

# THE U.S. Energy DATABOOK

*A summary of national and global energy indicators*



JUNE 24, 2019

FEDERAL RESERVE BANK of KANSAS CITY

## SUMMARY OF CURRENT ENERGY CONDITIONS

The number of total active drilling rigs in the United States declined 1.6 percent from a month ago, down 8.1 percent from a year ago. In March 2019, U.S. crude oil production grew 2.1 percent, and natural gas production increased 10.9 percent. For the week ending June 14th, West Texas Intermediate (WTI) crude oil averaged \$52.52 per barrel and North Sea Brent averaged \$63.19 per barrel, a decrease of 15.4 percent and 13.8 percent in the last month, respectively. The Henry Hub natural gas spot price averaged \$2.41 per million Btu for the week ending June 14th, a decline of 9.7 percent in the last month. U.S. crude oil and petroleum products exports expanded 5.2 percent and imports rose 3.4 percent in the last month. Global demand for petroleum dipped 0.2 percent the first quarter of 2019, and global petroleum production inched up 0.1 percent in May 2019.

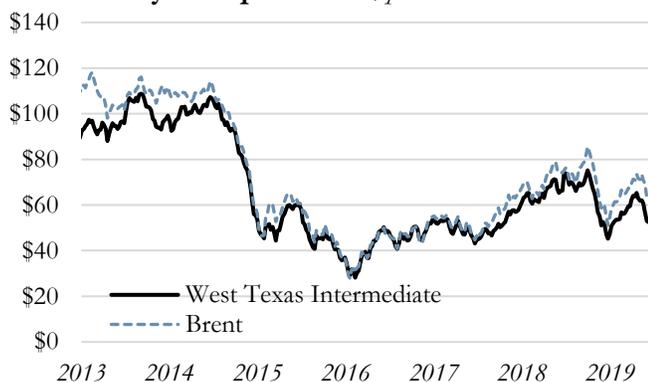
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S. 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.



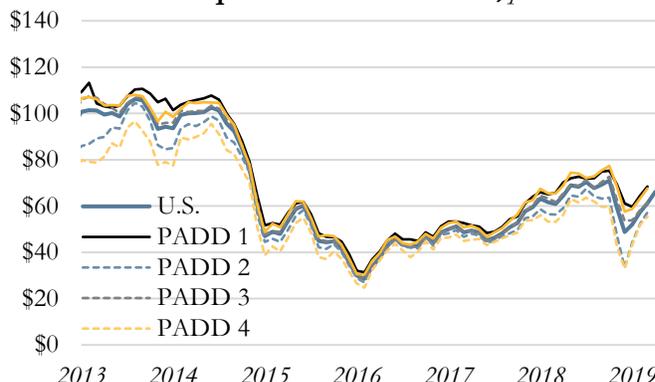
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through June 14, 2019

Weekly Oil Spot Prices, per barrel



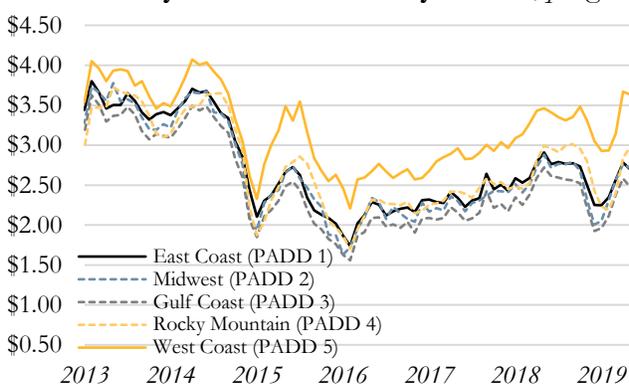
Refiner Acquisition Cost of Oil\*, per barrel



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	6/14/19	Ago	Ago	Ago	Ago	Ago
West Texas Intermediate	\$52.52	-\$0.45	-\$9.58	-\$5.29	\$0.98	-\$13.69
Brent	\$63.19	\$0.04	-\$10.13	-\$2.52	\$3.68	-\$11.07
Henry Hub	\$2.41	-\$0.04	-\$0.26	-\$0.48	-\$1.97	-\$0.58

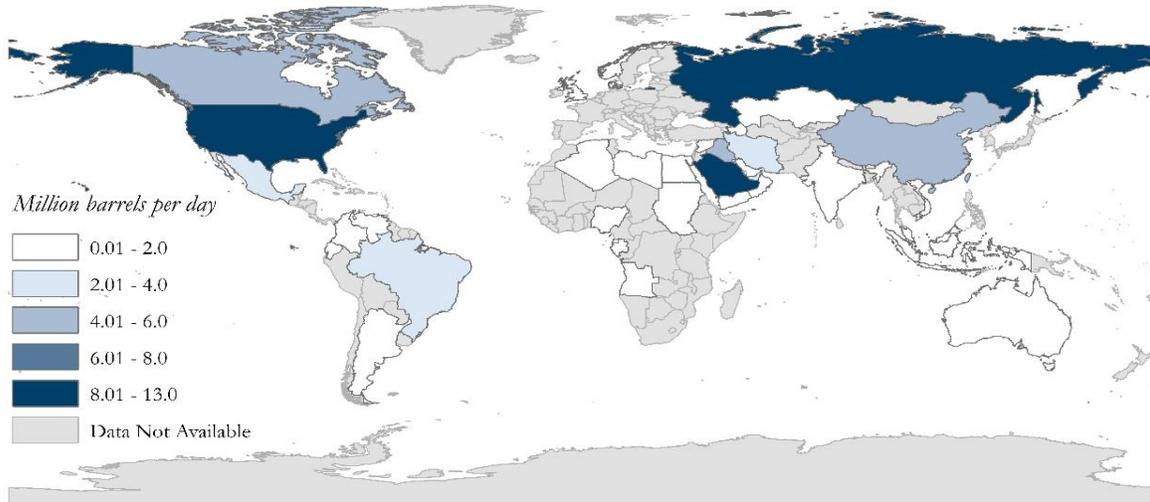
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	3 months	6 Months	1 Year
Geographic Area	May-19	Ago	Ago	Ago	Ago
East Coast (PADD 1)	\$2.70	-\$0.08	\$0.35	\$0.20	-\$0.21
Midwest (PADD 2)	\$2.71	-\$0.05	\$0.41	\$0.40	-\$0.17
Gulf Coast (PADD 3)	\$2.47	-\$0.11	\$0.36	\$0.26	-\$0.25
Rocky Mountain (PADD 4)	\$2.98	\$0.14	\$0.79	\$0.18	-\$0.01
West Coast (PADD 5)	\$3.63	-\$0.04	\$0.70	\$0.32	\$0.17

\*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

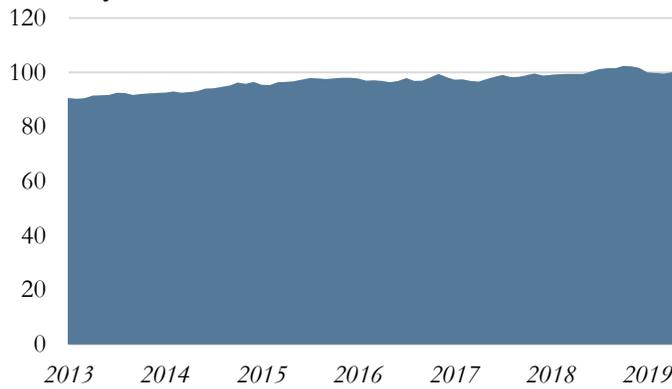
May 2019 Global Petroleum Production



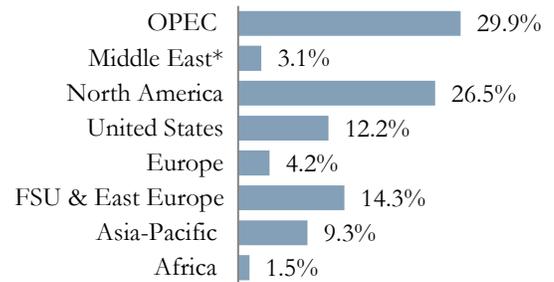
Source: Energy Information Administration/Haver Analytics

May 2019

Monthly Global Petroleum Production, million barrels per day

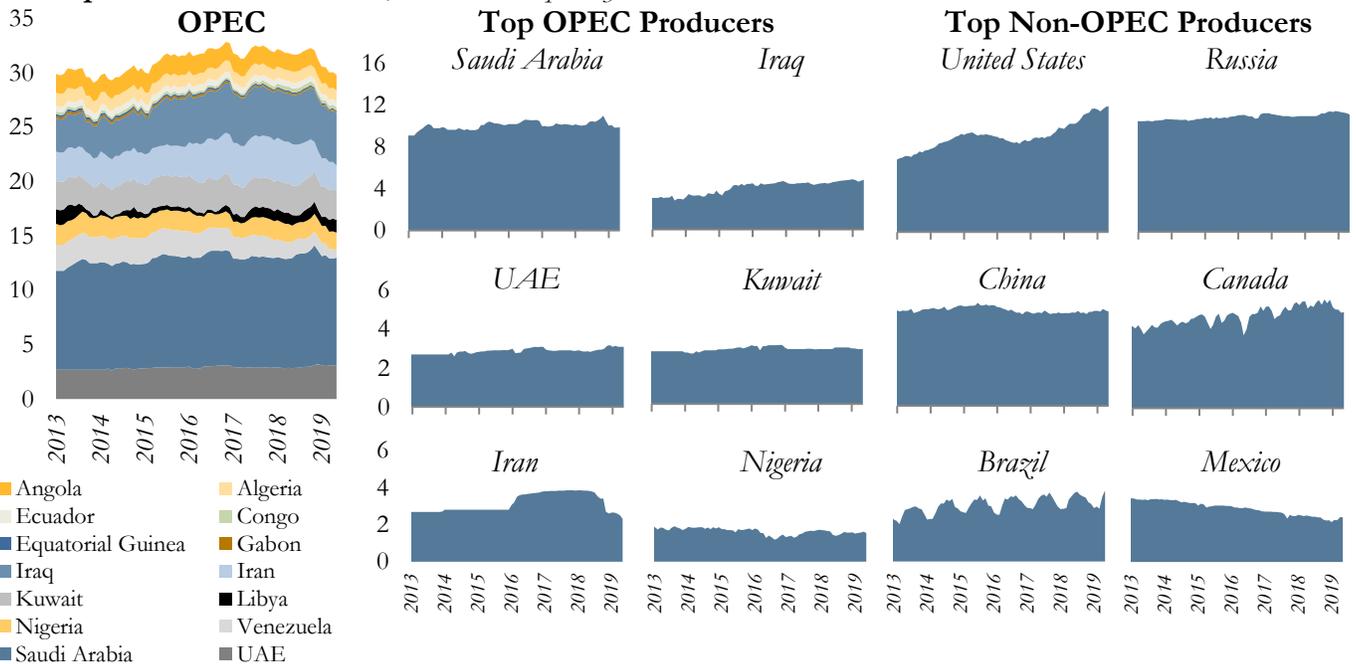


Regional Share of Production



\*Excludes OPEC

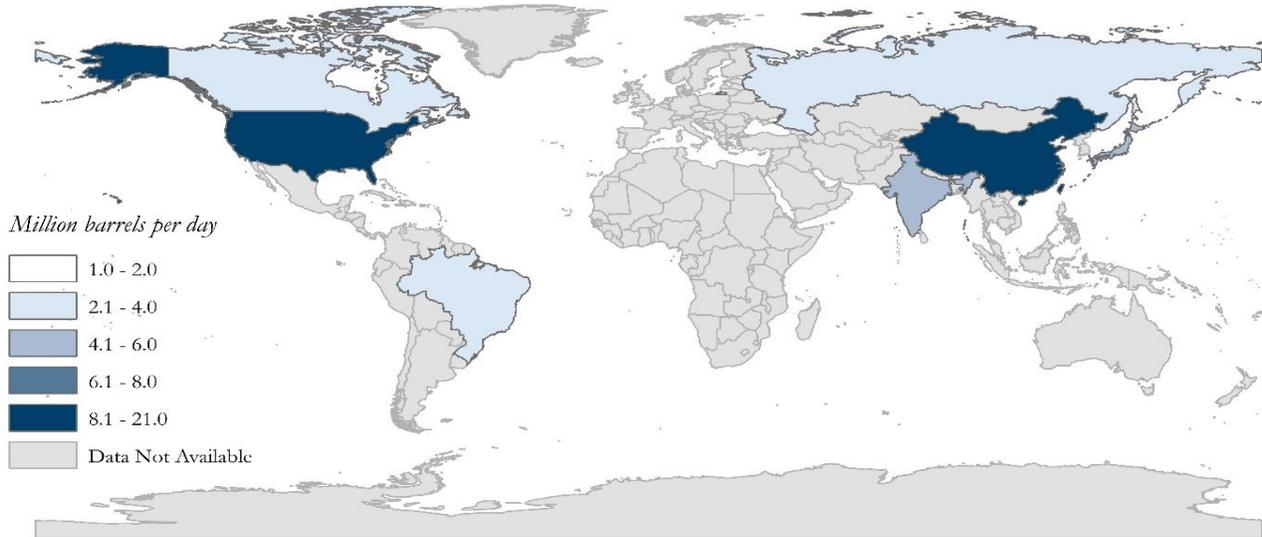
Top Crude Oil Producers, million barrels per day



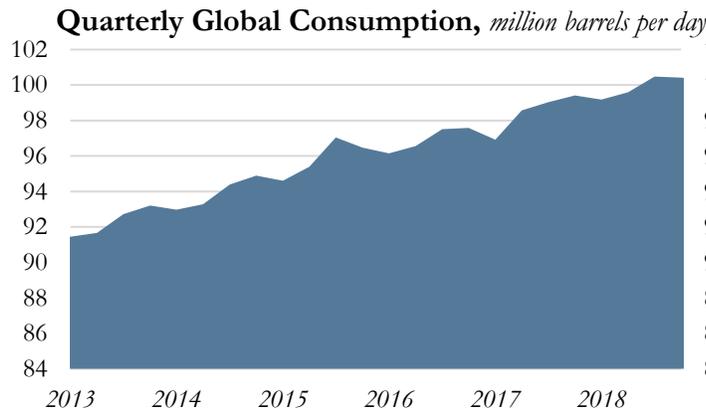
Note: OPEC country production values are for crude oil and non-OPEC country data is for petroleum production.

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

First Quarter 2019 Global Petroleum Consumption

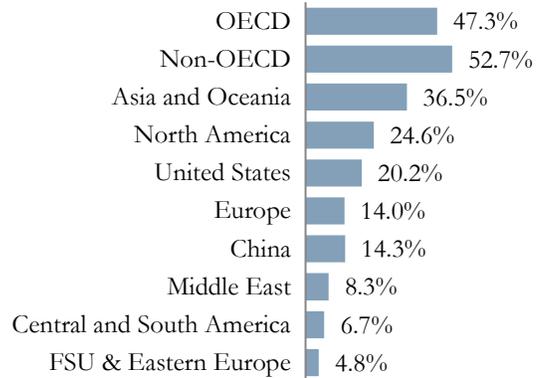


Source: Energy Information Administration/Haver Analytics

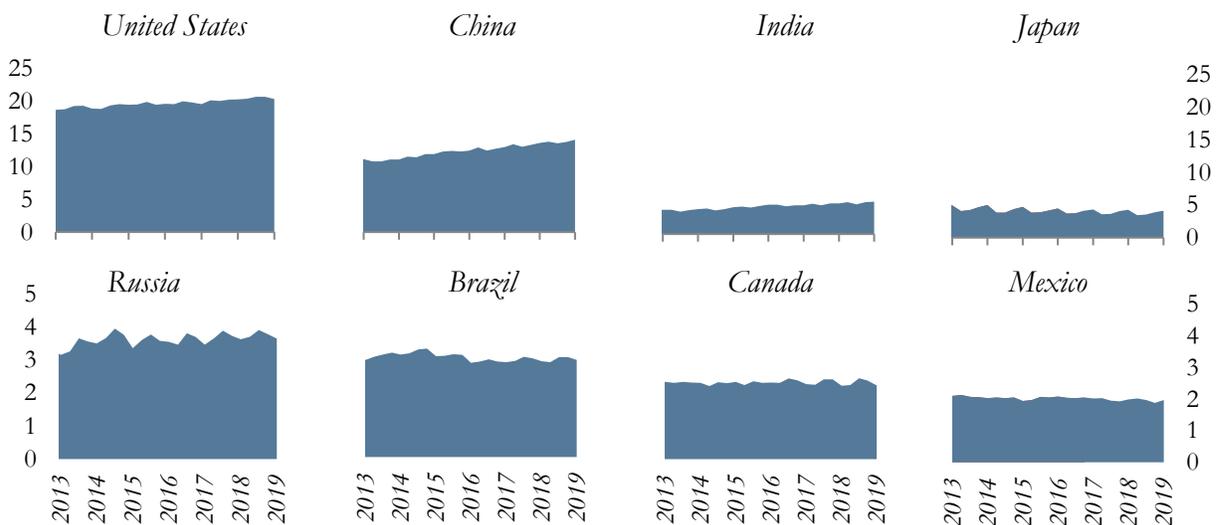


First Quarter 2019

Regional Share of Consumption

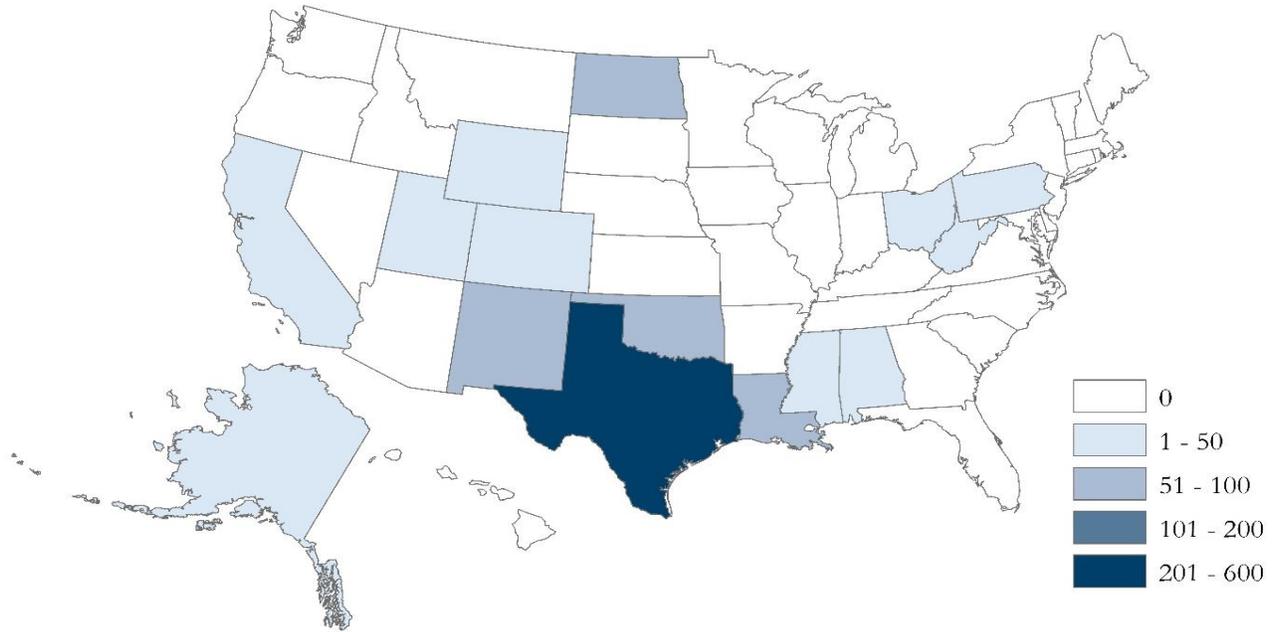


Top Petroleum Consumers, million barrels per day



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

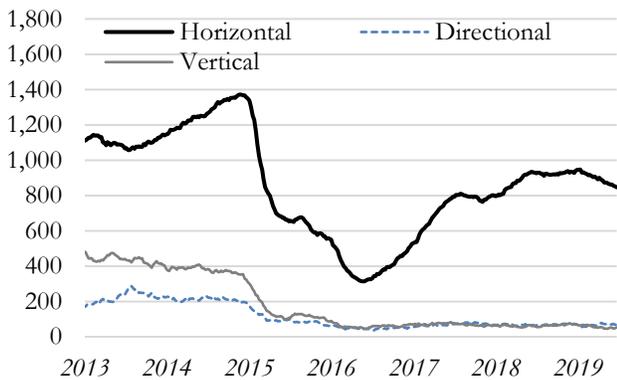
June 2019 Weekly Active Oil & Gas Drilling Rig Counts



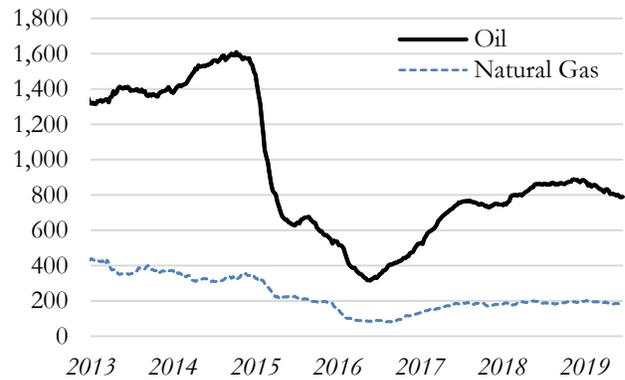
Source: Baker Hughes/Haver Analytics

June 21, 2019

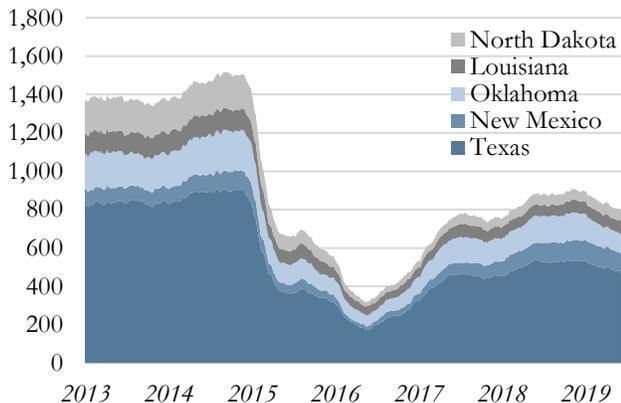
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

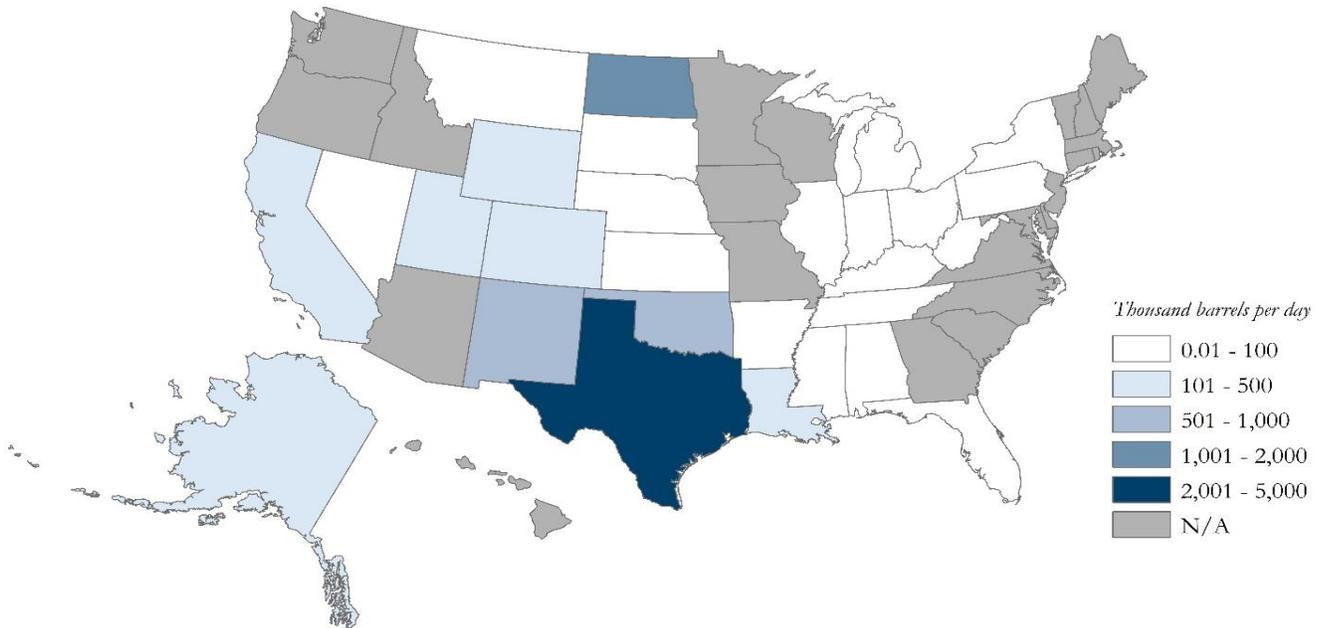
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	789	797	824	862
Gas	177	186	192	188
Misc	1	0	0	2
<b>Total</b>	<b>967</b>	<b>983</b>	<b>1016</b>	<b>1052</b>

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	-1.0%	-4.2%	-8.5%
Gas	-	-4.8%	-7.8%	-5.9%
Misc	-	-	-	-50.0%
<b>Total</b>	-	<b>-1.6%</b>	<b>-4.8%</b>	<b>-8.1%</b>

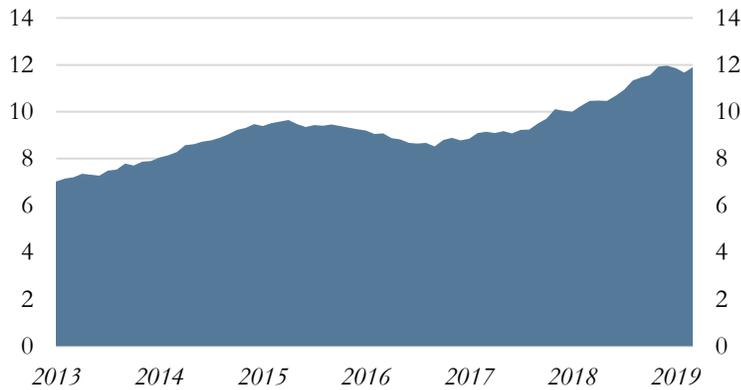
Source: Baker Hughes/Haver Analytics

March 2019 U.S. Crude Oil Production

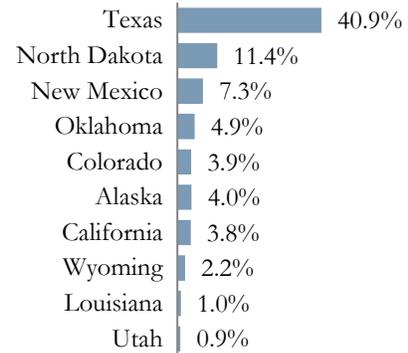


Source: Baker Hughes/Haver Analytics

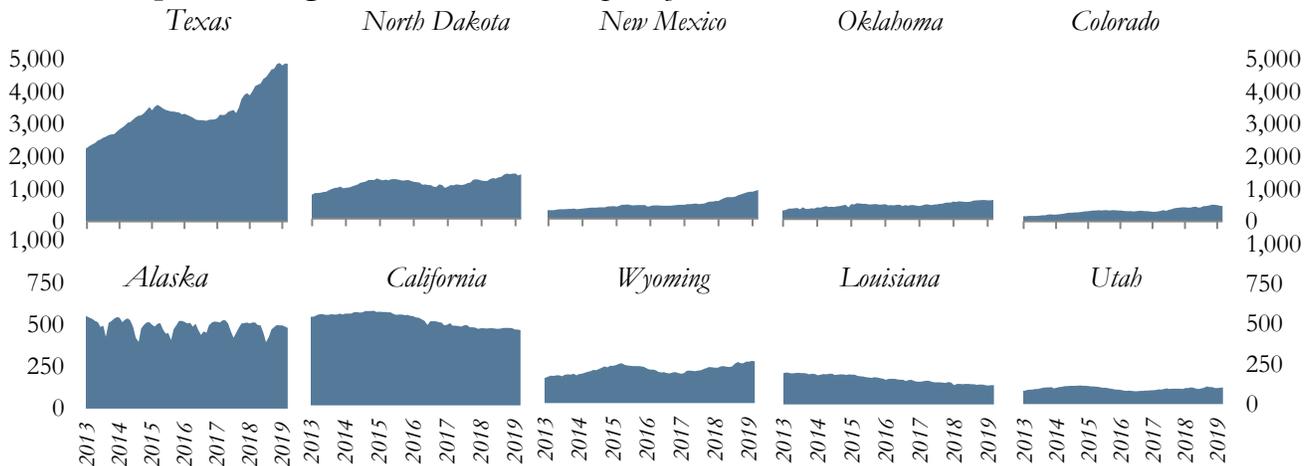
Monthly U.S. Production, million barrels per day



Share of Production



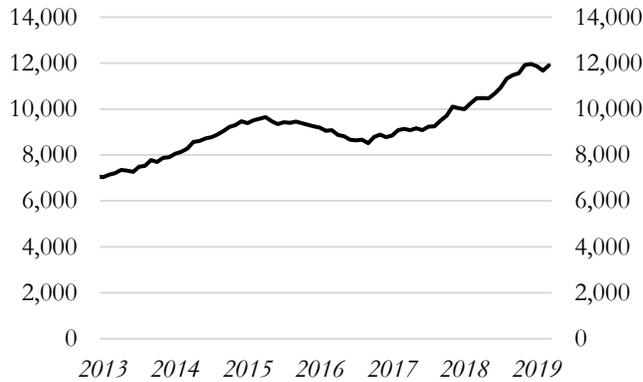
Top Producing States, thousand barrels per day



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

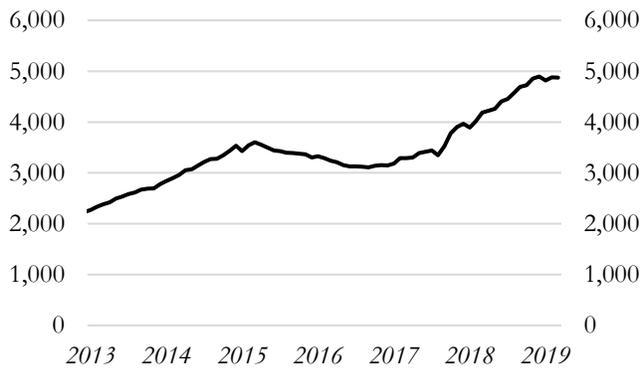
Data through March 2019

**United States** *Thousand barrels per day*



	<b>United States</b> <i>Thousand barrels per day</i>	<i>Change from</i>
Mar-19	11,905	
Month Ago	11,664	2.1%
3 Months Ago	11,963	-0.5%
6 Months Ago	11,470	3.8%
1 Year Ago	10,461	13.8%

**Texas**



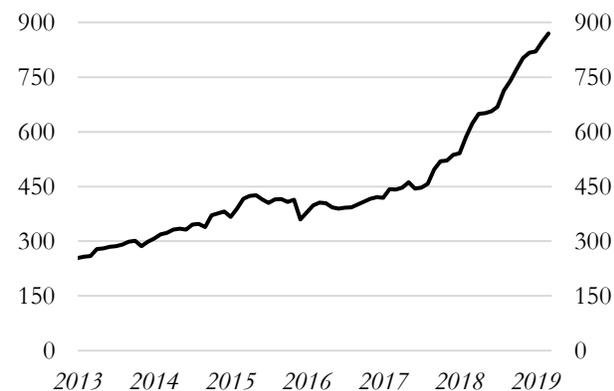
	<b>Texas</b> <i>Thousand barrels per day</i>	<i>Change from</i>
Mar-19	4,873	
Month Ago	4,879	-0.1%
3 Months Ago	4,896	-0.5%
6 Months Ago	4,692	3.9%
1 Year Ago	4,185	16.4%
Share of U.S. Production		40.9%

**North Dakota**



	<b>North Dakota</b> <i>Thousand barrels per day</i>	<i>Change from</i>
Mar-19	1,352	
Month Ago	1,310	3.2%
3 Months Ago	1,367	-1.1%
6 Months Ago	1,340	0.9%
1 Year Ago	1,145	18.1%
Share of U.S. Production		11.4%

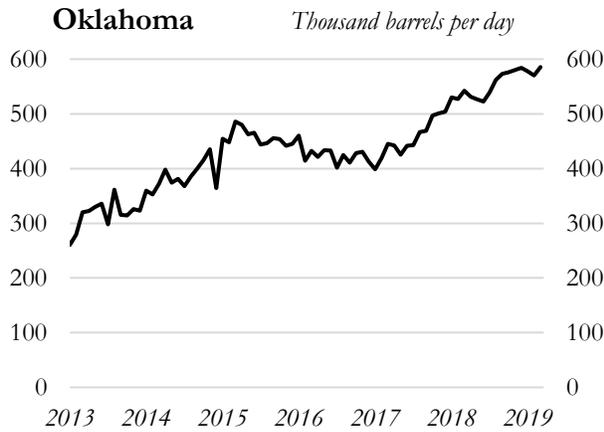
**New Mexico**



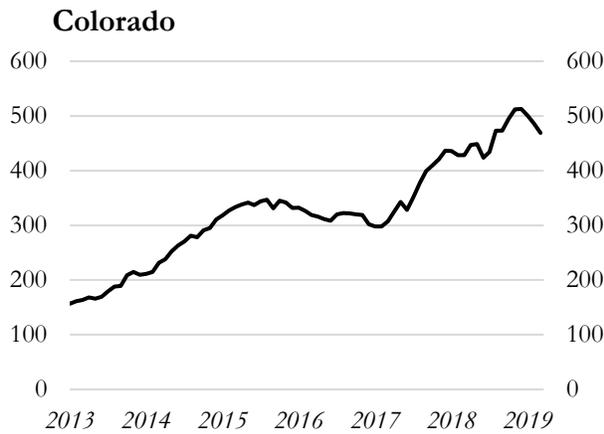
	<b>New Mexico</b> <i>Thousand barrels per day</i>	<i>Change from</i>
Mar-19	870	
Month Ago	847	2.7%
3 Months Ago	817	6.5%
6 Months Ago	739	17.7%
1 Year Ago	623	39.6%
Share of U.S. Production		7.3%

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

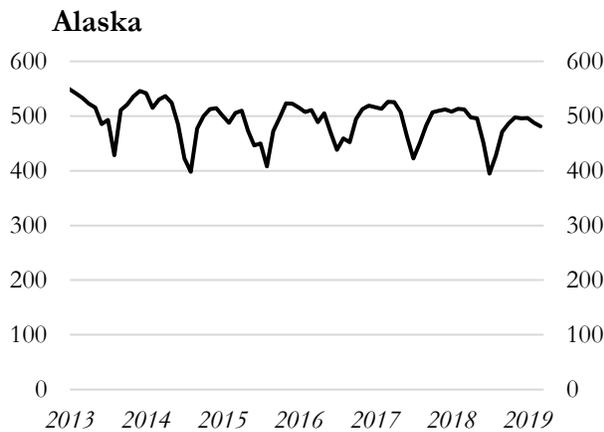
Data through March 2019



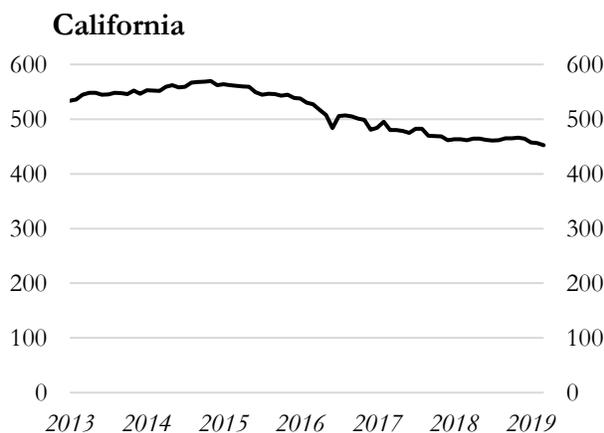
	Oklahoma	Change from
	Thousand barrels per day	
Mar-19	586	
Month Ago	570	2.7%
3 Months Ago	584	0.2%
6 Months Ago	573	2.1%
1 Year Ago	543	7.9%
Share of U.S. Production	4.9%	



	Colorado	Change from
	Thousand barrels per day	
Mar-19	469	
Month Ago	486	-3.5%
3 Months Ago	513	-8.6%
6 Months Ago	473	-0.9%
1 Year Ago	428	9.5%
Share of U.S. Production	3.9%	



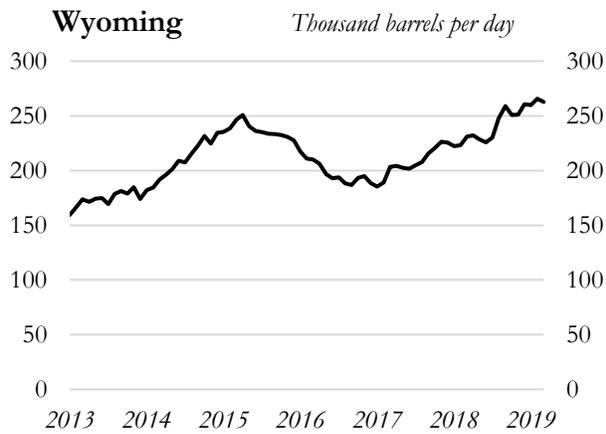
	Alaska	Change from
	Thousand barrels per day	
Mar-19	481	
Month Ago	488	-1.3%
3 Months Ago	496	-2.9%
6 Months Ago	471	2.0%
1 Year Ago	512	-6.1%
Share of U.S. Production	4.0%	



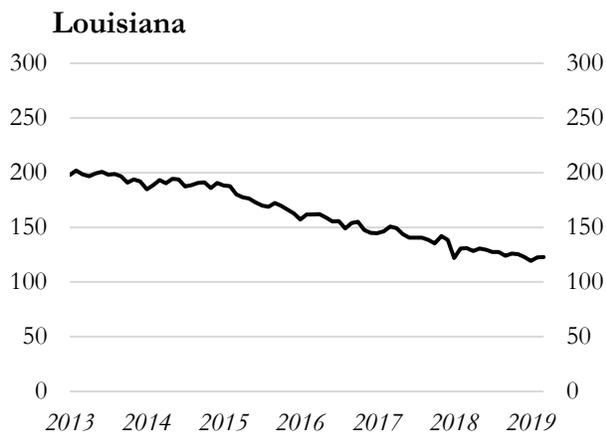
	California	Change from
	Thousand barrels per day	
Mar-19	452	
Month Ago	456	-0.8%
3 Months Ago	464	-2.6%
6 Months Ago	465	-2.8%
1 Year Ago	462	-2.0%
Share of U.S. Production	3.8%	

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

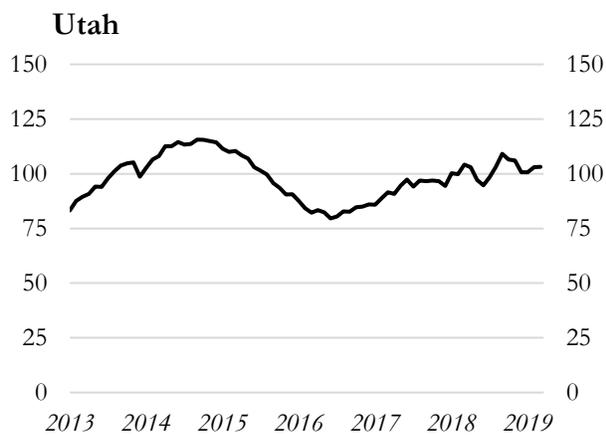
Data through March 2019



Wyoming		Change
Thousand barrels per day		from
Mar-19	263	
Month Ago	266	-1.2%
3 Months Ago	261	0.7%
6 Months Ago	259	1.4%
1 Year Ago	231	13.6%
Share of U.S. Production		2.2%



Louisiana		Change
Thousand barrels per day		from
Mar-19	123	
Month Ago	122	0.3%
3 Months Ago	123	0.1%
6 Months Ago	124	-1.0%
1 Year Ago	131	-6.1%
Share of U.S. Production		1.0%

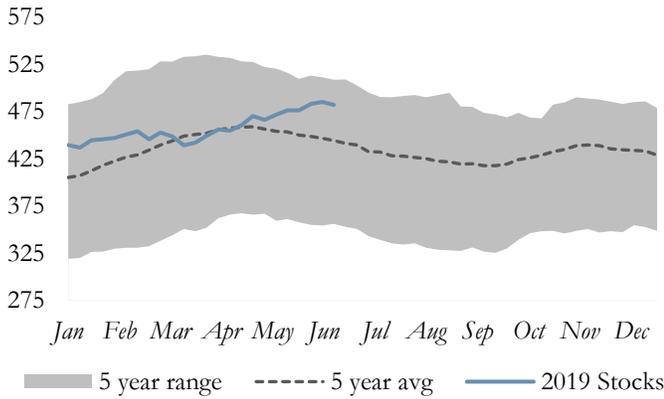


Utah		Change
Thousand barrels per day		from
Mar-19	103	
Month Ago	103	0.1%
3 Months Ago	101	2.4%
6 Months Ago	109	-5.5%
1 Year Ago	104	-0.9%
Share of U.S. Production		0.9%

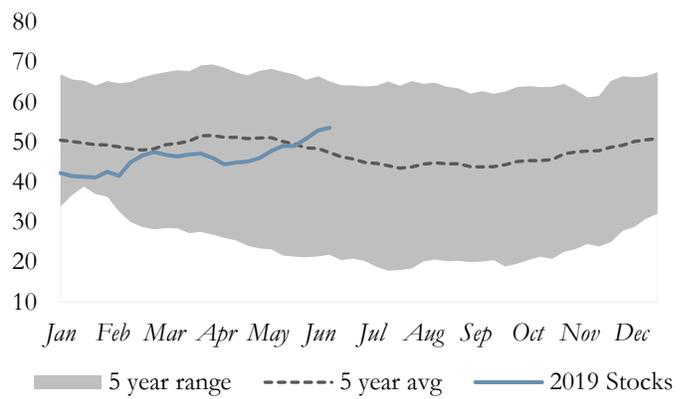
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

June 2019 Weekly U.S. Crude Oil Stocks

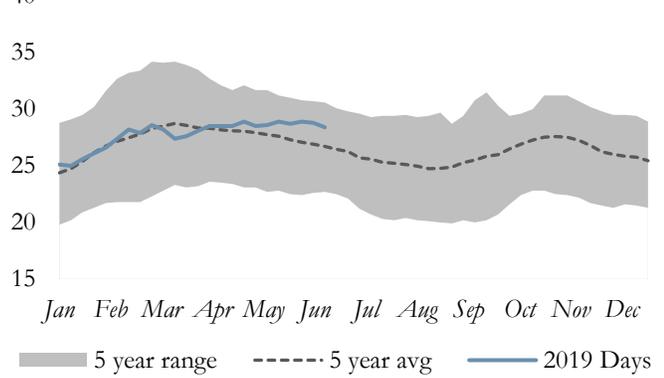
U.S. Oil Stocks, million barrels\*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



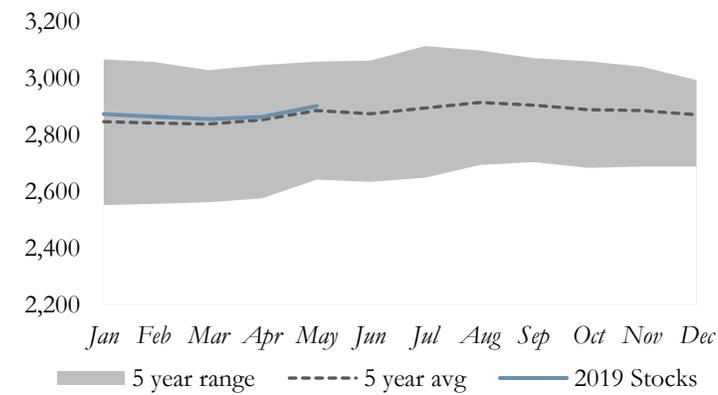
Crude Oil Stocks

	1 Week Change from Ago	1 Year Ago
U.S.	-0.6%	13.1%
Cushing, OK	1.2%	64.3%
Days of Supply	-1.4%	15.9%
East Coast (PADD 1)	6.3%	16.1%
Midwest (PADD 2)	0.5%	26.8%
Gulf Coast (PADD 3)	-2.4%	10.6%
Rocky Mountain (PADD 4)	-0.7%	4.8%
West Coast (PADD 5)	2.2%	-2.6%

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

May 2019 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels



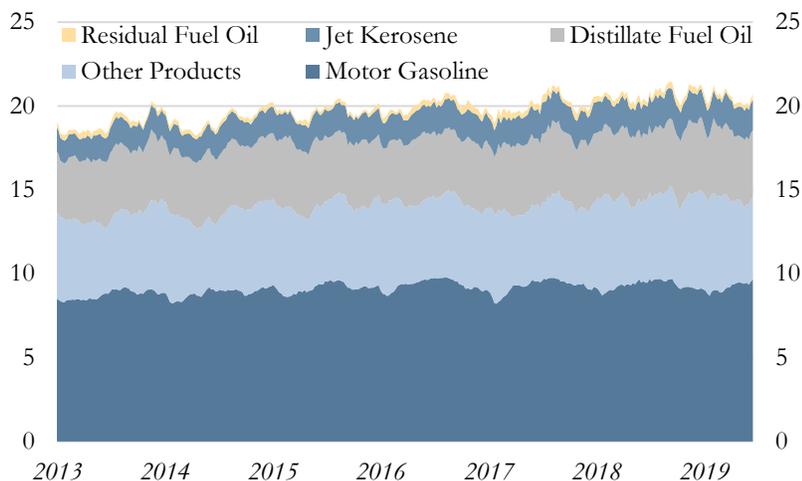
Petroleum Stocks	Million Barrels	Change from
Current Month	2,902	
1 Month Ago	2,864	1.3%
3 Months Ago	2,865	1.3%
6 Months Ago	2,849	1.9%
1 Year Ago	2,817	3.0%

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

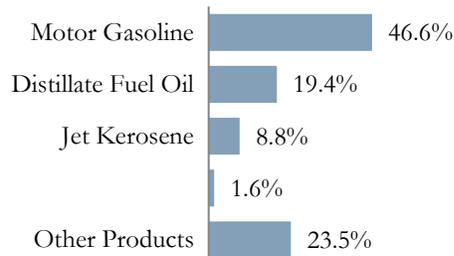
### June 2019 Weekly U.S. Demand for Petroleum Products

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 6/14/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	20,709	19,924	21,065	21,206	20,343
Motor Gasoline	9,660	9,419	9,148	9,086	9,468
Distillate Fuel Oil	4,025	3,998	4,220	4,240	4,013
Jet Kerosene	1,822	1,740	1,847	1,688	1,735
Residual Fuel Oil	331	219	232	263	280
Other Products	4,871	4,548	5,618	5,929	4,847

#### U.S. Consumption by Product, Change from

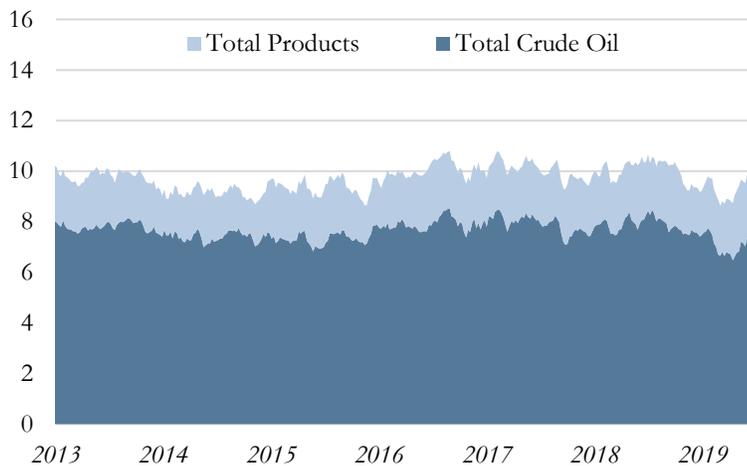
	Current 6/14/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	3.9%	-1.7%	-2.3%	1.8%
Motor Gasoline	-	2.6%	5.6%	6.3%	2.0%
Distillate Fuel Oil	-	0.7%	-4.6%	-5.1%	0.3%
Jet Kerosene	-	4.7%	-1.4%	7.9%	5.0%
Residual Fuel Oil	-	51.1%	42.7%	25.9%	18.2%
Other Products	-	7.1%	-13.3%	-17.8%	0.5%

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

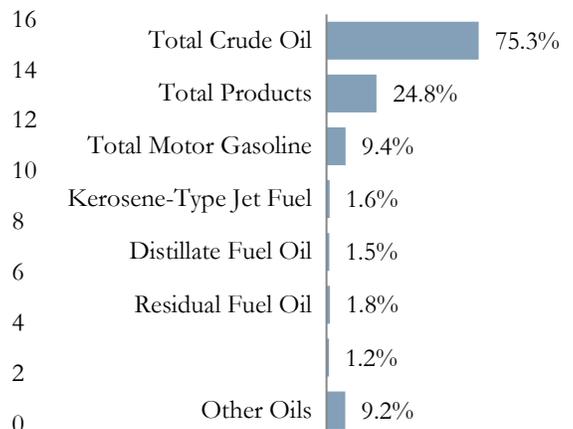
June 2019 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product\*

Thousand barrels per day

	Current 6/14/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>7,467</b>	<b>7,166</b>	<b>6,649</b>	<b>7,549</b>	<b>8,080</b>
<b>Total Products</b>	<b>2,458</b>	<b>2,425</b>	<b>2,066</b>	<b>1,777</b>	<b>2,258</b>
Total Motor Gasoline	930	996	599	423	853
Kerosene-Type Jet Fuel	158	175	223	110	164
Distillate Fuel Oil	144	79	229	226	134
Residual Fuel Oil	177	78	135	81	284
Propane/Propylene	121	120	178	177	107
Other Oils	916	976	702	760	717
<b>Total Imports</b>	<b>9,925</b>	<b>9,591</b>	<b>8,715</b>	<b>9,326</b>	<b>10,338</b>

U.S. Imports by Product, Change from

	Current 6/14/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>4.2%</b>	<b>12.3%</b>	<b>-1.1%</b>	<b>-7.6%</b>
<b>Total Products</b>	-	<b>1.4%</b>	<b>19.0%</b>	<b>38.3%</b>	<b>8.9%</b>
Total Motor Gasoline	-	-6.6%	55.3%	119.9%	9.0%
Kerosene-Type Jet Fuel	-	-9.7%	-29.1%	43.6%	-3.7%
Distillate Fuel Oil	-	82.3%	-37.1%	-36.3%	7.5%
Residual Fuel Oil	-	126.9%	31.1%	118.5%	-37.7%
Propane/Propylene	-	0.8%	-32.0%	-31.6%	13.1%
Other Oils	-	-6.1%	30.5%	20.5%	27.8%
<b>Total Imports</b>	-	<b>3.5%</b>	<b>13.9%</b>	<b>6.4%</b>	<b>-4.0%</b>

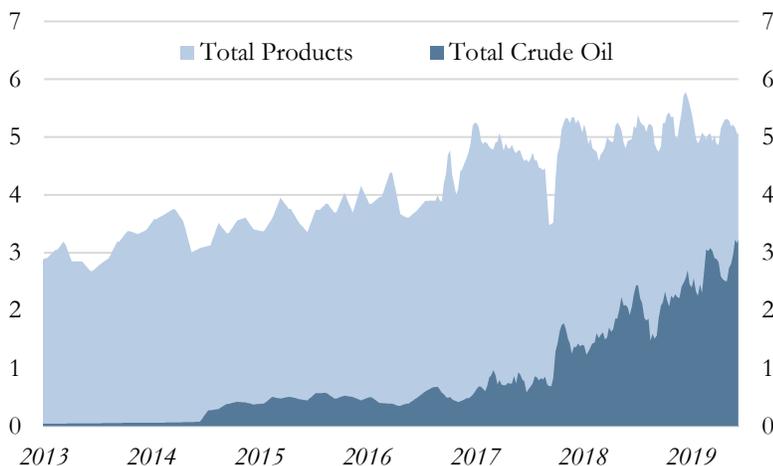
\*Totals may not sum due to component rounding

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

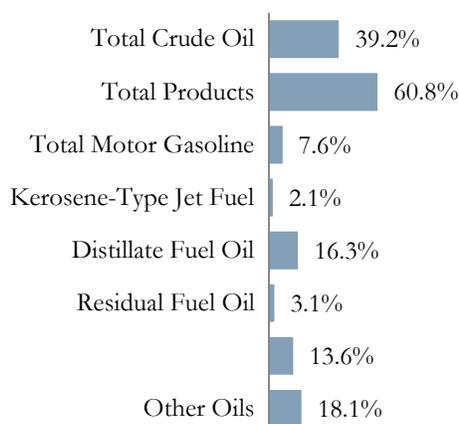
### June 2019 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages

Exports, million barrels per day



Share of Total Exports



U.S. Exports by Product\*

Thousand barrels per day

	Current 6/14/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>3,290</b>	<b>2,801</b>	<b>3,025</b>	<b>2,561</b>	<b>2,074</b>
<b>Total Products</b>	<b>5,108</b>	<b>5,186</b>	<b>4,928</b>	<b>5,778</b>	<b>4,966</b>
Total Motor Gasoline	639	595	829	1,080	601
Kerosene-Type Jet Fuel	178	197	168	203	216
Distillate Fuel Oil	1,369	1,275	1,118	1,456	1,299
Residual Fuel Oil	259	278	234	280	365
Propane/Propylene	1,139	1,314	839	925	854
Other Oils	1,524	1,527	1,740	1,834	1,632
<b>Total Exports</b>	<b>8,398</b>	<b>7,986</b>	<b>7,953</b>	<b>8,339</b>	<b>7,041</b>

U.S. Exports by Product, Change from

	Current 6/14/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>17.5%</b>	<b>8.8%</b>	<b>28.5%</b>	58.6%
<b>Total Products</b>	-	<b>-1.5%</b>	<b>3.7%</b>	<b>-11.6%</b>	<b>2.9%</b>
Total Motor Gasoline	-	7.4%	-22.9%	-40.8%	6.3%
Kerosene-Type Jet Fuel	-	-9.6%	6.0%	-12.3%	-17.6%
Distillate Fuel Oil	-	7.4%	22.5%	-6.0%	5.4%
Residual Fuel Oil	-	-6.8%	10.7%	-7.5%	-29.0%
Propane/Propylene	-	-13.3%	35.8%	23.1%	33.4%
Other Oils	-	-0.2%	-12.4%	-16.9%	-6.6%
<b>Total Exports</b>	-	<b>5.2%</b>	<b>5.6%</b>	<b>0.7%</b>	<b>19.3%</b>

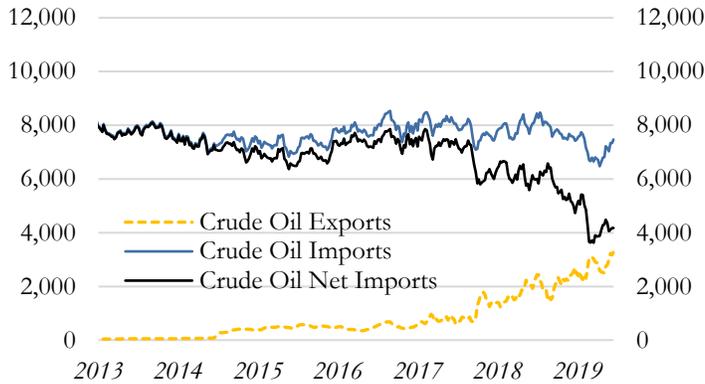
\*Totals may not sum due to rounding

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

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

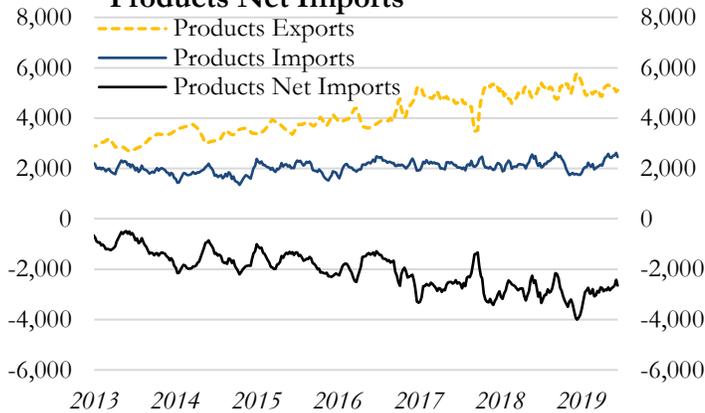
4-Week Averages, Thousand barrels per day

#### Crude Oil Net Imports



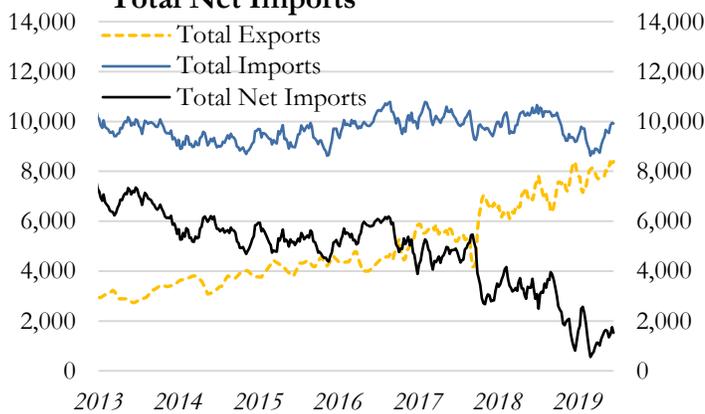
Crude Oil Net Imports		Change
Thousand barrels per day		from
6/14/19	4,177	
Month Ago	4,365	-4.3%
3 Months Ago	3,624	15.3%
6 Months Ago	4,988	-16.3%
1 Year Ago	6,005	-30.4%

#### Products Net Imports



Products Net Imports		Change
Thousand barrels per day		from
6/14/19	-2,650	
Month Ago	-2,760	-
3 Months Ago	-2,862	-
6 Months Ago	-4,001	-
1 Year Ago	-2,709	-

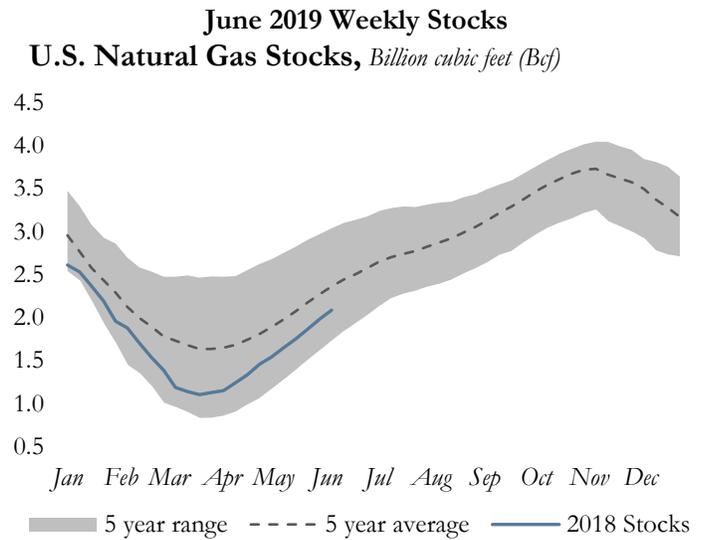
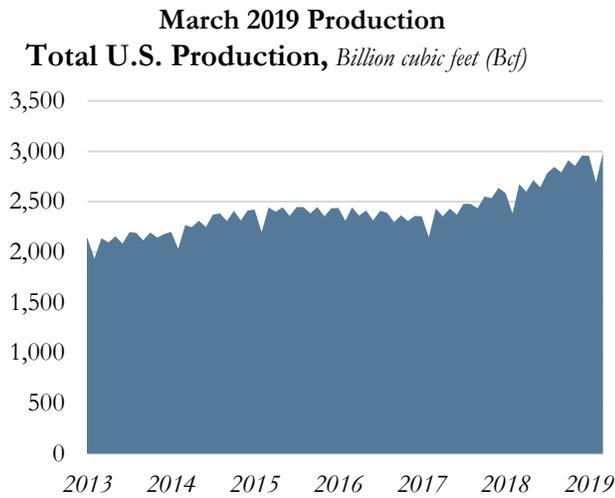
#### Total Net Imports



Total Net Imports		Change
Thousand barrels per day		from
6/14/19	1,527	
Month Ago	1,605	-4.9%
3 Months Ago	762	100.4%
6 Months Ago	988	54.6%
1 Year Ago	3,297	-53.7%

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

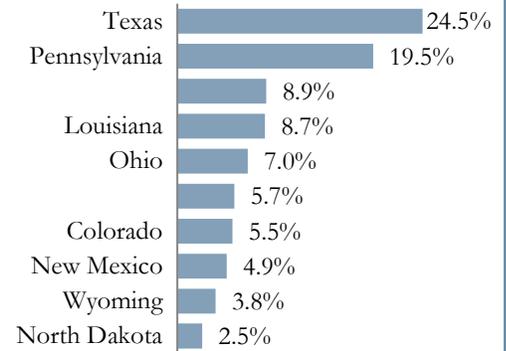
U.S. Natural Gas Production & Stocks



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	2,984	2,691	2,957	2,790	2,673
U.S. Stocks	2,203	1,753	1,143	2,773	2,008

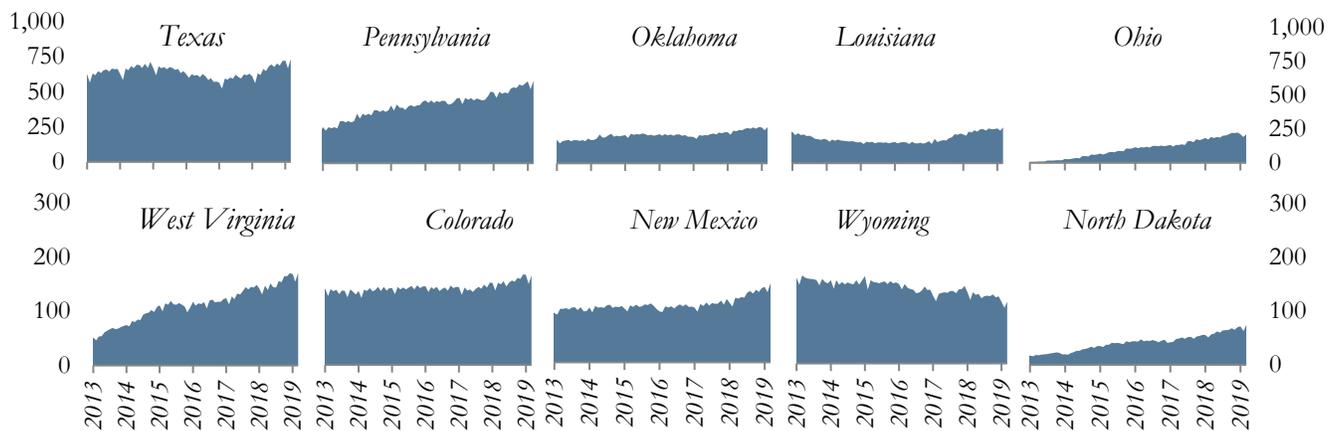
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	10.9%	0.9%	6.9%	11.6%
U.S. Stocks	-	25.7%	92.7%	-20.6%	9.7%

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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