

THE U.S. Energy DATABOOK

A summary of national and global energy indicators



FEBRUARY 26, 2024

FEDERAL RESERVE BANK *of* KANSAS CITY

SUMMARY OF CURRENT ENERGY CONDITIONS

Since the last edition of the U.S. Energy Databook, activity in the energy sector decreased moderately. For the week ending February 9, West Texas Intermediate (WTI) crude oil averaged \$75.05 per barrel and North Sea Brent averaged \$81.51 per barrel, decreasing 3.7% and 2.4% respectively over the last quarter. The Henry Hub natural gas spot price averaged \$1.93 per million Btu for the week ending February 9, increasing 21.5% over the last three months. Over the last quarter, the total number of active drilling rigs in the United States increased slightly by 1.1%, but is 18% below year-ago levels. U.S. crude oil production increased 0.6% from a month ago and is up 2.0% from three months ago. U.S. crude oil and petroleum products exports decreased 5.9% in the last quarter and imports decreased 1.5%. Global demand for petroleum increased 0.48% and global petroleum production declined roughly 1.31% over the last quarter.

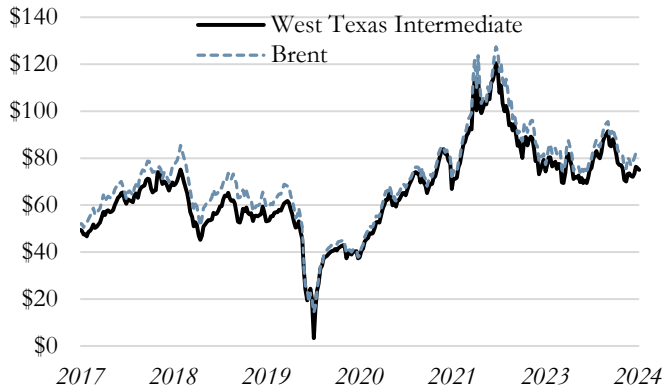
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S.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



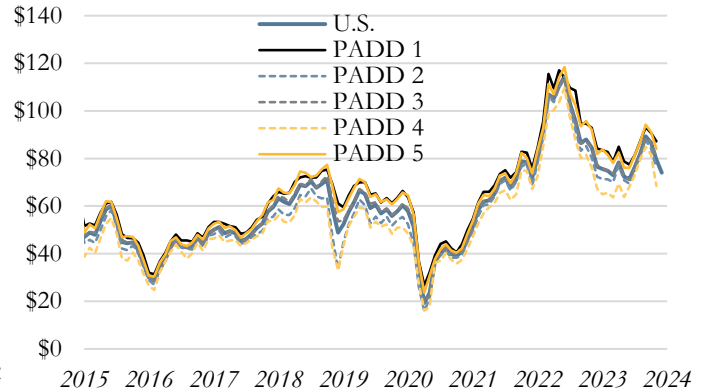
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through February 9, 2024

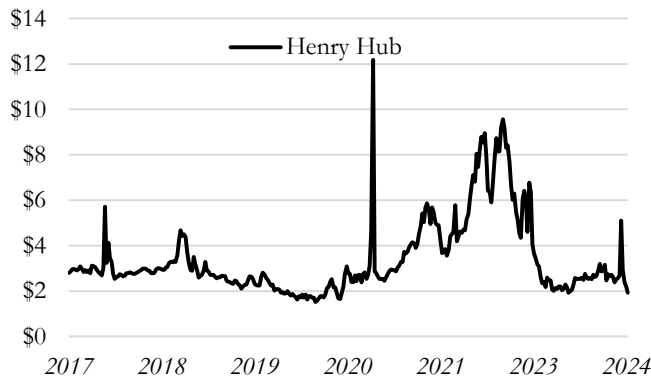
Weekly Oil Spot Prices, per barrel



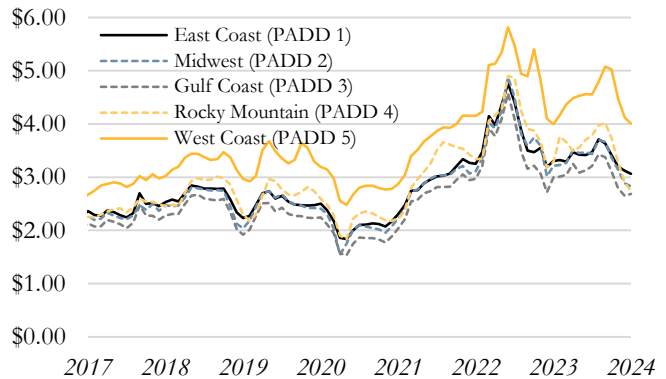
Refiner Acquisition Cost of Oil*, per barrel



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	2/9/24	Ago	Ago	Ago	Ago	Ago
West Texas Intermediate	\$75.05	-\$0.73	\$3.02	-\$2.87	-\$7.99	-\$2.46
Brent	\$81.51	-\$1.06	\$3.11	-\$2.01	-\$6.32	-\$1.79
Henry Hub	\$1.93	-\$0.27	-\$3.18	-\$0.53	-\$0.83	-\$0.41

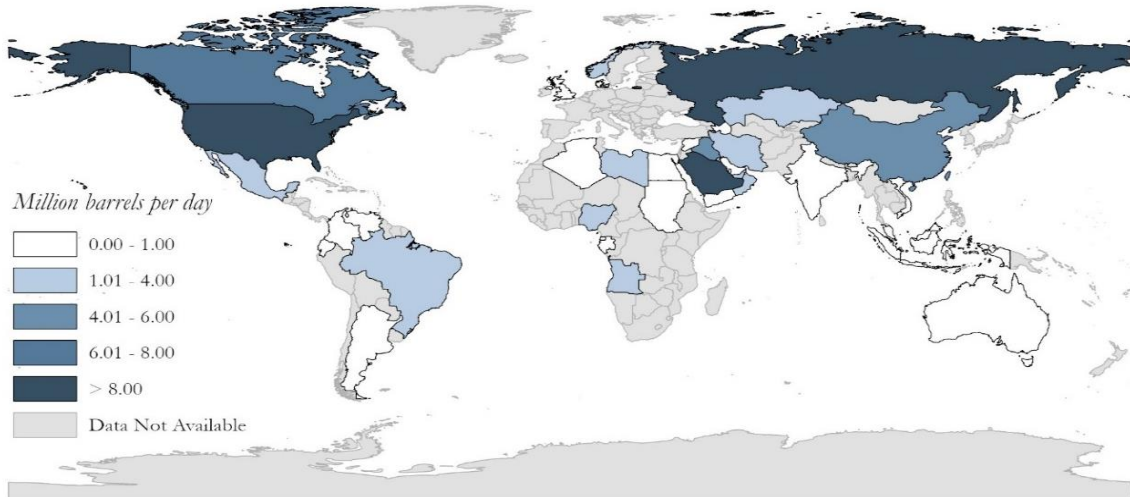
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	3 Months	6 Months	1 Year
Geographic Area	Jan-24	Ago	Ago	Ago	Ago
East Coast (PADD 1)	\$3.06	-\$0.06	-\$0.36	-\$0.41	-\$0.25
Midwest (PADD 2)	\$2.83	-\$0.06	-\$0.54	-\$0.61	-\$0.39
Gulf Coast (PADD 3)	\$2.69	\$0.04	-\$0.42	-\$0.52	-\$0.31
Rocky Mountain (PADD 4)	\$2.74	-\$0.16	-\$1.01	-\$1.05	-\$0.55
West Coast (PADD 5)	\$4.01	-\$0.12	-\$1.02	-\$0.55	\$0.01

*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 2024 Global Petroleum Production



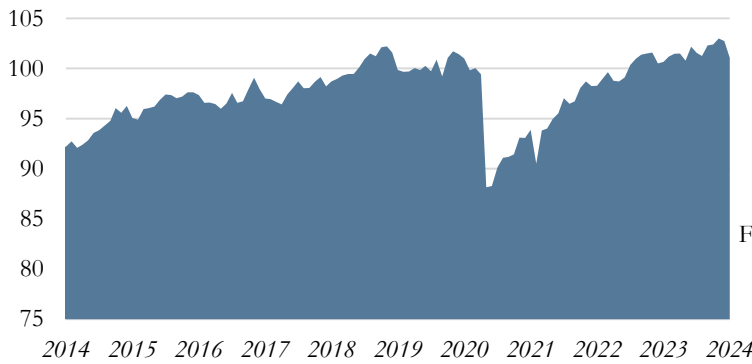
Million barrels per day

- 0.00 - 1.00
- 1.01 - 4.00
- 4.01 - 6.00
- 6.01 - 8.00
- > 8.00
- Data Not Available

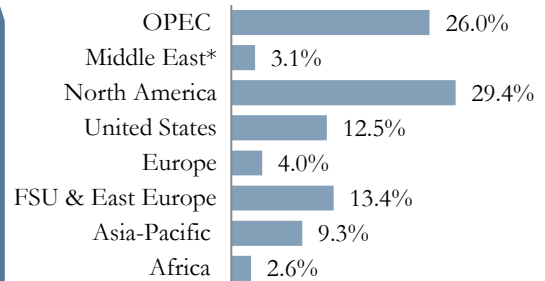
Source: Energy Information Administration/Haver Analytics

January 2024

Monthly Global Petroleum Production, million barrels per day

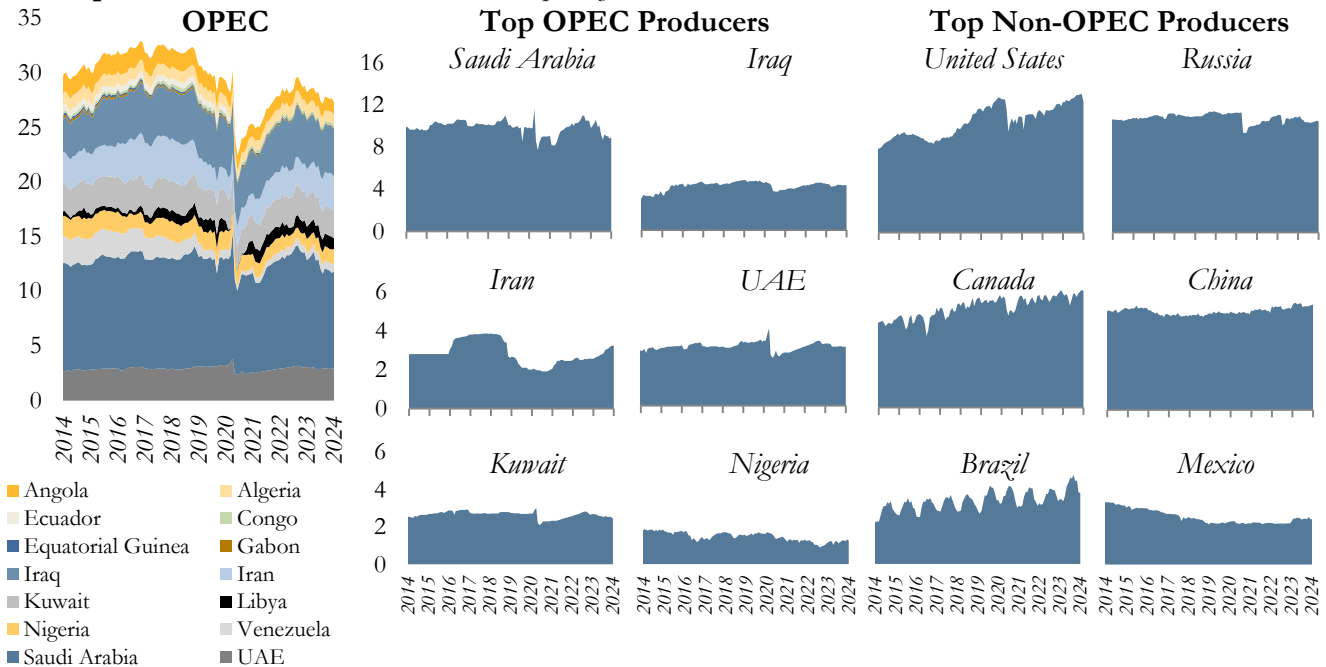


Regional Share of Production



*Excludes OPEC

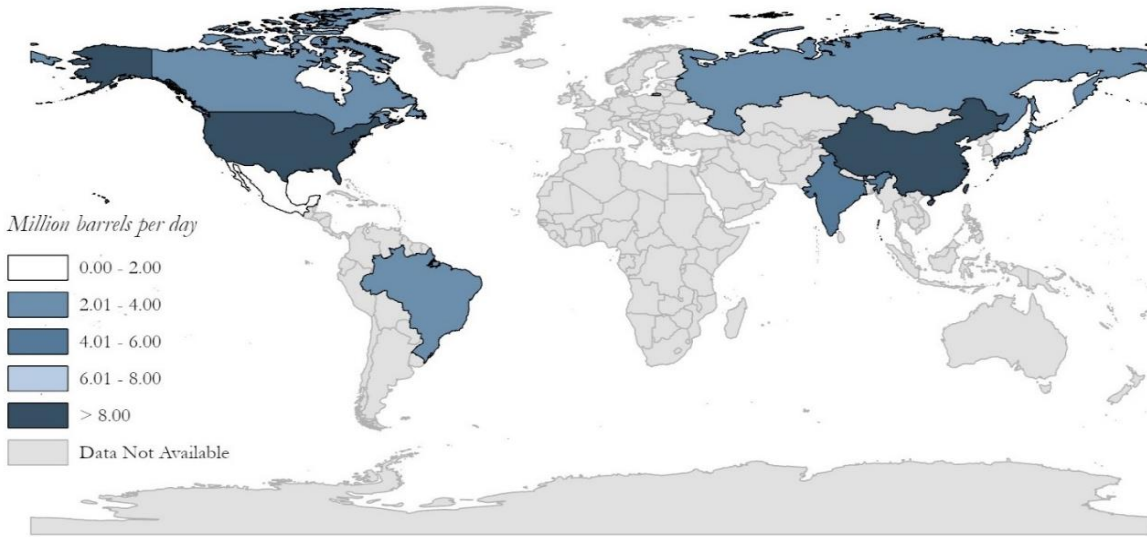
Top Crude Oil Producers, million barrels per day



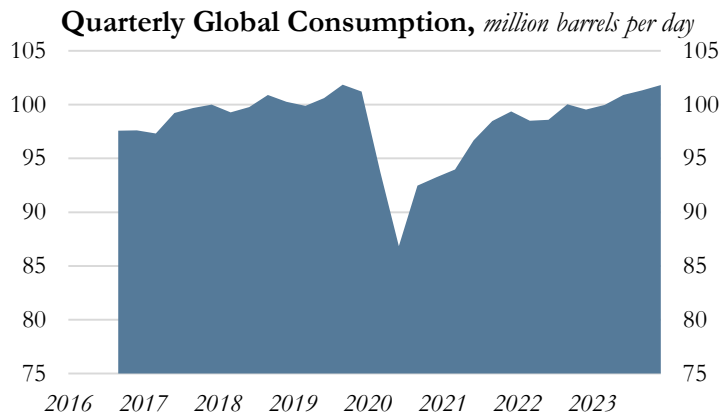
Note: OPEC country production values are for crude oil and non-OPEC country data is for petroleum production.

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

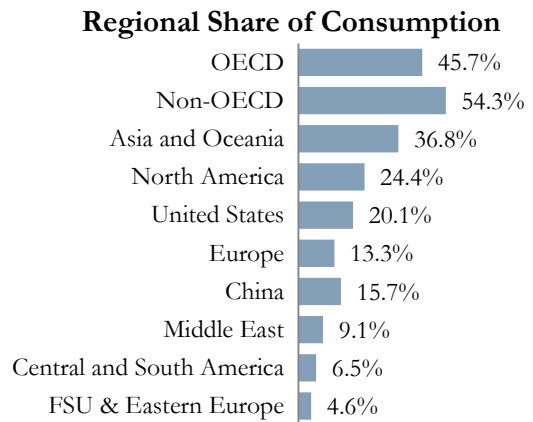
Fourth Quarter 2023 Global Petroleum Consumption



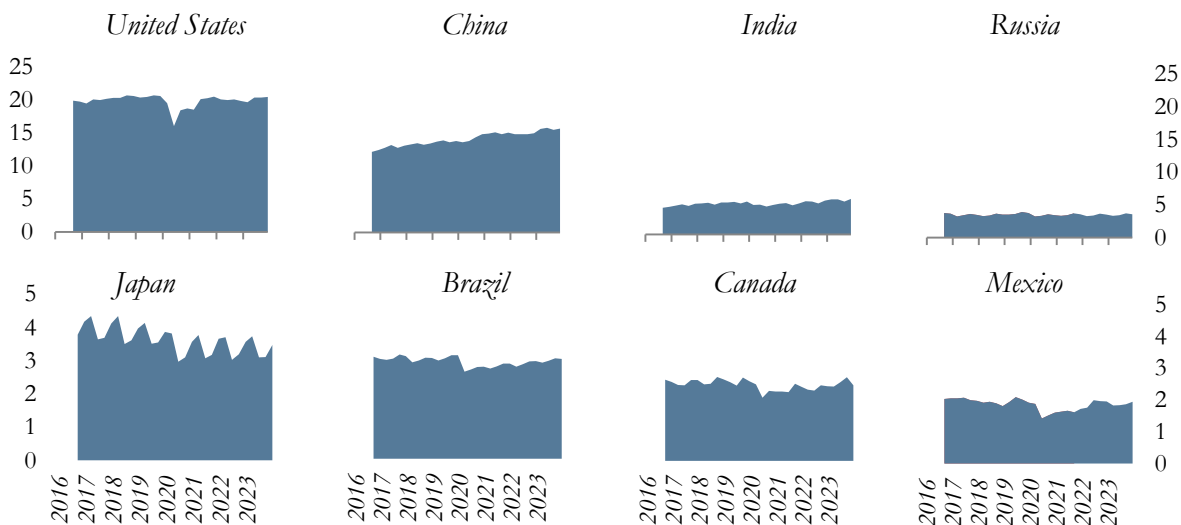
Source: Energy Information Administration/Haver Analytics



Fourth Quarter 2023

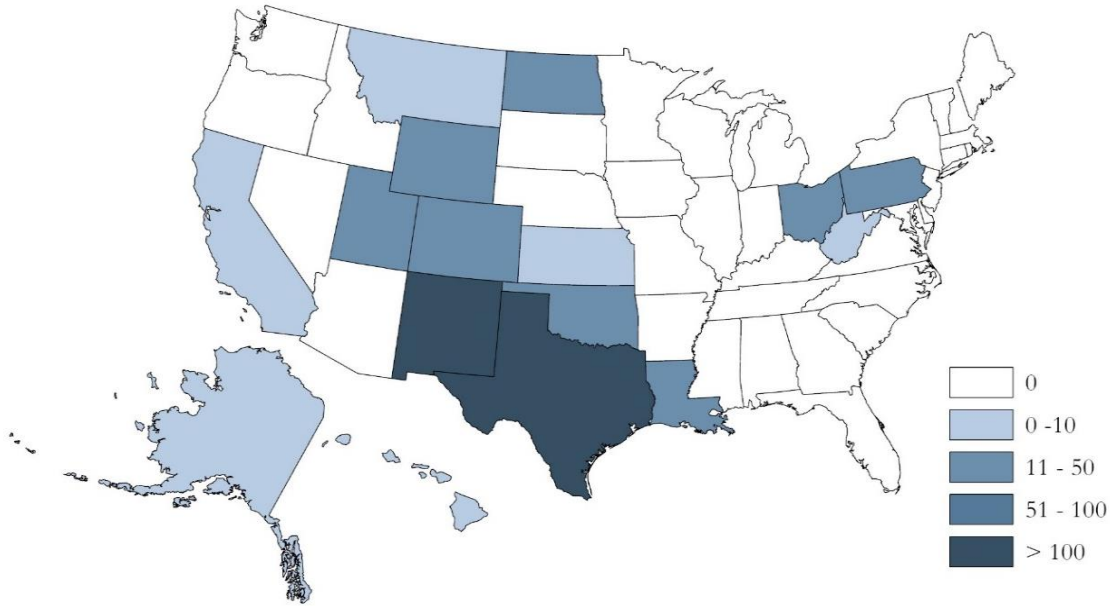


Top Petroleum Consumers, million barrels per day



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

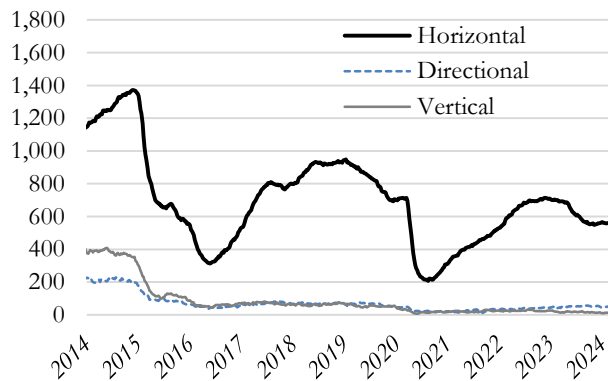
February 2024 Weekly Active Oil & Gas Drilling Rig Counts



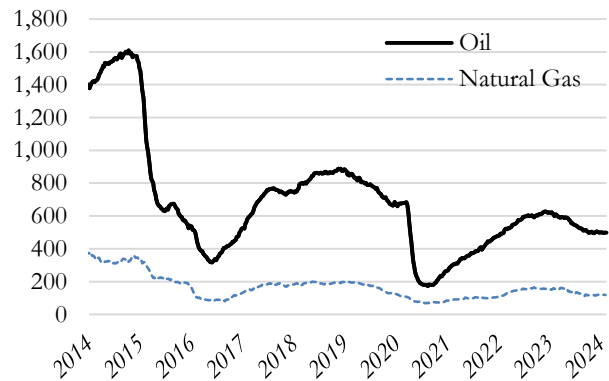
Source: Baker Hughes/Haver Analytics

February 9, 2023

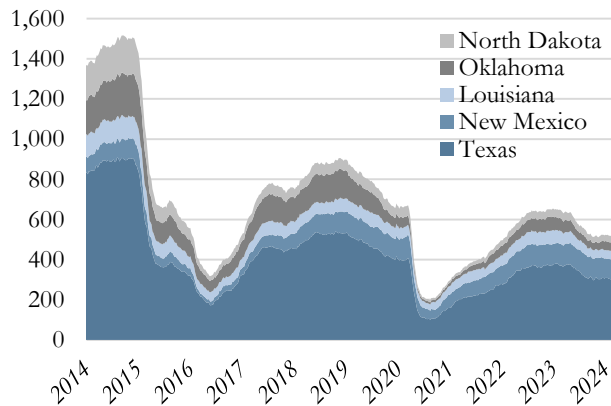
U.S. Active Drilling Rigs by Trajectory



U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

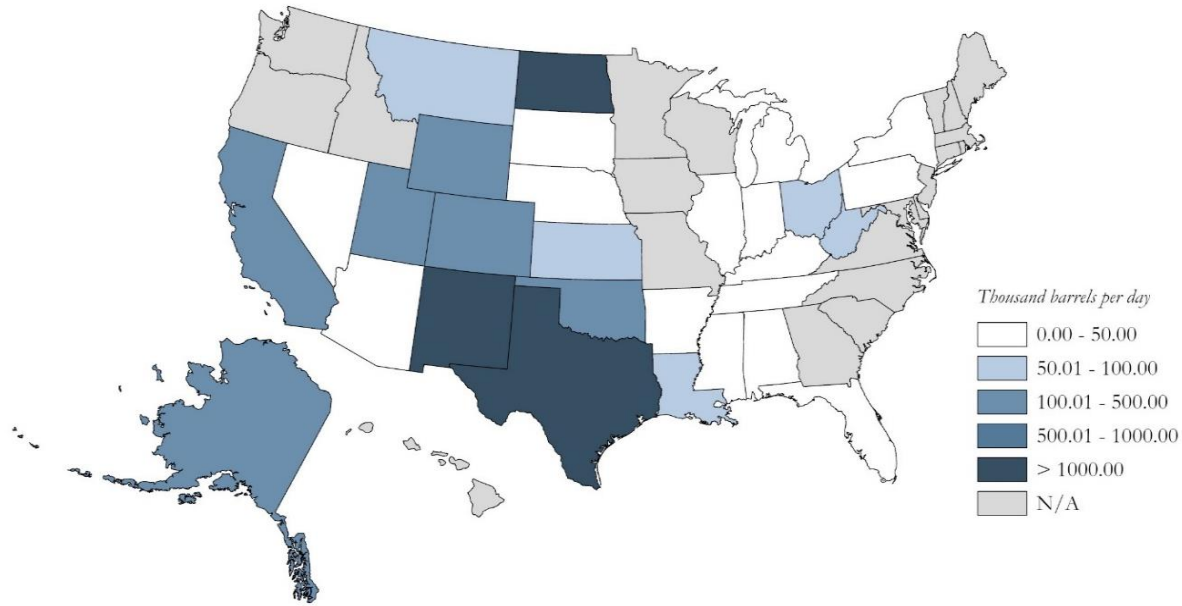
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	499	499	494	609
Gas	121	117	118	150
Misc	3	3	4	2
Total	623	619	616	761

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	0.0%	1.0%	-18.1%
Gas	-	3.4%	2.5%	-19.3%
Misc	-	0.0%	-25.0%	50.0%
Total	-	0.6%	1.1%	-18.1%

Source: Baker Hughes/Haver Analytics

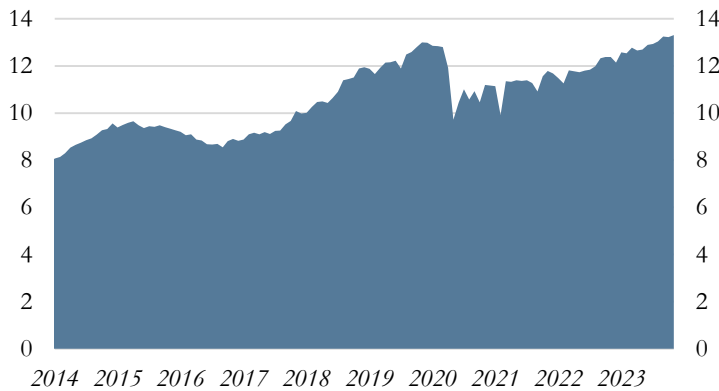
November 2023 U.S. Crude Oil Production



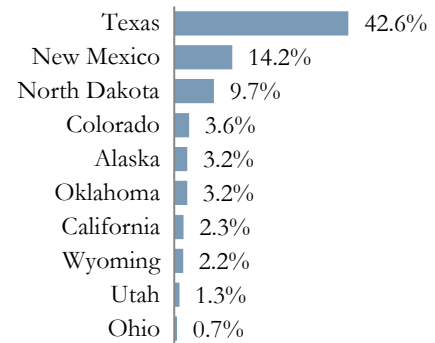
Source: Energy Information Administration/Haver Analytics

November 2023

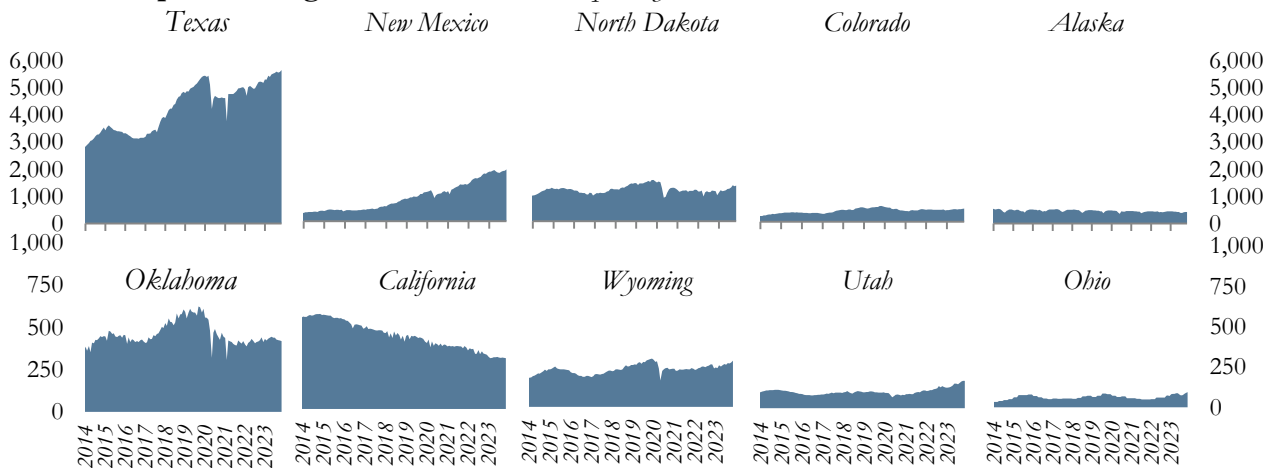
Monthly U.S. Production, million barrels per day



Share of Production

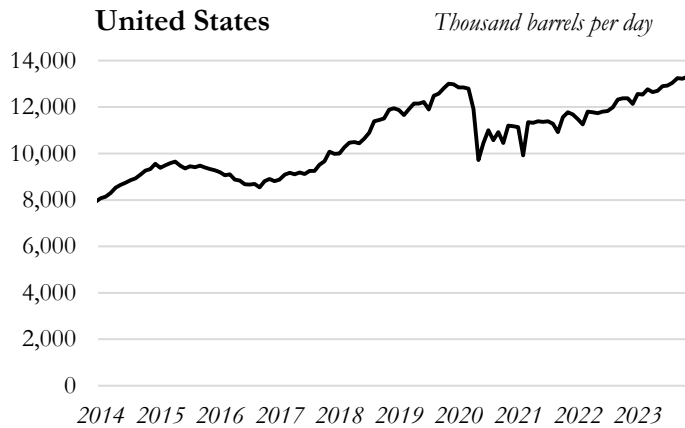


Top Producing States, thousand barrels per day

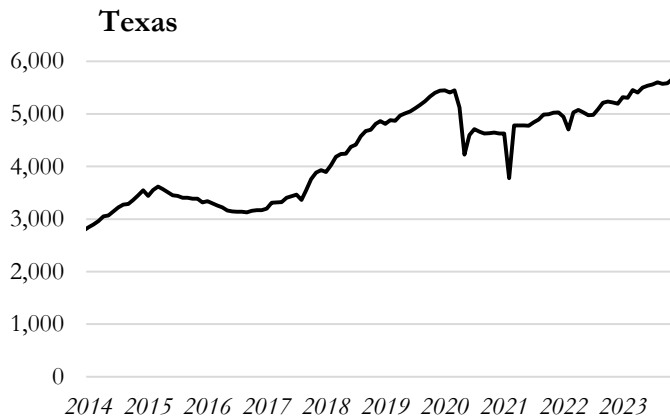


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

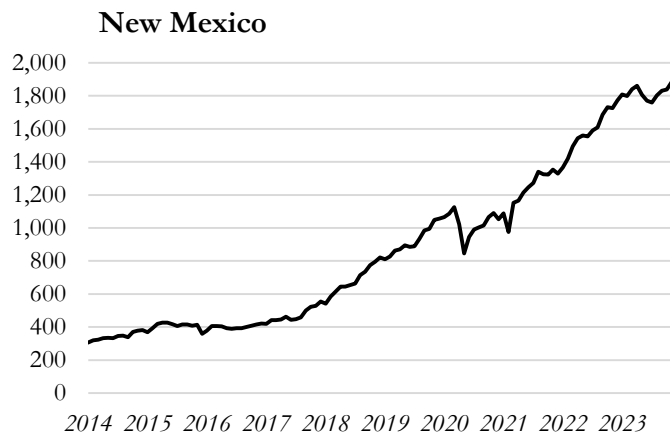
Data through November 2023



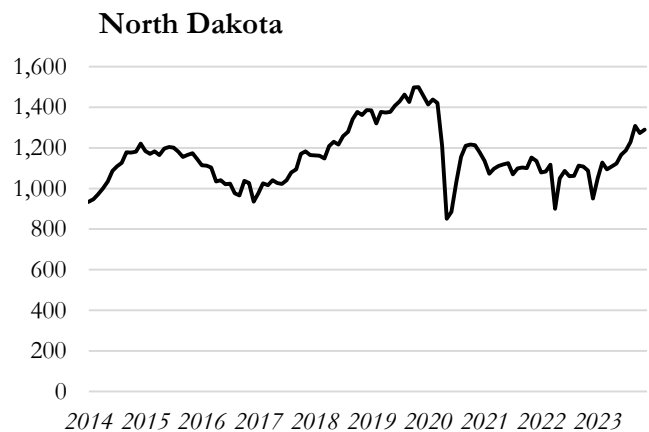
United States		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-23	13,308	
Month Ago	13,224	0.6%
3 Months Ago	13,041	2.0%
6 Months Ago	12,694	4.8%
1 Year Ago	12,376	7.5%



Texas		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-23	5,662	
Month Ago	5,586	1.4%
3 Months Ago	5,603	1.1%
6 Months Ago	5,500	3.0%
1 Year Ago	5,220	8.5%
Share of U.S. Production		42.6%



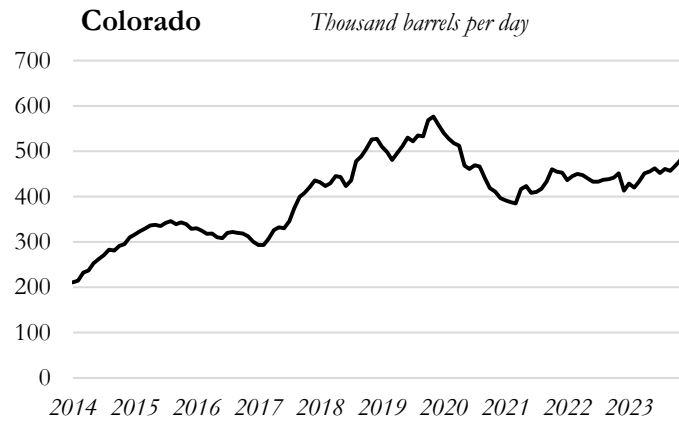
New Mexico		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-23	1,884	
Month Ago	1,839	2.4%
3 Months Ago	1,802	4.6%
6 Months Ago	1,806	4.3%
1 Year Ago	1,725	9.2%
Share of U.S. Production		14.2%



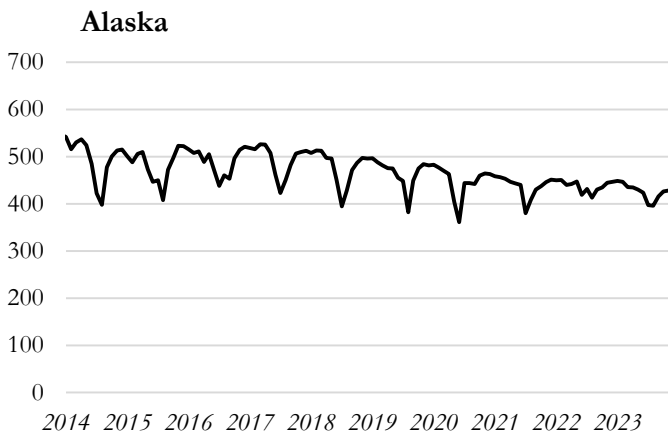
North Dakota		<i>Change from</i>
<i>Thousand barrels per day</i>		
Nov-23	1,290	
Month Ago	1,273	1.3%
3 Months Ago	1,229	5.0%
6 Months Ago	1,122	14.9%
1 Year Ago	1,089	18.5%
Share of U.S. Production		9.7%

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

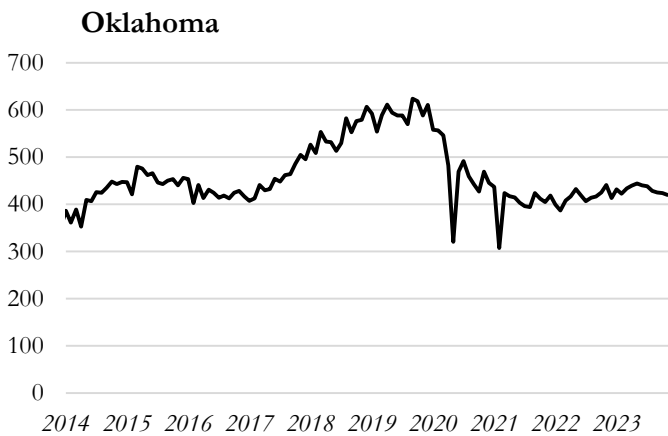
Data through November 2023



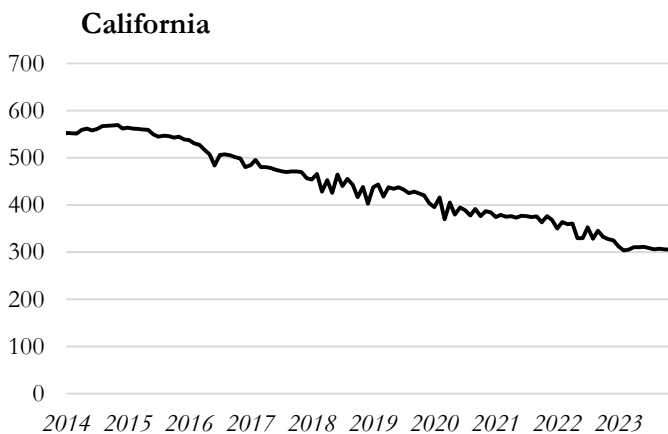
	Colorado	Change from
	Thousand barrels per day	
Nov-23	481	
Month Ago	469	2.6%
3 Months Ago	461	4.3%
6 Months Ago	456	5.6%
1 Year Ago	451	6.6%
Share of U.S. Production		3.6%



	Alaska	Change from
	Thousand barrels per day	
Nov-23	428	
Month Ago	426	0.4%
3 Months Ago	396	8.1%
6 Months Ago	430	-0.5%
1 Year Ago	445	-3.8%
Share of U.S. Production		3.2%



	Oklahoma	Change from
	Thousand barrels per day	
Nov-23	420	
Month Ago	424	-0.8%
3 Months Ago	429	-2.0%
6 Months Ago	444	-5.4%
1 Year Ago	441	-4.8%
Share of U.S. Production		3.2%

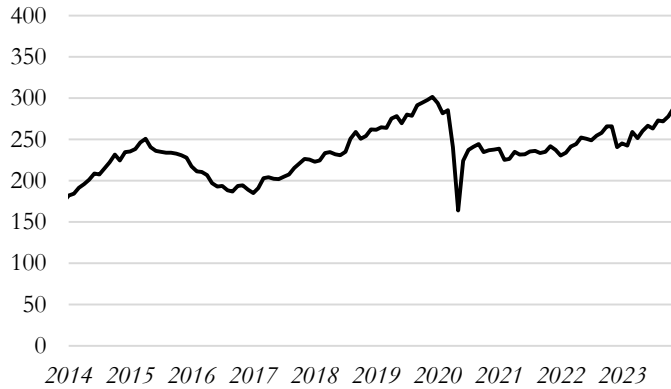


	California	Change from
	Thousand barrels per day	
Nov-23	305	
Month Ago	306	-0.2%
3 Months Ago	306	-0.4%
6 Months Ago	310	-1.8%
1 Year Ago	328	-6.9%
Share of U.S. Production		2.3%

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

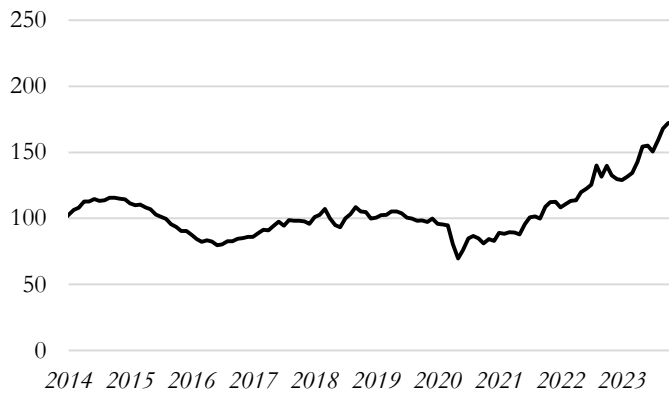
Data through November 2023

Wyoming *Thousand barrels per day*



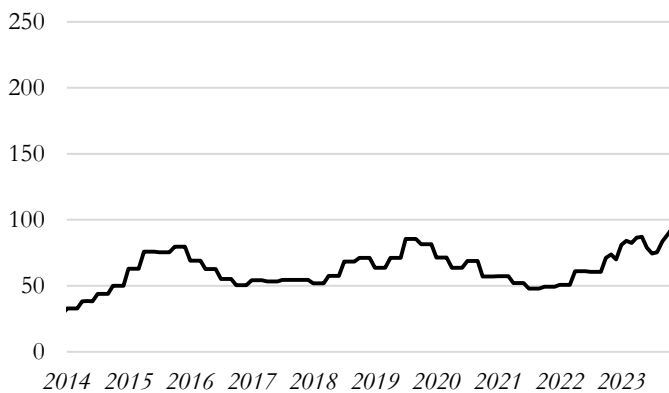
	Wyoming <i>Thousand barrels per day</i>	<i>Change from</i>
Nov-23	288	
Month Ago	278	3.6%
3 Months Ago	273	5.5%
6 Months Ago	260	10.6%
1 Year Ago	266	8.3%
Share of U.S. Production		2.2%

Utah



	Utah <i>Thousand barrels per day</i>	<i>Change from</i>
Nov-23	172	
Month Ago	172	0.1%
3 Months Ago	159	8.5%
6 Months Ago	154	11.7%
1 Year Ago	133	30.1%
Share of U.S. Production		1.3%

Ohio

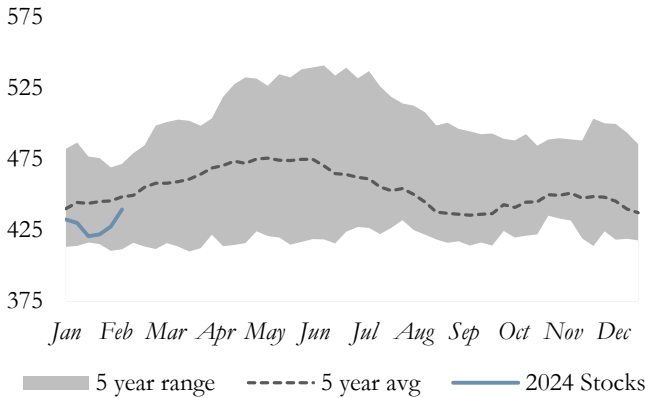


	Ohio <i>Thousand barrels per day</i>	<i>Change from</i>
Nov-23	94	
Month Ago	89	6.0%
3 Months Ago	75	24.8%
6 Months Ago	87	7.9%
1 Year Ago	74	27.6%
Share of U.S. Production		0.7%

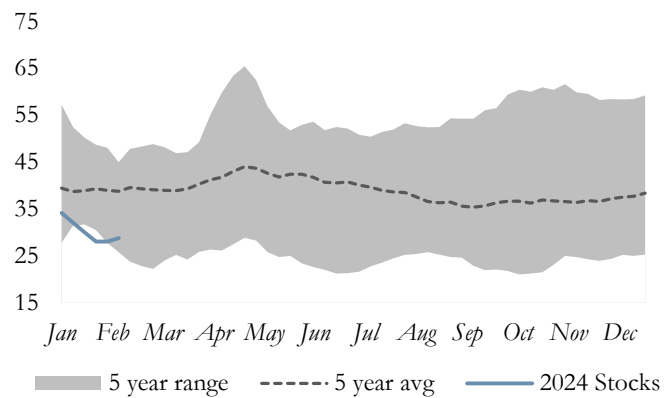
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

January 2024 Weekly U.S. Crude Oil Stocks

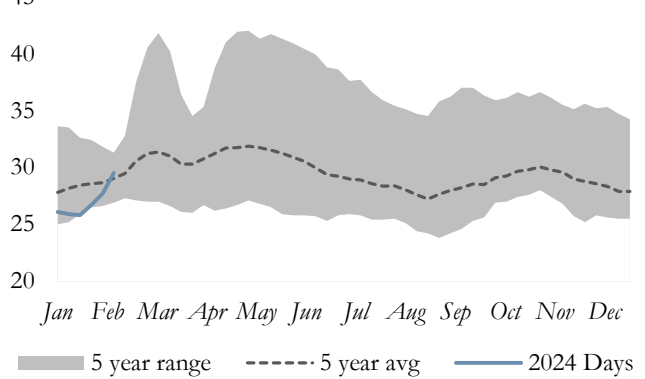
U.S. Oil Stocks, million barrels*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



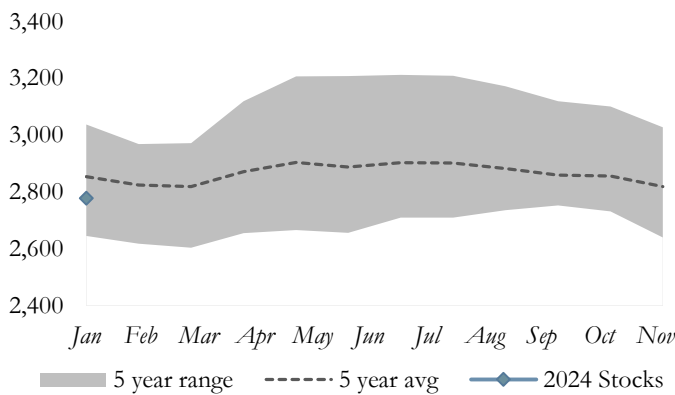
Crude Oil Stocks

	1 Week Ago	1 Year Ago
U.S.	2.8%	-6.8%
Cushing, OK	2.5%	-27.5%
Days of Supply	6.5%	-5.4%
East Coast (PADD 1)	9.7%	11.7%
Midwest (PADD 2)	2.6%	-11.8%
Gulf Coast (PADD 3)	2.9%	-5.6%
Rocky Mountain (PADD 4)	0.6%	-2.3%
West Coast (PADD 5)	3.1%	-5.0%

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

January 2024 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels



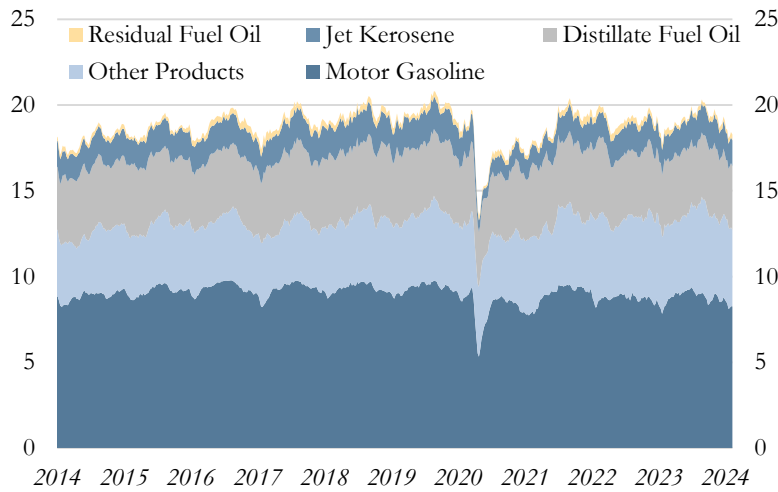
Petroleum Stocks

	Million Barrels	Change from
Current Month	2,778	
1 Month Ago	2,783	-0.2%
3 Months Ago	2,778	0.0%
6 Months Ago	2,810	-1.1%
1 Year Ago	2,819	-1.5%

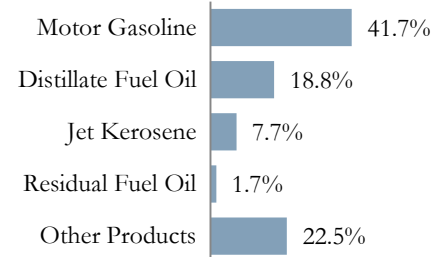
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

February 2024 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 2/9/24	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	19,789	19,987	20,443	20,922	19,848
Motor Gasoline	8,250	8,429	9,000	8,982	8,334
Distillate Fuel Oil	3,718	3,428	4,039	3,739	3,806
Jet Kerosene	1,516	1,557	1,763	1,726	1,494
Residual Fuel Oil	337	220	275	249	327
Other Products	4,462	4,918	4,389	5,285	4,531

U.S. Consumption by Product, Change from

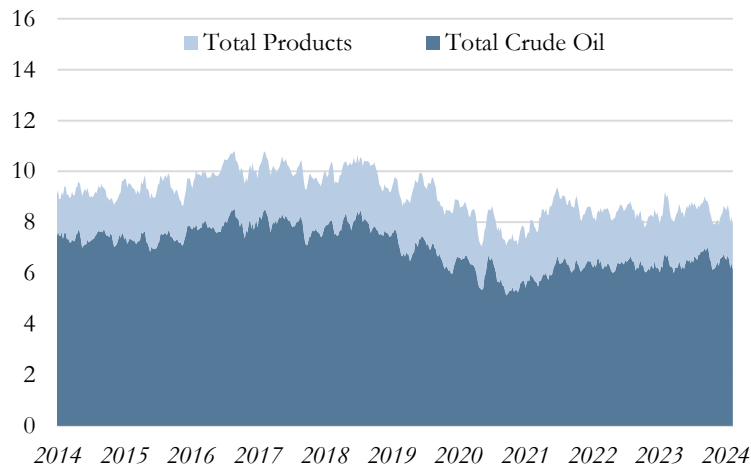
	Current 2/9/24	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
All Products	-	-1.0%	-3.2%	-5.4%	-0.3%
Motor Gasoline	-	-2.1%	-8.3%	-8.1%	-1.0%
Distillate Fuel Oil	-	8.5%	-7.9%	-0.6%	-2.3%
Jet Kerosene	-	-2.6%	-14.0%	-12.2%	1.5%
Residual Fuel Oil	-	53.2%	22.5%	35.3%	3.1%
Other Products	-	-9.3%	1.7%	-15.6%	-1.5%

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

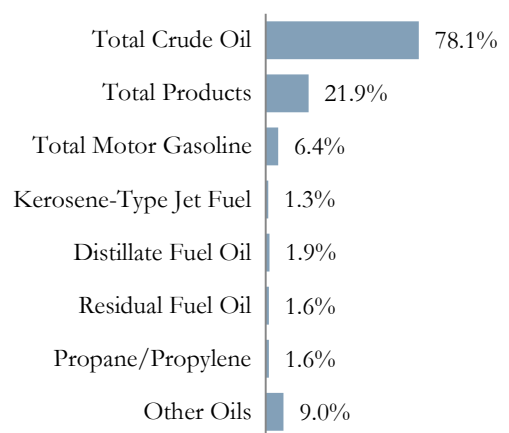
February 2024 Weekly U.S. Imports of Crude Oil & Petroleum Products

4-Week Averages

Imports, million barrels per day



Share of Total Imports



U.S. Imports by Product*

Thousand barrels per day

	<i>Current</i> 2/9/24	<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>
Total Crude Oil	6,140	6,708	6,301	6,719	6,619
Total Products	1,724	1,965	1,682	1,864	2,370
<i>Total Motor Gasoline</i>	500	557	607	742	633
<i>Kerosene-Type Jet Fuel</i>	106	106	110	103	133
<i>Distillate Fuel Oil</i>	150	205	139	117	386
<i>Residual Fuel Oil</i>	129	91	89	64	215
<i>Propane/Propylene</i>	129	129	90	83	166
<i>Other Oils</i>	711	876	647	755	837
Total Imports	7,864	8,673	7,983	8,583	8,989

U.S. Imports by Product, Change from

	<i>Current</i> 2/9/24	<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>
Total Crude Oil	-	-8.5%	-2.6%	-8.6%	-7.2%
Total Products	-	-12.3%	2.5%	-7.5%	-27.3%
<i>Total Motor Gasoline</i>	-	-10.2%	-17.6%	-32.6%	-21.0%
<i>Kerosene-Type Jet Fuel</i>	-	0.0%	-3.6%	2.9%	-20.3%
<i>Distillate Fuel Oil</i>	-	-26.8%	7.9%	28.2%	-61.1%
<i>Residual Fuel Oil</i>	-	41.8%	44.9%	101.6%	-40.0%
<i>Propane/Propylene</i>	-	0.0%	43.3%	55.4%	-22.3%
<i>Other Oils</i>	-	-18.8%	9.9%	-5.8%	-15.1%
Total Imports	-	-9.3%	-1.5%	-8.4%	-12.5%

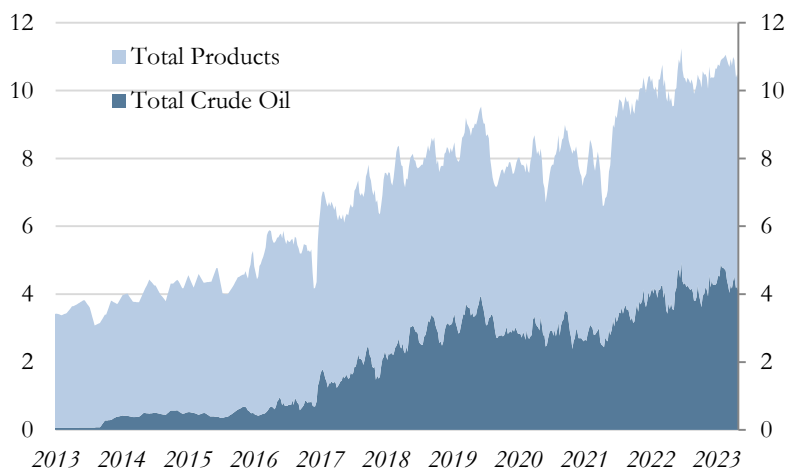
*Totals may not sum due to component rounding

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

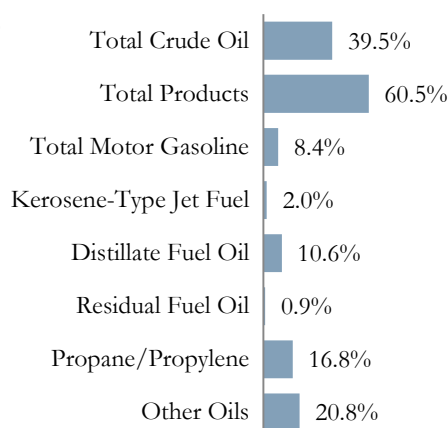
February 2024 Weekly U.S. Exports of Crude Oil & Petroleum Products

4-Week Averages

Exports, million barrels per day



Share of Total Exports



U.S. Exports by Product*

Thousand barrels per day

	<i>Current 2/9/24</i>	<i>1 Month Ago</i>	<i>3 Months Ago</i>	<i>6 Months Ago</i>	<i>1 Year Ago</i>
Total Crude Oil	4,068	4,390	4,786	4,208	3,561
Total Products	6,223	6,601	6,149	6,276	5,972
<i>Total Motor Gasoline</i>	866	983	896	909	887
<i>Kerosene-Type Jet Fuel</i>	201	252	172	179	189
<i>Distillate Fuel Oil</i>	1,087	1,173	1,048	1,286	1,071
<i>Residual Fuel Oil</i>	97	134	95	149	138
<i>Propane/Propylene</i>	1,726	1,754	1,787	1,528	1,549
<i>Other Oils</i>	2,136	2,192	2,075	2,131	2,138
Total Exports	10,291	10,990	10,935	10,484	9,533

U.S. Exports by Product, Change from

	<i>Current 2/9/24</i>	<i>1 Month Ago</i>	<i>3 Months Ago</i>	<i>6 Months Ago</i>	<i>1 Year Ago</i>
Total Crude Oil	-	-7.3%	-15.0%	-3.3%	14.2%
Total Products	-	-5.7%	1.2%	-0.8%	4.2%
<i>Total Motor Gasoline</i>	-	-11.9%	-3.3%	-4.7%	-2.4%
<i>Kerosene-Type Jet Fuel</i>	-	-20.2%	16.9%	12.3%	6.3%
<i>Distillate Fuel Oil</i>	-	-7.3%	3.7%	-15.5%	1.5%
<i>Residual Fuel Oil</i>	-	-27.6%	2.1%	-34.9%	-29.7%
<i>Propane/Propylene</i>	-	-1.6%	-3.4%	13.0%	11.4%
<i>Other Oils</i>	-	-2.6%	2.9%	0.2%	-0.1%
Total Exports	-	-6.4%	-5.9%	-1.8%	8.0%

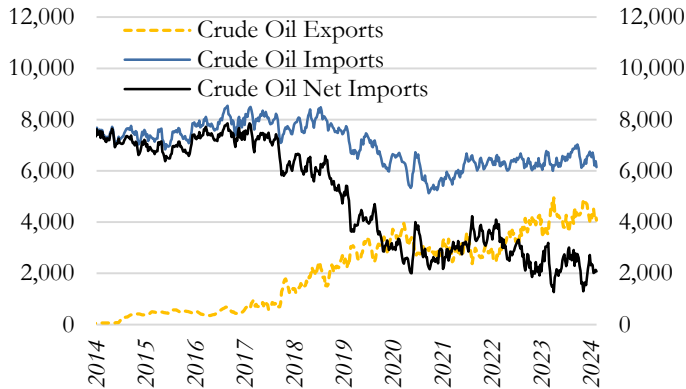
*Totals may not sum due to rounding

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

February 2024 Weekly U.S. Net Imports of Crude Oil & Petroleum Products

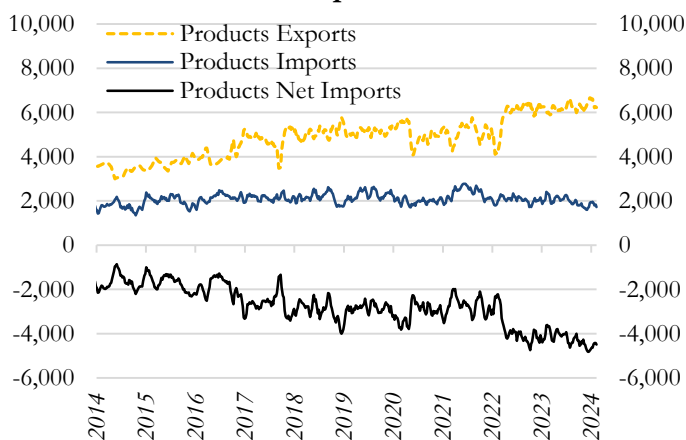
4-Week Averages, Thousand barrels per day

Crude Oil Net Imports



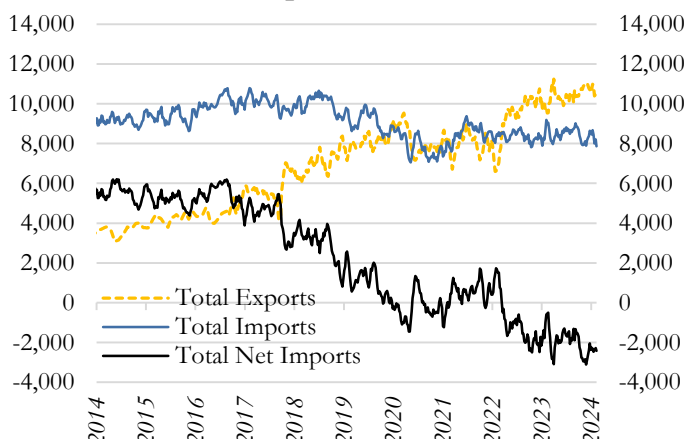
Crude Oil Net Imports		Change
Thousand barrels per day		from
2/9/24	2,072	
Month Ago	2,319	-10.7%
3 Months Ago	1,515	36.8%
6 Months Ago	2,511	-17.5%
1 Year Ago	3,058	-32.2%

Products Net Imports



Products Net Imports		Change
Thousand barrels per day		from
2/9/24	-4,499	
Month Ago	-4,636	-
3 Months Ago	-4,466	-
6 Months Ago	-4,412	-
1 Year Ago	-3,602	-

Total Net Imports



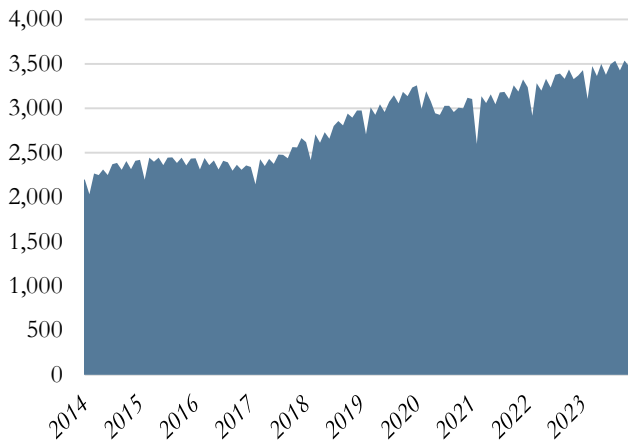
Total Net Imports		Change
Thousand barrels per day		from
2/9/24	-2,426	
Month Ago	-2,318	-
3 Months Ago	-2,951	-
6 Months Ago	-1,901	-
1 Year Ago	-544	-

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

U.S. Natural Gas Production & Stocks

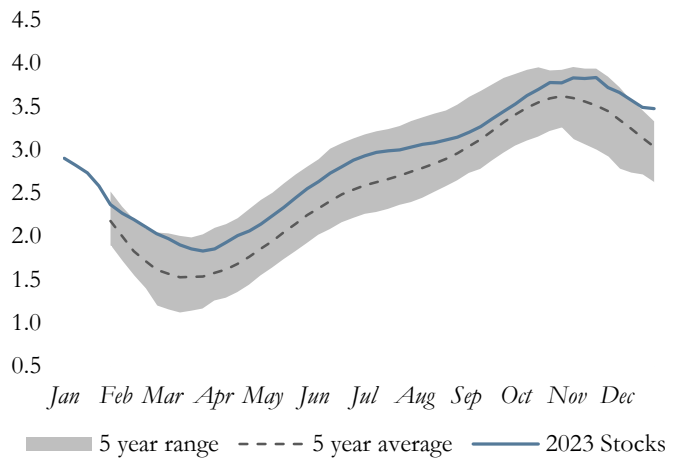
November 2023 Production

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



December 2023 Weekly Stocks

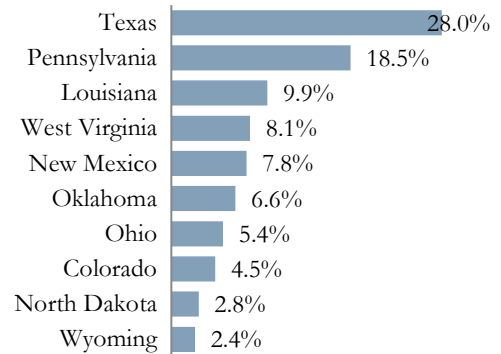
U.S. Natural Gas Stocks, Billion cubic feet (Bcf)



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	3,470	3,537	3,534	3,500	3,327
U.S. Stocks	2,584	3,336	3,773	3,030	2,366

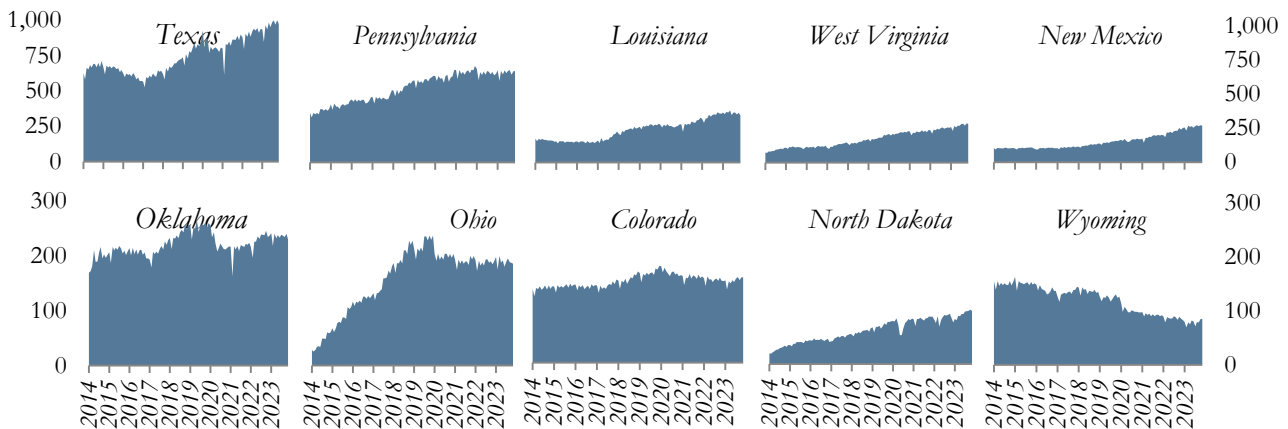
Share of Production



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%	-1.8%	-0.8%	4.3%
U.S. Stocks	-	-22.5%	-31.5%	-14.7%	9.2%

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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