

# THE U.S. Energy DATABOOK

*A summary of national and global energy indicators*



AUGUST 10, 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 grew moderately. For the week ending July 29, West Texas Intermediate (WTI) crude oil averaged \$99.60 per barrel and North Sea Brent averaged \$109.28 per barrel, but hit intra-quarter highs of \$120.43 and \$127.40, respectively. The Henry Hub natural gas spot price averaged \$8.74 per million Btu for the week ending July 29, surging 28.3% over the last three months. In July, the total number of active drilling rigs in the United States rose 2.3% from a month ago, and is up 9.9% from three months ago. U.S. crude oil production dipped 0.5% from a month ago but is up 2.6% from three months ago. Oil production remains below pre-pandemic levels. U.S. crude oil and petroleum products exports increased 0.5% in the last quarter and imports rose by 8.1%. Global demand for petroleum fell by 0.3% and global petroleum production rose 2.1% over the last quarter.

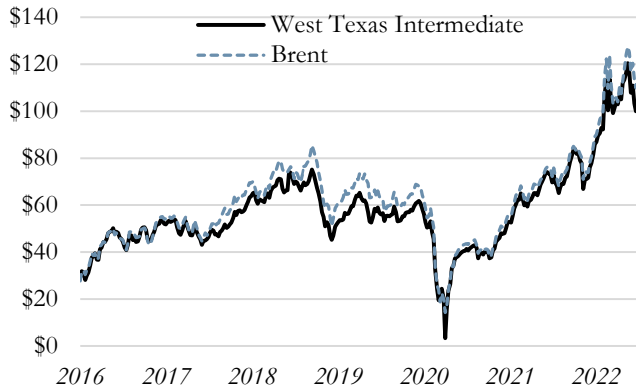
This databook provides current economic indicators to help monitor trends and allow comparison of past information. These indicators include: oil and natural gas prices; global petroleum production and demand; U.S. oil production and petroleum demand; U.S. crude oil stocks; OECD petroleum stocks; U.S.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



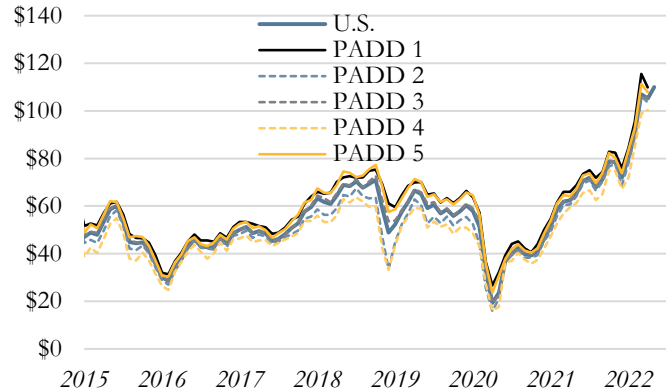
The Federal Reserve Bank of Kansas City's headquarters is located at 1 Memorial Drive in the heart of Kansas City, Missouri. The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and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

Weekly data through July 29, 2022

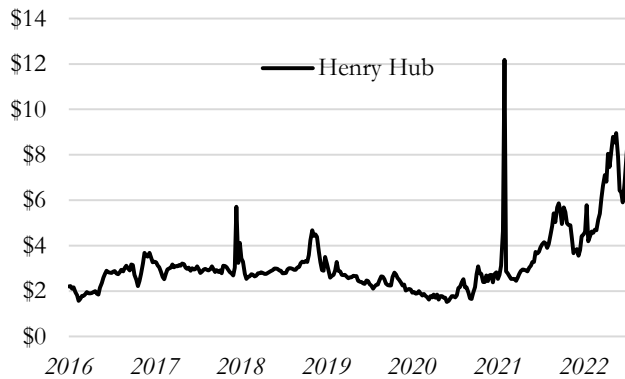
Weekly Oil Spot Prices, per barrel



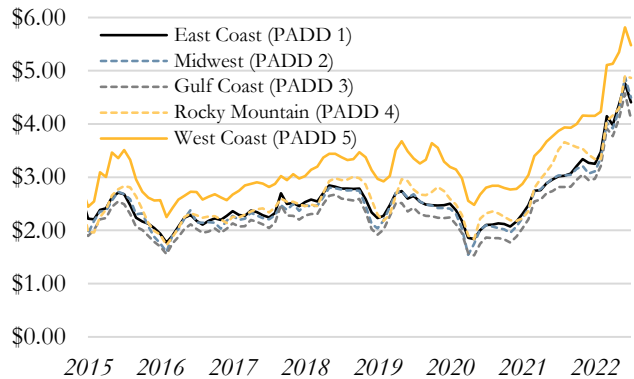
Refiner Acquisition Cost of Oil\*, per barrel



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	7/29/22	Ago	Ago	Ago	Ago	Ago
West Texas Intermediate	\$99.60	-\$2.64	-\$11.36	-\$3.25	\$12.66	\$26.85
Brent	\$109.28	-\$4.25	-\$11.06	\$5.36	\$19.16	\$33.53
Henry Hub	\$8.74	\$0.98	\$2.39	\$1.93	\$4.14	\$4.68

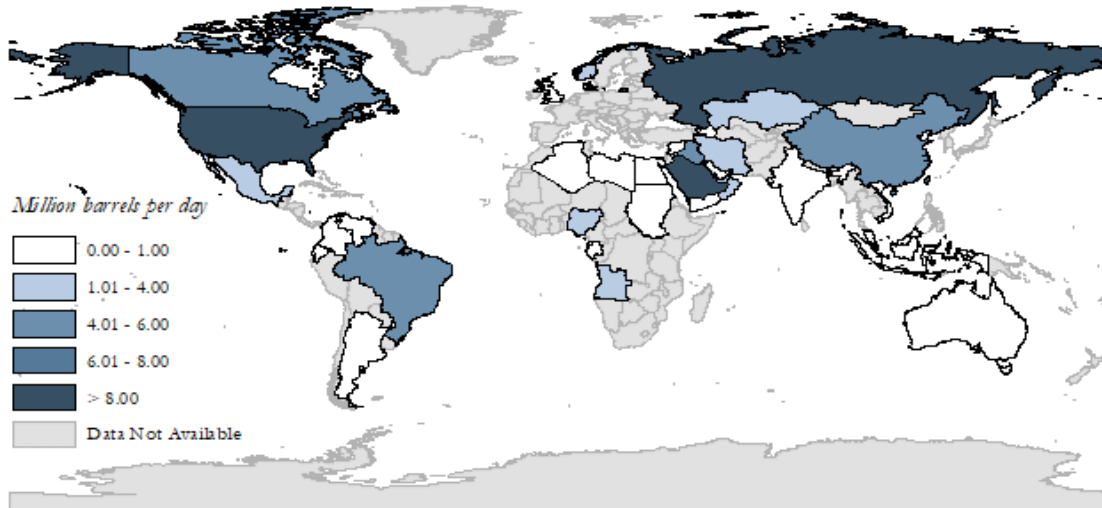
Monthly Gasoline Spot Prices, Change from

	Current	1 Month	3 months	6 Months	1 Year
Geographic Area	Jul-22	Ago	Ago	Ago	Ago
East Coast (PADD 1)	\$4.40	-\$0.36	\$0.42	\$1.15	\$1.39
Midwest (PADD 2)	\$4.50	-\$0.38	\$0.58	\$1.38	\$1.46
Gulf Coast (PADD 3)	\$4.09	-\$0.48	\$0.33	\$1.12	\$1.28
Rocky Mountain (PADD 4)	\$4.86	-\$0.04	\$0.71	\$1.52	\$1.34
West Coast (PADD 5)	\$5.48	-\$0.33	\$0.35	\$1.33	\$1.61

\*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

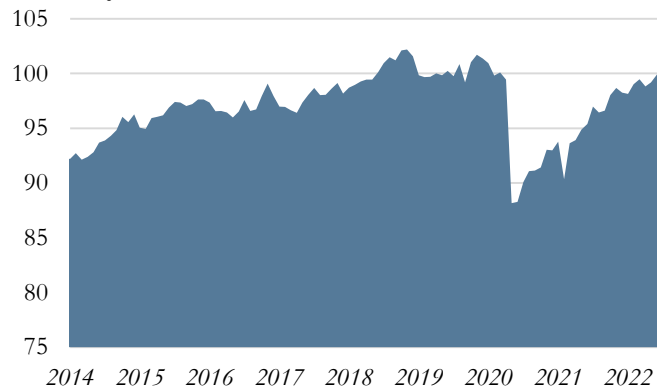
June 2022 Global Petroleum Production



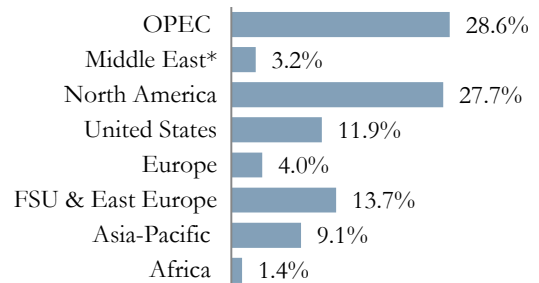
Source: Energy Information Administration/Haver Analytics

June 2022

Monthly Global Petroleum Production, million barrels per day

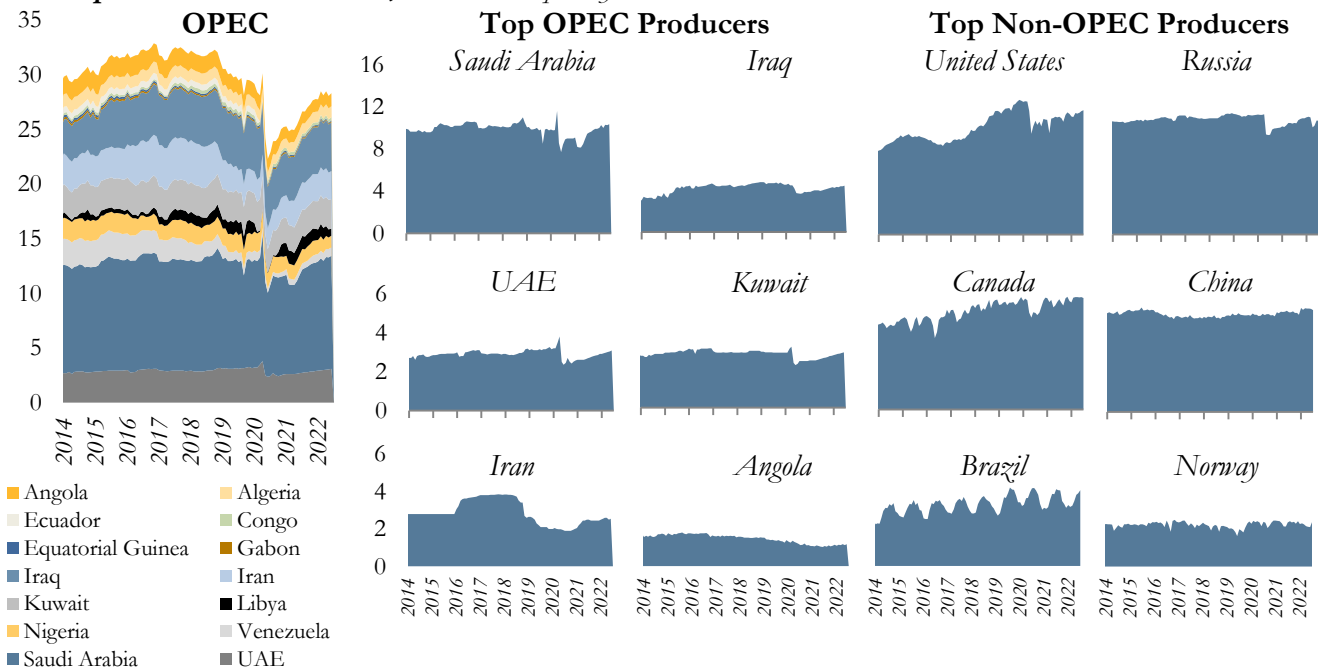


Regional Share of Production



\*Excludes OPEC

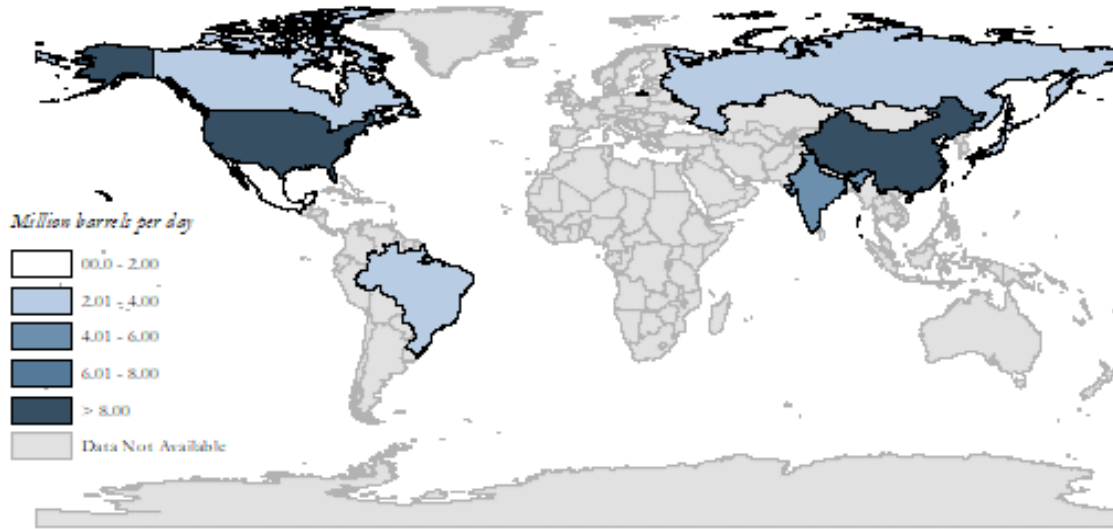
Top Crude Oil Producers, million barrels per day



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

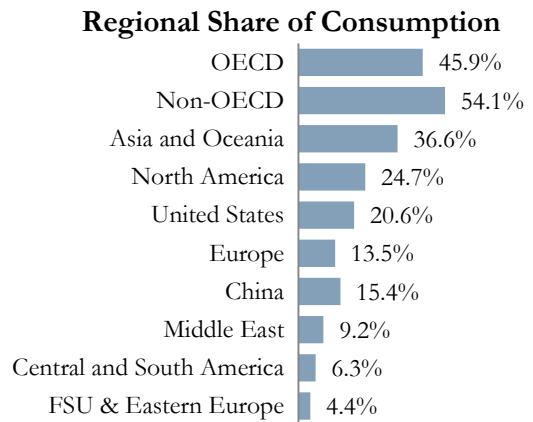
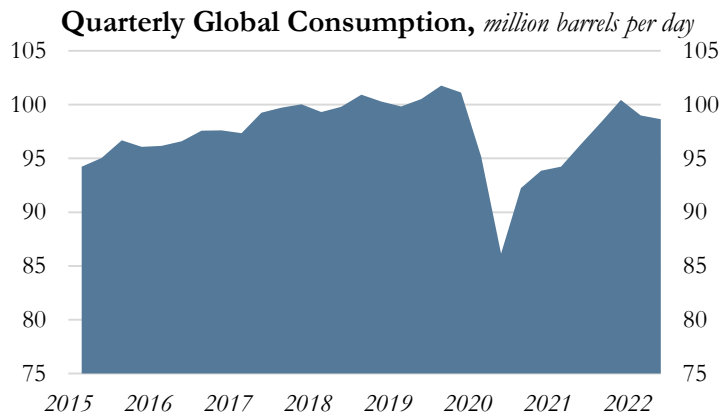
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Second Quarter 2022 Global Petroleum Consumption

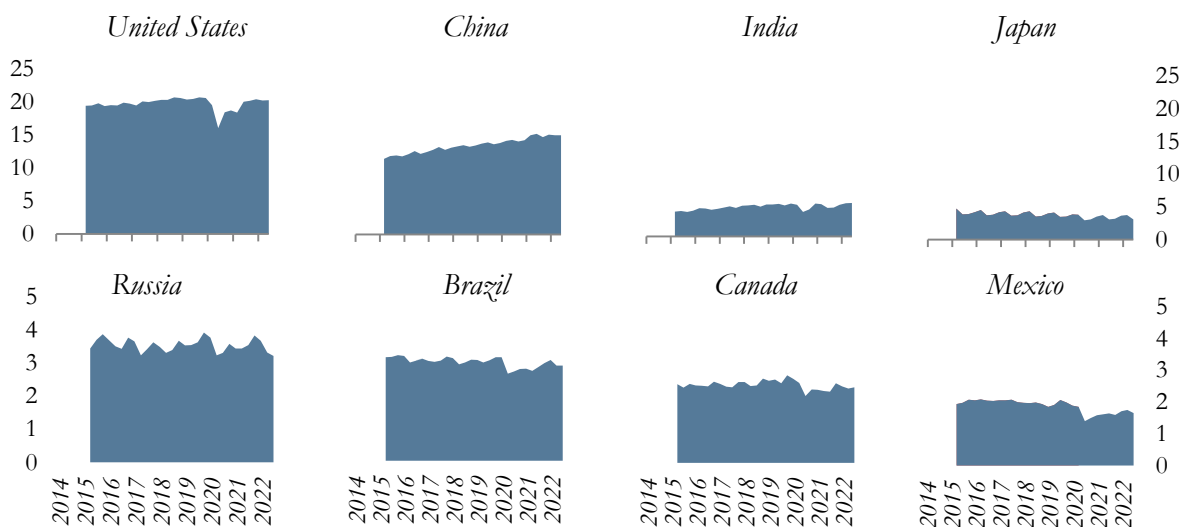


Source: Energy Information Administration/Haver Analytics

Second Quarter 2022

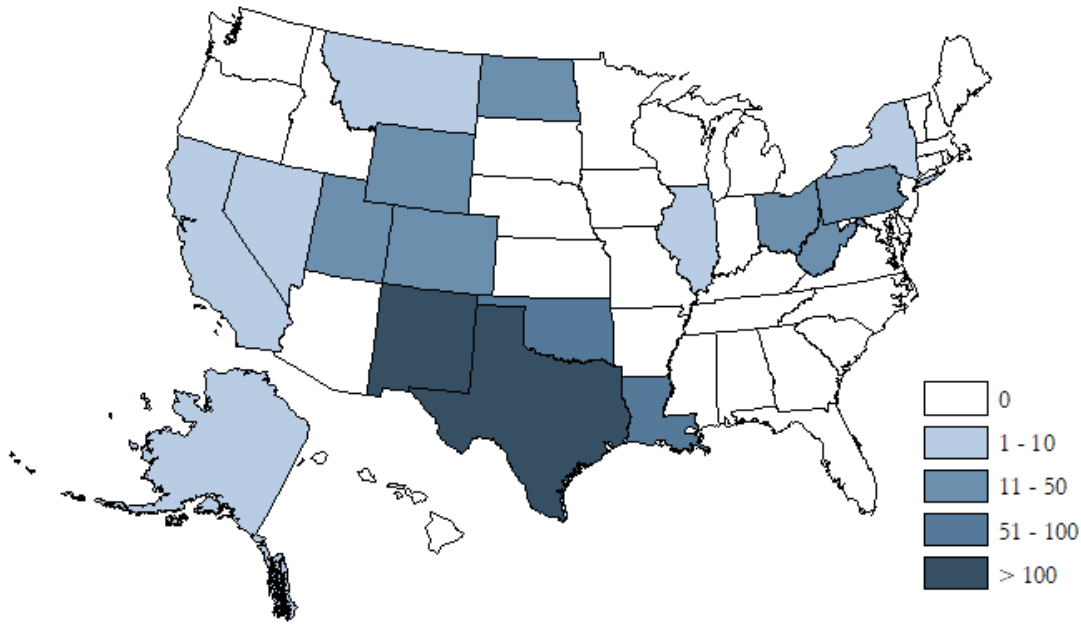


Top Petroleum Consumers, million barrels per day



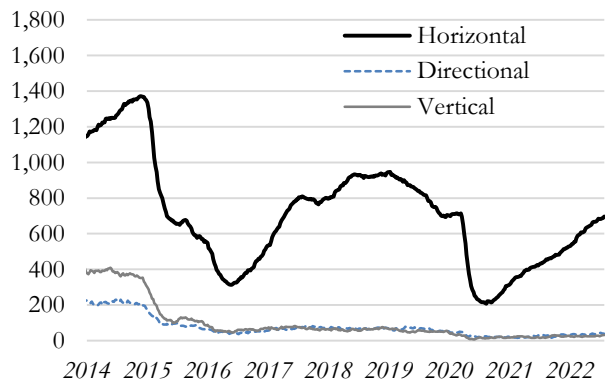
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

July 2022 Weekly Active Oil & Gas Drilling Rig Counts



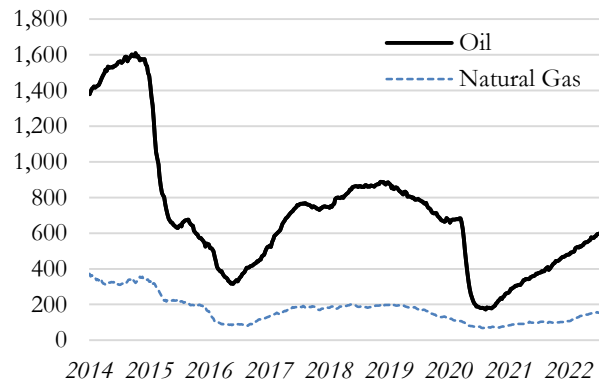
Source: Baker Hughes/Haver Analytics

U.S. Active Drilling Rigs by Trajectory

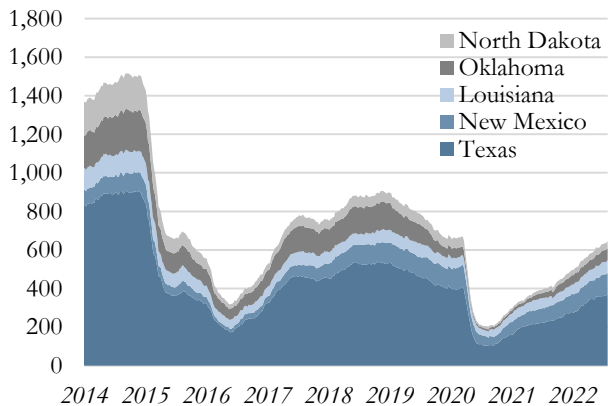


July 29, 2022

U.S. Active Drilling Rigs by Type



Top Five States for Drilling Activity (Total Active Rigs)



Rig Count By Type

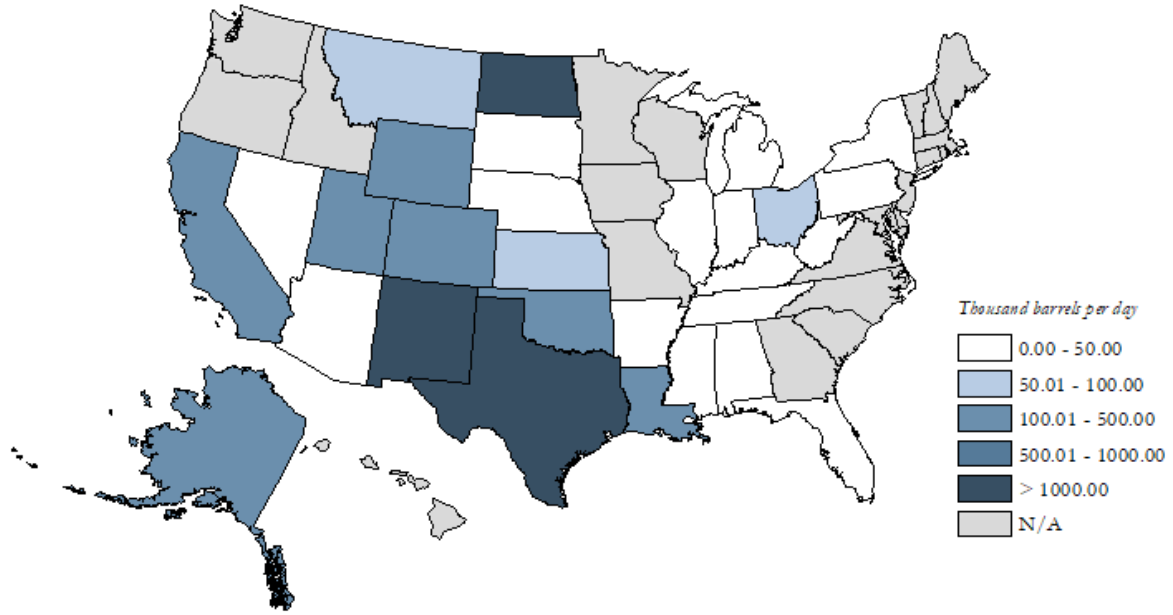
Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	605	595	552	385
Gas	157	153	144	103
Misc	5	2	2	0
<b>Total</b>	<b>767</b>	<b>750</b>	<b>698</b>	<b>488</b>

Rig Count By Type, Change from

Rig Type	Current Week	1 Month Ago	3 Months Ago	1 Year Ago
Oil	-	1.7%	9.6%	57.1%
Gas	-	2.6%	9.0%	52.4%
Misc	-	150.0%	150.0%	-
<b>Total</b>	-	<b>2.3%</b>	<b>9.9%</b>	<b>57.2%</b>

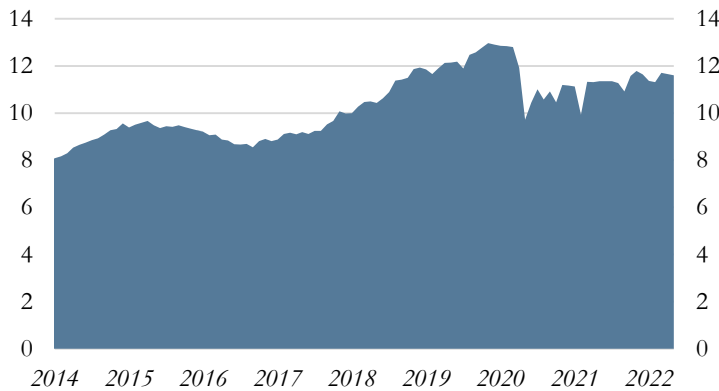
Source: Baker Hughes/Haver Analytics

May 2022 U.S. Crude Oil Production

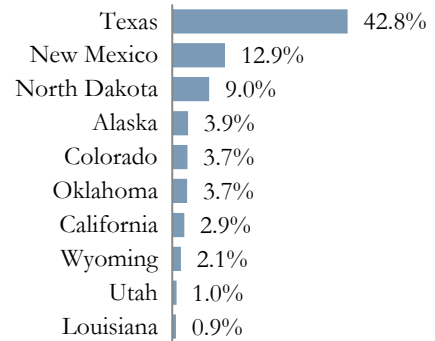


Source: Energy Information Administration/Haver Analytics

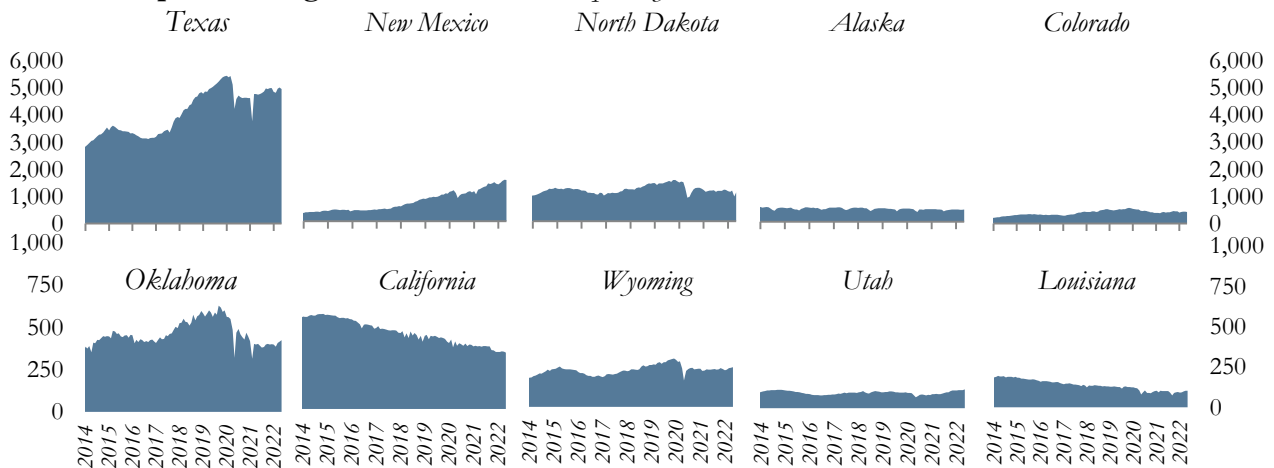
Monthly U.S. Production, million barrels per day



May 2022 Share of Production

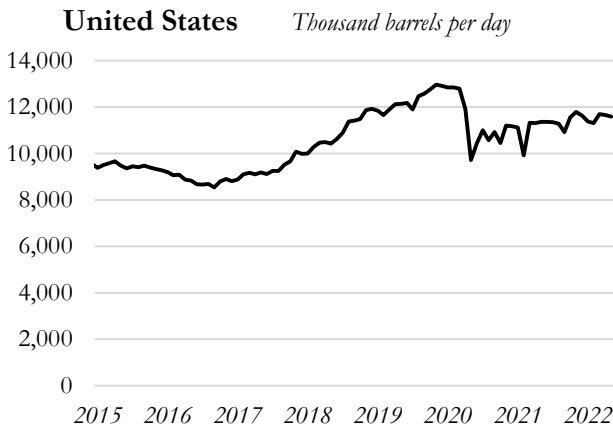


Top Producing States, thousand barrels per day

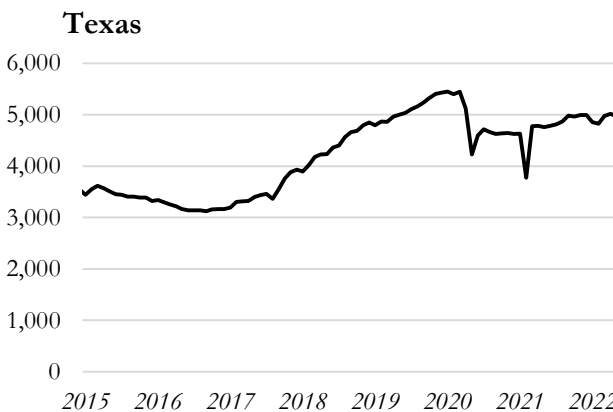


Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

Data through May 2022



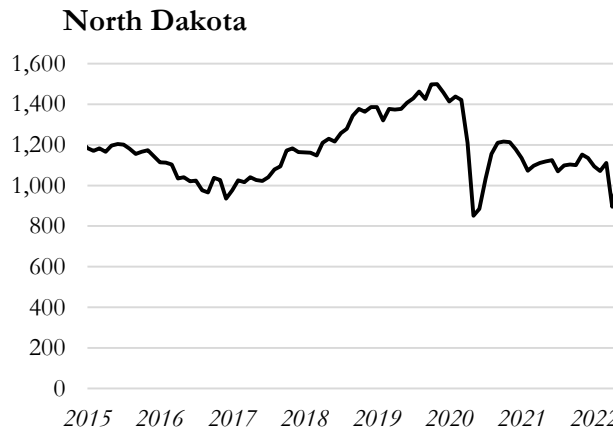
<b>United States</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-22	11,595	
Month Ago	11,652	-0.5%
3 Months Ago	11,306	2.6%
6 Months Ago	11,790	-1.7%
1 Year Ago	11,356	2.1%



<b>Texas</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-22	4,965	
Month Ago	5,017	-1.0%
3 Months Ago	4,825	2.9%
6 Months Ago	4,994	-0.6%
1 Year Ago	4,756	4.4%
Share of U.S. Production		42.8%



<b>New Mexico</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-22	1,497	
Month Ago	1,508	-0.7%
3 Months Ago	1,401	6.9%
6 Months Ago	1,420	5.4%
1 Year Ago	1,215	23.3%
Share of U.S. Production		12.9%

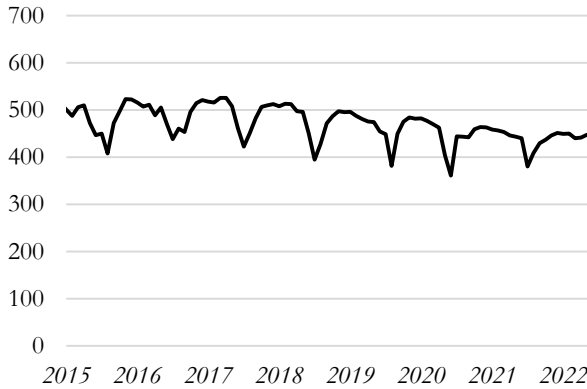


<b>North Dakota</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-22	1,049	
Month Ago	895	17.1%
3 Months Ago	1,072	-2.1%
6 Months Ago	1,151	-8.9%
1 Year Ago	1,119	-6.3%
Share of U.S. Production		9.0%

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

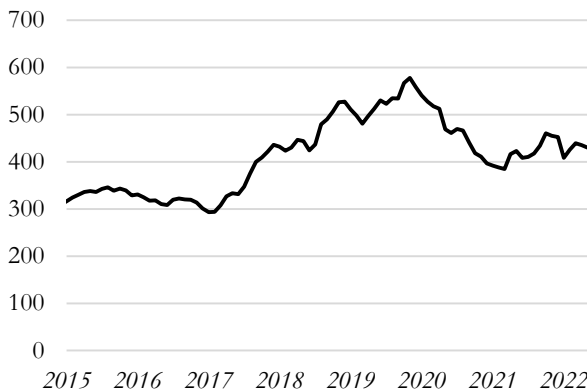
Data through May 2022

**Alaska** *Thousand barrels per day*



	<b>Alaska</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
May-22	447	
Month Ago	442	1.3%
3 Months Ago	450	-0.7%
6 Months Ago	446	0.3%
1 Year Ago	443	0.9%
Share of U.S. Production		3.9%

**Colorado**



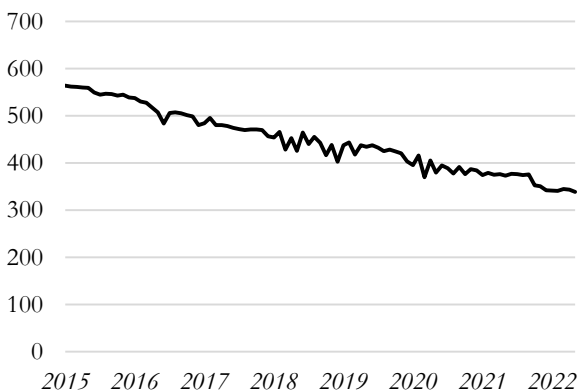
	<b>Colorado</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
May-22	430	
Month Ago	435	-1.3%
3 Months Ago	425	1.1%
6 Months Ago	455	-5.5%
1 Year Ago	423	1.6%
Share of U.S. Production		3.7%

**Oklahoma**



	<b>Oklahoma</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
May-22	425	
Month Ago	416	2.3%
3 Months Ago	386	10.2%
6 Months Ago	399	6.7%
1 Year Ago	403	5.5%
Share of U.S. Production		3.7%

**California**



	<b>California</b>	<i>Change from</i>
	<i>Thousand barrels per day</i>	
May-22	339	
Month Ago	343	-1.3%
3 Months Ago	341	-0.6%
6 Months Ago	351	-3.5%
1 Year Ago	373	-9.2%
Share of U.S. Production		2.9%

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



Data through May 2022

**Wyoming** *Thousand barrels per day*



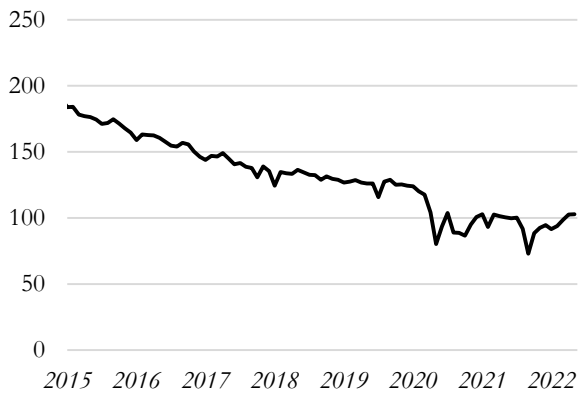
<b>Wyoming</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-22	248	
Month Ago	244	1.6%
3 Months Ago	233	6.4%
6 Months Ago	242	2.6%
1 Year Ago	232	7.1%
Share of U.S. Production		2.1%

**Utah**



<b>Utah</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-22	119	
Month Ago	114	3.9%
3 Months Ago	114	3.8%
6 Months Ago	112	5.6%
1 Year Ago	88	35.0%
Share of U.S. Production		1.0%

**Louisiana**

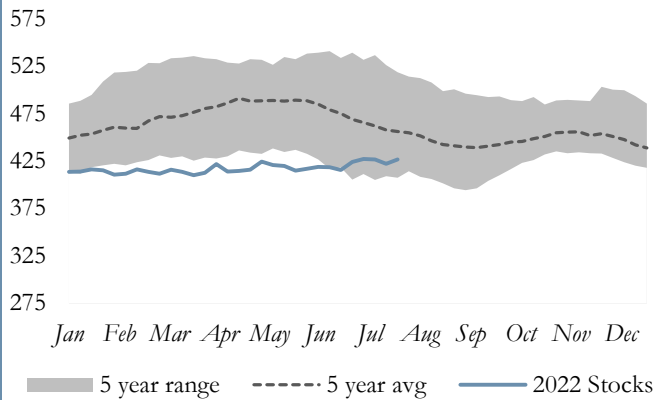


<b>Louisiana</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
May-22	103	
Month Ago	103	0.1%
3 Months Ago	94	9.6%
6 Months Ago	92	11.2%
1 Year Ago	100	2.3%
Share of U.S. Production		0.9%

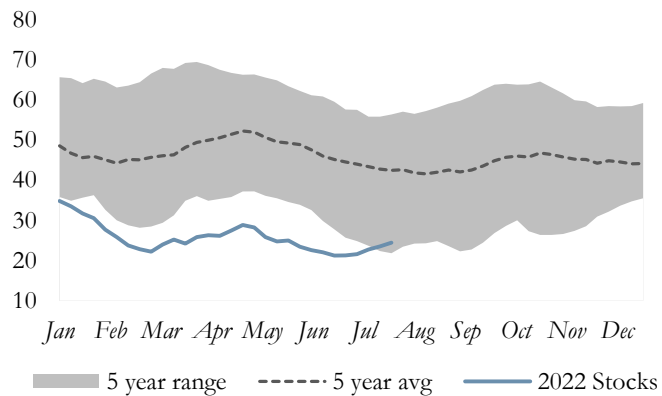
Source: U.S. Department of Energy, Energy Information Administration/Haver Analytics

July 2022 Weekly U.S. Crude Oil Stocks

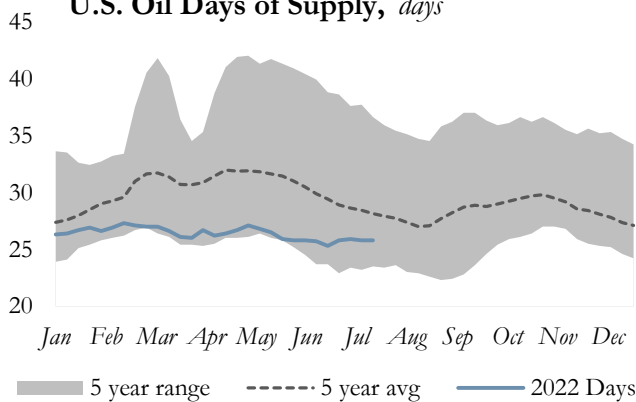
U.S. Oil Stocks, million barrels\*



Cushing, OK Oil Stocks, million barrels



U.S. Oil Days of Supply, days



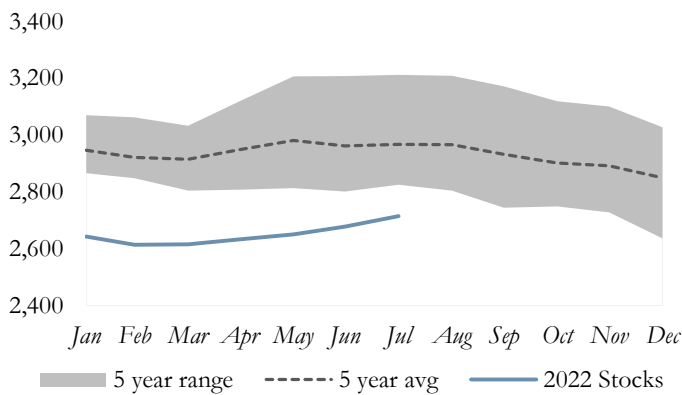
Crude Oil Stocks

	1 Week Ago	1 Year Ago
U.S.	1.1%	-2.9%
Cushing, OK	3.9%	-29.9%
Days of Supply	-100.0%	-100.0%
East Coast (PADD 1)	0.5%	-15.1%
Midwest (PADD 2)	3.3%	-8.9%
Gulf Coast (PADD 3)	-0.7%	-1.7%
Rocky Mountain (PADD 4)	0.6%	-0.2%
West Coast (PADD 5)	5.3%	7.1%

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

July 2022 OECD Commercial Petroleum Inventory

OECD Commercial Petroleum Inventory, million barrels



Petroleum Stocks

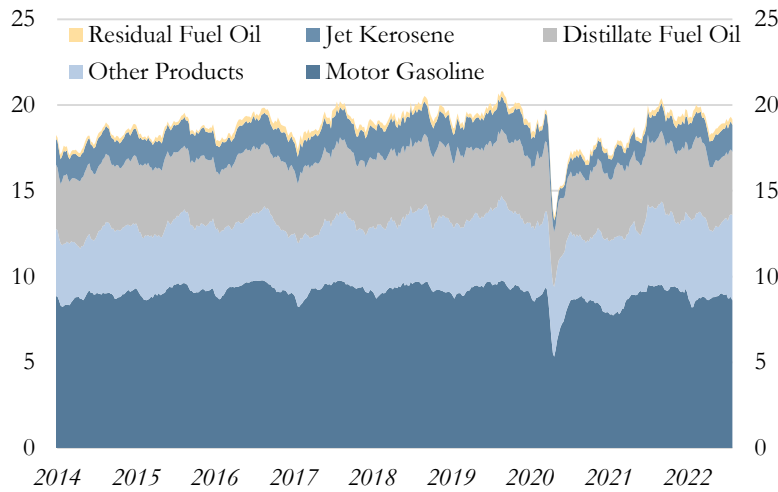
	Million Barrels	Change from
Current Month	2,715	
1 Month Ago	2,678	1.4%
3 Months Ago	2,633	3.1%
6 Months Ago	2,643	2.7%
1 Year Ago	2,836	-4.3%

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

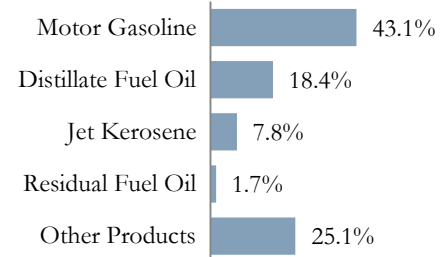
**July 2022 Weekly U.S. Demand for Petroleum Products**

*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> 7/29/22	<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	19,917	20,017	19,273	21,643	20,544
Motor Gasoline	8,592	8,983	8,799	8,215	9,420
Distillate Fuel Oil	3,673	3,858	3,774	4,432	3,766
Jet Kerosene	1,555	1,623	1,540	1,466	1,565
Residual Fuel Oil	334	309	409	400	331
Other Products	4,998	4,408	3,811	5,147	4,593

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

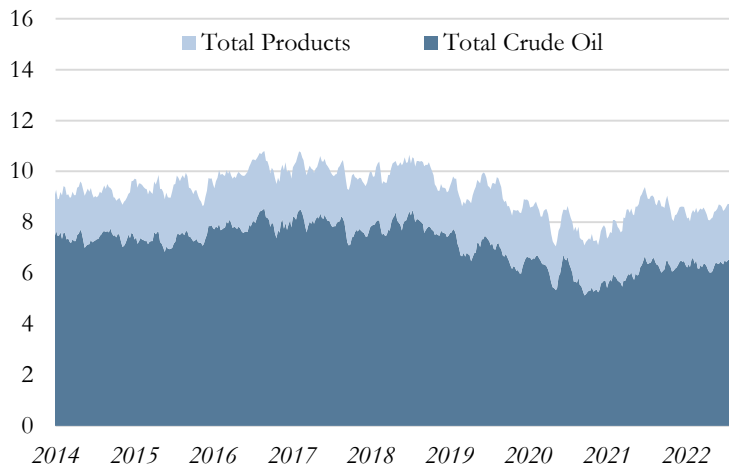
	<i>Current</i> 7/29/22	<i>1 Month</i> <i>Ago</i>	<i>3 Months</i> <i>Ago</i>	<i>6 Months</i> <i>Ago</i>	<i>1 Year</i> <i>Ago</i>
All Products	-	-0.5%	3.3%	-8.0%	-3.1%
Motor Gasoline	-	-4.4%	-2.4%	4.6%	-8.8%
Distillate Fuel Oil	-	-4.8%	-2.7%	-17.1%	-2.5%
Jet Kerosene	-	-4.2%	1.0%	6.1%	-0.6%
Residual Fuel Oil	-	8.1%	-18.3%	-16.5%	0.9%
Other Products	-	13.4%	31.1%	-2.9%	8.8%

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

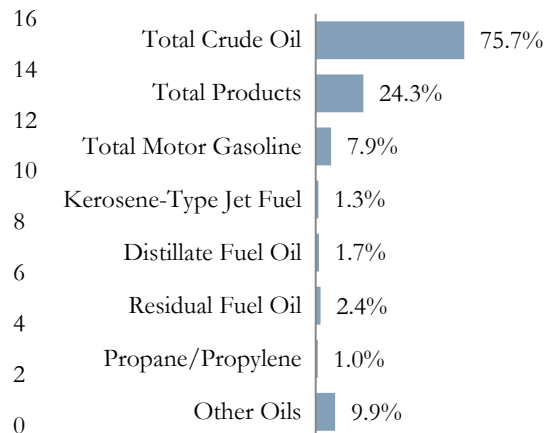
**July 2022 Weekly U.S. Imports of Crude Oil & Petroleum Products**

4-Week Averages

**Imports, million barrels per day**



**Share of Total Imports**



**U.S. Imports by Product\***

Thousand barrels per day

	Current 7/29/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>6,675</b>	<b>6,512</b>	<b>6,025</b>	<b>6,534</b>	<b>6,564</b>
<b>Total Products</b>	<b>2,142</b>	<b>1,993</b>	<b>2,129</b>	<b>1,811</b>	<b>2,491</b>
Total Motor Gasoline	697	801	752	432	1,043
Kerosene-Type Jet Fuel	116	104	131	145	145
Distillate Fuel Oil	154	113	118	249	128
Residual Fuel Oil	214	278	300	172	128
Propane/Propylene	89	72	104	150	85
Other Oils	871	626	724	654	949
<b>Total Imports</b>	<b>8,817</b>	<b>8,505</b>	<b>8,154</b>	<b>8,345</b>	<b>9,055</b>

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

	Current 7/29/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>2.5%</b>	<b>10.8%</b>	<b>2.2%</b>	1.7%
<b>Total Products</b>	-	<b>7.5%</b>	<b>0.6%</b>	<b>18.3%</b>	<b>-14.0%</b>
Total Motor Gasoline	-	-13.0%	-7.3%	61.3%	-33.2%
Kerosene-Type Jet Fuel	-	11.5%	-11.5%	-20.0%	-20.0%
Distillate Fuel Oil	-	36.3%	30.5%	-38.2%	20.3%
Residual Fuel Oil	-	-23.0%	-28.7%	24.4%	67.2%
Propane/Propylene	-	23.6%	-14.4%	-40.7%	4.7%
Other Oils	-	39.1%	20.3%	33.2%	-8.2%
<b>Total Imports</b>	-	<b>3.7%</b>	<b>8.1%</b>	<b>5.7%</b>	<b>-2.6%</b>

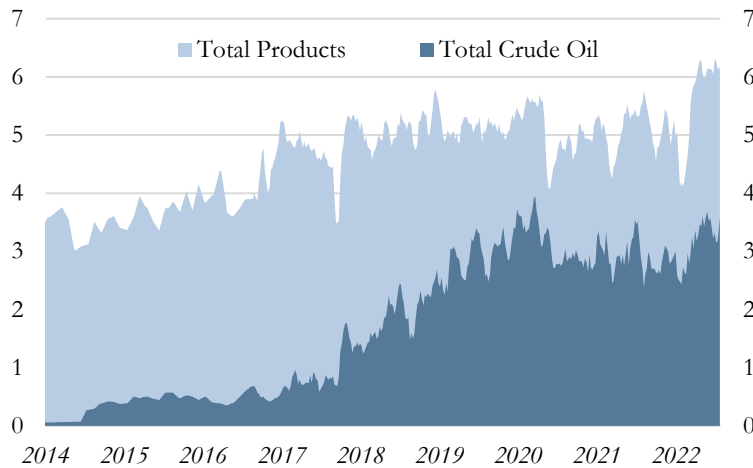
\*Totals may not sum due to component rounding

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

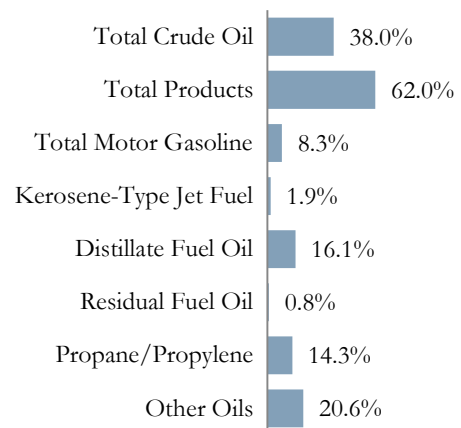
**July 2022 Weekly U.S. Exports of Crude Oil & Petroleum Products**

4-Week Averages

**Exports, million barrels per day**



**Share of Total Exports**



**U.S. Exports by Product\***

Thousand barrels per day

	Current 7/29/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	<b>3,711</b>	<b>3,322</b>	<b>3,436</b>	<b>2,434</b>	<b>2,720</b>
<b>Total Products</b>	<b>6,049</b>	<b>6,313</b>	<b>6,270</b>	<b>4,186</b>	<b>5,549</b>
Total Motor Gasoline	814	960	900	493	739
Kerosene-Type Jet Fuel	185	160	204	108	97
Distillate Fuel Oil	1,573	1,306	1,422	682	1,222
Residual Fuel Oil	78	157	111	62	127
Propane/Propylene	1,393	1,447	1,344	1,150	1,255
Other Oils	2,007	2,283	2,290	1,692	2,109
<b>Total Exports</b>	<b>9,759</b>	<b>9,636</b>	<b>9,707</b>	<b>6,620</b>	<b>8,270</b>

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

	Current 7/29/22	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
<b>Total Crude Oil</b>	-	<b>11.7%</b>	<b>8.0%</b>	<b>52.5%</b>	36.4%
<b>Total Products</b>	-	<b>-4.2%</b>	<b>-3.5%</b>	<b>44.5%</b>	<b>9.0%</b>
Total Motor Gasoline	-	-15.2%	-9.6%	65.1%	10.1%
Kerosene-Type Jet Fuel	-	15.6%	-9.3%	71.3%	90.7%
Distillate Fuel Oil	-	20.4%	10.6%	130.6%	28.7%
Residual Fuel Oil	-	-50.3%	-29.7%	25.8%	-38.6%
Propane/Propylene	-	-3.7%	3.6%	21.1%	11.0%
Other Oils	-	-12.1%	-12.4%	18.6%	-4.8%
<b>Total Exports</b>	-	<b>1.3%</b>	<b>0.5%</b>	<b>47.4%</b>	<b>18.0%</b>

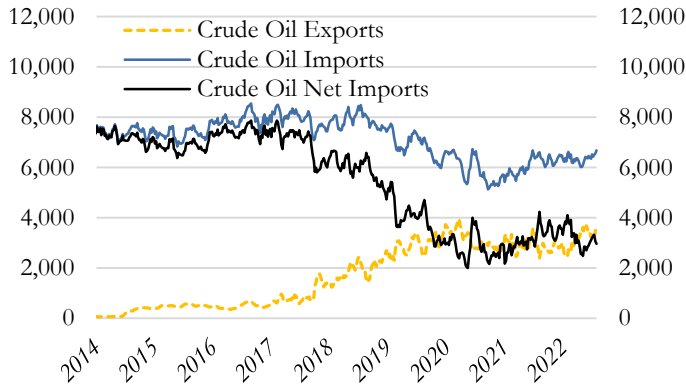
\*Totals may not sum due to rounding

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

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

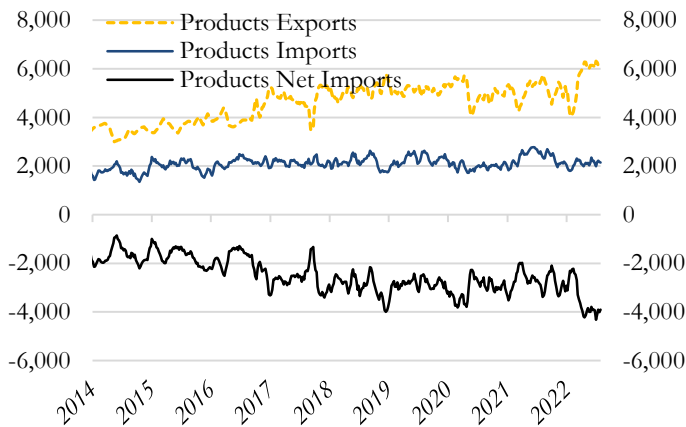
*4-Week Averages, Thousand barrels per day*

**Crude Oil Net Imports**



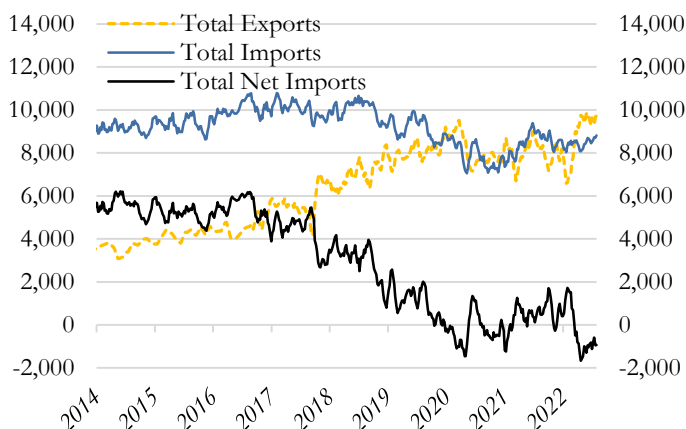
<b>Crude Oil Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
7/29/22	2,964	
Month Ago	3,190	-7.1%
3 Months Ago	2,588	14.5%
6 Months Ago	4,099	-27.7%
1 Year Ago	3,844	-22.9%

**Products Net Imports**



<b>Products Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
7/29/22	-3,907	
Month Ago	-4,321	-
3 Months Ago	-4,141	-
6 Months Ago	-2,374	-
1 Year Ago	-3,058	-

**Total Net Imports**



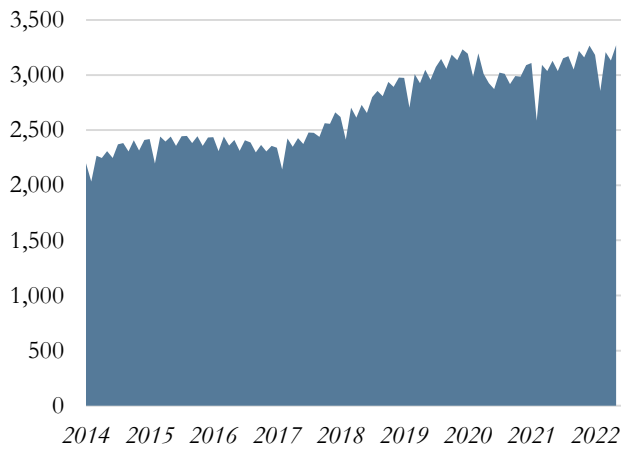
<b>Total Net Imports</b>		<i>Change from</i>
<i>Thousand barrels per day</i>		
7/29/22	(943)	
Month Ago	(1,131)	-
3 Months Ago	(1,553)	-
6 Months Ago	1,725	-
1 Year Ago	786	-

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

U.S. Natural Gas Production & Stocks

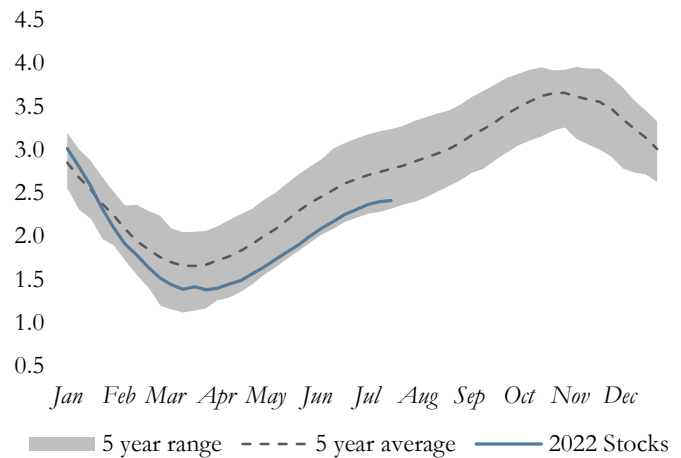
May 2022 Production

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



July 2022 Weekly Stocks

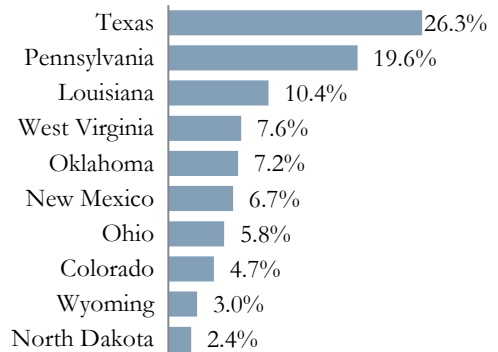
U.S. Natural Gas Stocks, Billion cubic feet (Bcf)



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	3,271	3,134	2,856	3,161	3,151
U.S. Stocks	2,416	2,251	1,490	2,591	2,714

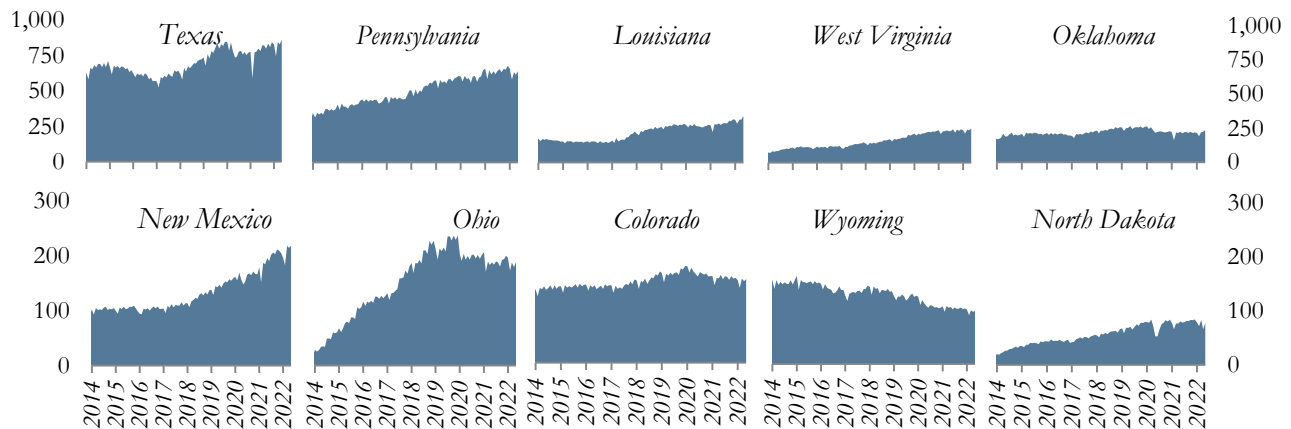
Share of Production



U.S. Natural Gas, Change from

	Current Period*	1 Month Ago	3 Months Ago	6 Months Ago	1 Year Ago
U.S. Production	-	4.4%	14.5%	3.5%	3.8%
U.S. Stocks	-	7.3%	62.1%	-6.8%	-11.0%

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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