energy API
Statistics Department
Monthly Statistical Report
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Vol. 43 No. 1
Published February 14, 2019
January 2019

EXECUTIVE SUMMARY

The U.S. natural gas and oil industry broke several records in January:
- Strongest gasoline demand (8.9 million barrels per day, mb/d) for the month January on record since 1945;
- Record refinery and petrochemical demand for other oils' in any month (5.7 mb/d);
- U.S. production of crude oil (11.9 mb/d) and natural gas liquids (NGLs) (4.9 mb/d); and,
- Refinery throughput (17.3 mb/d) and capacity utilization (93.1 percent) for the month of January.

Despite the strong crude oil production and refining as well as demand, total U.S. petroleum inventories are currently 5.8 percent above their historical 5-year average. Further, U.S. petroleum exports decreased to 7.5 mb/d with lower exports of crude oil and refined products, which may be indicative of slowing global oil demand and economic growth.

U.S. leading economic indicators gave mixed signals in January. However, one measure of international shipping activity – the Baltic Dry Index – was clear and fell by 47.4 percent m/m between the end of December and January. The only larger declines on record were during the Financial Crisis, in October and November 2008.

On the domestic economic front, API's Distillate Economic and Financial Indicator (DEFI) as unveiled last month combines industry fundamentals from the Monthly Statistical Report (MSR) with oil prices and interest rates into an indicator of U.S. industrial production and economic growth. Based on data through January, DEFI's growth year-over-year slowed by 0.3 percentage points for the second consecutive month. Please see the following chart for comparisons with U.S. total industrial production.

JANUARY HIGHLIGHTS (Click hyperlinks to advance to any section)

Demand
- **U.S. petroleum demand 20.7 mb/d in January – strongest for the month since 2005.**
  - Strongest January gasoline demand (8.9 mb/d) on record since 1945.
  - Distillate demand decreased 3.3 percent y/y in January.
  - Strongest January jet fuel demand since 2007.
  - Residual fuel oil demand the lowest in four years.
  - Record refinery and petrochemical feedstock demand (5.7 mb/d).

Prices & Macroeconomy
- **Gasoline prices fell in January even as crude oil prices rose.**
- **U.S. leading economic indicators give mixed signals.**

Supply
- **Record U.S. oil (11.9 mb/d) and NGL production (4.9 mb/d).**

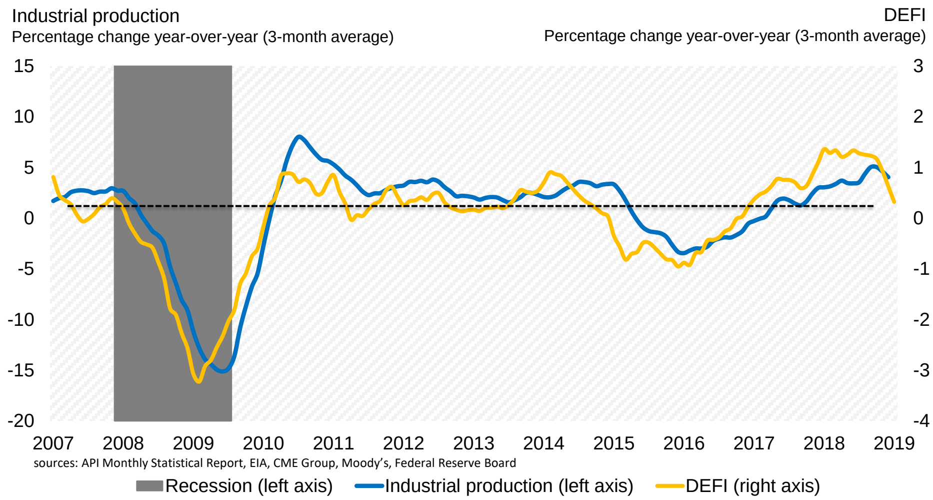
International trade
- **U.S. petroleum exports (7.5 mb/d) fell by 0.5 mb/d in two months.**

Industry operations
- **Record refinery throughput (17.3 mb/d) and capacity utilization (93.1 percent) for the month of January.**

Inventories
- **Total petroleum inventories 5.8 percent above the average of the 5-year range.**

API Distillate Economic and Financial Indicator (DEFI) – January 2019

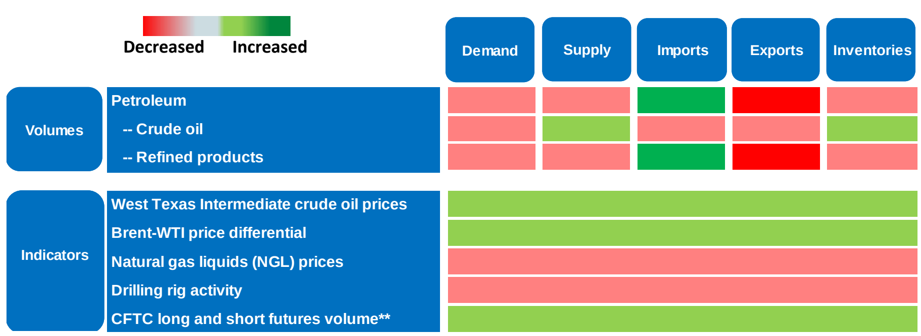
- The DEFI value of 0.1 for January and three-month average of 0.3 suggests a slowing of industrial production from relatively strong levels



MSR heat map – January 2019

- Crude oil prices rebounded in January despite increased production and inventories
- U.S. petroleum net imports increased due to a combination of higher imports and lower exports

Heat map of monthly percentage changes – January 2019 compared with December 2018*

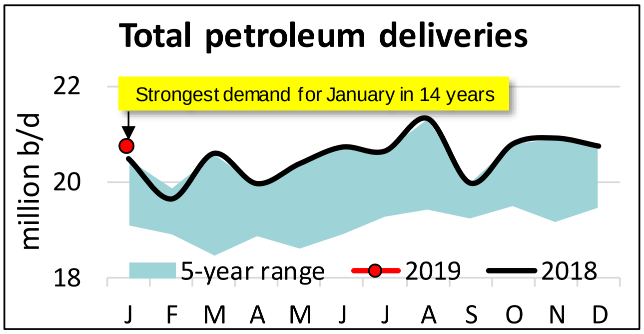


* Boldest colored increases and decreases reflect changes vs. prior month that are in the top or bottom quartile for the past five years
** CFTC long/short open interest comparisons based on month versus same month in prior year
sources: API Monthly Statistical Report, EIA, CFTC, Baker Hughes

Details by section

Demand

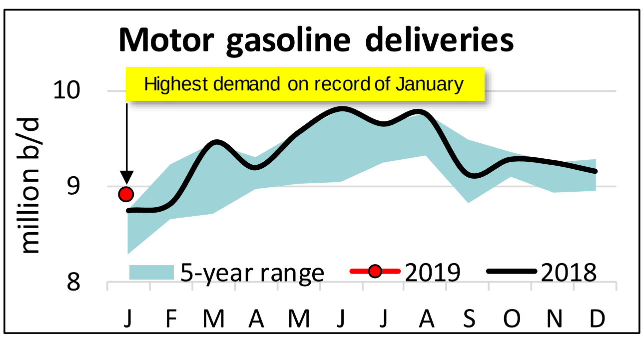
U.S. petroleum demand 20.7 mb/d in January – strongest for the month since 2005



U.S. petroleum demand, as measured by total domestic petroleum deliveries, was 20.7 mb/d in January, which was down 0.2 percent from December but up 1.1 percent compared with January 2018. This was the strongest petroleum demand for the month of January since 2005.

Gasoline

Strongest January gasoline demand (8.9 mb/d) on record since 1945

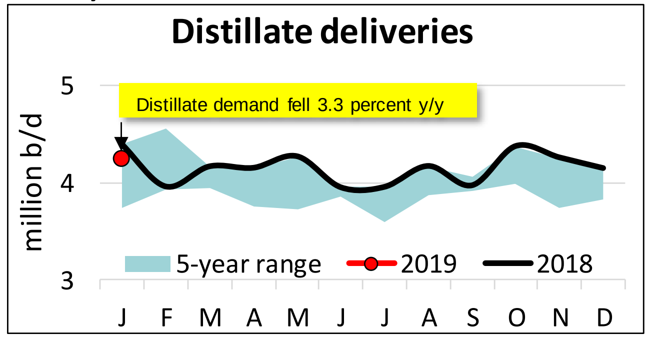


Consumer gasoline demand, measured by total motor gasoline deliveries, was 8.9 mb/d in January. This represented a seasonal decrease of 2.7 percent from December but a 1.9 percent increase compared with January 2018 for the strongest January on record since 1945.

Demand for reformulated-type gasoline, which is consumed primarily in urban areas, increased by 0.9 percent y/y to 2.9 mb/d in January. By contrast, conventional gasoline is used more in rural areas and increased 2.4 percent y/y to 6.0 mb/d.

Distillate Fuel Oil

Distillate demand decreased 3.3 percent y/y in January



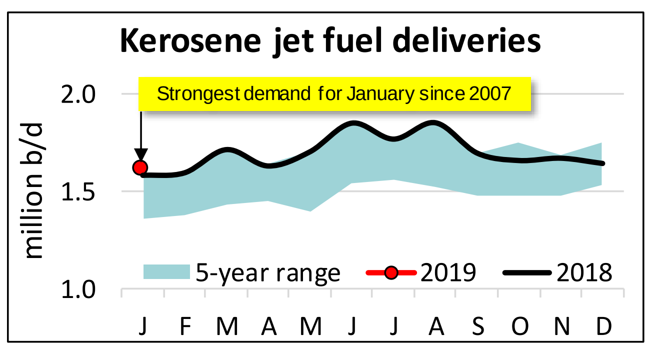
In January, distillate deliveries of 4.2 mb/d increased by 2.4 percent from December but decreased 3.3 percent versus January 2018.

About 96.0 percent of distillate demand in January was for ultra-low sulfur distillate (ULSD), which is driven by road freight transportation activity. The Bureau of Labor Statistics' (BLS) Producer Price Index for freight trucking increased by 8.0 percent y/y in January as strong activity and a driver shortage that has resulted in annual trucker salaries at Amazon and Walmart rising to nearly $90,000, or roughly 40 percent above the median U.S. household income.

The remaining 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 January, HSD deliveries fell by 30.8 percent from December and 17.4 percent compared with January 2018. This was the lowest HSD demand on record for the month of January.

Kerosene Jet Fuel

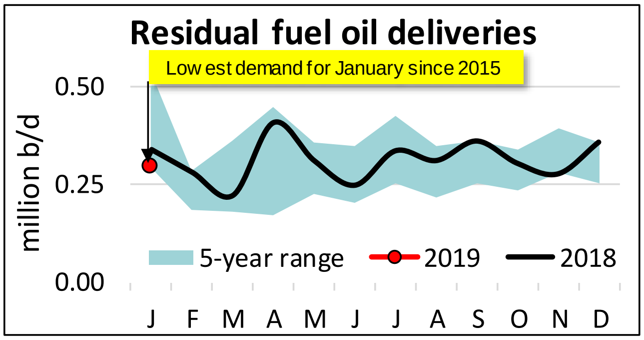
Strongest January jet fuel demand since 2007



In January, kerosene jet fuel deliveries of 1.6 mb/d decreased by 2.4 percent compared with December but were up by 1.4 percent versus January 2018, which made for the strongest demand for the month of January since 2007. The increase generally was consistent with the International Air Transport Association (IATA) latest report, which showed U.S. domestic air passenger kilometers increased by 3.8 percent y/y in December.

Residual Fuel Oil

Residual fuel oil demand the lowest in four years

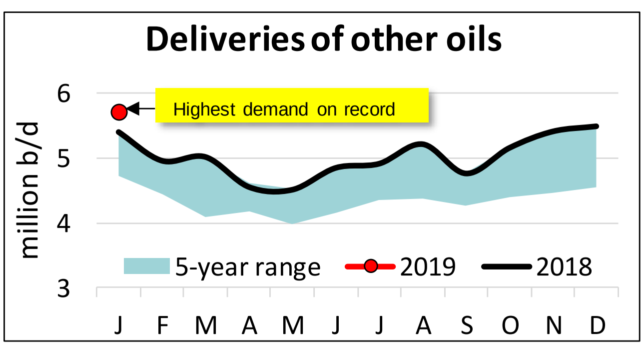


Residual fuel oil is used in electric power production, space heating, marine vessel bunkering and other industrial applications. Residual fuel oil demand was 297 thousand barrels per day (kb/d) in January, a decrease of 17.3 percent from December and 12.6 percent versus January 2018.

EIA reports U.S. average heating degree days decreased 3.2 percent y/y in January. Marine shipping also decelerated, as the Baltic Dry Index monthly average fell 20.4 percent between December and January. As of January 31, the Baltic Dry Index fell 47.4 percent from December 31. The precipitous drop suggests slower global growth.

Other Oils

Record refinery and petrochemical feedstock demand (5.7 mb/d)

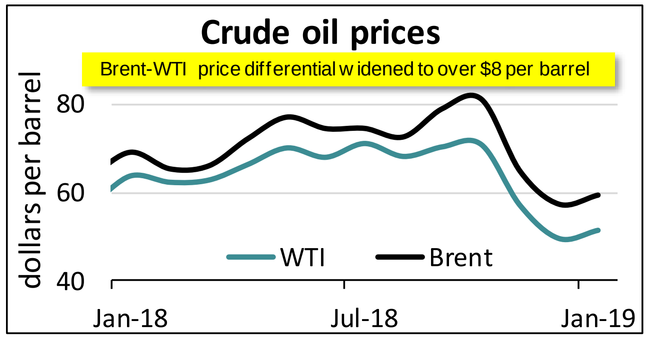


Refining and petrochemical demand for liquid feedstocks, naphtha, and gasoil ("other oils") was 5.7 mb/d in January, an increase of 3.9 percent from December and 7.6 percent — 0.4 mb/d — above January 2018. This was the highest other oils' demand on record.

These trends reflected solid refining and petrochemical demand, reinforcing the January record refinery throughput.

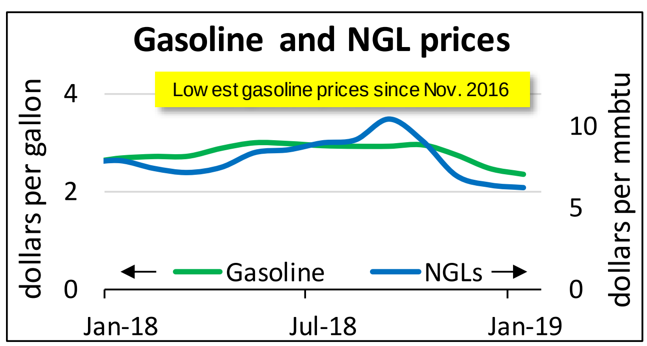
Prices

Gasoline prices fell in January even as crude oil price rose



Domestic WTI crude oil prices averaged $51.38 per barrel in January, an increase of 3.8 percent ($1.86 per barrel) from December but a decrease of 21.3 percent ($12.32 per barrel) from January 2018. Similarly, international Brent crude oil prices averaged $59.41 per barrel, up 3.6 percent ($2.05 per barrel) from December. As prices rebounded, the difference between Brent and WTI crude oil prices increased to $8.03 per barrel in January form $7.84 per barrel in December.

EIA reports crude oil has remained the top input cost to produce gasoline. As WTI crude oil prices fell, the average U.S. gasoline price decreased to $2.34 per gallon in January from $2.46 per gallon in December, according to AAA reports.



Natural gas liquids (NGL) prices averaged $6.24 per million Btu (MMBtu) in January, which was a decrease of 2.5 percent from December. According to Bloomberg, prices of the constituent NGLs– ethane, propane, butane and field natural gasoline --- were mixed between from December to January, with ethane and propane decreasing but butane and field natural gasoline increasing.

Macroeconomy

U.S. leading economic indicators give mixed signals

The University of Michigan's consumer sentiment index dropped to a final reading of 91.2 in January from 98.3 in December. Although the level is still relatively favorable, survey reported the year-ahead outlook remained at its worst since mid-2014 due to a host of issues, including the partial government shutdown, impact of tariffs, financial market volatility, global slowdown, and uncertainty about monetary policies. The survey anticipates the decline could translate into lower spending, as consumers increase their precautionary savings, which is typically done by cutting their discretionary spending.

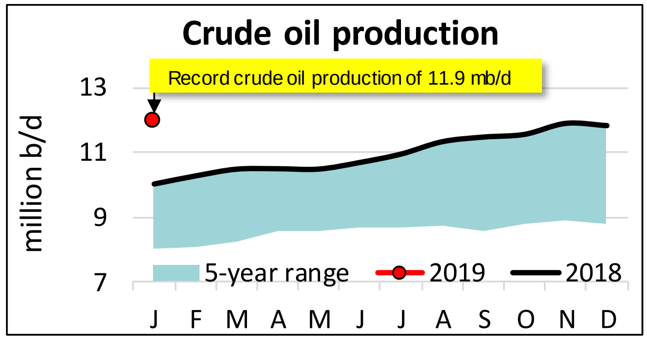
The Institute for Supply Management's Purchasing Managers Index (PMI) registered 56.6 in January, which was an increase of 2.3 percentage points from a reading of 54.3 in December. Any value above 50.0 suggests an expansion. New orders and inputs weakened. Growth occurred in 14 of the 18 manufacturing sectors surveyed (three more than in December).

By contrast, API's Distillate Economic and Financial Indicator (DEFI), which combines industry fundamentals with prices and interest rates, decreased for the second month in a row.

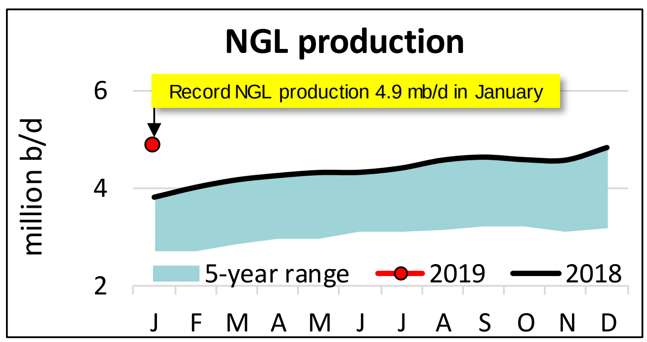
Labor markets remained relatively tight even though the unemployment rate increased to 4.0 percent in January from 3.9 percent in December, according to the Bureau of Labor Statistics (BLS). Although U.S. non-farm payrolls grew by 304,000 in January, this exceeded consensus expectations.

Supply

Record U.S. oil (11.9 mb/d) and NGL production (4.9 mb/d)



U.S. crude oil production of 11.9 mb/d in January – #1 in the world – marked the highest monthly output on record. The increased production reflects the rise in drilling activity over the past quarter, which Baker Hughes reported an average of 878 oil-targeted rigs in Q4 2018, up from 863 oil rigs in Q3 2018. The rig count slipped to an average of 866 in January, however, so further production growth may hinge on the extent to which the backlog of drilled but uncompleted wells (DUCs) begins to be drawn down. EIA reported nearly 8,600 DUCs as of year-end 2018.

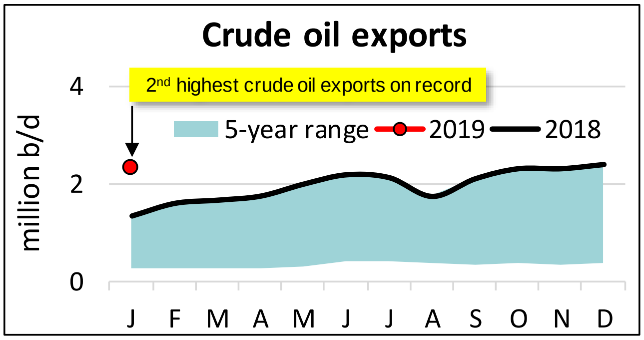


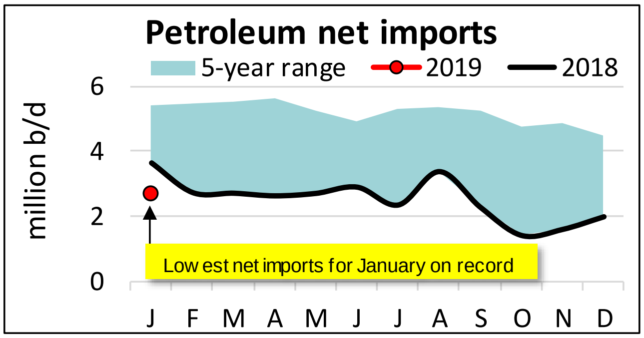
Natural gas liquids (NGL) production, a co-product of natural gas production, was 4.9 mb/d in January, the highest on record for any month.

International trade

U.S. petroleum exports (7.5 mb/d) fell by 0.5 mb/d in two months

U.S. petroleum exports of crude oil and refined products decreased to 7.5 mb/d in January from 7.8 mb/d in December and 8.0 mb/d in both November and October of 2018.

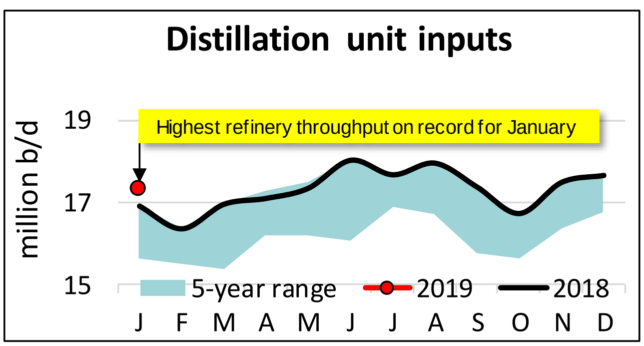




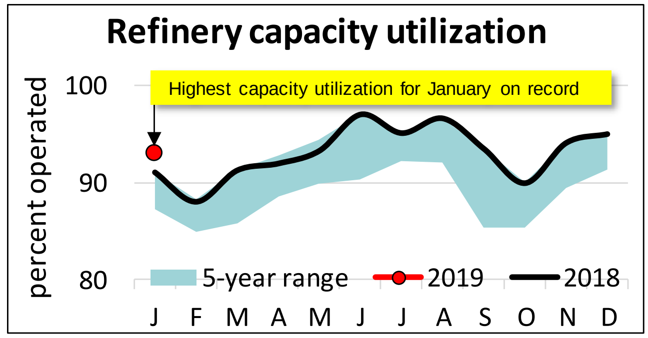
Consequently, the U.S. petroleum net trade balance increased to 2.6 mb/d in January after having been below 2.0 mb/d in December. Although exports in January still represented an improvement of 1.0 mb/d lower net imports compared with January 2018, the fall in exports appears consistent with indications of slower global economic growth.

Industry operations

Record refinery throughput (17.3 mb/d) and capacity utilization (93.1 percent) for January



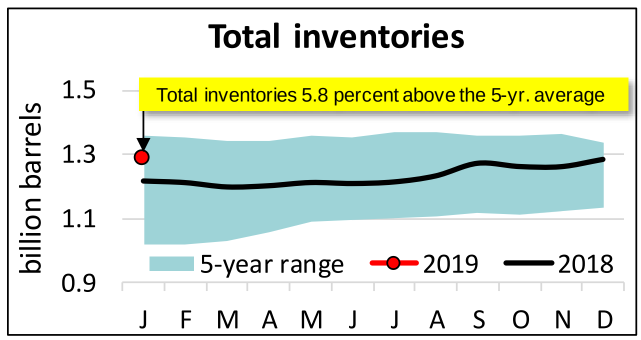
U.S. refineries set new records for the month of January with throughput of 17.3 mb/d and refinery capacity utilization of 93.1 percent.

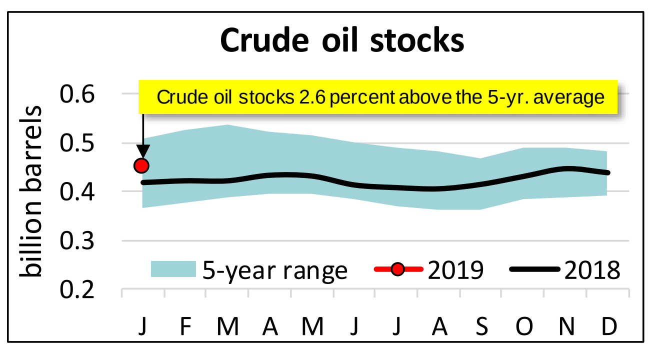


Inventories

Total petroleum inventories 5.8 percent above the average of the 5-year range

In January, total petroleum inventories were 1.28 billion barrels, which was virtually unchanged from December but 5.7 percent over January 2018. Total inventories are now 5.8 percent above the average of the 5-year range. Within the January total, crude oil inventories rose 1.4 percent m/m, while refined product stocks fell 0.9 percent m/m.





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

Disposition and Supply	January			Year-to-Date		
	2019[2]	2018	% Change	2019[3]	2018	% Change
Disposition:						
Total motor gasoline	8,906	8,742	1.9			
Finished reformulated	2,882	2,857	0.9			
Finished conventional	6,024	5,886	2.4			
Kerosine-jet	1,608	1,586	1.4			
Distillate fuel oil	4,249	4,394	(3.3)			
≤ 500 ppm sulfur	4,092	4,204	(2.7)			
≤ 15 ppm sulfur	4,074	4,171	(2.3)			
> 500 ppm sulfur	157	190	(17.4)			
Residual fuel oil	297	340	(12.6)			
All other oils (including crude losses)	5,703	5,302	7.6			
Reclassified[4]	(74)	97	na			
Total domestic product supplied	20,689	20,461	1.1			
Exports	7,488	6,615	13.2			
Total disposition	28,177	27,076	4.1			
Supply:						
Domestic liquids production						
Crude oil (including condensate)	11,936	9,995	19.4			
Natural gas liquids	4,865	3,825	27.2			
Other supply[5]	1,263	1,220	3.6			
Total domestic supply	18,064	15,039	20.1			
Imports:						
Crude oil (excluding SPR imports)	7,645	8,012	(4.6)			
From Canada	3,551	3,778	(6.0)			
All other	4,094	4,234	(3.3)			
Products	2,500	2,262	10.5			
Total motor gasoline (incl. blend.comp)	529	503	5.2			
All other	1,971	1,759	12.1			
Total imports	10,145	10,274	(1.3)			
Total supply	28,209	25,313	11.4			
Stock change, all oils	32	(1,763)	na			
Refinery Operations:						
Input to crude distillation units	17,322	16,918	2.4			
Gasoline production	9,754	9,519	2.5			
Kerosine-jet production	1,776	1,690	5.1			
Distillate fuel production	5,275	5,010	5.3			
Residual fuel production	403	467	(13.8)			
Operable capacity	18,604	18,567	0.2			
Refinery utilization[6]	93.1%	91.1%	na			
Crude oil runs	17,017	16,599	2.5			

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)

	January 2019	December 2018	January 2018	% Change From Month Ago	% Change From Year Ago
Stocks (at month-end, in millions of barrels):					
Crude oil (excluding lease & SPR stocks).........	448.2	440.2	419.9	1.8	6.7
Unfinished oils..	87.0	86.3	89.6	0.8	(2.9)
Total motor gasoline...	258.2	242.3	247.9	6.6	4.1
Finished reformulated..................................	0.0	0.0	0.1	(0.1)	(18.0)
Finished conventional..................................	27.7	25.5	25.2	8.6	10.0
Blending components...................................	230.5	216.8	222.7	6.3	3.5
Kerosene-jet...	42.1	40.6	42.7	3.7	(1.4)
Distillate fuel oil..	141.7	131.2	141.1	8.0	0.4
≤ 500 ppm sulfur...	130.5	120.8	129.0	8.0	1.1
≤ 15 ppm sulfur.......................................	127.1	117.2	127.9	8.4	(0.6)
> 500 ppm sulfur...	11.2	10.4	12.1	7.7	(7.4)
Residual fuel oil..	28.7	27.2	32.4	5.5	(11.3)
All other oils...	279.9	318.1 R	241.5	(12.0)	15.9
Total all oils...	1,285.8	1285.9.0 R	1,215.2	(0.0)	5.8