

# THE U.S. Energy DATABOOK

*A summary of national and global energy indicators*



MAY 18, 2018

FEDERAL RESERVE BANK of KANSAS CITY

## SUMMARY OF CURRENT ENERGY CONDITIONS

The number of total active drilling rigs in the United States rose 3.3 percent from a month ago and was 16.1 percent higher than a year ago. U.S. crude oil production was up 2.6 percent in February, while natural gas production fell 7.8 percent. U.S. crude oil prices rose to the highest level since 2014. For the week ending May 11th, West Texas Intermediate (WTI) crude oil averaged \$70.56 per barrel and North Sea Brent averaged \$76.68 per barrel, rising nearly 6.9 percent and 7.6 percent respectively in the last month. The Henry Hub natural gas spot price averaged \$2.76 per million Btu for the week ending May 11th, a marginal dip of 0.7 percent in the last month. U.S. crude oil and petroleum products exports grew 11.5 percent while imports edged lower by 0.8 percent over the last month. Global petroleum production improved 0.7 percent in April, and global petroleum demand for the first quarter of 2018 rose a modest 0.4 percent.

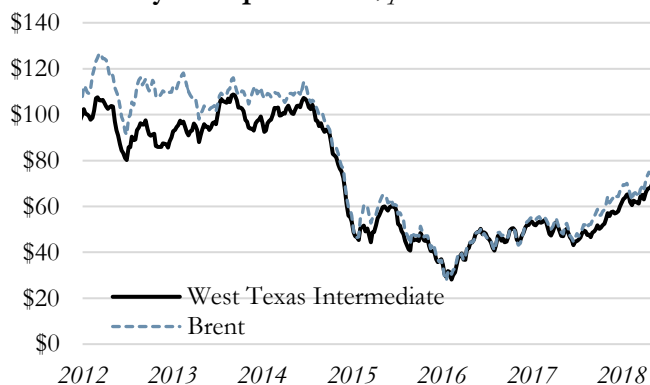
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S.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



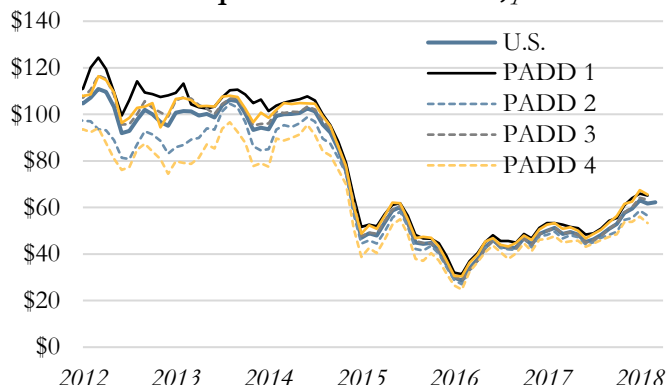
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through May 11, 2018

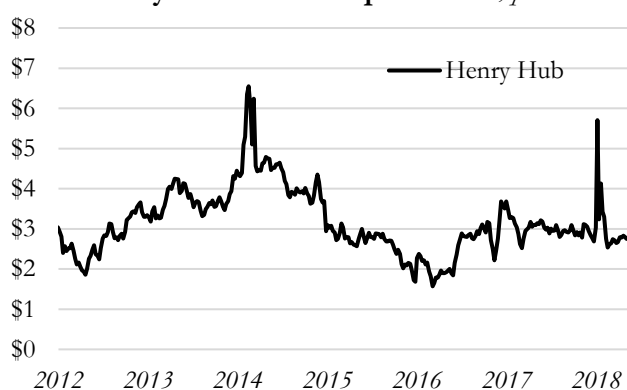
Weekly Oil Spot Prices, per barrel



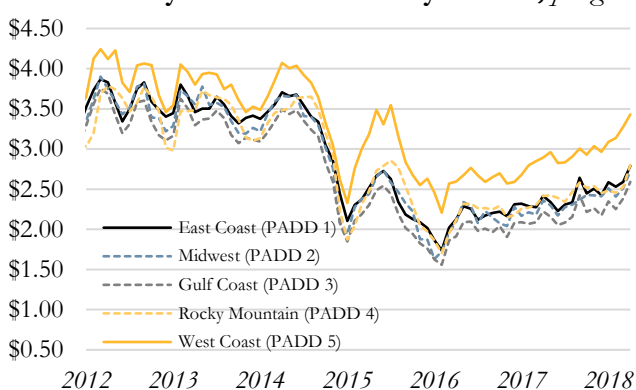
Refiner Acquisition Cost of Oil\*, per barrel



Weekly Natural Gas Spot Prices, per mmbtu



Monthly Gasoline Prices by PADD, per gallon



Weekly Spot Prices, Change from

	Current	1 Week	1 Month	6 Months	1 Year	
Weekly Spot Prices	5/11/18	Ago	Ago	Ago	Ago	Peak (2012-17)
West Texas Intermediate	\$70.56	\$2.18	\$4.54	\$13.51	\$23.52	-\$38.21
Brent	\$76.68	\$2.26	\$5.44	\$12.39	\$28.68	-\$49.94
Henry Hub	\$2.76	\$0.01	-\$0.02	-\$0.36	-\$0.36	-\$3.79

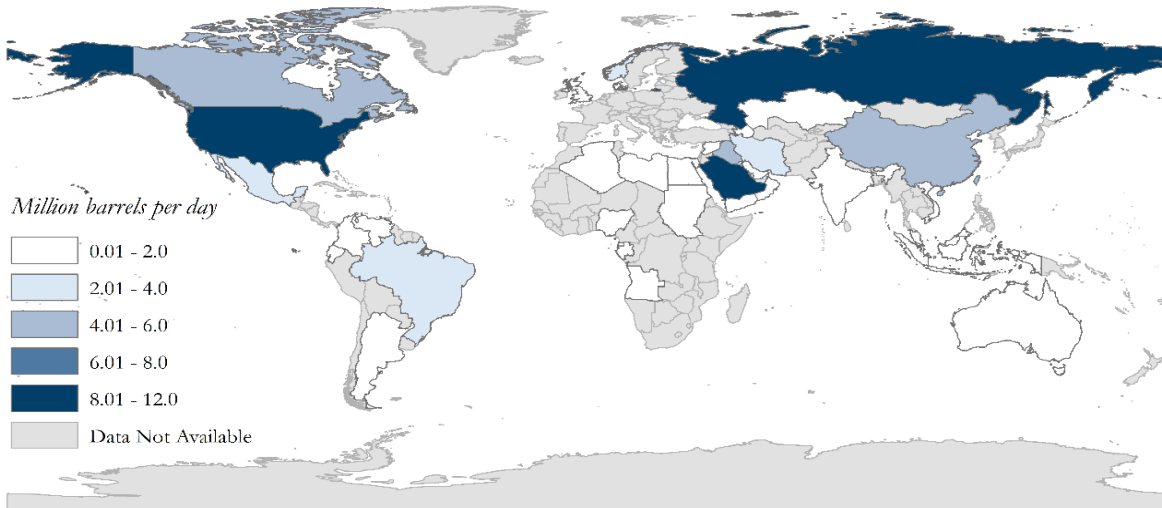
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	6 Months	1 Year	
Geographic Area	Apr-18	Ago	Ago	Ago	Peak (2012-17)
East Coast (PADD 1)	\$2.79	\$0.20	\$0.34	\$0.37	-\$1.08
Midwest (PADD 2)	\$2.72	\$0.21	\$0.30	\$0.37	-\$1.18
Gulf Coast (PADD 3)	\$2.59	\$0.21	\$0.37	\$0.36	-\$1.17
Rocky Mountain (PADD 4)	\$2.80	\$0.28	\$0.29	\$0.39	-\$0.98
West Coast (PADD 5)	\$3.43	\$0.16	\$0.50	\$0.54	-\$0.81

\*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

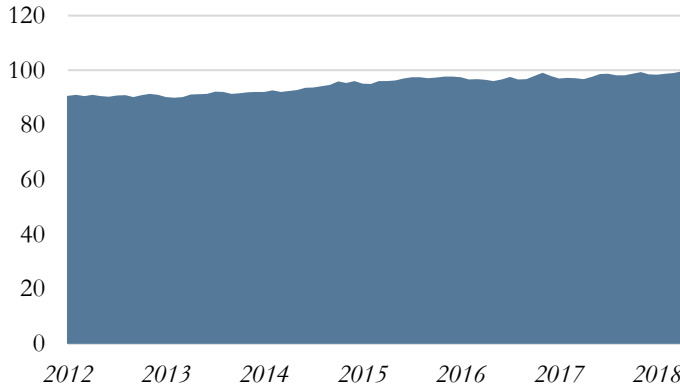
April 2018 Global Petroleum Production



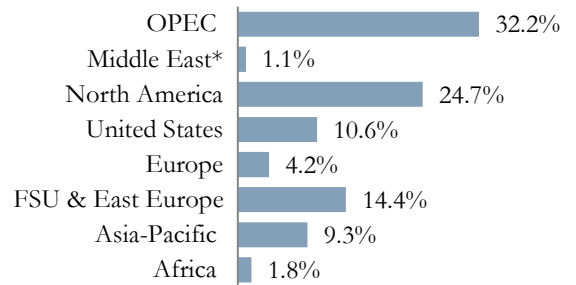
Source: Energy Information Administration/Haver Analytics

April 2018

Monthly Global Petroleum Production, million barrels per day

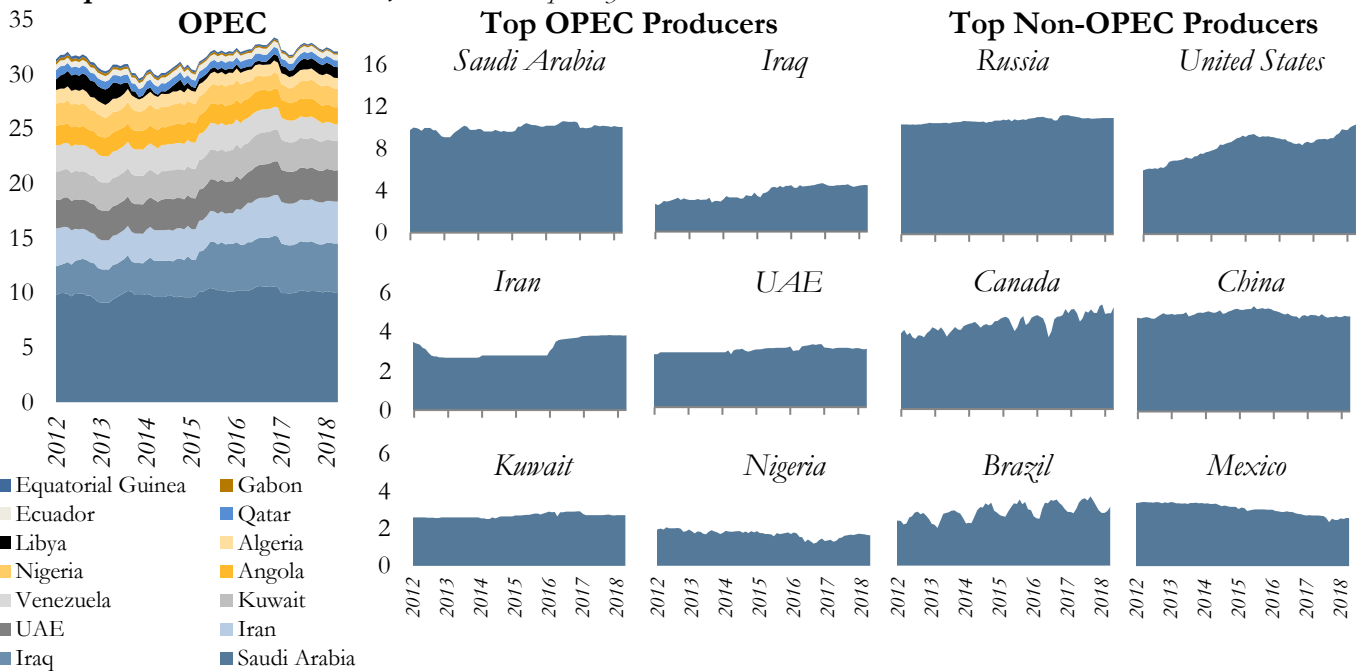


Regional Share of Production



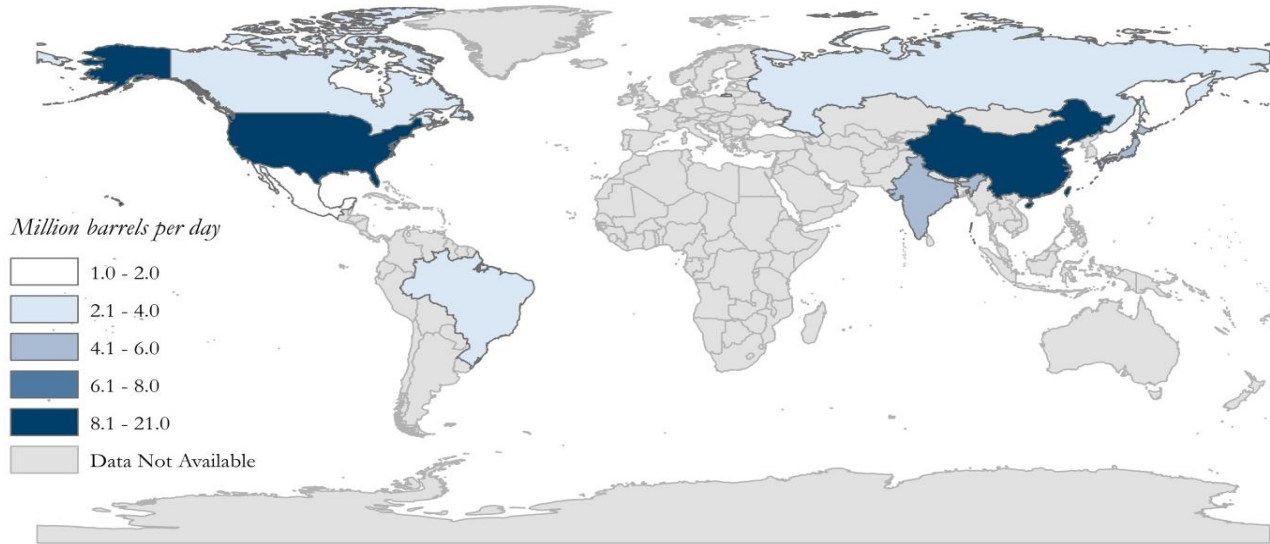
\*Excludes OPEC

Top Crude Oil Producers, million barrels per day

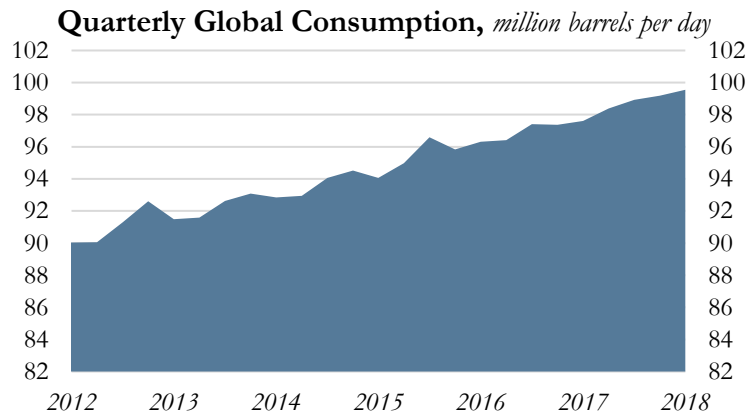


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

First Quarter 2018 Global Petroleum Consumption

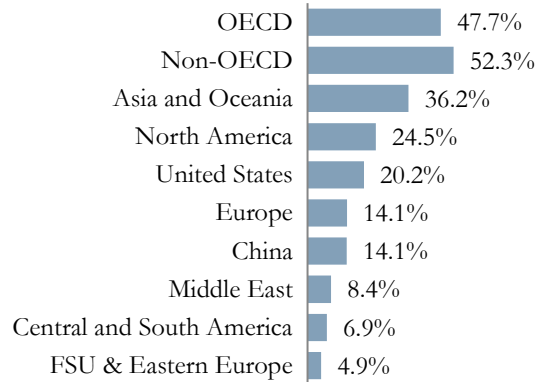


Source: Energy Information Administration/Haver Analytics

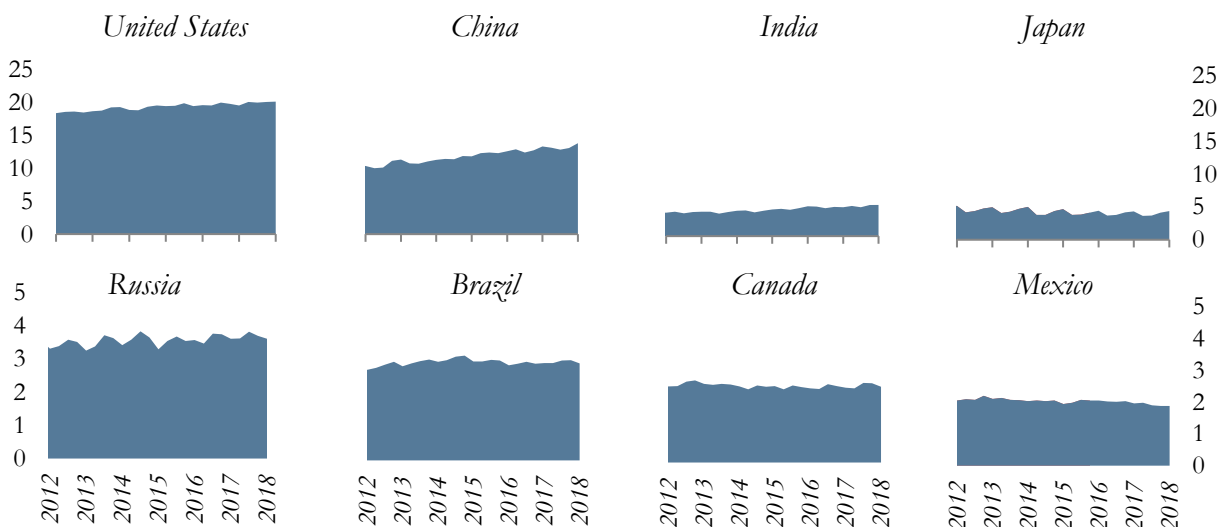


First Quarter 2018

Regional Share of Consumption

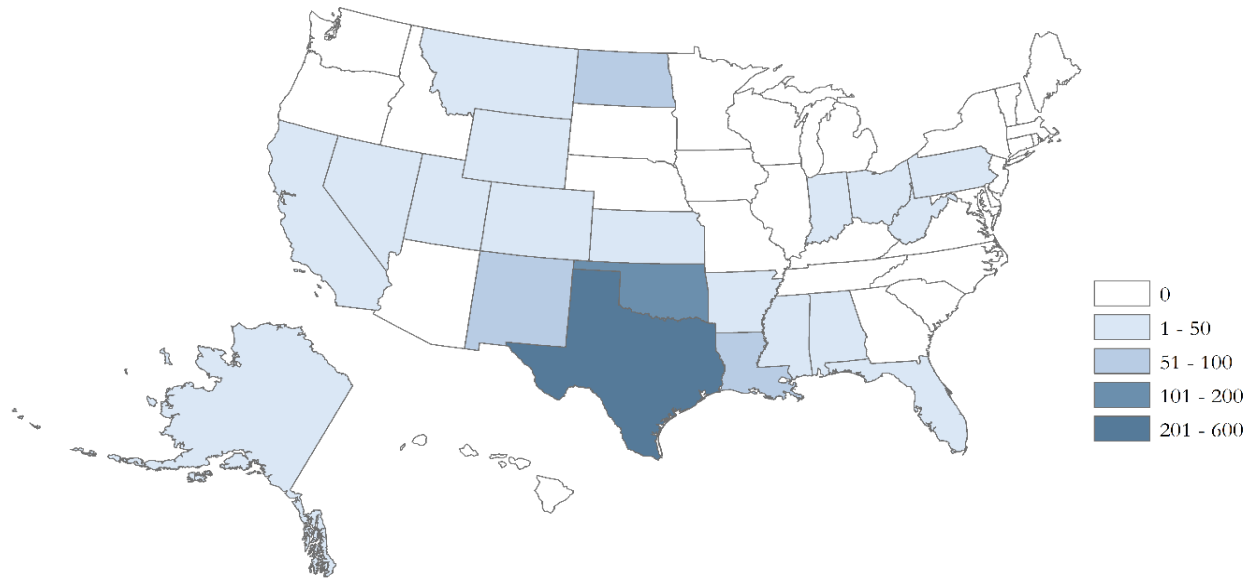


Top Petroleum Consumers, million barrels per day



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

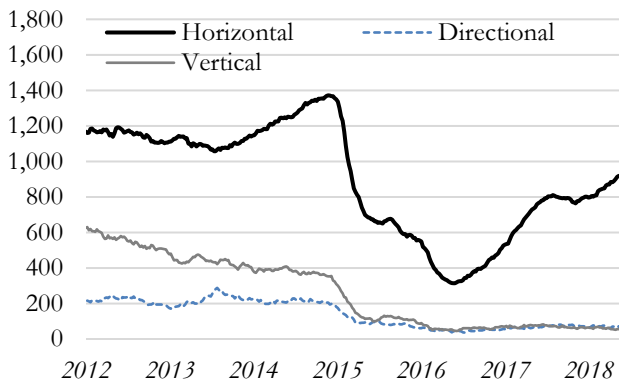
May 2018 Weekly Active Oil & Gas Drilling Rig Counts



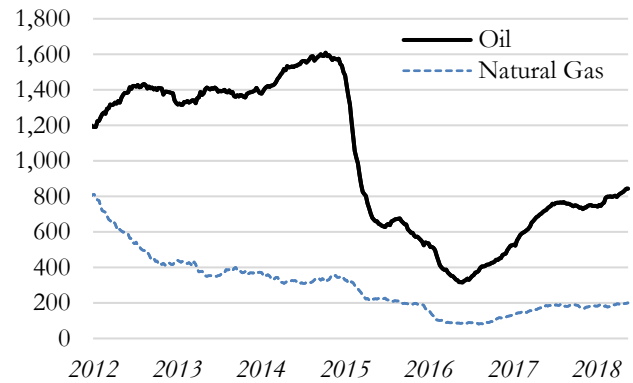
Source: Baker Hughes/Haver Analytics

May 18, 2018

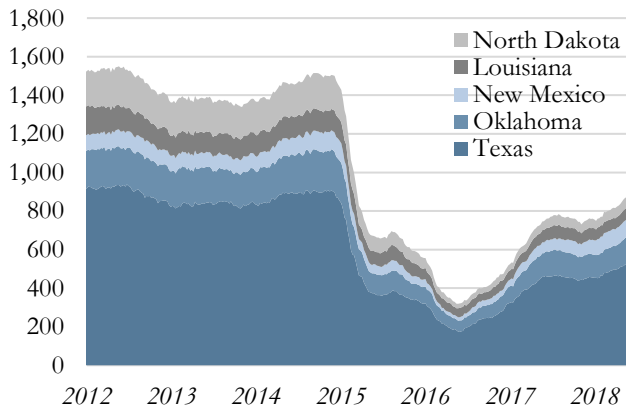
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

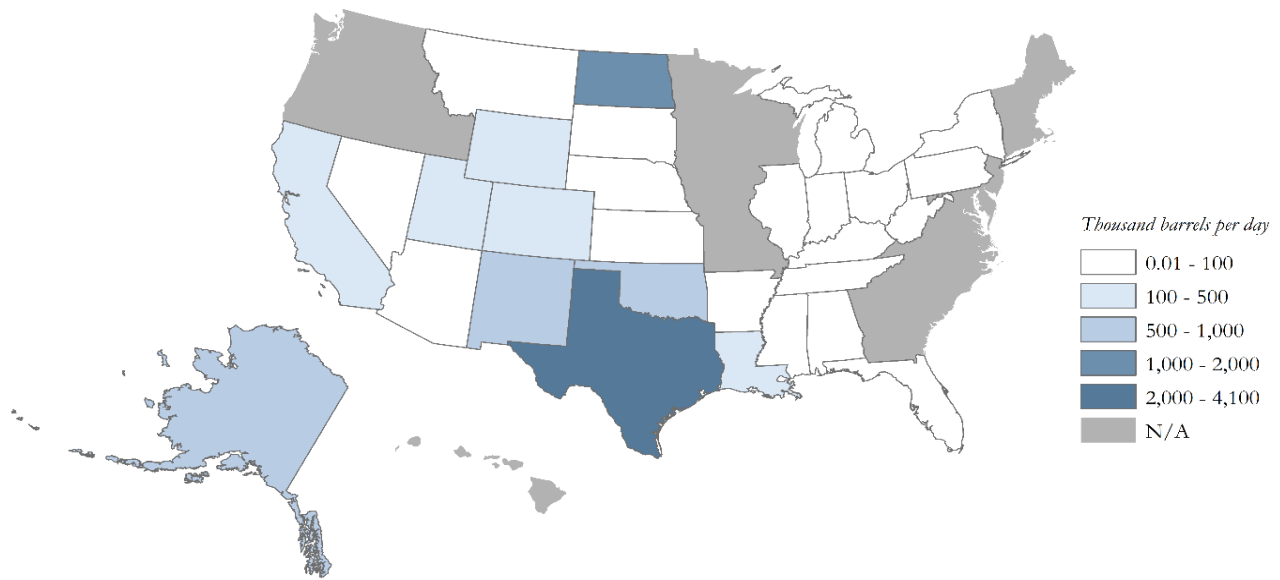
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	844	820	798	720
Gas	200	192	177	180
Misc	2	1	0	1
<b>Total</b>	<b>1046</b>	<b>1013</b>	<b>975</b>	<b>901</b>

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	2.9%	5.8%	17.2%
Gas	-	4.2%	13.0%	11.1%
Misc	-	100.0%	-	100.0%
<b>Total</b>	-	<b>3.3%</b>	<b>7.3%</b>	<b>16.1%</b>

Source: Baker Hughes/Haver Analytics

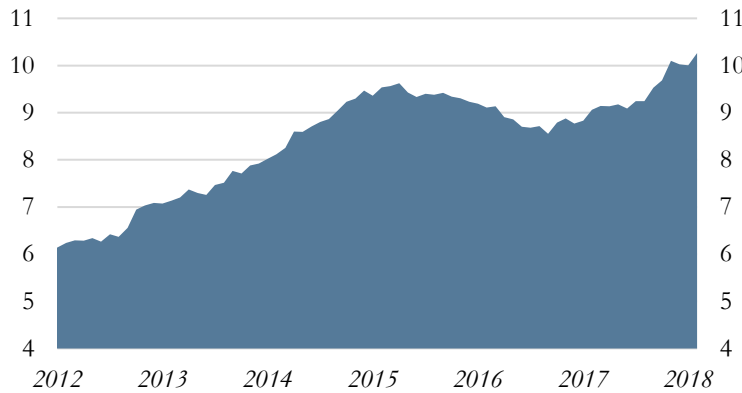
February 2018 U.S. Crude Oil Production



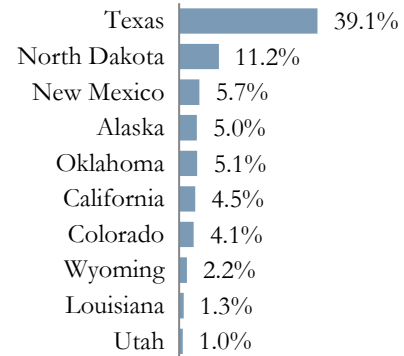
Source: Energy Information Administration/Haver Analytics

February 2018

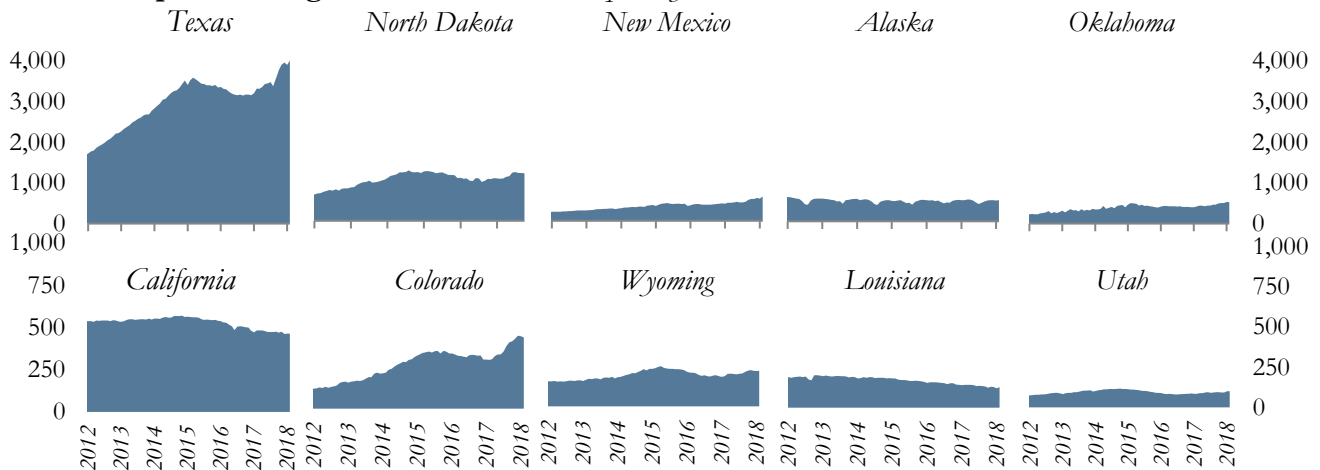
Monthly U.S. Production, million barrels per day



Share of Production

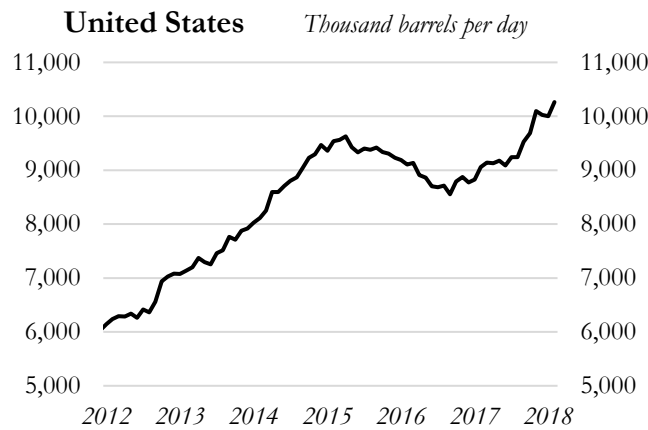


Top Producing States, thousand barrels per day

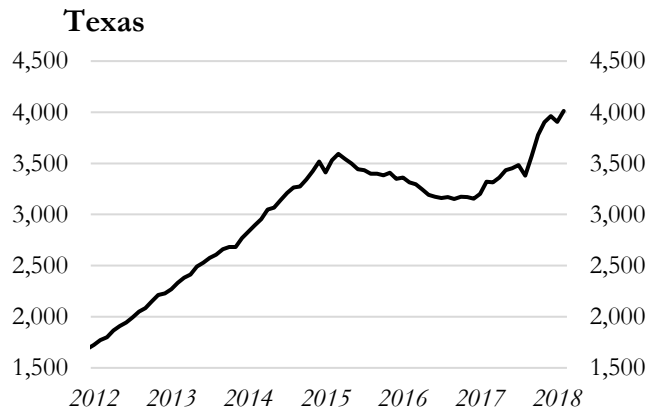


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

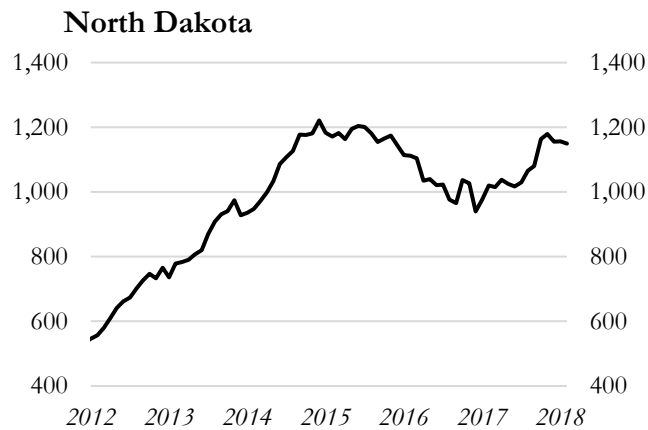
Data through February 2018



<b>United States</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Feb-18	10,264	
Month Ago	10,004	2.6%
3 Months Ago	10,099	1.6%
6 Months Ago	9,242	11.0%
1 Year Ago	9,058	13.3%



<b>Texas</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Feb-18	4,012	
Month Ago	3,906	2.7%
3 Months Ago	3,903	2.8%
6 Months Ago	3,379	18.8%
1 Year Ago	3,321	20.8%
Share of U.S. Production		39.1%



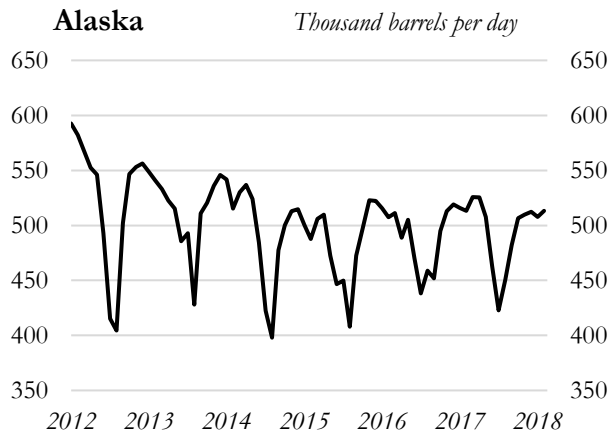
<b>North Dakota</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Feb-18	1,150	
Month Ago	1,157	-0.6%
3 Months Ago	1,179	-2.5%
6 Months Ago	1,066	7.9%
1 Year Ago	1,020	12.8%
Share of U.S. Production		11.2%



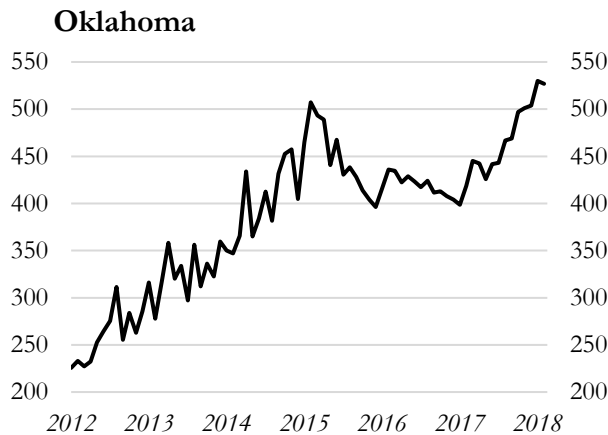
<b>New Mexico</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Feb-18	588	
Month Ago	542	8.4%
3 Months Ago	530	10.9%
6 Months Ago	462	27.4%
1 Year Ago	440	33.6%
Share of U.S. Production		5.7%

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

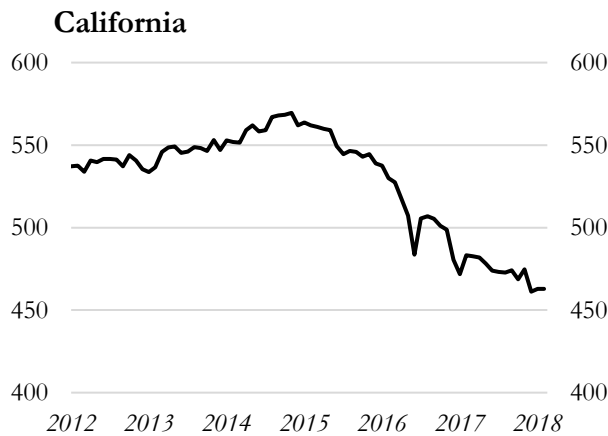
Data through February 2018



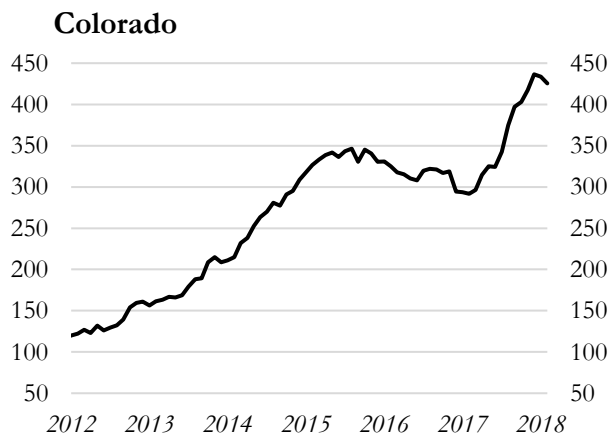
	Alaska	Change from
	Thousand barrels per day	
Feb-18	513	
Month Ago	508	1.1%
3 Months Ago	510	0.6%
6 Months Ago	451	13.9%
1 Year Ago	513	0.0%
Share of U.S. Production	5.0%	



	Oklahoma	Change from
	Thousand barrels per day	
Feb-18	527	
Month Ago	530	-0.6%
3 Months Ago	501	5.1%
6 Months Ago	467	12.8%
1 Year Ago	419	25.8%
Share of U.S. Production	5.1%	



	California	Change from
	Thousand barrels per day	
Feb-18	463	
Month Ago	463	0.0%
3 Months Ago	475	-2.5%
6 Months Ago	473	-2.1%
1 Year Ago	483	-4.2%
Share of U.S. Production	4.5%	

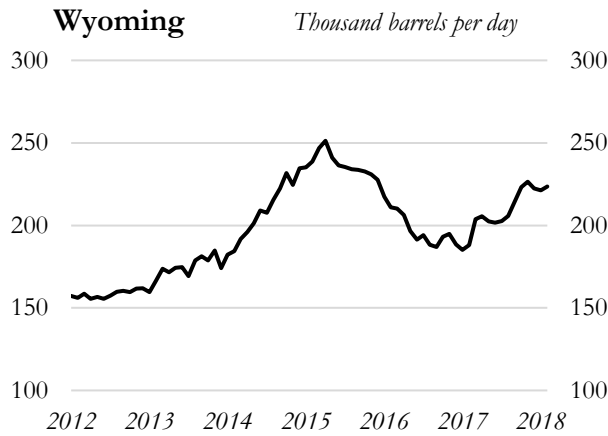


	Colorado	Change from
	Thousand barrels per day	
Feb-18	425	
Month Ago	434	-1.9%
3 Months Ago	417	1.9%
6 Months Ago	375	13.5%
1 Year Ago	292	45.8%
Share of U.S. Production	4.1%	

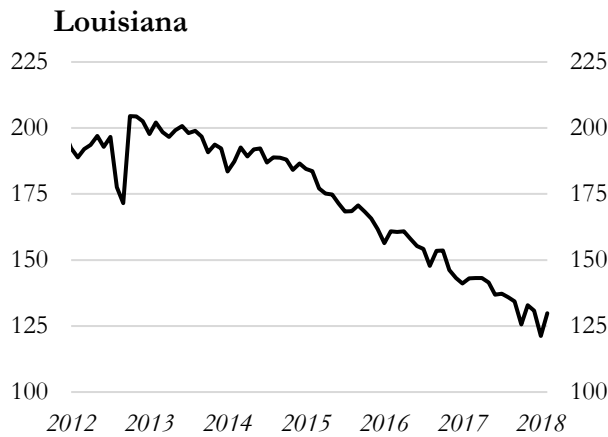
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics



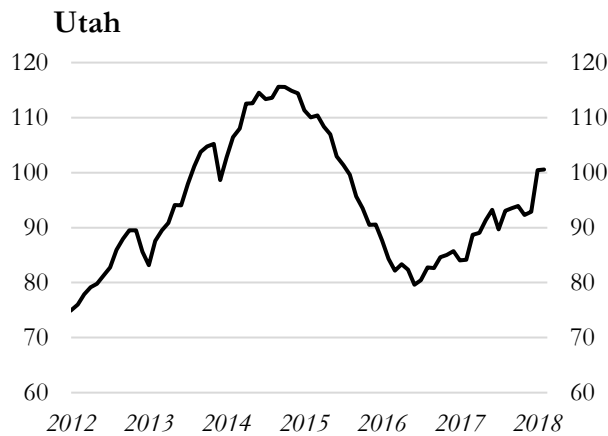
Data through February 2018



Wyoming		Change
Thousand barrels per day		from
Feb-18	224	
Month Ago	221	1.1%
3 Months Ago	227	-1.3%
6 Months Ago	206	8.7%
1 Year Ago	188	18.9%
Share of U.S. Production	2.2%	



Louisiana		Change
Thousand barrels per day		from
Feb-18	130	
Month Ago	121	7.1%
3 Months Ago	133	-2.3%
6 Months Ago	136	-4.5%
1 Year Ago	143	-9.3%
Share of U.S. Production	1.3%	

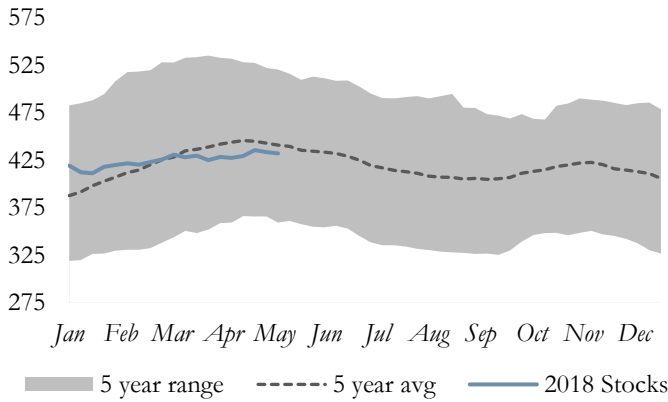


Utah		Change
Thousand barrels per day		from
Feb-18	101	
Month Ago	100	0.1%
3 Months Ago	92	9.0%
6 Months Ago	93	8.1%
1 Year Ago	84	19.5%
Share of U.S. Production	1.0%	

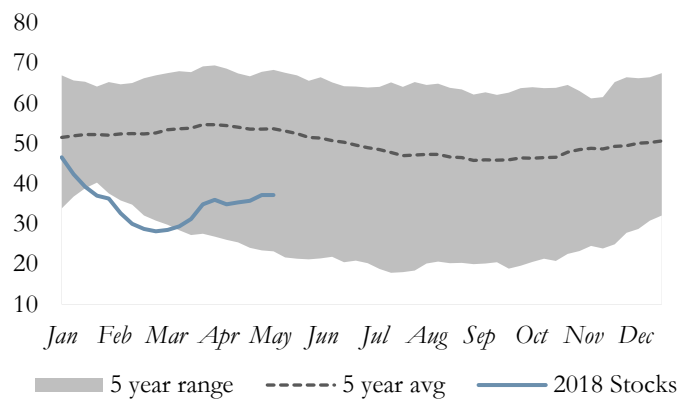
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

May 2018 Weekly U.S. Crude Oil Stocks

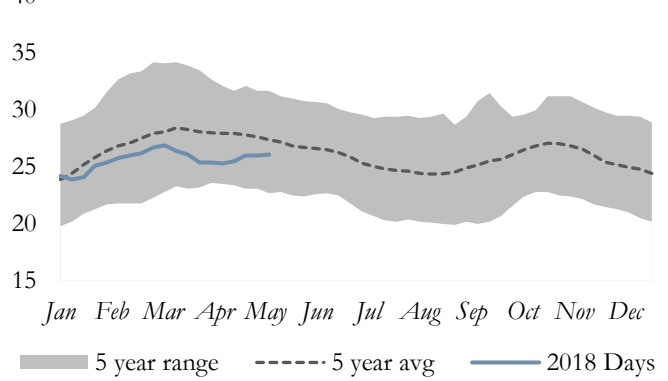
U.S. Oil Stocks, million barrels\*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



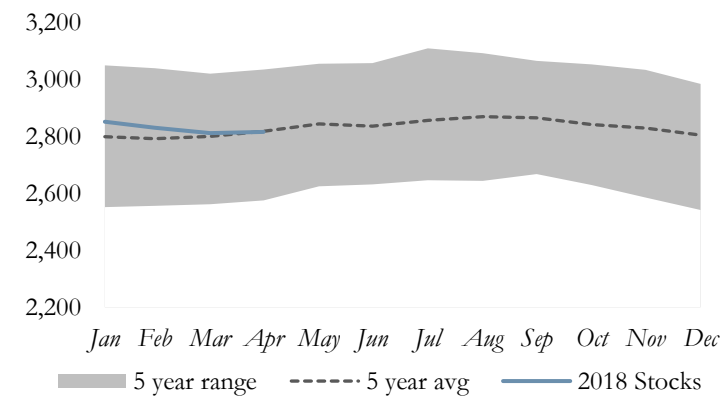
Crude Oil Stocks

	1 Week Change from Ago	1 Year Ago
U.S.	-0.3%	-17.0%
Cushing, OK	0.1%	-43.9%
Days of Supply	0.4%	-14.4%
East Coast (PADD 1)	-16.1%	-26.8%
Midwest (PADD 2)	0.6%	-22.1%
Gulf Coast (PADD 3)	-0.7%	-16.7%
Rocky Mountain (PADD 4)	0.8%	-5.8%
West Coast (PADD 5)	2.9%	-5.2%

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

April 2018 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels



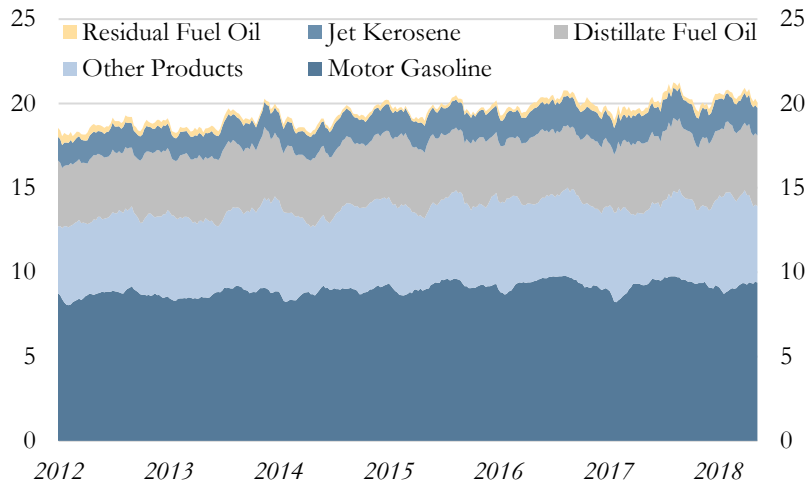
Petroleum Stocks	Million Barrels	Change from
Current Month	2,816	
1 Month Ago	2,812	0.1%
3 Months Ago	2,852	-1.3%
6 Months Ago	2,909	-3.2%
1 Year Ago	3,036	-7.2%

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

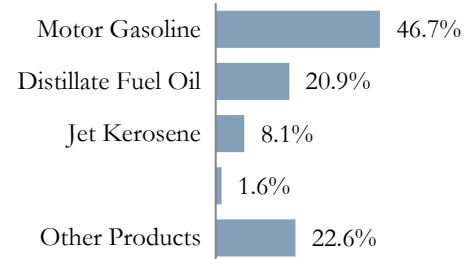
May 2018 Weekly U.S. Demand for Petroleum Products

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 5/11/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	20,060	20,845	20,692	20,063	19,758
Motor Gasoline	9,370	9,385	8,978	9,361	9,306
Distillate Fuel Oil	4,191	4,197	4,044	4,038	4,069
Jet Kerosene	1,632	1,760	1,604	1,779	1,728
Residual Fuel Oil	325	310	299	286	288
Other Products	4,542	5,193	5,767	4,599	4,367

U.S. Consumption by Product, Change from

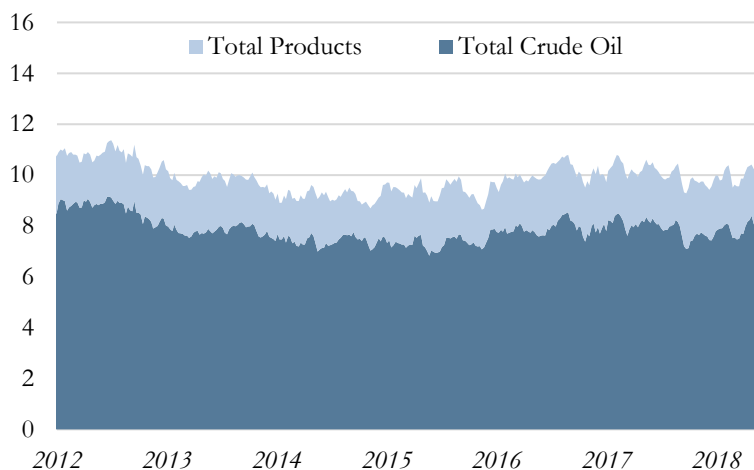
	Current 5/11/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	-3.8%	-3.1%	0.0%	1.5%
Motor Gasoline	-	-0.2%	4.4%	0.1%	0.7%
Distillate Fuel Oil	-	-0.1%	3.6%	3.8%	3.0%
Jet Kerosene	-	-7.3%	1.7%	-8.3%	-5.6%
Residual Fuel Oil	-	4.8%	8.7%	13.6%	12.8%
Other Products	-	-12.5%	-21.2%	-1.2%	4.0%

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

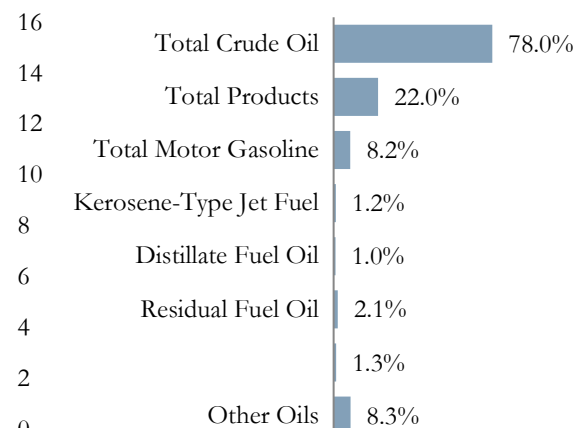
May 2018 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product\*

Thousand barrels per day

	Current 5/11/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>7,986</b>	<b>8,157</b>	<b>8,063</b>	<b>7,742</b>	<b>8,347</b>
<b>Total Products</b>	<b>2,246</b>	<b>2,154</b>	<b>2,320</b>	<b>2,003</b>	<b>2,252</b>
Total Motor Gasoline	836	702	617	382	814
Kerosene-Type Jet Fuel	119	118	131	274	163
Distillate Fuel Oil	101	119	346	129	111
Residual Fuel Oil	215	238	193	145	219
Propane/Propylene	130	158	235	129	94
Other Oils	845	820	798	935	844
<b>Total Imports</b>	<b>10,232</b>	<b>10,311</b>	<b>10,383</b>	<b>9,745</b>	<b>10,599</b>

U.S. Imports by Product, Change from

	Current 5/11/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>-2.1%</b>	<b>-1.0%</b>	<b>3.2%</b>	<b>-4.3%</b>
<b>Total Products</b>	-	<b>4.3%</b>	<b>-3.2%</b>	<b>12.1%</b>	<b>-0.3%</b>
Total Motor Gasoline	-	19.1%	35.5%	118.8%	2.7%
Kerosene-Type Jet Fuel	-	0.8%	-9.2%	-56.6%	-27.0%
Distillate Fuel Oil	-	-15.1%	-70.8%	-21.7%	-9.0%
Residual Fuel Oil	-	-9.7%	11.4%	48.3%	-1.8%
Propane/Propylene	-	-17.7%	-44.7%	0.8%	38.3%
Other Oils	-	3.0%	5.9%	-9.6%	0.1%
<b>Total Imports</b>	-	<b>-0.8%</b>	<b>-1.5%</b>	<b>5.0%</b>	<b>-3.5%</b>

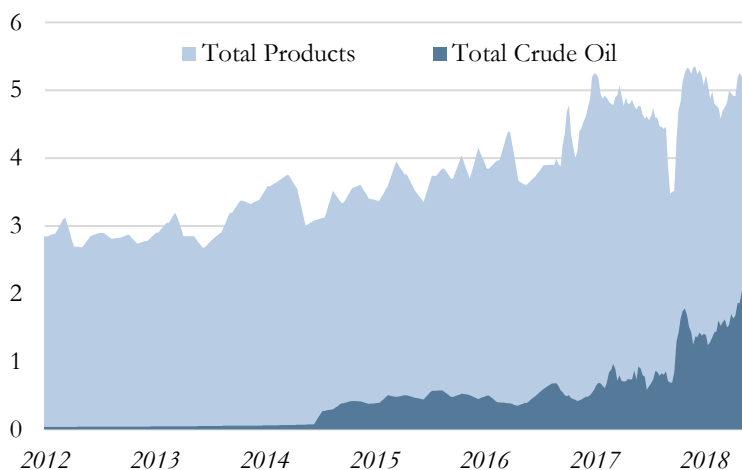
\*Totals may not sum due to component rounding

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

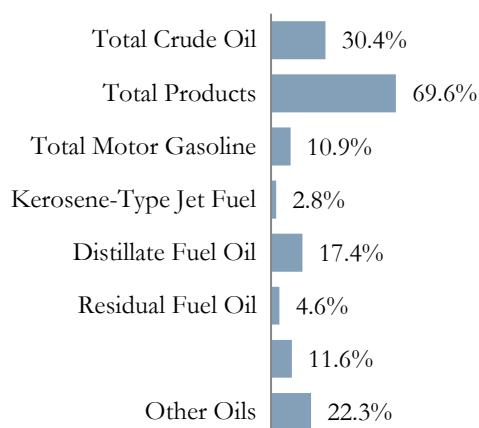
### May 2018 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages

Exports, million barrels per day



Share of Total Exports



U.S. Exports by Product\*

Thousand barrels per day

	Current 5/11/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>2,231</b>	<b>1,677</b>	<b>1,446</b>	<b>1,514</b>	<b>867</b>
<b>Total Products</b>	<b>5,116</b>	<b>4,914</b>	<b>4,768</b>	<b>5,321</b>	<b>4,766</b>
Total Motor Gasoline	800	875	728	787	646
Kerosene-Type Jet Fuel	207	221	118	117	168
Distillate Fuel Oil	1,281	1,179	1,070	1,504	1,133
Residual Fuel Oil	341	276	312	287	287
Propane/Propylene	852	735	794	907	955
Other Oils	1,636	1,628	1,747	1,718	1,578
<b>Total Exports</b>	<b>7,347</b>	<b>6,591</b>	<b>6,215</b>	<b>6,834</b>	<b>5,634</b>

U.S. Exports by Product, Change from

	Current 5/11/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>33.0%</b>	<b>54.3%</b>	<b>47.4%</b>	157.3%
<b>Total Products</b>	-	<b>4.1%</b>	<b>7.3%</b>	<b>-3.9%</b>	<b>7.3%</b>
Total Motor Gasoline	-	<b>-8.6%</b>	9.9%	1.7%	23.8%
Kerosene-Type Jet Fuel	-	<b>-6.3%</b>	75.4%	76.9%	23.2%
Distillate Fuel Oil	-	8.7%	19.7%	<b>-14.8%</b>	13.1%
Residual Fuel Oil	-	23.6%	9.3%	18.8%	18.8%
Propane/Propylene	-	15.9%	7.3%	<b>-6.1%</b>	<b>-10.8%</b>
Other Oils	-	0.5%	<b>-6.4%</b>	<b>-4.8%</b>	3.7%
<b>Total Exports</b>	-	<b>11.5%</b>	<b>18.2%</b>	<b>7.5%</b>	<b>30.4%</b>

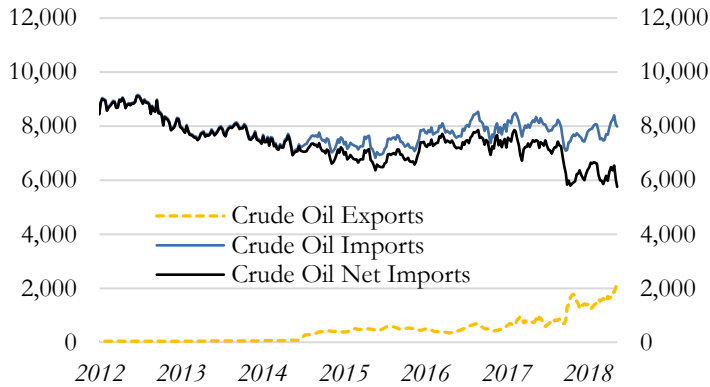
\*Totals may not sum due to rounding

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

**May 2018 Weekly U.S. Net Imports of Crude Oil & Petroleum Products**

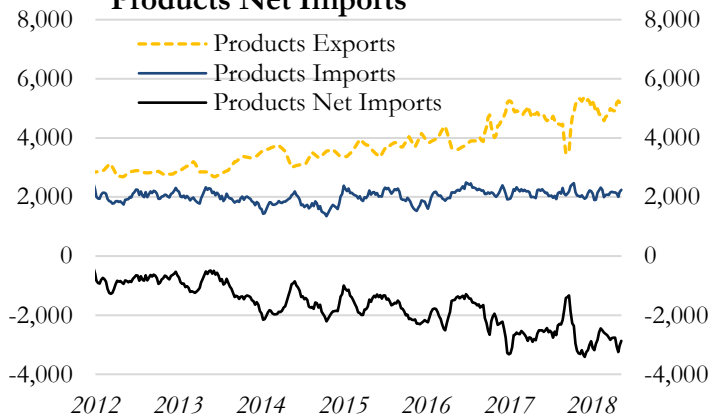
*4-Week Averages, Thousand barrels per day*

**Crude Oil Net Imports**



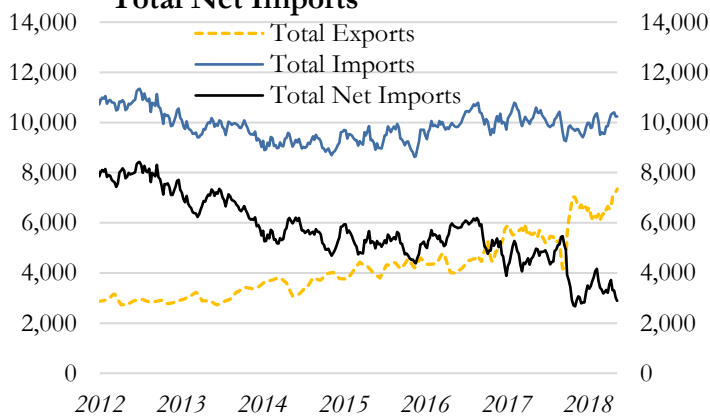
<b>Crude Oil Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
5/11/18	5,755	
Month Ago	6,480	-11.2%
3 Months Ago	6,617	-13.0%
6 Months Ago	6,229	-7.6%
1 Year Ago	7,479	-23.1%

**Products Net Imports**



<b>Products Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
5/11/18	-2,870	
Month Ago	-2,760	-
3 Months Ago	-2,448	-
6 Months Ago	-3,318	-
1 Year Ago	-2,515	-

**Total Net Imports**



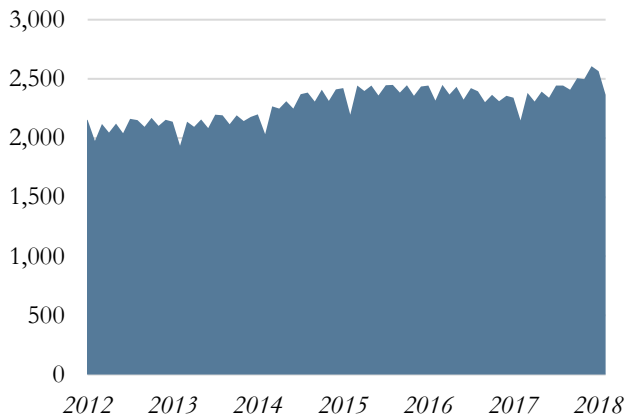
<b>Total Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
5/11/18	2,885	
Month Ago	3,720	-22.4%
3 Months Ago	4,169	-30.8%
6 Months Ago	2,911	-0.9%
1 Year Ago	4,965	-41.9%

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

U.S. Natural Gas Production & Stocks

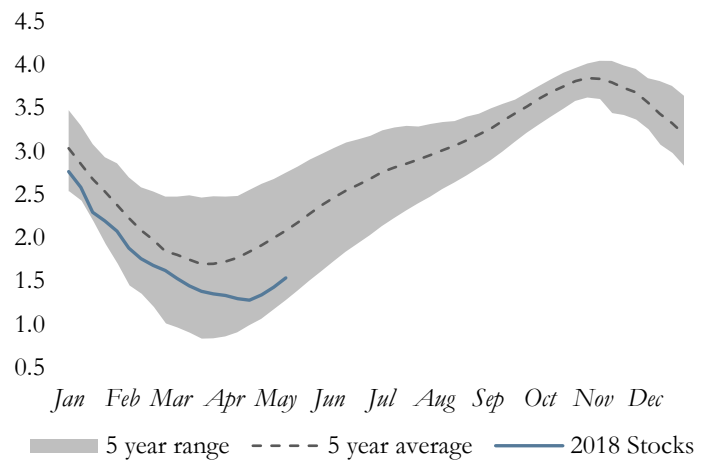
February 2018 Production

Total U.S. Production, Billion cubic feet (Bcf)



May 2018 Weekly Stocks

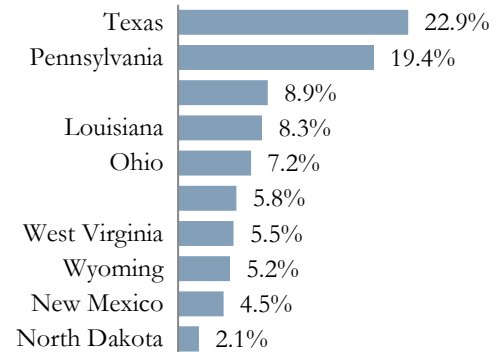
U.S. Natural Gas Stocks, Billion cubic feet (Bcf)



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	2,365	2,566	2,497	2,444	2,148
U.S. Stocks	1,538	1,299	1,884	3,772	2,369

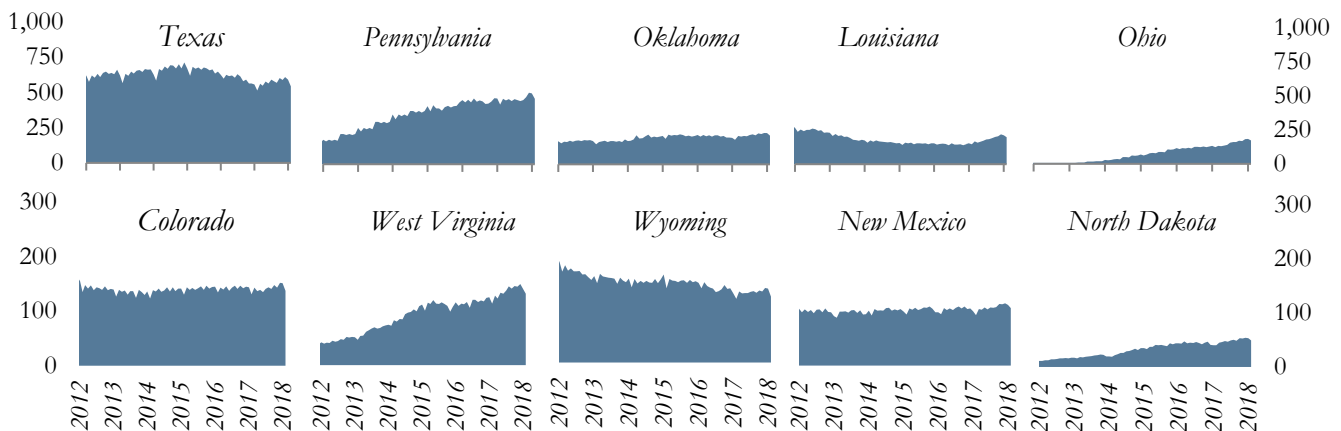
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	-7.8%	-5.3%	-3.2%	10.1%
U.S. Stocks	-	18.4%	-18.4%	-59.2%	-35.1%

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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