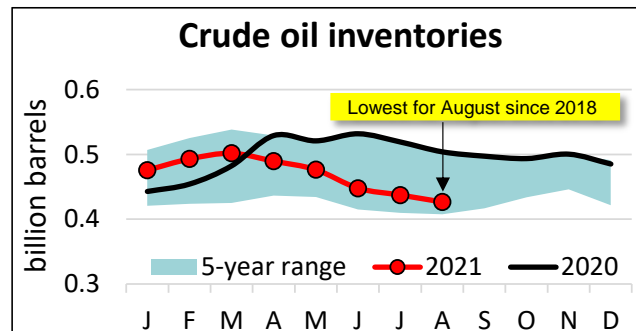
U.S. refinery throughput was 16.4 mb/d in August, which was a decrease of 0.8% from July and implied a capacity utilization rate of 90.6%, down from 92.4% in June and 91.4% in July.

**Inventories**

**Lowest crude oil inventories for August since 2018**



U.S. total petroleum inventories, including crude oil and refined products (but excluding the Strategic Petroleum Reserve) increased in August by 0.3% m/m to 1.280 billion barrels from a revised July estimate of 1.277.



Within the total, crude oil inventories fell by 2.4% m/m to 426.7 million barrels, their lowest for the month since 2018. This represented a 15.4% y/y decrease and as 4.7% above the bottom of the 5-year range.

**ESTIMATED UNITED STATES PETROLEUM BALANCE<sup>1</sup>**  
(Daily average in thousands of 42 gallon barrels)

| Disposition and Supply                       | August            |         |          | Year-to-Date      |        |          |
|--|-------------------|---------|----------|-------------------|--------|----------|
|  | 2021 <sup>2</sup> | 2020    | % Change | 2021 <sup>3</sup> | 2020   | % Change |
| <b>Disposition:</b>                          |                   |         |          |                   |        |          |
| Total motor gasoline.....                    | 9,491             | 8,524   | 11.3     | 8,778             | 7,985  | 9.9      |
| Finished reformulated.....                   | 3,098             | 2,712   | 14.2     | 2,777             | 2,454  | 13.2     |
| Finished conventional.....                   | 6,393             | 5,812   | 10.0     | 6,001             | 5,531  | 8.5      |
| Kerosene-jet.....                            | 1,563             | 1,016   | 53.8     | 1,314             | 1,089  | 20.7     |
| Distillate fuel oil.....                     | 4,055             | 3,668   | 10.6     | 3,952             | 3,726  | 6.1      |
| ≤ 500 ppm sulfur.....                        | 4,030             | 3,665   | 10.0     | 3,928             | 3,688  | 6.5      |
| ≤ 15 ppm sulfur.....                         | 3,982             | 3,642   | 9.3      | 3,879             | 3,674  | 5.6      |
| > 500 ppm sulfur.....                        | 25                | 2       | 1,150.0  | 24                | 38     | (36.8)   |
| Residual fuel oil.....                       | 312               | 306     | 2.0      | 273               | 190    | 43.7     |
| All other oils (including crude losses)..... | 5,948             | 4,966   | 19.8     | 5,272             | 4,839  | 8.9      |
| Reclassified <sup>4</sup> .....              | (87)              | 78      | na       | 90                | 128    | na       |
| Total domestic product supplied.....         | 21,282            | 18,558  | 14.7     | 19,678            | 17,957 | 9.6      |
| Exports.....                                 | 8,274             | 8,550   | (3.2)    | 8,414             | 8,552  | (1.6)    |
| Total disposition.....                       | 29,556            | 27,108  | 9.0      | 28,092            | 26,509 | 6.0      |
| <b>Supply:</b>                               |                   |         |          |                   |        |          |
| Domestic liquids production                  |                   |         |          |                   |        |          |
| Crude oil (including condensate).....        | 11,165            | 10,558  | 5.8      | 11,062            | 11,490 | (3.7)    |
| Natural gas liquids.....                     | 5,339             | 5,351   | (0.2)    | 5,215             | 5,139  | 1.5      |
| Other supply <sup>5</sup> .....              | 1,099             | 1,042   | 5.5      | 1,101             | 995    | 10.7     |
| Total domestic supply.....                   | 17,603            | 16,951  | 3.8      | 17,378            | 17,624 | (1.4)    |
| Imports:                                     |                   |         |          |                   |        |          |
| Crude oil (excluding SPR imports).....       | 6,085             | 5,417   | 12.3     | 5,995             | 6,066  | (1.2)    |
| From Canada.....                             | 3,395             | 3,426   | (0.9)    | 3,651             | 3,593  | 1.6      |
| All other.....                               | 2,690             | 1,991   | 35.1     | 2,344             | 2,473  | (5.2)    |
| Products.....                                | 2,638             | 2,033   | 29.8     | 2,487             | 1,943  | 28.0     |
| Total motor gasoline (incl. blend.comp)..... | 1,070             | 660     | 62.1     | 908               | 573    | 58.5     |
| All other.....                               | 1,568             | 1,372   | 14.2     | 1,580             | 1,370  | 15.3     |
| Total imports.....                           | 8,723             | 7,450   | 17.1     | 8,482             | 8,009  | 5.9      |
| Total supply.....                            | 26,326            | 24,400  | 7.9      | 25,860            | 25,633 | 0.9      |
| Stock change, all oils.....                  | (3,230)           | (2,708) | na       | (2,232)           | (876)  | na       |
| <b>Refinery Operations:</b>                  |                   |         |          |                   |        |          |
| Input to crude distillation units.....       | 16,426            | 14,693  | 11.8     | 15,542            | 14,947 | 4.0      |
| Gasoline production.....                     | 9,855             | 9,312   | 5.8      | 9,436             | 8,608  | 9.6      |
| Kerosene-jet production.....                 | 1,411             | 851     | 65.8     | 1,262             | 1,051  | 20.1     |
| Distillate fuel production.....              | 4,799             | 4,823   | (0.5)    | 4,614             | 4,875  | (5.4)    |
| Residual fuel production.....                | 239               | 193     | 23.8     | 208               | 206    | 1.2      |
| Operable capacity.....                       | 18,128            | 18,622  | (2.7)    | 18,121            | 18,800 | (3.6)    |
| Refinery utilization <sup>6</sup> .....      | 90.6%             | 78.9%   | na       | 85.8%             | 79.5%  | na       |
| Crude oil runs.....                          | 15,794            | 14,152  | 11.6     | 15,033            | 14,408 | 4.3      |

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 BALANCE<sup>1</sup>**  
(Daily average in thousands of 42 gallon barrels)

|   | August<br>2021 | July<br>2021 | August<br>2020 | % Change From |          |
|---|----------------|--------------|----------------|---------------|----------|
|   |                |              |                | Month Ago     | Year Ago |
| <b>Stocks (at month-end, in millions of barrels):</b> |                |              |                |               |          |
| Crude oil (excluding lease & SPR stocks).....         | 426.7          | 437.4        | 504.4          | (2.4)         | (15.4)   |
| Unfinished oils.....                                  | 86.9           | 90.5         | 82.4           | (4.0)         | 5.5      |
| Total motor gasoline.....                             | 224.3          | 229.9        | 237.5          | (2.4)         | (5.6)    |
| Finished reformulated.....                            | 0.0            | 0.0          | 0.0            | 0.0           | (62.5)   |
| Finished conventional.....                            | 19.0           | 17.5         | 25.1           | 8.6           | (24.3)   |
| Blending components.....                              | 205.3          | 212.4        | 212.4          | (3.3)         | (3.3)    |
| Kerosene-jet.....                                     | 42.8           | 44.1         | 40.1           | (2.9)         | 6.8      |
| Distillate fuel oil.....                              | 135.4          | 139.3        | 179.8          | (2.8)         | (24.7)   |
| ≤ 500 ppm sulfur.....                                 | 126.9          | 130.9        | 170.7          | (3.1)         | (25.7)   |
| ≤ 15 ppm sulfur.....                                  | 123.7          | 127.4        | 166.8          | (3.0)         | (25.8)   |
| > 500 ppm sulfur.....                                 | 8.5            | 8.4          | 9.1            | 1.2           | (6.2)    |
| Residual fuel oil.....                                | 29.6           | 29.3         | 34.4           | 1.0           | (13.9)   |
| All other oils.....                                   | 334.5          | 306.5        | 363.2          | 9.1           | (7.9)    |
| Total all oils.....                                   | 1,280.2        | 1,277.0      | 1,441.8        | 0.3           | (11.2)   |