

THE U.S. Energy

DATABOOK

A summary of national and global energy indicators



AUGUST 19, 2019

FEDERAL RESERVE BANK of KANSAS CITY

SUMMARY OF CURRENT ENERGY CONDITIONS

In August, the number of total active drilling rigs in the United States continued to decline, down 2.0 percent from a month ago and 11.5 percent from a year ago. In May 2019, U.S. crude oil production edged down 0.2 percent while natural gas production increased 2.8 percent. For the week ending August 9th, West Texas Intermediate (WTI) crude oil averaged \$53.28 per barrel and North Sea Brent averaged \$67.33 per barrel, a decrease of 9.7 percent and 13.1 percent in the last month, respectively. The Henry Hub natural gas spot price averaged \$2.11 per million Btu for the week ending August 9th, a drop of 14.6 percent in the last month. U.S. crude oil and petroleum products exports decreased 5.0 percent while imports rose 5.1 percent in the last month. Global demand for petroleum expanded 0.5 percent the second quarter of 2019, and global petroleum production inched down 0.3 percent in June 2019.

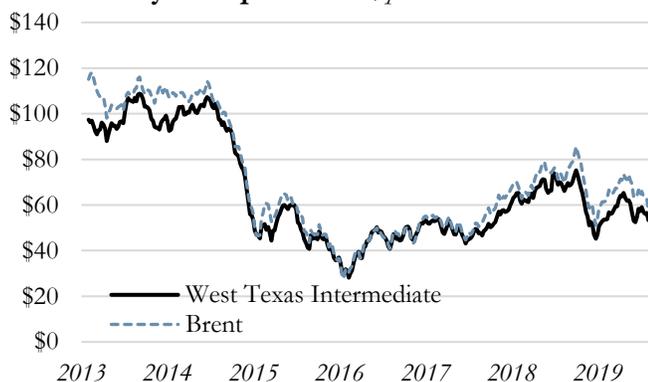
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S. oil imports; U.S. oil exports; oil and gas drilling rig counts; and U.S. natural gas production. These indicators can be found on the following pages.



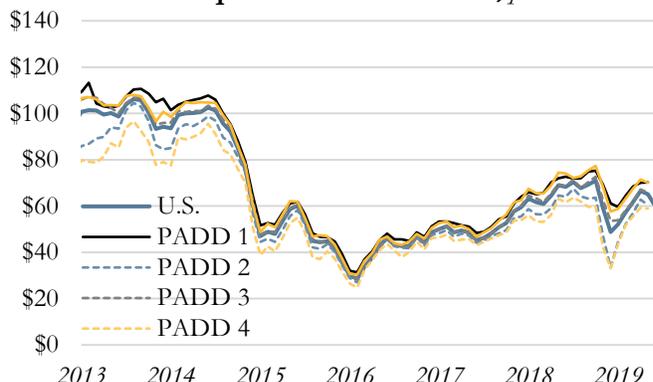
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and Wyoming. There are three branches across the Tenth Federal Reserve District located in Denver, Oklahoma City, and Omaha.

Weekly data through August 9, 2019

Weekly Oil Spot Prices, per barrel



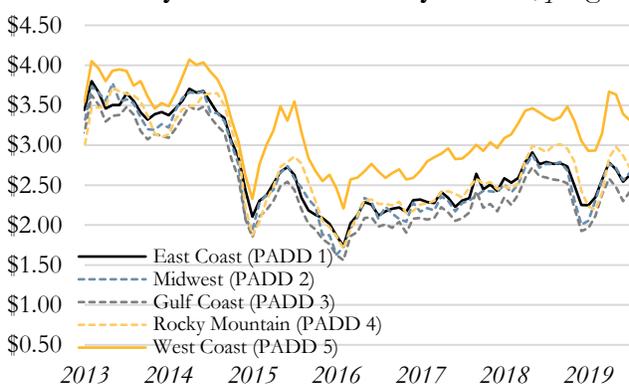
Refiner Acquisition Cost of Oil*, per barrel



Weekly Natural Gas Spot Prices, per mmbtu



Monthly Gasoline Prices by PADD, per gallon



Weekly Spot Prices, Change from

	Current	1 Week	1 Month	3 months	6 Months	1 Year
Weekly Spot Prices	8/9/19	Ago	Ago	Ago	Ago	Ago
West Texas Intermediate	\$53.28	-\$3.27	-\$5.74	-\$8.53	-\$0.25	-\$14.62
Brent	\$57.33	-\$5.26	-\$8.65	-\$13.75	-\$4.38	-\$14.09
Henry Hub	\$2.11	-\$0.13	-\$0.36	-\$0.49	-\$0.48	-\$0.84

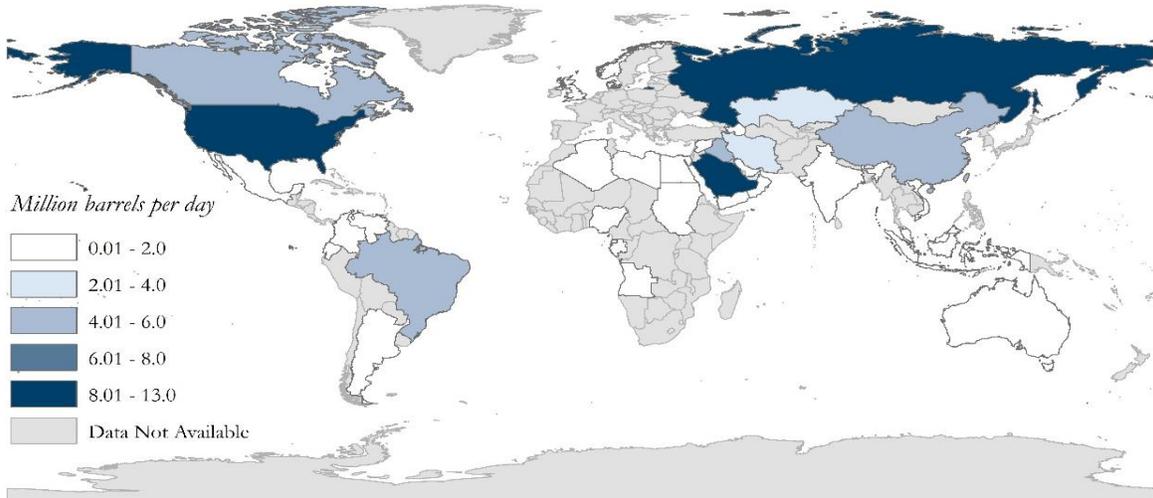
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	3 months	6 Months	1 Year
Geographic Area	Jul-19	Ago	Ago	Ago	Ago
East Coast (PADD 1)	\$2.63	\$0.09	-\$0.15	\$0.38	-\$0.16
Midwest (PADD 2)	\$2.66	\$0.10	-\$0.11	\$0.61	-\$0.11
Gulf Coast (PADD 3)	\$2.42	\$0.12	-\$0.16	\$0.46	-\$0.17
Rocky Mountain (PADD 4)	\$2.71	-\$0.16	-\$0.14	\$0.48	-\$0.21
West Coast (PADD 5)	\$3.31	-\$0.08	-\$0.37	\$0.38	-\$0.04

*The cost of crude oil, including transportation and other fees paid by the refiner.

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

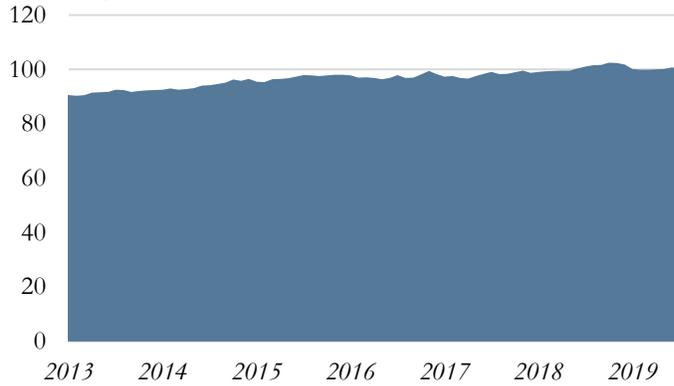
July 2019 Global Petroleum Production



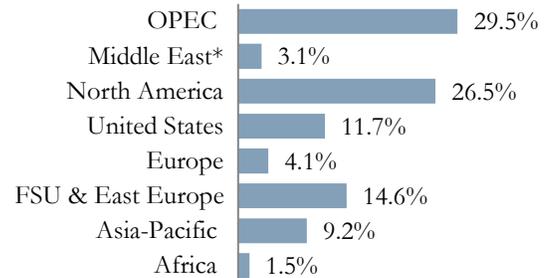
Source: Energy Information Administration/Haver Analytics

July 2019

Monthly Global Petroleum Production, million barrels per day

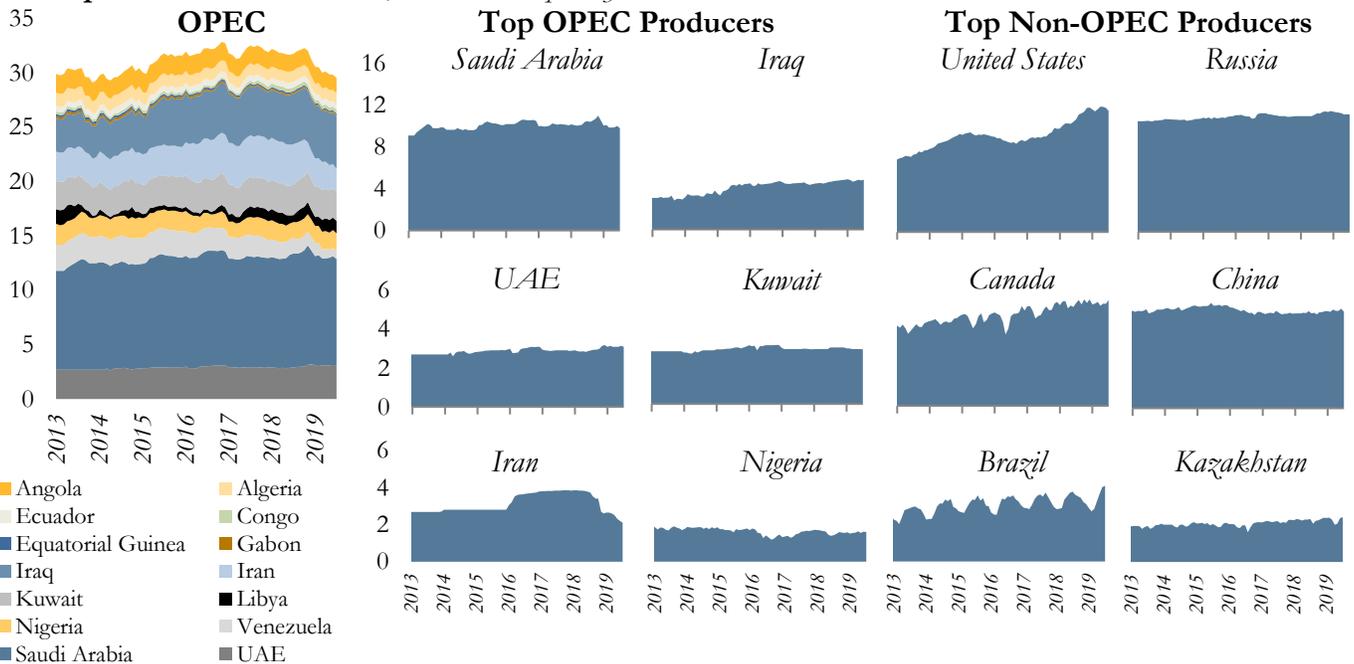


Regional Share of Production



*Excludes OPEC

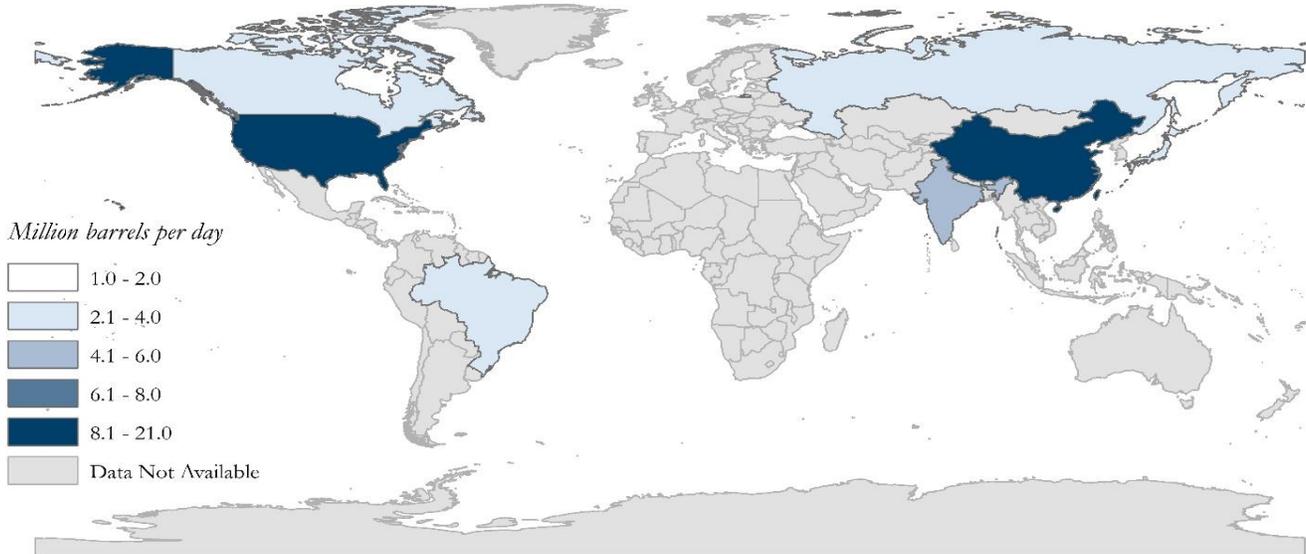
Top Crude Oil Producers, million barrels per day



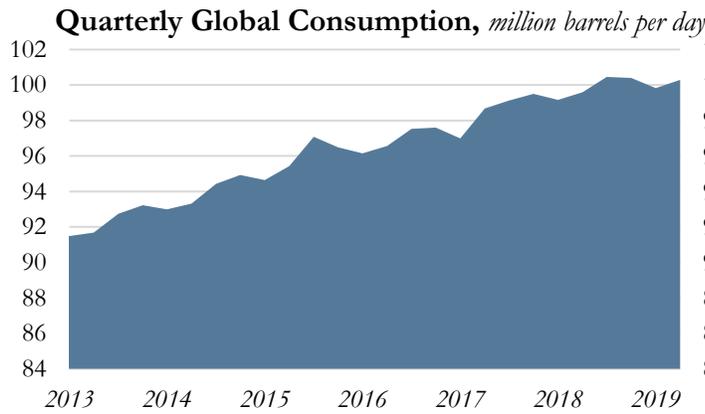
Note: OPEC country production values are for crude oil and non-OPEC country data is for petroleum production.

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Second Quarter 2019 Global Petroleum Consumption

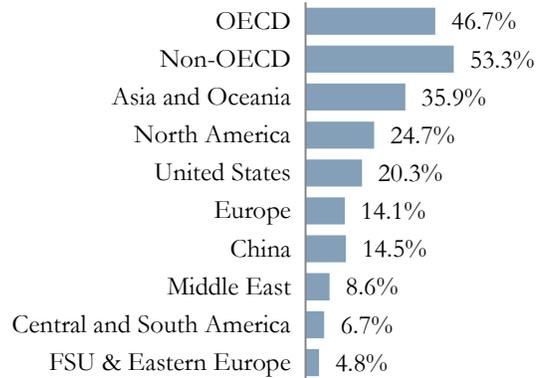


Source: Energy Information Administration/Haver Analytics

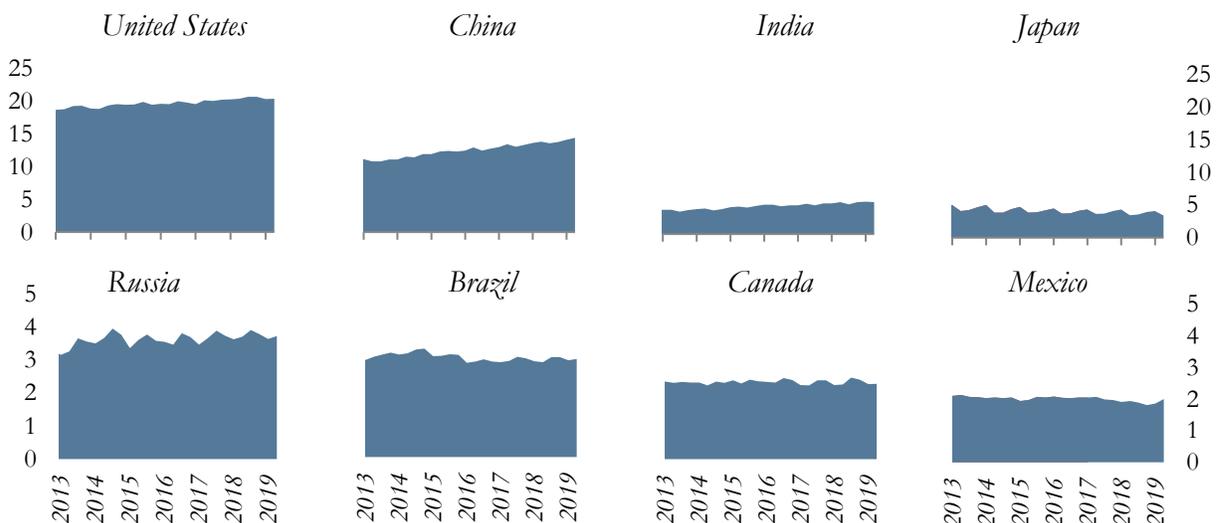


Second Quarter 2019

Regional Share of Consumption

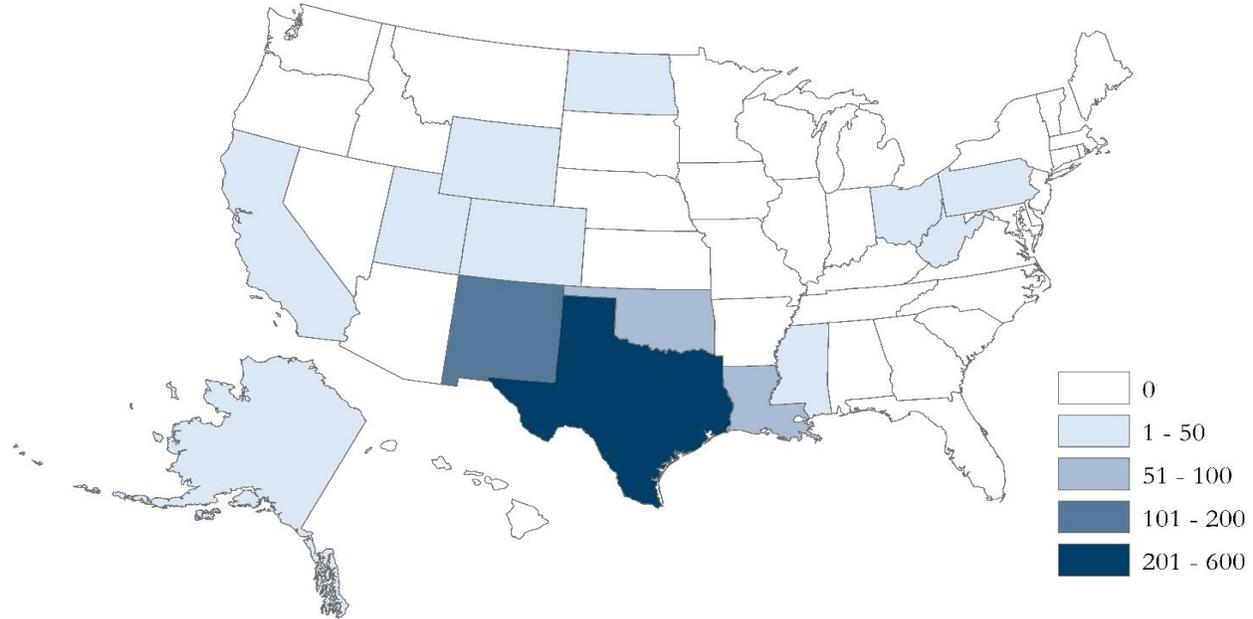


Top Petroleum Consumers, million barrels per day



Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

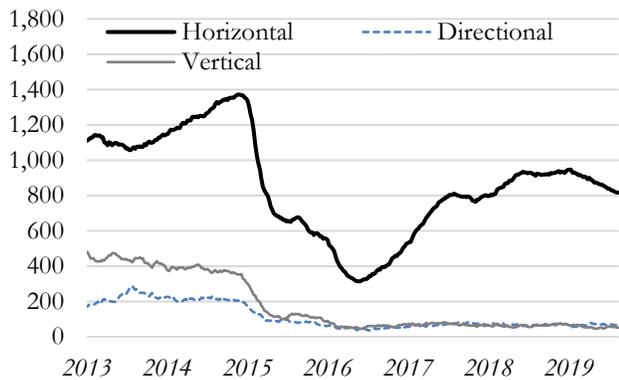
August 2019 Weekly Active Oil & Gas Drilling Rig Counts



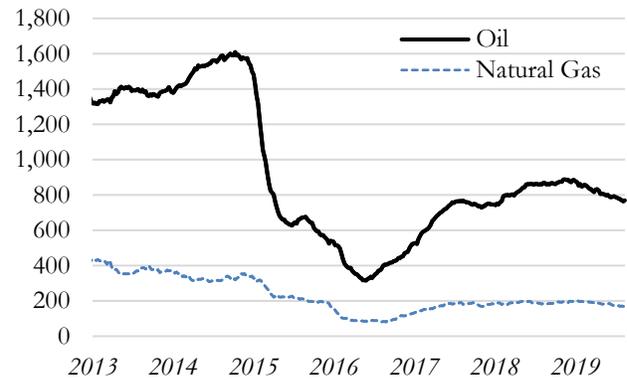
Source: Baker Hughes/Haver Analytics

August 16, 2019

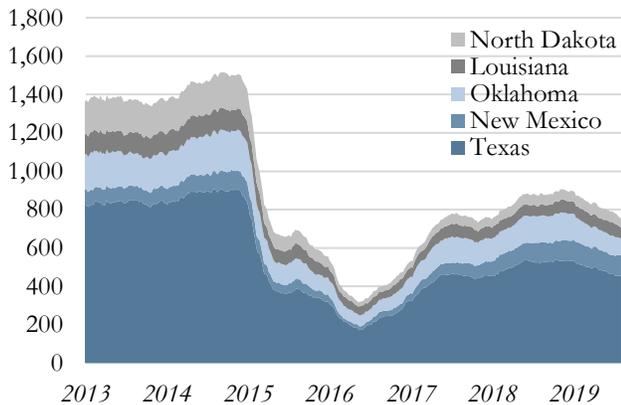
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

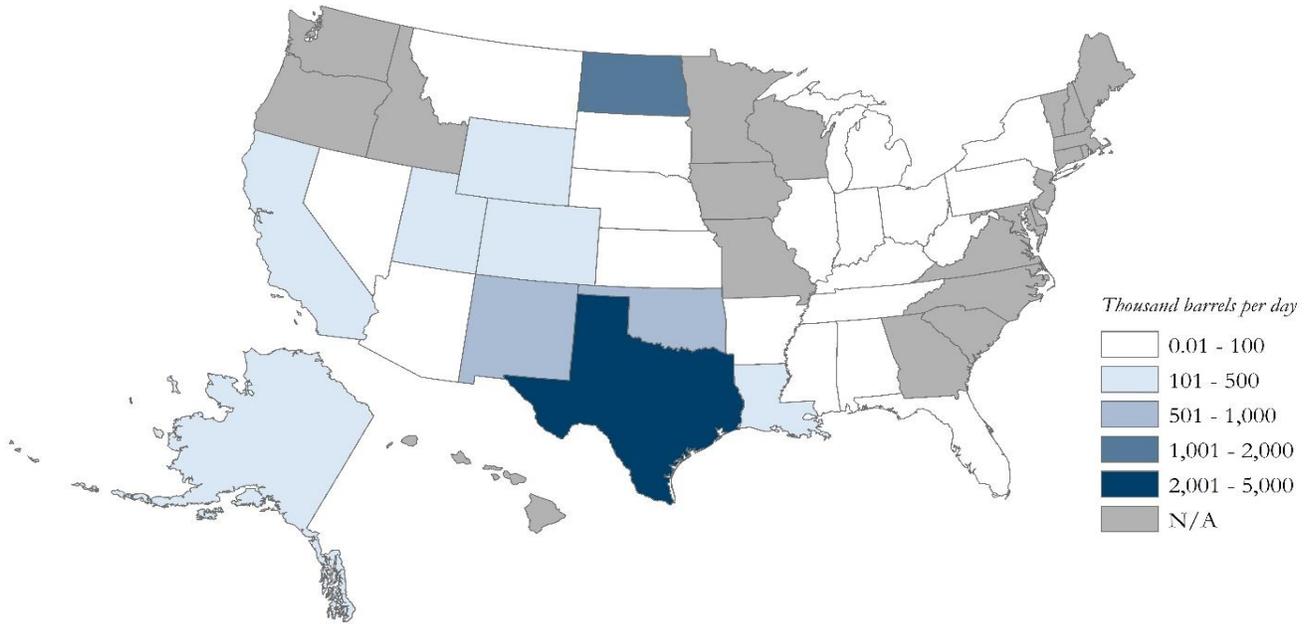
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	770	779	802	869
Gas	165	174	185	186
Misc	0	1	0	2
Total	935	954	987	1057

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	-1.2%	-4.0%	-11.4%
Gas	-	-5.2%	-10.8%	-11.3%
Misc	-	-100.0%	-	-100.0%
Total	-	-2.0%	-5.3%	-11.5%

Source: Baker Hughes/Haver Analytics

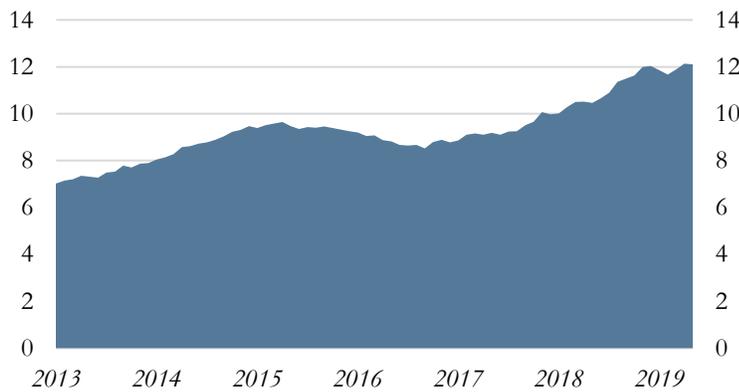
May 2019 U.S. Crude Oil Production



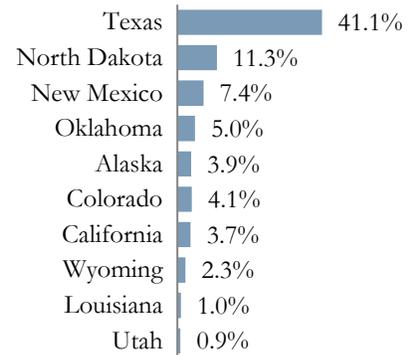
Source: Baker Hughes/Haver Analytics

May 2019

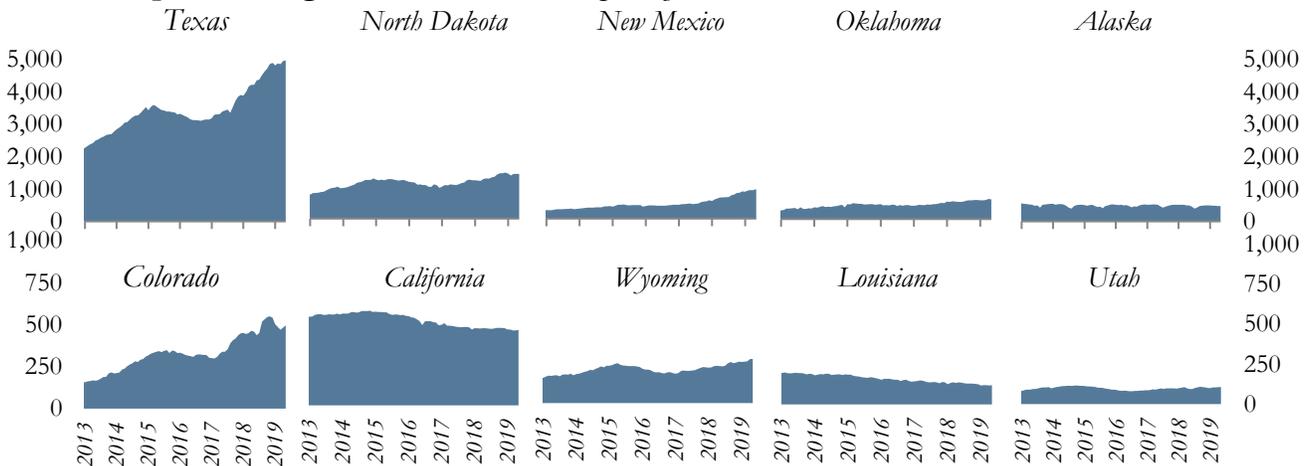
Monthly U.S. Production, million barrels per day



Share of Production



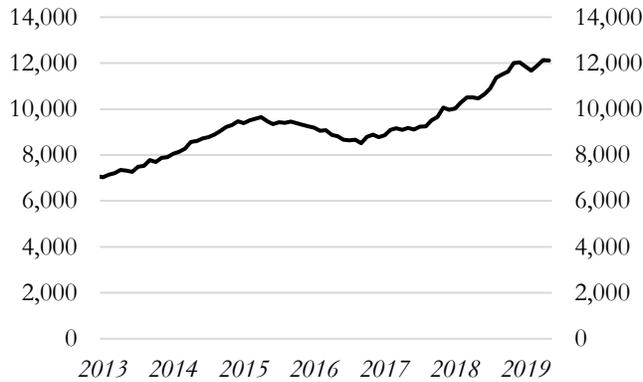
Top Producing States, thousand barrels per day



Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

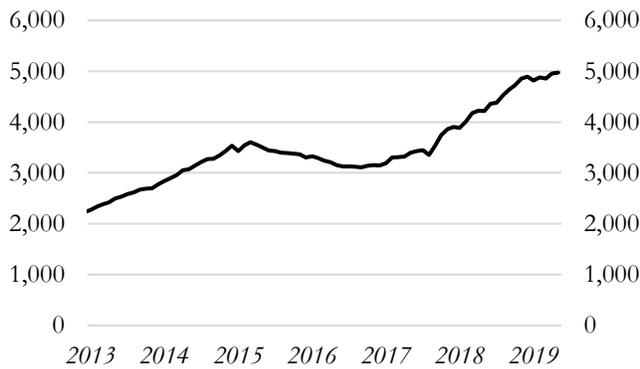
Data through May 2019

United States *Thousand barrels per day*



	United States <i>Thousand barrels per day</i>	<i>Change from</i>
May-19	12,108	
Month Ago	12,134	-0.2%
3 Months Ago	11,669	3.8%
6 Months Ago	11,999	0.9%
1 Year Ago	10,460	15.8%

Texas



	Texas <i>Thousand barrels per day</i>	<i>Change from</i>
May-19	4,972	
Month Ago	4,956	0.3%
3 Months Ago	4,878	1.9%
6 Months Ago	4,856	2.4%
1 Year Ago	4,217	17.9%
Share of U.S. Production		41.1%

North Dakota



	North Dakota <i>Thousand barrels per day</i>	<i>Change from</i>
May-19	1,364	
Month Ago	1,361	0.2%
3 Months Ago	1,310	4.1%
6 Months Ago	1,381	-1.3%
1 Year Ago	1,230	10.9%
Share of U.S. Production		11.3%

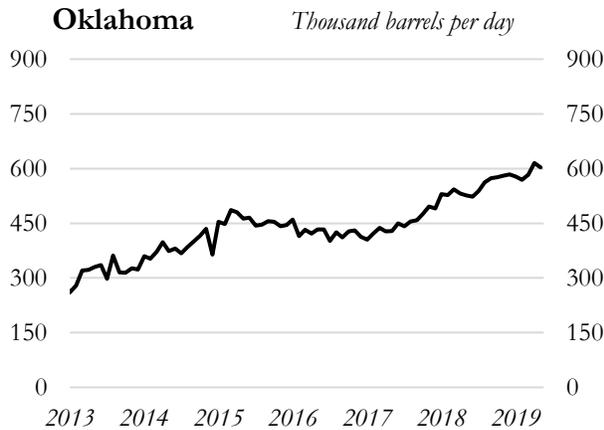
New Mexico



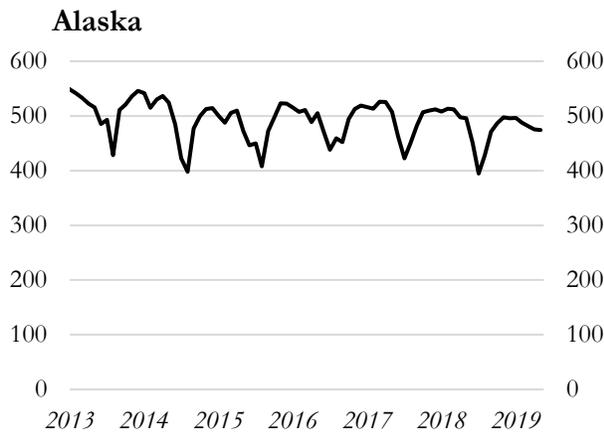
	New Mexico <i>Thousand barrels per day</i>	<i>Change from</i>
May-19	900	
Month Ago	867	3.8%
3 Months Ago	861	4.5%
6 Months Ago	793	13.5%
1 Year Ago	645	39.5%
Share of U.S. Production		7.4%

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

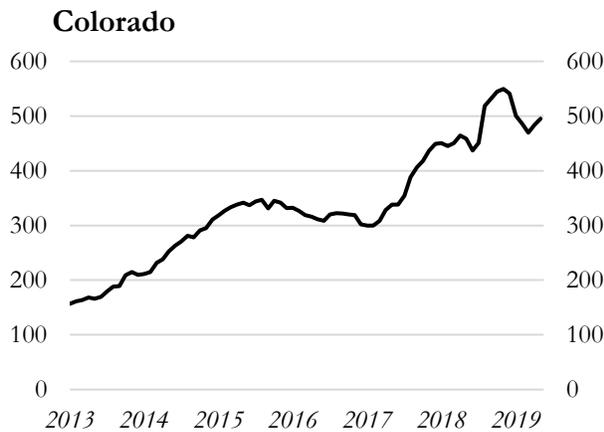
Data through May 2019



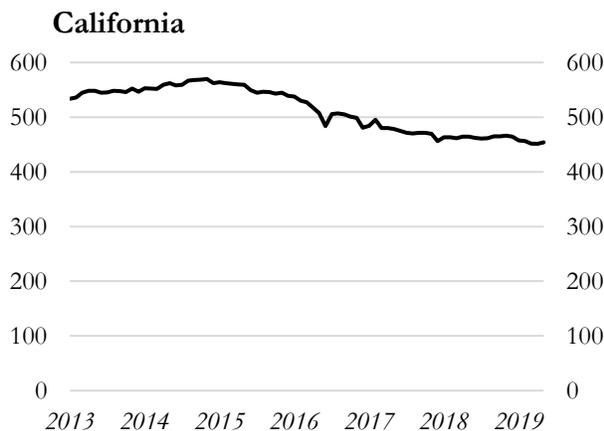
Oklahoma		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-19	603	
Month Ago	615	-2.0%
3 Months Ago	569	5.9%
6 Months Ago	580	3.9%
1 Year Ago	527	14.4%
Share of U.S. Production		5.0%



Alaska		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-19	474	
Month Ago	475	-0.2%
3 Months Ago	488	-2.7%
6 Months Ago	497	-4.6%
1 Year Ago	496	-4.3%
Share of U.S. Production		3.9%



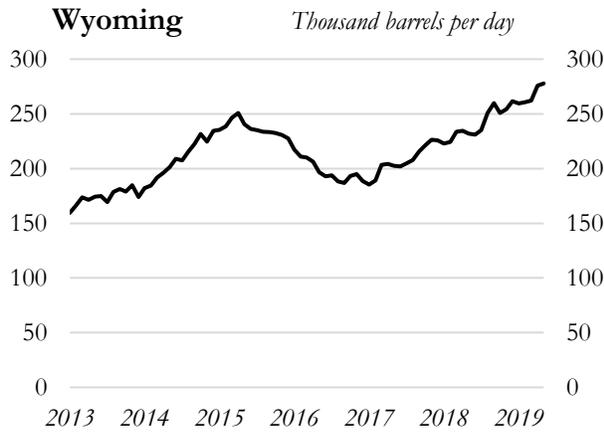
Colorado		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-19	495	
Month Ago	483	2.4%
3 Months Ago	487	1.7%
6 Months Ago	550	-9.9%
1 Year Ago	459	7.9%
Share of U.S. Production		4.1%



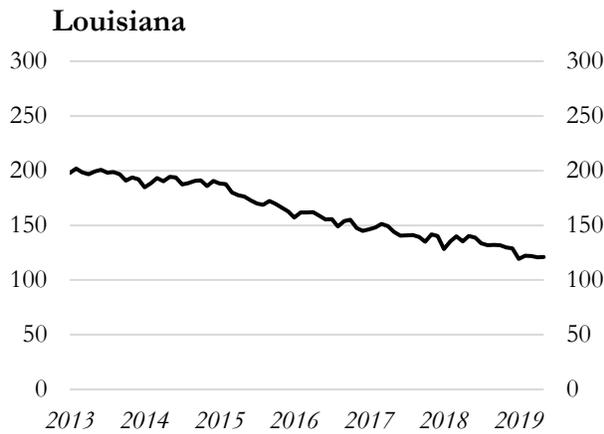
California		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-19	454	
Month Ago	451	0.6%
3 Months Ago	456	-0.5%
6 Months Ago	466	-2.6%
1 Year Ago	464	-2.2%
Share of U.S. Production		3.7%

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

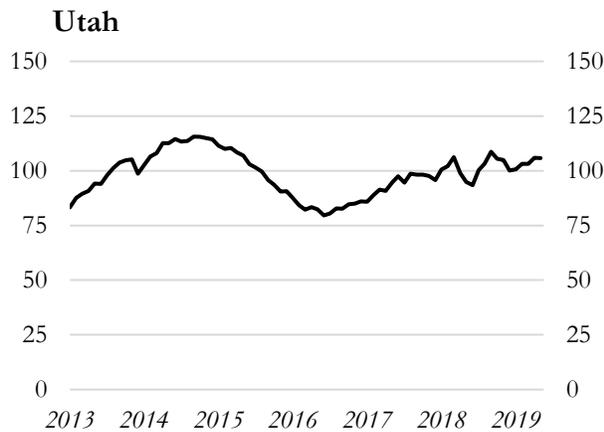
Data through May 2019



Wyoming		Change
Thousand barrels per day		from
May-19	278	
Month Ago	276	0.7%
3 Months Ago	261	6.5%
6 Months Ago	254	9.2%
1 Year Ago	232	19.8%
Share of U.S. Production		2.3%



Louisiana		Change
Thousand barrels per day		from
May-19	121	
Month Ago	121	0.2%
3 Months Ago	122	-0.9%
6 Months Ago	130	-6.7%
1 Year Ago	140	-13.7%
Share of U.S. Production		1.0%

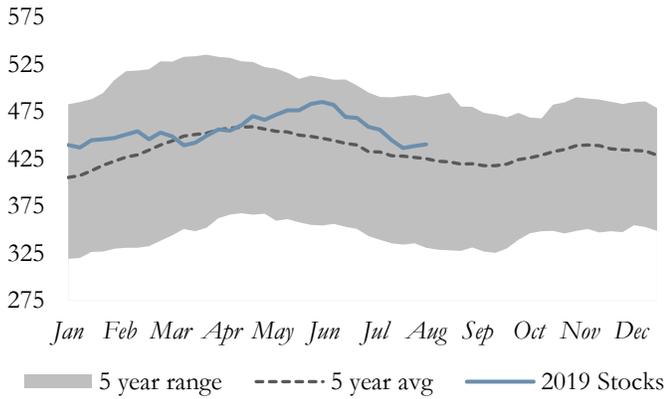


Utah		Change
Thousand barrels per day		from
May-19	106	
Month Ago	106	-0.1%
3 Months Ago	103	2.6%
6 Months Ago	105	0.9%
1 Year Ago	95	11.5%
Share of U.S. Production		0.9%

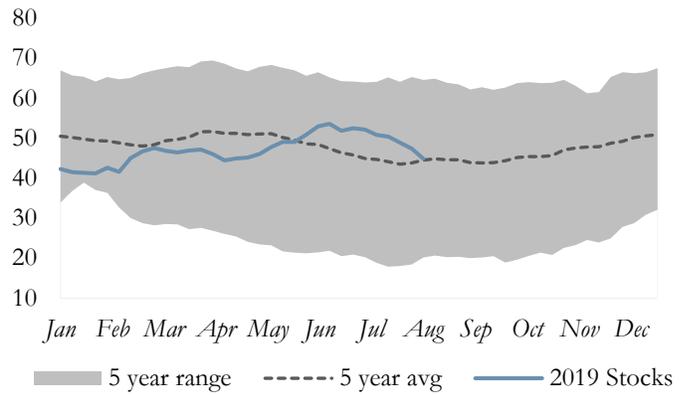
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

August 2019 Weekly U.S. Crude Oil Stocks

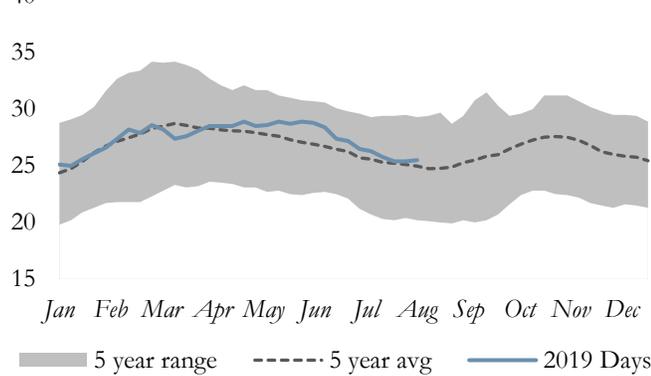
U.S. Oil Stocks, million barrels*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



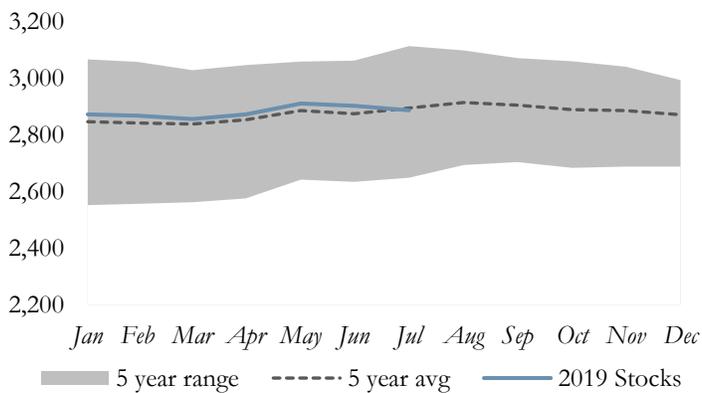
Crude Oil Stocks

	1 Week Ago	1 Year Ago
U.S.	0.4%	6.4%
Cushing, OK	-5.4%	91.2%
Days of Supply	0.4%	8.1%
East Coast (PADD 1)	4.6%	-21.6%
Midwest (PADD 2)	-2.5%	22.0%
Gulf Coast (PADD 3)	0.8%	3.5%
Rocky Mountain (PADD 4)	2.2%	-4.8%
West Coast (PADD 5)	4.5%	-1.7%

*Stocks include those domestic and Customs-cleared foreign stocks held at, or in transit to, refineries and bulk terminals, and stocks in pipelines.

July 2019 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels



Petroleum Stocks

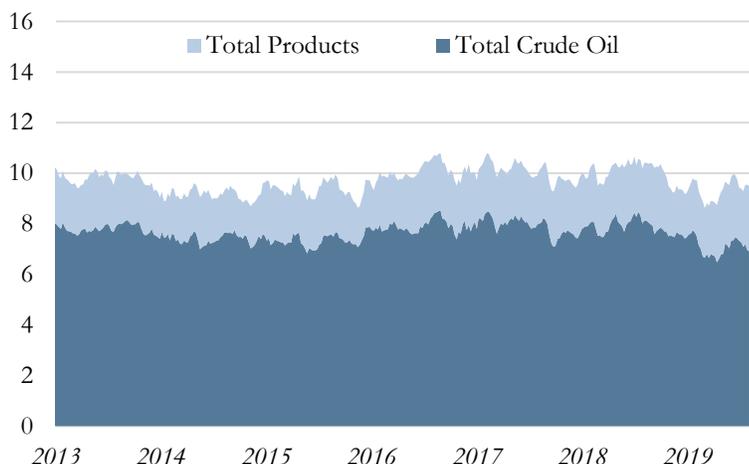
	Million Barrels	Change from
Current Month	2,887	
1 Month Ago	2,903	-0.6%
3 Months Ago	2,873	0.5%
6 Months Ago	2,872	0.5%
1 Year Ago	2,826	2.2%

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

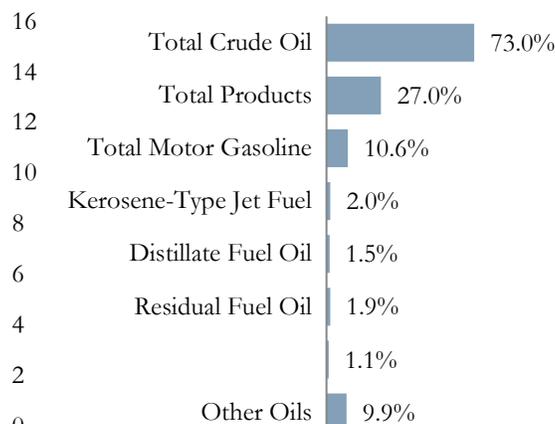
August 2019 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product*

Thousand barrels per day

	<i>Current</i> 8/9/19	<i>1 Month</i> <i>Ago</i>	<i>3 Months</i> <i>Ago</i>	<i>6 Months</i> <i>Ago</i>	<i>1 Year</i> <i>Ago</i>
Total Crude Oil	7,138	7,094	7,217	7,158	8,116
Total Products	2,634	2,203	2,449	2,117	2,296
<i>Total Motor Gasoline</i>	1,031	769	885	541	798
<i>Kerosene-Type Jet Fuel</i>	191	148	202	144	130
<i>Distillate Fuel Oil</i>	147	111	115	347	177
<i>Residual Fuel Oil</i>	181	112	135	203	260
<i>Propane/Propylene</i>	108	105	125	209	112
<i>Other Oils</i>	967	948	987	673	819
Total Imports	9,772	9,297	9,666	9,275	10,412

U.S. Imports by Product, Change from

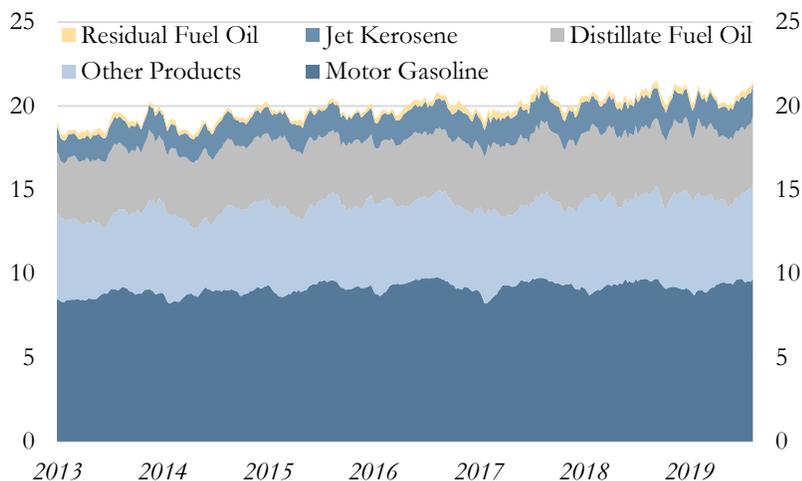
	<i>Current</i> 8/9/19	<i>1 Month</i> <i>Ago</i>	<i>3 Months</i> <i>Ago</i>	<i>6 Months</i> <i>Ago</i>	<i>1 Year</i> <i>Ago</i>
Total Crude Oil	-	0.6%	-1.1%	-0.3%	-12.1%
Total Products	-	19.6%	7.6%	24.4%	14.7%
<i>Total Motor Gasoline</i>	-	34.1%	16.5%	90.6%	29.2%
<i>Kerosene-Type Jet Fuel</i>	-	29.1%	-5.4%	32.6%	46.9%
<i>Distillate Fuel Oil</i>	-	32.4%	27.8%	-57.6%	-16.9%
<i>Residual Fuel Oil</i>	-	61.6%	34.1%	-10.8%	-30.4%
<i>Propane/Propylene</i>	-	2.9%	-13.6%	-48.3%	-3.6%
<i>Other Oils</i>	-	2.0%	-2.0%	43.7%	18.1%
Total Imports	-	5.1%	1.1%	5.4%	-6.1%

*Totals may not sum due to component rounding

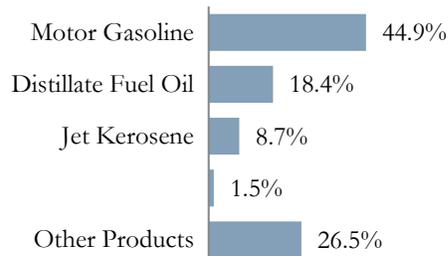
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

August 2019 Weekly U.S. Demand for Petroleum Products 4-Week Averages

All Petroleum Products, million barrels per day



Share of Total Consumption



U.S. Consumption by Product & Percent Change

U.S. Consumption by Product, thousand barrels per day

	Current 8/9/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	21,610	20,811	20,121	20,807	20,846
Motor Gasoline	9,704	9,482	9,414	9,038	9,646
Distillate Fuel Oil	3,973	3,728	4,000	4,308	3,935
Jet Kerosene	1,890	1,864	1,811	1,624	1,851
Residual Fuel Oil	325	384	197	192	296
Other Products	5,718	5,353	4,699	5,645	5,118

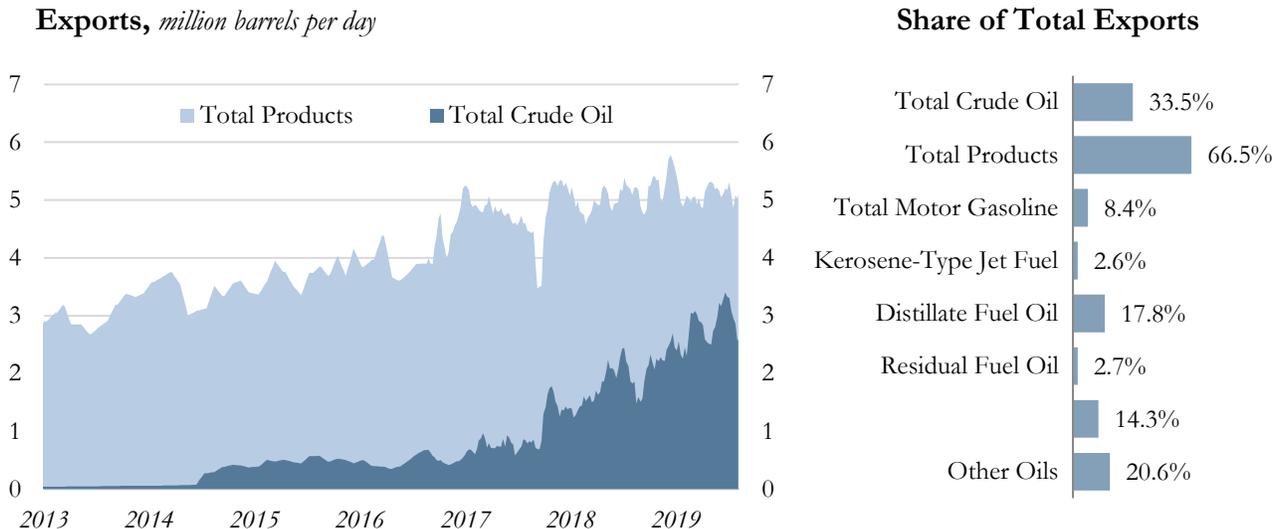
U.S. Consumption by Product, Change from

	Current 8/9/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	3.8%	7.4%	3.9%	3.7%
Motor Gasoline	-	2.3%	3.1%	7.4%	0.6%
Distillate Fuel Oil	-	6.6%	-0.7%	-7.8%	1.0%
Jet Kerosene	-	1.4%	4.4%	16.4%	2.1%
Residual Fuel Oil	-	-15.4%	65.0%	69.3%	9.8%
Other Products	-	6.8%	21.7%	1.3%	11.7%

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

August 2019 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages



U.S. Exports by Product*

Thousand barrels per day

	Current 8/9/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	2,604	3,086	2,740	2,303	1,859
Total Products	5,159	5,089	5,287	5,076	5,219
Total Motor Gasoline	649	705	628	752	676
Kerosene-Type Jet Fuel	203	180	174	203	226
Distillate Fuel Oil	1,385	1,424	1,324	1,166	1,190
Residual Fuel Oil	209	92	300	289	397
Propane/Propylene	1,112	1,130	1,319	908	1,065
Other Oils	1,603	1,559	1,542	1,758	1,665
Total Exports	7,763	8,174	8,027	7,379	7,078

U.S. Exports by Product, Change from

	Current 8/9/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	-15.6%	-5.0%	13.1%	40.1%
Total Products	-	1.4%	-2.4%	1.6%	-1.1%
Total Motor Gasoline	-	-7.9%	3.3%	-13.7%	-4.0%
Kerosene-Type Jet Fuel	-	12.8%	16.7%	0.0%	-10.2%
Distillate Fuel Oil	-	-2.7%	4.6%	18.8%	16.4%
Residual Fuel Oil	-	127.2%	-30.3%	-27.7%	-47.4%
Propane/Propylene	-	-1.6%	-15.7%	22.5%	4.4%
Other Oils	-	2.8%	4.0%	-8.8%	-3.7%
Total Exports	-	-5.0%	-3.3%	5.2%	9.7%

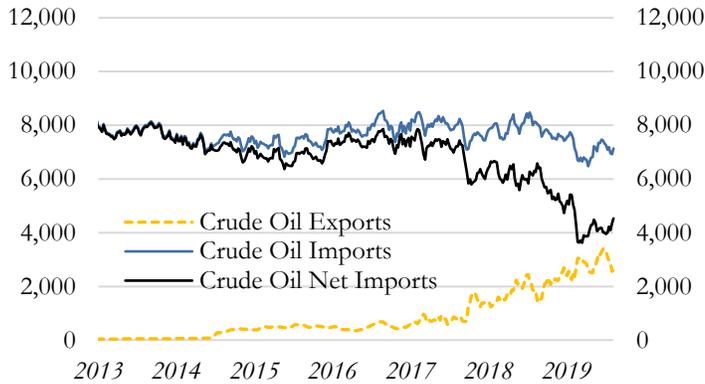
*Totals may not sum due to rounding

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

August 2019 Weekly U.S. Net Imports of Crude Oil & Petroleum Products

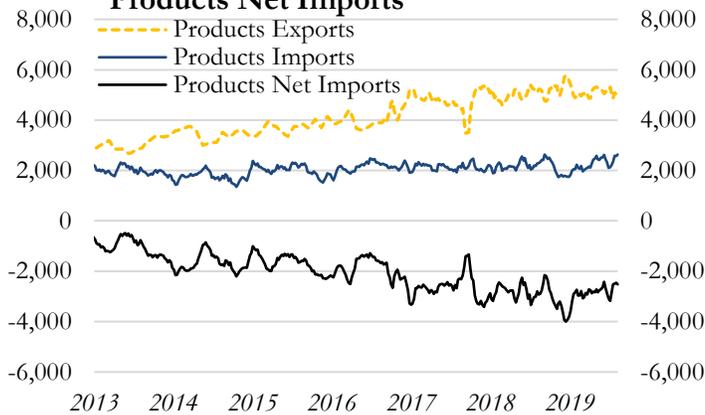
4-Week Averages, Thousand barrels per day

Crude Oil Net Imports



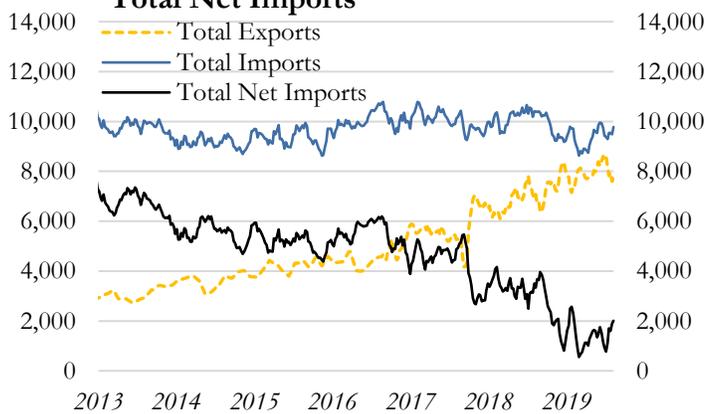
Crude Oil Net Imports		Change
Thousand barrels per day		from
8/9/19	4,535	
Month Ago	4,008	13.1%
3 Months Ago	4,477	1.3%
6 Months Ago	4,854	-6.6%
1 Year Ago	6,257	-27.5%

Products Net Imports



Products Net Imports		Change
Thousand barrels per day		from
8/9/19	-2,525	
Month Ago	-2,886	-
3 Months Ago	-2,838	-
6 Months Ago	-2,958	-
1 Year Ago	-2,923	-

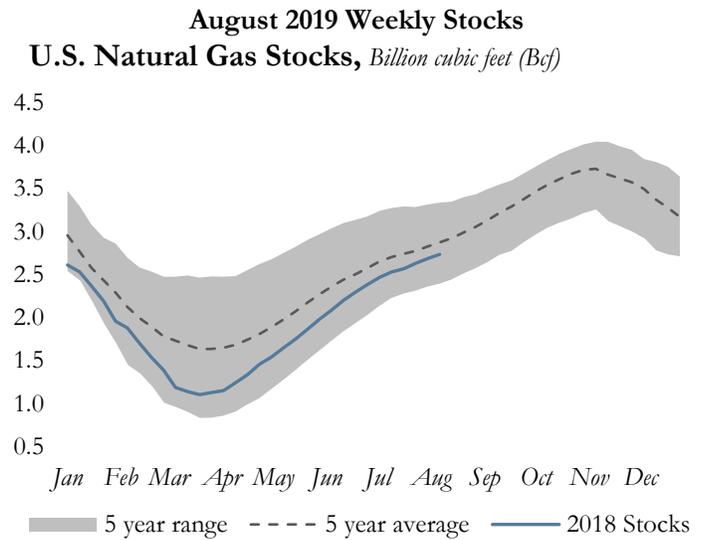
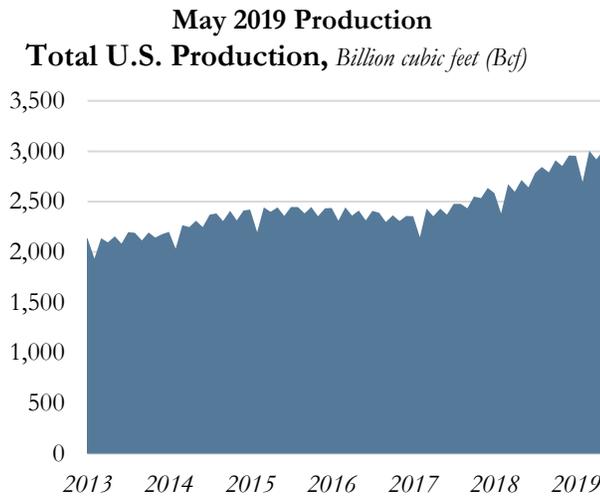
Total Net Imports



Total Net Imports		Change
Thousand barrels per day		from
8/9/19	2,010	
Month Ago	1,122	79.1%
3 Months Ago	1,639	22.6%
6 Months Ago	1,896	6.0%
1 Year Ago	3,334	-39.7%

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

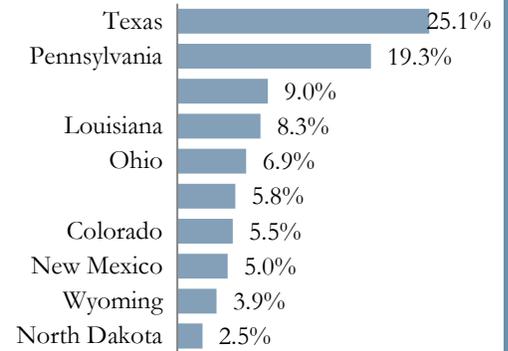
U.S. Natural Gas Production & Stocks



U.S. Natural Gas, Billion cubic feet (Bcf)

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	3,002	2,920	2,697	2,855	2,713
U.S. Stocks	2,738	2,533	1,653	1,882	2,386

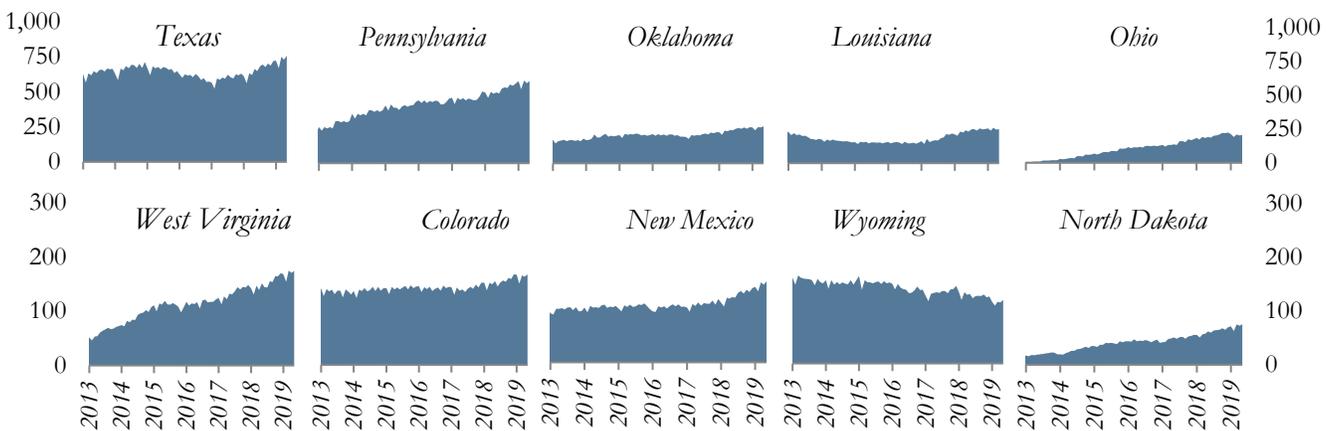
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	2.8%	11.3%	5.2%	10.6%
U.S. Stocks	-	8.1%	65.6%	45.5%	14.8%

Top Producing States, Billion cubic feet (Bcf)



*U.S. production is monthly data & stocks are weekly data

Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Definitions:

West Texas Intermediate: A crude oil produced in Texas and southern Oklahoma which serves as a reference or "marker" for pricing a number of other crude streams and is traded in the domestic spot market at Cushing, Oklahoma.

Brent: A blended crude oil produced in the North Sea region which serves as a reference or "marker" for pricing a number of other international crude streams.

Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Refined petroleum products include but are not limited to gasolines, kerosene, distillates (including No. 2 fuel oil), liquefied petroleum gas, asphalt, lubricating oils, diesel fuels, and residual fuels.

Notes:

Page 2: Petroleum Administration for Defense Districts (PADD) are geographic aggregations of the 50 States and the District of Columbia into five districts by the Petroleum Administration for Defense in 1950. These districts were originally defined during World War II for purposes of administering oil allocation. For more information, visit: <http://www.eia.gov/petroleum/supply/monthly/pdf/append.pdf>

Page 3: For OPEC countries & the U.S., only crude oil production data is used. For non-OPEC countries (excluding the U.S.) total petroleum production data is used. Total petroleum production includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

Page 5: The active rig count is the number of rigs actively exploring for or developing oil or natural gas. Rig counts provide an indicator of new drilling activity and potential for expanded crude oil or natural gas production.

Pages 10: Crude oil stocks are stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

Crude oil stocks for Cushing include domestic and foreign crude oil stocks held in tank farms in Lincoln, Payne, and Creek counties in Oklahoma. Cushing, Oklahoma, is the designated delivery point for NYMEX crude oil futures contracts.

Days of supply are calculated by taking the current stock level and dividing by product supplied (used as an estimate of demand) averaged over the most recent four-week period. For crude oil, refinery inputs of crude oil are used as a proxy for demand.

Notes:

Page 11: Petroleum Consumption approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas-processing plants, blending plants, pipelines, and bulk terminals.

Data Revisions

Most data are revised periodically to correct for errors and incorporate additional information as it becomes available. Data shown in this report are subject to change.

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