

THE U.S. Energy DATABOOK

A summary of national and global energy indicators



FEBRUARY 25, 2019

FEDERAL RESERVE BANK of KANSAS CITY

SUMMARY OF CURRENT ENERGY CONDITIONS

The number of total active drilling rigs in the United States inched down 1.1 percent from a month ago, but was up 7.1 percent from a year ago. U.S. crude oil production increased 3.0 percent in October, while natural gas production dipped 2.2 percent. Crude oil prices rose modestly in February, recovering somewhat after the price drop in late 2018. For the week ending February 15th, West Texas Intermediate (WTI) crude oil averaged \$53.88 per barrel and North Sea Brent averaged \$63.36 per barrel, an increase of 3.8 percent and 5.9 percent in the last month, respectively. The Henry Hub natural gas spot price averaged \$2.66 per million Btu for the week ending February 15th, falling 24 percent in the last month. U.S. crude oil and petroleum products exports increased 5.8 percent, while imports declined 7.5 percent over the last month. Global demand for petroleum edged up 0.5 percent in the fourth quarter of 2018, and global petroleum production eased down 1.2 percent in January 2019.

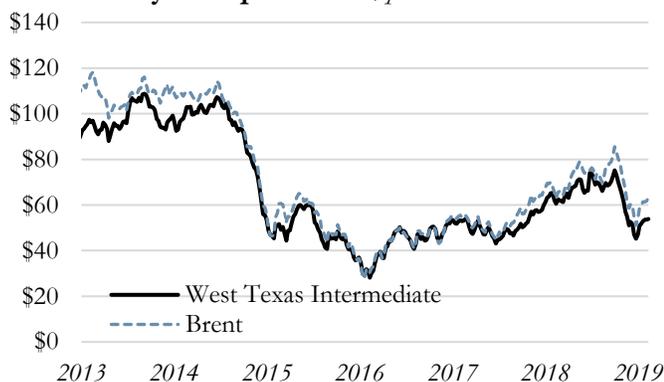
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S.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



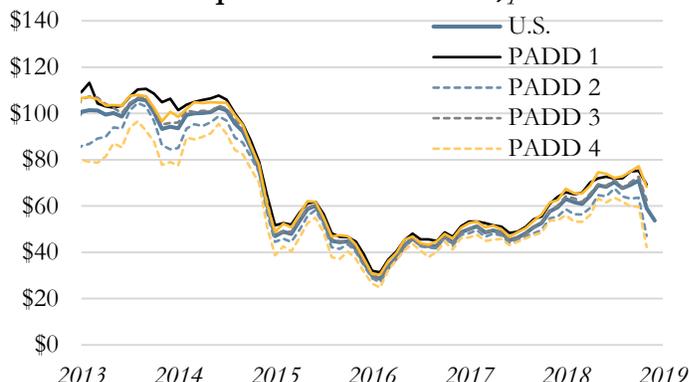
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through February 15, 2019

Weekly Oil Spot Prices, per barrel



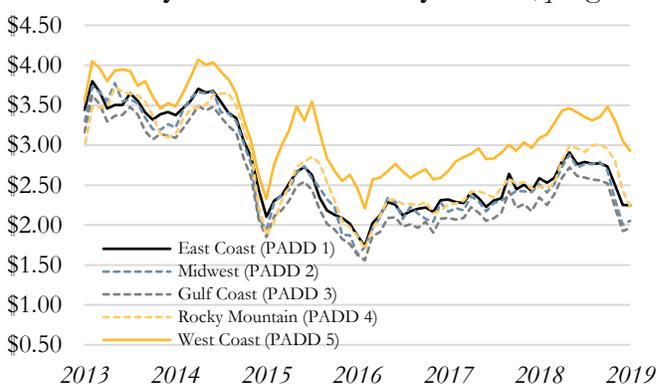
Refiner Acquisition Cost of Oil*, per barrel



Weekly Natural Gas Spot Prices, per mmbtu



Monthly Gasoline Prices by PADD, per gallon



Weekly Spot Prices, Change from

	Current	1 Week	1 Month	3 months	6 Months	1 Year
Weekly Spot Prices	2/15/19	Ago	Ago	Ago	Ago	Ago
West Texas Intermediate	\$53.88	\$0.35	\$1.96	-\$3.04	-\$12.27	-\$6.68
Brent	\$63.36	\$1.65	\$3.53	-\$2.85	-\$6.46	\$0.64
Henry Hub	\$2.66	\$0.07	-\$0.84	-\$1.57	-\$0.34	\$0.12

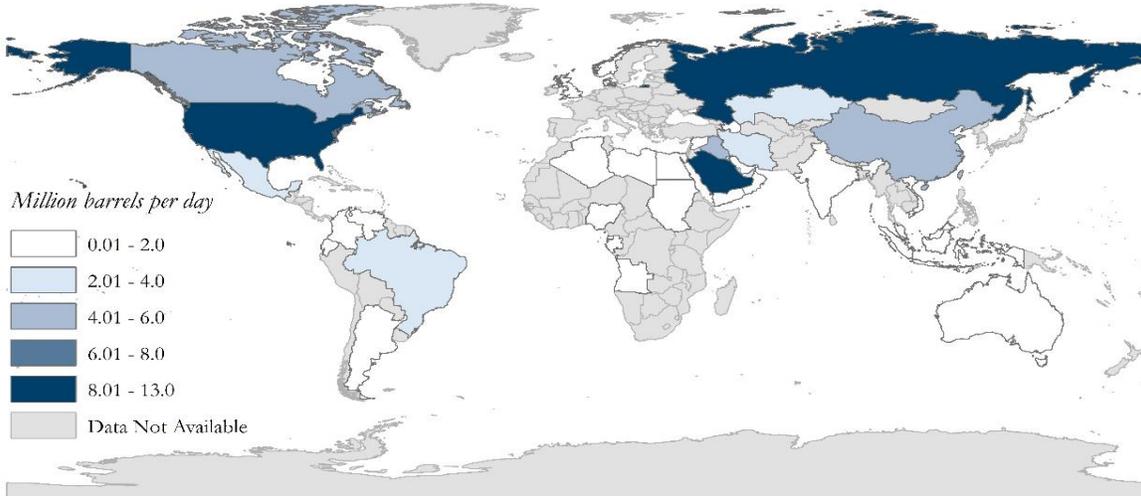
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	3 months	6 Months	1 Year
Geographic Area	Jan-19	Ago	Ago	Ago	Ago
East Coast (PADD 1)	\$2.25	\$0.00	-\$0.48	-\$0.54	-\$0.34
Midwest (PADD 2)	\$2.05	\$0.05	-\$0.63	-\$0.72	-\$0.46
Gulf Coast (PADD 3)	\$1.96	\$0.03	-\$0.56	-\$0.63	-\$0.39
Rocky Mountain (PADD 4)	\$2.23	-\$0.20	-\$0.73	-\$0.68	-\$0.25
West Coast (PADD 5)	\$2.93	-\$0.13	-\$0.55	-\$0.42	-\$0.16

*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

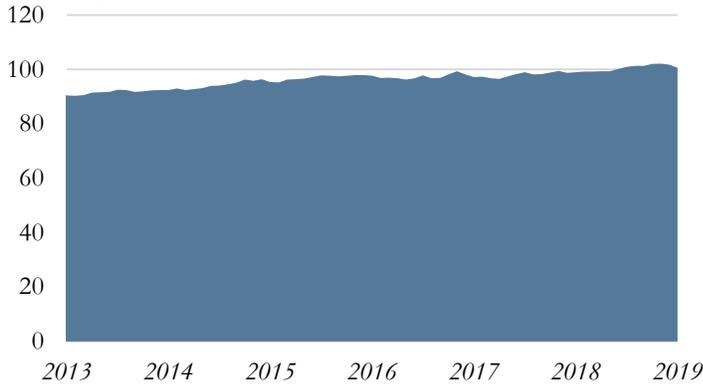
January 2019 Global Petroleum Production



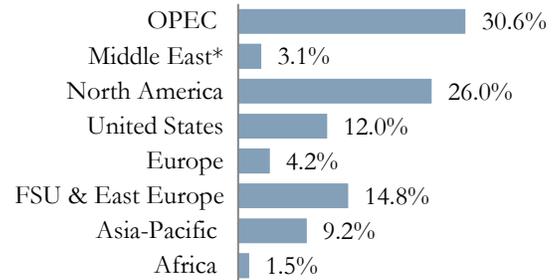
Source: Energy Information Administration/Haver Analytics

January 2019

Monthly Global Petroleum Production, million barrels per day

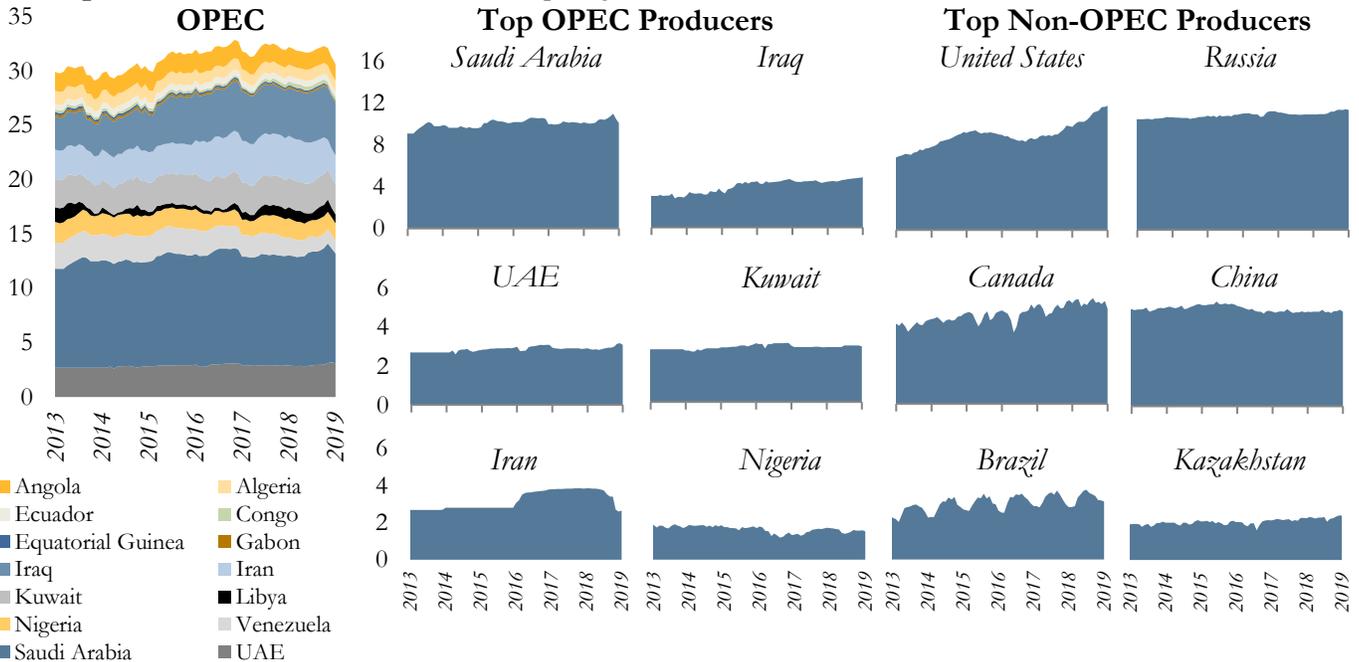


Regional Share of Production



*Excludes OPEC

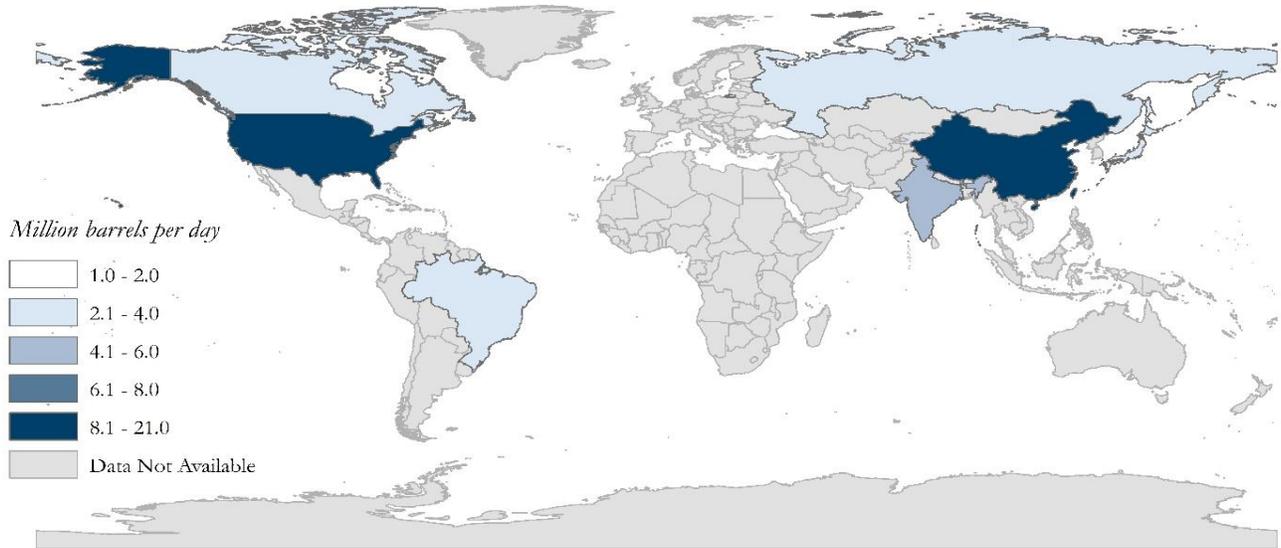
Top Crude Oil Producers, million barrels per day



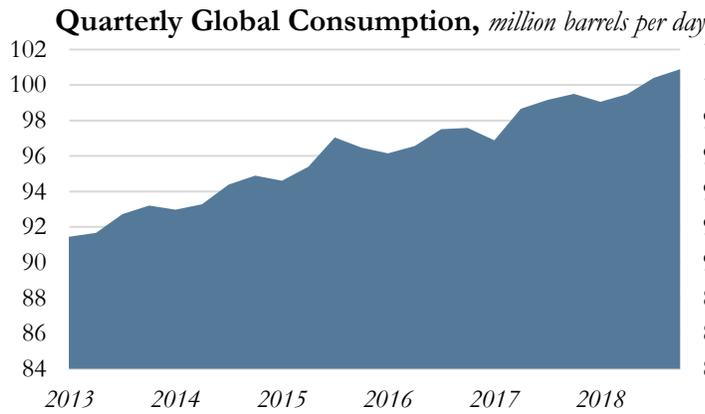
Note: OPEC country production values are for crude oil and non-OPEC country data is for petroleum production.

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

Fourth Quarter 2018 Global Petroleum Consumption

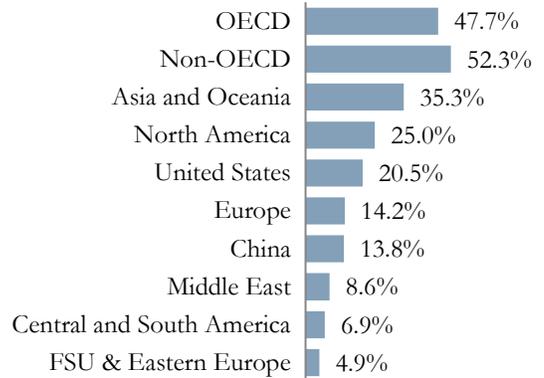


Source: Energy Information Administration/Haver Analytics

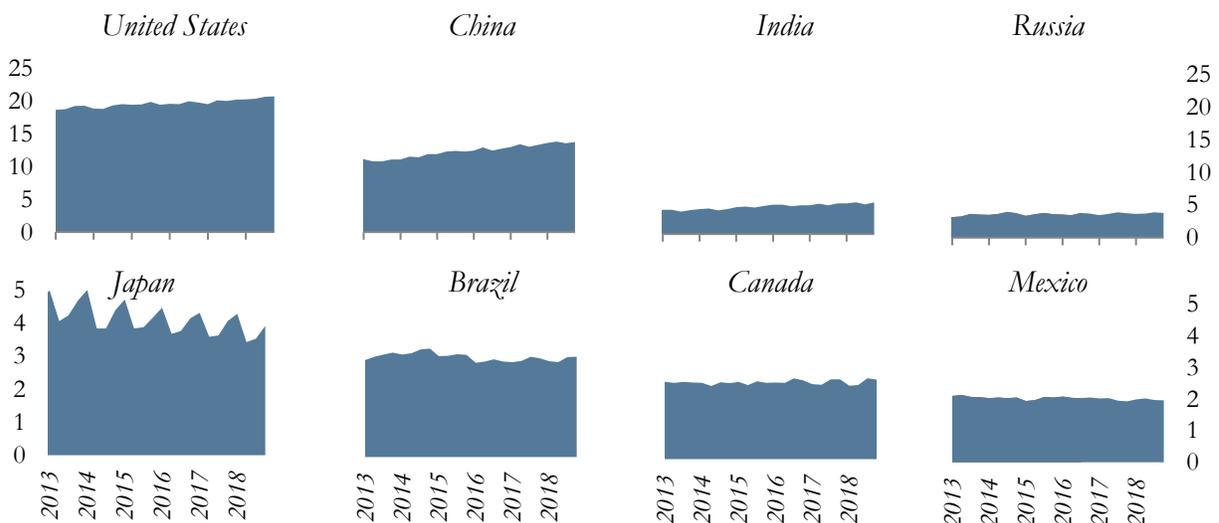


Fourth Quarter 2018

Regional Share of Consumption

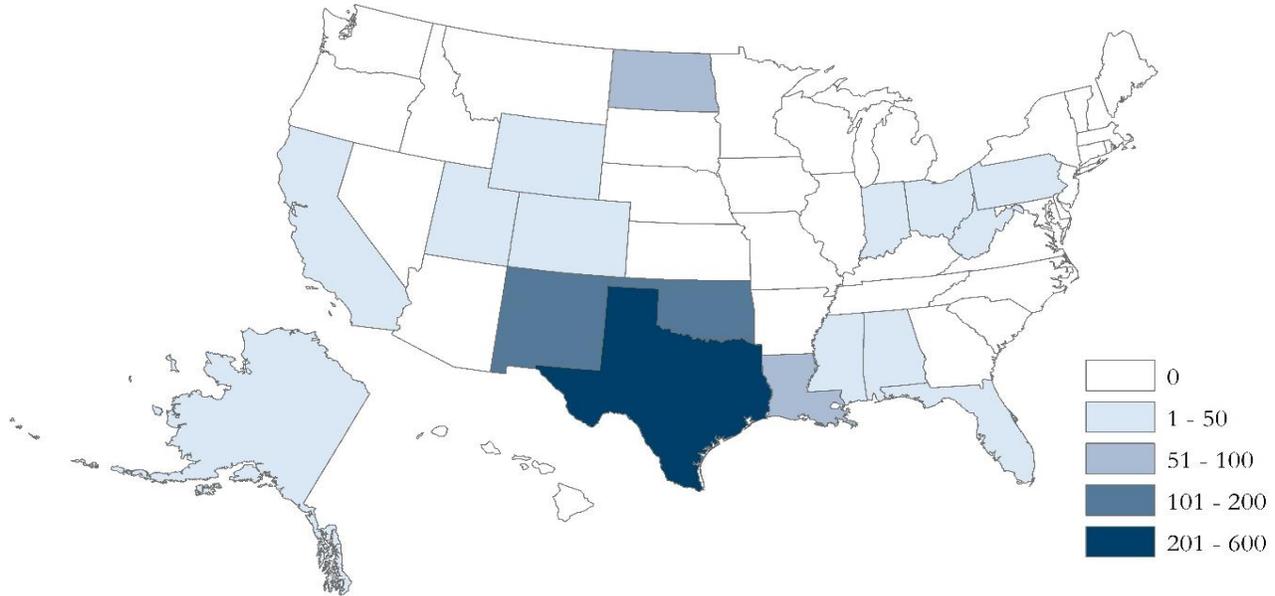


Top Petroleum Consumers, million barrels per day



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

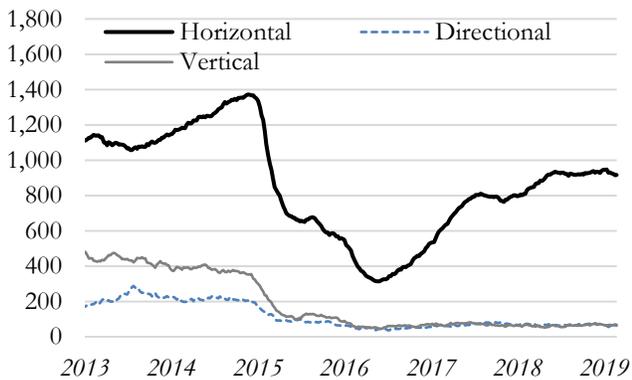
February 2019 Weekly Active Oil & Gas Drilling Rig Counts



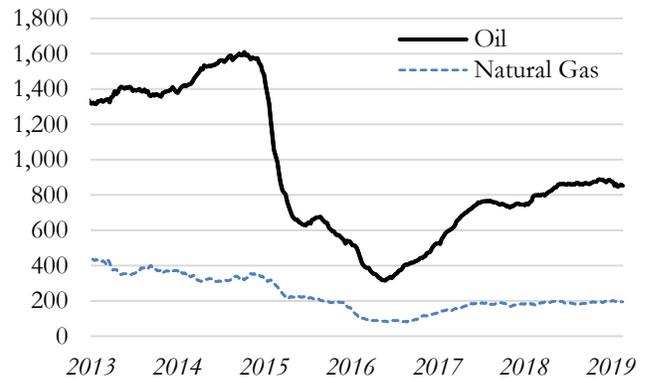
Source: Baker Hughes/Haver Analytics

February 22, 2019

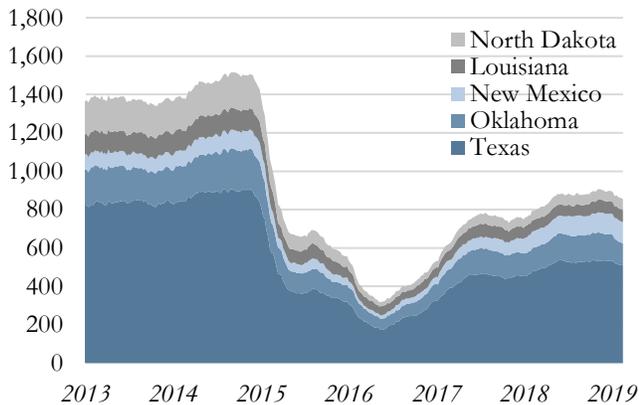
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

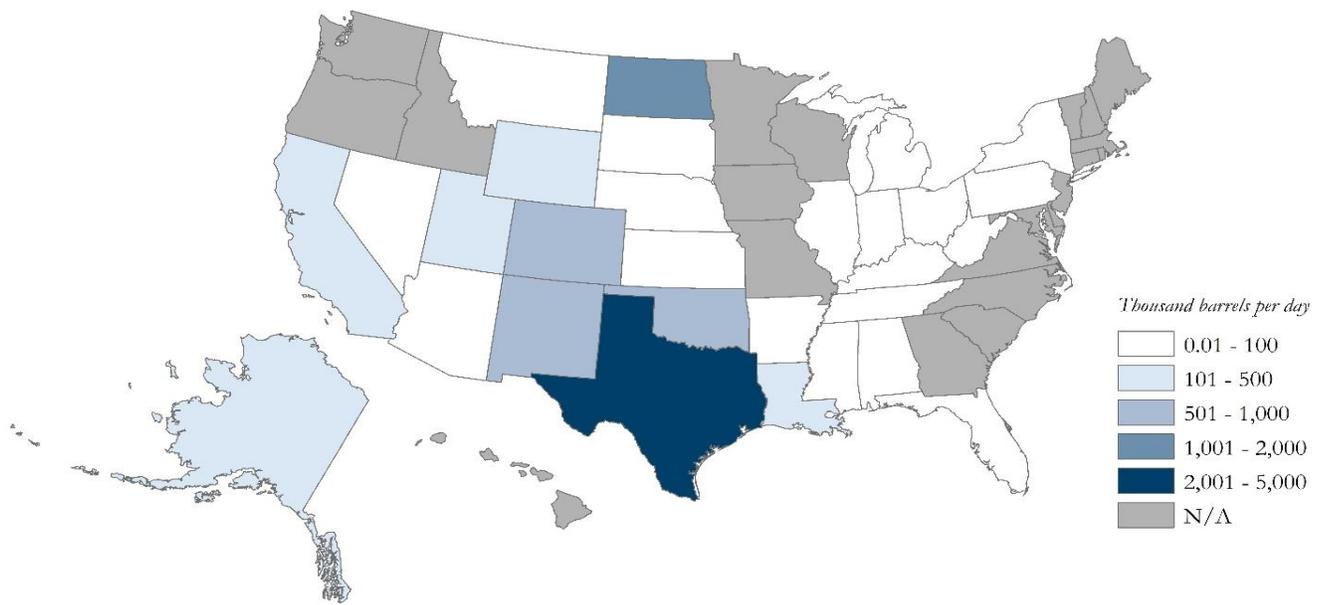
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	853	862	885	799
Gas	194	197	194	179
Misc	0	0	0	0
Total	1047	1059	1079	978

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	-1.0%	-3.6%	6.8%
Gas	-	-1.5%	0.0%	8.4%
Misc	-	-	-	-
Total	-	-1.1%	-3.0%	7.1%

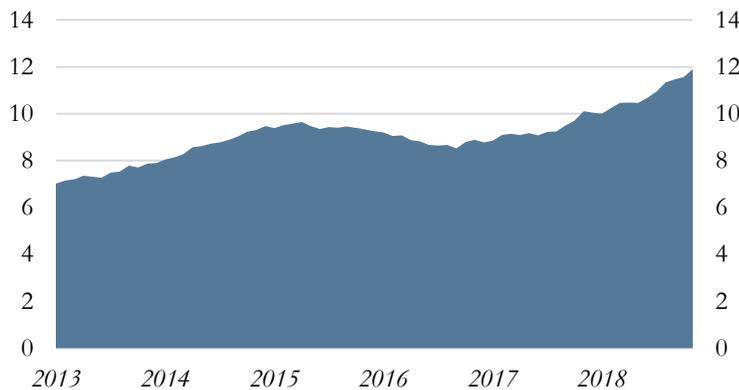
Source: Baker Hughes/Haver Analytics

November 2018 U.S. Crude Oil Production

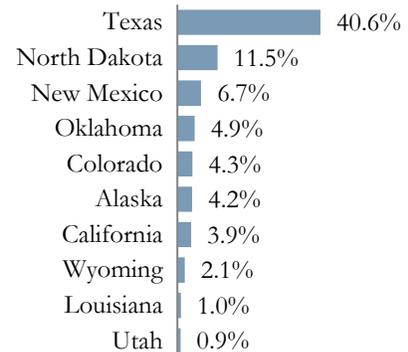


Source: Baker Hughes/Haver Analytics

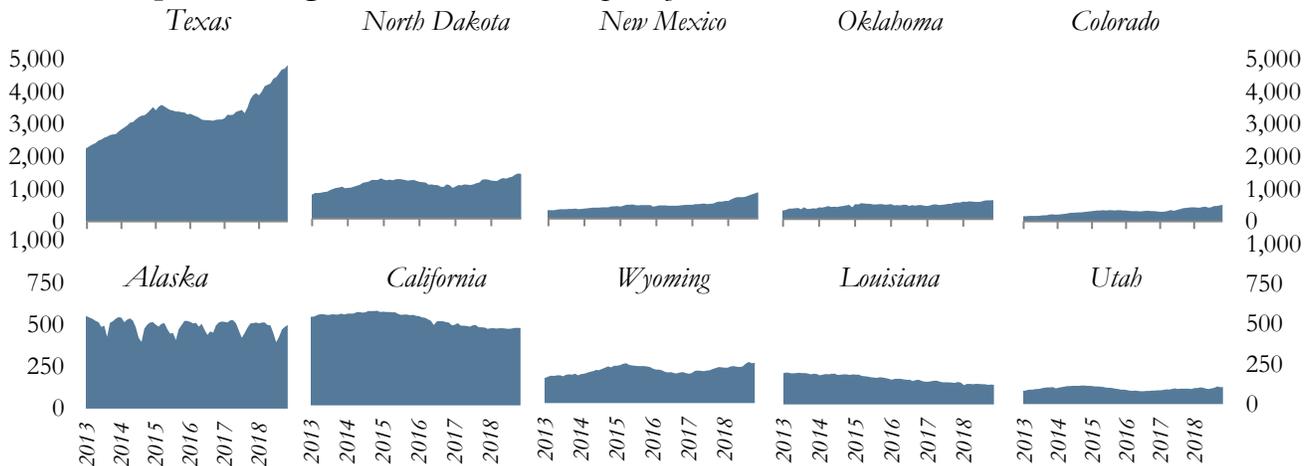
Monthly U.S. Production, million barrels per day



Share of Production



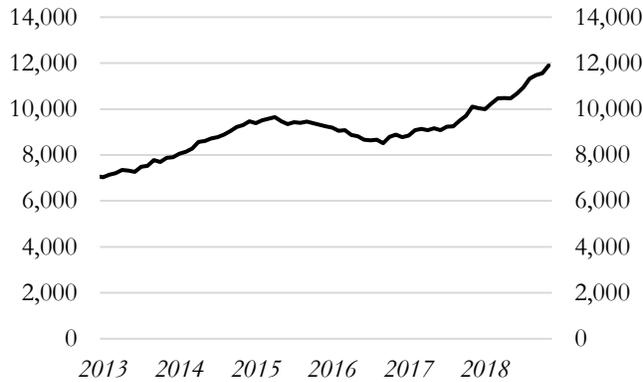
Top Producing States, thousand barrels per day



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

Data through November 2018

United States *Thousand barrels per day*



	United States <i>Thousand barrels per day</i>	<i>Change from</i>
Nov-18	11,900	
Month Ago	11,555	3.0%
3 Months Ago	11,325	5.1%
6 Months Ago	10,464	13.7%
1 Year Ago	10,103	17.8%

Texas



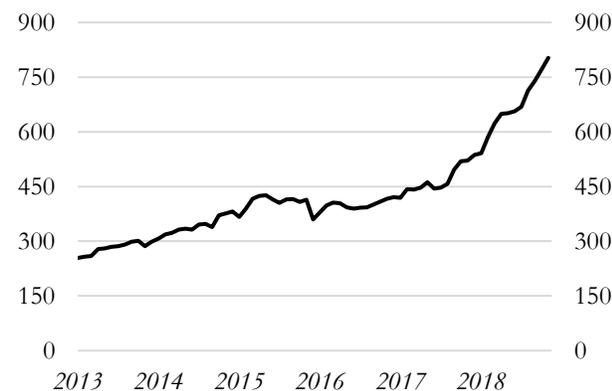
	Texas <i>Thousand barrels per day</i>	<i>Change from</i>
Nov-18	4,835	
Month Ago	4,720	2.4%
3 Months Ago	4,574	5.7%
6 Months Ago	4,260	13.5%
1 Year Ago	3,903	23.9%
Share of U.S. Production		40.6%

North Dakota



	North Dakota <i>Thousand barrels per day</i>	<i>Change from</i>
Nov-18	1,364	
Month Ago	1,375	-0.8%
3 Months Ago	1,275	7.0%
6 Months Ago	1,235	10.4%
1 Year Ago	1,197	13.9%
Share of U.S. Production		11.5%

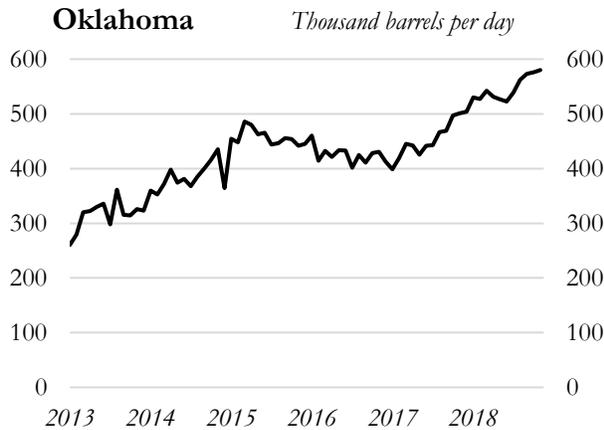
New Mexico



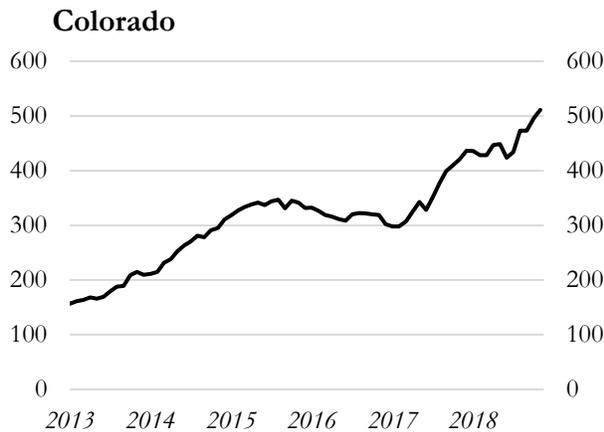
	New Mexico <i>Thousand barrels per day</i>	<i>Change from</i>
Nov-18	803	
Month Ago	771	4.1%
3 Months Ago	713	12.6%
6 Months Ago	651	23.4%
1 Year Ago	522	53.9%
Share of U.S. Production		6.7%

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

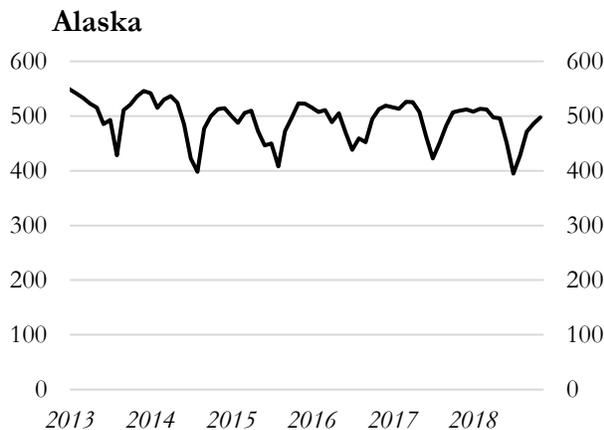
Data through November 2018



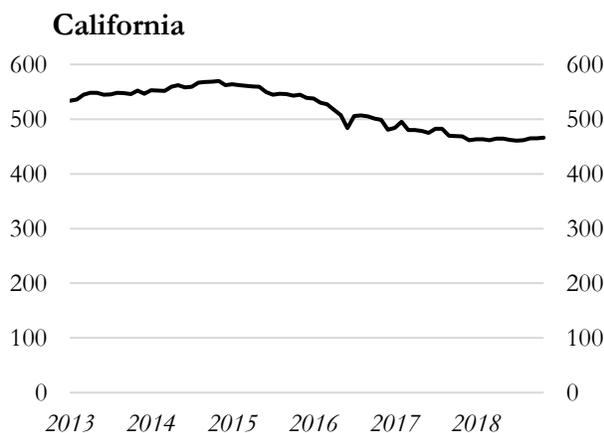
	Oklahoma	Change
	Thousand barrels per day	from
Nov-18	580	
Month Ago	576	0.7%
3 Months Ago	562	3.2%
6 Months Ago	527	10.1%
1 Year Ago	501	15.8%
Share of U.S. Production	4.9%	



	Colorado	Change
	Thousand barrels per day	from
Nov-18	511	
Month Ago	496	3.1%
3 Months Ago	473	8.1%
6 Months Ago	449	13.9%
1 Year Ago	421	21.6%
Share of U.S. Production	4.3%	



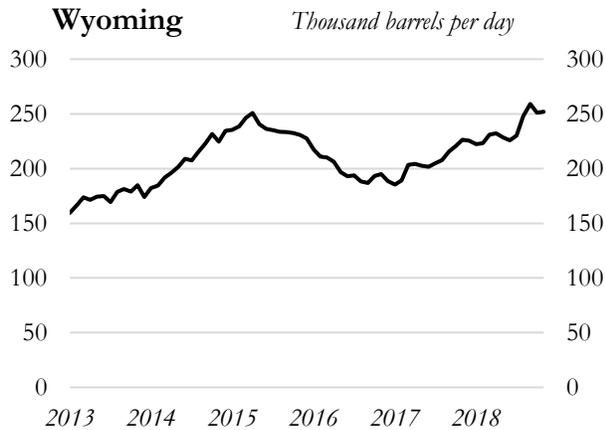
	Alaska	Change
	Thousand barrels per day	from
Nov-18	497	
Month Ago	487	2.2%
3 Months Ago	428	16.3%
6 Months Ago	496	0.3%
1 Year Ago	510	-2.5%
Share of U.S. Production	4.2%	



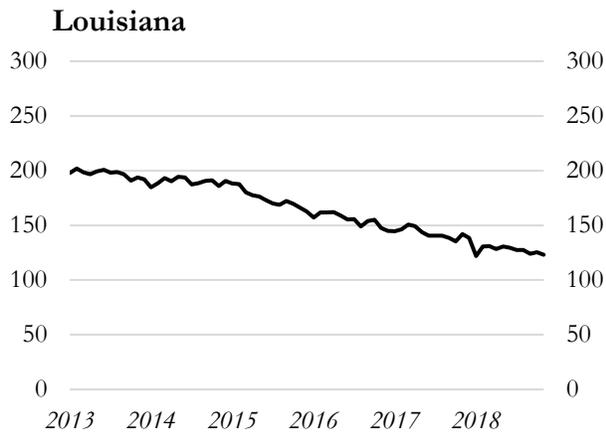
	California	Change
	Thousand barrels per day	from
Nov-18	466	
Month Ago	465	0.2%
3 Months Ago	461	1.0%
6 Months Ago	464	0.4%
1 Year Ago	468	-0.5%
Share of U.S. Production	3.9%	

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

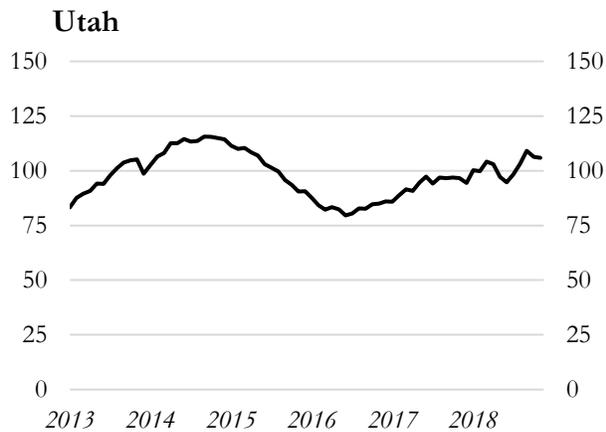
Data through November 2018



Wyoming		Change
Thousand barrels per day		from
Nov-18	252	
Month Ago	251	0.3%
3 Months Ago	248	1.6%
6 Months Ago	228	10.3%
1 Year Ago	226	11.3%
Share of U.S. Production		2.1%



Louisiana		Change
Thousand barrels per day		from
Nov-18	123	
Month Ago	125	-1.7%
3 Months Ago	127	-3.4%
6 Months Ago	131	-5.7%
1 Year Ago	142	-13.2%
Share of U.S. Production		1.0%

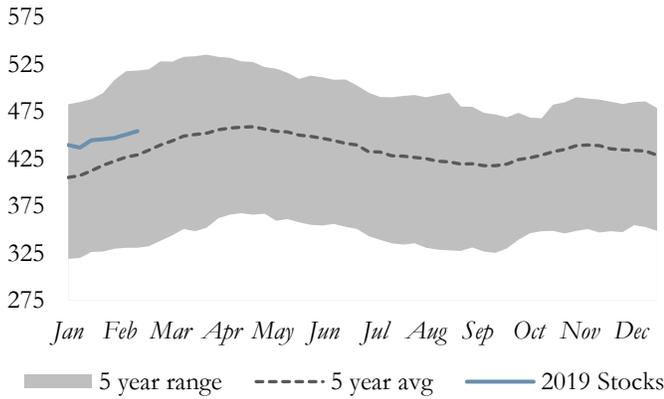


Utah		Change
Thousand barrels per day		from
Nov-18	106	
Month Ago	106	-0.5%
3 Months Ago	103	2.7%
6 Months Ago	97	9.0%
1 Year Ago	97	9.7%
Share of U.S. Production		0.9%

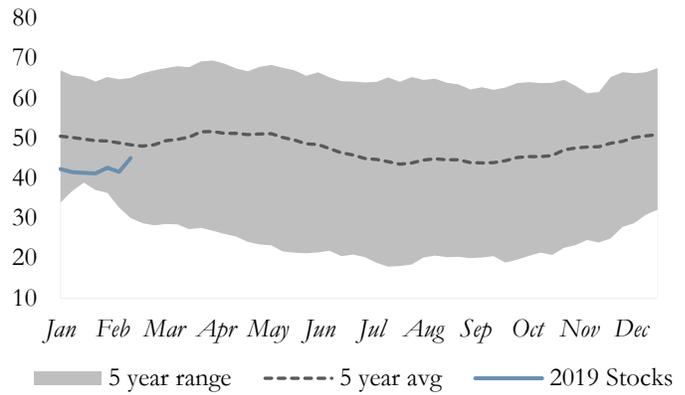
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

February 2019 Weekly U.S. Crude Oil Stocks

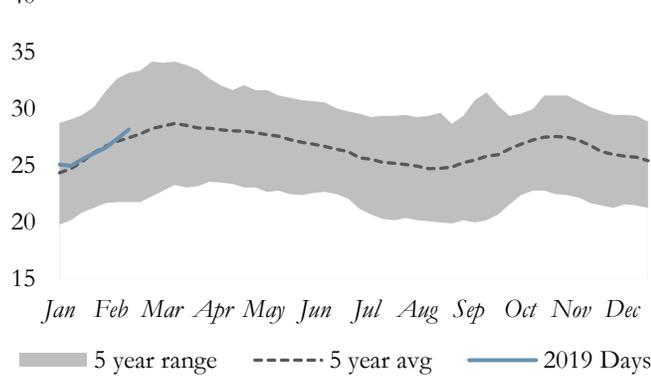
U.S. Oil Stocks, million barrels*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



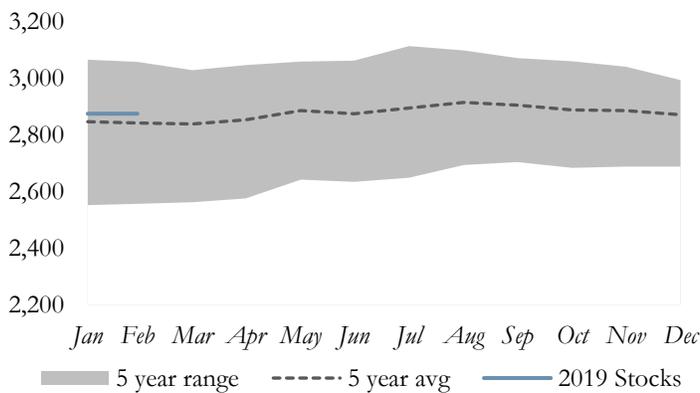
Crude Oil Stocks

	1 Week Change from Ago	1 Year Ago
U.S.	0.8%	8.1%
Cushing, OK	8.2%	50.1%
Days of Supply	2.9%	8.5%
East Coast (PADD 1)	-3.8%	11.8%
Midwest (PADD 2)	2.5%	21.6%
Gulf Coast (PADD 3)	0.7%	4.0%
Rocky Mountain (PADD 4)	-2.6%	-2.4%
West Coast (PADD 5)	-0.6%	-0.2%

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

January 2019 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels



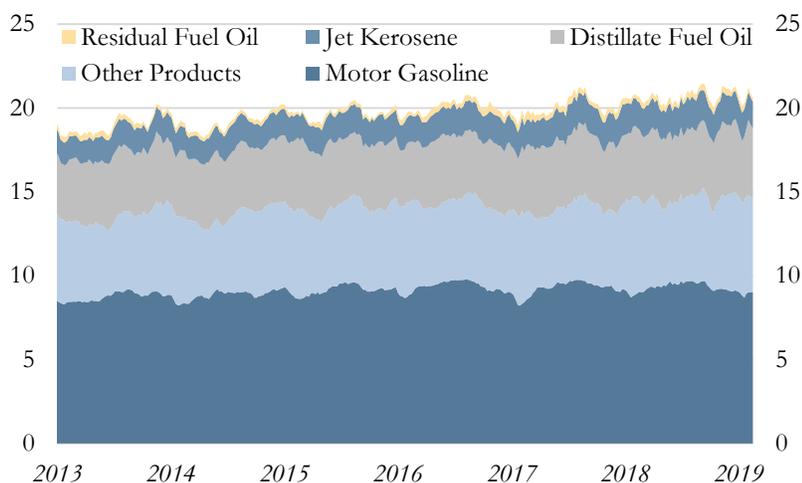
Petroleum Stocks

	Million Barrels	Change from
Current Month	2,875	
1 Month Ago	2,863	0.4%
3 Months Ago	2,849	0.9%
6 Months Ago	2,826	1.7%
1 Year Ago	2,865	0.3%

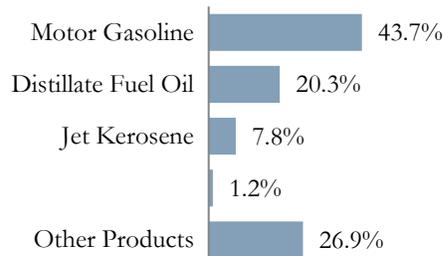
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

February 2019 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 2/15/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	20,622	20,286	21,259	20,807	20,646
Motor Gasoline	9,021	8,698	9,185	9,547	9,054
Distillate Fuel Oil	4,195	3,819	4,412	3,909	4,139
Jet Kerosene	1,600	1,652	1,762	1,835	1,636
Residual Fuel Oil	253	345	394	366	309
Other Products	5,553	5,772	5,506	5,150	5,508

U.S. Consumption by Product, Change from

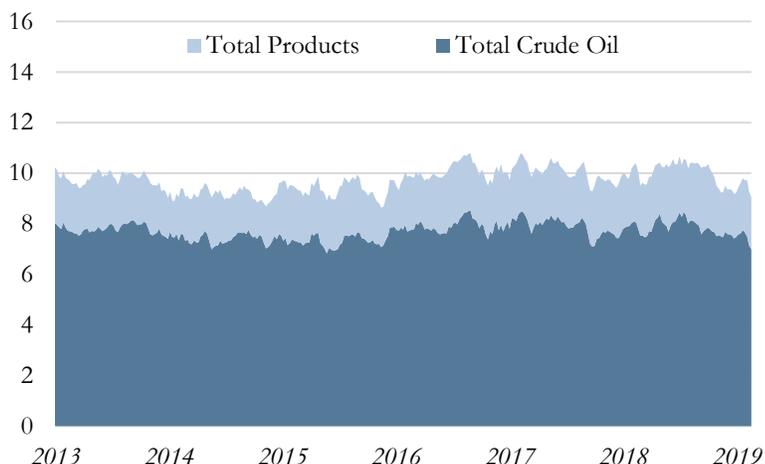
	Current 2/15/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	1.7%	-3.0%	-0.9%	-0.1%
Motor Gasoline	-	3.7%	-1.8%	-5.5%	-0.4%
Distillate Fuel Oil	-	9.8%	-4.9%	7.3%	1.4%
Jet Kerosene	-	-3.1%	-9.2%	-12.8%	-2.2%
Residual Fuel Oil	-	-26.7%	-35.8%	-30.9%	-18.1%
Other Products	-	-3.8%	0.9%	7.8%	0.8%

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

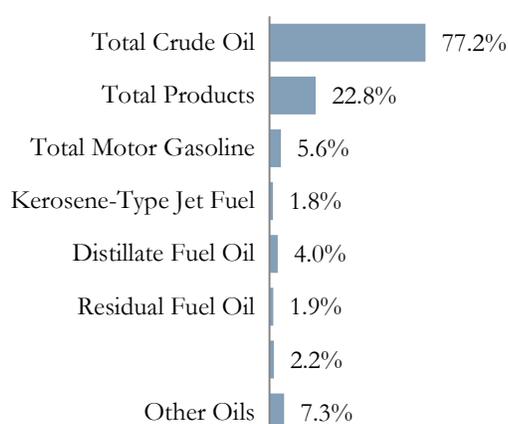
February 2019 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product*

Thousand barrels per day

	Current 2/15/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	6,990	7,739	7,472	8,053	7,808
Total Products	2,066	2,054	1,769	2,325	2,237
Total Motor Gasoline	506	451	363	792	561
Kerosene-Type Jet Fuel	159	106	110	145	126
Distillate Fuel Oil	366	297	179	162	344
Residual Fuel Oil	175	222	183	323	191
Propane/Propylene	199	195	157	102	236
Other Oils	661	784	768	802	779
Total Imports	9,056	9,793	9,241	10,378	10,045

U.S. Imports by Product, Change from

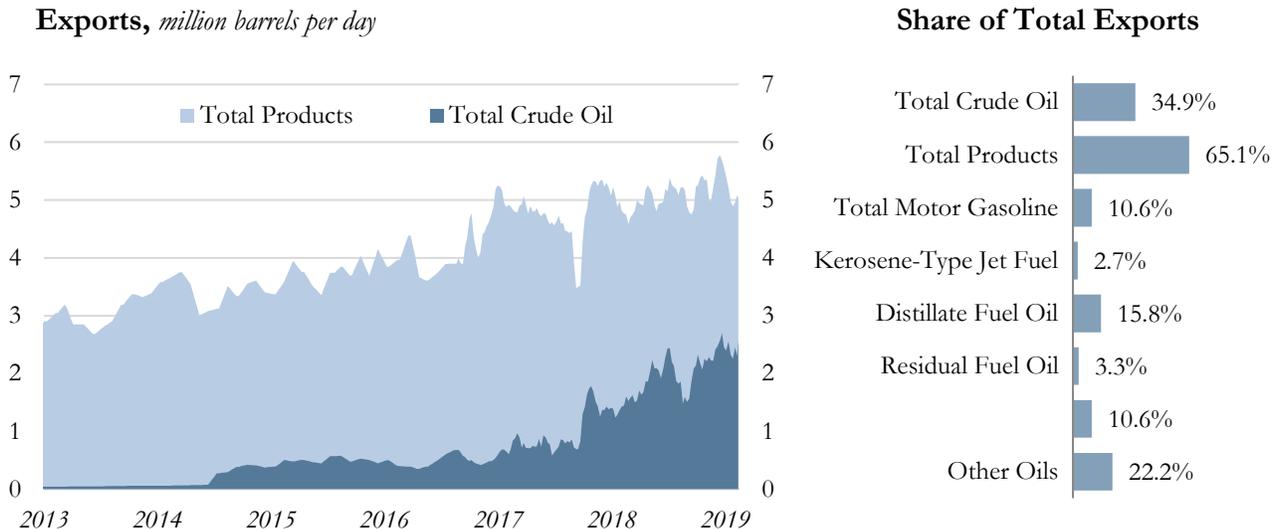
	Current 2/15/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	-9.7%	-6.5%	-13.2%	-10.5%
Total Products	-	0.6%	16.8%	-11.1%	-7.6%
Total Motor Gasoline	-	12.2%	39.4%	-36.1%	-9.8%
Kerosene-Type Jet Fuel	-	50.0%	44.5%	9.7%	26.2%
Distillate Fuel Oil	-	23.2%	104.5%	125.9%	6.4%
Residual Fuel Oil	-	-21.2%	-4.4%	-45.8%	-8.4%
Propane/Propylene	-	2.1%	26.8%	95.1%	-15.7%
Other Oils	-	-15.7%	-13.9%	-17.6%	-15.1%
Total Imports	-	-7.5%	-2.0%	-12.7%	-9.8%

*Totals may not sum due to component rounding

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

January 2019 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages



U.S. Exports by Product*

Thousand barrels per day

	Current 2/15/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	2,696	2,326	2,227	1,477	1,605
Total Products	5,027	4,972	4,973	5,220	4,745
Total Motor Gasoline	818	744	833	670	750
Kerosene-Type Jet Fuel	205	255	214	216	86
Distillate Fuel Oil	1,219	1,118	1,202	1,198	998
Residual Fuel Oil	251	200	213	391	309
Propane/Propylene	819	973	863	1,091	809
Other Oils	1,714	1,683	1,649	1,655	1,793
Total Exports	7,723	7,298	7,201	6,697	6,349

U.S. Exports by Product, Change from

	Current 2/15/19	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
Total Crude Oil	-	15.9%	21.1%	82.5%	68.0%
Total Products	-	1.1%	1.1%	-3.7%	5.9%
Total Motor Gasoline	-	9.9%	-1.8%	22.1%	9.1%
Kerosene-Type Jet Fuel	-	-19.6%	-4.2%	-5.1%	138.4%
Distillate Fuel Oil	-	9.0%	1.4%	1.8%	22.1%
Residual Fuel Oil	-	25.5%	17.8%	-35.8%	-18.8%
Propane/Propylene	-	-15.8%	-5.1%	-24.9%	1.2%
Other Oils	-	1.8%	3.9%	3.6%	-4.4%
Total Exports	-	5.8%	7.2%	15.3%	21.6%

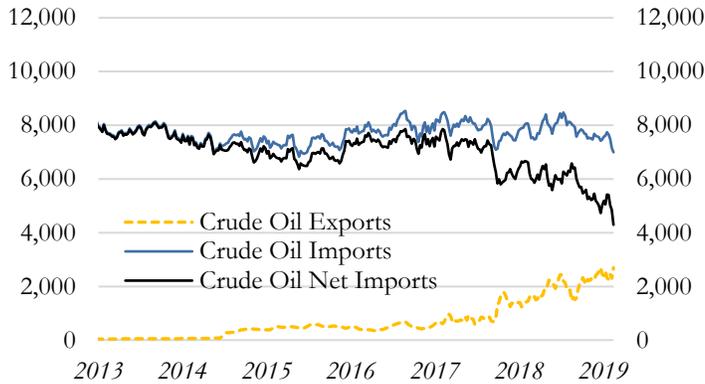
*Totals may not sum due to rounding

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

February 2019 Weekly U.S. Net Imports of Crude Oil & Petroleum Products

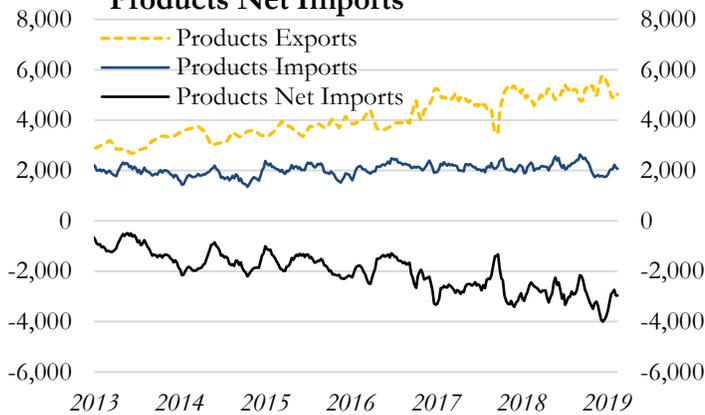
4-Week Averages, Thousand barrels per day

Crude Oil Net Imports



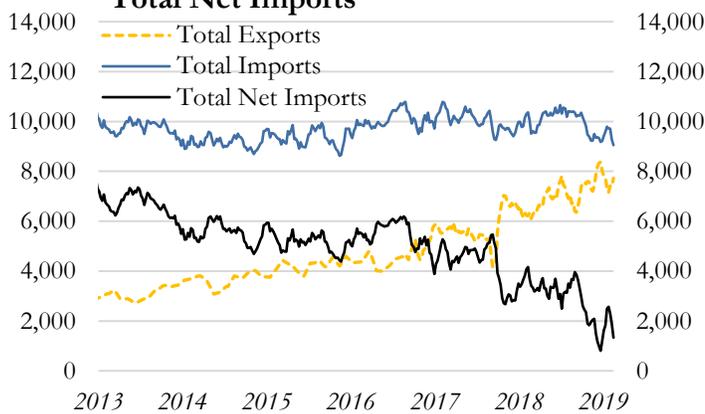
Crude Oil Net Imports		Change
Thousand barrels per day		from
2/15/19	4,294	
Month Ago	5,413	-20.7%
3 Months Ago	5,245	-18.1%
6 Months Ago	6,576	-34.7%
1 Year Ago	6,203	-30.8%

Products Net Imports



Products Net Imports		Change
Thousand barrels per day		from
2/15/19	-2,961	
Month Ago	-2,918	-
3 Months Ago	-3,204	-
6 Months Ago	-2,895	-
1 Year Ago	-2,508	-

Total Net Imports



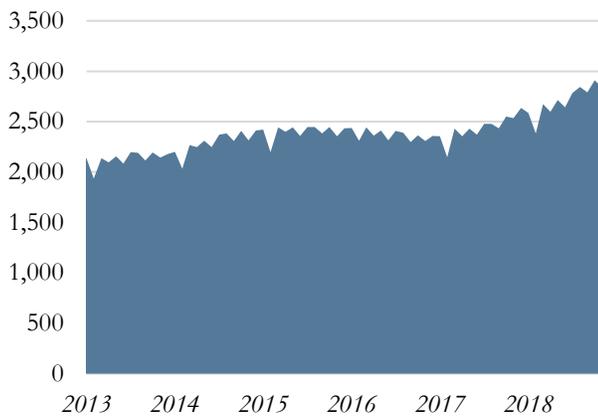
Total Net Imports		Change
Thousand barrels per day		from
2/15/19	1,333	
Month Ago	2,495	-46.6%
3 Months Ago	2,041	-34.7%
6 Months Ago	3,681	-63.8%
1 Year Ago	3,696	-63.9%

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

U.S. Natural Gas Production & Stocks

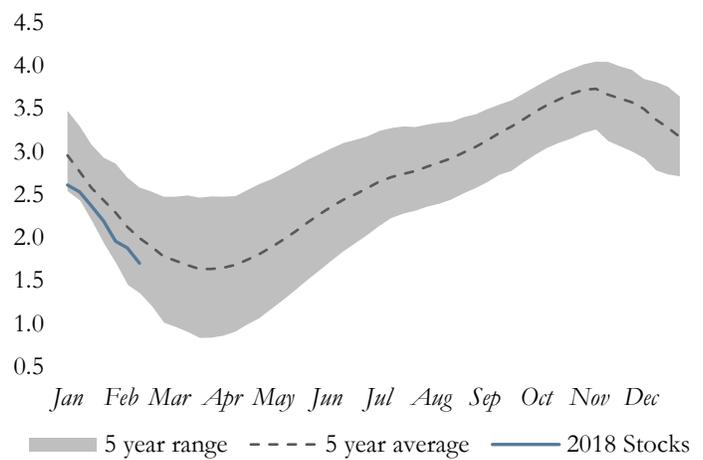
November 2018 Production

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



February 2018 Weekly Stocks

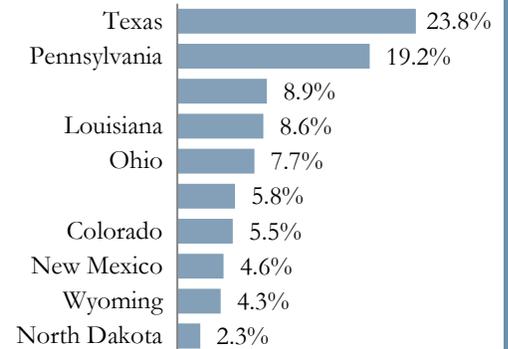
U.S. Natural Gas Stocks, Billion cubic feet (Bcf)



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	2,845	2,909	2,845	2,713	2,535
U.S. Stocks	1,705	2,370	3,113	2,435	1,760

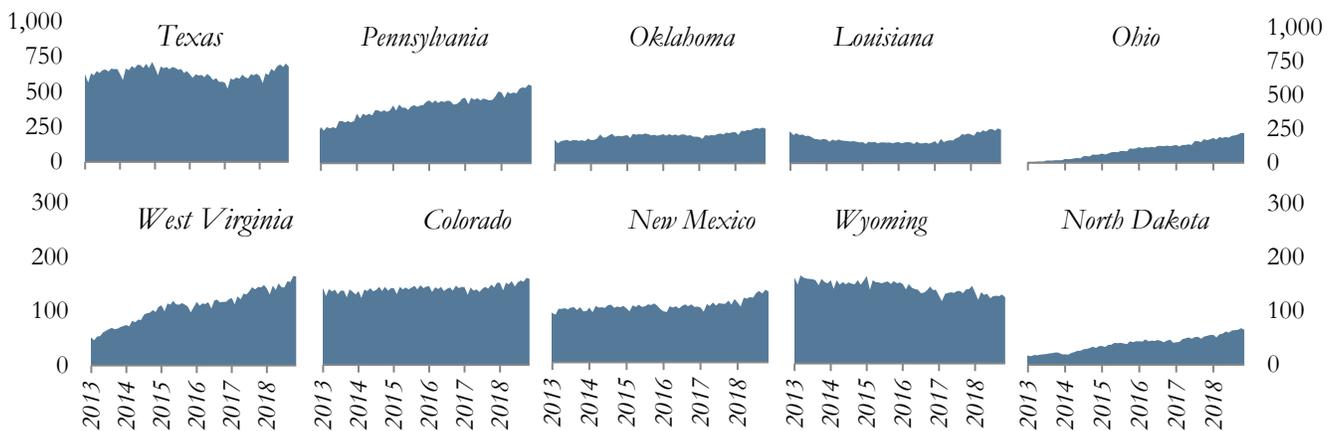
Share of Production



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%	0.0%	4.9%	12.2%
U.S. Stocks	-	-28.1%	-45.2%	-30.0%	-3.1%

Top Producing States, Billion cubic feet (Bcf)



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

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

Definitions:

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

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

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

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

Notes:

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

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

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

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

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

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

Notes:

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

Data Revisions

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

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