

THE U.S. Energy

DATABOOK

A summary of national and global energy indicators



NOVEMBER 16, 2018

FEDERAL RESERVE BANK of KANSAS CITY

SUMMARY OF CURRENT ENERGY CONDITIONS

The number of total active drilling rigs in the United States inched up 1.4 percent from a month ago, and increased 18.3 percent from a year ago. U.S. crude oil production rose 3.8 percent in August, and natural gas production edged higher by 2.2 percent. Crude oil prices fell in November. For the week ending November 9th, West Texas Intermediate (WTI) crude oil averaged \$61.57 per barrel and North Sea Brent averaged \$70.34 per barrel, decreasing 15.6 percent and 15.3 percent respectively in the last month. On the other hand, the Henry Hub natural gas spot price averaged \$3.58 per million Btu for the week ending November 9th, increasing 8.5 percent in the last month. U.S. crude oil and petroleum products imports declined 7.8 percent, and export dipped 3.6 percent over the last month. Global demand for petroleum inched up 1.2 percent in the third quarter of 2018, and global petroleum production dipped 0.5 percent in October.

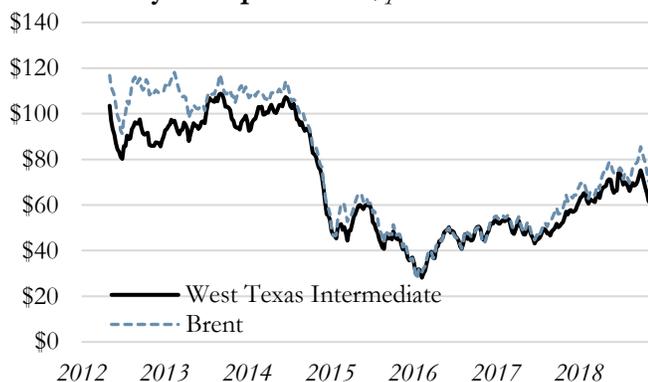
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S.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



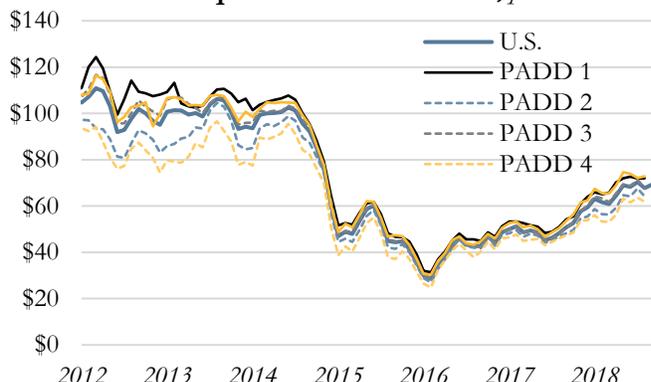
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through November 9, 2018

Weekly Oil Spot Prices, per barrel



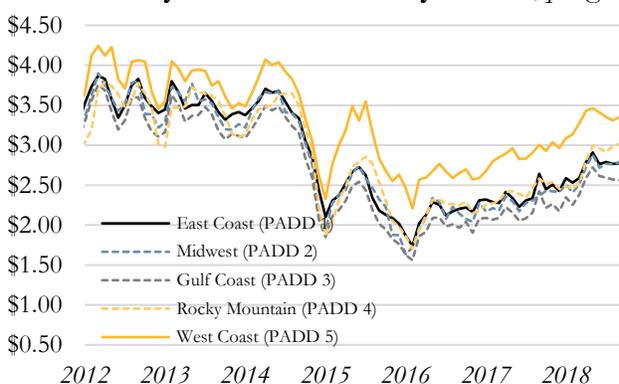
Refiner Acquisition Cost of Oil*, per barrel



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	Peak (2012-17)
Weekly Spot Prices	11/9/18	Ago	Ago	Ago	Ago	
West Texas Intermediate	\$61.57	-\$3.49	-\$11.39	-\$8.99	\$4.52	-\$47.20
Brent	\$70.34	-\$3.75	-\$12.71	-\$6.34	\$6.05	-\$47.76
Henry Hub	\$3.58	\$0.30	\$0.28	\$0.82	\$0.46	-\$2.97

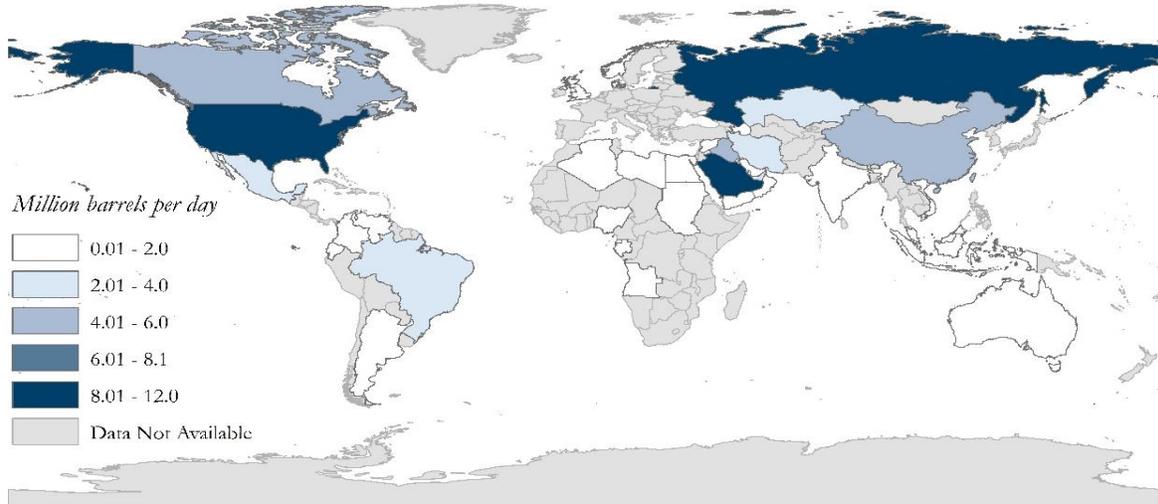
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	6 Months	1 Year	Peak (2012-17)
Geographic Area	Oct-18	Ago	Ago	Ago	
East Coast (PADD 1)	\$2.73	-\$0.04	-\$0.06	\$0.29	-\$1.10
Midwest (PADD 2)	\$2.68	-\$0.11	-\$0.04	\$0.25	-\$1.13
Gulf Coast (PADD 3)	\$2.52	-\$0.04	-\$0.07	\$0.31	-\$1.10
Rocky Mountain (PADD 4)	\$2.96	-\$0.06	\$0.16	\$0.44	-\$0.82
West Coast (PADD 5)	\$3.48	\$0.13	\$0.05	\$0.55	-\$0.59

*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

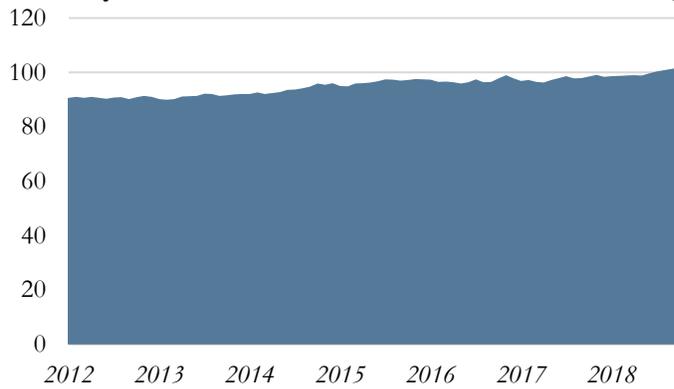
October 2018 Global Petroleum Production



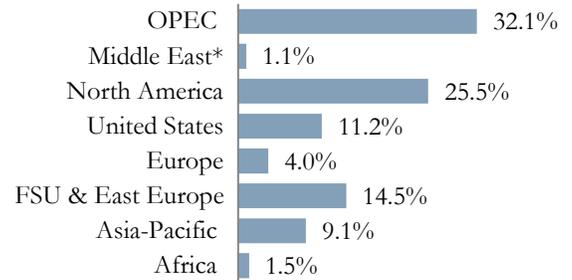
Source: Energy Information Administration/Haver Analytics

October 2018

Monthly Global Petroleum Production, million barrels per day

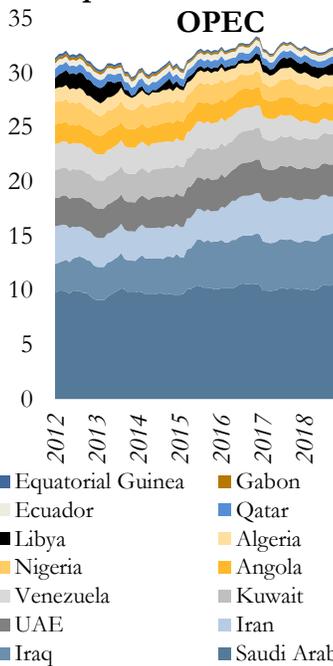


Regional Share of Production

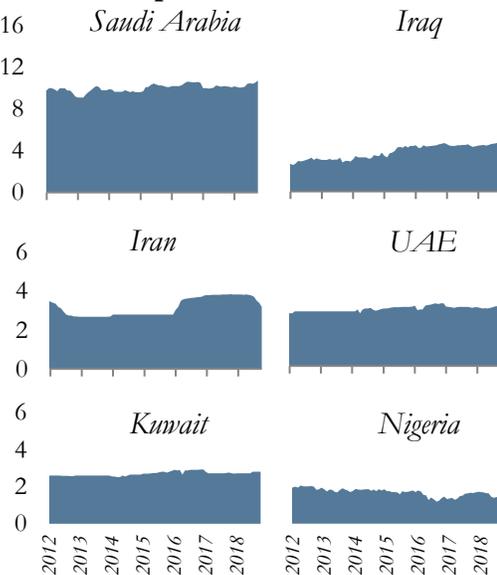


*Excludes OPEC

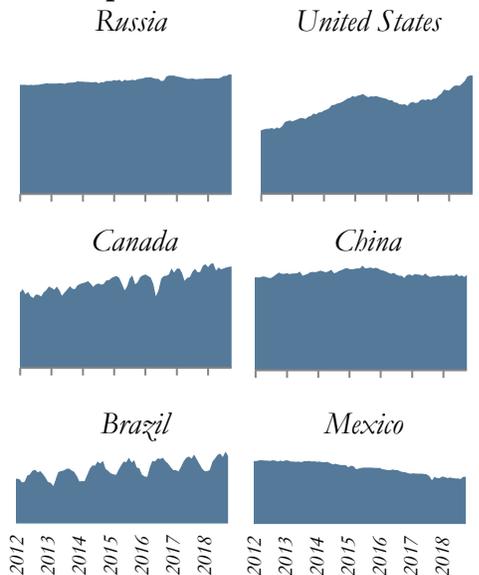
Top Crude Oil Producers, million barrels per day



Top OPEC Producers

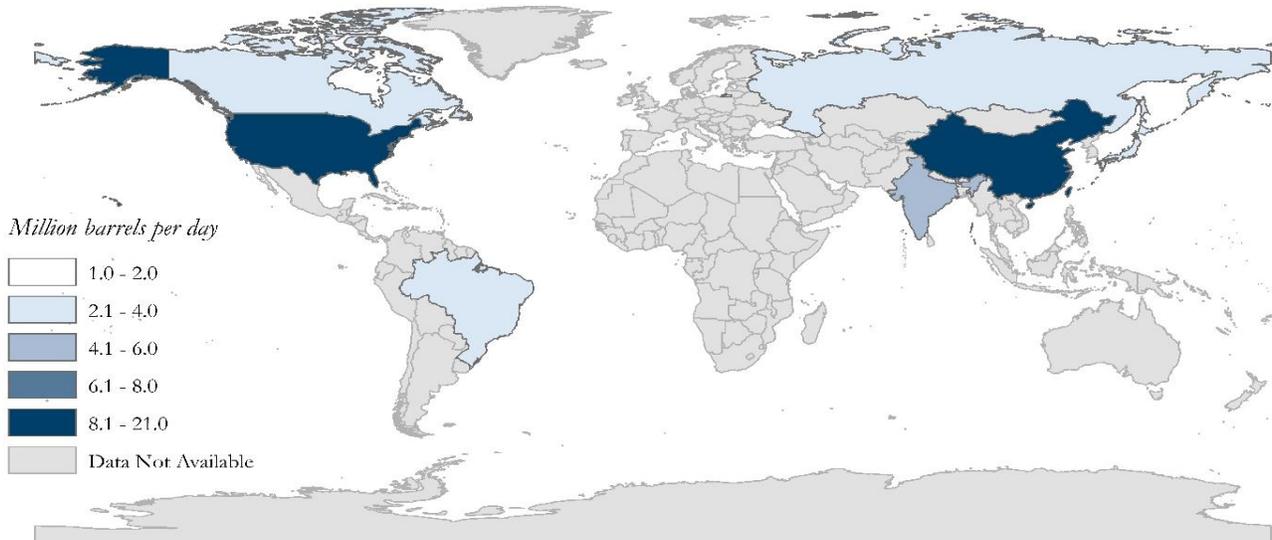


Top Non-OPEC Producers

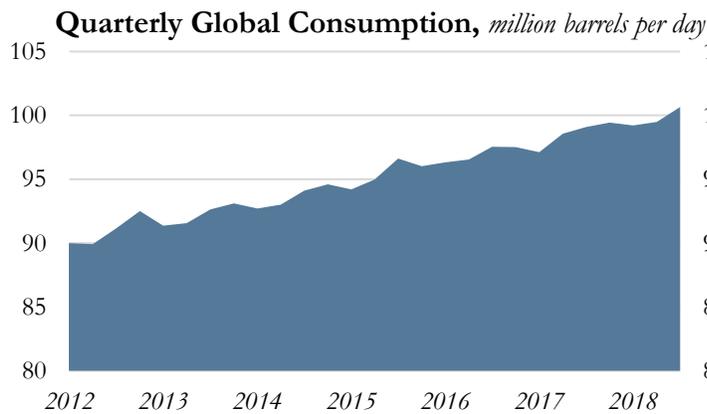


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Third Quarter 2018 Global Petroleum Consumption

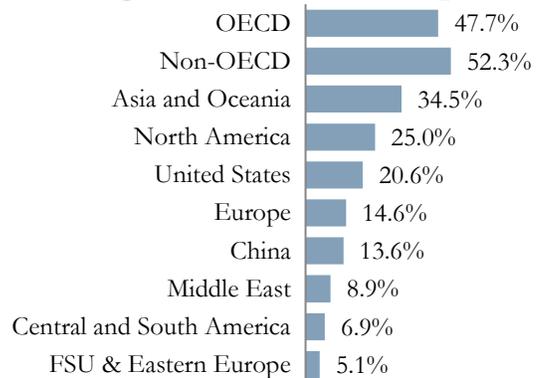


Source: Energy Information Administration/Haver Analytics

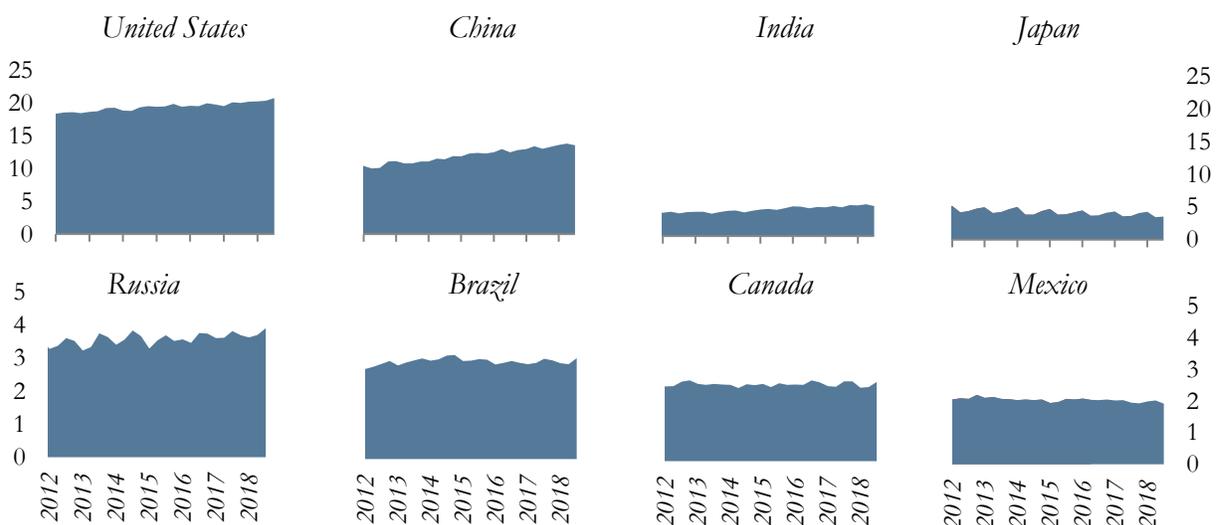


Third Quarter 2018

Regional Share of Consumption

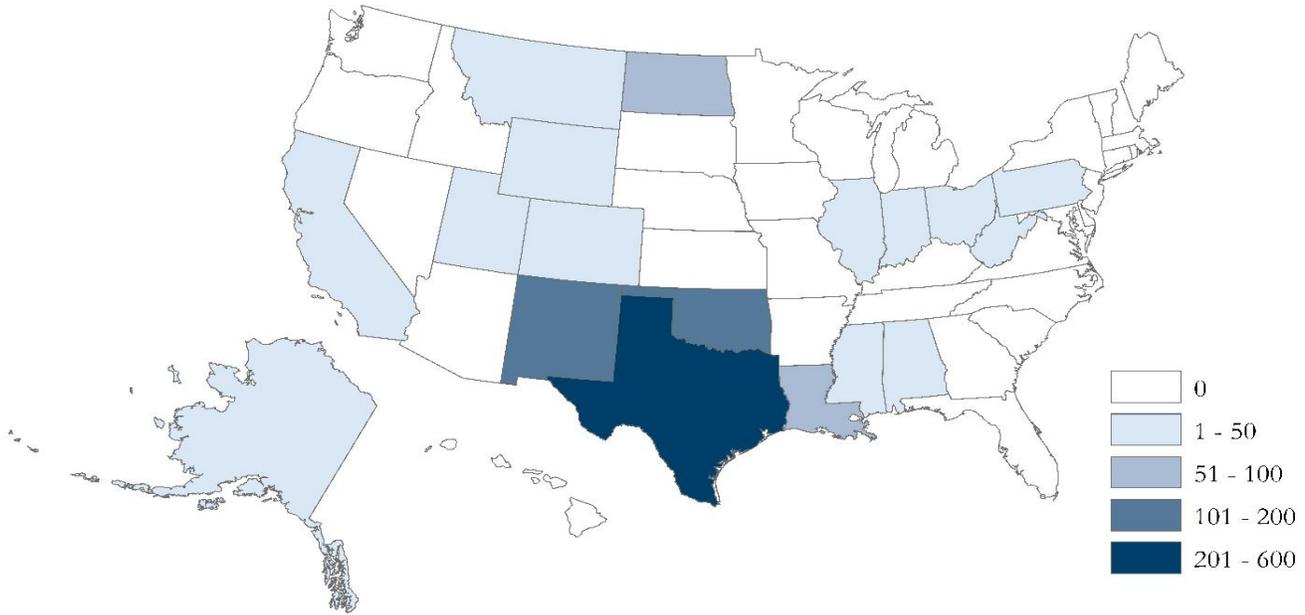


Top Petroleum Consumers, million barrels per day



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

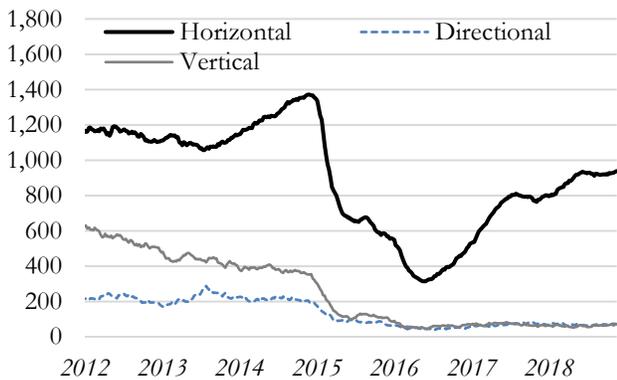
November 2018 Weekly Active Oil & Gas Drilling Rig Counts



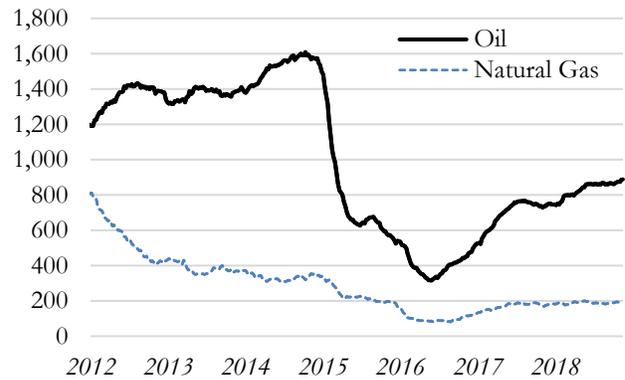
Source: Baker Hughes/Haver Analytics

November 16, 2018

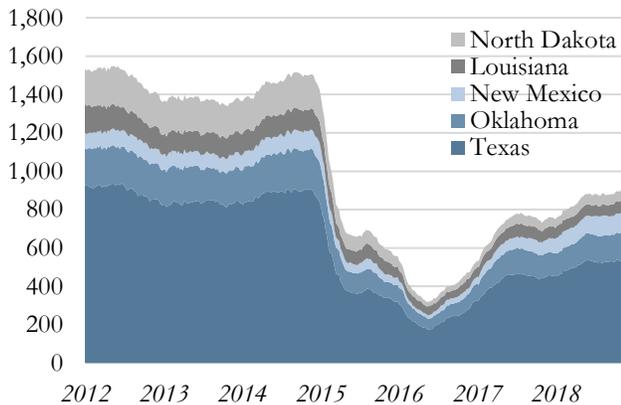
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

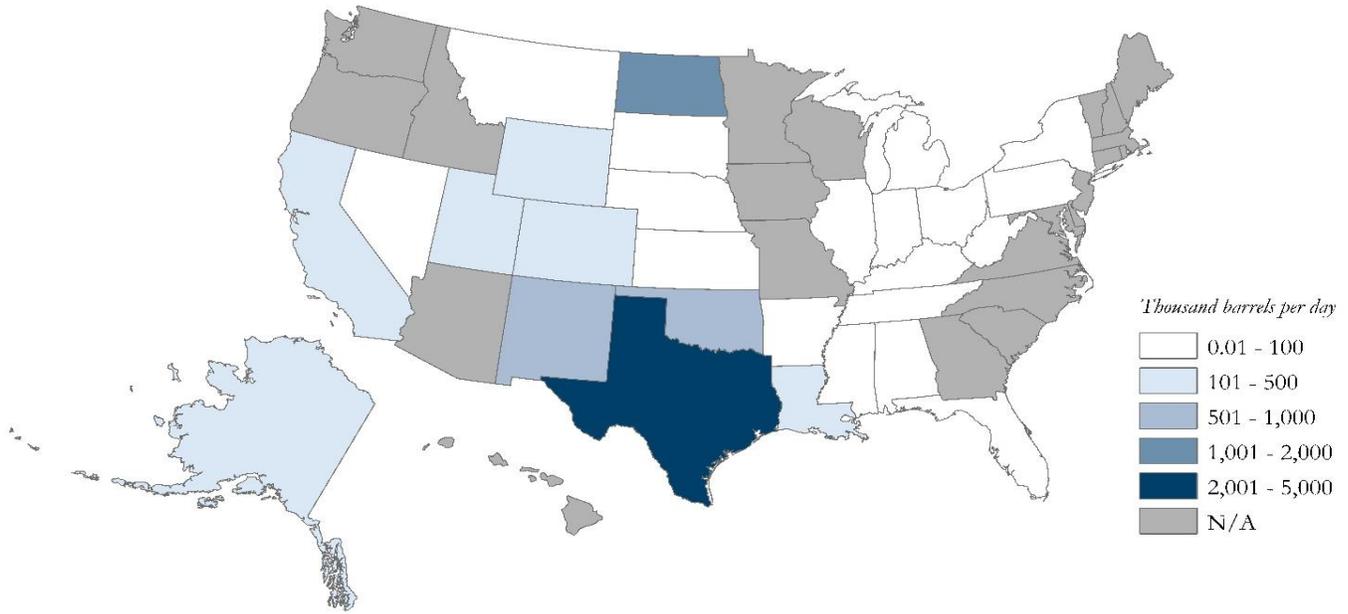
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	888	873	869	738
Gas	194	194	186	177
Misc	0	0	2	0
Total	1082	1067	1057	915

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	1.7%	2.2%	20.3%
Gas	-	0.0%	4.3%	9.6%
Misc	-	-	-100.0%	-
Total	-	1.4%	2.4%	18.3%

Source: Baker Hughes/Haver Analytics

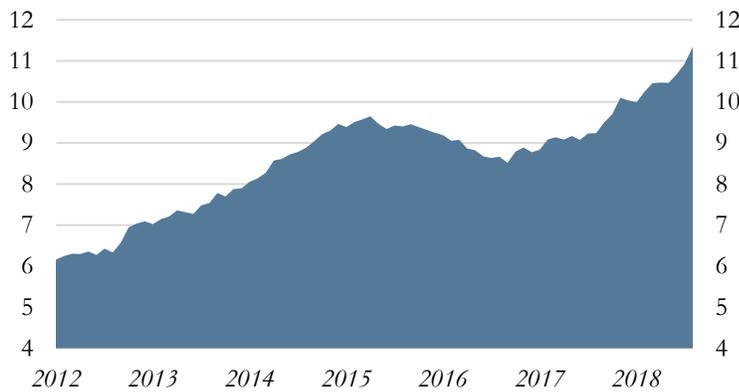
August 2018 U.S. Crude Oil Production



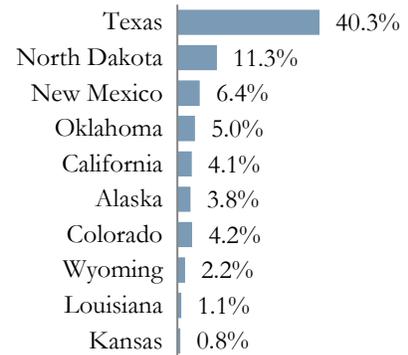
Source: Baker Hughes/Haver Analytics

August, 2018

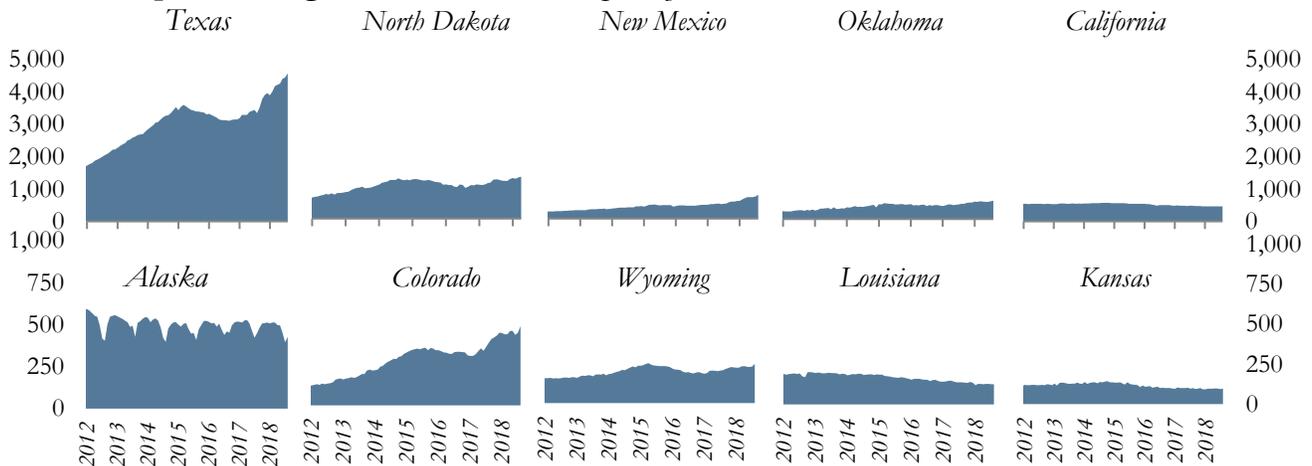
Monthly U.S. Production, million barrels per day



Share of Production

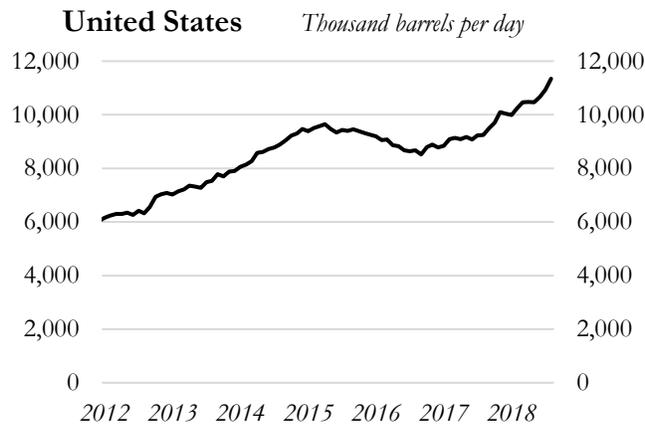


Top Producing States, thousand barrels per day

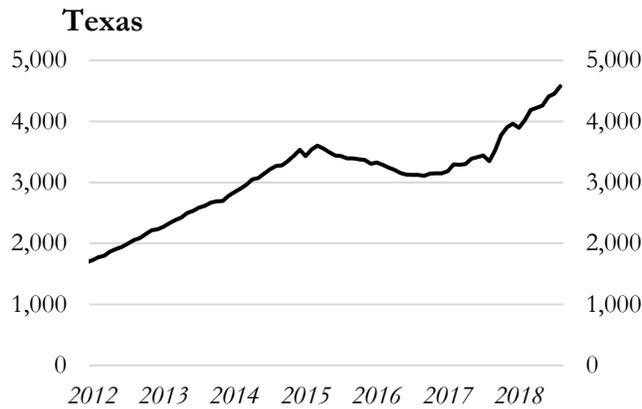


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

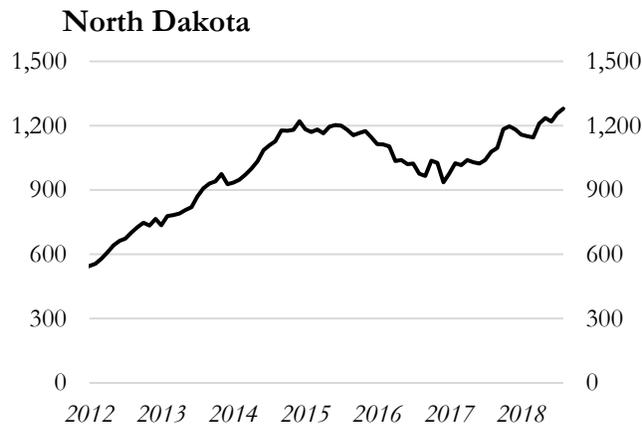
Data through August 2018



	United States <i>Thousand barrels per day</i>	<i>Change from</i>
Aug-18	11,346	
Month Ago	10,930	3.8%
3 Months Ago	10,464	8.4%
6 Months Ago	10,248	10.7%
1 Year Ago	9,244	22.7%



	Texas <i>Thousand barrels per day</i>	<i>Change from</i>
Aug-18	4,577	
Month Ago	4,451	2.8%
3 Months Ago	4,260	7.4%
6 Months Ago	4,015	14.0%
1 Year Ago	3,345	36.8%
Share of U.S. Production		40.3%



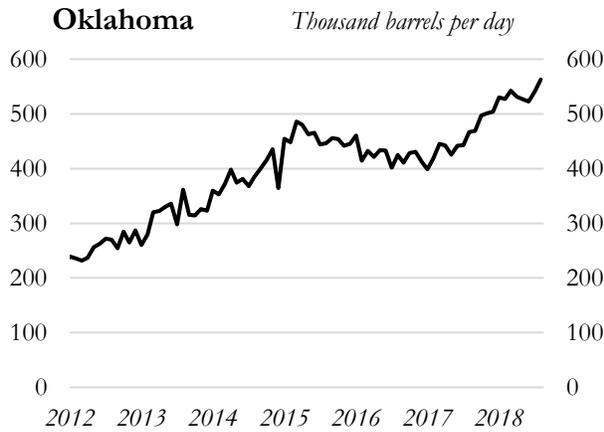
	North Dakota <i>Thousand barrels per day</i>	<i>Change from</i>
Aug-18	1,279	
Month Ago	1,257	1.8%
3 Months Ago	1,235	3.6%
6 Months Ago	1,151	11.2%
1 Year Ago	1,079	18.6%
Share of U.S. Production		11.3%



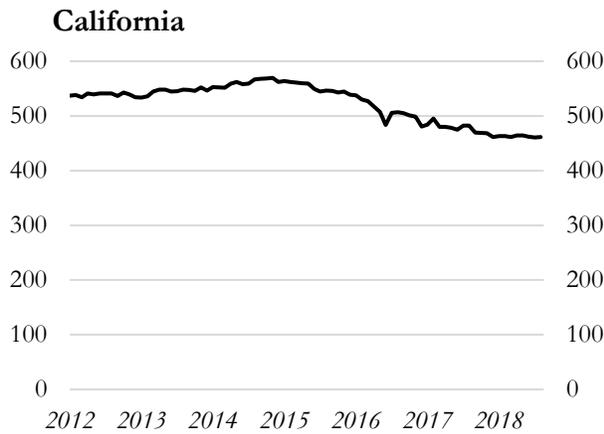
	New Mexico <i>Thousand barrels per day</i>	<i>Change from</i>
Aug-18	724	
Month Ago	669	8.2%
3 Months Ago	651	11.3%
6 Months Ago	586	23.7%
1 Year Ago	458	58.2%
Share of U.S. Production		6.4%

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

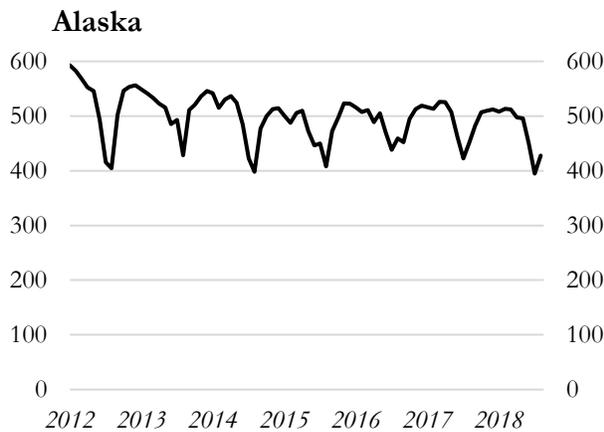
Data through August 2018



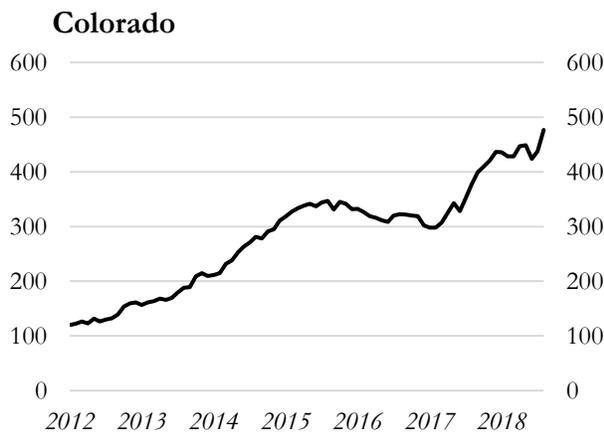
Oklahoma		<i>Change from</i>
<i>Thousand barrels per day</i>		
Aug-18	563	
Month Ago	540	4.2%
3 Months Ago	527	6.8%
6 Months Ago	527	6.7%
1 Year Ago	467	20.6%
Share of U.S. Production		5.0%



California		<i>Change from</i>
<i>Thousand barrels per day</i>		
Aug-18	461	
Month Ago	461	0.1%
3 Months Ago	464	-0.6%
6 Months Ago	463	-0.4%
1 Year Ago	482	-4.4%
Share of U.S. Production		4.1%



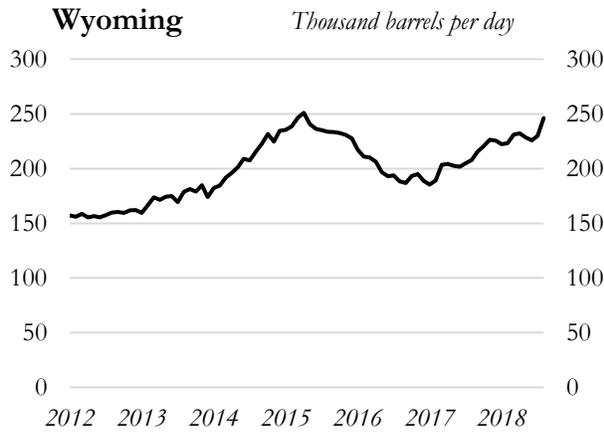
Alaska		<i>Change from</i>
<i>Thousand barrels per day</i>		
Aug-18	428	
Month Ago	395	8.4%
3 Months Ago	496	-13.8%
6 Months Ago	513	-16.6%
1 Year Ago	451	-5.1%
Share of U.S. Production		3.8%



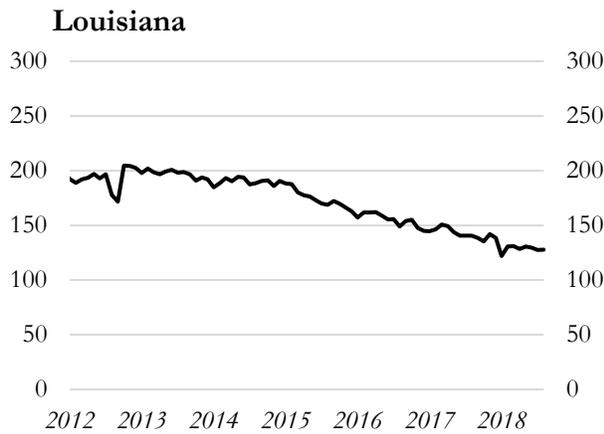
Colorado		<i>Change from</i>
<i>Thousand barrels per day</i>		
Aug-18	477	
Month Ago	437	9.0%
3 Months Ago	449	6.2%
6 Months Ago	428	11.3%
1 Year Ago	377	26.4%
Share of U.S. Production		4.2%

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

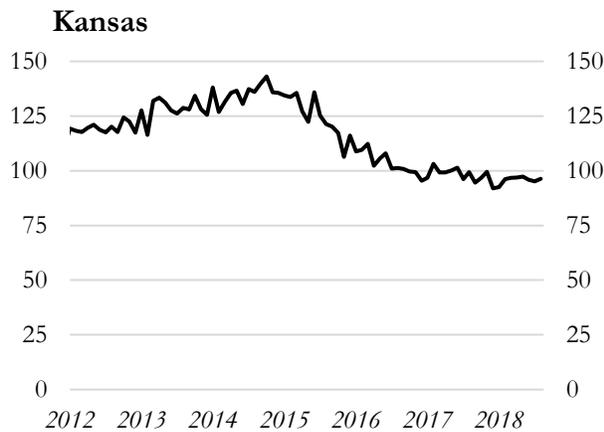
Data through August 2018



Wyoming		Change from
Thousand barrels per day		
Aug-18	246	
Month Ago	230	7.0%
3 Months Ago	228	7.8%
6 Months Ago	223	10.2%
1 Year Ago	208	18.6%
Share of U.S. Production		2.2%



Louisiana		Change from
Thousand barrels per day		
Aug-18	128	
Month Ago	128	0.2%
3 Months Ago	131	-2.1%
6 Months Ago	131	-2.1%
1 Year Ago	141	-9.1%
Share of U.S. Production		1.1%

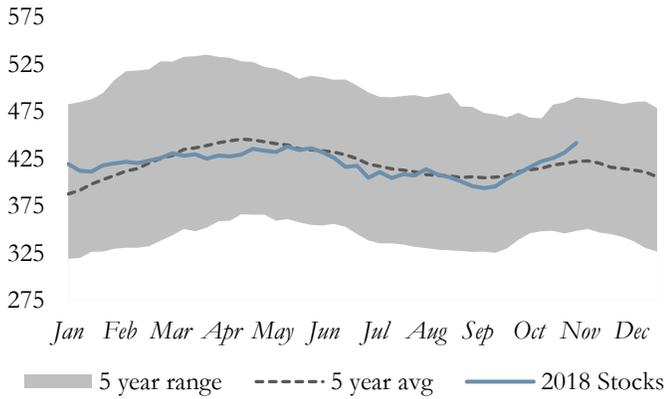


Kansas		Change from
Thousand barrels per day		
Aug-18	96	
Month Ago	95	1.2%
3 Months Ago	97	-1.1%
6 Months Ago	96	0.0%
1 Year Ago	99	-3.1%
Share of U.S. Production		0.8%

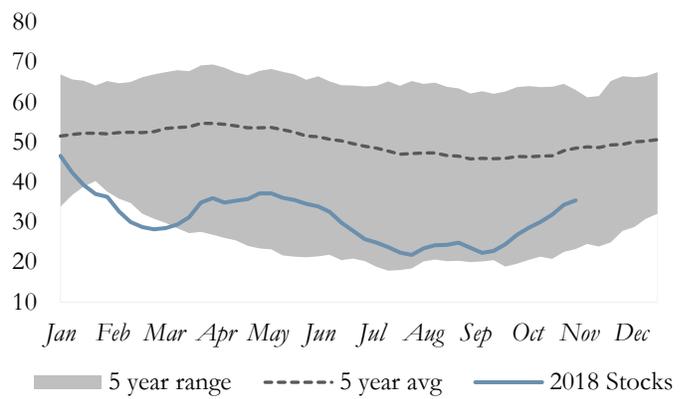
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

November 2018 Weekly U.S. Crude Oil Stocks

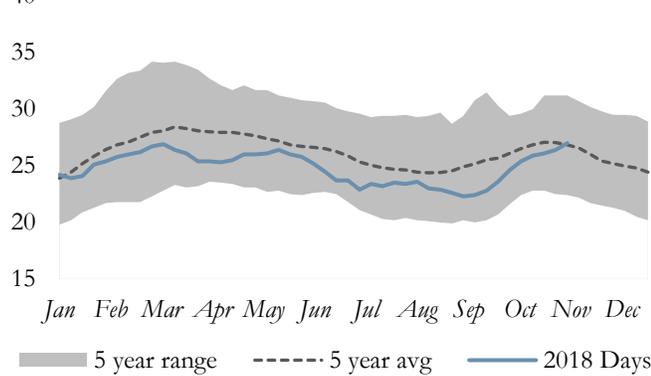
U.S. Oil Stocks, million barrels*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



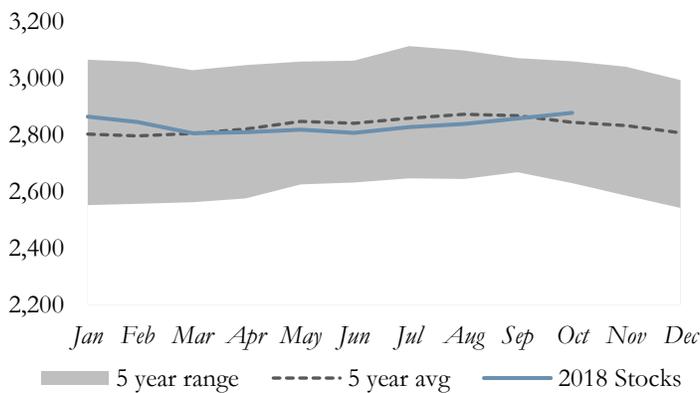
Crude Oil Stocks

	1 Week Change from Ago	1 Year Ago
U.S.	2.4%	-3.7%
Cushing, OK	3.4%	-43.8%
Days of Supply	2.3%	-4.6%
East Coast (PADD 1)	20.8%	0.1%
Midwest (PADD 2)	1.8%	-16.1%
Gulf Coast (PADD 3)	2.3%	3.2%
Rocky Mountain (PADD 4)	2.9%	9.5%
West Coast (PADD 5)	-0.4%	-3.3%

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

October 2018 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels

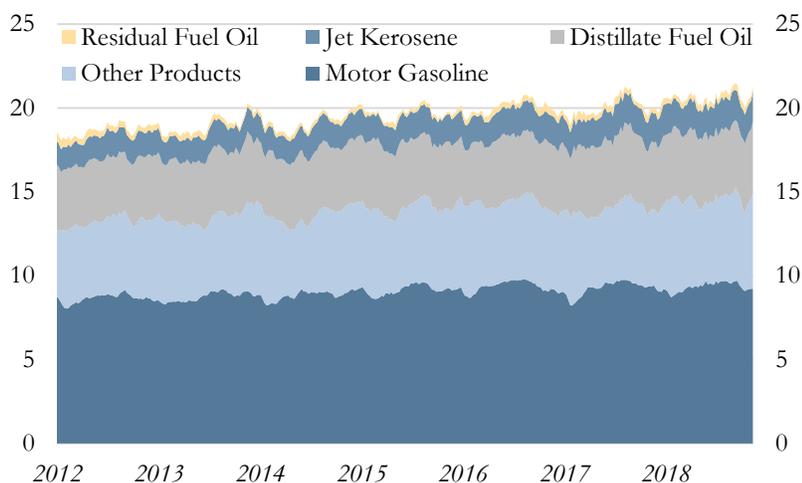


Petroleum Stocks	Million Barrels	Change from
Current Month	2,878	
1 Month Ago	2,858	0.7%
3 Months Ago	2,828	1.8%
6 Months Ago	2,810	2.4%
1 Year Ago	2,914	-1.2%

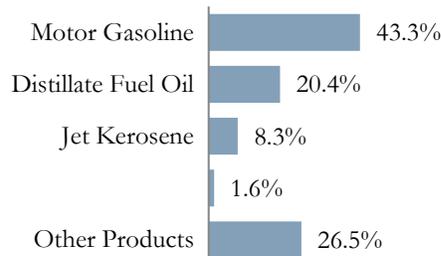
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

November 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 11/9/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	21,315	19,989	20,846	20,060	20,063
Motor Gasoline	9,219	9,087	9,646	9,370	9,361
Distillate Fuel Oil	4,346	4,148	3,935	4,191	4,038
Jet Kerosene	1,772	1,693	1,851	1,632	1,779
Residual Fuel Oil	332	394	296	325	286
Other Products	5,646	4,667	5,118	4,542	4,599

U.S. Consumption by Product, Change from

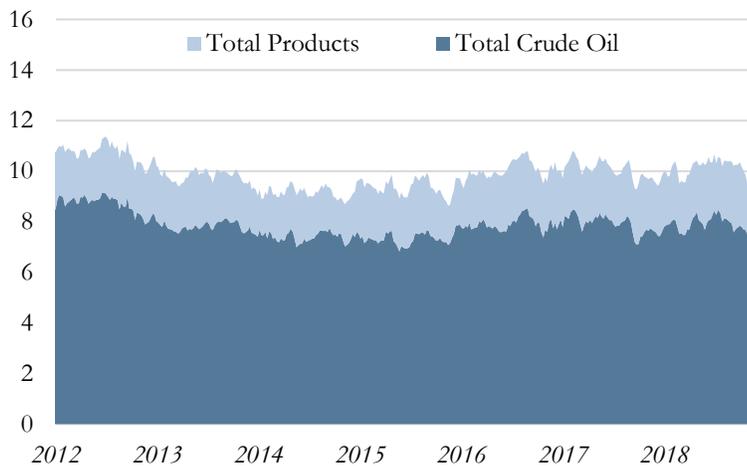
	Current 11/9/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	6.6%	2.2%	6.3%	6.2%
Motor Gasoline	-	1.5%	-4.4%	-1.6%	-1.5%
Distillate Fuel Oil	-	4.8%	10.4%	3.7%	7.6%
Jet Kerosene	-	4.7%	-4.3%	8.6%	-0.4%
Residual Fuel Oil	-	-15.7%	12.2%	2.2%	16.1%
Other Products	-	21.0%	10.3%	24.3%	22.8%

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

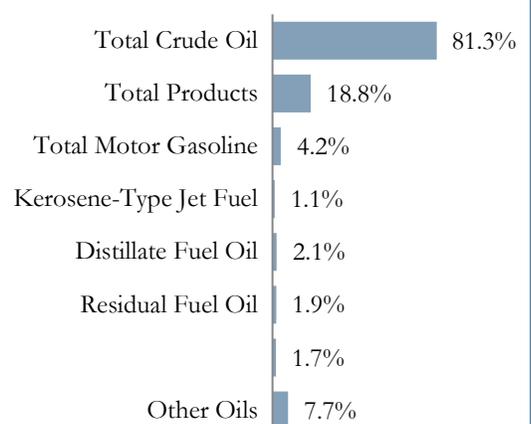
November 2018 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product*

Thousand barrels per day

	Current 11/9/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	7,503	7,695	8,116	7,986	7,742
Total Products	1,737	2,324	2,296	2,246	2,003
Total Motor Gasoline	384	666	798	836	382
Kerosene-Type Jet Fuel	102	153	130	119	274
Distillate Fuel Oil	194	160	177	101	129
Residual Fuel Oil	172	323	260	215	145
Propane/ Propylene	157	112	112	130	129
Other Oils	715	892	819	845	935
Total Imports	9,240	10,019	10,412	10,232	9,745

U.S. Imports by Product, Change from

	Current 11/9/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	-2.5%	-7.6%	-6.0%	-3.1%
Total Products	-	-25.3%	-24.3%	-22.7%	-13.3%
Total Motor Gasoline	-	-42.3%	-51.9%	-54.1%	0.5%
Kerosene-Type Jet Fuel	-	-33.3%	-21.5%	-14.3%	-62.8%
Distillate Fuel Oil	-	21.3%	9.6%	92.1%	50.4%
Residual Fuel Oil	-	-46.7%	-33.8%	-20.0%	18.6%
Propane/ Propylene	-	40.2%	40.2%	20.8%	21.7%
Other Oils	-	-19.8%	-12.7%	-15.4%	-23.5%
Total Imports	-	-7.8%	-11.3%	-9.7%	-5.2%

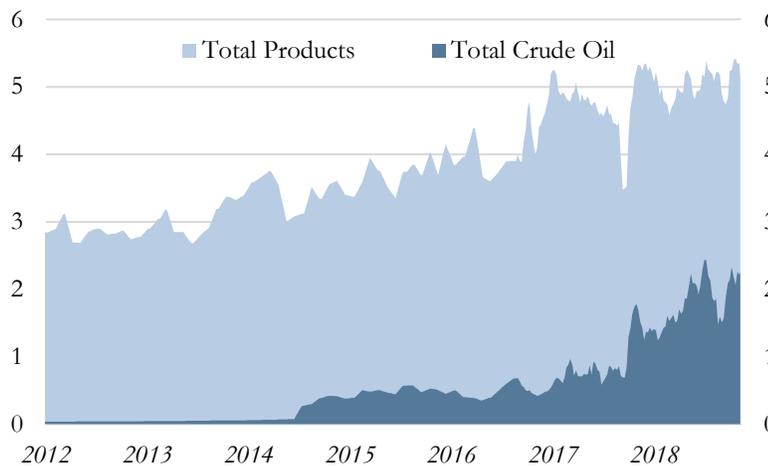
*Totals may not sum due to component rounding

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

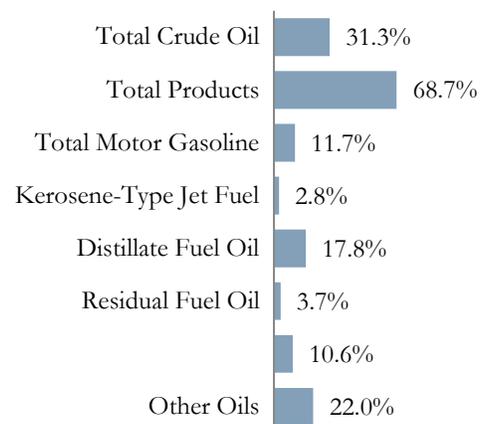
November 2018 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages

Exports, million barrels per day



Share of Total Exports



U.S. Exports by Product*

Thousand barrels per day

	Current 11/9/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	2,280	2,180	1,859	2,231	1,514
Total Products	5,010	5,386	5,219	5,116	5,321
Total Motor Gasoline	854	993	676	800	787
Kerosene-Type Jet Fuel	206	214	226	207	117
Distillate Fuel Oil	1,300	1,246	1,190	1,281	1,504
Residual Fuel Oil	270	267	397	341	287
Propane/Propylene	773	886	1,065	852	907
Other Oils	1,607	1,781	1,665	1,636	1,718
Total Exports	7,290	7,566	7,078	7,347	6,834

U.S. Exports by Product, Change from

	Current 11/9/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	4.6%	22.6%	2.2%	50.6%
Total Products	-	-7.0%	-4.0%	-2.1%	-5.8%
Total Motor Gasoline	-	-14.0%	26.3%	6.7%	8.5%
Kerosene-Type Jet Fuel	-	-3.7%	-8.8%	-0.5%	76.1%
Distillate Fuel Oil	-	4.3%	9.2%	1.5%	-13.6%
Residual Fuel Oil	-	1.1%	-32.0%	-20.8%	-5.9%
Propane/Propylene	-	-12.8%	-27.4%	-9.3%	-14.8%
Other Oils	-	-9.8%	-3.5%	-1.8%	-6.5%
Total Exports	-	-3.6%	3.0%	-0.8%	6.7%

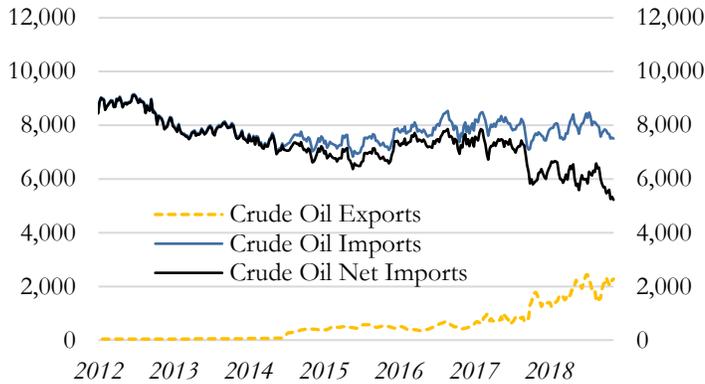
*Totals may not sum due to rounding

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

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

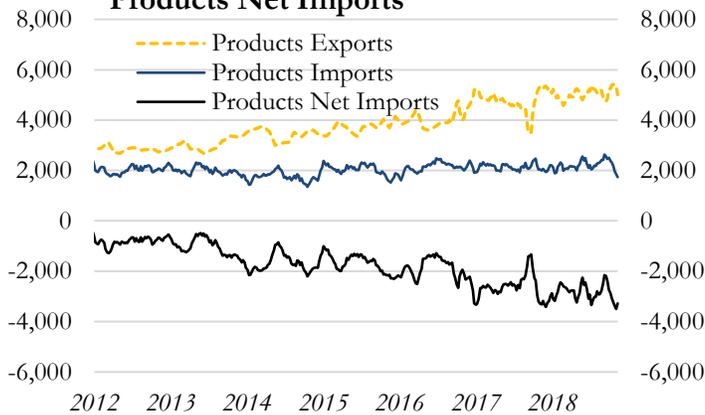
4-Week Averages, Thousand barrels per day

Crude Oil Net Imports



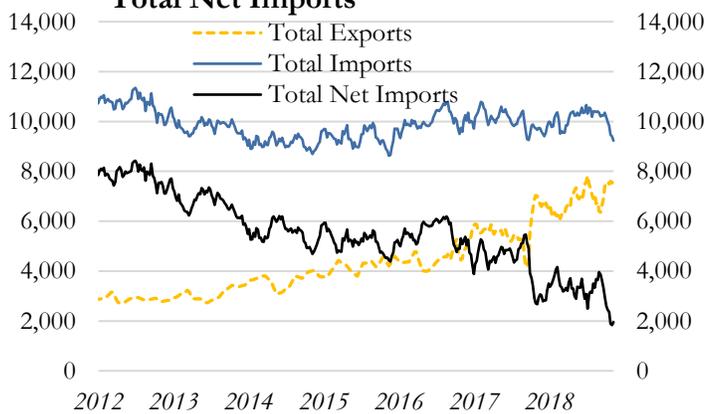
Crude Oil Net Imports		<i>Change from</i>
<i>Thousand barrels per day</i>		
11/9/18	5,223	
Month Ago	5,515	-5.3%
3 Months Ago	6,257	-16.5%
6 Months Ago	5,755	-9.2%
1 Year Ago	6,229	-16.2%

Products Net Imports



Products Net Imports		<i>Change from</i>
<i>Thousand barrels per day</i>		
11/9/18	-3,273	
Month Ago	-3,062	-
3 Months Ago	-2,923	-
6 Months Ago	-2,870	-
1 Year Ago	-3,318	-

Total Net Imports



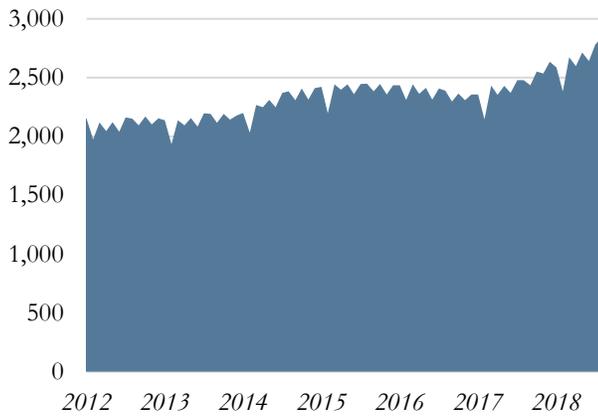
Total Net Imports		<i>Change from</i>
<i>Thousand barrels per day</i>		
11/9/18	1,951	
Month Ago	2,452	-20.4%
3 Months Ago	3,334	-41.5%
6 Months Ago	2,885	-32.4%
1 Year Ago	2,911	-33.0%

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

U.S. Natural Gas Production & Stocks

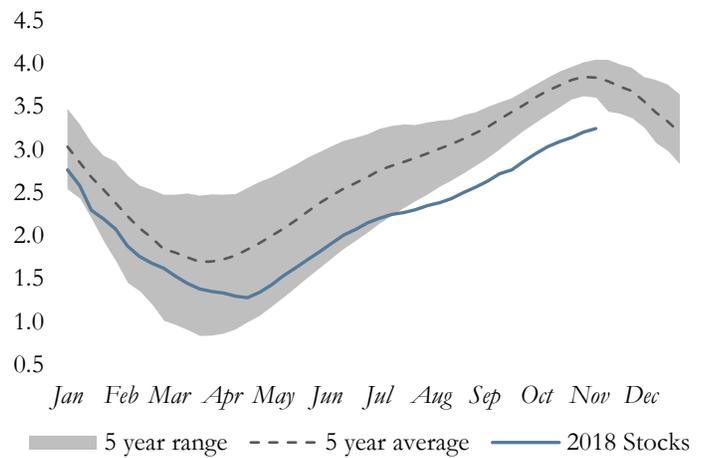
August 2018 Production

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



October 2018 Weekly Stocks

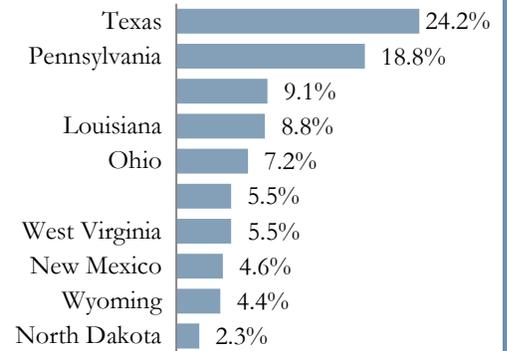
U.S. Natural Gas Stocks, Billion cubic feet (Bcf)



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	2,844	2,782	2,713	2,385	2,478
U.S. Stocks	3,247	3,037	2,386	1,538	3,772

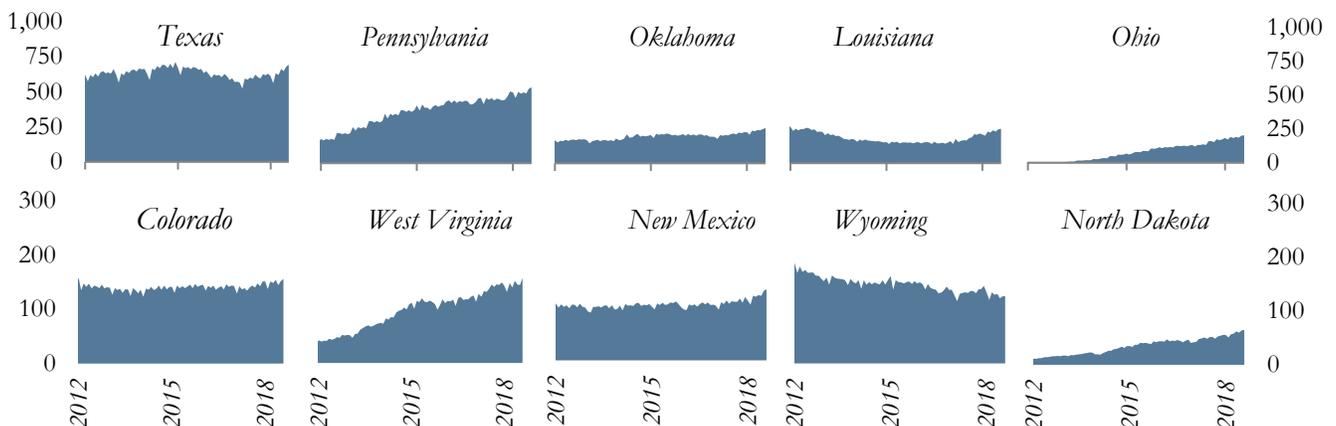
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	2.2%	4.8%	19.3%	14.8%
U.S. Stocks	-	6.9%	36.1%	111.1%	-13.9%

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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