

Energy Tidbits

BC Says “LNG Canada Has Expressed the Wish to Explore the Possibility of Proceeding with Phase 2, and We’re Engaged in Discussions with Them”

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Year-over-year summary

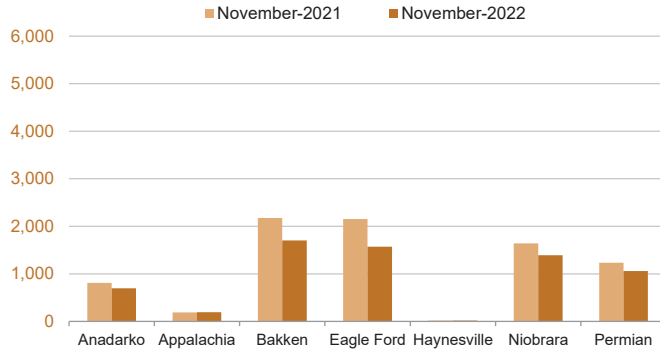
October 2022

Drilling Productivity Report

drilling data through September
projected production through November

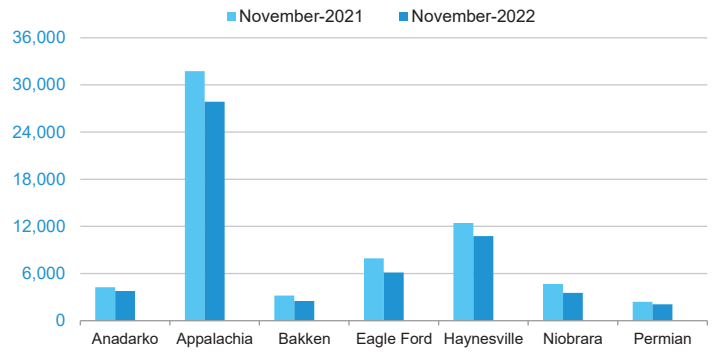
New-well oil production per rig

barrels/day



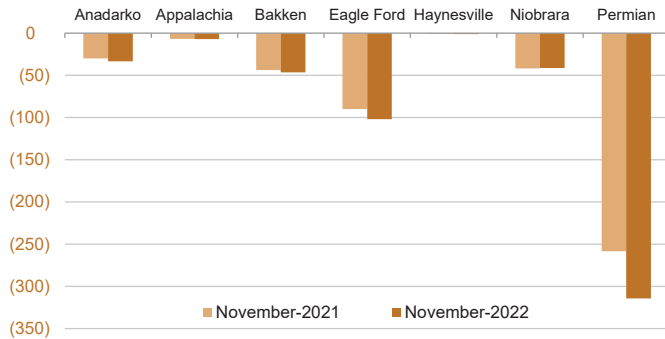
New-well gas production per rig

thousand cubic feet/day



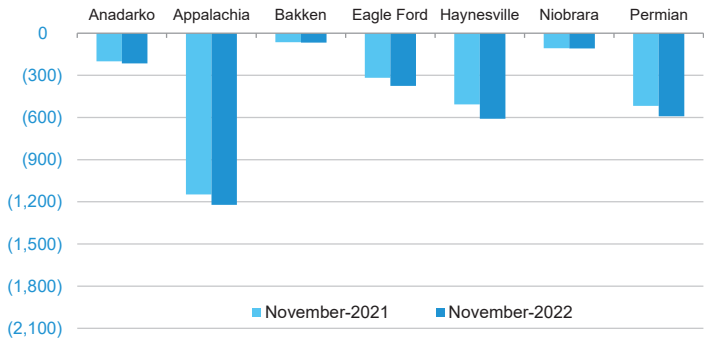
Legacy oil production change

thousand barrels/day



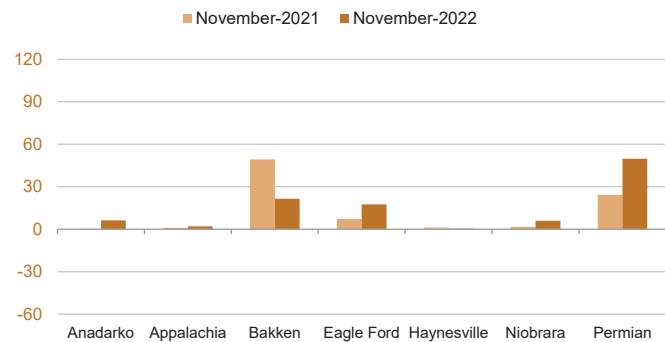
Legacy gas production change

million cubic feet/day



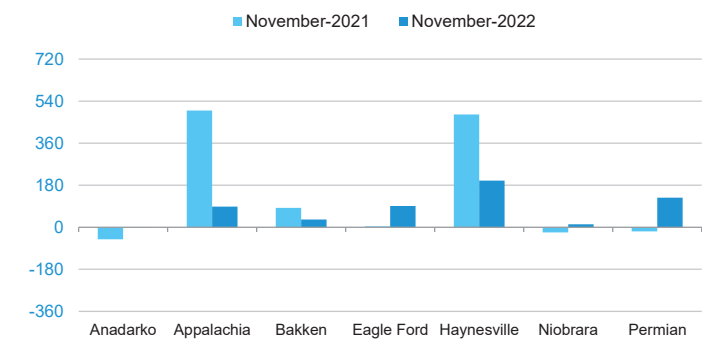
Indicated monthly change in oil production (Nov vs. Oct)

thousand barrels/day



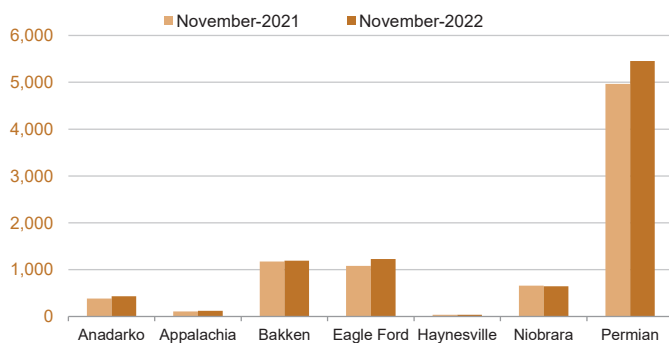
Indicated monthly change in gas production (Nov vs. Oct)

million cubic feet/day



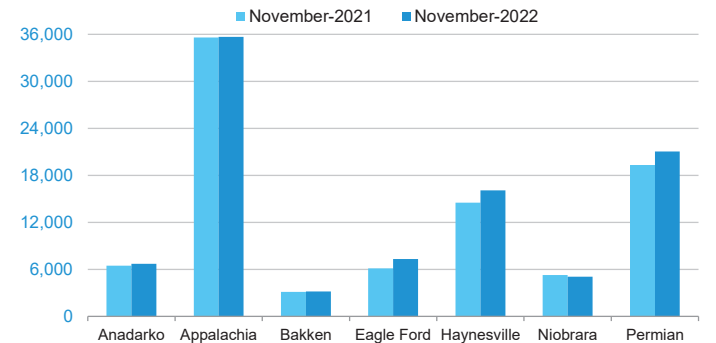
Oil production

thousand barrels/day




Natural gas production

million cubic feet/day



Oil +3
barrels/day
month over month


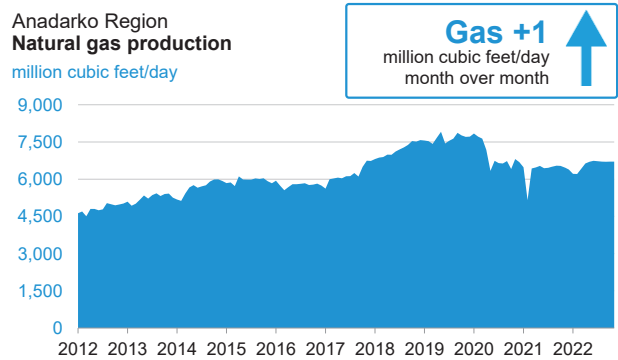
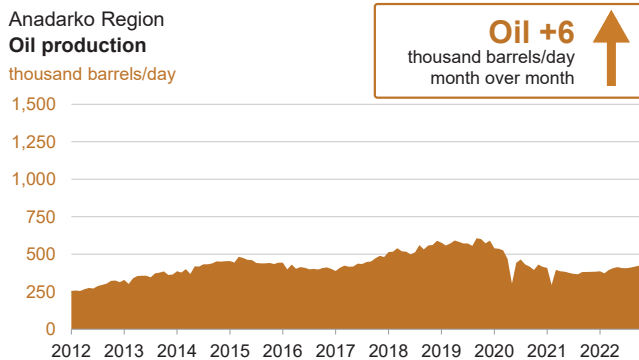
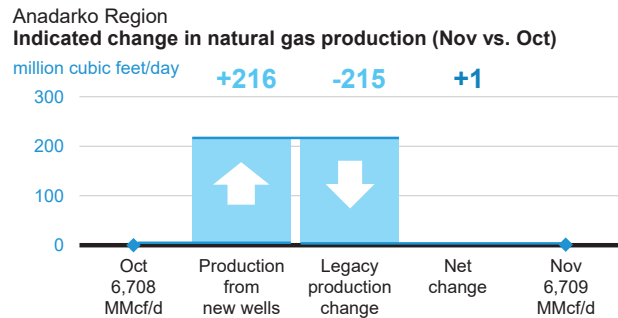
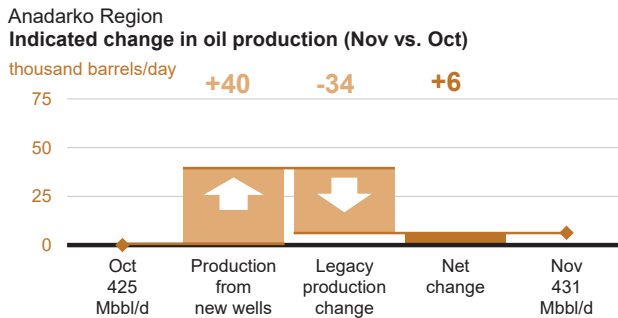
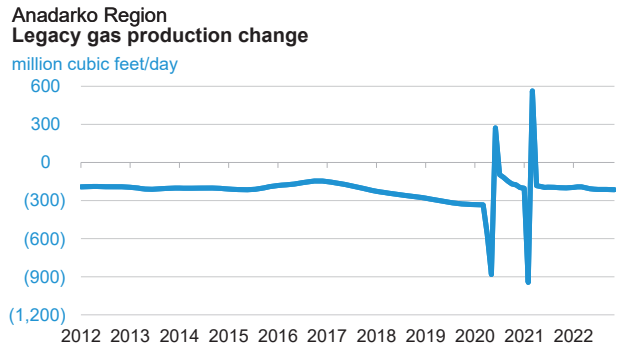
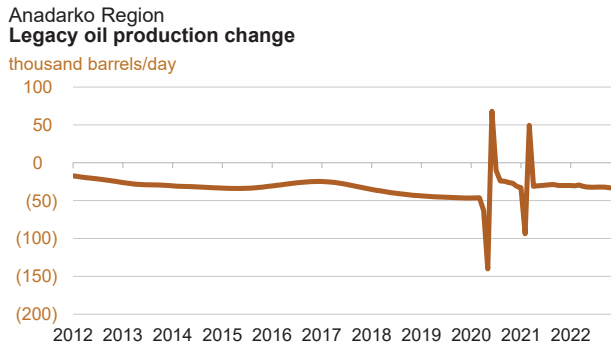
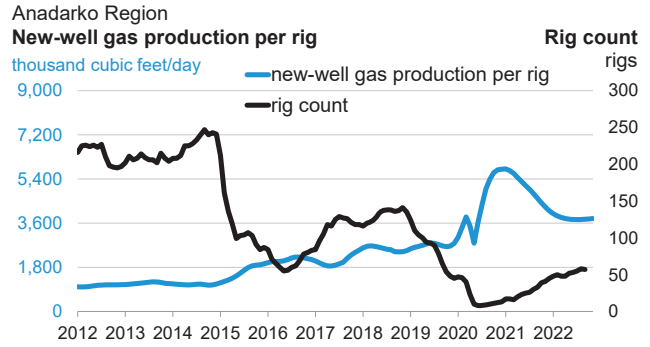
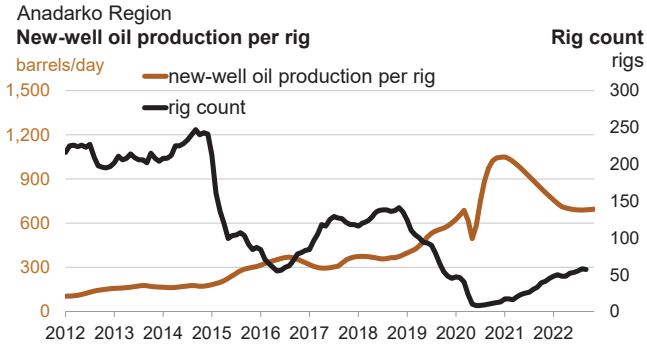


695 November
692 October
barrels/day

Monthly
additions
from one
average rig

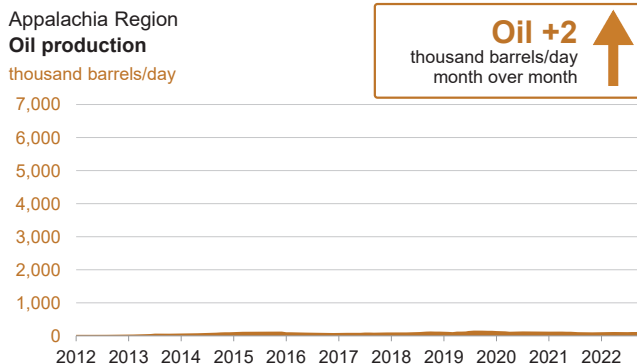
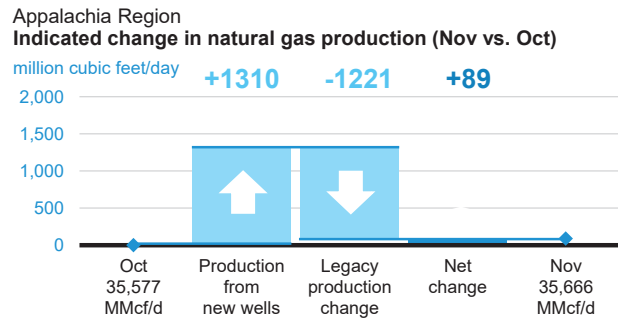
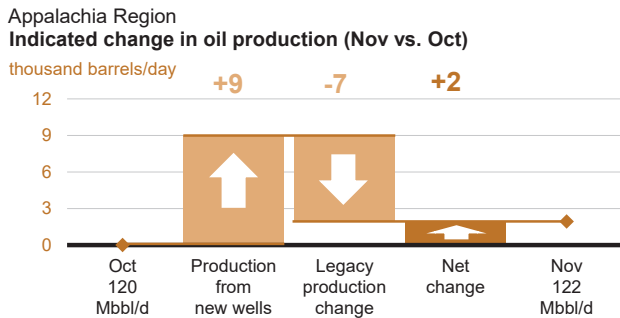
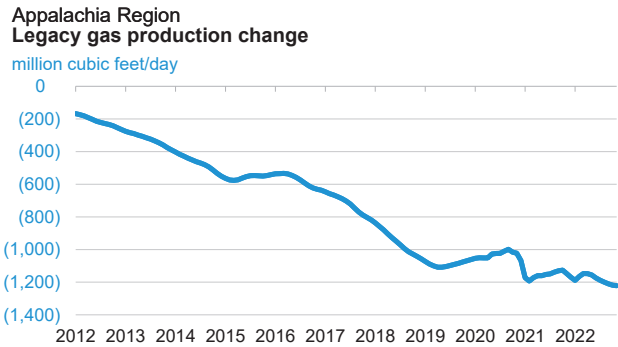
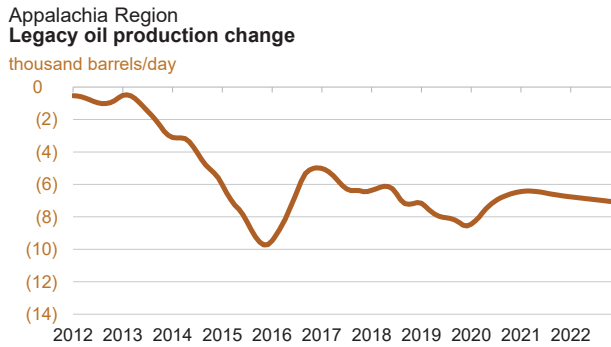
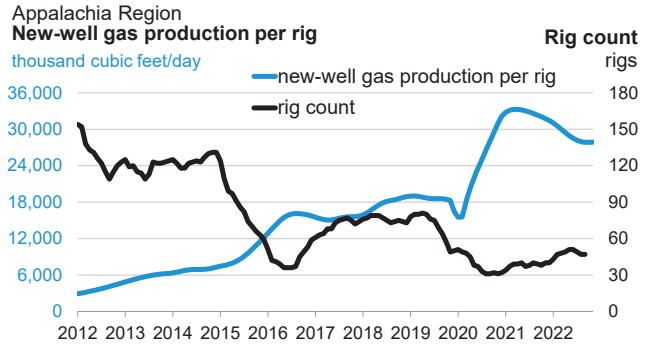
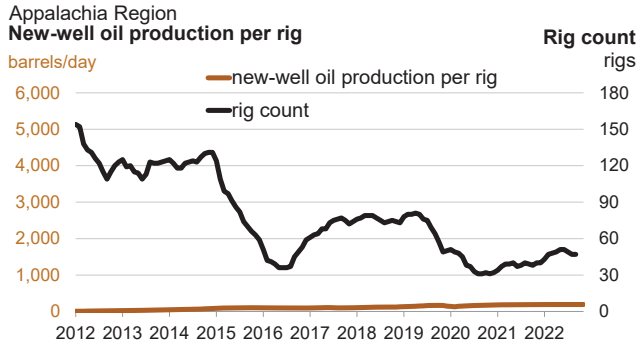
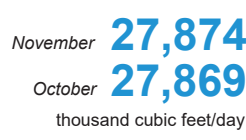
November **3,786**
October **3,771**
thousand cubic feet/day

Gas +15
thousand cubic feet/day
month over month

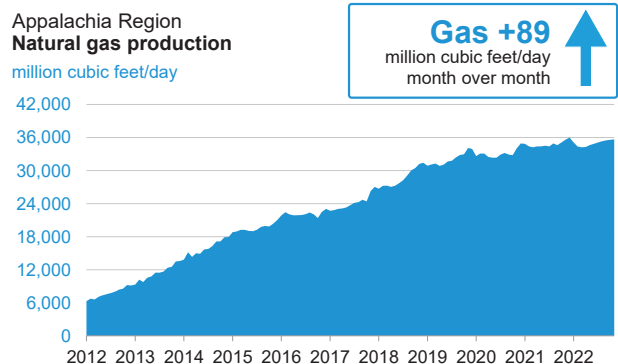






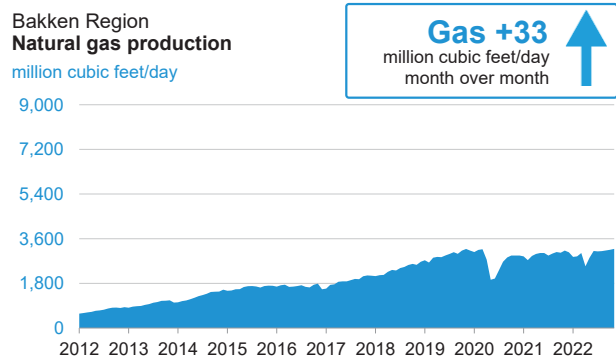
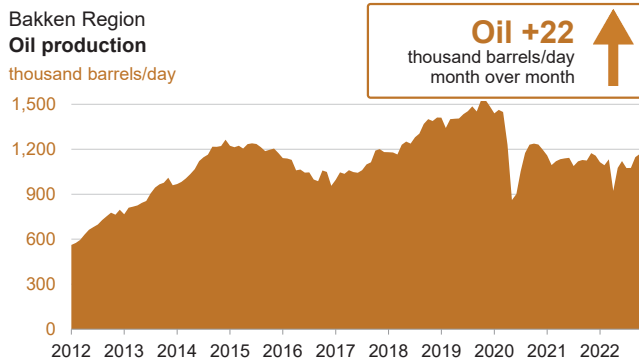
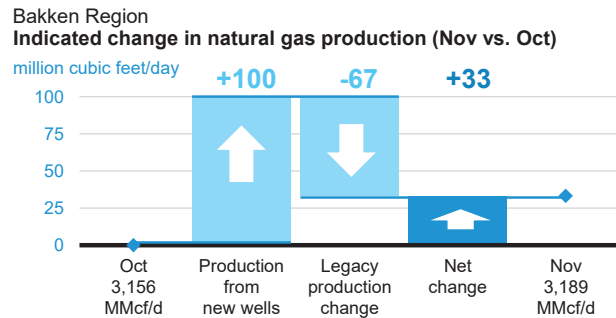
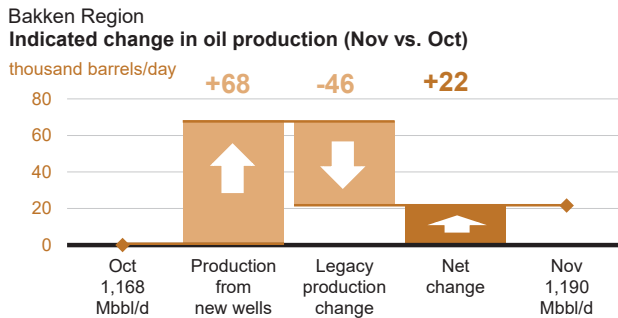
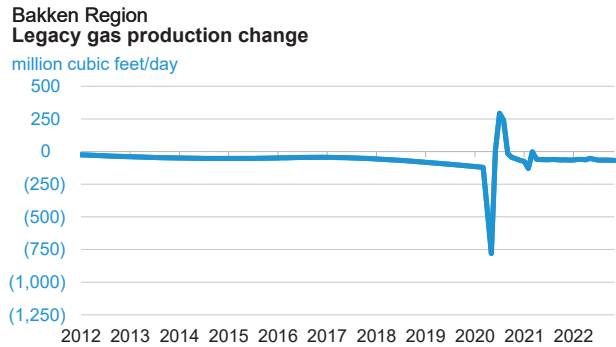
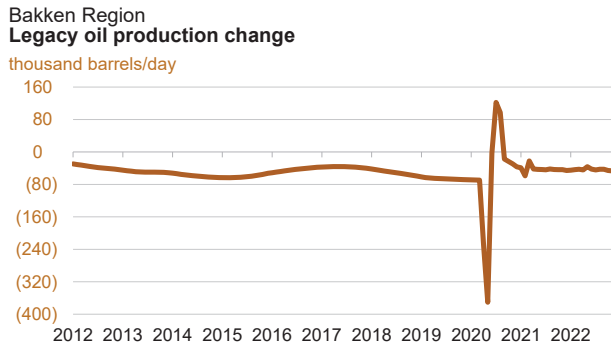
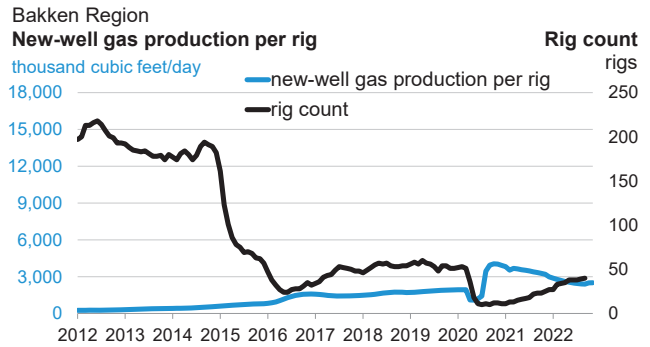
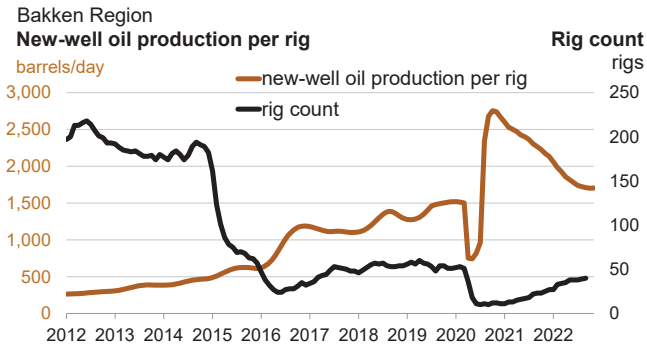
Monthly additions from one average rig

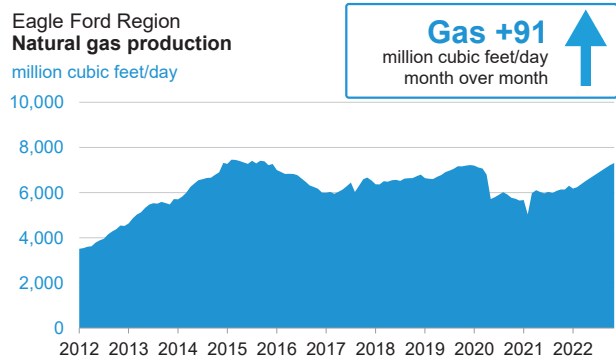
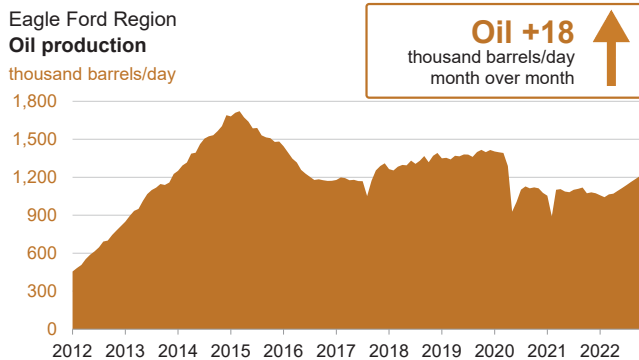
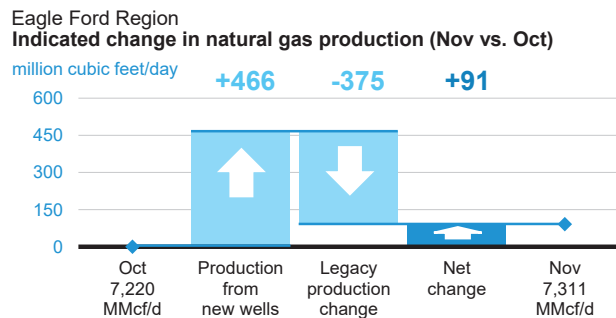
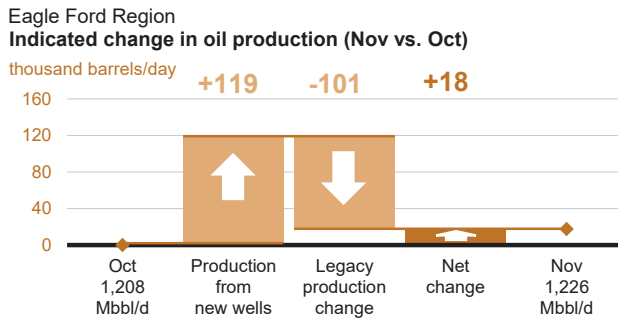
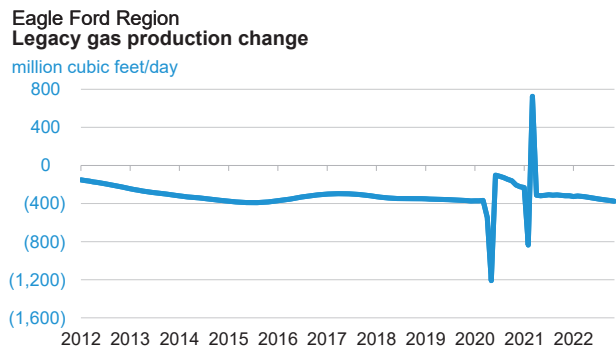
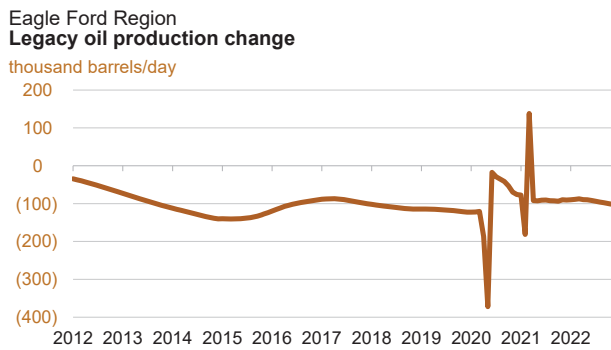
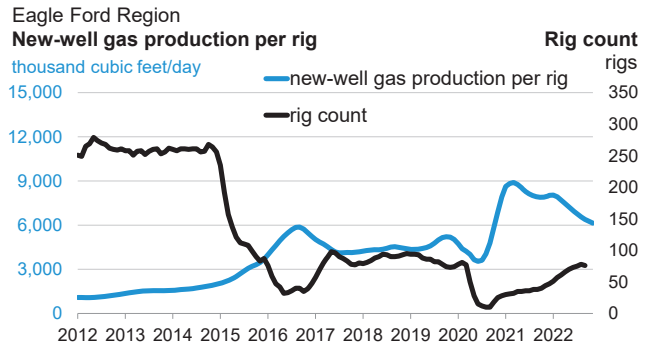
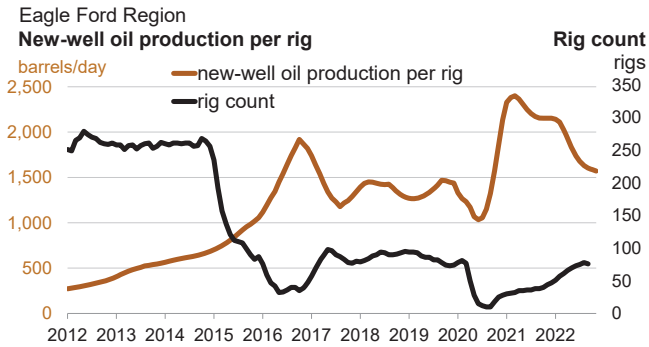


Oil +2 
thousand barrels/day
month over month



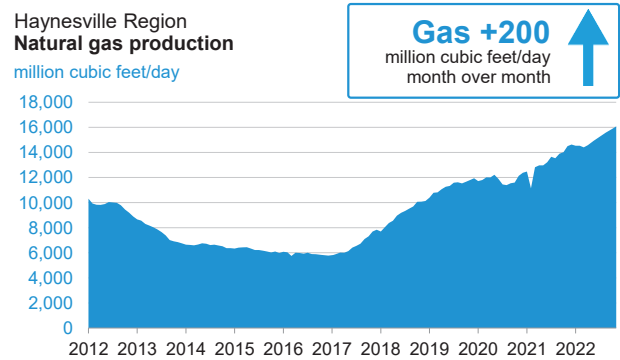
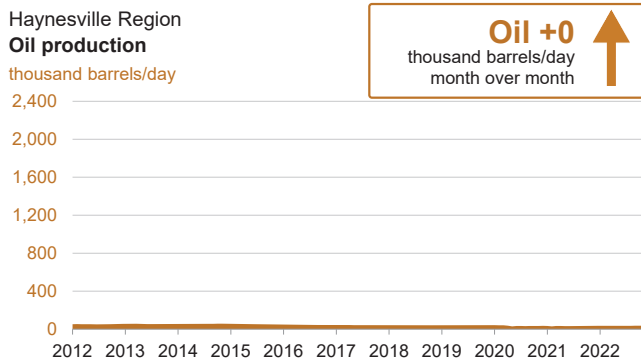
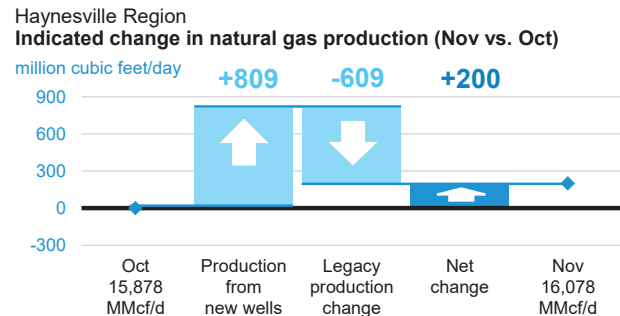
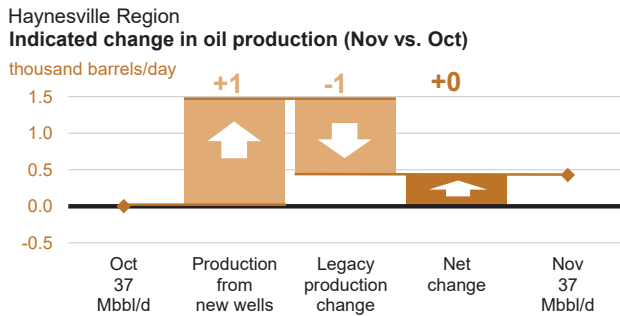
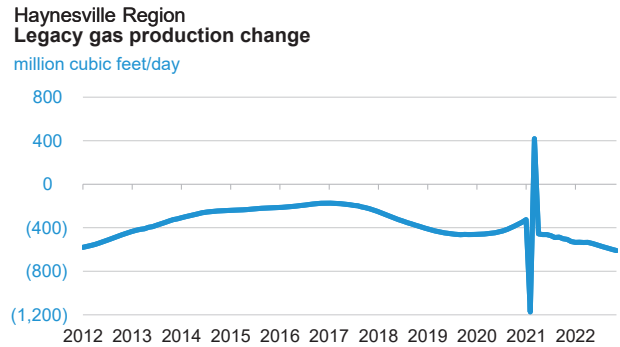
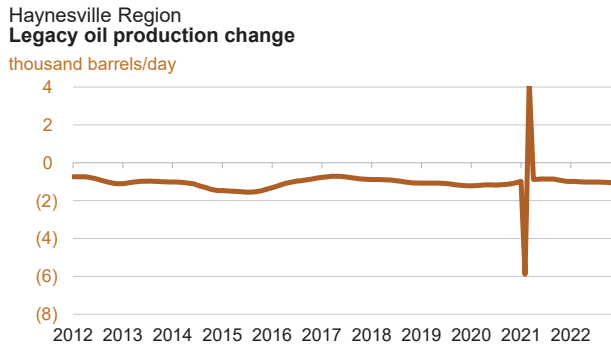
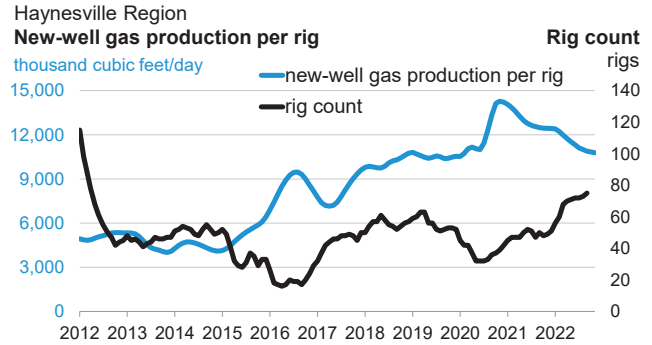
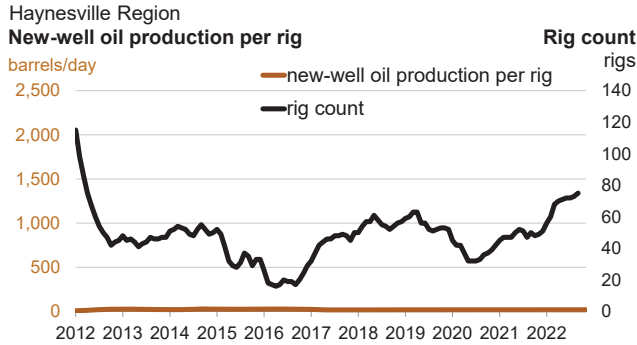
Gas +89 
million cubic feet/day
month over month

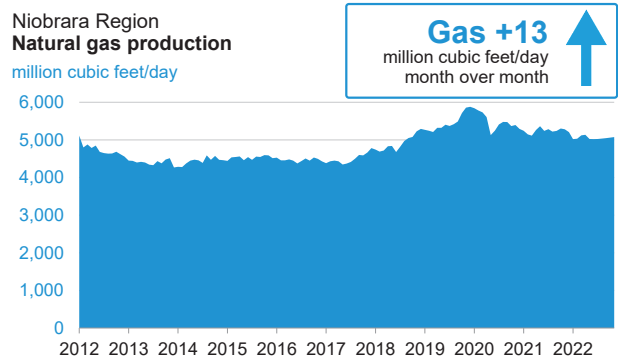
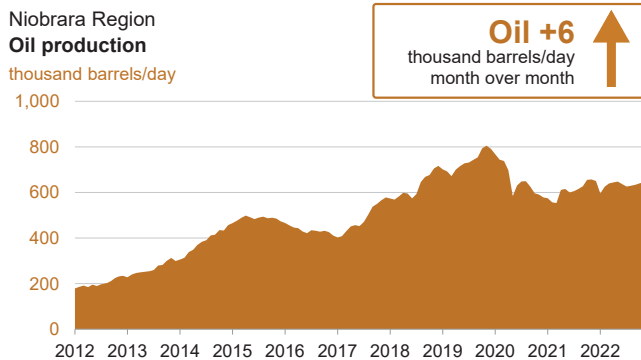
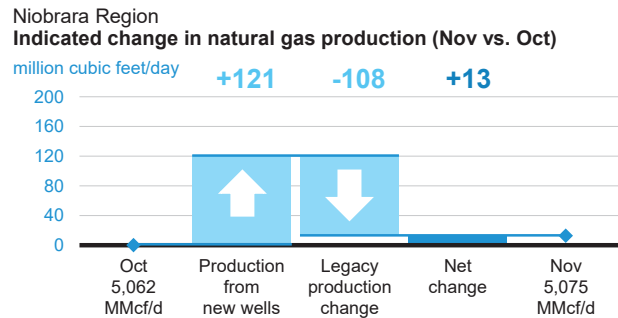
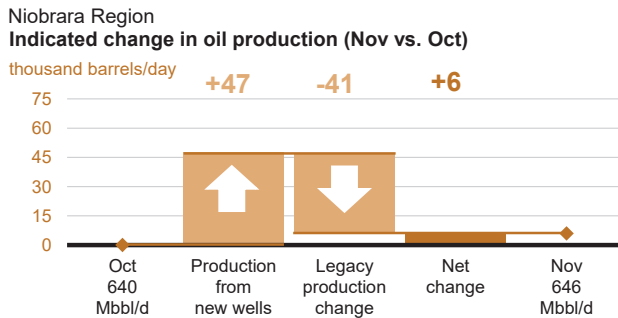
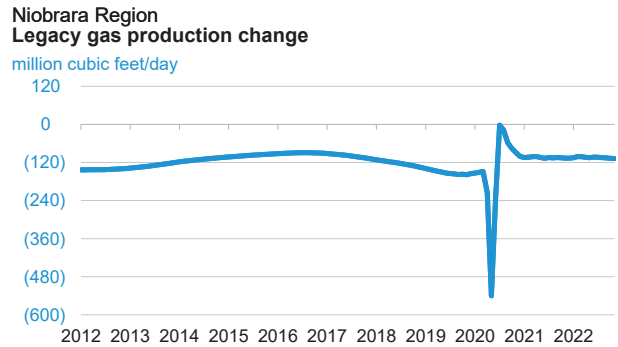
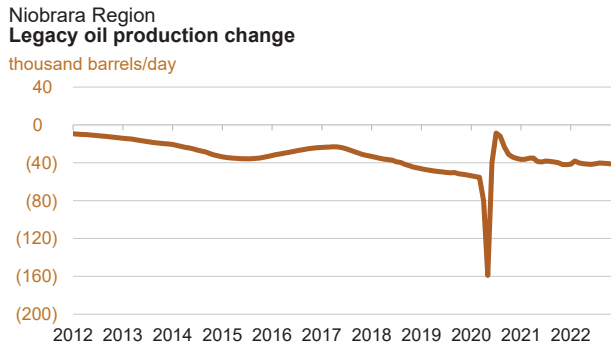
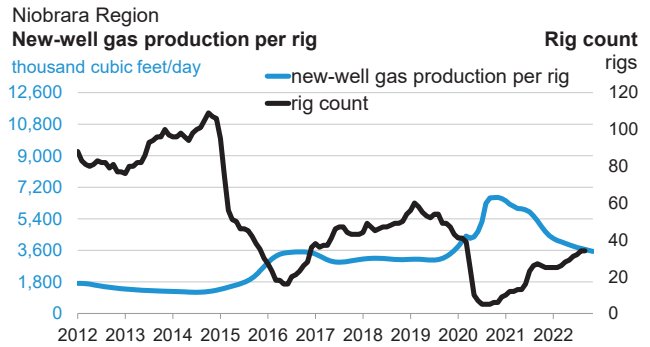
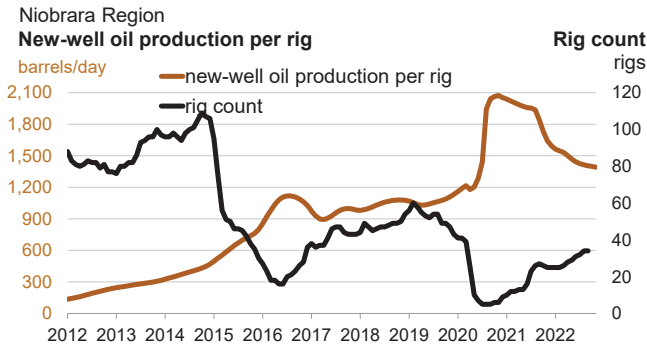


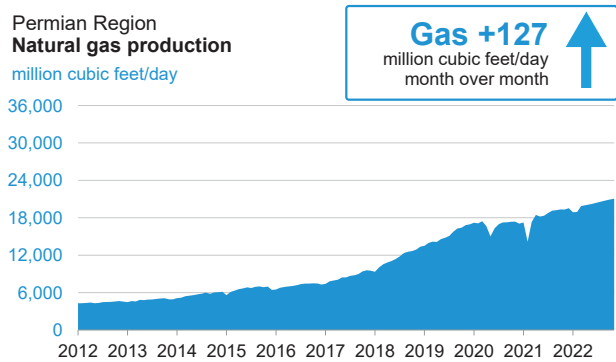
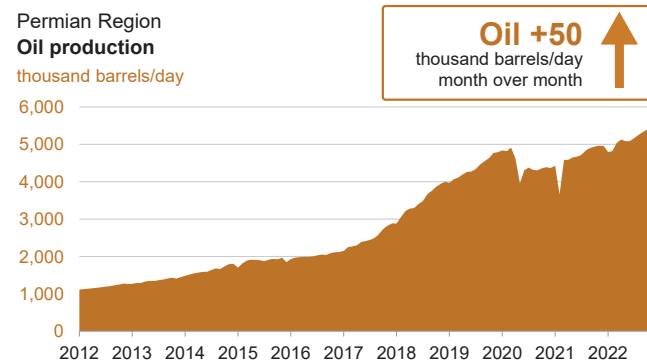
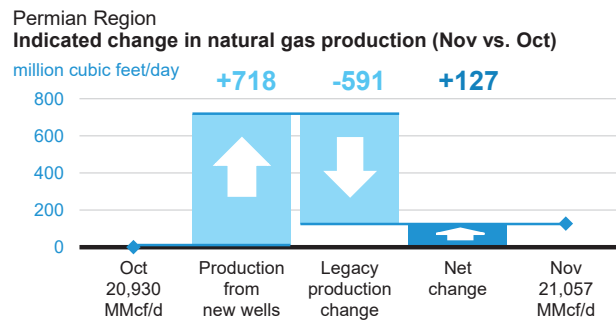
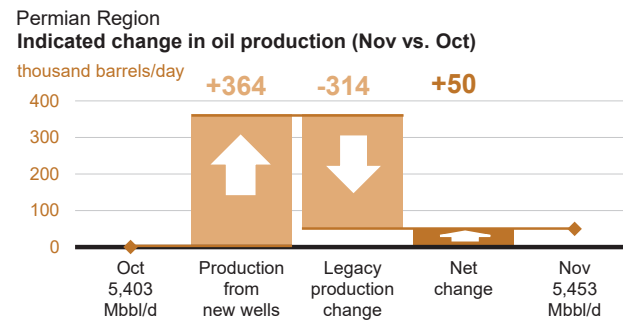
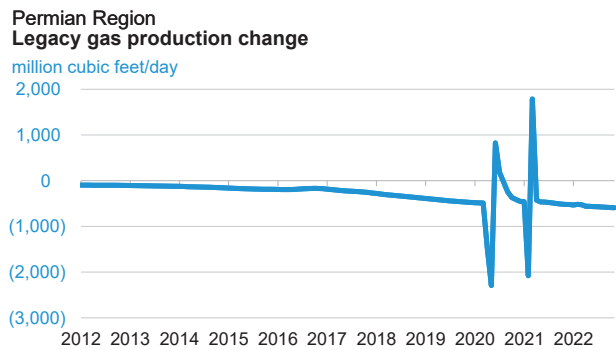
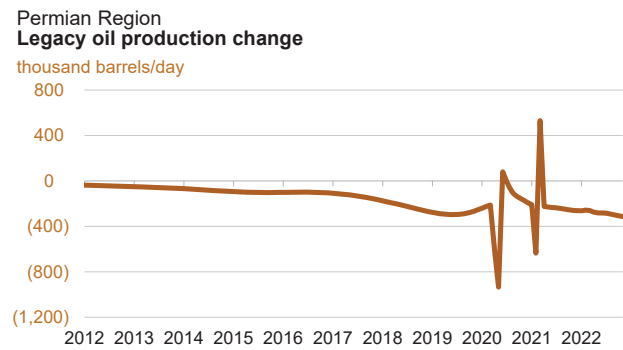
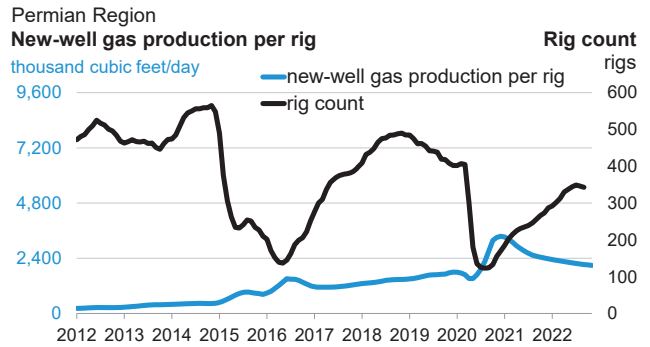
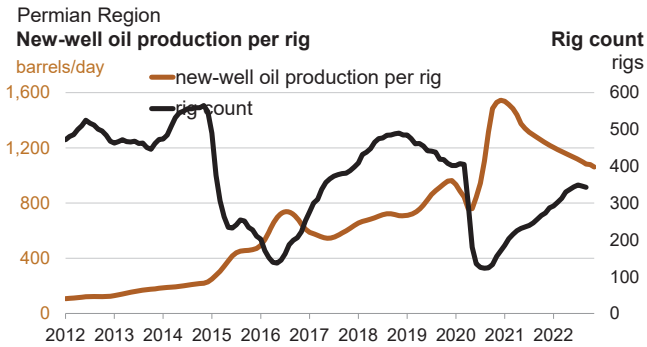




Monthly additions from one average rig









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 oil¹ and natural gas² 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's³ 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

Summary

Overview of Activity for August 2022

- **Top five countries of destination, representing 55.9% of total U.S. LNG exports in August 2022**
 - Netherlands (50.4 Bcf), South Korea (36.0 Bcf), France (33.9 Bcf), Spain (26.1 Bcf), and United Kingdom (21.3 Bcf)
- **299.9 Bcf of exports in August 2022**
 - 0.1% decrease from July 2022
 - 0.7% more than August 2021
- **98 cargos shipped in August 2022**
 - Sabine Pass (40), Cameron (29), Corpus Christi (19), Cove Point (7), Elba (3), and Freeport (0)
 - 100 cargos in July 2022
 - 98 cargos in August 2021

1a. Table of Exports of Domestically-Produced LNG Delivered by Region (Cumulative from February 2016 through August 2022)

Region	Number of Countries Receiving Per Region	Volume Exported (Bcf)	Percentage Receipts of Total Volume Exported (%)	Number of Cargos*
East Asia and Pacific	8	4,213.4	34.1%	1218
Europe and Central Asia	13	4,885.0	39.5%	1514
Latin America and the Caribbean**	13	2,106.6	17.1%	750
Middle East and North Africa	5	366.3	3.0%	107
South Asia	3	781.6	6.3%	233
Sub-Saharan Africa	0	0.0	0.0%	0
Total LNG Exports	42	12,353.0	100.0%	3,822

*Split cargos counted as both individual cargos and countries

**Number of cargos does not include the shipments by ISO container

1b. Shipments of Domestically-Produced LNG Delivered – by Country (Cumulative from February 2016 through August 2022)

Country of Destination	Region	Number of Cargos	Volume (Bcf of Natural Gas)	Percentage of Total U.S LNG Exports (%)
1. South Korea*	East Asia and Pacific	467	1,627.7	13.2%
2. Japan*	East Asia and Pacific	342	1,180.0	9.6%
3. Spain*	Europe and Central Asia	300	943.0	7.6%
4. China*	East Asia and Pacific	270	925.1	7.5%
5. France*	Europe and Central Asia	241	779.6	6.3%
6. United Kingdom*	Europe and Central Asia	221	745.8	6.0%
7. Netherlands*	Europe and Central Asia	185	606.3	4.9%
8. Brazil*	Latin America and the Caribbean	216	604.9	4.9%
9. India*	South Asia	174	588.3	4.8%
10. Mexico*	Latin America and the Caribbean	163	546.3	4.4%
11. Turkey*	Europe and Central Asia	163	527.1	4.3%
12. Chile*	Latin America and the Caribbean	131	416.0	3.4%
13. Italy*	Europe and Central Asia	90	293.7	2.4%
14. Taiwan*	East Asia and Pacific	92	292.0	2.4%
15. Argentina*	Latin America and the Caribbean	110	265.2	2.1%
16. Portugal*	Europe and Central Asia	74	234.9	1.9%
17. Poland*	Europe and Central Asia	67	227.1	1.8%
18. Greece*	Europe and Central Asia	70	167.8	1.4%
19. Kuwait	Middle East and North Africa	42	146.0	1.2%
20. Dominican Republic*	Latin America and the Caribbean	61	144.5	1.2%
21. Lithuania	Europe and Central Asia	42	129.7	1.1%
22. Pakistan*	South Asia	40	128.9	1.0%
23. Jordan*	Middle East and North Africa	36	124.2	1.0%
24. Belgium*	Europe and Central Asia	37	122.0	1.0%
25. Singapore*	East Asia and Pacific	31	100.7	0.8%
26. Croatia	Europe and Central Asia	31	93.4	0.8%
27. Thailand*	East Asia and Pacific	23	79.2	0.6%
28. Bangladesh*	South Asia	19	64.5	0.5%
29. Jamaica*	Latin America and the Caribbean	25	57.3	0.5%
30. United Arab Emirates	Middle East and North Africa	15	51.1	0.4%
31. Panama*	Latin America and the Caribbean	27	47.9	0.4%
32. Israel*	Middle East and North Africa	9	28.0	0.2%
33. Colombia*	Latin America and the Caribbean	17	20.5	0.2%
34. Egypt*	Middle East and North Africa	5	16.9	0.1%
35. Malta*	Europe and Central Asia	9	14.6	0.1%
36. Indonesia*	East Asia and Pacific	9	5.0	0.0%
37. Malaysia	East Asia and Pacific	1	3.7	0.0%
Total Exports by Vessel		3,855	12,348.8	
38. Barbados	Latin America and the Caribbean	304	1.3	0.0%
39. Bahamas	Latin America and the Caribbean	598	1.4	0.0%
Jamaica	Latin America and the Caribbean	99	1.1	0.0%
40. Haiti	Latin America and the Caribbean	125	0.4	0.0%
41. Antigua and Barbuda	Latin America and the Caribbean	26	0.0	0.0%
42. Nicaragua	Latin America and the Caribbean	1	0.0	0.0%
Total Exports by ISO		1126	4.1	
Total Exports by Vessel and ISO		4,981	12,353.0	

Note:

Volume and Number of Cargos are the cumulative totals of each individual Country of Destination by Region starting from February 2016.

Jamaica has received U.S. LNG exports by both vessel and ISO container. The volumes are totaled separately

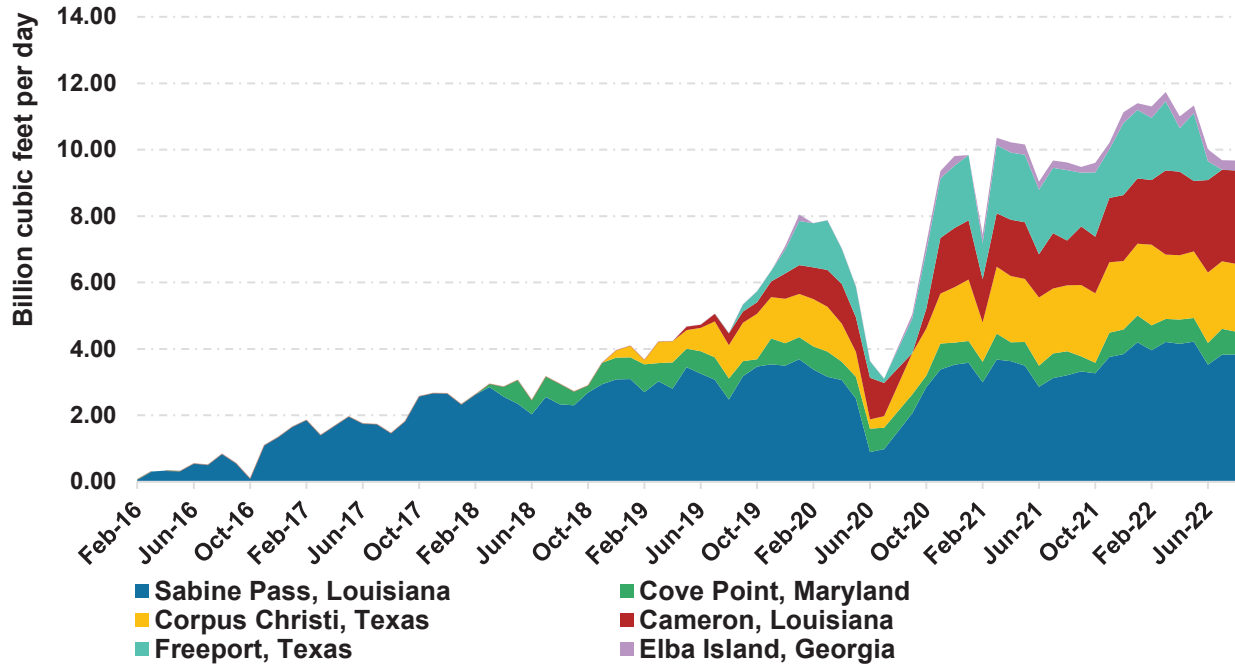
* Split cargos counted as both individual cargos and countries.

Vessel = LNG Exports by Vessel and ISO container = LNG Exports by Vessel in ISO Containers.

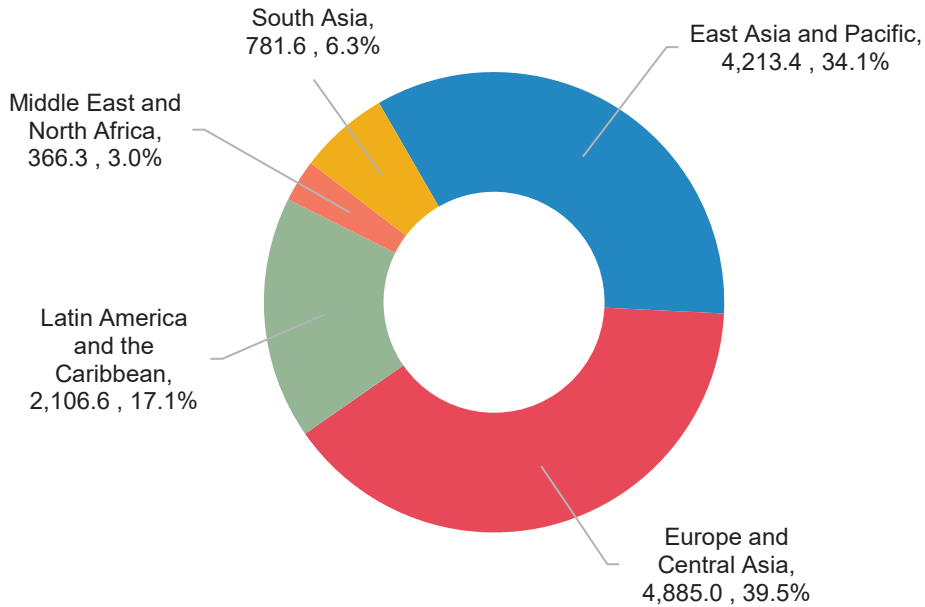
Does not include re-exports of previously-imported LNG. See table 2c for re-exports data.

Totals may not equal sum of components because of independent rounding.

1c. Domestically-Produced LNG Exported by Terminal (February 2016 through August 2022)

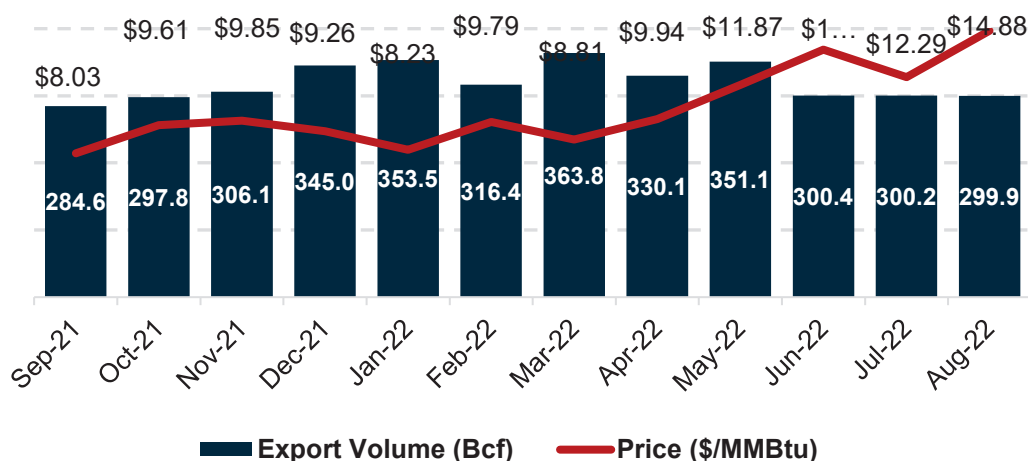


1d. Domestically-Produced LNG Exported by Region (Cumulative from February 2016 through August 2022) (Bcf, %)



1f. Domestically-Produced LNG Delivered – Volume (Bcf) and Weighted Average price (\$/MMBtu) by Export Terminal per month

	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Total
Sabine Pass, LA	99.6	101.3	112.8	119.1	130.1	110.9	130.5	124.6	130.7	105.7	118.5	118.7	1,402.4
	\$7.77	\$9.43	\$9.81	\$8.94	\$8.40	\$9.81	\$7.92	\$8.80	\$10.93	\$12.90	\$10.50	\$12.71	\$9.81
Cove Point, MD	13.7	9.9	21.9	23.0	25.2	20.9	21.4	21.8	22.2	19.7	24.2	21.4	245.5
	\$8.23	\$9.64	\$10.18	\$9.27	\$8.33	\$9.74	\$8.57	\$9.32	\$10.85	\$12.33	\$11.28	\$12.36	\$10.05
Corpus Christi, TX	64.4	64.8	63.5	64.0	66.8	68.2	60.1	58.3	62.0	63.7	63.1	63.4	762.2
	\$8.38	\$10.85	\$10.34	\$11.92	\$9.12	\$10.66	\$9.81	\$10.48	\$11.95	\$13.57	\$12.17	\$14.70	\$11.16
Cameron, LA	52.8	52.7	58.1	61.4	61.2	54.4	78.6	75.4	65.8	83.3	85.2	87.2	816.0
	\$7.99	\$8.93	\$9.36	\$7.59	\$7.40	\$8.72	\$9.76	\$12.33	\$14.85	\$16.05	\$15.15	\$18.92	\$11.99
Freeport, TX	48.6	60.0	43.9	67.3	63.9	52.5	64.5	39.3	63.5	17.3	0	0	520.8
	\$8.09	\$9.29	\$9.85	\$8.96	\$7.87	\$9.60	\$8.42	\$9.07	\$11.23	\$12.83	0	0	\$9.27
Elba Island, GA	5.5	9.1	5.8	10.3	6.3	9.6	8.7	10.8	6.9	10.7	9.1	9.2	101.9
	\$7.64	\$8.65	\$9.17	\$8.41	\$6.70	\$10.40	\$10.12	\$7.93	\$9.66	\$11.40	\$12.20	\$11.58	\$9.63
Total	284.6	297.8	306.1	345.0	353.5	316.4	363.8	330.1	351.1	300.4	300.2	299.9	3,848.9
	\$8.03	\$9.61	\$9.85	\$9.26	\$8.23	\$9.79	\$8.81	\$9.94	\$11.87	\$13.82	\$12.29	\$14.88	\$10.47



Notes:

*Beginning with July 2019 data, with the exception of some commissioning cargos as indicated in Table 2(a), all average export cargo prices include liquefaction fees. From January to June 2019, some cargos at Sabine Pass and Corpus Christi do not include liquefaction fees. For further details, please see Tables 2a(i) and 2a(iii).

Does not include re-exports of previously-imported LNG. See table 2c for re-exports data.

Totals may not equal sum of components because of independent rounding.

W - Withheld to avoid disclosure of individual company data.

DOE has a confidentiality policy for certain data elements collected on Form FE-746R that allows DOE to publish a monthly volume-weighted average price for each point of LNG import or export, but not a price for each individual imported or exported LNG cargo. For additional information, please see the Federal Register Notice concerning this Information Collection Extension at <https://www.federalregister.gov/documents/2018/08/30/2018-18829/information-collection-extension>.



Mayor Lori Ackerman. (City of Fort St. John) **Posted**

inNews

Lori Ackerman takes on role with Blueberry River First Nation

by [Shailynn Foster](#) October 19, 2022

FORT ST. JOHN, B.C. — The outgoing mayor of Fort St. John will begin a new venture with Blueberry River First Nations next month after over a decade in municipal politics.

On Wednesday, the first nation announced that Ackerman has been appointed CEO of Blueberry River Resources Ltd., a new entity to manage the band's business interests.

The company was created as an independent entity to advance the nation's economic priorities, said a release.

Ackerman will begin her duties on November 1st.

"[Ackerman] has long-standing and positive relationships with Northeastern B.C. First Nations, as well as with local industry and provincial administrative entities, and is well placed to advance the interests of the nation in a way that benefits all parties," said a release.

Blueberry River First Nations Chief Judy Desjarlais says she is happy to have Ackerman on their management team due to her wealth of expertise across many topics.

"[This expertise] makes her uniquely qualified for this new role to create business opportunities that will benefit the Nation and its members for generations to come."

The release mentions Ackerman's 11 years as mayor of Fort St. John, highlighting her achievements in the community and how she raised awareness of critical issues.

The release also notes how she was named one of the Top 35 Most Influential Women in BC by BC Business Magazine and was named 2019 Energy Person of the Year by the Energy Council of Canada.

"The Blueberry River First Nations and its leadership have done a significant amount of work preparing to move forward with a structure that acknowledges opportunities for reconciliation and economic benefit for its members and ultimately our region," said Ackerman.

Ackerman will lead her last Fort St. John council meeting as mayor on October 31st.

<https://www.theglobeandmail.com/business/article-lng-canada-expansion/>

LNG Canada's proposed expansion hinges on economic viability of switching to lower-carbon technology

BRENT JANG

KITIMAT, B.C.

PUBLISHED YESTERDAYUPDATED 5 HOURS AGO



LNG Canada construction general manager Vince Kenny walks toward a receiving platform as the terminus for the Coastal GasLink natural gas pipeline, left, is seen at the export terminal under construction in Kitimat, B.C., on Sept. 28. DARRYL DYCK/THE CANADIAN PRESS

A proposal to double LNG Canada's export capacity hinges on the economic viability of using innovative electric technology to help produce liquefied natural gas, says the chief executive officer of Petronas Energy Canada Ltd.

The Shell PLC-led megaproject in Kitimat, B.C., is the only LNG export terminal under construction in the country, with Phase 1 scheduled to open in 2025. Malaysia's state-owned energy giant Petronas is the second-largest partner.

Electric-drive technology for the proposed Phase 2 would be designed to reduce carbon emissions in the production process for supercooling natural gas into liquid form, Izwan Ismail said in a phone interview from Calgary.

"It's something you have to look at in terms of cost competitiveness and actual supply of electricity," he said.

By contrast, Phase 1 under construction in Kitimat will be equipped with turbines powered by natural gas in the liquefaction process.

Kuala Lumpur-based Petronas wholly owns Calgary-based Petronas Energy Canada, which is the upstream unit that oversees natural gas assets in the North Montney region of northeast British Columbia. The Malaysian company owns 25 per cent of LNG Canada through a separate wholly-owned unit, North Montney LNG Limited Partnership.

"We're very excited about what we're doing here in Canada because a lot of our aspirations tie very nicely with what we're doing in the upstream and of course the work that's been done on LNG Canada as well," Mr. Ismail said.

The goal under Phase 1 is to export 14 million tonnes a year of LNG to Asia. If Phase 2 gets approved by the co-owners, it would double the capacity to 28 million tonnes a year at the terminal, which is located on an industrial site on the traditional territory of the Haisla Nation.

“All things being equal, Phase 2 will have obviously certain advantages because you’re going to have existing infrastructure already being built under Phase 1,” Mr. Ismail said.

One option for Phase 2 is designing special compressors powered by electric motors to supercool natural gas, relying on hydroelectricity from BC Hydro instead of using turbines driven by natural gas. Another option would be a hybrid-type approach, utilizing gas-fired turbines initially and then subsequently switching over to electric power.

“All of those options are being reviewed at the moment,” LNG Canada construction general manager Vince Kenny told The Globe and Mail while on duty at the Kitimat industrial site, the former location of Methanex Corp.’s methanol plant, which closed in 2006.

LNG Canada’s Phase 1 would operate at 0.15 carbon dioxide equivalent tonnes for each tonne of LNG produced, which is below B.C.’s limit for “emissions intensity” of 0.16 CO₂ equivalent tonnes.

“We really do have a differentiated environmental product when you look at what LNG Canada is doing,” said Teresa Waddington, vice-president of corporate relations at the Shell-led project.

But Dan Woynillowicz, a Victoria-based climate and energy policy consultant, said even though LNG Canada bills itself as having the lowest emissions intensity among major LNG projects in the world, the focus should be on moving toward renewables and shifting away from fossil fuels as many countries strive for net-zero emissions by 2050.

“It will be the cleanest new project, but that doesn’t mean that it’s clean enough,” Mr. Woynillowicz said. “If we look at LNG Canada’s Phase 1 within the context of B.C., it will be adding a significant chunk of new greenhouse gas emissions, which means that every other sector in B.C. has to reduce their emissions more to be able to accommodate that project and still have the province achieving its climate targets.”

He said burning natural gas to create electricity is cleaner than burning thermal coal, but he has doubts from a climate perspective about the industry’s portrayal of LNG as a good transition fuel in the years ahead. “While there may be some role for natural gas as a transition fuel, that role may be quite fleeting,” Mr. Woynillowicz said, adding that more attention should be devoted globally to other areas such as bolstering hydrogen production and reducing carbon footprints.

Other groups, such as Stand.earth and the Canadian Centre for Policy Alternatives, have warned about methane leaks from the production of natural gas through hydraulic fracturing, or fracking.

In a recent media briefing in Kitimat, however, LNG Canada chief executive officer Jason Klein said LNG from B.C. will play a crucial role in helping displace coal used in Asia for electricity generation. “The climate challenge isn’t a B.C. challenge. It is a global challenge,” Mr. Klein said. “It’s not just about displacing coal. It’s also about getting people out of energy poverty around the world.”

He said Shell, Petronas and the three other co-owners of the megaproject will ultimately decide whether it makes economic sense for Phase 2 to use lower-carbon hydroelectricity from BC Hydro to power motors to produce LNG.

There isn’t sufficient infrastructure today for BC Hydro to provide enough hydro power for electric-drive technology at the Kitimat facility, but new transmission lines are possible.

B.C. Energy Minister Bruce Ralston, who is the cabinet minister responsible for BC Hydro, said electrification would be an important aspect of LNG Canada’s potential expansion.

“LNG Canada has expressed the wish to explore the possibility of proceeding with Phase 2, and we’re engaged in discussions with them,” Mr. Ralston said.

Global LNG demand has surged following Russia’s invasion of Ukraine in February, with fears of fuel shortages as Europe heads into the winter heating season. The continent is seeking to reduce its dependence on natural gas from Russia, which supplied nearly 40 per cent of the Europe Union’s total consumption of the fuel last year.

Mr. Ismail said LNG Canada will be able to indirectly help Europe within three years because exports from the Kitimat terminal will contribute to the security of supplies globally and free up LNG to be rerouted to European countries from elsewhere in the world.

“I think that definitely there’s going to be strong global LNG demand,” Mr. Ismail said.

On the local level, construction of LNG Canada’s Phase 1 has produced uneven economic spinoffs for Kitimat retailers and restaurants. Out-of-town workers staying at the accommodation centre on the construction site already have access to a wide range of amenities, including dining areas, a full-size basketball court, a climbing wall and a miniature golf course.

Still, numerous LNG Canada workers and subcontractors keen on playing an actual 18-hole round of golf flocked to the Hirsch Creek Golf and Winter Club during several warm days in mid-September, leading to longer waits for tee-off times and a rush of food orders at the clubhouse restaurant.

Dale Robinson, a local computer consultant who played the Hirsch course on a cool and quiet day in late September, described the scene he witnessed on one hectic late-summer day. “The work trucks filled up the parking lot, right to the back over there,” he said. “Before the weather turned, I couldn’t even get on to golf.”

Mr. Robinson wonders whether the high-flying local economy is headed for a hard landing if Phase 2 doesn’t get approved. “It’s booming now, but it could go bust,” he said.

Industry observers estimate project-related costs will total \$45-billion for LNG Canada’s Phase 1, counting the \$18-billion Kitimat terminal and various infrastructure that includes the \$11.2-billion Coastal GasLink pipeline to be operated by TC Energy Corp.

The contentious pipeline route would transport natural gas from northeast B.C. to Kitimat.

Shell is the largest partner in LNG Canada, with a 40-per-cent stake, followed by Petronas at 25 per cent. The other co-owners are PetroChina (15 per cent), Japan’s Mitsubishi Corp. (15 per cent) and South Korea’s Kogas (5 per cent).

REPLAY: France's Macron delivers speech after EU summit in Brussels



Issued on: 21/10/2022 - 15:54 Modified: 21/10/2022 - 16:39



SAF Group created transcript of excerpts from Macron's address post EU leaders summit agreeing on a "roadmap" to protect European consumers from soaring energy prices in Brussels on Oct 21, 2022.

<https://www.france24.com/en/video/20221021-replay-france-s-macron-delivers-speech-after-eu-summit-in-brussels>

Items in "italics" are SAF Group created transcript

Note this is based on the France24 translation

In the Q&A, at 22:00 min mark, Macron "... *Because since the beginning of the war, we have our union of values. But we are not united when it comes to consequences of the war on our lives. It is true that when you are Norwegian or American, sanctioning Russia, helping Ukraine, is not the same whether you're Norwegian, French or German. Our economies need energy and the problem of depending on gas is much stronger for some countries than for others. So we have to discuss this. We have to have the debate. It's fair and that's what we've been doing. I really approached the Norwegian Prime Minister and the United States in a very open way so that they can understand our point of view. And yes, they have oil and that's great for them, but it wouldn't be fair if they kept all the benefit for themselves. It's a debate we have to have. There can't be a two tier Europe. Moreover, there are choices which we made in conjunction with the US regarding attractiveness, but with double standards because their cost of energy are so much lower as they are producers. They sell the gas for 3 or 4 times less than we have to pay. And they have also great subsidies from the states, the state in some area, up to 90%. That is unfair, it means it's double standard for the goods that are produced. And we need to create some more sincere conditions of trade. It's something I've been talking about with them and when I have my state visit in the states at the beginning of December, I will be discussing it again. And we have to act very quickly on prices, bring them down. We have to maintain solidarity and not let financial instability start in Europe. We have to create the conditions of attractiveness and competitiveness so that we can catch up and not be dependent on the ups and downs what is going on. We want to be, we are not only a market, we are producers. We want to be good at selling various industrial goods. And to do that, we need to fight and not stay "*

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

4:10 TTF

13:20 energy charter

Oct 18, 2022 13:46:27

Mexico Confirms Hedge to Insure Oil Revenue at \$68.70 in 2023

Mexico has moved to guarantee oil income next year, Yorio says
Finance Ministry executes massive hedge on annual basis

By Max de Haldevang and Dale Quinn

(Bloomberg) -- Mexico has an oil hedge program for 2023 that protects the country's revenue if crude prices decline below \$68.70 per barrel, Deputy Finance Minister Gabriel Yorio told lawmakers on Tuesday.

"For 2023, there is an oil hedge program that can be used if we observe a fall in oil prices below our budgeted price of \$68.70 per barrel," Yorio said in a presentation to a Mexican congressional committee.



Gabriel Yorio, Mexico's deputy finance minister, speaks during an interview in Mexico City, Mexico, on Thursday, Sept. 12, 2019. Source: Bloomberg

Bloomberg News reported last week that Mexico had begun the hedge, executing it largely through oil majors -- in contrast to previous years where Mexico has historically used big banks such as Goldman Sachs Group Inc. to run the program.

Read More: Mexico Begins Secretive Annual Oil Hedge to Lock in 2023 Revenue

The so-called Hacienda Hedge is the largest sovereign oil hedge in the world, typically costing \$1 billion and historically executed by some of Wall Street's biggest banks. While it serves as insurance against falling prices for the OPEC+ member, whose economy continues to rely on oil income, the hedge can also yield massive returns: It earned Mexico \$2.38 billion in 2020 when oil prices crashed and \$6 billion in 2015.

Mexico's Finance Ministry didn't immediately provide details on Yorio's remarks.

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Oil production increased by 0.12% in Colombia during August; Gas registered a decrease of 2.97%

October 13, 2022. Minenergía , Bogotá.

Sector: Hydrocarbons

The restoration of production and the entry of new wells in the departments of Meta and Arauca, drove the increase in oil production that reached an average of 749,022 barrels per day during August 2022.

- Meanwhile, the average production of traded gas was 1,087.29 million cubic feet per day (mpcd).

Minenergy. Bogotá, October 13, 2022.

The National Hydrocarbons Agency (ANH) reported that the controlled oil production during August of this year was 749,022 average barrels per day (bopd), 0.12% higher than that registered in July 2022 when it was 748,148 barrels average per day.

This behavior is due to the restoration of production and the entry of new wells in the departments of Meta and Arauca. With respect to the same month of 2021, there was an increase in daily oil production that corresponds to 0.17% (749,022 vs. 747,772 bopd).

The increase in production occurred mainly in the fields: Indian (Cabuyaro-Meta), Rubiales (Puerto Gaitán-Meta), Platanillo (Puerto Asís-Putumayo), Caño Limón (Arauca/Araucuita-Arauca), and Mariposa (Cabuyaro-Meta).

Meanwhile, the ANH reported that the average production of marketed gas was 1,087.29 million cubic feet per day (mpcd) during August 2022, which represented a decrease of 2.97% compared to the previous month, when it reached 1,120.61 mpcd. This decrease was due to the fall in the average production of the Cupiagua Liria field and electrical failures in the Clarinet field.

Compared to August 2021, marketed gas production increased by 2.41%, from 1,061.74 mpcd to 1,087.29 mpcd.

The decrease in gas production in the eighth month of the year is explained by the behavior of demand, with a decrease in the gas marketed from the Clarinete (Sahagún/La Unión-Córdoba/Sucre), Cupiagua Sur (Aguazul-Casanare), Aguas vivas (Sahagún-Córdoba), Cupiagua Liria (Aguazul-Casanare), and Kananaskis (Tauramena-Casanare) fields.

Excerpts from ANI reporting on Hardeep Singh Puri comments post Jennifer Granholm meeting in Washington



<https://aninews.in/news/world/us/india-is-clear-about-its-policy-regarding-oil-purchases-will-buy-oil-from-wherever-it-has-to-hardeep-singh-puri20221008143703/>

India is clear about its policy regarding oil purchases, will buy oil from wherever it has to: Hardeep Singh Puri

ANI | Updated: Oct 08, 2022 14:37 IST

Washington [US], October 8 (ANI): India has reiterated its choice of importing oil from countries like Russia after OPEC Plus, a consortium of oil-producing nations led by Russia and Saudi Arabia announced a slash in oil production by two million barrels per day.

While taking to reporters in Washington DC during his ongoing US visit, Union Minister of Petroleum and Natural Gas Hardeep Singh Puri on Saturday touched on several topics including how India will balance OPEC Plus oil production cut, diversification of energy - equity infusion, bio-fuel blending and green hydrogen.

With rising global energy requirements, the OPEC production cut is likely to impact countries like India, the third largest oil importer. Speaking on the topic of balancing the imports from OPEC Plus countries as well as from the US, which is also a oil exporting country, Puri said "If you are clear about your policy, which means you believe in energy security, energy affordability you will buy from wherever you have to. Our energy purchases from sources hitherto unheard of, we are in discussion with them."

Answering how India will negotiate the tightrope of expectations, he told ANI, "It's not a tight rope, I don't look at - We will also acquire assets outside wherever - I mean in recent months- we did USD 1.6 billion equity infusion which BPCL has done in Brazil. We are looking at assets in Africa."

Puri explained that oil exporting countries need buyers as they have to sell their products in the market.

"Sometimes when you are looking at it in a journalistic manner, you would say that producers are holding all the cards. I disagree with that; I think the person or country with a large market also has a huge role to play. I am giving you a hypothetical example - If we decide to limit consumption, no matter what you produce, you will have to find a place to sell it too and I can tell you that in the last year or so, I have had my oil companies tell me that we can raise it from here, but there are traditional suppliers, this is a discussion which will go on," Puri said in response to a question by ANI.

"Much of the trade incidentally takes place in a manner which is not properly understood outside. It's not that - you have some fuels which have high density, some are lighter fuels - I don't want to get into that discussion - it may originate somewhere - we own assets outside, the product of those assets does not come to India, it goes in, it's sold in the swap market etc," he added.

This week's OPEC Plus announcement on oil production cut will likely have a cascading impact on geopolitical shifts amid the Russia-Ukraine crisis.

"Oil and energy have been traded for years. Governments in particular situations will react to geopolitical events. At the end of the day all governments are committed to issues of energy provisions; that is security and affordability," said Puri.

Meanwhile, an intense pressure campaign by the US to dissuade its Arab allies seemingly fell on deaf ears. Russia is already pumping below its OPEC+ ceiling, and the bulk of the cuts will be made by Gulf producers.

Speaking about the conflict and Indian diversification, Union minister Puri said, "I don't see any conflict. There are countries in OPEC that sell to us. They've never turned around and told us that they don't want to sell to us. If you don't sell to India and China, there are not many big markets left, even Europe collectively. Many of these are matured markets in energy. They don't utilize crude oil - some of them have gone into nuclear energy, and others are going into biofuels. I also want to share with you some of the advances which India has made - biofuel blending, when I was Ambassador to Brazil, we tried very hard, the central government tried to introduce 5 per cent ethanol blending in 15 of our States and Union Territories, we couldn't get it done."

Puri further stated that the India had taken a giant leap in bio-fuel blending after Prime Minister Narendra Modi assumed power in 2014.

"In 2014, when Prime Minister Narendra Modi assumed office, our bio-fuel blending was 1.4 per cent, today we have already reached 10.5 per cent of blending. We have a target of 20 per cent blending by 2030. We have just brought it forward to 2024-2025," said Puri.

He also gave examples of green Hydrogen and how India is providing opportunities for oil exploring companies.

"Green Hydrogen - We have Indian companies selling green ammonia to Germany - the world is moving at different fronts - exploration and production in India will shoot up. I have always said that we have neglected to the point, I even use words like 'criminal neglect.' We have 3.5 million square kilometres of sedimentary basin, and one million square kilometres of that sedimentary basin was called a 'no go area', just now a few months ago, 99.5 per cent of that 'no go area' has been cleaned up which means for an investor are happy to come and explore. There are not hundreds of players in the energy sector, five to six big companies, they are all interested, they are either forming joint ventures, just to come (to India)," said Puri. (ANI)

<https://aninews.in/news/world/us/india-under-no-global-pressure-to-shun-russian-oil-hardeep-singh-puri20221008093740/>

Union Minister of Petroleum and Natural Gas, Hardeep Singh Puri.

India under no global pressure to shun Russian oil: Hardeep Singh Puri

ANI | Updated: Oct 08, 2022 09:37 IST

Washington [US], October 8 (ANI): Union Minister of Petroleum and Natural Gas, Hardeep Singh Puri on Saturday said that India is under no pressure to shun Russian oil.

In a bilateral meeting with US energy secretary Jennifer Granholm, Puri said that the Indian government has a moral duty to provide energy to its citizens and it will continue to buy oil from wherever it has to.

Have I been told by anyone to stop buying Russian oil? The answer is a categorical No," Puri told reporters in Washington.

"India will buy oil from wherever it has to for the simple reason that this kind of a discussion cannot be taken to the consuming population of India," he added.

Since the start of the Ukraine conflict. India has sought to carve a middle path between Moscow and its Western critics and so far largely resisted Western pressure to cut its economic ties with the Kremlin.

The US is holding "deep talks" with India over the latter's reliance on Russian arms and oil, according to media reports citing a state department official. The official claimed that Indian representatives are starting to look at other markets to meet their demands as they try to become less dependent on Moscow for oil purchases.

Notably, the European Union (EU) on Thursday (local time) adopted its latest package of sanctions against Russia over the illegal annexation of Ukraine's Donetsk, Luhansk, Zaporizhzhia and Kherson regions.

The EU adopted restrictive measures against an additional 30 individuals and seven entities, read the EU's statement.

EU sanctions (8th package since the Ukraine war began) aim to force Russia to reduce prices & lose oil revenue. But as imports to the tune of 1.7 million barrels per day, the EU is still the biggest market for Russian crude.

Moreover, the EU is trying to determine the pricing of Russian oil through its insurance firms as Russia is the world's largest oil exporter. The European insurers rule commercial oil tankers by providing them with massive insurance.

The EU sanctions II forbid these insurers from providing services to Russian companies selling oil above the price cap.

Moreover, EU's sanctions package on Russia will impact countries like India. EU is capping what other countries can pay for Russian oil. It bans the sale of oil above that price. This applies only to oil transported by sea. While, the EU members importing Russian oil by pipeline won't be hurt by these sanctions.

Puri highlighted India is one of the largest oil importer and the demand is expected to rise driven by an increase in India's per capita consumption of energy which currently stands at one-third of the global average. Puri further stressed that the fuel demand is expected to keep rising as the country's economy grows.

It is pertinent to note that External Affairs Minister S Jaishankar also on several platforms had explained India's decision to continue buying Russian oil. Recently, Jaishankar said PM Modi's advice on the issue was to do what is best for the nation. "Due to the Russia-Ukraine conflict, petrol prices doubled. We had pressure from where to buy the oil but Prime Minister Narendra Modi and the government were of the view that we have to do what is the best for our nation," Jaishankar said. (ANI)

<https://aninews.in/news/world/us/oil-price-rise-in-india-is-way-below-global-price-hikes-hardeep-singh-puri20221008091154/>

Oil price rise in India is way below global price hikes: Hardeep Singh Puri

ANI | Updated: Oct 08, 2022 09:11 IST

Washington [US], October 8 (ANI): Union Petroleum and Natural Gas minister Hardeep Singh Puri said that compared to fuel price hikes globally, India only raised prices by 2 per cent, which is way below that of other countries.

"In terms of petrol and diesel, if the increases in North America are 43-46 per cent, in India we allow prices to go up by only 2 per cent or so. In terms of gas, global benchmarks went up by 260-280 per cent and our own ability to contain gas price increases was something around 70 per cent," Puri told reporters in Washington DC.

Puri on Thursday held bilateral meeting with US energy secretary Jennifer Granholm and other top officials of the Biden Administration.

The minister also highlighted India's commitment to accelerating a just and sustainable energy transition at the ministerial dialogue on India-US strategic clean energy.

During his visit, the union minister also held meetings with senior officials of the World Bank, the Presidential envoy for energy and infrastructure Amos Hochstein and senior representatives of the White House. Puri is scheduled to meet energy business leaders in Houston on Saturday.

The Union Minister said that India was "very confident" of navigating the Organisation of Petroleum Exporting Countries Plus (OPEC+) decision to cut oil production from November by a steeper-than-expected two million barrels per day (bpd). "

How will this impact India? We are very confident of being able to navigate through the situation," Puri told reporters in Washington.

"How will this navigate India? We're very confident of being able to navigate through the situation," said Puri.

Puri highlighted India is one of the largest oil importers and the demand is expected to rise driven by an increase in the country's per capita consumption of energy which currently stands at one-third of the global average. Puri further stressed that the fuel demand is expected to keep rising as the country's economy grows.

"In India, 5mn (oil) bpd is being consumed daily; it's set to rise. Our per capita consumption compared to global averages is 1/3rd. But I see in the coming years, 25 per cent of the global increase in demand will come from India. Energy is a critical driver of economic growth," the union minister said.

The Union Minister also said that India will buy crude oil from whichever country it wanted and that New Delhi faces no pressure from Washington to cut its energy buys from Russia.

"India will buy oil from wherever it has to for the simple reason that this kind of a discussion cannot be taken to the consuming population of India," Puri told reporters in Washington. (ANI)

OCTOBER 18, 2022

FACT SHEET: President Biden to Announce New Actions to Strengthen U.S. Energy Security, Encourage Production, and Bring Down Costs

President Biden is committed to doing everything in his power to respond to Putin's Price Hike at the pump, and he is delivering. Gas prices fell at the fastest rate in over a decade this summer, with average prices down by about \$1.15 per gallon since their peak in June – and just about 30 cents above levels on February 24, when the war in Ukraine began. In fact, gas prices have fallen 15 out of the last 18 weeks. According to an industry analyst, the most common price across the country today is \$3.39.

President Biden is directing his Administration to take additional action to strengthen energy security, address the supply crunch, and lower costs.

First, the Department of Energy (DOE) is issuing a Notice of Sale tomorrow morning for 15 million barrels from the Strategic Petroleum Reserve (SPR) to be delivered in December. This sale will complete the historic, 180-million-barrel drawdown the President announced in the spring, which has helped to stabilize crude oil markets and reduce prices at the pump. The President is also calling on DOE to be ready to move forward with additional significant SPR sales this winter if needed due to Russian or other actions disrupting global markets.

Second, the President is announcing that the Administration intends to repurchase crude oil for the SPR when prices are at or below about \$67-\$72 per barrel, adding to global demand when prices are around that range. As part of its commitment to ensure replenishment of the SPR, the DOE is finalizing a rule that will allow it to enter fixed price contracts through a competitive bid process for product delivered at a future date. This repurchase approach will protect taxpayers and help create certainty around future demand for crude oil. That will encourage firms to invest in production right now, helping to improve U.S. energy security and bring down energy prices that have been driven up by Putin's war in Ukraine.

Third, the President is calling on companies to pass through lower energy costs to consumers right away. The profit that energy refining companies are now capturing on every gallon of gasoline is about double what it typically is at this time of year, and the retailer margin over the refinery price is more than 40 percent above the typical level. These outsized industry profit margins – adding more than \$0.60 to the average price of a gallon of gas – have kept pump prices higher than they should be. Keeping prices high even as input costs fall is unacceptable, and the President will call on companies to pass their savings through to consumers – now.

Continuing to Use the SPR to Advance U.S. Energy Security

In March, following Putin's further invasion of Ukraine, the President authorized the largest-ever release from the SPR and secured historic coordination with allies and partners to release crude oil from their reserves as well. Treasury Department economists [estimate](#) that these releases, along with coordinated releases from international partners, have reduced gas prices by as much as about \$0.40 per gallon, compared to what they otherwise would have been. Average U.S. gas prices have declined by more than a dollar per gallon from their peak earlier this year.

Global crude oil supply flows remain a challenge, due in large part to the ongoing instability caused by Russia's actions in Ukraine. To help stabilize markets and shore up supply in the face of these challenges, DOE will sell 15 million barrels from the SPR for delivery in December, issuing the Notice

of Sale for these barrels in the morning. The sale, which completes the 180 million barrels the President authorized in the spring, will add about 500K barrels per day of supply onto the market in December, providing continued supply certainty and some price relief.

The U.S. SPR remains the largest strategic reserve in the world with about 400 million barrels remaining, which is greater than the amount of any SPR release in U.S. history. Even as DOE executes on the plan to refill the SPR to previous levels in coming years, the SPR remains more than ready to respond to energy security needs today.

The President is prepared to authorize significant additional sales in coming months if conditions require. DOE will be prepared to act quickly to inject additional supply into the market if needed, and the Administration will not hesitate to use this tool, or the others at its disposal, to shore up the global supply of energy, support domestic inventory levels, and bring prices down for Americans.

Using SPR Repurchases to Encourage Increases in Near-Term Production

The Administration is committed to replenishing the SPR, which is an important national security asset, so it can continue to serve its purpose well into the future. And, it is committed to doing so in a way that protects taxpayer interests, avoids putting upward pressure on prices in the near term, and encourages more production right now by providing certainty about repurchases in the future.

U.S. oil production is almost 12 million barrels per day. By the end of this year, it will be up by about one million barrels per day compared to when President Biden took office, and it is on track to reach a new annual high in 2023. However, a number of industry participants have suggested that, even with today's high prices, they are concerned about investing in production when prices could fall in the future.

The Administration is announcing its intent to use SPR repurchases to add to global crude oil demand at times when the price of West Texas Intermediate (WTI) crude oil is at or below about \$67 to \$72 per barrel. This will protect taxpayer interests because the SPR will be repurchasing at a lower price than recent sales, potentially allowing it to repurchase more oil than it released with sale proceeds. It will also help address producer concerns about uncertain demand in future years, encouraging immediate investment.

DOE has finalized a first-of-its-kind rule that enables it to enter into fixed-price contracts with suppliers, through a competitive bid process, to repurchase oil for future delivery windows. This new authority will shore up demand for oil when supply is less uncertain and prices are anticipated to be lower. For example, if the market were to price barrels for delivery in mid-2024 at \$70, the new rule allows DOE to enter into a contract now for mid-2024 delivery of oil at, around or lower than that price. DOE plans to use this authority to enter into contracts to repurchase oil for the SPR, targeting a price of about \$67 to \$72 per barrel or lower, with initial repurchases being delivered in 2024 or 2025. In addition, DOE is prepared to undertake additional SPR repurchases at times when the price of oil for current delivery drops to about \$67 to \$72 per barrel or lower, supplementing its future fixed-price contracts as appropriate.

This approach is a win for taxpayers – refilling the SPR at a lower price compared to the barrels sold. And it is a win for energy security – giving producers who enter into the contracts more certainty of continued oil demand to inform investment decisions today, thereby spurring needed increases in production at a time when Putin's war continues to disrupt global energy markets.

Oil price outlook – Snapshot: October 19, 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	↔	<ul style="list-style-type: none"> Refinery margins were largely flat over the past week.
	Crude stocks	↓	<ul style="list-style-type: none"> In the week ending October 7, land crude-oil storage levels in BloombergNEF's tracked regions (the US, ARA and Japan) rose by 1.8% to 558.2 million barrels (m bbl). The stockpile deficit against the five-year average (2015-19) narrowed from 30.2m bbl to 23.9m bbl. Including global floating crude stockpiles from the same week, total crude oil inventories increased by 1.3% to 646.7m bbl, with the stockpile surplus widening from 21.2m bbl to 25.2m bbl.
	Product stocks	↔	<ul style="list-style-type: none"> In the week ending October 7, gasoline and light distillate stockpiles in BNEF's tracked regions (the US, ARA, Singapore, Japan and Fujairah) rose by 1.1% week-on-week to 254.6m bbl, with the stockpile deficit against the three-year average (2017-19) narrowing from 12.2m bbl to 7.0m bbl. Gasoil and middle distillate stockpiles in BNEF's tracked regions were down 4.5% to 138.1m bbl, with the stockpile deficit against the three-year average widening from 30.4m bbl to 35.7m bbl. Oil product stockpiles in tracked regions dropped by 0.5% to 963.0m bbl, with the stockpile deficit against the three-year seasonal average narrowing from 48.9m bbl to 48.4m bbl. Altogether, crude and product stockpiles increased by 0.2% to 1,609.8m bbl, with the stockpile deficit narrowing from 27.7m bbl to 23.1m bbl.
	Demand indicators	↓	<ul style="list-style-type: none"> In the week to October 18, global jet fuel demand from commercial passenger flights dropped by 1.4% to 5.31 million barrels per day. Jet fuel consumption by international passenger flight departures was up 9,200 barrels per day (or +0.3%) week-on-week, while consumption by domestic passenger flight departures decreased 83,500 barrels per day (or -3.7%). In the week to October 16, flight departures in the Eurocontrol area rose to 88.5% of the equivalent week in 2019, up from 88.1% last week. The four-week moving average climbed to 88.1%, from 87.6%. Meanwhile, in the same week, US passenger throughput grew to 95.7% of the equivalent week in 2019, up from 94.9% last week. The four-week moving average increased to 94.5%, from 94.1%. The oil-demand-weighted global mobility index (excluding China) fell over the past week, according to BNEF's calculation based on Google mobility data. It decreased by 1.5% in the week to October 14, led by declines in the Americas (-2.6%), Asia Pacific ex-China (-0.5%) and Europe (-0.1%). Meanwhile, in the week to October 12, TomTom's peak congestion data showed decreases in North America (-4.6%), Europe (-3.0%) and Asia Pacific ex-China (-1.2%). Road congestion in China's 15 key cities surged 10.8 percentage points to 108.6% of January 2021 levels in the week to October 12, according to BNEF's calculation based on Baidu data. In the week to October 11, global daily average Covid-19 cases grew 10% to 479,000 new cases. The Americas number decreased 7% to 58,000 daily cases, while the Asia Pacific number declined 8% to 120,000 daily cases (although the number in China more recently fell 8% to 1,413 cases in the week to October 17). Europe saw cases rise 40% to 276,000 daily cases.
Financial	Macro indicators	↓	<ul style="list-style-type: none"> The dollar index averaged 113.1 over the past week and was 1.3% higher than the week before.
	Hedge fund positioning	↑	<ul style="list-style-type: none"> In the week to October 11, Managed Money net positioning in the oil complex was up by 47.1m bbl (or +10.0%) week-on-week to 519.0m bbl, and rose to the twentieth percentile of the past five years.
	Options chains and volatility	↔	<ul style="list-style-type: none"> There was a significant drop in open interest for Brent Mar-23 \$200/bbl calls. Brent and WTI 1M volatility skews were higher over the past week.
Outlook	Weekly call	↓	<ul style="list-style-type: none"> BNEF is bearish on oil prices for the week ahead, with Brent Dec-22 trading at \$90.28/bbl and WTI Dec-22 trading at \$82.72/bbl at the time of writing. The oil-demand-weighted global mobility index (excluding China) weakened over the past week, and slipped from 0.2% to 1.1% below the same week last year. Global jet fuel demand dropped week-on-week. The four-week moving average for air traffic in Europe moved slightly higher to 88.1% of 2019 levels, reaching the year-to-date high level last seen in mid-August. Meanwhile, the US TSA four-week average passenger throughput inched higher to 94.5% of 2019 levels, but was still below the post-pandemic high of 95.5% seen in late-September. Weekly oil product inventories saw a bearish move over the past week as the stockpile deficit against its seasonal average narrowed. This was largely driven by the crude stockbuild on land. Middle distillate stockpiles have begun falling again as the weather turns cold in the northern hemisphere. Key agencies – OPEC, the International Energy Agency (IEA) and the US Energy Information Administration (EIA) – now see an oil supply deficit for 2023 of between 0.28-0.60m b/d (million barrels per day) due to lower OPEC+ supply. On average, the key agencies lowered their expectations for annual oil demand growth in 2023 by 0.44m b/d (million barrels per day) to 1.82m b/d. Key agencies now expect a smaller supply deficit for 2022, as the effects of OPEC+ supply cuts in the fourth quarter outweighed the weaker oil demand outlook. They expect to see a supply surplus of between 0.26-0.35m b/d.

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
October 19	↔	↓	↔	↓	↑	↔	↓	Brent-Dec: 90.28 WTI-Dec: 82.78	
October 4	↔	↔	↑	↔	↓	↓	↔	Brent-Dec: 90.71 WTI-Nov: 85.26	📄
September 27	↔	↓	↓	↓	↓	↓	↔	Brent-Dec: 94.06 WTI-Nov: 87.83	📄
September 6	↓	↑	↔	↓	↔	↑	↓	Brent-Nov: 101.00 WTI-Oct: 95.40	📄
August 30	↔	↔	↓	↑	↑	↑	↑	Brent-Oct: 93.65 WTI-Sep: 87.83	📄
August 16	↔	↓	↔	↓	↓	↔	↓	Brent-Oct: 97.60 WTI-Sep: 91.50	📄
August 9	↔	↓	↔	↔	↓	↓	↔	Brent-Oct: 99.38 WTI-Sep: 93.42	📄
August 2	↔	↑	↔	↔	↔	↔	↓	Brent-Oct: 101.94 WTI-Sep: 98.46	📄
July 26	↔	↓	↔	↓	↑	↔	↔	Brent-Sep: 105.88 WTI-Sep: 99.03	📄
July 19	↔	↓	↓	↓	↔	↔	↓	Brent-Sep: 105.18 WTI-Aug: 102.34	📄
July 11	↓	↓	↑	↓	↓	↓	↓	Brent-Sep: 111.71 WTI-Aug: 107.91	📄
July 5	↓	↑	↓	↑	↓	↓	↔	Brent-Aug: 115.81 WTI-Aug: 110.34	📄
June 21	↑	↓	↑	↑	↓	↓	↔	Brent-Aug: 120.06 WTI-Jul: 118.58	📄
June 13	↔	↑	↔	↔	↑	↔	↔	Brent-Aug: 119.88 WTI-Jul: 118.94	📄

To view past reports on terminal, go to [NI BNEFOIL](#), search for the report and click on the icon to the far right:

24 ✓ Oil Price Indicators Weekly

BNE

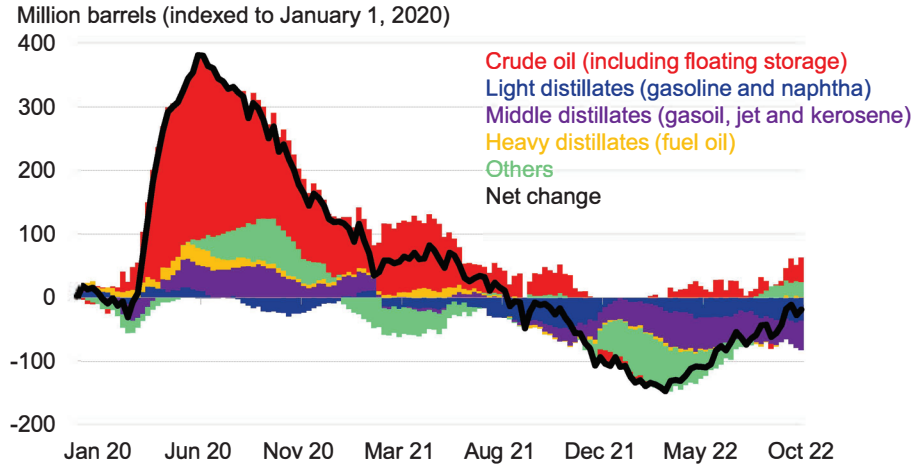
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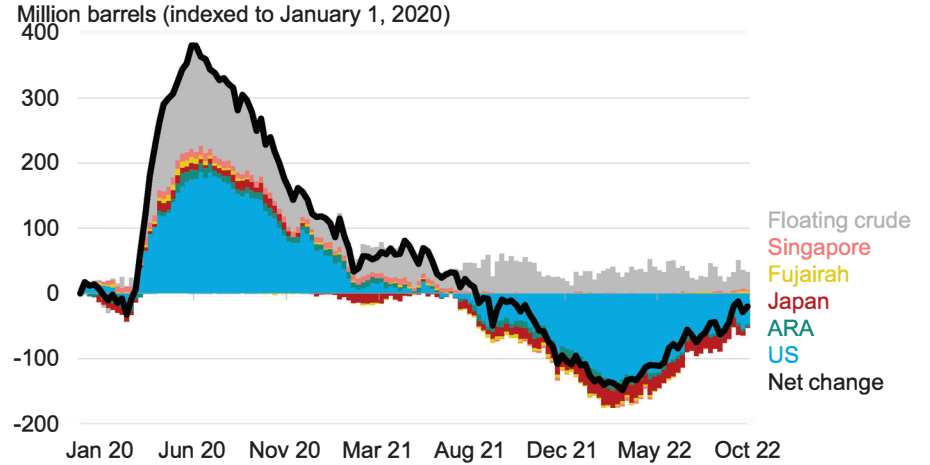
Weekly oil inventories

Middle distillate stockpiles start to fall

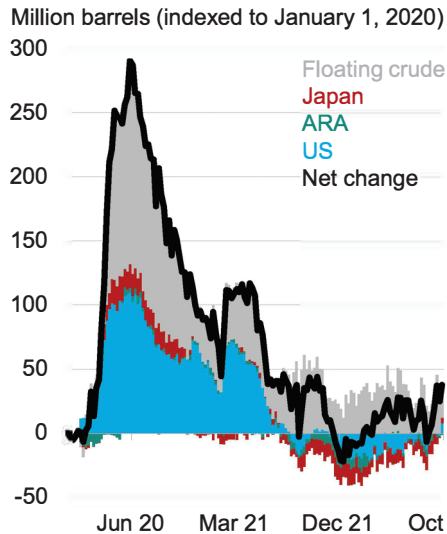
Weekly oil inventories by type



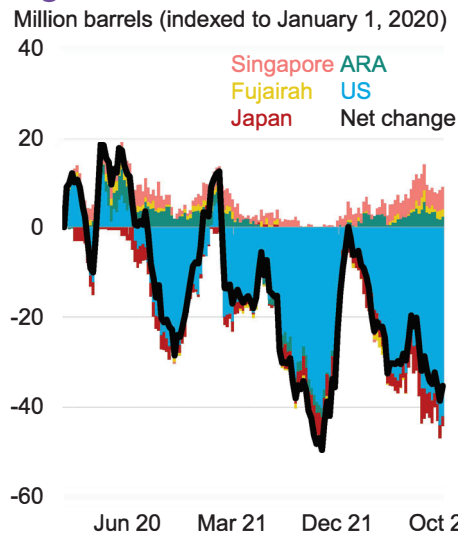
Weekly oil inventories by region



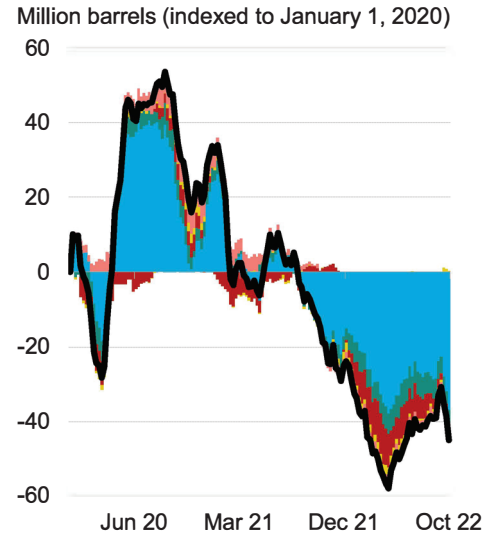
Crude inventories



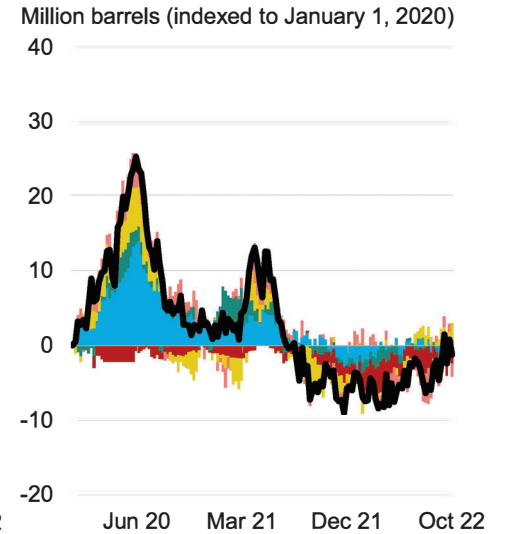
Light distillate inventories



Middle distillate inventories



Heavy distillate inventories



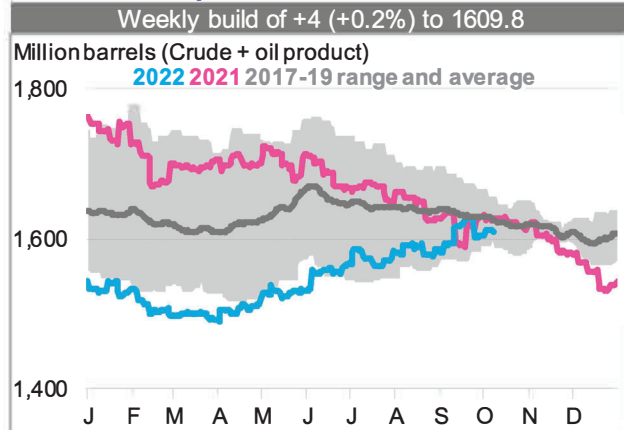
Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ, Vortexa, Genscape. Note: As of the week ending **October 7, 2022**.

Aggregated oil stockpiles

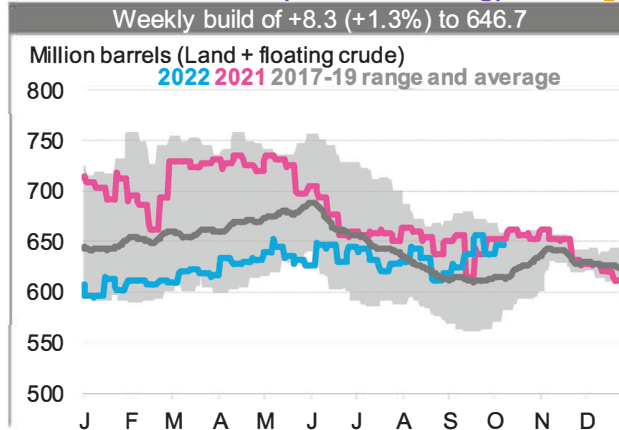
Bearish: Stockpile deficit narrowed from 27.7m bbl to 23.1m bbl

- 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.

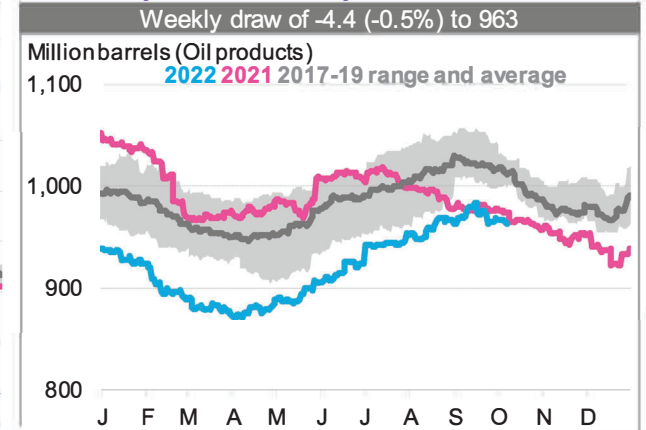
Total oil and product stocks



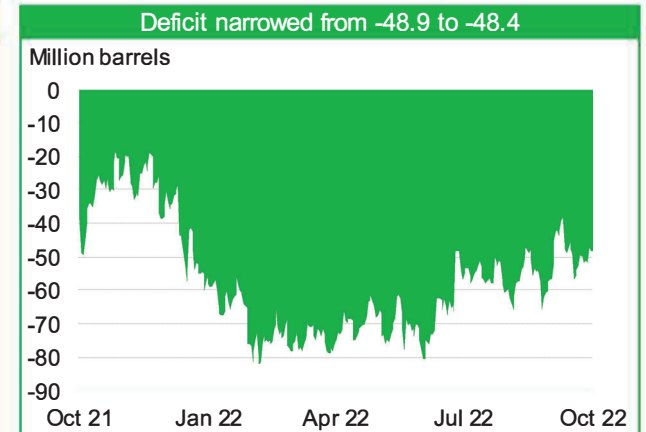
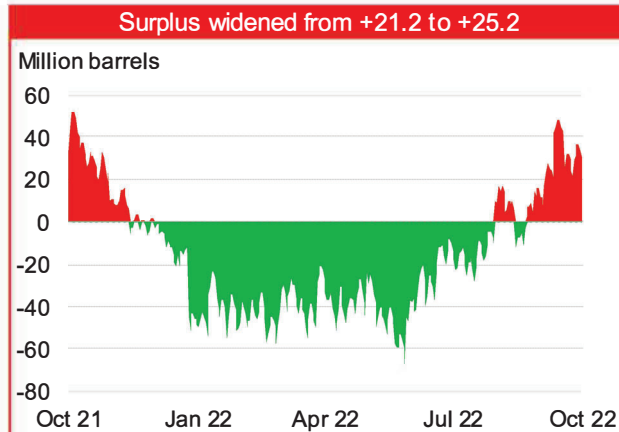
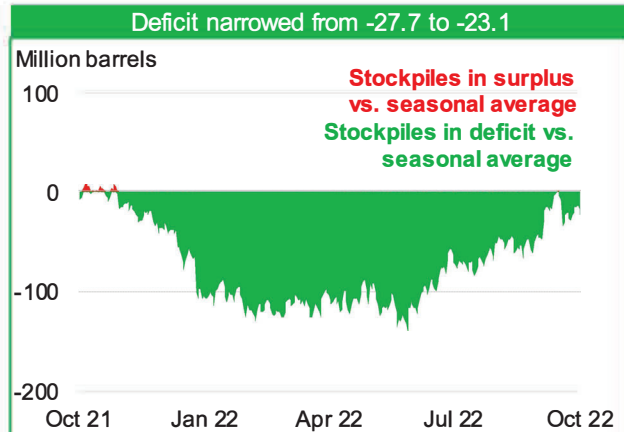
Total crude stocks (land + floating)



Total oil product stockpiles



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



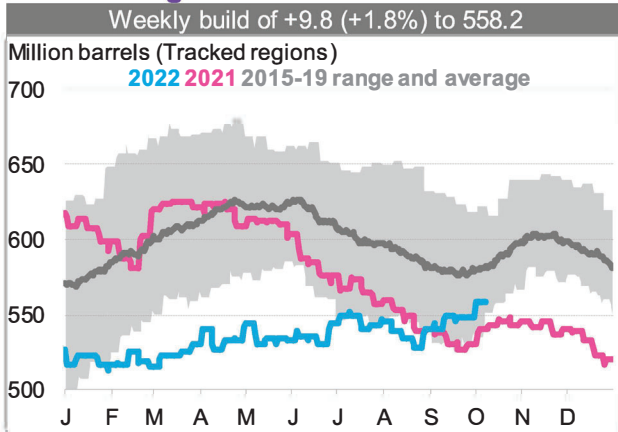
Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ, Vortexa, Genscape. Note: As of the week ending October 7, 2022.

Crude stocks: Land

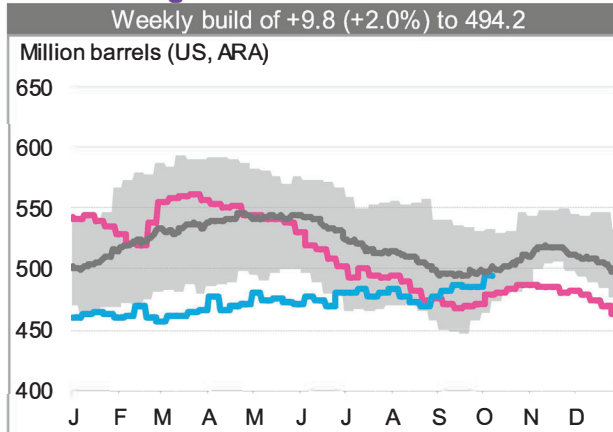
Bearish: Deficit narrowed from 30.2m bbl to 23.9m bbl against the seasonal average

- 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.

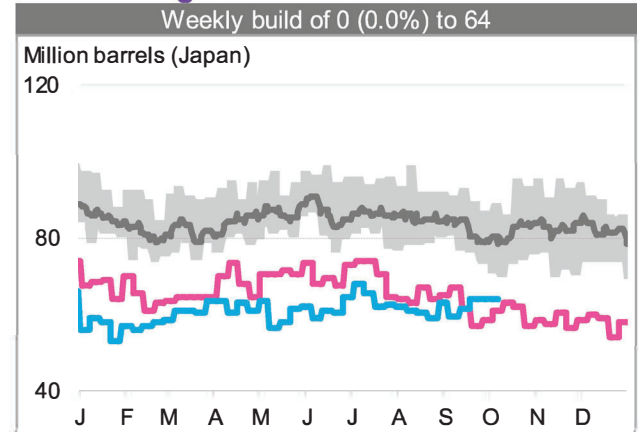
Land storage: Total



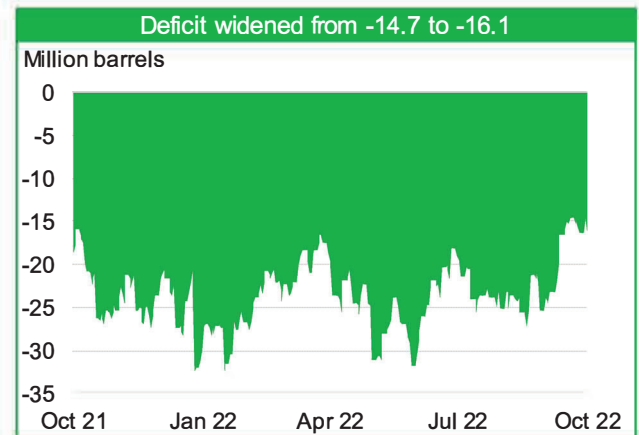
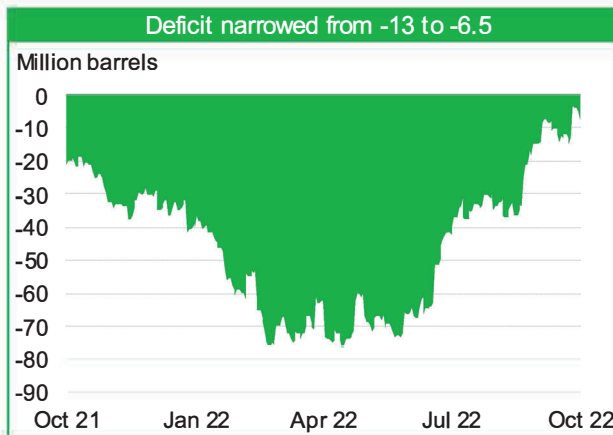
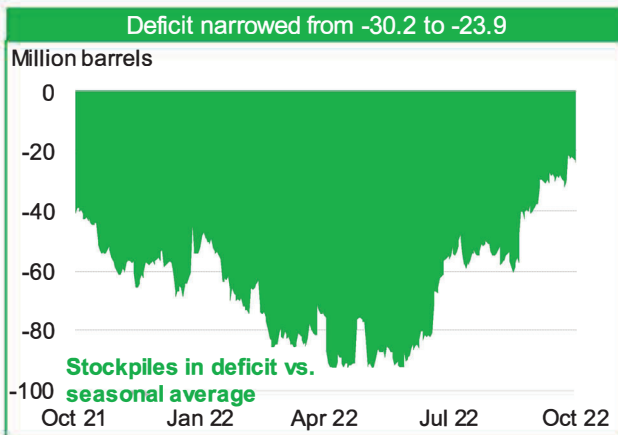
Land storage: West of Suez



Land storage: East of Suez



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



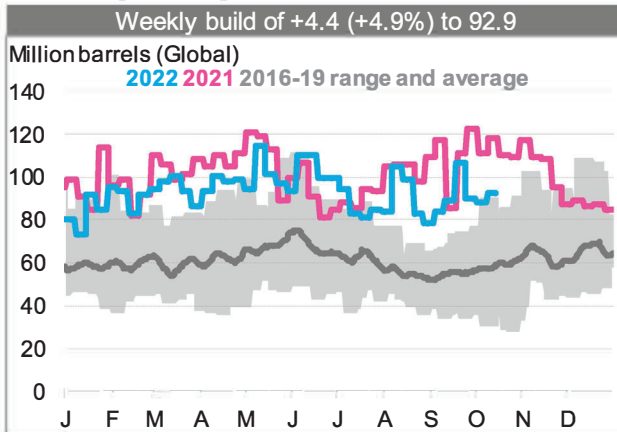
Source: BloombergNEF, US EIA, Genscape, PAJ. Note: As of the week ending October 7, 2022.

Crude stocks: Floating

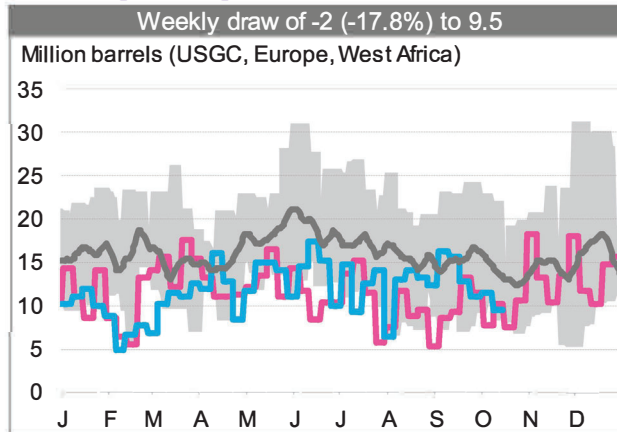
Neutral: Surplus level remains high

- 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).

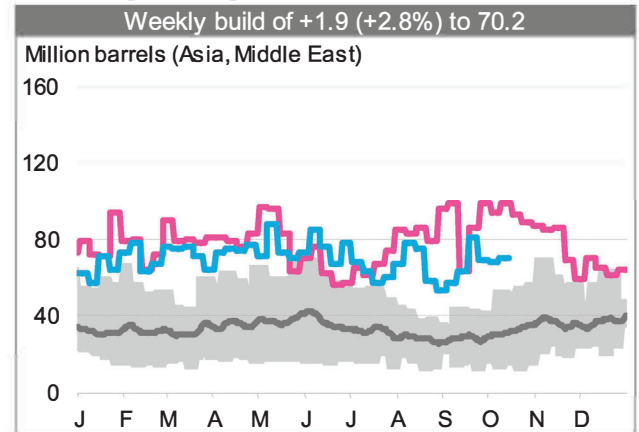
Floating storage: Total



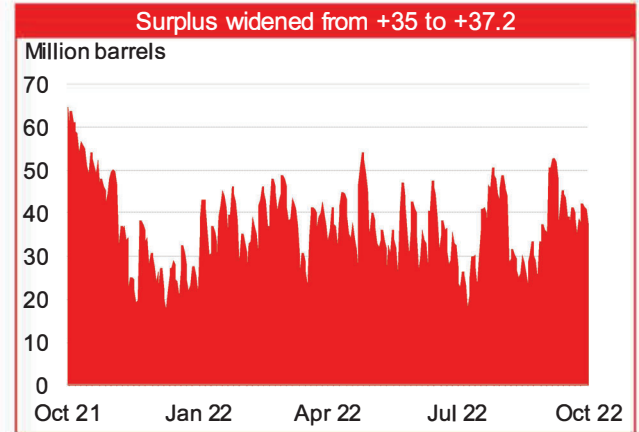
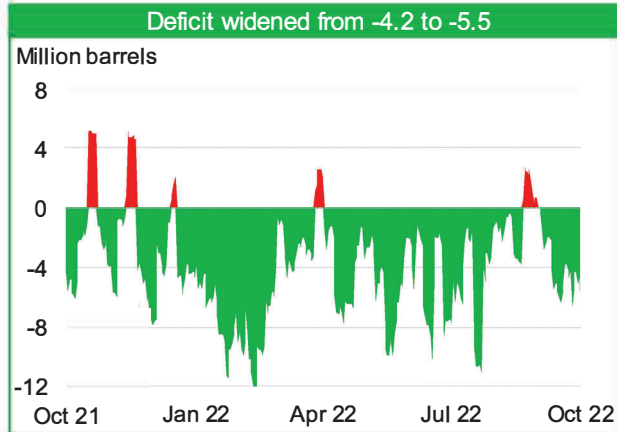
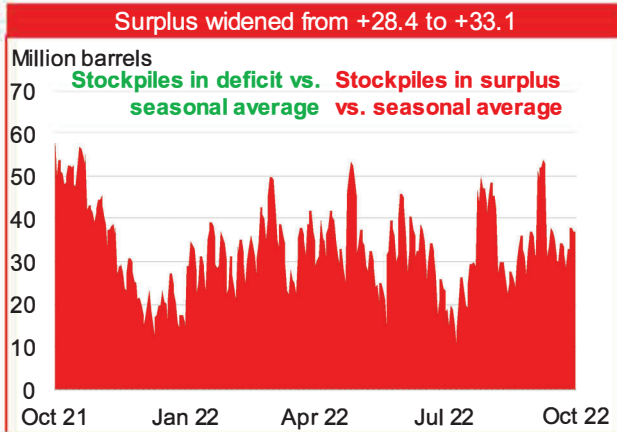
Floating storage: West of Suez



Floating storage: East of Suez



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



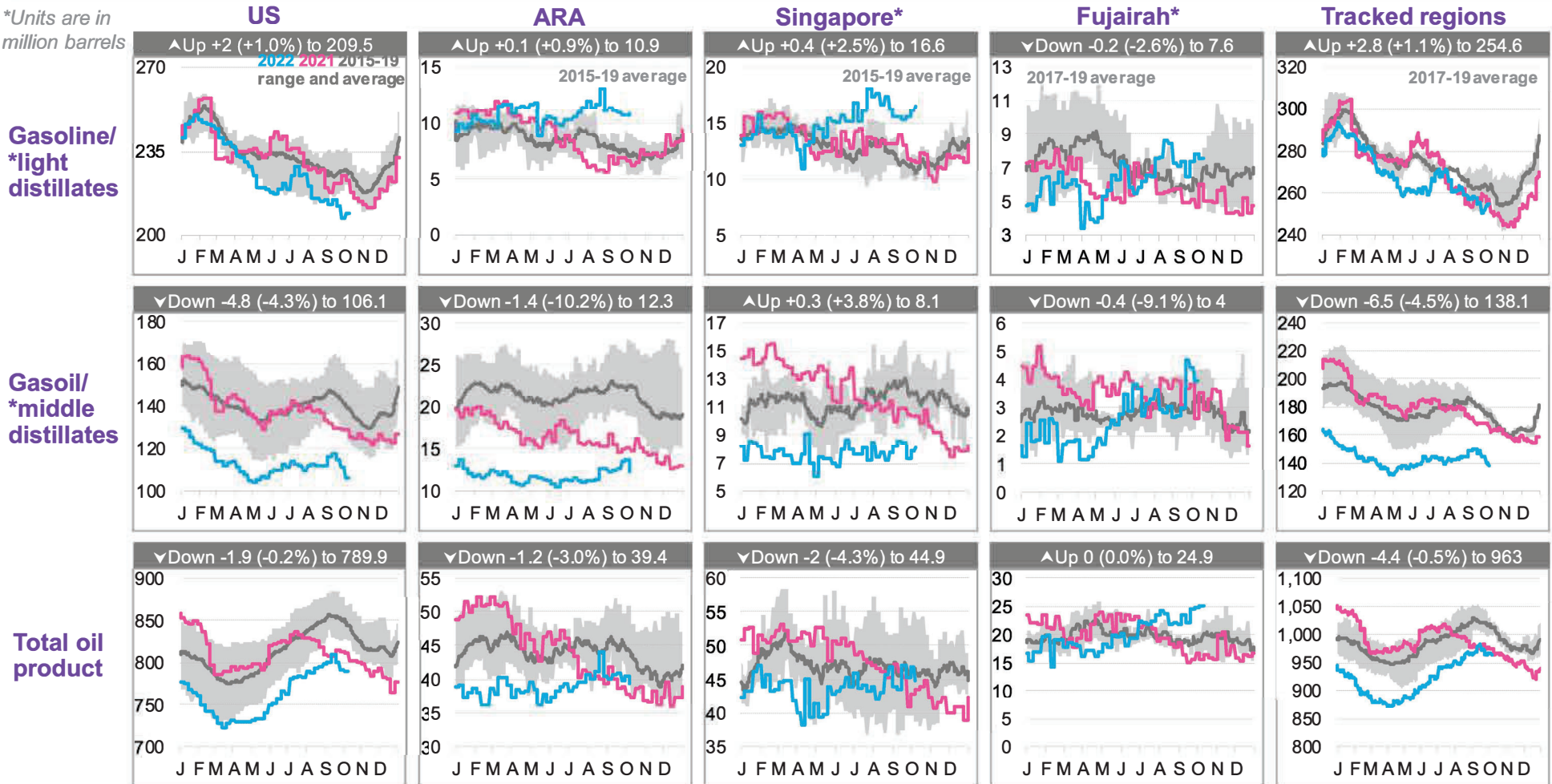
Source: BloombergNEF, Vortexa. Note: As of the week ending October 14, 2022. *Raw data from Vortexa are revised frequently, so the data in this report might change week-to-week.

Product stocks: Current versus seasonal average

Neutral: Oil product stockpiles in tracked regions fell 0.5% over the past week

- 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

*Units are in million barrels



Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the week ending October 7, 2022.

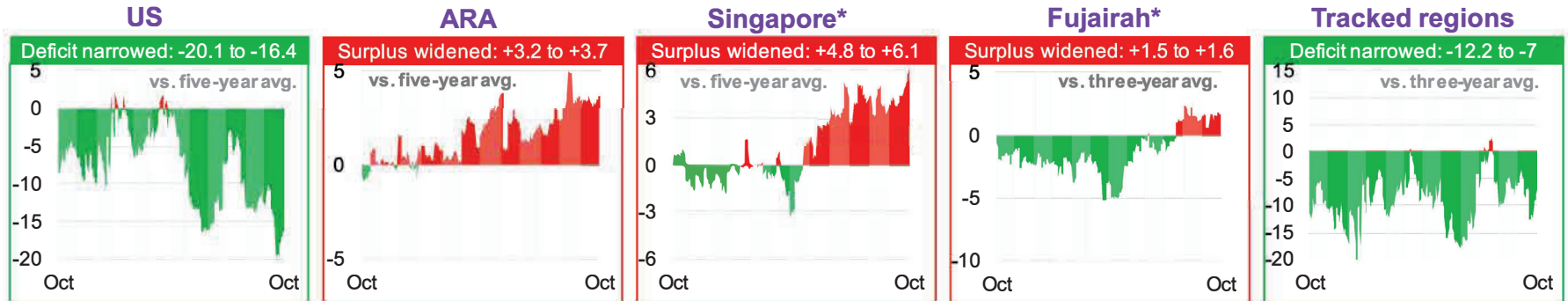
Product stocks: Current versus seasonal average

Neutral: Oil product stockpile deficit against the seasonal average narrowed from 48.9m bbl to 48.4m bbl

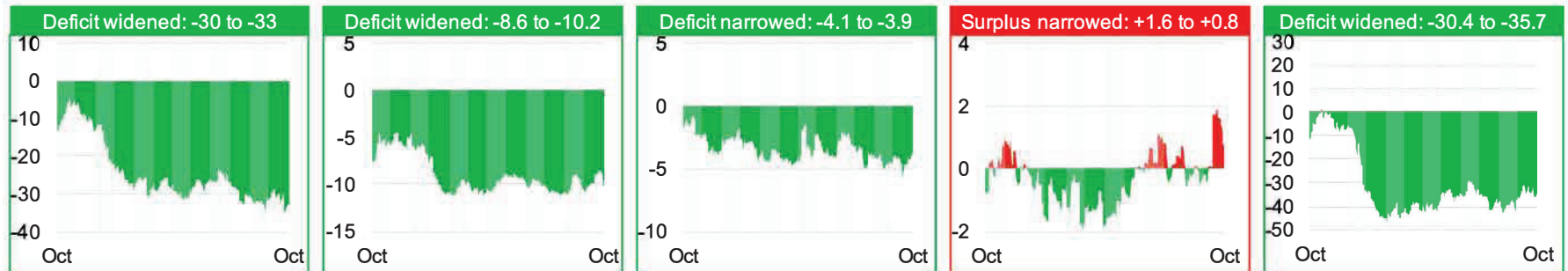
- The charts below compare each respective regional product stockpile level against the seasonal average defined in the previous slide.
- Red** signifies that the current stockpile levels are higher (in surplus) than the seasonal average, while **green** signals that the current stockpiles are lower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

*Units are in million barrels

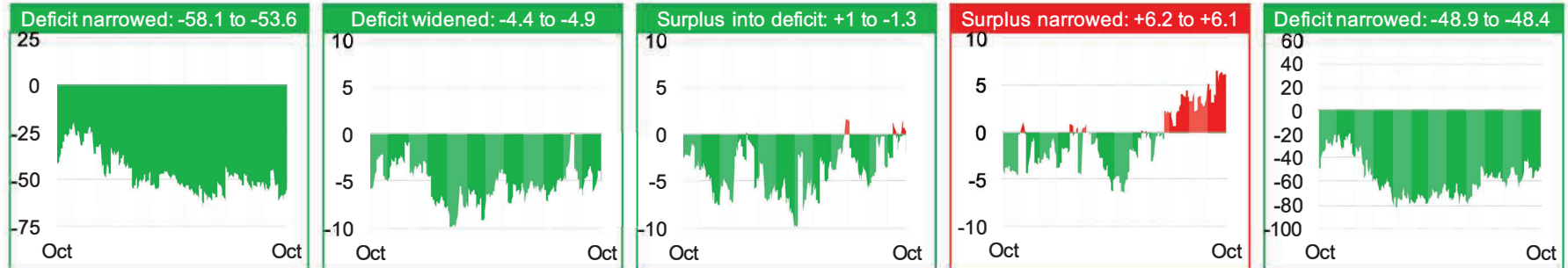
Gasoline/
*light
distillates



Gasoil/
*middle
distillates



Total oil
product



Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the week ending October 7, 2022.

Oct 19, 2022 12:08:53

OIL DEMAND MONITOR: India Leads Gasoline Gains While US Lags (1)

Congestion intensifies in many major cities around the world
 Oct. 14 US gasoline demand still below the 5-yr seasonal avg

By Stephen Voss

(Bloomberg) -- Gasoline demand has struggled to return to pre-pandemic levels in European and North American markets even as coronavirus fades into the distance for most motorists, leaving emerging markets such as India with the biggest consumption gains.

There's ample evidence that commuters have returned to their cars, even if not always as much as before the pandemic. An average of Monday morning congestion levels across five major European cities showed levels near the highest so far this year, according to a Bloomberg analysis using TomTom NV data. The same is true for aggregates of major cities in the Americas and Asia.

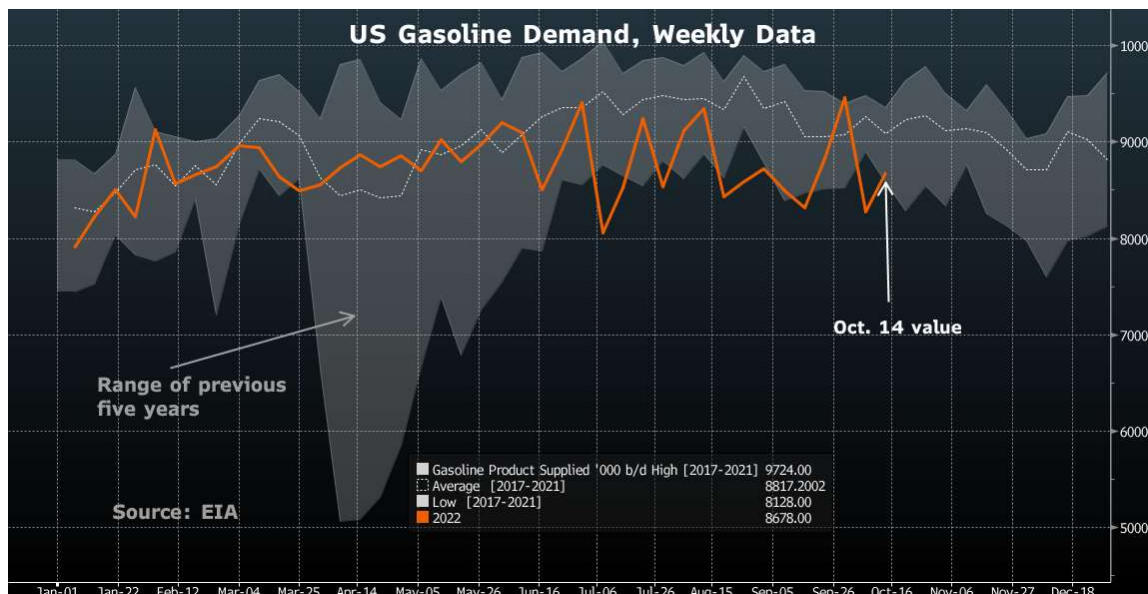
Traffic in urban areas is typically lower during the summer vacations or around public holidays. Neither was applicable to the most recent Monday, when regionally-averaged congestion levels were high in Asia, Europe and the Americas. Separate data for China also shows a recent gain, following the end of a weeklong holiday. Still, busy cities don't always mean higher national road fuel sales, as drivers scale back on longer trips or switch to electric vehicles.



India Leads

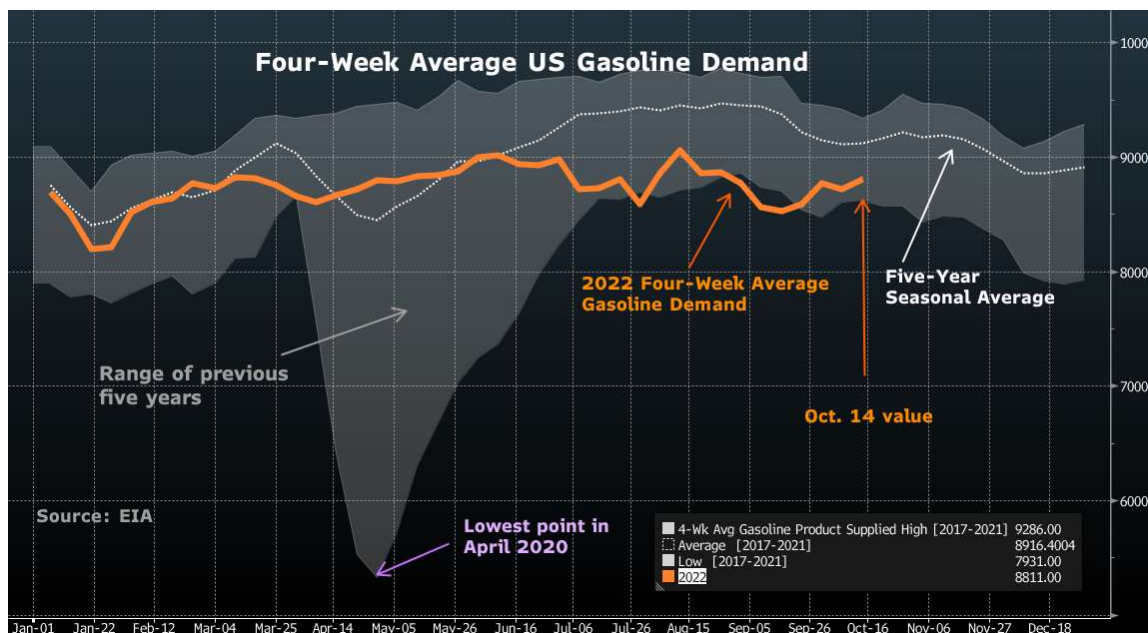
India is showing significant momentum. Road fuel consumption was strong in the country last month, with gasoline up 23% from 2019 levels and diesel 15% higher, according to a Bloomberg survey of refinery officials.

More frequent weekly data is available for consumption by American and British motorists, but compared with India, both appear weak.



The latest estimate of US gasoline product supplied, a notoriously volatile proxy for demand, was published earlier Wednesday by the Energy Information Administration. That figure, for the week ended Oct. 14, edged higher again after an erratic few weeks that saw it jump from below the five-year seasonal range, to above, then back below. Compared to the same week of 2019, demand is down about 7%.

Another way of viewing the same data is the smoother, four-week average, and that shows US gasoline demand just above the bottom of the seasonal range, at about 8.8 million barrels a day, and still below the five-year seasonal average.



US demand for distillate fuel, which includes the diesel that fuels generators and trucks and the heating oil for millions of homes, was also below average for most of the second and third quarter but recently surged higher during September and early October. Rampant demand for US exports is a key reason, as European buyers seek alternatives to Russian diesel before a looming outright ban.

READ: US Down to 25 Days of Diesel Supply Poses Problem for Biden

Gasoline pump prices in the US aren't providing any easy signals on the direction of demand at the moment. They slumped from about \$5 a gallon in June to about \$3.70 in mid-September, following the trajectory of international crude oil prices. Since then, both crude and gasoline prices have moved

sideways amid competing themes: a recent, bullish decision by OPEC+ nations to cut production is tempered by speculation about a likely US strategic stockpile release, and the worsening state of the world economy.

In the UK, gasoline and diesel sales were down 4.8% and 12%, respectively, from 2019 levels in the week ended Oct. 2, government data from filling stations show. The International Energy Agency has repeatedly said that oil producers can't rely on advanced economies for substantial year-over-year growth in oil demand any more, as many parts of the world try to move away from fossil fuels. Asia will account for 96% of next year's expected 1.7 million barrels a day growth in global oil demand, the Paris-based agency said in its most recent monthly report.

In China, an aggregate measure of congestion across 15 cities with the most cars fell to 98 on Oct. 5, dropping below the baseline level of 100 for the first time since May 10, according to calculations by BloombergNEF, based on Baidu data. It remained low that week, during national holidays, then bounced back to 109 by Oct. 12.

Beijing's Covid-19 infections grew to 41 cases on Tuesday, according to the municipal health commission. While that number would be considered relatively small in most countries, that's the highest in four months for Beijing, and raises concern about potential curbs for the capital as the flareup worsens in the middle of the twice-a-decade party congress, where Chinese President Xi Jinping has defended his Covid Zero policy.

Air Travel Status Quo

Global airline activity continues to hover roughly midway between the late-pandemic year of 2021 and pre-pandemic 2019, according to Flightradar24's daily tracking of the number of commercial flights worldwide. The latest data shows an uptick, with the global number currently trailing 2019 by 10%, which is better than early September, when it was down by 14%.

Air travel across the whole of Europe, using separate data from Eurocontrol, is about 12% below the same week in 2019, though this figure varies by country, with Spain reduced by only 3.1% and Germany down 21%. In the US, a seven-day rolling measure of the number of passengers passing through airport security barriers was about 7% less than the equivalent figure for 2019, using data from the Transportation Security Administration.

Still, an annual survey by consulting firm Deloitte shows that fewer Americans are planning vacations over the winter holidays as stubborn inflation keeps travelers close to home. About 31% plan to travel between Thanksgiving and mid-January, down from 42% in 2021.

The Bloomberg oil-demand monitor uses a range of high-frequency data to help identify emerging trends.

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	-9.9	+4.7	-7.2	4.3 w		Oct. 14	8.68m b/d	EIA
Distillates product supplied	US	-4.8	+14	-6.7	+19 w		Oct. 14	4.07m b/d	EIA
Jet fuel product supplied	US	-0.2	+45	-13	+14 w		Oct. 14	1.41m b/d	EIA
Total oil products supplied	US	-4.9	+15	-0.8	+9.6 w		Oct. 14	20.76m b/d	EIA
All motor vehicle use index	UK	unch	+10	-2	-1 w		Oct. 10	98	DfT
Car use	UK	unch	+11	-6	-1.1 w		Oct. 10	94	DfT
Light commercial vehicle (vans)	UK	+2.7	+12	+14	-0.9 w		Oct. 10	114	
Heavy goods vehicle use	UK	-4.5	-0.9	+5	unch w		Oct. 10	105	DfT
Gasoline (petrol) avg sales per filling station	UK	-12	+6.3	-4.8	+4.5 m		Sept. 26-Oct. 2	6,819 liters/d	BEIS
Diesel avg sales per station	UK	-15	-4.0	-12	+9.7 m		Sept. 26-Oct. 2	9,061 liters/d	BEIS
Total road fuels sales per station	UK	-14	+0.2	-9	+7.4 m		Sept. 26-Oct. 2	15,880 liters/d	BEIS
China 15 cities congestion	China	-4			+0.8 d		Oct. 12	112	Baidu / BNEF
Gasoline	India			+23	-1.9	2/m	Sept. 1-30	2.66m tons	Bberg
Diesel	India			+15	+1.3	2/m	Sept. 1-30	5.99m tons	Bberg
LPG	India			+15	+4.3	2/m	Sept. 1-30	2.49m tons	Bberg

Jet fuel	India			-12	+3.9	2/m	Sept. 1-30	545k tons	Bberg
Total Products	India	+8.1	+14	+6.1	-3.6	m	September	17.2m tons	PPAC
Toll roads volume	France	-0.7		+1.8		m	September	n/a	Atlantia
Toll roads volume	Italy	-0.5		+1.1		m	September	n/a	Atlantia
Toll roads volume	Spain	-1.5		-2.6		m	September	n/a	Atlantia
Toll roads volume	Brazil	+2		+6.1		m	September	n/a	Atlantia
Toll roads volume	Chile	-4.7		+10		m	September	n/a	Atlantia
Toll roads volume	Mexico	+7.8		+12		m	September	n/a	Atlantia
Gasoline	Spain	+6.3			-11	m	September	533k m3	Exolum
Diesel (and heating oil)	Spain	+0.2			+0.8	m	September	2284k m3	Exolum
Jet fuel	Spain	+41			-5.9	m	September	594 m3	Exolum
Total oil products	Spain	+6.6			-1.4	m	September	3411 m3	Exolum
Road fuel sales	France	+3.5			+8	m	September	4.444m m3	UFIP
Gasoline	France	+8.7				m	September	n/a	UFIP
Road diesel	France	+1.7				m	September	n/a	UFIP
Jet fuel	France	+39		-19	-13	m	September	622k m3	UFIP
All petroleum products	France	+7.2			+13	m	September	5.219m tons	UFIP
All vehicles traffic	Italy	unch			-4	m	September	n/a	Anas
Heavy vehicle traffic	Italy	-3			+23	m	September	n/a	Anas
Gasoline	Portugal	+9.3	+18	+1	+20	m	August	112k tons	ENSE
Diesel	Portugal	+7.3	+13	+0.4	+15	m	August	453k tons	ENSE
Jet fuel	Portugal	+59	+161	+1	+1	m	August	159k tons	ENSE

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 Portuguese jet fuel sales for August 2022 vs August 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 publication frequency 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 the US DoT also switched to monthly data after the week ended April 3.

City congestion:

Measure	Location	% chg vs avg 2019	% chg m/m	Congestion mins added to 1 hr trip at 8am* local time										
				Oct. 17	Oct. 10	Oct. 3	Sept 26	Sept 19	Sept 12	Sept 5	Aug 29	Aug 22	Aug 15	
			(for Oct. 17)											
Congestion	Tokyo	-2	+455	37	8	34	38	7	34	31	32	35	8	
Congestion	Taipei	+46	+51	52	4	34	37	34	45	37	29	29	26	
Congestion	Jakarta	-6	+2	37	37	36	34	36	38	37	36	38	39	
Congestion	Mumbai	-36	-19	31	25	21	28	38	30	22	29	32	3	
Congestion	New York	-6	-11	29	5	31	16	33	38 zero		17	13	14	
Congestion	Los Angeles	-2	-6	35	26	37	27	37	38	2	35	33	31	
Congestion	London	+25	+1217	47	53	41	49	4	43	37	2	20	18	
Congestion	Rome	+1	-9	49	53	56	40	54	42	41	12	5 zero		
Congestion	Madrid	-10	+10	32	31	31	29	29	27	17	9	4 zero		
Congestion	Paris	-3	-5	43	39	49	44	46	47	45	25	14	1	
Congestion	Berlin	-16	+2	28	29	1	26	28	30	28	25	25	19	
Congestion	Mexico City	-21	-13	39	38	39	40	45	47	50	44	37	37	
Congestion	Sao Paulo	-22	+10	34	31	29	38	31	32	32	39	31	33	

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 Oct. 17 vs Sept. 19. The large m/m gains for Tokyo and London reflect public holidays on the month-ago date. Tokyo, Taipei and US cities had public holidays on Oct. 10, reducing traffic flows, as did Berlin on Oct. 3. TomTom has been unable to provide data on most Chinese cities since April 2021. Taipei and Jakarta were added to the table in December 2021.

Chinese City Congestion:

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Measure	Location	% chg vs Jan. 2021	% chg m/m	% chg w/w	Oct. 12	Oct. 10	Oct. 3	Sept 26	Sept. 19	Sept. 12	Sept. 5	Aug. 29	Aug. 22	Aug. 15
(compare vs Oct. 12)														
Congestion	Beijing	+12	-4.1	+12	112	105	117	128	121	124	127	120	124	111
Congestion	Chengdu	+10	+51	+17	110	105	102	121	79	73	77	93	97	100
Congestion	Chongqing	-1	-6.4	+5.4	99	96	108	122	109	107	100	73	84	83
Congestion	Guangzhou	+12	-5	+9.1	112	101	115	118	120	118	118	121	114	111
Congestion	Shanghai	+9	-19	+9.3	109	101	121	131	142	128	140	123	120	112
Congestion	China-15	+9	+0.8	+11	109	102	108	116	111	107	107	103	105	102

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 Oct. 10 vs Sept. 12.

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 per day	US	+18	+156	+1.7	+4.8	-1.9d		Oct. 17	2.36m	TSA
Airline passenger throughput (7d avg)	US	+16	+162	-7.4	+6.2	+2.9d		Oct. 17	2.27m	TSA
All flights	Worldwide	+4.3	+36	+2.1	-4	-5.7d		Oct. 17	199,846	Flightradar24
Commercial flights	Worldwide	+11	+54	-10	+4.2	-1.4d		Oct. 17	105,856	Flightradar24
Air traffic (flights)	Europe			-12	-5.5	-1.1d		Oct. 17	28,351	Eurocontrol
Air traffic (flights)	UK			-13	+3	-1.8d		Oct. 17	5,411	Eurocontrol
Air traffic (flights)	Spain			-3.1	-2.7	+0.4d		Oct. 17	4,736	Eurocontrol
Air traffic (flights)	Germany			-21	-6.7	-4.9d		Oct. 17	4,719	Eurocontrol
Air traffic (flights)	Italy			-3.9	-11	-3d		Oct. 17	3,547	Eurocontrol
Air passenger traffic per month	China	+44	-30	-47	-1.7	m		August 2022	32.3m	CACC
Heathrow airport passengers	UK	+125	+360	-15	-4.3	m		September 2022	5.78m	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	+3.7%	+0.7%	-4.9%	Oct. 14	15.6m b/d	EIA
Utilization	US	+4.8	+6.4	-4.1	Oct. 14	89.5 %	EIA
Utilization	US Gulf	+7.6	+6	-6.4	Oct. 14	90.5 %	EIA
Utilization	US East	+13	+31	-0.8	Oct. 14	90.3 %	EIA
Utilization	US Midwest	+2.7	+6	-2.9	Oct. 14	91.9 %	EIA
Utilization (indep.)	Shandong,	-1.7	+4.7	+4.5	Oct. 14	68.4 %	Oilchem

refs) China

NOTE: US refinery data is weekly. China Shandong utilization is updated twice a month. 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.

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(Updates US demand estimates with latest EIA figures in sixth and seventh paragraphs and in the first and fourth tables.)

--With assistance from Mary Schlangenstein.

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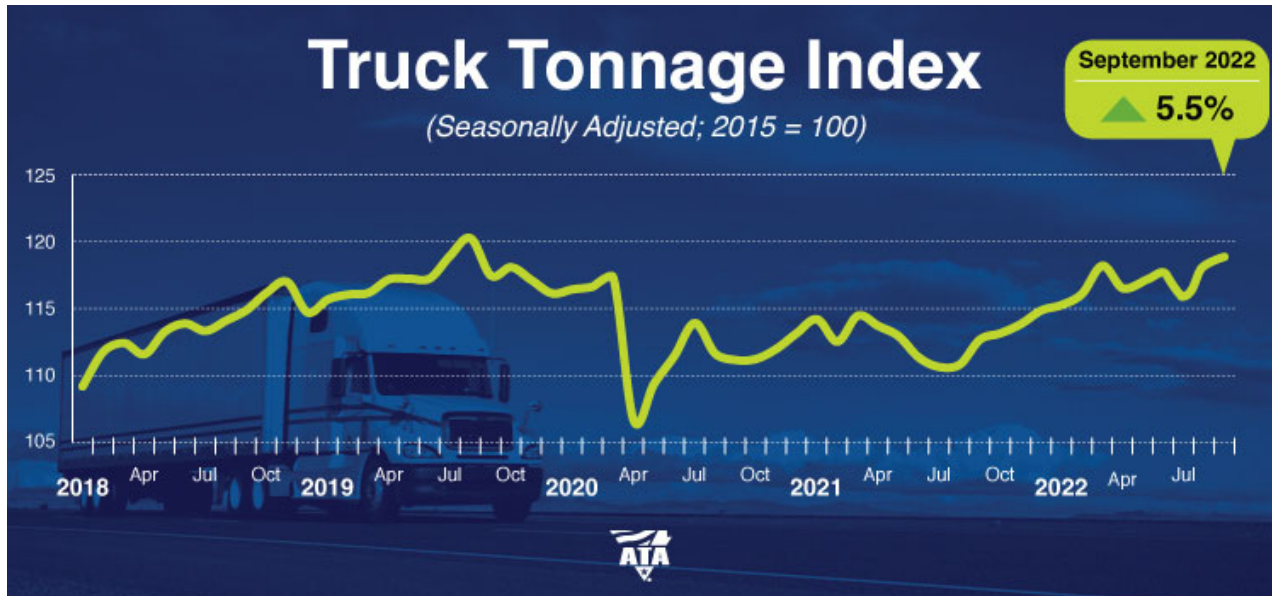
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ATA Truck Tonnage Index Rose 0.5% in September

OCT18

Media Contact: Sean McNally

Washington — American Trucking Associations’ advanced seasonally adjusted (SA) For-Hire Truck Tonnage Index increased 0.5% in September after rising 2.1% in August. In September, the index equaled 118.8 (2015=100) versus 118.2 in August.



“The latest gain put tonnage at the highest level since August 2019 and the third highest level on record,” said **ATA Chief Economist Bob Costello**. “This is another example of how the contract freight market remains strong despite weakness in the spot market this year. During the third quarter, tonnage increased 0.5% over the second quarter while increasing 5.6% over the same period in 2021. That was the largest quarterly year-over-year increase since the second quarter of 2018.”

August’s increase was revised down slightly from our September 20 press release.

Compared with September 2021, the SA index increased 5.5%, which was the thirteenth straight year-over-year gain. In August, the index was up 6.7% from a year earlier. Year-to-date through September, compared with the same period in 2021, tonnage was up 4%.

The not seasonally adjusted index, which represents the change in tonnage actually hauled by fleets before any seasonal adjustment, equaled 119 in September, 3.8% below the August level (123.7). In calculating the index, 100 represents 2015. ATA’s For-Hire Truck Tonnage Index is dominated by contract freight as opposed to spot market freight.

Trucking serves as a barometer of the U.S. economy, representing 72.2% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 10.93 billion tons of freight in 2021. Motor carriers collected \$875.5 billion, or 80.8% of total revenue earned by all transport modes.

ATA calculates the tonnage index based on surveys from its membership and has been doing so since the 1970s. This is a preliminary figure and subject to change in the final report issued around the 5th day of each month. The report includes month-to-month and year-over-year results, relevant economic comparisons, and key financial indicators.

TIPRO Analysis Shows Oil & Gas Industry Adding More Jobs, as Texas Continues to Play Critical Role Meeting Energy Demand

Oct 21 Posted by [Kelli Way](#) in [Uncategorized](#)

Austin, Texas - Citing the latest Current Employment Statistics (CES) report from the U.S. Bureau of Labor Statistics (BLS), the Texas Independent Producers and Royalty Owners Association (TIPRO) today highlighted new employment figures showing continued growth in monthly employment for the Texas upstream sector. According to TIPRO's analysis, direct Texas upstream employment for September 2022 totaled 202,900, an increase of 900 jobs from August employment numbers. Texas upstream employment in September 2022 represented the addition of 34,900 positions compared to September 2021, including an increase of 8,800 in oil and natural gas extraction and 26,100 jobs in the services sector.

TIPRO once again noted strong job posting data for upstream, midstream and downstream sectors for the month of September. According to the association, there were 11,382 active unique jobs postings for the Texas oil and natural gas industry in September, including 3,600 new job postings added in the month. While posting data remained strong, job growth slowed in September compared to previous months, likely due to a workforce shortage facing the industry.

Among the 14 specific industry sectors TIPRO uses to define the Texas oil and natural gas industry, Support Activities for Oil and Gas Operations continued to dominate the rankings for unique job listings in September with 3,066 postings, followed by Crude Petroleum Extraction (1,558), and Petroleum Refineries (1,108), indicating a continued emphasis on increasing exploration and production activities in the state. The leading three cities by total unique oil and natural gas job postings were Houston (4,181), Midland (1,028) and Odessa (541), said TIPRO.

The top three companies ranked by unique job postings in September were Baker Hughes with 602 positions, Energy Transfer (498) and KBR (435), according to TIPRO's analysis. Of the top ten companies listed by unique job postings last month, five companies were in the services sector, followed by three companies in oil and natural gas extraction and two midstream companies.

Top posted industry occupations for September included heavy tractor-trailer truck drivers (620), managers (322) and maintenance and repair workers (265). Top qualifications for unique job postings included Commercial Driver's License (CDL) (515), CDL Class A License (436) and Bachelor of Science in Business (173). When analyzing education requirements for unique industry job postings last month, TIPRO reports that 44 percent required a bachelor's degree, 35 percent a high school diploma or GED, and 23 percent had no education requirement listed as part of the criteria.

TIPRO also highlights new data released from the Texas comptroller's office showing production taxes paid by the oil and natural gas industry to the state of Texas generated over \$1 billion in tax revenue in September. According to the comptroller's data, in September, Texas oil producers paid \$552 million in production taxes, up 41 percent from September 2021. Natural gas producers, meanwhile, last month paid \$480 million in state taxes, up 91 percent from September 2021.

Additionally, TIPRO reports that oil output in the Permian Basin is forecasted to jump by 50,000 barrels per day (bpd) to a record 5.453 million bpd in November, according to the U.S. Energy Information Administration (EIA). In the Eagle Ford Shale in South Texas, oil output will rise by 18,000 bpd to hit 1.226 million bpd in November, the formation's highest production level since April 2020. Overall, U.S. crude oil production is expected to go up by 104,000 bpd, topping 9.105 million bpd in November, the country's highest output since March 2020, projects the EIA.

Ed Longanecker, president of TIPRO, said the following: "We continue to see employment and production growth, and high demand for available workers in the Texas oil and natural gas industry despite the many challenges facing producers today. OPEC's oil output cuts and geopolitical conflicts also make clear why it is so important for the U.S. to encourage domestic production and to continue exporting our resources into the global market. Continued investment in energy infrastructure, like LNG export terminals, pipelines and refineries, is also essential to meeting global energy needs. It's past time to stop using short-sighted ploys to stabilize prices and develop a long-term strategy to address our growing energy needs in coordination with Texas oil and gas producers who are ready to meet this challenge."

"Moreover, constantly pointing the finger at energy producers will not lower global prices," Longanecker continued. "Oil and gas companies are price takers, not price makers. Global energy markets determine the costs of petroleum products. Policies that get to the root of the problem and address U.S. supply of oil and gas resources are what America really needs. This includes tackling production variables, such as streamlining permitting processes for additional infrastructure or increasing onshore and offshore development opportunities."

###

[PRINT](#)

Christian Sewing's keynote at the Handelsblatt Banken Summit 2022

- Check against delivery -

Dear Mr Matthes, Ladies and Gentlemen,

I am delighted to be with you today at a time that is more challenging than anything I have experienced in more than 30 years of banking. While the Covid pandemic proved to be a temporary shock to the world economy, **Russia's war against Ukraine has destroyed a number of certainties on which we built our economic system over the past decades.**

- **The brakes have been applied to globalisation and,** in the face of major geopolitical tensions, it is unlikely to pick up its old momentum any time soon.
- As a result, **many seemingly perfect global value and supply chains have been disrupted.**
- **The workforce, which for a long time was thought to be available without limit, has become a bottleneck factor worldwide.**
- **At the same time, electricity and gas have become scarce and extremely expensive. Energy is set to stay an expensive commodity in Europe for some time. This represents a structural competitive drawback and it is a threat to our economy. In the long term, we will need to respond with structural solutions.**

These points are the most important reasons for soaring inflation **As a result, we will no longer be able to avert a recession in Germany.**

Yet we believe that our economy is resilient enough to cope well with this recession – provided the central banks act quickly and decisively now. Right now many people still have their savings to fall back on to pay the higher prices; many companies are still sufficiently financed. **But the longer inflation remains high, the greater the strain and the higher the potential for social conflict.**

Three lessons

This combination of short and longer-term challenges seems unique at this point. **And while it is essential we meet the short-term needs, we also have to explore what this means for our long-term ability to compete. The greatest complexity still lies ahead of us** when we begin to draw the real lessons of the past few years. In my view, there are three main lessons:

Firstly, we have seen how dangerous it is for us in Europe to become too dependent on individual countries or regions. **At the moment, the main focus is on energy and raw material imports from Russia – and rightly so.** We must do everything we can to ensure that our cars, our heating and our factories are not only able to run when an autocrat in the Kremlin is favourably disposed towards us. All efforts by politicians and companies to change this deserve unconditional support.

That is not enough, though. When it comes to dependencies, **we also have to face the awkward question of how to deal with China. Its increasing isolation and growing tensions, especially between China and the United States, pose a considerable risk for Germany.**

China is a cornerstone of our economy. About 8 percent of our exports go to China and 12 percent of our imports are from the country. More than a tenth of the sales of all DAX-listed companies are from China. At the latest during the pandemic it has become clear just how much our supply chains rely on China. **Reducing this dependency will require a change no less fundamental than decoupling from Russian energy.**

At the same time – **and this is my second lesson – we need to tackle the climate crisis with much more resolve than to date.** Climate change is already causing damage of gigantic proportions. In light of Covid and the war in Ukraine, the danger is that the topic will slip down the list of priorities. That would be the biggest mistake we could make, though.

Fighting the climate crisis is a generational task that will radically change the economy and society. Every company will have to face the issue – not just out of its responsibility to society, but to secure its own continued existence. Those who fail today to put sustainability firmly at the centre of their strategy will – in ten years – have trouble selling their products, finding employees or attracting investors. They will disappear from the market.

The third lesson, I believe, is that we have been under the illusion for the past 30 years that we could live forever in an ever more globalised world with no major conflicts and with steady growth. Francis Fukuyama has often been criticised for equating the end of the Cold War with the "end of history". But de facto we acted as if this thesis was correct; we have been acting as if the world was on its way to becoming one big village where everyone is interested in economic cooperation because, after all, everyone benefits from it. That has stopped being the case for some time now, though.

The truth is that 30 years of presumed calm will **now be followed by a period of heightened volatility with economic uncertainty, regular crises and geopolitical conflicts that are also likely to drag on for decades. Trouble spots are not cut off from the rest of the world: they impact other regions in a number of ways.** As such, we must come up with holistic solutions that take this degree of interplay into account. Dealing with this complexity will be a great challenge for us. **Good risk management is the order of the day.**

“We must not leave the playing field and with it the access to global capital markets largely to foreign banks. The past few months should have taught us this. **In Germany, we must not allow ourselves to add a further dependency – access to finance – to our current dependencies on gas, raw materials and supply chains.**” Christian Sewing, CEO

National feat of strength

Let us not delude ourselves: we certainly have our work cut out for us if we are to accomplish these three tasks – reducing dependencies, dealing with permanently higher volatility and driving the historic transformation of our economy. We will only succeed through a concerted joint effort, with politics, business and society all working closely hand in hand. The financial sector must and can play a crucial role.

We need banks that are able to finance these mammoth tasks, while protecting their clients against risks and being reliable partners, accompanying clients worldwide.

And for this we need a domestic financial sector that stands on its own two feet and can assert itself against its global competitors. We must not leave the playing field and with it the access to global capital markets largely to foreign banks. The past few years should have taught us this. **In Germany, we must not allow ourselves to add a further dependency – access to finance – to our current dependencies on gas, raw materials and supply chains.**

We have the means to prevent this, but **we still have much to do.** As a financial sector, we have already achieved a lot: we are much more stable and resilient today than we were ten years ago. We are profitable. Our industry has foregone relatively little profit in the first half of the year and even managed to increase revenues. And the loan defaults that the industry faces in the coming months should remain manageable because banks have taken the necessary provisions.

Progress in the financial sector is far from sufficient

That is far from enough, though, if the German financial sector is to play a leading role in the long term. What we need is:

- For our banks to work harder at becoming even more efficient and focusing even more on clients, especially in digital services.
- We need reliable regulation that does not always create higher hurdles and tie up more capital than necessary – capital that is needed right now to finance the economy.
- And sooner or later we will also need consolidation, not nationally, but Europe-wide. Size counts in banking – and if we don't want to hand over the playing field to the Americans, Europe must create the right conditions for big banks. I can only repeat what I've said before: both the European banking union and the capital markets union are essential here.

The above points are not new, but they are becoming more urgent. We are actually very well equipped so there is no reason to talk ourselves down. We are operating in an economy that has shown enormous resilience and that will also navigate the upcoming recession – because corporate balance sheets are strong, and debt is low by international standards. **This economy has great potential as long as we focus now on aligning ourselves for the long term and on how to minimise the threat of de-industrialisation: with less regulation, more courage and more pragmatism, this attitude is incredibly important.**

And that goes for banks, too. We have proven banks can be part of the solution. We can do much more, though. Before the financial crisis of 2007, just 15 years ago, Europe's banks were more profitable than their competitors in the US. Since then, the Americans have unrelentingly left us behind. We could, of course, agonise over this. Instead, we should rather see it as an incentive to buck the trend. **The dominance of American banks is no law of nature.**

At Deutsche Bank, we are convinced that the way to achieve this is by being a strong partner to our clients. They need a bank that supports them in all kinds of environments, in all markets and all over the world. This is what we emphasised when we formulated our Global Hausbank aspiration. We have radically transformed our business since 2019 and strategically repositioned ourselves in line with this aspiration.

We are convinced that this strategy will be especially effective in volatile times – because now is the moment when advice and expertise are highly sought after.

And this does not apply to us alone. Despite all the differences between the banks in Germany, we have one thing in common: we were there for our clients during the pandemic, we were there for our clients when Russia invaded Ukraine and we continue to be there – in these volatile times that urgently call for sustainable transformation. We have regained a great deal of trust. Let us work together to create the conditions for renewed dynamic growth across our entire economy.

<https://www.nrdc.org/media/2022/221019-0>

Canadian Logging Industry Carbon Emissions On Par With Tar Sands Operations:

Groundbreaking Report Debunks the Myth that Logging is Carbon-Neutral

October 18, 2022

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WASHINGTON – A paradigm-shifting [report](#) shows that carbon emissions from industrial logging in Canada are on par with those of Canada's tar sands operations. According to *Lost in the Woods: Canada's Hidden Logging Emissions are Equivalent to those from Oil Sands Operations*, a Nature Canada and Natural Resources Defense Council report released today, logging is one of Canada's highest net greenhouse gas (GHG)-emitting sectors.

"Logging is often, erroneously, portrayed by governments and industry as a carbon-neutral sector," said Graham Saul, Executive Director of Nature Canada. "This report clearly shows that claim to be false. The reality is that logging is a high-emissions sector whose climate impacts are being ignored."

The report calculates, for the first time, the net GHG emissions associated with logging in Canada using published and unpublished 2020 government data. It shows that, even using the government's own numbers, which are likely to be conservative, the net GHG emissions from logging in 2020 were 75 megatonnes of carbon dioxide equivalent (Mt CO₂e) – roughly equal to emissions from Canada's oil sands operations.

"Canada and the world can't afford to continue ignoring the logging industry's devastating climate toll," said Anthony Swift, Director of the NRDC (Natural Resources Defense Council) Canada Project. "*Lost in the Woods* starkly illustrates that Canada can't meet its climate targets unless it addresses logging emissions alongside those of the fossil fuel sectors. Canada's global standing on forests and climate depends on it."

The Government of Canada does not transparently report emissions from the logging industry in its annual national GHG inventory. Nor does the government's 2030 Emissions Reduction Plan include a strategy for reducing logging emissions, leaving a significant hole in Canada's plan to address its climate impact. While Canada has committed to cut GHG emissions by at least 40% from 2005 levels by 2030, meeting this target will require the government to integrate the logging industry, as one of Canada's highest-emitting sectors, into this strategy, and take action to reduce logging's emissions. Michael Polanyi of Nature Canada and Jennifer Skene of NRDC are available for interviews or a technical briefing.

###

NRDC (Natural Resources Defense Council) is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Bozeman, MT, and Beijing. Visit us at www.nrdc.org and follow us on Twitter @NRDC.

1

INTRODUCTION: CANADA'S HIGH-EMISSIONS LOGGING SECTOR

A glaring omission in Canada's climate policy is undermining the rigour and integrity of the government's climate commitments, leaving unaddressed the net greenhouse gas (GHG) emissions from one of the country's highest-emitting sectors: the logging industry. A new analysis of government data conducted by Nature Canada and the Natural Resources Defense Council (NRDC)¹ shows that the logging industry is one of Canada's major GHG emitters, with a footprint that's equal to more than 10 percent of Canada's overall emissions. This figure, which is a conservative estimate, places the logging sector's GHG emissions on par with oil sands production² and higher than emissions from electricity generation.³ However, Canada does not clearly report the logging sector's emissions. Instead, logging emissions can only be calculated through a complex process of piecing together official data dispersed across various government sources (some of which are available only upon request). In addition, unlike its approach to all other high-emitting sectors, the Government of Canada has not articulated a clear strategy to reduce this sector's emissions, effectively exempting the logging industry from its keystone climate policies.

The exclusion of this high-emitting sector jeopardizes Canada's climate ambition. The government's achievement of its commitment to reduce Canada's emissions to 40 to 45 percent below 2005 levels by 2030 depends on a full and accurate accounting of — and effective actions to reduce — emissions from all sectors of the economy. The lack of recognition of the logging sector's significant emissions also leads to a fundamentally flawed basis for forest sector policy decisions, including forest carbon regulation, perpetuating policy decisions grounded in the myth of logging's carbon neutrality and exempting the industry from accountability.

Canada's climate leadership depends on a comprehensive accounting and mitigation of impacts across all sectors. The atmosphere does not distinguish between emissions from logging and those from fossil fuels and, by the government's own numbers, the logging industry ranks among Canada's greatest climate liabilities. Canada should transparently and accurately report logging emissions, addressing them alongside emissions from all other high-emitting sectors in its 2030 Emissions Reduction Plan (ERP) and other policies.

This report outlines the key findings from the new Nature Canada and NRDC technical report, and proposes key policy recommendations for the Government of Canada to address the high level of GHG emissions from the logging sector. These recommendations include: 1.) Transparently report the logging industry's emissions; 2.) Develop a strategy for reducing these emissions; 3.) Directly regulate the sector's emissions; and 4.) Address biases, flaws, and omissions in Canada's logging emissions accounting.



Boreal forest in Ontario
Credit: River Jordan for NRDC

2

LOGGING EMISSIONS RIVAL THOSE FROM OIL SANDS PRODUCTION

International scientists, including the Intergovernmental Panel on Climate Change (IPCC), have increasingly sounded the alarm about the devastating climate ramifications of continuing to destroy primary forests (forests that have never been industrially disturbed).⁴ Logging of primary forests, which have unique climate value, incurs a carbon debt that persists for centuries, long past the timeframe for averting catastrophic climate impacts.⁵

Each year, the logging industry clearcuts more than 550,000 hectares of forest across Canada,⁶ equivalent to more than six NHL hockey rinks every minute, much of this in primary forest areas.⁷ Over decades, industrial logging has reduced the average age of Canada's forests⁸ and eroded primary forest areas,⁹ decreasing the overall carbon Canada's forests store¹⁰— with the atmosphere seeing the difference.



Clearcut in Ontario
Credit: River Jordan for NRDC

Despite having some of the most carbon-dense and expansive primary forests in the world,¹¹ as well as one of the largest logging industries, Canada is failing to transparently report the net GHG emissions from its net logging emissions. Within its annual GHG reporting to the United Nations and its 2030 ERP,¹² Canada discloses its net emissions from all other high-emitting sectors, but does not report any such figure for industrial logging.

However, as outlined in a new technical analysis,¹³ the government's own underlying data, when pieced together, generates a clear picture of the true scope of the logging industry's climate impact—one that identifies the logging sector as one of Canada's major GHG emitters.

While the numbers to determine the sector's impact are contained in government materials, piecing them together to calculate logging's net annual emissions is exceedingly and unnecessarily complex. The data are scattered across an expansive array of materials, with some only available upon request. In addition, the government uses confusing, misleading, and inconsistent terminology, making the process of calculating net emissions even more challenging.

To represent net GHG emissions from logging, the technical analysis calculates three components that, together, feed into the final number: First, it compiles the total amount of forest carbon that is emitted or taken out of the forest upon logging. Second, from that figure, it subtracts the net carbon that is not immediately released to the atmosphere because it is stored in long-lived wood products. Third, it subtracts forest carbon removals (i.e. the carbon the forest removes from the atmosphere) as the forest regrows.¹⁴

According to the above calculations, using the government’s own data, Canada’s logging industry is a high-emitting sector. In 2020, the logging sector emitted 75 megatonnes of carbon dioxide equivalent (Mt CO₂e), which is equal to more than 10 percent of Canada’s total GHG emissions (see Figure 1).¹⁵ In fact, net logging emissions in Canada were higher than emissions from oil sands operations in every year from 2005 to 2018 (the average annual net emissions of logging were 82 Mt CO₂e between 2015 and 2020, while the average annual emissions of oil sands production were 78 Mt CO₂e over that same period — see Figure 2).

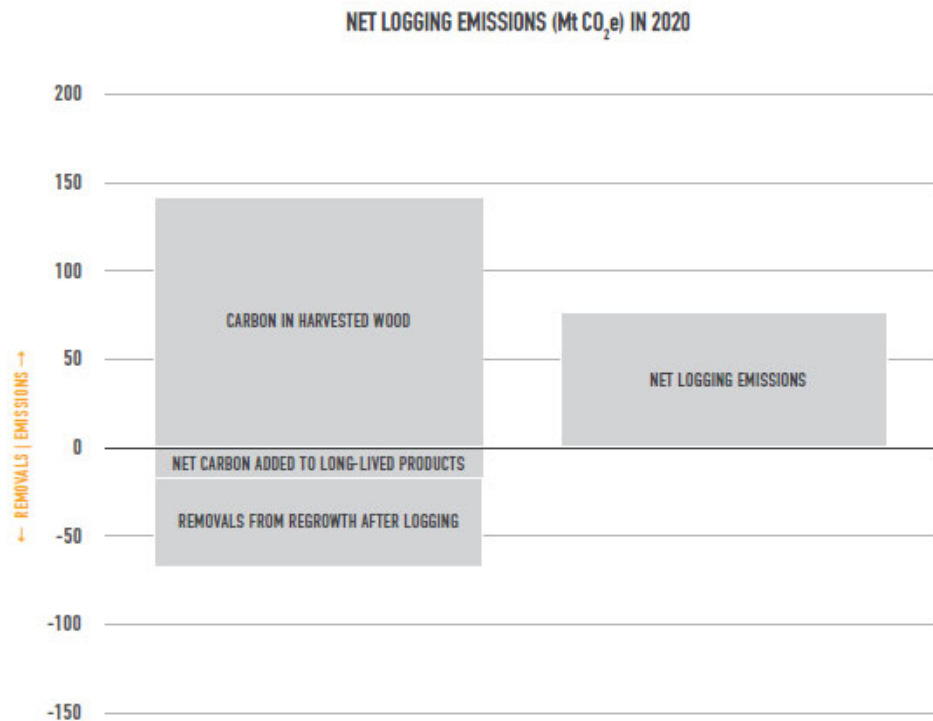


Figure 1: Canada’s 2020 net logging emissions. The left column depicts emissions and removals associated with logging (emissions are positive, removals are negative). The right column depicts the net (sum of) emissions and removals in the left column, showing logging as a large net source of emissions in 2020.

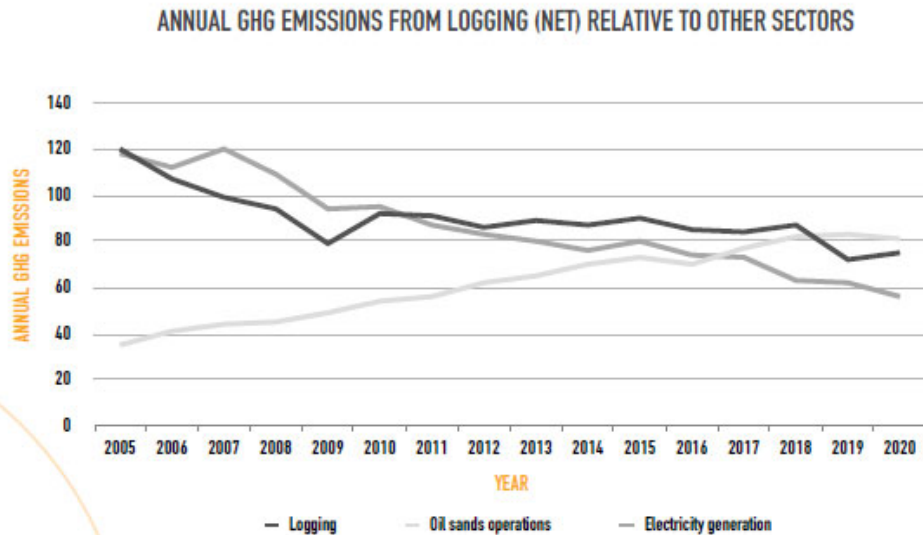


Figure 2: A comparison of Canada’s net logging emissions (black line) with emissions from oil sands operations (light grey) and electricity generation (dark grey) from 2005 to 2020.

3

BIASES AND GAPS IN THE GOVERNMENT’S ACCOUNTING OBSCURE AND DOWNPLAY EMISSIONS

Instead of clearly reporting the logging industry’s net emissions as a stand-alone figure, the Government of Canada provides calculations for forest-wide carbon emissions, which it refers to as “combined net flux from Forest Land and Harvested Wood Products.”¹⁶ This number includes forest GHG emissions and removals (i.e. carbon removed from the atmosphere) from never-before-logged forest areas that are entirely independent from the logging sector’s impact.

In calculating these forest-wide emissions, the government takes an inconsistent approach to how it integrates the GHG emissions and removals from wildfires and subsequent regrowth on non-logged forest land, which further obscures the logging industry’s emissions impact. The result is a large, artificial carbon sink that, when

combined with the logging industry's emissions to generate a forest-wide emissions calculation, effectively buries the industry's impact. As a result, Canada can report its "combined net flux" as roughly carbon neutral, with the logging industry's emissions a hidden subset of that figure.¹⁷

4

TRUE LOGGING EMISSIONS ARE LIKELY UNDERESTIMATED

When assembled, the government's data paints a clear picture of the logging industry's climate footprint, which should be addressed in the government's climate strategy. However, it should be noted that the net logging emissions, as calculated above, likely understate the industry's full climate impact. Government data omit a number of factors essential to a comprehensive emissions profile. For example, the calculations above are based on logging data from provinces and territories, which recent whistleblower testimony has called into question.¹⁸ The government's inventory also excludes key forest and logging dynamics essential to a comprehensive emissions calculation. For example, the government does not include the carbon impact of "logging scars," areas where the forest remains essentially barren even 20 to 30 years following logging.¹⁹ It also does not include non-CO₂ GHG emissions from logging, such as methane.²⁰



Logging scars from a clearcut from 1989, with scars covering approximately 13% of the clearcut area.
Credit: © Google Earth, with original site documentation from Trevor Hesselink, Wildlands League

5

POLICY RECOMMENDATIONS: ACCURATELY REPORT LOGGING EMISSIONS AND ACT TO REDUCE THEM

Canada's failure to transparently and accurately report the logging sector's net GHG emissions has perpetuated inaccurate claims about logging's carbon neutrality, undermined the integrity of the government's 2030 Emissions Reduction Plan (ERP), and spurred broader policy choices that unjustifiably approach logging's climate impact as fundamentally different from that of the fossil fuel industry. The erasure of logging's climate impact has also obscured the opportunities for Canada to advance its 2030 climate goals with regulations that incentivize emissions reductions through forest protection and more sustainable logging practices.

The following policy recommendations would help the Government of Canada to align its reporting and regulation of emissions from the logging industry with its stated climate goals:

1. TRANSPARENTLY REPORT THE LOGGING INDUSTRY'S NET ANNUAL GHG EMISSIONS

Canada should transparently report in its annual inventory the net annual emissions from the logging industry, as it does for all other high-emissions sectors.

2. DEVELOP A STRATEGY TO REDUCE THE LOGGING INDUSTRY'S EMISSIONS IN ALIGNMENT WITH THE GOVERNMENT'S BROADER EMISSIONS REDUCTION COMMITMENTS

Canada should develop a strategy for reducing emissions from the logging industry, as it has done for all other high-emitting industries. This entails accurately representing the logging sector in its ERP, ensuring that these emissions, like those from all other high-emitting sectors, are addressed in Canada's strategy to lower its emissions to 40-45 percent below 2005 levels by 2030. Doing so will not only ensure that Canada is truly achieving its stated goal, but will hold the logging industry to the same standard as all other sectors. It will also help to incentivize companies to adopt climate-friendlier logging practices, creating opportunities for Canada to lead globally as a source for more sustainable forest products, and will more accurately value primary forest protection (including through Indigenous Protected and Conserved Areas) within Canada's policy frameworks.

3. PURSUE LOGGING INDUSTRY EMISSIONS REDUCTIONS THROUGH DIRECT REGULATION OF THE SECTOR

Canada's strategy to address the climate impact from industrial logging should encompass direct regulation of its emissions, including the pricing of emissions from the burning of biomass under the Output-Based Pricing System (OBPS). This would align the biomass sector with Canada's approach to all other energy sources. The current exclusion of wood combustion from the OBPS effectively functions as an industry subsidy, allowing the biomass sector,²¹ which produces plants and plant by-products to be burned for energy, to externalize the climate cost of its operations.

The prioritization of direct regulation would also entail a reexamination by the federal government of its regime for forest-based carbon offsets under the Greenhouse Gas Offset Credit System. Given that the logging industry is itself a significant contributor to Canada's emissions, avoided logging operations or removals from tree planting following logging should not be offered up as credits to "cancel out" emissions from other industries, but rather should be treated as part of the overall emissions footprint Canada needs to reduce. In other words, just as the high-emitting oil and gas industry is not allowed to claim credits from leaving oil and gas reserves unexploited, the high-emitting logging industry should not be allowed to claim credits from unexploited or replanted forests.

4. FIX BIASES, OMISSIONS, AND OTHER FLAWS IN FOREST CARBON ACCOUNTING

In reporting the logging industry's emissions, Canada should align its accounting practices with IPCC guidelines, correcting the bias in how it accounts for natural disturbances in its current "combined net-flux" figure. Canada should also address other gaps in its forest carbon accounting to improve the accuracy of its reported annual logging emissions, for example by including the carbon impact of logging scars, integrating methane and other non-CO₂ GHGs, and ensuring the accuracy of logging rates reported by provinces.

6

CONCLUSION

The obfuscation of the carbon impact from industrial logging doesn't change the industry's climate cost—it simply places it on other sectors, the public, and the global community. It also stymies meaningful solutions to achieving a climate-safe future. Acknowledging and regulating logging emissions will create new emissions reduction pathways and build in the proper incentives for mitigating climate impacts and driving economic innovation. In recognizing the true climate cost of business-as-usual logging, Canada will not only fill a critical gap in its climate plan, but also open up opportunities for climate mitigation and more sustainable economies—creating critical new pathways for Canada to lead.

Trafigura signs USD800 million loan agreement guaranteed by the Federal Republic of Germany

Geneva, October 21 2022 - Trafigura, a market leader in the global commodities industry, has entered into a USD800 million five-year loan underwritten and arranged by Societe Generale and syndicated to seven participating banks. The loan is guaranteed by the government of the Federal Republic of Germany acting through the German Export Credit Agency (ECA) Euler Hermes Aktiengesellschaft. The guarantee is provided under Germany's Untied Loan program to support the commitment by Trafigura to deliver, under a five-year supply agreement, up to 500,000 tonnes of non-ferrous metals into Germany.

The Untied Loan program is a tool to secure the long-term delivery of strategic commodities to Germany. In exchange for offering cover on the financing, Trafigura has committed to a new long term agreement to supply strategic commodities. The agreement included a review of Trafigura's environmental, social and governance (ESG) policies and performance.

"The support of the Untied Loan program has enabled Trafigura to take on a long term commitment to supply strategic commodities to German industry," said Kostas Bintas, Trafigura's Co-head of Metals and Minerals.

Non-ferrous metals are used by Europe's renewable energy, electronics and chemical industries, as well as suppliers to the construction and car industries.

ENDS

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Notes to editors

About Trafigura

Founded in 1993, Trafigura is one of the largest physical commodities trading groups in the world. At the heart of global supply, Trafigura connects the world with the vital resources it needs. Through our Oil & Petroleum Products, Metals & Minerals, and Power & Renewables divisions, we deploy infrastructure, skills and a global network to move commodities from where they are plentiful to where they are needed most, forming strong relationships that make supply chains more efficient, secure and sustainable.

Trafigura also owns and operates a number of industrial assets including global multi-metals producer Nyrstar and fuel storage and distribution company Puma Energy; and joint ventures Impala Terminals, a port and logistics provider, and Nala Renewables, a power and renewable energy investment and development platform. Trafigura is owned by its employees and employs over 13,000 people working in 48 countries.

Germany by-country imports of Copper, Nickel & Zinc data from WITS World Integrated Trade Solution

<https://wits.worldbank.org/trade/comtrade/en/country/DEU/year/2019/tradeflow/Imports/partner/ALL/product/260300#>

Reporter	TradeFlow	ProductCode	Product Description	Year	Partner	Trade Value 1000USD	Quantity	Quantity Unit
Germany	Import	260300	Copper ores and concentrates	2019	World	1919801.76	1.02001e+009	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Brazil	510874.35	2.40001e+008	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Peru	504392.33	2.98856e+008	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Chile	299629.50	1.77045e+008	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Australia	182826.17	4.29668e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Canada	174224.37	8.61204e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Panama	55027.36	4.71685e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Mexico	54625.86	4.26971e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Indonesia	46306.09	2.2e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Papua New Guinea	34133.50	1.05e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Portugal	22155.17	2.087e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Finland	17811.26	1.15508e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Morocco	17722.51	2.02083e+007	Kg
Germany	Import	260300	Copper ores and concentrates	2019	United States	36.14	19137	Kg
Germany	Import	260300	Copper ores and concentrates	2019	China	28.55	6000	Kg
Germany	Import	260300	Copper ores and concentrates	2019	France	3.73	60	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Congo, Dem. Rep.	2.49	1354	Kg
Germany	Import	260300	Copper ores and concentrates	2019	Switzerland	2.40	1283	Kg

<https://wits.worldbank.org/trade/comtrade/en/country/DEU/year/2021/tradeflow/Imports/partner/ALL/product/260800>

Reporter	TradeFlow	ProductCode	Product Description	Year	Partner	Trade Value 1000USD	Quantity	Quantity Unit
Germany	Import	260800	Zinc ores and concentrates	2021	World	359573.35	3.52568e+008	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	United States	95311.61	8.26586e+007	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Australia	69790.45	7.81906e+007	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Sweden	65096.33	6.92781e+007	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Peru	46102.78	4.34433e+007	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Burkina Faso	38955.94	4.30796e+007	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Italy	23327.19	1.57185e+007	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Portugal	12084.00	1.46829e+007	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Turkey	8876.29	5.51315e+006	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	France	25.13	3000	Kg
Germany	Import	260800	Zinc ores and concentrates	2021	Poland	3.63	325	Kg

<https://wits.worldbank.org/trade/comtrade/en/country/DEU/year/2021/tradeflow/Imports/partner/ALL/product/260400#>

Reporter	TradeFlow	ProductCode	Product Description	Year	Partner	Trade Value 1000USD	Quantity	Quantity Unit
Germany	Import	260400	Nickel ores and concentrates	2021	World	4374.27	1.99477e+006	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	Malaysia	1479.85	546366	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	Korea, Rep.	902.42	494190	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	Singapore	736.24	311892	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	Indonesia	485.28	167337	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	Japan	346.17	177049	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	Thailand	225.69	160204	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	France	100.97	5000	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	Brazil	52.88	58545	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	United States	41.08	71906	Kg
Germany	Import	260400	Nickel ores and concentrates	2021	China	3.69	2282	Kg

- 17 Oct 2022 | 12:43 UTC

BP agrees to buy US renewable natural gas producer Archaea Energy for \$4.1 billion

- Author [Robert Perkins](#) [Dylan Chase](#)

HIGHLIGHTS

Acquisition would boost BP's biogas supplies by 50%

BP sees 70,000 boe/d global biogas potential by 2030

Doubles target for biogas sector earnings by 2030

BP has agreed to acquire Archaea Energy, a US producer of renewable natural gas (RNG), for \$4.1 billion in cash and debt as part of plans to expand its bioenergy business and meet its decarbonization targets, the energy major said Oct. 17.

Houston-based Archaea Energy operates 50 RNG and landfill gas-to-energy facilities across the US, producing around 6,000 b/d of oil equivalent a day of RNG, which would boost BP's biogas supply volumes by 50%, BP said.

Archaea also has a development pipeline of more than 80 projects that underpin the potential for around five-fold growth in RNG production by 2030. As a result, BP said the deal has the potential to take BP's biogas supply volumes to around 70,000 boe/d globally by 2030.

Biogas is generated by the decomposition of organic material at landfill sites, waste management facilities and dairy farms and can be used interchangeably with fossil fuel-based natural gas.

"Archaea is a fantastic fast-growing business, and BP will add distinctive value through our trading business and customer reach," BP CEO Bernard Looney said in a statement. "It will accelerate our key bioenergy growth engine, creating a real leader in the biogas sector, and support our net-zero ambition."

Bioenergy is one of five strategic transition growth engines that BP intends to grow rapidly through this decade. The company expects investment into its transition growth businesses to reach more than 40% of its total annual capital expenditure by 2025, aiming to grow this to around 50% by 2030.

BP said the acquisition of Archaea is "a strong strategic fit" with its existing biogas business, expanding its position in the US and potentially also in key geographies globally, including the UK and Germany.

Archaea has expanded rapidly since it was founded by owners of a Pittsburgh-area landfill in 2018 and has recently struck a few scale-boosting deals with a few companies along the RNG value chain. Earlier this year, the company announced a joint venture with US waste management company Republic Services to develop 40 RNG projects across the US to convert landfill gas into pipeline-quality RNG that can be used for a variety of applications to displace conventional natural gas.

Landfill-to-RNG projects account for around 70% of all RNG volumes in the US, according to the US trade group RNG Coalition.

Biogas growth

As a result of the agreed acquisition, BP said it also doubled to around \$2 billion its target for the contribution to EBITDA from biogas by 2030. BP said it now expects to generate more than \$10 billion EBITDA from its transition growth businesses by 2030, up from previous guidance of \$9-10 billion.

BP also sees opportunities to integrate the business with its trading operations, as the major is a leading marketer of natural gas in North America.

"Demand for biogas is also diversifying with opportunities for growth into areas such as LNG, renewable hydrogen, and power for EV charging," BP said.

BP on Oct. 17 positioned the Archaea bid as a compliment to its existing RNG businesses in the US, which include a joint venture with RNG marketer Clean Energy Fuels to co-market RNG in California through the latter company's fueling station portfolio.

"The more sources we can bring into that [Clean Energy joint venture] in terms of supply the more we can actually market out," BP's executive vice president of trading and shipping, Carol Howle, told investors on a webcast Oct. 17. "Also with Clean [Energy] we are more focused around the dairy digester side of the portfolio, while this is on the landfill side."

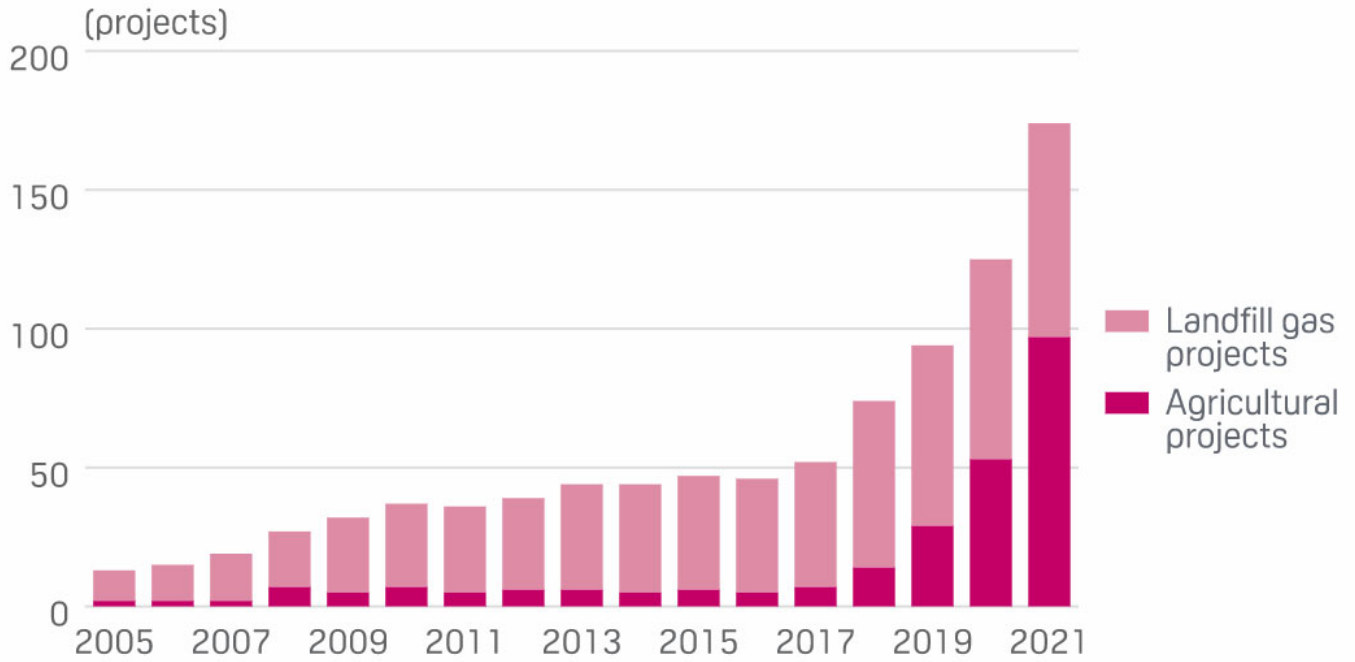
BP said boosting sales of RNG will support its net-zero ambition, specifically its aim to reduce to net-zero the carbon intensity of energy products it sells by 2050 or sooner. It has set an interim target to reduce carbon intensity by 5% by 2025 and aims to reduce it by 15-20% by 2030, both against a 2019 baseline.

In addition to RNG's environmental benefits compared to traditional natural gas, the low-carbon fuel's eligibility for lucrative federal and state-level incentives has **recently made it an economically attractive investment** for oil and gas players like BP.

BP's Howle estimated that the company can expect to realize RNG prices close to the Henry Hub gas benchmark plus the value of federal renewable fuel blending credits that have recently averaged around \$33/MMBtu for RNG delivered to transportation markets.

The acquisition is subject to regulatory approvals and Archaea shareholder approval. BP is targeting acquisition completion by the end of 2022.

US RNG PROJECTS OPERATING BY YEAR



Source: US EPA

bp accelerates and expands in bioenergy, agreeing to buy leading US biogas company Archaea Energy

17 October 2022

- Accelerates bioenergy growth
 - Acquisition of a leading US renewable natural gas (RNG) producer will accelerate growth of bp's strategic bioenergy transition growth engine
 - Operates 50 RNG and landfill gas-to-energy facilities across US, with development pipeline supporting potential for around five-fold increase in RNG volumes by 2030
 - Doubles the EBITDA bp **expects** from biogas to around \$2 billion by 2030; supports increase in bp's aim for EBITDA from transition growth businesses by 2030 from \$9-10 billion to more than \$10 billion
- Adds distinctive value
 - Builds on bp's existing biogas business – expanding in the US, a key fast-growing geography for biogas
 - **Expect additional distinctive value through integration with bp's trading capabilities and global customer relationships**
- Maintains financial discipline
 - **\$3.3 billion cash acquisition; acquisition multiple of around four times¹**
 - Remain committed to disciplined financial frame; five priorities unchanged, including no change to dividend or buyback guidance
 - Expected to be accretive to both earnings and free cash flow per share, post integration, and to deliver double-digit returns
- Supports net zero ambition
 - Biogas growth supports both customer decarbonization goals and bp's aim to reduce carbon intensity of energy products it sells

In a move that will expand and accelerate the growth of its strategic bioenergy business, bp today announced that it **has agreed to acquire Archaea Energy Inc., a leading producer of renewable natural gas (RNG) in the US. The agreed acquisition, which is subject to regulatory and Archaea shareholder approval, will be for \$3.3 billion in cash, as well as around \$800 million of net debt².**

Bioenergy is one of five strategic transition growth engines that bp intends to grow rapidly through this decade. bp expects investment into its transition growth businesses to reach more than 40% of its total annual capital expenditure by 2025, aiming to grow this to around 50% by 2030.

Acquiring Archaea will expand bp's presence in the US biogas industry, enhancing its ability to support customers' decarbonization goals and also progressing its aim to reduce the average carbon intensity of the energy products it sells. bp aims to reduce that carbon intensity to net zero by 2050 or sooner³.

Bernard Looney, bp chief executive, said: "Archaea is a fantastic fast-growing business, and bp will add distinctive value through our trading business and customer reach. It will accelerate our key bioenergy growth engine, creating a real leader in the biogas sector, and support our net zero ambition. And, importantly, we're doing this while remaining focused on the disciplined execution of our financial frame. Investing with discipline into the energy transition, creating further value through integration – this is exactly what bp's transformation into an integrated energy company is all about."

Archaea Energy

Based in Houston, Texas, Archaea Energy is a leading RNG producer, operating 50 RNG and landfill gas-to-energy facilities across the US, producing around 6,000 barrels of oil equivalent a day (boe/d) of RNG. At closing its production would be expected to provide an immediate 50% increase to bp's biogas supply volumes.

Archaea has a development pipeline of more than 80 projects that underpin the potential for around five-fold growth in RNG production by 2030. Earlier this year, it announced a joint venture with Republic Services, Inc. to develop 40 RNG projects across the US, part of this pipeline. The joint venture will convert landfill gas into pipeline-quality RNG that can be used for a variety of applications to displace conventional natural gas.

Archaea has extensive operational expertise and experience with an industry-leading modular and integrated approach to biogas projects that provides short development lead-times. The business's innovative and highly experienced management and operations team has a proven track record and will remain with bp on completion.

Nick Stork, CEO of Archaea Energy, said: "Archaea has become one of the largest and fastest growing RNG platforms in the US and today's announcement will further enable this business to realize its full potential. bp is a world-class partner with an operational history in the RNG value chain that is fully aligned with ours and our partners', and I look forward to our hard-working team joining the bp organization to help achieve their bioenergy goals."

Jon Vander Ark, Republic Services president and chief executive officer, said: "The acquisition of Archaea by bp allows us to accelerate decarbonization through our innovative joint venture with Archaea. With our shared focus on sustainability, this joint venture provides additional opportunities to work together on other decarbonization and environmental services initiatives."

The acquisition of Archaea has a strong strategic fit with bp's existing biogas business, enabling expansion of its position in the US and potentially also in key geographies globally, including the UK and Germany. Alongside growth in bp's existing portfolio, the addition of Archaea's production and pipeline has the potential to take bp's biogas supply volumes to around 70,000 boe/d globally by 2030.

bp sees the opportunity to deliver additional distinctive value through the integration of the business with bp's trading capabilities and broad customer base - bp is a leading marketer of natural gas in North America, with many customers looking to decarbonize. Demand for biogas is also diversifying with opportunities for growth into areas such as LNG, renewable hydrogen, and power for EV charging.

Dave Lawler, chairman and president of bp America, said: "Our biogas team is already one of the leading suppliers of renewable natural gas in North America. This deal accelerates our ability to deliver cleaner energy, generate significant earnings in a fast-growing sector and help reduce emissions. This could help bp take a significant stride toward our net zero ambition."

Accelerates earnings growth, while maintaining discipline

bp has agreed to acquire Archaea for \$3.3 billion in cash, or \$26 per share, representing a 38% premium to Archaea's 30-day volume weighted average share price⁴. Together with around \$800 million net debt, the total enterprise value is \$4.1 billion. Subject to regulatory approvals and Archaea shareholder approval, bp is targeting acquisition completion by the end of 2022.

Post integration, bp expects the transaction to be accretive to both its earnings per share and free cash flow per share.

The business is expected to deliver rateable earnings growth. From around \$140 million today, bp is targeting EBITDA⁵ from the business, when integrated with bp, of more than \$500 million in 2025 and is aiming for around \$1 billion by 2027, following completion of the development pipeline⁶. This underpins an acquisition multiple of around four times¹. bp's investment is expected to deliver double digit returns.

As a result of the agreed acquisition, bp has doubled to around \$2 billion its aim for the contribution to EBITDA from biogas by 2030. bp now aims for more than \$10 billion EBITDA to be generated by its transition growth businesses by 2030⁷ - up from previous guidance of \$9-10 billion.

bp remains committed to its disciplined financial frame, with its five priorities unchanged. A resilient dividend remains bp's first priority with guidance unchanged. bp remains focused on maintaining a strong investment grade credit rating. bp's medium-term⁸ capital expenditure guidance is unchanged at \$14-16 billion a year. And bp's commitment to return 60% of full year surplus cash flow⁹ through share buybacks in 2022, subject to maintaining a strong investment grade credit rating, is unchanged.

In setting the buyback, bp's board will continue to take into account the cumulative level of and outlook for surplus cash flow, including the effect of this transaction.

Renewable natural gas

Global biogas demand is growing rapidly. In bp's Energy Outlook 2022, biogas grows more than 25-fold from 2019 to 2050 in both the Accelerated and Net Zero scenarios.

Biogas is generated by the decomposition of organic material at landfill sites, anaerobic digesters and other waste facilities. Archaea's operations process biogas - that would have been flared or vented if it were not captured - to produce pipeline-quality RNG or to generate power.

RNG can be used interchangeably with fossil fuel-based natural gas – including as transport fuel, in power generation and in heating – but, as it is derived from organic waste, its use results in lower lifecycle greenhouse gas emissions. Projects such as Archaea's also have the potential to be integrated with technology such as carbon capture and storage to further reduce lifecycle greenhouse gas emissions.

Increasing sales of RNG will support bp's net zero ambition, specifically its aim to reduce to net zero the carbon intensity of energy products it sells by 2050 or sooner. It has set an interim target to reduce this carbon intensity by 5% by 2025 and aims to reduce it by 15-20% by 2030, both against a 2019 baseline.

Notes to editors

- Morgan Stanley & Co. LLC is acting as financial adviser to bp and Freshfields Bruckhaus Deringer as lead legal adviser to bp.
- Archaea Energy Inc. is one of the largest RNG producers in the US, with an industry-leading platform and expertise in developing, constructing, and operating RNG facilities to capture waste emissions and convert them into low carbon fuel. Its innovative, technology-driven approach is backed by significant gas processing expertise, enabling Archaea to deliver RNG projects that are expected to have higher uptime and efficiency, faster project timelines, and lower development costs. Archaea partners with landfill and farm owners to help them transform potential sources of emissions into RNG, transforming their facilities into renewable energy centres. Additional information is available at www.archaeaenergy.com.
- Republic Services, Inc. is a leader in the environmental services industry. Through its subsidiaries, the company provides customers with the most complete set of products and services, including recycling, solid waste, special waste, hazardous waste, container rental and field services. Republic's industry-leading commitments to advance circularity, reduce emissions and decarbonize operations are helping deliver on its vision to partner with customers to create a more sustainable world. Additional information is available at RepublicServices.com.

Footnotes

1. Acquisition enterprise value around four times expected 2027 EBITDA
2. Archaea Energy net debt sourced from 2Q 2022 10Q, adjusted for disclosed subsequent financing activity.
3. bp's aim 3 is to reach net zero for the carbon intensity of the energy products bp sells. Any interim target or aim in respect of bp's aim 3 is defined in terms of reductions in the carbon intensity of the energy products bp sells (in grams CO₂e/MJ) relative to the baseline year of 2019. (Work is ongoing to confirm an assured baseline for this aim to incorporate the inclusion of physically traded energy products).

For the purposes of aim 3, an energy product is a product that is used by an ultimate end user to satisfy an energy demand. In the case of fuels, to burn them to release their calorific content, and in the case of electricity to provide work or heat. A refined product such as a lubricant base stock does not count as an energy product as it is not used to provide energy in its use phase. Crude oil does not count as an energy product except in the rare cases where it is used by an end user to satisfy energy demand.

Physically traded energy product includes trades in energy products which are physically settled in circumstances where bp considers their inclusion to be consistent with the intent of the aim. It therefore excludes, for example, financial trades, and physical trades where the purpose or effect is that the volumes traded net off against each other.

4. Premium calculated using Archaea Energy Inc. (NYSE: LFG) 30-day volume weighted average share price as of 14 October 2022 (Bloomberg)
5. EBITDA: replacement cost profit before interest and tax, excluding net adjusting items, adding back depreciation, depletion and amortization and exploration write-offs (net of adjusting items).
6. Projected financial information in this release represents bp's view of the business when integrated with bp.
7. At \$60/bbl Brent (2020, real) and bp planning assumptions.
8. 2023-30.
9. Surplus cash flow refers to the net surplus of sources of cash over uses of cash, after reaching the \$35 billion net debt target. Sources of cash include net cash provided by operating activities, cash provided from investing activities and cash receipts relating to transactions involving non-controlling interests. Uses of cash include lease liability payments, payments on perpetual hybrid bond, dividends paid, cash capital expenditure, the cash cost of share buybacks to offset the dilution from vesting of awards under employee share schemes, cash payments relating to transactions involving non-controlling interests and currency translation differences relating to cash and cash equivalents as presented on the condensed group cash flow statement.

Further information

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Cautionary statement

In order to utilize the 'safe harbor' provisions of the United States Private Securities Litigation Reform Act of 1995 (the 'PSLRA') and the general doctrine of cautionary statements, bp is providing the following cautionary statement.

This document contains certain forecasts, projections and forward-looking statements – that is, statements related to future, not past events and circumstances – with respect to the financial condition, results of operations and businesses of bp and certain of the plans and objectives of bp with respect to these items. These statements are generally, but not always, identified by the use of words such as 'will', 'expects', 'is expected to', 'targets', 'aims', 'should', 'may', 'objective', 'is likely to', 'intends', 'believes', 'anticipates', 'plans', 'we see' or similar expressions. In particular, the following, among other statements, are all forward-looking in nature: expectations in relation to completion of the transaction described including the outcome of third party approvals, the expected timing of completion and the amount and timing of the consideration and how it will be funded; plans and expectations relating to growing bp's transition growth engines through this decade including that investment into bp's transition growth businesses will reach more than 40% of bp's total capital expenditure by 2025 and around 50% by 2030; plans and expectations for bp's capital expenditure over the medium-term to be \$14-16 billion; plans and estimates relating to the growth, development and value creation potential of Archaea's business including expectations to grow earnings; expectations for the completion of Archaea's projects and development pipeline; expectations to increase production by around five-fold by 2030; plans and expectations in relation to Archaea's management and operations team; expectations for Archaea's business when integrated with bp to deliver rateable earnings growth including targeting EBITDA of more than \$500 million by 2025 and aim for around \$1 billion by 2027; expectations that biogas will contribute around \$2 billion of EBITDA in 2030 and bp's aim for transition growth businesses to contribute more than \$10 billion EBITDA by 2030; expectations for the investment to deliver double digit returns and statements regarding additional distinctive value creation; plans and expectations relating to bp's strategy, including bp's transformation to an integrated energy company; expectations that the transaction will be accretive to earnings and free cash flow on a per share basis post integration; expectations and plans regarding Archaea's joint venture with Republic Services Inc.; expectations that the transaction has the potential to take bp's biogas supply volumes to around 70 thousand barrels oil equivalent per day globally by 2030; expectations for the transaction to advance bp's net zero ambition including bp's Aim 3 to reduce to net zero the carbon intensity of the energy products bp sells by 2050 or sooner; statements relating to demand for renewable natural gas including within scenarios described in the bp Energy Outlook 2022; and plans and expectations regarding bp's financial frame including plans and expectations for future dividends, plans and expectations regarding bp's credit rating, including in

respect of maintaining a strong investment grade credit rating, plans and expectations for bp's annual capital expenditure, plans and expectations for bp's cash balance point, plans and expectations regarding the allocation of surplus cash flow and plans and expectations regarding the amount and timing of share buybacks.

By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will or may occur in the future and are outside the control of bp. Actual results or outcomes, may differ materially from those expressed in such statements, depending on a variety of factors, including the risk factors discussed under "Risk factors" in bp's Annual Report and Form 20-F 2021 as filed with the US Securities and Exchange Commission and in any of our more recent public reports.

Our most recent Annual Report and Form 20-F and other period filings are available on our website at www.bp.com or can be obtained from the SEC by calling 1-800-SEC-0330 or on its website at www.sec.gov. Our most recent Annual Report and Form 20-F and other period filings are available on our website at www.bp.com, or can be obtained from the SEC by calling 1-800-SEC-0330 or on its website at www.sec.gov.



The facility you see in the background of this slide is project Assai in Pennsylvania in the US. It is the highest capacity, operational, renewable natural gas facility in the world.

Today we have announced an agreement to acquire Archaea Energy, the company that owns and operates this facility, which is one of 50 facilities in their portfolio. They are a leading biogas company in the US, producing renewable natural gas and power, and are publicly listed on the New York Stock Exchange. We know them well through our existing relationship – the Mavrix Joint Venture.

This is an exciting and compelling combination, which advances our ongoing transformation to an Integrated Energy Company.

With the proposed acquisition, **we do three things.**

First – we accelerate our growth plans – now expecting to deliver in excess of \$10 billion from our transition growth businesses by 2030.

We'll do this by:

- Deepening our participation in the rapidly growing biogas sector.
- De-risking and accelerating one of our five transition growth engines,

bioenergy.

- And adding a rateable, growing and highly visible source of EBITDA.

Second – we do so by adding distinctive value:

- Building on our existing capability and experience across the biogas value chain.
- We will integrate biogas supply from Archaea Energy with our experienced trading business and global customer relationships.

And third – as biogas helps decarbonise demand – we will reduce carbon intensity – thereby supporting our Aim 3.

Importantly, amongst all of this - we are **remaining disciplined**. So, it is worth spending a few minutes on what is not changing following today's announcement.

We remain committed to our disciplined financial frame, with our five priorities unchanged.

- First, a resilient dividend. We continue – unchanged – to see capacity for an annual increase of the dividend per ordinary share of around 4% through 2025 at around \$60 per barrel Brent. And importantly this is underpinned by an average cash balance point through 2025 which remains unchanged at around \$40 per barrel Brent.
- Second, we remain focused on maintaining a strong investment grade credit rating.
- Third and fourth, we will continue to invest with discipline into the transition and resilient hydrocarbons. Capital expenditure guidance remains unchanged at \$14 to \$16 billion over the medium-term – including inorganics.
- And fifth, our guidance for share buybacks is unchanged. We continue to expect to be able to deliver share buybacks of around \$4 billion per annum at around \$60 per barrel Brent through 2025. And we remain committed to returning 60% of 2022 surplus cash flow through share buybacks, subject to maintaining a strong investment grade credit rating.

In setting the buyback, the board will continue to take into account the cumulative level of and outlook for surplus cash flow, including the effect of this transaction.

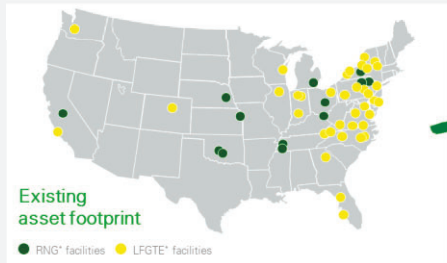
Finally, the acquisition is expected to be accretive to earnings and free cash flow per share, post integration, and to deliver double-digit returns.

Acquiring a market-leading biogas company



A **leading** and **fast-growing** producer of RNG* in the US...

With a **strong** development pipeline underpinning **rapid** growth



13 RNG* facilities, 37 LFGTE* facilities

6mboed production¹ expected in 2022

Proven track-record

>80 projects; feedstock for >75% of development pipeline secured

Visibility to ~30mboed production¹ by 2030

Modular capital-light development

Deal terms

\$3.3bn cash transaction

\$26 per share
38% premium to 30-day VWAP³

Enterprise value - \$4.1bn⁴

Targeting close by end 2022⁵

(1) Equity production, using conversion factor of 1 mmbtu per day to 8.04 gallons of gasoline equivalent per day

(2) Development projects as reported by Archaea Energy's 2022 results presentation

(3) Premium calculated using Archaea Energy Inc. (NYSE: LFG) 30-day volume weighted average share price (Bloomberg) as of 14 October 2022

(4) Cash consideration plus net debt sourced from Archaea Energy's 2022 100, adjusted for disclosed subsequent financing activity

(5) Subject to regulatory approvals and Archaea Energy shareholder approval

Turning then to the proposed acquisition in more detail.

We have worked together with Archaea Energy over the past couple of years, and I recently spent time with Nick Stork, the co-founder, and Danny Rice, the Chairman. They have built a great team, and a company with a proven track record. And we are really excited the team at Archaea Energy will be joining bp on completion, bringing a wealth of capability and experience that we can learn from.

Nick and his co-founders started out as landfill owners in Pittsburgh. They have built a leading biogas company, around the simple concept of sourcing gas from landfill and farm owners that would otherwise have been flared or vented, then processing it to produce renewable natural gas or power.

Today, they have a portfolio of 50 operating renewable natural gas and landfill gas-to-energy facilities, producing around six thousand barrels oil equivalent per day. At closing, Archaea Energy is expected to provide an immediate 50% increase to bp's biogas supply volumes.

And while an established business today, this acquisition is underpinned by the significant and de-risked growth potential we see in the future:

- A pipeline of more than 80 projects creating the potential to grow volumes

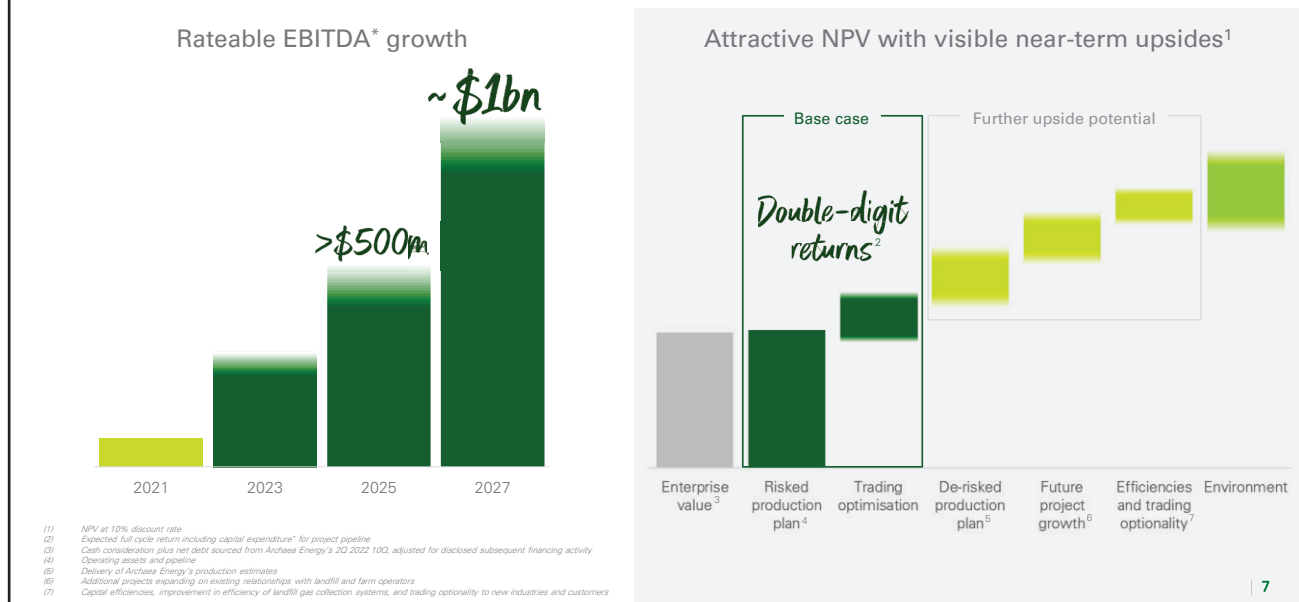
around five-fold by 2030.

- 40 of these projects are in a joint venture with Republic Services.
- Feedstock for more than 75% of projects in the pipeline has been secured.
- Advance orders for equipment have been placed for 22 projects.
- Low execution risk supports delivery of this growth. Projects are modular, capex-light, and have short development lead-times.
- And there is development potential beyond this, building on existing relationships with landfill and farm owners.

Turning to the transaction itself:

- This is a \$3.3 billion cash transaction.
- The purchase price of \$26 per share represents a 38% premium to Archaea Energy's 30-day volume weighted average share price.
- Total enterprise value of \$4.1 billion includes around \$800 million of net debt.
- With completion of the project pipeline, and when integrated with bp, we aim to deliver EBITDA of around \$1 billion per annum by 2027, underpinning an acquisition multiple of around four times.
- And we are hoping to close the transaction by the end of the year, subject to regulatory approvals and Archaea Energy shareholder approval.

Creating significant value with growth potential



The proposed acquisition is expected to deliver significant value for bp's shareholders.

First, EBITDA growth:

- We expect Archaea Energy will deliver rateable EBITDA growth.
- Growing from around \$140 million today, we are targeting around \$550 million in 2025, and aiming for around \$1 billion by 2027 when integrated with bp.
- For bp, we now expect the EBITDA contribution from biogas to double to around \$2 billion in 2030.
- And as a result, we are now aiming for greater than \$10 billion EBITDA from bp's transition growth businesses by 2030.

Second, value creation:

- We are confident our base case, including capex of around \$1.7 billion to support the buildout of the project pipeline by 2027, can support double digit returns.
- And we see potential for further value creation, and enhanced returns, over

and above our base case.

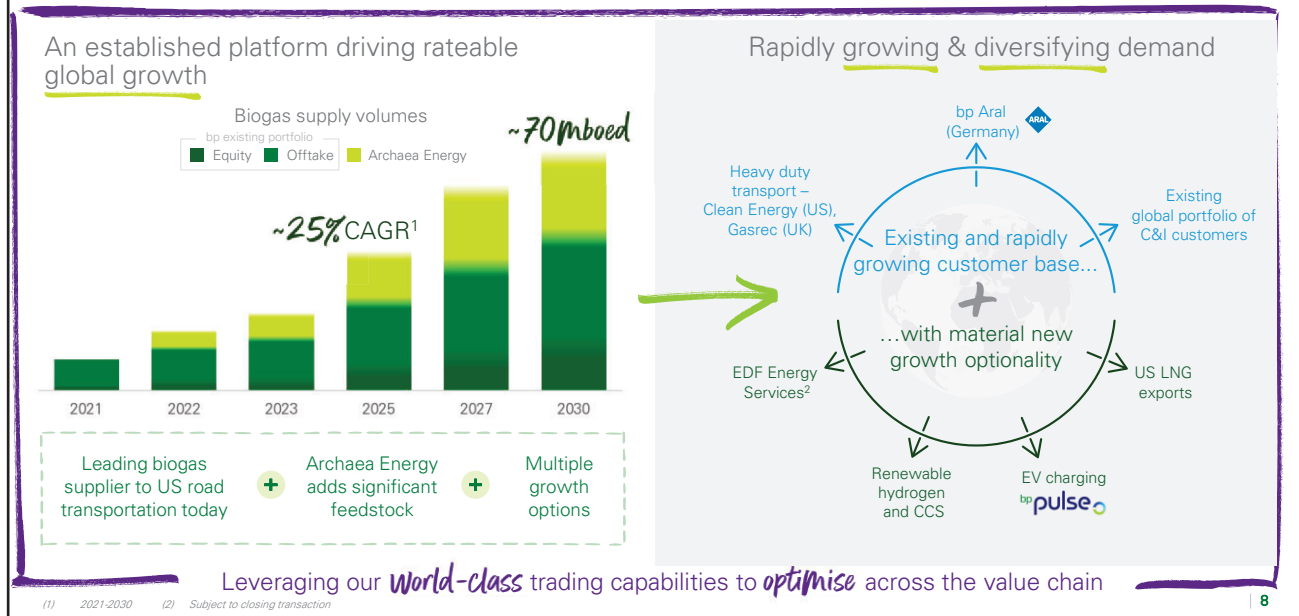
This base case:

- Assumes the build out of the development pipeline.
- Includes a risked view of production from the portfolio.
- Assumes the benefit of trading optimisation, something we are already doing through our Mavrix joint venture with Archaea and we intend to scale-up. For example, we expect to be able to direct more of the RNG into road transportation use, optimising value from the higher RIN credits, while using the scope and scale of our trading and supply portfolio to satisfy the fixed price contracts – value creation through integration.
- And, we are assuming a conservative RINs price, well below the 1 and 2-year average.

Beyond the base case, we see the potential for further sources of value creation, including:

- De-risking the portfolio production plan – through the delivery of Archaea Energy's production estimates.
- Future project growth – expanding on existing relationships with landfill and farm operators.
- And efficiencies and trading optionality – including capital efficiencies relating to the development pipeline, improvement in the efficiency of landfill gas collection systems, as well as trading optionality to new industries and customers.

Combining to grow bp's biogas value chain



What is really exciting about bringing bp and Archaea Energy together, is how the combined portfolios enable bp to capture enhanced value across the biogas value chain.

bp already has an established, global biogas business – a business positioned in an increasingly supportive macro environment of rapidly growing demand, with attractive fiscal incentives. In bp's 2022 Energy Outlook, biogas grows more than 25-fold from 2019 to 2050 in both the Accelerated and Net Zero scenarios.

The addition of Archaea Energy rapidly advances our access to feedstock and scales our upstream participation in the biogas value chain – a distinctive source of competitive advantage:

- Today we have a biogas portfolio of equity and merchant offtakes of more than 10 thousand barrels oil equivalent per day.
- Alongside growth in our existing portfolio, the addition of Archaea Energy's production and pipeline has the potential to take biogas supply volumes to around 70 thousand barrels oil equivalent per day by 2030.

On the demand side:

- We have biogas customers today – and demand from these customers is

Excerpts BP Transcript For CEO Bernard Looney Comments Today

Can we deliver the 8-10% returns from renewables?

The answer is very simply – yes.

We actually believe we can do better, and these returns could turn out to be conservative. But let me take you through why we have absolute confidence in our plan.

It is firstly based on experience – specifically with Lightsource bp

Since we formed the partnership at the start of 2018, Lightsource bp has expanded its presence from 5 to 13 countries.

As I mentioned, it has grown its project pipeline from 1.6 gigawatts to 16.

And it has delivered 17 projects since 2018.

They typically achieve returns in the 8 to 10% range.

So how do we get to 8 to 10% across our renewables portfolio as a whole?

First, we know returns start at around 5 to 6% on an equity basis in a competitive auction.

Second, we believe that through our extensive experience in operations and project management – we can add value through applying our processes. We have track record here. For example in Biofuels – where we have, and more recently through bp Bunge, have increased the efficiency in harvesting by 50% since 2016.

Third, we'll integrate with the rest of bp. Through Trading where we have a long track record – over 30 years – of delivering close to a 2% return uplift. Or through the application of our digital expertise to drive additional performance. Or by bundling our renewables offer with different forms of energy along with our Natural Climate Solutions and offsets portfolio, to give customers what they want – clean, low cost and firm energy.

Fourth, we will use leverage which is typical in this industry.

The combination of these four areas gets us to 8-10%.

Beyond this – we have the choice to optimize the portfolio – to farm down or not – and if we do – that could add a further 1 to 2%.

So yes – we are confident we can deliver the returns we are targeting.



Jenny Chase
@solar_chase



1. Time to make 2021 minor updates to my annual “opinions on #solar” thread.

If you like these, you’ll like my 2019 book, Solar Power Finance Without the Jargon, a little old but still valid, five stars on Amazon.

tinyurl.com/y6lc3ohl

7:16 AM · Oct 22, 2022 · Twitter Web App

186 Retweets 77 Quote Tweets 583 Likes



SAF Group Tweet your reply

Reply



Jenny Chase @solar_chase · Oct 22



Replying to @solar_chase

2. Solar Power Finance Without the Jargon is for STEM-educated people interested or seeking to work in renewable energy planning or finance.

Link to 2021 thread. 2020, 2019, 2018 and 2017 are linked from there so you can see what I got wrong or changed. tinyurl.com/mpd2rpcx

1

4

56



Jenny Chase @solar_chase · Oct 22



3. To opinions! Solar is the cheapest source of bulk electricity in many countries, and one of the quickest to deploy, which in the 2022 global energy crisis has been invaluable.

The limits to PV build this year have been supply, installation labour, grid access and permitting.

2

25

114



Jenny Chase @solar_chase · Oct 22



4. We don’t need a technology breakthrough. Today, solar developers just need a grid connection and permission to sell electricity and they’ll be off building solar plants whether it’s a good idea or not.

1

20

149



Jenny Chase @solar_chase · Oct 22



5. Incremental improvements continue. Now the standard solar wafer is 182mm mono, up from 166mm last year.

(Bigger wafers are a way to cut costs and increase efficiency, though some buyers have concerns about moving to a 210mm standard yet.)

1

4

77



Jenny Chase @solar_chase · Oct 22



6. Prices for freight, polysilicon, steel and aluminum went up in the last two years.

Freight is back down, but polysilicon is still above \$37/kg (from a low of \$6.3/kg in summer 2020). We expect it to drop back to \$15/kg early in 2023 on increased supply.



Jenny Chase @solar_chase · Oct 22



7. In October 2021, when the standard mono module price was 27.3 US cents per W, I said it would "come back down over 1-2 years" (referring to all-time low of 19 cents in summer 2020).

It's now 25.2 cents, so we're still waiting for further falls....



1



7



76



Jenny Chase @solar_chase · Oct 22



8. High input prices for solar plants have been largely irrelevant this year because electricity prices have risen much more.

However, developers that signed fixed-price power purchase agreements before 2021 have suffered badly.



1



3



71



Jenny Chase @solar_chase · Oct 22



9. Fixed-price power purchase agreements are a bad idea and they should always, at minimum, be index-linked to inflation and/or the currency the bank debt is borrowed in.



2



4



87



Jenny Chase @solar_chase · Oct 22



10. Thank goodness we've collectively stopped the nonsense of boasting about "lowest ever solar auction prices", most of which were Middle East opaque transfer prices or aren't currently being built.

PV prices below \$25/MWh unsubsidised were too low.



2



5



99



Jenny Chase @solar_chase · Oct 22



11. There's little talk of power price cannibalisation in 2022, because most countries have been too busy worrying about very high power prices. But solar plants do still all generate power at the same time, and that will cause sunny hours to have very low power prices in future.



1



2



81



Jenny Chase @solar_chase · Oct 22



12. It may well be that "negative power prices for a few hours every sunny day, followed by high evening power prices when the sun goes down" is a problem solved by capitalism and batteries.



5



23



152



Jenny Chase @solar_chase · Oct 22



13. Russia's invasion of Ukraine is a more significant event in the history of the energy transition than Covid-19. Europe has been rudely reminded that energy dependence is a shackle.



1




24




135



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14. Solar manufacturing is still a bad business to be in despite three relatively good years. Competition is vicious, the newest factories have the best tech. Older manufacturers carry heavy debt for factories rapidly becoming obsolete.

2 7 85 


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15. Government support for domestic solar manufacturing is getting really trendy, but it's a long term project. India has done it since 2013, and its firms like Vikram, Waaree and Mundra still mainly sell abroad only due to US trade restrictions on China.

1 2 74 

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16. The US Inflation Reduction Act appears to be a licence to print money for solar and hydrogen firms. An unsustainable boom in build and manufacturing is possible, though this may be muted because the US is a difficult country to do business in.

2 5 81 

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17. Europe will support a few solar factories, but is unlikely to have a united push to rely solely on domestic manufacturing.

2 2 55 

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18. You can be cynical about government and corporate net zero emissions targets if you like, but they're a lot better than no net zero emissions targets.


1 13 110 

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19. Forecasting solar build is hard when people actually pay for the results and therefore want them country by country.


It's easy when you just extrapolate a global line, but that is not terribly useful for setting corporate strategy, and makes your clients yell at you.

2 1 71 

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20. Our PV mid forecast – the highest I could get regional analysts to agree to, while allocating most capacity to actual countries, not buffer – is only 4.2TW by 2030, rather below the 5.3TW BNEF models that we need to be on a global net-zero-by-2050 high-renewables path.

1 6 79 

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21. You want to forecast a terawatt-per-year solar market by 2030, you go for it! (We have 460GW/year in 2030).

Fair warning, you'll have to forecast solar build in markets that currently have no plausible plans, and where country experts will tell you it will never happen.



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22. In 2017, my analysis team covered 42 countries which were significant solar markets. Now we attempt to cover 144, which is a pain, and we keep finding ones we have missed. Some of these may well surprise us and make the world a terawatt market by 2030.

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79



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...

23. The supply chain for solar manufacturing should probably be more transparent.

This sentence is also true without the word "solar".

1

10

109



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...

24. While moving to a circular economy with 100% recycling rates is essential in the long run, it's not a challenge for PV in particular; few PV panels have been recycled to date only because the vast majority are still in use.

It can be done.

2

16

121



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...

25. I refuse to get excited about perovskites until a perovskite company can disclose a commercial partnership with a named major module manufacturer.

(This was my opinion in 2018, 2019, 2020 and 2021. It is my opinion still).

1

6

114



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26. Floating solar is a thing, but it's not a new tech. It's solar onna boat.

It's mostly about having a place to put the modules and, when it's on a hydro dam reservoir, a grid connection right there. Grid connections are like gold dust.

4

8

137



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...

27. Agrivoltaics, likewise, is solar onna field.

PV only has synergies with *some* agriculture. Competition for light and restricted mechanical access to crops are often problems. Study is needed to make sure it isn't just subsidised bad PV and bad farming in the same place.

4

4

123



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28. Residential and commercial solar policy worldwide are moving to paying a much lower rate for instantaneous exports than users pay for grid power, and that's fine. The pro-solar alternatives, full net metering or even a higher feed-in tariff, are excessively generous.



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29. Batteries for residential solar systems are becoming standard offers in Europe and the US. Frankly some of the sales proposals are of indifferent veracity and the current software isn't up to economically optimising when batteries charge and discharge.



2



6



82



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30. If you get a battery and a solar system, pay attention to when it charges and discharges and what power costs at those times! Everyone needs a hobby. (We need better control software for the residential segment).



4



15



140



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31. Also get your rooftop solar system built when you have scaffolding up for something else, 'cos scaffolding is expensive. Ideally build it when you're building the roof, there will never be a better time.

Rooftop solar mandates are good and should be more common.



2



10



137



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Replying to [@solar_chase](#)

...I drafted all that and FORGOT TO CHANGE 2021 TO 2022. These are of course 2022 thoughts.



5



82

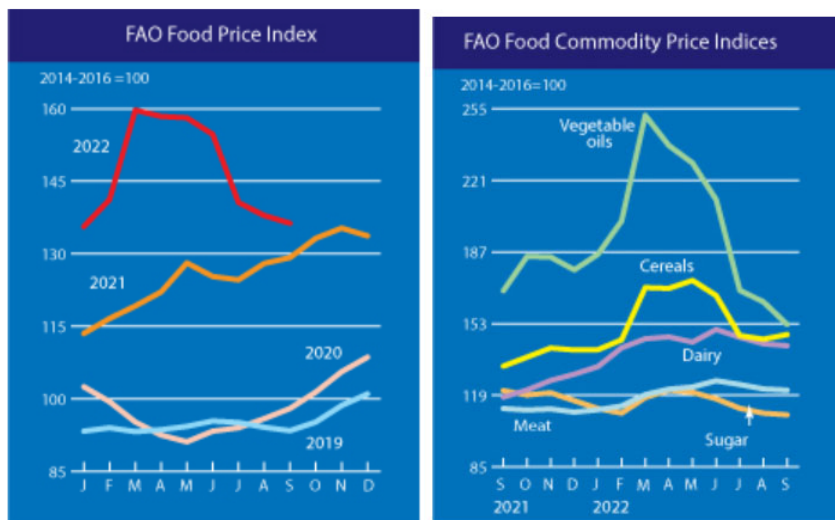


FAO Food Price Index

The FAO Food Price Index (FFPI) is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices weighted by the average export shares of each of the groups over 2014-2016. A feature article published in the June 2020 edition of the Food Outlook presents the revision of the base period for the calculation of the FFPI and the expansion of its price coverage, to be introduced from July 2020. A November 2013 article contains technical background on the previous construction of the FFPI.

FAO Food Price Index drops for the sixth consecutive month

Release date: 07/10/2022



» **The FAO Food Price Index*** (FFPI) averaged 136.3 points in September 2022, down 1.5 points (1.1 percent) from August, marking the sixth monthly decline in a row. The FFPI's decline in September was driven by a sharp fall in the international prices of vegetable oils and moderate decreases in those of sugar, meat and dairy products, more than offsetting a rebound in the cereal price sub-index. Despite the new decline, the FFPI remained 7.2 points (5.5 percent) above its value in the corresponding month last year.

» **The FAO Cereal Price Index** averaged 147.8 points in September, up 2.2 points (1.5 percent) from August and 14.9 points (11.2 percent) above its September 2021 value. In September, international wheat prices rebounded by 2.2 percent, underpinned by heightened uncertainty about the Black Sea Grain Initiative's continuation beyond November and the potential impact on Ukraine's exports. Moreover, concerns regarding dry conditions in Argentina and the United States of America, as well as a fast pace of exports from the European Union on top of the bloc's higher internal demand for wheat amid tighter maize supplies, provided further support to wheat prices. International prices of coarse grains rose marginally (+0.4 percent) again in September, with mixed price trends. World maize prices were nearly stable (+0.2 percent) as a strong United States dollar countered pressure from a tighter supply outlook with further downgraded production prospects in the United States of America and the European Union amid uncertainty regarding Ukraine's exports. International barley prices declined by 3.0 percent, mostly reflecting improved harvest prospects in Australia and the Russian Federation, while world sorghum prices increased by 13.2 percent due to reduced production prospects in the United States of America. The FAO All Rice Price Index rose by 2.2 percent in September. Indica prices spearheaded this increase, rising in response to export policy changes in India, which fostered anticipation that buyers would turn to other rice suppliers. Marketing disruptions and production uncertainties stemming from severe floods in Pakistan added to the price firmness. Nevertheless, demand was generally sluggish, thus capping increases in rice prices.

» **The FAO Vegetable Oil Price Index** averaged 152.6 points in September, down 10.8 points (6.6 percent) month-on-month, marking the lowest level since February 2021. The continued drop of the index reflected

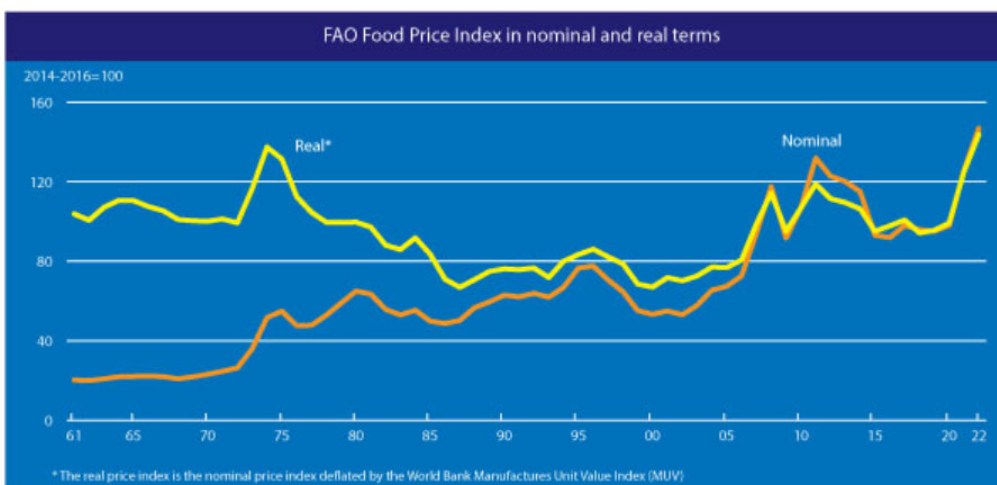
lower prices across palm, soy, sunflower and rapeseed oils. In September, international palm oil prices declined for the sixth consecutive month, largely driven by lingering heavy inventories that coincided with seasonally rising production in Southeast Asia. In the meantime, world soybean quotations dropped moderately after a short-lived rebound in August in response to elevated export availabilities in Argentina, owing to sharply higher farmer sales. As for sunflower oil, international prices declined to a 14-month low due to increased export supplies from the Black Sea region amid subdued import demand. World rapeseed oil prices also fell markedly, primarily due to prospective abundant global production in the 2022/23 season. Lower crude oil prices also contributed to the downward pressure on world vegetable oil prices.

» **The FAO Dairy Price Index** averaged 142.5 points in September, down 0.8 points (0.6 percent) from August, marking the third consecutive monthly decline, but remained 24.4 points (20.7 percent) above its value a year ago. In September, international prices of all dairy products declined moderately, to a great extent reflecting the impact of the weaker Euro against the United States dollar in world dairy prices (expressed in United States dollars). Moreover, limited market demand for medium-term deliveries due to apprehensions over market uncertainties stemming from tight milk production, high energy costs and labour shortages, especially in Europe, coupled with bleak global economic growth prospects, also weighed on international dairy price quotations. Meanwhile, demand for spot supplies remained robust, especially from Asia.

» **The FAO Meat Price Index*** averaged 121.4 points in September, down 0.6 points (0.5 percent) from August, also registering the third consecutive monthly decline, but still 8.7 points (7.7 percent) above its value in the corresponding month last year. In September, international price quotations for ovine meat declined the most, underpinned by the impacts of currency movements. Bovine meat prices also fell on high export availabilities from Brazil and elevated cattle liquidation in some producing countries. Meanwhile, poultry meat prices fell marginally as world import purchases remained subdued, notwithstanding constrained export supplies from some large exporting countries amid avian influenza outbreaks. By contrast, world pig meat prices increased further, reflecting the supply shortfall of slaughter-ready pigs in the European Union.

» **The FAO Sugar Price Index** averaged 109.7 points in September, down 0.8 points (0.7 percent) from August, marking the fifth consecutive monthly decline and reaching its lowest level since July 2021. The September decline was mostly related to the good production prospects in Brazil, the world's largest sugar exporter, with rains benefiting yields of standing crops and lower ethanol prices prompting a greater use of sugarcane to produce sugar. The weakening of the Brazilian real against the United States dollar exerted further downward pressure on world sugar prices while encouraging greater exports. Although the favourable production outlook for the 2022/23 season contributed to lowering prices, prevailing overall tight global sugar supplies limited the month-on-month price decline.

* Unlike for other commodity groups, most prices utilized in the calculation of the FAO Meat Price Index are not available when the FAO Food Price Index is computed and published; therefore, the value of the Meat Price Index for the most recent months is derived from a mixture of projected and observed prices. This can, at times, require significant revisions in the final value of the FAO Meat Price Index which could in turn influence the value of the FAO Food Price Index.



FAO food price index

	Food Price Index ¹	Meat ²	Dairy ³	Cereals ⁴	Vegetables Oils ⁵	Sugar ⁶	
2004	65.6	67.6	69.8	64.0	69.6	44.3	
2005	67.4	71.8	77.2	60.8	64.4	61.2	
2006	72.6	70.5	73.1	71.2	70.5	91.4	
2007	94.3	76.9	122.4	100.9	107.3	62.4	
2008	117.5	90.2	132.3	137.6	141.1	79.2	
2009	91.7	81.2	91.4	97.2	94.4	112.2	
2010	106.7	91.0	111.9	107.5	122.0	131.7	
2011	131.9	105.3	129.9	142.2	156.5	160.9	
2012	122.8	105.0	111.7	137.4	138.3	133.3	
2013	120.1	106.2	140.9	129.1	119.5	109.5	
2014	115.0	112.2	130.2	115.8	110.6	105.2	
2015	93.0	96.7	87.1	95.9	89.9	83.2	
2016	91.9	91.0	82.6	88.3	99.4	111.6	
2017	98.0	97.7	108.0	91.0	101.9	99.1	
2018	95.9	94.9	107.3	100.8	87.8	77.4	
2019	95.1	100.0	102.8	96.6	83.2	78.6	
2020	98.1	95.5	101.8	103.1	99.4	79.5	
2021	125.7	107.7	119.1	131.2	164.9	109.3	
2021	September	129.2	112.7	118.1	132.8	168.6	121.2
	October	133.2	112.0	121.5	137.1	184.8	119.1
	November	135.3	112.5	126.0	141.4	184.6	120.2
	December	133.7	111.0	129.0	140.5	178.5	116.4
2022	January	135.6	112.1	132.6	140.6	185.9	112.7
	February	141.2	113.9	141.5	145.3	201.7	110.5
	March	159.7	119.3	145.8	170.1	251.8	117.9
	April	158.4	121.9	146.7	169.7	237.5	121.5
	May	158.1	122.9	144.2	173.5	229.2	120.4
	June	154.7	125.9	150.2	166.3	211.8	117.3
	July	140.6	124.1	146.5	147.3	168.8	112.8
	August	137.9	122.0	143.4	145.6	163.3	110.5
	September	136.3	121.4	142.5	147.8	152.6	109.7

1 Food Price Index: Consists of the average of 5 commodity group price indices mentioned above, weighted with the average export shares of each of the groups for 2014-2016: in total 95 price quotations considered by FAO commodity specialists as representing the international prices of the food commodities are included in the overall index. Each sub-index is a weighted average of the price relatives of the commodities included in the group, with the base period price consisting of the averages for the years 2014-2016.

2 Meat Price Index: Based on 35 average export unit values/market prices of four meat types (bovine, pig, poultry and ovine) from 10 representative markets. Within each meat type, export unit values/prices are weighted by the trade shares of their respective markets, while the meat types are weighted by their average global export trade shares for 2014-2016. Quotations for the two most recent months may consist of estimates and be subject to revision.

3 Dairy Price Index: Computed using 8 price quotations of four dairy products (butter, cheese, SMP and WMP) from two representative markets. Within each dairy product, prices are weighted by the trade shares of their respective markets, while the dairy products are weighted by their average export shares for 2014-2016.

4 Cereals Price Index: Compiled using the International Grains Council (IGC) wheat price index (an average of 10 different wheat price quotations), the IGC maize price index (an average of 4 different maize price quotations), the IGC barley price index (an average of 5 different barley price quotations), 1 sorghum export quotation and the FAO All Rice Price Index. The FAO All Rice Price Index is based on 21 rice export quotations, combined into four groups consisting of Indica, Aromatic, Japonica and Glutinous rice varieties. Within each varietal group, a simple average of the relative prices of appropriate quotations is calculated; then the average relative prices of each of the four rice varieties are combined by weighting them with their (fixed) trade shares for 2014-2016. The Cereal Price Index combines the relative prices of sorghum, the IGC wheat, maize and barley price indices (re-based to 2014-2016) and the FAO All Rice Price Index by weighing each commodity with its average export trade share for 2014-2016.

5 Vegetable Oil Price Index: Consists of an average of 10 different oils weighted with average export trade shares of each oil product for 2014-2016.

6 Sugar Price Index: Index form of the International Sugar Agreement prices with 2014-2016 as base.



Dear Members of the Harvard Community,

For the most recent fiscal year, which ended on June 30, 2022, the return on the Harvard endowment was -1.8% and the value stood at \$50.9 billion. The endowment also distributed more than \$2.1 billion toward the University's operating budget, which continues to represent more than one-third of annual operating revenue.

The disparity between fiscal year 2021 (FY21) and fiscal year 2022 (FY22) returns was stark and reinforces the necessity of focusing on long-term, risk adjusted returns. Among the headwinds we faced this past year, several market factors weighed negatively on performance.

- By far the most significant impact was the poor performance of global equity markets over the course of the year. The S&P 500, Nasdaq Composite, Nasdaq Small Cap, and the ACWI—benchmarks for domestic and global equities—declined by 11%, 23%, 27% and 16%, respectively.

In addition, two other less significant factors weighed upon performance:

- While our benchmark relative performance with respect to public equities, hedge funds, and private equities had been unusually strong over the past four fiscal years, FY22 was not a strong benchmark relative year. Notably, however, HMC's five-year benchmark relative performance—a far more important metric—remains very strong and reinforces the effective turnaround HMC has made.
- A number of institutional investors leaned into the conventional energy sector, through either equities or commodity futures, adding materially to their total return. HMC did not participate in these returns given the University's commitment to tackling the impacts of climate change, supporting sustainable solutions, and achieving our stated net zero goals.

Notably, the highest risk asset classes—i.e., the private portfolios of venture capital, buyout, and real estate—were the strongest performers. In fact, the more private assets an investor had in its portfolio in FY22, the stronger their performance. This is somewhat counterintuitive and may indicate that private managers have not yet marked their portfolios to reflect general market conditions. This phenomenon does make us cautious about forward-looking returns in private portfolios.

For example, the venture capital portion of HMC's private equity portfolio returned high single digits despite the deeply negative performance of relevant public equity indices. On the other hand, some venture managers have meaningful exposure to public companies, which declined with public markets. Accordingly, the performance of venture portfolios during FY22 was largely a function of the proportion of public companies held in those portfolios.

We expect that the end of the current calendar year might present meaningful adjustments to these valuations, as investment managers audit their portfolios. Under existing accounting conventions for venture portfolios, investment managers generally use the most recent round of financing to mark investments. This convention may slow the process of moving existing valuations to fair value. This circumstance is not unique to Harvard—other institutional investors with large private portfolios will almost certainly face the same dynamic.

Given this environment, we are particularly pleased that we were able to sell close to \$1 billion of private equity funds in the secondary market during the summer of 2021—a time of significant ebullience—avoiding the discounts these funds would likely face today.

Harvard's Risk Tolerance

Harvard engaged in a years-long analysis of its risk tolerance to balance the desire for continued growth in the endowment with the University's steady reliance on annual distributions. In November 2021, the Corporation approved a proposal of the Harvard Finance Committee and the HMC Board to moderately increase the risk level of the portfolio. Noting how expensive the overall market was at the time, HMC decided to increase the portfolio risk level slowly over a multi-year period to avoid investing heavily at prevailing valuations. This increase will eventually make our risk level more consistent with that of various peers, although it will still be lower than some.

Net Zero Efforts

HMC is proud to be deeply engaged in the issue of sustainability. We are particularly excited about two efforts. First, HMC became the first U.S. endowment to make its own operations carbon neutral for FY22. Working with a third-party vendor, we measured our greenhouse gas emissions, sought opportunities to reduce future emissions, and secured offsets through carbon dioxide removal (CDR). Our goal continues to be mitigation of emissions wherever possible. For the emissions we cannot abate, our guiding principles for CDR are durability, additionality, quality carbon accounting and monitoring, and they may not result in harm to surrounding ecosystems and communities. Second, HMC has been an active investor in technology-driven climate transition investments. A more detailed report on our efforts for these important initiatives will be available in the 2023 Climate Report.

Diversity, Equity & Inclusion

For many years, HMC has worked to address the lack of gender and racial diversity in the financial industry—among our team, our universe of external managers, and portfolio investments.

We last reported on the diversity of our external managers [in 2020](#). Since then, the percentage of diverse, active U.S.-based managers [has grown](#). While we are pleased with our efforts to date, there is certainly more work to be done. HMC continues to actively seek out opportunities to invest with diverse managers and to maintain a staff that reflects those same principles.

In Closing

The disparity in performance between FY21 and FY22 serves to highlight both the value of the endowment to Harvard University during times of economic adversity, as well as the need to focus on long-term returns. We remain confident that the steps we have taken—and those still in process—to construct a portfolio that serves the University's long-term interests will allow Harvard to maintain and increase its critical support of students, faculty, and research for generations to come.

Best regards,



N.P. "Narv" Narvekar
Chief Executive Officer



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Cost-of-Living Adjustments for Federal Civil Service Annuities

Updated October 13, 2022

Congressional Research Service

<https://crsreports.congress.gov>

94-834

Summary

Cost-of-living adjustments (COLAs) for the Civil Service Retirement System (CSRS) and the Federal Employees Retirement System (FERS) are based on the rate of inflation as measured by the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). COLAs for both CSRS and FERS are determined by the average monthly CPI-W during the third quarter (July to September) of the current calendar year and the third quarter of the base year, which is the last previous year in which a COLA was applied. The “effective date” for COLAs is December, but they first appear in the benefits issued during the following January.

All CSRS retirees and survivors receive COLAs. Under FERS, however, nondisabled retirees under the age of 62 do not receive COLAs. Survivors and disabled retirees are eligible for COLAs under FERS regardless of age. CSRS pays a COLA that is equal to the percentage change in the CPI-W during the measurement period, but COLAs under FERS are limited if the rate of inflation is greater than 2.0%. If the rate of inflation during the measurement period is between 2.0% and 3.0%, the COLA under FERS is 2.0%. If inflation is greater than 3.0%, then the COLA for FERS benefits is equal to the CPI-W minus one percentage point.

Congress passed the first law requiring automatic COLAs for federal civil service retirement benefits in 1962, and it has adjusted either the formula by which they are calculated or the date on which they take effect more than 10 times since then.

If consumer prices as measured by the CPI-W do not increase from the third quarter of the base year to the third quarter of the current calendar year, there is no COLA for annuities paid under CSRS or FERS. For example, from the third quarter of 2014 to the third quarter of 2015, the CPI-W fell by 0.4%. Therefore, no COLA was paid under either CSRS or FERS beginning January 2016.

From the third quarter of 2021 to the third quarter of 2022, the CPI-W increased by 8.7%. Therefore, beginning in January 2023, the CSRS COLA is 8.7% and the FERS COLA is 7.7%.

Contents

COLA Formulas and Amounts	1
History of Legislation Affecting COLAs for Civil Service Annuities	2

Tables

Table 1. COLAs in Civil Service Retirement Benefits.....	3
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Contacts

Author Information.....	4
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COLA Formulas and Amounts

Only federal employees hired before 1984 participate in the Civil Service Retirement System (CSRS). The CSRS is closed to new entrants and will expire with the death of the last CSRS annuitant sometime around the year 2075. Civilian federal employees who were hired in 1984 or later participate in the Federal Employees Retirement System (FERS), as do employees who voluntarily switched from CSRS to FERS during “open seasons” that were held in 1987 and 1998. The FERS program began operating on January 1, 1987.

Cost-of-living adjustments (COLAs) for CSRS annuities are based on the average monthly percentage change in the CPI-W in the third quarter (July to September) of the current calendar year compared with the third quarter of the base year, which is the year in which the last COLA was applied.¹ The base year for determining the COLA effective in December 2022 (paid out in 2023) is 2021.² Adjustments are effective on the first day of the month preceding the month in which they are first paid.³

COLAs for benefits paid under FERS also are based on the percentage change in the CPI-W from third quarter to third quarter, but payment of COLAs under FERS is limited according to the eligibility category of the beneficiary and the rate of inflation.⁴ COLAs are not paid to nondisabled FERS retirees as long as they are under the age of 62. COLAs are paid to survivors of FERS retirees and disabled FERS retirees of any age after the first year of disability. All COLAs paid under FERS are limited if the rate of inflation exceeds 2.0%, according to the following formula:

Increase in CPI-W	Increase (COLA) in FERS Benefits
Under 2.0%	Same as CPI-W increase
2.0% to 3.0%	2.0%
More than 3.0%	Increase in CPI-W minus 1 percentage point

From the third quarter of 2021 (the current base year) to the third quarter of 2022, the CPI-W increased by 8.7%. Therefore, paid out beginning January 2023, the CSRS COLA is 8.7% and the FERS COLA is 7.7%.

¹ See 5 U.S.C. §8340.

² Between 1962 (when Congress passed the first law enacting automatic COLAs for federal civil service retirement benefits) and 2009, the base year—the year in which the last adjustment occurred—was also the previous year. Because the CPI-W decreased from the third quarter of 2008 to the third quarter of 2010, however, the base year for determining the COLA that was effective in December 2011 (and paid out in 2012) remained 2008. The CPI-W also decreased from the third quarter of 2014 to the third quarter of 2015, so the base year for determining the COLA effective in December 2016 (paid out in 2017) was 2014.

³ For example, the 2015 CSRS COLA of 1.7% was effective December 1, 2014, and first applied to benefits paid in January 2015. It was equal to the average monthly percentage change in the CPI-W between the third quarter of calendar year 2013 and the third quarter of 2014. Because there was no increase in the CPI-W between the third quarter of 2014 and the third quarter of 2015, there was no CSRS COLA paid out beginning in January 2016. In addition, the third quarter of 2014 remained the base on which the COLA for 2016 (paid out beginning in January 2017) was calculated. From the third quarter of 2014 to the third quarter of 2016, the CPI-W increased by 0.3%. Therefore, the COLA for 2016 (paid out beginning in January 2017) for both CSRS and FERS was 0.3%.

⁴ See 5 U.S.C. §8462.

History of Legislation Affecting COLAs for Civil Service Annuities

P.L. 87-793 (enacted in 1962) was the first law that provided for automatic adjustments in civil service retirement and disability benefits whenever the CPI in the current year exceeded the CPI in the base year (the year in which the last adjustment occurred) by 3.0% or more. In 1965, this was changed to require an adjustment in benefits whenever the CPI for a given *month* was at least 3.0% higher than in the month when the last adjustment was made, and remained at that level or higher for three consecutive months.

P.L. 91-93 (enacted in 1969) added one percentage point to COLAs in addition to the percentage change in the CPI to offset the erosion of benefits that had occurred as a result of the time lag in the adjustment formula. (P.L. 91-179 did the same for COLAs paid to military retirees.)

P.L. 94-440 (enacted in October 1976) repealed the one percentage point addition to COLAs. In addition, this law provided for automatic semiannual adjustments in benefits based on the change in the CPI from June to December (effective the following March 1) and December to June (effective the following September 1).

P.L. 97-35 (Omnibus Budget Reconciliation Act of 1981) replaced semiannual COLAs with annual COLAs based on the December-to-December change in the CPI, payable in March of the following year.

P.L. 97-253 (Omnibus Budget Reconciliation Act of 1982) delayed the implementation of COLAs by one month in FY1983, FY1984, and FY1985. The FY1983 COLA was effective April 1 rather than March 1. The FY1984 COLA was scheduled for May 1 and the FY1985 COLA was scheduled for June 1. This law also mandated that nondisabled retirees under the age of 62 would receive 50% of the projected CPI plus the full difference in the actual CPI over these projections. The law specified that the projected CPI was 6.6% for 1983, 7.2% for 1984, and 6.6% for 1985. This provision was repealed by the supplemental appropriations law that was passed in August 1984. COLAs for January 1985 and thereafter were to be the full amount for all retirees.

P.L. 97-253 limited COLAs in certain cases. Under the restriction, an annuity could not be increased by a COLA to an amount that exceeded the greater of the maximum pay for a GS-15 federal employee or the final pay of the employee (or high-3 average pay, if greater), increased by the average annual percentage change (compounded) in rates of pay of the General Schedule for the period beginning on the retiree's annuity starting date and ending on the effective date of the adjustment.

P.L. 98-270 (Omnibus Budget Reconciliation Act of 1983, enacted April 1984) delayed the COLA scheduled for May 1984 until December (payable in January 1985). Thereafter, all COLAs were to be effective in December and payable in January and were to be based on the change in the average monthly CPI-W from third-quarter to third-quarter. This formula and schedule are the same as those used to calculate COLAs in the Social Security program, as required by P.L. 98-21 (Social Security Amendments of 1983).

P.L. 98-369 (Deficit Reduction Act of 1984) specified that civilian and military retirement COLAs are to be paid in checks issued on the first business day of the month following the month in which they are effective. (COLAs that are effective in December are to be paid in checks issued in January.)

P.L. 99-177 (Balanced Budget and Emergency Deficit Control Act of 1981 [Gramm-Rudman-Hollings]). This law suspended all civil service retirement COLAs for FY1986 and for all

subsequent years in which the specified deficit reduction targets for the year would not otherwise be met.

P.L. 99-509 (Omnibus Budget Reconciliation Act of 1986). This law reinstated COLAs for programs in which they were subject to suspension under P.L. 99-177 for FY1987-FY1991.

P.L. 100-119 (Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987). This law permanently exempted the programs subject to suspension of COLAs under P.L. 99-177 from the suspensions required by that law.

P.L. 103-66 (Omnibus Budget Reconciliation Act of 1993). This law postponed the effective date of COLAs from December to March for FY1994-FY1996. The CPI measurement period was not changed.

Table I. COLAs in Civil Service Retirement Benefits

Effective Date ^a	CSRS Benefit Increase	FERS Benefit Increase	CPI Change During COLA Measurement Period
December 1965	6.1%	—	4.6%
January 1967	3.9	—	3.9
May 1968	3.9	—	3.9
March 1969	3.9	—	3.9
November 1969	5.0	—	4.0
August 1970	5.6	—	4.6
June 1971	4.5	—	3.5
July 1972	4.8	—	3.8
July 1973	6.1	—	5.1
January 1974	5.5	—	4.5
July 1974	6.3	—	5.3
January 1975	7.3	—	6.3
August 1975	5.1	—	4.1
March 1976	5.4	—	4.4
March 1977	4.8	—	4.8
September 1977	4.3	—	4.3
March 1978	2.4	—	2.4
September 1978	4.9	—	4.9
March 1979	3.9	—	3.9
September 1979	6.9	—	6.9
March 1980	6.0	—	6.0
September 1980	7.7	—	7.7
March 1981	4.4	—	4.4
March 1982	8.7	—	8.7
April 1983	3.9	—	3.9
December 1984	3.5	—	3.5
December 1985	0.0	—	3.1
December 1986	1.3	—	1.3
December 1987	4.2	—	4.2
December 1988	4.0	3.0	4.0
December 1989	4.7	3.7	4.7
December 1990	5.4	4.4	5.4
December 1991	3.7	2.7	3.7

Effective Date ^a	CSRS Benefit Increase	FERS Benefit Increase	CPI Change During COLA Measurement Period
December 1992	3.0	2.0	3.0
March 1994	2.6	2.0	2.6
March 1995	2.8	2.0	2.8
March 1996	2.6	2.0	2.6
December 1996	2.9	2.0	2.9
December 1997	2.1	2.0	2.1
December 1998	1.3	1.3	1.3
December 1999	2.4	2.0	2.4
December 2000	3.5	2.5	3.5
December 2001	2.6	2.0	2.6
December 2002	1.4	1.4	1.4
December 2003	2.1	2.0	2.1
December 2004	2.7	2.0	2.7
December 2005	4.1	3.1	4.1
December 2006	3.3	2.3	3.3
December 2007	2.3	2.0	2.3
December 2008	5.8	4.8	5.8
December 2009	0.0	0.0	-2.1
December 2010	0.0	0.0	-0.6
December 2011	3.6	2.6	3.6
December 2012	1.7	1.7	1.7
December 2013	1.5	1.5	1.5
December 2014	1.7	1.7	1.7
December 2015	0.0	0.0	-0.4
December 2016	0.3	0.3	0.3
December 2017	2.0	2.0	2.0
December 2018	2.8	2.0	2.8
December 2019	1.6	1.6	1.6
December 2020	1.3	1.3	1.3
December 2021	5.9	4.9	5.9
December 2022	8.7	7.7	8.7

Source: The Congressional Research Service.

Notes: Includes pensions for Members of Congress. P.L. 87-793 (enacted in 1962) was the first law that provided for automatic adjustments in civil service retirement and disability benefits based on certain changes in the Consumer Price Index; however, December 1965 was the first month in which an automatic adjustment was effective.

a. Benefit increases are actually paid the following month.

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Social Security Benefits Increase in 2023

October 13, 2022 • By [Jeff Nesbit, Deputy Commissioner for Communications](#)

Reading Time: 2 Minutes

Last Updated: October 13, 2022



Approximately 70 million Americans will see a 8.7% increase in their Social Security benefits and Supplemental Security Income (SSI) payments in 2023. On average, Social Security benefits will increase by more than \$140 per month starting in January.

Federal benefit rates increase when the cost-of-living rises, as measured by the Department of Labor's Consumer Price Index (CPI-W). The CPI-W rises when inflation increases, leading to a higher cost-of-living. This change means prices for goods and services, on average, are higher. The cost-of-living adjustment (COLA) helps to offset these costs.

We will mail COLA notices throughout the month of December to retirement, survivors, and disability beneficiaries, SSI recipients, and representative payees. But if you want to know your new benefit amount sooner, you can securely obtain your Social Security COLA notice online using the Message Center in your personal [my Social Security account](#). You can access this information in early December, prior to receiving the mailed notice. Benefit amounts will not be available before December. Since you will receive the COLA notice online or in the mail, you don't need to contact us to get your new benefit amount.

If you prefer to access your COLA notice online and not receive the mailed notice, you can log in to your personal [my Social Security account](#) to opt out by changing your Preferences in the Message Center. You can update your preferences to opt out of the mailed COLA notice, and any other notices that are available online. Did you know you can receive a text or email alert when there is a new message waiting for you? That way, you always know when we have something important for you – like your COLA notice. If you don't have an account yet, you must create one by November 15, 2022 to receive the 2023 COLA notice online.

“Medicare premiums are going down and Social Security benefits are going up in 2023, which will give seniors more peace of mind and breathing room. This year's substantial Social Security cost-of-living adjustment is the first time in over a decade that Medicare premiums are not rising and shows that we can provide more support to older Americans who count on the benefits they have earned,” Acting Commissioner Kilolo Kijakazi said.

January 2023 marks when other changes will happen based on the increase in the national average wage index. For example, the maximum amount of earnings subject to Social Security payroll tax in 2023 will be higher. The retirement earnings test exempt amount [will also change in 2023](#).

Be among the first to know! Sign up for or log in to your personal [my Social Security account](#) today. Choose email or text under “Message Center Preferences” to receive courtesy notifications.

You can find more information about the 2023 COLA [here](#).

SAF Dan Tsubouchi @Energy_Tidbits · 1h ...
 1/2. #NatGas #LNG #Oil #Coal will be needed for longer. #COP27
 President Egypt Foreign Affairs Minister Sameh Shoukry "COP27 is to be convened while the international community is facing a financial and debt crisis, an energy-prices crisis, a food crisis, and ..." #OOTT

1 4 12

SAF Dan Tsubouchi @Energy_Tidbits · 1h ...
 2/2. ". on top of them the climate crisis "In light of the current geopolitical situation, it seems that transition will take longer than anticipated." #EnergyTransition will take longer, be bumpy road & cost more \$\$\$ Thx @MarcChampion1 @business Salma El Wardany. #OOTT

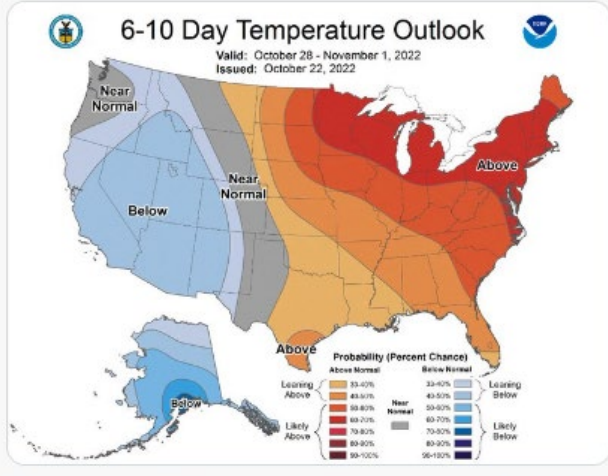
3

SAF Dan Tsubouchi @Energy_Tidbits · 2h ...
 Great #Solar thread with many insights. ie #20, highest could get BNEF regional analysts to agree to, while allocating most capacity to actual countries, not buffer – is only 4.2TW by 2030, vs 5.3TW BNEF models for NetZero high renewables path. Thx @solar_chase #EnergyTransition

Jenny Chase @solar_chase · Oct 22
 1. Time to make 2021 minor updates to my annual "opinions on #solar" thread.
 If you like these, you'll like my 2019 book, Solar Power Finance Without the Jargon, a little old but still valid, five stars on Amazon.
tinyurl.com/y6lc3ohl
[Show this thread](#)

3

SAF Dan Tsubouchi @Energy_Tidbits · 19h ...
 Continued near term price pressure on HH #NatGas prices with a warm end to October east half of US. Just checked and no 8-14 day outlook posted today Thx @NOAA. #OOTT

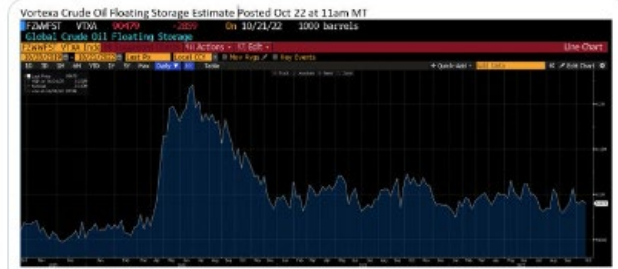


SAF

Dan Tsubouchi @Energy_Tidbits · 21h

...

#Vortexa crude #Oil floating storage at 10/21 est 90.48 mmb, -2.86 mmb WoW vs upwardly revised 10/14 of 93.34 mmb. Last several weeks revised up, excl 09/23 week, floating storage is +/-90 mmb vs last week +/- 85 mmb. Thx @Vortexa @business. #OOTT



Source: Bloomberg, Vortexa

Posted Oct 22 11am MT					Oct 15 9am MT					Oct 8, noon MT				
ID	3D	1H	OH	YTD	ID	3D	1H	OH	YTD	ID	3D	1H	OH	YTD
Fr	10/21/2022			904.79	Fr	10/14/2022			899.93	Fr	10/07/2022			860.58
Fr	10/14/2022			933.38	Fr	10/07/2022			964.99	Fr	09/30/2022			916.26
Fr	10/07/2022			899.87	Fr	09/16/2022			860.18	Fr	09/23/2022			100.2036
Fr	09/30/2022			915.06	Fr	09/23/2022			105.1451	Fr	09/16/2022			882.98
Fr	09/23/2022			107.2926	Fr	09/16/2022			87.940	Fr	09/09/2022			907.98
Fr	09/16/2022			900.14	Fr	09/09/2022			845.75	Fr	09/02/2022			818.71
Fr	09/09/2022			892.89	Fr	09/02/2022			788.35	Fr	08/26/2022			848.68
Fr	09/02/2022			799.85	Fr	08/26/2022			821.36	Fr	08/19/2022			101.9113
Fr	08/26/2022			899.16	Fr	08/19/2022			968.36	Fr	08/12/2022			106.3936
Fr	08/19/2022			100.4686	Fr	08/12/2022			103.2094	Fr	08/05/2022			850.96
Fr	08/12/2022			105.7948	Fr	08/05/2022			841.07	Fr	07/29/2022			879.93

Source: Bloomberg, Vortexa





Dan Tsubouchi @Energy_Tidbits · Oct 22



#Macron headline is US & NO need to reduce #NatGas #LNG price. More in transcript. not united in consequences of sanctions, "have to maintain solidarity & not let financial instability start in EU", industrial activity being hit hard. A normal winter likely tipping point? #OOTT

REPLAY: France's Macron delivers speech after EU summit in Brussels



SAF Group created transcript of excerpts from Macron's address post EU leaders summit agreeing on a "roadmap" to protect European consumers from soaring energy prices in Brussels on Oct 21, 2022.

<https://www.france24.com/en/video/20221021-replay-france-s-macron-delivers-speech-after-eu-summit-in-brussels>

Items in "italics" are SAF Group created transcript

Note this is based on the France24 translation

In the Q&A, at 22:00 min mark, Macron "... Because since the beginning of the war, we have our union of values. *But we are not united when it comes to consequences of the war on our lives. It is true that when you are Norwegian or American, sanctioning Russia, helping Ukraine, is not the same whether you're Norwegian, French or German. Our economies need energy and the problem of depending on gas is much stronger for some countries than for others. So we have to discuss this. We have to have the debate. It's fair and that's what we've been doing. I really approached the Norwegian Prime Minister and the United States in a very open way so that they can understand our point of view. And yes, they have all and that's great for them, but it wouldn't be fair if they kept all the benefit for themselves. It's a debate we have to have. There can't be a two tier Europe. Moreover, there are choices which we made in conjunction with the US regarding attractiveness, but with double standards because their cost of energy are so much lower as they are producers. They sell the gas for 3 or 4 times less than we have to pay. And they have also great subsidies from the states, the state in some area, up to 90%. That is unfair, it means it's double standard for the goods that are produced. And we need to create some more sincere conditions of trade. It's something I've been talking about with them and when I have my state visit in the states at the beginning of December, I will be discussing it again. And we have to act very quickly on prices, bring them down. We have to maintain solidarity and not let financial instability start in Europe. We have to create the conditions of attractiveness and competitiveness so that we can catch up and not be dependent on the ups and downs what is going on. We want to be, we are not only a market, we are producers. We want to be good at selling various industrial goods. And to do that, we need to fight and not stay "*

Prepared by SAF Group <https://safigroup.ca/news-insights/>



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Dan Tsubouchi @Energy_Tidbits · Oct 21

...

Ouch! "unlike its approach to all other high-emitting sectors, the Government of Canada has not articulated a clear strategy to reduce this sector's emissions, effectively exempting the logging industry from its keystone climate policies." #OOTT
nrdc.org/sites/default/...

1

INTRODUCTION: CANADA'S HIGH-EMISSIONS LOGGING SECTOR

A glaring omission in Canada's climate policy is undermining the rigour and integrity of the government's climate commitments, leaving unaddressed the net greenhouse gas (GHG) emissions from one of the country's highest-emitting sectors: the logging industry. A new analysis of government data conducted by Nature Canada and the Natural Resources Defense Council (NRDC) shows that the logging industry is one of Canada's major GHG emitters, with a footprint that's equal to more than 10 percent of Canada's overall emissions. This figure, which is a conservative estimate, places the logging sector's GHG emissions on par with oil sands production¹ and higher than emissions from electricity generation.² However, Canada does not clearly report the logging sector's emissions. Instead, logging emissions can only be calculated through a complex process of piecing together official data dispersed across various government sources (some of which are available only upon request). In addition, unlike its approach to all other high-emitting sectors, the Government of Canada has not articulated a clear strategy to reduce this sector's emissions, effectively exempting the logging industry from its keystone climate policies.

The exclusion of this high-emitting sector jeopardizes Canada's climate ambition. The government's achievement of its commitment to reduce Canada's emissions to 40 to 45 percent below 2005 levels by 2030 depends on a full and accurate accounting of — and effective actions to reduce — emissions from all sectors of the economy. The lack of recognition of the logging sector's significant emissions also leads to a fundamentally flawed basis for forest sector policy decisions, including forest carbon regulation, perpetuating policy decisions grounded in the myth of logging's carbon neutrality and exempting the industry from accountability.

Canada's climate leadership depends on a comprehensive accounting and mitigation of impacts across all sectors. The atmosphere does not distinguish between emissions from logging and those from fossil fuels and, by the government's own numbers, the logging industry ranks among Canada's greatest climate liabilities. Canada should transparently and accurately report logging emissions, addressing them alongside emissions from all other high-emitting sectors in its 2030 Emissions Reduction Plan (ERP) and other policies.

This report outlines the key findings from the new Nature Canada and NRDC technical report, and proposes key policy recommendations for the Government of Canada to address the high level of GHG emissions from the logging sector. These recommendations include: 1) Transparently report the logging industry's emissions; 2) Develop a strategy for reducing these emissions; 3) Directly regulate the sector's emissions; and 4) Address biases, flaws, and omissions in Canada's logging emissions accounting.

LIST IN THE REPORT: CANADA'S HIGHEST LOGGING OPERATORS ARE EQUIVALENT TO THOSE FROM OIL SANDS OPERATORS

100 Dan Tsubouchi @Energy_Tidbits · Oct 21



WOW!

@NRDC @NatureCanada "Canadian Logging Industry Carbon Emissions On Par With Tar Sands Operations"
[nrdc.org/sites/default/... . . .](https://nrdc.org/sites/default/...)



1



5



SAF

Dan Tsubouchi @Energy_Tidbits · Oct 21
WOW!

...

@NRDC @NatureCanada "Canadian Logging Industry Carbon Emissions On Par With Tar Sands Operations" [nrdc.org/sites/default/...](https://www.nrdc.org/sites/default/...)

At 35:30 min [reddit.com/r/climate/comm...](https://www.reddit.com/r/climate/comm...), @JustinTrudeau asked on it, didn't address it, just gave general response on tree planting, etc.

#OOTT

<https://www.nrdc.org/media/2022/221019-0>

Canadian Logging Industry Carbon Emissions On Par With Tar Sands Operations

October 18, 2022

MEDIA CONTACTS
 Margie Kelly, NRDC
mkelly@nrdc.org, 541-222-9699
 Michael Polanyi, Nature Canada
mpolanyi@naturecanada.ca, 343-553-6060

WASHINGTON — A new report shows that carbon emissions from industrial logging in Canada are on par with those of Canada's tar sands operations. According to *Lost in the Woods: Canada's Hidden Logging Emissions are Equivalent to those from Oil Sands Operations*, a Nature Canada and Natural Resources Defense Council report released today, logging is one of Canada's highest net greenhouse gas (GHG)-emitting sectors.

Logging is often erroneously portrayed by governments and industry as a carbon-neutral sector, said Graham Saul, Executive Director of Nature Canada. "This report clearly shows that claim to be false. The reality is that logging is a high-emissions sector whose climate impacts are being ignored."

The report calculates, for the first time, the net GHG emissions associated with logging in Canada using published and unpublished 2020 government data. It shows that, even using the government's own numbers, which are likely to be conservative, the net GHG emissions from logging in 2020 were 70 megatonnes of carbon dioxide equivalent (MTCO₂e) — roughly equal to emissions from Canada's tar sands operations.

"Canada and the world can't afford to continue ignoring the logging industry's devastating climate toll," said Anthony Swift, Director of the NRDC (Natural Resources Defense Council) Canada Project. "*Lost in the Woods* starkly illustrates that Canada can't meet its climate targets unless it addresses logging emissions alongside those of the fossil fuel sectors. Canada's global standing on forests and climate depends on it."

The Government of Canada does not transparently report emissions from the logging industry in its annual national GHG inventory. Nor does the government's 2030 Emissions Reduction Plan include a strategy for reducing logging emissions, leaving a significant hole in Canada's plan to address its climate impact. While Canada has committed to cut GHG emissions by at least 40% from 2005 levels by 2030, meeting this target will require the government to integrate the logging industry, as one of Canada's highest-emitting sectors, into this strategy, and take action to reduce logging's emissions. Michael Polanyi of Nature Canada and Jennifer Skene of NRDC are available for interviews or a technical briefing.

###

NRDC (Natural Resources Defense Council) is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Bozeman, MT, and Beijing. Visit us at www.nrdc.org and follow us on Twitter @NRDC.

2 9 19

SAF repost Dan Tsubouchi @Energy_Tidbits · Oct 21 ...
High #NatGas #Oil prices is THE 2020s issue for the west. @JustinTrudeau
".. EXCEPT we're sort of avoiding the fact that underpinning those
democracies is a reliance on cheap energy and cheap raw material inputs
from countries that do not share our values or our approach". #OOTT



SAF Group created transcript of comments from Justin Trudeau on climate change policy at Ottawa
conference on Oct 19, 2022
https://www.reddit.com/r/climate/comments/v8due/canadian_pm_justin_trudeau_discusses_climate/

Items in "Italics>" are SAF Group created transcript

At 20:50 min mark, Trudeau "... people are realizing that getting off Russian oil and gas means getting onto
more oil and gas to replace that from elsewhere. But it's also showing, okay, we need to accelerate our move
off of oil and gas. Or moves to decarbonize the gas, at least. So that we can actually not be reliant on Russia,
but, more than that, not be reliant as democracies on autocracies. I mean, we spent a lot of time since the
beginning of the war in Ukraine pointing out that democracies with freedom rights, freedoms, rights with
thoughtful capitalist models, are the best solution for people around the world. *Yes, your should all become
democracies, except we're sort of avoiding the fact that underpinning those democracies is a reliance on cheap
energy and cheap raw material inputs from countries that do not share our values or our approach. Forget on
democracy, on things like human rights, on environmental responsibility, on sustainability, on labor
standards. So we can actually make a case that democracy is better for the world than our western civilization
in all its forms is better if it's reliant on authoritarian dictatorships. So, that's where Canada comes in. Right.
Where we actually have the kinds of resources you find in a Russia or a China. But we have labor standards. We
have environmental standards. We have democracy. We have human rights. We recognize our challenges and
mistakes and work to tackle them. We have freedom of expression, and political freedoms that actually make
us more reliable, more robust, more resilient as trading partners."*

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

🗨️ 4 ❤️ 10 ↗️

SAF repost Dan Tsubouchi @Energy_Tidbits · Oct 21 ...
Looks like no need right now for #NatGas #LNG for heating homes in EU.
The warm weather continues so no weather related #NatGas demand, it's
leave the windows open weather. Times are ET so 2pm BST. Good Europe
temp map courtesy of @MeteoredUK. #OOTT



🗨️ 1 🔄 2 ❤️ 6 ↗️

Dan Tsubouchi @Energy_Tidbits · Oct 21

...

Like checking CEO messaging QoQ. See Looks like \$SLB CEO Q3 vs Q2 messaging is similar as \$BKR CEO. Still strong but using "constructive" in Q3 normally infers little less bullish long term #Oil #NatGas outlook vs Q2 message. #OOTT

Schlumberger Announces Third-Quarter 2022 Results

Q3 2022 Highlights

Q3 2022 revenue of \$4.1 billion, up 1% from Q3 2021. Operating margin of 21%, up 1 percentage point from Q3 2021. Free cash flow of \$1.1 billion, up 1% from Q3 2021. Dividend of \$0.15 per share, up 1% from Q3 2021. Total return to shareholders of 15%, up 1 percentage point from Q3 2021.

Q3 2022 Financial Performance

Q3 2022 revenue of \$4.1 billion, up 1% from Q3 2021. Operating margin of 21%, up 1 percentage point from Q3 2021. Free cash flow of \$1.1 billion, up 1% from Q3 2021. Dividend of \$0.15 per share, up 1% from Q3 2021. Total return to shareholders of 15%, up 1 percentage point from Q3 2021.

Q3 2022 Operational Performance

Q3 2022 operational performance was strong, with revenue up 1% from Q3 2021. Operating margin of 21%, up 1 percentage point from Q3 2021. Free cash flow of \$1.1 billion, up 1% from Q3 2021. Dividend of \$0.15 per share, up 1% from Q3 2021. Total return to shareholders of 15%, up 1 percentage point from Q3 2021.

Q3 2022 Outlook

Q3 2022 outlook is positive, with revenue up 1% from Q3 2021. Operating margin of 21%, up 1 percentage point from Q3 2021. Free cash flow of \$1.1 billion, up 1% from Q3 2021. Dividend of \$0.15 per share, up 1% from Q3 2021. Total return to shareholders of 15%, up 1 percentage point from Q3 2021.

Dan Tsubouchi @Energy_Tidbits · Oct 19



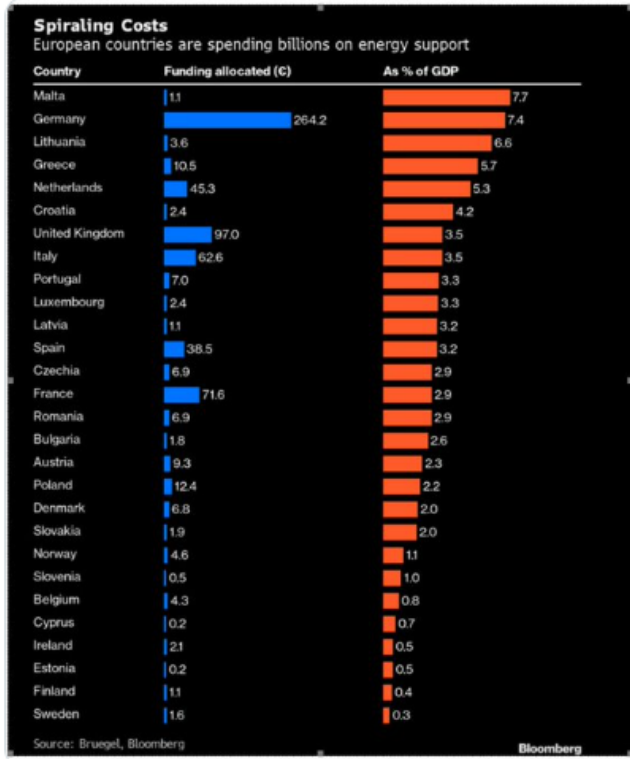
Like checking CEO messaging QoQ. \$BKR Q3 @simonelli still positive for #Oil #NatGas #LNG outlook ie. supportive a multi-year upturn in global upstream spending, but just not as bullish vs Q2 oil still supportive of strong activity, benefit from a strong LN...

3 1

SAF

Dan Tsubouchi @Energy_Tidbits · Oct 21

EU govts have pledged 550 billion euros (\$536b) to protect citizens/businesses from soaring energy costs over past yr. Unlike Covid that was temporary impact, banning RUS #NatGas #Oil #PetroleumProducts = higher energy costs to Europeans for a long time. Thx @johnainger. #OOTT



1 2 5

SAF

Dan Tsubouchi @Energy_Tidbits · Oct 21

Germany \$0.8b loan guarantee to @Trafigura to long-term 5-yr supply commitment of strategic commodities (#Copper, #Nickel, #Zinc, etc). Looks like an overall supply risk worry and NOT a Russia supply risk. Bet Germany would do this for #LNG if only had to do 5-yr deals. #OOTT

Germany \$0.8b loan agreement guaranteed by the federal republic of germany

agreement guaranteed by the Federal Republic of Germany

In the global commodities industry, Trafigura has entered into a USD800 million loan agreement guaranteed by the government of the Federal Republic of Germany. The guarantee is provided under Germany's United Loan Act (ULG) to support the long-term supply of strategic commodities to Germany. In exchange for the loan, Trafigura has entered into a long-term commitment to supply strategic commodities to Germany, including copper, nickel, zinc, and other metals. The agreement included a review of Trafigura's supply chain and risk management practices.

Trafigura is a global commodities trading group in the world. At the heart of global commodities trading are metals, minerals, and power & renewables. We are the world's largest metals and minerals trader, with a strong focus on copper, nickel, zinc, and other metals. We are also a leading power and renewables trader, with a strong focus on coal, oil, gas, and renewable energy. We have a long history of providing high-quality services to our clients in 48 countries.

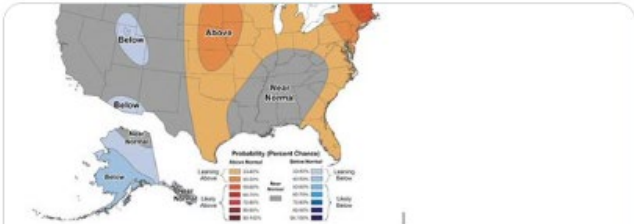
Trafigura.com

4 8

SAF

Dan Tsubouchi @Energy_Tidbits · Oct 20

Updated @NOAA 30-day & DJF temperature outlook. Marginally colder DJF vs last mth forecast, but still not bullish for weather driven #NatGas demand in DJF. And still a warmer than normal Nov. HH would be way lower if not for #LNG exports. #OOTT



<https://www.cpc.ncep.noaa.gov/products/predictions/30day/>



https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=2



3 6

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Dan Tsubouchi @Energy_Tidbits · Oct 20

sunrise in 15 min in san jose del cabo.



3

SAF **Dan Tsubouchi** @Energy_Tidbits · Oct 20 ...
Also why energy will cost more \$\$\$ under energy transition.
[#RenewableNaturalGas](#) is interchangeable with [#NatGas](#) produced from natural gas wells, but [@bp_plc](#) indicating will cost about 6x current HH price. [#OOTT](#)

↳ **Dan Tsubouchi** @Energy_Tidbits · Oct 19
How math works for [@bp_plc](#) \$4.1b Renewable [#NatGas](#) Archaea.
[@RobPana](#) [@DylanChase_](#) report bp expects RNG prices close to Henry Hub PLUS the value of federal renewable fuel blending credits that have recently averaged ~\$33/MMBtu for RNG delivered to transportation markets. [#OOTT](#)

🗨️ 3 ❤️ 1 ↗️


SAF **Dan Tsubouchi** @Energy_Tidbits · Oct 20 ...
"Demand is strong" first words out of American Airlines CEO Isom's mouth to [@Lebeaucarnews](#) on [@SquawkCNBC](#) right now. [#OOTT](#)

🗨️ 1 🔄 2 ❤️ 2 ↗️

SAF **Dan Tsubouchi** @Energy_Tidbits · Oct 19 ...
How math works for [@bp_plc](#) \$4.1b Renewable [#NatGas](#) Archaea.
[@RobPana](#) [@DylanChase_](#) report bp expects RNG prices close to Henry Hub PLUS the value of federal renewable fuel blending credits that have recently averaged ~\$33/MMBtu for RNG delivered to transportation markets. [#OOTT](#)

🗨️ 1 🔄 2 ❤️ 2 ↗️

SAF **Dan Tsubouchi** @Energy_Tidbits · Oct 19 ...
[#SPR](#). Biden "gonna continue the responsible use that national asset". Honest admission, even if not why EPCA created SPR "storage of up to 1 billion barrels of petroleum products to reduce the impact of disruptions in supplies of petroleum products" [#OOTT](#)

 youtube.com
LIVE: Biden delivers remarks on continuing to lowe...
President Joe Biden will deliver remarks on additional actions to strengthen energy security a...

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SAF

Dan Tsubouchi @Energy_Tidbits · Oct 19

...

#LNGCanada 1.8 bcfd Phase 2? See 🗨️ SBKR @simonelli_j expects 13.2 to 19.7 bcfd of #LNG FIDs in 2022/23, incl 4.1 bcfd FID'd to date in 2022. But landscape shifting to established LNG developers with brownfield projects and projects utilizing faster to market modular lines. #OOT

Excerpts from Baker Hughes Q3 call webcast on Oct 19, 2022

Items in "italics" are SAF Group created transcript

Note there are some differences to the Bloomberg posted transcript.

"Despite these economic challenges, we remain constructive on the outlook for oil and gas and believe that underlying fundamentals remain supportive of a multi-year upturn in global upstream spending.

Operators around the world has shown a great deal of financial discipline, which we expect to translate into a more durable upstream spending cycle even in the face of an unpredictable commodity price environment. In the oil market, we expect continued price volatility as demand growth likely softens under the weight of higher interest rates and inflationary pressures.

However, we expect supply constraints and production discipline to largely offset any demand weakness. This should support price levels that are conducive to driving double digit upstream spending growth in 2023. In the natural gas and LNG markets, prices remain elevated as a multitude of factors increase tensions on an already stressed global gas market. Europe surging demand for LNG has redirected cargoes from other regions and created an exceptionally tight global market that could get even tighter in 2023. This situation has resulted in record-high LNG prices,

but has also slowed down switching from coal to gas in some developing countries. We believe that significant investment is still required over the next five to ten years to ensure natural gas's position as a key part of the energy transition

However, while the current price environment is attractive for new projects this is also a pivotal time for the industry with price-related demand destruction occurring in some markets and LNG developers facing inflationary pressures and a higher cost of capital for new projects.

As a result, we believe the landscape may be shifting in favor of established LNG players with the scale, diversity, and financial strength to navigate the risks and uncertainties. Those with brownfield projects and projects that utilize faster-to-market modular lines, maybe particularly advantaged in the coming years."

"The primary growth driver for TPS continues to be LNG where multiple projects are expected to move forward for FID in 2022 and 2023. Although inflationary pressures and rising interest costs have slowed progress on some projects we remain comfortable with our expectation of 100 to a 150 MTPA reaching FID by the end of 2023, including the 31 MTPA that at has reached FID year to date."

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

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📌

Dan Tsubouchi @Energy_Tidbits · Oct 19
 #OPEC will like this, #Biden won't. Support for #Oil prices in 2023/24 if there is lesser US #Oil shale growth ahead. \$BKR Q3 call, @simonelli_I NAM "drilling & completion activity are beginning to level off after significant growth over the last 2 years". #OOTT

SAF — Dan Tsubouchi @Energy_Tidbits · Oct 5
 Reminder. @EIAgov actuals for US #Oil production of 11.800 mmb/d was only +166,000 b/d in July 2022 vs Dec 2021 of 11.634 mmb/d. It's +2.1 mmb/d since Covid bottom of 9.713 mmb/d in May 2020, but growth stalled so far in 2022. #OOTT

Excerpt News & Insights – SAF Group



Energy Tidbits

Oct 2, 2022

Produced by Dan Tsubouchi

US Oil Production in July is Only +166,000 b/d vs Dec 2021

Oil – EIA Form 914 July oil production is only +166,000 b/d vs Dec 2021 exit. US oil production is viewed as a key global oil supply growth, but to date, the growth in 2022 has been less than expected. There are two key takeaways from the EIA's look back at July actual of production – July is only +166,000 b/d vs the Dec 2021 exit and was -230,000 b/d below the weekly estimates. The EIA released its Form 914 data [LINK] on Friday which is the EIA's "actuals" for July US oil and natural gas production. (i) Form 914 estimates total US oil production is up 0.022 mmb/d MoM to 11.800 mmb/d in July. The actuals for July were >200,000 b/d lower than the EIA's weekly estimates that worked out to just over 12.030 mmb/d. (ii) One of the growing questions has been how much US oil will grow in 2022. July actuals of 11.800 mmb/d is only +166,000 b/d more than the year end Dec 2021 average of 11.634 mmb/d.

Figure 19: EIA Form 914 US Oil Production

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	11,569	11,516	11,701	11,660	11,829	11,788	11,800					
2021	11,124	9,925	11,326	11,305	11,356	11,347	11,277	10,918	11,569	11,790	11,634	
2020	12,852	12,842	12,797	11,914	9,713	10,442	11,006	10,577	10,921	10,457	11,194	11,168
2019	11,669	11,471	11,913	12,189	12,354	12,318	11,902	12,486	12,590	12,809	13,000	12,978
2018	10,001	10,203	10,467	10,500	10,435	10,441	10,387	11,262	11,443	11,209	11,896	11,945
2017	8,875	8,110	8,166	8,371	8,305	8,111	8,247	8,250	8,517	8,669	10,051	9,983
2016	9,202	9,084	9,101	8,824	8,835	8,476	8,462	8,690	8,544	8,804	8,901	8,816

Source: EIA

Figure 20: EIA Form 914 US Oil Production vs Weekly Estimate



Source: EIA

The 51-pg weekly SAF Oct 2, 2022 Energy Tidbits memo is posted on SAF Group website and is available for download on the news/insights section of SAF website <https://safgroup.ca/news-insights/>

SAF Dan Tsubouchi @Energy_Tidbits · Oct 19
 For those not near their laptop, @EIAgov just released #Oil #Gasoline #Distillates inventory as of Oct 14. Table below compares EIA data vs @business expectations posted as of 5am MT, and vs @APIenergy yesterday. Prior to release, WTI was \$84.11. #OOTT

[ir.eia.gov/wpsr/overview...](https://www.eia.gov/wpsr/overview...)

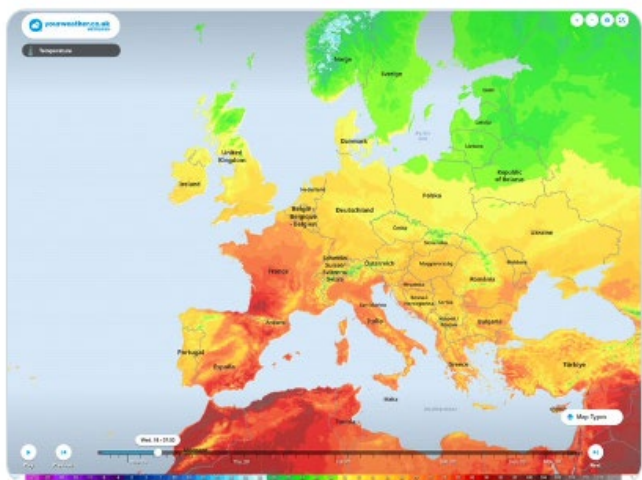
Inventory Oct 14: EIA, Bloomberg Survey Expectations,

s)	EIA	Expectations
	-1.73	2.50
	-0.11	-2.00
	0.12	-2.00
		-1.50

Commercial so builds in impact o 3.6 mmb draw from SPR for
 l in the oil data, Cushing had a build of 0.58 mmb for Oct 14
 Bloomberg
 AF Group <https://safgroup.ca/news-insights/>

🗨️ 1 ❤️ 4 ↗️

SAF Dan Tsubouchi @Energy_Tidbits · Oct 19
 No wonder #NatGas #LNG has softened this week, it's warm in Europe so no weather related #NatGas demand, it's leave the windows open weather. Times are ET so noon BST. Good Europe temp map courtesy of @MeteoredUK. #OOTT



🗨️ 1 ↻️ 5 ❤️ 15 ↗️

Dan Tsubouchi @Energy_Tidbits · Oct 19 ...
Like checking CEO messaging QoQ. \$BKR Q3 @simonelli_J still positive for #Oil #NatGas #LNG outlook ie. supportive a multi-year upturn in global upstream spending, but just not as bullish vs Q2 oil still supportive of strong activity, benefit from a strong LNG cycle. #OOT

Baker Hughes Company Announces Third Quarter 2022 Results

October 19, 2022 at 7:00 AM EDT

"We were generally pleased with our third quarter results, with strong performance in O&E while TFS successfully managed multiple challenges. We also saw strong midstream performance, with continued momentum in CFE as well as TFS 2022 has presented some unique challenges for Baker Hughes, and as we head towards 2023 we believe many of the key challenges ahead for both areas should be resolved by then as our teams for their continued commitment to deliver for our customers and execute on our strategy," said Lorenzo Simonelli, Baker Hughes Chairman and Chief Executive Officer.

"The energy outlook has grown increasingly uncertain as the global economy is highly sensitive to inflationary pressures, a strong interest rate environment, and possible disruptions in global commodity markets. Despite these economic challenges, we remain committed to our customers and our employees. On the energy front, recent policy measures in Europe and the U.S. are likely to help support a significant increase in global energy development.

"Given the systemic nature of the challenges, Baker Hughes is focusing on preparing for a range of scenarios and adjusting on what is within our control. Last month, we announced a restructuring plan to optimize our cost structure and improve operating performance, and our management team is working to improve our operational efficiency. We are also working to improve our balance sheet position. Baker Hughes is committed to the quality of our capital spending program. Importantly, we expect these changes to increase shareholder value as we continue to build in our portfolio for new energy and long-term growth opportunities," concluded Simonelli.

Baker Hughes Company Announces Second Quarter 2022 Results

July 28, 2022 at 7:00 AM EDT

"Our second quarter results were mixed as each product category navigated in different set of challenges ranging from equipment challenges to supply chain difficulties. The completion of our balance sheet program, O&E CFE and TFS are managing the current situation fairly well. CFE and O&E have both had more liquidity, would like to thank our teams for their continued efforts and commitment to deliver for our customers and execute on our strategy through these volatile times," said Lorenzo Simonelli, Baker Hughes Chairman and Chief Executive Officer.

"As we look to the second half of 2022 and into 2023, the markets face an unusual set of circumstances and challenges. Baker Hughes is committed to our customers and employees, and we will continue to invest in our energy transition and industrial activities, while also evaluating the value of our assets to shareholders," concluded Simonelli.

"Baker Hughes is preparing for all of these scenarios and will continue to evaluate our long-term strategy. If commodity prices remain resilient as we expect, our portfolio is well positioned to continue to invest in our energy transition and industrial activities, while also evaluating the value of our assets to shareholders," concluded Simonelli.

0 3 7

Dan Tsubouchi @Energy_Tidbits · Oct 18 ...
#Biden action: sell 15 mmb from SPR. "intends" to repurchase for SPR when oil at/below \$67-72/b to encourage drilling to increase production. and a message to #OPEC, says he is "prepared to authorize significant additional sales in coming months if conditions require". #OOT

FACT SHEET: President Biden to Announce New Actions to Strengthen U.S. Energy Security, Encourage Production, and Bring Down Costs

OCTOBER 14, 2022

The President will announce new actions to strengthen U.S. energy security, encourage production, and bring down costs. These actions will include:

- Announcing a plan to sell 15 million barrels of oil from the Strategic Petroleum Reserve (SPR) to help bring down oil prices and encourage production.
- Authorizing the release of up to 50 million gallons of oil from the SPR to help bring down oil prices and encourage production.
- Authorizing the release of up to 50 million gallons of oil from the SPR to help bring down oil prices and encourage production.
- Authorizing the release of up to 50 million gallons of oil from the SPR to help bring down oil prices and encourage production.

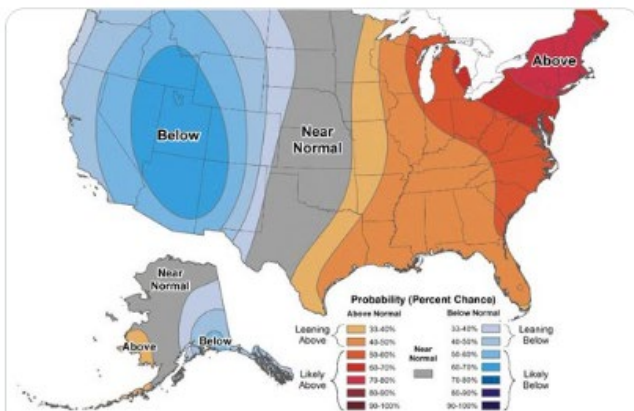
President Biden is directing the Administration to take additional action to strengthen energy security, address the supply crunch, and lower costs.

The Administration is also taking steps to encourage production and bring down costs. These steps include:

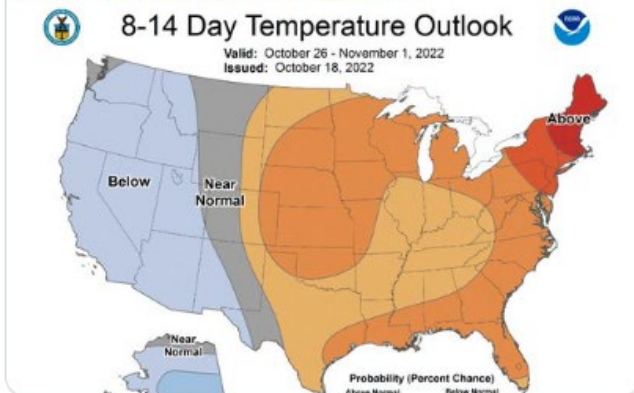
- Authorizing the release of up to 50 million gallons of oil from the SPR to help bring down oil prices and encourage production.
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- Authorizing the release of up to 50 million gallons of oil from the SPR to help bring down oil prices and encourage production.
- Authorizing the release of up to 50 million gallons of oil from the SPR to help bring down oil prices and encourage production.

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SAF Dan Tsubouchi @Energy_Tidbits · Oct 18
Continued near term pressure on HH #NatGas prices - it's warm east half of US and getting warmer. Warm end of Oct = perfect weather to leave the windows open during the day. Thx @NOAA. #OOTT



<https://www.cpc.ncep.noaa.gov/products/predictions/814day/>



🗨️ 3 ❤️ 5 📌

SAF

Dan Tsubouchi @Energy_Tidbits · Oct 18

#Oil supply surprises are almost always hits to Oil supply. @business delay to restoring full production at Kashagan back to ~400,000 b/d from current restricted ~200,000 b/d. Target was 10/20, but new base is 11/10, but could take into early Dec. Thx Nariman Gizitdinov. #OOTT

Kashagan Oil Field Repairs Could Take 6 Weeks, Success Uncertain
 2022-10-18 11:19:46.411 GMT
 By Nariman Gizitdinov
 (Bloomberg) -- The restoration of full oil production at the Kashagan field in Kazakhstan will take between two and six weeks, a delay from the initial plan to complete repairs by Oct. 20 as the operator continues to work on a solution to a gas leak, people familiar with the matter said.

The project, which is currently producing about 200,000 barrels a day, is expected to be able to double output after repairs are finished on a piece of equipment known as a slug catcher, the people said, asking not to be identified because the information is not public. The base case is for full output to resume around Nov. 30, but the works could last into early December, they said.

Partners in the venture plan to fix the gas leak by applying a polymer coating to the interior of cracked pipes within the slug catcher, and also affixing an external wrapping to most of the pipes, the people said. It's uncertain whether this method will be able to withstand full production pressures and there's a reasonable chance it won't be long-term solution, the people said.

Kazakhstan's energy ministry declined to comment. The North Caspian Operating Co., Kashagan's operator, didn't immediately respond to a request for comment.

Kazakhstan is Central Asia's largest energy producer and one of the main alternatives to Russian crude supplies to Europe since the invasion of Ukraine. Kashagan, where oil major companies invested more than \$50 billion, has previously experienced serious startup delays, including in 2013 when sulfurous gas corroded and cracked pipelines from the offshore field to onshore processing facility.

A slug catcher collects and buffers large volumes of oil and gas when flows aren't evenly distributed within the vast systems of the multibillion dollar complex near the Caspian Sea. It then releases them at a slower rate to prevent overloading of processing equipment.

The polymer-coating repair may end up being a temporary solution to help maintain full output at the field until 2024, when a new slug catcher could be built, the people said. The decision about whether to invest in the construction of a new piece of equipment will depend on the results of the repairs, the people said.

Kashagan's operator plans to hold public hearings on the repair works on Oct. 24, as required by law. Royal Dutch Shell Plc, Exxon Mobil Corp., state-run KazMunayGas National Co., Eni SpA and TotalEnergies SE are the main partners in the project.

To contact the reporter on this story: Nariman Gizitdinov in Almaty at ngizitdinov@bloomberg.net
 To contact the editors responsible for this story: Torrey Clark at tclark8@bloomberg.net James Herron

To view this story in Bloomberg click here: <https://blinks.bloomberg.com/news/stories/RIWG5DDWLU68>

1 2 9

SAF

Dan Tsubouchi @Energy_Tidbits · Oct 18

Just the facts, ma'am. See 🗿, No hints from Danish Police Intelligence on who might be responsible for the "powerful explosions" that hit #NordStream 1 & 2 in Denmark exclusive economic zone. #NatGas #LNG #OOTT

Copenhagen Police
 News
 October 18, 2022 09:08
 Part

PET and Copenhagen Police set up joint investigation group in the case of gas leaks in the Baltic Sea
 The Copenhagen Police, assisted by the Armed Forces and in cooperation with, among others, the Danish Police Intelligence Service (PET), have carried out a number of preliminary investigations of the crime scenes in the Baltic Sea.

The investigations have confirmed that there has been extensive damage to Nord Stream 1 and 2 in Denmark's exclusive economic zone, and that **investigations are ongoing.**

On the basis of the preliminary investigations, **PET and the Copenhagen Police** have decided to set up **a joint investigation group to investigate the gas leaks in the Baltic Sea.**

As before, the investigation group will work closely with relevant authorities both in Denmark and abroad, including the Armed Forces, which assists with the investigation of the crime scenes in the Baltic Sea.

It is still too early to say anything about the framework within which international cooperation will, among others, The Hague and The Hague is a good idea. Sweden and Germany will run, as it depends on several factors, including which authorities handle the case in the different countries.

It is not possible to say when the investigation can be expected to be completed.

We understand the great interest in the matter, but at this stage no further information will be provided from the investigation of the gas leaks.

Press contact
 Email: nic-jpress@politi.dk
 Phone: 33211935

3

Dan Tsubouchi @Energy_Tidbits · Oct 18

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#LNG supply surprises are almost always hits to LNG supply. @WTBClowes reported Nigeria LNG (NLNG) declared #ForceMajeure on shipments from its Bonny Island LNG facility after supplies were cut off by flooding. NLNG capacity is 2.89 bcf/d but been producing below capacity. #OOTT

UZZ-10-17 10:55:59.630 GMT

By William Clowes

(Bloomberg) -- Nigeria LNG Ltd. declared force majeure on shipments from its Bonny Island liquefied natural gas facility after supplies were cut off by flooding.

The notice by the gas suppliers was a result of high flood water levels in their operational areas, leading to a shut-in of gas production which has caused significant disruption of gas supply to NLNG," company spokesman Andy Odeh said by email Monday.

The announcement comes as NLNG, which can produce 2.89 million tons of LNG a year, was already operating at reduced capacity due to difficulties securing adequate feedstock. The company is a joint venture between the state-owned Nigerian National Petroleum Co., Shell Plc, TotalEnergies SE and Eni SpA. The shareholders are also the plant's main providers of gas. NLNG is "reviewing the situation with gas suppliers to ascertain the extent of the disruption to its operations," according to the statement. The company will try to "mitigate the impact of the force majeure to the extent reasonably possible," it said.

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William Clowes in Abuja at wclowes@bloomberg.net

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Anthony Osaebrown at aosaebrown2@bloomberg.net

Andrew Reiersson

To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/R1W042T1UM0W>



Dan Tsubouchi @Energy_Tidbits · Oct 17

...

Saudi used 664,000 b/d #Oil in Aug to generate electricity. Aug is normally seasonal peak Saudi use of Oil for electricity and normal peak to winter trough cut in consumption is ~400,000 b/d. This is almost equal to Saudi cut in quota in Nov/Dec. #OOTT

Saudi Arabia JOGI Data

Updated Oct 17, 2022 for August data

	Refinery					MeM Changes					
	Inventories (mbbl)	Production (mbbl/d)	Direct Use (mbbl/d)	Intake (mbbl/d)	Exports (mbbl/d)	Inventories (mbbl)	Inventories (mbbl/d)	Production (mbbl/d)	Direct Use (mbbl/d)	Refinery Intake (mbbl/d)	Exports (mbbl/d)
Oct-20	144,659	8,914	591	2,402	6,159	619	22	8	-224	-48	95
Nov-20	143,432	8,972	320	2,539	6,364	-1,227	-41	-2	-71	-63	196
Dec-20	140,010	8,990	267	2,328	6,495	-3,410	-110	8	-53	-11	141
Jan-21	137,207	8,103	269	2,343	6,682	-2,809	-81	123	2	15	87
Feb-21	134,575	8,147	335	2,281	5,829	-2,632	-84	-866	66	-62	-657
Mar-21	133,338	8,138	319	2,431	5,827	-1,237	-40	9	-16	150	-196
Apr-21	134,085	8,134	407	2,295	5,408	747	26	-4	83	-135	-18
May-21	135,775	8,544	451	2,389	5,649	1,690	55	410	44	94	241
Jun-21	135,139	8,907	596	2,398	5,985	436	-21	383	135	9	316
Jul-21	135,105	9,474	691	2,457	6,327	-34	-1	547	105	59	362
Aug-21	133,164	9,562	654	2,521	6,450	-1,941	-83	88	-37	94	123
Sep-21	136,542	9,692	643	2,480	6,510	3,378	113	100	-111	-31	66
Oct-21	136,806	9,790	328	2,611	6,833	264	9	118	-215	121	317
Nov-21	132,378	9,912	339	2,772	6,949	-4,428	-148	132	11	161	116
Dec-21	134,662	10,022	318	2,694	6,937	2,284	74	110	-21	-78	-12
Jan-22	133,742	10,145	402	2,777	6,969	-920	-30	123	84	83	29
Feb-22	137,149	10,225	291	2,506	7,307	3,467	110	80	-115	-271	341
Mar-22	135,847	10,380	335	2,773	7,295	-1,362	-42	76	44	267	-72
Apr-22	136,579	10,441	287	2,638	7,382	3,732	124	141	62	-235	147
May-22	144,421	10,538	682	2,748	7,050	4,842	166	97	185	211	-332
June-22	141,847	10,646	687	2,849	7,196	-2,574	-83	108	105	100	146
Jul-22	142,058	10,815	661	2,763	7,384	211	7	109	-20	-86	188
Aug-22	141,603	11,061	664	2,801	7,601	-455	-15	296	3	38	217

Source: JOGI, Bloomberg



SAF REPORT

Dan Tsubouchi @Energy_Tidbits · Oct 17

...

ICYMI. Latest Saudi response to US, 🇺🇸 Defense minister @kbsalsaud notes UKR thanks for supporting their territorial integrity. Also asks if #OPEC+ decision means KSA is standing with Iran as well? #Biden is all-in so can't back off Saudi verbal attack line before midterm. #OOTT

 **Khalid bin Salman** خالد بن سلمان 
@kbsalsaud

وزير الدفاع - Minister of Defense

mod.gov.sa/Pages/default... Joined March 2018

45 Following 1.1M Followers



Tweets Tweets & replies Media Likes

 **Khalid bin Salman** خالد بن سلمان  @kbsalsaud · 17h

Although the OPEC+ decision, which was taken unanimously, was due to purely economic reasons, some accused the Kingdom of standing with Russia. Iran is also a member of OPEC, does this mean that the Kingdom is standing with Iran as well?

529 2,057 3,647

 **Khalid bin Salman** خالد بن سلمان  @kbsalsaud · 17h

على الرغم من أن قرار أوبك، الذي اتخذ بالإجماع، كان لدوافع اقتصادية بحتة، إلا أن البعض اتهم المملكة بتدعيمها بحائب روسيا!! إيران كذلك عضو في أوبك، فهل يعني هذا أن المملكة وقعت بحائب إيران أيضاً؟

1,178 6,585 11.2K

 **Khalid bin Salman** خالد بن سلمان  @kbsalsaud · 17h


We are astonished by the accusations that the kingdom is standing with Russia in its war with Ukraine. It is telling that these false accusations did not come from the Ukrainian government.

 **Володимир Зеленський**  @ZelenskyyUa · Oct 14

SAF – Dan Tsubouchi @Energy_Tidbits · Oct 16



Positive for #Oil, unless another month of US verbal attacks makes #MBS give in. @JakeSullivan46 says Biden wants to consult with Congress post midterm to work thru options so Saudi will be election talking point. Thx @DanaBashCNN. #OOTT

1   

Dan Tsubouchi @Energy_Tidbits · Oct 17
 #LNGCanada 1.8 bcf Phase 2 FID.

Liberals seem onside see 🇺🇸 @cafreeland.

BC. @brentcjang reports @BruceRalston "LNG Canada has expressed the wish to explore the possibility of proceeding with Phase 2, and we're engaged in discussions with them.

#OOTT

theglobeandmail.com/business/artic...

🗨️ Dan Tsubouchi @Energy_Tidbits · Oct 14

Positive 🇺🇸 #NatGas. Liberals must want to be seen as being onside when #LNGCanada FIDs 1.8 bcf Phase 2? @cafreeland "We will always be looking at economically viable LNG projects." LNG \$ outlook way higher since 🇺🇸 02/21 tweet #Shell IRR 14-18% for its pre-FID projects. #OOTT twitter.com/Energy_Tidbits...

https://www.reuters.com/markets/commodities/canada-would-back-economically-viable-new-lng-terminals-energy-transition-2022-10-14?si=534536447a31015829a8548ac9a9c9e48e8a11&utm_campaign=twotweet&utm_medium=social&utm_source=twitter
 October 14, 2022 12:39 PM MDT Last Updated 5 hours ago

Canada would back 'economically viable' new LNG terminals -finmin
 By Steve Scherer



Canada's Finance Minister Chrystia Freeland looks on during a news conference before delivering the 2022-23 budget, in Ottawa, Ontario, Canada April 7, 2022. REUTERS/Blaiz Gabe/Photo
 OTTAWA, Oct 14 (Reuters) - Canada will look at supporting more liquefied natural gas (LNG) terminals as long as they are economically feasible because they are needed to keep the world from burning coal again amid the current energy crunch, Finance Minister Chrystia Freeland said on Friday.

LNG "is an important transition fuel," Freeland told reporters in Washington at the end of annual IMF and World Bank meetings. "We will always be looking at economically viable LNG projects."

German Chancellor Olaf Scholz visited in August, looking for Canada - the world's fifth largest producer of natural gas - to play a "major role" in filling the shortfall brought on by Russia's invasion of Ukraine, but went home with no promises.

When Scholz was in Canada, Prime Minister Justin Trudeau said "there has never been a strong business case" for LNG on the country's east coast.

On Friday, Freeland appeared to leave the door open to the possibility, as has Natural Resources Minister Jonathan Wilkinson, saying that she had heard finance ministers in Washington this week say they were having to burn more coal because of the soaring cost of LNG.

"I want to burn less coal," one minister said quite movingly," Freeland said, but cannot because "LNG is too expensive right now."

Two east coast projects being discussed are Repsol's (REP.MC) intake facility in New Brunswick, which could be retrofitted for exports, and Plaquemine Energy's (PEA.TO) proposed Goudreau LNG facility in Nova Scotia. Separately, Freeland indicated that Canada would need to spend far more to compete to become the "best and fastest" at creating green-transition industries after the U.S. passage of the Inflation Reduction Act.

When asked if Canada was increasing its incentives to scale up green technologies in order to match the United States, she responded: "It is something we are very, very focused on."

"We need to act even more energetically and aggressively than we have hitherto," she said. "We need to find ways to attract even more private capital."

Reporting by Steve Scherer, with additional reporting by Julie Gordon Editing by Chris Reese and Marguissa Choy



SAF **Dan Tsubouchi** @Energy_Tidbits · Oct 17 ...
If anyone thinks India will agree to US/EU price cap on RUS #Oil, see 📌
10/08 thread on @HardeepSPuri clear NO post his @SecGranholm meeting
would seem to clearer position vs reports today "India may not join US-led
push to cap prices of Russia oil" #OOTT
[livemint.com/industry/energ...](https://www.livemint.com/industry/energ...)

👉 **Dan Tsubouchi** @Energy_Tidbits · Oct 8
1/3. Great @ANI reporting on clear India energy position from
@HardeepSPuri post @SecGranholm meeting. "Have I been told by
anyone to stop buying Russian oil? The answer is a categorical No".
#OOTT #NatGas #LNG
[Show this thread](#)

🗨️ ↻️ ❤️ 2 📤

SAF **Dan Tsubouchi** @Energy_Tidbits · Oct 17 ...
Haftar fan or not, his call for protests has to bring risk for interruptions to
Libya #Oil production that has been solid for the past couple months.
Coming up on anniversary of last moment cancelled 12/24/21 election.
#OOTT

🎯 **The Libya Observer** @Lyobserver · Oct 17
#Libya's renegade general Khalifa Haftar told his supporters in Sabha
city that the political solution to the crisis has failed. He called "Libyan
people" to stage protests across the country, promising that his so-
called army will protect them.



🗨️ 2 ↻️ 4 ❤️ 8 📤

SAF

Dan Tsubouchi @Energy_Tidbits · Oct 16

...

Positive for #Oil, unless another month of US verbal attacks makes #MBS give in. @JakeSullivan46 says Biden wants to consult with Congress post midterm to work thru options so Saudi will be election talking point. Thx @DanaBashCNN. #OOTT

Excerpt <https://transcripts.cnn.com/show/sota/date/2022-10-16/segment/01>

State of the Union

Interview With U.S. National Security Adviser Jake Sullivan; Interview With Council of Economic Advisers Chair Cecilia Rouse; Interview With Arizona Governor Candidate Karl Lake; Interview With Colorado Senatorial Candidate Joe O'Dea; Interview With Arizona Secretary of State Katie Hobbs; Interview With Sen. Michael Bennet (D-CO). Aired 9-10a ET

Aired October 16, 2022 - 09:00 ET

BASH: I want to turn now to foreign policy and some serious global tests for the commander in chief.

Joining me now is the White House national security adviser, Jake Sullivan.

Thank you so much for coming on.

I want to start with Saudi Arabia.

President Biden said this week it is time to rethink the U.S. relationship with Saudi Arabia after they sided with Russia to reduce oil production.

One thing some of your fellow Democrats on Capitol Hill are pushing is halting future arms sales to Saudi Arabia. Can you give a reason why the U.S. would want to continue selling arms to Saudi Arabia right now?

JAKE SULLIVAN, U.S. NATIONAL SECURITY ADVISER: Well, first, Dana, thanks for having me on.

You're right. The president did say that he is going to ~~reevaluate~~ our relationship with Saudi Arabia, because they did side with Russia, against the interests of the American people. This is a relationship that got built over decades on a bipartisan basis.

And so the president isn't going to act precipitously. He's going to act methodically, strategically. And he's going to take his time to consult with members of both parties, and also to have an opportunity for Congress to ~~listen so that he can in work items in person and work through the options~~. Those options include...

BASH: Is halting arms sales on the table?

SULLIVAN: As I was just saying, those options include changes to our approach to security assistance to Saudi Arabia. But I'm not going to get ahead of the president.

What I will say is, there's nothing immaterially moving now. So there is time for him to have those consultations to make decisions that are in the best interests of the American people. That's what he's going to do.

BASH: President Biden, as you know, faced criticism for his meeting with the Saudi crown prince, Mohammed bin Salman. That was in July.

Will President Biden meet with the crown prince again at the G20 summit next month?

[09:10:02]

SULLIVAN: He has no plans to meet with the crown prince at the G20 summit.



↻ 3

♡ 11

