American Petroleum Institute

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Washington, DC 20001

The MSR™ - Monthly Statistical Report

API Statistics Department & Office of the Chief Economist

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EXECUTIVE SUMMARY

In February, U.S. petroleum demand (21.6 million barrels per day, mb/d) was at its strongest for any month since August 2005, due to the reduced impact of the Omicron COVID variant, solid urban commuting and freight transportation, and strong demand for consumer products that are enabled by other oils in refining and petrochemicals.

Demand increased despite higher crude oil and motor fuel prices, which rose as Russia's war on Ukraine escalated in late February. The war caused global oil prices to increase by more than domestic prices, which showed that the U.S. having its own domestic oil production is beneficial, and also spurred an acceleration in U.S. refinery activity and exports.

U.S. crude oil production edged up by 0.1% m/m to 11.6 mb/d in February, and drilling activity also continued to pick up. However, as evident in comparison with the relatively stronger petroleum demand as well as the lowest crude oil inventories for the month of February since 2014, greater domestic production is likely to be needed to help place downward pressure on consumer prices.

Leading economic indicators have continued to be 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 plummeted in February and early March, and this has historically related to weaker consumer spending.

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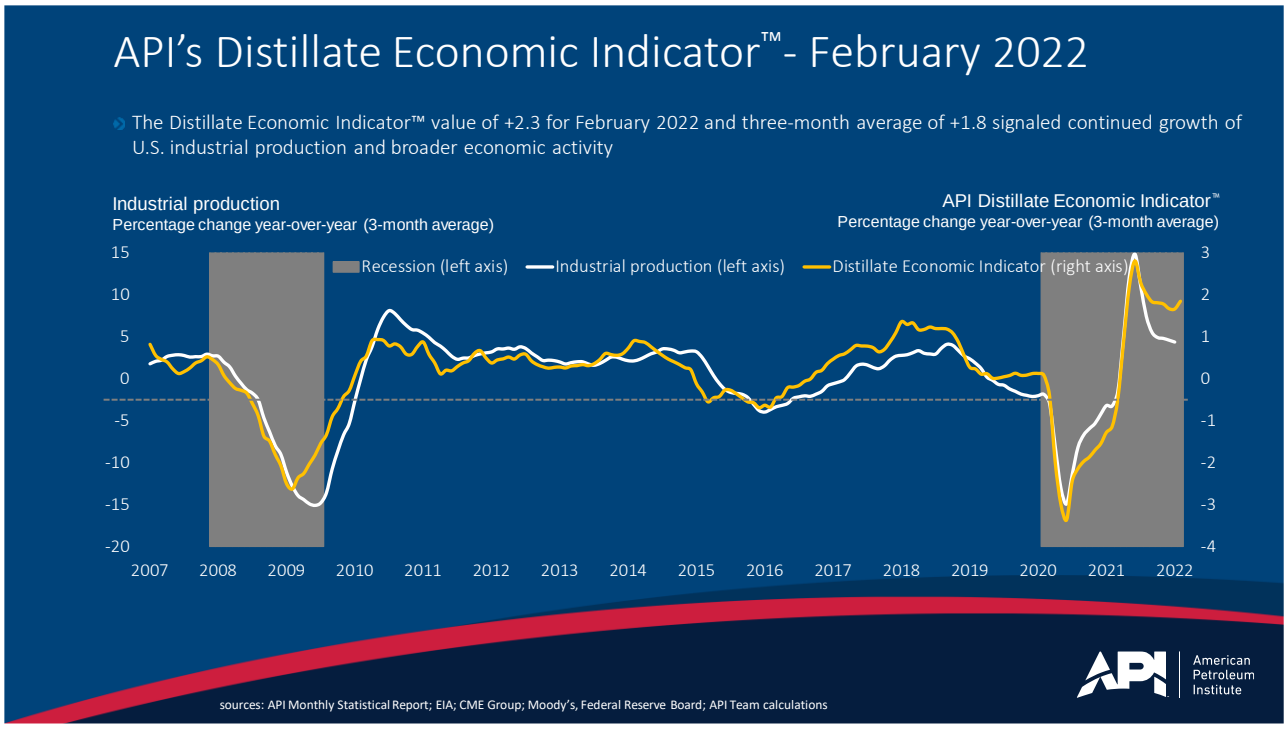
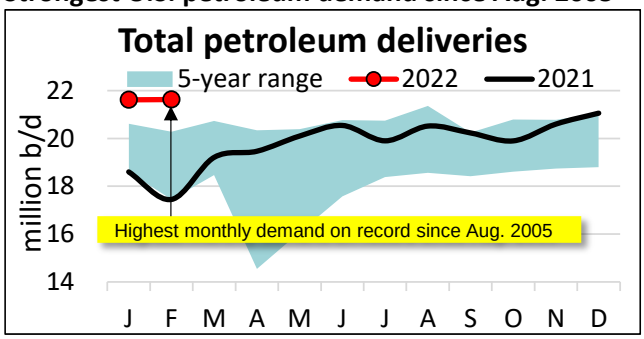


Details by section

Demand

Strongest U.S. petroleum demand since Aug. 2005



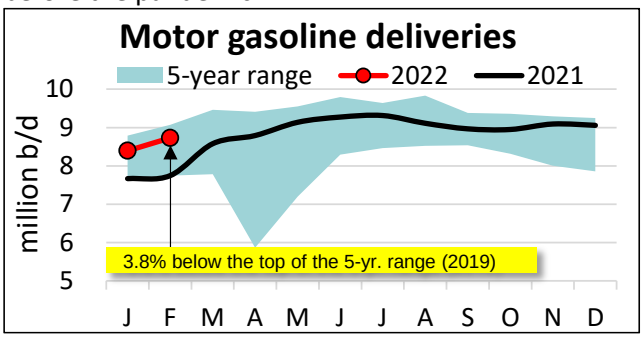
U.S. petroleum demand, as measured by total domestic petroleum deliveries, was 21.6 mb/d in February, only 0.03% above demand in January. However, this was its highest for the month February on record since 1963 and also its highest for any month since August 2005.

As a benchmark to before the pandemic, the demand reflected an increase of 6.6% compared with Feb. 2019. "Other oils" (that is, naphtha, gasoil, propane and propylene) that feed refinery and petrochemical operations, including packaging and medical plastics, remained strong. Motor gasoline increased in February, offsetting monthly decreases in distillates, jet fuel, and residual fuel oil.

Gasoline

Urban commuting returned motor gasoline demand to near the top of the five-year range

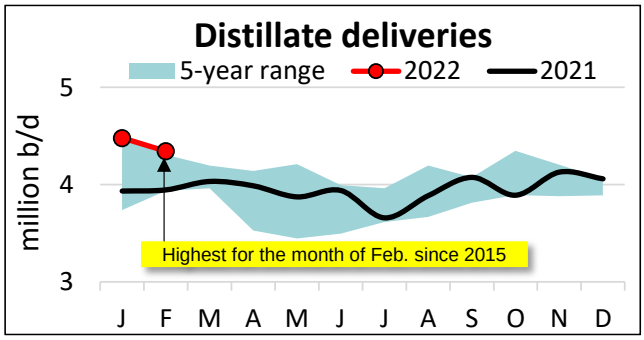
Consumer gasoline demand, measured by motor gasoline deliveries, was 8.7 mb/d in February. This reflected an increase of 4.0% m/m but was 3.8% below its level in Feb. 2019, again benchmarking to before the pandemic.



Deliveries of reformulated-type gasoline (consumed primarily in urban areas) rose to 2.8 mb/d and were up by 5.6% m/m from January. By comparison, conventional gasoline (consumed mainly in rural areas) increased by 3.2% y/y to 5.9 mb/d. The relative changes are consistent with a recovery in urban commuting as the Omicron variant of the pandemic eased.

Distillate Fuel Oil

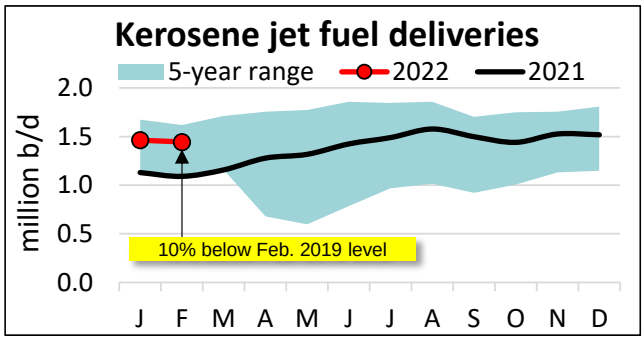
Freight trucking drove the strongest February distillate demand since 2015.



Distillate deliveries of 4.3 mb/d decreased by 3.1% m/m from January but were at their highest for month since 2015. They also were at their highest for any month since October 2018. Consistent with demand data, DAT iQ industry trendlines suggested that spot freight truck posts increased by 3.9% m/m from January and by 12.9% y/y compared with Feb. 2021.

Kerosene Jet Fuel

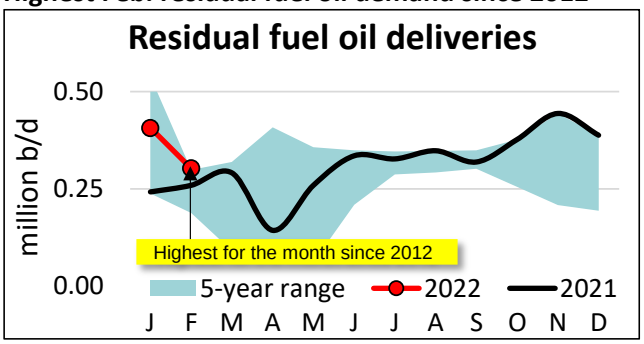
Jet fuel demand was 10% below its Feb. 2019 level



Kerosene-type jet fuel deliveries of 1.4 mb/d in February decreased by 1.3% m/m from January and remained 10.1% less than they were in Feb. 2019. High-frequency data from Flightradar24 and TSA showed that air passenger volumes remained down by more than 15% in Feb. 2022 compared with Feb. 2019, but the total number of tracked (passenger and cargo) flights was 5.2% higher over the same period. The International Air Transport Association (IATA) characterized the Omicron variant as a speed bump, but noted that impacts from the Russia war on Ukraine have not yet factored into the data.

Residual Fuel Oil

Highest Feb. residual fuel oil demand since 2012

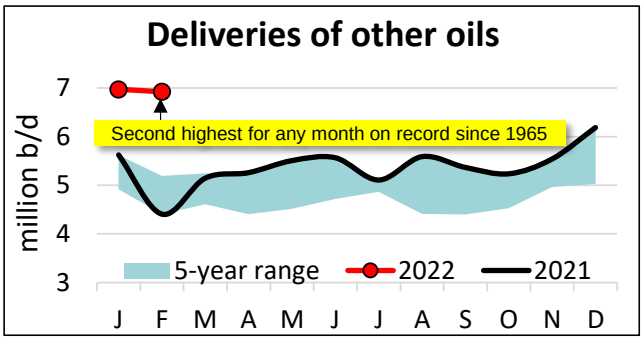


Deliveries of residual fuel oil, which is used as a marine bunker fuel and internationally in electric power production, space heating and industrial applications, were 0.3 mb/d in February, which was a decrease of 25.6% m/m from January but an increase of 8.6% compared with Feb. 2019.

Residual fuel oil demand has historically (2011-2021) fallen by an average of 19.2% m/m between January and February, and despite the decrease in Feb. 2022 the deliveries were their highest for the month of February since 2012.

Other Oils – Naphtha, Gasoil, Propane & Propylene

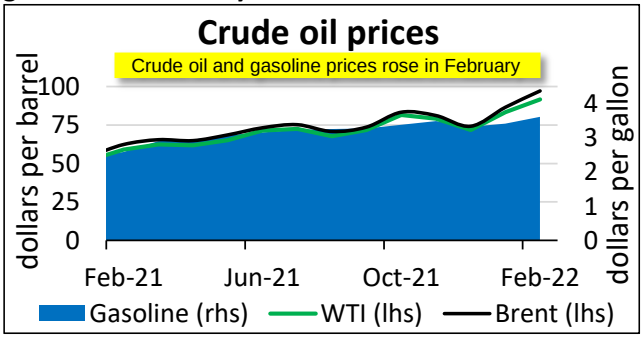
Other oils' demand sustained near-record levels



Deliveries of refinery and petrochemical liquid feedstocks – that is, naphtha, gasoil, and propane/propylene ("other oils") – were 6.9 mb/d in February, down by 0.1 mb/d m/m from January – and the second highest behind only Jan. 2022. This represented 32% of U.S. petroleum demand in February and likely reflected the strong continued refining and petrochemical demand for medical plastics and packaging.

Prices

Increased crude oil prices outpaced those of gasoline in February



In February, West Texas Intermediate (WTI) crude oil prices increased by 10.1% m/m to $91.64 per barrel. Brent crude oil spot prices averaged $97.13 per barrel and implied a Brent-WTI crude oil price differential of $5.49 per barrel, its largest since Jan. 2020.

Crude oil remained the top input cost in making gasoline per EIA. The U.S. average conventional gasoline price was $3.61 per gallon in February, up by 5.8% from January, according to AAA.

Macroeconomy

Leading indicators highlight industrial growth, but a continued drop in consumer sentiment

API's Distillate Economic Indicator™, which is based primarily on diesel/distillate supply, demand, and inventories, had a reading of 2.3 in February and a three-month average of 1.8, suggesting that U.S. industrial production and broader economic activity have continued to grow.

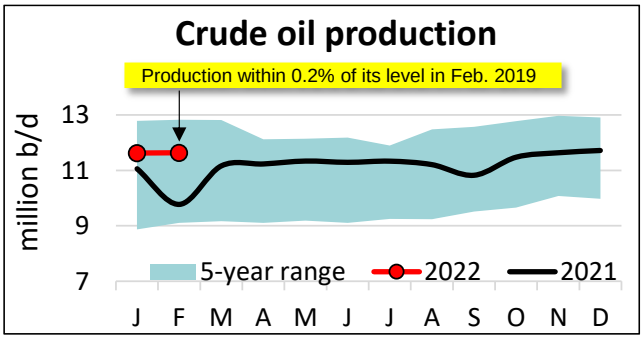
The Institute for Supply Management's manufacturing Purchasing Managers Index (PMI) had a reading of 58.6 in February, a 1.0 percentage point increase from January. Index values above 50.0 suggest an expansion in the overall economy, and the manufacturing PMI exceeded that threshold for a 20th consecutive month. Within the index, there were monthly increases in the index's measures of new orders, production, supplier deliveries, imports, manufacturers' inventories, and the backlog of orders. And there were monthly decreases in the index's measures of prices, employment and customers' inventories. Sixteen of the 17 manufacturing industries surveyed reported growth in February.

The University of Michigan's consumer sentiment index decreased by nearly 30% to readings of 59.7 in early March and 62.8 in February from a January level of 84.9. The survey attributed the drop in the index to decreased inflation-adjusted incomes, rising fuel prices, and high year-ahead expected inflation rates. Notably, the February and March readings were at their lowest compared with any point with the pandemic since 2020.

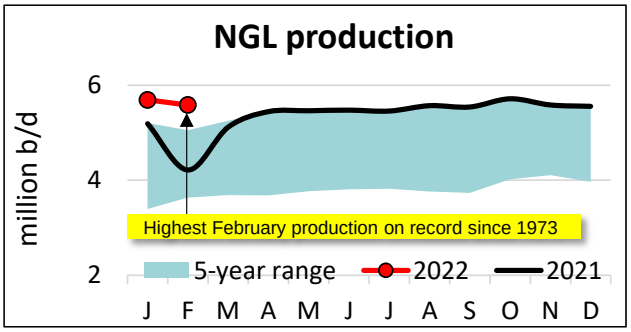
According to the Bureau of Labor Statistics (BLS), the unemployment rate fell by 0.2% to 3.8% in February. Non-farm payrolls increased by a preliminary estimate of 678,000 m/m, their largest increase since July 2021.

Supply

U.S. crude oil production edged upwards



U.S. crude oil production of 11.6 mb/d in February increased by 0.1% m/m from January and was within 0.2% of its level in Feb. 2019. Baker Hughes reported 516 active oil-directed rigs in February, a 5.2% m/m increase from January but 39.4% less than the 852 rigs that ran in February 2019.

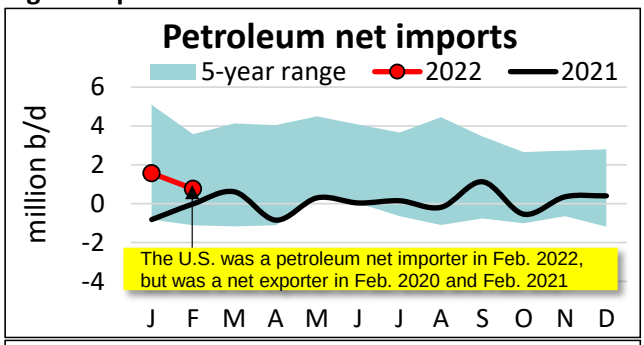


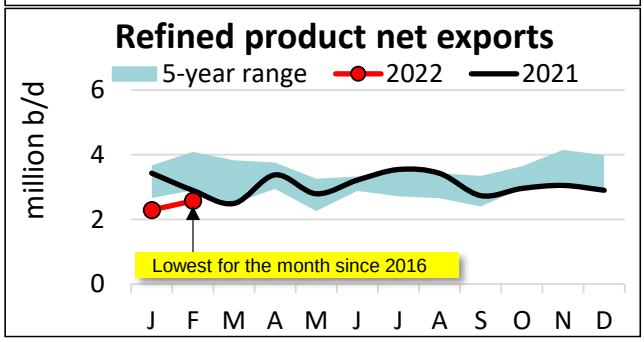
By contrast, natural gas-directed drilling rose by 10.1% m/m (12 rigs) to 123 rigs in February as natural gas spot prices at Henry Hub of $4.69 per

million Btu increased by 7.1% m/m from January. 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. However, NGL production decreased by 1.9% m/m to 5.6 mb/d.

International trade

U.S. petroleum net imports persisted despite higher exports

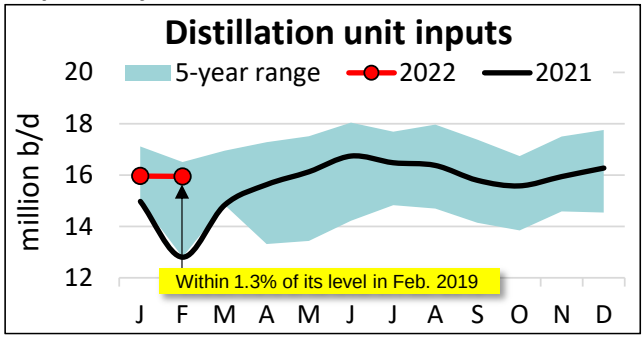


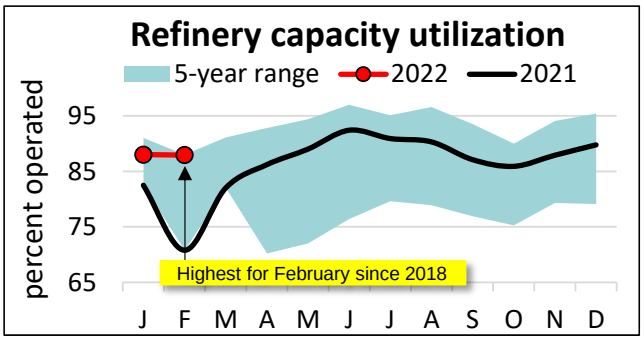


The U.S. was a petroleum net importer of 0.8 mb/d in February, whereas it had been a petroleum net exporter in February for each of the past two years. However, the monthly change showed net imports that were 0.8 mb/d lower in February compared with January, driven mainly by higher exports of refined product exports and crude oil that accelerated in late February as the Russia escalated hostilities in Ukraine.

Industry operations

Refinery capacity utilization and gross inputs at their highest for February since 2018 and 2020, respectively

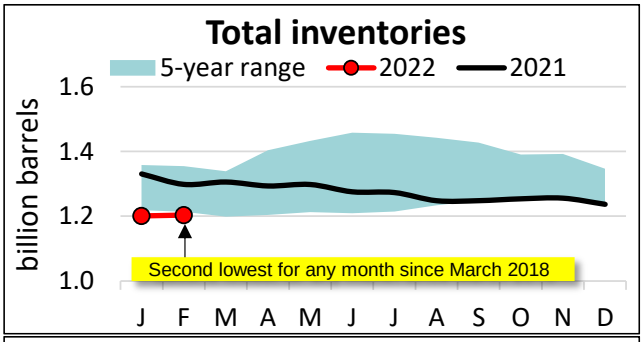


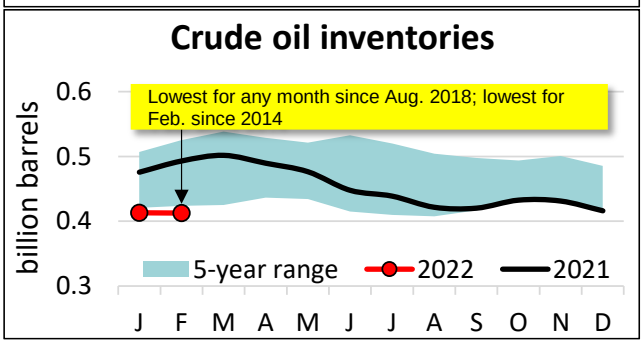


U.S. refinery throughput was 15.9 mb/d in February, which was within 1.3% of its level in Feb. 2019. This implied a capacity utilization rate of 87.9% that was the highest for the month of February since 2018.

Inventories

Inventories at their lowest since 2018





Following a downward revision to January's total petroleum inventories, including crude oil and refined products (but excluding the Strategic Petroleum Reserve), in February they increased by 0.2% m/m to 1.20 billion barrels. Other than January 2022, the February 2022 reading was the lowest for any month since March 2018. U.S. crude oil inventories slipped by 0.1% m/m to 412.7 million barrels, their lowest for any month since Aug. 2018. Crude oil inventories remained below their five-year range and at their lowest level for the month since 2014.

ESTIMATED UNITED STATES PETROLEUM BALANCE[1]
(Daily average in thousands of 42 gallon barrels)

Disposition and Supply	February			Year-to-Date		
	2022[2]	2021	% Change	2022[3]	2021	% Change
Disposition:						
Total motor gasoline	8,728	7,744	12.7	8,552	7,703	11.0
Finished reformulated	2,834	2,353	20.4	2,755	2,347	17.4
Finished conventional	5,894	5,391	9.3	5,797	5,356	8.2
Kerosene-jet	1,444	1,092	32.2	1,454	1,112	30.7
Distillate fuel oil	4,343	3,946	10.1	4,415	3,940	12.1
≤ 500 ppm sulfur	4,291	3,900	10.0	4,345	3,912	11.1
≤ 15 ppm sulfur	4,287	3,845	11.5	4,341	3,879	11.9
> 500 ppm sulfur	52	46	13.0	70	28	150.0
Residual fuel oil	303	259	17.0	358	250	43.2
All other oils (including crude losses)	6,926	4,263	62.5	6,951	4,978	39.6
Reclassified[4]	(118)	141	na	(107)	66	na
Total domestic product supplied	21,626	17,444	24.0	21,622	18,049	19.8
Exports	7,705	7,661	0.6	7,193	8,222	(12.5)
Total disposition	29,331	25,105	16.8	28,815	26,271	9.7
Supply:						
Domestic liquids production						
Crude oil (including condensate)	11,617	9,773	18.9	11,621	10,447	11.2
Natural gas liquids	5,758	4,215	36.6	5,723	4,726	20.0
Other supply[5]	1,115	952	17.1	1,118	1,019	9.6
Total domestic supply	18,490	14,940	23.8	18,462	16,193	14.0
Imports:						
Crude oil (excluding SPR imports)	6,207	5,589	11.1	6,303	5,691	10.7
From Canada	3,737	3,604	3.7	3,742	3,726	0.4
All other	2,470	1,985	24.4	2,560	1,965	30.3
Products	2,267	2,059	10.1	2,083	2,097	(0.7)
Total motor gasoline (incl. blend.comp)	526	598	(12.0)	496	555	(10.6)
All other	1,741	1,461	19.1	1,587	1,542	2.9
Total imports	8,474	7,648	10.8	8,385	7,788	7.7
Total supply	26,964	22,588	19.4	26,847	23,981	12.0
Stock change, all oils	(2,367)	(2,517)	na	(1,968)	(2,290)	na
Refinery Operations:						
Input to crude distillation units	15,761	12,804	23.1	15,866	13,945	13.8
Gasoline production	9,193	8,396	9.5	9,015	8,461	6.5
Kerosene-jet production	1,512	949	59.3	1,519	1,095	38.8
Distillate fuel production	4,663	3,766	23.8	4,702	4,180	12.5
Residual fuel production	196	188	4.3	242	178	35.8
Operable capacity	18,096	18,090	0.0	18,115	18,118	(0.0)
Refinery utilization[6]	87.1%	70.8%	na	87.6%	77.0%	na
Crude oil runs	15,269	12,374	23.4	15,395	13,504	14.0

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[1]
(Daily average in thousands of 42 gallon barrels)

	February 2022	January 2022		February 2021	% Change From Month Ago	% Change From Year Ago
Stocks (at month-end, in millions of barrels):						
Crude oil (excluding lease & SPR stocks)	412.7	413.1		493.2	(0.1)	(16.3)
Unfinished oils	84.3	82.2		89.5	2.6	(5.8)
Total motor gasoline	245.7	250.3		241.1	(1.8)	1.9
Finished reformulated	0.0	0.0		0.0	0.2	(42.9)
Finished conventional	18.5	19.0		20.9	(2.6)	(11.3)
Blending components	227.2	231.3		220.2	(1.8)	3.2
Kerosene-jet	38.7	37.9		39.8	2.1	(2.9)
Distillate fuel oil	117.2	122.5		143.4	(4.3)	(18.3)
≤ 500 ppm sulfur	109.9	115.4		135.1	(4.8)	(18.7)
≤ 15 ppm sulfur	107.4	112.6		131.7	(4.6)	(18.4)
> 500 ppm sulfur	7.3	7.1		8.3	2.8	(12.0)
Residual fuel oil	26.6	26.1		31.2	1.9	(14.6)
All other oils	277.7	268.5	R	259.8	3.5	6.9
Total all oils	1,202.9	1,200.6	R	1,298.0	0.2	(7.3)