

THE U.S. Energy DATABOOK

A summary of national and global energy indicators



MARCH 23, 2018

FEDERAL RESERVE BANK of KANSAS CITY

SUMMARY OF CURRENT ENERGY CONDITIONS

The number of total active drilling rigs in the United States rose 1.7 percent since a month ago and was up 23 percent compared to a year ago. U.S. crude oil production fell 1.1 percent in December, while natural gas production increased 4.2 percent. For the week ending March 16th, West Texas Intermediate (WTI) crude oil averaged \$61.28 per barrel and North Sea Brent averaged \$64.14 per barrel. The Henry Hub natural gas spot price averaged \$2.71 per million Btu for the week ending March 16th. U.S. crude oil and petroleum products exports inched down 0.4 percent and imports declined 4.9 percent. According to initial estimates, global petroleum production was flat in February compared to the previous month. Global petroleum demand for the fourth quarter of 2017 grew 0.2 percent.

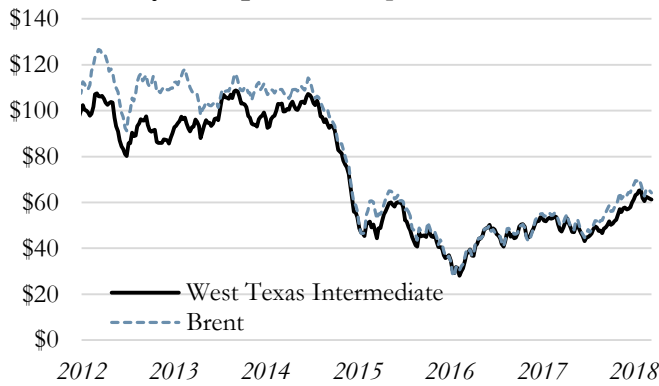
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S.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



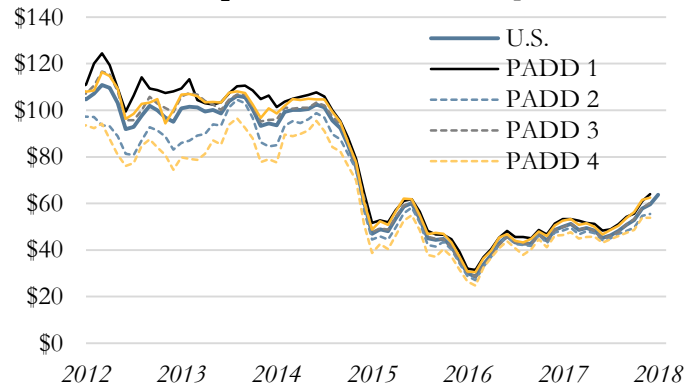
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through March 16, 2018

Weekly Oil Spot Prices, per barrel



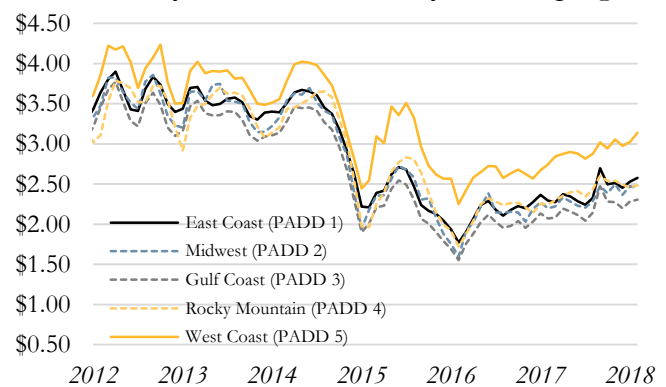
Refiner Acquisition Cost of Oil*, per barrel



Weekly Natural Gas Spot Prices, per mmbtu



Monthly Gasoline Prices by PADD, per gallon



Weekly Spot Prices, Change from

Weekly Spot Prices	Current 3/16/18	1 Week Ago	1 Month Ago	6 Months Ago	1 Year Ago	Peak (2012-17)
West Texas Intermediate	\$61.28	-\$0.37	\$0.72	\$12.21	\$13.25	-\$47.49
Brent	\$64.14	-\$0.98	\$1.42	\$8.60	\$13.85	-\$62.48
Henry Hub	\$2.71	-\$0.03	\$0.17	-\$0.25	-\$0.24	-\$3.84

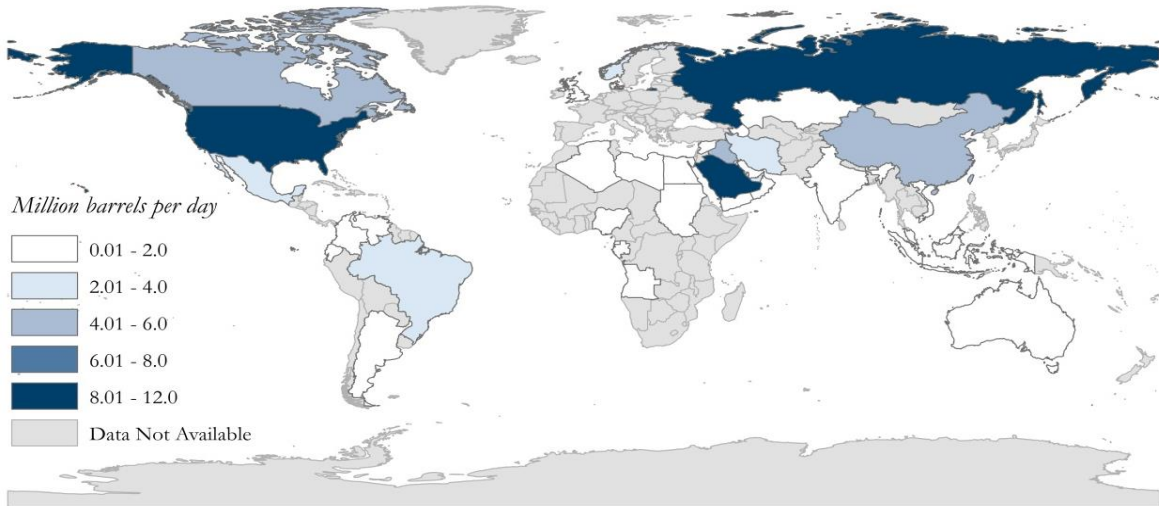
Monthly Gasoline Spot Prices, Change from

Geographic Area	Current Feb-18	1 Month Ago	6 Months Ago	1 Year Ago	Peak (2012-17)
East Coast (PADD 1)	\$2.58	\$0.05	\$0.25	\$0.28	-\$1.32
Midwest (PADD 2)	\$2.45	-\$0.03	\$0.16	\$0.25	-\$1.41
Gulf Coast (PADD 3)	\$2.31	\$0.02	\$0.16	\$0.23	-\$1.46
Rocky Mountain (PADD 4)	\$2.49	\$0.03	\$0.05	\$0.24	-\$1.30
West Coast (PADD 5)	\$3.14	\$0.12	\$0.26	\$0.39	-\$1.10

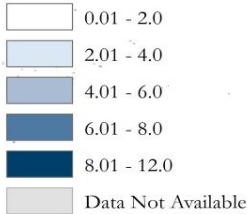
*The cost of crude oil, including transportation and other fees paid by the refiner.

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

February 2018 Global Petroleum Production



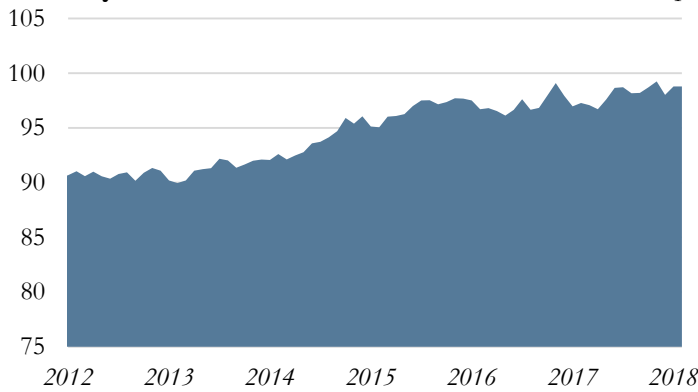
Million barrels per day



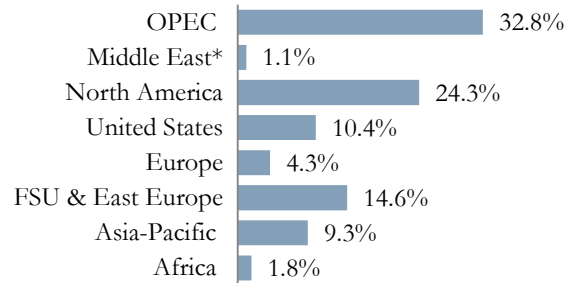
Source: Energy Information Administration/Haver Analytics

February 2018

Monthly Global Petroleum Production, million barrels per day

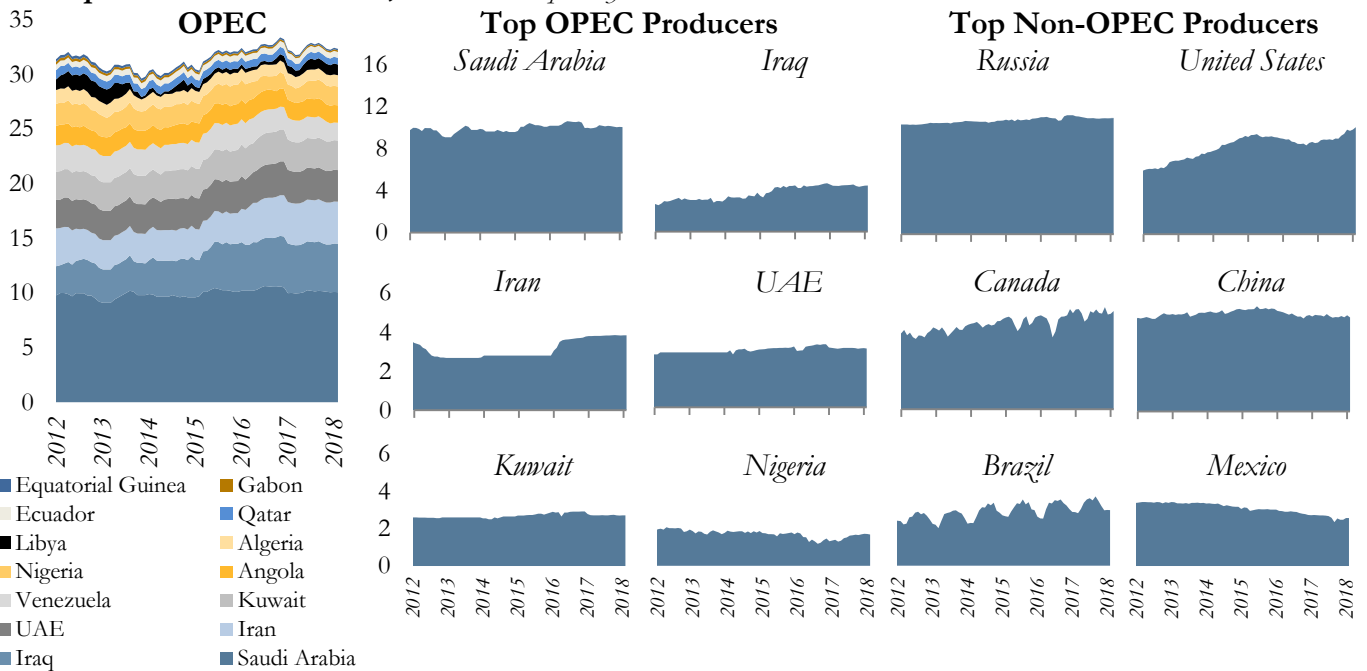


Regional Share of Production



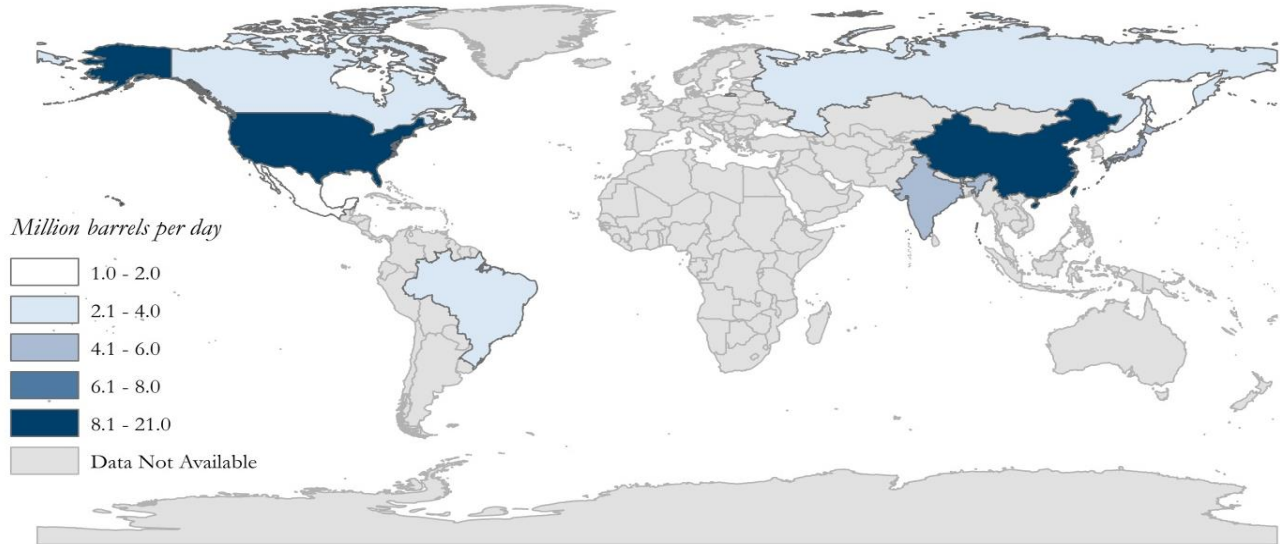
*Excludes OPEC

Top Crude Oil Producers, million barrels per day

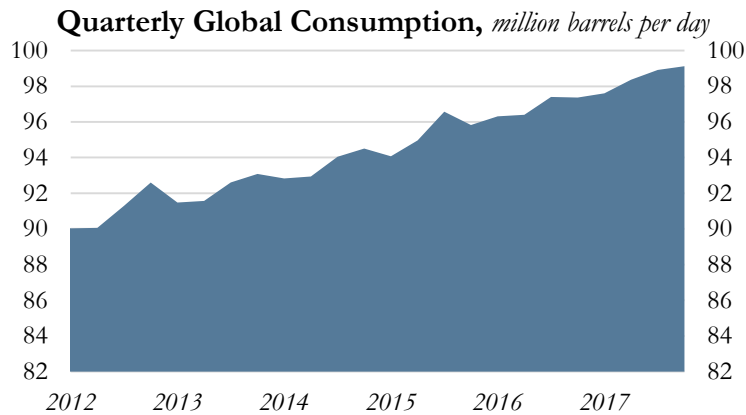


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Fourth Quarter 2017 Global Petroleum Consumption

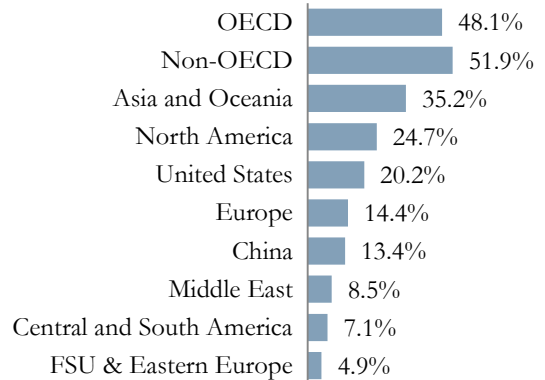


Source: Energy Information Administration/Haver Analytics

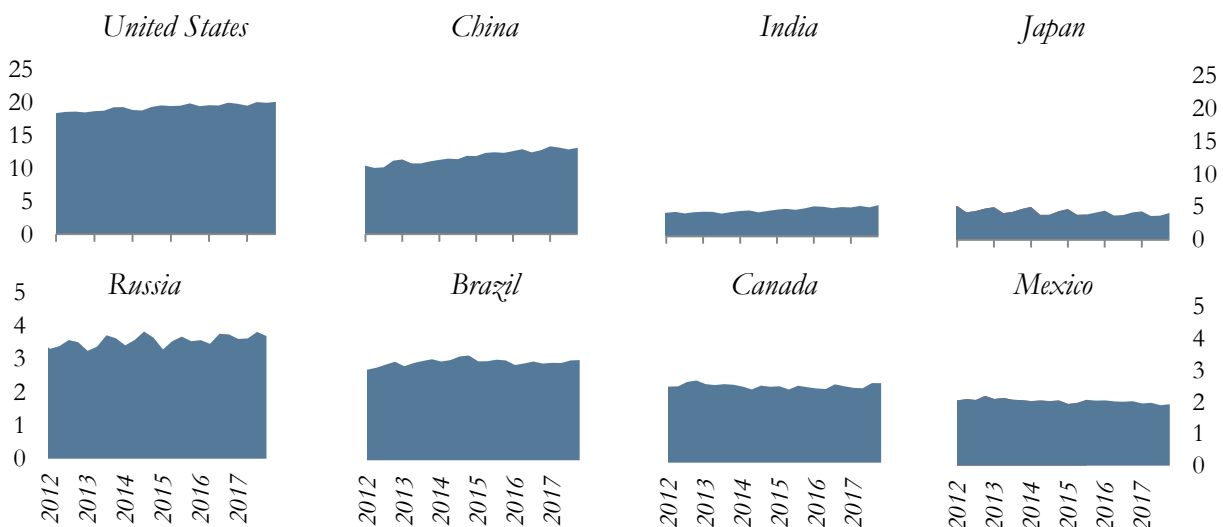


Fourth Quarter 2017

Regional Share of Consumption

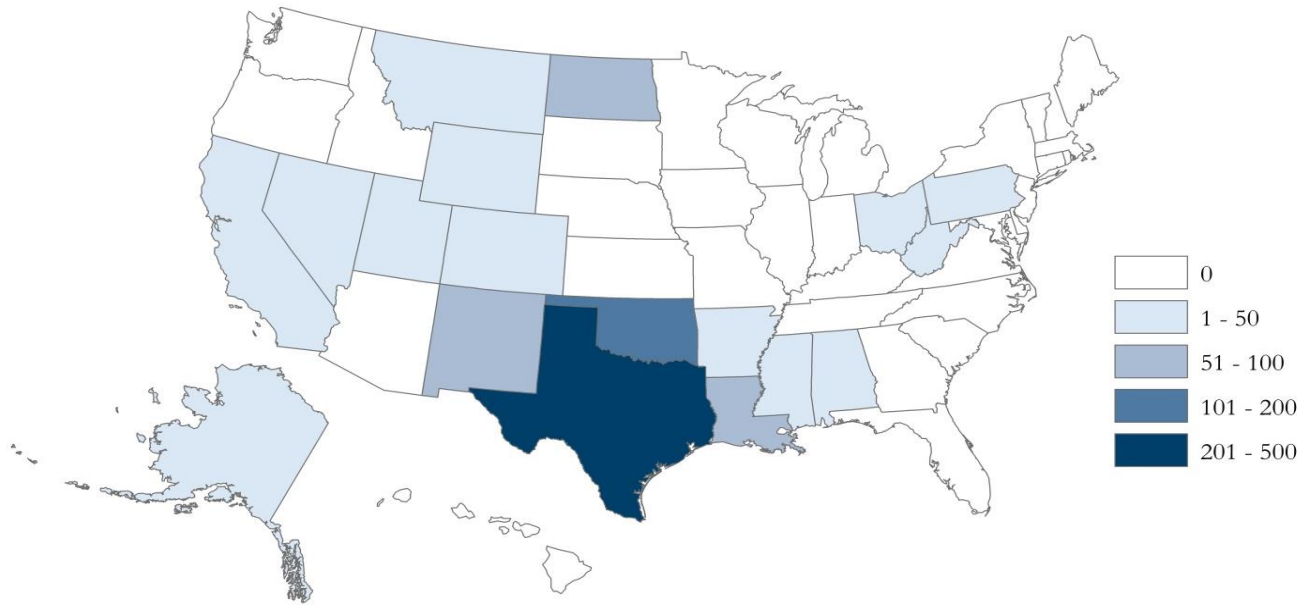


Top Petroleum Consumers, million barrels per day



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

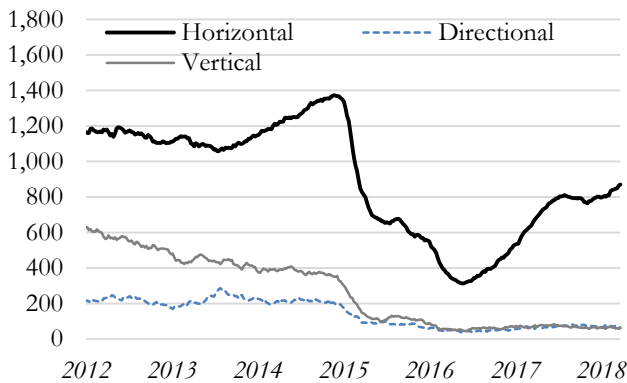
March 2018 Weekly Active Oil & Gas Drilling Rig Counts



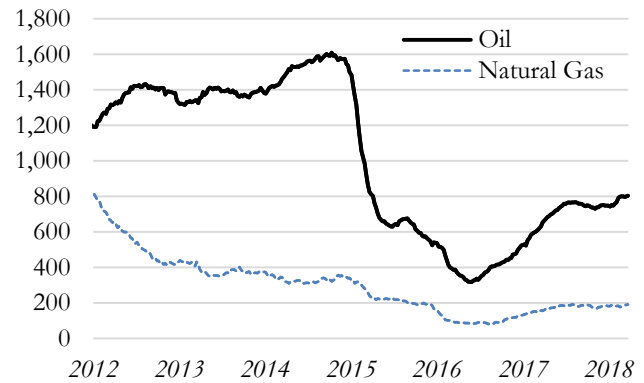
Source: Baker Hughes/Haver Analytics

March 23, 2018

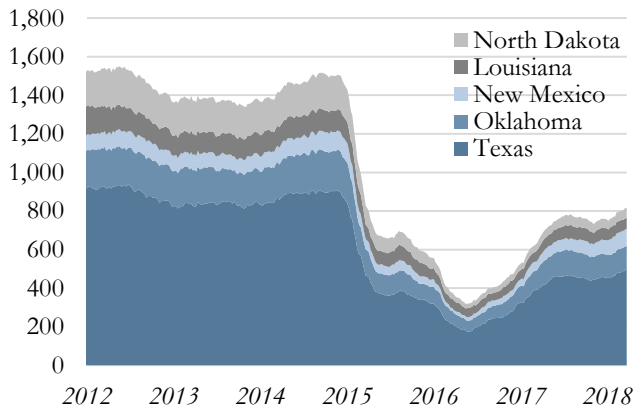
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

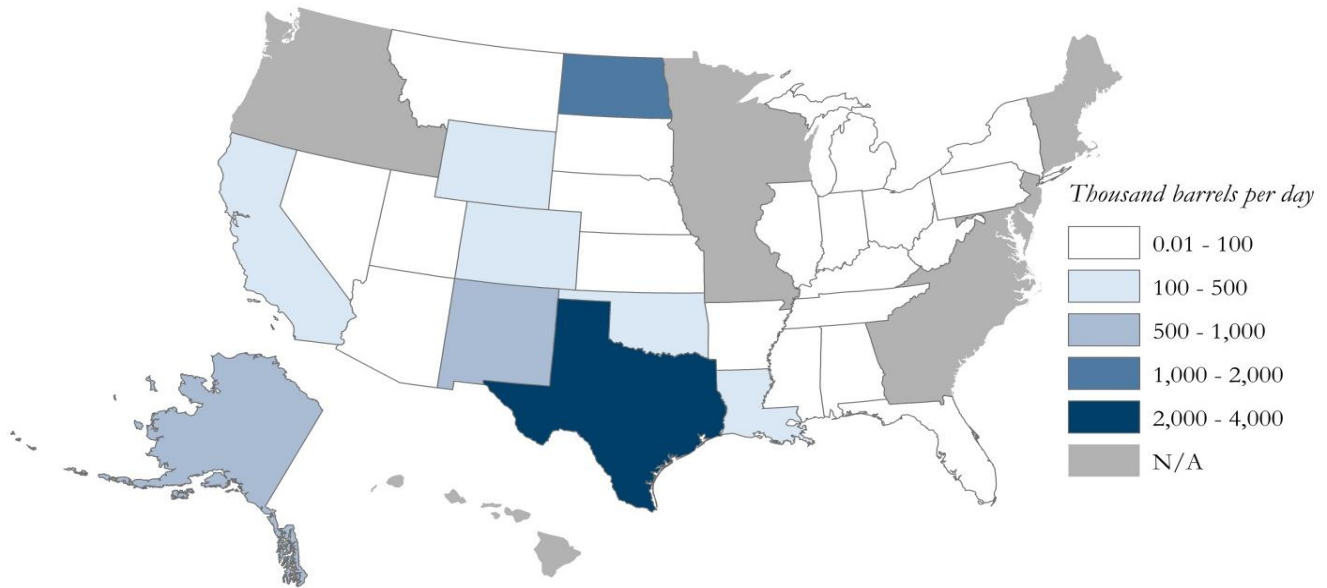
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	804	799	747	652
Gas	190	179	184	155
Misc	1	0	0	2
Total	995	978	931	809

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	0.6%	7.6%	23.3%
Gas	-	6.1%	3.3%	22.6%
Misc	-	-	-	-50.0%
Total	-	1.7%	6.9%	23.0%

Source: Baker Hughes/Haver Analytics

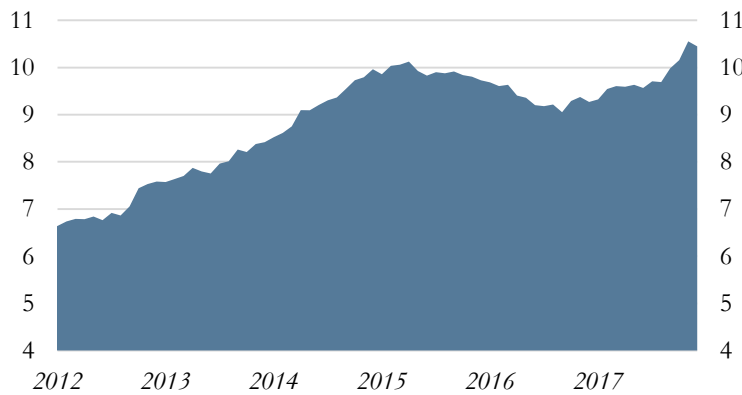
December 2017 U.S. Crude Oil Production



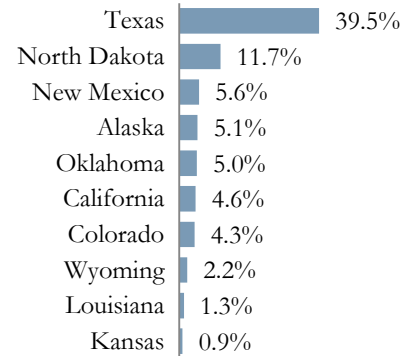
Source: Energy Information Administration/Haver Analytics

December 2017

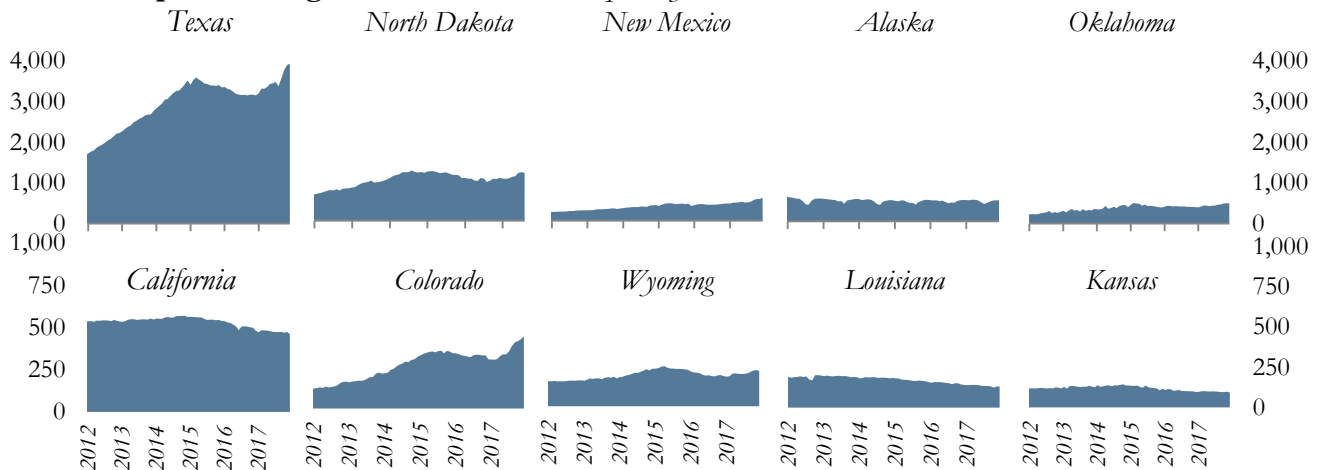
Monthly U.S. Production, million barrels per day



Share of Production

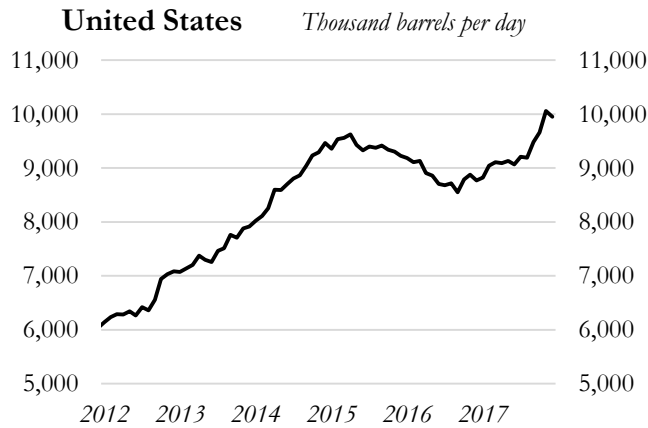


Top Producing States, thousand barrels per day

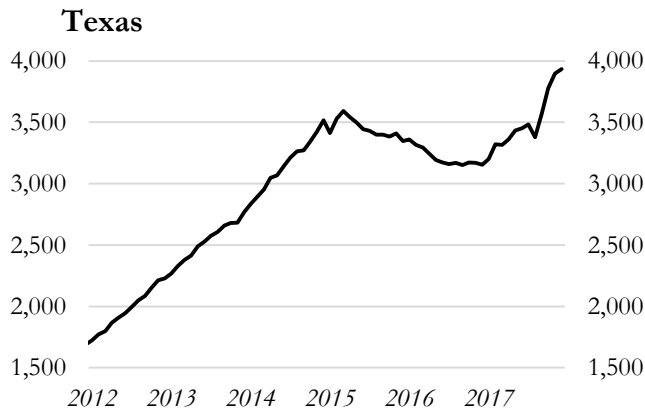


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

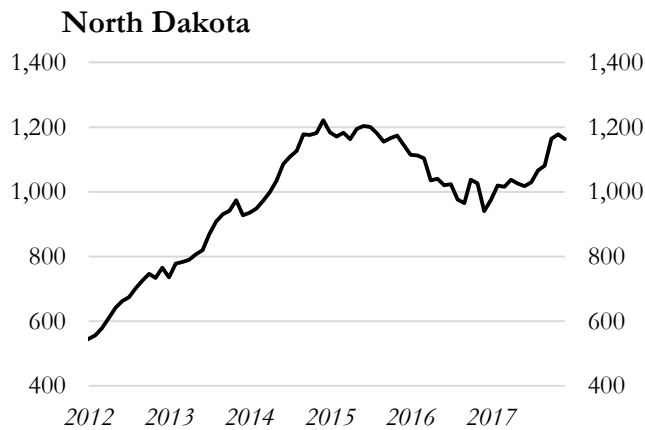
Data through December 2017



United States		<i>Change from</i>
<i>Thousand barrels per day</i>		
Dec-17	9,949	
Month Ago	10,057	-1.1%
3 Months Ago	9,485	4.9%
6 Months Ago	9,068	9.7%
1 Year Ago	8,771	13.4%



Texas		<i>Change from</i>
<i>Thousand barrels per day</i>		
Dec-17	3,933	
Month Ago	3,897	0.9%
3 Months Ago	3,572	10.1%
6 Months Ago	3,451	14.0%
1 Year Ago	3,153	24.7%
Share of U.S. Production		39.5%



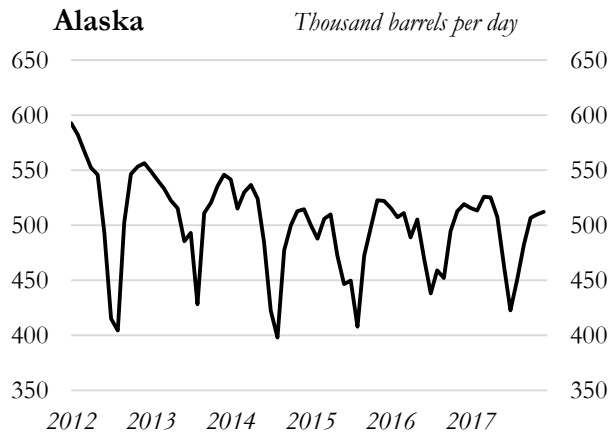
North Dakota		<i>Change from</i>
<i>Thousand barrels per day</i>		
Dec-17	1,163	
Month Ago	1,178	-1.3%
3 Months Ago	1,081	7.6%
6 Months Ago	1,017	14.3%
1 Year Ago	940	23.7%
Share of U.S. Production		11.7%



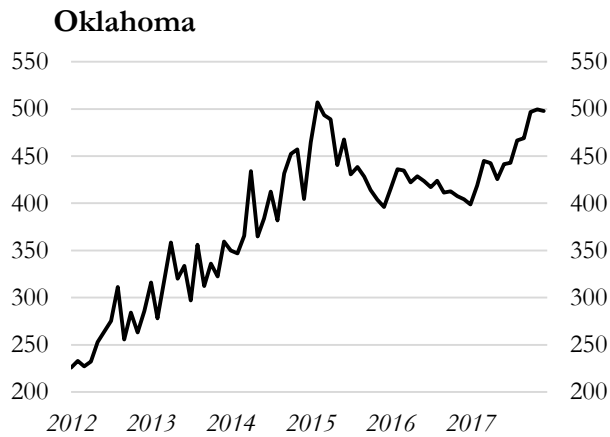
New Mexico		<i>Change from</i>
<i>Thousand barrels per day</i>		
Dec-17	556	
Month Ago	530	4.8%
3 Months Ago	505	10.1%
6 Months Ago	443	25.6%
1 Year Ago	420	32.3%
Share of U.S. Production		5.6%

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

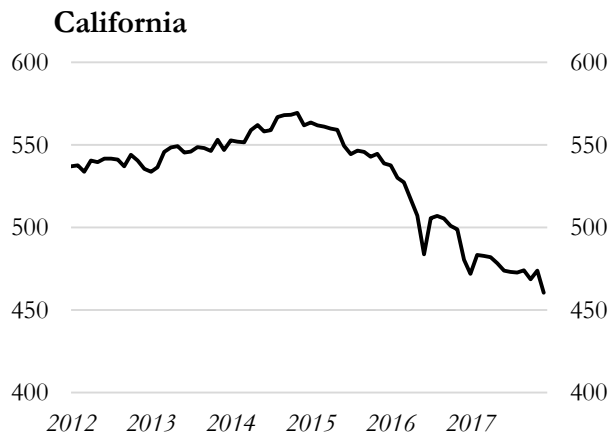
Data through December 2017



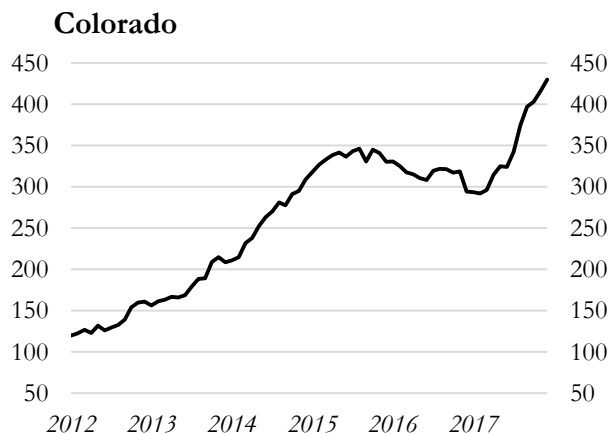
Alaska		Change from
Thousand barrels per day		
Dec-17	512	
Month Ago	510	0.5%
3 Months Ago	482	6.3%
6 Months Ago	463	10.7%
1 Year Ago	519	-1.3%
Share of U.S. Production		5.1%



Oklahoma		Change from
Thousand barrels per day		
Dec-17	498	
Month Ago	500	-0.4%
3 Months Ago	469	6.2%
6 Months Ago	442	12.8%
1 Year Ago	404	23.2%
Share of U.S. Production		5.0%



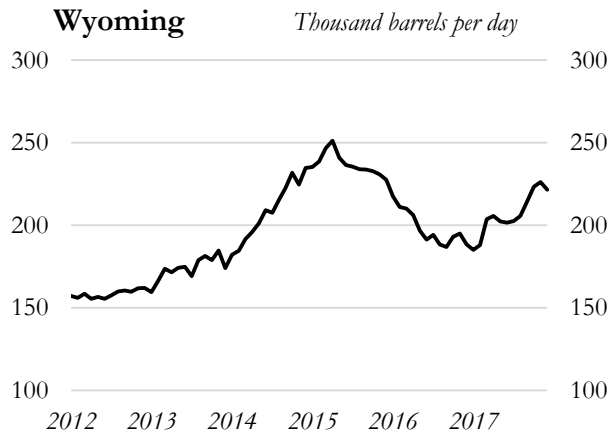
California		Change from
Thousand barrels per day		
Dec-17	461	
Month Ago	474	-2.8%
3 Months Ago	474	-2.8%
6 Months Ago	474	-2.8%
1 Year Ago	480	-4.1%
Share of U.S. Production		4.6%



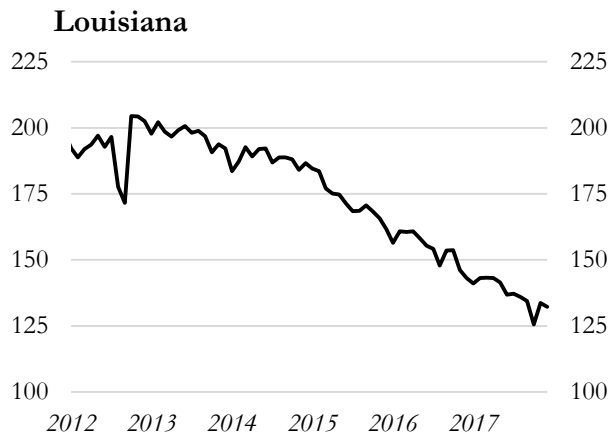
Colorado		Change from
Thousand barrels per day		
Dec-17	430	
Month Ago	416	3.4%
3 Months Ago	397	8.3%
6 Months Ago	324	32.7%
1 Year Ago	294	46.2%
Share of U.S. Production		4.3%

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

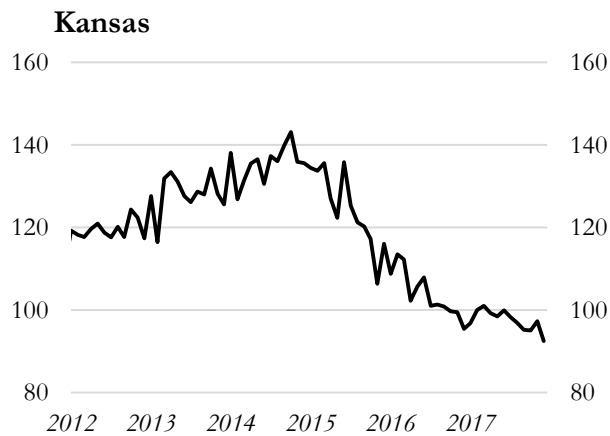
Data through December 2017



Wyoming		Change
Thousand barrels per day		from
Dec-17	222	
Month Ago	226	-2.0%
3 Months Ago	214	3.4%
6 Months Ago	202	10.0%
1 Year Ago	188	17.6%
Share of U.S. Production		2.2%



Louisiana		Change
Thousand barrels per day		from
Dec-17	132	
Month Ago	134	-1.2%
3 Months Ago	134	-1.6%
6 Months Ago	137	-3.4%
1 Year Ago	143	-7.7%
Share of U.S. Production		1.3%

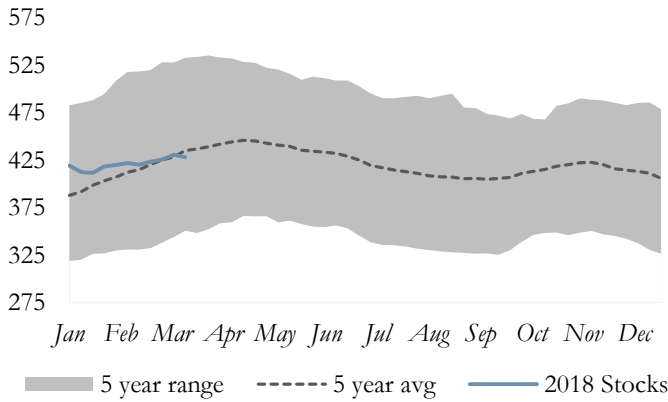


Kansas		Change
Thousand barrels per day		from
Dec-17	93	
Month Ago	97	-4.9%
3 Months Ago	95	-2.8%
6 Months Ago	100	-7.4%
1 Year Ago	95	-3.0%
Share of U.S. Production		0.9%

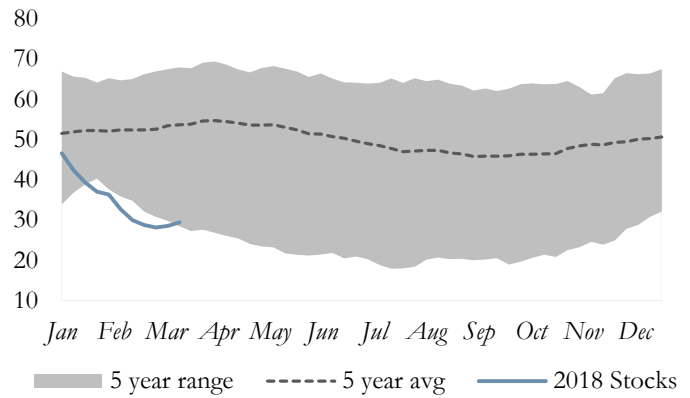
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

March 2018 Weekly U.S. Crude Oil Stocks

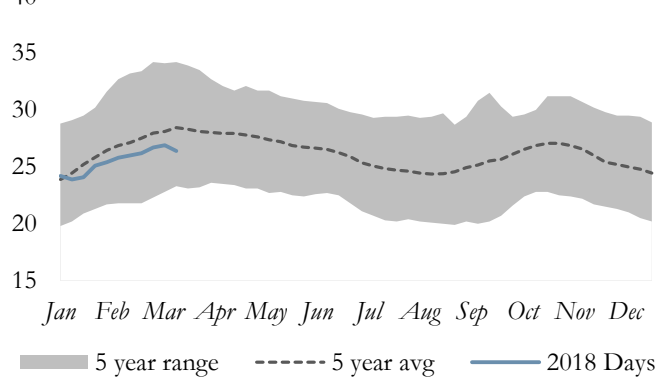
U.S. Oil Stocks, million barrels*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



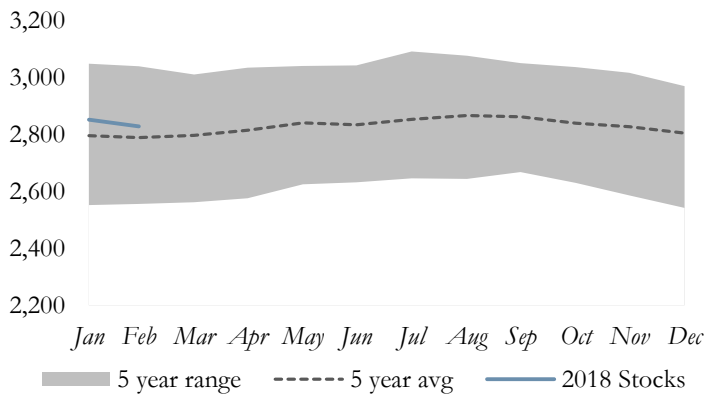
Crude Oil Stocks

	1 Week Ago	1 Year Ago
U.S.	-0.6%	-19.7%
Cushing, OK	3.2%	-56.7%
Days of Supply	-1.9%	-22.8%
East Coast (PADD 1)	0.7%	-37.3%
Midwest (PADD 2)	1.7%	-27.8%
Gulf Coast (PADD 3)	-1.6%	-15.7%
Rocky Mountain (PADD 4)	1.4%	-12.4%
West Coast (PADD 5)	-2.4%	-13.7%

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

February 2018 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels



Petroleum Stocks

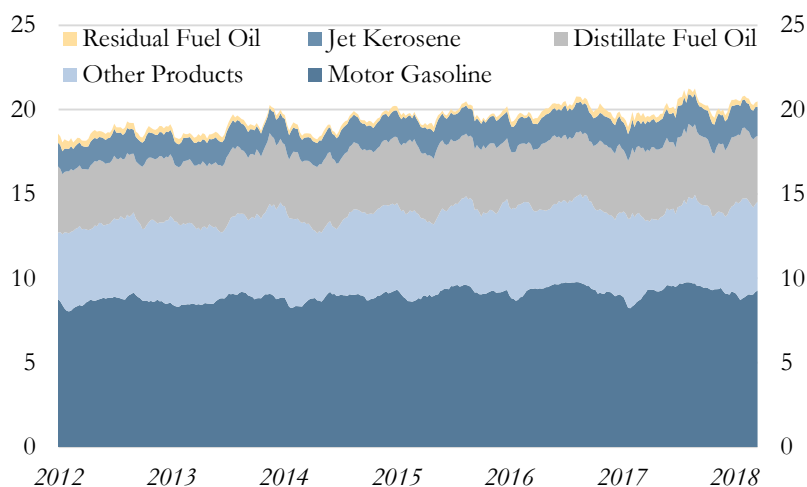
	Million Barrels	Change from
Current Month	2,829	
1 Month Ago	2,852	-0.8%
3 Months Ago	2,891	-2.1%
6 Months Ago	2,989	-5.4%
1 Year Ago	3,040	-6.9%

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

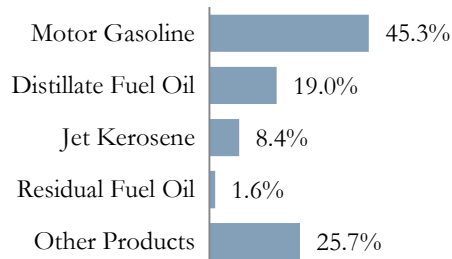
March 2018 Weekly U.S. Demand for Petroleum Products

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 3/16/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	20,487	20,646	20,299	20,386	19,529
Motor Gasoline	9,276	9,054	9,034	9,517	9,102
Distillate Fuel Oil	3,899	4,139	3,981	4,074	4,081
Jet Kerosene	1,723	1,636	1,792	1,726	1,643
Residual Fuel Oil	322	309	467	225	399
Other Products	5,267	5,508	5,025	4,844	4,304

U.S. Consumption by Product, Change from

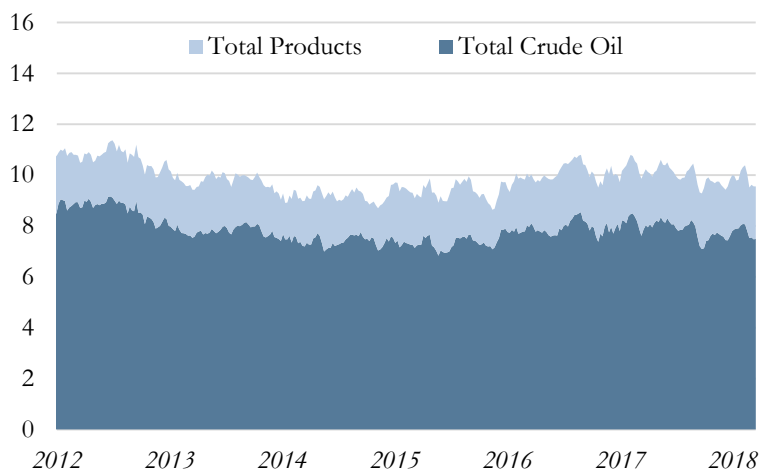
	Current 3/16/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	-0.8%	0.9%	0.5%	4.9%
Motor Gasoline	-	2.5%	2.7%	-2.5%	1.9%
Distillate Fuel Oil	-	-5.8%	-2.1%	-4.3%	-4.5%
Jet Kerosene	-	5.3%	-3.9%	-0.2%	4.9%
Residual Fuel Oil	-	4.2%	-31.0%	43.1%	-19.3%
Other Products	-	-4.4%	4.8%	8.7%	22.4%

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

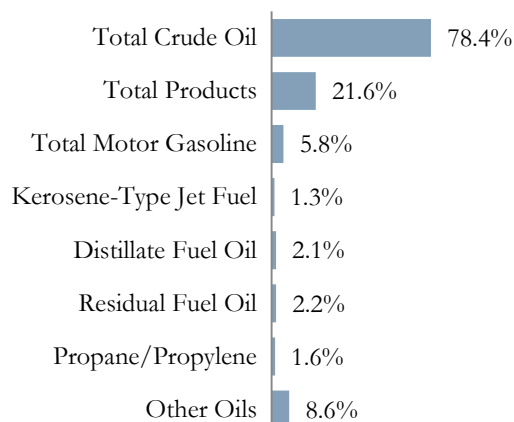
March 2018 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product*

Thousand barrels per day

	Current 3/16/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	7,487	7,808	7,432	7,209	7,863
Total Products	2,065	2,237	2,120	2,107	2,187
Total Motor Gasoline	555	561	496	639	399
Kerosene-Type Jet Fuel	121	126	156	148	131
Distillate Fuel Oil	204	344	199	104	171
Residual Fuel Oil	207	191	217	165	313
Propane/Propylene	157	236	192	129	178
Other Oils	821	779	852	913	995
Total Imports	9,552	10,045	9,552	9,316	10,050

U.S. Imports by Product, Change from

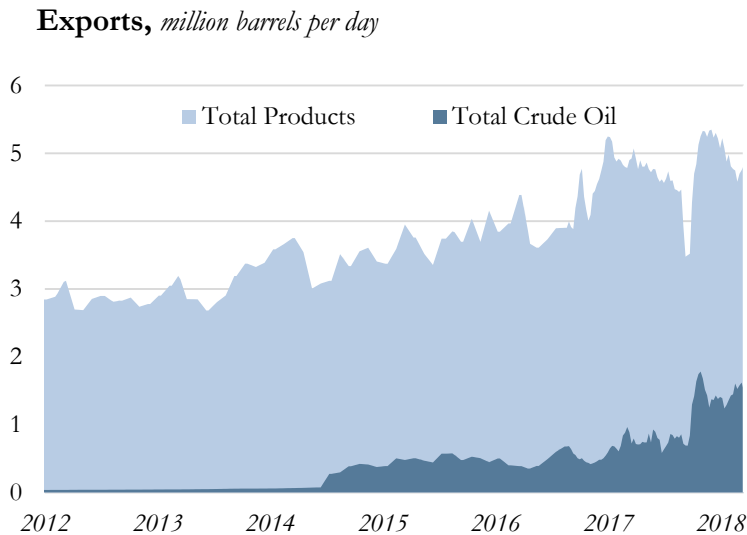
	Current 3/16/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	-4.1%	0.7%	3.9%	-4.8%
Total Products	-	-7.7%	-2.6%	-2.0%	-5.6%
Total Motor Gasoline	-	-1.1%	11.9%	-13.1%	39.1%
Kerosene-Type Jet Fuel	-	-4.0%	-22.4%	-18.2%	-7.6%
Distillate Fuel Oil	-	-40.7%	2.5%	96.2%	19.3%
Residual Fuel Oil	-	8.4%	-4.6%	25.5%	-33.9%
Propane/Propylene	-	-33.5%	-18.2%	21.7%	-11.8%
Other Oils	-	5.4%	-3.6%	-10.1%	-17.5%
Total Imports	-	-4.9%	0.0%	2.5%	-5.0%

*Totals may not sum due to component rounding

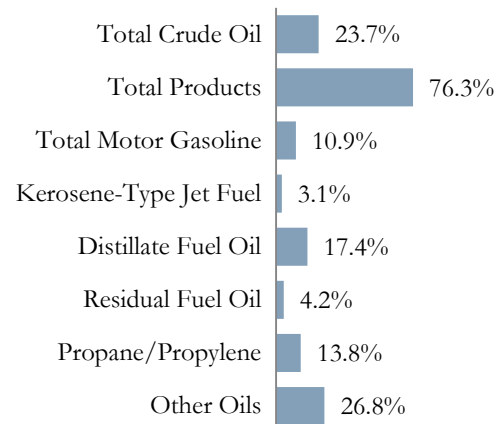
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

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

4-Week Averages



Share of Total Exports



U.S. Exports by Product*

Thousand barrels per day

	Current 3/16/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	1,501	1,605	1,429	689	721
Total Products	4,821	4,745	5,300	3,497	4,923
Total Motor Gasoline	692	750	911	532	690
Kerosene-Type Jet Fuel	196	86	123	81	163
Distillate Fuel Oil	1,099	998	1,366	887	1,199
Residual Fuel Oil	268	309	268	265	311
Propane/Propylene	870	809	929	511	922
Other Oils	1,697	1,793	1,703	1,221	1,639
Total Exports	6,322	6,349	6,728	4,186	5,645

U.S. Exports by Product, Change from

	Current 3/16/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	-6.5%	5.0%	117.9%	108.2%
Total Products	-	1.6%	-9.0%	37.9%	-2.1%
Total Motor Gasoline	-	-7.7%	-24.0%	30.1%	0.3%
Kerosene-Type Jet Fuel	-	127.9%	59.3%	142.0%	20.2%
Distillate Fuel Oil	-	10.1%	-19.5%	23.9%	-8.3%
Residual Fuel Oil	-	-13.3%	0.0%	1.1%	-13.8%
Propane/Propylene	-	7.5%	-6.4%	70.3%	-5.6%
Other Oils	-	-5.4%	-0.4%	39.0%	3.5%
Total Exports	-	-0.4%	-6.0%	51.0%	12.0%

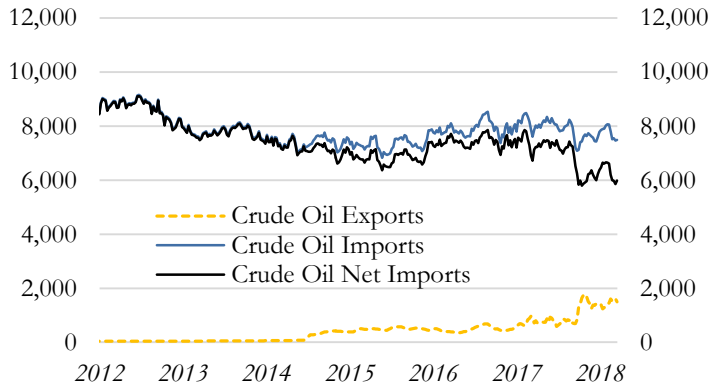
*Totals may not sum due to rounding

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

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

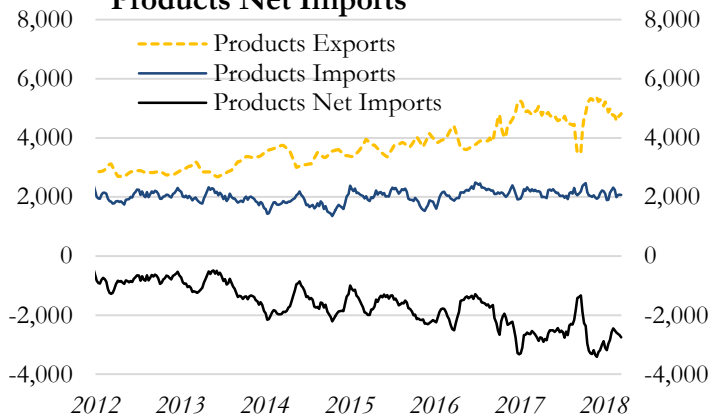
4-Week Averages, Thousand barrels per day

Crude Oil Net Imports



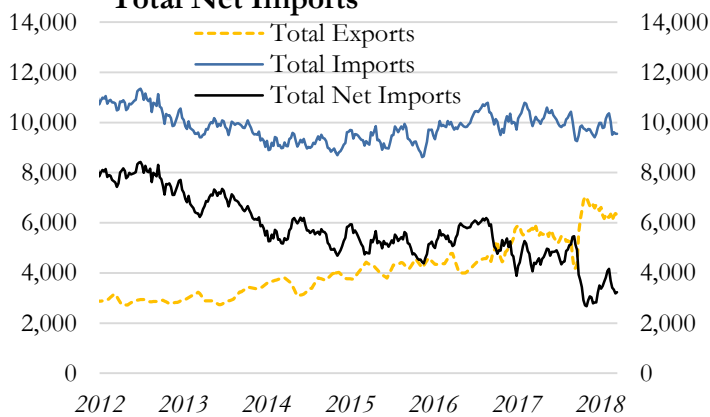
Crude Oil Net Imports		<i>Change from</i>
<i>Thousand barrels per day</i>		
3/16/18	5,986	
Month Ago	6,203	-3.5%
3 Months Ago	6,004	-0.3%
6 Months Ago	6,520	-8.2%
1 Year Ago	7,142	-16.2%

Products Net Imports



Products Net Imports		<i>Change from</i>
<i>Thousand barrels per day</i>		
3/16/18	-2,756	
Month Ago	-2,508	-
3 Months Ago	-3,180	-
6 Months Ago	-1,390	-
1 Year Ago	-2,736	-

Total Net Imports



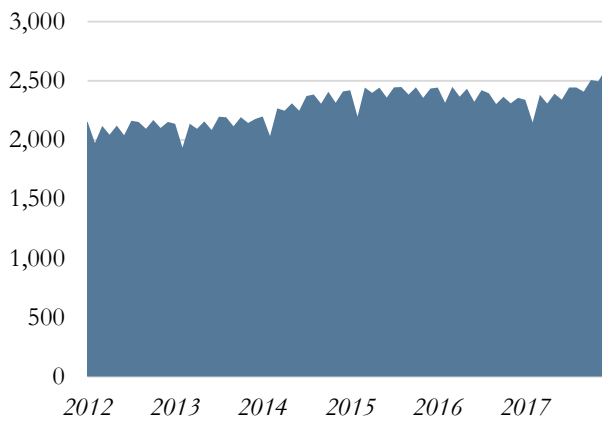
Total Net Imports		<i>Change from</i>
<i>Thousand barrels per day</i>		
3/16/18	3,230	
Month Ago	3,696	-12.6%
3 Months Ago	2,824	14.4%
6 Months Ago	5,130	-37.0%
1 Year Ago	4,405	-26.7%

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

U.S. Natural Gas Production & Stocks

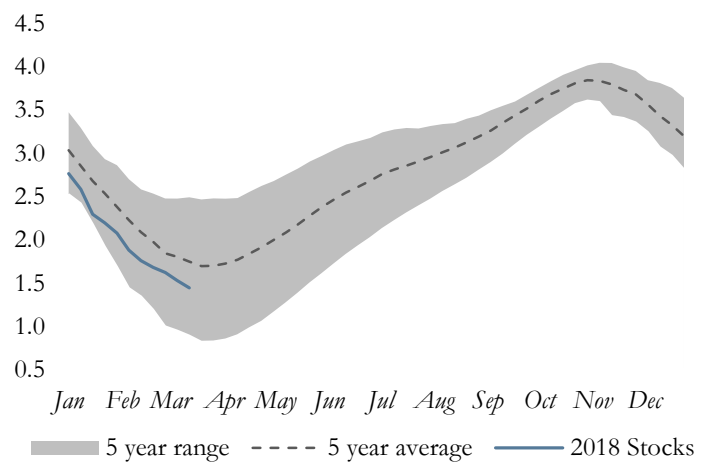
December 2017 Production

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



March 2018 Weekly Stocks

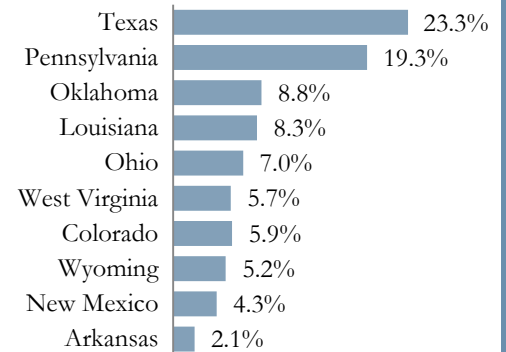
U.S. Natural Gas Stocks, Billion cubic feet (Bcf)



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	2,600	2,496	2,408	2,341	2,356
U.S. Stocks	1,446	1,760	3,444	3,408	2,092

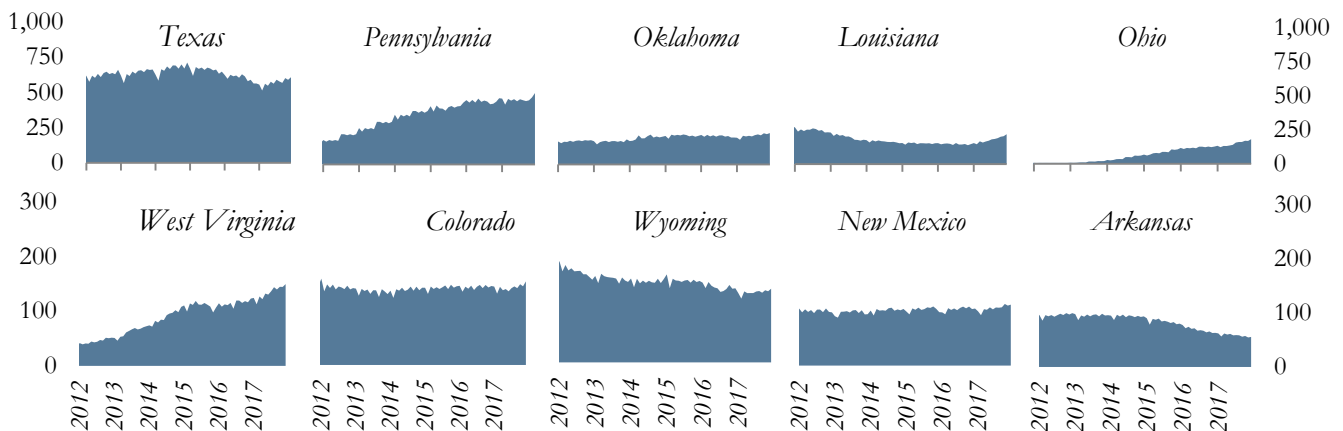
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	4.2%	8.0%	11.1%	10.4%
U.S. Stocks	-	-17.8%	-58.0%	-57.6%	-30.9%

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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