# Energy Tidbits

## US Says JCPOA Big Issues Have Been Largely Settled, How Could Biden Walk Away Now?

Produced by: Dan Tsubouchi

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**Dan Tsubouchi**
Principal, Chief Market Strategist
dtsubouchi@safgroup.ca

**Ryan Dunfield**
Principal, CEO
rdunfield@safgroup.ca

**Aaron Bunting**
Principal, COO, CFO
abunting@safgroup.ca

**Ryan Haughn**
Principal, Energy
rhaughn@safgroup.ca

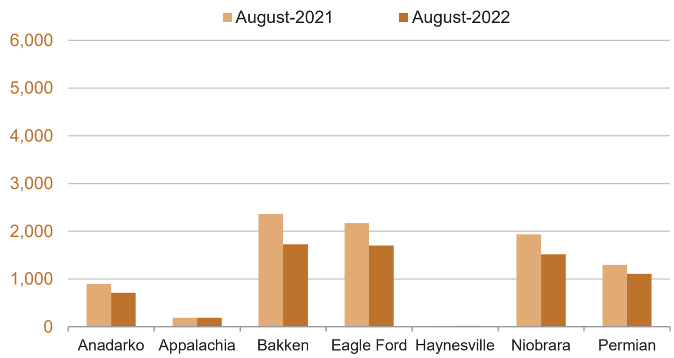
# Year-over-year summary

*July 2022*

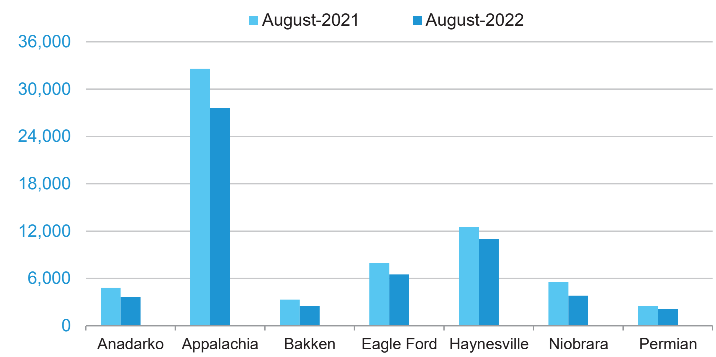
Drilling Productivity Report

drilling data through June
projected production through August

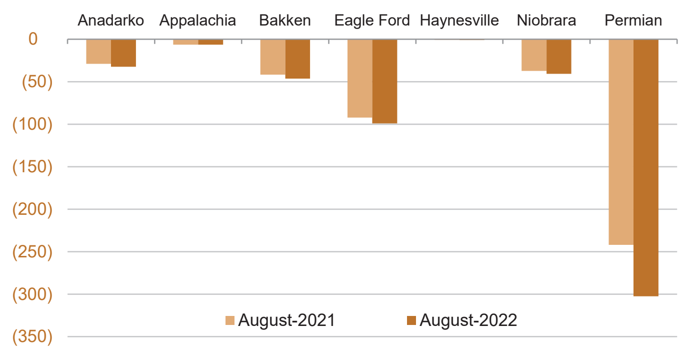
**New-well oil production per rig**
barrels/day



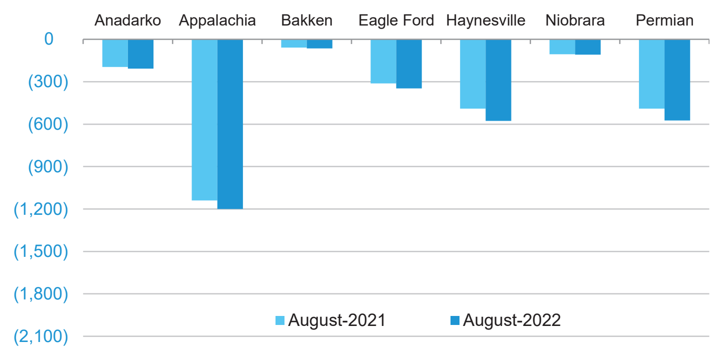

**New-well gas production per rig**
thousand cubic feet/day



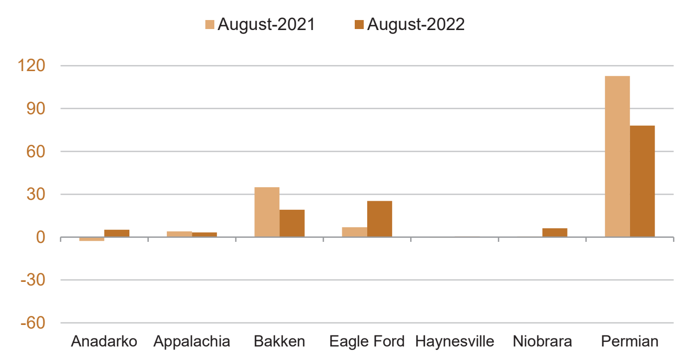

**Legacy oil production change**
thousand barrels/day



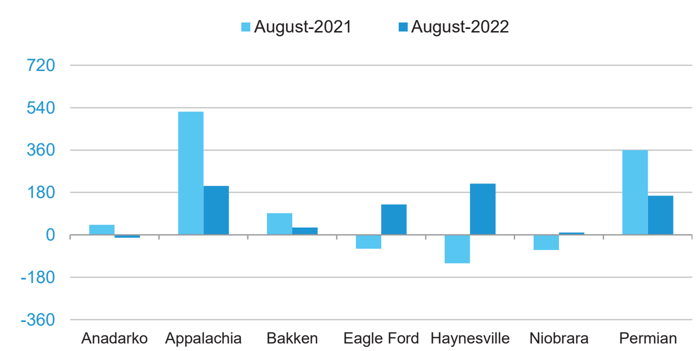

**Legacy gas production change**
million cubic feet/day



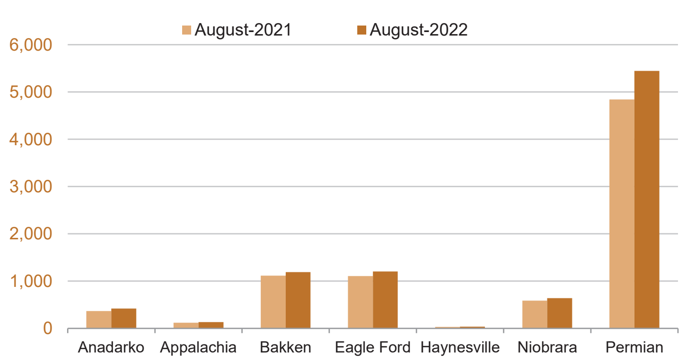

**Indicated monthly change in oil production (Aug vs. Jul)**
thousand barrels/day



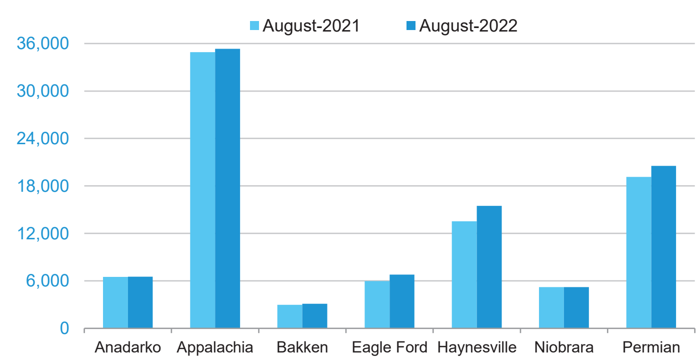

**Indicated monthly change in gas production (Aug vs. Jul)**
million cubic feet/day




**Oil production**
thousand barrels/day




**Natural gas production**
million cubic feet/day



# Anadarko Region

Drilling Productivity Report

*July 2022*

drilling data through June
projected production through August

**Oil -1** barrels/day month over month

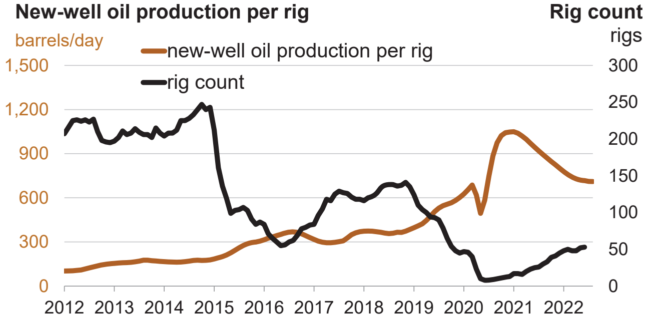
**711** *August*
**712** *July*
barrels/day

**Monthly additions from one average rig**

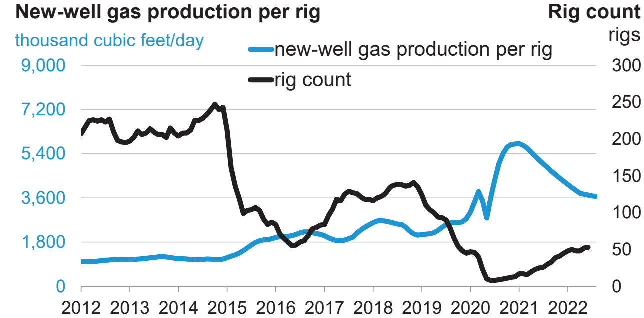
*August* **3,670**
*July* **3,678**
thousand cubic feet/day

**Gas -8** thousand cubic feet/day month over month

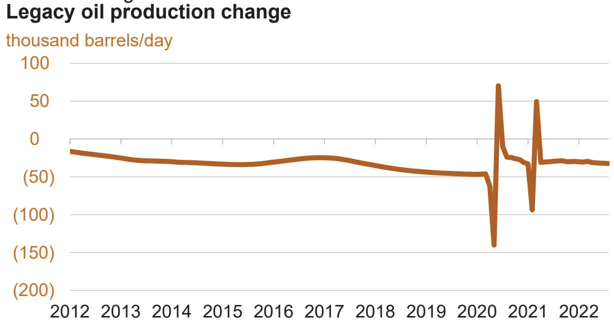
Anadarko Region
**New-well oil production per rig**



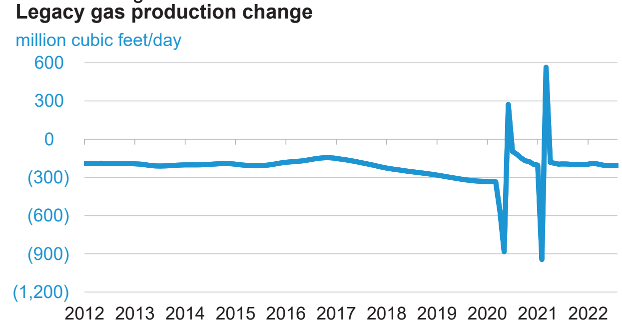

Anadarko Region
**New-well gas production per rig**



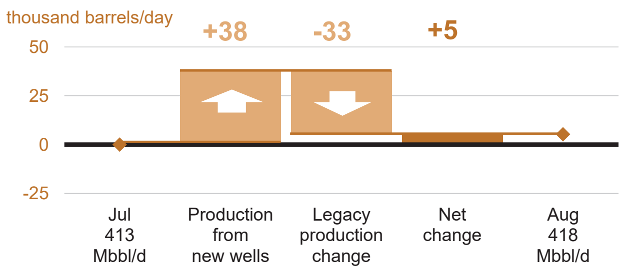

Anadarko Region
**Legacy oil production change**



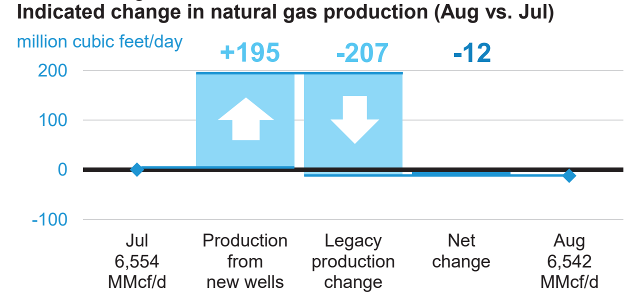

Anadarko Region
**Legacy gas production change**




Anadarko Region
**Indicated change in oil production (Aug vs. Jul)**

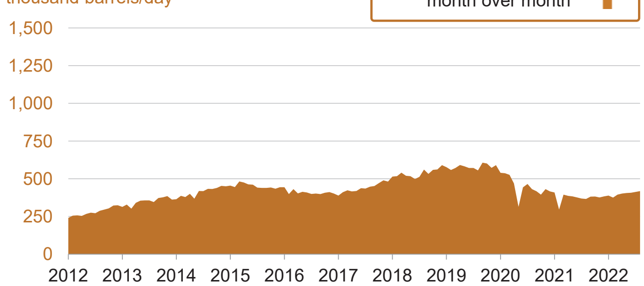



Anadarko Region
**Indicated change in natural gas production (Aug vs. Jul)**



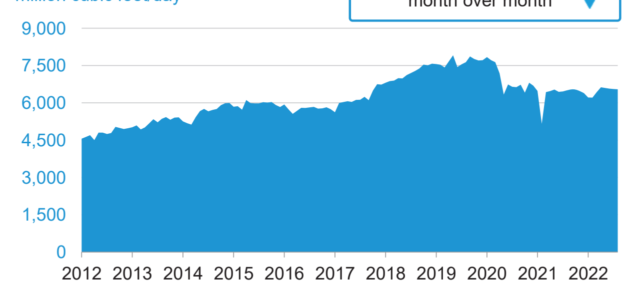

Anadarko Region
**Oil production**
thousand barrels/day

**Oil +5** thousand barrels/day month over month




Anadarko Region
**Natural gas production**
million cubic feet/day

**Gas -12** million cubic feet/day month over month



# Appalachia Region

Drilling Productivity Report

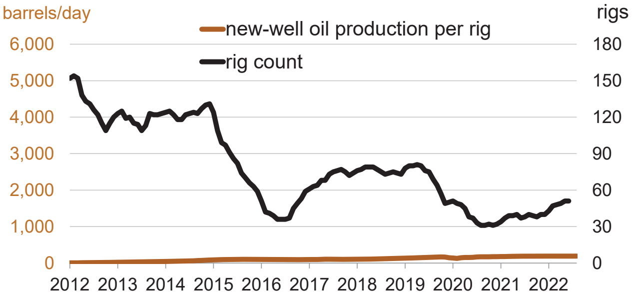
*July 2022*

drilling data through June
projected production through August

| Oil | | | Monthly additions from one average rig | | Gas |
|---|---|---|---|---|---|
| **0** barrels/day month over month | **191** *August* / **191** *July* barrels/day | | | *August* **27,601** / *July* **27,993** thousand cubic feet/day | **-392** thousand cubic feet/day month over month |

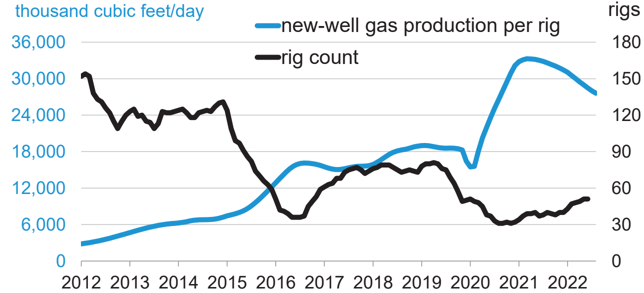
Appalachia Region
**New-well oil production per rig**

barrels/day



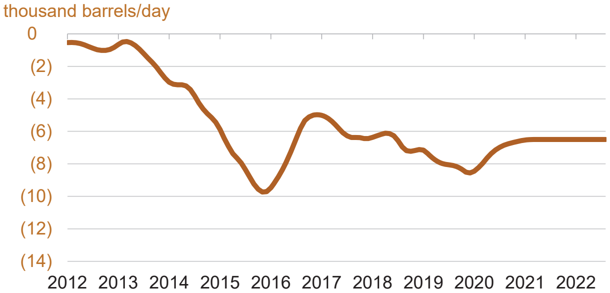

Appalachia Region
**New-well gas production per rig**

thousand cubic feet/day



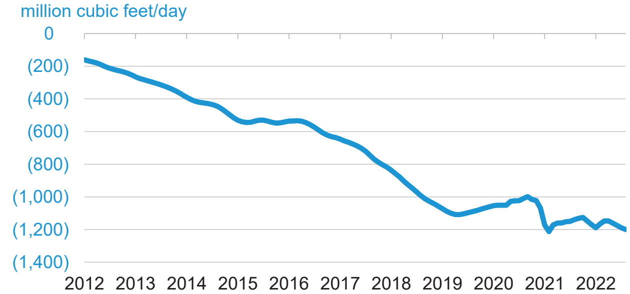

Appalachia Region
**Legacy oil production change**

thousand barrels/day



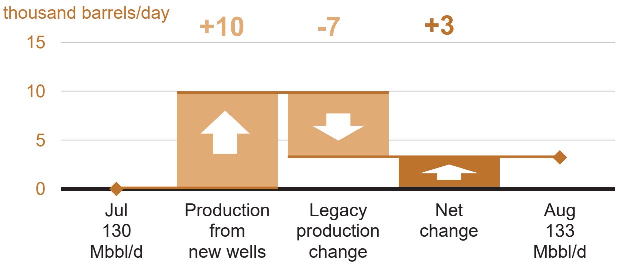

Appalachia Region
**Legacy gas production change**

million cubic feet/day



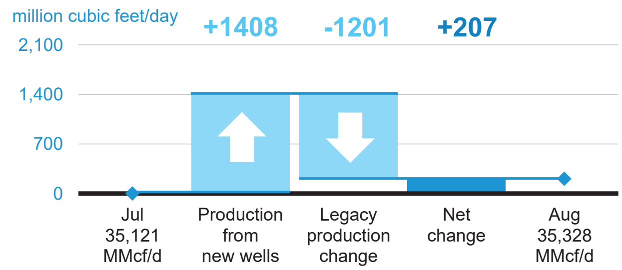

Appalachia Region
**Indicated change in oil production (Aug vs. Jul)**

thousand barrels/day




Appalachia Region
**Indicated change in natural gas production (Aug vs. Jul)**

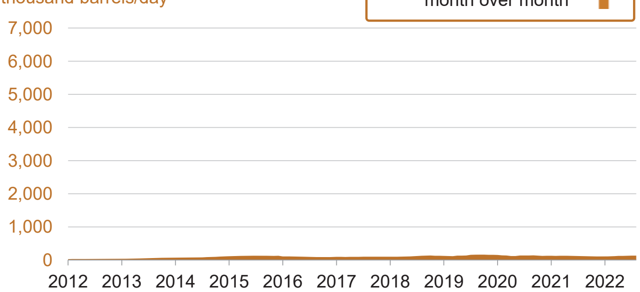
million cubic feet/day




Appalachia Region
**Oil production**

thousand barrels/day

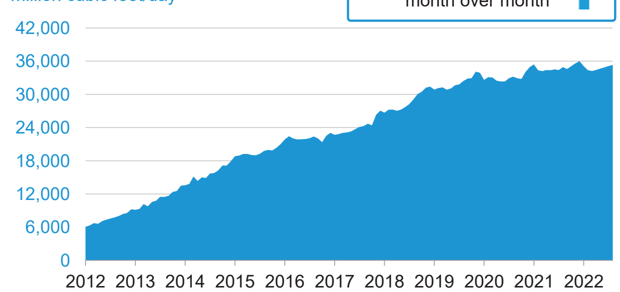
**Oil +3**
thousand barrels/day
month over month




Appalachia Region
**Natural gas production**

million cubic feet/day

**Gas +207**
million cubic feet/day
month over month



# Bakken Region

Drilling Productivity Report

*July 2022*

drilling data through June
projected production through August

**Oil +2** barrels/day month over month

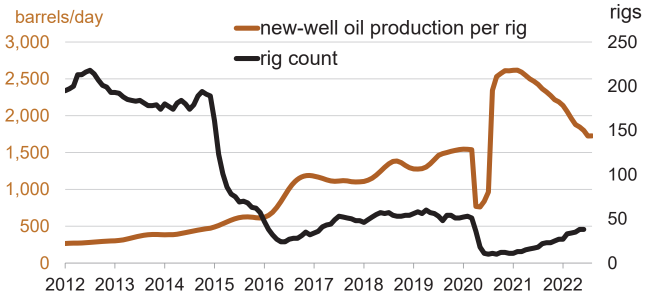
**1,726** *August*
**1,724** *July*
barrels/day

**Monthly additions from one average rig**

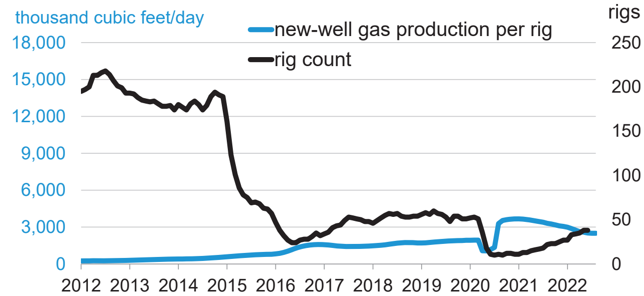
*August* **2,503**
*July* **2,499**
thousand cubic feet/day

**Gas +4** thousand cubic feet/day month over month

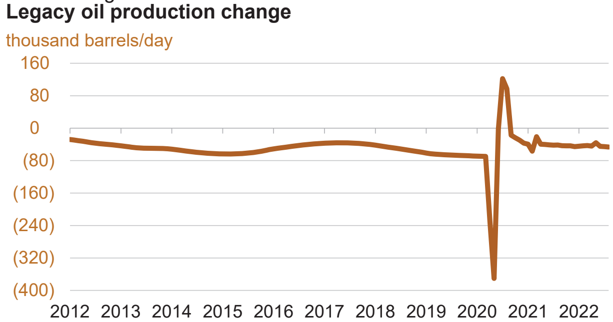
Bakken Region
**New-well oil production per rig** **Rig count**



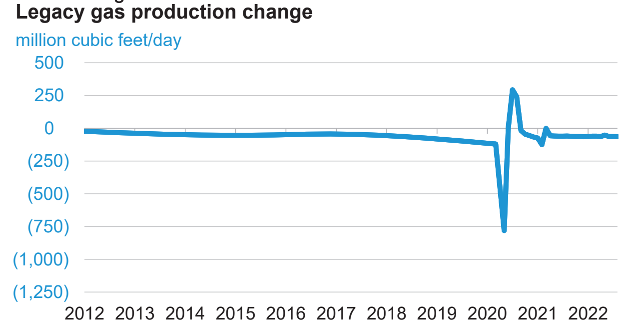

Bakken Region
**New-well gas production per rig** **Rig count**



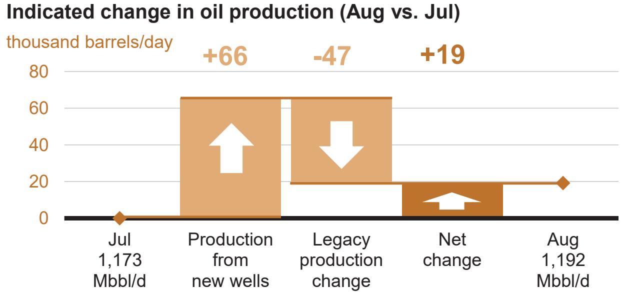

Bakken Region
**Legacy oil production change**



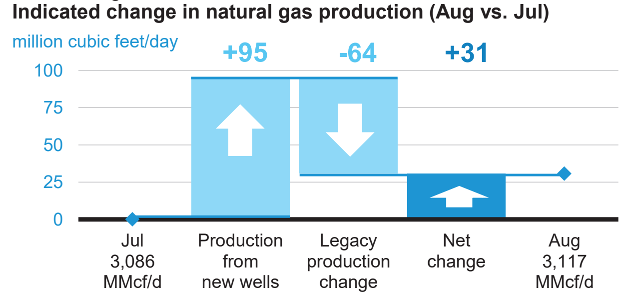

Bakken Region
**Legacy gas production change**




Bakken Region
**Indicated change in oil production (Aug vs. Jul)**

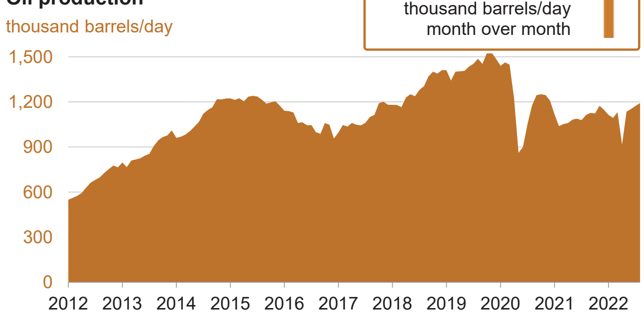



Bakken Region
**Indicated change in natural gas production (Aug vs. Jul)**



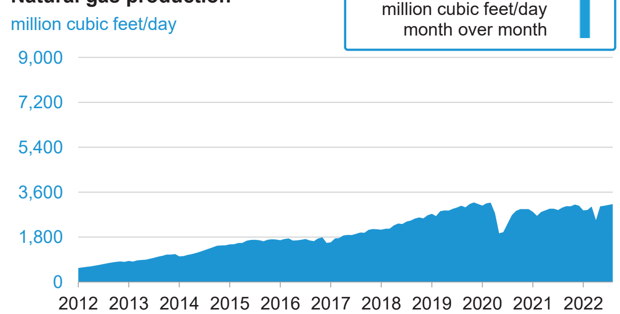

Bakken Region
**Oil production**

**Oil +19** thousand barrels/day month over month




Bakken Region
**Natural gas production**

**Gas +31** million cubic feet/day month over month



# Eagle Ford Region

Drilling Productivity Report

*July 2022*

drilling data through June
projected production through August

**Oil -80** barrels/day month over month

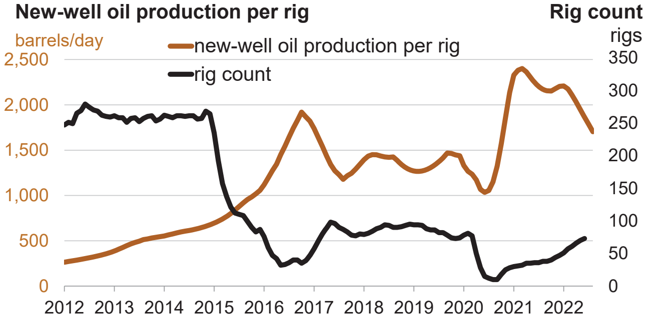
**1,703** *August*
**1,783** *July*
barrels/day

**Monthly additions from one average rig**

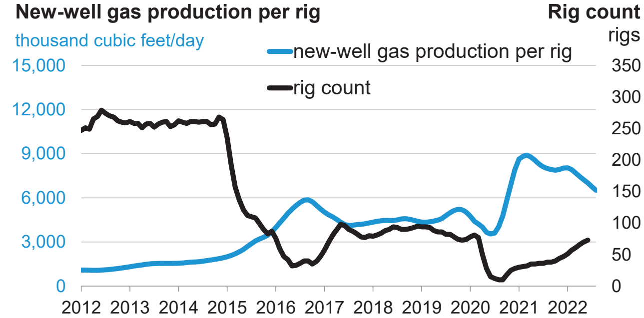
*August* **6,516**
*July* **6,752**
thousand cubic feet/day

**Gas -236** thousand cubic feet/day month over month

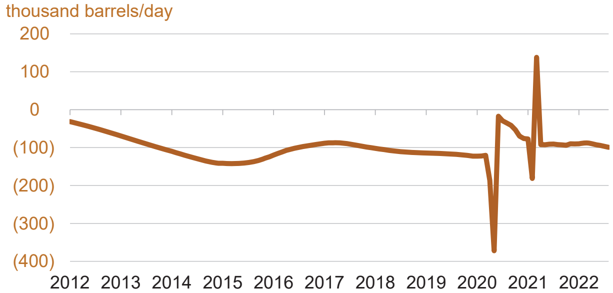
Eagle Ford Region
**New-well oil production per rig** **Rig count**



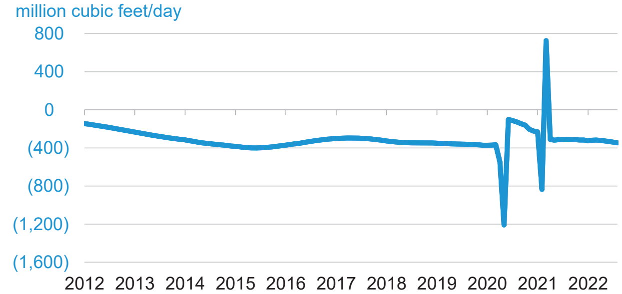

Eagle Ford Region
**New-well gas production per rig** **Rig count**



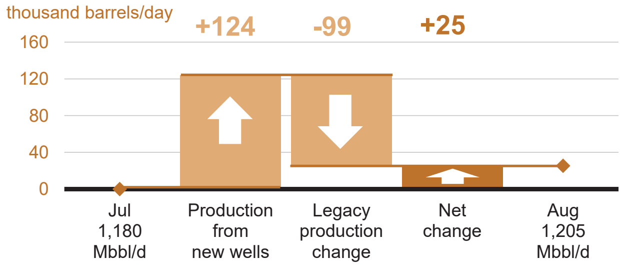

Eagle Ford Region
**Legacy oil production change**



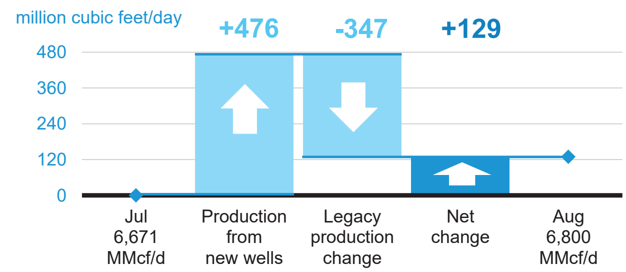

Eagle Ford Region
**Legacy gas production change**




Eagle Ford Region
**Indicated change in oil production (Aug vs. Jul)**

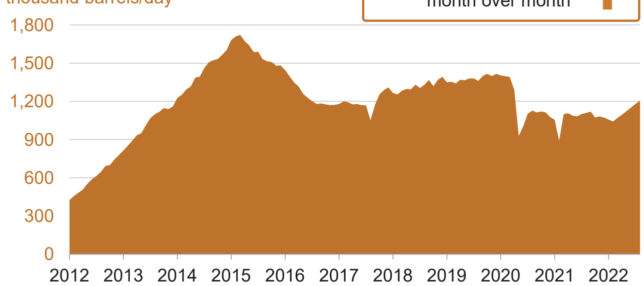



Eagle Ford Region
**Indicated change in natural gas production (Aug vs. Jul)**



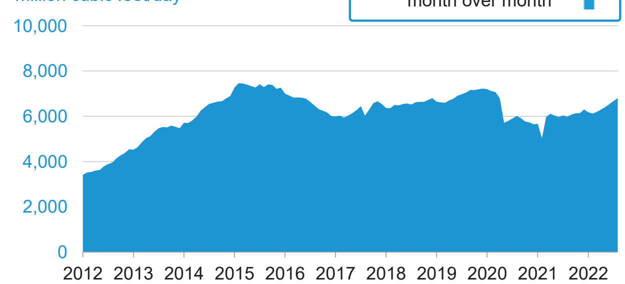

Eagle Ford Region
**Oil production**
thousand barrels/day

**Oil +25** thousand barrels/day month over month




Eagle Ford Region
**Natural gas production**
million cubic feet/day

**Gas +129** million cubic feet/day month over month



# Haynesville Region

Drilling Productivity Report

*July 2022*

drilling data through June
projected production through August

**Oil**
**0**
barrels/day
month over month

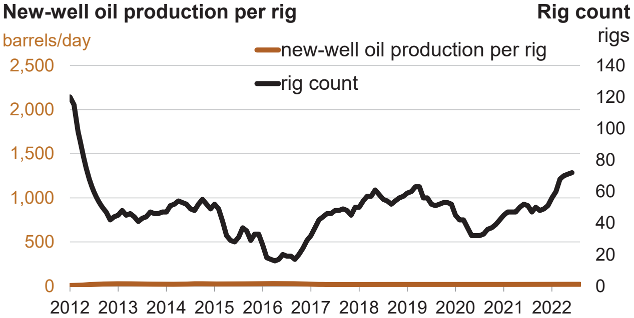
**20** *August*
**20** *July*
barrels/day

**Monthly additions from one average rig**

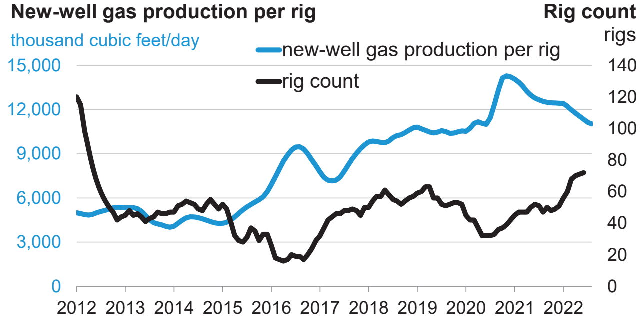
*August* **11,022**
*July* **11,134**
thousand cubic feet/day

**Gas**
**-112**
thousand cubic feet/day
month over month

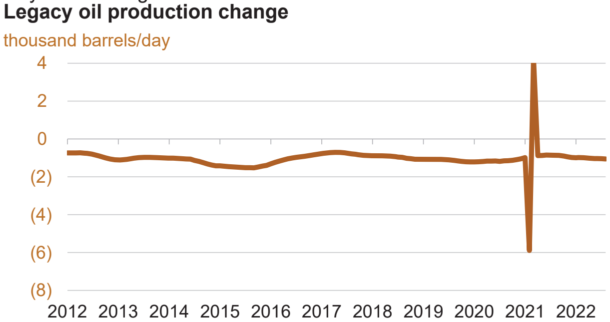
Haynesville Region
**New-well oil production per rig** **Rig count**



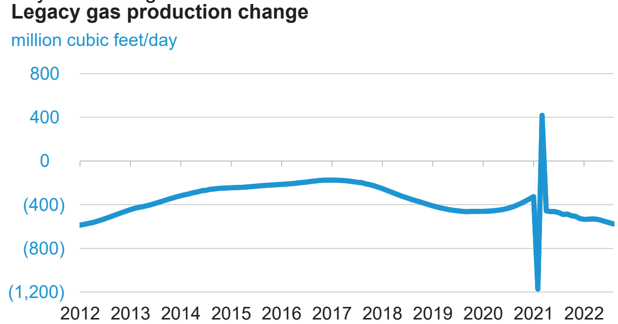

Haynesville Region
**New-well gas production per rig** **Rig count**



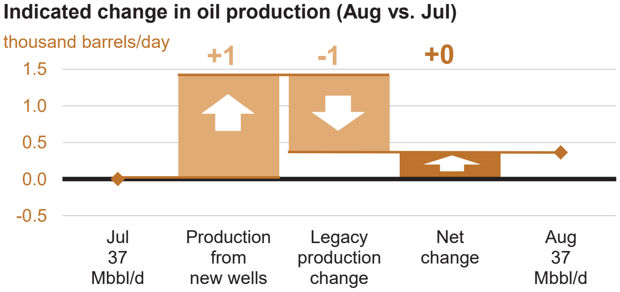

Haynesville Region
**Legacy oil production change**



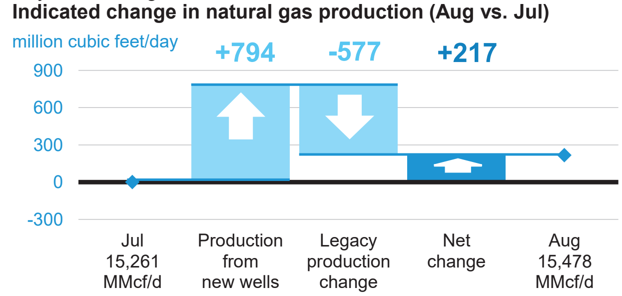

Haynesville Region
**Legacy gas production change**




Haynesville Region
**Indicated change in oil production (Aug vs. Jul)**

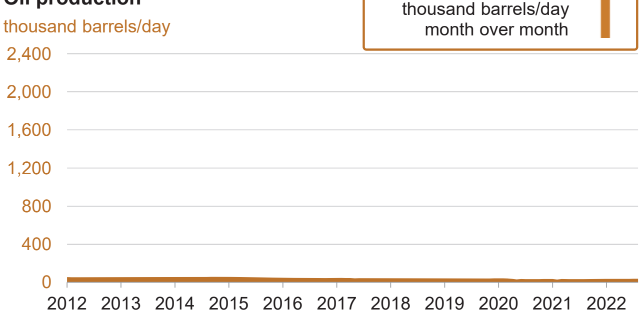



Haynesville Region
**Indicated change in natural gas production (Aug vs. Jul)**



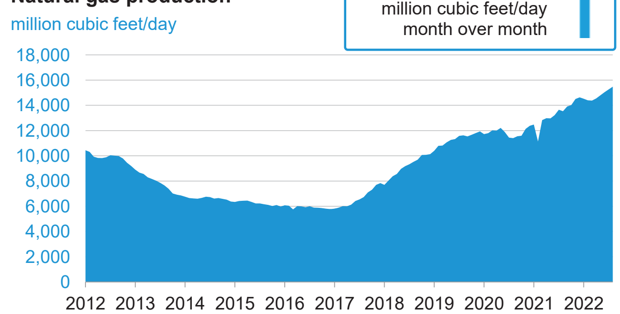

Haynesville Region
**Oil production**

**Oil +0**
thousand barrels/day
month over month




Haynesville Region
**Natural gas production**

**Gas +217**
million cubic feet/day
month over month



# Niobrara Region

Drilling Productivity Report

*July 2022*

drilling data through June
projected production through August

**Oil**
**-15**
barrels/day
month over month

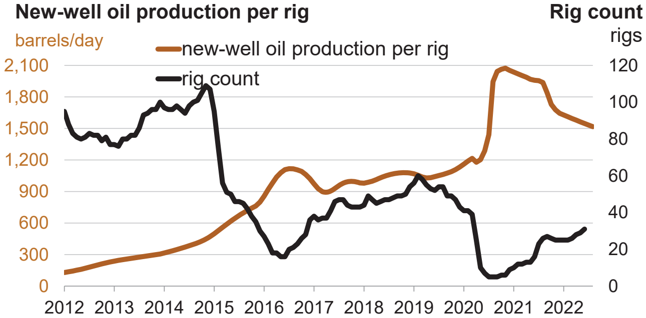
**1,517** *August*
**1,532** *July*
barrels/day

**Monthly additions from one average rig**

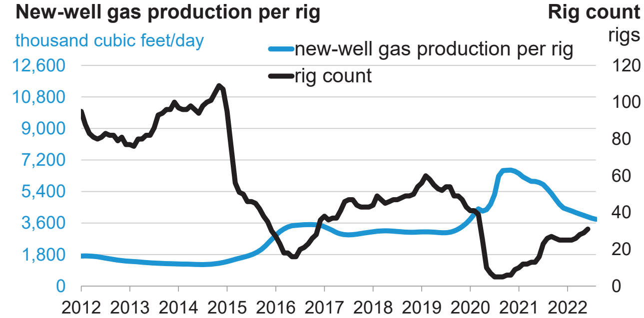
*August* **3,817**
*July* **3,875**
thousand cubic feet/day

**Gas**
**-58**
thousand cubic feet/day
month over month

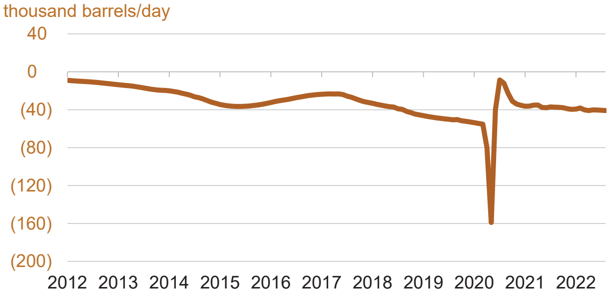
Niobrara Region
**New-well oil production per rig**



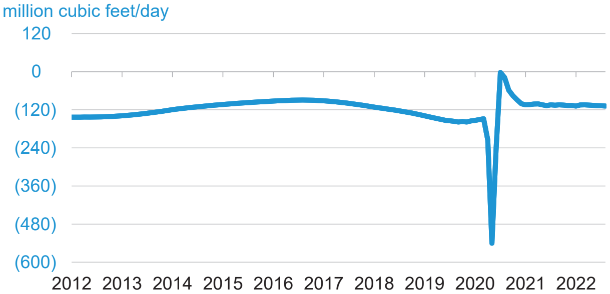

Niobrara Region
**New-well gas production per rig**



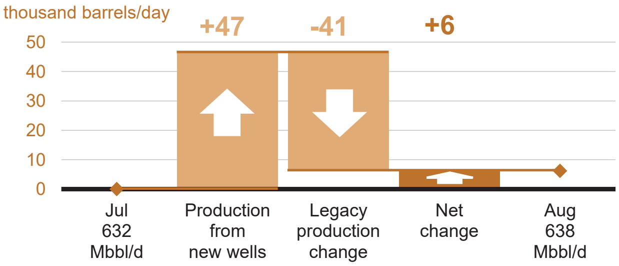

Niobrara Region
**Legacy oil production change**



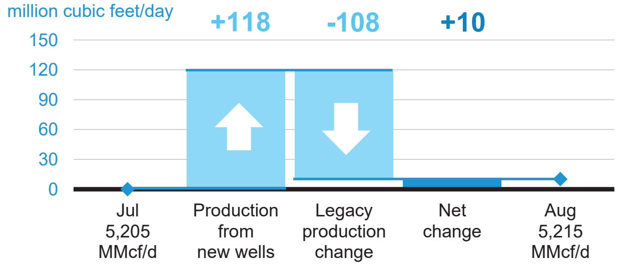

Niobrara Region
**Legacy gas production change**




Niobrara Region
**Indicated change in oil production (Aug vs. Jul)**

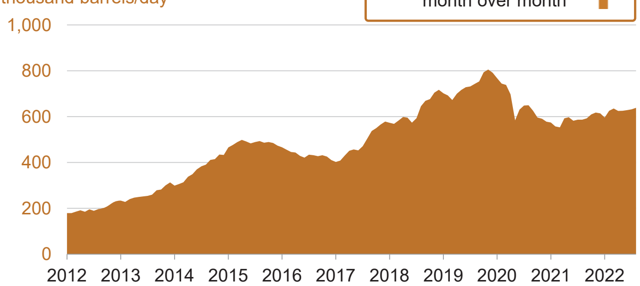



Niobrara Region
**Indicated change in natural gas production (Aug vs. Jul)**



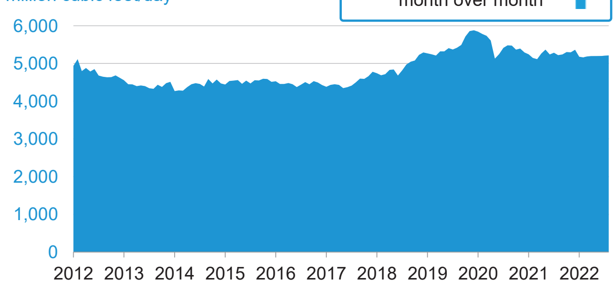

Niobrara Region
**Oil production**

**Oil +6**
thousand barrels/day
month over month




Niobrara Region
**Natural gas production**

**Gas +10**
million cubic feet/day
month over month



# Permian Region

Drilling Productivity Report

*July 2022*

drilling data through June
projected production through August

**Oil**
**-12**
barrels/day
month over month

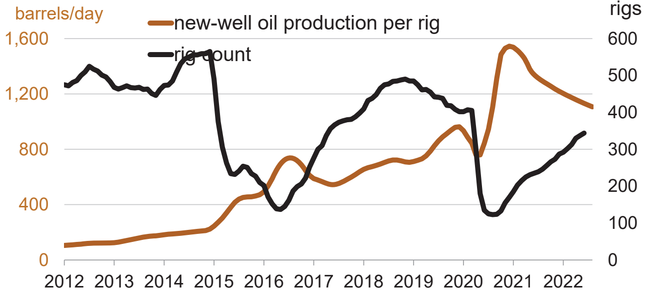
**1,107** *August*
**1,119** *July*
barrels/day

**Monthly additions from one average rig**

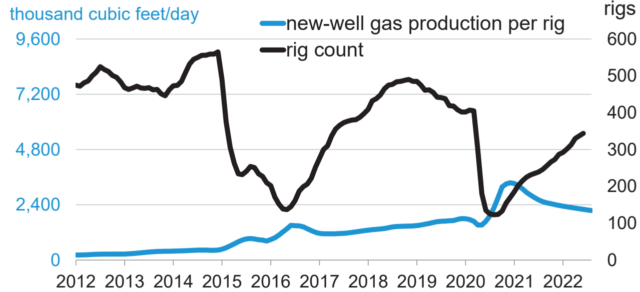
*August* **2,150**
*July* **2,174**
thousand cubic feet/day

**Gas**
**-24**
thousand cubic feet/day
month over month

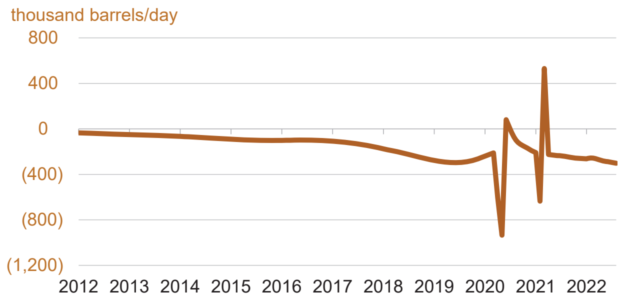
Permian Region
**New-well oil production per rig**



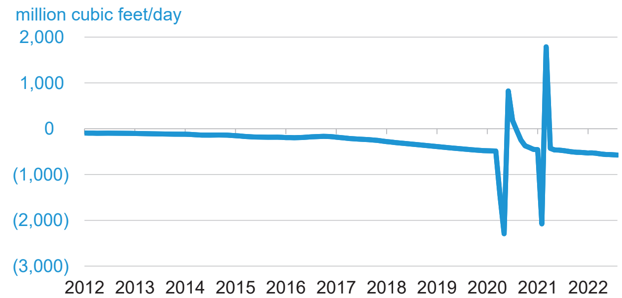

Permian Region
**New-well gas production per rig**



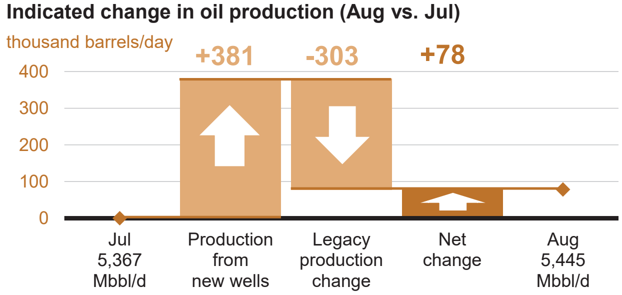

Permian Region
**Legacy oil production change**



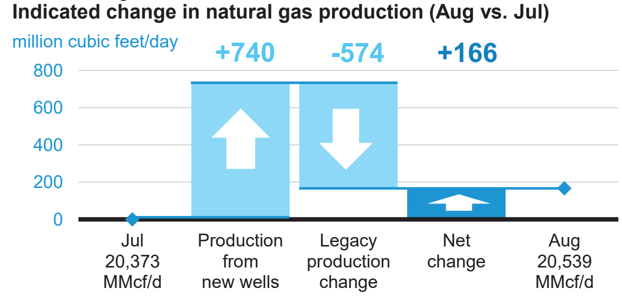

Permian Region
**Legacy gas production change**




Permian Region
**Indicated change in oil production (Aug vs. Jul)**

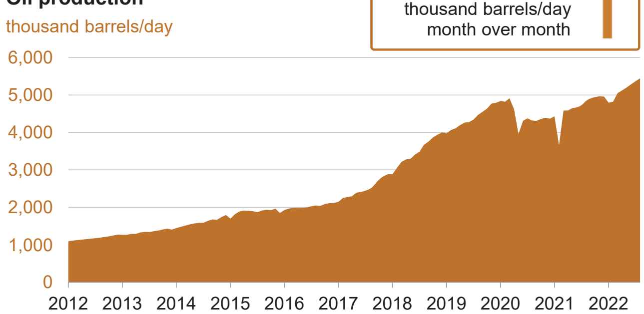



Permian Region
**Indicated change in natural gas production (Aug vs. Jul)**



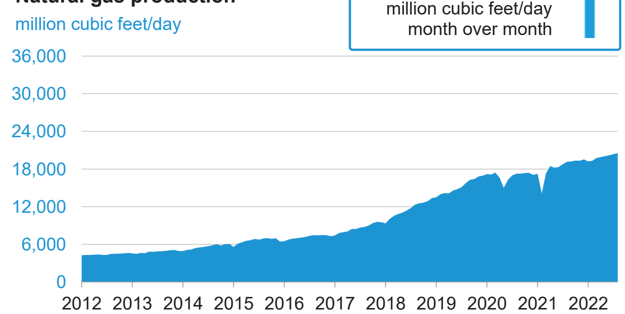

Permian Region
**Oil production**

**Oil +78**
thousand barrels/day
month over month




Permian Region
**Natural gas production**

**Gas +166**
million cubic feet/day
month over month



# Explanatory notes

Drilling Productivity Report

July 2022

The Drilling Productivity Report uses recent data on the total number of drilling rigs in operation along with estimates of drilling productivity and estimated changes in production from existing oil and natural gas wells to provide estimated changes in oil[1] and natural gas[2] production for seven key regions. EIA's approach does not distinguish between oil-directed rigs and gas-directed rigs because once a well is completed it may produce both oil and gas; more than half of the wells do that.

**Monthly additions from one average rig**

Monthly additions from one average rig represent EIA's estimate of an average rig's[3] contribution to production of oil and natural gas from new wells.[4] The estimation of new-well production per rig uses several months of recent historical data on total production from new wells for each field divided by the region's monthly rig count, lagged by two months.[5] Current- and next-month values are listed on the top header. The month-over-month change is listed alongside, with +/- signs and color-coded arrows to highlight the growth or decline in oil (brown) or natural gas (blue).

**New-well oil/gas production per rig**

Charts present historical estimated monthly additions from one average rig coupled with the number of total drilling rigs as reported by Baker Hughes.

**Legacy oil and natural gas production change**

Charts present EIA's estimates of total oil and gas production changes from all the wells other than the new wells. The trend is dominated by the well depletion rates, but other circumstances can influence the direction of the change. For example, well freeze-offs or hurricanes can cause production to significantly decline in any given month, resulting in a production increase the next month when production simply returns to normal levels.

**Projected change in monthly oil/gas production**

Charts present the combined effects of new-well production and changes to legacy production. Total new-well production is offset by the anticipated change in legacy production to derive the net change in production. The estimated change in production does not reflect external circumstances that can affect the actual rates, such as infrastructure constraints, bad weather, or shut-ins based on environmental or economic issues.

**Oil/gas production**

Charts present all oil and natural gas production from both new and legacy wells since 2007. This production is based on all wells reported to the state oil and gas agencies. Where state data are not immediately available, EIA estimates the production based on estimated changes in new-well oil/gas production and the corresponding legacy change.

**Footnotes:**

1. Oil production represents both crude and condensate production from all formations in the region. Production is not limited to tight formations. The regions are defined by all selected counties, which include areas outside of tight oil formations.
2. Gas production represents gross (before processing) gas production from all formations in the region. Production is not limited to shale formations. The regions are defined by all selected counties, which include areas outside of shale formations.
3. The monthly average rig count used in this report is calculated from weekly data on total oil and gas rigs reported by Baker Hughes.
4. A new well is defined as one that began producing for the first time in the previous month. Each well belongs to the new-well category for only one month. Reworked and recompleted wells are excluded from the calculation.
5. Rig count data lag production data because EIA has observed that the best predictor of the number of new wells beginning production in a given month is the count of rigs in operation two months earlier.

The data used in the preparation of this report come from the following sources. EIA is solely responsible for the analysis, calculations, and conclusions.

**Drilling Info** (http://www.drillinginfo.com) Source of production, permit, and spud data for counties associated with this report. Source of real-time rig location to estimate new wells spudded and completed throughout the United States.

**Baker Hughes** (http://www.bakerhughes.com) Source of rig and well counts by county, state, and basin.

**North Dakota Oil and Gas Division** (https://www.dmr.nd.gov/oilgas) Source of well production, permit, and completion data in the counties associated with this report in North Dakota

**Railroad Commission of Texas** (http://www.rrc.state.tx.us) Source of well production, permit, and completion data in the counties associated with this report in Texas

**Pennsylvania Department of Environmental Protection** (https://www.paoilandgasreporting.state.pa.us/publicreports/Modules/Welcome/Welcome.aspx) Source of well production, permit, and completion data in the counties associated with this report in Pennsylvania

**West Virginia Department of Environmental Protection** (http://www.dep.wv.gov/oil-and-gas/Pages/default.aspx) Source of well production, permit, and completion data in the counties associated with this report in West Virginia

**Colorado Oil and Gas Conservation Commission** (http://cogcc.state.co.us) Source of well production, permit, and completion data in the counties associated with this report in Colorado

**Wyoming Oil and Conservation Commission** (http://wogcc.state.wy.us) Source of well production, permit, and completion data in the counties associated with this report in Wyoming

**Louisiana Department of Natural Resources** (http://dnr.louisiana.gov) Source of well production, permit, and completion data in the counties associated with this report in Louisiana

**Ohio Department of Natural Resources** (http://oilandgas.ohiodnr.gov) Source of well production, permit, and completion data in the counties associated with this report in Ohio

**Oklahoma Corporation Commission** (http://www.occeweb.com/og/oghome.htm) Source of well production, permit, and completion data in the counties associated with this report in Oklahoma https://www.facebook.com/pages/category/Labor-Union/Offshore-Alliance-524335271311416/

Offshore Alliance

5 hrs ·

The Offshore Alliance and ETU members on Prelude are into our 70th day of Protected Industrial Action in our EBA campaign for job security and Tier 1 rates and conditions. Shell have torched an estimated $1.3 Billion of production in a dispute which has locked down production and prevented any offtakes for over 5 weeks.

Shell have tipped about $1.3 Billion of earnings down the drain by refusing to agree to a zero cost claim of ensuing permanent direct-hire jobs are not out-sourced to low-wage labour hire contractors.

Shell's losses work out at over $5 Million per Prelude employee - plus they have cancelled the Turnaround scheduled to commence in two weeks time.

No company in Australian history has lost so much money in a bargainining dispute.

Shell's industrial relations is in complete chaos and is what Company's get when they follow the AMMA industrial relations hand book about how to f*** up Enterprise Bargaining negotiations.

Whatever Shell's Prelude bosses thought they could save by outsourcing permanent jobs to low-wage labour hire contractors has been exceeded 1000 times over in their idelogogically bankrupt approach to bargaining negotiations.

Our Prelude members have drawn a line in the sand on job security and have this week supported the extension of Protected Industrial Action until our bargaining claims are resolved.

The Offshore Alliance and ETU will go one day longer and one day stronger!

IF YOU DON'T FIGHT, YOU LOSE!

https://media.bom.gov.au/releases/1060/climate-driver-update-wet-outlook-continues-with-an-increased-chance-of-la-nina-developing-this-spring/

# Climate Driver Update - Wet outlook continues with an increased chance of La Nina developing this spring

*16/08/2022*

**Issued:** 3pm, Tuesday, 16 August 2022

The Bureau of Meteorology ('the Bureau') has moved from 'La Niña WATCH' to 'La Niña ALERT' with the likelihood of La Niña returning this spring increasing to around 3 times the normal risk.

Climate models and indicators have shifted towards meeting La Niña ALERT criteria. A La Niña ALERT means the chance of a La Niña developing in the coming season has increased.

When La Niña criteria have been met in the past, a La Niña event has developed around 70% of the time. La Niña refers to changes in sea surface temperatures in the tropical Pacific Ocean, with waters in the eastern Pacific being cooler than normal, and waters in the western tropical Pacific being warmer than normal. Trade winds strengthen, increasing the water moisture in the air, which usually brings rainfall to eastern and central Australia and a wetter start to the northern wet season.

The Bureau's 3-month climate outlook shows a high chance of above average rainfall for most of the eastern two-thirds of the Australian mainland between September and November 2022. The outlook reflects a range of climate drivers including a negative Indian Ocean Dipole (IOD) event and warmer than average waters around Australia.

With wet soils, high rivers and full dams, and the outlook for above average rainfall, elevated flood risk remains for eastern Australia.

Some third-party sources and media outlets have suggested that the east coast of Australia is experiencing a third La Niña. This reporting does not reflect the complexity of Australia's climate and is not entirely accurate.

The Bureau of Meteorology's El Niño–Southern Oscillation Outlook, which is monitored by the Bureau's specialist climatologists and is underpinned by analysis of seven climate models, is at La Niña ALERT status. This means there is a 70% chance of La Niña returning this spring.

The Bureau is advising of very high chances of wet conditions over eastern Australia for the next three months. Should a La Niña event be established in the Pacific Ocean, the wet conditions will persist into summer.

This rainfall outlook is of great importance to communities in eastern Australia given the increased risk of flood following above average rainfall for the past few months and above average soil moisture levels. We encourage communities to keep up to date with official forecasts and warnings on the Bureau's website and BOM Weather app and follow the advice of emergency services.

More information is available on the Bureau's website:

https://twitter.com/GazpromEN/status/1560677160053944321/photo/1

**Gazprom**
@GazpromEN

11:16 AM · Aug 19, 2022 · Twitter for iPhone

Service maintenance of GCU at Portovaya CS.

On August 31, 2022, the only gas compressor unit that is currently in operation, Trent 60, will be shut down for a three-day servicing and preventive maintenance period.

This set of scheduled operations under the current service maintenance contract will be performed jointly with Siemens.

According to the technical specifications provided by Siemens, the unit must undergo technical maintenance every 1,000 hours, namely, the casing must be inspected for cracks, dents, deformations and burn-throughs, and cleaned; the oil, air and gas combustion venting systems must be checked for leaks, connections must be tightened, and the causes of leaks must be eliminated; the safety valves must be subjected to performance checks and the airflow control system must undergo adjustments.

Gas supplies via the Nord Stream gas pipeline will be suspended during the three-day (August 31 to September 2, 2022) maintenance of the Trent 60 DLE gas compressor unit.

Upon the completion of maintenance operations, provided that no malfunctions are identified, gas transmission will be resumed at the rate of 33 million cubic meters per day.

**Director's Cut**
**June 2022 Production**

## Oil Production

| | |
|---|---|
| **May** | 32,830,872 barrels = 1,059,060 barrels/day (final) |
| ***(New Mexico)*** | **45,626,947 barrels = 1,471,837 barrels/day (+1.3%)** |
| **June** | 32,884,526 barrels = 1,096,151 barrels/day **(+3.5%)** **(RF – 0.3%)** |

1,055,516 barrels/day or 96% from Bakken and Three Forks
40,635 barrels/day or 4% from legacy pools

1,519,037 all-time North Dakota high Nov 2019

**Revised Revenue Forecast** **= 1,200,000→1,100,000→1,000,000 barrels/day**

## Crude Price[1] ($/barrel)

| | North Dakota Light Sweet | WTI | ND Market estimate |
|---|---|---|---|
| **May** | 105.77 | 109.26 | 105.08 **(RF +102%)** |
| **June** | 111.35 | 114.34 | 111.20 **(RF +122%)** |
| **Today** | 88.25 | 89.41 | 88.83 **(Est. RF +78%)** |
| All-time high (6/2008) | $125.62 | $134.02 | $126.75 |

**Revised Revenue Forecast** **= $50.00**

## Gas Production & Capture

| | |
|---|---|
| **May Production** | 86,467,224 MCF = 2,789,265 MCF/day |
| Gas Captured: 94% | 81,364,509 MCF = 2,624,662 MCF/day |
| **June Production** | 91,832,447 MCF = 3,061,082 MCF/day **(+9.7%)** |
| Gas Captured: 94% | 86,509,821 MCF = 2,883,661 MCF/day |

3,145,172 MCF/day all-time high production Nov 2019
2,902,655 MCF/day all-time high capture Mar 2021

## Fort Berthold Reservation Activity

| | Total | Fee Land | Trust Land |
|---|---|---|---|
| Oil Production (barrels/day) | 208,501 | 77,091 | 131,410 |
| Drilling Rigs | 4 | 1 | 3 |
| Active Wells | 2,645 | 654 | 1,991 |
| Waiting on completion | 20 | | |
| Approved Drilling Permits | 294 | 46 | 248 |
| Potential Future Wells | 3,907 | 1,110 | 2,797 |

[1] Pricing References: WTI: EIA and CME Group; ND Light Sweet: Flint Hills Resources

## Rigs & Wells

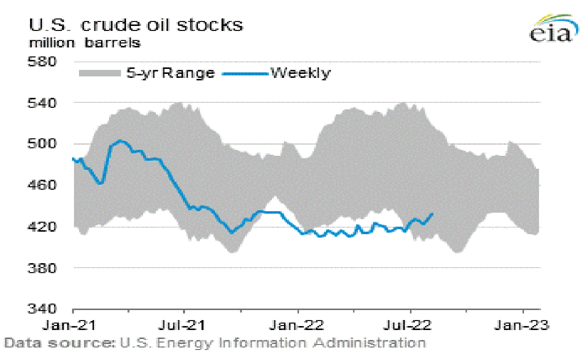
| | May | June | July | Today |
|---|---|---|---|---|
| **Rigs** | 40 | 42 | 42 | 47<br>New Mexico – 104<br>Federal Surface 1<br>All-time high – 218 (5/29/2012) |
| **Permitted** | 68 drilling<br>0 seismic | 77 drilling<br>0 seismic | 53 drilling<br>0 seismic<br>All-time high – 370 (10/2012) | - |
| **Completed** | 33<br>(Preliminary) | 27<br>(Preliminary) | 74<br>(Preliminary)<br><br>Revenue Forecast<br>**30→<u>40</u>→50→60**<br>**(RF+85%)** | - |
| **Inactive**[2] | 2,448 | 1,750 | - | - |
| **Waiting on Completion**[3] | 496 | 483 | - | - |
| **Producing** | 16,965 | 17,284<br>(Preliminary)<br>*NEW All-time high 17,284 (6/2022)*<br>*14,972 (87%) from unconventional Bakken – Three Forks*<br>*2,312 (13%) from legacy conventional pools* | - | - |

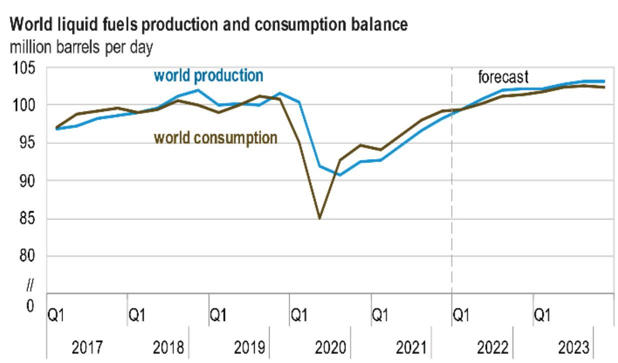
## Drilling and Completions Activity & Crude Oil Markets

The drilling rig count continues to slowly increase.

The number of active completion crews decreased to 16 this week.

OPEC+ published production increases are as follows: June-July +648,000 July-August +648,000 August-September +101,000. Russia sanctions have exacerbated an already tight market. Lower transportation fuels and crude oil demand are resulting in a US crude oil stock build.

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[2] Includes all well types on IA and AB statuses: **IA** = Inactive shut in >3 months and <12 months;
**AB** = Abandoned (Shut in >12 months)

[3] The number of wells waiting on completions is an estimate on the part of the director based on idle well count and a typical five-year average. Neither the State of North Dakota, nor any agency officer, or employee of the State of North Dakota warrants the accuracy or reliability of this product and shall not be held responsible for any losses caused by this product. Portions of the information may be incorrect or out of date. Any person or entity that relies on any information obtained from this product does so at his or her own risk.

Crude oil transportation capacity including rail deliveries to coastal refineries is adequate, but could be disrupted due to:

- US Appeals Court for the ninth circuit upholding of a lower court ruling protecting the Swinomish Indian Tribal Community's right to sue to enforce an agreement that restricts the number of trains that can cross its reservation in northwest Washington state.
- DAPL Civil Action No. 16-1534 continues, but the courts have now ruled that DAPL can continue normal operations until the USACOE EIS is completed.

Drilling activity is expected to slowly increase with operators maintaining a permit inventory of approximately 12 months. A survey of operators by JPT revealed the following:

*"The surge in the cost of services and supplies pushed the average oil price needed to justify drilling a new oil well in the Mid-Continent to $65/bbl, according to a survey of industry experts by the Federal Reserve Bank of Kansas City released on 8 July.*

*When they were asked what it would take to get them to substantially increase drilling, they put the number at $98/bbl, which was higher than the closing price for the WTI price in futures trading on 14 July."*

## Gas Capture

US natural gas storage is 12% below the five-year average. Crude oil inventories remain below normal in the US, and world storage is now below the five-year average.

The price of natural gas delivered to Northern Border at Watford City has returned to an elevated level of $7.43/MCF today for a current oil to gas price ratio of 12 to 1. The state-wide gas flared volume from May to June increased 12,817 MCFD to 177,420 MCF per day, the statewide percent flared decreased to 5.6% while Bakken capture percentage was unchanged at 95%. The historical high flared percent was 36% in 09/2011.

Gas capture details are as follows:

| | |
|---|---|
| Statewide | 94% |
| Statewide Bakken | 95% |
| Non-FBIR Bakken | 95% |
| FBIR Bakken | 95% |
| Trust FBIR Bakken | 96% |
| Fee FBIR | 85% |
| Big Bend | 78% |
| Twin Buttes | 74% |
| Charlson | 78% |

The Commission established the following gas capture goals:

| | |
|---|---|
| 74% | October 1, 2014 - December 31, 2014 |
| 77% | January 1, 2015 - March 31, 2016 |
| 80% | April 1, 2016 - October 31, 2016 |
| 85% | November 1, 2016 - October 31, 2018 |
| 88% | November 1, 2018 - October 31, 2020 |
| 91% | November 1, 2020 |

## Seismic

There are currently 0 active oil and gas seismic surveys.

| Active Surveys | Recording | NDIC Reclamation Projects | Remediating | Suspended | Permitted |
|---|---|---|---|---|---|
| 0 | 1 | 0 | 0 | 5 | 1 |

## Agency Updates

**BLM on 1/20/21 DOI issued order 3395** implementing a 60 day suspension of Federal Register publications; issuing, revising, or amending Resource Management Plans; granting rights of way and easements; approving or amending plans of operation; appointing, hiring or promoting personnel; leasing; and permits to drill. On 1/27/21 President Biden issued an executive order that mandates a "pause" on new oil and gas leasing on federal lands, onshore and offshore, "to the extent consistent with applicable law," while a comprehensive review of oil and gas permitting and leasing is conducted by the Interior Department. There is no time limit on the review, which means the president's moratorium on new leasing is indefinite. The order does not restrict energy activities on lands the government holds in trust for Native American tribes.
**What is the percentage of federal lands in ND?**
Mineral ownership in ND is 85% private, 9% federal (4% Indian lands and 5% federal public lands), and 6% state. 66% of ND spacing units contain no federal public or Indian minerals, 24% contain federal public minerals, 9% contain Indian minerals,1% contain both.
**How many potential wells could be delayed or not drilled by a Biden administration ban on drilling permits and hydraulic fracturing on federal lands?**
A spatial query found 3,443 undrilled wells in spacing units that would penetrate federal minerals, 2,902 undrilled wells in spacing units would penetrate BIA Trust minerals (700 tribal minerals and 2,202 allotted minerals), and the total number of wells potentially impacted is 6,345. The minimum number of future Bakken wells is 24,000 so the 3,443 wells on federal public lands = 14%, and the 2,902 wells on trust lands = 12%.
**What is the potential federal royalty loss from a Biden administration ban on drilling permits and hydraulic fracturing on federal lands?**
A recent study from University of Wyoming estimated the ND loss as follows: 2021-2025 $76 million, 2026-2030 $113 million, 2031-2035 $160 million, and 2036-2040 $221 million for a total of $570 million over 15 years. Please note that 50% of the royalties on federal public lands go to the state and 50% of the state share goes to the county where the oil was produced.

The U.S. Interior Department launched its review of the federal oil and gas leasing program on 3/25/21, a key step that will determine whether the Biden administration will permanently halt new leases on federal land and water. The review kicked off with a public forum on oil and gas leasing on federal land and water, with participants representing industry, environmental conservation and justice groups, labor and others, and commence an online comment period. This input will inform an interim report to be released in early summer outlining next steps and recommendations on the future of the program and what can be done to reform how leases are managed and how much revenue should go to taxpayers and other issues.

On 7/7/21 North Dakota sued the Department of Interior (DOI), Secretary of Interior Debra Haaland, Bureau of Land Management (BLM), Director of the BLM Nada Culver, and Director of the Montana-Dakotas BLM John Mehlhoff in US District Court for the District of North Dakota. The lawsuit requested the court:
Compel the Federal Defendants to hold quarterly lease sales. Oral arguments are scheduled for 1/12/22 in Bismarck.
Prohibit the Federal Defendants from cancelling quarterly lease sales.
Enjoin the Secretary implementing a moratorium on federal lease sales.
Declare that Federal Defendants are in violation of MLA, FLPMA, NEPA, and APA.
Grant other relief sought and as the court deems proper to remedy the violations.
There are 811 tracts nominated for pending lease sales in ND:

569 are pending NEPA or surface manager concurrence

242 are fully evaluated with Record of Decision by US Forest Service and Corp of Engineers, and waiting for scheduled auction – value to ND 1,037 wells and $4.9 billion (GPT, OET, NDTL royalties, federal royalties, sales tax and income tax)

On 01/14/2022 Judge Traynor denied North Dakota's motion without prejudice. In the Order on Mandamus, the Court noted that "a fully developed factual record is necessary to resolve the instant dispute." The Court also held that because Federal Defendants had given the Court "assurances at the hearing the process to start Federal oil and gas leasing sales in North Dakota was imminent" mandamus relief was "unnecessary." However, the Court noted that "if the Defendants do not hold to their word and cancel any planned future sale, North Dakota may bring this action for review of the specifically cancelled sales once this Court has the benefit of a complete record.". Federal Defendants have cancelled the Q1 2022 lease sale, but have now published a potential Q2 sales listing with a protest period ending 5/18/22. The matters at issue in Louisiana v. Biden et al. continue to be litigated. For these reasons, North Dakota filed a motion with the Court to enter https://www.willistonherald.com/news/oil_and_energy/north-dakota-bakken-production-grew-in-june-but-workforce-gas-takeaway-continue-to-put-a/article_541fd076-1e3d-11ed-9376-d351c10a95b5.html

# North Dakota Bakken production grew in June, but workforce, gas takeaway continue to put a damper on things

**By Renée Jean rjean@willistonherald.com**

**Aug 17, 2022**

North Dakota Director of Mineral Resources Lynn Helms talks about June production numbers.

North Dakota posted production gains in June and almost hit the 1.1 million barrel per day mark, but its full potential continues to be held back by workforce and gas takeaway issues, its top oil and gas regulator said.

The state posted a 3.6 percent increase in crude oil production for the month of June to 1,096,151 barrels/day, North Dakota Director of Mineral Resources Lynn Helms said. Gas production, meanwhile, was up 9.7 percent, jumping from 2.789 billion cubic feet per day to 3,061 billion cubic feet per day.

Helms expects similar growth rates for July, but August will be a bit of a wild card, as North Dakota Pipeline Authority Justin Kringstad explained.

An equipment failure on Sunday at a North Dakota compressor station on the Northern Border line will reduce that line's gas takeaway by 30 to 90 feet per day.

"That brings the current restricted capacity on the Northern Border pipeline to just over 2 BCF per day," he said. "The brunt of that capacity restriction will be felt by North Dakota producers."

According to Kringstad's calculations, this is likely to result in the loss of 1.4 million barrels of oil production over the next 11 days, translating to a daily loss of around 130,000 barrels. Northern Border anticipates having the line back to full operating capacity by Aug. 25.

Gas takeaway capacity continues to do well in the state, Helms said, with an average 94 percent capture rate statewide. But the state's oil production is bumping up against its ceiling on gas takeaway. That's a potentially big limiting factor for further Bakken production growth.

Natural gas prices are on the one hand providing incentive for industry to continue adding gas takeaway infrastructure, but, in the short-term, it's also an incentive to limit oil production to get attractively priced gas to market.

Another thing that's hampering the growth of Bakken oil production right now are continued workforce issues. It takes around two months to hire and train a crew, whether it's a drilling rig, hydraulic fracturing or workover rig crew.

"North Dakota has begun to really focus on career technical education, to grow our own workforce," Helms said. "But over the next couple of years, (workforce) is really going to be the most difficult hurdle to overcome."

Standing up seven more rigs at current hiring rates would take 14 to 21 months to accomplish, Helms added.

"Our No. 1 hurdle is definitely workforce," he said.

Workover rigs right now are 100 percent deployed, Helms added, and have a long wait list.

"We're hearing from operators that today if they need a worker rig, their schedules are showing that it might be October before they get a rig," he said. "But you can see the deployment of worker rigs has made a huge impact on our inactive well count. It dropped by 700 from 2448 to 1750."

North Dakota now has a record 17,284 wells operating in the state.

"So are we at peak production?" Helms said. "No, we really believe that within the next year, production is going to grow to 1.2 million barrels a day. And looking a little bit further out, we think by the end of the 2020s, we can achieve and sustain 1.4 million barrels a day. So it's a slow growth curve."

That jives well with a recent survey Helms saw from the Journal of Petroleum Technology that asked operators where prices need to be to justify drilling a new well, and where they need to be to justify substantially increasing their drilling rates.

Operators pegged the slow, steady drilling price as $65 a barrel, and the ramp-up scenario as $98 a barrel.

“So we’re not anticipating a big spike or ramp up in drilling activity again,” Helms said. “Just this slow increase in rig count and frack crews, completing crews, taking us to the end of the year.”

Newly completed wells for June were 53, Helms said, and 74 for July. That’s well above revenue forecasts and is part of the reason Helms continues to predict strong production growth in July.

Rigs are now at 48, Helms said, and frack crews stand at 16, which is about enough to keep up with the drilling rig crews, but not enough to substantially lower the Drilled Uncompleted well counts. Those are now back to a more usual average, however, Helms said, ranging between 300 to 350. That’s down substantially from the 1600 to 1700 that the state’s oil and gas industry had been working through.

# MONTHLY UPDATE

## AUGUST 2022 PRODUCTION & TRANSPORTATION

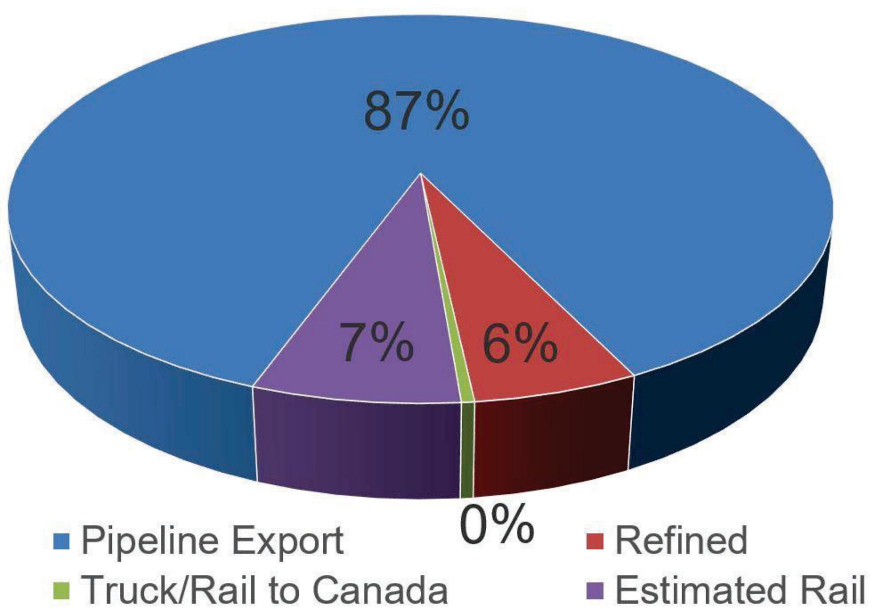
### North Dakota Oil Production

| Month | Monthly Total, BBL | Average, BOPD |
|---|---|---|
| May 2022 - Final | 32,830,872 | 1,059,060 |
| June 2022 - Prelim. | 32,884,526 | 1,096,151 |

### North Dakota Natural Gas Production

| Month | Monthly Total, MCF | Average, MCFD |
|---|---|---|
| May 2022 - Final | 86,467,224 | 2,789,265 |
| June 2022 - Prelim. | 91,832,447 | 3,061,082 |

*Estimated Williston Basin Oil Transportation, June 2022*




## CURRENT DRILLING ACTIVITY:

**NORTH DAKOTA[1]**

47 Rigs

**EASTERN MONTANA[2]**

2 Rigs

**SOUTH DAKOTA[2]**

0 Rigs

**SOURCE (AUG 16, 2022):**

1. ND Oil & Gas Division
2. Baker Hughes

## PRICES:

Crude (WTI): $86.77

Crude (Brent): $92.57

NYMEX Gas: $9.19

**SOURCE: BLOOMBERG (AUG 16, 2022 11AM CST)**

## GAS STATS*

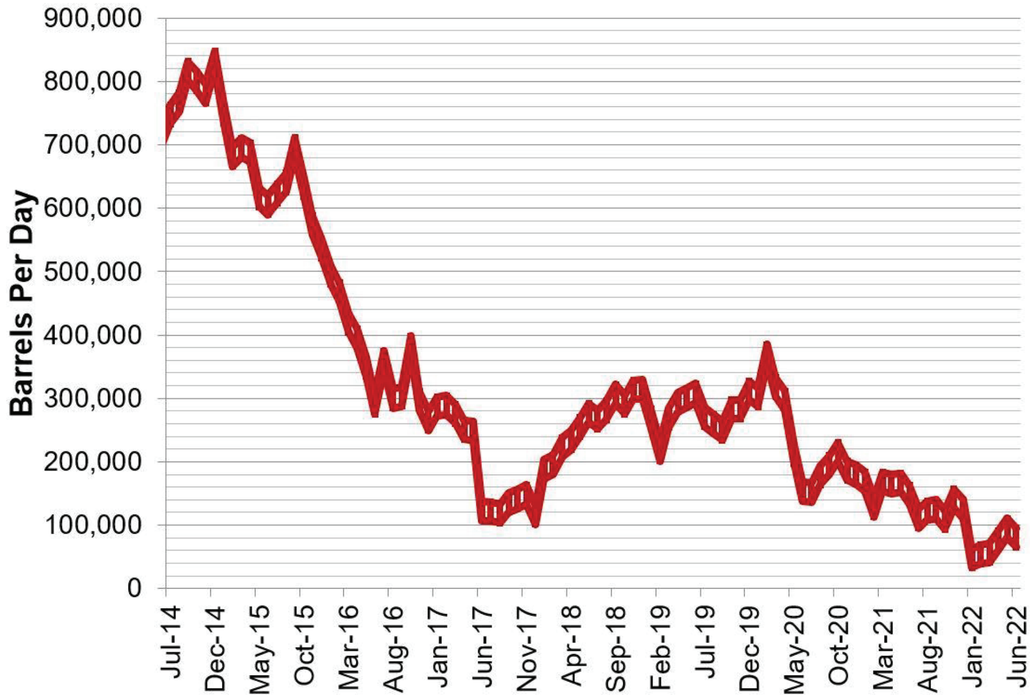
**94% CAPTURED & SOLD**

**5% FLARED DUE TO CHALLENGES OR CONSTRAINTS ON EXISTING GATHERING SYSTEMS**

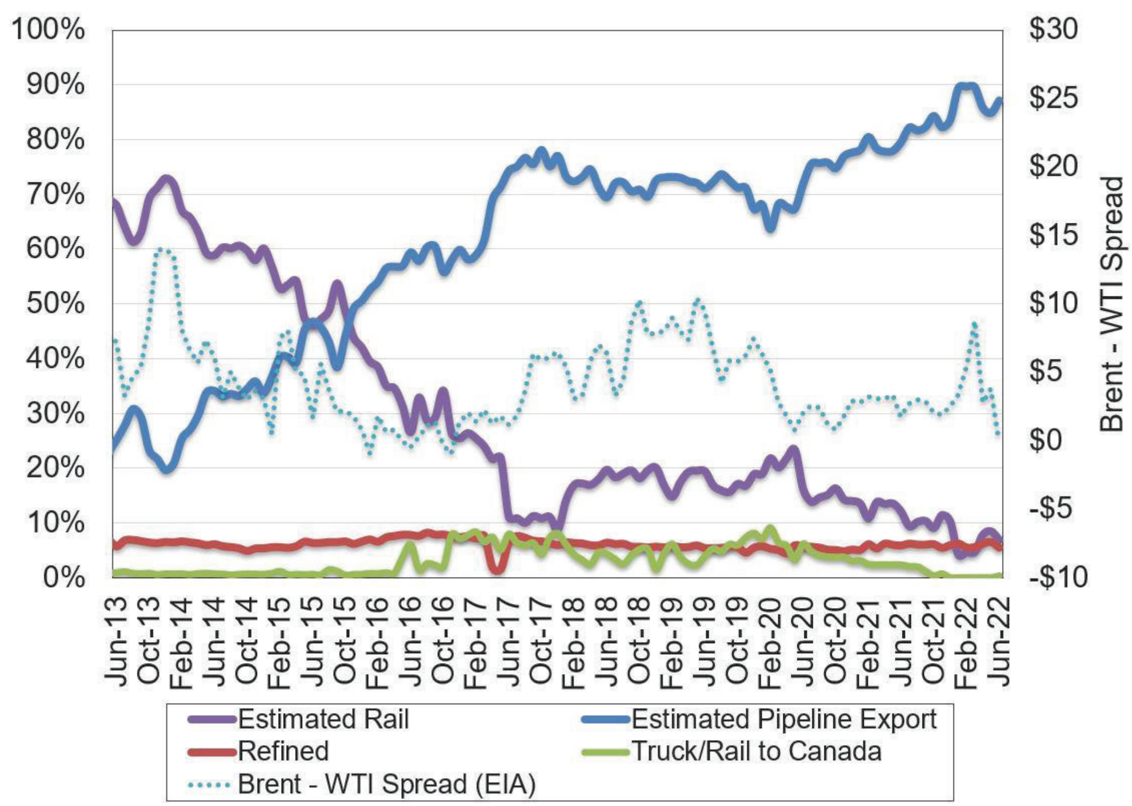
**1% FLARED FROM WELL WITH ZERO SALES**

***JUNE 2022 NON-CONF DATA***

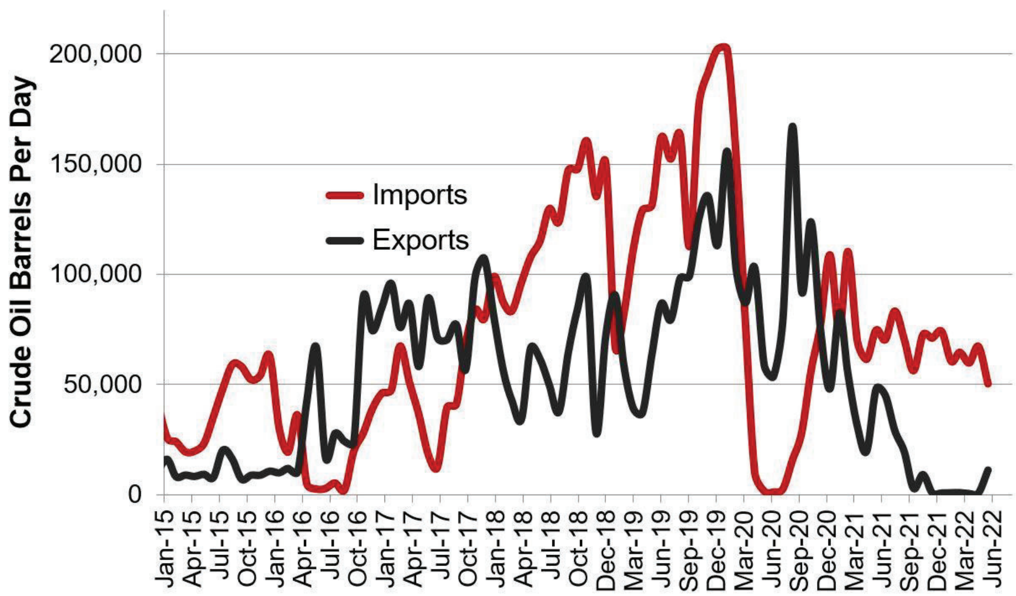
## *Estimated North Dakota Rail Export Volumes*




## *Estimated Williston Basin Oil Transportation*

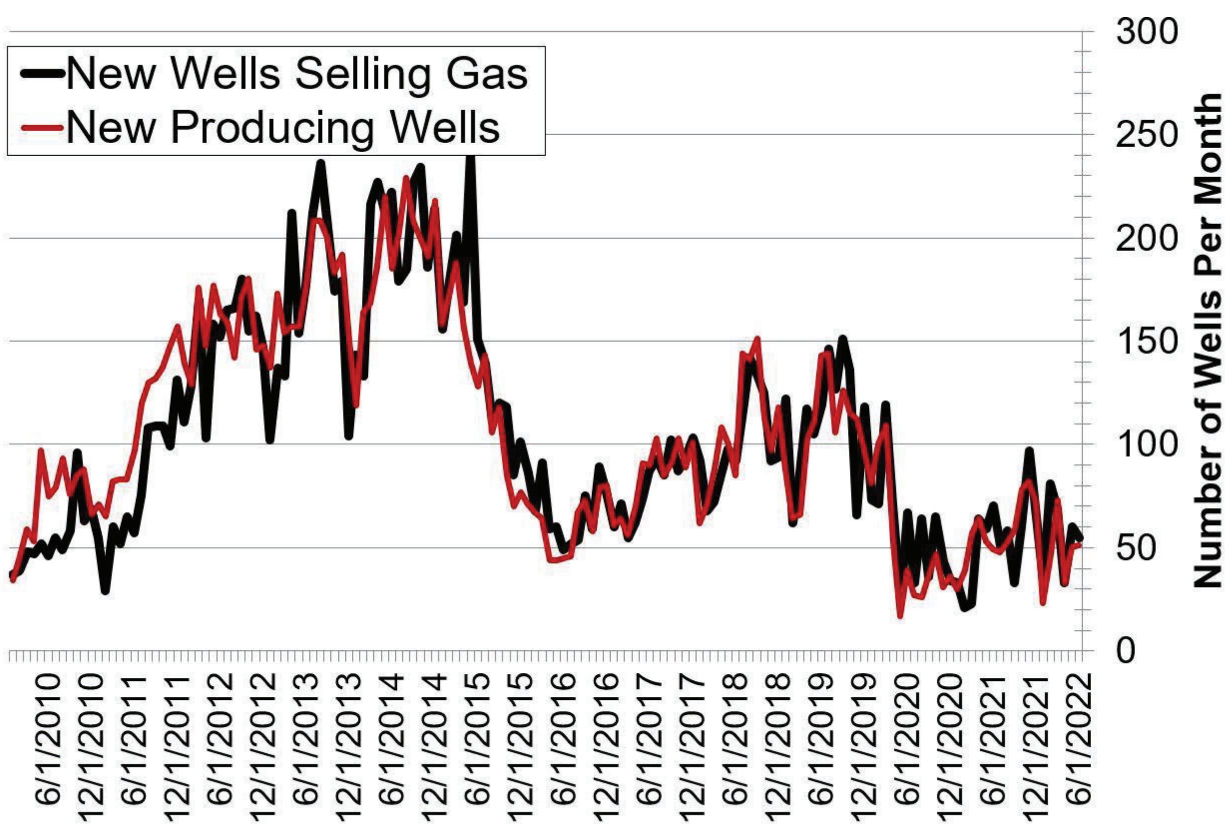


## *Williston Basin Truck/Rail Imports and Exports with Canada*




***Data for imports/exports chart is provided by the US International Trade Commission and represents traffic across US/Canada border in the Williston Basin area.***

## *New Gas Sales Wells per Month*



## US Williston Basin Oil Production, BOPD

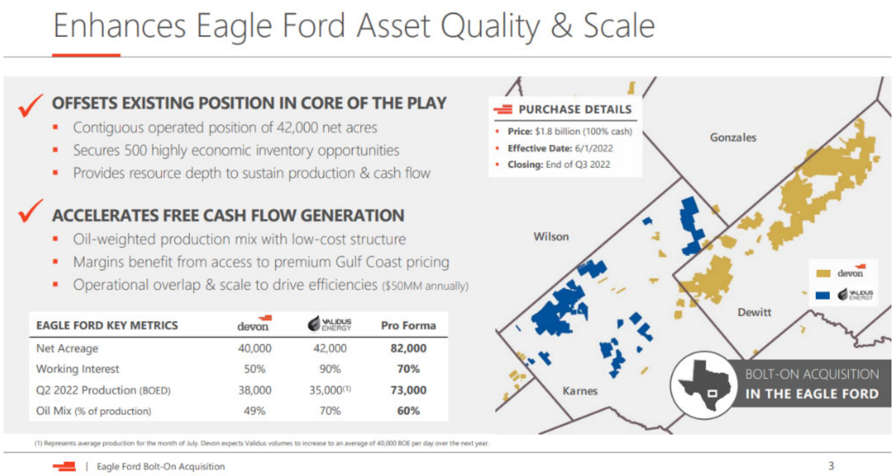
### 2021

| MONTH | ND | EASTERN MT* | SD | TOTAL |
|---|---|---|---|---|
| January | 1,147,724 | 50,415 | 2,874 | 1,201,012 |
| February | 1,083,820 | 48,246 | 2,828 | 1,134,895 |
| March | 1,109,005 | 49,520 | 2,744 | 1,161,269 |
| April | 1,121,776 | 48,440 | 2,644 | 1,172,860 |
| May | 1,129,785 | 47,277 | 2,640 | 1,179,702 |
| June | 1,134,758 | 44,100 | 3,103 | 1,181,962 |
| July | 1,078,883 | 43,758 | 2,884 | 1,125,525 |
| August | 1,108,084 | 47,284 | 2,892 | 1,158,260 |
| September | 1,113,963 | 50,410 | 2,847 | 1,167,220 |
| October | 1,110,828 | 49,462 | 2,853 | 1,163,143 |
| November | 1,158,553 | 48,588 | 2,780 | 1,209,921 |
| December | 1,144,999 | 48,199 | 2,717 | 1,195,914 |

### 2022

| MONTH | ND | EASTERN MT* | SD | TOTAL |
|---|---|---|---|---|
| January | 1,088,613 | 47,599 | 2,709 | 1,138,921 |
| February | 1,089,091 | 46,941 | 2,742 | 1,138,774 |
| March | 1,122,640 | 49,451 | 2,709 | 1,174,800 |
| April | 905,357 | 49,804 | 2,338 | 957,499 |
| May | 1,059,060 | | 2,648 | |
| June | 1,096,151 | | | |
| July | | | | |
| August | | | | |
| September | | | | |
| October | | | | |
| November | | | | |
| December | | | | |

** Eastern Montana production composed of the following Counties: Carter, Daniels, Dawson, Fallon, McCone, Powder River, Prairie, Richland, Roosevelt, Sheridan, Valley, Wibaux*




https://www.devonenergy.com/news/2022/Devon-Energy-Announces-Bolt-On-Acquisition-in-the-Eagle-Ford

## Devon Energy Announces Bolt-On Acquisition in the Eagle Ford

OKLAHOMA CITY, Aug. 09, 2022 (GLOBE NEWSWIRE) -- Devon Energy Corp. (NYSE: DVN) announced today it has entered into a definitive purchase agreement to acquire Validus Energy, an Eagle Ford operator, for total cash consideration of $1.8 billion. The transaction is subject to customary terms and conditions and is expected to close at the end of the third quarter of 2022, with an effective date of June 1, 2022.

Rick Muncrief, president and CEO stated, “The Validus acquisition captures a top-tier oil resource with a meaningful runway of highly economic inventory that is complementary to our existing footprint in the Eagle Ford. This accretive transaction also enhances our financially-driven strategy that is designed to deliver per-share financial growth and accelerate the return of capital to our shareholders.”

**TRANSACTION HIGHLIGHTS**

- **Immediately accretive to financial metrics** – The transaction is attractively valued at 2-times cash flow, with a free cash flow yield of 30 percent at strip pricing over the next year. The acquisition is expected to be immediately accretive to all relevant per-share metrics in the first year, including earnings, cash flow, free cash flow and net asset value.
- **Increases cash-return outlook** – Due to the accretive nature of this transaction to free cash flow, the outlook for Devon’s variable dividend increases by up to 10 percent on a per-share basis at strip pricing. In addition to higher dividend payouts, the incremental free cash flow from this acquisition positions the company to accelerate the return of excess cash to shareholders through the ongoing execution of its $2.0 billion share repurchase program.
- **Enhances Eagle Ford asset quality and scale** – This acquisition secures a premier acreage position of 42,000 net acres (90% working interest) adjacent to Devon’s existing leasehold in the basin. Validus’s current production is approximately 35,000 Boe per day (70 percent oil), with volumes expected to increase to an average of 40,000 Boe per day over the next year. The transaction also adds 350 repeatable drilling locations in the core of the Karnes Trough oil window along with 150 high-quality refrac candidates. This highly economic inventory positions the company’s Eagle Ford assets to sustain its high-margin production and free cash flow generation for several years.
- **Captures high-margin production** – The acquired assets provide high cash operating margins through access to premium Gulf Coast pricing and low per-unit expenses. With enhanced scale in the basin, Devon expects to realize $50 million in average annual cash flow savings from capital efficiencies, operating improvements, and marketing synergies.
- **Maintains top-tier balance sheet** – Devon’s pro forma leverage metrics will remain relatively unchanged, exiting the year with an expected net debt-to-EBITDAX ratio of 0.4 times at strip pricing. This balance sheet strength preserves the company’s financial and operational flexibility and allows for the accelerated return of capital to shareholders.

Supplemental slides covering the transaction are available on the company’s website at www.devonenergy.com.

17 August 2022

## Santos announces Pikka FID and net-zero project plans

**Highlights**

- Expected production 80,000 barrels a day gross with first oil anticipated in 2026
- 2P reserves 397 million barrels gross pre-royalties
- Capex US$1.3 billion Santos-share
- ~19% IRR at US$60 long-term oil price
- Santos committed to a net-zero project (scope 1 and 2, equity share)
- Strong support from key stakeholders, including the State and landowners

Santos, as operator of the Pikka Unit joint venture, today announced a final investment decision (FID) has been taken to proceed with the US$2.6 billion gross (US$1.3 billion Santos-share) Pikka Phase 1 oil project located on the North Slope of Alaska.

Pikka Phase 1 is expected to produce 80,000 barrels a day of oil gross with first oil anticipated in 2026.

The project has strong fundamentals, is located in a world-class oil producing province with significant existing infrastructure, has low unabated emissions intensity and is supported by key stakeholders, including the State of Alaska, the North Slope Borough, the landowner company Kuukpik Corporation and the Arctic Slope Regional Corporation (ASRC).

Taking FID on Pikka Phase 1 is consistent with Santos' goal of achieving net-zero (scope 1 and 2, equity share) by 2040. Santos is committed to delivering a net-zero project (scope 1 and 2, equity share) and has entered into Memorandums of Understanding with Alaska Native Corporations to deliver carbon offset projects, including a Strategic Alliance with ASRC Energy Services, a wholly-owned subsidiary of ASRC, on leading technology development for carbon solutions in the Arctic.

Alaska has a rich and proud oil and gas history – welcoming the jobs, investment and community development the industry provides. Pikka Phase 1 represents one of the lowest-cost and lowest unabated emissions intensity new oil projects in the region.

Santos is focussed on local procurement and local employment as part of the project, with 98 per cent of current employees living in Alaska. Phase 1 of the project is expected to create more than 500 jobs and construction of the project will deliver approximately 2,600 jobs.

The Pikka Phase 1 project represents compelling value for Santos shareholders given its robust economics and strong local stakeholder support.

Santos Managing Director and Chief Executive Officer Kevin Gallagher said Pikka Phase 1 is the right project at the right time in the right location.

**Media enquiries**
Claire Hammond
+61 (0) 401 591 488
claire.hammond@santos.com

**Investor enquiries**
Andrew Nairn
+61 8 8116 5314 / +61 (0) 437 166 497
andrew.nairn@santos.com

**Santos Limited** ABN 80 007 550 923
GPO Box 2455, Adelaide SA 5001
T +61 8 8116 5000 F +61 8 8116 5131
www.santos.com

“Global oil and gas markets are seeing increased volatility and countries are looking to diversify their supply sources away from Russia, which according to the International Energy Agency, currently produces 18 per cent of the world’s gas and 12 per cent of its oil,” Mr Gallagher said.

“Low-carbon oil projects like Pikka Phase 1 respond to new demand for OECD supply and are critical for global and United States energy security, that has been highlighted since the Russian invasion of Ukraine.

“Santos has emission reduction plans to achieve scope 1 and 2 net-zero emissions by 2040 and in-line with that commitment, Pikka will be a net-zero project.

“The project will add further diversification to our portfolio and reduces geographic concentration risk.

“Pikka Phase 1 will execute a responsible development plan with a small surface footprint and utilise existing infrastructure, including the Kuparuk transportation pipeline and the Trans-Alaska pipeline system.

“We have a world-class team with a rich history of successfully carrying out work on the North Slope. With approximately 90 per cent of project spend within North America minimising supply chain risk and civils work already completed, the project is well positioned for execution.”

Santos has a 51% interest in the Pikka Unit. The remaining interest is held by Repsol.

**Pikka Phase 1 key metrics**

| | |
|---|---|
| Development plan | Optimised using existing pipeline capacity, single small footprint drilling pad and electrified field operations |
| First oil | 2026 |
| Nameplate capacity | 80,000 barrels of oil per day gross |
| 2P Reserves | 397 mmbbl gross pre-royalties<br>165 mmbbl Santos-share at 51% interest (net of 18.67% royalties) |
| Capex to nameplate capacity | US$2.6 billion gross (2022 real)<br>US$1.3 billion Santos-share at 51% interest |
| Annual opex in production | ~US$150 million gross |
| Forecast IRR | ~19% @ US$60 per barrel long-term oil price (2022 real) |
| Lifecycle breakeven oil price | ~US$40 per barrel |

*This ASX announcement was approved and authorised for release by Kevin Gallagher, Managing Director and Chief Executive Officer.*

https://www.cnn.com/2022/08/19/politics/iran-nuclear-deal-progress/index.html

# Iran drops key 'red line' demand as progress on a revived nuclear deal edges forward

By Natasha Bertrand and Kylie Atwood, CNN
Updated 5:19 PM ET, Fri August 19, 2022

**Washington (CNN)**Iran has officially dropped a key "red line" demand that had been a major sticking point in efforts to revive the Iran nuclear deal, a senior administration official told CNN.

In its Monday response to a draft nuclear deal agreement proposed by the European Union -- which the EU has described as a "final" draft -- Iran did not demand that the Iranian Revolutionary Guard Corps be removed from the State Department's list of Foreign Terrorist Organizations, the official said.

"The current version of the text, and what they are demanding, drops it," the official said, noting that the US had repeatedly and consistently rejected the demand. "So if we are closer to a deal, that's why."

The Iranians also dropped demands related to delisting several companies tied to the IRGC, the official said.

The official added that "the President has been firm and consistent that he will not lift the terrorism designation of Iran's Revolutionary Guards Corps." But the official said that while a deal is now "closer than it was two weeks ago, the outcome remains uncertain as some gaps remain. President Biden will only approve a deal that meets our national security interests."

Progress from this point forward could be slow, another senior administration official said. But there does seem to be more momentum now than there has been in the past year.

President Joe Biden has insisted for months that he would not lift the IRGC terrorist designation in order to revive the nuclear deal, known as the Joint Comprehensive Plan of Action. Asked in July in an interview with Israel's Channel 12 whether he was still committed to keeping the IRGC on the list, even if it meant killing the deal for good, Biden responded: "Yes."

The policy is one of several foreign policy decisions made by former President Donald Trump that Biden has maintained—the Trump administration designated the IRGC as a terrorist organization in 2019 as part of a "maximum pressure campaign" imposed after Trump withdrew the US from the deal in 2018. The Biden administration has also continued to impose new sanctions on Iran as talks over the nuclear deal have worn on.

While the US does feel one major obstacle has been removed, there are still some other sticking points. Those include Tehran's desire for a guarantee that it will be compensated if a future US president pulls out of the deal, and its demand that a three-year-old probe by the International Atomic Energy Agency into its nuclear program be shut down.

The Biden administration's position on those issues has not changed, officials told CNN. Iran still has to explain to the IAEA why undeclared nuclear material—traces of uranium—were found at Iranian sites in 2019, the officials said. And the US has also made clear to Iran that it can't bind future administrations to the deal, nor promise compensation should a US president ever withdraw, the officials said.
Politically, meanwhile, Republican opposition to the deal in the US remains strong, even if delisting the IRGC is not part of the deal. That opposition has only grown in recent weeks with the Justice Department rolling out charges against an Iranian who plotted to assassinate former National Security Adviser John

Bolton, and the attack on author Salman Rushdie that was praised by Iranian officials. Republicans have also insisted that they will try to block any sanctions relief that Iran might get for returning to the JCPOA.

"Their deal dismantles sanctions on the Iranian economy and floods the regime with hundreds of billions of dollars, even while Iran is attempting to hunt down and murder former American officials and dissidents on American soil," Republican Senator Ted Cruz of Texas told CNN. Cruz added that he is "committed to blocking and reversing this catastrophic deal."

For now, the US has been privately conveying feedback to the Europeans, a senior administration official said. But the US has not yet officially responded to the EU and Iranian drafts, another administration official said.

"As we do in the Biden administration, we're doing our homework," one of the senior administration officials said. "We're consulting with our experts in the interagency. And when we have a response prepared, we'll send it back."

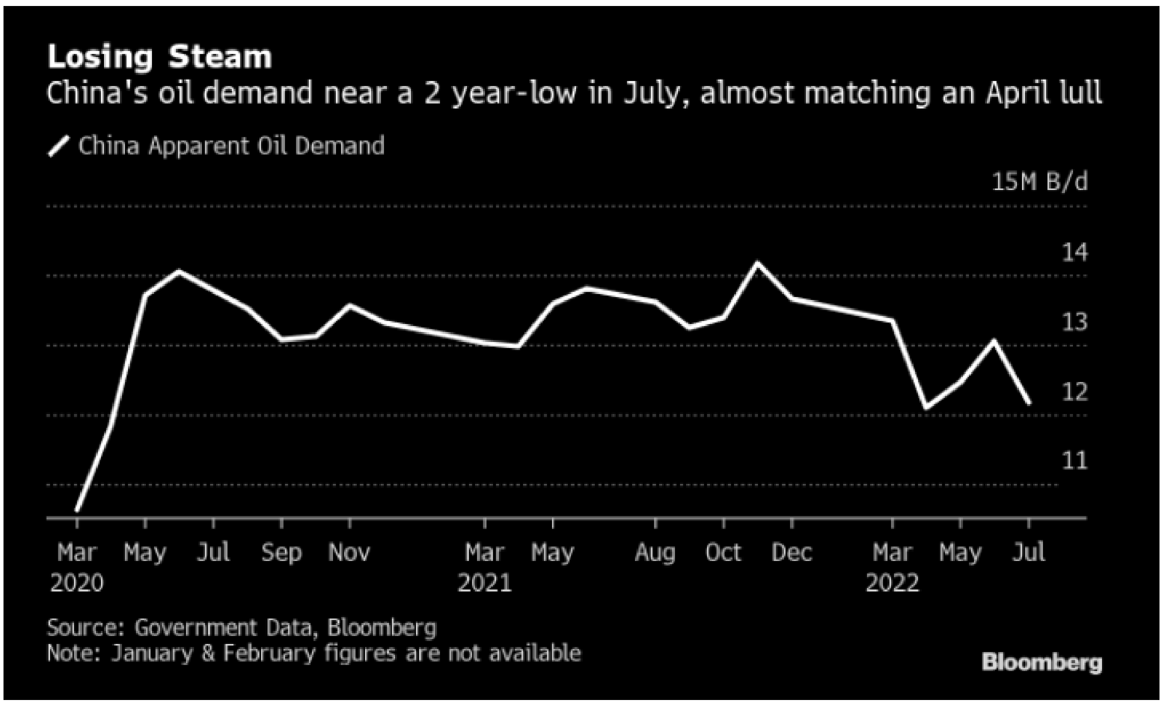
*CNN's Jennifer Hansler contributed reporting*

Oil Consumption in China Is Under Threat in Risk to Prices (1)
2022-08-16 07:48:20.408 GMT

By Bloomberg News

(Bloomberg) -- Oil demand in China, the largest importer, is under threat as the government presses on with strict anti-virus curbs and growth slows.

Among warning signs, total oil-product demand may average about 14.1 million barrels a day this quarter, below the average of 15.7 million a day in the same period last year, according to data and analytics firm Kpler. Separately, official figures show apparent crude consumption sank almost 10% in July as refineries handled the least oil on a daily basis that month since March 2020.




The slower-than-expected recovery in Asia's top economy will pose a further risk to oil prices that have already collapsed to the lowest level in six months, giving up all of the gains following Russia's invasion of Ukraine. The slump has been driven by Moscow's continued ability to get its crude onto global markets, rising supply from Libya, and overarching concern among investors that slower growth and tighter US monetary policy will hurt commodities demand.

With a fresh round of Covid-19 flareups and lockdown measures in tourism hubs, China's consumer spending and summer travel are taking a hit. The nation needs more stimulus as the recovery isn't solid, according to a front-page report in the Financial News, a newspaper backed by the central bank.

"The impact of these snap lockdowns on key economic figures is not lost on us -- there has been weakened consumer and business spending," said Jane Xie, a senior oil analyst at Kpler. "With the latest setback on tourism hubs, we can expect

even more cautious travel behaviour amongst its citizenry."
The trajectory of oil demand in China is a fundamental driver of prices, with the country accounting for about one barrel in every six consumed worldwide in 2021, according to International Energy Agency data. Global benchmark Brent, which climbed to almost $140 a barrel in March, was last near $94.
Jet fuel demand may fall to 410,000 barrels a day this quarter, down 280,000 barrels a day from last year's pace, according to Kpler. Gasoline consumption is projected to average at 3.25 million barrels a day, down by about 660,000 barrels a day from the same period last year.
China's oil demand recovery "plateaued in July," according to an analysis from BloombergNEF, which cited lower congestion levels in 15 of the nation's biggest cities. Diesel demand growth has lost momentum as road cargo volume remained flat, while industrial use of diesel has slowed, it said.

Flight Numbers

Daily flight numbers fell 5% to 10,200 in the week of Aug. 14 due to Covid-19 flareups in tourism hot spots, down 24% from 2019 levels, the China Aviation Daily reported in a Wechat post that cited aviation data provider VariFlight.
Adding further pressure is a slump rattling the property sector, which poses a risk to diesel consumption as the industrial fuel is used in construction projects. Kpler forecasts diesel consumption may fall to 3.38 million barrels a day this quarter, down about 210,000 barrels a day from last year.
To be sure, not everyone is pessimistic. Pent-up travel demand and a "fine-tuning" of containment measures will lift gasoline and jet fuel usage, according to Fenglei Shi, director of Greater China oil market midstream and downstream at S&P Global Commodity Insights, who forecasts that nationwide oil demand will rise by more than 600,000 barrels a day in August compared with July.
Separately, Goldman Sachs Group Inc. also expects some growth. China's overall oil demand will rise modestly through to 2023 on back of an effective rolling lockdowns, Damien Courvalin, the bank's head of energy research, told Bloomberg TV last week.
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To contact Bloomberg News staff for this story:

John Liu in Beijing at jliu42@bloomberg.net;
Sarah Chen in Beijing at schen514@bloomberg.net
To contact the editors responsible for this story:
Serene Cheong at scheong20@bloomberg.net
Jake Lloyd-Smith

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# Oil price outlook – Snapshot: August 16, 2022

**Disclaimer: Please note that BNEF does not offer investment advice. Clients must decide for themselves whether current market prices fully reflect the issues discussed in this note.**

| Category | Indicator | Signal | Comment |
|---|---|---|---|
| Fundamentals | **Refinery margins** | ↔ | • Refinery margins were slightly higher over the past week. |
| Fundamentals | **Crude stocks** | ↓ | • In the week ending August 5, land crude-oil storage levels in BloombergNEF's tracked regions (the US, ARA and Japan) rose by 0.5% to 545.7 million barrels (m bbl). The stockpile **deficit** against the five-year average (2015-19) **narrowed from 53.9m bbl to 49.6m bbl**.<br>• Including global floating crude stockpiles from the same week, total crude oil inventories increased by 0.8% to 640m bbl, with the stockpile **deficit flipping from a deficit of 10.8m bbl to a surplus of 0.7m bbl.** |
| Fundamentals | **Product stocks** | ↔ | • In the week ending August 5, gasoline and light distillate stockpiles in BNEF's tracked regions (the US, ARA, Singapore, Japan and Fujairah) declined by 2.1% week-on-week to 265.4m bbl, with the stockpile **deficit** against the three-year average (2017-19) **widening from 0.7m bbl to 5.8m bbl**. Gasoil and middle distillate stockpiles in BNEF's tracked regions were up 0.4% to 141.4m bbl, with the stockpile **deficit** against the three-year average **narrowing from 39.6m bbl to 38.7m bbl**.<br>• Oil product stockpiles in tracked regions grew by 0.5% to 950.1m bbl, with the stockpile **deficit** against the three-year seasonal average **widening from 57.3m bbl to 57.8m bbl**. Altogether, crude and product stockpiles rose by 0.6% to 1,590.1m bbl, with the stockpile **deficit narrowing from 68.2m bbl to 57.1m bbl.** |
| Fundamentals | **Demand indicators** | ↓ | • In the week to August 16, global jet fuel demand from commercial passenger flights was virtually flat at 5.76 million barrels per day. Jet fuel consumption by international passenger flight departures was down by 6,600 barrels per day (or -0.2%) week-on-week, while consumption by domestic passenger flight departures increased by 8,200 barrels per day (or +0.3%). In the week to August 14, flight departures in the Eurocontrol area fell to 87.9% of the equivalent week in 2019, down from 88.5% last week. The four-week moving average however inched higher to 88.1%, from 87.7%. Meanwhile, in the same week, US passenger throughput rose to 90.1% of the equivalent week in 2019, up from 89.1% last week. The four-week moving average increased to 89%, from 88.4%.<br>• The global mobility index slipped over the past week, according to BNEF's calculation based on Google mobility data. It fell by 0.5% in the week to August 11, driven by declines in Asia Pacific ex-China (-0.9%), Europe (-0.5%) and the Americas (-0.2%). Meanwhile, in the week to August 10, TomTom's peak congestion data showed growth in Asia Pacific ex-China (+4.9%) and North America (+9.2%), but this was met with a strong decline in Europe (-9.4%). Road congestion in China's 15 key cities was up by 3.2 percentage points to 103.7% of January 2021 levels in the week to August 10, according to BNEF's calculation based on Baidu data.<br>• In the week to August 9, global daily average Covid-19 cases fell by 2% to 988,000 new cases. The Asia Pacific number grew by 24% to 512,000 daily cases (with the number in **China more recently surging 13% to 1,250 cases** in the week to August 13), Europe dropped by 21% to 252,000 daily cases, and the Americas was down 17% to 188,000 daily cases. |
| Financial | **Macro indicators** | ↑ | • The dollar index averaged 105.7 over the past week and was 0.3% lower than the week before. |
| Financial | **Hedge fund positioning** | ↓ | • In the week to August 9, Managed Money net positioning in the oil complex was down by 43.7m bbl (or -9.3%) week-on-week to 428.7m bbl, and fell to the 7th percentile (versus the 12th percentile last week) of the past five years. |
| Financial | **Options chains and volatility** | ↔ | • Brent and WTI 1M volatility skews fell slightly over the past week. |
| Outlook | **Weekly call** | ↓ | • BNEF is bearish on oil prices for the week ahead, with Brent Oct-22 trading at $93.65/bbl and WTI Sep-22 trading at $87.83/bbl at the time of writing.<br>• The global mobility index weakened over the past week, as year-on-year growth slowed. Weekly road congestion levels in China rose for the first time after falling for five consecutive weeks, but yet another resurgence in Covid-19 cases could cause traffic levels to fall again. The US EIA four-week average motor gasoline supplied bounced back above 2020 levels, avoiding potentially another sell-off in oil. Global jet fuel demand was flat week-on-week, although the air traffic in Europe and passenger throughput in the US improved against the 2019 levels on a four-week moving average basis.<br>• Weekly crude inventories saw a bearish move over the past week. While the crude and oil product stockpile deficits have eased over the past several weeks, the product inventory deficit has remained sizable, primarily due to middle distillates. The middle distillate market is likely to remain tight through the winter season as elevated natural gas prices constrict hydrocracking runs, while jet fuel and industrial demand remains resilient.<br>• The IEA revised oil demand expectations higher by 563,000-707,000 b/d for 2Q to 4Q 2022, as it sees more oil use in power generation in the Middle East due to hot weather, as well as increased gas-to-oil switching in Europe due to surging natural gas prices. On the other hand, OPEC revised oil demand lower by 551,000-719,000 b/d for 2H 2022 due to resurgence of Covid-19 restrictions and ongoing geopolitical uncertainties. IEA's oil demand growth forecast for 2022 was hence revised higher to 2.11m b/d from 1.73m b/d, while OPEC's was reduced from 3.36m b/d to 3.1m b/d. However, oil demand growth for 2023 remains largely unchanged. |


BloombergNEF

# Past outlooks

**Disclaimer: Please note that BNEF does not offer investment advice. Clients must decide for themselves whether current market prices fully reflect the issues discussed in this note**

| Date of report | Refinery margins | Crude stocks | Product stocks | Demand indicators | Commitment of traders | Options chain and volatility | BNEF week ahead call | Brent/WTI price at time of writing ($/bbl) | Web Link |
|---|---|---|---|---|---|---|---|---|---|
| **August 16** | ↔ | ↓ | ↔ | ↓ | ↓ | ↔ | ↓ | Brent-Oct: 93.65<br>WTI-Sep: 87.83 | |
| **August 9** | ↔ | ↓ | ↔ | ↔ | ↓ | ↓ | ↔ | Brent-Oct: 97.60<br>WTI-Sep: 91.50 | |
| **August 2** | ↔ | ↑ | ↔ | ↔ | ↔ | ↔ | ↓ | Brent-Oct: 99.38<br>WTI-Sep: 93.42 | |
| **July 26** | ↔ | ↓ | ↔ | ↓ | ↑ | ↔ | ↔ | Brent-Oct: 101.94<br>WTI-Sep: 98.46 | |
| **July 19** | ↔ | ↓ | ↓ | ↓ | ↔ | ↔ | ↓ | Brent-Sep: 105.88<br>WTI-Sep: 99.03 | |
| **July 11** | ↓ | ↓ | ↑ | ↓ | ↓ | ↓ | ↓ | Brent-Sep: 105.18<br>WTI-Aug: 102.34 | |
| **July 5** | ↓ | ↑ | ↓ | ↑ | ↓ | ↓ | ↔ | Brent-Sep: 111.71<br>WTI-Aug: 107.91 | |
| **June 21** | ↑ | ↓ | ↑ | ↑ | ↓ | ↓ | ↔ | Brent-Aug: 115.81<br>WTI-Aug: 110.34 | |
| **June 13** | ↔ | ↑ | ↔ | ↔ | ↑ | ↔ | ↔ | Brent-Aug: 120.06<br>WTI-Jul: 118.58 | |
| **June 6** | ↔ | ↑ | ↑ | ↔ | ↑ | ↔ | ↔ | Brent-Aug: 119.88<br>WTI-Jul: 118.94 | |
| **May 30** | ↔ | ↑ | ↓ | ↔ | ↔ | ↔ | ↔ | Brent-Aug: 116.46<br>WTI-Jul: 115.81 | |
| **May 23** | ↑ | ↑ | ↑ | ↔ | ↑ | ↑ | ↑ | Brent-Aug: 110.88<br>WTI-Jul: 111.11 | |
| **May 16** | ↓ | ↓ | ↔ | ↑ | ↓ | ↓ | ↔ | Brent-Jul: 112.22<br>WTI-Jul: 109.69 | |
| **May 9** | ↔ | ↓ | ↔ | ↑ | ↓ | ↔ | ↑ | Brent-Jul: 109.93<br>WTI-Jun: 107.22 | |

**To view past reports on terminal, go to NI BNEFOIL, search for the report and click on the icon to the far right:**




BloombergNEF

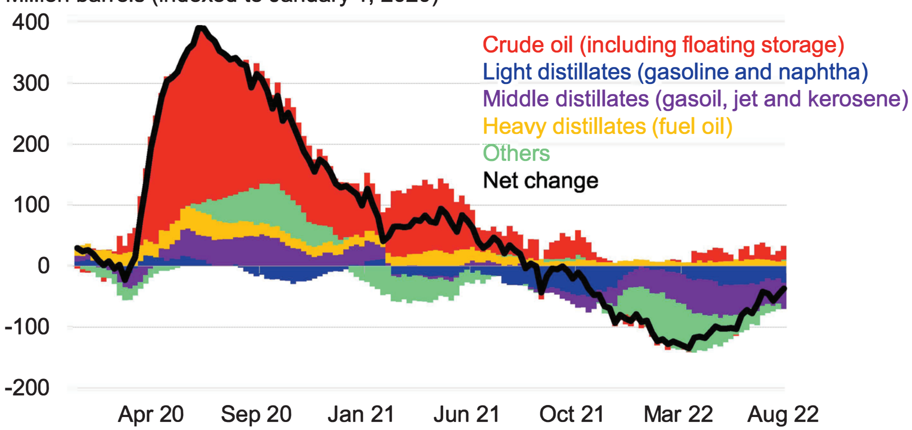
Fundamentals Financial

# Weekly oil inventories

## Crude oil stockpiles inched higher

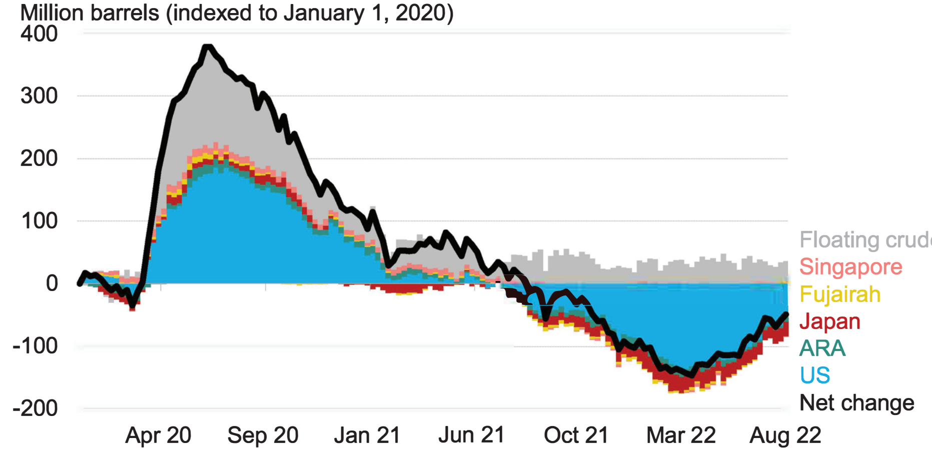
### Weekly oil inventories by type

Million barrels (indexed to January 1, 2020)



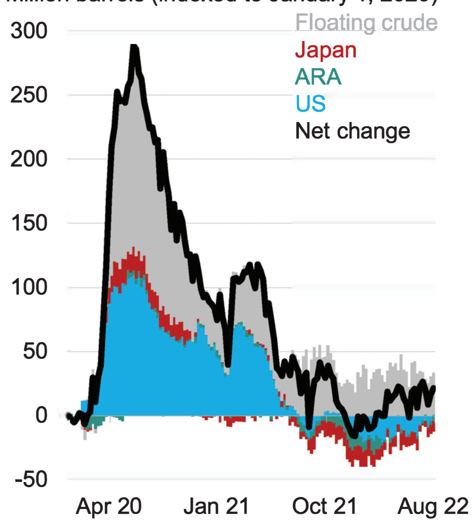

### Weekly oil inventories by region

Million barrels (indexed to January 1, 2020)



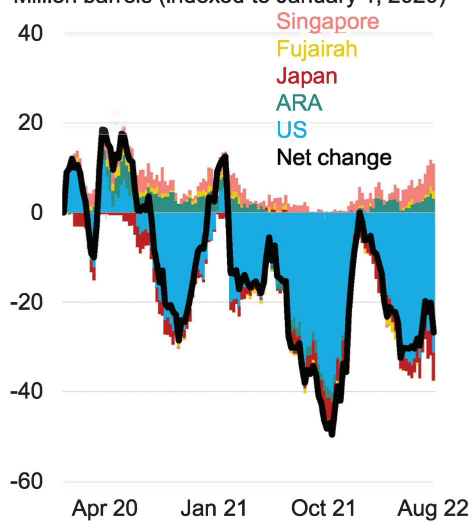

### Crude inventories

Million barrels (indexed to January 1, 2020)



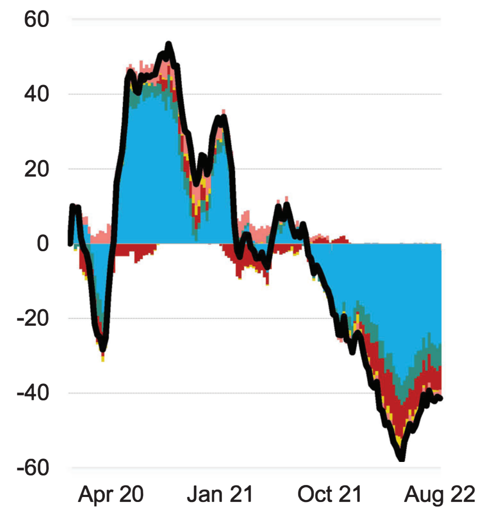

### Light distillate inventories

Million barrels (indexed to January 1, 2020)



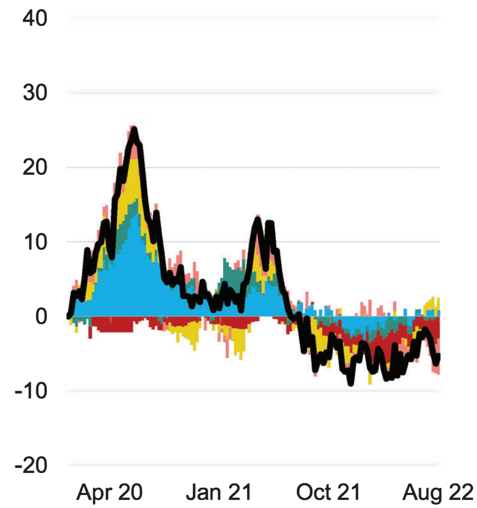

### Middle distillate inventories

Million barrels (indexed to January 1, 2020)




### Heavy distillate inventories

Million barrels (indexed to January 1, 2020)




*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ ,Vortexa, Genscape. Note: As of the week ending **August 5, 2022**.*

Fundamentals Financial

# Aggregated oil stockpiles

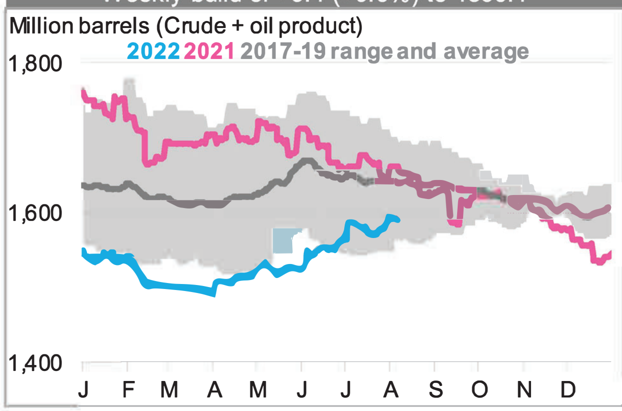
## Bearish: Stockpiles deficit narrowed from 68.2m bbl to 57.1m bbl

- Charts below use the **2017-19** (three-year) seasonal stockpiles. All calculations are recalibrated to measure against their respective three-year seasonal averages, so the values below may differ from the previous slides.
- Land crude inventories include the US, ARA, Japan and Shandong Teapots. Floating storage data are global. Oil product storage includes the US, ARA, Japan, Singapore, Shandong Teapots and Fujairah. Floating crude inventories may have been adjusted since the previous report – see slide 8 for further info.

### Total oil and product stocks = Total crude stocks (land + floating) + Total oil product stockpiles

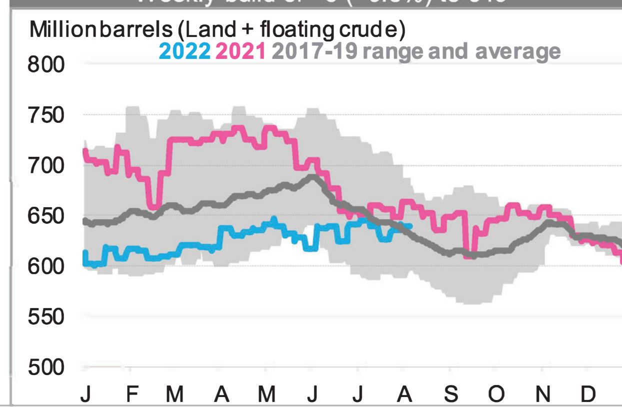
**Total oil and product stocks**

Weekly build of +9.4 (+0.6%) to 1590.1



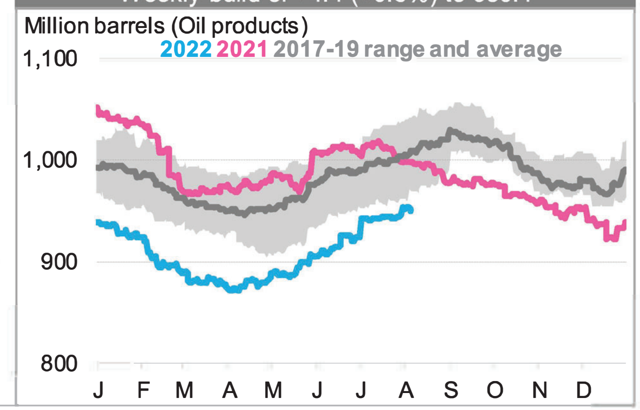

**Total crude stocks (land + floating)**

Weekly build of +5 (+0.8%) to 640



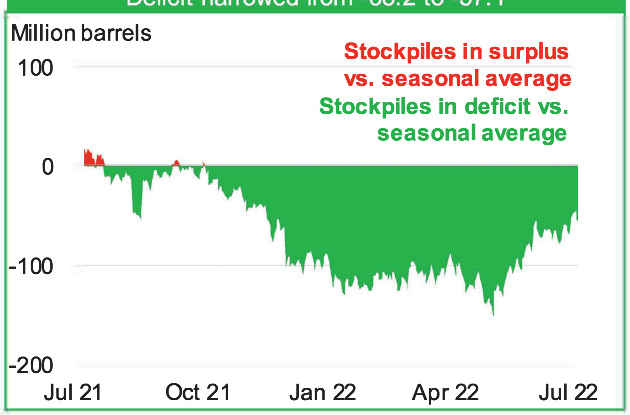

**Total oil product stockpiles**

Weekly build of +4.4 (+0.5%) to 950.1

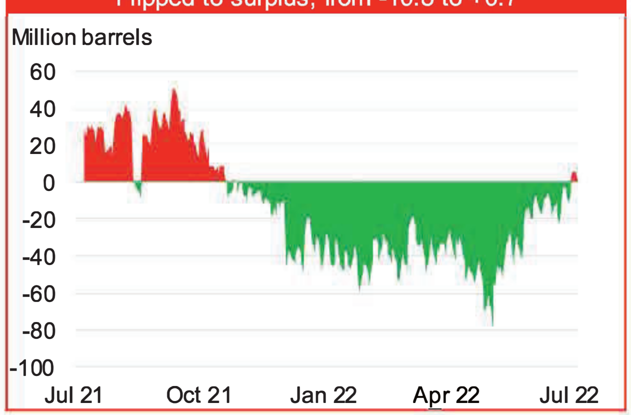



**Charts below subtract current stockpiles by the 2017-19 (three-year) seasonal average**

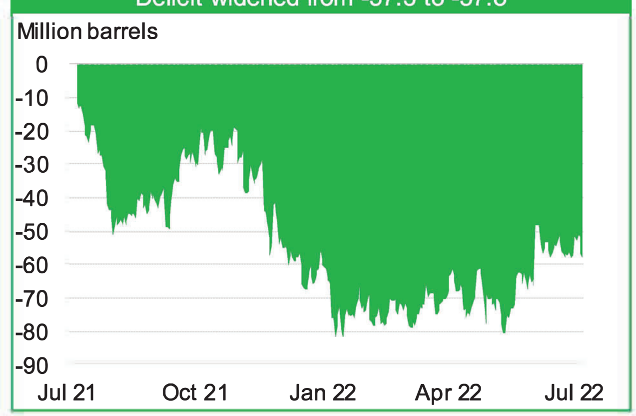
Deficit narrowed from -68.2 to -57.1




Flipped to surplus, from -10.8 to +0.7




Deficit widened from -57.3 to -57.8




*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ ,Vortexa, Genscape. Note: As of the* ***week ending August 5, 2022.***

Fundamentals | Financial

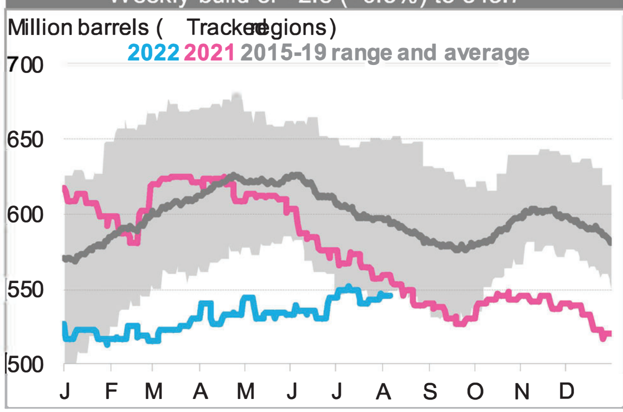
# Crude stocks: Land

## Bearish: Deficit narrowed from 53.9m bbl to 49.6m bbl against the seasonal average

- Crude inventory rises when supply outstrips demand (meaning more physical oil is available than is needed). High or rising inventories are therefore a bearish factor for oil prices. Every year, storage levels fluctuate due to seasonal demand trends. The intra-year directional movement of stockpile levels is somewhat predictable, yet the magnitude of movement can differ significantly from expectations.
- A useful way to gauge if the intra-year storage levels differ from the norm is to measure the difference between the current and seasonal average inventory levels.

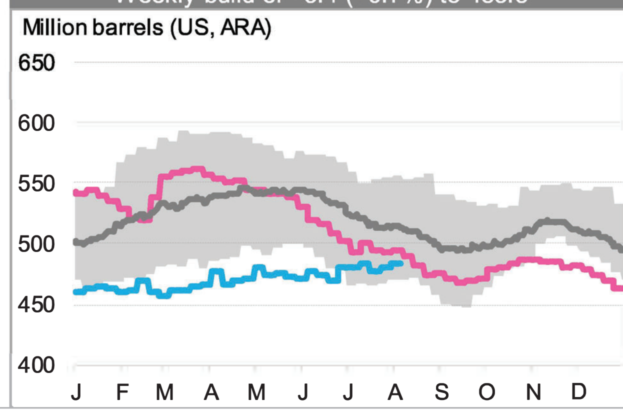
### Land storage: Total

Weekly build of +2.8 (+0.5%) to 545.7



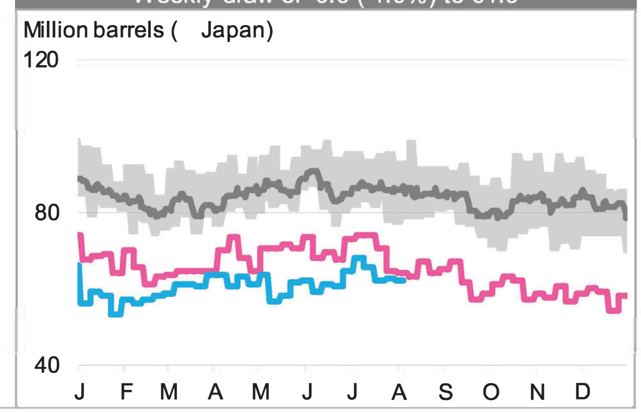

### Land storage: West of Suez

Weekly build of +3.4 (+0.7%) to 483.8



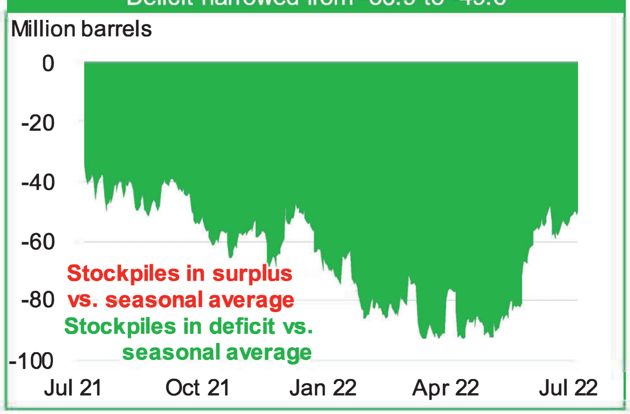

### Land storage: East of Suez

Weekly draw of -0.6 (-1.0%) to 61.9

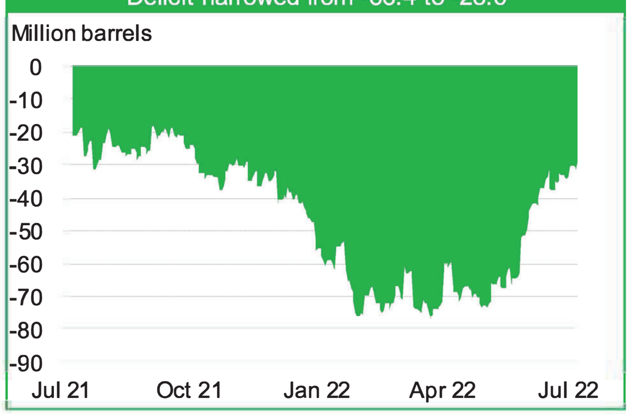



**Charts below subtract current stockpiles by the 2015-19 (five-year) seasonal average**

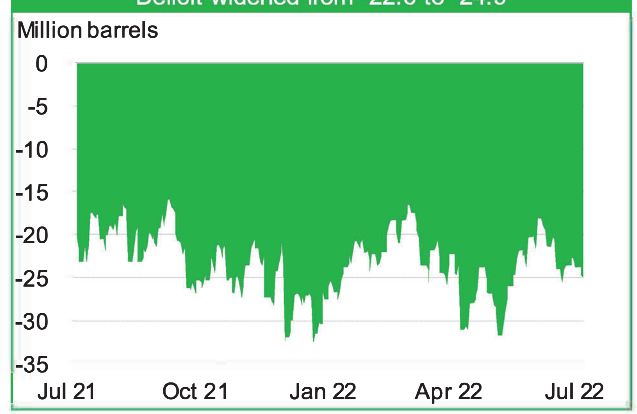
Deficit narrowed from -53.9 to -49.6




Deficit narrowed from -33.4 to -28.6




Deficit widened from -22.6 to -24.9




*Source: BloombergNEF, US EIA, Genscape, PAJ. Note: As of the **week ending August 5, 2022.***

Fundamentals | Financial

# Crude stocks: Floating

## Bearish: Surplus widened over the past week

- Floating storage is only profitable if the strength of contango (future versus prompt price) is greater than the tanker costs. Therefore, tankers become floating storage when the profit from a storage play exceeds the cost of the forward freight agreement (FFA).
- The floating storage data used in the "Oil Price Outlook" slide is for the previous week (ie, the week before the latest data shown below). That data are available in the table to the right.

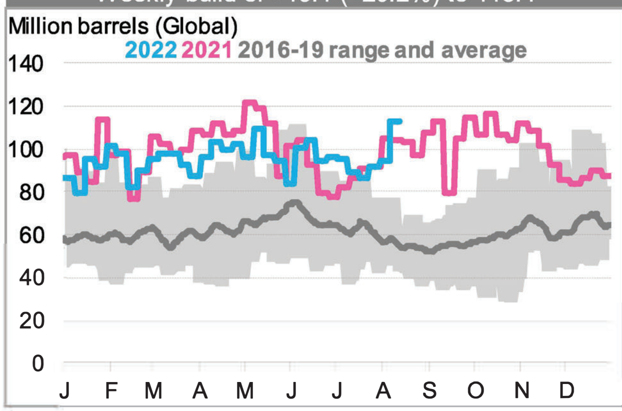
### Vortexa's revision to global floating crude inventories

| Million barrels | Previous report | Current report | Vortexa's revision |
|---|---|---|---|
| Inventories in week of Aug. 5 | 98.1 | **94.3*** | -3.8 |
| Inventories in week of Jul. 29 | 95.1 | 92.1 | -3.0 |

*Note: *Figure used to aggregate total oil inventories on page 8.*

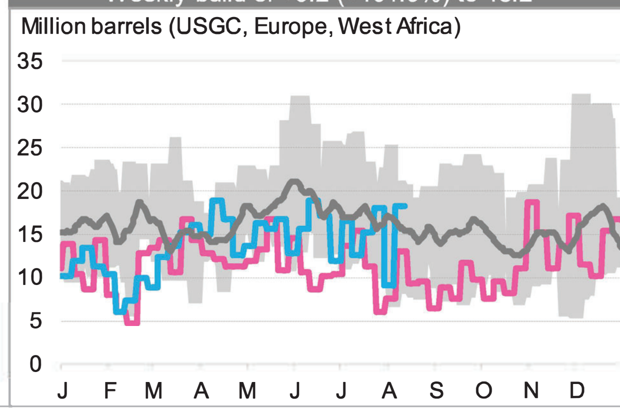
### Floating storage: Total

Weekly build of +19.1 (+20.2%) to 113.4



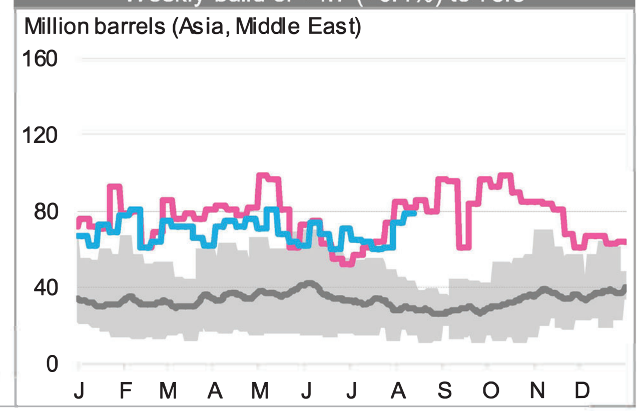

### Floating storage: West of Suez

Weekly build of +9.2 (+101.9%) to 18.2



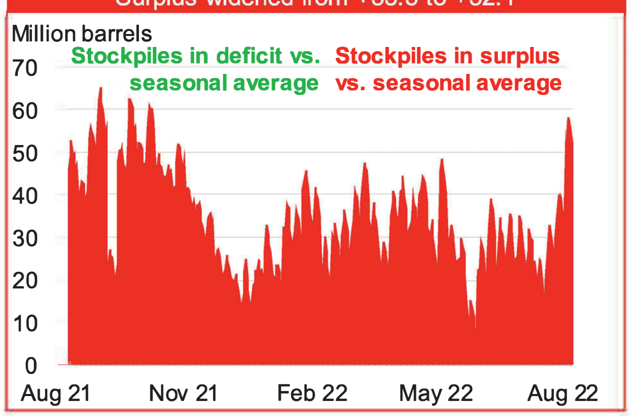

### Floating storage: East of Suez

Weekly build of +4.7 (+6.4%) to 78.8

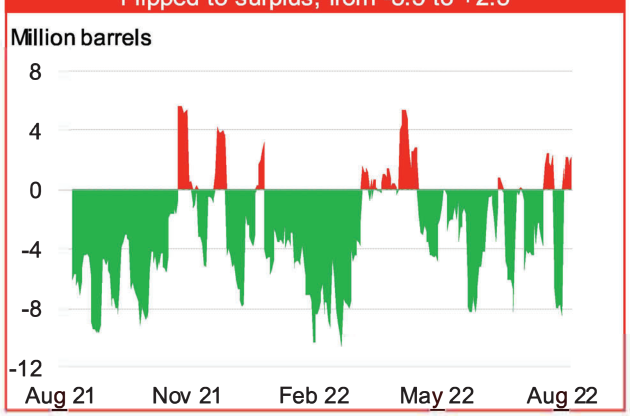



**Charts below subtract current stockpiles by the 2016-19 (four-year) seasonal average**

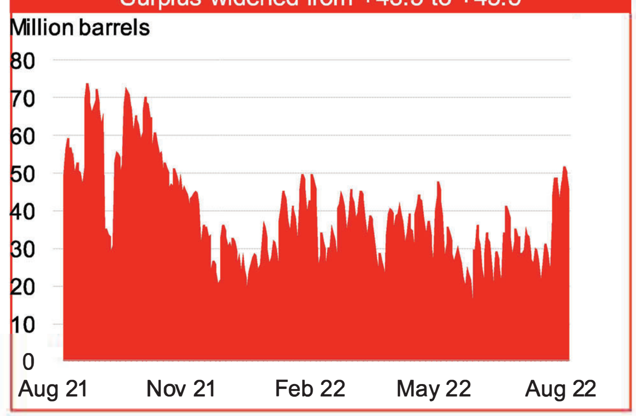
Surplus widened from +35.3 to +52.1




Flipped to surplus, from -8.5 to +2.3




Surplus widened from +43.3 to +45.5



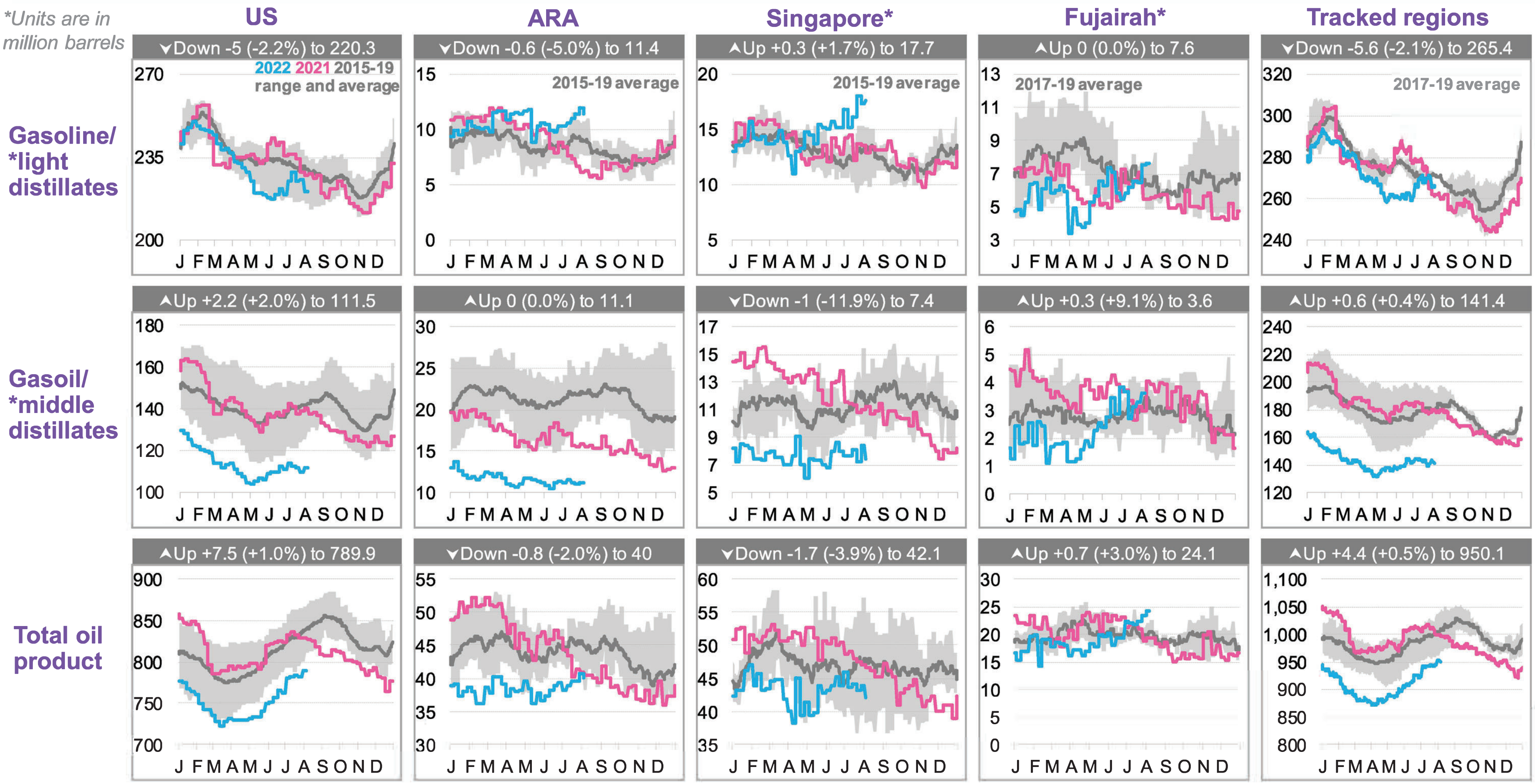

*Source: BloombergNEF, Vortexa. Note: As of the* ***week ending August 12, 2022. *Raw data from Vortexa are revised frequently, so the data in this report might change week-to-week.***

Fundamentals Financial

# Product stocks: Current versus seasonal average

## Neutral: Oil product stockpiles in tracked regions grew by 0.5% over the past week, while gasoline and light distillate stockpiles fell by 2.1%

- Chart legend are as follows: 2022, 2021 and the 2015-19 range and average. For Fujairah and tracked regions, the **2017-19 (three-year) seasonal range** is shown. Tracked regions include US, ARA, Singapore, Japan and Fujairah

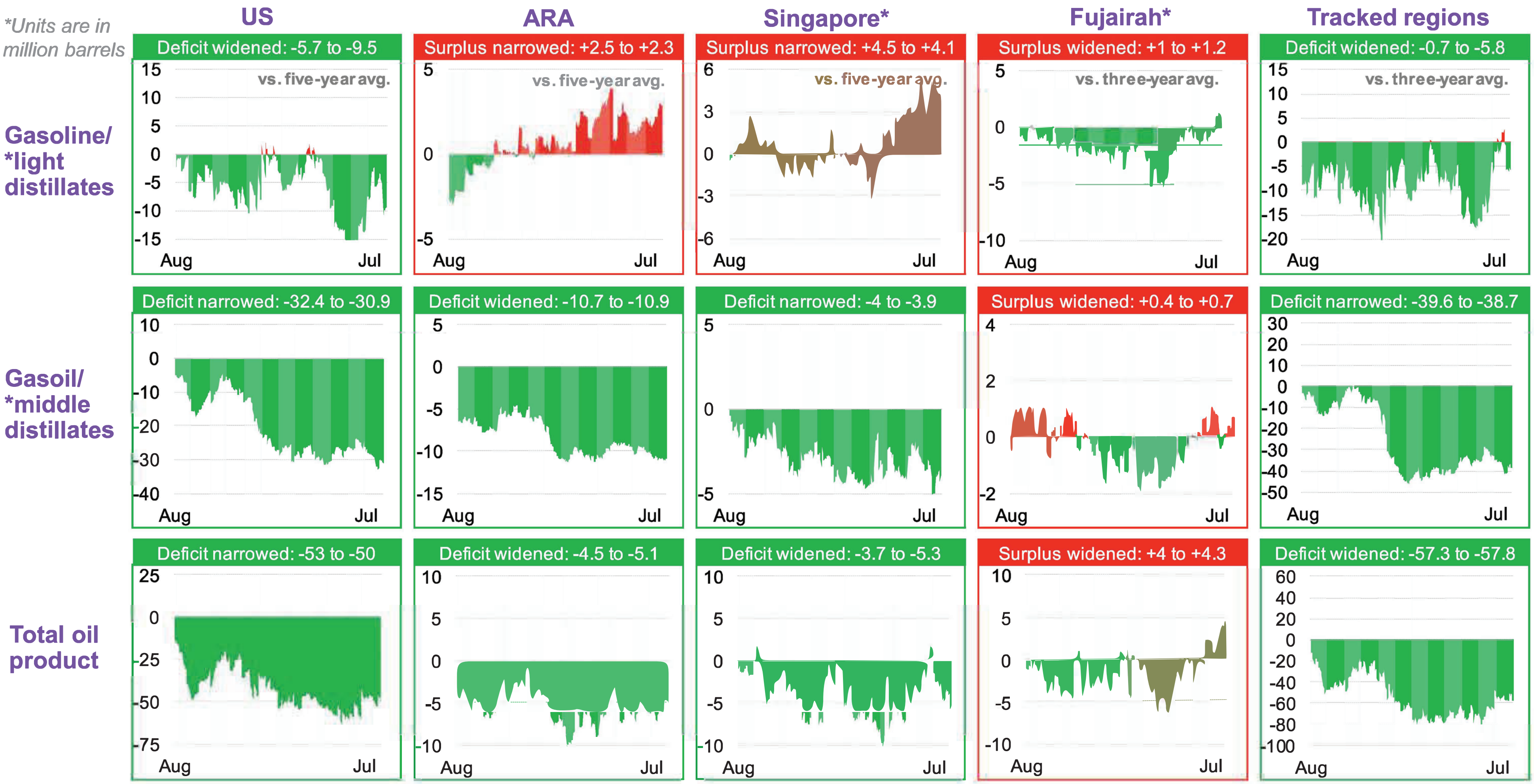



*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the **week ending August 5, 2022.***

# Product stocks: Current versus seasonal average

## Neutral: Oil product stockpile deficit against the seasonal average widened from 57.3m bbl to 57.8m bbl

- The charts below compare each respective regional product stockpile level against the seasonal average defined in the previous slide.
- **Red** signifies that the current stockpile levels are higher (in surplus) than the seasonal average, while **green** signals that the current stockpiles are lower (in deficit).




Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the **week ending August 5, 2022.**

Aug 18, 2022 07:07:06

# OIL DEMAND MONITOR: US Fills Up on Gasoline; China Outlook Dims

China's apparent oil demand 9.7% weaker than a year ago

Global air travel is still 13% below same week of 2019

By Stephen Voss

(Bloomberg) -- Further improvement in gasoline use put US total oil demand firmly back above the five-year average, while China's economy and oil consumption are not growing as rapidly as expected.

US oil products supplied rose in the week ended Aug. 12, as did gasoline. The government estimates are volatile, and had shown abnormally low levels just a couple of weeks before, prompting speculation high prices were destroying demand. Regular gasoline slid below $4 a gallon at the pump last week, after peaking above $5 in June.

Demand in China, the world's second-largest oil consumer, has been rocky in recent months, coupled with an uncertain trajectory for economic growth as some cities continue to endure coronavirus lockdowns. Covid cases jumped to a three-month high on Wednesday, driven by a outbreak in Hainan province that's become the biggest since Shanghai was shut down in the spring.


The latest Chinese apparent oil demand estimate for July, calculated by Bloomberg from raw government data, could be viewed two ways.

On the one hand, it is up 5.5% from the same month of 2019, before the pandemic emerged, which is moderately bullish for demand, considering that many other countries haven't reached pre-Covid levels yet. But on the other hand, it's down almost 10% year-on-year, which is a worrying sign for a nation that's supposed to be the engine of growth for the global oil market.

The latest International Energy Agency report, on Aug. 11, called for Chinese oil demand to contract by 0.4% this year, to 15.37 million barrels a day, then grow by 5.7% in 2023 to 16.25 million. The second-quarter was predicted to be the weakest this year, at about 14.6 million barrels a day.

The agency had predicted a month ago that positive year-on-year growth in China would be attained by July but now it says "this has been pushed back to September as the renewed lockdowns and more adverse economic conditions decelerate gasoline and gasoil use."

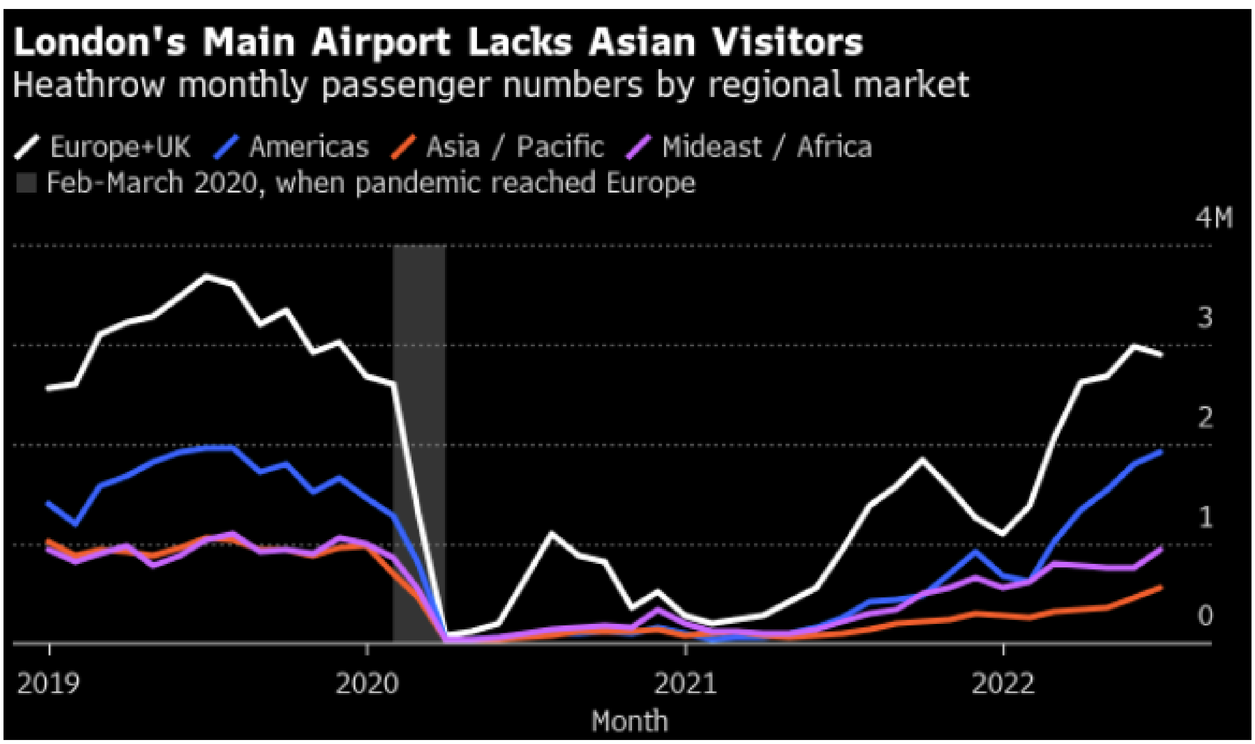
**Air Travel Still Down 13%**

The worldwide number of commercial flights, as tracked each day by Flightradar24, hasn't changed much over the past four weeks, averaging about 108,000 a day and stuck mid-way between the levels seen this time last year and in 2019. The seven-day average for Aug. 16 was 13% lower than the same period of 2019. A separate estimate for European flights alone, from Eurocontrol, was also 13% down.

Another barometer of the airline industry is the number of seats offered by airlines, compared with the same week of 2019. The analysis by OAG Aviation for the week commencing Aug. 15 shows that, globally, seat capacity is also 13% down from 2019 levels, while about one-third bigger than it was this time a year ago.

Out of 17 broad geographical regions tracked by OAG, the biggest laggards on a percentage basis are Southern Africa, South East Asia, North East Asia, Southwest Pacific and Eastern Europe. The most significant of those is North East Asia, lagging by 18%, because that region includes China, which vies with the US as the biggest air travel market.

A lack of Asian visitors is holding back passenger numbers at London's biggest airport, while travel connections to other regions have recovered more fully, according to statistics for July from Heathrow Airport Ltd.




The Bloomberg oil-demand monitor uses a range of high-frequency data to help identify emerging trends. The next monitor will be published in early September.

Following are the latest indicators. The first three tables shows fuel demand and road congestion, the next shows air travel globally and the fifth is refinery activity:

| Demand Measure | Location | % y/y | % vs 2020 | % vs 2019 | % m/m | Freq | Latest Date | Latest Value | Source |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline product supplied | US | +0.2 | +8.3 | -5.9 | +9.7 | w | Aug. 12 | 9.35m b/d | EIA |
| Distillates product supplied | US | -9.2 | +21 | +1.7 | +6.2 | w | Aug. 12 | 3.93m b/d | EIA |
| Jet fuel product supplied | US | -4.1 | +64 | -21 | -2.4 | w | Aug. 12 | 1.60m b/d | EIA |
| Total oil products supplied | US | -1.1 | +24 | -3.8 | +0.9 | w | Aug. 12 | 21.22m b/d | EIA |
| All motor vehicle use index | UK | -1 | +7.7 | -2 | +2.1 | w | Aug. 15 | 98 | DfT |
| Car use | UK | -1 | +8 | -5 | +4.4 | w | Aug. 15 | 95 | DfT |
| Light commercial vehicle use | UK | +1.8 | +11 | +11 | unch | w | Aug. 15 | 111 | DfT |
| Heavy goods vehicle use | UK | -1.9 | +2 | +2 | -1 | w | Aug. 15 | 102 | DfT |
| Gasoline (petrol) avg sales per filling station | UK | -2.4 | +7 | -8.7 | -1.9 | m | July 25-31 | 6,534 liters/d | BEIS |
| Diesel avg sales per station | UK | -7.5 | -2.8 | -15 | -3.3 | m | July 25-31 | 8,707 liters/d | BEIS |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Total road fuels sales per station | UK | -5.4 | +1.1 | -13 | -2.7 | m | July 25-31 | 15,240 liters/d | BEIS |
| China 15 cities congestion | China | | | | -2.6 | d | Aug. 8 | 103 | Baidu / BNEF |
| Gasoline | India | +12 | | +16 | -5 | 2/m | July 1-31 | 2.66m tons | Bberg |
| Diesel | India | +18 | | +5 | -13 | 2/m | July 1-31 | 6.42m tons | Bberg |
| LPG | India | +4.1 | | +12 | +8.7 | 2/m | July 1-31 | 2.47m tons | Bberg |
| Jet fuel | India | +79 | | -14 | -1.1 | 2/m | July 1-31 | 534k tons | Bberg |
| Total Products | India | +6.1 | +13 | -2.1 | -5.7 | m | July | 17.6m tons | PPAC |
| Toll roads volume | France | +5.3 | | +3.8 | | m | July | n/a | Atlantia |
| Toll roads volume | Italy | +0.3 | | -2.2 | | m | July | n/a | Atlantia |
| Toll roads volume | Spain | +0.1 | | -1.9 | | m | July | n/a | Atlantia |
| Toll roads volume | Brazil | +7.3 | | +6.9 | | m | July | n/a | Atlantia |
| Toll roads volume | Chile | -1.7 | | +5.2 | | m | July | n/a | Atlantia |
| Toll roads volume | Mexico | +3.5 | | +6.3 | | m | July | n/a | Atlantia |
| Gasoline | Spain | +1.7 | | | +6.3 | m | July | 555 m3 | Exolum |
| Diesel (and heating oil) | Spain | -2 | | | -1.4 | m | July | 2205k m3 | Exolum |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Jet fuel | Spain | +53 | | | +12 | m | July | 647 m3 | Exolum |
| Total oil products | Spain | +5.6 | | | +2.2 | m | July | 3407 m3 | Exolum |
| Road fuel sales | France | -2.4 | | | +0.8 | m | June | 4.278m m3 | UFIP |
| Gasoline | France | | | +16 | | m | 1H 2022 | n/a | UFIP |
| Road diesel | France | | | -6.2 | | m | 1H 2022 | n/a | UFIP |
| Jet fuel | France | +80 | | -23 | +2 | m | June | 615k m3 | UFIP |
| All petroleum products | France | +1.5 | | -3.4 | +0.9 | m | June | 4.615m tons | UFIP |
| All vehicles traffic | Italy | -1.3 | | | +1.7 | m | July | n/a | Anas |
| Heavy vehicle traffic | Italy | -6.4 | | | -6.9 | m | July | n/a | Anas |
| Gasoline | Portugal | +3.3 | +13 | +2.7 | -6.1 | m | June | 87k tons | ENSE |
| Diesel | Portugal | +1.5 | +3.8 | -3.4 | -9.5 | m | June | 381k tons | ENSE |
| Jet fuel | Portugal | +120 | +809 | -4.4 | +6.5 | m | June | 143k tons | ENSE |
| Total fuel sales | Italy | +1.4 | +20 | -2 | +0.7 | m | June | 4.53m tons | Ministry |
| Gasoline | Italy | +3.3 | +28 | +4.7 | +5.2 | m | June | 692k tons | Ministry |
| Diesel /gasoil | Italy | -1.9 | +15 | +0.5 | +0.5 | m | June | 2.30m tons | Ministry |
| Jet fuel | Italy | +126 | +419 | -19 | +13 | m | June | 379k tons | Ministry |

Notes: Click here for a PDF with more information on sources, methods. The frequency column shows w for data updated weekly, 2/m for twice a month and m for monthly. The column showing "vs 2020" is used for some data, such as comparing Italian jet fuel sales for June 2022 vs June 2020.

In DfT UK daily data, which is updated once a week, the column showing versus 2019 is actually showing the change versus the first week of February 2020, to represent the pre-Covid era.

In BEIS UK daily data, the column showing versus 2019 is actually showing the change versus the average of Jan. 27-March 22, 2020, to represent the pre-Covid era. The data switched from weekly to monthly, after July 28.

Atlantia is publishing toll road data on a monthly basis, rather than the weekly format seen in 2021, and DoT also switched to monthly data after the week ended April 3.

**City congestion:**

| Measure | Location | % chg vs avg 2019 | % chg m/m | Aug 15 | Aug 8 | Aug 1 | Jul 25 | Jul 18 | Jul 11 | Jul 4 | Jun 27 | Jun 20 | Jun 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (for Aug. 15) | | Congestion mins added to 1 hr trip at 8am* local time | | | | | | | | | |
| Congestion | Tokyo | -77 | +17 | 8 | 32 | 31 | 32 | 7 | 31 | 38 | 35 | 29 | 29 |
| Congestion | Taipei | -25 | zero | 26 | 27 | 26 | 26 | 26 | 26 | 25 | 23 | 23 | 22 |
| Congestion | Jakarta | zero | +10 | 39 | 37 | 37 | 34 | 35 | 26 | 29 | 28 | 33 | 37 |
| Congestion | Mumbai | -94 | -90 | 3 | 26 | 25 | 26 | 29 | 27 | 26 | 22 | 30 | 20 |
| Congestion | New York | -54 | -31 | 14 | 17 | 20 | 17 | 21 | 17 | zero | 22 | 11 | 29 |
| Congestion | Los Angeles | -12 | +58 | 31 | 19 | 18 | 16 | 20 | 17 | 2 | 20 | 12 | 22 |
| Congestion | London | -52 | -30 | 18 | 17 | 17 | 21 | 26 | 32 | 35 | 38 | 42 | 44 |
| Congestion | Rome | -100 | -100 | zero | 8 | 19 | 25 | 32 | 32 | 33 | 30 | 43 | 41 |
| Congestion | Madrid | -100 | -100 | zero | 3 | 5 | zero | 11 | 13 | 14 | 13 | 21 | 27 |
| Congestion | Paris | -99 | -98 | 1 | 10 | 13 | 25 | 28 | 31 | 37 | 37 | 41 | 49 |
| Congestion | Berlin | -45 | +35 | 19 | 16 | 13 | 15 | 14 | 17 | 29 | 27 | 40 | 27 |
| Congestion | Mexico City | -24 | +59 | 37 | 32 | 26 | 23 | 23 | 25 | 26 | 28 | 29 | 33 |
| Congestion | Sao Paulo | -24 | +77 | 33 | 40 | 26 | 20 | 19 | 19 | 20 | 21 | 24 | 25 |

Source: TomTom. Click here for a PDF with more information on sources, methods.

* 9am statistics are used for Mumbai. All other cities use 8am.

NOTE: m/m comparisons are Aug. 15 vs July 18. The Aug. 15 Assumption Day religious holiday likely cut traffic flows in Rome, Madrid and Paris. Madrid was also on holiday July 25 and Tokyo on July 18. TomTom has been unable to provide Chinese data since April 2021. Taipei and Jakarta were added to the table in December 2021.

**Chinese City Congestion:**

| Measure | Location | % chg vs Jan. 2021 | % chg m/m | % chg w/w | Aug. 8 | Aug. 1 | Jul. 25 | Jul. 18 | Jul. 11 | Jul. 4 | Jun. 27 | Jun. 20 | Jun. 13 | Jun. 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (compare vs Aug. 8) | | | | | | | | | | | | |
| Congestion | Beijing | +9 | -12 | -4.4 | 109 | 114 | 109 | 116 | 124 | 130 | 109 | 97 | 99 | 84 |
| Congestion | Guangzhou | +12 | +2.4 | +2.6 | 112 | 109 | 105 | 103 | 109 | 116 | 113 | 115 | 121 | 112 |
| Congestion | Shanghai | +13 | +7.1 | +5 | 113 | 108 | 105 | 103 | 106 | 119 | 111 | 105 | 106 | 89 |
| Congestion | China-15 | +3 | -2.6 | +1.9 | 103 | 101 | 101 | 103 | 106 | 115 | 111 | 109 | 109 | 103 |

Source: BNEF calculations based on Baidu congestion data, showing a seven-day moving average indexed against a January 2021 baseline of 100. China-15 is the weighted average of the 15 cities with the highest number of vehicle registrations. m/m comparisons are Aug. 8 vs July 11

**Air Travel:**

| Measure | Location | y/y | vs 2 yrs ago | vs 2019 | m/m | w/w | Freq. | Latest Date | Latest Value | Source |
|---|---|---|---|---|---|---|---|---|---|---|
| | | changes shown as % | | | | | | | | |
| Airline passenger throughput | US | +24 | +252 | -21 | -6.3 | -1.8 | d | Aug. 16 | 1.992m | TSA |
| Airline passenger throughput (7d avg) | US | +16 | +206 | -9.6 | -4.2 | -2.6 | d | Aug. 16 | 2.201m | TSA |
| All flights | Worldwide | +14 | +46 | +8.5 | -0.8 | -1.1 | d | Aug. 16 | 223,010 | Flightradar24 |
| Commercial flights | Worldwide | +20 | +57 | -13 | -0.4 | +0.4 | d | Aug. 16 | 107,658 | Flightradar24 |
| Air traffic (flights) | Europe | | | -13 | -1.4 | +0.1 | d | Aug. 16 | 29,977 | Eurocontrol |
| Air traffic (flights) | UK | | | -16 | -0.1 | +1.7 | d | Aug. 16 | 5,612 | Eurocontrol |
| Air traffic (flights) | Germany | | | -19 | +1.9 | +1.1 | d | Aug. 16 | 4,937 | Eurocontrol |
| Seat capacity | Worldwide | +34 | +72 | -13 | +0.4 | -0.1 | w | Aug. 15-21 | 102.5m | OAG |
| Seat capacity | North America | | | -7.7 | | -1.3 | w | Aug. 15-21 | n/a | OAG |
| Seat capacity | North East Asia | | | -18 | | +0.2 | w | Aug. 15-21 | n/a | OAG |
| Seat capacity | South East Asia | | | -31 | | -0.1 | w | Aug. 15-21 | n/a | OAG |
| Seat capacity | South Asia | | | -3.1 | | +1 | w | Aug. 15-21 | n/a | OAG |
| Seat capacity | Western Europe | | | -11 | | +0.5 | w | Aug. 15-21 | n/a | OAG |
| Seat capacity | Central America | | | +9.6 | | -4.4 | w | Aug. 15-21 | n/a | OAG |
| Heathrow airport passengers | UK | +318 | +628 | -19 | +5.4 | | m | July 2022 | 6.31m | Heathrow |

NOTE: Comparisons versus 2019 are a better measure of a return to normal for most nations, rather than y/y comparisons.

FlightRadar24 data shown above, and comparisons thereof, all use 7-day moving averages, except for w/w which uses single day data.

**Refineries:**

| Measure | Location | y/y | chg vs 2019 | m/m chg | Latest as of Date | Latest Value | Source |
|---|---|---|---|---|---|---|---|
| | | Changes are in ppt unless noted | | | | | |
| Crude intake | US | +2.6% | -5.1% | +0.6% | Aug. 12 | 16.4m b/d | EIA |
| Utilization | US | +1.3 | -1.3 | -0.2 | Aug. 12 | 93.5 % | EIA |
| Utilization | US Gulf | +3.8 | +0.9 | -1.1 | Aug. 12 | 96.9 % | EIA |
| Utilization | US East | +8.8 | +28 | +0.5 | Aug. 12 | 98.4 % | EIA |
| Utilization | US Midwest | -1.1 | -6.4 | +3 | Aug. 12 | 92.8 % | EIA |
| Apparent Oil Demand | China | -9.7% | +5.5% | -6.7% | July 2022 | 12.16m b/d | NBS |

NOTE: All of the refinery data is weekly, except NBS apparent demand, which is usually monthly. Changes are shown in percentages for the rows on crude intake and Chinese apparent oil demand, while refinery utilization changes are shown in percentage points. SCI99 data on Chinese refinery run rates was discontinued in late 2021.

# Aviation Indicators Weekly

BloombergNEF is tracking the evolution of passenger flight schedules and departures globally. This note provides a weekly update of these data points to guide expectations of the demand for aviation fuel.

| Metric | Frequency | August 4 to 10 |
|---|---|---|
| Passenger flight schedule | Weekly | Scheduled departures increased by a small number week-on-week |
| Implied fuel consumption | Weekly | Implied fuel consumption increased week-on-week and year-on-year |
| Asia-Pacific jet fuel demand | Weekly | Jet fuel demand in Asia Pacific increased week-on-week and year-on-year |
| Europe jet fuel demand | Weekly | Jet fuel demand in Europe decreased week-on-week and increased year-on-year |
| Americas jet fuel demand | Weekly | Jet fuel demand in the Americas decreased week-on-week and increased year-on-year |
| Rest of World jet fuel demand | Weekly | Rest of World jet fuel demand decreased week-on-week and increased year-on-year |

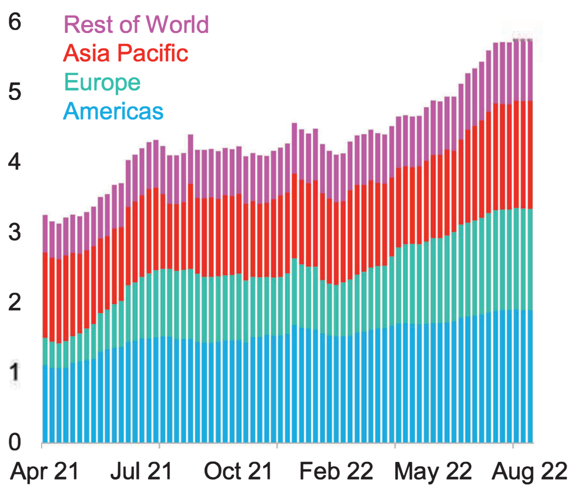
*Source: DSET FLY<GO>, BloombergNEF. Note: Green signals an upturn from the disruption caused by Covid-19, red indicates no upturn, orange indicates a possible upturn.*

- Global passenger jet fuel demand from August 4 leveled with the previous week, growing by only 0.03% week-on-week. Asia Pacific recorded a weekly gain of 0.7%. Meanwhile, demand from the Americas and Europe registered small week-on-week drops of 0.04% and 0.3% respectively.
- Cancellations since the previous week have removed on average 7,957 barrels per day of jet fuel demand over the next four weeks.
- In Europe, departures in the Eurocontrol area were down by 0.4% against the previous week amid the operational chaos that hit both airports and airlines. The summer travel season is also peaking in line with seasonal norms. Finnair and KLM were among the carriers that reduced activities in the week of August 8-14.
- The slight drop in summer flight schedules coincided with a shortage of staff, mechanics and pilots, as well as operational issues at airports and worker strikes. These disruptions may see flight cancellations, delays and passenger caps at airports persist over the next few weeks.
- US passenger numbers dropped by 1.1% week-on-week as the summer travel months peak. Downside risks exist from flight cancellations, high fuel costs, weather problems and logistical issues at both airlines and airports.
- In China, the number of scheduled domestic flights is set to increase by 15.2% over the next four weeks, according to current flight schedules, as some travel restrictions ease. However, this growth may not materialize, as China has routinely cut several thousands of scheduled flights a week or so before the intended departure date.

# Commercial passenger flight jet fuel demand

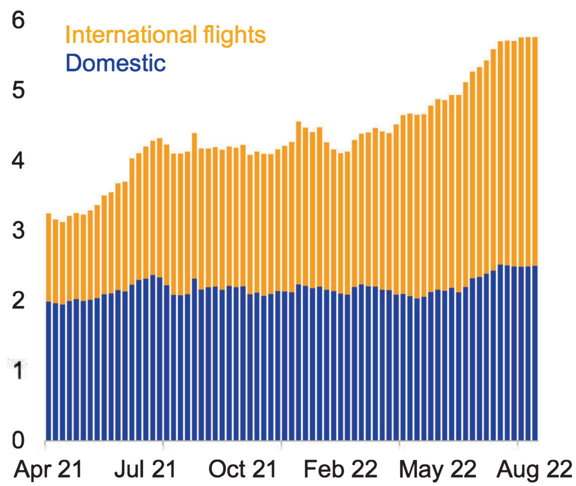
### Demand by departure region

Million barrels per day




### Demand by flight type

Million barrels per day




- Global passenger jet fuel demand across August 4-10 increased by 0.03% from a week earlier.
- This gain was led by the Asia Pacific, with the region's weekly jet fuel demand increasing by 0.7%. By contrast, demand from the Americas and Europe recorded a weekly decline of 0.04% and 0.35% respectively.
- Jet fuel demand from domestic flights was bullish, climbing by 0.3% week-on-week. By contrast, demand from international flights was more bearish, dropping by 0.2% from the previous week.
- For more cuts of this data, see DSET FLY<GO>.

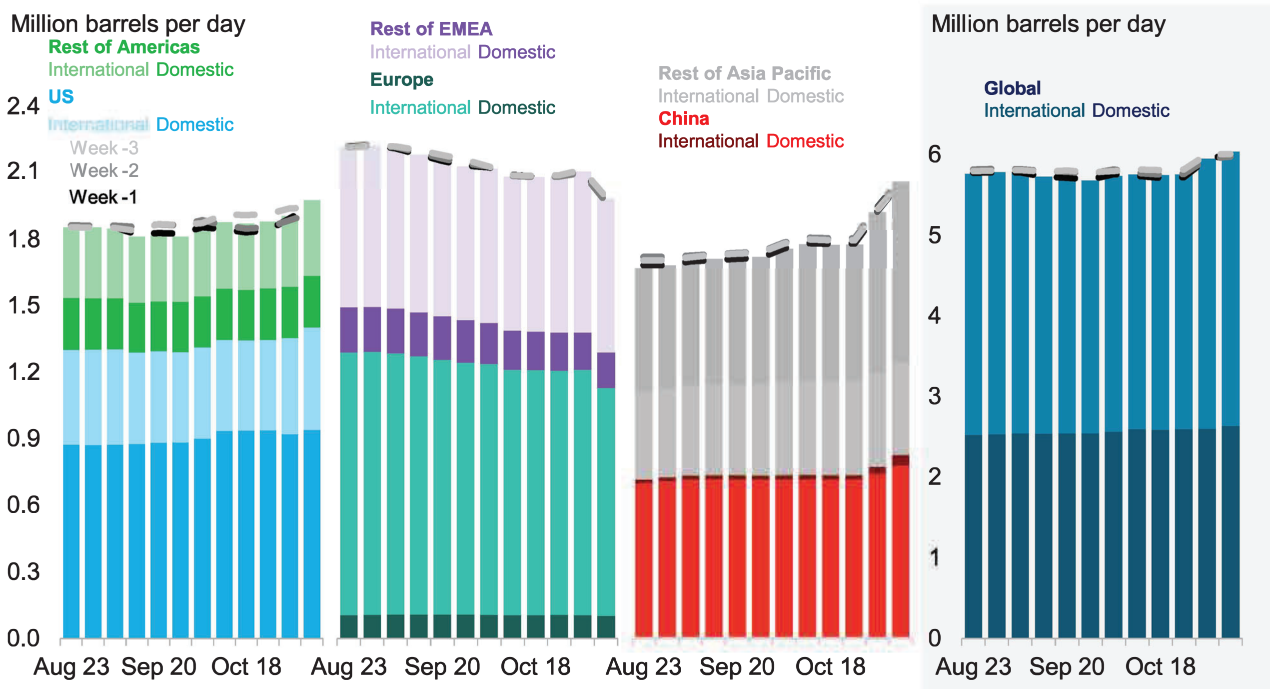
For more on demand and pricing fundamentals, see BNEF's Oil Price Indicators Weekly

| *K bbl per day* | Latest | Week Δ | Four-week Δ | Year-on-year Δ |
|---|---|---|---|---|
| World | **5,757** | 1.7 (+0.03%) | 52.0 (+0.9%) | 1662.4 (+40.6%) |
| Americas | **1,894** | -0.7 (-0.04%) | -1.7 (-0.1%) | 376.8 (+24.8%) |
| Europe | **1,443** | -3.9 (-0.3%) | 14.7 (+1.0%) | 480.3 (+49.9%) |
| Asia Pacific | **1,537** | 10.3 (+0.7%) | 35.0 (+2.3%) | 609.2 (+65.6%) |
| Rest of World | **883** | -4.0 (-0.4%) | 4.1 (+0.5%) | 196.1 (+28.6%) |

| *K bbl per day* | Latest | Week Δ | Four-week Δ | Year-on-year Δ |
|---|---|---|---|---|
| International | **3,261** | -6.6 (-0.2%) | 56.3 (+1.8%) | 1249.9 (+62.1%) |
| Domestic | **2,496** | 8.2 (+0.3%) | -4.3 (-0.2%) | 412.5 (+19.8%) |

*Source: BloombergNEF, Bloomberg Terminal DSET FLY<GO>. Note: The model does not account for load factors of aircraft, route inefficiencies or cargo flights.*

# Jet fuel demand implied by scheduled flights




- Based on the number of passenger flights scheduled, jet fuel demand over the next four weeks will average 5.76 million barrels per day. Fuel consumed in cargo flights is not included in this number.
- Cancellations since last week have removed on average 7,957 barrels per day of jet fuel demand over the same four weeks.
- For more cuts of this data, see DSET FLY<GO>.

*Source: BloombergNEF, Bloomberg Terminal DSET FLY<GO>. Note: As of August 9, 2022. Oil consumption is based on the aircraft model, distance between origin and destination airport and the fuel efficiency of each aircraft type. Consumption is allocated to the departure airport and does not account for load factor, or inefficiencies such as longer routes or circling at an arrival airport. Intra-Europe flights are defined as international.*

# Last Hurrah for Oil as Europe Looks Beyond Gas for Power

Published on August 15, 2022, by Andreas Gandolfo and Kesavarthiniy Savarimuthu

- EU member states are bringing back oil plants to curb gas use
- Major policy changes are required to fire up oil plants at scale

Europe's remaining oil-fired power plants appear set for one last hurrah as governments and utilities scramble for alternatives to gas.

The European Union is increasingly turning to oil to reduce the amount of gas burned for power and prepare for the upcoming winter.

However, the relatively small size of the bloc's oil fleet – at just 2.5% of total combined electricity generation capacity – will constrain its ability to displace gas. In addition, the steep cost of running oil-fired generators makes them a less favorable substitute than coal, and restarting oil plants will also require major policy reversals.

Oil plants are thus more likely Europe's last line of defense for the upcoming winter, with a sustained renaissance of oil generation a more remote prospect.

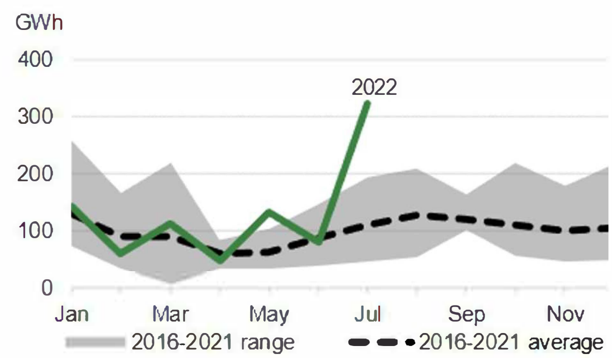
## Resorting to oil for electricity generation

The ongoing gas crisis in Europe has sparked a hunt for alternative fuels to lean on in the power sector – for more, read our *European Gas Monthly: Counting Turbines Causes Nightmares* (web | terminal). That search has highlighted oil as a potential solution.

Even Germany with its large coal capacity base has resorted to oil-fired power plants as part of its strategy to cut gas use. In June, the German government passed the Power Plant Replacement Act, bringing 1.6 gigawatts (GW) of oil capacity back into the market. That was followed by the city of Munich announcing in August plans to restart two oil burners.

Oil plants have a bigger role in countries with limited coal and lignite capacity to displace gas for thermal generation. In Italy, for instance, average output from oil-fired generation in July jumped to 322 gigawatt-hours, three times the past five-year average. Still, the capacity factor of Italy's oil fleet averaged just 13% over the month, suggesting oil generation is being used for peaking purposes and that there remains potential to displace more gas by running oil as baseload capacity.

**Italy's average output from oil-fired power plants by month**




*Source: Entsoe, BloombergNEF*

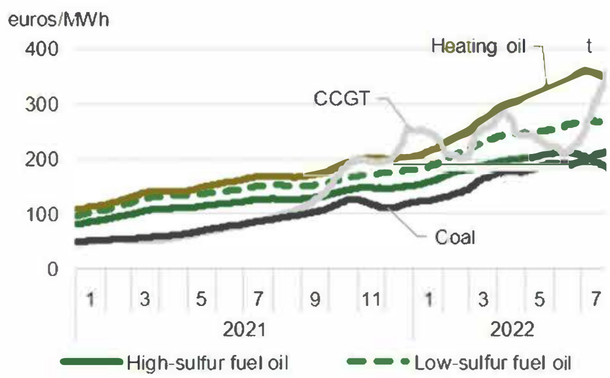
## Oil's limited firepower

Germany, France, Italy, Sweden and Estonia are home to the EU's largest remaining oil-fired power fleets, accounting for 14.5GW of the region's 23GW of capacity in 2020. Yet, oil is still a relatively small part of the overall picture, equivalent to just 6% of these five countries' combined fossil-fuel and nuclear fleet.

The remaining 10GW of oil capacity in the EU is shared between Greece, Ireland, Finland, Denmark and Eastern European member states.

Even if all these oil plants were fired up, their impact on gas generation would be marginal. In a best-case scenario, the EU's 23GW of oil-fired plants could supply around 5-6% of total annual electricity generation, assuming an 80% capacity factor. While this is around three times the 10-year average share of oil in the bloc's generation mix, it pales in comparison to the 15-20% share of power typically delivered by gas plants.

**Daily 30-day rolling average short-run marginal cost of select fossil-fuel technologies in Europe**




*Source: Bloomberg Terminal, BloombergNEF. Note: Calculation assumes oil fleet efficiency of 35%. 'CCGT' refers to combined cycle gas turbine. Numbers along the x-axis correspond to months of the year – 1 = January etc.*

Running oil plants also remains an expensive business. Even with the increases in coal and carbon prices over 2022, coal plants are still cheaper than plants using oil with low sulfur content. While combined cycle gas turbines are pricier than low-sulfur oil plants, they are on par cost-wise with plants burning heating oil.

Since oil generators cannot always switch from one grade of oil to another, the existence of lower-price oil grades does not mean oil plants can flock to it. Fuel supply limitations could also hamper a sustained uptick in oil-fired generation in Europe, as demand continues to outstrip supply in the global commodities market.

Generators also face regulatory barriers before they can fire up oil plants. European policy has sought to get rid of emissions-intensive oil plants. The Industrial Emissions Directive (IED), which covers oil-fired generators, sets a limit on emissions from combustion facilities and specifically caps sulfur emissions. This has forced generators to switch oil grades or shut down since 2012, a dynamic visible through the declining use of high-sulfur oil for electricity generation in the five countries covered. Italy, for example, closed 8GW of oil capacity from 2012-15 as a result of non-compliance with the IED.

## Something is better than nothing

Oil generation has the potential to scale to a level that can contribute to gas demand reduction in the power sector. However, it lacks economic and policy support from the EU.

The European Commission's 'Save Gas for a Safe Winter' plan advocates market-based fuel switching from gas to oil in the power sector. However, with the cost of producing power from heating oil on par with gas, market forces alone are currently insufficient to incentivize the switch. The EU may need to review regulatory frameworks such as the IED that limit oil plants from burning cheaper high-sulfur fuel oil.

Overall, the rally in oil prices and the policy reversals required to fire up large oil plants at scale suggest that a short-lived oil renaissance would be an expensive, but perhaps necessary, last resort to lowering Europe's gas consumption.

# European Power Weekly

August 15, 2022

BloombergNEF

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BNEF<GO>

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**Client enquiries:**

- Bloomberg Terminal: press <Help> key twice
- Email: support.bnef@bloomberg.net



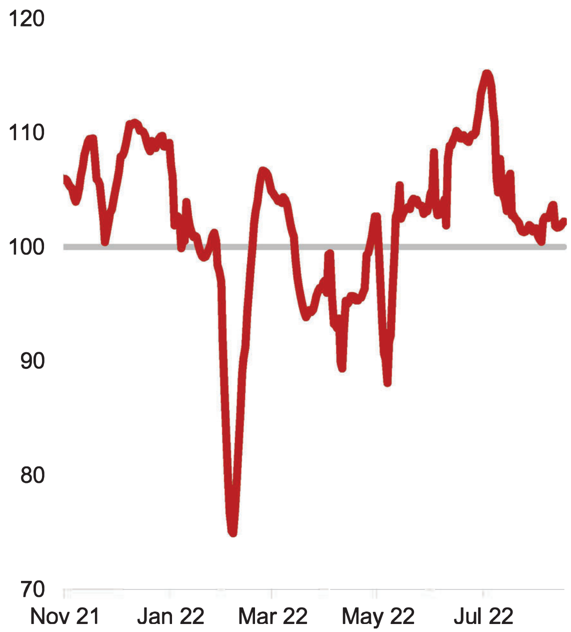
| | | |
|---|---|---|
| Andreas Gandolfo | Team Lead, European Power | agandolfo2@bloomberg.net |
| Kesavarthiniy Savarimuthu | Associate, European Power | ksavarimuth2@bloomberg.net |
| Emma Champion | Team Lead, Energy Transitions | echampion3@bloomberg.net |

# Comparing the three mobility indicators

## North American congestion climbed as China levels slipped

### China-15 (Baidu) congestion index

Daily peak congestion levels, indexed to January 2021 (seven-day MA)

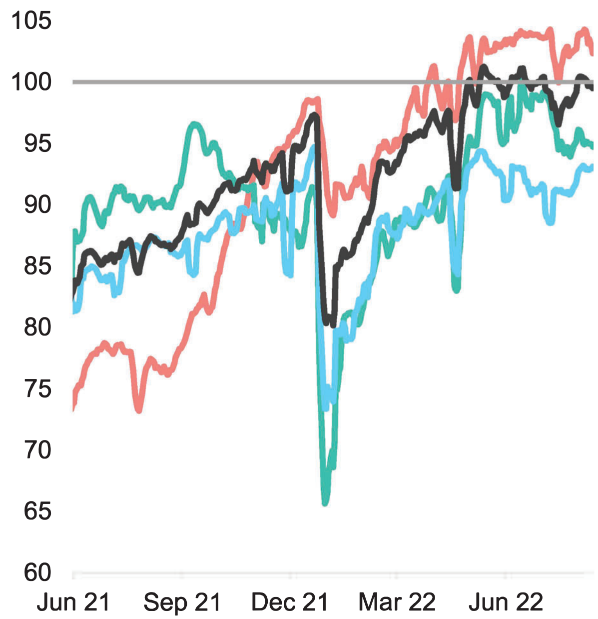



| | Latest | Week Δ | Four-week Δ |
|---|---|---|---|
| China-15 | 102.55 | -1.14 (-1.10%) | 0.21 (+0.21%) |

*Source: BloombergNEF, calculated from Baidu's data. Note: Data updated to **August 17, 2022**.*

### Google mobility index

Indexed to Jan – Feb 2020 (seven-day MA)

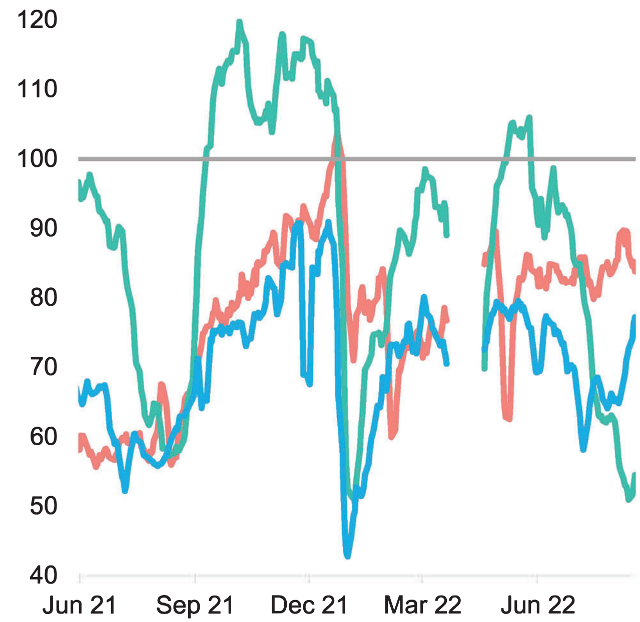



| | Latest | Week Δ | Four-week Δ |
|---|---|---|---|
| Asia Pacific | 102.3 | -2.0 (-1.9%) | 2.0 (+2.0%) |
| World | 99.5 | -0.8 (-0.8%) | 2.5 (+2.6%) |
| Europe | 94.7 | -0.2 (-0.2%) | 0.0 (-0.0%) |
| Americas | 93.1 | 0.05 (+0.1%) | 1.9 (+2.1%) |

*Source: Google Community Mobility Report, BloombergNEF. Note: **Data exclude China and Russia.** Calculation includes retail and recreation, workplaces, transport hubs. **Data updated to August 13, 2022.** The world index rating is weighted by the 2019 road fuels demand of each country.*

### TomTom congestion index

Indexed to the peak congestion of the average week in 2019 (five-day weekday MA)




| | Latest | Week Δ | Four-week Δ |
|---|---|---|---|
| Asia Pacific | 83.8 | -5.8 (-6.5%) | 1.5 (+1.8%) |
| Europe | 54.5 | 1.6 (+3.0%) | -8.4 (-13.4%) |
| North America | 77.2 | 6.2 (+8.7%) | 9.7 (+14.4%) |

*Source: TomTom road congestion data, BloombergNEF. Note: **Asia Pacific excludes China. Data updated to August 17, 2022.***

TomTom | Google | Baidu

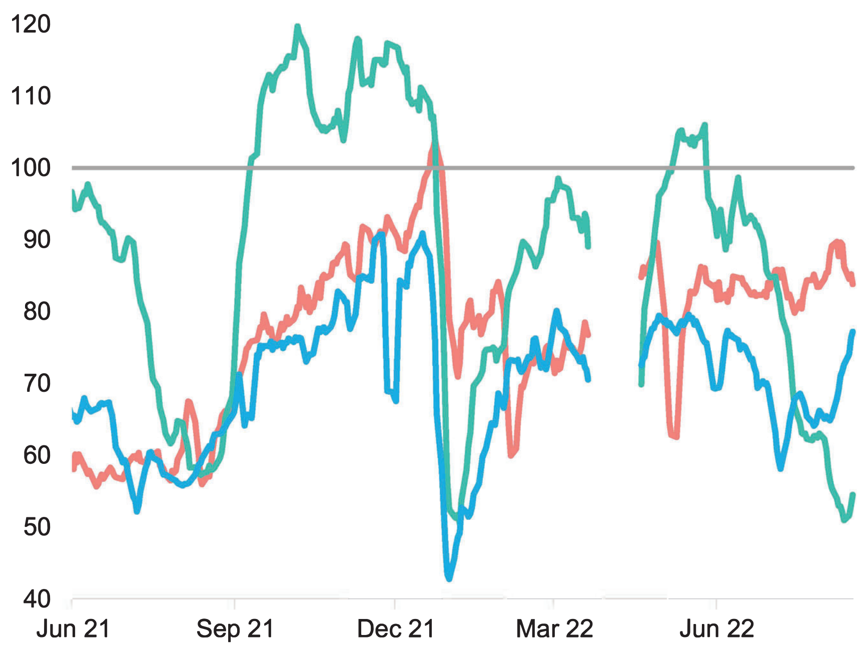
Apple Mobility reports were discontinued on April 14, 2022. We have resumed updating TomTom congestion data, which was previously updated to March 16.

# TomTom congestion index

## North American level surged, while Europe resiled from sinking

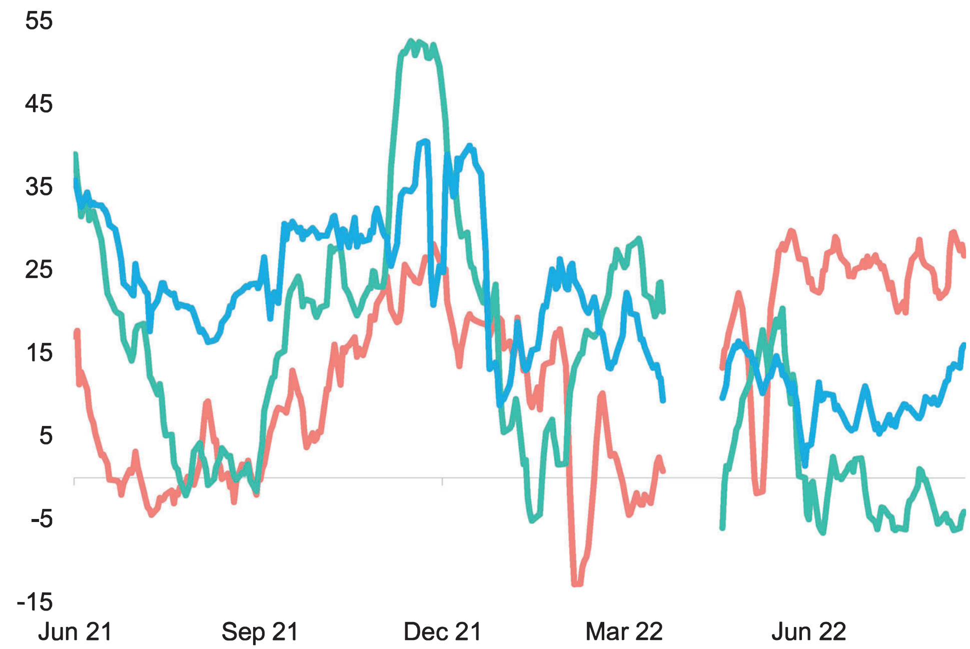
### Regional road congestion index

Indexed to the peak congestion of the average week in 2019 (five-day weekday moving average)




### Index point change versus the previous year

Percentage point change vs. the year before (seven-day moving average)




| | Latest | Week Δ | Four-week Δ | Index point Δ vs year before | Index point Δ vs year before (last week) |
|---|---|---|---|---|---|
| Europe | **54.5** | 1.6 (+3.0%) | -8.4 (-13.4%) | -5.57 | -5.14 |
| Asia Pacific | **83.8** | -5.8 (-6.5%) | 1.5 (+1.8%) | 28.29 | 23.32 |
| North America | **77.2** | 6.2 (+8.7%) | 9.7 (+14.4%) | 13.73 | 10.91 |

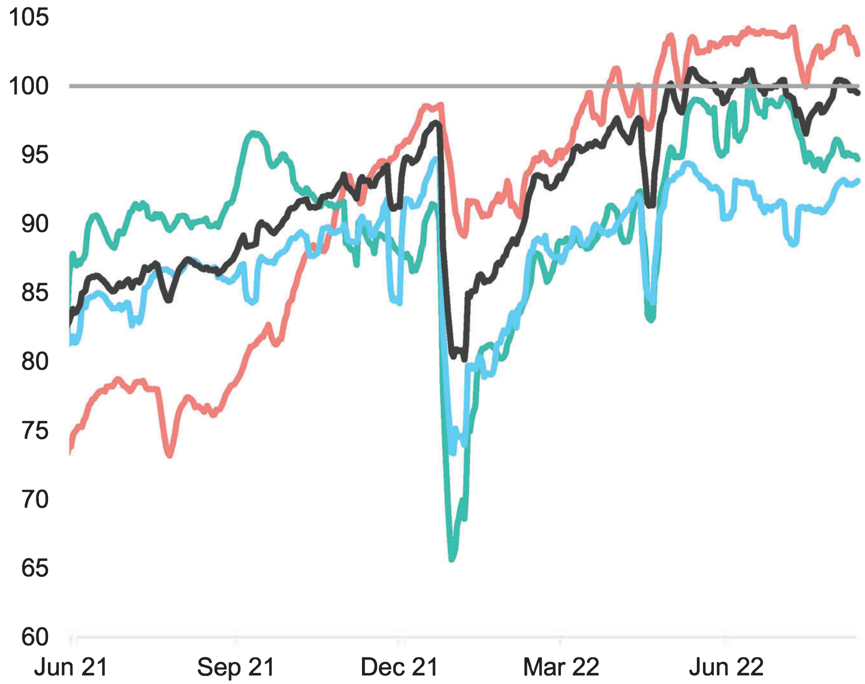
*Source: TomTom, BloombergNEF. Note:* ***Asia Pacific excludes China. Data updated to August 17, 2022,*** *with weekly addition from August 10, 2022. Index point change versus the previous year is obtained by averaging the latest weekly values.*

# Google mobility index

## Uptick for the Americas despite bearish views globally

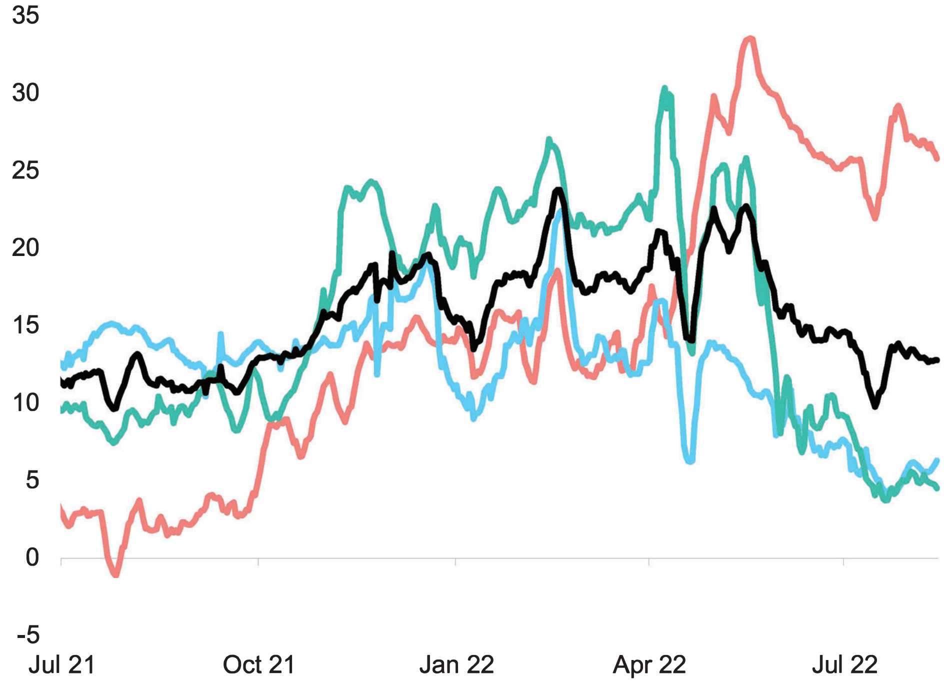
### Global and regional road mobility index

Indexed to Jan – Feb 2020 (seven-day moving average)




### Index point change versus the previous year

Percentage point change vs. the year before (seven-day moving average)




| | Latest | Week Δ | Four-week Δ | Index point Δ vs year before | Index point Δ vs year before (last week) |
|---|---|---|---|---|---|
| Asia Pacific | **102.3** | -2.0 (-1.9%) | 2.0 (+2.0%) | 26.4 | 26.9 |
| World | **99.5** | -0.8 (-0.8%) | 2.5 (+2.6%) | 12.8 | 13.2 |
| Europe | **94.7** | -0.2 (-0.2%) | 0.0 (-0.0%) | 4.9 | 5.2 |
| Americas | **93.1** | 0.05 (+0.1%) | 1.9 (+2.1%) | 5.8 | 6.0 |

*Source: Google Community Mobility Report, BloombergNEF. Note:* ***Data excludes China and Russia.*** *Calculation includes retail and recreation, workplaces and transport hubs.* ***Data updated to August 13, 2022,*** *with weekly addition from August 7, 2022. The world/regional index is weighted by the 2019 road fuels demand of each country. Index point change versus the previous year is obtained by averaging the latest weekly values.*

Swiss to Release More Fuel With Rhine Traffic Near Standstill
2022-08-19 07:48:54.279 GMT

By Alex Longley
(Bloomberg) -- Switzerland will further tap its strategic fuel stocks as imports along the River Rhine to the land-locked country have almost come to a standstill.
Earlier this week, a key gauge of the river's depth fell to about 30cm, the lowest for the time of year since at least 1990. The Rhine is a vital transport route for Europe's inland economies, including Switzerland.
The government will release another 490,000 cubic meters -- about 3 million barrels -- of fuel until the end of September. That will take inventories to almost a fifth below mandated levels, following a previous release in July, according to a Swiss government statement dated Aug. 18.
Switzerland relies on the fuel it refines domestically as well as deliveries across land and by river, making the Rhine a vital conduit.
Following a heat wave across Europe, the measured water-level on the Rhine at Kaub in Germany hasn't been this low at this time of year since at least 1990, according to official data compiled by Bloomberg. Prior to November 2013, data are tallied on a daily, rather than intraday basis.
In addition to the dwindling water levels, there have also been cancellations and delays in cross-border rail traffic due to staff shortages and construction work, the Swiss government said. That has hobbled an alternative import route.

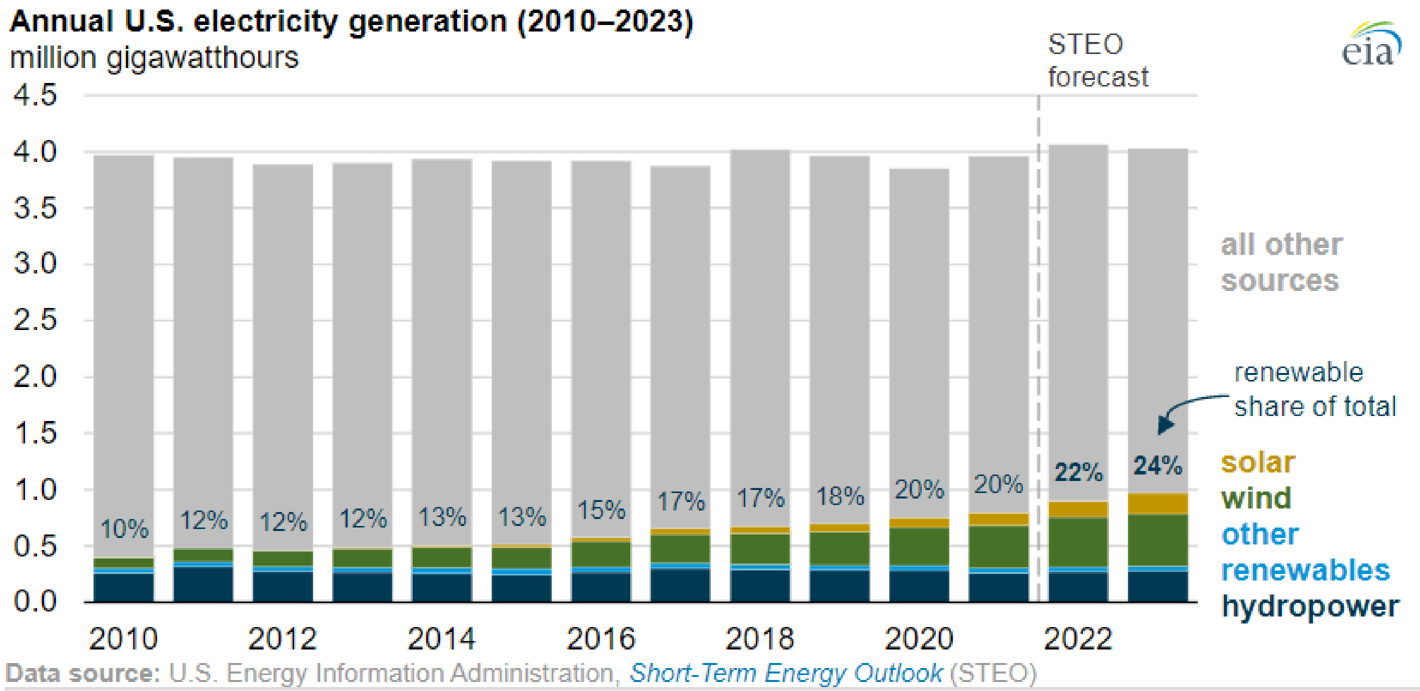
To contact the reporter on this story:
Alex Longley in London at alongley@bloomberg.net
To contact the editors responsible for this story:
Alaric Nightingale at anightingal1@bloomberg.net
Dylan Griffiths

To view this story in Bloomberg click here:
https://blinks.bloomberg.com/news/stories/RGUOCJDWX2PS

https://www.eia.gov/todayinenergy/detail.php?id=53459

AUGUST 16, 2022

# EIA expects renewables to account for 22% of U.S. electricity generation in 2022



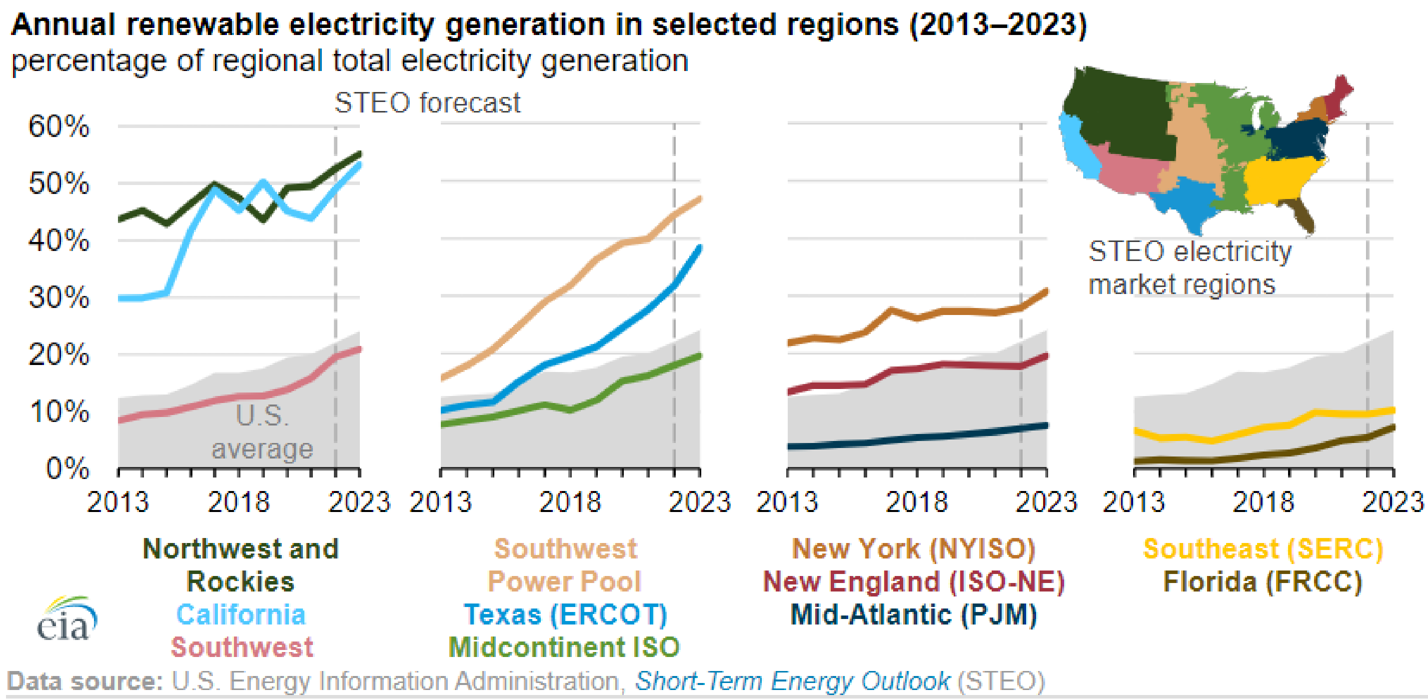

U.S. electricity generation from renewable sources, such as hydropower, wind, and solar, accounted for 20% of electricity generation both in 2020 and in 2021. We expect that share to increase to 22% in 2022 and to 24% in 2023 as more generating capacity from wind and solar come online and other generation sources, such as coal and nuclear, are retired.

We publish short-term forecasts for five renewable energy sources: conventional hydropower, wind, solar, biomass, and geothermal. We based our forecasts for 2022 annual values on our monthly historical survey data through May and forecasts for June through December.

Forecasts in our *Short-Term Energy Outlook* show how we expect 11 electricity markets in the United States will generate electricity. The two regions with the largest shares of renewable electricity generation during 2021 were the Northwest, where renewables accounted for half of the region’s electricity generation, and California, where renewables accounted for 44% of regional electricity generation. Both of these regions’ hydropower resources were constrained by droughts in 2021, but they still increased their renewable shares of electricity generation.

The Southwest Power Pool (SPP) region has had the most growth in the renewable share of electricity generation over the past decade, largely due to wind generation. In 2013, 13% of the region’s electricity generation came from renewables. That share increased to 40% in 2021, and we expect it to rise to 44% in 2022.

The Electric Reliability Council of Texas, or ERCOT, has also increased its renewable share, from 10% in 2013 to 32% in 2022. ERCOT is the only electricity market region where the renewable electricity share has transitioned from less than the U.S. average to more than the U.S. average from 2013 to present. Both SPP and ERCOT have added substantial generating capacity from wind turbines. Earlier this year, output from wind turbines in SPP and ERCOT contributed to wind becoming the second-highest source of electricity generation on a single day (March 29).



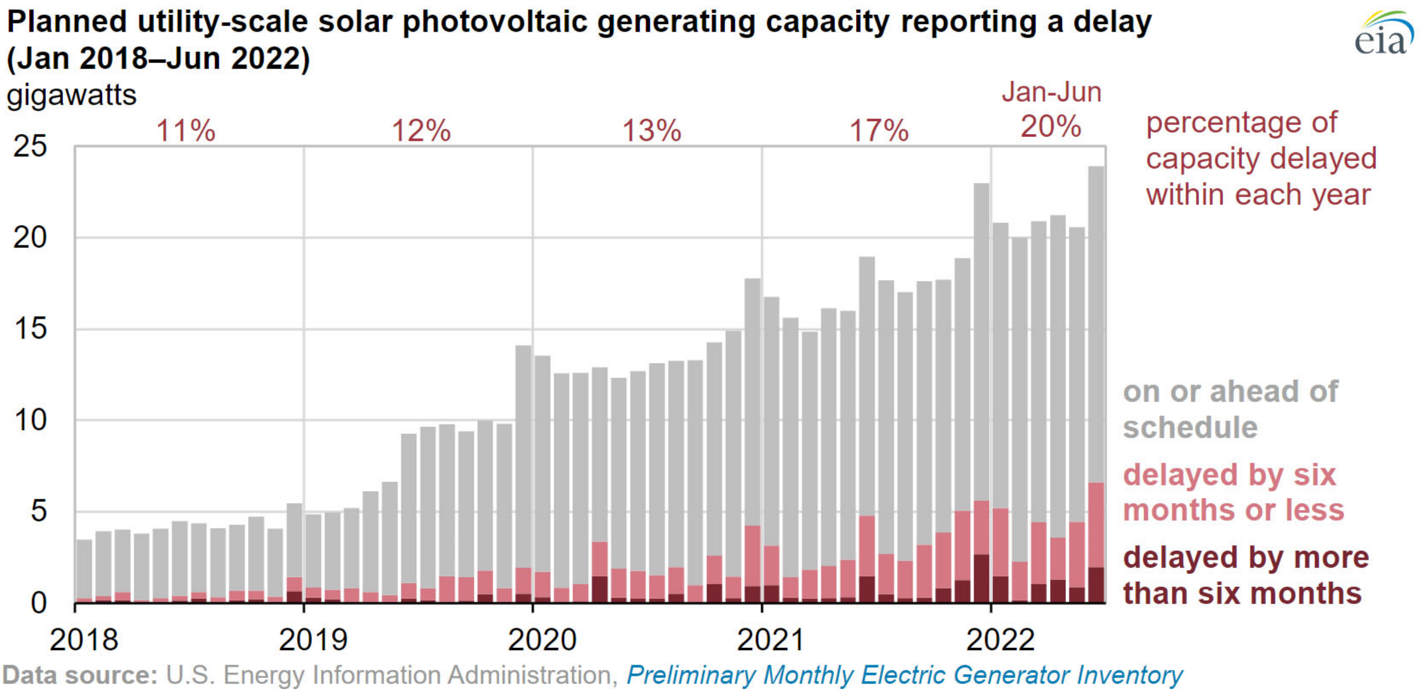

The share of electricity generation from renewable sources is lowest in three regions along the U.S. East Coast: the PJM Interconnection in the Mid-Atlantic, the Southeast (SERC Reliability Corporation), and the Florida Reliability Coordinating Council. In each of these regions, we expect the renewable share of electricity generation to remain below half of the national average through 2023. Natural gas and nuclear sources provide most of the electricity generation in the Southeast and Florida. In PJM, the prevalent generation sources have been natural gas and coal.

**Principal contributor:** Owen Comstock

**Tags:** generation, forecasts/projections, electricity, renewables, STEO (Short-Term Energy Outlook) https://www.eia.gov/todayinenergy/detail.php?id=53400

AUGUST 11, 2022

# Utility-scale solar projects report delays




Power plant developers plan to install 17.8 gigawatts (GW) of utility-scale solar photovoltaic (PV) generating capacity in 2022, according to our June 2022 *Preliminary Monthly Electric Generator Inventory*. Over the first six months of 2022, 4.2 GW of that capacity came online, less than half of what the industry had planned to install in those months. From January through June 2022, about 20% of planned solar photovoltaic capacity was delayed.

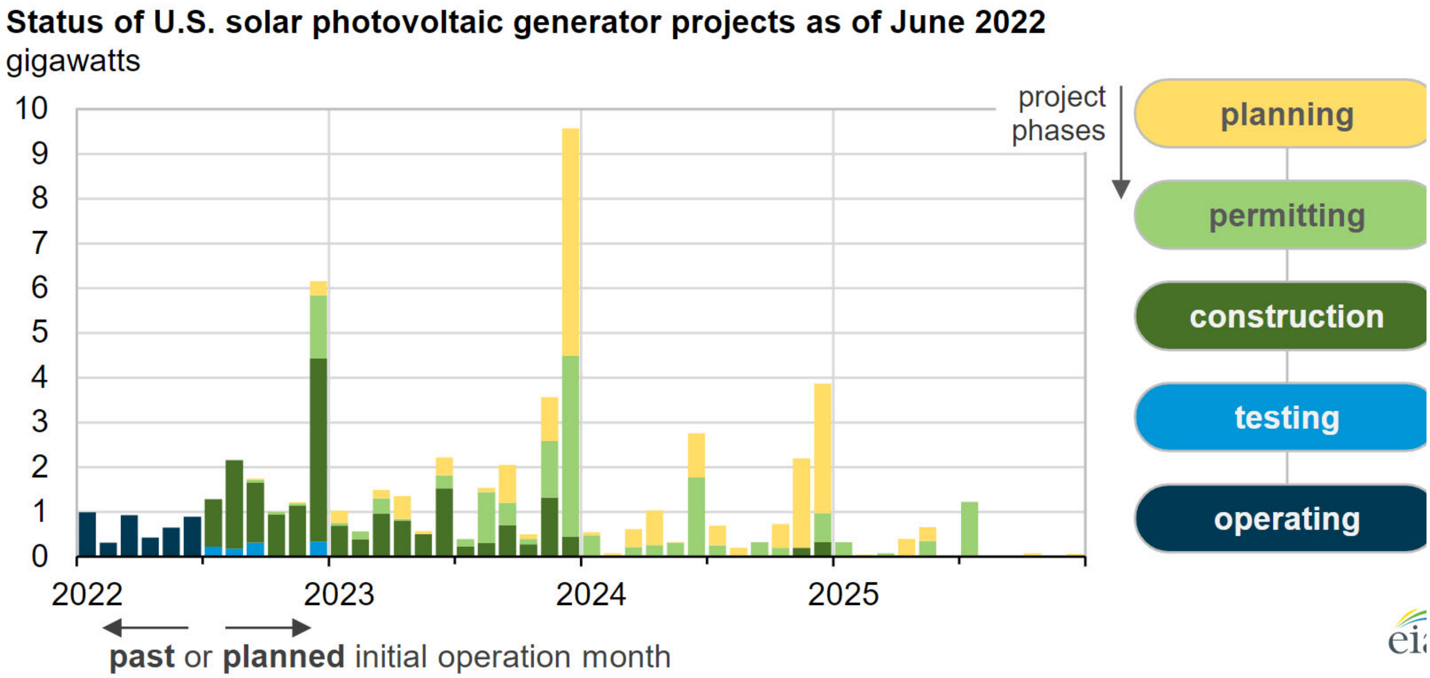
Our preliminary data from January through June 2022 show that PV solar installations were delayed by an average of 4.4 GW each month, compared with average monthly delays of 2.6 GW during the same period last year. In most cases, reported delays are for six months or less.

Various factors could cause delays, including broad economic factors, such as supply chain constraints, labor shortages, and high prices of components, and factors specific to electric generator projects, such as obtaining permits or testing equipment.

In February, the United States extended tariffs on imported crystalline silicon solar products from China, which raised the tariff-rate quota from 2.5 GW to 5.0 GW and excluded bifacial panels from the extension of duties. In April, the U.S. Department of Commerce announced an anti-dumping circumvention investigation of solar cells and modules imported from Cambodia, Malaysia, Thailand, and Vietnam, countries that allegedly use parts made in China that otherwise would be subject to tariffs.

In June, the President took executive action to advance the deployment of solar in the United States. He authorized the easing of import duties for a 24-month period for solar cells and modules imported from the countries under investigation and invoked the Defense Production Act to expand domestic production of solar modules. Any determination that the Department of Commerce reaches in its investigation will apply after this 24-month period ends.

In our monthly survey, we ask respondents who plan to bring generators online in the near future which stage their projects are in: testing, construction, permitting, or planning. Most of the projects that will come online in the next 18 months are under construction. About 1.9 GW of solar capacity installations are projects under construction that have been delayed but are still scheduled to come online in 2022; another 1.7 GW under construction have been delayed to 2023.



**Data source:** U.S. Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*

**Principal contributors:** Katherine Antonio, Tyler Hodge https://www.wsj.com/articles/germany-to-keep-last-three-nuclear-power-plants-running-in-policy-u-turn-11660661914

# Germany to Keep Last Three Nuclear-Power Plants Running in Policy U-Turn

## Move prompted by the mounting economic war with Russia marks the first departure from a two-decade policy to abandon nuclear energy


The Isar nuclear-power plant in Essenbach, Germany, is one of the last nuclear plants still operating in the country.PHOTO: ALEXANDRA BEIER/GETTY IMAGES

By *Bojan Pancevski* Follow

Updated Aug. 16, 2022 12:40 pm ET

BERLIN—Germany plans to postpone the closure of the country's last three nuclear power plants as it braces for a possible shortage of energy this winter after Russia throttled gas supplies to the country, said German government officials.

While temporary, the move would mark the first departure from a policy initiated in the early 2000s to phase out nuclear energy in Germany and which had over time become enshrined in political consensus.

The decision has yet to be formally adopted by German Chancellor Olaf Scholz's cabinet and would likely require a vote in Parliament. Some details are still under discussion, three senior government officials said. A cabinet decision would also need to wait on the outcome of an assessment of Germany's energy needs that will be concluded in the coming weeks but which the officials said was a foregone conclusion.

Still, while a formal decision could be weeks off, the government believes two key conditions allowing a temporary extension of the life of the three remaining plants, now expected to close on Dec. 31, have been met: Germany is facing a likely shortage of gas and letting the reactors operate longer poses no safety concern, the officials said.

"The reactors are safe until Dec. 31, and obviously they will remain safe also after Dec. 31," a senior official said.

The plan underlines how deeply Moscow's attack on Ukraine has scrambled politics in Europe, and particularly in Germany, which long enjoyed close economic relations with Russia and whose economy

Shortly after the invasion, Mr. Scholz moved to ramp up military spending and deliver arms to Ukraine, breaking with years of pacifism and a legal ban on the delivery of offensive weapons in conflict zones. The nuclear move, while limited and temporary, would break a third long-held taboo in German politics.

Mr. Scholz hinted at the decision last week, saying for the first time that it could make sense to keep Germany's last three nuclear reactors online.

A spokeswoman for the Economy Ministry, which oversees energy, denied that the government had made a decision on extending the life of the plants, adding that it would depend on the findings of the continuing assessment of Germany's power needs.

Extending the life of the three plants beyond their current closing date is no panacea for Germany's looming energy bottleneck this winter. The country is mainly missing natural gas, which is used primarily for heating and manufacturing.

Yet by allowing the plants, which together account for around 6% of the country's electricity production, to stay online, Berlin would remove the need to replace them with gas- or coal-powered plants, allowing gas to be used in areas where it can't be replaced by other fuels.

Mothballed coal plants have already been brought back online to prevent energy blackouts after Russia slashed gas supplies in June, a decision that will complicate Berlin's plans to cut greenhouse-gas emissions and reduce air pollution.

The government has also drafted two executive orders outlining measures to reduce gas and power consumption in the country over the next two years, including by lowering the temperature in public buildings. The country's energy regulator estimates that gas consumption will need to be cut by 20% if Germany is to avoid a gas shortfall this winter and next.

It is unclear for how long the reactors will continue to operate past the December deadline. The three officials said the extension would only be for a few months. Leading figures in the Free Democratic party, the government's third coalition partner, have said the plant should run into 2024.

Several officials said that the extension would only affect the three plants that still operate today and that Berlin wasn't considering reopening plants decommissioned earlier, including three that were shut down last winter.

The nuclear extension is fraught with technical, legal and political hurdles. Laws may need to be amended to allow for the reactors to remain online and obtain fresh fuel rods. Complex certification as well as insurance and nuclear-waste disposal procedures could be required.

It is also politically sensitive. The nuclear phaseout was initiated by the Social Democrats and Greens, the leading parties in the current coalition, and has become part of the parties' identities, particularly for the Greens, a party that was born out of the antinuclear movement.

Leading Green politicians have already accepted a short extension of the nuclear-power generation. Ludwig Hartmann, the Greens' parliamentary floor leader in the state of Bavaria, said that the life of reactors could be prolonged for a "few months" if the region faced the risk of power shortages.

The opposition conservatives, the party of former Chancellor Angela Merkel, who greatly accelerated the phasing-out of nuclear energy following the Fukushima disaster in 2011, now also favors extending the plants' lifespan.

"Not everyone [who keeps using nuclear energy] in the world is stupider than us," Friedrich Merz, chairman of the center-right Christian Democratic Union, said in a recent radio interview.

While the phaseout has for years enjoyed overwhelming popular support, a recent survey by the Forsa Institut polling group showed three quarters of Germans wanted the planned reactor closures to be postponed. Forsa said it had recorded a gradual shift in public opinion in favor of keeping the plants online since Russia invaded Ukraine in February.

The last three German nuclear power plants are Isar 2 in the southern state of Bavaria, Neckarwestheim 2 in Baden-Wurttemberg and Emsland in Lower Saxony, which are operated by E.On SE, EnBW AG, and RWE AG respectively.

A spokesman for EnBW said the company would be willing to discuss an extension of the operation of its reactor if the government asked for it. A spokeswoman for Preussen Elektra, the E.On subsidiary that runs its last nuclear plant, refused to comment. RWE didn't immediately respond to a request for comment.

Germany has been facing pressure from its European allies, including the European Union's executive body, to extend the operation of its last reactors as part of the bloc's efforts to manage the looming energy crisis.

The ministry for the economy and the environment, headed by Robert Habeck of the Green Party, commissioned an initial stress-test earlier this year, which found that the nuclear reactors wouldn't help solve a potential energy crisis.

After Russia slashed gas exports to Germany by 80% last month, Mr. Habeck ordered a second, broader analysis that would take into account a possible shortage of gas this winter.

Some environmental groups have already announced that they would take legal action against a decision to postpone the plant closure.

**Write to** Bojan Pancevski at bojan.pancevski@wsj.com

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https://www.ft.com/content/10725417-9896-4cbf-830a-24ce65382226

# Norway's oil fund chief warns of tough times ahead for investors

**Adrienne Klasa and Robin Wigglesworth – Aug 17, 2022**

The $1.2tn sovereign wealth fund lost $174bn in first half, and Nicolai Tangen is worried that July's rally will unravel

Norges Bank Investment Management's equity portfolio was particularly hit hard in the first half of the year, losing 17%

The head of the world's largest sovereign has warned investors against complacency and said they face difficult years ahead, as Norway's oil fund swung to its biggest ever dollar loss in the first half of 2022.

"Markets don't go down in a straight line, and I'm worried that we can have tough times for an extended period," Nicolai Tangen, the fund's chief executive, said in an interview with the Financial Times. "There is a risk that we haven't seen the worst yet."

The effects of reversing monetary stimulus and low interest rates from the 2008 financial crisis through to the pandemic are so huge that "I'm more in the several years [of difficult markets] camp. I don't think this is done overnight," he added.

July's market rally has encouraged some investors, but is likely to be a false dawn, he said.

"The market has got one function, and that is trying to steal your money every day. The best way the market could steal your money in July was to rally, so that's what it did," Tangen said.


The $1.2tn fund suffered a 14.4 per cent loss, or the equivalent of $174bn, in the first half of the year, driven by a sell-off across all sectors except energy, it said on Wednesday. It had gained 14.5 per cent during 2021 as markets soared following the reopening of economies around the world.

"The fund is now so big that the sums become very big . . . But we are a long-term investor so we have to tolerate these kinds of swings," Tangen said at an earlier press conference. "What was unusual this time is that we lost money both in stocks and bonds."

Norges Bank Investment Management's equity portfolio was hit particularly hard in the first half, losing 17 per cent, while fixed income was down 9.3 per cent. Facebook parent Meta was the single biggest contributor to NBIM's stock market losses in the first half.

The fund's investments in unlisted real estate delivered a 7.1 per cent gain but they make up only 3 per cent of the fund's overall portfolio. Its renewable energy infrastructure investments fell 13.3 per cent.

Nicolai Tangen: 'We are a long-term investor so we have to tolerate these kinds of swings' © Fredrik Solstad/Bloomberg

The sovereign wealth fund, which owns the equivalent of about 1.5 per cent of every listed company in the world, had inflows of NKr356bn ($36.8bn) in the first half of 2022, while currency movements bumped up the fund's value by NKr642bn. The MSCI All-World index of global stocks is down 14 per cent so far this year. The fund said it had outperformed its own benchmark by 1.14* percentage points.

Tangen had previously warned that Russia's invasion of Ukraine would make inflation problems worse. In an interview with the FT in January, he also described himself as "the team leader for team permanent" in the debate on how long high inflation might last.

On Wednesday Tangen reiterated this view. "There is a risk that inflation will be tougher to get down than many think," he said. "Inflation feeds on itself." The oil fund was set up in 1996 to invest the proceeds of Norway's oil and gas industry and is housed in its central bank. It is a quasi-index fund, with its overarching investment mandate set by the Ministry of Finance while material changes to how the fund invests must be approved by parliament.

*This has been corrected from 1.14 basis points

# Investments

The fund's market value fell 682 billion kroner to 11,657 billion kroner in the first half of 2022. A weaker krone cushioned the fall in the fund's market value in krone terms. The fund's return for the period was -14.4 percent, or -1,680 billion kroner. This was 1.14 percentage points better than the return on the benchmark index.

Equity investments had a market value of 7,986 billion at the end of the period, fixed-income investments 3,304 billion kroner, unlisted real estate investments 354 billion kroner and unlisted renewable energy infrastructure investments 13 billion kroner. Equities made up 68.5 percent of the fund, fixed income 28.3 percent, unlisted real estate 3.0 percent and unlisted renewable energy infrastructure 0.1 percent.

The change in the fund's market value consists of the return of -1,680 billion kroner, less transfers from the government of 356 billion kroner and 642 billion from a weakening of the krone exchange rate.

The fund invests in international securities in foreign currency. Returns are therefore measured primarily in international currency – a weighted combination of the currencies in the fund's benchmark indices for equities and bonds.

**Chart 1** The fund's market value. Billions of kroner.

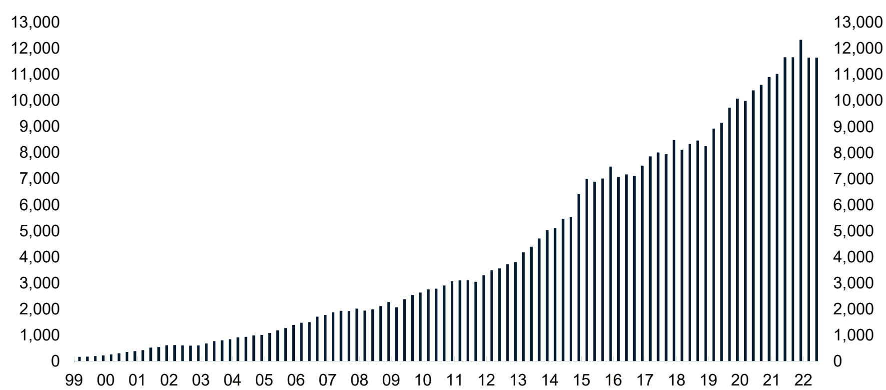



**Chart 2** Changes in the fund's market value. Billions of kroner.

**Table 1** Key figures. Billions of kroner.

| | First half 2022 | 1Q 2022 | 2021 |
|---|---|---|---|
| **Market value** | | | |
| Equity investments | 7,986 | 8,262 | 8,878 |
| Fixed-income investments | 3,304 | 3,066 | 3,135 |
| Unlisted real estate investments | 354 | 315 | 312 |
| Unlisted infrastructure investments[1] | 13 | 13 | 14 |
| **Market value of fund[2]** | **11,657** | **11,657** | **12,340** |
| Accrued, not paid, management fees[3] | 0 | -2 | 1 |
| **Owner's capital[2]** | **11,657** | **11,655** | **12,340** |
| | | | |
| Inflow of capital | 358 | 140 | 80 |
| Withdrawal of capital | - | - | -199 |
| Paid management fees[4] | -2 | 1 | -10 |
| Return on fund | -1,680 | -653 | 1,580 |
| Changes due to fluctuations in krone | 642 | -171 | -25 |
| **Total change in market value** | **-682** | **-683** | **1,426** |
| | | | |
| **Changes in value since first capital inflow in 1996** | | | |
| Total inflow of capital | 4,012 | 3,794 | 3,654 |
| Total withdrawal of capital[3] | -687 | -685 | -687 |
| Return on equity investments | 5,100 | 5,968 | 6,485 |
| Return on fixed-income investments | 1,085 | 1,252 | 1,401 |
| Return on unlisted real estate investments | 143 | 133 | 120 |
| Return on unlisted infrastructure investments[1] | -0 | 1 | 1 |
| Management fees[4] | -61 | -60 | -58 |
| Changes due to fluctuations in krone | 2,066 | 1,252 | 1,423 |
| **Market value of fund** | **11,657** | **11,657** | **12,340** |
| | | | |
| **Return on fund** | **6,327** | **7,355** | **8,007** |
| **Return after management costs** | **6,266** | **7,295** | **7,949** |

1 First unlisted infrastructure investment was made in second quarter of 2021.

2 The fund's market value shown in this table does not take into account the management fee. Owner's capital in the financial statements equals the fund's market value less accrued, not paid, management fees.

3 Total withdrawal of capital shown in this table is adjusted for accrued, not paid, management fees.

4 Management fees are describe in note 11 in the financial statements.

**Chart 3** The fund's quarterly return and accumulated annualised return. Percent.

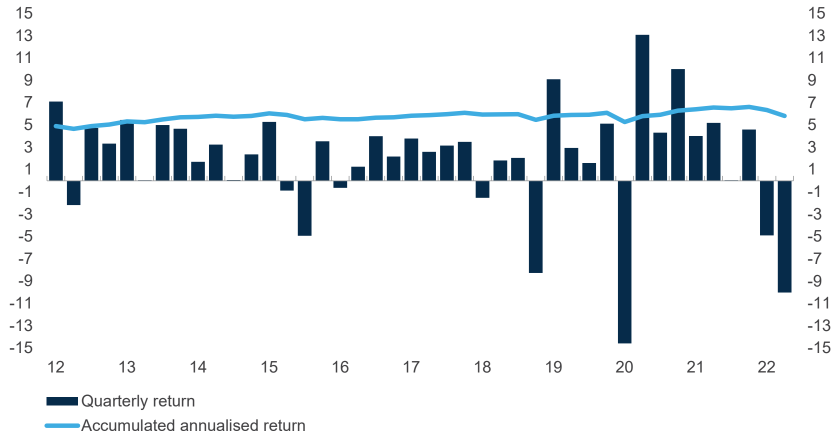



**Table 2** Return figures. Measured in the fund's currency basket. Percent.

| | First half 2022 | 2Q 2022 | 1Q 2022 |
|---|---|---|---|
| Equity investments | -17.05 | -12.49 | -5.21 |
| Fixed-income investments | -9.32 | -4.73 | -4.81 |
| Unlisted real estate investments | 7.12 | 2.87 | 4.13 |
| Unlisted infrastructure investments | -13.29 | -10.30 | -3.33 |
| Return on fund | -14.41 | -10.01 | -4.89 |
| | | | |
| Management costs | 0.02 | 0.01 | 0.01 |
| Return on fund after management costs | -14.43 | -10.02 | -4.90 |

**Table 3** Historical key figures as at 30 June 2022. Annualised data, measured in the fund's currency basket. Percent.

| | Since 01.01.1998 | Last 10 years | Last 12 months |
|---|---|---|---|
| **Fund return** | **5.81** | **7.51** | **-10.43** |
| Annual price inflation | 2.04 | 2.19 | 7.77 |
| Annual management costs | 0.08 | 0.05 | 0.04 |
| | | | |
| Net real return on fund | 3.62 | 5.15 | -16.94 |
| The fund's actual standard deviation | 8.12 | 8.52 | 9.82 |

## Return on equity investments

The market in 2022 has been hit by rising interest rates, high inflation and war in Europe. The fund's Russian equities were frozen following Russia's invasion of Ukraine.

Equity investments returned -17.0 percent for the first half and accounted for 68.5 percent of the fund at the end of the period. Energy was the only sector with a positive return. The most negative returns were in technology, consumer durables and industry.

### Energy stocks perform best

Energy companies delivered the period's strongest return of 13.2 percent. Prices for oil, gas and refined products rose sharply as a result of stronger demand and low investment levels. The war between Russia and Ukraine put further pressure on prices.

Technology companies produced the period's weakest return of -27.6 percent. The surge in demand during the pandemic for digital advertising, e-commerce and semiconductors has normalised. Growing fears of recession have also impacted particularly on tech stocks.

Consumer discretionary were the second-weakest sector in the first half with a return of -24.9 percent. These stocks had a difficult start to the year, with investors anticipating weaker demand from households in response to rapidly rising prices for essentials such as energy, housing and food.

Industrials were the third-weakest performers with a return of -21.8 percent. A weaker economy and fears of recession tend to reduce demand for industrial goods and services.

**Table 4** Return on the fund's equity investments in first half of 2022. International currency. Percent.

| Market | Return | Share of equity investments |
|---|---|---|
| North America | -17.6 | 46.4 |
| Europe | -19.3 | 29.2 |
| Asia and Oceania | -14.3 | 21.7 |
| Emerging markets | -12.6 | 11.2 |

**Table 5** Return on the fund's equity investments in first half of 2022 by sector. International currency. Percent.

| Sector | Return | Share of equity investments[1] |
|---|---|---|
| Basic materials | -13.4 | 4.3 |
| Consumer staples | -8.5 | 6.5 |
| Consumer discretionary | -24.9 | 13.5 |
| Financials | -11.3 | 15.0 |
| Health care | -9.0 | 12.4 |
| Industrials | -21.8 | 12.5 |
| Energy | 13.2 | 4.0 |
| Technology | -27.6 | 18.7 |
| Telecommunications | -6.5 | 3.6 |
| Utilities | -7.6 | 2.6 |
| Real estate | -19.0 | 6.2 |

[1] Does not sum up to 100 percent because cash and derivatives are not included.

**Chart 4** Price developments in regional equity markets. Measured in US dollars, except for the Stoxx Europe 600, which is measured in euros. Indexed total return 31.12.2021 = 100.

Source: Bloomberg

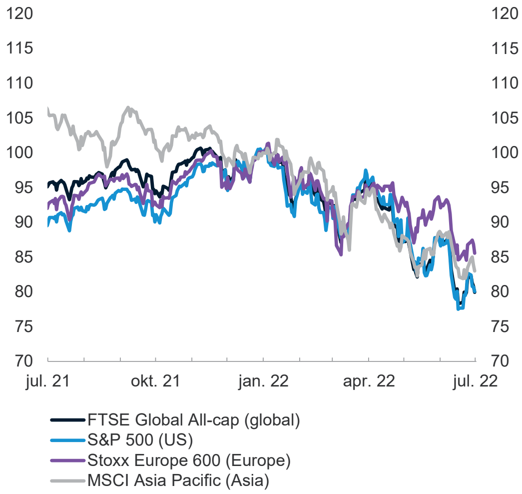



**Chart 5** Price developments in stock sectors in the FTSE Global All Cap Index. Measured in US dollars. Indexed total return 31.12.2021 = 100.

Source: FTSE Russell

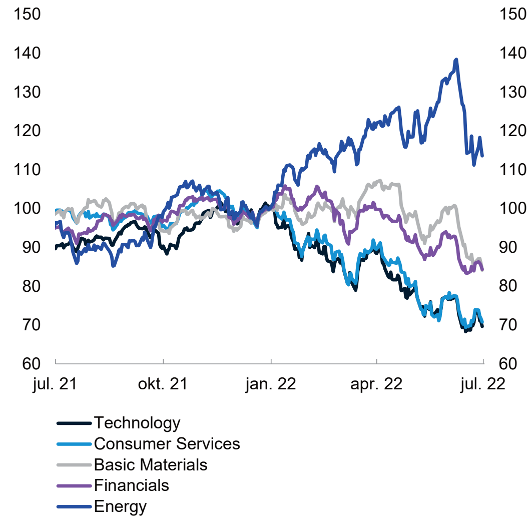



**Table 6** The fund's largest equity holdings as at 30 June 2022. Millions of kroner.

| Company | Country | Holding |
|---|---|---|
| Apple Inc | US | 204,480 |
| Microsoft Corp | US | 199,374 |
| Alphabet Inc | US | 128,392 |
| Amazon.com Inc | US | 95,165 |
| Nestlé SA | Switzerland | 84,613 |
| Roche Holding AG | Switzerland | 62,086 |
| Taiwan Semiconductor Manufacturing Co Ltd | Taiwan | 60,493 |
| Shell PLC | UK | 55,092 |
| Tesla Inc | US | 53,550 |
| Meta Platforms Inc | US | 53,101 |
| AstraZeneca PLC | UK | 46,080 |
| Novo Nordisk A/S | Denmark | 44,655 |
| UnitedHealth Group Inc | US | 44,511 |
| Novartis AG | Switzerland | 43,905 |
| ASML Holding NV | Netherlands | 43,089 |
| Berkshire Hathaway Inc | US | 41,865 |
| Johnson & Johnson | US | 40,653 |
| Exxon Mobil Corp | US | 37,673 |
| Samsung Electronics Co Ltd | South Korea | 37,658 |
| NVIDIA Corp | US | 35,921 |

## Return on fixed-income investments

Fixed-income investments returned -9.3 percent for the first half and accounted for 28.3 percent of the fund at the end of the period. Returns in the bond market were unusually weak in the first half of 2022.

For example, Bloomberg's US Treasury index returned -9.1 percent, the weakest half-year return since the index started in 1973. Excessive inflation was a key theme in the markets and led to a tightening of monetary policy and an increase in global interest rates.

**Higher interest rates reduce value of bond portfolio**

Government bonds returned -9.0 percent for the first half and accounted for 55.5 percent of the fund's fixed-income investments at the end of the period. The fund's three largest holdings were of US, Japanese and German government bonds.

US Treasuries accounted for 25.9 percent of fixed-income investments and returned -5.1 percent, while Japanese government bonds made up 10.3 percent of fixed-income investments and returned -14.0 percent, and euro-denominated government bonds amounted to 8.9 percent of fixed-income investments and returned -15.5 percent.

The Federal Reserve raised its policy rate by a total of 1.5 percentage points in the first half of the year. There was only a modest increase in interest rates in Japan, but the yen weakened considerably. In the euro area, higher interest rates and a weak euro brought a record-low half-year return.

**Chart 6** 10-year government bond yields. Percent.

Source: Bloomberg

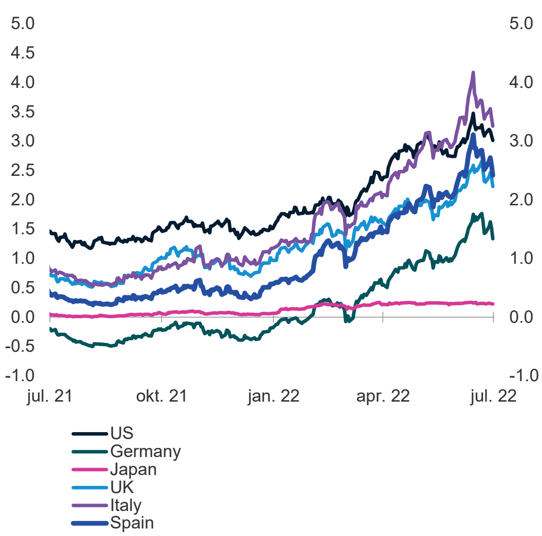



**Chart 7** Price developments in fixed-income sectors. Measured in US dollars. Indexed total return 31.12.2021 = 100.

Source: Bloomberg Barclays Indices

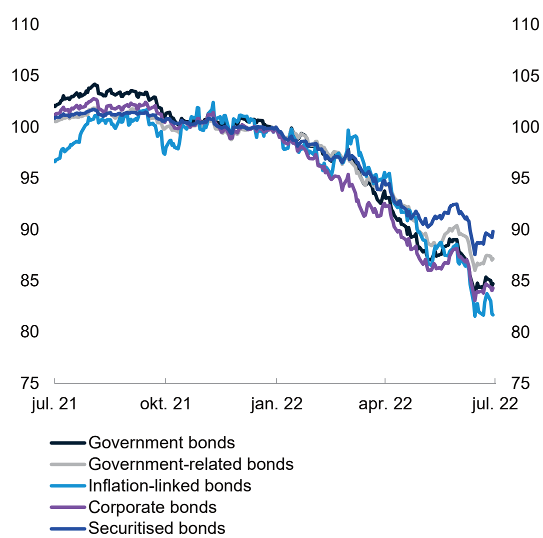


**Table 7** Return on the fund's fixed-income investments in the first half of 2022 by sector. International currency. Percent.

| Sector | Return | Share of fixed-income investments[1] |
|---|---|---|
| Government bonds[2] | -9.0 | 55.5 |
| Government-related bonds[2] | -11.3 | 11.6 |
| Inflation-linked bonds[2] | -10.1 | 6.6 |
| Corporate bonds | -11.0 | 23.8 |
| Securitised bonds | -9.3 | 6.8 |

[1] Does not sum up to 100 percent because cash and derivatives are not included.

[2] Governments may issue different types of bonds, and the fund's investments in these bonds are grouped accordingly. Bonds issued by a country's government in the country's own currency are categorised as government bonds. Bonds issued by a country's government in another country's currency are government-related bonds. Inflation-linked bonds issued by governments are grouped with inflation-linked bonds.

**Table 8** The fund's largest bond holdings as at 30 June 2022. Millions of kroner.

| Issuer | Country | Holding |
|---|---|---|
| Government of United States of America | US | 965,671 |
| Government of Japan | Japan | 347,006 |
| Government of Germany | Germany | 111,066 |
| Monetary Authority of Singapore | Singapore | 82,251 |
| United Kingdom Government | UK | 80,788 |
| Government of France | France | 58,194 |
| Government of Canada | Canada | 55,298 |
| Government of Italy | Italy | 50,388 |
| Canada Mortgage & Housing Corp | Canada | 40,959 |
| Government of Spain | Spain | 40,276 |
| Government of Australia | Australia | 39,724 |
| European Union | International Organisations | 27,675 |
| Bank of America Corp | US | 22,636 |
| Government of South Korea | South Korea | 21,366 |
| Morgan Stanley | US | 20,809 |
| Kreditanstalt fur Wiederaufbau | Germany | 18,835 |
| Goldman Sachs Group Inc/The | US | 18,660 |
| Government of Singapore | Singapore | 18,157 |
| Government of the Netherlands | Netherlands | 17,300 |
| Government of Austria | Austria | 16,990 |

**Table 9** The fund's bond holdings as at 30 June 2022 based on credit ratings. Percentage of bond holdings.

| | AAA | AA | A | BBB | Lower rating | Total |
|---|---|---|---|---|---|---|
| Government bonds | 34.5 | 4.7 | 11.4 | 1.9 | 0.7 | 53.2 |
| Government-related bonds | 4.8 | 4.1 | 1.6 | 0.5 | 0.1 | 11.1 |
| Inflation-linked bonds | 4.2 | 1.5 | 0.2 | 0.4 | - | 6.3 |
| Corporate bonds | 0.2 | 1.6 | 9.8 | 10.8 | 0.4 | 22.8 |
| Securitised bonds | 5.6 | 0.9 | 0.1 | 0.0 | 0.0 | 6.6 |
| **Total** | **49.3** | **12.8** | **23.1** | **13.6** | **1.2** | **100.0** |

## Return on real estate investments

Total real estate investments returned -5.7 percent for the first half and amounted to 5.0 percent of the fund at the end of the period. Unlisted and listed real estate investments are managed under a combined strategy for real estate.

Unlisted real estate investments returned 7.1 percent and accounted for 60.6 percent of the overall real estate portfolio, while investments in listed real estate returned -20.9 percent.

The main driver of returns in unlisted real estate is the investments in logistics, which was strong in the first half of 2022. The listed portfolio performed less well, as the market turmoil had a greater impact on this part of the real estate market.

**Table 10** Value of real estate investments as at 30 June 2022. Billions of kroner.

| | Value[1] |
|---|---|
| Unlisted real estate investments | 354 |
| Listed real estate investments | 230 |
| **Total real estate investments** | **584** |

[1] Including bank deposits and other receivables.

**Table 11** Return on unlisted real estate investments in the first half of 2022. Percentage points.

| | Return |
|---|---|
| Rental income | 1.5 |
| Changes in value | 5.5 |
| Transaction costs | 0.0 |
| Result of currency adjustments | 0.1 |
| **Total** | **7.1** |

## Return on unlisted renewable energy infrastructure investments

Investments in unlisted renewable energy infrastructure returned -13.3 percent and amounted to 0.1 percent of the fund at the end of the period. The main driver of returns in unlisted renewable energy infrastructure was primarily due to an increased capital requirement as a result of higher interest rates, changes to expected future production and write-downs over the expected life of the project. The increase in power prices in the short term made a positive contribution to the return.

**Table 12** Value of unlisted renewable energy infrastructure investments as at 30 June 2022. Billions of kroner.

| | Value[1] |
|---|---|
| **Unlisted infrastructure investments** | **13** |

[1] Including bank deposits and other receivables.

**Table 13** Return of unlisted renewable energy infrastructure investments in the first half of 2022. Percentage points.

| | Return |
|---|---|
| **Unlisted infrastructure investments** | **-13.3** |

## The fund's relative return

The return on the fund for the first half of the year was 1.14 percentage points better than the return on the benchmark index from the Ministry of Finance, corresponding to an excess return of 156 billion kroner. This is the first time in two decades that we have generated an excess return in a sharply falling equity market. We do not expect a similarly strong relative return in the future.

The relative return is broken down between equity, fixed-income and real asset management, and an allocation effect between them.

Equity management contributed 0.31 percentage point to the fund's relative return in the first half of the year. Investments in the energy sector made the most positive contribution to the relative return for the period, while the technology sector made the most negative. Broken down by country, equity investments in the US and the UK made the most positive contributions to the relative return, and Chinese stocks the most negative. An overweight of value stocks relative to the benchmark index contributed positively to the relative return.

Fixed-income management contributed 0.33 percentage point to the fund's relative return for the period. The fund's fixed-income investments have a lower duration than the benchmark index, which contributed positively to the relative return.

Real asset management contributed 0.42 percentage point to the fund's relative return, measured against the equities and bonds sold to finance these investments. Listed real estate investments contributed -0.09 percentage point and unlisted real estate investments 0.51 percentage point, while infrastructure made a negligible contribution to the relative return for the period.

The relative return may also be affected by an allocation effect between these management areas. The contribution from this effect during the period was 0.07 percentage point, as the fund was underweight in equities relative to bonds.

**Chart 8** The fund's quarterly relative return and accumulated annualised relative return. Calculations based on aggregated equity and fixed-income investments until end of 2016. Percentage points.

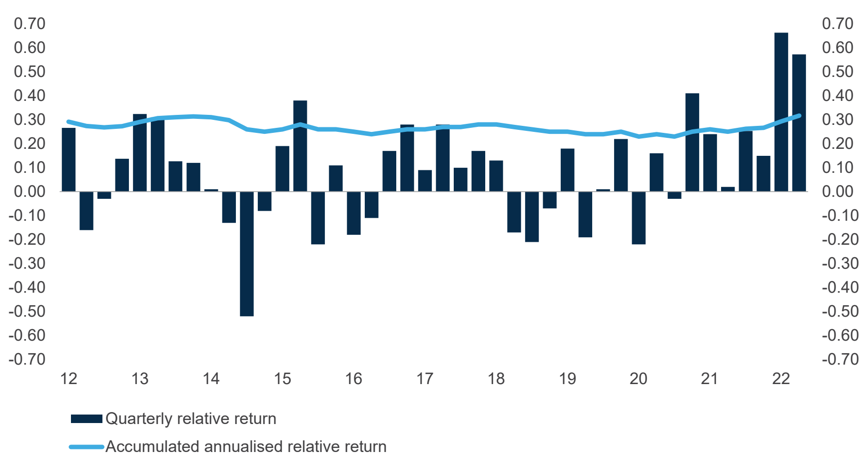


**Table 14** Historic relative return as at 30 June 2022. Annualised figures measured in the fund's currency basket. Percentage points.

| | Since 1998 | Last 15 years | Last 10 years | Last 5 years | Last 12 months |
|---|---|---|---|---|---|
| Relative return on fund (percentage points)[1] | 0.32 | 0.20 | 0.38 | 0.50 | 1.54 |
| The fund's tracking error (percentage points)[1] | 0.65 | 0.77 | 0.38 | 0.38 | 0.47 |
| The fund's information ratio (IR)[1,2] | 0.50 | 0.29 | 0.96 | 1.24 | 3.63 |

1 Based on aggregated equity and fixed-income investments until end of 2016.

2 The fund's information ratio (IR) is the ratio of the fund's average monthly relative return to the fund's tracking error. The IR indicates how much relative return has been achieved per unit of relative risk.

**Table 15** Contributions from management areas to the fund's relative return in the first half of 2022. Percentage points.

| | Total |
|---|---|
| Equity management | 0.31 |
| Fixed-income management | 0.33 |
| Real assets management | 0.42 |
| Allocation effect | 0.07 |
| **Total** | **1.14** |

## Investment framework

The fund is managed on the basis of limits set in the mandate from the Ministry of Finance.

**Table 16** Key figures for the fund's risk and exposure.

| | Limits set by the Ministry of Finance | 30.06.2022 |
|---|---|---|
| Allocation | Equity portfolio 60–80 percent of fund's market value[1] | 68.3 |
| | Unlisted real estate no more than 7 percent of the fund's market value | 3.0 |
| | Fixed-income portfolio 20–40 percent of fund's market value[1] | 29.0 |
| | Unlisted renewable energy infrastructure no more than 2 percent of the fund's market value | 0.1 |
| Market risk | 1.25 percentage points expected relative volatility for the fund's investments | 0.4 |
| Credit risk | Maximum 5 percent of fixed-income investments may be rated below BBB- | 1.2 |
| Emerging markets | Maximum 5 percent of fixed-income investments may be in emerging markets | 3.4 |
| Ownership | Maximum 10 percent of voting shares in a listed company in the equity portfolio[2] | 9.6 |

1 Derivatives are represented with their underlying economic exposure.

2 Investments in listed and unlisted real estate companies are exempt from this restriction.

## Operational risk management

Norges Bank's Executive Board has decided there must be less than a 20 percent probability that operational risk factors will have a financial impact of 750 million kroner or more over a 12-month period.

Estimated operational risk exposure remained within the Executive Board's tolerance limit in the first half of the year. A total of 152 unwanted operational events were registered, with an estimated financial impact of around 22.5 million kroner.

## Responsible investment

Voting is one of the most important instruments available to us for exercising our ownership rights. We voted on a total of 96,317 proposals at 8,691 meetings in the first half of the year. The second quarter is the busy season for voting, with more than two thirds of annual shareholder meetings taking place between April and June. We continuously update all of our voting on our website: www.nbim.no.

We had 1,485 meetings with companies in the first half of the year, raising governance and sustainability issues at 68.4 percent of them. These issues mostly concerned capital management, climate change and human capital.

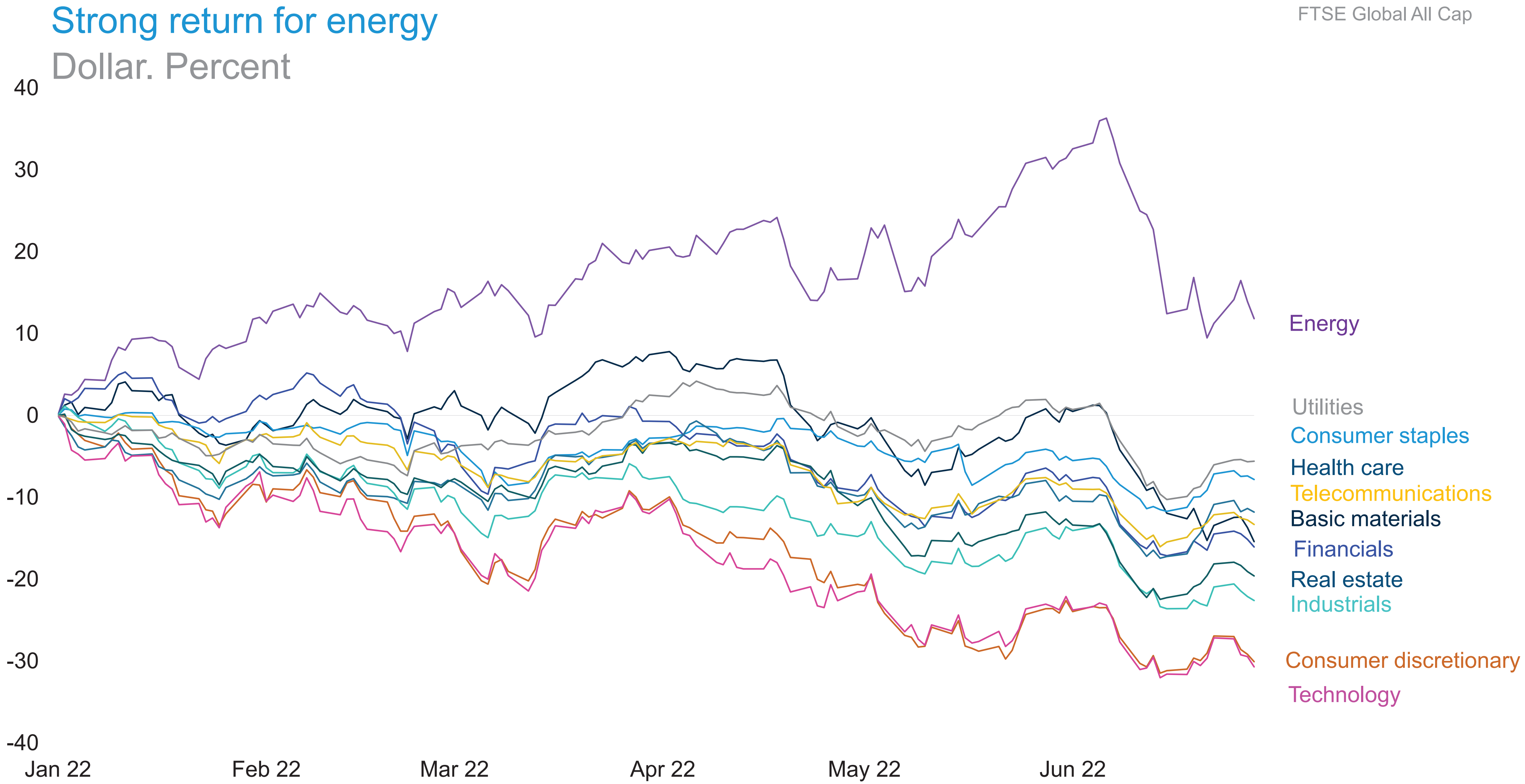
# Geopolitical changes

European natural gas prices. Price in Euro/MWh

Bloomberg: Dutch TTF Natural Gas
1 Month ahead futures

## Strong return for energy

Dollar. Percent



Negative returns in the stock market
Dollar. Percent
FTSE Global All Cap
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
Jan 22
Feb 22
Mar 22
Apr 22
May 22
Jun 22

## … but positive development in the third quarter

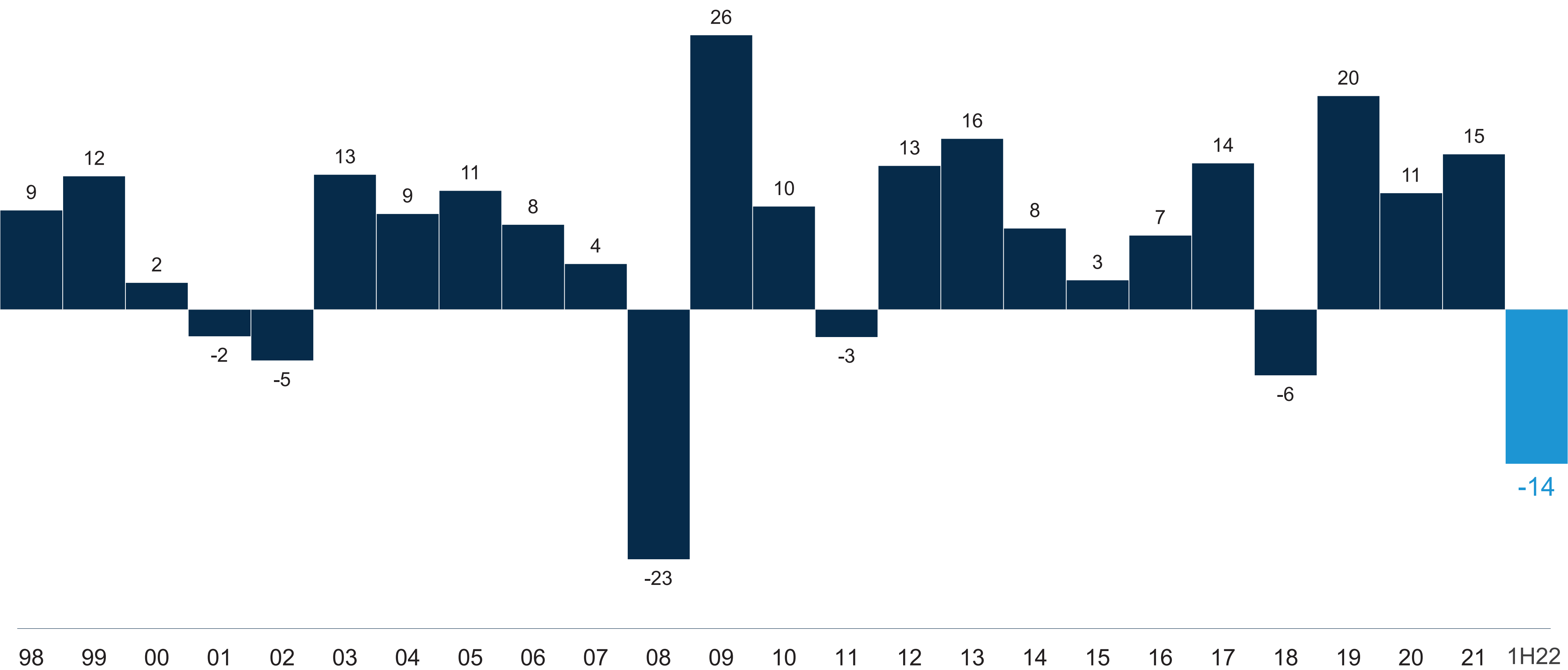
Dollar. Percent

## -14 percent return

Percent

| | |
|---|---|
| Q2 2022 | -10% |
| 1H 2022 | -14% |
| Since 1998 | 6% |

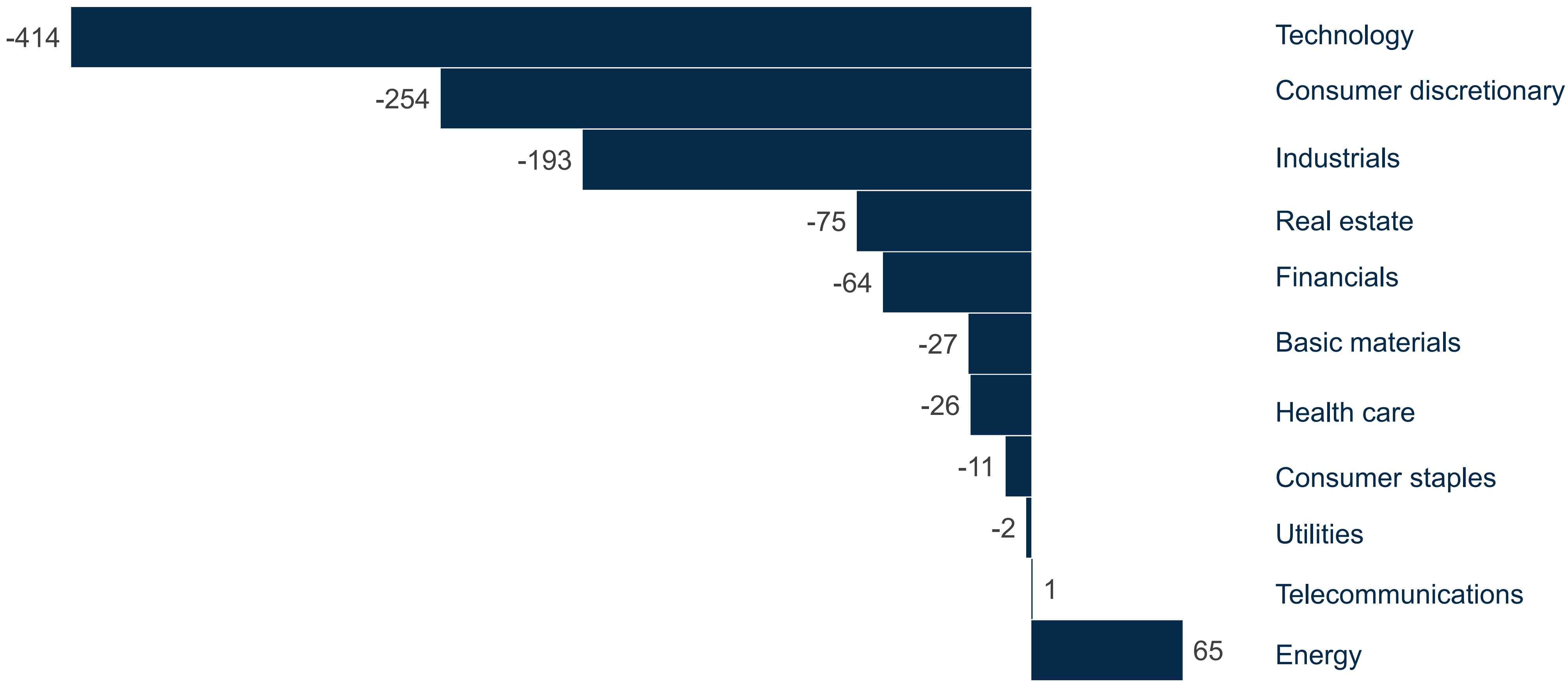
Measured in the fund's currency basket



FTSE industry classification
as at 30.06.2022

## Weakest return for technology

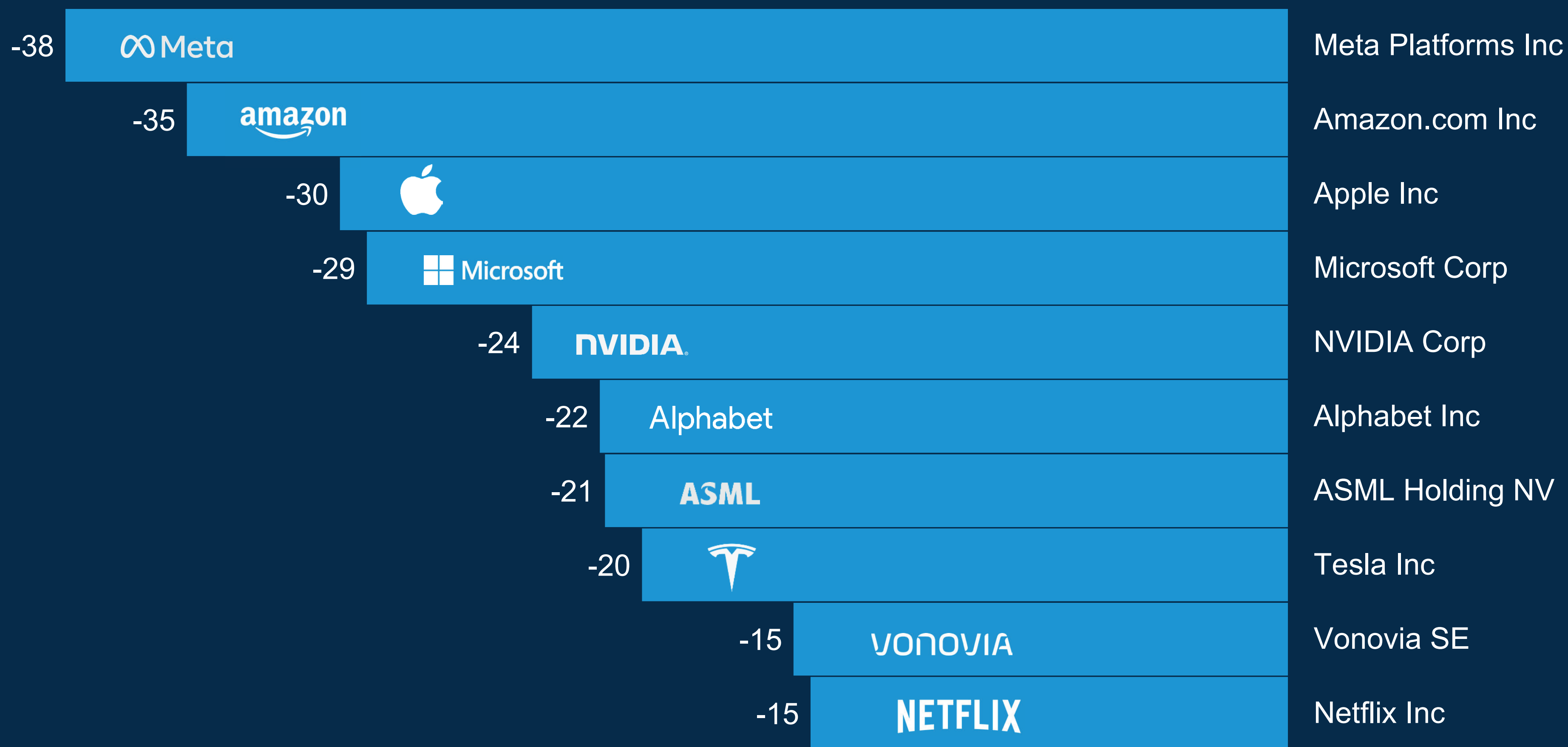
### By sector. Billion kroner



## Top 10 negative single contribution to absolute return

Billion kroner

as at 30.06.2022




# Negative return on real estate

Unlisted real estate

7% return

Listed real estate

-21% return

Total real estate return

-6% return

https://www.norges-bank.no/aktuelt/nyheter-og-hendelser/Foredrag-og-taler/2021/2021-12-21-borsum/

# Ownership and climate risk in the GPFG - on the instruments for managing climate risk in the GPFG

Speech by Deputy Governor Øystein Børsum, 21 December 2021.

*Actual performance may differ from published text*

### Introduction

Climate challenges are an engaging theme.

*Figure: Emissions must be reduced*

The world economy, as it operates today, is not sustainable. It must be, and then emissions must go down. It concerns us all - and not least our common fund. With a broadly diversified, global portfolio and a long horizon, we are in many ways burdened with the world economy.

Norges Bank is a financial investor. We will secure and create financial value for future generations. It is our task as manager of the fund. But how the assignment is carried out can also have an impact beyond the purely financial. Among other things, in the transition to a low-emission society. What our role should be - what our work should consist of - is what I want to talk about today.

This summer, an expert group submitted a report to the Ministry of Finance with recommendations on how climate risk should be managed in the fund. During the autumn, we at Norges Bank worked to assess the proposals and look at how they can be implemented.

A couple of days ago, the Executive Board sent its response to the Ministry of Finance. In the bank's management of climate risk, a lot is already being done, and we are outlining even more ambitious plans for the future. As a long-term and global investor with ownership interests in several thousand companies, we have a financial interest in the companies adapting to the risk and opportunities that climate change entails in a good way.

We propose that Norges Bank be a driving force for the companies we are invested in to adjust to net zero emissions over time - that the companies we invest in reflect the restructuring that the world has to go through.

### The fund as an investor

### Our characteristics as an investor

The climate risk in the fund is related to who we are as an investor and our overall investment strategy. In short: The fund is large, broadly diversified, long-term and close to the index.

*Chart: Large, broadly diversified, long-term and index-linked*

Of the fund's more than 12,000 billion, 70 per cent is invested in shares. With that, we are one of the world's largest shareholders. We are owners of 9000 companies in 70 countries.

And we are long-term. By using only the real return, the fund can in principle be perpetual.

The strategy is based somewhat simply on the following: If we are to achieve the best balance between expected return and risk, we must spread the investments widely and own a little of everything in the market. There is a solid professional basis for this approach.

### How climate risk is relevant to the fund

What does this way of managing the fund have to say for the fund's climate risk? By spreading the investments widely, we are protected against incidents that only affect individual companies or special sectors. But we can not protect ourselves from events or developments that affect everyone.

The fund is exposed to two types of climate risk - physical risk and transition risk.

Transition risk is about whether the *companies* we own will manage the transition to a low-emission economy. Here the challenge is very different across sectors and companies.

*Chart: Transition risk and the fund*

The fund's equity investments can be categorized according to transition risk as assessed by the research company MSCI today. The blue bars in the figure show shares of the fund's portfolio. The white bars show the emissions in the companies. The companies that have ended up in the category «restructuring» have high emissions and must therefore restructure significantly. They make up 14 percent of the equity portfolio. The rest are companies that are either considered to be neutrally positioned or are considered to make a positive contribution to a green transition. The latter are thus part of the solution. [1]

Physical risk is more directly linked to climate change. The easiest to think about are acute events such as extreme weather, but also more gradual changes such as warmer climates, droughts and increased sea levels can affect individual investments in both negative and positive directions.

In a scenario where the world does not succeed in the transition to a low-emission economy, the risk increases, also for the fund, because the consequences of major climate change will be felt everywhere. As owners of shares, bonds and real assets, we are invested in everything from real estate and infrastructure, forestry and the food industry to all kinds of production capital. All of these are investments that can be affected by changes in the environment, including heat waves, floods and fires. We own a little of everything.

For a large, long-term, global fund, there will be nowhere to hide.

Climate risk is a long-term and important risk that the fund must deal with.

### What does a long-term goal of net zero emissions mean for the fund?

A key recommendation from the expert group is that Norges Bank's responsible management be given a long-term goal of working towards net zero emissions from the companies in which the fund is invested. Norges Bank supports this recommendation.

Some may interpret this as a plan to sell shares in companies with large emissions.

But that is not our approach, nor is it the expert group's proposal. Instead of selling ourselves out, we will through active ownership be a *driving force* for the companies to adapt. In order to influence, we must actually be owners.

And we believe that ownership work works.

It works because we are big. Norges Bank is among the ten largest owners in about half of the companies we are invested in, and we have experienced that the companies listen when we talk.

### Responsible management - a chain of instruments

*Figure: Responsible management - a chain of instruments*

Responsible management is our foremost tool in the work with climate risk and climate-related investment opportunities. I will now consider some important parts of this work. We are already doing a lot, and now we want to do even more.

The work can be grouped into three: The work we do towards the markets, towards the companies and with the portfolio. Together, this constitutes a coherent chain of instruments. I can not take a full review of the work here, but will highlight some points.

### Default setting

The first point, standard setting, is about standards for reporting and measuring companies' climate risk.

Good common standards are important. This enables us as managers to assess the companies' prospects, prioritize ownership work and make good investment decisions.

But not just us. Better reporting will make the financial markets more well-functioning and better able to allocate capital. International standards provide equal conditions across markets and set the list for all companies. We, and other major investors, have an important role to play in contributing to the development of these standards.

Among the particularly important initiatives we have supported are climate reporting from the Task Force on Climate-Related Financial Disclosures (TCFD). Such reporting has been voluntary, but we believe that it must now become a requirement. Another issue we are working on is a comprehensive standard for sustainability reporting in line with the recently launched International Sustainability Standards Board (ISSB).

We will also work for good standards for reporting on companies' indirect emissions in the value chain, so-called "framework 3". In many sectors, this is crucial for understanding the companies' climate risk. We will also work with other climate-related issues where international standards may be appropriate. The use of various forms of climate quotas can be an example of this.

Our work with the companies starts with setting clear expectations.

We have formulated our expectations in our own expectations documents. In the climate area, we already expect companies to have a climate strategy, set emission targets, report on developments and stress test their business models against different climate scenarios. Going forward, it is natural for us to emphasize the horizon towards zero emissions. This will provide a clearer direction for the exercise of ownership.

### Exercise of ownership

The exercise of ownership will be central to the work to manage the fund's climate risk. Not least, the dialogue with the companies is important.

*Figure: Climate is more often a theme in the dialogue*

The dialogue with the companies follows our expectations. Last year we had about 3,000 meetings with the companies, and as you can see from this figure, sustainability is increasingly on the agenda.

Going forward, we will increase ownership activity on climate, both in scope and depth.

We will give particular priority to ownership activity towards the companies that have the largest emissions, towards those that have not published their own climate plans or have inadequate climate reporting. We will also strengthen the ownership activity aimed at the financial sector, which is indirectly exposed to climate risk through lending and investments.

The dialogue is adapted to the sector and situation. Steel and cement are an example. These companies currently have large emissions, but are also manufacturers of products we also need in a low-emission society. Therefore, the dialogue is precisely about transition plans, much about the technological measures and investments needed for change. We also address the need for industry standards and lobbying, which is a significant challenge.

*Figure: Companies report better on climate*

We see signs that the work is working. For example, when we analyze the reporting from 1,500 companies, we see that the companies we have been actively involved in have made greater progress in reporting on climate strategy than the other companies. Of course, we should not take all the credit for these advances. But there is progress.

In the future, we will report more about the dialogue with the companies, what they are about and changes we see. That it is visible is a tool in itself.

### Reporting and voting

The dialogue with the companies will not succeed in all cases. We can then hold the boards responsible for their decisions through our voting. This year, we have, among other things, in six cases voted against renewed confidence in board members due to inadequate management of climate risk. This sounds small, but in the future we will work to use this tool to a greater extent than today.

We have started by announcing our voting five days before the actual voting. What we do is noticed.

Another alternative is to promote shareholder proposals, alone or together with others. In the past year, we have supported 19 shareholder proposals on climate. One of those who gained a majority led to a large international company initiating work on reporting on emissions in the value chain ("Box 3"). Going forward, we will also consider promoting our own shareholder proposals.

### Risk-based divestments

A last resort, when the exercise of ownership does not succeed, is the sale. It will not be the case that we automatically sell out if the ownership work does not succeed. But in some cases it can be the result.

Norges Bank can sell out of a company on a financial basis. This is what we call risk-based divestments. These are companies that we believe handle climate risk in a very deficient way - and thus provide an increased financial risk. This is about avoiding companies that we believe do not have sustainable business models.

*Figure: More than half of the sales are related to climate*

Risk-based divestments are active decisions made by Norges Bank, which draw on the fund's framework for deviations from the benchmark index. In the period 2012-2020, we have made more than 300 such sales, and more than half have been linked to climate change.

We are ready to do more of this in the future.

As a continuation of risk-based divestments, we have also begun to systematically assess companies' sustainability risk before entering the fund's benchmark index.

The fund is managed close to the index. Risk-based divestments will therefore mainly be relevant for smaller companies. For larger companies, we have more limited room for maneuver, as such sales will to a greater extent draw on the framework for deviations from the benchmark index.

### The behavioral criterion

*Figure - Responsible management - a chain of instruments*

This takes me over to the second form of divestiture, namely exclusion on ethical grounds. The fund's ethical guidelines contain both a product-based coal criterion and a behavior-based climate criterion.

The latter includes companies that are linked to serious environmental damage or to an unacceptable degree lead to greenhouse gas emissions.

The Council on Ethics advises observing or excluding a company based on this criterion. Based on their recommendations, the Executive Board of Norges Bank makes the final decision based on these recommendations. A decision on exclusion means that the company is excluded from both the portfolio and the benchmark index. It therefore does not draw on our framework for deviations.

It is our experience that the practice of this criterion is complex and that it requires broad insight and detailed information about companies' activities and plans.

Norges Bank expects that we will - in light of the work I have talked about today - gather further detailed information about the companies' climate risk and climate plans. We will share this information with the Council on Ethics.

Downsizing or exclusion is the last link in the chain of instruments, but far from the most important. We plan for Norges Bank to be a driving force for the companies in the portfolio to adjust to net zero emissions over time. Active ownership is the key tool.

### End

Before I conclude, I would like to mention that we invest in companies that can contribute to solutions to the climate challenges, both through the environmental mandates and in the rest of equity management. We are now also in the process of building up a portfolio of high-quality wind and solar power plants.

The first environmental mandates were established in December 2009, and have had positive learning effects for several parts of the organization. As we write in the letter to the ministry, we will in future draw more on the competence of the managers of the environmental mandates in other parts of the administration.

Overall: Our ambition is for us to be a leader in responsible management. In collaboration with other large investors, we will contribute to the development of standards and methods for reporting. We will strengthen our dialogue with companies about climate both in scope and depth, and utilize the entire toolbox we have as an investor. We will influence companies to take the restructuring seriously. We expect concrete plans, not empty words or greenwashing! And not least - we must have a clear voice in our ownership work.

### Footnote

[1] The calculations are based on the analysis company MSCI's classification of companies' transition risk. 80 per cent of the market value of the fund's equity portfolio ends up in the group of companies that are neutrally exposed to transition risk.

PUBLISHED December 21, 2021 9:00 AM

https://www.cppinvestments.com/public-media/headlines/2021/cpp-investments-highlights-importance-of-decarbonizing-hard-to-abate-sectors-in-addressing-climate-change

# CPP Investments highlights importance of decarbonizing hard-to-abate sectors in addressing climate change

• CPP Investments releases position outlining investors' role in enabling an economy-wide evolution to a low-carbon future
• Introduces new investment approach that will identify, fund and support companies in their effort to decarbonize

**Toronto, CANADA (December 15, 2021) –** Helping essential, high-emitting businesses decarbonize is critical to addressing climate change, according to a recent perspective published by Canada Pension Plan Investment Board (CPP Investments). The perspective, "Investing to enable an economy-wide evolution to a low-carbon future," highlights the opportunity decarbonization presents for long-term investors, noting the need to address a particularly serious obstacle to decarbonization: strategic sectors that are essential, high-emitting and hard-to-abate.

The perspective also outlines CPP Investments' new investment approach which aims to identify, fund and support companies that are committed to creating value by lowering their emissions over time, consistent with CPP Investments' time horizon advantage.

"High-emitting companies that successfully navigate the economy-wide evolution to a low-carbon future will preserve and deliver embedded value for patient long-term investors like CPP Investments," said Deb Orida, Global Head of Real Assets & Chief Sustainability Officer. "This new investment approach complements the Fund's ongoing commitment to investing in companies that have the potential to develop innovative climate technologies around the world and furthers our existing capabilities in technologies that enable the energy evolution."

Strategic sectors that are essential, high emitting and hard-to-abate within this investment approach include agriculture, chemicals, cement, conventional power, oil and gas, steel and heavy transportation. The successful decarbonization of these sectors is not only essential to meet wider net-zero ambitions, but also to sustain economic growth, stability and a responsible transition. CPP Investments plans to work in partnership with like-minded companies, industry leaders, investors, and other interested parties to build out a dedicated investment approach to support current and future portfolio companies in their evolution.

CPP Investments also released a related perspective today focusing on an additional key element of sustainable investing, "Financing a greener future," highlighting green bonds as part of the Fund's approach to deploying capital for projects with environmental benefits. The paper outlines how for green bonds to go from a fast-growing niche to a mainstream offering, standards will have to grow out of a mix of evolving draft rules into something closer to the bond market's extant framework for governing how debt is rated, issued and evaluated for performance. The imperative is to improve green bond standards and practices quickly. Doing so can help the financial sector realize its enormous potential for guiding capital toward investments that support the transition to a low-carbon economy while also boosting returns. In 2018, CPP Investments was the world's first pension fund to issue green bonds and has floated six more issuances since.

For more information, the "*Investing to enable an economy-wide evolution to a low-carbon future*" perspective can be found on the CPP Investments website here. The "*Financing a greener future*" paper can be found here.

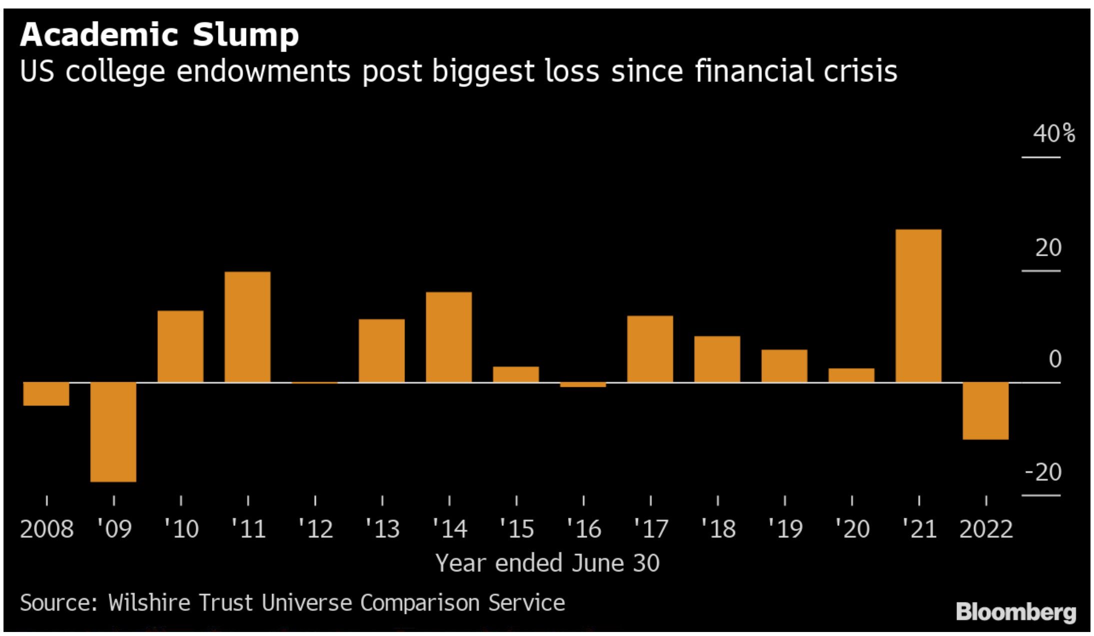
**About CPP Investments**

Canada Pension Plan Investment Board (CPP Investments™) is a professional investment management organization that manages the Fund in the best interest of the more than 20 million contributors and beneficiaries of the Canada Pension Plan. In order to build diversified portfolios of assets, investments are made around the world in public equities, private equities, real estate, infrastructure and fixed income.

Headquartered in Toronto, with offices in Hong Kong, London, Luxembourg, Mumbai, New York City, San Francisco, São Paulo and Sydney, CPP Investments is governed and managed independently of the Canada Pension Plan and at arm's length from governments. At September 30, 2021, the Fund totalled $541.5 billion. For more information, please visit www.cppinvestments.com or follow us on LinkedIn, Facebook or Twitter.

College Endowments Post Biggest Losses Since Financial Crisis
2022-08-09 13:00:00.3 GMT

By Janet Lorin
(Bloomberg) -- Investments in US college endowments declined the most since the global financial crisis, owing in part to double-digit losses in US equity markets.
Endowments lost a median 10.2% before fees for the 12 months through June, according to data to be published Tuesday by Wilshire Trust Universe Comparison Service. The largest funds -- those with assets of more than $500 million -- fared substantially better, with a slight gain of 0.9%. Larger endowments tend to invest more in alternatives such as private equity funds, which offered a buffer against the equity-market losses, while smaller ones rely more heavily on US stocks.
The S&P 500 declined by 12% for the period. That left smaller endowments in particular with nowhere to hide, although commodities and private equity offered some relief, said Mike Rush, a senior vice president at Wilshire.
“Other than investing in cash, which obviously is not the answer, the second quarter was literally one of the worst quarters for investing,” Rush said. “Endowments have this prudent diversifier into alternatives that helped out at least the relative returns during the second quarter.”




Private equity, which has helped juice returns in recent years, couldn’t insulate endowments as much this year as valuations for startups and other closely held companies declined.
Wilshire data -- as reported to the firm by institutional investors including pensions and endowments -- show that median private equity returns decreased as the fiscal year progressed per quarter, from a gain of 5.3% in the quarter beginning in July 2021 to a loss of 0.3% in the most recent quarter.
Read more: Ivy League Endowments Brace for Losses With PE

Values Tumbling

The data released Tuesday didn't represent results for individual colleges. Schools begin to release their annual investment results in September or October. They typically wait for private equity marks for the quarter ended in June.

The returns contrasted sharply with the previous year's results, when endowments returned a median 27%, their best results since 1986. The largest funds posted a median gain of 34% last year, driven by private equity and venture capital, with some colleges faring even better. Washington University in St. Louis notched returns of 65% and several schools gained more than 50%, including the Massachusetts Institute of Technology, Bowdoin College and Vanderbilt and Duke universities.

Schools faced pressure to spend more of their gains as a result of the strong numbers. The latest performance figures come as universities now grapple with inflation along with years of Covid-19 expenses.

The difference between the wealthiest colleges and other schools also demonstrates the widening gap among endowment sizes and resources within higher education. Many of the richest schools also pay a 1.4% levy on their net endowment gains, passed during the 2017 Republican-led tax reform, a tax schools are lobbying to end.

Colleges typically need annual gains of at least 7% to keep pace with annual spending -- on expenses such as financial aid and professor salaries -- and inflation, which is affecting costs such as food in dining halls. Spending isn't determined by a single year of performance, but rather by formulas based on three- or five-year averages.

To contact the reporter on this story:
Janet Lorin in New York at jlorin@bloomberg.net
To contact the editors responsible for this story:
Amanda Cantrell at acantrell10@bloomberg.net
Daniel Taub

https://www.wilshire.com/press-releases/wilshire-trust-universe-comparison-service-reports-worst-quarter-since-covid-19-shutdown-with-9-63-percent

**8/9/2022**

# Wilshire Trust Universe Comparison Service Reports Worst Quarter since Covid-19 Shutdown with -9.63 Percent

## Most asset classes negative for quarter.

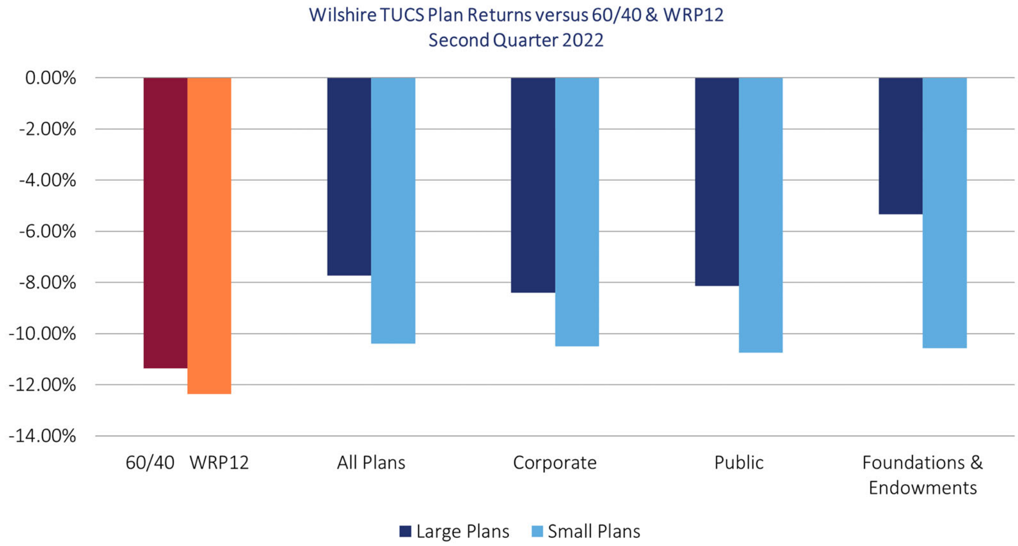
**Santa Monica, Calif., August 9, 2022** — Institutional assets tracked by Wilshire Trust Universe Comparison Service® (Wilshire TUCS®) posted an all-plan median return of -9.63 percent for the second quarter and -10.59 percent for the year ending June 30, 2022. Wilshire TUCS, a cooperative effort between Wilshire and custodial organizations, is widely considered the definitive benchmark for U.S. institutional plan assets performance and allocation.

"The second quarter of 2022 was historical but for all the wrong reasons. If you look back 50 years, you'll be hard pressed to find another quarter where global equities were down by double-digits and investment grade bonds were down five percent," said Jason Schwarz, President of Wilshire. "All plan types were able to outperform a traditional 60/40 portfolio, particularly larger plans with higher allocations to alternative investments," Schwarz added.

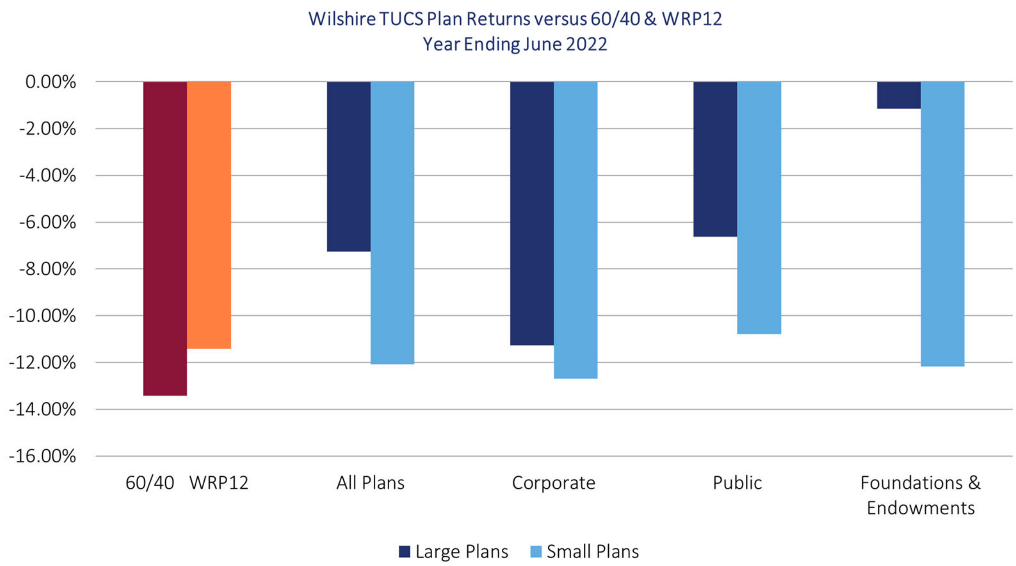
U.S. equities, represented by the FT Wilshire 5000 Index℠, fell -16.77 percent second quarter and -13.19 percent for the 12 months ending June; meanwhile, international equities, represented by the MSCI AC World ex U.S., fell -13.73 percent second quarter and -19.42 percent for the year. U.S. bonds, represented by the Wilshire Bond Index℠, fell -5.27 percent second quarter and -10.31 percent for the one-year.

Across all plan types, quarterly median losses ranged from -5.33 to -10.74 percent for large foundation and endowment funds (assets above $500 million) and small public funds (assets below $1 billion), respectively. One-year median returns ranged from -1.15 to -12.70 percent for large foundation and endowment funds and small corporate funds (assets below $1 billion), respectively.

For the quarter, all plan medians outperformed the 60/40 portfolio loss of -11.36 percent. All plan medians also outperformed the -12.37 percent loss for the multi-asset Wilshire Risk Parity – 12% Target Volatility Index. Large foundation and endowment funds outperformed all other sizes and plan types in the second quarter due mostly to a larger exposure to U.S. alternatives. Allocation trends continue to show significant exposure for large foundations and endowments to alternatives, with a median second quarter allocation of 56.06 percent. Large corporate and public funds had median first quarter allocations to alternatives of 22.10 and 20.75 percent respectively.




For the year, large and small plan groups outperformed the -13.42 percent loss for the 60/40 portfolio while mostly large plans outperformed the -11.41 percent loss for the multi-asset Wilshire Risk Parity – 12% Target Volatility Index. Large plans outperformed small across all plan types for the one-year.




Large plans (assets above $1 billion) overall posted losses of -7.73 percent for the quarter and -7.25 percent for the year ending June 30, 2022; meanwhile small plans (assets less than $1 billion) underperformed large for the quarter and the year with returns of -10.40 and -12.07 percent, respectively.

**Media Contact**

Amy Bradford
abradford@wilshire.com
wilshiremedia@wilshire.com
805-256-5674

https://www.wsj.com/articles/it-now-costs-300-000-to-raise-a-child-11660864334?mod=e2tw

# It Now Costs $300,000 to Raise a Child

## A middle-income family might spend more than $18,000 a year on average, as inflation hits food, housing, haircuts and sports, Brookings analysis finds

Muffy Mendoza with her sons Mack Jr. and Phillip, left and right, and her husband, Mack, center, in Pittsburgh earlier this month. NATE SMALLWOOD FOR THE WALL STREET JOURNAL

SHARE

By *Rina Torchinsky*

Follow

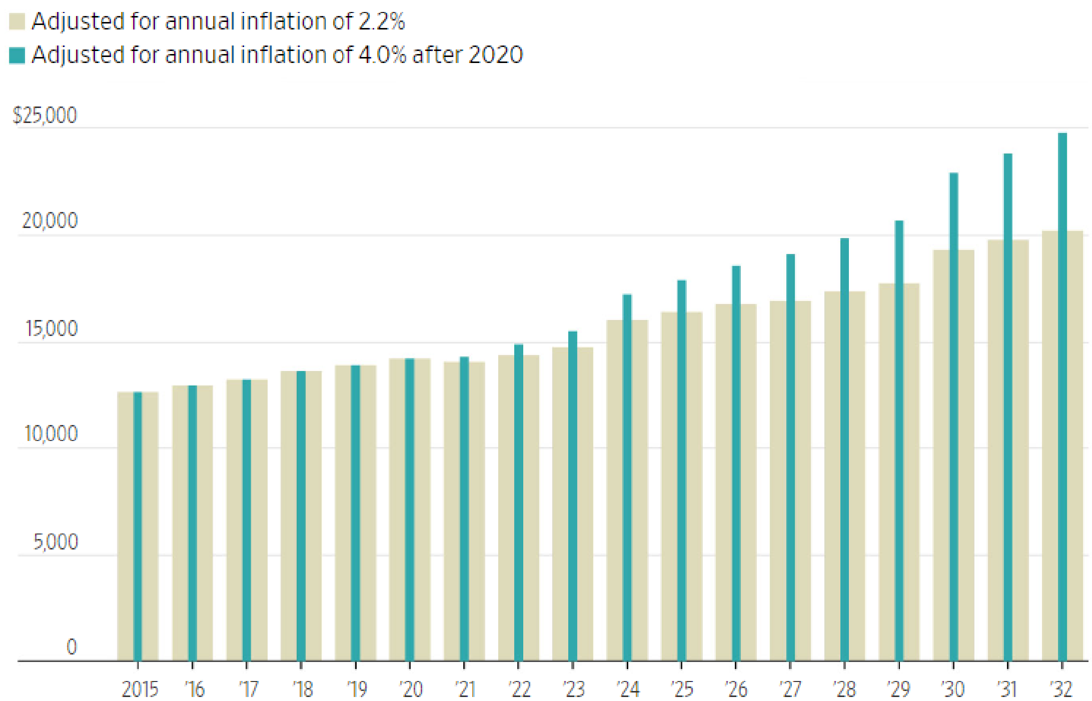
Aug. 19, 2022 5:30 am ET

The cost of raising a child through high school has risen to more than $300,000 because of inflation that is running close to a four-decade high, according to a Brookings Institution estimate.

It determined that a married, middle-income couple with two children would spend $310,605—or an average of $18,271 a year—to raise their younger child born in 2015 through age 17. The calculation uses an earlier government estimate as a baseline, with adjustments for inflation trends.

The multiyear total is up $26,011, or more than 9%, from a calculation based on the inflation rate two years ago, before rapid price increases hit the economy, the Brookings Institution said.

**Estimated annual family expenses for a child born in 2015**

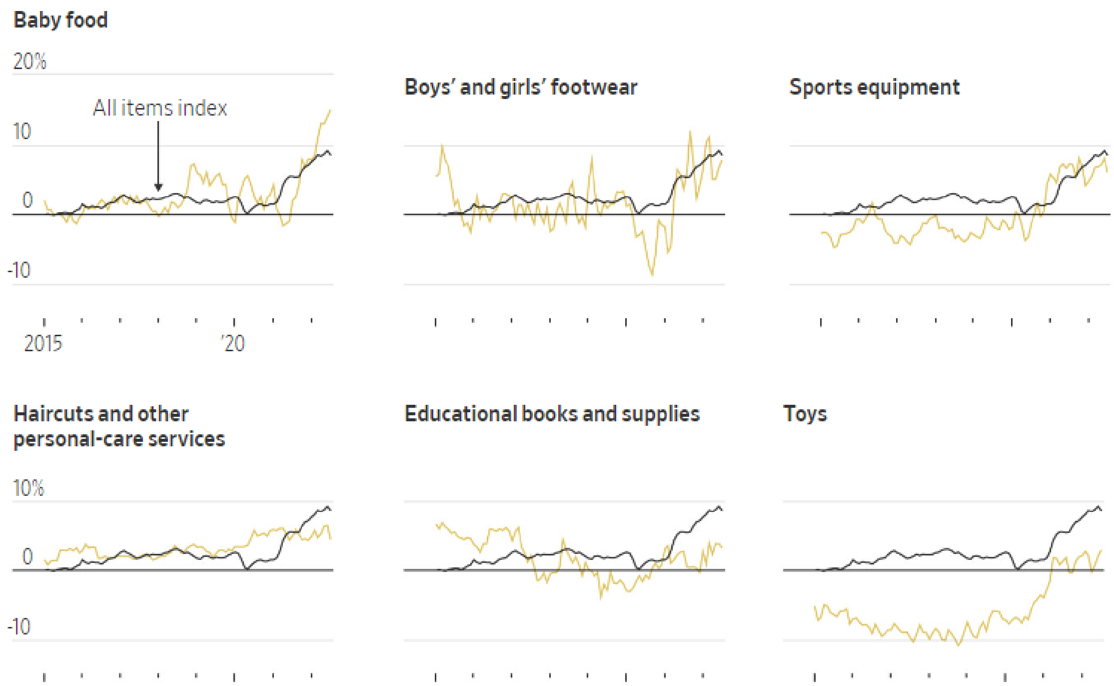



Note: The estimates are for a middle-income two-parent married family with two children, in which the younger child was born in 2015.
Source: Brookings Institution
Ming Li/THE WALL STREET JOURNAL

For Muffy Mendoza, high inflation has meant that "boys week" wasn't in the cards this summer. The gathering, she said, is usually a time for all of the boys in her family—her three sons and their cousins—to get together at her Pittsburgh home. This year, the gathering is too expensive. "It costs a lot to feed almost 10 boys," she said.

Brookings calculated the cost of raising a family [based on a 2017 estimate] from the Agriculture Department. The estimate covers a range of expenses, including housing, food, clothing, healthcare and child care, and accounts for childhood milestones and activities—diapers, haircuts, sports equipment and dance lessons, among other costs.

Consumer-price index, 12-month change




Source: Labor Department
Ming Li/THE WALL STREET JOURNAL

"A lot of people are going to think twice before they have either a first child or a subsequent child because everything is costing more," said Isabel Sawhill, a senior fellow at Brookings. "You also may feel like you have to work more."

Inflation's trajectory in the future isn't clear, Dr. Sawhill said, in part because Federal Reserve efforts to bring the rate down have an uncertain outcome.

"We know it's very high right now, but we also know that the Fed is stepping on the brakes very hard and that it's going to come down," she said. "We don't know how fast and to what level and how long it will stay somewhat elevated."

The annual inflation rate eased to 8.5% in July, down from 9.1% the prior month. Gasoline and other energy prices fell from the prior month, but food prices continued to climb. Prices for food at home were up 13.1% in July compared with the year before, the Labor Department said, adding pressure to household budgets.

High prices in the grocery store have led Jennifer Smith to be creative at mealtimes. Meatless Mondays and clean-out-the-fridge Thursdays are new additions to the family's bill of fare. A turkey sandwich, leftover pasta, and sautéed peppers and onions were all on the menu one Thursday night in the Raleigh, N.C., home.


Jennifer Smith, wearing a black shirt, with her family at home in Raleigh, N.C.PHOTO: JENNIFER SMITH

Mrs. Smith said her grocery bill has rocketed up. She noticed prices for snack foods—Cheez-It and Goldfish crackers, among others—have increased. “Our kids are back-to-school shopping now,” she said. “Everything has gone up. “

Rising expenses for raising a family could disproportionately affect lower-income families, said Dr. Sawhill, who holds a Ph.D. in economics. For a single parent earning $20,000 or $30,000 a year, shelling out the extra funds for a child might be difficult, she said.

Black families are also more exposed to inflation fluctuations, economists say. Researchers from the University of California, San Diego, and the Richmond Federal Reserve Bank showed that Black families experience higher levels of price volatility, which can make it difficult for households to determine how much the money they earn will buy.

To respond to higher prices, people might choose to shop at a more affordable store, but Black households were already shopping at the cheapest nearby store, said Munseob Lee, an economics professor at the University of California, San Diego. He said shoppers could also trade down to lower-quality items, but Black families and lower-income households have little room to adjust.

“There’s nothing left to cut out,” said Mrs. Mendoza, who is chief executive officer of Brown Mamas, a network of more than 6,500 Black mothers in the Pittsburgh area. “We’re cutting off the cable today because we can’t afford it,” she said of efforts to reduce her household’s costs.


Muffy Mendoza and her family decided not to host their annual weeklong get-together with the boys' cousins this summer, partly because of the cost of meals.PHOTO: NATE SMALLWOOD FOR THE WALL STREET JOURNAL

Tamera Dixon, a Pittsburgh mother of a son, said she is trying to save money, even in her sleep. "Switching cellphone plans, cutting back on eating out, helping your neighbor, buying from your local grocery store, your local farmers market," Ms. Dixon said. "When you've done all those things naturally just to survive, you've run out and you've exhausted all of that."

Child care, including nannies, preschools and nursery schools, is one of the greatest costs for most families, said Diane Schilder, a senior fellow at the Urban Institute.

Adrienne Briggs, who runs Lil' Bits Family Child Care Home, in Philadelphia, has been in the business for decades. It is a family child-care center, where she cares for children on one floor and lives on another. Ms. Briggs, who holds a master's degree in early childhood education, said her salary isn't commensurate with her education. She said she makes less than minimum wage, which is $7.25 an hour in Pennsylvania.

Most of the families she serves receive government subsidies, she said. "That actually pays about half of what my true cost really is, and it's kind of hard to put the true cost onto the families just because of inflation, and even before inflation, just the economy itself."

https://www.theguardian.com/business/2022/aug/18/handing-over-cold-hard-cash-makes-you-think-twice-the-people-ditching-cards-in-the-cost-of-living-crisis

**UK cost of living crisis**

# ‘Handing over cold hard cash makes you think twice’: the people ditching cards in the cost of living crisis

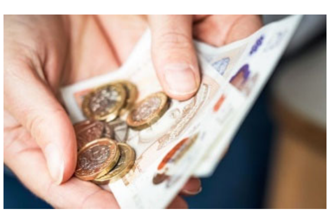
Composite: Guardian Design; Andy Andrews; Dr TJ Martin/Getty Images; Ben Molyneux/Alamy

**With inflation raging and real wages falling, more and more of us are taking an old-school approach to staying on top of spending. Suddenly coins and notes are back in favour**

**Amelia Tait**
Thu 18 Aug 2022 10.00 BST

A year ago, buying a Starbucks coffee didn’t feel “real” to Samantha Thomas. “It was just tapping,” the 41-year-old private tutor from Wigan says. “It didn’t feel like real money, it was just my card.” Nowadays, Thomas pulls out a £5 note every time she wants a hot drink. “When you’re physically handing over solid money,” she says, “it just makes you think twice.”

For the last 12 months, Thomas has been a cash-only consumer. She leaves her debit card at home when she does her weekly food shop, bringing only the budget she has allocated in notes. As a result, Thomas could “sit here and tell you to the penny” what most items in the supermarket cost. “I know that if I go to Aldi something would cost me 6p less than if I went to Asda and about 5p less than if I went to Tesco,” she says. Thomas’s “solid money” habit hasn’t just changed her attitude to Starbucks; it’s changed the way she spends and saves entirely.



Research shows that we experience the ‘pain of paying’ when spending cash. Photograph: georgeclerk/Getty Images/iStockphoto

Thomas is not the only one turning to cash during the cost of living crisis. In July, more than £800m in banknotes was withdrawn from Post Office counters, a 20% rise from the same month the year before. Martin Kearsley, banking director at the Post Office, told the BBC: “We’re seeing more and more people increasingly reliant on cash as the tried-and-tested way to manage a budget.”

Since records began five years ago, Post Office withdrawals have exceeded £800m only once before – and that was last Christmas, a time when a lot of cash is tucked into cards. Shortly after UK wages fell at their fastest rate in 20 years, Kearsley said it was clear that Britain is “anything but a cashless society”.

Thomas first ditched her debit card post-lockdown after she was troubled by her online spending during the pandemic, but she says her cash-only budget is helping her to prepare for rising costs. “I feel like I’m ahead of the game, I feel like I’ve got an advantage,” she says. “It’s definitely going to be tricky, but I feel like I’ve already got lots of tools in place to help me.”

Contactless promotes increased spending and increased use of debt
*Warwick business school*

Personal finance and consumer expert Sue Hayward concurs that “handing over cold hard cash often makes you think twice about how much you’re spending”. She also notes that it’s easier to keep track of purchases when paying with banknotes, “as contactless payments can take several days to show up on your statement”.

In 2020, researchers from Warwick business school analysed more than 300m transactions from 260,000 consumers and found that people with contactless cards spent “significantly more” than those without. Contactless spenders were also more likely to be charged overdraft fees and made more purchases overall. The researchers concluded that contactless: “promotes increased spending and can promote decreased cash usage and increased use of debt.”

Conversely, almost 30 years of academic research have shown that we experience the “pain of paying” when spending cash: handing over money feels like losing it, activating the insular cortex, the part of our brain that deals with physical pain. (Interestingly, it seems that some alternatives to cash are less painful than others. One 2018 paper, from the Frankfurt School of Finance & Management, found that consumers feel lower levels of pain when they pay with mobile phones and smartwatches than when they use credit cards.)

“It’s just being savvy and going back to old-school ways,” Thomas says of her cash use. On her YouTube channel, The Budget Mum UK, she shows her 2,600 subscribers how she withdraws her wage at the start of the month and separates the notes into different laminated envelopes. Among others, there’s an envelope for food shopping, one for travel, one for credit card debt and one for emergencies.

Old-style budgeting … 'cash stuffing' involves setting aside money in envelopes, one for each expense. Photograph: FotoDuets/Getty Images/iStockphoto

On social media, this budgeting technique is called "cash stuffing": the envelopes help people keep track of their spending and saving without complicated spreadsheets. Google searches for the technique spiked at the beginning of the year, and TikTok videos hashtagged #cashstuffing have now accumulated almost 550m views.

Jade Edmondson is a 29-year-old teaching assistant from Coventry who sells cash-stuffing materials such as labelled plastic envelopes, binders and savings tracking sheets on her Etsy page. She says she has seen a recent rise in sales. In total, Edmondson personally uses 30 cash-stuffing envelopes for things such as petrol money, Christmas savings and her Slimming World membership. Putting away money gradually in one envelope over the course of the year helps Edmondson save for bigger costs: she now has £350 saved to buy her four children's school uniforms. "If this was me last year, I would be panicking: 'How am I going to pay for all of this?'" she says. "Whereas actually now, I don't worry about money."

Yet a cash-only lifestyle can cause problems in an increasingly cashless society. In 2010, half of the UK's transactional payments were made in cash, but by 2020, this had dropped to just 17%. A number of shops banned cash payments for public health reasons during the pandemic, but a 2021 survey by Which? found that one in five consumers had been prevented from making a cash payment between April and July of 2021, when restrictions were easing.

The reality is you will pay more using cash because you can't shop online
*Natalie Cenney*

Thomas has run into trouble when paying for petrol – and when she sent her daughter to the cinema with cash recently, she was unable to buy her ticket and snacks. "It's just been trial and error," she says. Six weeks ago, she decided to set up Apple Pay on her phone as a backup for emergencies, but she refuses to leave her credit card in her car to avoid temptation.

Natalie Ceeney, chair of the Cash Action Group, says many small businesses don't accept cash because it's increasingly difficult to deposit takings due to the closure of high street banks. Ceeney is now campaigning to get ATMs to take cash deposits (you can currently do this inside banks, but opening hours can be prohibitive). However, she says, "setting up a whole new network" is "not quick". Meanwhile, Ceeney notes that many consumers depend on cash due to “some form of vulnerability”, such as not having a proper internet connection, smartphone or bank account, or having a disability. A May study by the Royal Society of Arts found that 15 million people in the UK rely on cash to budget.

“The main reason people will tell you they use cash is for budgeting: you can see it, you can feel it,” Ceeney says. “With the cost of living crisis, more people are strapped for cash so it shouldn’t be a surprise that people are going back to using cash, withdrawing money to get through the week safely without getting overdrawn.”

Although cash can have its advantages, Ceeney warns that there’s a “poverty premium” when avoiding cards. “The reality is, if you can’t shop online you will pay more using cash because you can’t get online deals or direct debits where you often get a discount, you can’t shop around or buy in bulk,” she says. Ceeney explains that although many families know this, they’re “going back to cash because they can’t afford to go overdrawn – this is about necessity”.

Even with cash-stuffing systems in place, Thomas and Edmondson are concerned about the ever-increasing cost of living. “I feel like it’s going to be a big hurdle,” Thomas says of rising bills, while Edmondson adds: “It’s still very nerve-racking. It’s like: ‘Where are we going to find this extra money from?’” While using cash can be helpful for individual consumers, it is not a substitute for government intervention, nor a long-term solution to our economic crisis. With food prices rising at their fastest pace in 14 years and annual energy bills expected to cost two months’ worth of wages next year, coins can only go so far.

*Additional reporting by Rachel Hall*

https://www.cnbc.com/2022/08/15/financing-pushes-monthly-cost-of-new-cars-to-record-high.html

# Drivers are paying an average $702 monthly for new cars: Here's why that record high was 'inevitable,' says analyst

PUBLISHED MON, AUG 15 20223:16 PM EDTUPDATED MON, AUG 15 20225:13 PM EDT

Sarah O'Brien@SARAHTGOBRIEN

## KEY POINTS

- In addition to elevated transaction prices on new vehicles, higher interest rates are adding to the cost of financing a car.
- Manufacturer discounts also have dropped 54.7% from a year ago, according to recent data.
- There are some things you can do to help keep the cost down for a new car.

Consumers looking to buy a new car may need to clear more room in their budgets for it.

For new vehicles, the average auto loan is for 70.4 months (less than two months shy of six years) and monthly payments have climbed past $700 for the first time ever, according to new data from Edmunds. It echoes similar findings included in a joint forecast from J.D. Power and LMC Automotive released in late July.

"It was inevitable just because we see how much vehicle consumers are financing," said Ivan Drury, senior manager of insights for Edmunds.

## Why drivers are spending more to buy a new vehicle

The average new-car transaction in July was $45,869, according to the J.D. Power/LMC Automotive forecast. That's down a tad from the record $45,988 set in June.

Several factors are playing into higher costs, experts say:

- **Higher interest rates for auto loans:** The average is about 5.5%, up from 4.5% a year ago, Edmunds data shows. That rate could tick higher, given that the Federal Reserve is expected next month to again raise a key interest rate that many consumer loans derive from.
- **Supply chain constraints:** In the midst of a persisting shortage of computer chips needed to complete today's cars, consumer demand continues to outstrip supply, which has led to elevated prices. Over the last year, prices on new cars have risen 10.4%, according to the latest Consumer Price Index.
- **Vehicle popularity:** Consumer preference also has shifted over the last decade or so to SUVs and trucks from sedans, which may cost less.
- **Fewer incentives:** With dealers not struggling to make sales, manufacturer discounts have fallen to an average of $894 per vehicle, down 54.7% from a year

ago, according to the J.D. Power/LMC estimate. It's the first time the average has fallen below $900.

## How to save money when financing a new car

If you plan to finance the purchase of a new car, there are some things to consider that could lower the amount you need to finance.

For starters, keep in mind that consumers with higher credit scores are able to secure the best loan terms.

"Boosting your score might make all the difference in an auto loan … the higher you can get it, the better the rate you'll be offered," said certified financial planner Malcolm Ethridge, an executive vice president and financial advisor at CIC Wealth in Rockville, Maryland.

Additionally, if you plan to use dealer financing, you may be able to negotiate the interest rate down, Ethridge said. "People probably don't focus on that," he said.

You also should be realistic about how much car you actually need. Some cars may have features that push the price up but that you could live without, he said.

"Pay attention to finding one that has fewer features … because that can bring down the price of the car," Ethridge said.

## Trade-in values remain 'extremely good'

And if you're trading in a car, that also will reduce the amount you need to finance. Depending on the specifics of the car, it could be worth more than you anticipate.

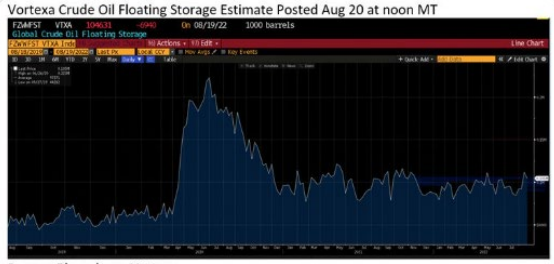
Trade-in values "are still extremely good compared to what it would have been worth in typical times," said Drury at Edmunds. For instance, for 5-year-old cars, "you are still thousands of dollars ahead of where you technically should be," he added.

"If you look at a 5-year-old car five years ago versus one today, there's no comparison," Drury said. "You have so much equity in that car."

**Dan Tsubouchi** @Energy_Tidbits · 20h

#Vortexa crude #Oil floating storage at 08/19 est 104.63 mmb, -6.94 mmb WoW vs revised up 08/12 of 111.57 mmb. 2nd consecutive week >100 mmb after being +/- 90 mmb for 7 weeks. Thx @Vortexa @business. #OOTT

Vortexa Crude Oil Floating Storage Estimate Posted Aug 20 at noon MT




Source: Bloomberg, Vortexa

Posted Aug 20, noon MT

FZWWFST VTXA Index 08/18/2019 - 08/19/2022

| | Date | Last Px |
|---|---|---|
| Fr | 08/19/2022 | 104.631k |
| Fr | 08/12/2022 | 111.571k |
| Fr | 08/05/2022 | 91956 |
| Fr | 07/29/2022 | 91904 |
| Fr | 07/22/2022 | 84582 |
| Fr | 07/15/2022 | 86346 |
| Fr | 07/08/2022 | 95063 |
| Fr | 07/01/2022 | 94835 |
| Fr | 06/24/2022 | 93158 |
| Fr | 06/17/2022 | 103.26k |
| Fr | 06/10/2022 | 101.878k |

Aug 13, noon MT

FZWWFST VTXA Index 08/11/2019 - 08/12/2022

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| Fr | 07/29/2022 | 91794 |
| Fr | 07/22/2022 | 85237 |
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| Fr | 07/08/2022 | 93508 |
| Fr | 07/01/2022 | 94246 |
| Fr | 06/24/2022 | 92554 |
| Fr | 06/17/2022 | 101.729k |
| Fr | 06/10/2022 | 98995 |
| Fr | 06/03/2022 | 82782 |

Aug 6, noon MT

FZWWFST VTXA Index 08/04/2019 - 08/05/2022

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|---|---|---|
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| Fr | 07/29/2022 | 95816 |
| Fr | 07/22/2022 | 87022 |
| Fr | 07/15/2022 | 86619 |
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| Fr | 06/24/2022 | 96394 |
| Fr | 06/17/2022 | 106.642k |
| Fr | 06/10/2022 | 103.827k |
| Fr | 06/03/2022 | 86967 |
| Fr | 05/27/2022 | 97566 |

Source: Bloomberg, Vortexa

**Dan Tsubouchi** @Energy_Tidbits · 22h

Did you see the impressive leaderboard for today's 3rd round @BMWchamps? 🇨🇦@coreconn -7 but not teeing off until 11:35am MT. Our 🇨🇦 golf stars on the course already are @TaylorPendrith -4, @ahadwingolf -4 and @MacHughesGolf at even par. Going to be a golf watching afternoon.

**BMW Championship**

August 18 - 21, 2022 · ESPN+

Wilmington Country Club (South Course) - Wilmington, DE
Par 71 - Yards 7534
Purse $15,000,000 - Defending Champion Patrick Cantlay

AccuWeather 88° Current Weather
Precipitation: -
Wind: SSE 3 mph
Gusts: 5 mph

Leaderboard | Player Stats | Course Stats

Round 3 - In Progress Auto Update: On

| POS | ↑↓ | PLAYER | SCORE | TODAY | THRU | R1 | R2 | R3 | R4 | TOT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | - | Adam Scott | -8 | - | 11:45 AM | 65 | 69 | -- | -- | 134 |
| T2 | - | Jordan Spieth | -7 | - | 11:25 AM | 68 | 67 | -- | -- | 135 |
| T2 | - | Corey Conners | -7 | - | 11:35 AM | 68 | 67 | -- | -- | 135 |
| T2 | - | Cameron Young | -7 | - | 11:35 AM | 67 | 68 | -- | -- | 135 |
| T2 | - | Scottie Scheffler | -7 | - | 11:45 AM | 68 | 67 | -- | -- | 135 |
| T6 | ↑16 | Collin Morikawa | -6 | -3 | 4 | 67 | 72 | -- | -- | 139 |
| T6 | - | Patrick Cantlay | -6 | - | 11:05 AM | 68 | 68 | -- | -- | 136 |
| T6 | - | Xander Schauffele | -6 | - | 11:05 AM | 67 | 69 | -- | -- | 136 |
| T6 | - | Scott Stallings | -6 | - | 11:15 AM | 68 | 68 | -- | -- | 136 |
| T6 | - | Rory McIlroy | -6 | - | 11:15 AM | 68 | 68 | -- | -- | 136 |
| T6 | - | Cam Davis | -6 | - | 11:25 AM | 69 | 67 | -- | -- | 136 |

**Dan Tsubouchi** @Energy_Tidbits · Aug 20

Did you notice? #Gazprom says #NordStream compressor maintenance "will be performed JOINTLY with #Siemens". Who besides DE signed off on Siemens to do this? Why? Or is this just a test by Putin to see what he can get from the West? Sept 3 will be a day to watch. #NatGas #OOTT

> **Dan Tsubouchi** @Energy_Tidbits · Aug 19
>
> Hmmm! #Gazprom says #NordStream to shut down on Aug 31 for 3 days and will resume #NatGas flows at 1.17 bcf/d "provided that no malfunctions are identified". wonder what the betting line is on more than 3 days! #OOTT
>
> **Gazprom** @GazpromEN · 7h
>
> Service maintenance of GCU at Portovaya CS.
>
> On August 31, 2022, the only gas compressor unit that is currently in operation, Trent 60, will be shut down for a three-day servicing and preventive maintenance period.
>
> This set of scheduled operations under the current service maintenance contract will be performed jointly with Siemens.
>
> According to the technical specifications provided by Siemens, the unit must undergo technical maintenance every 1,000 hours, namely, the casing must be inspected for cracks, dents, deformations and burn-throughs, and cleaned; the oil, air and gas combustion venting systems must be checked for leaks, connections must be tightened, and the causes of leaks must be eliminated; the safety valves must be subjected to performance checks and the airflow control system must undergo adjustments.
>
> Gas supplies via the Nord Stream gas pipeline will be suspended during the three-day (August 31 to September 2, 2022) maintenance of the Trent 60 DLE gas compressor unit.
>
> Upon the completion of maintenance operations, provided that no malfunctions are identified, gas transmission will be resumed at the rate of 33 million cubic meters per day.

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SAF

**Dan Tsubouchi** @Energy_Tidbits · Aug 19

#JCPOA. #Oil market should keep pricing in likelihood of a deal as long as signs of progress. Senior Biden adminstration offical tells CNN "while a deal is now "closer than it was two weeks ago, the outcome remains uncertain as some gaps remain." #OOTT

cnn.com

Iran drops key 'red line' demand as progress on a revived nuclear deal ...

Iran has officially dropped a key "red line" demand that had been a major sticking point in efforts to revive the Iran nuclear deal, a senior ...

SAF

**Dan Tsubouchi** @Energy_Tidbits · Aug 19

Did union give clear deal maker/breaker to #Shell to get its 0.47 bcf/d Prelude FLNG back loading #LNG cargos? "Our Prelude members have drawn a line in the sand on job security" ie. no outsourcing union jobs to contractors. Last loading was July 6. #NatGas #OOTT

https://www.facebook.com/pages/category/Labor-Union/Offshore-Alliance-524335271311416/

Offshore Alliance

August 17 at 2:00PM

The Offshore Alliance and ETU members on Prelude are into our 70th day of Protected Industrial Action in our EBA campaign for job security and Tier 1 rates and conditions. Shell have torched an estimated $1.3 Billion of production in a dispute which has locked down production and prevented any offtakes for over 5 weeks.

Shell have tipped about $1.3 Billion of earnings down the drain by refusing to agree to a zero cost claim of ensuing permanent direct-hire jobs are not out-sourced to low-wage labour hire contractors.

Shell's losses work out at over $5 Million per Prelude employee - plus they have cancelled the Turnaround scheduled to commence in two weeks time.

No company in Australian history has lost so much money in a bargaining dispute.

Shell's industrial relations is in complete chaos and is what Company's get when they follow the AMMA industrial relations hand book about how to f*** up Enterprise Bargaining negotiations.

Whatever Shell's Prelude bosses thought they could save by outsourcing permanent jobs to low-wage labour hire contractors has been exceeded 1000 times over in their idelogogically bankrupt approach to bargaining negotiations.

Our Prelude members have drawn a line in the sand on job security and have this week supported the extension of Protected Industrial Action until our bargaining claims are resolved.

The Offshore Alliance and ETU will go one day longer and one day stronger!

IF YOU DON'T FIGHT, YOU LOSE!


SAF

**Dan Tsubouchi** @Energy_Tidbits · Aug 19

ICYMI. Dutch TTF #NatGas prices Thurs settle $72.08/mmbtu is >$400 per equivalent barrel of #Oil. This is for Oct shoulder season ie. not too hot/not too cold. Now panic time to cut consumption, switch where possible to #PetroleumProducts #Coal. Thx @MessageAnnKoh. #OOTT

and Spot Prices:

- Japan-Korea Marker futures for Oct. +78c to $57.60/mmbtu o Thursday
  - Nov. contract +78c to $57.60
- Dutch TTF futures for September delivery on ICE settled at th equivalent of +$3.87 to $71.23/mmbtu on Thursday, according Bloomberg calculations
  - October contract +$3.57 to $72.08

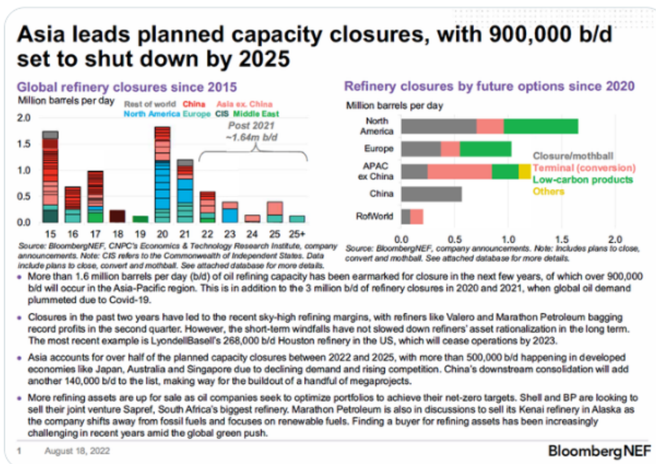
oomberg

**Dan Tsubouchi** @Energy_Tidbits · Aug 18

for those who want to follow live @California_ISO #Electricity supply, here is the link. #RenewableEnergy peaked at 2:20pm PT. #NatGas increasing to fill the gap as daily power moves to peak over the next few hours. #OOTT
caiso.com/TodaysOutlook/...


**Dan Tsubouchi** @Energy_Tidbits · Aug 18

Reminder of #Oil market stress for 2023 if demand recovers back to pre-Covid levels. Refinery capacity actual and planned shutdowns since Jan 1/2020 now 4.6 mmb/d driven by #ESG pressures. Thx @BloombergNEF Sisi Tang for updated list. #OOTT



**Asia leads planned capacity closures, with 900,000 b/d set to shut down by 2025**



*Source: BloombergNEF, CNPC's Economics & Technology Research Institute, company announcements. Note: CIS refers to the Commonwealth of Independent States. Data include plans to close, convert and mothball. See attached database for more details.*

*Source: BloombergNEF, company announcements. Note: Includes plans to close, convert and mothball. See attached database for more details.*

- More than 1.6 million barrels per day (b/d) of oil refining capacity has been earmarked for closure in the next few years, of which over 900,000 b/d will occur in the Asia-Pacific region. This is in addition to the 3 million b/d of refinery closures in 2020 and 2021, when global oil demand plummeted due to Covid-19.
- Closures in the past two years have led to the recent sky-high refining margins, with refiners like Valero and Marathon Petroleum bagging record profits in the second quarter. However, the short-term windfalls have not slowed down refiners' asset rationalization in the long term. The most recent example is LyondellBasell's 268,000 b/d Houston refinery in the US, which will cease operations by 2023.
- Asia accounts for over half of the planned capacity closures between 2022 and 2025, with more than 500,000 b/d happening in developed economies like Japan, Australia and Singapore due to declining demand and rising competition. China's downstream consolidation will add another 140,000 b/d to the list, making way for the buildout of a handful of megaprojects.
- More refining assets are up for sale as oil companies seek to optimize portfolios to achieve their net-zero targets. Shell and BP are looking to sell their joint venture Sapref, South Africa's biggest refinery. Marathon Petroleum is also in discussions to sell its Kenai refinery in Alaska as the company shifts away from fossil fuels and focuses on renewable fuels. Finding a buyer for refining assets has been increasingly challenging in recent years amid the global green push.

1 August 18, 2022 BloombergNEF

**Dan Tsubouchi** @Energy_Tidbits · May 24

Focus by #Biden @fbirol is on short term oil supply (want more #OPEC, shale), but don't have answer for big 2022 problem - refining capacity to produce #Diesel #Gasoline #JetFuel. 4.4 mmbd shut down since Jan 1/2020 driven by #ESG pressures. Thx ...

**Dan Tsubouchi** @Energy_Tidbits · Aug 18

"I will do whatever it takes to ensure Donald Trump is never again anywhere near the Oval Office, and I mean it" says @Liz_Cheney. Have to believe she can, If she impacts Senate/House races, could see continued #NetZero push no matter the energy security/cost risk. #OOTT

← 1988 | November 3, 1992 | 1996 →

538 members of the Electoral college
270 electoral votes needed to win

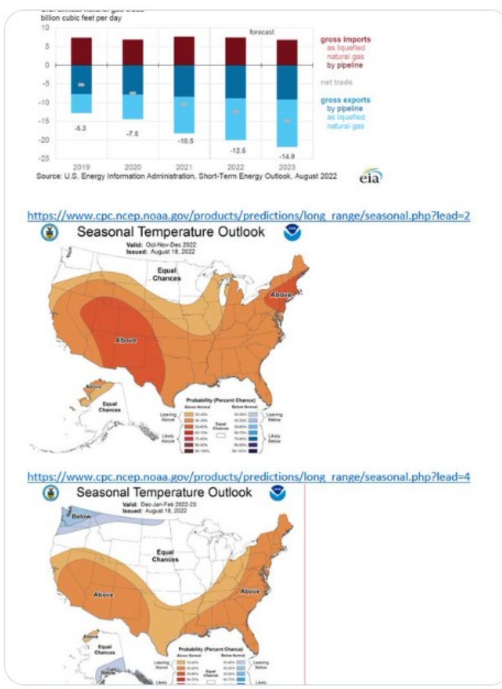
Opinion polls

| | | | |
|---|---|---|---|
| Turnout | 55.2%[1] ▲ 5.0 pp | | |
| Nominee | Bill Clinton | George H. W. Bush | Ross Perot |
| Party | Democratic | Republican | Independent |
| Home state | Arkansas | Texas | Texas |
| Running mate | Al Gore | Dan Quayle | James Stockdale |
| Electoral vote | 370 | 168 | 0 |
| States carried | 32 + DC | 18 | 0 |
| Popular vote | 44,909,889 | 39,104,550 | 19,743,821 |
| Percentage | 43.0% | 37.5% | 18.9% |

Presidential election results map. Blue denotes states won by Clinton/Gore and red denotes those won by Bush/Quayle. Numbers indicate electoral votes cast by each state and the District of Columbia.

**Dan Tsubouchi** @Energy_Tidbits · Aug 18

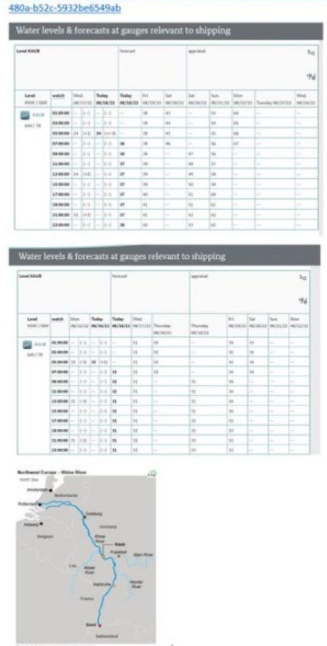
Good thing US #LNG exports are >4.5 tcf in 2022 amidst global LNG crisis. Otherwise HH #NatGas prices would be crashing, not ~$9.25, given @NOAA call for a warm start to a warm winter. Think about it, US LNG exports +2.63 tcf in last 3 yr vs storage now 2.52 tcf at Nov 12. #OOTT



**Dan Tsubouchi** @Energy_Tidbits · Aug 18

Should be back to shipping #JetFuel #Diesel #HeatingOil south on #RhineRiver with rising water levels. Looks like Mon/Tues was lowest level at 31 cm (12.2 inch), forecast to rise to double that by Sun. #OOTT

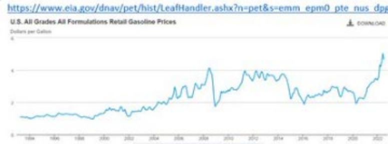
https://www.elwis.de/DE/dynamisch/gewaesserkunde/wasserstaende/index.php?target=1&pegelId=1d26e504-7f9e-480a-b52c-5932be6549ab




**Dan Tsubouchi** @Energy_Tidbits · Aug 18

#Oil demand response. YoY % increase/decrease in @USDOTFHWA vehicles miles traveled vs @EIAgov US #Gasoline prices. Feb +10.7% v $3.61, Mar +2.9% v $4.32, Apr +1.6% v $4.21, May +1.4% v $4.55, June -1.7% v $5.03. Suggests July should be ~flat YoY with $4.67 gasoline price. #OOTT

https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=emm_epm0_pte_nus_dpg&f=m




| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 2.636 | 2.533 | 2.329 | 1.938 | 1.961 | 2.170 | 2.272 | 2.272 | 2.274 | 2.248 | 2.200 | 2.284 |
| 2021 | 2.420 | 2.587 | 2.898 | 2.948 | 3.076 | 3.157 | 3.231 | 3.255 | 3.272 | 3.384 | 3.491 | 3.406 |
| 2022 | 3.413 | 3.611 | 4.322 | 4.213 | 4.545 | 5.032 | 4.668 | | | | | |

https://www.fhwa.dot.gov/policyinformation/travel_monitoring/22juntvt/page3.cfm

U.S. Department of Transportation
Federal Highway Administration

June 2022 Traffic Volume Trends

Estimated Monthly Motor Vehicle Travel in the U.S. for June 2022

Table - 1. Estimated Individual Monthly Motor Vehicle Travel in the United States**

| System | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2021 Individual Monthly Vehicle-Miles of Travel in Billions** | | | | | | | | | | | | |
| Rural Interstate | 18.3 | 16.4 | 21.9 | 20.7 | 23.9 | 24.7 | 26.5 | 24.5 | 22.9 | 23.7 | 22.7 | 22.4 |
| Rural Other Arterial | 27.5 | 24.9 | 32.5 | 31.5 | 34.6 | 35.4 | 36.9 | 35.4 | 33.9 | 34.7 | 32.1 | 31.7 |
| Other Rural | 24.5 | 22.1 | 28.6 | 28.1 | 31.3 | 31.6 | 33.4 | 31.8 | 30.5 | 31.0 | 28.4 | 27.8 |
| Urban Interstate | 40.1 | 37.2 | 47.1 | 44.6 | 48.6 | 49.4 | 50.6 | 48.8 | 47.8 | 49.5 | 47.0 | 46.8 |
| Urban Other Arterial | 81.7 | 76.3 | 94.2 | 90.1 | 98.1 | 98.2 | 100.7 | 99.7 | 96.3 | 99.3 | 93.0 | 93.8 |
| Other Urban | 39.0 | 36.1 | 45.1 | 44.1 | 47.8 | 47.6 | 48.4 | 47.2 | 46.5 | 47.6 | 44.5 | 45.9 |
| All Systems | 231.0 | 213.0 | 269.4 | 259.2 | 284.3 | 286.9 | 296.5 | 287.4 | 278.0 | 285.8 | 267.7 | 268.4 |
| **2022 Individual Monthly Vehicle-Miles of Travel in Billions** | | | | | | | | | | | | |
| Rural Interstate | 19.0 | 18.4 | 22.7 | 20.9 | 24.0 | 24.2 | | | | | | |
| Rural Other Arterial | 28.1 | 27.5 | 32.6 | 31.2 | 34.5 | 34.3 | | | | | | |
| Other Rural | 24.7 | 24.2 | 28.6 | 27.9 | 31.5 | 30.9 | | | | | | |
| Urban Interstate | 42.1 | 41.6 | 49.4 | 46.2 | 49.6 | 49.3 | | | | | | |
| Urban Other Arterial | 85.2 | 83.9 | 96.9 | 91.9 | 99.3 | 96.9 | | | | | | |
| Other Urban | 41.4 | 40.2 | 47.0 | 45.1 | 49.2 | 46.5 | | | | | | |
| All Systems | 240.5 | 235.8 | 277.3 | 263.2 | 288.2 | 282.1 | | | | | | |
| *** Percent Change in Individual Monthly Travel 2021 vs. 2022** | | | | | | | | | | | | |
| Rural Interstate | 3.8 | 12.2 | 3.8 | 0.9 | 0.2 | -2.1 | | | | | | |
| Rural Other Arterial | 2.1 | 10.1 | 0.5 | -1.0 | -0.4 | -3.1 | | | | | | |
| Other Rural | 1.2 | 9.6 | 0.2 | -0.7 | 0.5 | -2.0 | | | | | | |
| Urban Interstate | 5.0 | 11.8 | 4.7 | 3.4 | 2.2 | -0.3 | | | | | | |
| Urban Other Arterial | 4.3 | 10.0 | 2.9 | 2.0 | 1.3 | -1.3 | | | | | | |
| Other Urban | 6.1 | 11.4 | 4.2 | 2.4 | 3.0 | -2.3 | | | | | | |
| All Systems | 4.1 | 10.7 | 2.9 | 1.6 | 1.4 | -1.7 | | | | | | |

**Dan Tsubouchi** @Energy_Tidbits · Aug 17

"i'm worried that we can have tough times for an extended period""i'm more in the several years [of difficult markets] cap. i don't think this is done overnight". Food for thought, hope @NorgesBank CEO Tangen is wrong. Thx @AdrienneKlasa @RobinWigg. #OOTT

ft.com

Norway's oil fund posts biggest ever loss in turbulent markets

Returns on $1.2tn fund dropped by $174bn in first half, driven by a sell-off across all sectors except energy

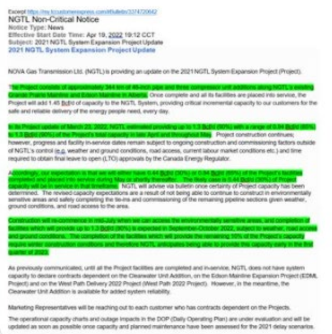
**Dan Tsubouchi** @Energy_Tidbits · Aug 17

great day in #Calgary. 28c and sunny. aren't dogs great! just keep looking to the side of my screen and this dog has been having a great time playing fetch for the last 15 minutes and no signs of wanting to stop.

**Dan Tsubouchi** @Energy_Tidbits · Aug 17

unfortunately, the hit to #AECO #NatGas prices has played out as warned by my SAF Group partner @GregSheaWorkBee in April. See 👇 below 04/19/22 thread. #OOTT

> **Dan Tsubouchi** @Energy_Tidbits · Apr 19
>
> Expect #AECO price hit as unexpected #NatGas will be forced into storage this summer. @TCEnergy likely case delays in USJR capacity addition in-service for ~0.9 bcf/d, most for ~5 mths, small % to early Q1/23. Thx @GregSheaWorkBee for flagging. #OOTT my.tccustomerexpress.com/#Bulletin/3374...



NGTL Non-Critical Notice
Notice Type: News
Effective Start Date Time: Apr 19, 2022 19:12 CCT
Subject: 2021 NGTL System Expansion Project Update
2021 NGTL System Expansion Project Update

NOVA Gas Transmission Ltd. (NGTL) is providing an update on the 2021 NGTL System Expansion Project (Project).

[illegible] Once complete and all its facilities are placed into service, the Project will add 1.45 Bcf/d of capacity to the NGTL System, providing critical incremental capacity to our customers for the safe and reliable delivery of the energy people need, every day.

[illegible] Project construction continues; however, progress and facility in-service dates remain subject to ongoing construction and commissioning factors outside of NGTL's control (e.g. weather and ground conditions, road access, current labour market conditions etc.) and time required to obtain final leave to open (LTO) approvals by the Canada Energy Regulator.

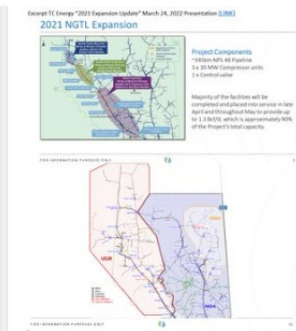
[illegible] NGTL will advise via bulletin once certainty of Project capacity has been determined. The revised capacity expectations are a result of not being able to continue to construct in environmentally sensitive areas and safely completing the tie-ins and commissioning of the remaining pipeline sections given weather, ground conditions, and road access to the area.

[illegible]

As previously communicated, until all the Project facilities are completed and in-service, NGTL does not have system capacity to declare contracts dependent on the Clearwater Unit Addition, on the Edson Mainline Expansion Project (EDML Project) and on the West Path Delivery 2022 Project (West Path 2022 Project). However, in the meantime, the Clearwater Unit Addition is available for added system reliability.

Marketing Representatives will be reaching out to each customer who has contracts dependent on the Projects.

The operational capacity charts and outage impacts in the DOP (Daily Operating Plan) are under evaluation and will be updated as soon as possible once capacity and planned maintenance have been assessed for the 2021 delay scenarios.




**Dan Tsubouchi** @Energy_Tidbits · Aug 17

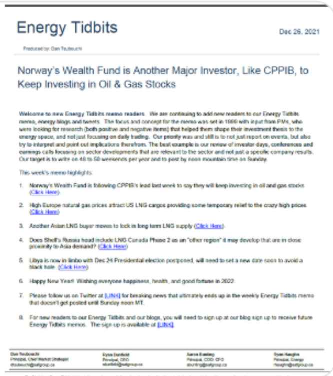
For those not near their laptop, @EIAgov just released #Oil #Gasoline #Distillates inventory as of Aug 12. Table below compares vs expectations and @APIenergy yesterday. Prior to release, WTI was $88.07. #OOTT

ir.eia.gov/wpsr/overview....

| s Inventory Aug 12: EIA, Bloomberg Survey Expectations, A | | |
|---|---|---|
| els) | EIA | Expectations |
| | -7.06 | 0.80 |
| | -4.64 | -1.00 |
| | 0.78 | 1.00 |
| | -10.92 | 0.80 |
| ommercial so builds in impact of 3.4 mmb draw from SPR for A | | |
| ed in the oil data, Cushing had a build of 0.19 mmb for Aug 12 | | |
| Bloomberg | | |
| SAF Group | https://safgroup.ca/news-insights/ | |

Dan Tsubouchi @Energy_Tidbits · Aug 17

Worst Norway wealth fund performance since 2008 crash. See 👇 12/21/21 thread & SAF Group 12/26/21 Energy Tidbits memo, fortunately they bucked the wave & decided to stay in #Oil #NatGas stocks that, even with Q3 weakness, are only positive performing equity sector. #OOTT

Energy Tidbits

Dec 26, 2021

Produced by: Dan Tsubouchi

Norway's Wealth Fund is Another Major Investor, Like CPPIB, to Keep Investing in Oil & Gas Stocks

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. Our priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector and not just a specific company results. Our target is to write on 48 to 50 weekends per year and to post by noon mountain time on Sunday.

This week's memo highlights:

1. Norway's Wealth Fund is following CPPIB's lead last week to say they will keep investing in oil and gas stocks (Click Here).
2. High Europe natural gas prices attract US LNG cargos providing some temporary relief to the crazy high prices (Click Here)
3. Another Asian LNG buyer moves to lock in long term LNG supply (Click Here).
4. Does Shell's Russia head include LNG Canada Phase 2 as an "other region" it may develop that are in close proximity to Asia demand? (Click Here)
5. Libya is now in limbo with Dec 24 Presidential election postponed, will need to set a new date soon to avoid a black hole. (Click Here)
6. Happy New Year! Wishing everyone happiness, health, and good fortune in 2022.
7. Please follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
8. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK].

Dan Tsubouchi, Principal, Chief Market Strategist
Ryan Dunfield, Principal, CEO
Aaron Bunting, Principal, COO, CFO
Ryan Haughn, Principal, Energy

Dan Tsubouchi @Energy_Tidbits · Dec 21, 2021

Multiple expansion for #Oil #NatGas stocks? Norway wealth fund has #MacronMoment & follows @cppib to slow play #EnergyTransition, won't sell, rather be a driving force for their equity investments to "adjust to #NetZero emissions over time". Less sellers is always ...

Dan Tsubouchi @Energy_Tidbits · Aug 16

Hmm! 3 separate @StateDeptSpox comments point to US return to #JCPOA. no greater challenge to US national security than Iran w/ nuke, deal will be dead if no longer in national security interest to pursue, big issues have been largely settled. See 👇 SAF Group transcript. #OOTT


US State Department briefing by Spokesperson Ned Price started at approx. 12:50pm MT. https://www.youtube.com/watch?v=c56GO9JpmPU.

Items in "italics" are SAF Group created transcript

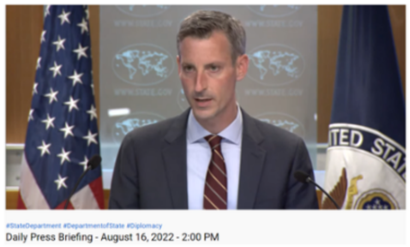
First question was on JCPOA, US State Dept spokesperson Ned Price initial reply included his standard line "*... we agree with the High Representative, we agree with Mr. Borrell's fundamental point – what could be negotiated over the course of these past 16, 17 months has been negotiated.*" Price was then pressed a couple times on his what could be negotiated has been negotiated. Price "*... the big issues have been discussed, they have been tabled. We believe they have been largely settled. That was the point of the EU*".

Later Price "*... this is a central challenge. There would be no greater challenge to our foreign policy, to our national security, to the collective security of the international community should Iran acquire a nuclear weapon. So that is why we have maintained this clear-eyed, steady, principled pragmatic focus at every turn of this diplomacy*". Two questions later, Price "*... the deal will be dead as soon as it is no longer in our national security interest to pursue. The point I just made in that admittedly long-winded answer to you is that the deal that has been on the table. At least, referring to the deal that has been on the table since March, for us, is a much more advantageous proposition than the status quo*".

Prepared by SAF Group https://safgroup.ca/news-insights/

**Dan Tsubouchi** @Energy_Tidbits · Aug 16

Hmmm! is this #Biden messaging for return to #JCPOA? Big issues are fine, other items are details? @StateDeptSpox just now "the big issues have been discussed. they have been tabled. We believe they have been largely settled." Seems consistent with 👇 Feb 1 tweet. #OOTT

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Prepared by SAF Group https://safgroup.ca/news-insights/

**Dan Tsubouchi** @Energy_Tidbits · Feb 1

Sounds like #Biden prepared to make last minute concessions to get #JCPOA. "We are prepared to go back into the deal. It doesn't mean that every detail of the negotiation has been resolved from our side, but

**Dan Tsubouchi** @Energy_Tidbits · Aug 16

RUS impact on #Oil/#NatGas vs #Copper. Slowing global economy, but RUS is huge in former so supply shortage. RUS is nothing in latter so @bhp CEO Henry "over the short to medium term, we expect there's going to be a bit of oversupply in copper". @DavidInglesTV. #OOTT


SAF Group created transcript of comments by BHP CEO Mike Henry with Bloomberg's David Ingles, Yvonne Man and Haidi Stroud-Watts on August 16, 2022. https://www.bloomberg.com/news/videos/2022-08-16/bhp-ceo-says-china-to-provide-stability-to-global-growth-video

Items in "italics"

At 3:40 min mark. Ingles *"… your outlook then on the copper market, do you think we will need more of this stuff these next 12 months or do we have to start paring back our expectations because of the growth outlook?"* Henry *"so, long term outlook for copper is really strong. Both for copper, nickel and, of course, potash. And that's off the back of these unstoppable global trends of decarbonization, electrification, population growth, increasing standards of living. All three of those commodities play to those fanatics. Now what happens over the next 12 months really does depend on that global growth outlook that we were speaking about earlier. We believe China is going to provide a bit of a growth tailwind, but we do expect we will see slowing global growth elsewhere. Over the short to medium term, we expect there's going to be a bit of oversupply in copper, but then towards the tail end of the decade, we expect the markets to move back into balance. the world needs more copper projects and that to be supportive of pricing"*.

Prepared by SAF Group https://safgroup.ca/news-insights/

**Dan Tsubouchi** @Energy_Tidbits · Aug 16

Oct is shoulder season for #NatGas consumption ie. not hot, not cold. But crazy high prices for Oct. Mon settle, Dutch TTF #NatGas $66.71/mmbt, JKM #LNG $56.19. This has to be forcing demand response. Better hope it's not a cold winter. Thx @SStapczynski @MessageAnnKoh #OOTT

res and Spot Prices:

- Japan-Korea Marker futures for September contract +5c to $45.44/mmbtu on Monday
  - Oct. contract +$4.30 to $56.19
- Dutch TTF futures for September delivery on ICE settled at the equivalent of +$3.57 to $65.52/mmbtu on Monday, according to Bloomberg calculations
  - October contract +$3.45 to $66.71

e: Bloomberg

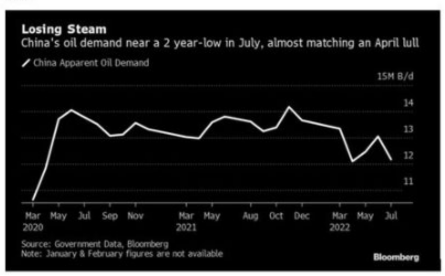
**Dan Tsubouchi** @Energy_Tidbits · Aug 16

China apparent #Oil demand -1.6 mmb/d YoY. Combine that with RUS oil not down as much as expected, SPR releases & JCPOA chatter, oil ~$90 is higher than most expect. Thx @sarahchen @business John Liu. #OOTT

**Excerpt**

Oil Consumption in China Is Under Threat in Risk to Prices (1)
2022-08-16 07:48:20.408 GMT

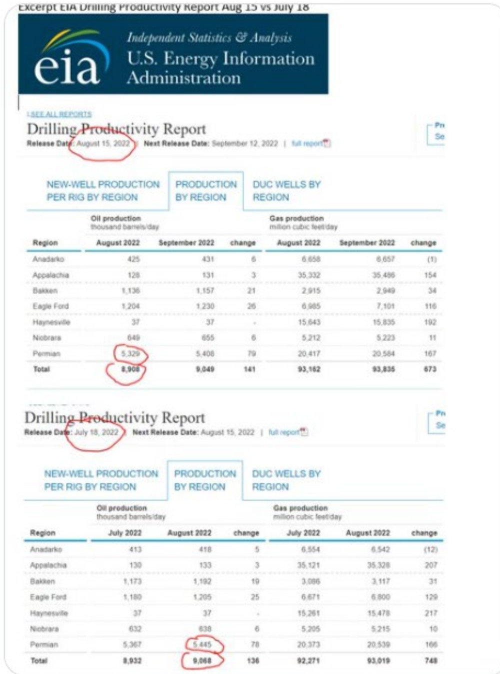
By Bloomberg News
(Bloomberg) -- Oil demand in China, the largest importer, is under threat as the government presses on with strict anti-virus curbs and growth slows.
Among warning signs, total oil-product demand may average about 14.1 million barrels a day this quarter, below the average of 15.7 million a day in the same period last year, according to data and analytics firm Kpler. Separately, official figures show apparent crude consumption sank almost 10% in July as refineries handled the least oil on a daily basis that month since March 2020.




To contact Bloomberg News staff for this story:
John Liu in Beijing at jliu42@bloomberg.net;
Sarah Chen in Beijing at schen514@bloomberg.net
To contact the editors responsible for this story:
Serene Cheong at scheong20@bloomberg.net
Jake Lloyd-Smith

**Dan Tsubouchi** @Energy_Tidbits · Aug 15

This is a change in a forecast, not actuals, but still notable @EIA revised down its #Permian shale/tight #Oil Aug production estimate from 5.445 mmb/d to 5.329 mmb/d. Have to wonder if they changed forecast assumption because the massive Texas heat wave in July/Aug. #OOTT



Excerpt EIA Drilling Productivity Report Aug 15 vs July 18

eia — Independent Statistics & Analysis — U.S. Energy Information Administration

‹ SEE ALL REPORTS

Drilling Productivity Report

Release Date: August 15, 2022 | Next Release Date: September 12, 2022 | full report

NEW-WELL PRODUCTION PER RIG BY REGION | PRODUCTION BY REGION | DUC WELLS BY REGION

| | Oil production thousand barrels/day | | | Gas production million cubic feet/day | | |
|---|---|---|---|---|---|---|
| Region | August 2022 | September 2022 | change | August 2022 | September 2022 | change |
| Anadarko | 425 | 431 | 6 | 6,658 | 6,657 | (1) |
| Appalachia | 128 | 131 | 3 | 35,332 | 35,486 | 154 |
| Bakken | 1,136 | 1,157 | 21 | 2,915 | 2,949 | 34 |
| Eagle Ford | 1,204 | 1,230 | 26 | 6,985 | 7,101 | 116 |
| Haynesville | 37 | 37 | - | 15,643 | 15,835 | 192 |
| Niobrara | 649 | 655 | 6 | 5,212 | 5,223 | 11 |
| Permian | 5,329 | 5,408 | 79 | 20,417 | 20,584 | 167 |
| **Total** | **8,908** | **9,049** | **141** | **93,162** | **93,835** | **673** |

Drilling Productivity Report

Release Date: July 18, 2022 | Next Release Date: August 15, 2022 | full report

NEW-WELL PRODUCTION PER RIG BY REGION | PRODUCTION BY REGION | DUC WELLS BY REGION

| | Oil production thousand barrels/day | | | Gas production million cubic feet/day | | |
|---|---|---|---|---|---|---|
| Region | July 2022 | August 2022 | change | July 2022 | August 2022 | change |
| Anadarko | 413 | 418 | 5 | 6,554 | 6,542 | (12) |
| Appalachia | 130 | 133 | 3 | 35,121 | 35,328 | 207 |
| Bakken | 1,173 | 1,192 | 19 | 3,086 | 3,117 | 31 |
| Eagle Ford | 1,180 | 1,205 | 25 | 6,671 | 6,800 | 129 |
| Haynesville | 37 | 37 | - | 15,261 | 15,478 | 217 |
| Niobrara | 632 | 638 | 6 | 5,205 | 5,215 | 10 |
| Permian | 5,367 | 5,445 | 78 | 20,373 | 20,539 | 166 |
| **Total** | **8,932** | **9,068** | **136** | **92,271** | **93,019** | **748** |

**Dan Tsubouchi** @Energy_Tidbits · Aug 15

#JCPOA. should hear soon, as this is supposedly coming by midnight, which is 1:30pm MT. #OOTT

**IRNA News Agency** @IrnaEnglish · Aug 15

Iran state-affiliated media

#Iran's Foreign Minister @Amirabdolahian : We will present our final proposal to the European coordinator tonight. If the US' response is realistic and flexible, an agreement will be reached. #ViennaTalks

Show this thread

**Dan Tsubouchi** @Energy_Tidbits · Aug 15

Also "some fear that anyone who continues to produce oil will be on the wrong side of history. to them i say we believe we are on the right side of reality". Great closing comments by @aramco CEO Nasser on the inconvenient truth on #EnergyTransition. #OOTT

> **Dan Tsubouchi** @Energy_Tidbits · Aug 15
>
> Must read! #Aramco CEO Nasser "rest of world will not transition at the same speed as developed world. this is where most of humanity lives". ie. 6.8b of 7.8b world! It's why #EnergyTransition "ambition is years ahead of reality". #Oil #NatGas look good for 2020s. #OOTT


SAF Group created transcript of Saudi Aramco CEO Nasser's concluding comments on Saudi Aramco Q2 call on Aug 15, 2022

Items in "italics" are SAF Group created transcript

At 7:34am MT, Nasser "*our focus remains on providing the reliable, sustainable and affordable energy the world needs. Some might ask why we are so deeply committed to growth and reliability when others are calling for reduced investment in oil and gas. Some fear that anyone who continues to produce oil will be on the wrong side of history. To them, I say that we believe we are on the right side of reality. Just look at the challenges the energy markets have faced in recent months. If alternative energy sources could have shouldered the burden, they would have. But ambition is still years ahead of reality. Longer term, we know the rest of the world will not transition at the same speed as the developed world. This is where most of humanity lives. Most of the roughly 2 billion new energy consumers on the planet by 2050 will be living there too. In short, we know the world is going to need energy from hydrocarbons for many decades to come. That is why we will never back down from our responsibility to the billions of people around the world who depend on us. Or t our commitment to an orderly and sustainable energy transition.*"

Prepared by SAF Group https://safgroup.ca/news-insights/

**Dan Tsubouchi** @Energy_Tidbits · Aug 15

Must read! #Aramco CEO Nasser "rest of world will not transition at the same speed as developed world. this is where most of humanity lives". ie. 6.8b of 7.8b world! It's why #EnergyTransition "ambition is years ahead of reality". #Oil #NatGas look good for 2020s. #OOTT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Prepared by SAF Group https://safgroup.ca/news-insights/

**Dan Tsubouchi** @Energy_Tidbits · Aug 15

#SaudiAramco Q2 call still on. CEO Nasser just reiterated his comments yesterday "today you have less than 2 million barrels a day of spare capacity", not enough for any increase in #Oil demand. Nasser also reminded there are always disruptions to supply. #OOTT

**Dan Tsubouchi** @Energy_Tidbits · Aug 14

Buckle Up! Available #Oil capacity is declining fast. EU sanctions on RUS #Oil start in Dec. @ArgusMedia reports #Aramco CEO Nasser said "describing "strained" global spare capacity of less than 2mn b/d and "declining fast." Oil looks good for Q4. Thx Ruxandra Jordache #OOTT


https://www.argusmedia.com/en/news/2360965-aramco-2q-profit-at-record-on-high-oil-prices-demand

Aramco 2Q profit at record on high oil prices, demand

Published date: 14 August 2022

Saudi state-controlled Aramco's second-quarter profit exceeded that of the three largest-earning oil majors combined, pushed higher by increases in oil prices, sales volumes and refining margins.

Aramco said today it broke its quarterly profit record posted in May, with a 90pc year-on-year jump to $48.4bn in the second quarter, more than it made in the first six months of 2021.

Comparatively, ExxonMobil, Shell and Chevron recorded a collective profit of $47.61bn in the second quarter, according to *Argus* calculations.

Aramco's free cash flow rose by 53pc on the year to $34.6bn in the second quarter, with the company citing increases in cash from operating activities. It left its dividend guidance unchanged at $18.8bn, to be paid in the third quarter. Almost all of this goes to the Saudi state.

"We all know the energy market has been characterised by volatility and instability during the first half of this year," Aramco chief executive Amin Nasser told reporters, attributing the record second-quarter results to higher demand for the company's products. The company forecast oil demand will continue to grow for the remainder of the decade, "despite downward economic pressures on short-term global forecasts." Nasser assessed current global oil demand as "healthy," based on customer nominations "especially from Asia."

But he flagged supply-side constraints.

"Ongoing investment in our industry is essential — both to help ensure markets remain well supplied and to facilitate an orderly energy transition," he said, describing "strained" global spare capacity of less than 2mn b/d and "declining fast." Saudi and Opec+ officials have faced consumer pressure to increase output this year. The producers' alliance will this month unwind the roughly 9.7mn b/d of cuts it implemented in May 2020 in response to the Covid-19 pandemic, and will add a further 100,000 b/d of output in September.

"Our commitment is, any time we have been asked [by the Saudi government]... to go to our maximum sustained capacity, which is currently 12mn b/d, we'll be able to bring this on the stream quickly and sustainably," Nasser said. Aramco said it produced 13.6mn b/d of oil equivalent (boe/d) in the second quarter, up from 13mn boe/d in the January-March period. It did not break out crude output, which *Argus* estimates at 10.46mn b/d in the second quarter and 10.14mn b/d in the first.

**Dan Tsubouchi** @Energy_Tidbits · Aug 15

Hmmm! A return to #JCPOA deal would be just in time for EU RUS #Oil sanctions start in Dec. See 👇, Iran Light API/H2S is good substitute for RUS Urals. Excerpt SAF Group Mar 13, 2022 Energy Tidbits memo safgroup.ca/news-insights/ #OOTT

**Excerpt SAF Group March 13, 2022 Energy Tidbits Memo**

**Oil – Iran's oil would be a good crude quality replacement for Urals crude to Europe**

On Wednesday, we tweeted [LINK] on a good reminder from the Gulf Intelligence daily Podcast [LINK] that Iran's crude oil quality would be a good replacement for Russian Urals crude oil to Europe. We tweeted *"#JCPOA. Good reminder from @gulf_intel podcast. Matt Stanley @starfuels reminds Iran light matches API and H2S very well and is a good substitute RUS Urals. See below @SPGlobalPlatts crude specs map. #OOTT"*. Our tweet included the below Platts map that noted crude qualities for Russia were Urals (Primorsk) 31.5 API 1.44% H2S, Urals (Ust Luga) 31.5 API 1.44% H2S, and Urals Gdansk 31.5 API 1.44% H2S, which compares to Iranian Light 33.4 API 1.36% H2S.

Figure 29: Platts Specifications Guide Europe and Africa Crude Oil

Source: Platts

Prepared by SAF Group https://safgroup.ca/news-insights/

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**Dan Tsubouchi** @Energy_Tidbits · Aug 15

Here's why EU wants #JCPOA, see 👇 thread incl @SPGlobalPlatts crude specs map, Iran #Oil is a good API & H2S replacement for RUS Urals oil for Europe. Be just in time for EU RUS oil sanctions start in Dec. #OOTT

> **Dan Tsubouchi** @Energy_Tidbits · Mar 9
>
> #JCPOA. Good reminder from @gulf_intel podcast. Matt Stanley @starfuels reminds Iran light matches API and H2S very well and is a good substitute RUS Urals. See below @SPGlobalPlatts crude specs map. #OOTT
>
> soundcloud.com/user-846530307...

**Dan Tsubouchi** @Energy_Tidbits · Aug 15

Sounds like a give from Iran on #JCPOA. "that a consensus is close in the talks in Vienna, Austria, on the condition that Iran's redlines are observed and its MAIN interests are being met." No wonder #Oil is down today, prospect of badly needed ~1 mmb/d. #OOTT

https://en.irna.ir/news/84854919/Vienna-consensus-possible-if-Iran-s-red-lines-observed-FM-Spox
Aug 15, 2022, 12:09 PM

- Nasser Kanaani

## Vienna consensus possible if Iran's red lines observed: FM Spox


Tehran, IRNA – Iran and the P4+1 group (Britain, France, Russia, China plus Germany) are close to an agreement in the Vienna talks, but it depends on observing Iran's redlines and interests, an Iranian official said. Nasser Kanaani, the spokesman of the Ministry of Foreign Affairs, said at Monday's press conference that a consensus is close in the talks in Vienna, Austria, on the condition that Iran's redlines are observed and its main interests are being met.

The consultations have been and are being conducted at the highest levels in Tehran, the spokesman said, referring to consultations on a new proposal provided by the European Union on the revival of the 2015 nuclear deal and lifting of anti-Iran sanctions.

Asked about the possibility of reaching a consensus in the Vienna Talks, Kanaani said that the discussions for the removal of anti-Iran sanctions are still in progress.

We continue negotiations, which were held in Vienna and then in Doha and most recently in Vienna again, the diplomat said, noting that as you know, the negotiating delegation participated in talks to reach a good and lasting agreement to pave the way for lifting the cruel anti-Iran sanctions.

We have had intense progressive negotiations and reached relative progress, he added.

There has been some relative progress, but it could not secure Iran's legal demands completely, he said, adding that Iran has other expectations from the other side and believes that all its interests should be met.

Additional talks are being held in the capitals and it is expected that supplementary statements on EU High Representative Josep Borrell's final proposition will be submitted, he noted.

Emphasizing the security and stability in the region, Kanaani said that Tehran is keen on assisting neighboring states.

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**Dan Tsubouchi** @Energy_Tidbits · Aug 14

Our weekly SAF Aug 14 2022 Energy Tidbits memo is posted on SAF Group website. this 58-pg energy research memo expands upon & covers more items than tweeted this week. See news/insights section of SAF website #Oil #OOTT #LNG #NatGas #EnergyTransition safgroup.ca/news-insights/

SAF GROUP

# Energy Tidbits

Aug 14, 2022

Produced by: Dan Tsubouchi

## Saudi Aramco CEO Warns "Strained" Global Spare Oil Capacity is <2 mmb/d and "Declining Fast"

**Welcome to new Energy Tidbits memo readers**. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. Our priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector. Our target is to write on 48 to 50 weekends per year and to post by noon MT on Sunday. The Sunday noon timing was because PMs said they didn't have research to read on Sundays and Sundays are a day when they start to think about the investing week ahead.

This week's memo highlights:

1. Saudi Aramco CEO warned this morning that global spare oil capacity is less than 2 mmb/d and declining fast.
2. Game changer for LNG, another Russian confirmation of massive delays to under-construction 2.6 bcf/d Arctic LNG-2 export.
3. More expectations that a return to JCPOA could happen very quickly
4. EIA either over-estimates US oil supply or under-estimates US oil demand by 0.5 mmb/d
5. IEA warns "*But with supply increasingly at risk to disruptions, another price rally cannot be excluded.*"
6. Please follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK].


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|---|---|---|---|
| **Dan Tsubouchi** | **Ryan Dunfield** | **Aaron Bunting** | **Ryan Haughn** |
| Principal, Chief Market Strategist | Principal, CEO | Principal, COO, CFO | Principal, Energy |
| dtsubouchi@safgroup.ca | rdunfield@safgroup.ca | abunting@safgroup.ca | rhaughn@safgroup.ca |