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### EXECUTIVE SUMMARY

Divergence was a recurrent theme in January with the strongest U.S. petroleum demand for the month of January on record since 1963, yet relatively flat crude oil production that remained down by 1.3 million barrels per day (mb/d) compared with its highest levels in November and December 2019. With demand having outpaced supply, refiners drew down U.S. crude oil inventories to their lowest level for January since 2015. Consequently, U.S. crude oil imports rose by 0.2 mb/d for the month, and the U.S. was a net importer of 1.6 mb/d of total petroleum in January. With this combination of demand that outpaced supply, historically low inventories, and petroleum net imports at their highest level in nearly three years, market fundamentals translated into some of the highest oil and motor fuels prices since 2014.

January also marked a couple of records:

- January had the highest amount of demand for other oils – that is, intermediate products in refining and petrochemicals from which products like medical plastics and packaging are made – for any month since 1965, representing nearly one-third of U.S. petroleum demand.
- U.S. refined product exports decreased by 23.4% m/m (1.0 mb/d) from December and 31.4% y/y (1.7 mb/d) compared with Jan. 2021.

Both records could be due in part to pandemic-related effects. However, the relative dearth of domestic crude oil production appears to have eroded the feedstock advantage of many U.S. refiners, which in turn reinforced lower refinery throughput and capacity utilization rates.

Leading economic indicators remained mixed. API's Distillate Economic Indicator™ suggested solid growth of U.S. industrial production and broader economic activity (please see the following [chart](#) for details), However, the [University of Michigan's consumer sentiment index](#) fell to its lowest level in a decade, and this has historically related to weaker consumer spending.

### CONTENTS [\(Click hyperlinks to advance to any section\)](#)

#### Demand

- **Strongest U.S. petroleum demand for the month of January on record since 1963.**
  - Motor gasoline demand returned to the middle of its 5-year range.
  - Trucking spurs strongest distillate demand since Jan. 2018.
  - Jet fuel demand within 10% of its Jan. 2019 level.
  - Residual fuel oil demand 2<sup>nd</sup> highest since Apr. 2018.
  - Record high other oils' demand of 7.0 mb/d.

#### Prices & Macroeconomy

- **Highest crude oil and gasoline prices since 2014.**
- **Leading indicators suggest industrial growth, but sharply lower consumer sentiment.**

#### Supply

- **U.S. crude oil up by 0.1 mb/d m/m but still down by 1.3 mb/d from its highest levels in 2019.**

#### International trade

- **Record drop in U.S. refined product exports spurs the highest petroleum net imports in 30 months.**

#### Industry operations

- **Refinery inputs and capacity utilization decreased.**

#### Inventories

- **Lowest crude oil inventories since Aug. 2018; historically low refined product inventories.**

# API's Distillate Economic Indicator™ - January 2022

The Distillate Economic Indicator™ value of +1.6 for January 2022 and three-month average of +1.7 signaled continued growth of U.S. industrial production and broader economic activity



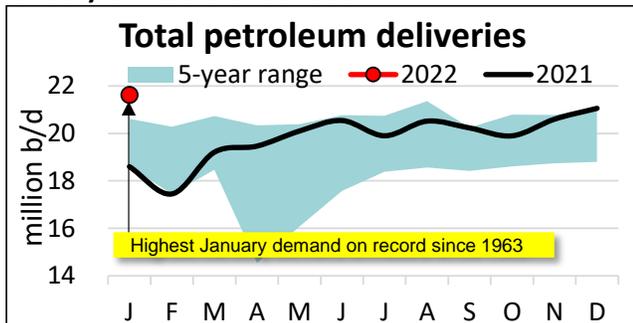
sources: API Monthly Statistical Report; EIA; CME Group; Moody's, Federal Reserve Board; API Team calculations



## Details by section

### Demand

**Strongest U.S. petroleum demand for the month of January on record since 1963**



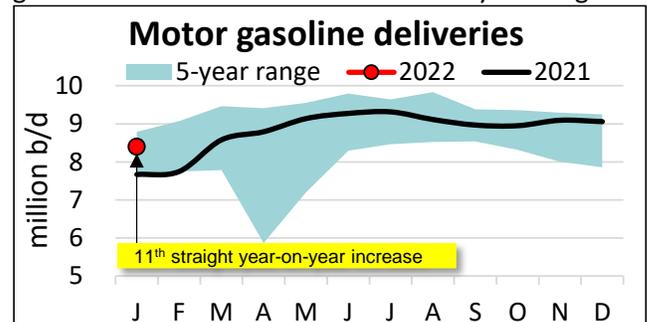
U.S. petroleum demand, as measured by total domestic petroleum deliveries, was 21.6 mb/d in January – the highest for the month of January on record since 1963.

This reflected increases of 2.7% m/m from December and 4.9% compared with Jan. 2019. The demand growth was mainly driven by “other oils” (that is, naphtha, gasoil, propane and propylene) that feed refinery and petrochemical operations, including packaging and medical plastics which have remained essential throughout the COVID pandemic.

### Gasoline

**Motor gasoline demand returned to the middle of its 5-year range.**

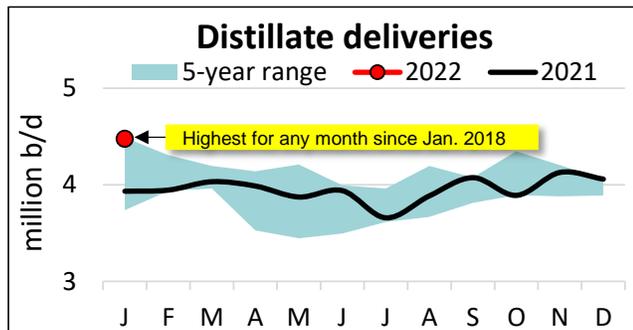
Consumer gasoline demand, measured by motor gasoline deliveries, was 8.4 mb/d in January. This reflected a decrease of 7.3% m/m from December but an increase of 9.5% y/y and returned U.S. motor gasoline demand to the middle of its 5-year range.



Deliveries of reformulated-type gasoline (consumed primarily in urban areas) rose by 14.6% y/y to 2.7 mb/d, while those of conventional gasoline (mainly in rural areas) increased by 7.2% y/y to 5.7 mb/d. The relative changes suggest a disproportionate rebound in urban driving activity.

### Distillate Fuel Oil

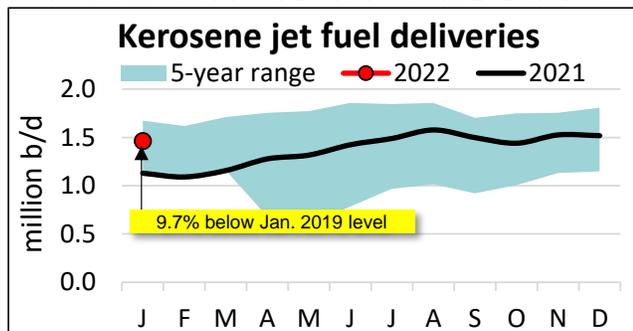
Trucking spurs strongest distillate demand since Jan. 2018.



Distillate deliveries of 4.5 mb/d increased by 10.3% from December to their the highest for any month since January 2018. Consistent with demand data, [DAT iQ industry trendlines](#) suggested that spot freight load posts increased 37.4% m/m from December and more than doubled compared with Jan. 2021.

### Kerosene Jet Fuel

Jet fuel demand within 10% of its Jan. 2019 level

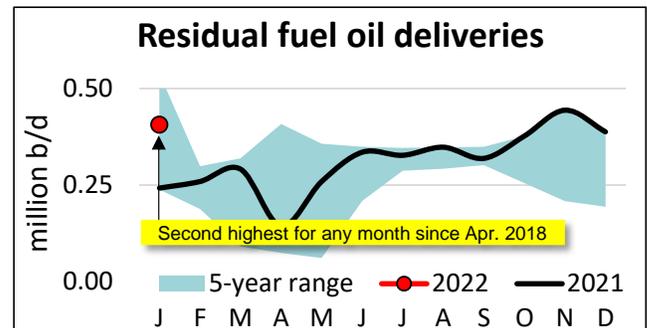


Kerosene-type jet fuel deliveries of 1.5 mb/d in January decreased by 3.7% m/m from December and 9.7% compared with Jan. 2019. This was a narrower difference than last month, when demand for Dec. 2021 was 16% lower than it was in Dec. 2019. High-frequency data from [Flightradar24](#) and [TSA](#) suggest that, while air passenger volumes remained down by more than 22% in Jan. 2022 compared with Jan. 2019, the number of tracked flights was actually 0.9% higher over the same period. Consequently, having fewer long-haul and international flight as well as relatively more air cargo traffic, as the International Air Transport Association (IATA) has [highlighted](#), could also help to explain the drop in jet fuel consumption.

noted the likely decrease in air travel due to the pandemic,

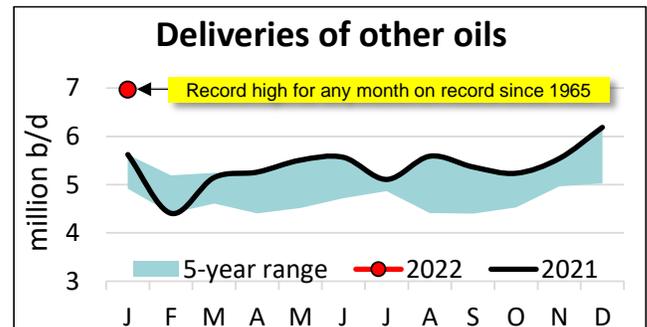
### Residual Fuel Oil

Residual fuel oil demand 2<sup>nd</sup> highest since Apr. 2018



Deliveries of residual fuel oil, which is used as a marine bunker fuel and internationally in electric power production, space heating and industrial applications, were 0.4 mb/d in January, which was an increase of 4.9% m/m from December but an increase of 28% compared with Jan. 2019.

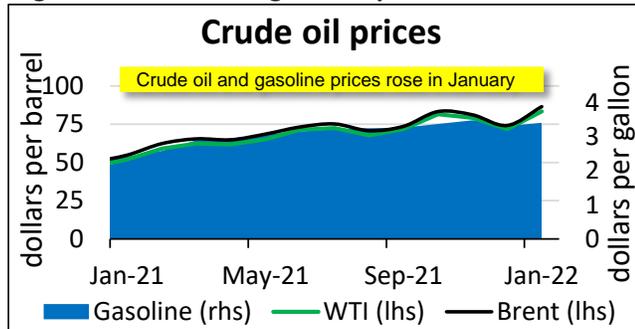
Other Oils – Naphtha, Gasoil, Propane & Propylene  
Record high other oils' demand of 7.0 mb/d



Deliveries of refinery and petrochemical liquid feedstocks – that is, naphtha, gasoil, and propane/propylene (“other oils”) – rose to a record high of 7.0 mb/d in January. With the ongoing pandemic, demand for medical plastics – from masks to home testing kits – and sterile packaging continued remained historically strong. This amounted to more than 32% of U.S. petroleum demand in January and was the highest level for any month on record since 1965.

**Prices**

**Highest crude oil and gasoline prices since 2014**



In January, West Texas Intermediate (WTI) crude oil prices increased by 16.1% m/m to \$83.22 per barrel. Brent crude oil spot prices averaged \$86.51 per barrel and implied a Brent-WTI crude oil price differential of \$3.29 per barrel, which generally reflected transportation costs.

Crude oil remained the top input cost in making gasoline per [EIA](#). The U.S. average conventional gasoline price was \$3.31 per gallon in January, up by 0.2% from December, according to [AAA](#).

**Macroeconomy**

**Leading indicators suggest industrial growth, but sharply lower consumer sentiment**

API’s Distillate Economic Indicator™, which is based primarily on diesel/distillate supply, demand, and inventories, had a reading of 1.6 in January and a three-month average of 1.7, suggesting that U.S. industrial production and broader economic activity have continued to grow.

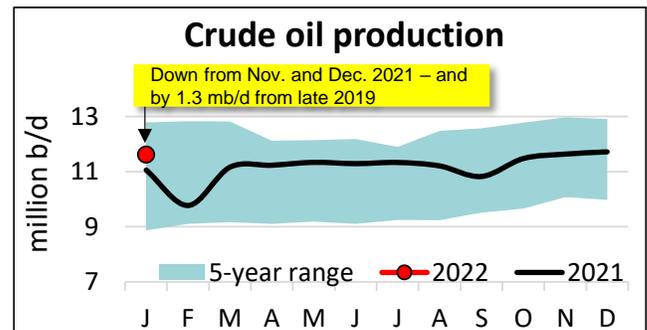
The Institute for Supply Management’s manufacturing Purchasing Managers Index ([PMI](#)) had a reading of 57.6 in January, a 1.1 percentage point decrease from December. Index values above 50.0 suggest an expansion in the overall economy, and the manufacturing PMI exceeded that threshold for a 20<sup>th</sup> consecutive month. Within the index, measures of prices, employment, customers’ inventories, imports and new export orders increased, while those for new orders, production, supplier deliveries, manufacturers’ inventories, and the backlog of orders decreased from December. Fifteen of the 14 manufacturing industries surveyed reported growth in January.

The [University of Michigan’s consumer sentiment index](#) decreased by 8.2% m/m to a reading of 61.7 in January, the survey’s worst level in a decade. The survey noted that the fall was driven by “weakening personal financial prospects, largely due to rising inflation, less confidence in the government’s economic policies, and the least favorable long term economic outlook in a decade.”

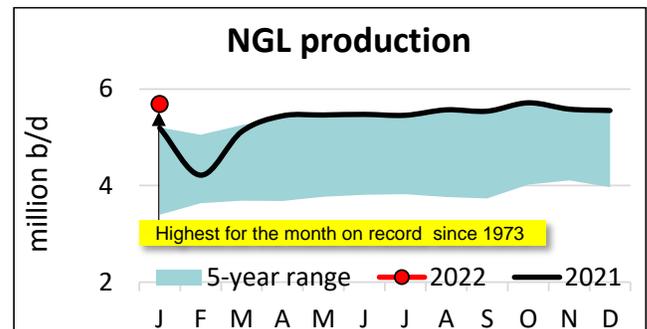
According to the [Bureau of Labor Statistics \(BLS\)](#), the unemployment rate rose by 0.1% to 4.0% in January. Non-farm payrolls increased by a preliminary estimate of 467,000 m/m, solid but down for a fourth straight month.

**Supply**

**U.S. crude oil up by 0.1 mb/d m/m but still down by 1.3 mb/d from its highest levels in 2019**



U.S. crude oil production of 11.7 mb/d in January increased by 0.1 m/m from December remained 1.2 mb/d below its heightened level from Jan. 2020. [Baker Hughes](#) reported 490 active oil-directed rigs in January, a 3.1% m/m increase from December but 26.9% less than the 671 rigs that ran in January 2020.

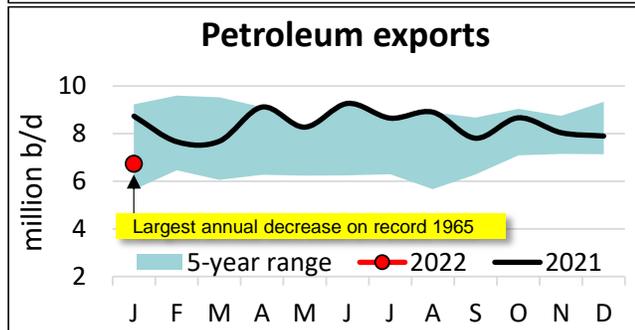
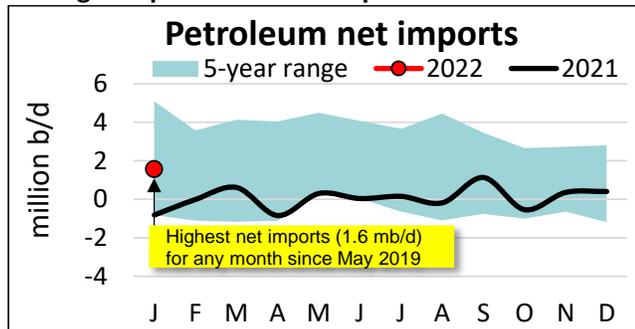


By contrast, natural gas-directed drilling rose by ten six rigs (6.2% m/m) to 111 rigs in January as natural gas spot prices at Henry Hub of \$4.38 per million Btu also increased by 16.5% m/m from December. The extraction of natural gas liquids (NGLs)

generally depends to the relative values of ethane, propane and butane, which historically have tended to correspond with those of crude oil. As crude oil prices increased in January, so did the extraction of NGLs to 5.7 mb/d in January, up by 2.5% m/m from December.

**International trade**

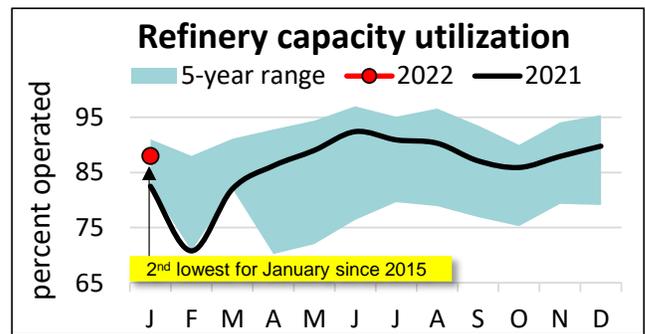
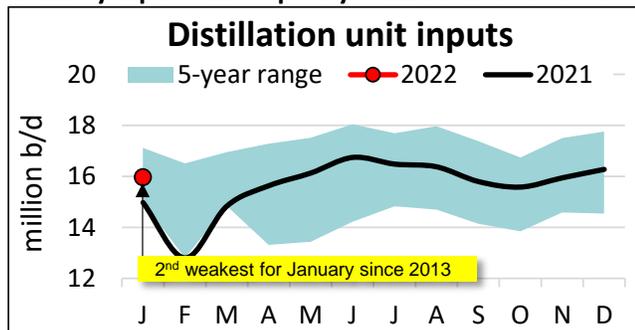
**Record drop in U.S. refined product exports spurs the highest petroleum net imports in 30 months**



The U.S. was a petroleum net importer of 1.6 mb/d in January, which was the highest for any month since May 2019. Within the total, U.S. total petroleum imports rose by 0.4 mb/d y/y; U.S. crude oil exports were stable; but U.S. refined product exports dropped by 23.4% m/m (1.2 mb/d) from December and 31.4% y/y (1.7 mb/d) compared with Jan. 2021.

**Industry operations**

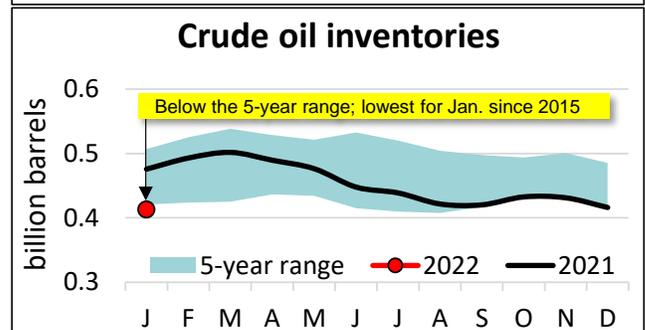
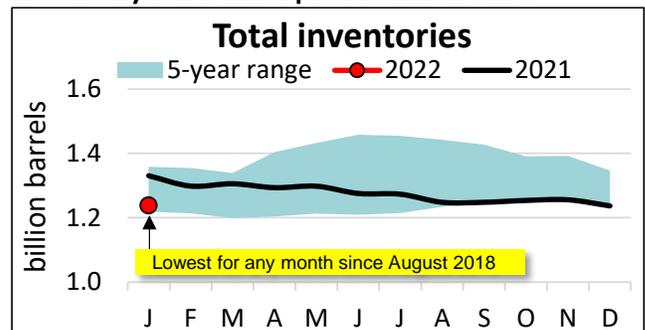
**Refinery inputs and capacity utilization decreased**



U.S. refinery throughput was 16.0 mb/d in January, its second weakest for the month since 2013. This implied a capacity utilization rate of 88% that similarly was its second lowest since 2015.

**Inventories**

**Lowest crude oil inventories since Aug. 2018; historically low refined product inventories**



U.S. total petroleum inventories, including crude oil and refined products (but excluding the Strategic Petroleum Reserve) increased by 0.1% m/m in January to 1.24 billion barrels. This was the lowest for any month since August 2018.

Total U.S. Stocks for crude oil inventories fell by 0.8% m/m to 413.1 million barrels. Crude oil inventories were below their five-year range and at their lowest level for the month since 2015. Inventories of all major refined products decreased in January compared with one year ago. Motor

gasoline fell by 1.9% y/y; distillates by 24.8% y/y; k/t jet fuel by 10.9% y/y; and a residual fuel oil by 18.5% y/y.

Notably, k/t jet fuel inventories displayed their first monthly increase (7.5% m/m) since June 2021, consistent with refinery production data that showed the most k/t jet fuel production since Feb. 2020, just prior to the U.S. escalation of the pandemic.

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

| Disposition and Supply                        | January           |         |          | Year-to-Date      |      |          |
|---|-------------------|---------|----------|-------------------|------|----------|
|   | 2022 <sup>2</sup> | 2021    | % Change | 2022 <sup>3</sup> | 2021 | % Change |
| <b>Disposition:</b>                           |                   |         |          |                   |      |          |
| Total motor gasoline.....                     | 8,393             | 7,666   | 9.5      |                   |      |          |
| Finished reformulated.....                    | 2,684             | 2,342   | 14.6     |                   |      |          |
| Finished conventional.....                    | 5,709             | 5,324   | 7.2      |                   |      |          |
| Kerosene-jet.....                             | 1,463             | 1,131   | 29.4     |                   |      |          |
| Distillate fuel oil.....                      | 4,480             | 3,934   | 13.9     |                   |      |          |
| ≤ 500 ppm sulfur.....                         | 4,394             | 3,922   | 12.0     |                   |      |          |
| ≤ 15 ppm sulfur.....                          | 4,390             | 3,910   | 12.3     |                   |      |          |
| > 500 ppm sulfur.....                         | 86                | 12      | 616.7    |                   |      |          |
| Residual fuel oil.....                        | 407               | 242     | 68.2     |                   |      |          |
| All other oils (including crude losses) ..... | 6,973             | 5,625   | 24.0     |                   |      |          |
| Reclassified <sup>4</sup> .....               | (97)              | (3)     | na       |                   |      |          |
| Total domestic product supplied.....          | 21,619            | 18,595  | 16.3     |                   |      |          |
| Exports.....                                  | 6,731             | 8,729   | (22.9)   |                   |      |          |
| Total disposition.....                        | 28,350            | 27,324  | 3.8      |                   |      |          |
| <b>Supply:</b>                                |                   |         |          |                   |      |          |
| Domestic liquids production                   |                   |         |          |                   |      |          |
| Crude oil (including condensate).....         | 11,625            | 11,056  | 5.1      |                   |      |          |
| Natural gas liquids.....                      | 5,692             | 5,188   | 9.7      |                   |      |          |
| Other supply <sup>5</sup> .....               | 1,120             | 1,080   | 3.7      |                   |      |          |
| Total domestic supply.....                    | 18,437            | 17,324  | 6.4      |                   |      |          |
| Imports:                                      |                   |         |          |                   |      |          |
| Crude oil (excluding SPR imports).....        | 6,389             | 5,783   | 10.5     |                   |      |          |
| From Canada.....                              | 3,747             | 3,836   | (2.3)    |                   |      |          |
| All other.....                                | 2,642             | 1,947   | 35.7     |                   |      |          |
| Products.....                                 | 1,916             | 2,132   | (10.1)   |                   |      |          |
| Total motor gasoline (incl. blend.comp)....   | 468               | 517     | (9.5)    |                   |      |          |
| All other.....                                | 1,448             | 1,614   | (10.3)   |                   |      |          |
| Total imports.....                            | 8,305             | 7,915   | 4.9      |                   |      |          |
| Total supply.....                             | 26,742            | 25,240  | 6.0      |                   |      |          |
| Stock change, all oils.....                   | (1,608)           | (2,085) | na       |                   |      |          |
| <b>Refinery Operations:</b>                   |                   |         |          |                   |      |          |
| Input to crude distillation units.....        | 15,960            | 14,975  | 6.6      |                   |      |          |
| Gasoline production.....                      | 8,853             | 8,520   | 3.9      |                   |      |          |
| Kerosene-jet production.....                  | 1,525             | 1,226   | 24.4     |                   |      |          |
| Distillate fuel production.....               | 4,737             | 4,554   | 4.0      |                   |      |          |
| Residual fuel production.....                 | 283               | 169     | 67.5     |                   |      |          |
| Operable capacity.....                        | 18,132            | 18,143  | (0.1)    |                   |      |          |
| Refinery utilization <sup>6</sup> .....       | 88.0%             | 82.5%   | na       |                   |      |          |
| Crude oil runs.....                           | 15,509            | 14,525  | 6.8      |                   |      |          |

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)

|   | January<br>2022 | December<br>2021 | January<br>2021 | % Change From |          |
|---|-----------------|------------------|-----------------|---------------|----------|
|   |                 |                  |                 | Month Ago     | Year Ago |
| <b>Stocks (at month-end, in millions of barrels):</b> |                 |                  |                 |               |          |
| Crude oil (excluding lease & SPR stocks).....         | 413.1           | 416.3            | 475.9           | (0.8)         | (13.2)   |
| Unfinished oils.....                                  | 82.2            | 83.5             | 84.7            | (1.6)         | (2.9)    |
| Total motor gasoline.....                             | 250.3           | 230.0            | 255.1           | 8.8           | (1.9)    |
| Finished reformulated.....                            | 0.0             | 0.0              | 0.0             | 0.1           | (50.0)   |
| Finished conventional.....                            | 19.0            | 17.1             | 22.9            | 11.1          | (17.0)   |
| Blending components.....                              | 231.3           | 212.9            | 232.2           | 8.6           | (0.4)    |
| Kerosene-jet.....                                     | 37.9            | 35.3             | 42.6            | 7.4           | (10.9)   |
| Distillate fuel oil.....                              | 122.5           | 127.0            | 162.8           | (3.5)         | (24.8)   |
| ≤ 500 ppm sulfur.....                                 | 115.4           | 119.4            | 153.9           | (3.4)         | (25.0)   |
| ≤ 15 ppm sulfur.....                                  | 112.6           | 117.0            | 150.2           | (3.7)         | (25.0)   |
| > 500 ppm sulfur.....                                 | 7.1             | 7.6              | 8.9             | (6.6)         | (20.0)   |
| Residual fuel oil.....                                | 26.1            | 26.1             | 32.0            | 0.0           | (18.5)   |
| All other oils.....                                   | 306.1           | 318.4 R          | 277.0           | (3.9)         | 10.5     |
| Total all oils.....                                   | 1,238.2         | 1,236.6 R        | 1,330.1         | 0.1           | (6.9)    |