

THE U.S. Energy

DATABOOK

A summary of national and global energy indicators



OCTOBER 19, 2018

FEDERAL RESERVE BANK of KANSAS CITY

SUMMARY OF CURRENT ENERGY CONDITIONS

The number of total active drilling rigs in the United States rose 1.3 percent from a month ago, and increased 16.9 percent from a year ago. U.S. crude oil production rose 2.5 percent in July, and natural gas production increased 5.3 percent. Crude oil prices continued increasing in October. For the week ending October 12th, West Texas Intermediate (WTI) crude oil averaged \$72.96 per barrel and North Sea Brent averaged \$83.05 per barrel, rising 5.8 percent and 6.3 percent respectively in the last month. The Henry Hub natural gas spot price averaged \$3.30 per million Btu for the week ending October 12th, increasing 12.6 percent in the last month. U.S. crude oil and petroleum products imports dipped 2.4 percent, while exports jumped 14.3 percent over the last month. Global demand for petroleum inched up 1.2 percent in the third quarter of 2018, and global petroleum production edged up 1.1 percent in September.

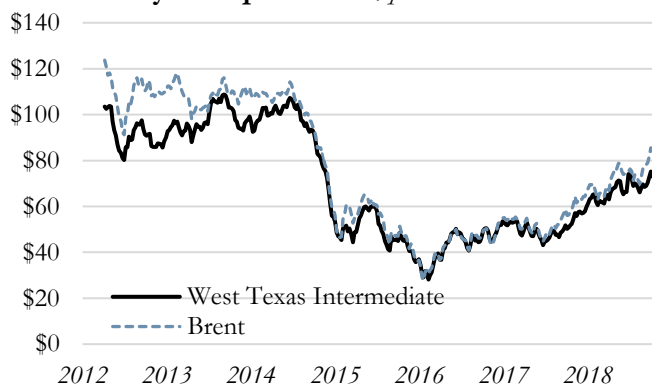
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S.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



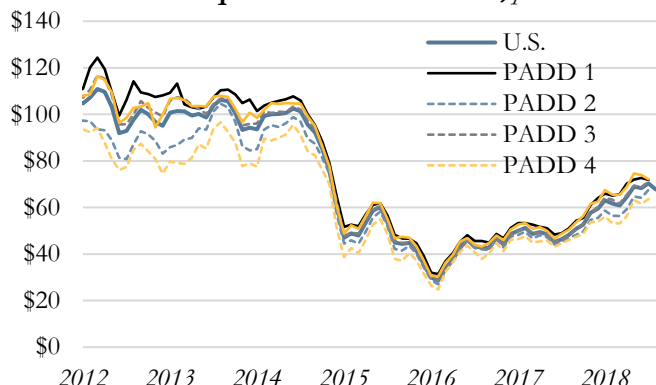
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through October 12, 2018

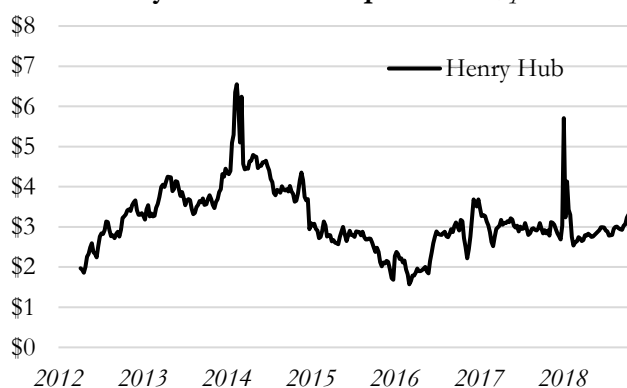
Weekly Oil Spot Prices, per barrel



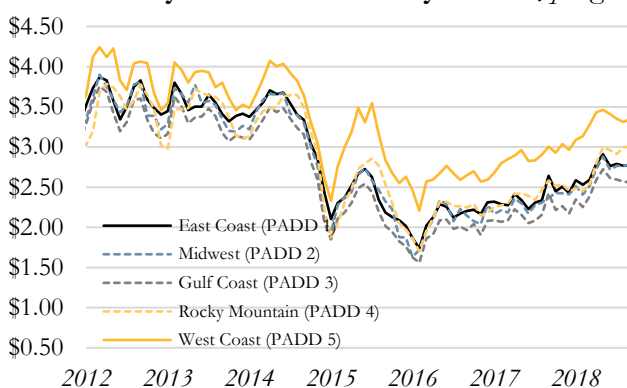
Refiner Acquisition Cost of Oil*, per barrel



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	10/12/18	Ago	Ago	Ago	Ago	
West Texas Intermediate	\$72.96	-\$2.17	\$4.00	\$6.94	\$22.19	-\$35.81
Brent	\$83.05	-\$2.39	\$4.94	\$11.81	\$26.84	-\$35.05
Henry Hub	\$3.30	\$0.07	\$0.37	\$0.52	\$0.38	-\$3.25

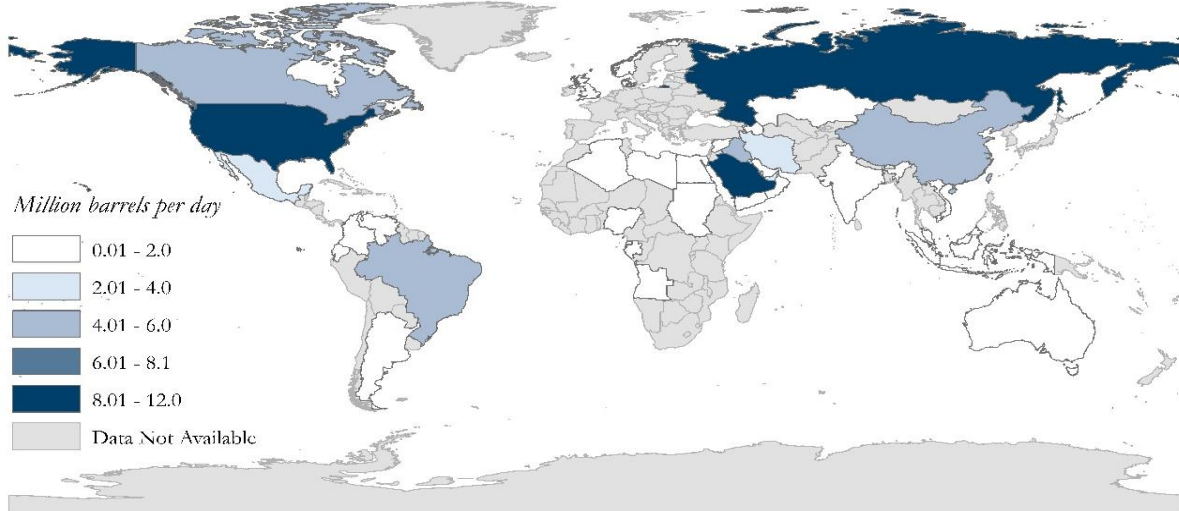
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	6 Months	1 Year	Peak (2012-17)
Geographic Area	Sep-18	Ago	Ago	Ago	
East Coast (PADD 1)	\$2.77	\$0.01	\$0.18	\$0.13	-\$1.06
Midwest (PADD 2)	\$2.79	\$0.03	\$0.27	\$0.42	-\$1.02
Gulf Coast (PADD 3)	\$2.56	-\$0.01	\$0.18	\$0.14	-\$1.07
Rocky Mountain (PADD 4)	\$3.01	\$0.02	\$0.49	\$0.43	-\$0.76
West Coast (PADD 5)	\$3.35	\$0.04	\$0.08	\$0.35	-\$0.72

*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

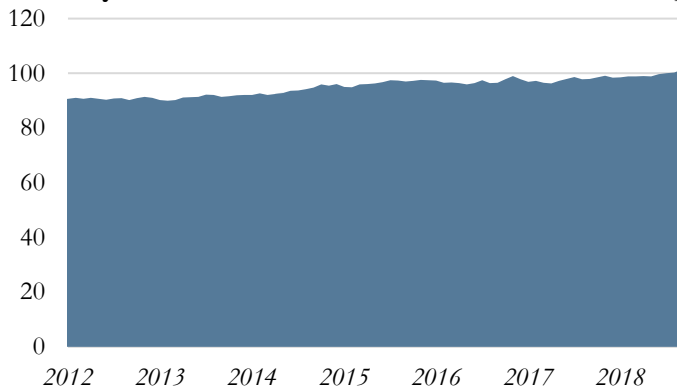
September 2018 Global Petroleum Production



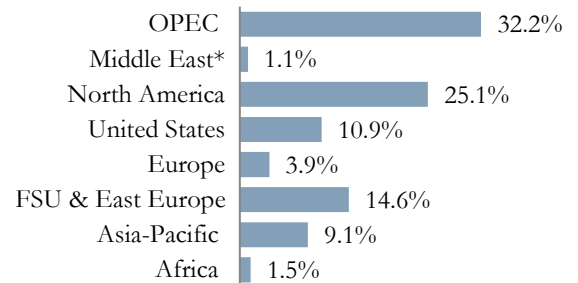
Source: Energy Information Administration/Haver Analytics

September 2018

Monthly Global Petroleum Production, million barrels per day

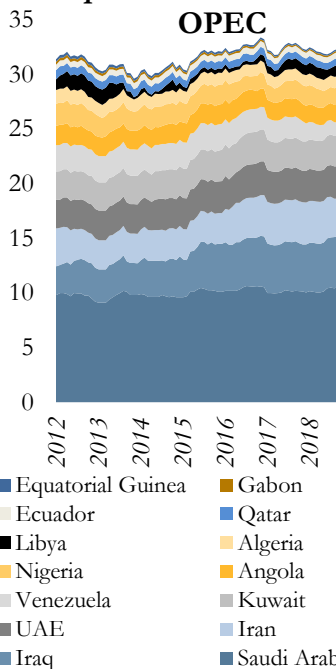


Regional Share of Production

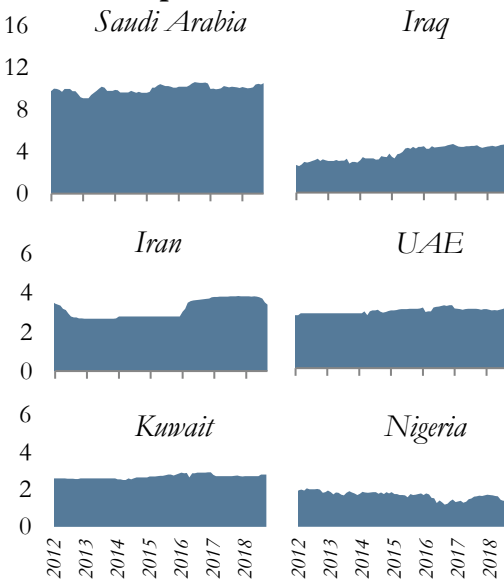


*Excludes OPEC

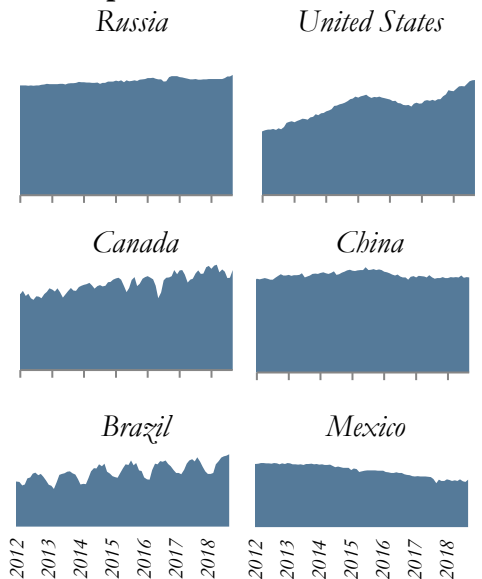
Top Crude Oil Producers, million barrels per day



Top OPEC Producers

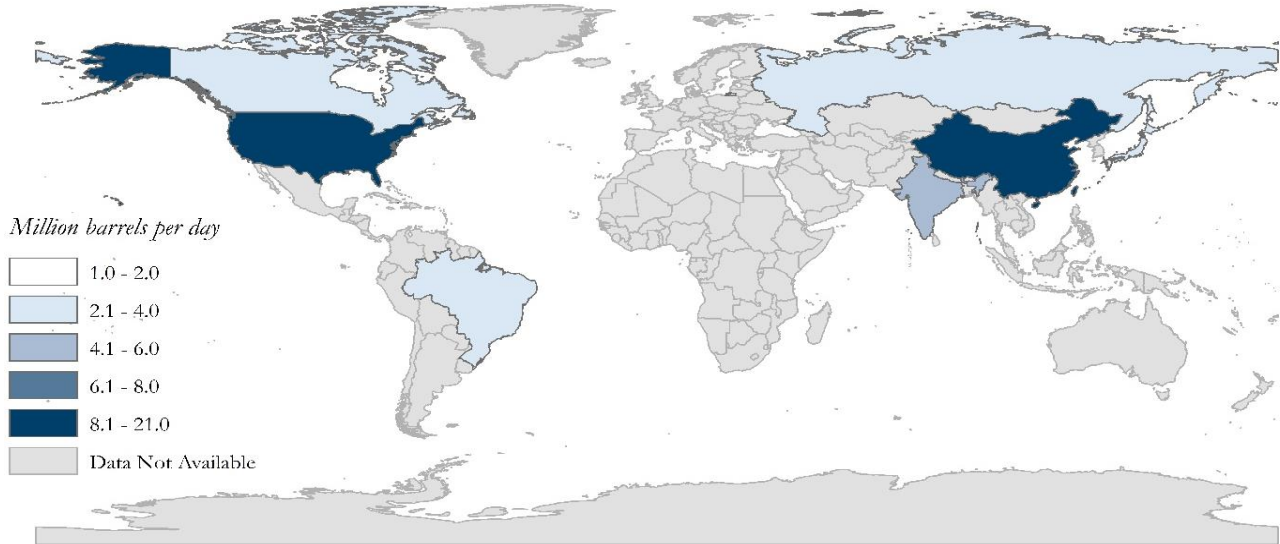


Top Non-OPEC Producers

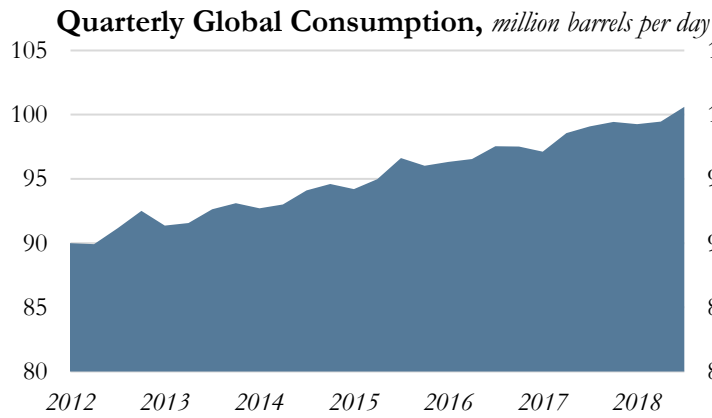


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Third Quarter 2018 Global Petroleum Consumption

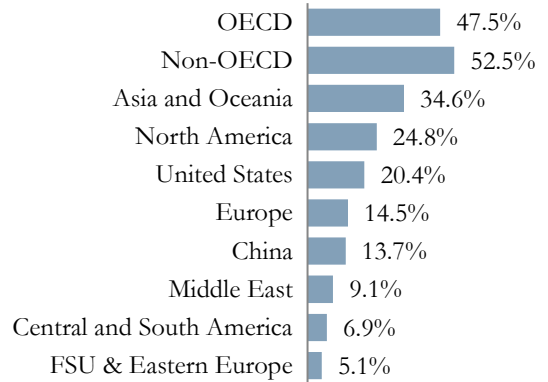


Source: Energy Information Administration/Haver Analytics

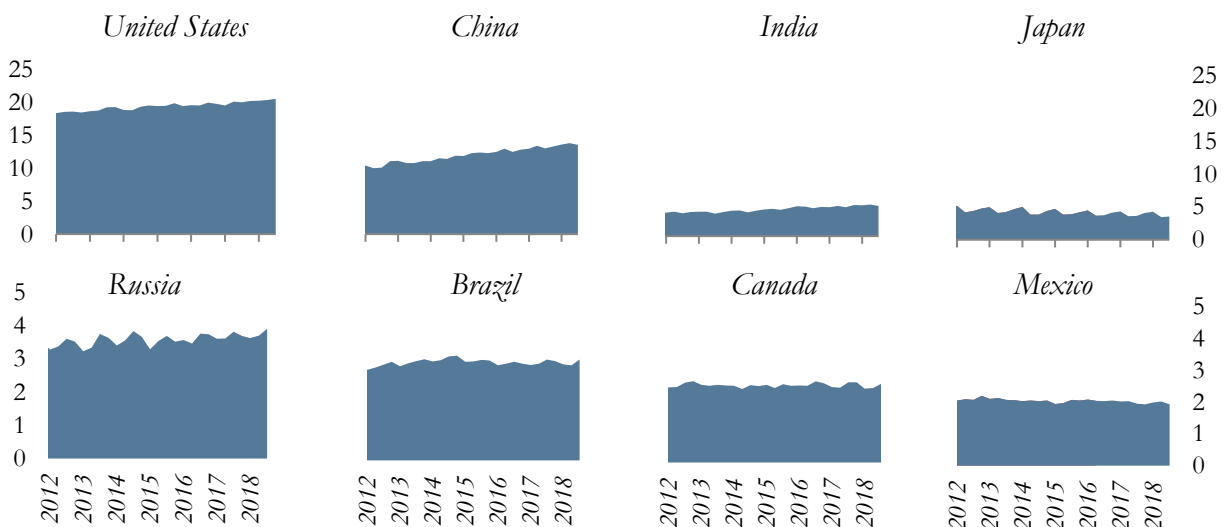


Third Quarter 2018

Regional Share of Consumption

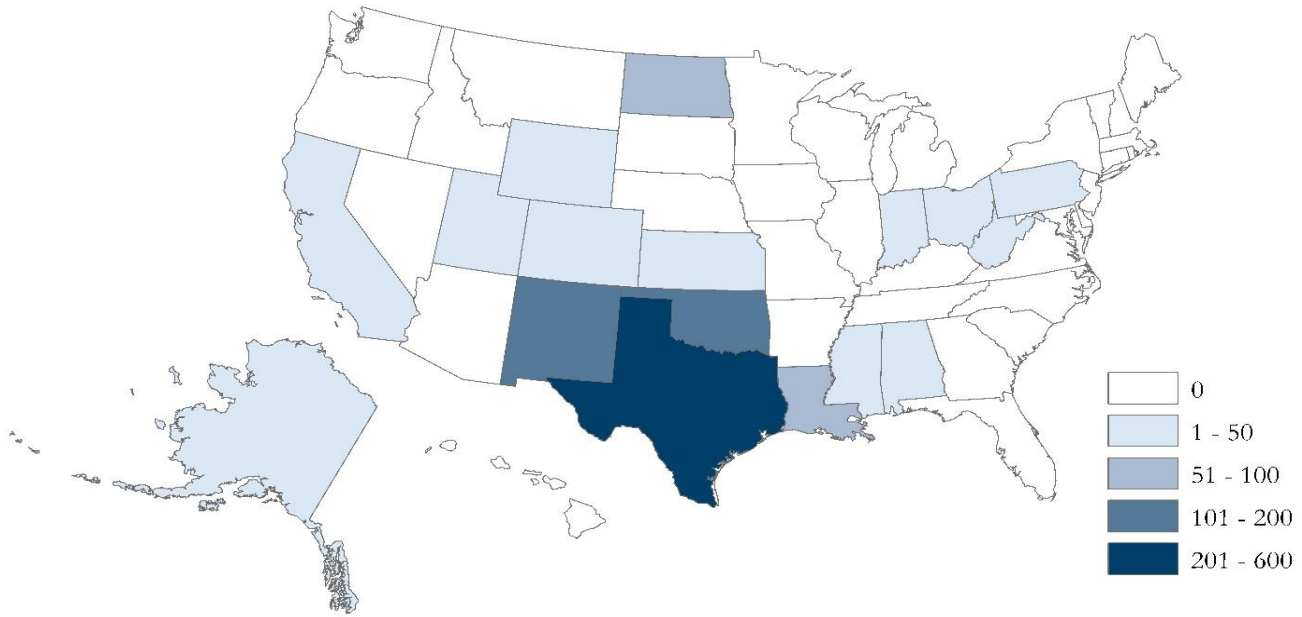


Top Petroleum Consumers, million barrels per day



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

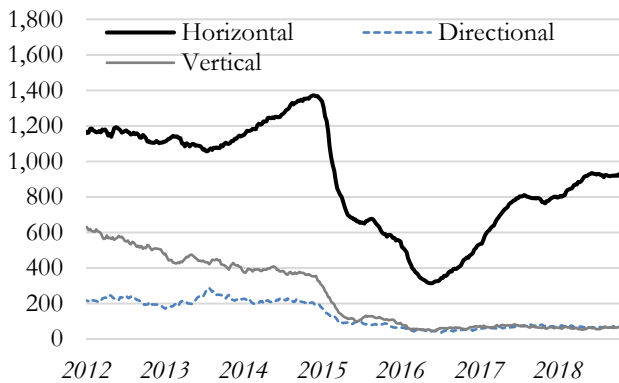
October 2018 Weekly Active Oil & Gas Drilling Rig Counts



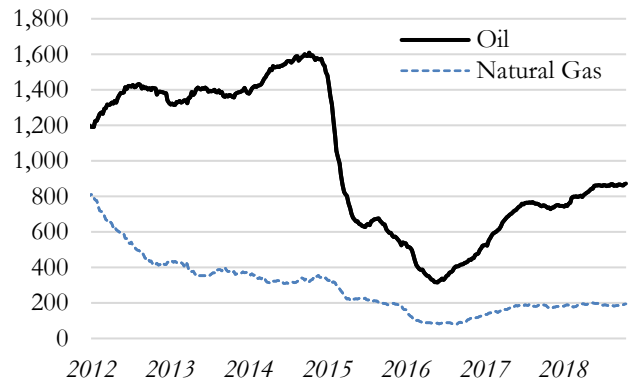
Source: Baker Hughes/Haver Analytics

October 19, 2018

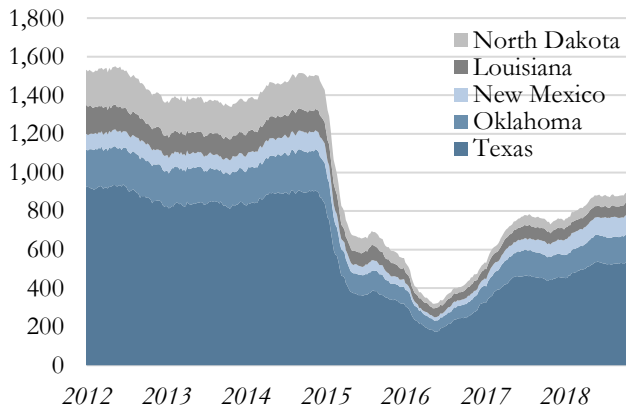
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

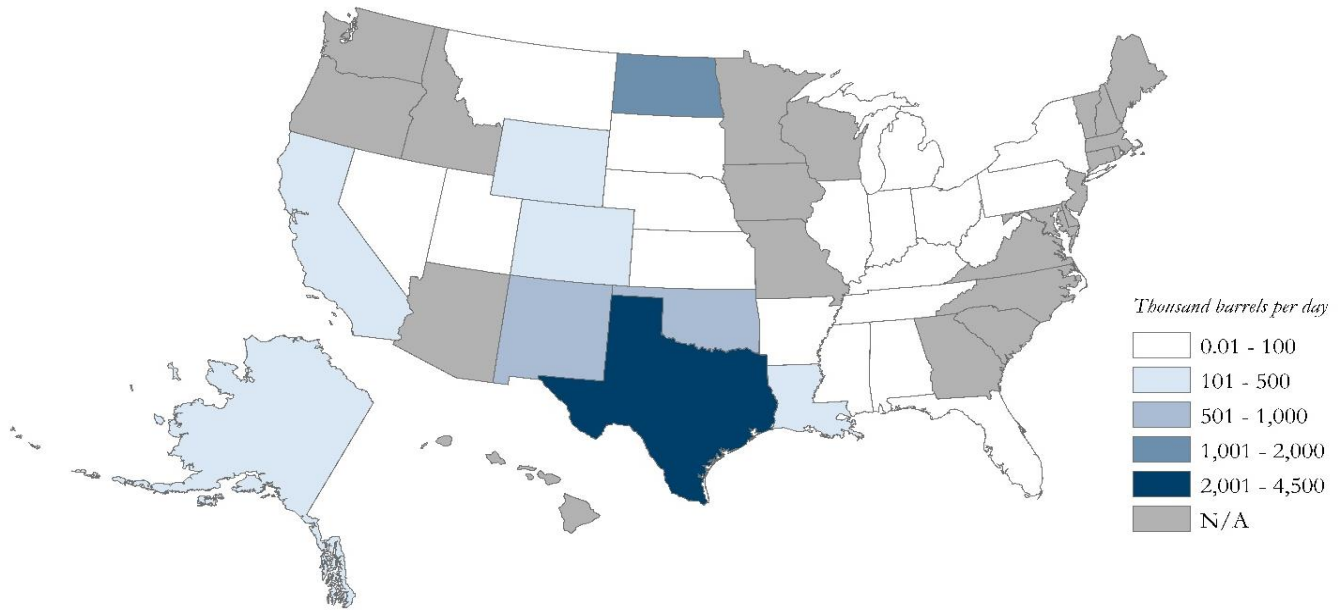
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	873	866	858	736
Gas	194	186	187	177
Misc	0	1	1	0
Total	1067	1053	1046	913

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	0.8%	1.7%	18.6%
Gas	-	4.3%	3.7%	9.6%
Misc	-	-100.0%	-100.0%	-
Total	-	1.3%	2.0%	16.9%

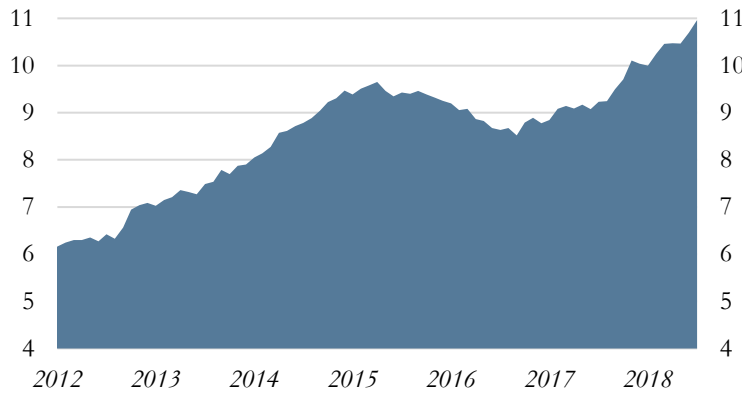
Source: Baker Hughes/Haver Analytics

July 2018 U.S. Crude Oil Production



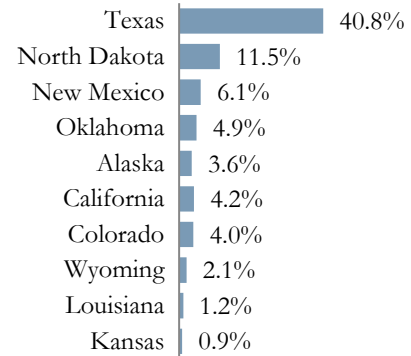
Source: Baker Hughes/Haver Analytics

Monthly U.S. Production, million barrels per day

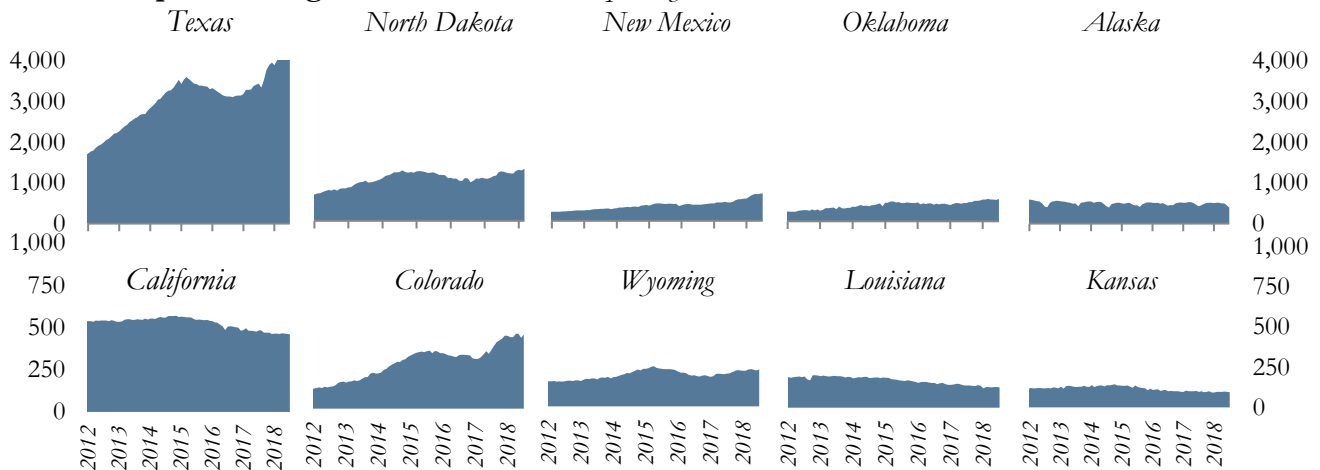


July, 2018

Share of Production

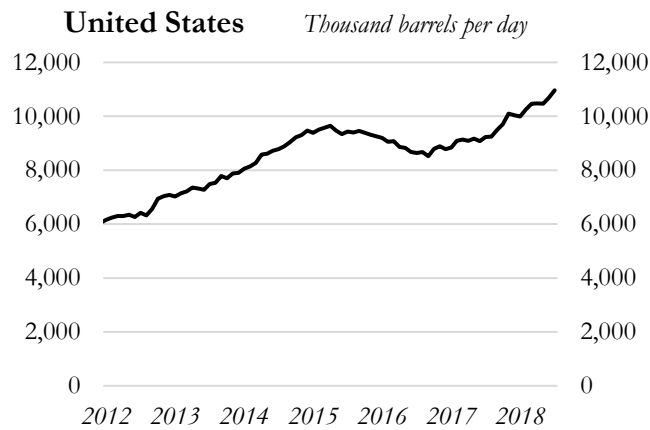


Top Producing States, thousand barrels per day

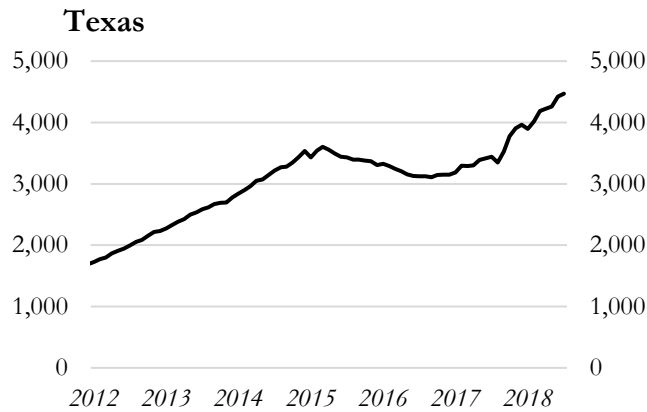


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

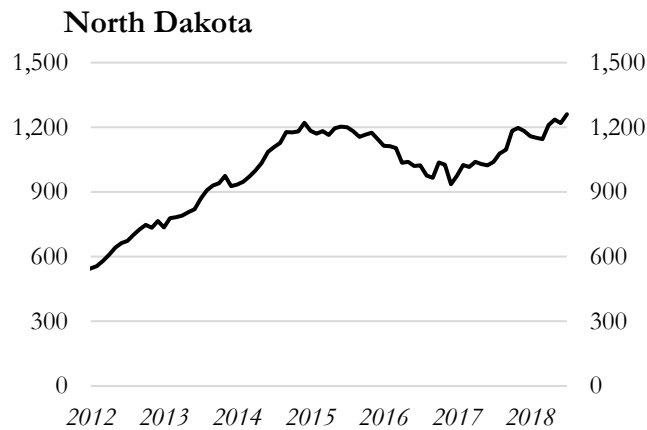
Data through July 2018



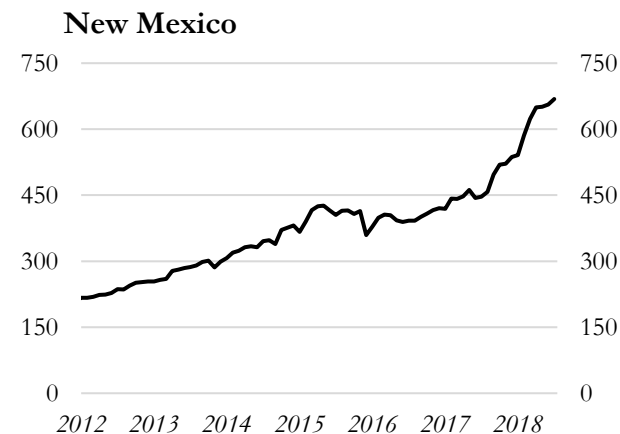
	United States <i>Thousand barrels per day</i>	<i>Change from</i>
Jul-18	10,964	
Month Ago	10,695	2.5%
3 Months Ago	10,475	4.7%
6 Months Ago	9,995	9.7%
1 Year Ago	9,230	18.8%



	Texas <i>Thousand barrels per day</i>	<i>Change from</i>
Jul-18	4,469	
Month Ago	4,423	1.0%
3 Months Ago	4,222	5.9%
6 Months Ago	3,894	14.8%
1 Year Ago	3,442	29.9%
Share of U.S. Production		40.8%



	North Dakota <i>Thousand barrels per day</i>	<i>Change from</i>
Jul-18	1,260	
Month Ago	1,219	3.4%
3 Months Ago	1,211	4.1%
6 Months Ago	1,158	8.8%
1 Year Ago	1,039	21.3%
Share of U.S. Production		11.5%



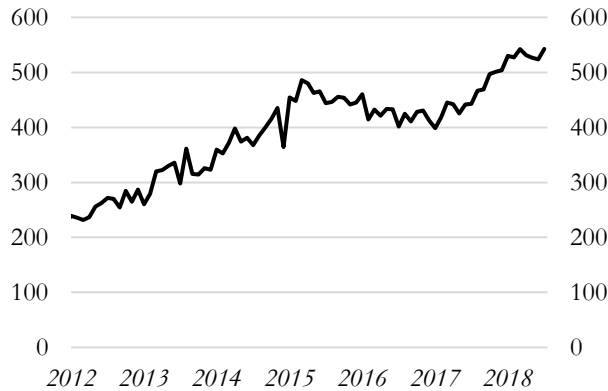
	New Mexico <i>Thousand barrels per day</i>	<i>Change from</i>
Jul-18	669	
Month Ago	656	1.9%
3 Months Ago	650	2.9%
6 Months Ago	541	23.5%
1 Year Ago	447	49.6%
Share of U.S. Production		6.1%

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

Data through July 2018

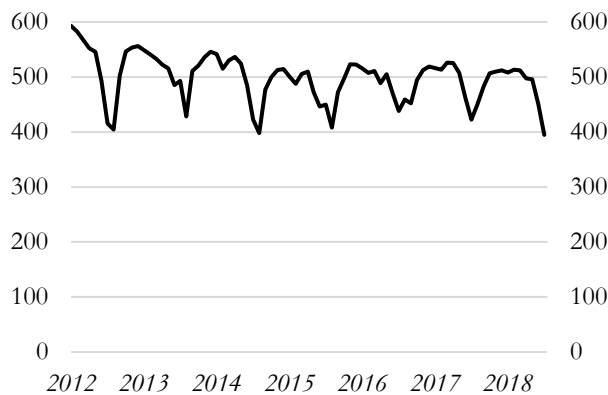
Oklahoma

Thousand barrels per day



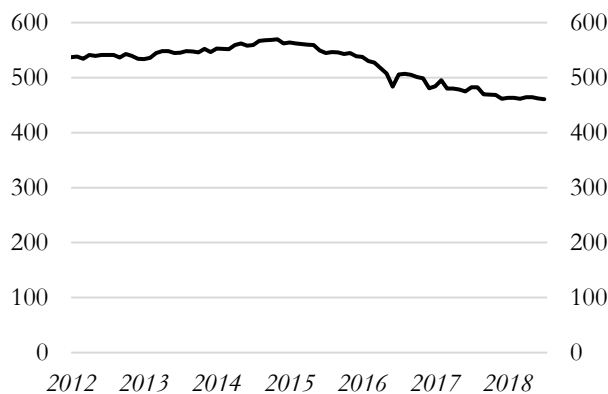
Oklahoma		<i>Change from</i>
<i>Thousand barrels per day</i>		
Jul-18	543	
Month Ago	524	3.6%
3 Months Ago	531	2.1%
6 Months Ago	530	2.4%
1 Year Ago	443	22.5%
Share of U.S. Production		4.9%

Alaska



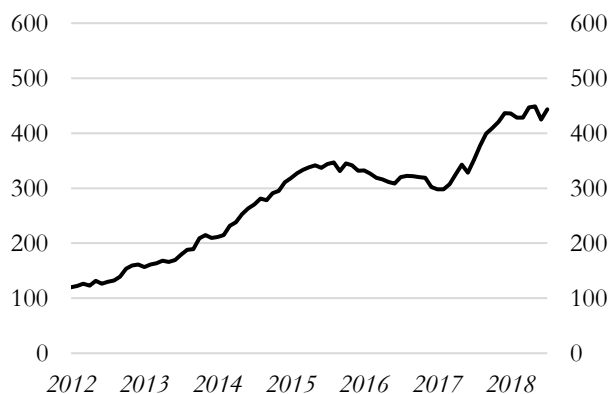
Alaska		<i>Change from</i>
<i>Thousand barrels per day</i>		
Jul-18	395	
Month Ago	451	-12.4%
3 Months Ago	497	-20.6%
6 Months Ago	508	-22.3%
1 Year Ago	423	-6.6%
Share of U.S. Production		3.6%

California



California		<i>Change from</i>
<i>Thousand barrels per day</i>		
Jul-18	461	
Month Ago	462	-0.2%
3 Months Ago	465	-0.8%
6 Months Ago	463	-0.6%
1 Year Ago	482	-4.5%
Share of U.S. Production		4.2%

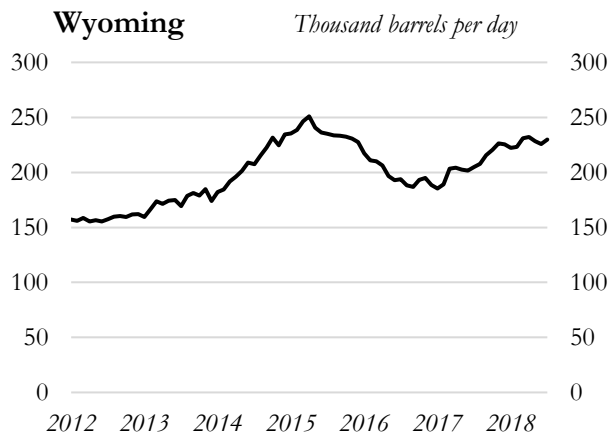
Colorado



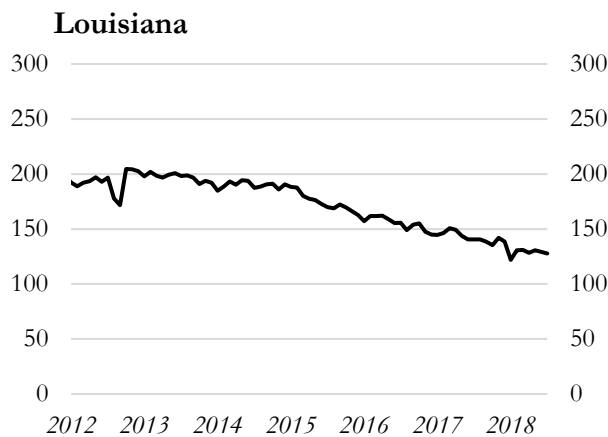
Colorado		<i>Change from</i>
<i>Thousand barrels per day</i>		
Jul-18	443	
Month Ago	425	4.4%
3 Months Ago	447	-0.8%
6 Months Ago	436	1.7%
1 Year Ago	352	26.0%
Share of U.S. Production		4.0%

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

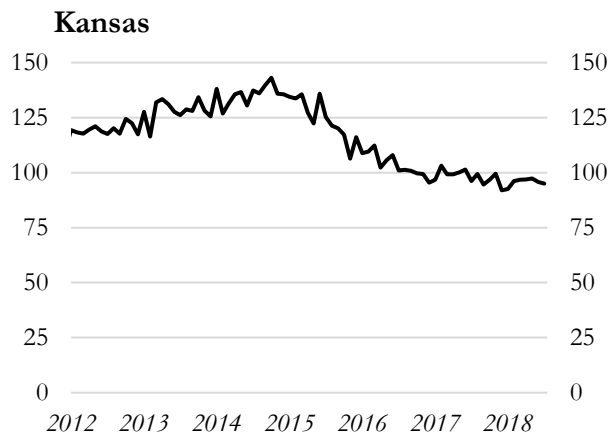
Data through July 2018



Wyoming		Change
Thousand barrels per day		from
Jul-18	230	
Month Ago	226	1.8%
3 Months Ago	232	-1.0%
6 Months Ago	222	3.4%
1 Year Ago	205	12.2%
Share of U.S. Production		2.1%



Louisiana		Change
Thousand barrels per day		from
Jul-18	128	
Month Ago	129	-1.2%
3 Months Ago	128	-0.5%
6 Months Ago	122	4.8%
1 Year Ago	140	-9.1%
Share of U.S. Production		1.2%

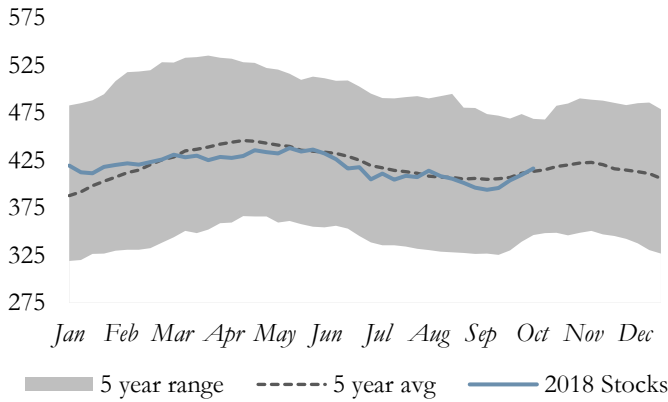


Kansas		Change
Thousand barrels per day		from
Jul-18	95	
Month Ago	96	-0.8%
3 Months Ago	97	-1.9%
6 Months Ago	93	2.7%
1 Year Ago	96	-1.3%
Share of U.S. Production		0.9%

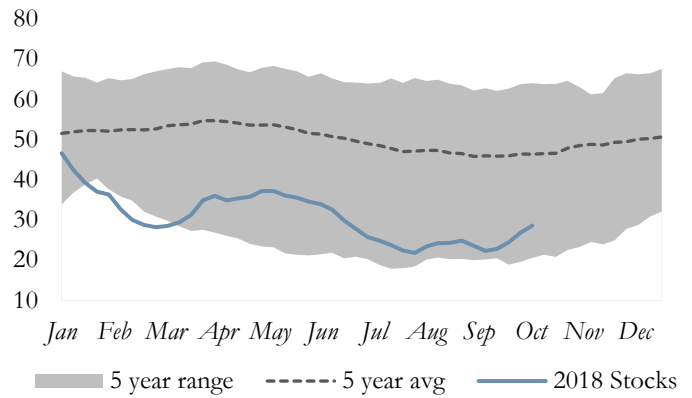
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

October 2018 Weekly U.S. Crude Oil Stocks

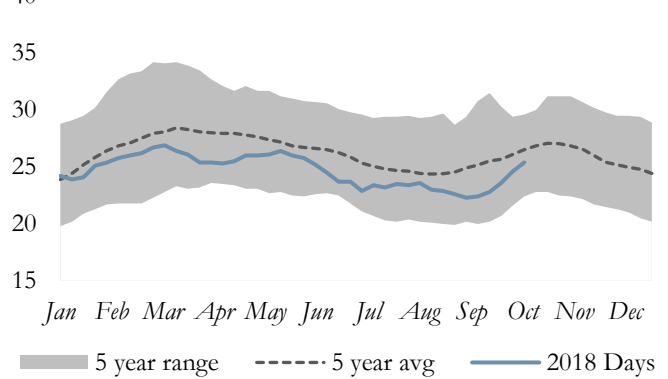
U.S. Oil Stocks, million barrels*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



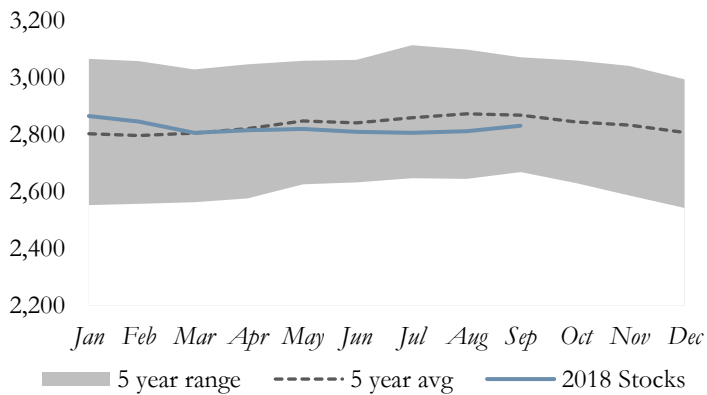
Crude Oil Stocks

	1 Week Change from Ago	1 Year Ago
U.S.	1.6%	-8.8%
Cushing, OK	6.6%	-55.3%
Days of Supply	3.3%	-11.2%
East Coast (PADD 1)	15.3%	-4.7%
Midwest (PADD 2)	1.9%	-23.4%
Gulf Coast (PADD 3)	0.5%	-2.6%
Rocky Mountain (PADD 4)	0.1%	5.4%
West Coast (PADD 5)	3.3%	1.3%

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

September 2018 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels

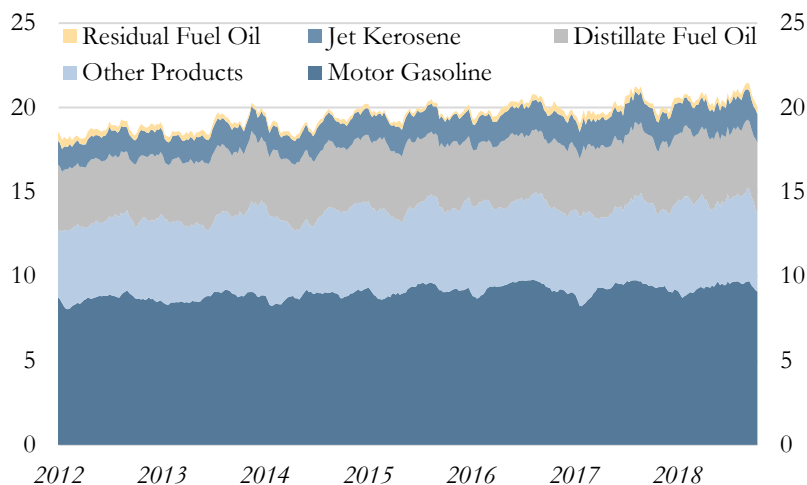


Petroleum Stocks	Million Barrels	Change from
Current Month	2,831	
1 Month Ago	2,812	0.7%
3 Months Ago	2,809	0.8%
6 Months Ago	2,806	0.9%
1 Year Ago	2,960	-4.4%

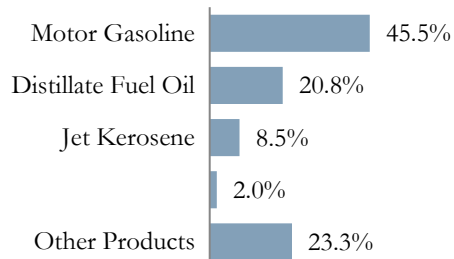
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

October 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 10/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	19,989	21,376	20,694	20,845	19,918
Motor Gasoline	9,087	9,704	9,646	9,385	9,345
Distillate Fuel Oil	4,148	4,042	3,921	4,197	3,720
Jet Kerosene	1,693	1,812	1,825	1,760	1,674
Residual Fuel Oil	394	394	324	310	399
Other Products	4,667	5,424	4,978	5,193	4,780

U.S. Consumption by Product, Change from

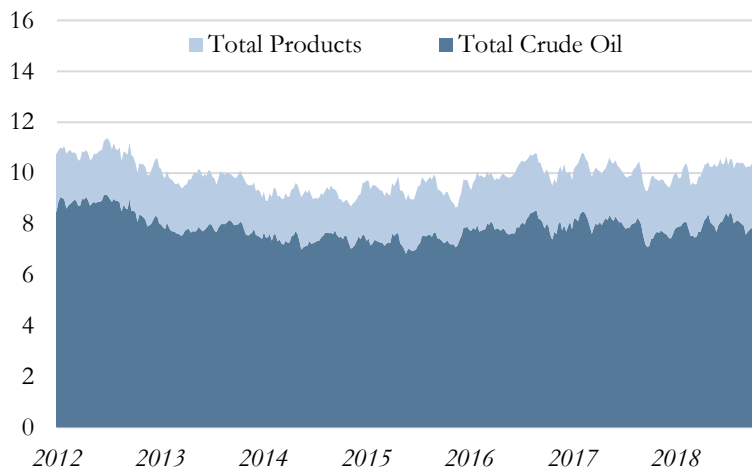
	Current 10/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	-6.5%	-3.4%	-4.1%	0.4%
Motor Gasoline	-	-6.4%	-5.8%	-3.2%	-2.8%
Distillate Fuel Oil	-	2.6%	5.8%	-1.2%	11.5%
Jet Kerosene	-	-6.6%	-7.2%	-3.8%	1.1%
Residual Fuel Oil	-	0.0%	21.6%	27.1%	-1.3%
Other Products	-	-14.0%	-6.2%	-10.1%	-2.4%

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

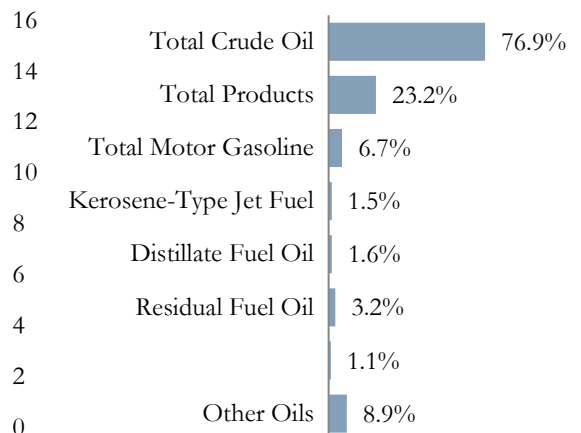
October 2018 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product*

Thousand barrels per day

	Current 10/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	7,695	7,704	8,477	8,157	7,435
Total Products	2,324	2,560	2,080	2,154	2,473
Total Motor Gasoline	666	867	787	702	863
Kerosene-Type Jet Fuel	153	199	117	118	182
Distillate Fuel Oil	160	188	97	119	87
Residual Fuel Oil	323	246	236	238	162
Propane/Propylene	112	128	99	158	126
Other Oils	892	923	745	820	1,053
Total Imports	10,019	10,264	10,557	10,311	9,908

U.S. Imports by Product, Change from

	Current 10/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	-0.1%	-9.2%	-5.7%	3.5%
Total Products	-	-9.2%	11.7%	7.9%	-6.0%
Total Motor Gasoline	-	-23.2%	-15.4%	-5.1%	-22.8%
Kerosene-Type Jet Fuel	-	-23.1%	30.8%	29.7%	-15.9%
Distillate Fuel Oil	-	-14.9%	64.9%	34.5%	83.9%
Residual Fuel Oil	-	31.3%	36.9%	35.7%	99.4%
Propane/Propylene	-	-12.5%	13.1%	-29.1%	-11.1%
Other Oils	-	-3.4%	19.7%	8.8%	-15.3%
Total Imports	-	-2.4%	-5.1%	-2.8%	1.1%

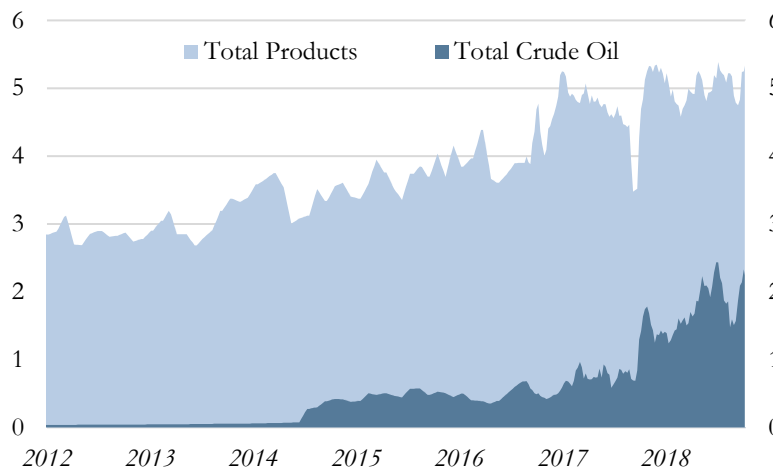
*Totals may not sum due to component rounding

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

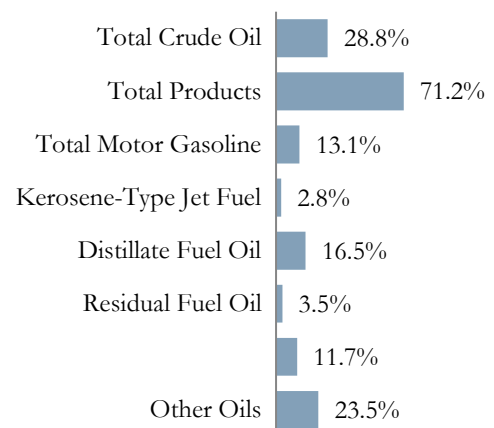
October 2018 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages

Exports, million barrels per day



Share of Total Exports



U.S. Exports by Product*

Thousand barrels per day

	Current 10/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	2,180	1,871	2,206	1,677	1,636
Total Products	5,386	4,748	5,263	4,914	4,839
Total Motor Gasoline	993	610	755	875	559
Kerosene-Type Jet Fuel	214	180	225	221	102
Distillate Fuel Oil	1,246	1,217	1,406	1,179	1,353
Residual Fuel Oil	267	248	369	276	299
Propane/ Propylene	886	841	723	735	971
Other Oils	1,781	1,653	1,786	1,628	1,556
Total Exports	7,566	6,618	7,469	6,591	6,475

U.S. Exports by Product, Change from

	Current 10/12/18	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	16.5%	-1.2%	30.0%	33.3%
Total Products	-	13.4%	2.3%	9.6%	11.3%
Total Motor Gasoline	-	62.8%	31.5%	13.5%	77.6%
Kerosene-Type Jet Fuel	-	18.9%	-4.9%	-3.2%	109.8%
Distillate Fuel Oil	-	2.4%	-11.4%	5.7%	-7.9%
Residual Fuel Oil	-	7.7%	-27.6%	-3.3%	-10.7%
Propane/ Propylene	-	5.4%	22.5%	20.5%	-8.8%
Other Oils	-	7.7%	-0.3%	9.4%	14.5%
Total Exports	-	14.3%	1.3%	14.8%	16.8%

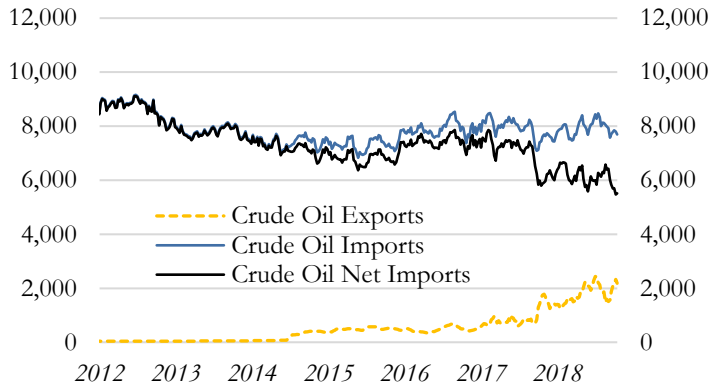
*Totals may not sum due to rounding

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

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

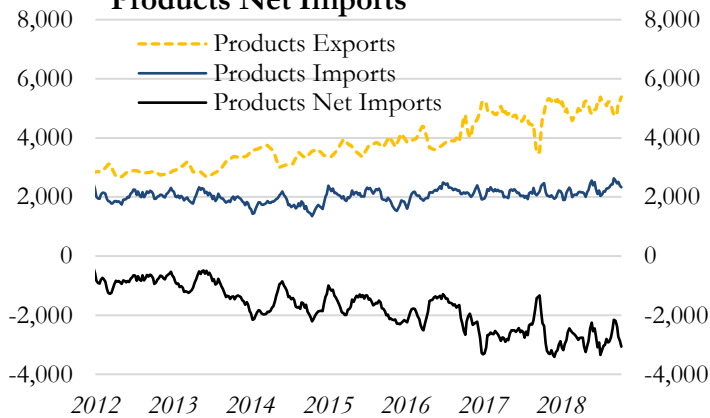
4-Week Averages, Thousand barrels per day

Crude Oil Net Imports



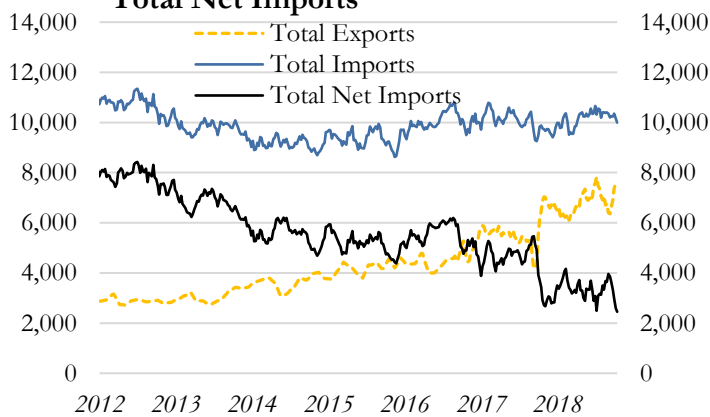
Crude Oil Net Imports		Change
Thousand barrels per day		from
10/12/18	5,515	
Month Ago	5,833	-5.5%
3 Months Ago	6,271	-12.1%
6 Months Ago	6,480	-14.9%
1 Year Ago	5,800	-4.9%

Products Net Imports



Products Net Imports		Change
Thousand barrels per day		from
10/12/18	-3,062	
Month Ago	-2,188	-
3 Months Ago	-3,184	-
6 Months Ago	-2,760	-
1 Year Ago	-2,366	-

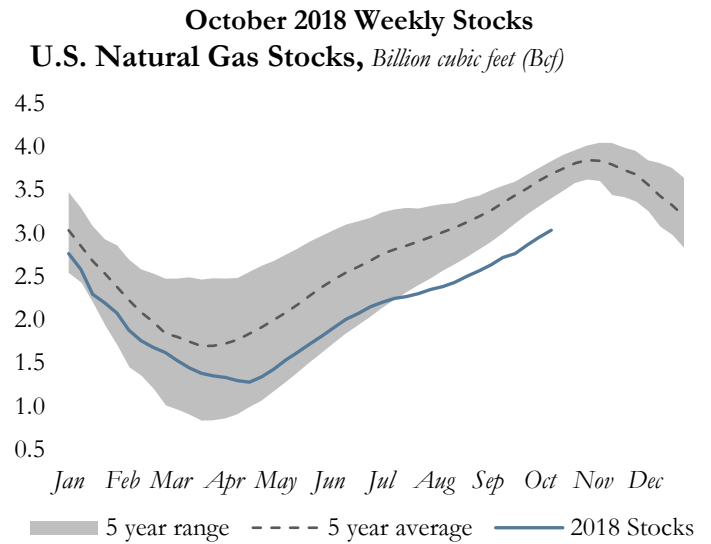
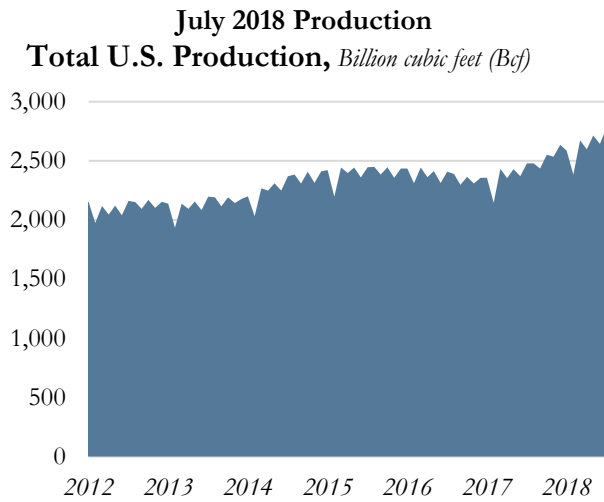
Total Net Imports



Total Net Imports		Change
Thousand barrels per day		from
10/12/18	2,452	
Month Ago	3,645	-32.7%
3 Months Ago	3,088	-20.6%
6 Months Ago	3,720	-34.1%
1 Year Ago	3,434	-28.6%

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

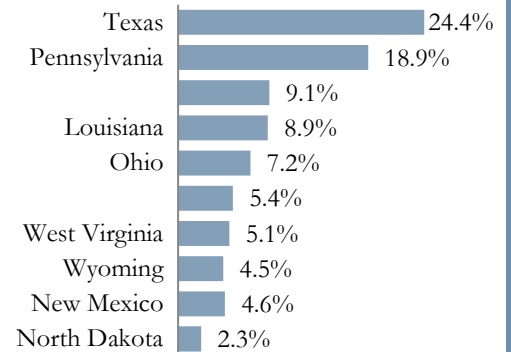
U.S. Natural Gas Production & Stocks



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	2,783	2,643	2,598	2,586	2,479
U.S. Stocks	3,037	2,722	2,248	1,299	3,645

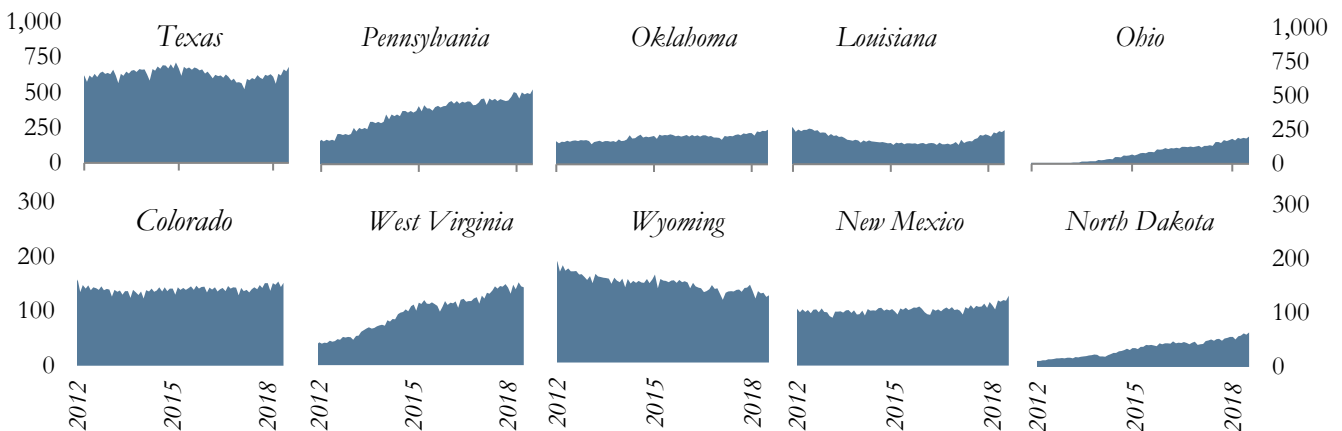
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	5.3%	7.1%	7.6%	12.3%
U.S. Stocks	-	11.6%	35.1%	133.8%	-16.7%

Top Producing States, Billion cubic feet (Bcf)



*U.S. production is monthly data & stocks are weekly data

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

Definitions:

West Texas Intermediate: A crude oil produced in Texas and southern Oklahoma which serves as a reference or "marker" for pricing a number of other crude streams and is traded in the domestic spot market at Cushing, Oklahoma.

Brent: A blended crude oil produced in the North Sea region which serves as a reference or "marker" for pricing a number of other international crude streams.

Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Refined petroleum products include but are not limited to gasolines, kerosene, distillates (including No. 2 fuel oil), liquefied petroleum gas, asphalt, lubricating oils, diesel fuels, and residual fuels.

Notes:

Page 2: Petroleum Administration for Defense Districts (PADD) are geographic aggregations of the 50 States and the District of Columbia into five districts by the Petroleum Administration for Defense in 1950. These districts were originally defined during World War II for purposes of administering oil allocation. For more information, visit: <http://www.eia.gov/petroleum/supply/monthly/pdf/append.pdf>

Page 3: For OPEC countries & the U.S., only crude oil production data is used. For non-OPEC countries (excluding the U.S.) total petroleum production data is used. Total petroleum production includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

Page 5: The active rig count is the number of rigs actively exploring for or developing oil or natural gas. Rig counts provide an indicator of new drilling activity and potential for expanded crude oil or natural gas production.

Pages 10: Crude oil stocks are stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

Crude oil stocks for Cushing include domestic and foreign crude oil stocks held in tank farms in Lincoln, Payne, and Creek counties in Oklahoma. Cushing, Oklahoma, is the designated delivery point for NYMEX crude oil futures contracts.

Days of supply are calculated by taking the current stock level and dividing by product supplied (used as an estimate of demand) averaged over the most recent four-week period. For crude oil, refinery inputs of crude oil are used as a proxy for demand.

Notes:

Page 11: Petroleum Consumption approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas-processing plants, blending plants, pipelines, and bulk terminals.

Data Revisions

Most data are revised periodically to correct for errors and incorporate additional information as it becomes available. Data shown in this report are subject to change.

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