

Kentucky gasoline price primer

Interim Joint Committee on Natural
Resources and Energy

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Key points

- ▶ Increased refiners' crude oil acquisition costs drove over **85%** of the rise in gasoline prices in the first half of 2022 per EIA and AAA
- ▶ Kentucky's gasoline prices averaged **29 cents per gallon below** the U.S. average in 2021 and the first half of 2022
- ▶ Although many uncertain factors could influence oil prices, this year oil demand has remained historically strong, while domestic crude oil production has remained 1.0 mb/d below its highest levels in late 2019 and early 2020
- ▶ EIA projects supply growth of 2.2 million barrels per day (mb/d) by OPEC and 1.4 mb/d from the U.S. is needed to balance global markets
- ▶ Inventories: As of August 5, the lowest commercial U.S. crude oil inventories since 2014 and SPR since 1985
- ▶ A combination of demand outpacing supply and low inventories has historically been a recipe for upward price pressure
- ▶ U.S. monitoring of short-term trends, especially distillate inventories on the East Coast
- ▶ **U.S. economic and energy security requires a renewed focus on policies to support healthy production, pipeline infrastructure, and trade**

Gasoline prices have historically reflected those of oil, which accounted for more than 85% of the change in gasoline prices through the first half of 2022

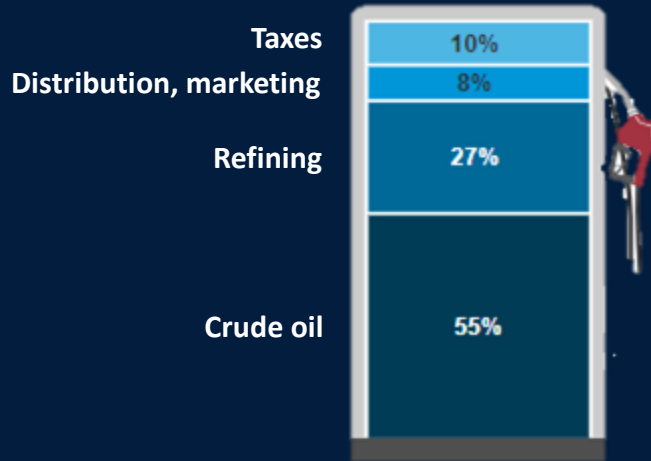


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- Kentucky's gasoline prices averaged **29 cents per gallon below** the U.S. average in the first half of 2022

EIA: What we pay for gasoline

Regular gasoline prices, June 2022

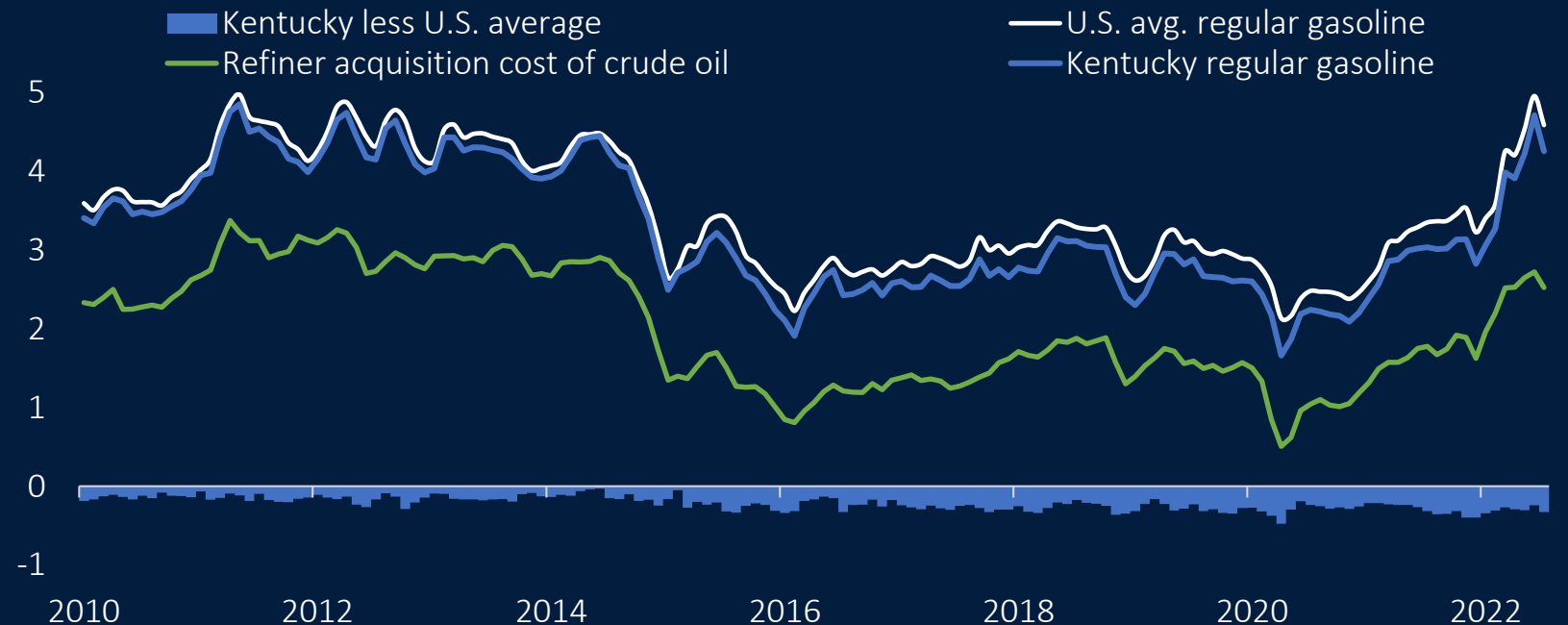
U.S. average retail price: \$4.93/gallon
 Kentucky average retail price: \$4.70/gallon



source: EIA

U.S. and Kentucky gasoline prices versus refiners' crude oil costs

Dollars per gallon (2022\$)



sources: Bloomberg; EIA; AAA; Bureau of Labor Statistics; API Team analysis

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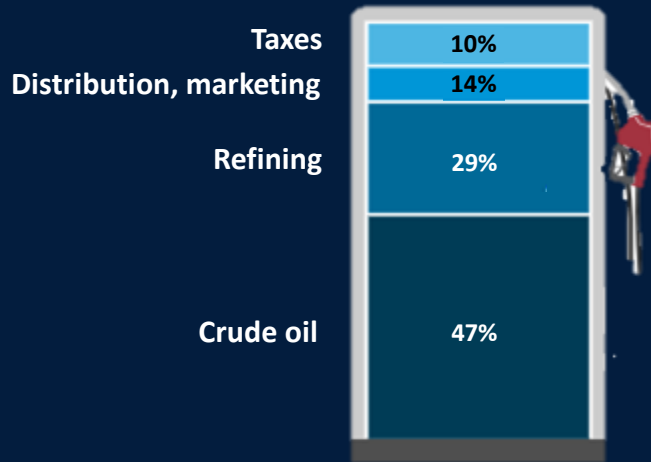
- Increased refiners' crude oil acquisition costs drove about of the rise in diesel prices in the first half of 2022 per EIA and AAA, with global market conditions also contributing
- Kentucky's gasoline prices averaged **16 cents per gallon below** the U.S. average in the first half of 2022

EIA: What we pay for gasoline

Diesel prices, June 2022

U.S. average retail price: \$5.75/gallon

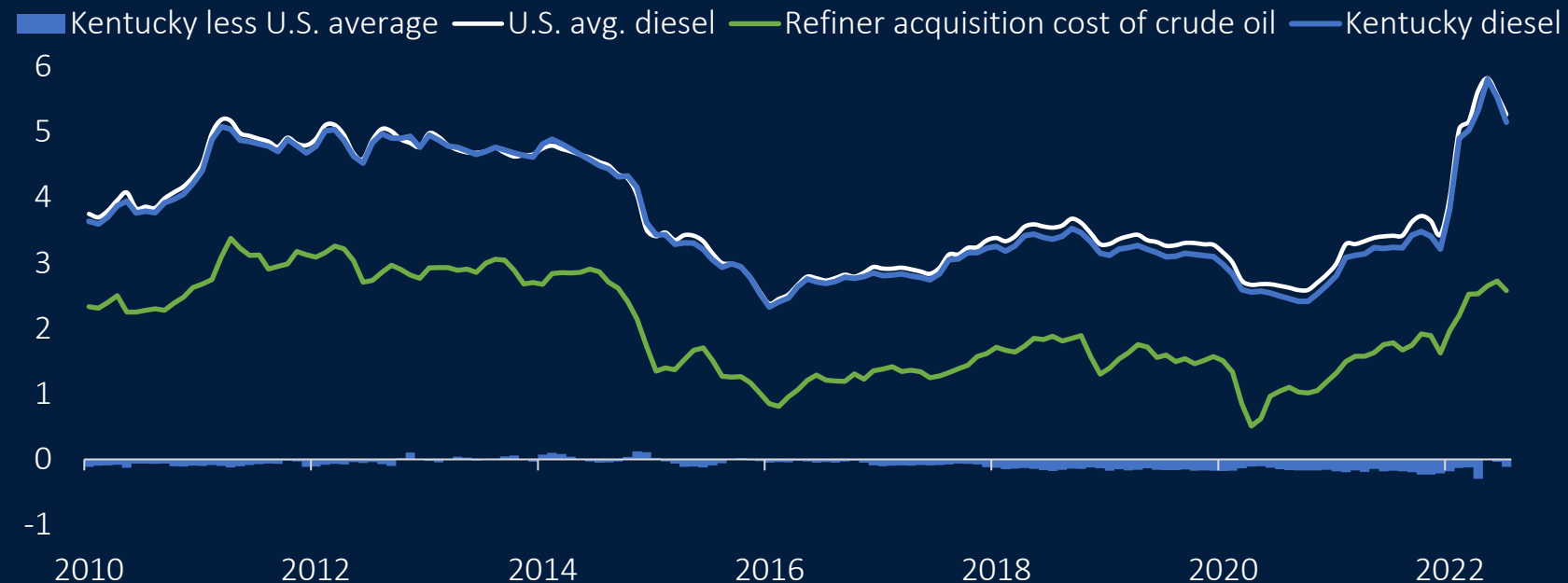
Kentucky average retail price: \$5.74/gallon



source: EIA

U.S. and Kentucky diesel prices versus refiners' crude oil costs

Dollars per gallon (2022\$)



sources: Bloomberg; EIA; AAA; Bureau of Labor Statistics; API Team analysis

Oil prices have historically related to many uncertain factors

CURRENT FACTORS

FUTURE EXPECTATIONS



FINANCIAL MARKETS

interest rates, foreign exchange rates, equity markets

Global oil demand could achieve a record high in 2023 per EIA



▶ EIA expects record-high global oil demand 101.5 mb/d in 2023, exiting the year at 102.9 mb/d in Dec. 2023

Global oil demand and GDP

Million barrels per day

110

100

90

80

70

40

50

60

70

80

90

100

2000

↑
Great Financial
Crisis (2008-2009)

↑
2020 COVID-
19 recession

2021

2022

2023

— EIA estimates

Real GDP (Trillion 2010\$)

*Market exchange rate basis

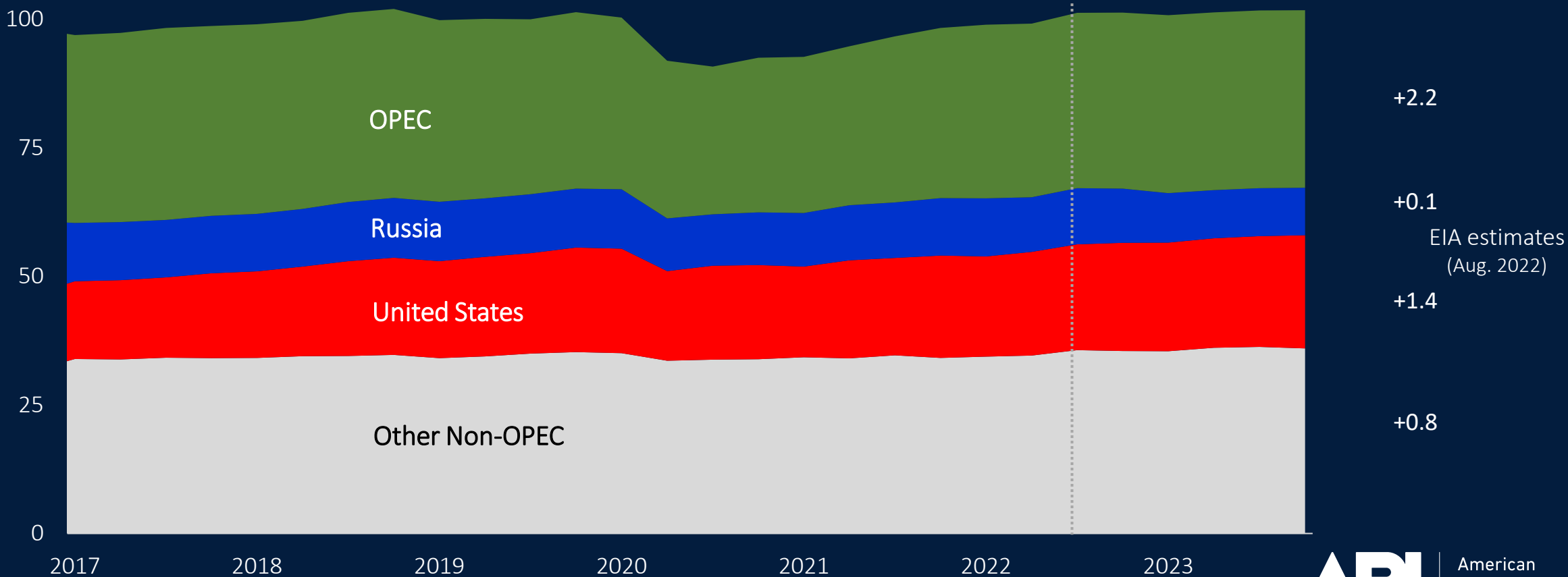
sources: EIA; Bloomberg; IMF; API Team calculations



Balancing global oil markets could require 2022 supply growth of 2.2 mb/d by OPEC and 1.4 mb/d from the U.S. per EIA

Global oil production

Million barrels per day



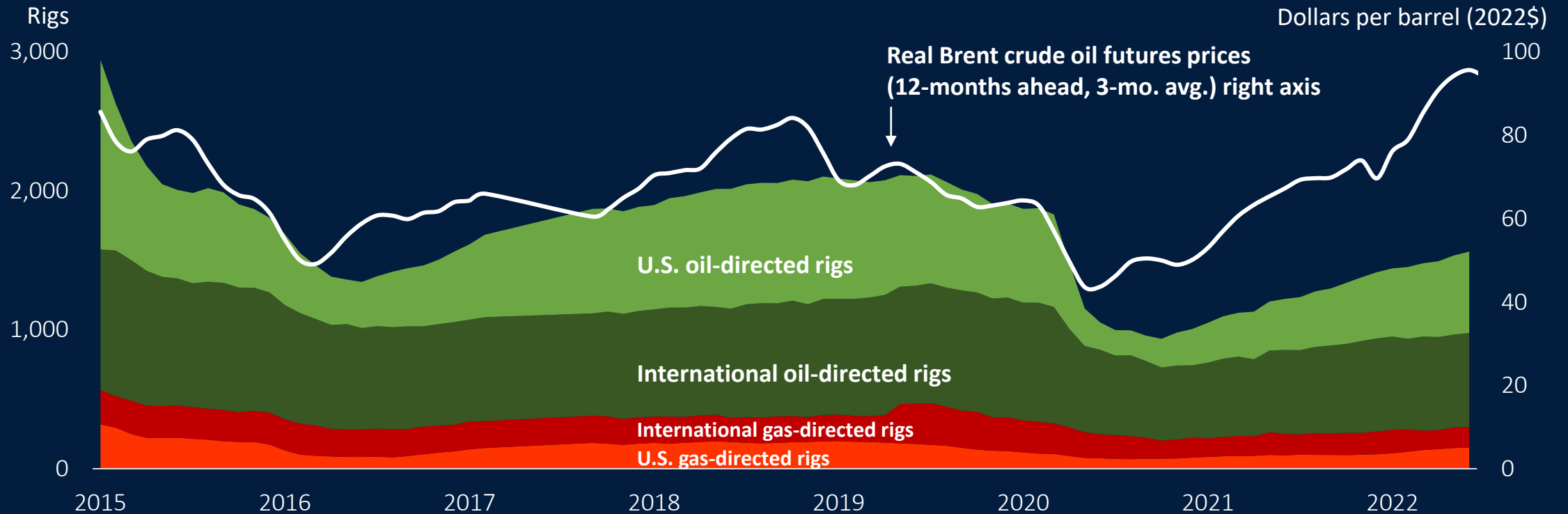
source: EIA



Global drilling activity has continued to lag its 2019 levels and historical price responsiveness

- ▶ In July 2022, global oil & gas drilling activity was down by 28.3% compared with July 2019. Changes vs. 2019 by segment:
 - U.S. oil drilling (-23.4%)
 - U.S. natural gas drilling (-12.4%)
 - International oil drilling (-19.2%)
 - International natural gas drilling (-49.0%)

Global oil drilling activity and Brent crude oil prices, monthly



sources: Baker Hughes ; Bloomberg; CME Group



Despite elevated prices, U.S. liquid fuels consumption could reach record levels in 2023 per EIA

- High-frequency indicators of industrial activity remained solid through June, and transportation saw an increase in travel and traffic volume along with increased fuel prices
- EIA projects U.S. annual oil consumption growth 2.9% (0.6 mb/d) y/y in 2022 and 2.0% y/y (0.4 mb/d) in 2023

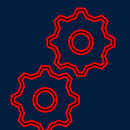
U.S. demand indicators, y/y%



Total flights
July 2022 vs. July 2021
+12%



Plastics & rubber
June 2022 vs. June 2021
+6.2%



Manufacturing
May 2022 vs. May 2021
+3.6%



Traffic volume
May 2022 vs. May 2021
+1.3%

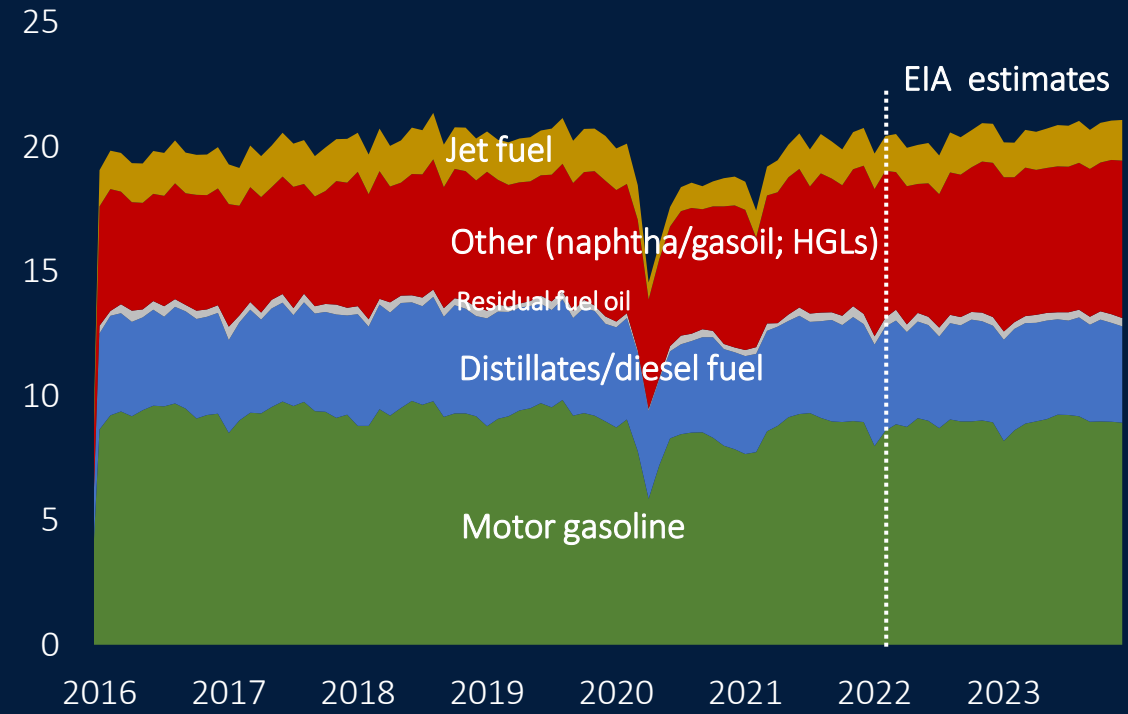


DAT spot Truck posts
July 2022 vs. July 2021
-9.3%

sources: FlightRadar24; FRB; FHA; DAT Trendlines

U.S. liquid fuel consumption by fuel

Million barrels per day



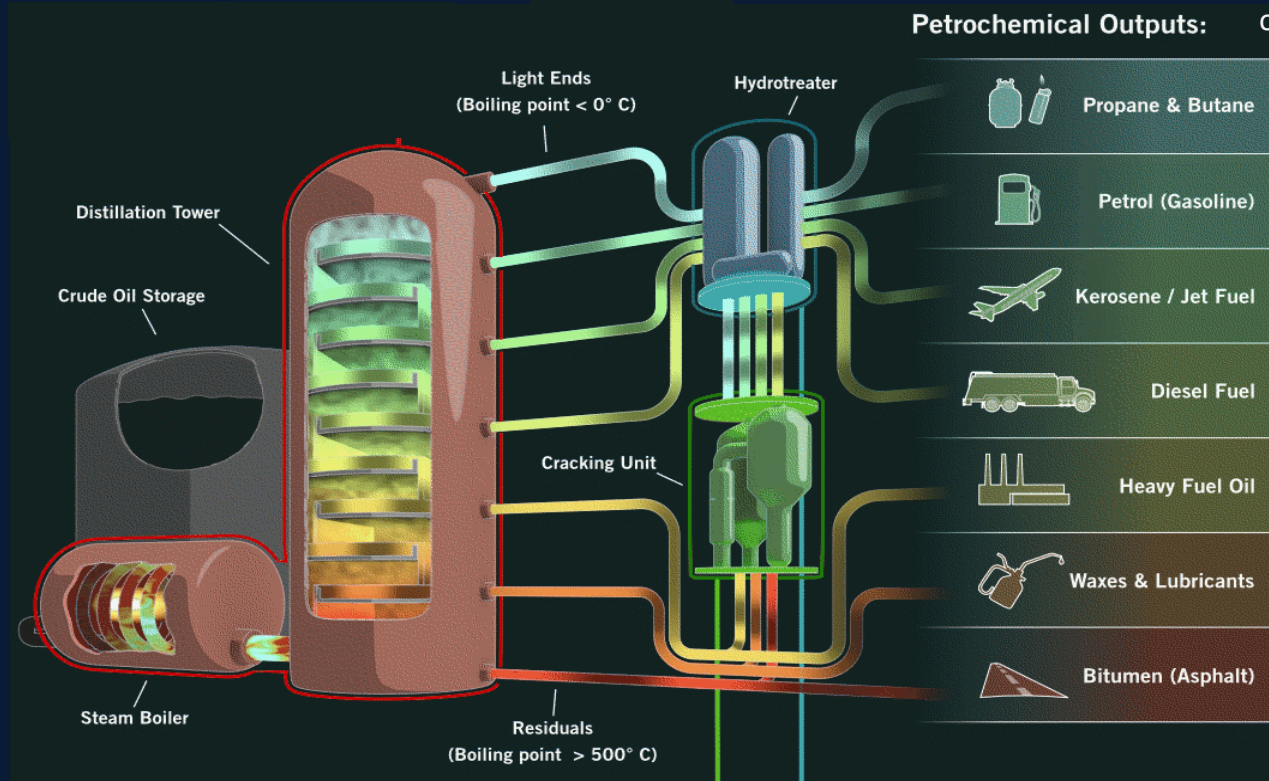
sources: EIA; API



U.S. refining has remained globally competitive by expanding existing facilities and becoming a preferred provider to the rest of the world

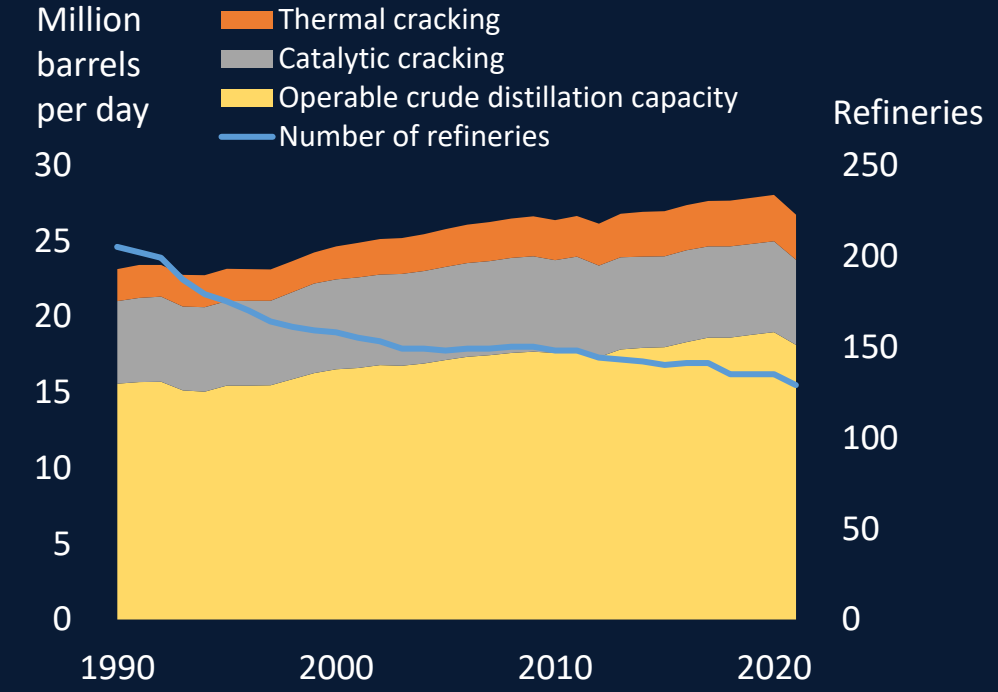
- › The U.S. refining complex produces a variety of petroleum-based products and materials to meet society's needs
- › Although the number of refineries has decreased over time — currently at 129 — their capacity has grown through continued investments that have been enabled by infrastructure and markets

Oil refining – an illustrative depiction



sources: Fes Tanks Australia; EIA

U.S. refineries and their capacity



source: EIA

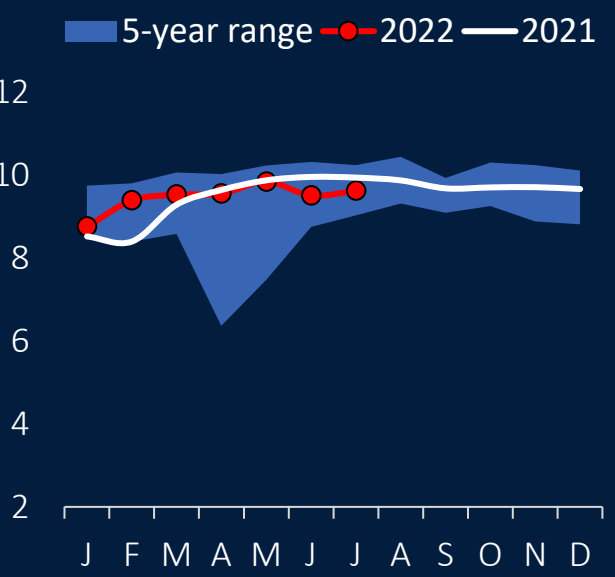
Motor gasoline fundamentals have similarly tightened so far in 2022



- ▶ In the first seven months of 2022, U.S. refinery motor gasoline production remained strong within its five-year range, and motor gasoline demand remained within the historical range
- ▶ Motor gasoline exports rose markedly since January, and inventories fell to the bottom of their five-year range

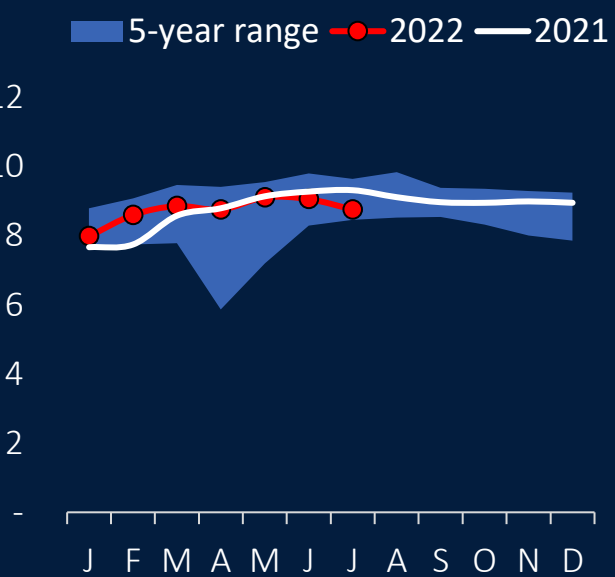
Motor gasoline production

Million barrels per day



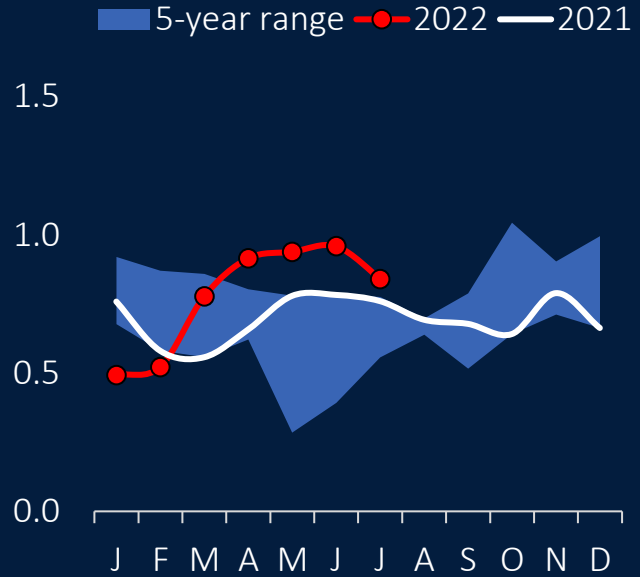
Motor gasoline demand

Million barrels per day



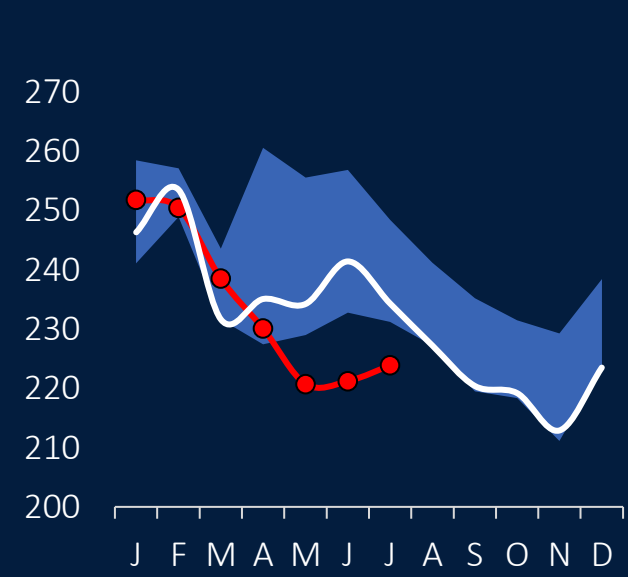
Motor gasoline exports

Million barrels per day



Motor gasoline inventories

Million barrels



sources: EIA; API MSR™

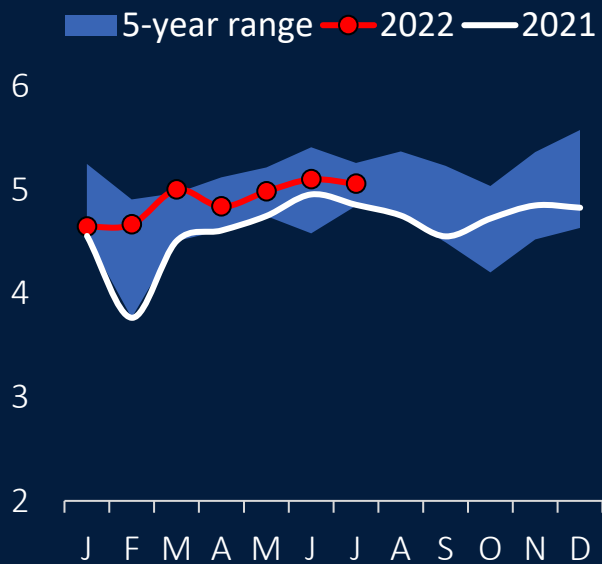
Distillates/diesel fuel fundamentals have generally tightened so far in 2022



- ▶ In the first seven months of 2022, U.S. refinery distillates' production and consumption were solid within their five-year ranges
- ▶ Distillate exports more than doubled between January and July, and inventories remained below their five-year range

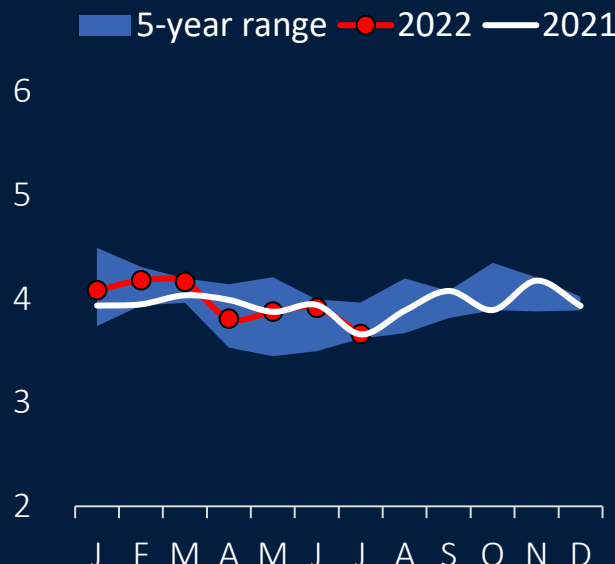
Distillates production

Million barrels per day



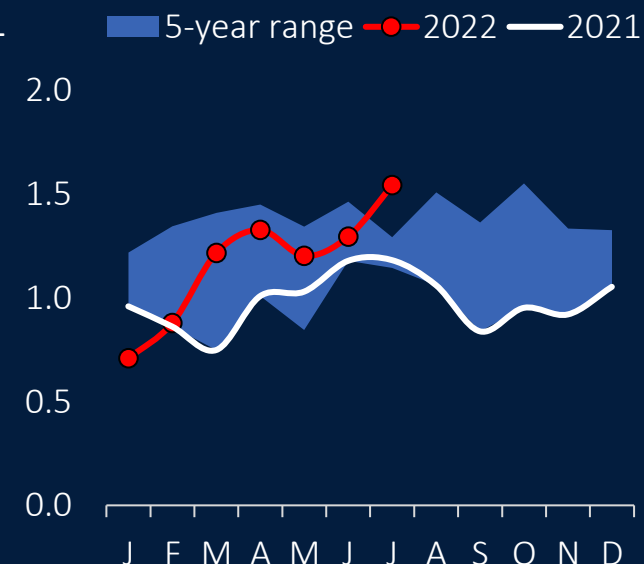
Distillates demand

Million barrels per day



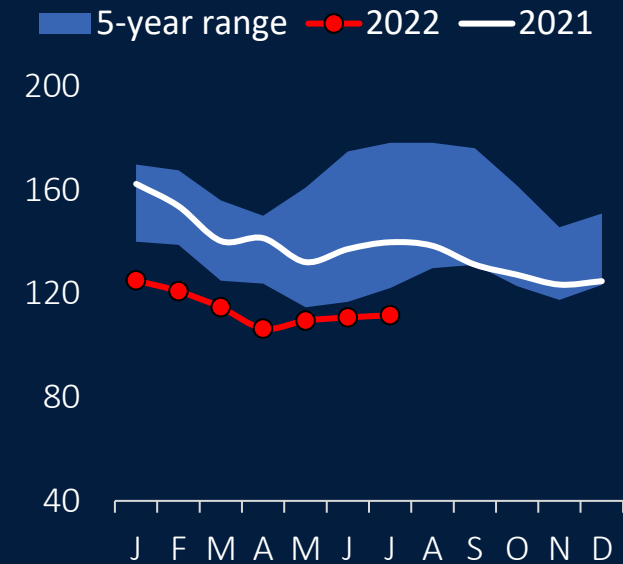
Distillates exports

Million barrels per day



Distillates inventories

Million barrels



sources: EIA; API MSR™

API economics resources available at www.api.org

The screenshot shows the API website homepage. At the top, the API logo and 'American Petroleum Institute' are on the left. The navigation menu includes 'Home', 'About', 'Membership', 'API Careers', 'Chief Economist' (circled in red with an arrow pointing to it), and 'Contact'. Below the navigation, there are dropdown menus for 'Natural Gas & Oil', 'Products & Services', 'Policy & Issues', 'Climate Action', and 'Blog, News & Media'. A search icon is on the right. The main banner features a photo of two workers in a refinery and the text 'Home / Products & Services / Statistics Reports & Surveys / API's Economic Industry Outlook'. Below the banner is a large heading 'API's Economic Industry Outlook' and a photo of three people in a meeting. To the right of the main content is a sidebar with sections: 'Read The Blog:' with a link to 'Chief Economist's Posts on the Energy Tomorrow blog'; 'Read The News Releases:' with links for 2017, 2018, 2019, and 2020; and 'Downloads' with links for 'Monthly Statistical Report', 'Q2 2020 Quarterly Outlook (Jun 2020)', 'Q3 2020 Quarterly Outlook (Sep 2020)', 'Q4 2020 Quarterly Outlook (Dec 2020)', and 'Q1 2021 Quarterly Outlook (Mar 2021)'. On the left side, there are several callout boxes for data visualizations: 'Tracking U.S. Oil Demand', 'U.S. Consumer Expenditure Summary', 'API's Distillate Economic Indicator™', 'U.S. Consumer Expenditure Flows By Income Level', and 'U.S. Consumer Expenditure Burden By Income Level'. A red arrow points from the 'Chief Economist' link to the 'Data Visualization' section in the bottom left callout.

Data Visualization

Explore API's Interactive Data Visualizations.

Tracking U.S. Oil Demand
Primary monthly API data tracking refined product consumption
[Explore Visualization .url](#)

U.S. Consumer Expenditure Summary
Summarizing leading U.S. consumer expenditure categories over time
[Explore Visualization .url](#)

API's Distillate Economic Indicator™
API's proprietary Distillate Economic Indicator™ leverages refined product demand estimates to broadly track economic activity
[Explore Visualization .url](#)

U.S. Consumer Expenditure Flows By Income Level
Mapping U.S. consumer expenditure flows by income level and spending category
[Explore Visualization .url](#)

U.S. Consumer Expenditure Burden By Income Level
Measuring U.S. consumer expenditure burden by spending category and income level
[Explore Visualization .url](#)

Reports & Surveys

Weekly Statistical Bulletin

Monthly Statistical Report

Economic Outlook

Data Visualization

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[Chief Economist's Posts on the Energy Tomorrow blog](#)

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[Chief Economist's News Releases, 2018](#)
[Chief Economist's News Releases, 2019](#)
[Chief Economist's News Releases, 2020](#)

Downloads
[Monthly Statistical Report](#)
File Size: .4 MB
[Q2 2020 Quarterly Outlook \(Jun 2020\)](#)
File Size: 1.9 MB
[Q3 2020 Quarterly Outlook \(Sep 2020\)](#)
File Size: 1.9 MB
[Q4 2020 Quarterly Outlook \(Dec 2020\)](#)
File Size: 2.4 MB
[Q1 2021 Quarterly Outlook \(Mar 2021\)](#)

The API Industry Outlook, developed by API's Dean Foreman, is a quarterly report that provides natural gas and oil industry as it relates to the economies.