

# THE U.S. Energy DATABOOK

*A summary of national and global energy indicators*



FEBRUARY 9, 2022

FEDERAL RESERVE BANK of KANSAS CITY

## SUMMARY OF CURRENT ENERGY CONDITIONS

Since the last edition of the U.S. energy databook, the energy sector made modest gains. With increased economic activity, oil and gas prices grew substantially. For the week ending January 28<sup>th</sup>, West Texas Intermediate (WTI) crude oil averaged \$86.94 per barrel and North Sea Brent averaged \$90.12 per barrel, rising 3.7 percent and 7.1 percent over the last three months, respectively. The Henry Hub natural gas spot price averaged \$4.60 per million Btu for the week ending January 28<sup>th</sup>, falling 19.0 percent over the last three months. In January, the number of total active drilling rigs in the United States rose 4.1 percent from a month ago, and is up 12.1 percent from three months ago. U.S. crude oil production increased 2.1% percent from a month ago and is up 4.9% percent from three months ago. Oil production remains below pre-pandemic levels. U.S. crude oil and petroleum products exports declined 15.9 percent in the last quarter and imports rose by 2.6 percent. Global demand for petroleum was up 1.2 percent and global petroleum production rose 1.3 percent over the last quarter, respectively.

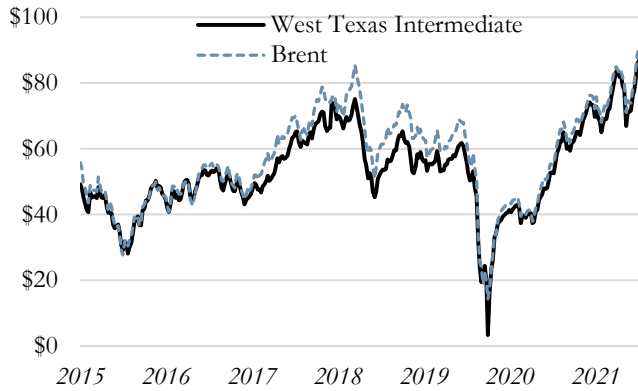
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S. oil imports; U.S. oil exports; oil and gas drilling rig counts; and U.S. natural gas production. These indicators can be found on the following pages.



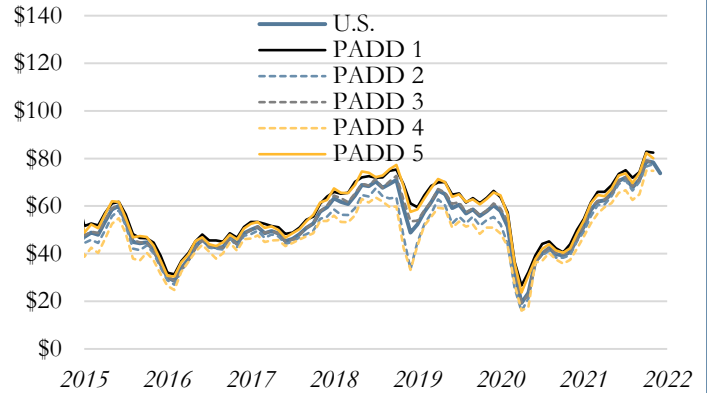
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through January 28, 2022

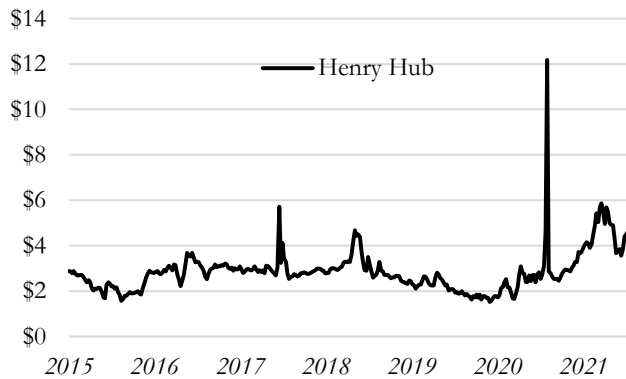
Weekly Oil Spot Prices, per barrel



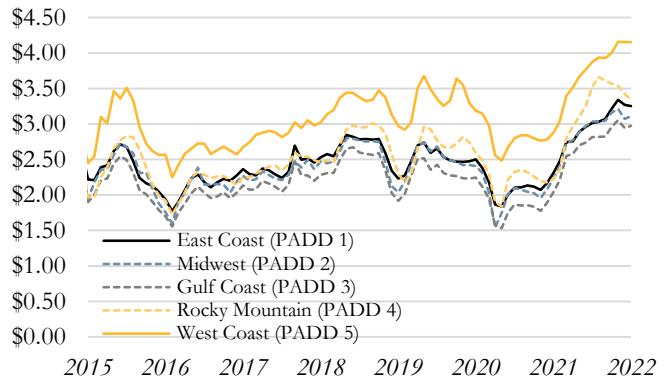
Refiner Acquisition Cost of Oil\*, per barrel



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	1/28/22	Ago	Ago	Ago	Ago	Ago
West Texas Intermediate	\$86.94	\$1.01	\$10.89	\$3.10	\$14.19	\$34.42
Brent	\$90.12	\$0.96	\$11.96	\$6.00	\$14.37	\$34.94
Henry Hub	\$4.60	\$0.10	\$1.04	-\$1.08	\$0.54	\$1.89

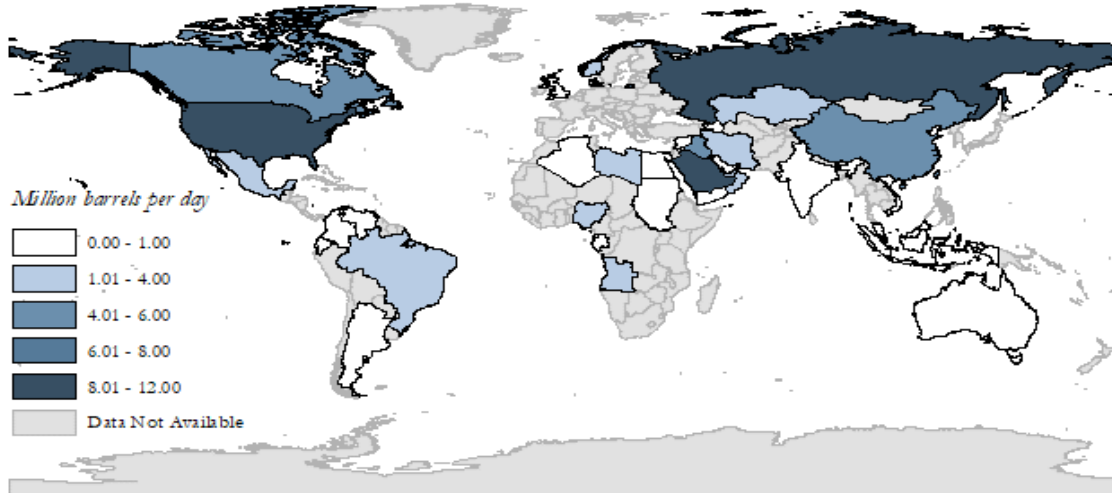
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	3 months	6 Months	1 Year
Geographic Area	Jan-22	Ago	Ago	Ago	Ago
East Coast (PADD 1)	\$3.25	-\$0.02	\$0.04	\$0.24	\$0.94
Midwest (PADD 2)	\$3.11	\$0.04	-\$0.05	\$0.08	\$0.88
Gulf Coast (PADD 3)	\$2.97	\$0.03	\$0.02	\$0.16	\$0.93
Rocky Mountain (PADD 4)	\$3.34	-\$0.08	-\$0.22	-\$0.18	\$1.11
West Coast (PADD 5)	\$4.15	\$0.00	\$0.16	\$0.29	\$1.28

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

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

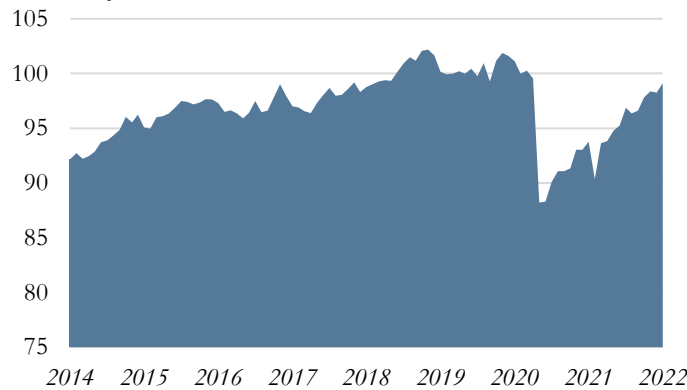
December 2021 Global Petroleum Production



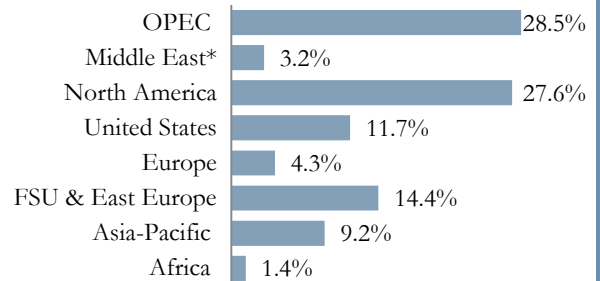
Source: Energy Information Administration/Haver Analytics

December 2021

Monthly Global Petroleum Production, million barrels per day

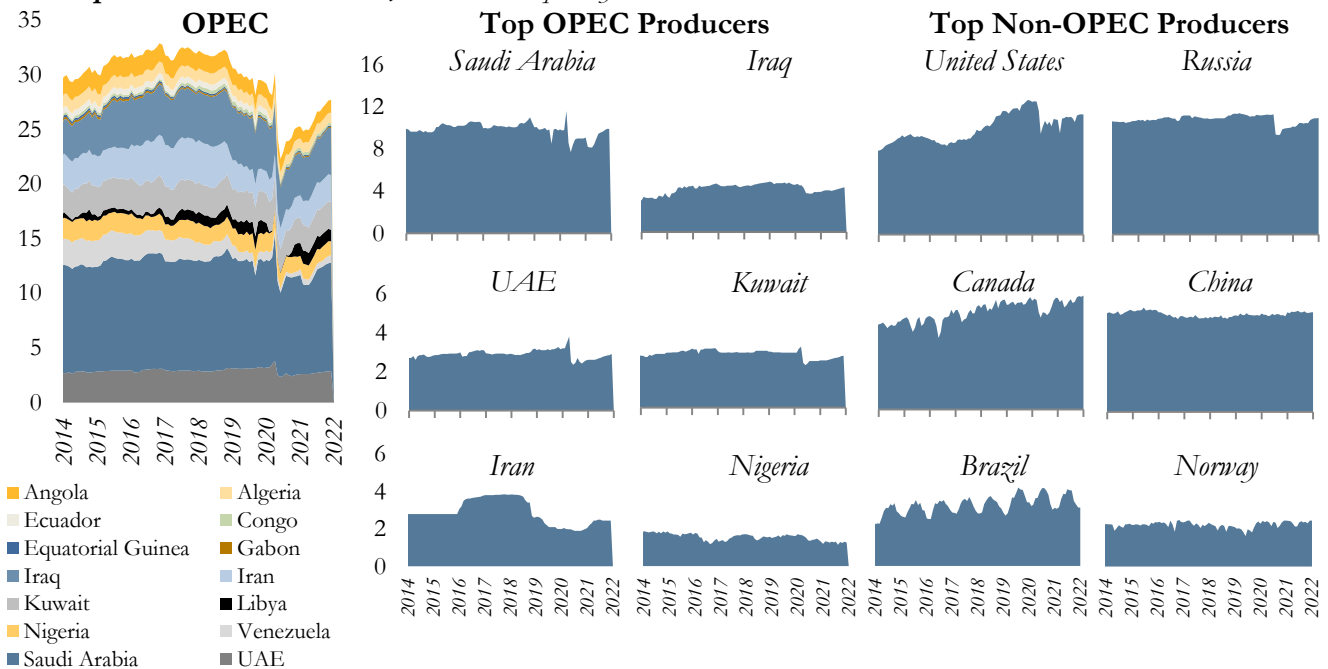


Regional Share of Production



\*Excludes OPEC

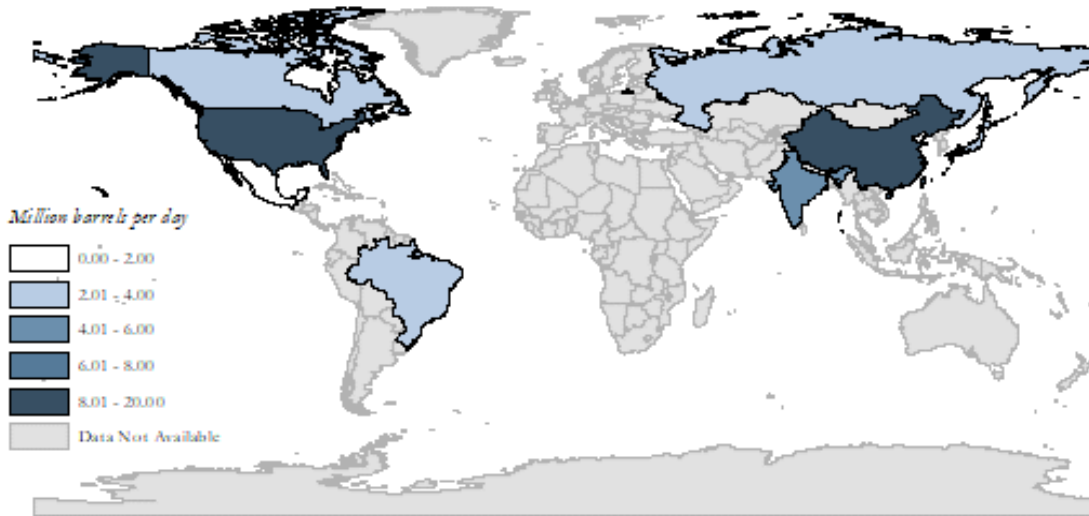
Top Crude Oil Producers, million barrels per day



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

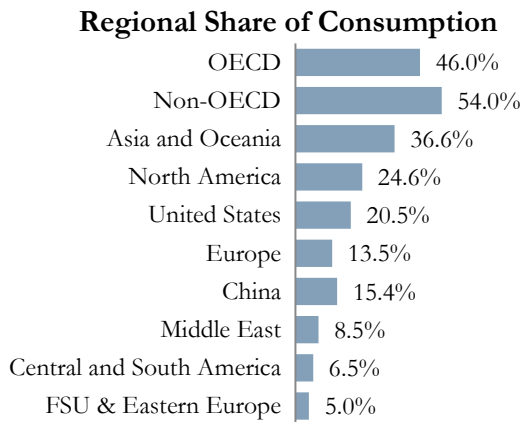
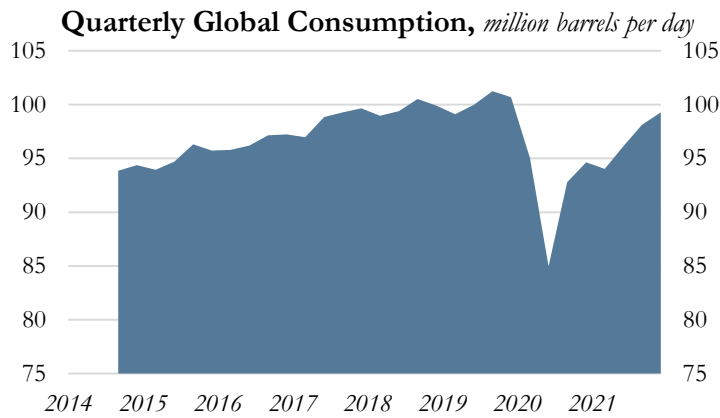
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Fourth Quarter 2021 Global Petroleum Consumption

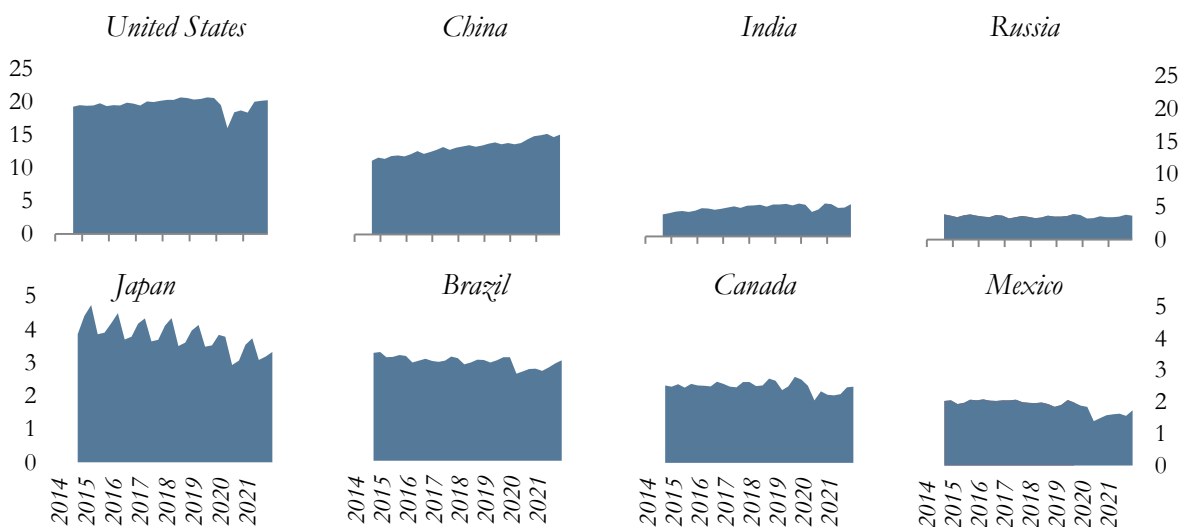


Source: Energy Information Administration / Haver Analytics

Fourth Quarter 2021

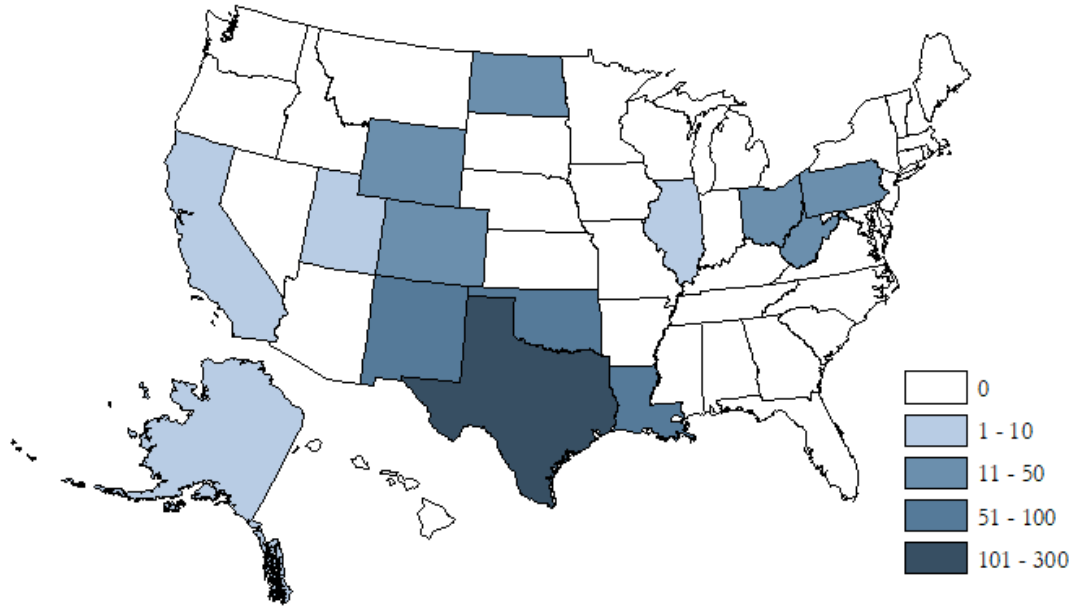


Top Petroleum Consumers, million barrels per day



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

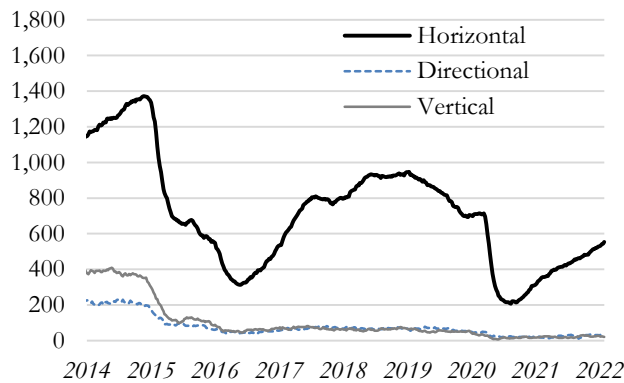
January 2022 Weekly Active Oil & Gas Drilling Rig Counts



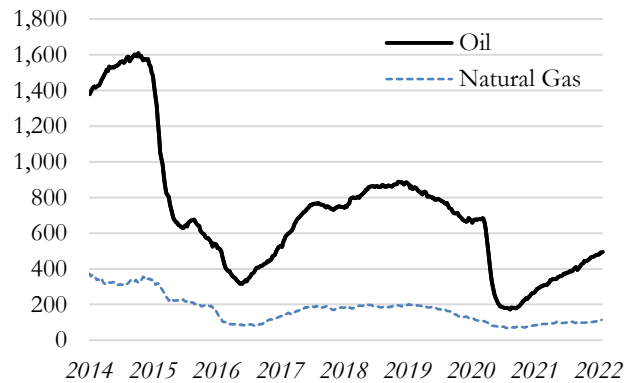
Source: Baker Hughes/Haver Analytics

January 28, 2022

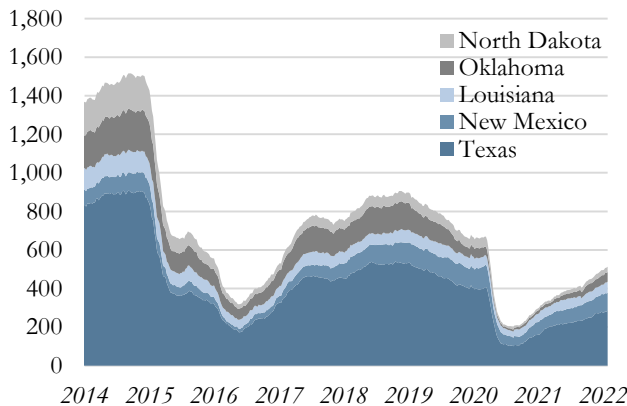
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

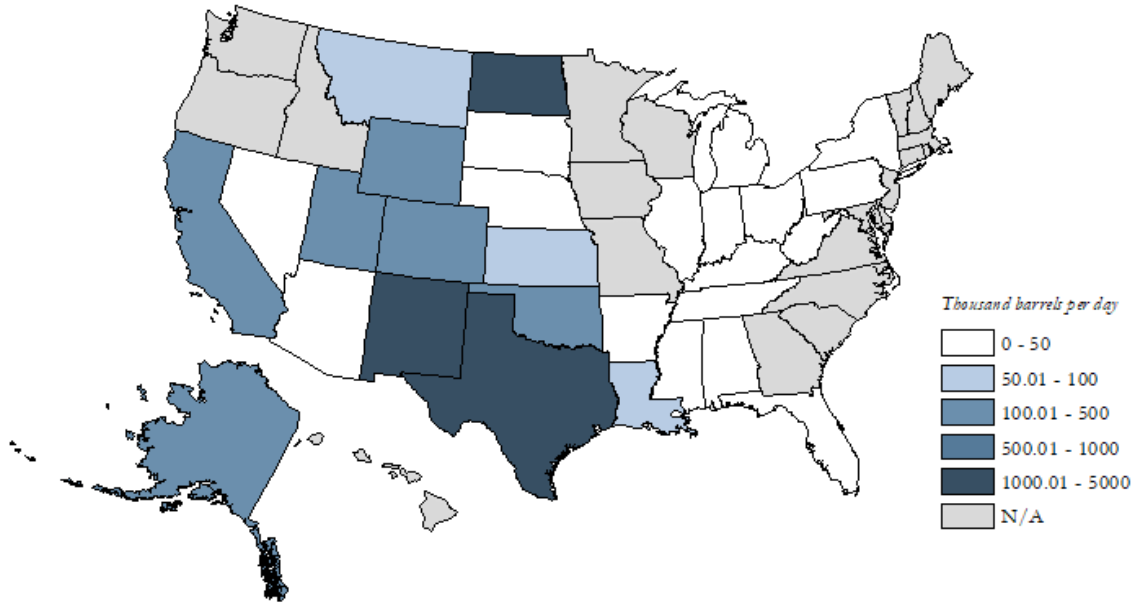
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	495	480	444	295
Gas	115	106	100	88
Misc	0	0	0	1
<b>Total</b>	<b>610</b>	<b>586</b>	<b>544</b>	<b>384</b>

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	3.1%	11.5%	67.8%
Gas	-	8.5%	15.0%	30.7%
Misc	-	-	-	-100.0%
<b>Total</b>	-	<b>4.1%</b>	<b>12.1%</b>	<b>58.9%</b>

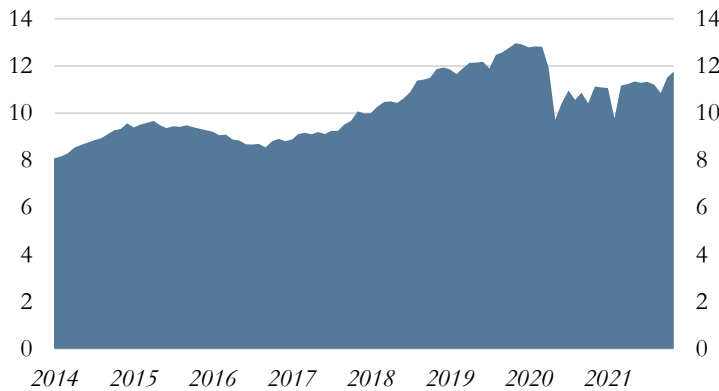
Source: Baker Hughes/Haver Analytics

November 2021 U.S. Crude Oil Production



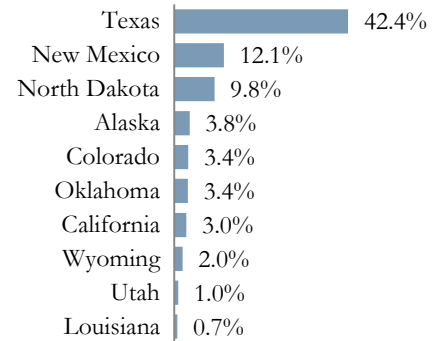
Source: Energy Information Administration/Haver Analytics

Monthly U.S. Production, million barrels per day

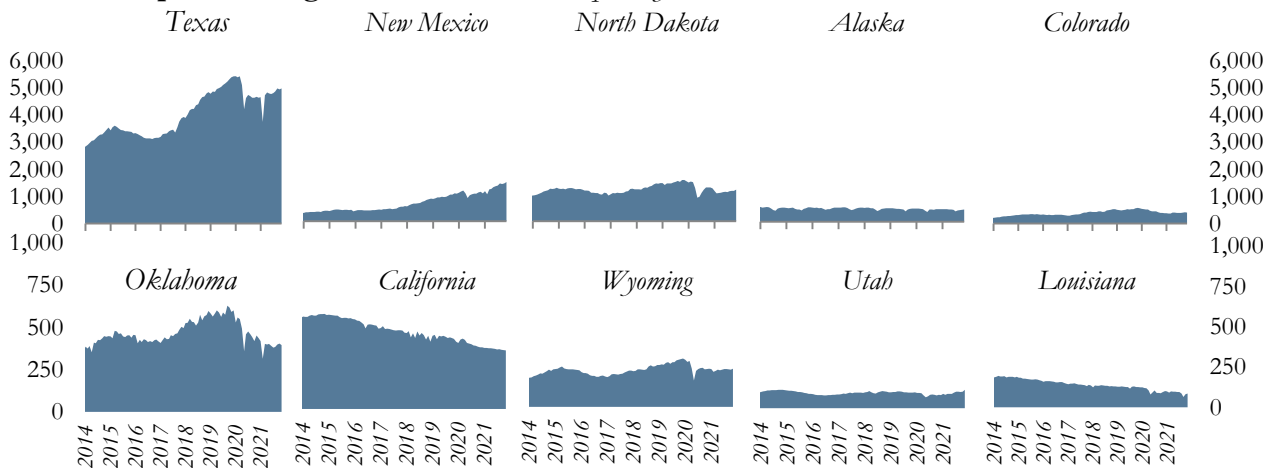


November 2021

Share of Production

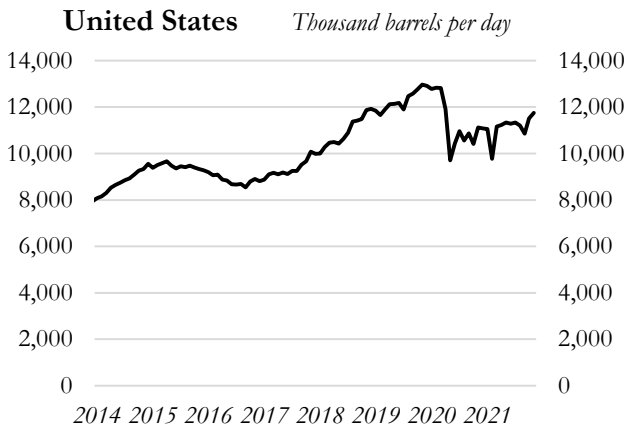


Top Producing States, thousand barrels per day

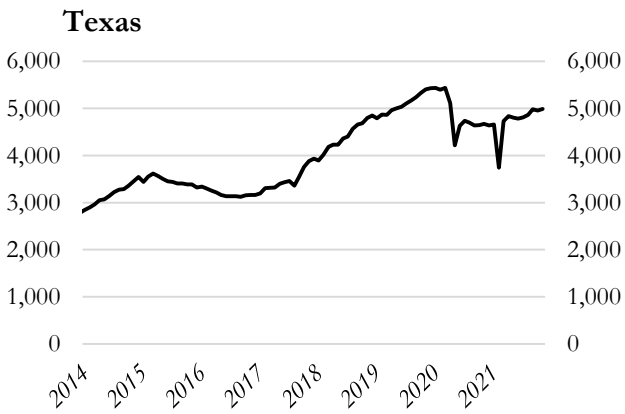


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

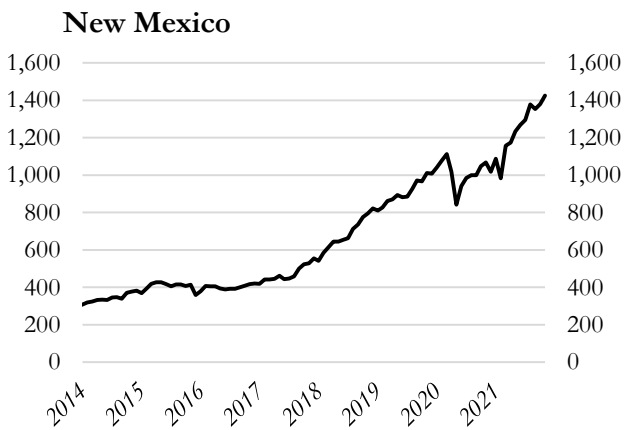
Data through November 2021



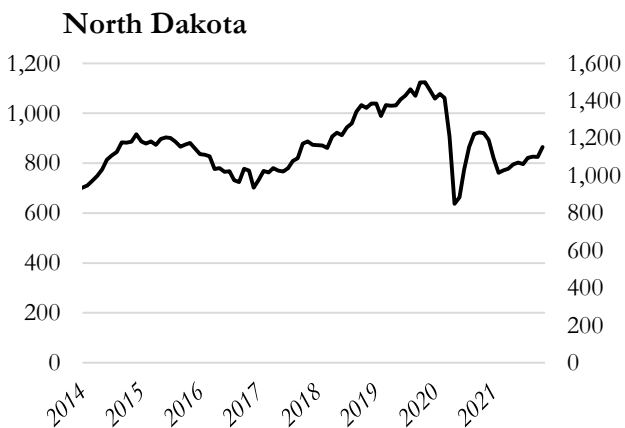
<b>United States</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-21	11,753	
Month Ago	11,509	2.1%
3 Months Ago	11,206	4.9%
6 Months Ago	11,334	3.7%
1 Year Ago	11,121	5.7%



<b>Texas</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-21	4,988	
Month Ago	4,954	0.7%
3 Months Ago	4,865	2.5%
6 Months Ago	4,806	3.8%
1 Year Ago	4,671	6.8%
Share of U.S. Production		42.4%



<b>New Mexico</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-21	1,425	
Month Ago	1,380	3.3%
3 Months Ago	1,378	3.4%
6 Months Ago	1,234	15.5%
1 Year Ago	1,068	33.4%
Share of U.S. Production		12.1%

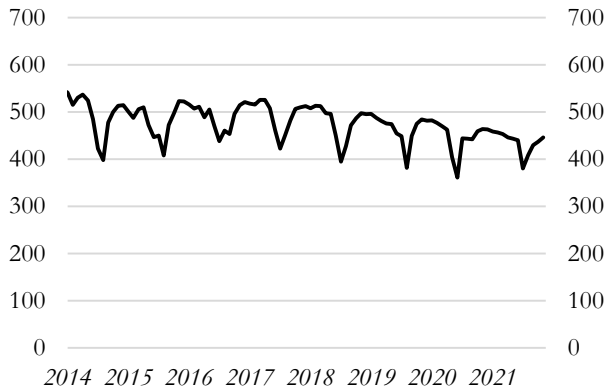


<b>North Dakota</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-21	1,154	
Month Ago	1,100	4.9%
3 Months Ago	1,094	5.5%
6 Months Ago	1,061	8.8%
1 Year Ago	1,227	-6.0%
Share of U.S. Production		9.8%

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

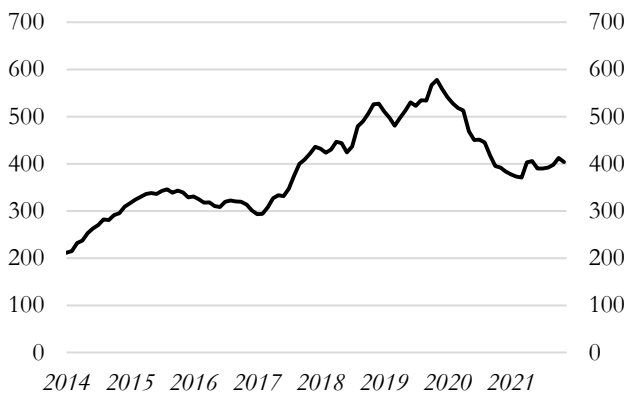
Data through November 2021

**Alaska** *Thousand barrels per day*



	<b>Alaska</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
Nov-21	446	
Month Ago	437	2.1%
3 Months Ago	409	9.2%
6 Months Ago	443	0.6%
1 Year Ago	464	-3.9%
Share of U.S. Production	3.8%	

**Colorado**



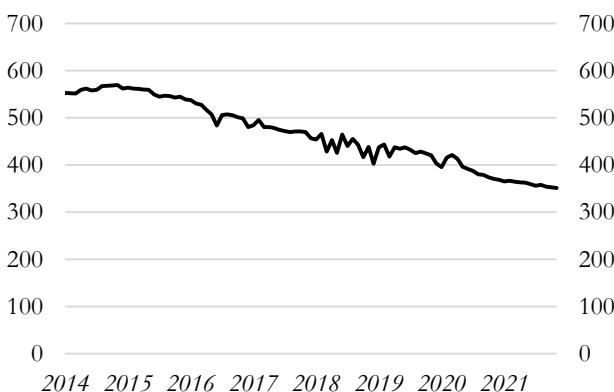
	<b>Colorado</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
Nov-21	404	
Month Ago	412	-2.1%
3 Months Ago	392	3.0%
6 Months Ago	406	-0.6%
1 Year Ago	392	2.9%
Share of U.S. Production	3.4%	

**Oklahoma**



	<b>Oklahoma</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
Nov-21	395	
Month Ago	404	-2.1%
3 Months Ago	385	2.7%
6 Months Ago	403	-2.0%
1 Year Ago	452	-12.5%
Share of U.S. Production	3.4%	

**California**



	<b>California</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
Nov-21	351	
Month Ago	353	-0.4%
3 Months Ago	358	-1.8%
6 Months Ago	363	-3.2%
1 Year Ago	370	-5.1%
Share of U.S. Production	3.0%	

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



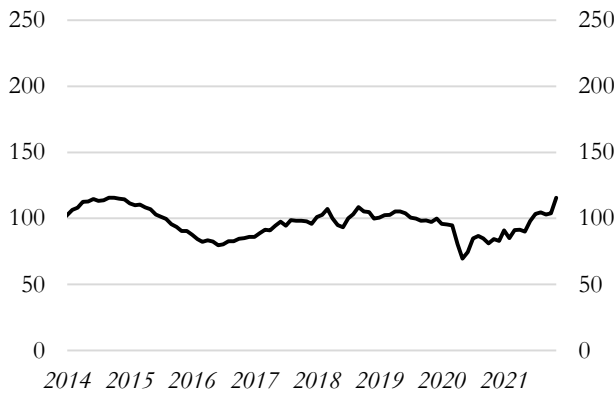
Data through November 2021

**Wyoming** *Thousand barrels per day*



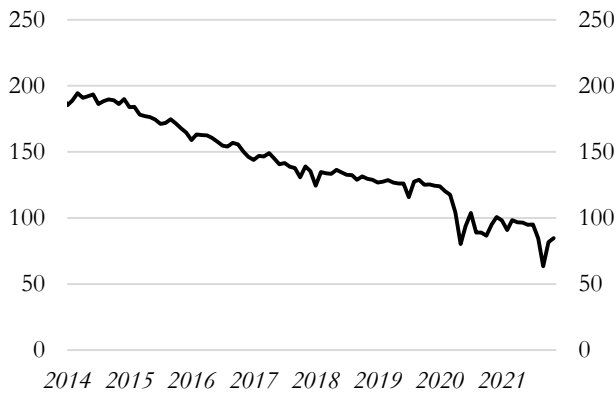
<b>Wyoming</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-21	239	
Month Ago	233	2.2%
3 Months Ago	235	1.3%
6 Months Ago	229	4.4%
1 Year Ago	237	0.6%
Share of U.S. Production		2.0%

**Utah**



<b>Utah</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-21	116	
Month Ago	104	11.3%
3 Months Ago	104	10.6%
6 Months Ago	90	28.3%
1 Year Ago	84	37.1%
Share of U.S. Production		1.0%

**Louisiana**

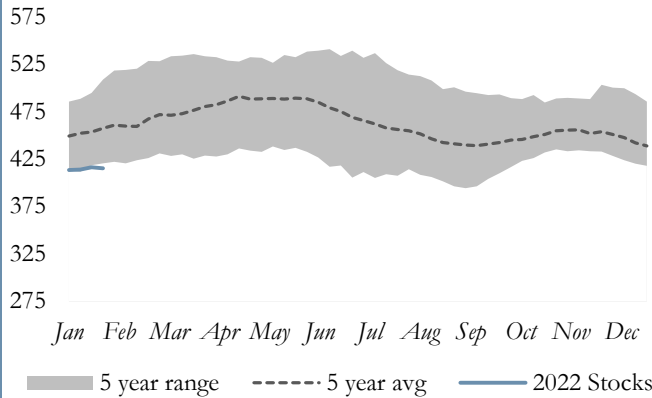


<b>Louisiana</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-21	85	
Month Ago	82	3.8%
3 Months Ago	84	0.4%
6 Months Ago	97	-12.2%
1 Year Ago	95	-10.8%
Share of U.S. Production		0.7%

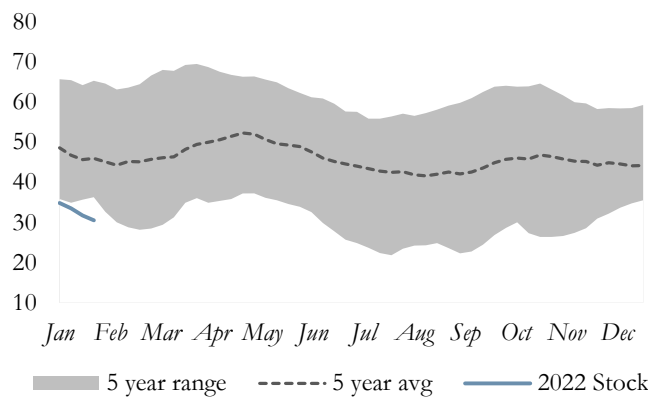
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

January 2022 Weekly U.S. Crude Oil Stocks

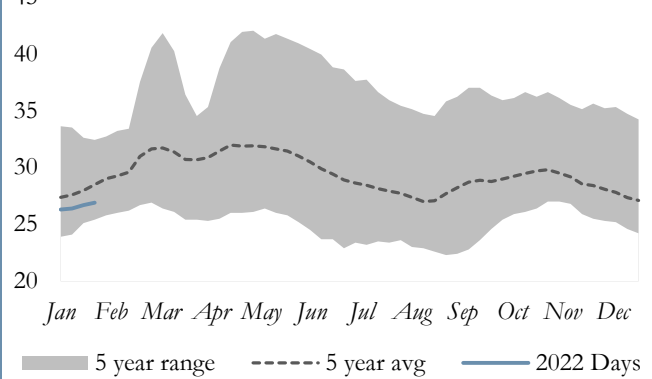
U.S. Oil Stocks, million barrels\*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



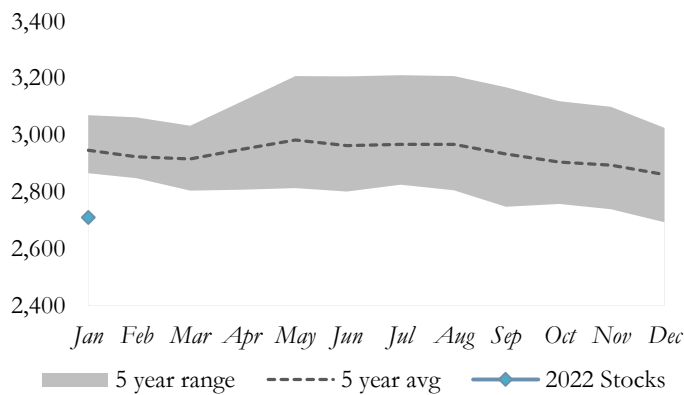
Crude Oil Stocks

	1 Week Ago	1 Year Ago
U.S.	-0.3%	-12.7%
Cushing, OK	-3.7%	-37.3%
Days of Supply	0.7%	-17.0%
East Coast (PADD 1)	18.1%	-26.8%
Midwest (PADD 2)	-0.7%	-17.7%
Gulf Coast (PADD 3)	-1.2%	-13.1%
Rocky Mountain (PADD 4)	1.0%	-3.5%
West Coast (PADD 5)	2.0%	1.5%

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

January 2022 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels

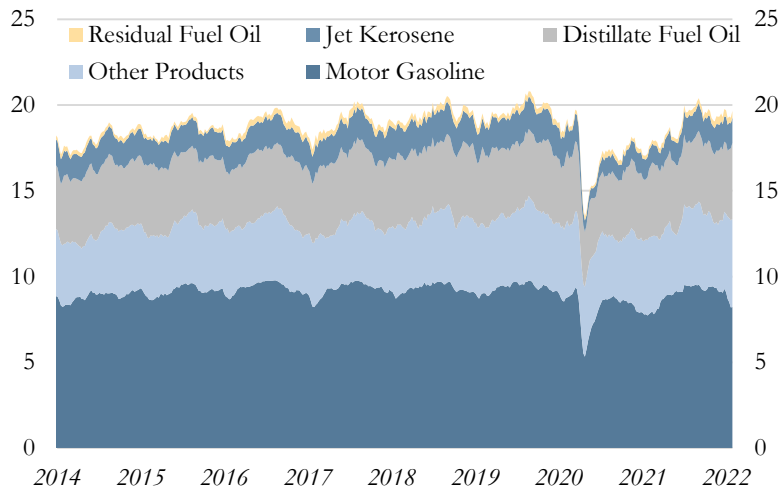


Petroleum Stocks	Million Barrels	Change from
Current Month	2,711	
1 Month Ago	2,694	0.6%
3 Months Ago	2,757	-1.7%
6 Months Ago	2,835	-4.4%
1 Year Ago	3,025	-10.4%

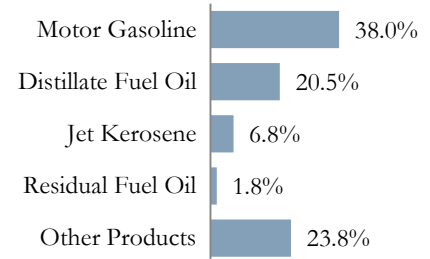
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

**January 2022 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**

	<i>Current</i> 1/28/22	<i>1 Month</i> <i>Ago</i>	<i>3 Months</i> <i>Ago</i>	<i>6 Months</i> <i>Ago</i>	<i>1 Year</i> <i>Ago</i>
All Products	21,643	21,382	20,384	20,544	19,365
Motor Gasoline	8,215	9,088	9,412	9,420	7,812
Distillate Fuel Oil	4,432	4,127	3,941	3,766	3,982
Jet Kerosene	1,466	1,531	1,471	1,565	1,136
Residual Fuel Oil	400	389	350	331	188
Other Products	5,147	4,561	4,094	4,593	4,482

**U.S. Consumption by Product, Change from**

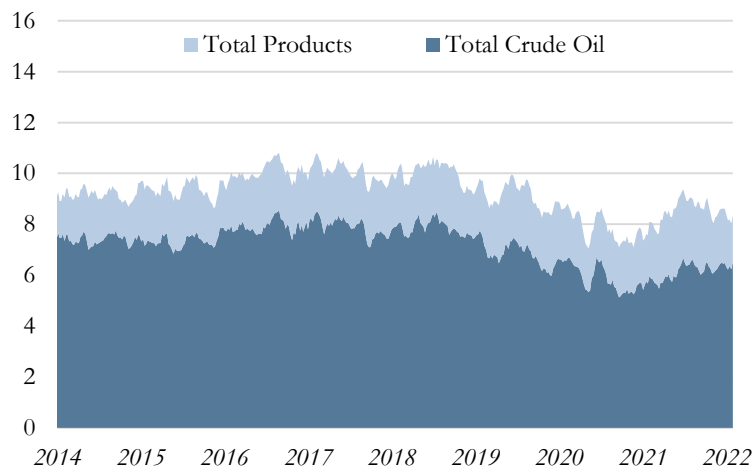
	<i>Current</i> 1/28/22	<i>1 Month</i> <i>Ago</i>	<i>3 Months</i> <i>Ago</i>	<i>6 Months</i> <i>Ago</i>	<i>1 Year</i> <i>Ago</i>
All Products	-	1.2%	6.2%	5.3%	11.8%
Motor Gasoline	-	-9.6%	-12.7%	-12.8%	5.2%
Distillate Fuel Oil	-	7.4%	12.5%	17.7%	11.3%
Jet Kerosene	-	-4.2%	-0.3%	-6.3%	29.0%
Residual Fuel Oil	-	2.8%	14.3%	20.8%	112.8%
Other Products	-	12.8%	25.7%	12.1%	14.8%

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

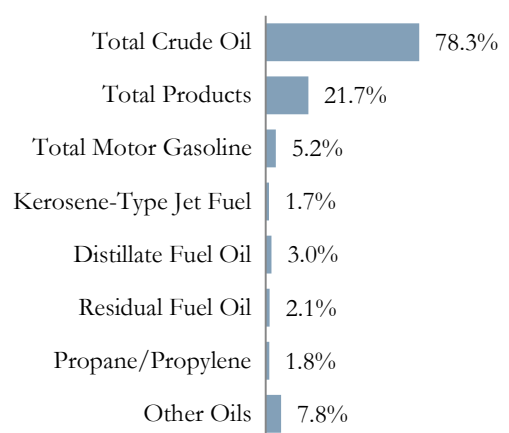
January 2022 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product\*

Thousand barrels per day

	Current 1/28/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>6,534</b>	<b>6,327</b>	<b>6,061</b>	<b>6,564</b>	<b>5,964</b>
<b>Total Products</b>	<b>1,811</b>	<b>2,044</b>	<b>2,073</b>	<b>2,491</b>	<b>2,130</b>
Total Motor Gasoline	432	554	578	1,043	480
Kerosene-Type Jet Fuel	145	134	210	145	124
Distillate Fuel Oil	249	258	227	128	450
Residual Fuel Oil	172	206	244	128	165
Propane/Propylene	150	151	106	85	155
Other Oils	654	742	701	949	756
<b>Total Imports</b>	<b>8,345</b>	<b>8,371</b>	<b>8,134</b>	<b>9,055</b>	<b>8,094</b>

U.S. Imports by Product, Change from

	Current 1/28/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>3.3%</b>	<b>7.8%</b>	<b>-0.5%</b>	9.6%
<b>Total Products</b>	-	<b>-11.4%</b>	<b>-12.6%</b>	<b>-27.3%</b>	<b>-15.0%</b>
Total Motor Gasoline	-	-22.0%	-25.3%	-58.6%	-10.0%
Kerosene-Type Jet Fuel	-	8.2%	-31.0%	0.0%	16.9%
Distillate Fuel Oil	-	-3.5%	9.7%	94.5%	-44.7%
Residual Fuel Oil	-	-16.5%	-29.5%	34.4%	4.2%
Propane/Propylene	-	-0.7%	41.5%	76.5%	-3.2%
Other Oils	-	-11.9%	-6.7%	-31.1%	-13.5%
<b>Total Imports</b>	-	<b>-0.3%</b>	<b>2.6%</b>	<b>-7.8%</b>	<b>3.1%</b>

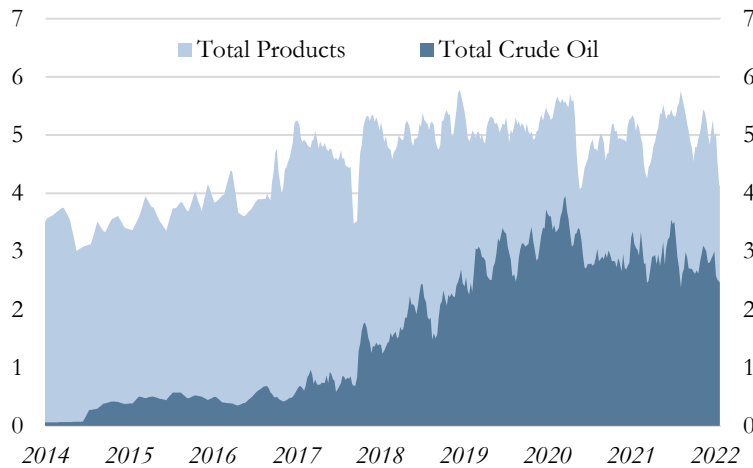
\*Totals may not sum due to component rounding

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

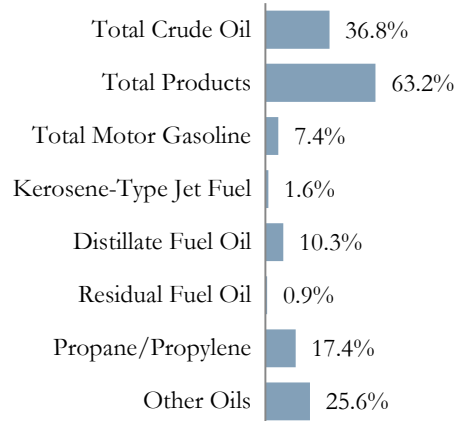
January 2022 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages

Exports, million barrels per day



Share of Total Exports



U.S. Exports by Product\*

Thousand barrels per day

	Current 1/28/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>2,434</b>	<b>3,002</b>	<b>2,822</b>	<b>2,720</b>	<b>3,025</b>
<b>Total Products</b>	<b>4,186</b>	<b>4,965</b>	<b>5,052</b>	<b>5,549</b>	<b>5,203</b>
Total Motor Gasoline	493	632	701	739	728
Kerosene-Type Jet Fuel	108	160	115	97	105
Distillate Fuel Oil	682	1,013	999	1,222	892
Residual Fuel Oil	62	72	89	127	86
Propane/Propylene	1,150	1,149	1,149	1,255	1,346
Other Oils	1,692	1,940	1,999	2,109	2,046
<b>Total Exports</b>	<b>6,620</b>	<b>7,967</b>	<b>7,874</b>	<b>8,270</b>	<b>8,228</b>

U.S. Exports by Product, Change from

	Current 1/28/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>-18.9%</b>	<b>-13.7%</b>	<b>-10.5%</b>	<b>-19.5%</b>
<b>Total Products</b>	-	<b>-15.7%</b>	<b>-17.1%</b>	<b>-24.6%</b>	<b>-19.5%</b>
Total Motor Gasoline	-	-22.0%	-29.7%	-33.3%	-32.3%
Kerosene-Type Jet Fuel	-	-32.5%	-6.1%	11.3%	2.9%
Distillate Fuel Oil	-	-32.7%	-31.7%	-44.2%	-23.5%
Residual Fuel Oil	-	-13.9%	-30.3%	-51.2%	-27.9%
Propane/Propylene	-	0.1%	0.1%	-8.4%	-14.6%
Other Oils	-	-12.8%	-15.4%	-19.8%	-17.3%
<b>Total Exports</b>	-	<b>-16.9%</b>	<b>-15.9%</b>	<b>-20.0%</b>	<b>-19.5%</b>

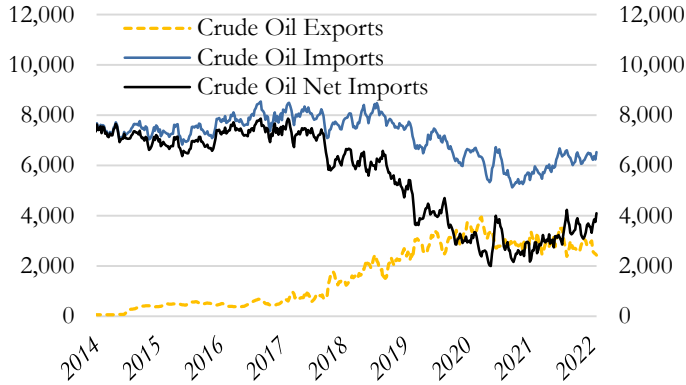
\*Totals may not sum due to rounding

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

**January 2022 Weekly U.S. Net Imports of Crude Oil & Petroleum Products**

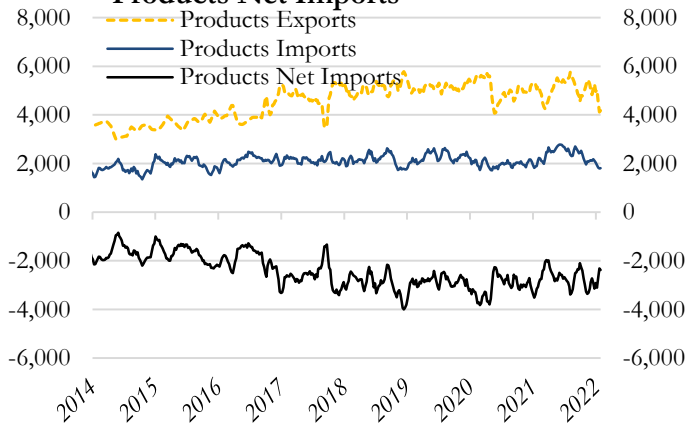
*4-Week Averages, Thousand barrels per day*

**Crude Oil Net Imports**



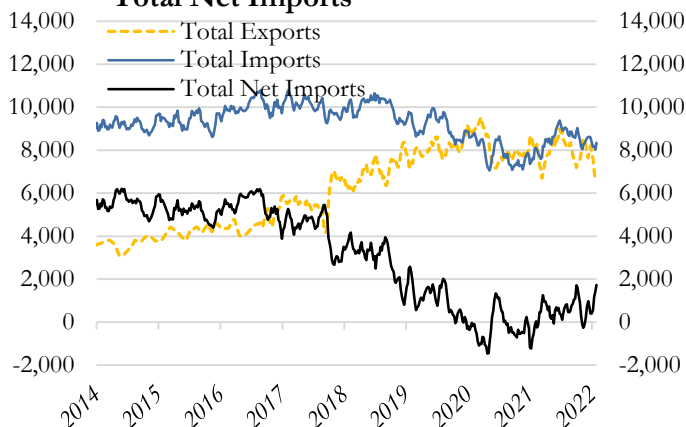
<b>Crude Oil Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
1/28/22	4,099	
Month Ago	3,325	23.3%
3 Months Ago	3,240	26.5%
6 Months Ago	3,844	6.6%
1 Year Ago	2,939	39.5%

**Products Net Imports**



<b>Products Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
1/28/22	-2,374	
Month Ago	-2,921	-
3 Months Ago	-2,979	-
6 Months Ago	-3,058	-
1 Year Ago	-3,072	-

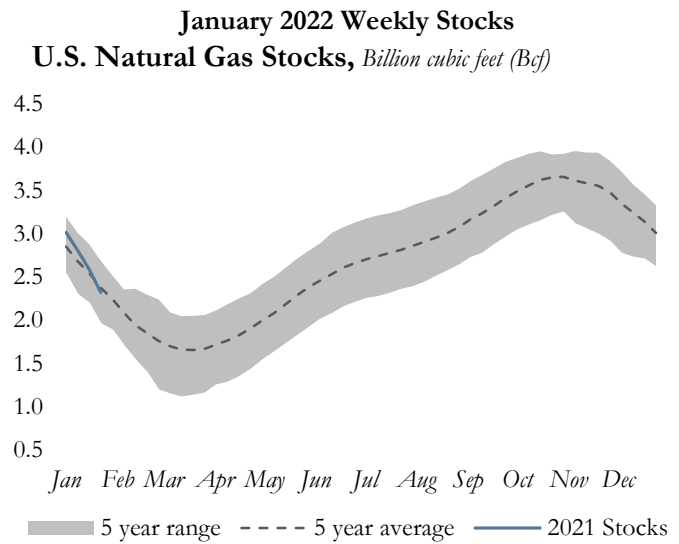
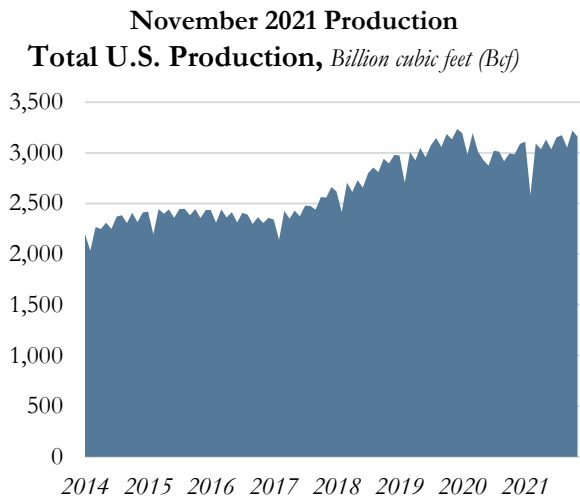
**Total Net Imports**



<b>Total Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
1/28/22	1,725	
Month Ago	404	-
3 Months Ago	261	-
6 Months Ago	786	-
1 Year Ago	(134)	-

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

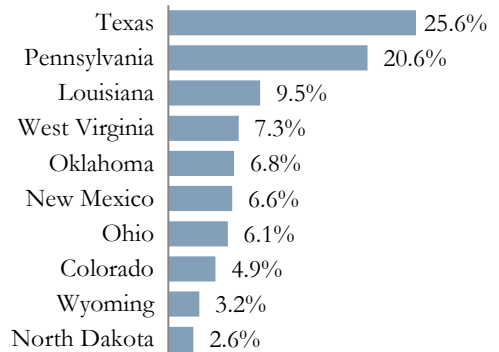
U.S. Natural Gas Production & Stocks



**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	3,158	3,219	3,173	3,130	3,110
U.S. Stocks	2,323	3,195	3,611	2,727	2,689

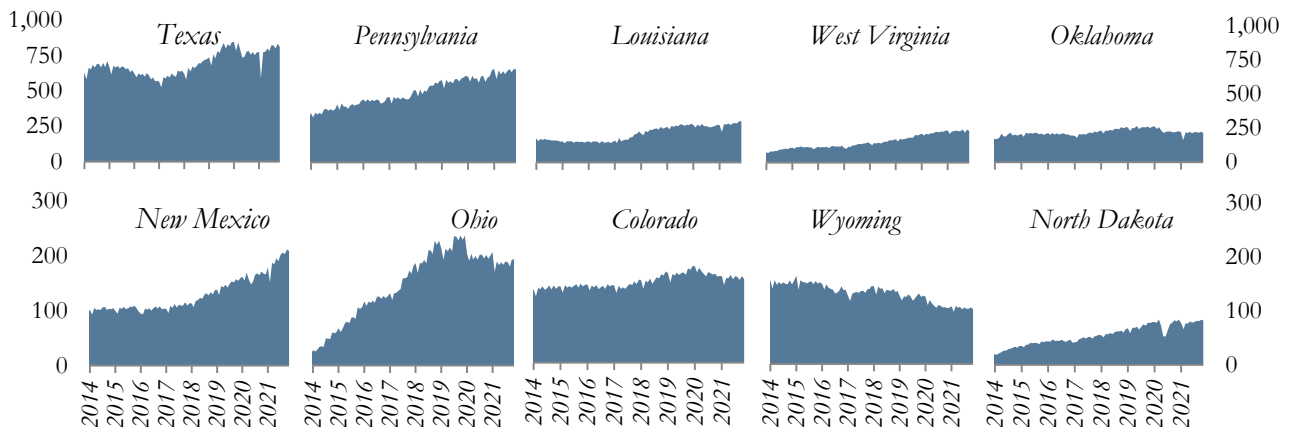
**Share of Production**



**U.S. Natural Gas, Change from**

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	-1.9%	-0.5%	0.9%	1.5%
U.S. Stocks	-	-27.3%	-35.7%	-14.8%	-13.6%

**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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