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July 2019

EXECUTIVE SUMMARY

In July, U.S. petroleum markets saw solid domestic supply and demand coupled with a weakened international backdrop. The U.S. Energy Information Administration (EIA) and International Energy Agency (IEA) [cut their estimates](#) of 2019 global oil demand growth to 1.0 million barrels per day (mb/d) and 1.1 mb/d, respectively. By contrast, this month's API Monthly Statistical Report shows the United States:

- Sustained its world-leading crude oil production at a record pace of 12.0 (mb/d) year-to-date, meaning the U.S. supplied virtually all of the world's oil demand growth and also helped offset OPEC supply cuts; and,
- Total U.S. petroleum demand was at its highest level (20.8 mb/d) for July since 2005, including new demand records for the month in jet fuel (1.8 mb/d) and other oils (e.g., naphtha, gasoil, 5.3 mb/d).

With the strength in consumer demand, domestic refineries processed crude oil at their highest utilization rates so far in 2019 (17.6 mb/d of throughput, utilizing 93.9% of capacity) and compensated for lower international demand for U.S. petroleum exports. Consequently, domestic West Texas Intermediate (WTI) crude oil prices averaged \$57.36 per barrel in July, which was an increase of 4.9% (\$2.70 per barrel) from June. However, WTI prices remained down 19.2% (\$13.62 per barrel) compared with July 2018 (\$70.98 per barrel), and U.S. petroleum inventories grew to within 4.1% of the top of the 5-year range.

API's economic indicator, the API D-E-I (Distillate Economic Indicator) had a reading of zero in July but a three-month average of -0.2, which historically has corresponded with slowing U.S. industrial production. Please see the [following chart](#) for comparisons.

JULY HIGHLIGHTS ([Click hyperlinks to advance to any section](#))**Demand**

- **U.S. petroleum demand (20.8 mb/d) was at its highest for July since 2005.**
 - Gasoline demand (9.6 mb/d) weakened from strong levels.
 - Distillate demand (3.9 mb/d) decelerated in July.
 - Record jet fuel demand for the month of July (1.8 mb/d).
 - Marine shipping drove residual fuel oil demand higher in July.
 - Record refinery and petrochemical other oils demand (5.3 mb/d) for the month of July.

Prices & Macroeconomy

- **Domestic and international crude oil prices converged with a balanced global oil market (EIA).**
- **U.S. leading economic indicators suggest weakening industrial but steady consumer trends.**

Supply

- **U.S. oil (12.0 mb/d) and natural gas liquids (4.8 mb/d) production remained near record levels.**

International trade

- **U.S. petroleum exports (7.6 mb/d) fell in July by the second-most on record.**

Industry operations

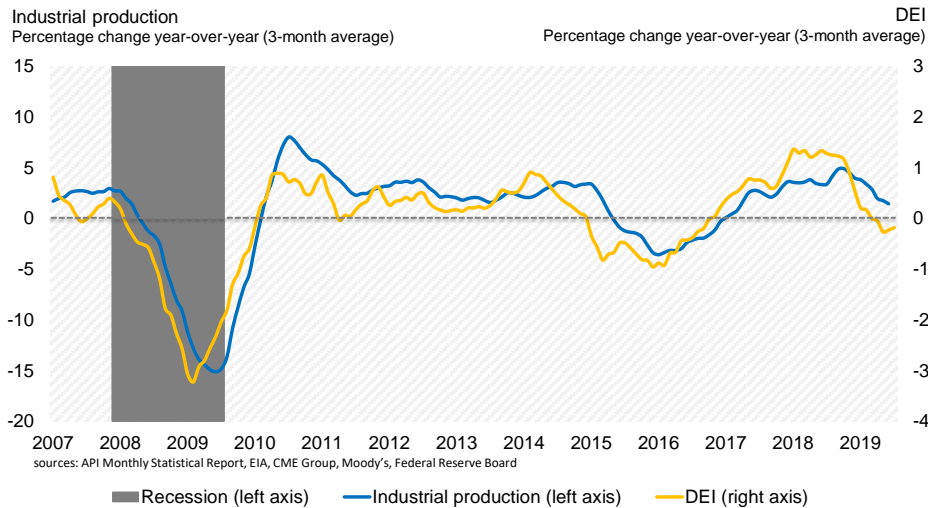
- **July refinery throughput and capacity utilization at their strongest levels so far for 2019.**

Inventories

- **Refined products drove total inventory building higher in July.**

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

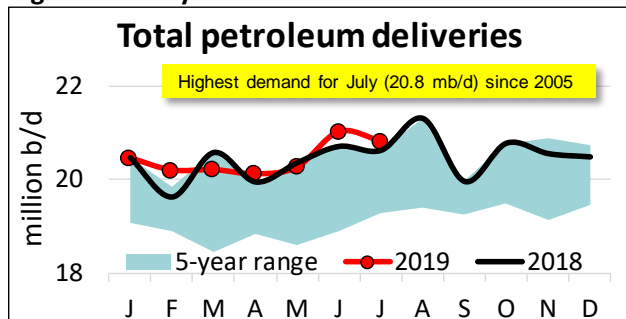
◆ The DEI value of -0.04 for July and three-month average of -0.2 suggests a continued slowing of industrial production



Details by section

Demand

U.S. petroleum demand (20.8 mb/d) was at its highest for July since 2005

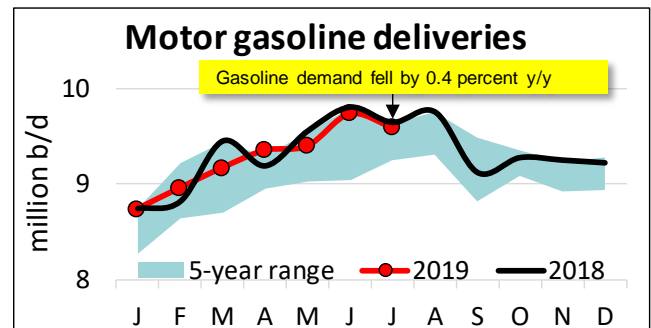


U.S. petroleum demand, as measured by total domestic petroleum deliveries, was 20.8 mb/d in July. This was a decrease of 0.9% from June but an increase of 0.9% compared with July 2018 – and the highest demand for the month of July since 2005. Year-to-date through July, total petroleum demand averaged 20.4 mb/d, its strongest level since 2007.

Gasoline

Gasoline demand (9.6 mb/d) weakened from strong levels

Consumer gasoline demand, measured by total motor gasoline deliveries, was 9.6 mb/d in July.

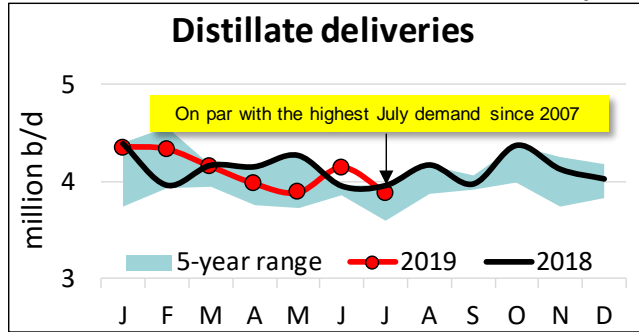


This represented a decrease of 1.4% from June and 0.4% compared with July 2018 – even as gasoline prices were 3.6% below those of July 2018 according to the [American Automobile Association \(AAA\)](#).

Year-to-date through July, gasoline demand fell by 0.4% y/y while regional consumption appeared to vary. Over the same period, demand for reformulated-type gasoline, which is consumed primarily in urban areas, decreased by 4.2% y/y to 3.0 mb/d. By contrast, conventional gasoline is used more in rural areas and increased 1.6% y/y to 6.3 mb/d.

Distillate Fuel Oil

Distillate demand (3.9 mb/d) decelerated in July



In July, distillate deliveries of 3.9 mb/d fell by 6.2% from a record level in June but also were down by 1.7% compared with July 2018.

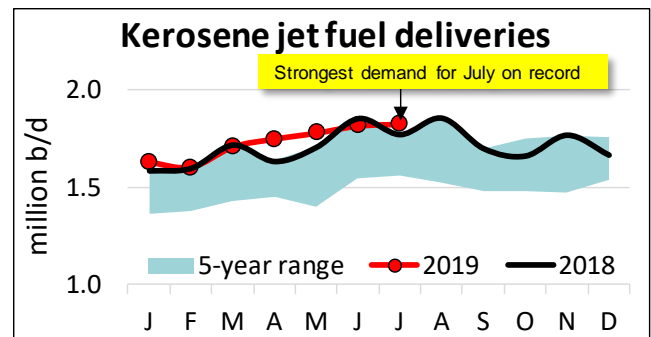
Cumulatively through July, distillate deliveries were virtually unchanged from the same period one year ago, despite lower diesel fuel prices according to [AAA](#). Given multiple sources [reported recession](#) in the trucking sector, consumption having remained on par with its highest level since 2007 showed relative strength of overall activity.

About 93.0% of distillate demand in July was for ultra-low sulfur distillate (ULSD), which is mainly used in heavy-duty transportation, including road freight trucking and agriculture. ULSD deliveries decreased by 1.4% y/y in July. The remaining 3.0% 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 July, HSD deliveries of 99 thousand barrels per day (kb/d) decreased 14.7% compared with July 2018.

Kerosene Jet Fuel

Record jet fuel demand for the month of July (1.8 mb/d)

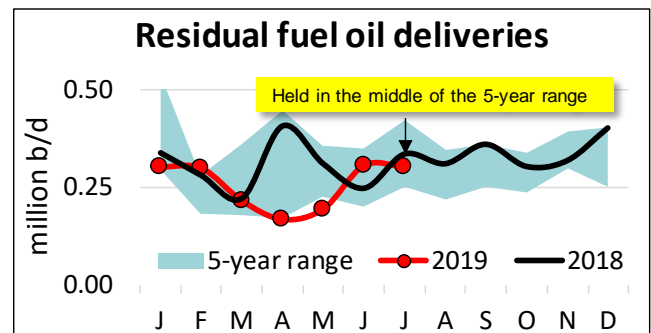
Kerosene jet fuel demand, at 1.8 mb/d in July, increased by 0.5% from June and 3.1% compared with July 2018 – a sign of solid summer air travel.



In fact, the [International Air Transport Association \(IATA\)](#) reported that air travel has “continued the trend of solid passenger demand growth while the record load factor shows that airlines are maximizing efficiency.” However, the IATA also highlighted that growth was not as strong as it was a year ago -- and attributed this slowing to increased economic uncertainty and trade tensions between the U.S. and China.

Residual Fuel Oil

Residual fuel oil demand held near its 5-year average in July.

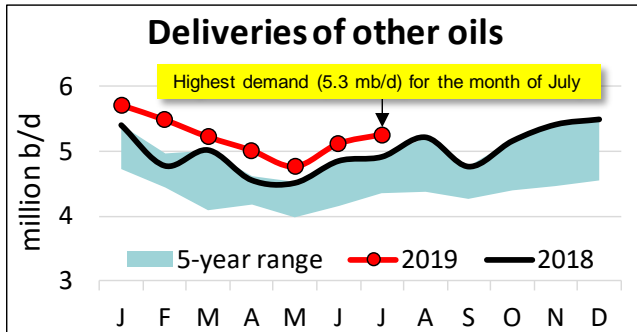


Residual fuel oil demand was 304 kb/d in July, almost the same as it was in June but down by 9.8% compared with July 2018.

Residual fuel oil is used in electric power production, space heating, marine vessel bunkering and other industrial applications. Although most of these applications seasonally could not have been areas of strength in July, marine shipping appeared to rebound as the [Baltic Dry Shipping Index](#) of ship charter rates increased by more than 59% between June and July.

Other Oils

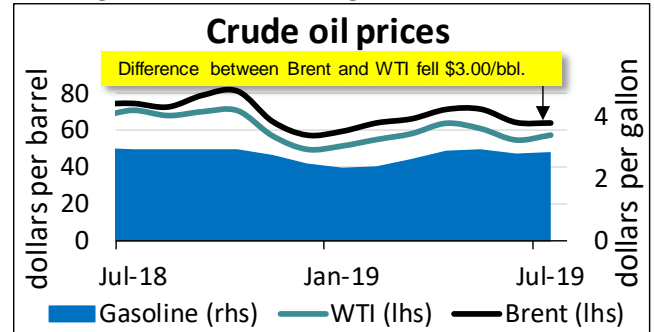
Record refinery and petrochemical other oils demand (5.3 mb/d) for the month of July



Refining and petrochemical demand for liquid feedstocks, naphtha, and gasoil ("other oils") was 5.3 mb/d in July, record demand for the month of July. This represented an increase of 2.8% from June and 5.0% above July 2018.

Prices

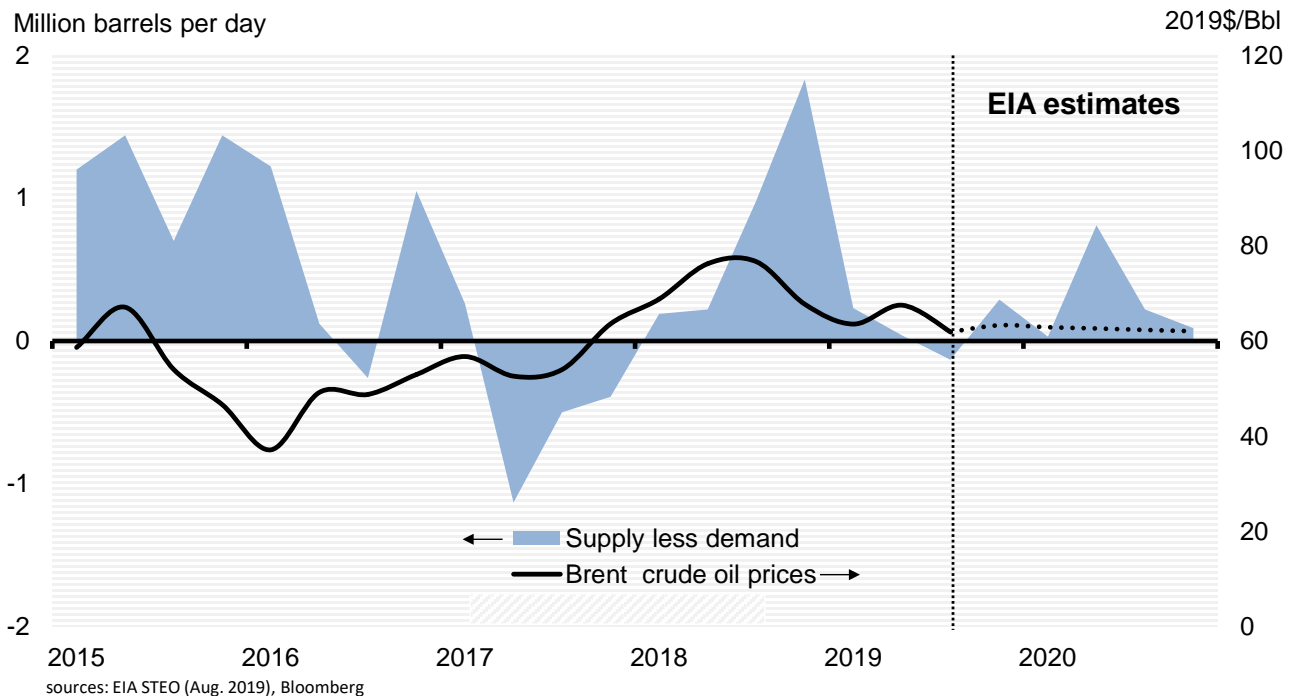
Domestic and international crude oil prices converged with a balanced global oil market (EIA)



July was a month of crude price convergence. Domestic WTI crude oil prices averaged \$57.36 per barrel in July, an increase of 4.9% (\$2.70 per barrel) from June but a decrease of 19.2% (\$13.62 per barrel) from July 2018. By contrast, international Brent crude oil prices averaged \$63.92 per barrel, down 0.5% from June.



EIA global supply/demand estimates as of August 2019



The difference between domestic and international crude oil prices narrowed by \$3.00 per barrel to \$6.56 per barrel in July. This was the lowest price differential between Brent and WTI since August 2018 and appeared to be consistent with [EIA estimates](#) that global oil markets have recently been balanced.

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

Macroeconomy

U.S. leading economic indicators suggest weakening industrial but steady consumer trends

API's D-E-I (Distillate Economic Indicator), which includes industry fundamentals, prices and interest rates, had a reading of zero in July but a three-month average of -0.2, which historically has corresponded with slowing U.S. industrial production.

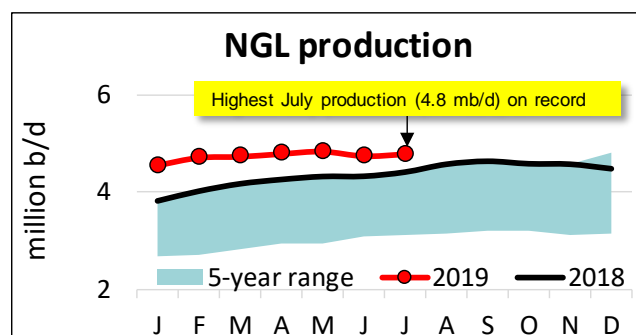
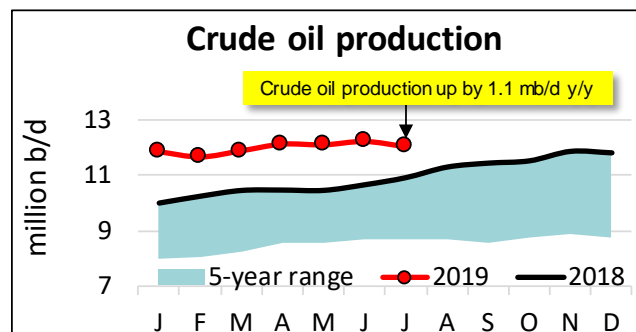
The [Institute for Supply Management's Purchasing Managers Index \(PMI\)](#) showed a softening expansion as the index registered 51.2 in July, a decrease of 0.5 percentage points from a reading of 52.7 in June. Any value above 50.0 suggests an expansion. New orders and supplier deliveries picked up, while production and employment slowed. Growth occurred in nine of the 18 manufacturing sectors surveyed, which was three fewer than it was in June.

The [University of Michigan's consumer sentiment index](#) remained virtually unchanged, with a reading of 98.4 in July versus 98.2 in June. The survey characterized the results as consumers having remained relatively optimistic and expecting more of the same, with no notable increase or decrease in sentiment.

According to the [Bureau of Labor Statistics \(BLS\)](#), labor markets remained near record-low unemployment. The unemployment rate remained steady at 3.7% as U.S. non-farm payrolls grew by 164,000 in July.

Supply

U.S. oil (12.0 mb/d) and natural gas liquids (4.8 mb/d) remained near record levels

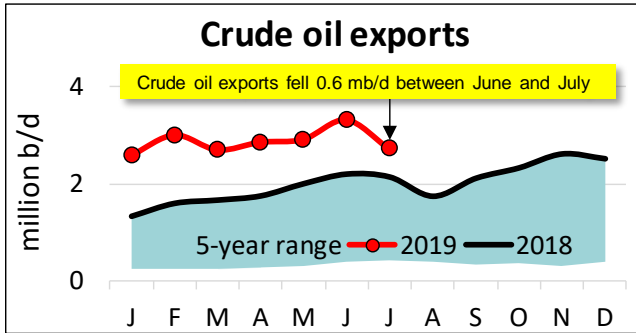
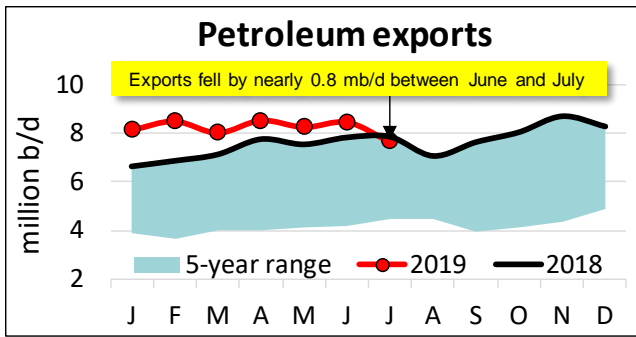


In July, the U.S. sustained its world-leading U.S. crude oil production above 12.0 mb/d as well as natural gas liquids production of 4.8 mb/d. The solid oil production came despite less drilling activity this quarter. [Baker Hughes](#) reported an average of 805 oil-targeted rigs in Q2 2019 falling to 764 as of August 9, 2019. This is consistent with continued shale productivity increases reported in the [U.S. Energy Information Administration \(EIA\) Drilling Productivity Report](#). Additionally, the production results were consistent with EIA reports that the number of drilled but uncompleted well (DUCs) declined consistently through Q2 2019 as new pipeline infrastructure came on stream.

International trade

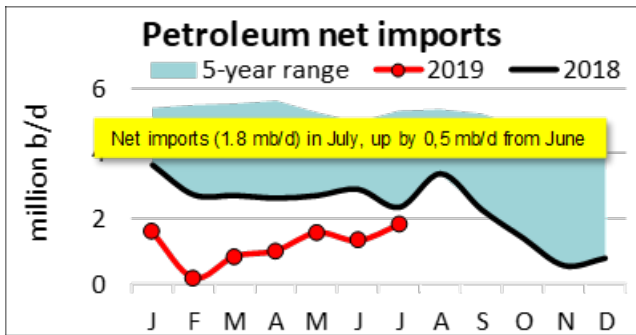
U.S. petroleum exports (7.6 mb/d) fell in July by the second-most on record.

After hitting a record for the month of June, U.S. petroleum exports experienced their second largest ever monthly decline in July, falling by nearly 0.8 mb/d in the month. A fall in crude oil exports accounted for three-quarters of the change.



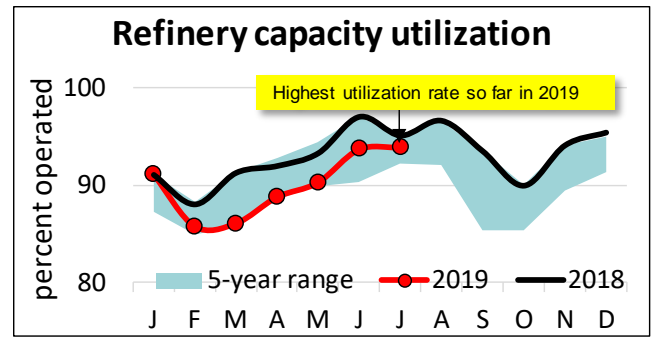
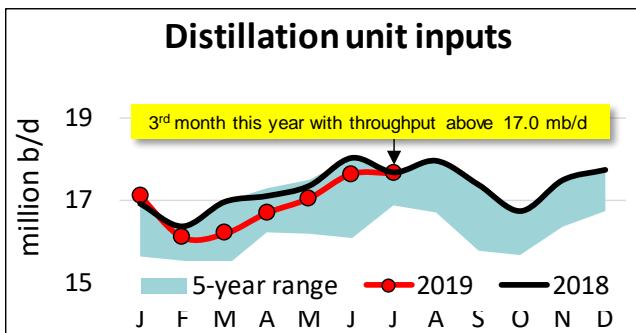
U.S. imports of crude oil fell between June and July, though refined product imports increased. On net, total petroleum imports were 9.5 mb/d in July, down 3.0% from June and 7.1% from July 2018.

Overall, U.S. petroleum net imports rose to 1.8 mb/d in July from 1.3 mb/d in June but were still lower than they were in July 2018 by 0.5 mb/d.



Industry operations

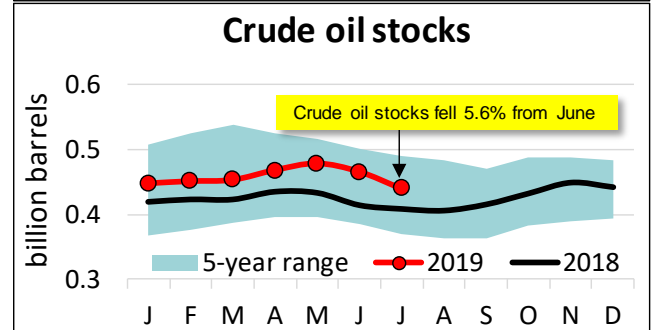
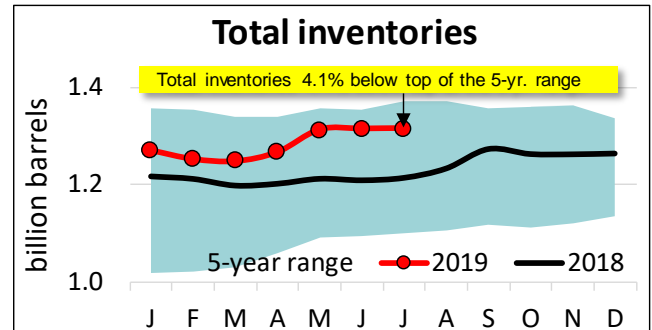
July refinery throughput and capacity utilization at their strongest levels so far for 2019



In July, gross inputs to U.S. refineries were 17.6 mb/d and an implied a capacity utilization rate of 93.9%. – both at their highest rates so far in 2019.

Inventories

Refined products drove total inventory building higher in July



In July, U.S. total petroleum inventories were 1.31 billion barrels, including crude oil and refined products but excluding the Strategic Petroleum Reserve. This level was just 4.1% below of the top of the 5-year range, due to stock building across each of the major refined products and despite a 5.6% monthly draw-down in crude oil stocks.

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

Disposition and Supply	July			Year-to-Date		
	2019 ²	2018	% Change	2019 ³	2018	% Change
Disposition:						
Total motor gasoline.....	9,598	9,640	(0.4)	9,284	9,317	(0.4)
Finished reformulated.....	3,210	3,291	(2.5)	3,003	3,136	(4.2)
Finished conventional.....	6,388	6,349	0.6	6,282	6,181	1.6
Kerosene-jet.....	1,827	1,772	3.1	1,732	1,697	2.1
Distillate fuel oil.....	3,889	3,958	(1.7)	4,126	4,126	(0.0)
≤ 500 ppm sulfur.....	3,790	3,843	(1.4)	4,023	3,972	1.3
≤ 15 ppm sulfur.....	3,784	3,841	(1.5)	4,010	3,961	1.2
> 500 ppm sulfur.....	99	116	(14.7)	102	155	(34.2)
Residual fuel oil.....	304	337	(9.8)	257	308	(16.6)
All other oils (including crude losses)	5,250	4,999	5.0	5,036	4,860	3.6
Reclassified ⁴	(51)	(85)	na	3	28	na
Total domestic product supplied.....	20,817	20,621	0.9	20,438	20,335	0.5
Exports.....	7,628	7,827	(2.5)	8,180	7,352	11.3
Total disposition.....	28,445	28,448	(0.0)	28,618	27,687	3.4
Supply:						
Domestic liquids production						
Crude oil (including condensate).....	12,040	10,891	10.6	11,989	10,475	14.5
Natural gas liquids.....	4,780	4,411	8.4	4,732	4,193	12.9
Other supply ⁵	1,218	1,289	(5.5)	1,219	1,242	(1.9)
Total domestic supply.....	18,038	16,592	8.7	17,940	15,910	12.8
Imports:						
Crude oil (excluding SPR imports).....	6,853	7,923	(13.5)	7,045	7,944	(11.3)
From Canada.....	4,171	3,562	17.1	3,896	3,721	4.7
All other.....	2,682	4,361	(38.5)	3,149	4,223	(25.4)
Products.....	2,601	2,253	15.5	2,345	2,225	5.4
Total motor gasoline (incl. blend.comp)....	908	803	13.1	758	739	2.6
All other.....	1,693	1,450	16.8	1,586	1,485	6.8
Total imports.....	9,454	10,176	(7.1)	9,389	10,169	(7.7)
Total supply.....	27,492	26,768	2.7	27,329	26,079	4.8
Stock change, all oils.....	(953)	(1,681)	na	(1,289)	(1,608)	na
Refinery Operations:						
Input to crude distillation units.....	17,648	17,688	(0.2)	16,923	17,214	(1.7)
Gasoline production.....	10,171	10,166	0.0	10,023	9,995	0.3
Kerosene-jet production.....	1,931	1,894	2.0	1,780	1,795	(0.8)
Distillate fuel production.....	5,268	5,256	0.2	5,149	5,064	1.7
Residual fuel production.....	399	444	(10.1)	376	427	(11.9)
Operable capacity.....	18,803	18,598	1.1	18,793	18,588	1.1
Refinery utilization ⁶	93.9%	95.1%	na	90.0%	92.6%	na
Crude oil runs.....	17,214	17,355	(0.8)	16,588	16,863	(1.6)

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)

	July 2019	June 2019	July 2018	% Change From	
				Month Ago	Year Ago
Stocks (at month-end, in millions of barrels):					
Crude oil (excluding lease & SPR stocks).....	440.0	466.0	409.3	(5.6)	7.5
Unfinished oils.....	93.8	96.9	89.7	(3.2)	4.6
Total motor gasoline.....	230.6	230.9	233.9	(0.1)	(1.4)
Finished reformulated.....	0.0	0.0	0.1	(0.1)	(34.0)
Finished conventional.....	22.5	22.5	24.2	0.0	(7.2)
Blending components.....	208.1	208.4	209.6	(0.1)	(0.7)
Kerosene-jet.....	42.4	39.9	41.0	6.3	3.5
Distillate fuel oil.....	137.2	127.3	127.1	7.8	8.0
≤ 500 ppm sulfur.....	126.6	118.1	119.0	7.2	6.4
≤ 15 ppm sulfur.....	124.3	115.0	114.8	8.0	8.2
> 500 ppm sulfur.....	10.6	9.2	8.1	15.2	31.0
Residual fuel oil.....	30.1	29.0	29.3	3.8	2.6
All other oils.....	340.6	323.7 R	282.0	5.2	20.8
Total all oils.....	1,314.7	1313.7 R	1,212.3	0.1	8.4