

THE U.S. Energy DATABOOK

A summary of national and global energy indicators



JANUARY 22, 2018

FEDERAL RESERVE BANK of KANSAS CITY

SUMMARY OF CURRENT ENERGY CONDITIONS

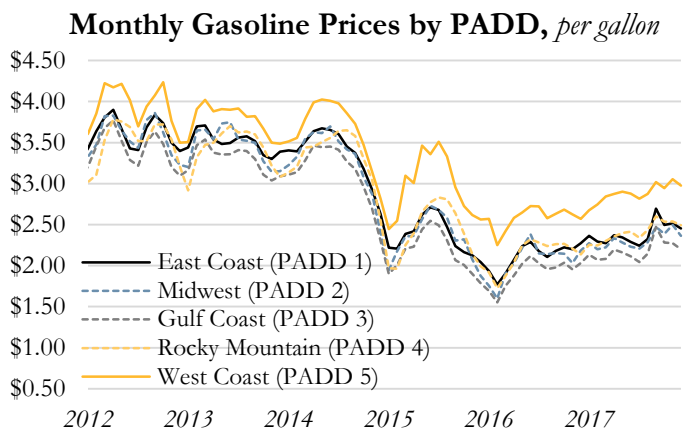
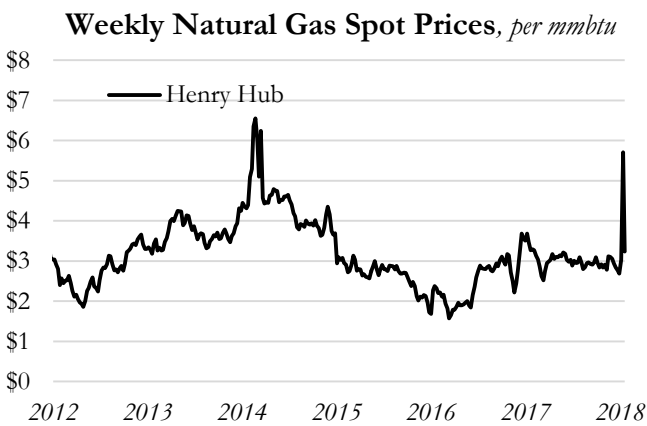
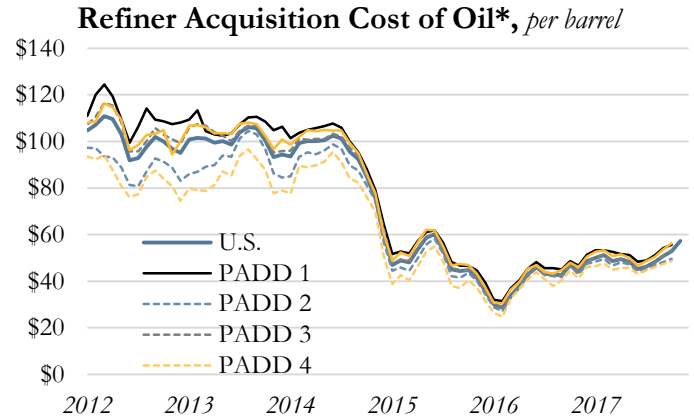
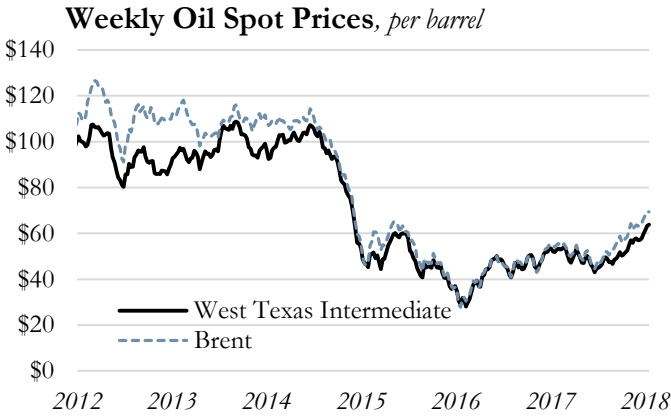
The number of total active drilling rigs in the United States rose 0.5 percent from a month ago and was 34.9 percent higher than a year ago. U.S. crude oil production rose 1.6 percent in October, and natural gas production increased 4.1 percent. For the week ending January 19th, West Texas Intermediate (WTI) crude oil averaged \$63.77 per barrel while North Sea Brent averaged \$69.39 per barrel. The Henry Hub natural gas spot price averaged \$3.24 per million Btu for the week ending January 12th. U.S. crude oil and petroleum products exports declined 6.2 percent while imports grew 2.4 percent. Global oil production was 0.1 percent higher in December, and global oil demand for the fourth quarter of 2017 edged up 0.2 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 January 19, 2018



Weekly Spot Prices, Change from

Weekly Spot Prices	Current 1/19/18	1 Week Ago	1 Month Ago	6 Months Ago	1 Year Ago	Peak (2011-17)
West Texas Intermediate	\$63.77	\$0.51	\$5.90	\$17.36	\$11.95	-\$45.00
Brent	\$69.39	-\$0.08	\$5.03	\$21.40	\$15.20	-\$57.23
Henry Hub*	\$3.24	-\$2.47	\$0.47	\$0.28	-\$0.03	-\$3.31

*Henry Hub current price for week of 1/12/18

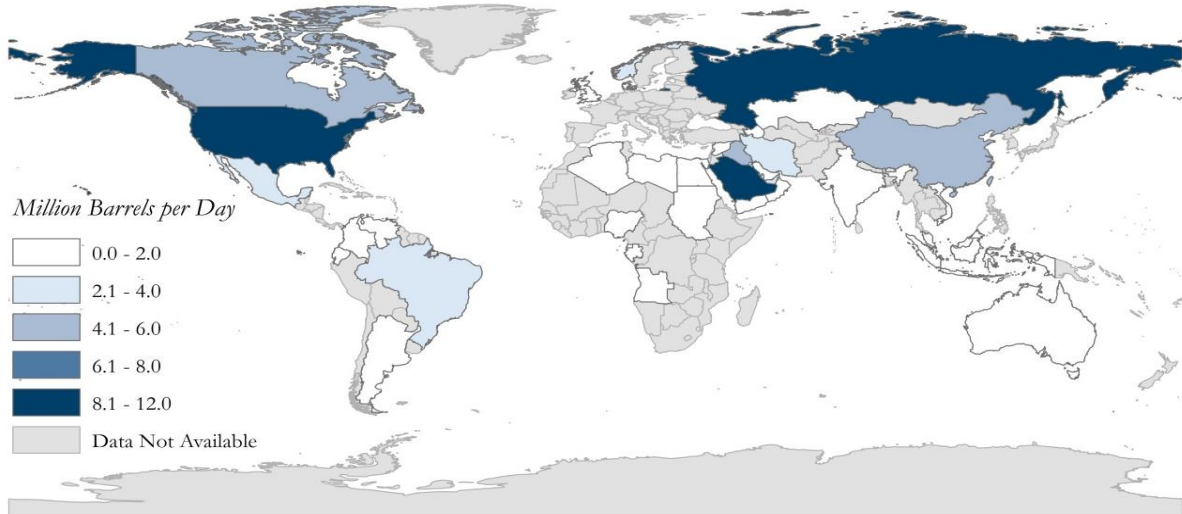
Monthly Gasoline Spot Prices, Change from

Geographic Area	Current Dec-17	1 Month Ago	6 Months Ago	1 Year Ago	Peak (2011-17)
East Coast (PADD 1)	\$2.46	-\$0.06	\$0.17	\$0.18	-\$1.45
Midwest (PADD 2)	\$2.37	-\$0.13	\$0.13	\$0.18	-\$1.55
Gulf Coast (PADD 3)	\$2.20	-\$0.07	\$0.09	\$0.17	-\$1.57
Rocky Mountain (PADD 4)	\$2.49	-\$0.05	\$0.08	\$0.36	-\$1.29
West Coast (PADD 5)	\$2.98	-\$0.08	\$0.10	\$0.41	-\$1.26

*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

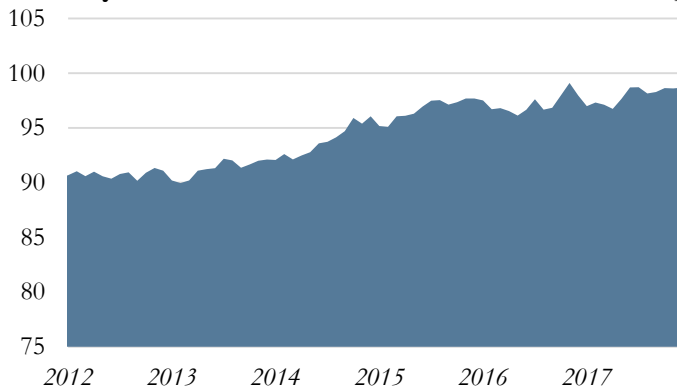
December 2017 Global Petroleum Production



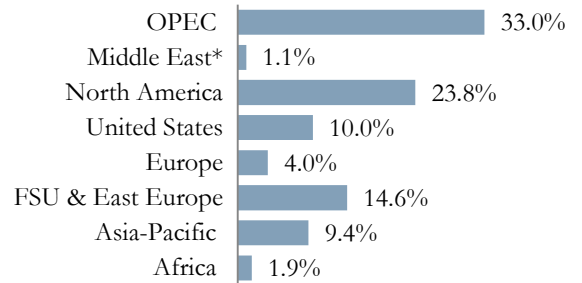
Source: Energy Information Administration/Haver Analytics

December 2017

Monthly Global Petroleum Production, million barrels per day

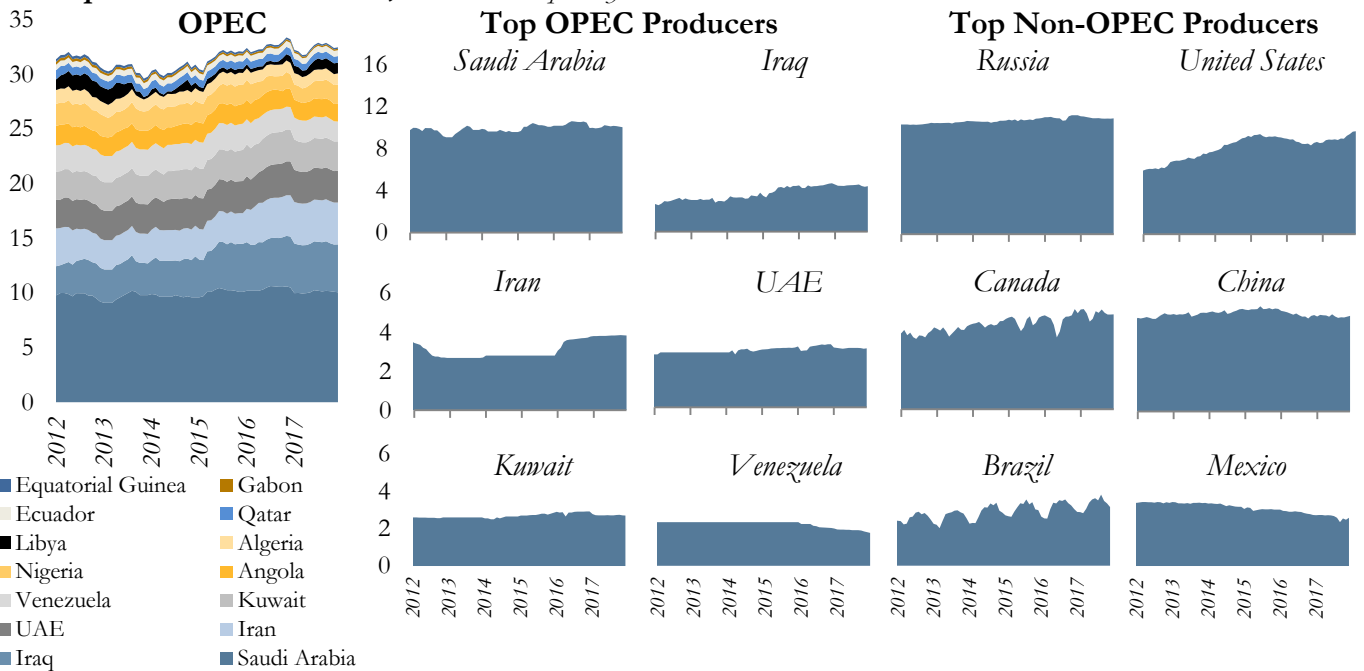


Regional Share of Production



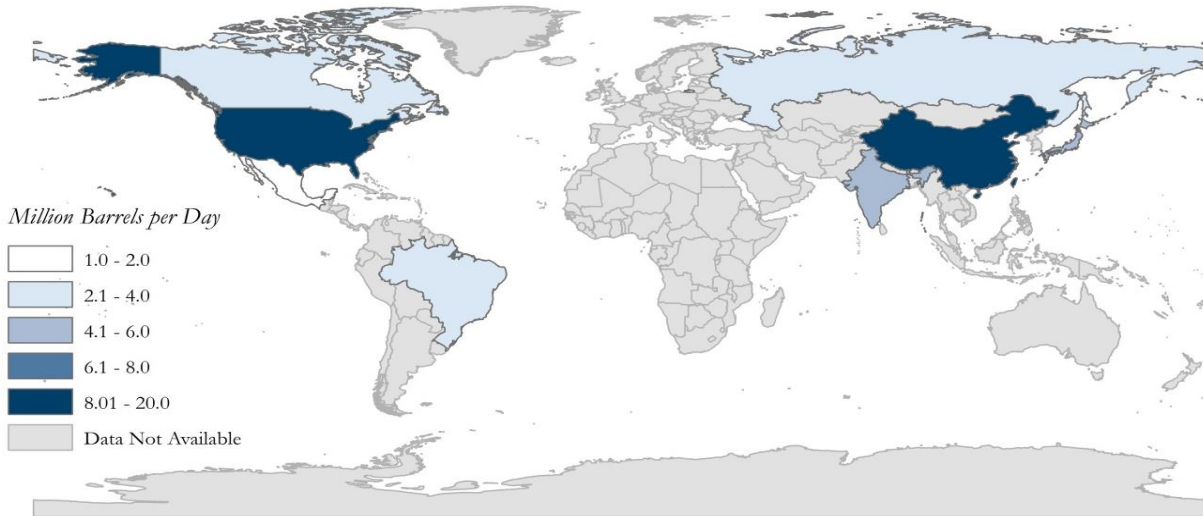
*Excludes OPEC

Top Crude Oil Producers, million barrels per day



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

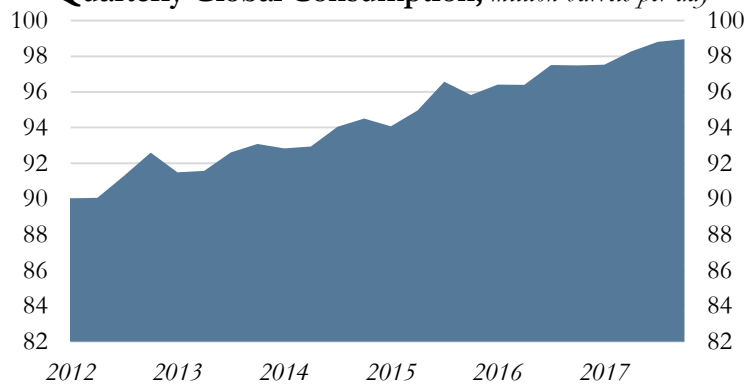
Fourth Quarter 2017 Global Petroleum Consumption



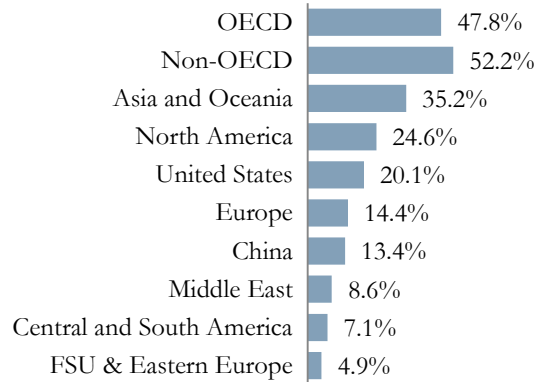
Source: Energy Information Administration/Haver Analytics

Fourth Quarter 2017

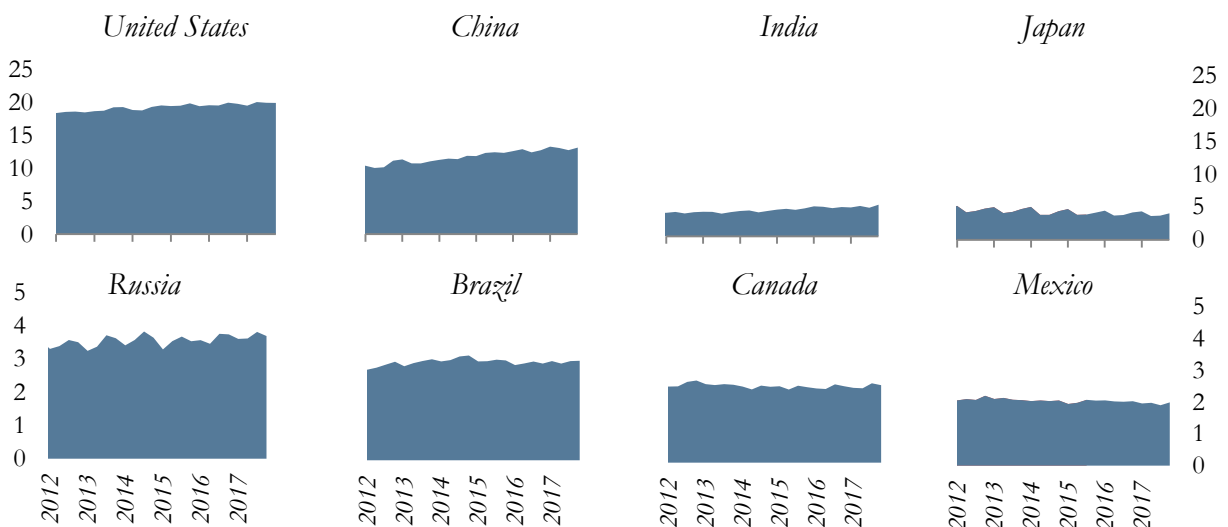
Quarterly Global Consumption, million barrels per day



Regional Share of Consumption

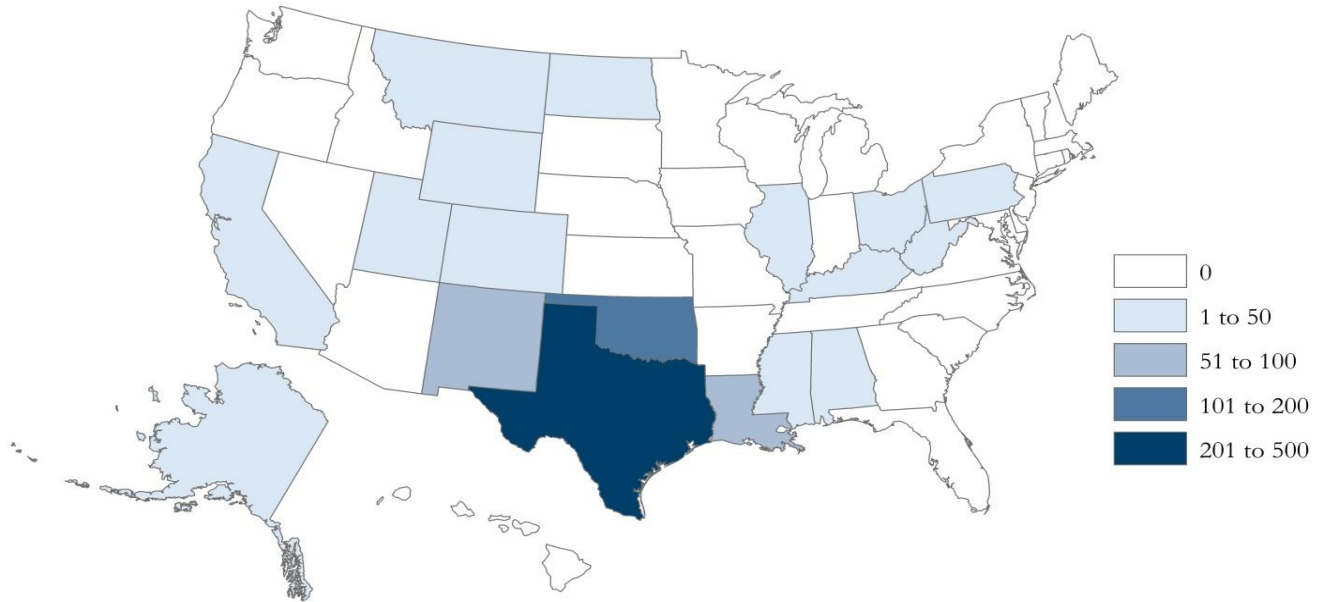


Top Petroleum Consumers, million barrels per day



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

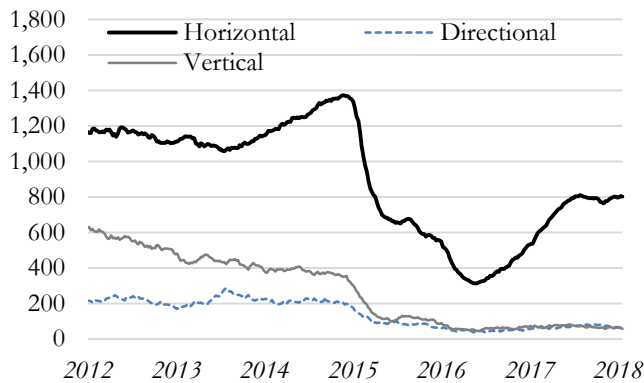
January 2018 Weekly Active Oil & Gas Drilling Rig Counts



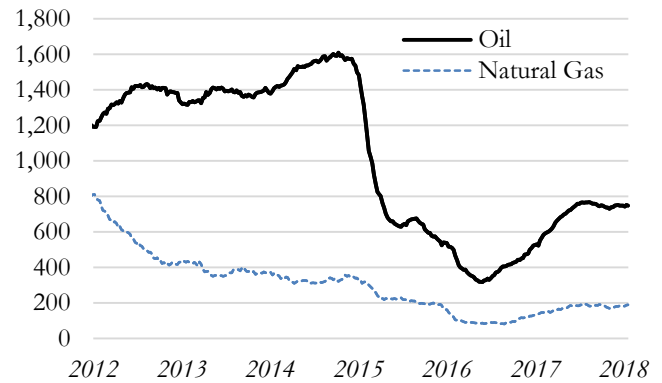
Source: Baker Hughes/Haver Analytics

January 19, 2018

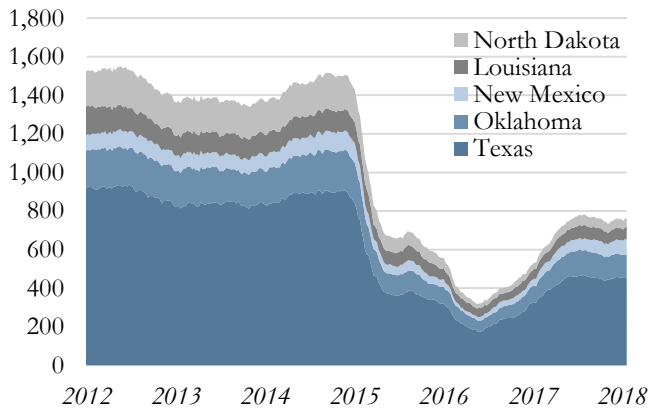
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

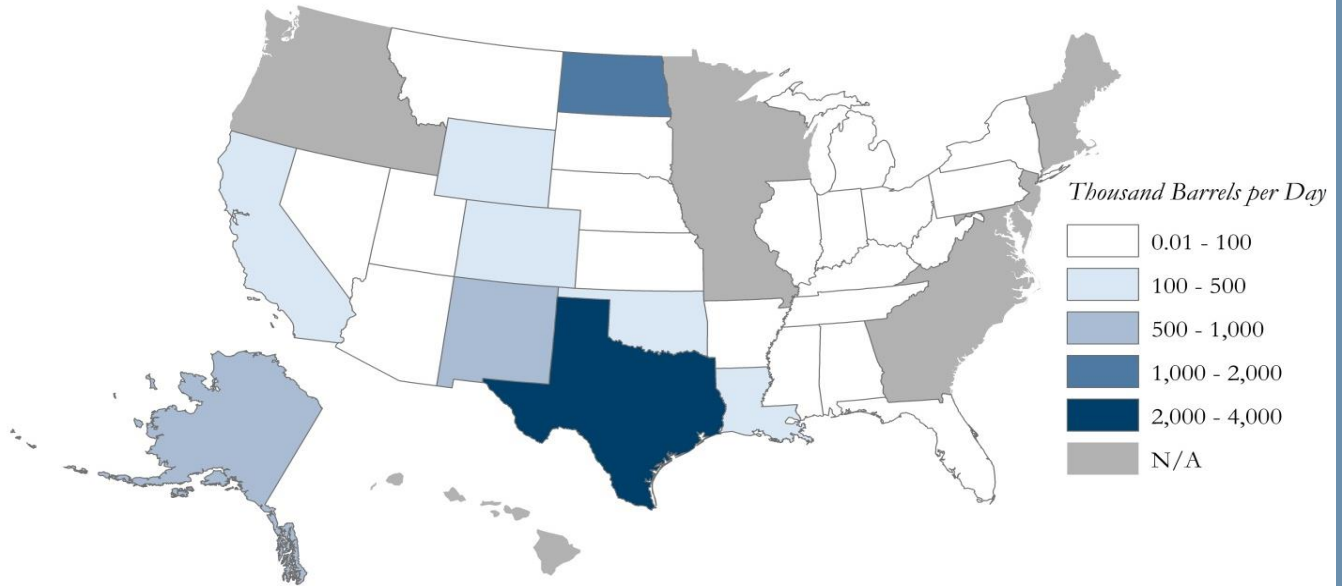
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	747	747	736	551
Gas	189	184	177	142
Misc	0	0	0	1
Total	936	931	913	694

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	0.0%	1.5%	35.6%
Gas	-	2.7%	6.8%	33.1%
Misc	-	-	-	-100.0%
Total	-	0.5%	2.5%	34.9%

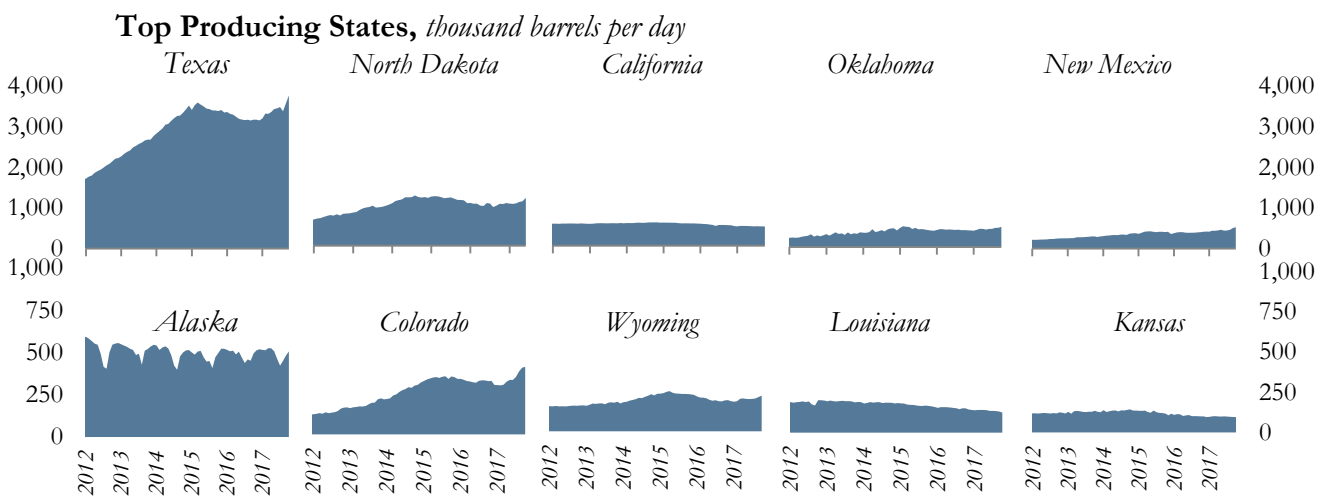
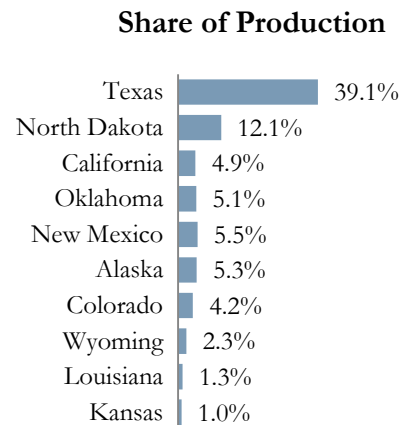
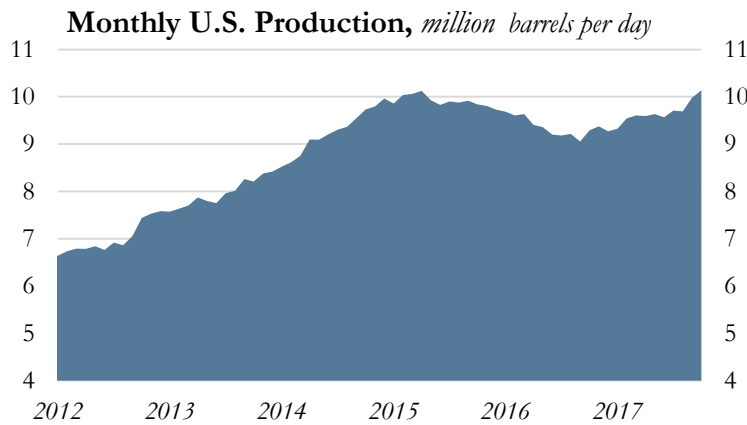
Source: Baker Hughes/Haver Analytics

October 2017 U.S. Crude Oil Production



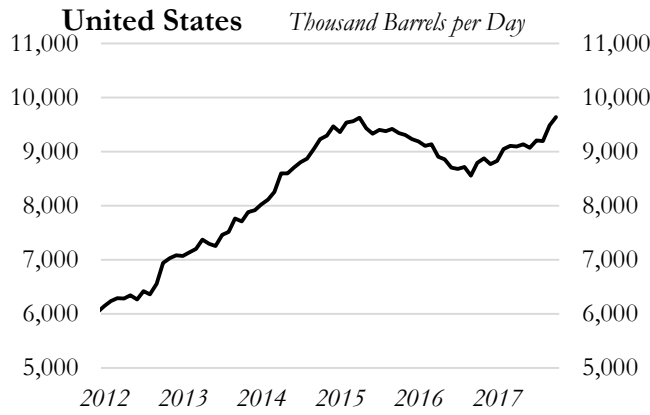
Source: Energy Information Administration/Haver Analytics

October 2017

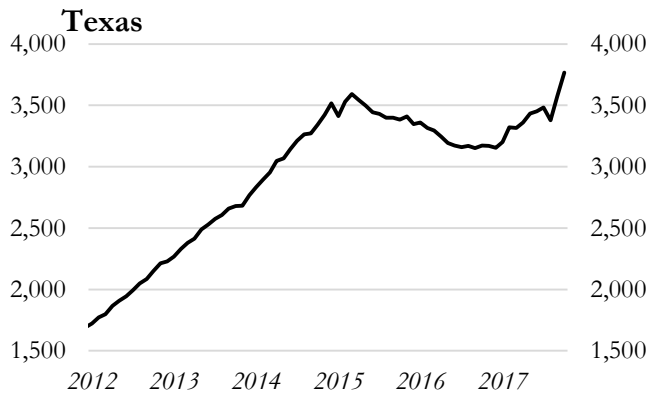


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

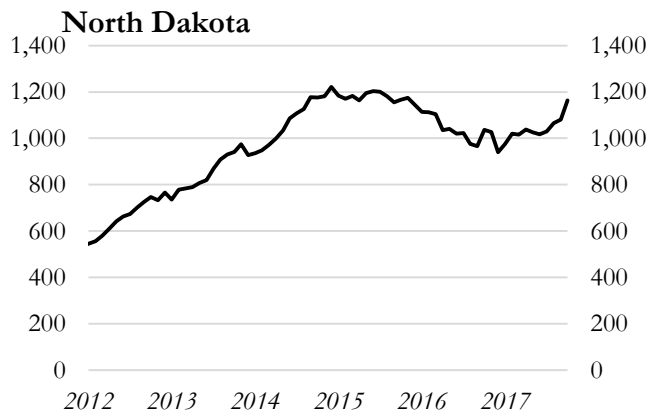
Data through October 2017



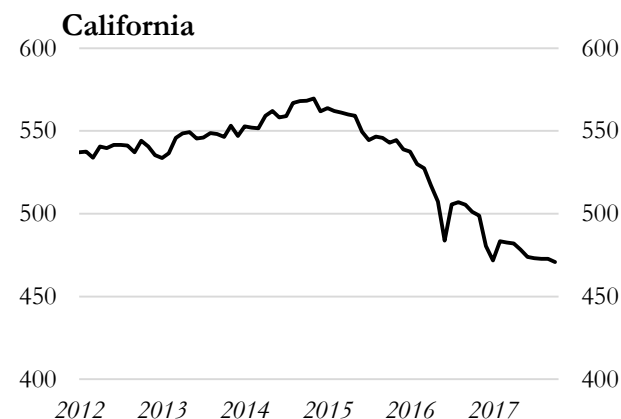
	United States <i>Thousand barrels per day</i>	<i>Change from</i>
Oct-17	9,637	
Month Ago	9,481	1.6%
3 Months Ago	9,209	4.6%
6 Months Ago	9,093	6.0%
1 Year Ago	8,791	9.6%



	Texas <i>Thousand barrels per day</i>	<i>Change from</i>
Oct-17	3,767	
Month Ago	3,574	5.4%
3 Months Ago	3,482	8.2%
6 Months Ago	3,360	12.1%
1 Year Ago	3,172	18.8%
Share of U.S. Production		39.1%



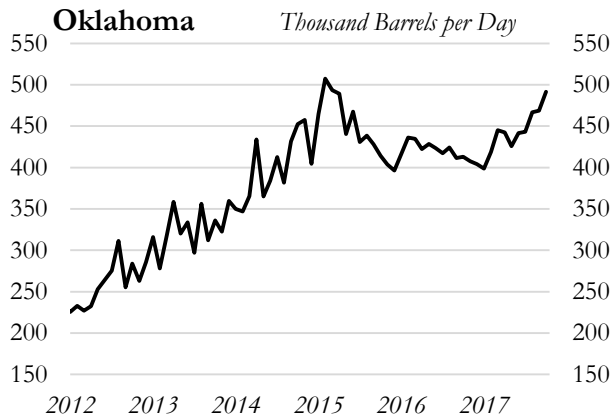
	North Dakota <i>Thousand barrels per day</i>	<i>Change from</i>
Oct-17	1,164	
Month Ago	1,081	7.7%
3 Months Ago	1,030	13.1%
6 Months Ago	1,038	12.2%
1 Year Ago	1,037	12.3%
Share of U.S. Production		12.1%



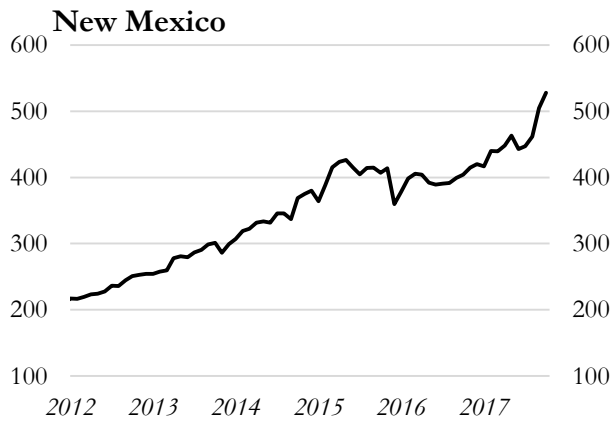
	California <i>Thousand barrels per day</i>	<i>Change from</i>
Oct-17	471	
Month Ago	473	-0.4%
3 Months Ago	473	-0.5%
6 Months Ago	482	-2.3%
1 Year Ago	501	-6.1%
Share of U.S. Production		4.9%

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

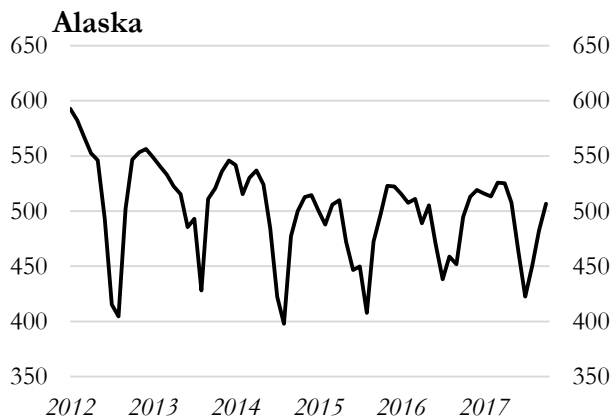
Data through October 2017



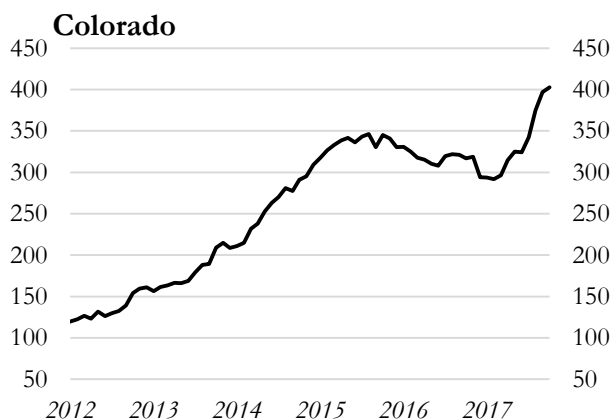
Oklahoma		<i>Change</i>
<i>Thousand barrels per day</i>		<i>from</i>
Oct-17	491	
Month Ago	469	4.9%
3 Months Ago	443	10.9%
6 Months Ago	442	11.1%
1 Year Ago	413	19.0%
Share of U.S. Production		5.1%



New Mexico		<i>Change</i>
<i>Thousand barrels per day</i>		<i>from</i>
Oct-17	528	
Month Ago	505	4.6%
3 Months Ago	447	18.1%
6 Months Ago	448	17.9%
1 Year Ago	404	30.6%
Share of U.S. Production		5.5%



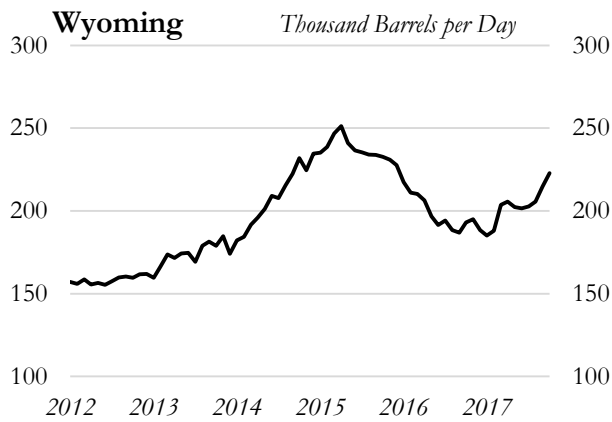
Alaska		<i>Change</i>
<i>Thousand barrels per day</i>		<i>from</i>
Oct-17	507	
Month Ago	482	5.1%
3 Months Ago	423	19.9%
6 Months Ago	525	-3.6%
1 Year Ago	495	2.4%
Share of U.S. Production		5.3%



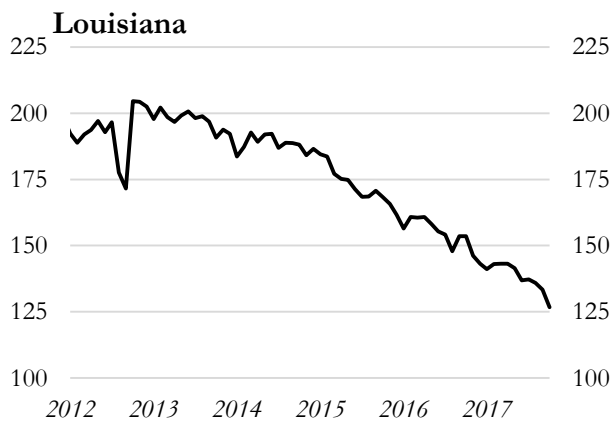
Colorado		<i>Change</i>
<i>Thousand barrels per day</i>		<i>from</i>
Oct-17	403	
Month Ago	397	1.5%
3 Months Ago	343	17.6%
6 Months Ago	315	28.0%
1 Year Ago	317	27.0%
Share of U.S. Production		4.2%

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

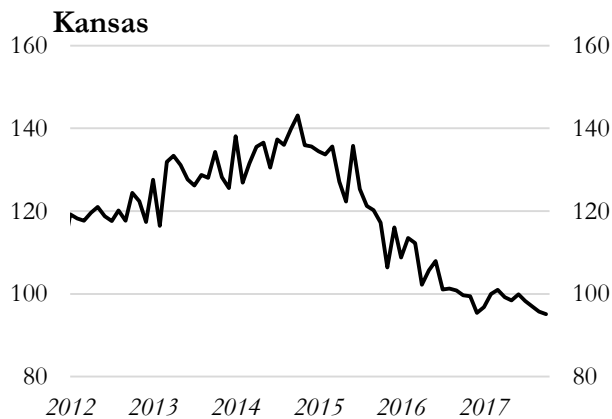
Data through October 2017



Wyoming		<i>Change from</i>
<i>Thousand barrels per day</i>		
Oct-17	223	
Month Ago	215	3.9%
3 Months Ago	203	10.0%
6 Months Ago	206	8.4%
1 Year Ago	193	15.4%
Share of U.S. Production		2.3%



Louisiana		<i>Change from</i>
<i>Thousand barrels per day</i>		
Oct-17	127	
Month Ago	133	-5.0%
3 Months Ago	137	-7.7%
6 Months Ago	143	-11.5%
1 Year Ago	154	-17.5%
Share of U.S. Production		1.3%

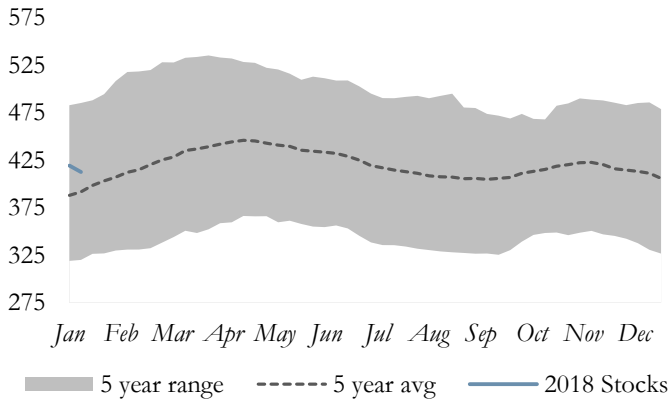


Kansas		<i>Change from</i>
<i>Thousand barrels per day</i>		
Oct-17	95	
Month Ago	96	-0.7%
3 Months Ago	98	-3.3%
6 Months Ago	99	-4.2%
1 Year Ago	100	-4.6%
Share of U.S. Production		1.0%

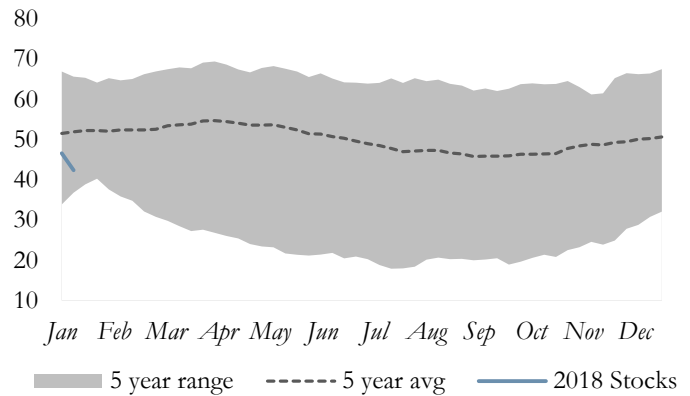
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

January 2018 Weekly U.S. Crude Oil Stocks

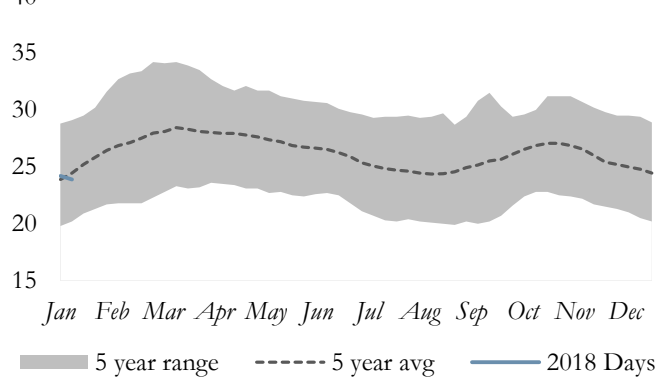
U.S. Oil Stocks, million barrels*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



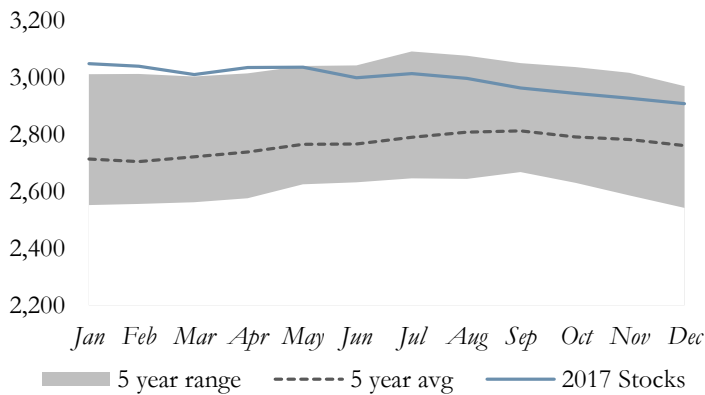
Crude Oil Stocks

	1 Week Change from Ago	1 Year Ago
U.S.	-1.6%	-15.0%
Cushing, OK	-9.0%	-35.4%
Days of Supply	-1.2%	-17.9%
East Coast (PADD 1)	1.6%	-18.2%
Midwest (PADD 2)	-3.0%	-16.2%
Gulf Coast (PADD 3)	-0.5%	-18.0%
Rocky Mountain (PADD 4)	1.0%	-5.7%
West Coast (PADD 5)	-4.5%	-0.1%

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

December 2017 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels

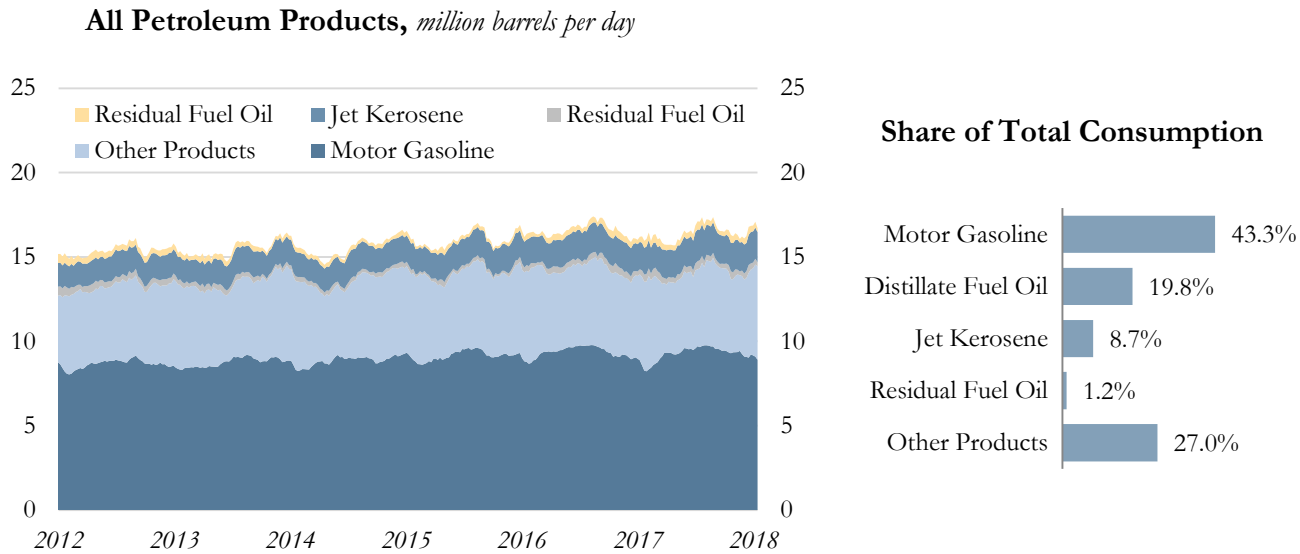


Petroleum Stocks

	Million Barrels	Change from
Current Month	2,908	
1 Month Ago	2,928	-0.7%
3 Months Ago	2,964	-1.9%
6 Months Ago	2,999	-3.0%
1 Year Ago	2,968	-2.0%

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

January 2018 Weekly U.S. Demand for Petroleum Products
4-Week Averages



U.S. Consumption by Product & Percent Change

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

	Current 1/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	20,543	20,299	19,918	20,752	19,348
Motor Gasoline	8,904	9,034	9,345	9,655	8,571
Distillate Fuel Oil	4,077	3,981	3,720	4,136	3,513
Jet Kerosene	1,781	1,792	1,674	1,811	1,639
Residual Fuel Oil	241	467	399	477	385
Other Products	5,540	5,025	4,780	4,673	5,240

U.S. Consumption by Product, Change from

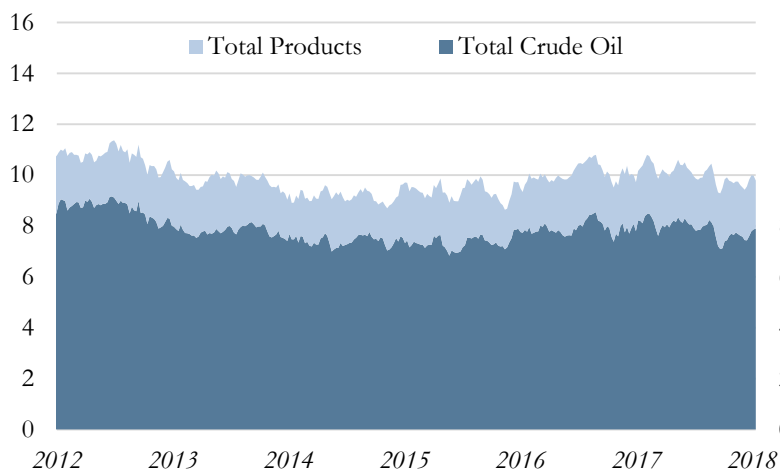
	Current 1/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	1.2%	3.1%	-1.0%	6.2%
Motor Gasoline	-	-1.4%	-4.7%	-7.8%	3.9%
Distillate Fuel Oil	-	2.4%	9.6%	-1.4%	16.1%
Jet Kerosene	-	-0.6%	6.4%	-1.7%	8.7%
Residual Fuel Oil	-	-48.4%	-39.6%	-49.5%	-37.4%
Other Products	-	10.2%	15.9%	18.6%	5.7%

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

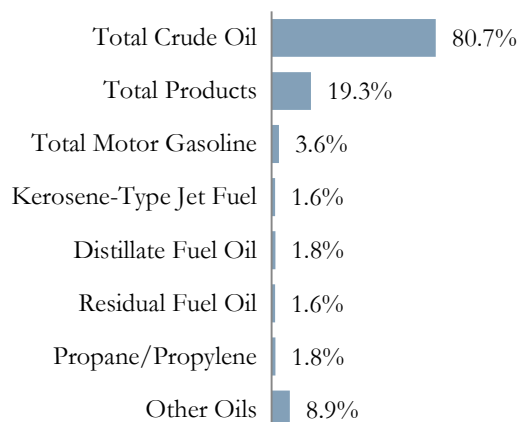
January 2018 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product*

Thousand barrels per day

	Current 1/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	7,892	7,432	7,435	7,841	8,195
Total Products	1,890	2,120	2,473	1,974	2,075
Total Motor Gasoline	349	496	863	607	607
Kerosene-Type Jet Fuel	158	156	182	139	134
Distillate Fuel Oil	173	199	87	125	128
Residual Fuel Oil	159	217	162	139	141
Propane/Propylene	180	192	126	102	202
Other Oils	871	852	1,053	863	863
Total Imports	9,782	9,552	9,908	9,815	10,270

U.S. Imports by Product, Change from

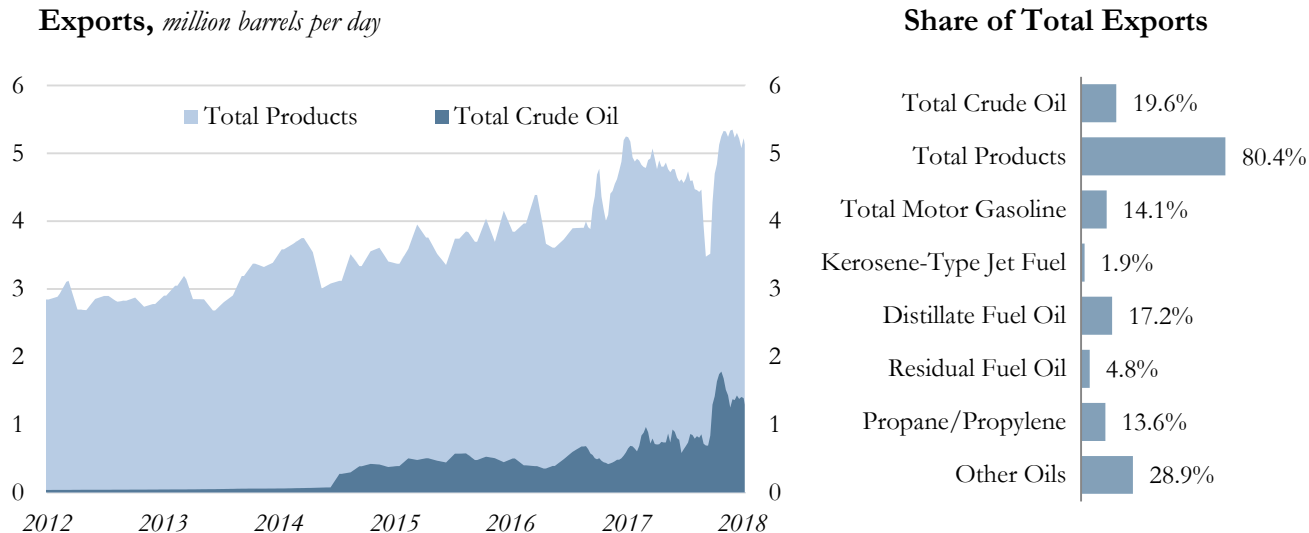
	Current 1/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	6.2%	6.1%	0.7%	-3.7%
Total Products	-	-10.8%	-23.6%	-4.3%	-8.9%
Total Motor Gasoline	-	-29.6%	-59.6%	-42.5%	-42.5%
Kerosene-Type Jet Fuel	-	1.3%	-13.2%	13.7%	17.9%
Distillate Fuel Oil	-	-13.1%	98.9%	38.4%	35.2%
Residual Fuel Oil	-	-26.7%	-1.9%	14.4%	12.8%
Propane/Propylene	-	-6.3%	42.9%	76.5%	-10.9%
Other Oils	-	2.2%	-17.3%	0.9%	0.9%
Total Imports	-	2.4%	-1.3%	-0.3%	-4.8%

*Totals may not sum due to component rounding

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

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

4-Week Averages



U.S. Exports by Product*

Thousand barrels per day

	Current 1/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	1,237	1,429	1,636	736	686
Total Products	5,074	5,300	4,839	4,733	5,171
Total Motor Gasoline	892	911	559	624	1,012
Kerosene-Type Jet Fuel	117	123	102	207	155
Distillate Fuel Oil	1,085	1,366	1,353	1,187	1,140
Residual Fuel Oil	300	268	299	306	243
Propane/Propylene	856	929	971	649	1,074
Other Oils	1,825	1,703	1,556	1,761	1,547
Total Exports	6,311	6,728	6,475	5,468	5,857

U.S. Exports by Product, Change from

	Current 1/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	-13.4%	-24.4%	68.1%	80.3%
Total Products	-	-4.3%	4.9%	7.2%	-1.9%
Total Motor Gasoline	-	-2.1%	59.6%	42.9%	-11.9%
Kerosene-Type Jet Fuel	-	-4.9%	14.7%	-43.5%	-24.5%
Distillate Fuel Oil	-	-20.6%	-19.8%	-8.6%	-4.8%
Residual Fuel Oil	-	11.9%	0.3%	-2.0%	23.5%
Propane/Propylene	-	-7.9%	-11.8%	31.9%	-20.3%
Other Oils	-	7.2%	17.3%	3.6%	18.0%
Total Exports	-	-6.2%	-2.5%	15.4%	7.8%

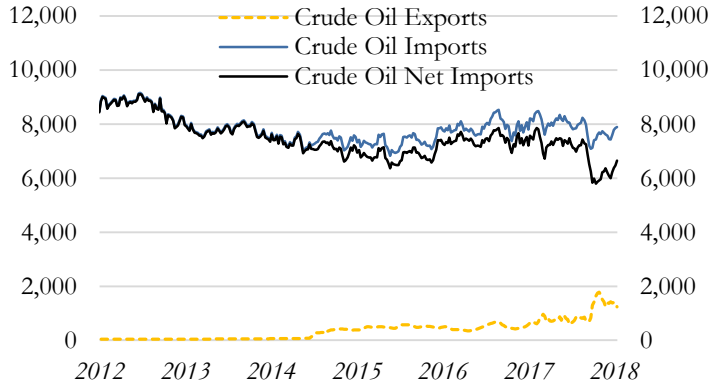
*Totals may not sum due to rounding

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

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

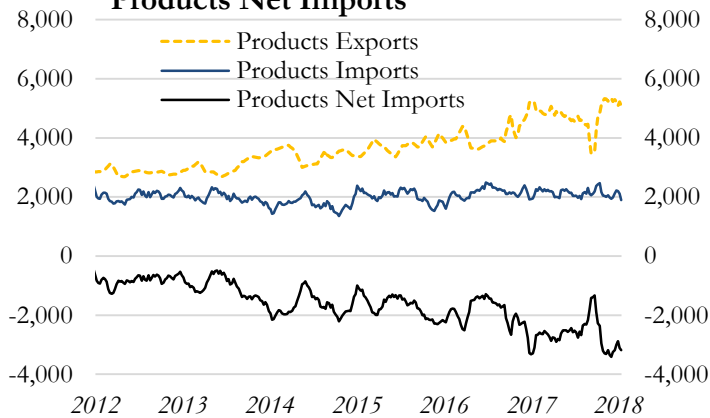
4-Week Averages, Thousand barrels per day

Crude Oil Net Imports



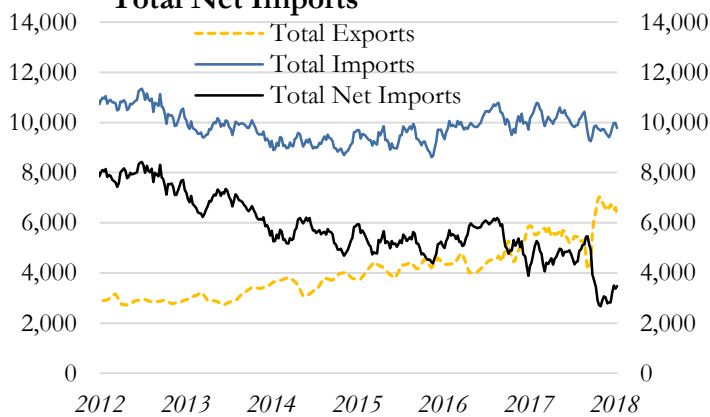
Crude Oil Net Imports		Change
Thousand barrels per day		from
1/12/18	6,655	
Month Ago	6,004	10.8%
3 Months Ago	5,800	14.7%
6 Months Ago	7,106	-6.3%
1 Year Ago	7,509	-11.4%

Products Net Imports



Products Net Imports		Change
Thousand barrels per day		from
1/12/18	-3,184	
Month Ago	-3,180	-
3 Months Ago	-2,366	-
6 Months Ago	-2,759	-
1 Year Ago	-3,096	-

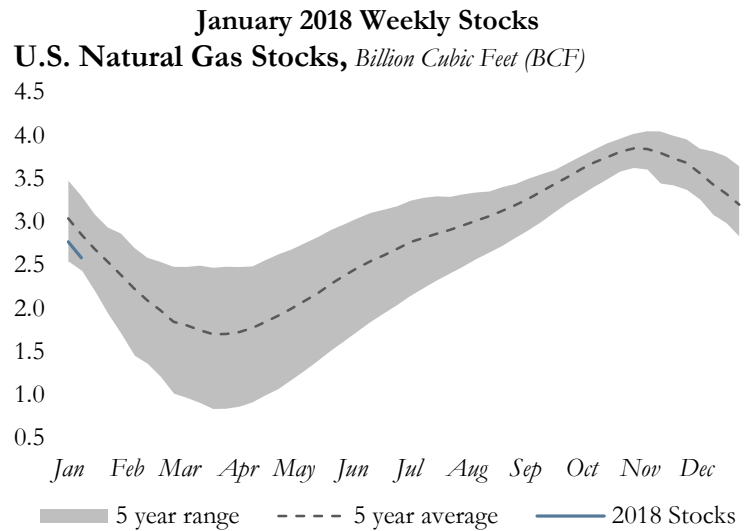
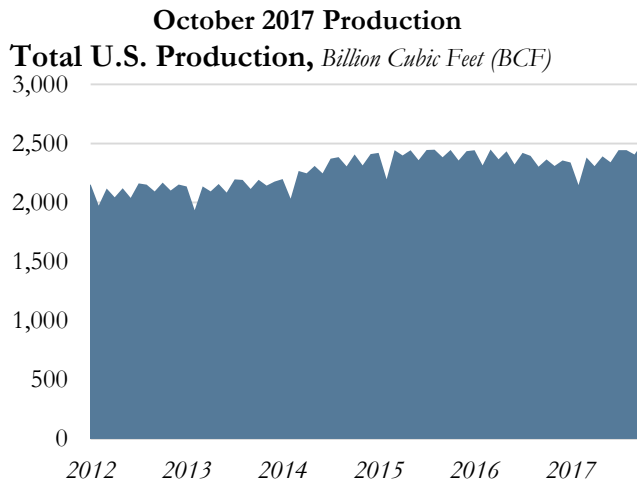
Total Net Imports



Total Net Imports		Change
Thousand barrels per day		from
1/12/18	3,471	
Month Ago	2,824	22.9%
3 Months Ago	3,434	1.1%
6 Months Ago	4,347	-20.2%
1 Year Ago	4,414	-21.4%

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

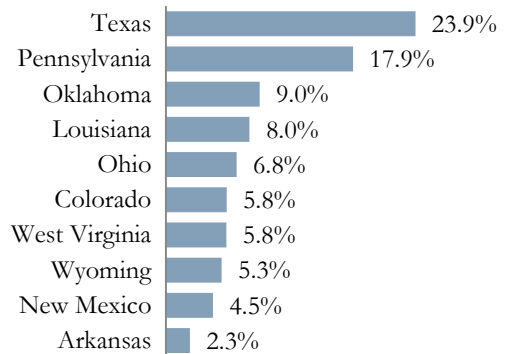
U.S. Natural Gas Production & Stocks



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	2,505	2,407	2,443	2,308	2,365
U.S. Stocks	2,584	3,444	3,645	2,963	2,917

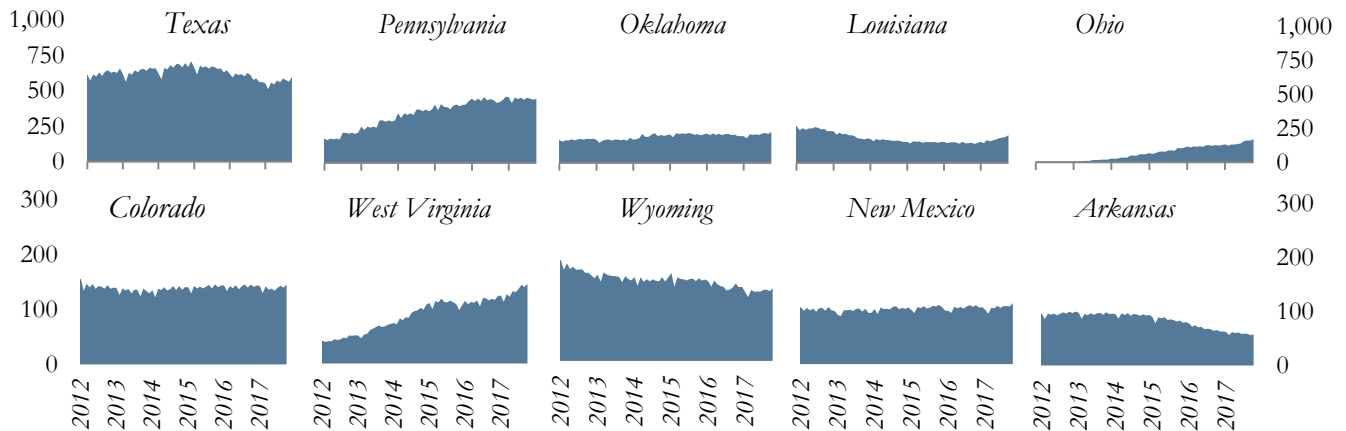
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	4.1%	2.5%	8.5%	5.9%
U.S. Stocks	-	-25.0%	-29.1%	-12.8%	-11.4%

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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