Energy Tidbits

Is Chevron Moving to Plateau Permian Production in 2025 an Indicator Lower 48 Shale/Tight Oil Will Finally Peak in 2025?

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https://www.aer.ca/data-and-performance-reports/statistical-reports/alberta-energy-outlook-st98/natural-gas/natural-gas-production

Natural Gas Production

Updated June 2024

Summary

The average daily production of marketable natural gas in Alberta increased in 2023 to 315.0 million cubic metres per day (10^6 m^3/d) or 11.2 billion cubic feet per day (Bcf/d), the highest production level since 2010, a 1.9% increase from the previous year. The higher production was driven by increases in gas production concentrated in the Petroleum Services Association of Canada (PSAC) Foothills Front (area 2) and Northwestern Alberta (area 7).

By 2033, marketable natural gas production is expected to reach 326.7 10^6 m^3/d (11.6 Bcf/d). Production increases are expected across the Foothills Front and Northwestern Alberta. It is anticipated that these production gains to be partially offset by declines from other PSAC areas.

Figure S5.1 shows Alberta's average daily marketable gas production by source and PSAC area.

Figure S5.1 Alberta marketable gas average daily production

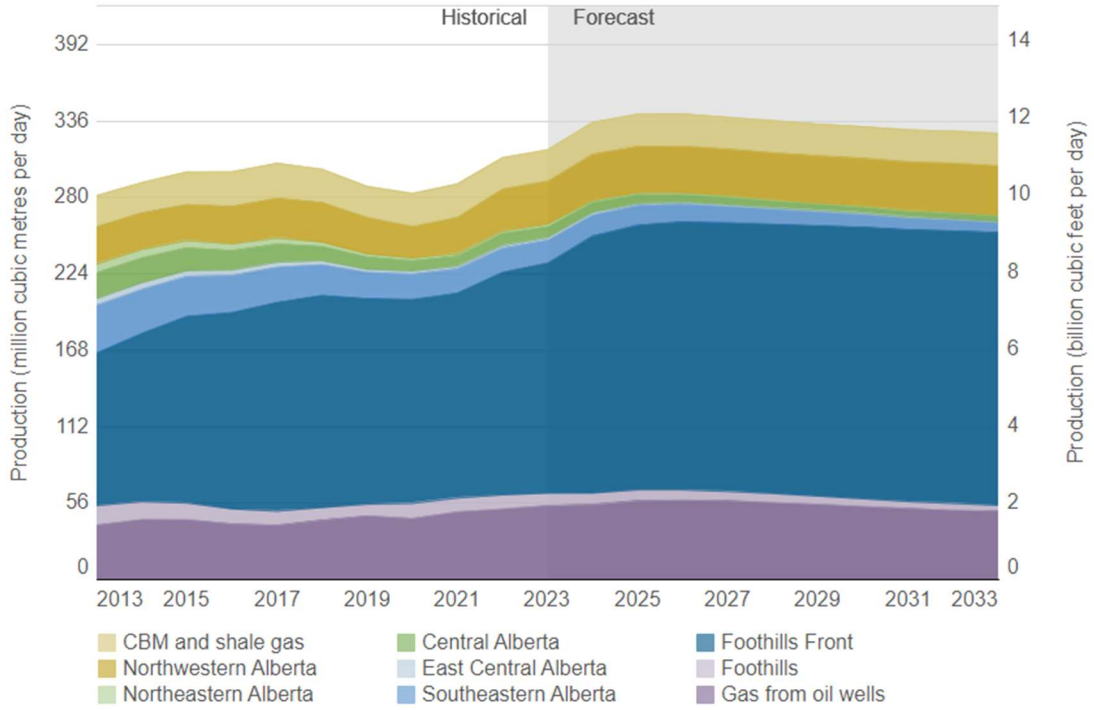


Table S5.1 shows Alberta's average daily marketable natural gas production and the number of new wells placed on production by year.

Table S5.1 Alberta natural gas production and new wells placed on production highlights

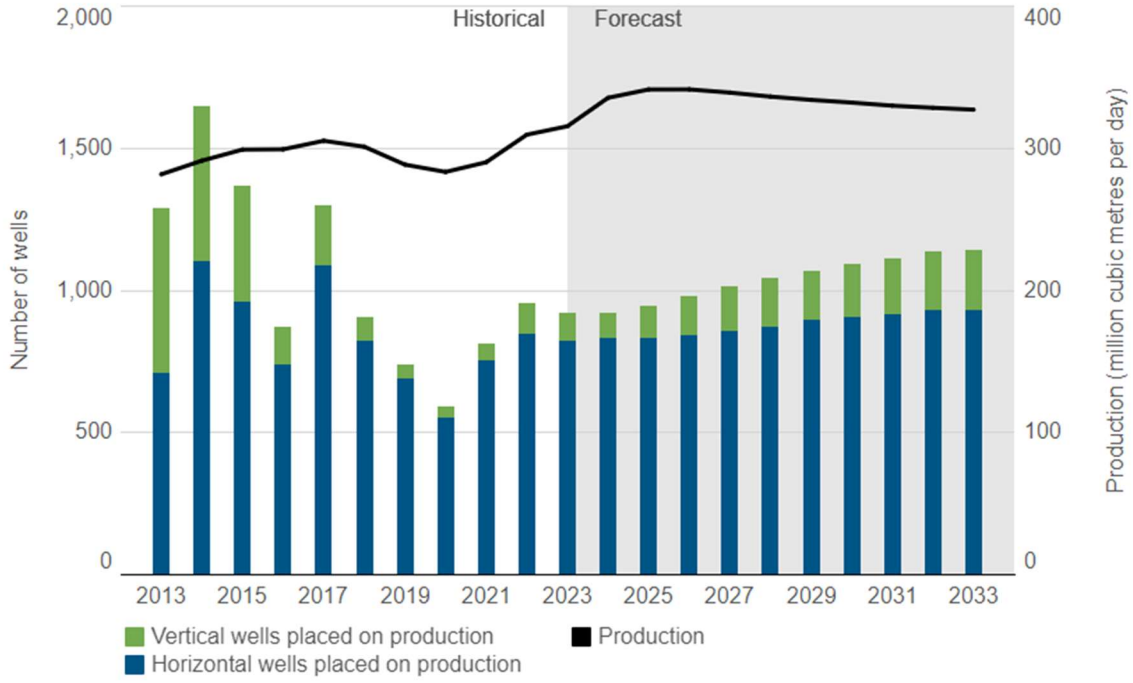
	2022	2023	2024	2025	2033
Marketable production (10^6 m^3/d)					
Gas[a]	286.1	292.1	311.3	317.3	303.4
Coalbed methane	12.1	11.9	11.3	10.8	7.2
Shale	10.9	11.0	12.4	12.8	16.1
Total	309.1	315.0	335.0	340.9	326.7
Number of new wells placed on production					
Vertical	105	102	90	115	210
Horizontal					
Multistage fractured	794	778	790	790	890
Non-multistage fractured	53	41	40	40	40
Subtotal	847	819	830	830	930
Total	952	921	920	945	1140

[a] This includes conventional, tight, and gas from oil wells.
Any discrepancies are due to rounding.

Marketable Gas Production in 2023

Figure S5.2 shows Alberta's average daily production of marketable gas and the number of new producing wells.

Figure S5.2 Alberta marketable gas average daily production and number of new producing wells



Total conventional (including tight) gas production—defined here as gas production excluding coalbed methane (CBM) and shale gas—increased by 2.1% in 2023. Shale gas production increased by 0.3%, and CBM production decreased by 1.4% in 2023.

Forecast for 2024 to 2033

Three trends in natural gas production are expected to continue over the forecast:

- Gas producers will focus on the most productive plays within the province, reducing the need for as many new wells to maintain production levels compared with past practices.
- Liquids-rich plays attract the most attention given their higher profitability, resulting in higher natural gas liquids in the raw gas stream.
- Producers will continue to seek ways to optimize infrastructure use and lower their costs.

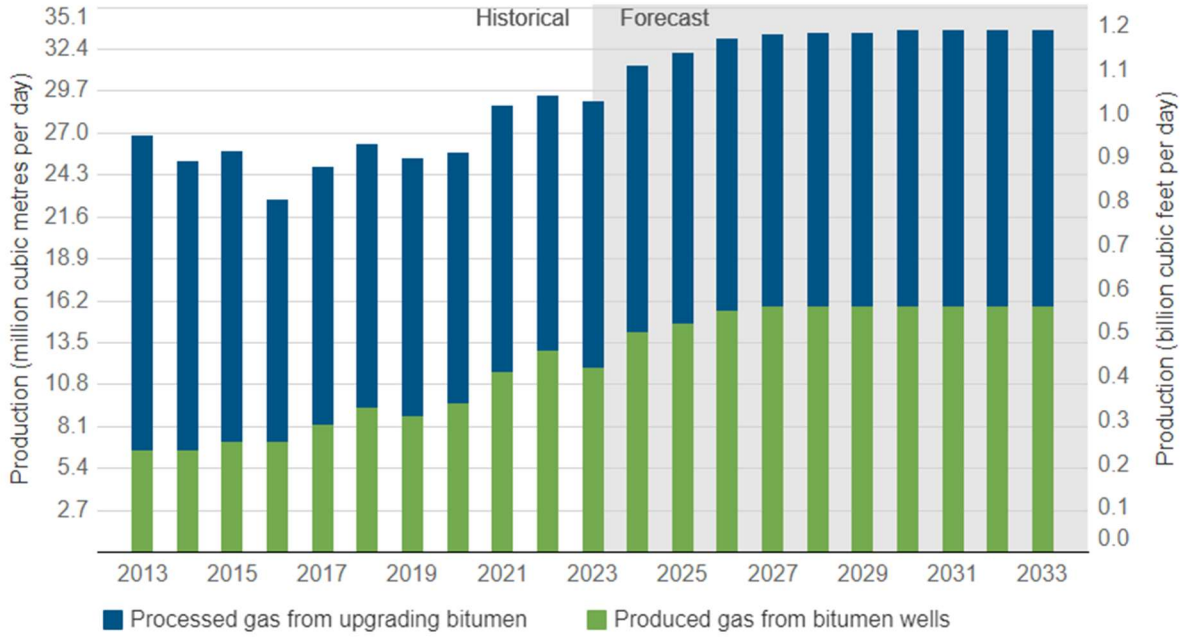
Given these trends, most new natural gas wells in Alberta are expected to come online in the Foothills Front and Northwestern Alberta PSAC areas. With growth in new wells placed on production, marketable gas production in Alberta is forecast to grow 3.7% by 2033. This production gain, however, is expected to be mildly offset by declines from other PSAC areas.

Oil Sands Gas Production and Use

Oil sands operations produce processed gas and produced gas. Processed gas is a by-product of bitumen upgrading, and its composition varies by process (e.g., coking versus. hydrocracking). Produced gas is raw natural gas from bitumen wells, and its composition varies depending on the source formation. Production trends for these gas sources are driven by bitumen production and upgrading.

Figure S5.3 shows the average daily gas production from bitumen upgrading and wells.

Figure S5.3 Average daily gas production from bitumen upgrading and bitumen wells

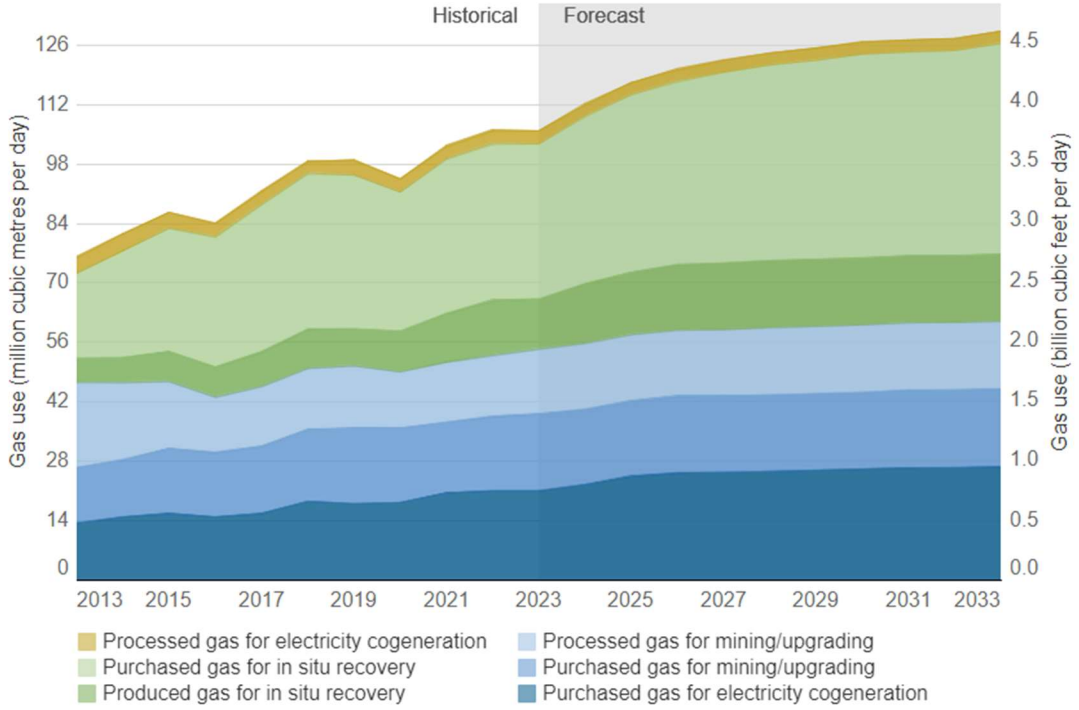


Oil sands operators use processed gas and produced gas for fuel and feedstock to generate electricity, steam, hot water for on-site operations, and hydrogen for upgrading units. Processed gas is also sent to processing facilities to extract high-value liquids.

Operators also purchase large quantities of natural gas from external sources—termed "purchased gas"—for use in their operations. Oil sands operations account for over a quarter of the total natural gas consumption in Alberta (excluding gas used for cogeneration).

Figure S5.4 shows Alberta's total purchased, processed, and produced gas for oil sands operations.

Figure S5.4 Alberta total purchased, processed, and produced gas for oil sands production



Oil Sands Gas Use

In 2023

The oil sands sector used 105.8 10^6 m^3/d (3.8 Bcf/d) of gas in 2023. In mining and upgrading in 2023, purchased gas use increased by 4% and processed gas by 6%.

Forecast for 2024 to 2033

Oil sands gas use is expected to reach 129.2 10^6 m^3/d (4.6 Bcf/d) by 2033, a 22% increase from 2023. Although total gas use increases in line with bitumen production, the bulk of the incremental gas use is gas purchased for in situ bitumen recovery. In situ operations use a high volume of natural gas for steam generation and account for most of the bitumen production growth in the forecast, which triggers increased natural gas use for the sector.

Purchased Gas

Table S5.2 shows the average use rates of purchased gas for oil sands operations in 2023.

Table S5.2 Average use rates of purchased gas for oil sands operations, 2023

Extraction method	Excluding purchased gas for cogeneration		Including purchased gas for cogeneration	
	(m^3/m^3)[a]	(Mcf/bbl)	(m^3/m^3)	(Mcf/bbl)
In situ				
Steam-assisted gravity drainage	189	1.1	226	1.3
Cyclic steam stimulation	228	1.3	298	1.7
Mining with upgrading	99	0.6	142	0.8

Note: Thousand cubic feet (Mcf) and barrels (bbl).

[a] Expressed as either cubic metres of natural gas per cubic metre of bitumen produced or thousand cubic feet of natural gas per barrel of bitumen produced. Rates are an average of typical schemes with sustained production.

https://www.adnoc.ae/en/news-and-media/press-releases/2024/adnoc-signs-15

ADNOC Signs 15-Year, 1 mtpa Sales and Purchase Agreement with PETRONAS for Ruwais LNG Project

Sales and Purchase Agreement converts previous Heads of Agreement between ADNOC and Malaysia's PETRONAS into a binding agreement

Over 8 mtpa of Ruwais LNG project's production capacity is committed to international customers through long-term agreements

Abu Dhabi, UAE – December 5, 2024: ADNOC announced today it has signed a second Sales and Purchase Agreement (SPA) for the lower-carbon Ruwais liquified natural gas (LNG) project, with Malaysia's PETRONAS. The 15-year SPA for supplying 1 million tonnes per annum (mtpa) of LNG converts a previous Heads of Agreement between ADNOC and PETRONAS into a definitive agreement.

The LNG will primarily be sourced from the Ruwais LNG project, which is currently under development in Al Ruwais Industrial City, Abu Dhabi. Deliveries are expected to start in 2028 upon commencement of its commercial operations. To date, over 8 mtpa of the project's production capacity has been committed to international customers through long-term agreements.

Fatema Al Nuaimi, Executive Vice President, Downstream Business Management at ADNOC, said: "Natural gas plays a critical role in meeting the world's energy needs, and we are proud to partner with PETRONAS to deliver lower-carbon LNG through this landmark agreement. This milestone further underscores ADNOC's role as a reliable global energy supplier and supports growing demand in Asia for cleaner, more sustainable energy solutions."

ADNOC Gas announced in November 2024 that it expects to acquire ADNOC's 60% stake in the Ruwais LNG project at cost, estimated at around $5 billion, in the second half of 2028. Upon completion, the project, comprising two 4.8 mtpa liquefaction trains with a combined capacity of 9.6 mtpa, will more than double ADNOC Gas' existing operated LNG production capacity to around 15 mtpa.

Shamsairi Ibrahim, Vice President of LNG Marketing & Trading at PETRONAS, said: "This partnership with ADNOC marks a significant milestone in strengthening PETRONAS' business with the UAE, complementing our upstream activities while reinforcing the strategic economic relationship between the UAE and Malaysia. This collaboration bolsters our LNG portfolio with a reliable supply of lower-carbon energy to meet Malaysia's domestic demand, enhances security of supply for our customers, and fosters deeper government-to-government collaboration whilst enabling sustainable development and providing solutions for the energy transition that will enrich lives for a sustainable future."

The Ruwais LNG plant will be the first LNG export facility in the Middle East and Africa region to run on clean power, making it one of the lowest-carbon intensity LNG plants in the world. The facility will leverage artificial intelligence and the latest technologies to enhance safety, minimize emissions and drive efficiency.

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SEMBCORP SIGNS LNG SALE AND PURCHASE AGREEMENT WITH CHEVRON

Singapore, December 5, 2024 – Sembcorp Industries (Sembcorp) today announces that its wholly-owned subsidiary, Sembcorp Fuels (Singapore) Pte Ltd, has signed a Sale and Purchase Agreement (SPA) with Chevron U.S.A. Inc. (Singapore Branch) (Chevron) to import up to 0.6 million tonnes of liquefied natural gas (LNG) per annum. The LNG delivery is expected to commence from 2028 for a tenure of 10 years.

The SPA will further strengthen Sembcorp's existing natural gas supply portfolio from diversified piped and liquefied sources globally. As a key natural gas importer for Singapore, Sembcorp is committed to supporting the country with a stable and resilient supply of energy.

The signing of the SPA is in the ordinary course of business and is not expected to have a material impact on the earnings per share and net tangible assets per share of Sembcorp for the financial year ending December 31, 2024.

- End -

https://www.qatarenergy.qa/en/MediaCenter/Pages/newsdetails.aspx?ItemId=3841

QatarEnergy and Shell enter into new long-term agreement for supply of 3 MTPA of LNG to China -

DOHA, Qatar • 2 December 2024 – QatarEnergy and Shell have entered into a new long-term sale and purchase agreement (SPA) for the supply of three million tons per annum (MTPA) of liquefied natural gas (LNG) to China.

LNG deliveries under the SPA will commence in January 2025, underscoring the commitment of both entities to meeting the world's growing energy demands. The agreement also highlights the continued growth of China's LNG market, which is projected to be the largest globally.

Commenting on the announcement, His Excellency Mr. Saad Sherida Al-Kaabi, the Minister of State for Energy Affairs, the President and CEO of QatarEnergy, said: "We are pleased to enter into this new long-term LNG SPA with our trusted partner, Shell. This agreement helps meet the requirements of Shell's end customers in China and enhances our contributions to meeting the needs of LNG end-users worldwide."

Highlighting the strength of the QatarEnergy-Shell collaboration, H.E. Minister Al-Kaabi noted: "This SPA marks the 11th LNG supply contract between us, serving as a testament to our enduring partnership. It underlines our consistent ability to meet the diverse requirements of our customers and partners globally. I extend my appreciation to Shell's management and working teams for the successful conclusion of this SPA."

https://wmo.int/media/update/global-seasonal-climate-update-december-january-february-2024-25

Global Seasonal Climate Update for December-January-February 2024-25

25 November 2024

During August-October 2024, the observed SST anomalies in global oceans, in general, were above average. The Pacific Niño sea-surface temperature (SST) index anomaly in the eastern Pacific (Niño 1+2) was negative. Of the other three Niño indices anomaly for the westernmost index (Niño 4) was above zero while other two indices in the equatorial central and eastern Pacific were near-zero. Overall, the SST state in the equatorial central and eastern Pacific was ENSO-neutral. The observed Indian Ocean Dipole (IOD) anomaly was near-zero. Both the North Tropical Atlantic (NTA) and South Tropical Atlantic (STA) SST index anomalies were above-zero and reflected widespread warmth in the tropical Atlantic.

Sea-surface temperature anomalies in the Niño 3.4 and Niño 3 regions are predicted to decline during December- February 2024-25 and are predicted to reflect weak La Niña conditions. Farther west in the Niño 4 region, the seasurface temperature anomaly is also predicted to decline and become negative. The strength of the IOD index is predicted to be near-average. In the equatorial Atlantic, SSTs are predicted to be above-normal in both the northern (NTA) and the southern (STA) regions during the season with a prediction for larger positive anomalies for NTA.

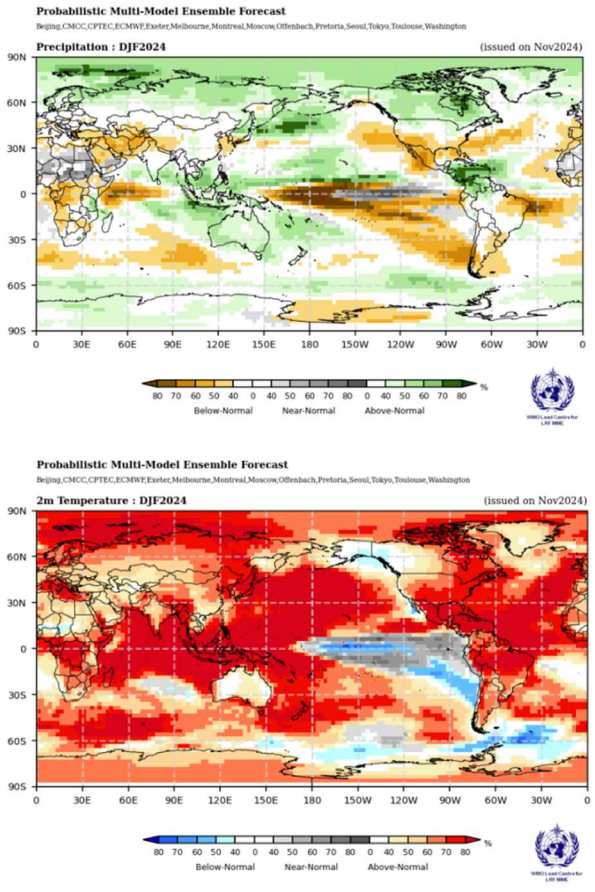


Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season December-February 2024-25. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-

normal, and near-normal is depicted in blue, red, and grey shadings respectively for temperature, and orange, green and grey shadings respectively for precipitation. White areas indicate equal chances for all categories in both cases. The baseline period is 1993–2009.

Consistent with the anticipated continuation of widespread above-normal sea-surface temperatures in all oceans except for the near-equatorial eastern Pacific Ocean, there is prediction of above-normal temperatures over almost all land areas. A few exceptions to this widespread warmth include land areas in the vicinity of the Bering Sea and the Gulf of Alaska, and Baja California. Extensive areas of large increases in probabilities for above-normal temperatures include South America (and particularly north of 15^{o} S), the Caribbean, Central America, southern,
eastern, and extreme northeast parts of North America, northern Europe. between 15^{o} S – 10^{o} N over Africa, western coastal and northeast regions of the Indian subcontinent, northern parts of eastern Asia, the Maritime continent, and New Zealand. Regions with moderate to weaker increase in probabilities for above-normal temperatures include northwestern North America, Greenland, southern Europe and northern Africa, Central Asia, southeast Asia, and Australia. In coastal areas of southern South America and extending north along the west coast to just north of the equator and into the eastern Pacific, consistent with the predicted emergence of weak La Niña, below- or nearnormal temperatures are expected.

Predictions for rainfall for December-February 2024-25 are consistent with the enhanced positive east to west sea surface temperature gradient typically observed during La Niña. Enhanced probabilities for near- or below-normal rainfall are predicted over a narrow band along or just north and south of the equator extending eastward from 150^{o} E to the western coast of South America. Below the equator, there is a band of enhanced probabilities for belownormal rainfall starting from 150^{o} W and extending south-eastwards to reach the western coast of South America and crossing into the southern Atlantic. Enhanced probabilities for below-normal rainfall are also predicted over the northeast South America extending into the Atlantic, North America below 45^{o} N, the Arabian Peninsula extending eastward into Central Asia, and over the Greater Horn of Africa extending into the Indian Ocean to 90^{o} E. Enhanced probabilities for above-normal rainfall are anticipated over the region centred over the Maritime Continent extending to cover the entire Australia and extending further eastward into the western Pacific to 150^{o} W, southern regions of Central America and the Caribbean, Arctic circle north of 60o N, and regions below 60^{o}S in the Southern Hemisphere. Other regions of enhanced probabilities for above-normal rainfall include a band off the coast of eastern Asia extending north-eastward to the Bering Sea and the Gulf of Alaska.

Source: Gazprom

https://tass.com/economy/1880739
2 Dec, 07:51

Gazprom brings gas supplies to China via Power of Siberia to target level beforehand

"An increase in supplies was ensured one month earlier than the initial deadline stipulated by the bilateral long-term gas purchase and sale agreement on the eastern route between Gazprom and the Chinese company CNPC," the statement reads

MOSCOW, December 2. /TASS/. Gazprom has brought daily supplies of gas to China via the Power of Siberia gas pipeline to the maximum contract level starting December 1 beforehand, the Russian gas holding said in a statement. The gas pipeline's design capacity is 38 bln cubic meters per year.

"In accordance with the Chinese side's request and the agreement signed, Gazprom ensured an increase in export of Russian natural gas to China via the Power of Siberia gas pipeline beforehand. Starting December 1, daily supplies have been brought to the maximum contract level. An increase in supplies was ensured one month earlier than the initial deadline stipulated by the bilateral long-term gas purchase and sale agreement on the eastern route between Gazprom and the Chinese company CNPC," the statement reads.

Gazprom and China's CNPC agreed earlier on bringing supplies of Russian gas to China via Power of Siberia to the maximum level starting December 2024 instead of the beginning of 2025. Previously the Russian gas producer planned to bring this gas pipeline to its design capacity of 38 bln cubic meters starting from January 1, 2025.

Supplies via the Power of Siberia totaled 4.1 bln cubic meters in 2020, 10.39 bln cubic meters in 2021, 15.4 bln cubic meters in 2022, and 22.73 bln cubic meters in 2023, while in 2024 they will exceed Gazprom's contract liabilities for this year.

LNG Price Pressures 2020/2021 With Gazprom Adding ~8.9 bcf/d Export Gas Pipeline Capacity Into Europe And China

Posted: Sat March 30, 2019. 11:15am Mountain

The major LNG market factor for 2020 and 2021 is not an LNG event, but an LNG related event – Russia's plans to add ~8.9 bcf/d of export gas pipeline capacity starting in Dec 2019. The LNG market this week was focused on the crashing shoulder season Asian LNG prices following the warmer than normal winter in Asian natural gas markets. And wider seasonal LNG price swings are going to be the norm until there is more gas storage around the world. But there was a much more significant LNG related headline on Thursday that is a huge relief to 2020 LNG prices – the Danish Energy Agency is forcing the ~5.3 bcf/d Nord Stream 2 export pipeline to Europe to evaluate a 3rd potential route thru their seas and their review process will, as normal, including public hearings. Nord Stream 2 will export Russia gas to Germany for connections therefrom, was supposed to be in service at yr-end 2019 and this new 3rd route could delay the in service for potentially 1 year. This is a big relief to 2020 LNG prices as it pushes back ~5.3 bcf/d of new (cheaper than LNG) natural gas into Europe into 2021. Its already tough enough for 2020/2021 LNG prices with Gazprom's Power of Siberia 3.6 bcf/d export gas pipeline to China on target to be in service on Dec 1/2019. The recent Shell LNG Outlook 2019 estimated that global net LNG imports increased by 3.6 bcf/d in 2018. We believe that would have been higher other than high LNG prices saw some switching to coal in Asia and LNG import infrastructure is still being built out. The Nord Stream 2 delay may be a relief to 2020 LNG prices, but the addition of ~8.9 bcf/d natural gas into Europe and China will keep price pressures on spot LNG prices over the next couple years. Plus, this added pipeline connected gas will add to the base natural gas supply, including during shoulder seasons, which should add increased risk to seasonal price swings.

Prior to Thurs, Nord Stream 2 Russia to Germany 5.3 bcf/d pipeline was on track for in service by year end 2019. Gazprom's Nord stream II gas pipeline [LINK] was on schedule to be in service by yr end 2019. It is a 1,200 km export gas pipeline that runs from Russia to Germany across the Baltic Sea. The pipeline enters the Baltic Sea at Ust-Luga area of the Leningrad area and then comes back ashore at Greifwald in NE Germany. Nord Stream 2 is a ~5.3 bcf/d twin of the existing Nord Stream pipeline to bring the combined capacity to ~10.6 bcf/d.

Nord Stream and Nord Stream 2 Gas Pipelines

Source: Gazprom

On Thurs, the Danish Energy Agency said they would need an environmental assessment for a new 3rd alternative Nord Stream 2 route. We were surprised that that this Nord Stream 2 story didn't get attention. Nord Stream 2 has had its approval requests for the pipeline in Danish seas since Jan 2018 for the main route and since Aug 2018 for the requested alternative route. There was no indication that a 3rd potential route would need to be environmentally assessed until Thurs. Needless to say, the request for an environmental assessment for a new 3rd alternative route was a surprise to Gazprom considering its move to in service by yr end 2019. On Thurs, Reuters [LINK], and others similarly, reported that the *"Danish Energy Agency has requested an environmental assessment of a third route option for the Nord Stream 2 gas pipeline in Danish waters, the Russian-led pipeline group said on Thursday. The project already has two pending permit applications with Danish authorities but the agency has now asked it to include a route option in the Danish exclusive economic zone to the south of Bornholm into the environmental assessment, a Nord Stream 2 spokesman said in an email."* TASS news agency reported [LINK] on Nord Stream 2 comments ""*The Danish Energy Agency has not rejected either the Southern Corridor or the so-called 'Base Case' in the territorial waters," the spokesperson said. "They have asked us for an additional environmental assessment," he noted. "We have just received this request and will carefully evaluate this," the spokesman said."*

But it sounds like the Danish Energy Agency new environmental assessment process could push back the in service by 1 year. Perhaps the reason why this didn't get much attention is that most just didn't think it would be a big delay. There is some logic there as the area isn't a big area and the 3rd alternative route variation can't be that far away ie. a lot of the work to date by the Danish Energy Agency should be applicable to a nearby 3rd alternative route. However, the subsequent TASS article [LINK] threw cold water on that view as the Danish Energy Agency doesn't know the timeline and also highlighted that the new review will include public hearings. TASS story "*Denmark cannot name timeline for its decision on Nord Stream 2*" wrote "*The Danish Energy Agency will decide on the Nord Stream 2 gas pipeline after environmental impact of the pipeline route in the exclusive economic zone of Denmark is assessed and public hearings are held, head of the agency's press service Ture Falbe-Hansen told TASS."* And "*There are no details regarding a timeline. When the Nord Stream 2 company provides the Danish authorities with an environment impact assessment it has to go through the normal procedure with public hearings etc. A decision from the Danish Energy Agency will depend on this process," Falbe-Hansen added."* And perhaps most significant, "*According to the Danish newspaper Politiken, the completion of the laying of the Nord Stream 2, scheduled for the end of 2019, may be delayed for a year."*

Gazprom's Power of Siberia 3.6 bcf/d export pipeline to China is on track for Dec 1/2019 start. Our March 17, 2019 Energy Tidbits memo noted that week's commitment from Gazprom Chairman to Putin for this Dec 1/2019 start. Gazprom posted a shorthand record of "*Alexey Miller briefs Vladimir Putin on Gazprom's activities in 2018 and plans for 2019*" [LINK]. The record is "*Vladimir Putin: How is the Power of Siberia project progressing? Alexey Miller: Power of Siberia is ahead of schedule. On December 1, we will start exporting gas to China from the Chayandinskoye field, which we will bring onstream. The start of gas supplies to China will no doubt become a historic event, as we are entering such an extensive gas market. Last year, gas consumption in China grew by 17.5 per cent, and it is the most dynamic and fast-growing natural gas market in the world. And we see great prospects for Russian gas supplies there*." This is a major global natural gas supply event and one that we have been writing about since our July 4, 2017 blog "*Today's Qatar/Russia Gas Supply Announcements*

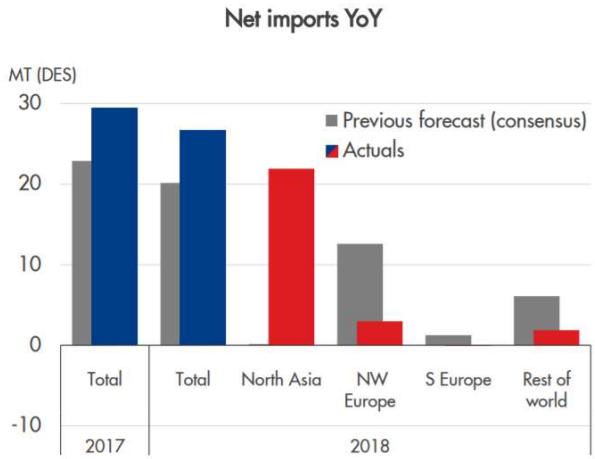
Add To The Challenge Facing BC LNG Post The New BC Govt" [LINK]. The Power of Siberia natural gas pipeline project will deliver ~3.6 bcf/d to China starting Dec 1, 2019.

Gazprom Power of Siberia Natural Gas Project

Source: Gazprom

Gazprom's pipelines will put pressure on LNG prices in 2020 and 2021. We should be clear that the weak LNG prices today have been driven by surplus LNG with lower demand from a warmer than normal winter in key Asian countries. And 2018 LNG demand would have been higher, but it was negatively impacted by high LNG prices that drove higher coal power generation in parts of Asia at the cost of LNG and natural gas. And LNG importing infrastructure is still at the early stages of built out in many key Asian markets. Its why we believe the rate of growth in LNG demand will continue accelerate in 2020 and going forward. However, Gazprom's Power of Siberia and Nord Stream 2 will add ~8.9 bcf/d of natural gas pipeline export capacity. Pipeline connected gas will become the effective base supply and push LNG to be a marginal supply, especially because LNG is higher costs. And adding ~8.9 bcf/d of gas supply into Europe and China will be about equal to (or a little less than our expectations) what would have been LNG demand growth in 2020 and 2021. On Feb 25, 2019, Shell released "*Shell LNG Outlook 2019*" [LINK], which included the below graph that shows its estimate that global LNG net imports in 2018 were down ~10% to 27 MT (~3.6 bcf/d).

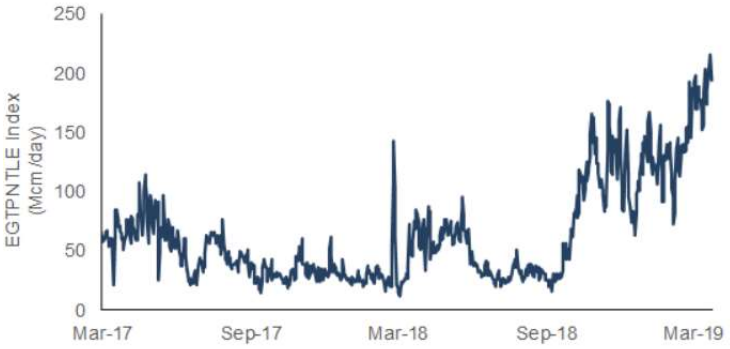
Global Net LNG Imports 2018 vs 2017



Source: Shell

Gazprom's pipeline connected gas supply becomes base supply, even during shoulder seasons, and will increase risk to seasonal price swings. Gazprom's pipeline connected new gas supply effectively becomes base natural gas supply. If it is unseasonably warm in China and they need less gas, they aren't going to stop the pipeline flows, rather they will just redirect an LNG tanker or two other markets. Adding more base gas supply means that there is increasing risk to big price swings. The big headline LNG story this week were LNG spot prices hitting 3 year lows. Bloomberg terminal wrote "*Asia's LNG benchmark, the Japan-Korea Marker, has more than halved since the start of the year to $4.375 per million British thermal units as of March 26. It's fallen to a rare discount to European prices, as U.K. National Balancing Point futures traded at around $4.50 on Friday, down 44 percent this year in their worst quarter in a decade. U.S. gas futures are down more than 8 percent this year, heading for the worst quarterly loss in two years*." We have been warning on this risk because of the mild winter in key parts of Asia. The problem with Asia is that there isn't any significant natural gas storage, so unneeded LNG cargos get redirected to NW Europe. Our Energy Tidbits memo have been highlighting that the best indicator for the winter LNG surplus is YoY increases in net LNG flows in to NW Europe. This is a theme we have highlighted since our Sept 20, 2017 blog "*Shell: "Every LNG Cargo That Could Technically Be Produced In This World Has Been Produced And Has Found A Well Paying Customer*" [LINK]. NW Europe tends to be a dumping ground for surplus LNG. We have been monitoring NW LNG storage levels and there have been big YoY net LNG inflows into NW Europe. Below is the Bloomberg graph of net LNG flows to NW Europe, which shows the current LNG inflows as of March 22, 2019 were 6.5 bcf/d, which is up 4.9 bcf/d YoY vs 1.6 bcf/d on March 22, 2018.

Net LNG Flows To NW Europe



Source: Bloomberg

https://www.ft.com/content/f7a34e3e-bce9-4db9-ac49-a092f382c526

Russia-China gas pipeline deal stalls over Beijing's price demands

Power of Siberia 2 project would offer lifeline to exporter Gazprom as Moscow's dependence on its neighbour grows

A deal on the pipeline was one of Russian President Vladimir Putin's top requests for Chinese leader Xi Jinping when they met last month, according to people familiar with the issue © Alexandr Demyanchuk/Sputnik/Pool/AP

Max Seddon in Riga, Anastasia Stognei in Tbilisi, Henry Foy in Brussels and Joe Leahy in Beijing YESTERDAY

Russia's attempts to conclude a major gas pipeline deal with China have run aground over what Moscow sees as Beijing's unreasonable demands on price and supply levels, according to three people familiar with the matter.

Beijing's tough stance on the Power of Siberia 2 pipeline underscores how Russia's invasion of Ukraine has left President Vladimir Putin increasingly dependent on Chinese leader Xi Jinping for economic support.

The people familiar with the matter said China had asked to pay close to Russia's heavily subsidised domestic prices and would only commit to buying a small fraction of the pipeline's planned annual capacity of 50bn cubic metres of gas.

Approval for the pipeline would transform the dire fortunes of Gazprom, Russia's state gas export monopoly, by linking the Chinese market to gasfields in western Russia that once supplied Europe.

Gazprom suffered a loss of Rbs629bn ($6.9bn) last year, its biggest in at least a quarter of a century, amid plummeting gas sales to Europe, which has had greater success than expected in diversifying away from Russian energy.

While Russia has insisted it is confident of agreement on Power of Siberia 2 "in the near future", two of the people said the impasse was the reason Alexei Miller, Gazprom's chief executive, had not joined Putin on the Russian leader's state visit to Beijing last month.

Miller, who was instead on a trip to Iran, would have been essential for any serious negotiations with China and his absence was "highly symbolic", said Tatiana Mitrova, a research fellow at Columbia University's Center on Global Energy Policy.

A deal on the pipeline was one of three main requests Putin made to Xi when they met, according to the people familiar with the matter, along with more Chinese bank activity in Russia and for China to snub a peace conference being organised by Ukraine this month.

China announced on Friday it would skip Ukraine's summit in Switzerland. Two of the people said Beijing and Moscow were discussing ringfencing one or more banks that would finance trade in components for Russia's defence industry — all but certainly incurring US sanctions that would cut any such bank out of the broader global financial system.

An agreement on the pipeline, however, remains distant, while the proposed co-operation with Chinese banks remains at a far smaller scale than Russia had requested, the people added.

Dmitry Peskov, Putin's spokesman, said Russia and China were still in talks on the pipeline.

"It's totally normal for each side to defend their own interests. Negotiations will continue, because the leaders of both countries have the political will for it, and commercial issues will continue to be worked out, and we have no doubt all the necessary agreements will be made," Peskov told reporters on Monday.

"As far as aspects of ongoing commercial negotiations go, they are, of course, not public," Peskov added. Gazprom declined to comment.

Asked about the gas talks, the Chinese foreign ministry said only that "the presidents of China and Russia agreed to look for areas where our interests converge . . . and enable each other's success".

China would "work with Russia to deliver on important common understandings reached between our two leaders and deepen our all-round cooperation [for] mutual benefit", the ministry said.

Russia's failure to secure the deal underscores how the war in Ukraine has made China the senior partner in the countries' relationship, according to Alexander Gabuev, director of the Carnegie Russia Eurasia Center in Berlin.

"China could need Russian gas strategically as a secure source of supply not based on maritime routes that would be affected in case of a maritime conflict around Taiwan or the South China Sea," Gabuev said. "But to make that worthwhile, China really needs a very cheap price and flexible obligations."

China's demand for imported gas is expected to reach about 250 bcm by 2030, up from less than 170 bcm in 2023, according to a paper published by Columbia's CGEP in May.

That paper said the 2030 level of demand could still be largely or entirely met through existing contracts for pipeline supply and for liquefied natural gas. However, by 2040, the gap between China's import demand and existing commitments would reach 150 bcm, it said.

Russia's lack of an alternative overland route for its gas exports means Gazprom would probably have to accept China's conditions, Gabuev said.

"China believes time's on its side. It has room to wait to squeeze the best conditions out of the Russians and wait for attention on the China-Russia relationship to move elsewhere," he said. "The pipeline can be built rather quickly, since the gasfields are already developed. Ultimately the Russians don't have any other option to market this gas."

Before the war in Ukraine, Gazprom relied on selling gas to Europe at high prices in order to subsidise Russia's domestic market.

China already pays Russia less for gas than to its other suppliers, with an average price of $4.4 per million British thermal units, compared with $10 for Myanmar and $5 for Uzbekistan, the CGEP researchers calculated from 2019-21 customs data.

During the same years Russia exported gas to Europe at about $10 per million Btu, according to data published by the Russian central bank.

Gazprom's exports to Europe fell to 22 bcm in 2023 from an average 230 bcm a year in the decade before the full-scale invasion of Ukraine. These are likely to dwindle further once a trans-shipment agreement with Ukraine expires at the end of this year.

Failure to agree increased supplies to China would be a hefty further blow. An unreleased report by a major Russian bank, seen by the Financial Times, recently excluded Power of Siberia 2 from its baseline forecast for Gazprom. That reduced the company's expected profit for 2029 — when the bank expected the project to launch — by almost 15 per cent.

China did not immediately respond to a request for comment.

This article has been amended since initial publication to reflect that the Ukraine peace summit is taking place at the Bürgenstock resort in Switzerland, not Geneva

https://www.chevron.com/newsroom/2024/q4/chevron-announces-2025-capex-budget

chevron announces 2025 capex budget & 4Q24 interim updates

- Organic capex budget of $15 billion; affiliate capex budget of $2 billion
- Restructuring and other charges expected to be $1.1 to $1.5 billion in 4Q24

San Ramon, Calif., Dec. 5, 2024 — Chevron Corporation today announced an organic capital expenditure range of $14.5 to $15.5 billion for consolidated subsidiaries (capex) and an affiliate capital expenditure (affiliate capex) range of $1.7 to $2.0 billion for 2025.

The company's 2025 capex and affiliate capex budgets represent a $2 billion year-over-year reduction. "The 2025 capital budget along with our announced structural cost reductions demonstrate our commitment to cost and capital discipline," said Chevron Chairman and CEO Mike Wirth. "We continue to invest in high-return, lower-carbon projects that position the company to deliver free cash flow growth."

Capex

Upstream spending is expected to be about $13 billion, of which roughly two-thirds is allocated to develop Chevron's U.S. portfolio. Permian Basin spend is lower than the 2024 budget and anticipated to be between $4.5 and $5.0 billion as production growth is reduced in favor of free cash flow. The remaining U.S. investment is split between the DJ Basin and the Gulf of Mexico, where deepwater growth projects continue to ramp and are expected to deliver offshore production of 300 mboed in 2026. In International, about $1.0 billion is allocated to Australia, which include Gorgon backfill investments.

PERMIAN

Downstream capex is expected to be approximately $1.2 billion, with two-thirds allocated to the U.S. Within total upstream and downstream budgets, about $1.5 billion of capex is dedicated to lowering the carbon intensity of our operations and growing New Energies businesses. Corporate and other capex is expected to be around $0.7 billion.

Affiliate Capex

Tengizchevroil LLP's budget is less than half of the affiliate capex as the Future Growth Project is projected to achieve first oil in the first half of 2025. The remaining affiliate spend primarily supports Chevron Phillips Chemical Company LLC, which includes the Golden Triangle Polymers and Ras Laffan Petrochemical Projects.

4Q24 Interim Update

In connection with recently announced plans to achieve $2 to $3 billion in structural cost reductions by the end of 2026, the Company expects to recognize a restructuring charge of $0.7 to $0.9 billion after-tax in the fourth quarter, with associated cash outflows over the next two years. The Company also anticipates recognizing non-cash, after-tax charges related to impairments, asset sales, and other obligations of $0.4 to $0.6 billion in the fourth quarter. The Company expects to treat these as special items and exclude them from adjusted earnings. It is possible that the financial impact of these items may differ from the estimates provided, including differences due to final accounting determinations, changes in facts, circumstances or assumptions or other developments in the interim.

Chevron is one of the world's leading integrated energy companies. We believe affordable, reliable and ever-cleaner energy is essential to enabling human progress. Chevron produces crude oil and natural gas; manufactures transportation fuels, lubricants, petrochemicals and additives; and develops technologies that enhance our business and the industry. We aim to grow our oil and gas business, lower the carbon intensity of our operations and grow lower carbon businesses in renewable fuels, carbon capture and offsets, hydrogen and other emerging technologies. More information about Chevron is available at www.chevron.com.

A - Jake Spiering {BIO 23376533 <GO>}

Thanks for the question, Jean Ann.

Operator

And our next question will come from Neil Mehta with Goldman Sachs.

Q - Neil Mehta {BIO 16213187 <GO>}

Yeah, good morning Mike and team. I just want to spend some time on the Permian. You had indicated in the prepared remarks that you expect to finish towards the top end of the 4% to 7% range in guidance and you highlighted strength in company-operated New Mexico. Can you spend a little bit more time unpacking that, the sustainability of that and just how should we think about the path to ultimately getting to plateau at this asset?

A - Michael K. Wirth {BIO 3445929 <GO>}

Yeah, Neil, we did have a nice strong quarter again in the Permian. I realize a lot of our activity now being in New Mexico, the data is not quite as timely and transparent maybe as on the Texas side, so you may not see that. But a couple of things. Number one, our new well performance has been very, very strong in the Delaware Basin. We've got a lot of that in the third quarter. In particular, we're in the Second Bone Spring and seeing top-quartile performance out of those wells.

Also in the -- on the Texas side in the Delaware and the Wolfcamp A were outperforming expectations. So new wells and the completion to pop time on those new wells has been very, very strong. In the base business, we're seeing stronger reliability performance, proactive maintenance efforts are paying off. We're seeing artificial lift optimization now sustaining strong production and we're seeing efficiency gains in everything from completions, designs, coordination and logistics to reduce mobilization. We've talked about triple frac before. And so across the entire activity portfolio in the basin we just continue to see improvement in the execution of that and then improvement in the performance of the wells.

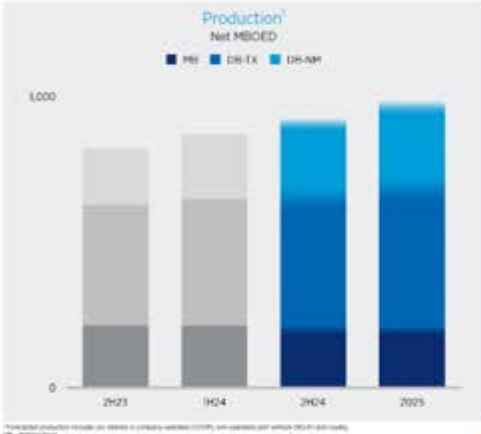
As we move towards the 1 million barrel-a-day mark next year, we will begin to shape our profile there a little bit towards a plateau and we'll really begin to focus on free cash flow and so growth will become less the driver and free cash flow will become more the driver, if you will. So we'll bring capital spending down and I think what you'll see is this year is probably going to be the peak in Permian CapEx and as we move forward we'll start to attenuate that the growth which has been at a 15% CAGR for the last three years, probably going to be higher than that this year will begin to attenuate as well and will really open up the free cash flow there.

So more to follow in terms of exactly what that looks like. I'm sure people are curious about that, so we'll provide more guidance here over the next call or two so you can start to think of what that looks like. But the headline here is continued efficiency and productivity gains, strong free cash flow today and we're going to manage it for even stronger free cash flow in the future.

Chevron 2024 Investor Presentation

November 4, 2024

Execution underpins Permian 1 MMBOED in 2025



Strong base business
improved reliability

Efficiency gains
implementing and scaling triple-frac

COOP well performance
Delaware Basin ~10% improvement[2]

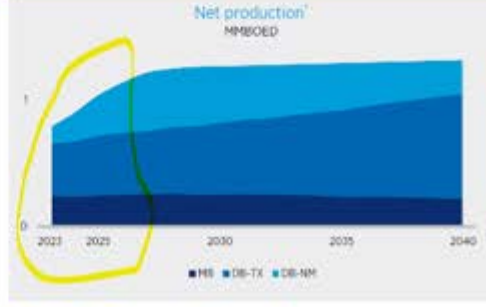
High quality, long duration resource

Permian inventory

Large diverse portfolio of economic resource

Permian long-term production

Over 15 years of production >1 MMBOED



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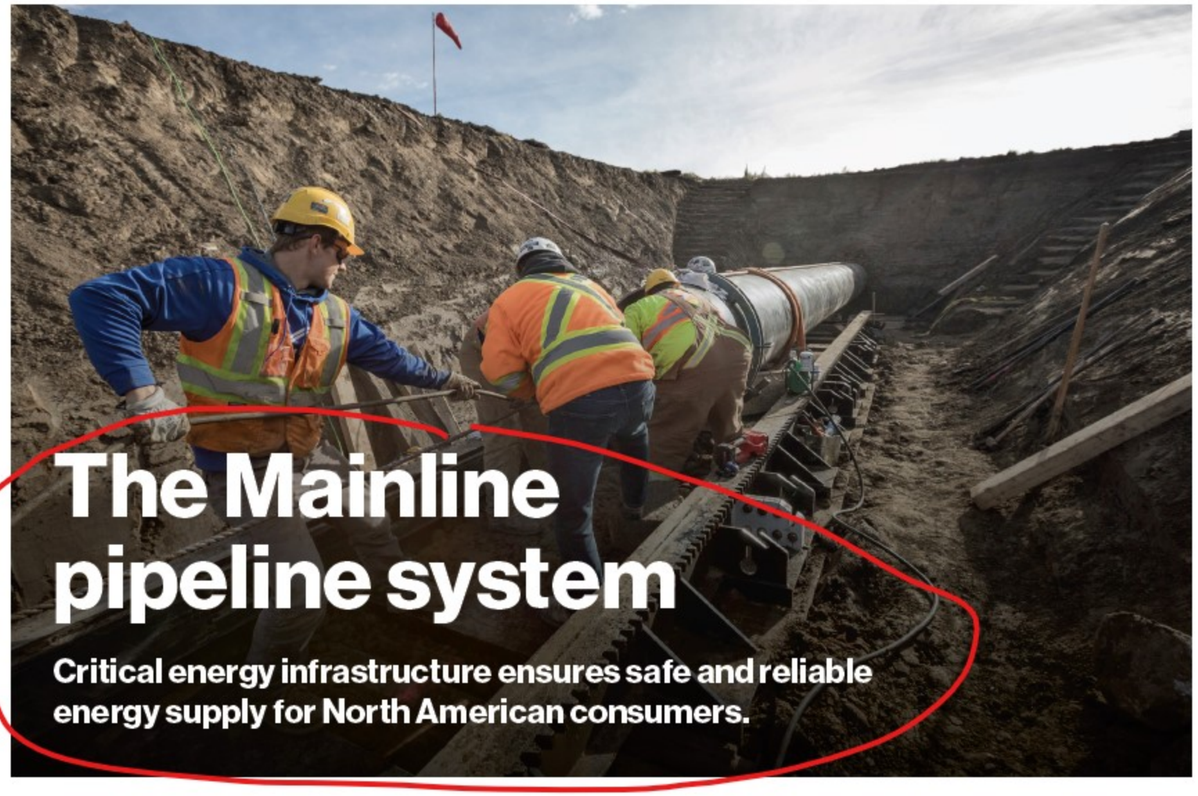


The Mainline pipeline system

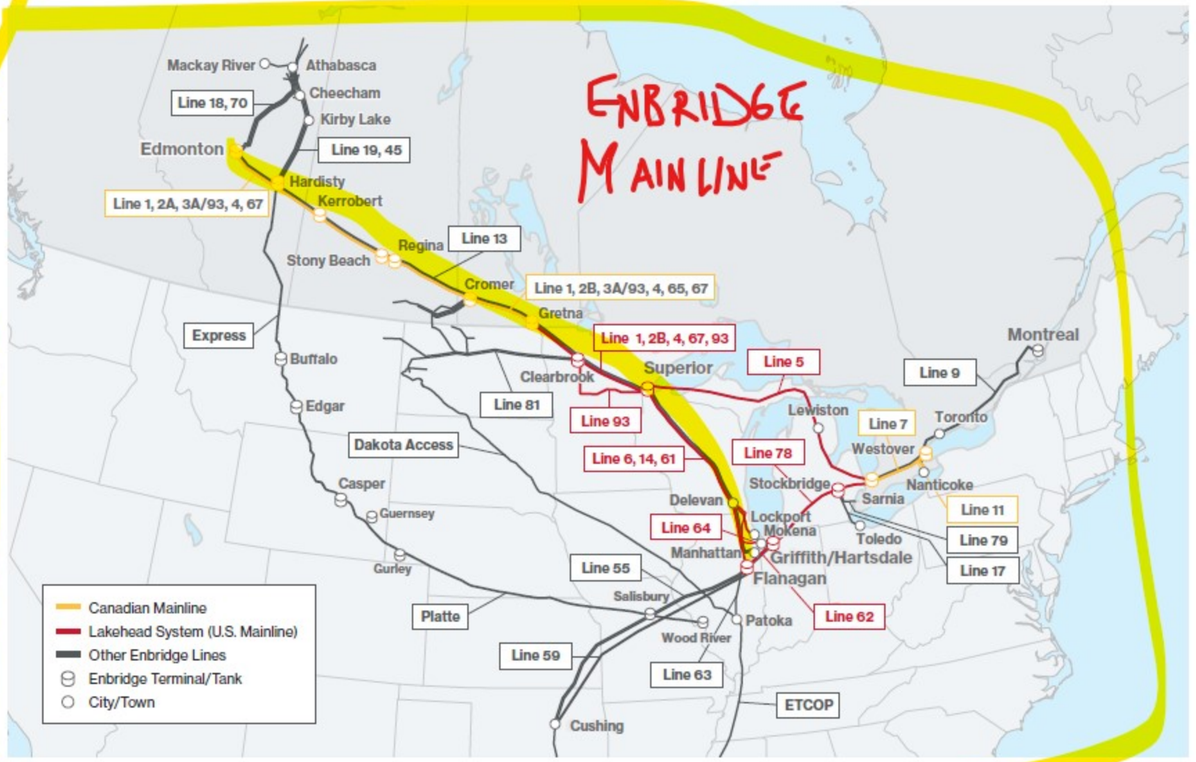
Critical energy infrastructure ensures safe and reliable energy supply for North American consumers.

With more than 13,800 kilometers (nearly 8,600 miles) of active pipe, Enbridge's Mainline pipeline network has the capacity to transport 3 million barrels a day of light, medium and heavy oil from Alberta to the U.S. Midwest and Eastern Canada.

This sophisticated pipeline infrastructure network carries a variety of crude oil types, including production from the Canadian oil sands and natural gas liquids, to refineries across North America. The Mainline is Canada's largest oil transportation system and plays a critical role in providing safe and reliable energy supply for North American consumers.

Enbridge's Mainline network includes the Canadian Mainline system, which includes several pipelines running from Edmonton to the Canada-U.S. border at Gretna, Manitoba, and the Lakehead System or U.S. Mainline, which carries on to Clearbrook, MN and Superior, WI, and delivers crude to markets in Minnesota, northern Illinois, Indiana, Ohio, Michigan and southern Ontario. Other Enbridge market access pipelines serve markets in the U.S. Gulf Coast, Oklahoma, southern Illinois, and Quebec.

The first pipeline in the Mainline network, Line 1, connected Edmonton to Superior and was built in 1950, in the wake of the Leduc, Alberta oil discovery that signaled the birth of the modern Canadian industry. Since then, numerous additional lines have been built to meet consumer demand and rigorously maintained to ensure the continued safe operational reliability of the system.



Connecting key basins and leading markets

In all the years of change and growth, one certainty has remained: delivering safe and reliable solutions for our customers is the foundation of Enbridge's business.

Enbridge moves 30% of the crude oil produced in North America. We also account for 65% of all U.S.-bound Canadian oil exports, 40% of U.S. oil imports, and about 25% of North American oil exports.

Enbridge's liquids pipeline network connects the continent's key supply basins with its leading refinery markets. In fact, we are connected to 75% of North America's refining capacity overall.

Our network is also unparalleled for its flexibility, with multiple receipt and delivery points across the United States and Canada. The Enbridge system is a complex web of energy infrastructure – with more than 20 major terminals, 200 tanks, 36 million barrels of operational tankage, 60 million barrels of contract storage capacity and 600 pump units.

Operating the integrated Enbridge network requires seamless coordination and collaboration across our many teams. Our segregated batching system allows us to simultaneously transport multiple grades and commodity types while maintaining strict standards for safety and efficiency.

With more than 20 receipt points and 30 delivery points across the network, we're well suited to move light, medium and heavy oil, as well as NGLs and refined products. Our system's high utilization rate reflects Enbridge's commitment to maximizing throughput via system optimization.

ENBRIDGE
enbridge.com/about-us

https://www.afpm.org/newsroom/news/afpm-statement-potential-north-american-tariffs

AFPM statement on potential North American tariffs

November 27, 2024

By: **AFPM Communications**

WASHINGTON, D.C. — American Fuel & Petrochemical Manufacturers (AFPM) President and CEO Chet Thompson issued the following statement addressing the potential impact of tariffs levied on crude oil and refined products from Canada and Mexico:

"American refiners depend on crude oil from Canada and Mexico to produce the affordable, reliable fuels consumers count on every day. Therefore, we would hope any future tariffs would exclude these critical feedstocks and refined products."

Additional information about the U.S. refining kit:

- **U.S. refining strength/stats:** The United States is the world's number one producer of crude oil, natural gas and refined products.
- **The United States needs imports, volumetrically and to access fit-for-purpose crude:**
    - In terms of volume, U.S. refining capacity far exceeds U.S. upstream oil production. We refine more crude oil every day than the U.S. upstream produces, and we produce more fuel and refined products every day than the United States consumes.
    - In terms of 'fit-for-purpose-crude,' most of our refineries were built prior to the U.S. shale boom when heavier, higher-sulfur crudes were more abundant. As a result, we have the biggest complex refining kit in the world—meaning we have more facilities and units than anywhere else capable of turning the toughest types of oil into consumer products like gasoline, diesel and jet fuel. Feeding a complex refinery light, sweet crude that it wasn't designed for is inefficient and could sideline entire process units, leading to less gasoline, diesel and jet fuel production overall, and potentially threatening long-term refinery operations.
- **We also need refined product imports.** Even though we produce more refined products here at home than we consume, there are regions in the United States—California, the Northeast and parts of the Midwest—that don't have sufficient pipeline capacity to rely solely on U.S. oil and refined products. Imports are the most economical way to feed those regional facilities and supply fuel to local consumers.
- **How much do we depend on foreign v. U.S. crude?** About 60% of the crude that runs through U.S. refineries comes from right here in the United States, and the average crude that we run is lighter and sweeter than in previous years, though still heavier than shale patch crude. Of the crude we import, most comes from Canada and Mexico, about 60% and 11%, respectively. In the Midwest (PADD 2), Canadian crude accounts for an even larger share of total refinery throughput (about 65% of total crude runs, meaning Canadian crude is the #1 feedstock for Midwest refiners). There is no easy, fit-for-purpose replacement for this crude oil.
- **How would tariffs impact the price of fuel?** Crude oil is to refineries what flour is to bakeries. It's our number one feedstock and input cost. If those feedstocks were to become significantly more expensive, so too would the overall cost of making fuel here in the United States. In regions like PADD 2, that have limited connectivity to U.S. crude oil and refined product pipelines, tariffs could have an especially hard impact—sharply increasing operating costs and potentially threatening refinery viability while simultaneously eroding U.S. energy security and driving up dependence on fuel imports from overseas. Tariffs applied to North American crude oil and refined products will not help our industry compete, nor will they support U.S. energy dominance and affordability for consumers.

12/02/2024 10:52:59 [BFW] Bloomberg First Word

Russia's Refinery Runs Hit Three-Month High in November

By Bloomberg News

(Bloomberg) -- Russia's primary crude-processing rates averaged 5.35m b/d during Nov. 1-27 as refineries largely completed their seasonal maintenance, according to a person with knowledge of the matter.

- That's more than 230k b/d above the average for most of October, but some 127k b/d less than in November 2023, historic data shows
- Russia's average crude processing for Nov. 21-27 reached 5.43m b/d, an increase of around 14k b/d from the previous seven days
- NOTE: Russia's refinery runs remain one of the key indicators – alongside seaborne export flows – for market watchers to follow trends in its oil industry after the government classified official output data amid Western sanctions
- READ, Nov. 30: Russia Allows Producers to Export Gasoline From the New Year
- READ, Nov. 27: Russia Boosts Petroleum Product Shipments as Refineries Ramp Up

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12/03/2024 07:02:52 [BN] Bloomberg News

Russia's Seaborne Crude Exports Jump Before Pivotal OPEC+ Talks

Flows from western ports surge, with impact of sanctions muted after two years

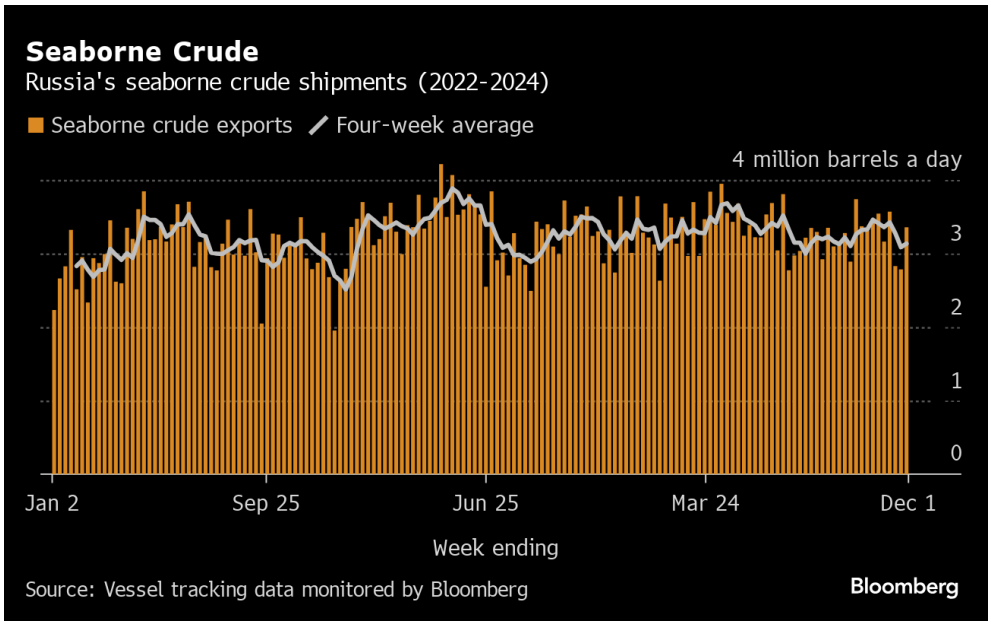
By Julian Lee

(Bloomberg) -- Russia's seaborne crude exports rose before OPEC+ ministerial discussions on production policy for the early part of 2025, amid indications that the alliance may have to delay for a third time plans to begin restoring barrels to the market.

Four-week average volumes increased by about 50,000 barrels a day in the period to Dec. 1, driven higher for the first time in three weeks by a surge in weekly shipments.

The gains were concentrated at the country's western ports, where flows from all export terminals recovered from two weeks of below-normal rates. Cargo loading at the key Pacific site of Kozmino was hit by strong winds during part of the week, which reduced operations by a third.

The increase in overall flows came before discussions among OPEC+ oil ministers that will now take place on Thursday after they were postponed from Sunday. Analysts expect that they will again put back their plan to start restoring curbed barrels to the market, with a three-month delay emerging as the main proposal.



It's now two years since Western nations imposed sanctions designed to cut the Kremlin's oil income, but there's little sign that they've been effective. As intended, Moscow's oil flows have been maintained, but the discounts that it's forced to accept in order to secure buyers are now minimal. And the creation of a huge shadow fleet of tankers, which appear largely immune to sanctions, has taken the trade out of the reach of authorities based in the US, UK and

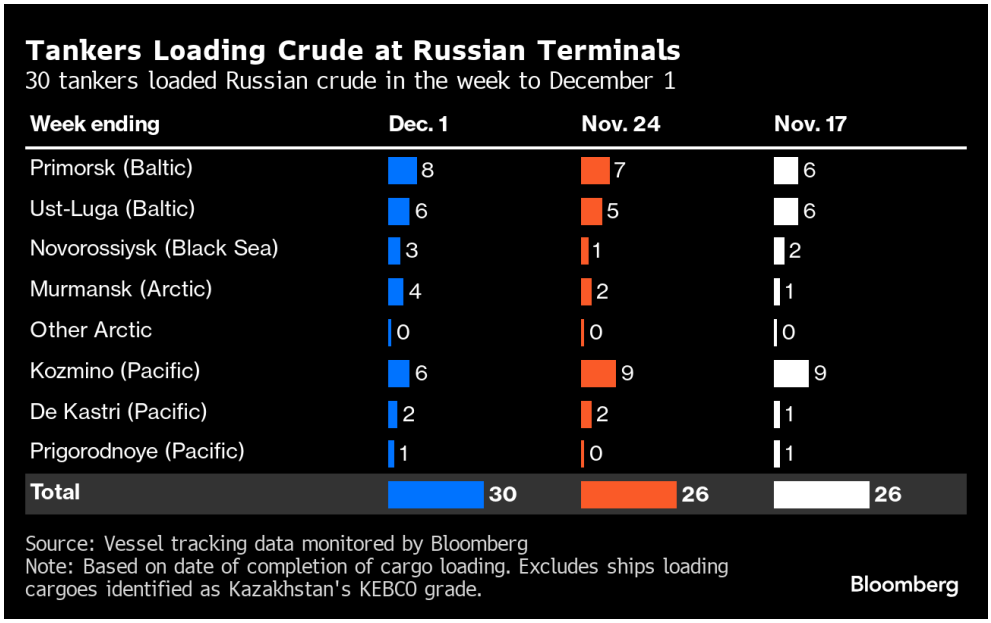
European Union.

Separately, Panama is canceling the registration of six ships sailing under its flag that were sanctioned by the UK last week, a small boost for those nations that have slapped restrictions on Moscow's exports machine. The authorities in London added another 30 tankers to a list of vessels sanctioned for carrying Russian oil. Fourteen of them had already been targeted by either the US or the European Union.

Meanwhile, Russia's refinery runs hit a three-month high in November after completion of seasonal maintenance, potentially making less crude available for export.

Crude Shipments

A total of 30 tankers loaded 23.5 million barrels of Russian crude in the week to Dec. 1, vessel-tracking data and port-agent reports show. The volume was up from a revised 19.5 million barrels on 26 ships the previous week.

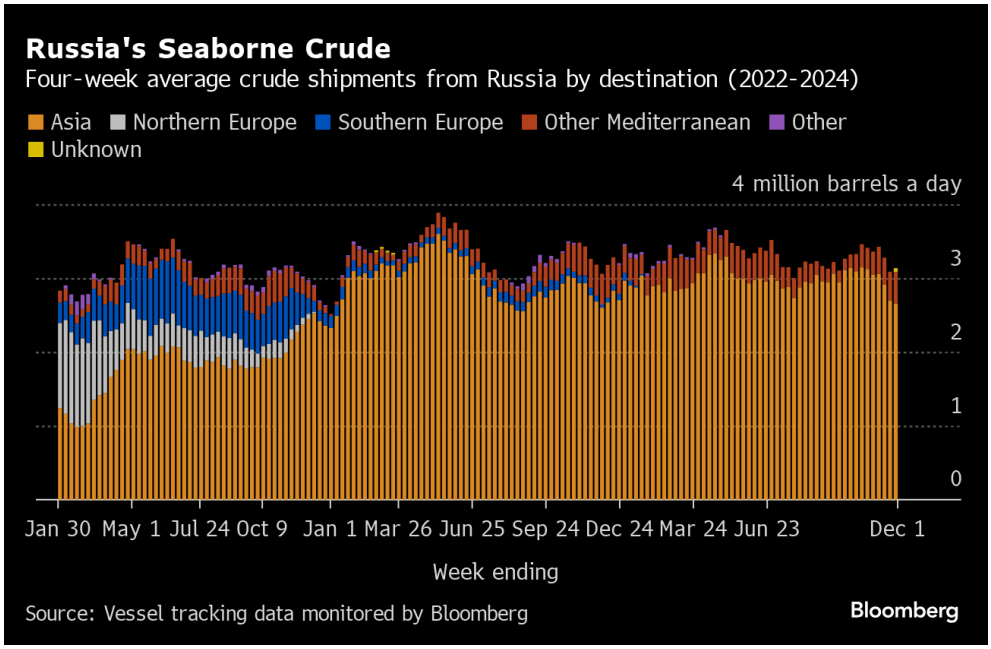


Daily crude flows in the week to Dec. 1 jumped by about 570,000 barrels to 3.36 million. The increase was driven by higher flows from the country's western ports, with more ships leaving its Baltic, Black Sea and Arctic ports. Strong winds hit loading operations at the main Pacific export terminal at Kozmino.

Less volatile four-week average flows also increased, rising for the first time in three weeks to average 3.13 million barrels a day, an increase of 50,000 from the revised figure for the period to Nov. 24.

Crude shipments so far this year are about 60,000 barrels a day, or 1.8%, below the average for the whole of 2023.

Two cargoes of Kazakhstan's KEBCO crude were loaded at Novorossiysk on the Black Sea during the week.



Russia terminated its export targets at the end of May, opting instead to restrict production, in line with its partners in the OPEC+ oil producers' group. The country's output target is set at 8.978 million barrels a day until the end of December, after a planned easing of some output cuts was delayed for a second time.

Moscow also pledged to make deeper output cuts in October and November this year, then between March and September of 2025, to compensate for pumping above its OPEC+ quota earlier this year.

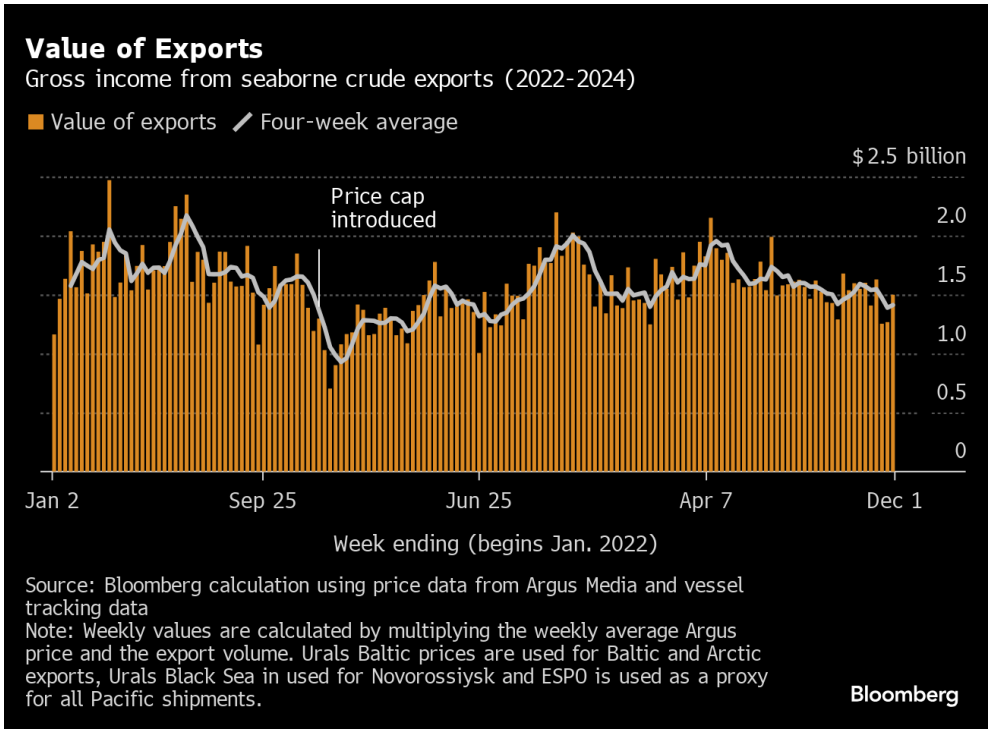
Export Value

The Kremlin's oil income rose, with a small decrease in weekly-average prices for Russia's major crude streams only partially offsetting the jump in the weekly export volumes. The gross value of Moscow's shipments rose by about $230 million to $1.5 billion in the week to Dec. 1.

Export values at Baltic ports were down week-on-week by about $0.10 a barrel. Prices for Black Sea loading Urals fell by about $0.50 a barrel and key Pacific grade ESPO dropped by about $0.70, compared with the previous week. Delivered prices in India were down by about $0.10 a barrel, all according to numbers from Argus Media.

Four-week average income increased, rising to about $1.41 billion a week, from a revised $1.39 billion in the period to Nov. 25.

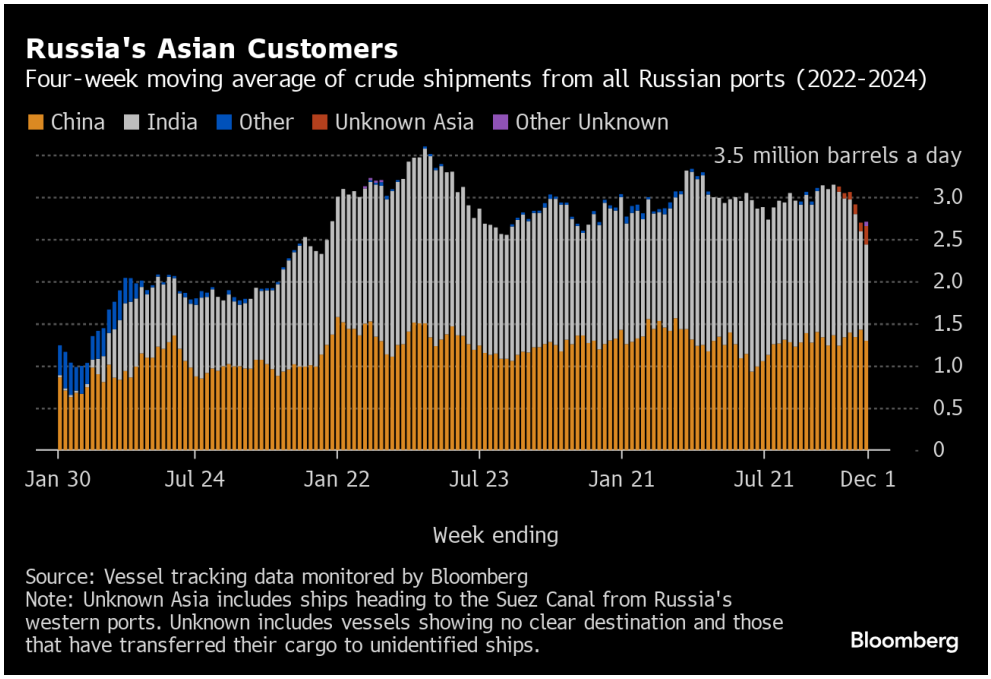
On this basis, the price of Russia's shipments from the Baltic in the four weeks to Dec. 1 was up by about $0.50 a barrel from the period to Nov. 25. Prices for key Pacific grade ESPO and for Black Sea Urals shipments were higher by about $0.40 a barrel. The delivered price for shipments to India was up by a more modest $0.20 a barrel.



Flows by Destination

- **Asia**

Observed shipments to Russia's Asian customers, including those showing no final destination, edged higher to 2.71 million barrels a day in the four weeks to Dec. 1 from a revised 2.7 million in the period to Nov. 24.



About 1.29 million barrels a day of crude were loaded onto tankers heading to China. That's down from a revised 1.43 million barrels a day in the period to Nov. 24

The Asian nation's seaborne imports are boosted by about 800,000 barrels a day of crude delivered from Russia by pipeline, either directly, or via Kazakhstan.

Flows on ships signaling destinations in India averaged 1.14 million barrels a day, down from a revised 1.17 million for the period to Nov. 24 and 1.46 million in the four weeks to Nov. 17.

The Indian figures, in particular, are likely to rise as the discharge ports become clear for vessels that are not currently showing final destinations. Most of those heading from Russia's western ports through the Suez Canal end up in the south Asian nation.

The equivalent of about 220,000 barrels a day was on vessels signaling Port Said or Suez in Egypt. Those show up as "Unknown Asia" until a final destination becomes apparent.

The "Other Unknown" volumes, running at about 50,000 barrels a day in the four weeks to Dec. 1, are those on tankers showing no clear destination. Most originate from Russia's western ports and go on to transit the Suez Canal, but some could end up in Turkey. Others may be moved from one vessel to another.

One cargo of Urals was delivered to the El-Hamra terminal on Egypt's Mediterranean coast, the tracking data show. That's the first delivery to the terminal since two cargoes were discharged there in July and August 2022.

Greek naval exercises that have been running since May and have forced ship-to-ship cargo transfers out of the Laconian Gulf and nearby waters, were extended for a sixth time and will now continue until mid-March. Russia has found a new location close to Greek shores to carry out cargo switches, though this has so far been limited to refined products.

Crude Shipments to Asia
Shipments of Russian crude to Asian buyers in million barrels a day

4 weeks ending	China	India	Other	Unknown Asia	Other Unknown	Total
October 27, 2024	1.24	1.82	0.00	0.06	0.00	3.12
November 3, 2024	1.34	1.65	0.00	0.06	0.00	3.05
November 10, 2024	1.39	1.58	0.00	0.09	0.00	3.06
November 17, 2024	1.34	1.46	0.00	0.12	0.00	2.91
November 24, 2024	1.43	1.17	0.00	0.10	0.00	2.70
December 1, 2024	1.29	1.14	0.00	0.22	0.05	2.71

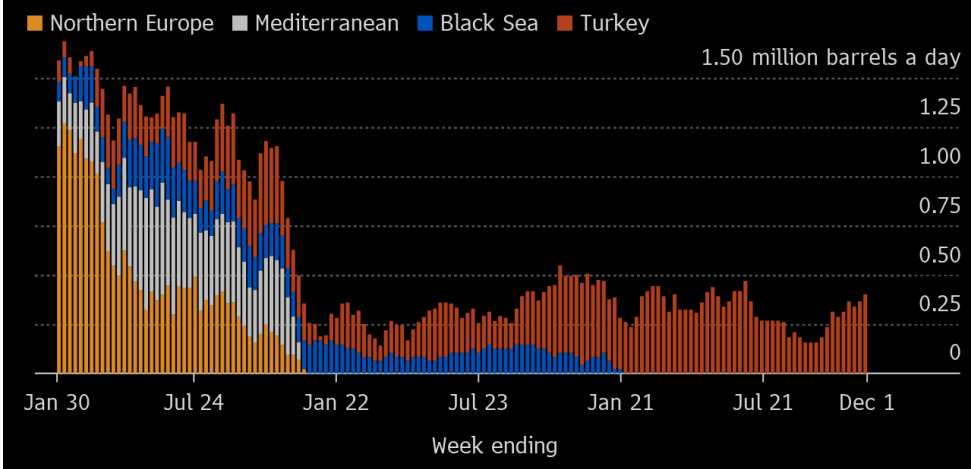
Source: Vessel tracking data compiled by Bloomberg Bloomberg

- **Europe and Turkey**

Russia's seaborne crude exports to European countries have ceased, with flows to Bulgaria halted at the end of last year. Moscow also lost about 500,000 barrels a day of pipeline exports to Poland and Germany at the start of 2023, when those countries stopped purchases.

Turkey is now the only short-haul market for shipments from Russia's western ports. Flows in the 28 days to Dec. 1 rose to about 400,000 barrels a day, the highest level since June. Fires at two Turkish refineries in November may hit crude deliveries to the country in the coming weeks.

Russia's Crude Shipments to Europe and Turkey
Four-week average crude shipments from Russia (2022-2024)



Source: Vessel tracking data monitored by Bloomberg
Note: Four-week moving average of crude shipments from all Russian ports. Bloomberg

NOTES

This story forms part of a weekly series tracking shipments of crude from Russian export terminals and the gross value of those flows. There will be no update next week; publication will resume on Tuesday, Dec. 17 .

All figures exclude cargoes identified as Kazakhstan's KEBCO grade. Those are shipments made by KazTransoil JSC that transit Russia for export through Novorossiysk and Ust–Luga and are not subject to European Union sanctions or a price cap. The Kazakh barrels are blended with crude of Russian origin to create a uniform export stream. Since Russia's invasion of Ukraine, Kazakhstan has rebranded its cargoes to distinguish them from those shipped by Russian companies.

Vessel–tracking data are cross–checked against port agent reports as well as flows and ship movements reported by other information providers including Kpler and Vortexa Ltd.

If you are reading this story on the Bloomberg terminal, click for a link to a PDF file of four–week average flows from Russia to key destinations.

––With assistance from Sherry Su.

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https://www.opec.org/opec_web/en/press_room/28.htm

Saudi Arabia, Russia, Iraq, United Arab Emirates, Kuwait, Kazakhstan, Algeria, and Oman held a virtual meeting on the sidelines of the 38th OPEC and non-OPEC Ministerial Meeting (ONOMM)

05 Dec 2024 | OPEC plus countries Saudi Arabia, Russia, Iraq, United Arab Emirates, Kuwait, Kazakhstan, Algeria, and Oman, which previously announced additional voluntary adjustments in April 2023 and November 2023 held a virtual meeting on the sideline of the 38th OPEC and non-OPEC Ministerial Meeting (ONOMM).

The meeting was conducted to reinforce the precautionary efforts of OPEC+ countries, aiming to support the stability and balance of oil markets. The aforementioned countries decided, in addition to the latest decisions from the 38th ONOMM, to extend the additional voluntary adjustments of 1.65 million barrels per day that were announced in April 2023, until the end of December 2026.

Moreover, these countries will extend their additional voluntary adjustments of 2.2 million barrels per day, that were announced in November 2023, until the end of March 2025 and then the 2.2 million barrels per day adjustments will be gradually phased out on a monthly basis until the end of September 2026 to support market stability as per the attached table. This monthly increase can be paused or reversed subject to market conditions.

In the spirit of transparency and collaboration, the meeting welcomed the pledges made by the overproducing countries to achieve full conformity and resubmit their updated compensation schedule to the OPEC Secretariat for the overproduced volumes since Jan 2024 before the end of December 2024 as agreed in the 52nd Meeting of the Joint Ministerial Monitoring Committee (JMMC). The compensation period will be extended until the end of June 2026.

Production Levels with the phase-out of only November 2023 voluntary adjustments which will be applied starting from April 2025 until September 2026

Country	2025										2026									Required Production Level as per 38th ONOMM (1)
	Jan - Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep - Dec	
Algeria	908	911	914	917	919	922	925	928	931	934	936	939	942	945	948	951	953	956	959	**1,007**
Iraq	4,000	4,012	4,024	4,037	4,049	4,061	4,073	4,086	4,098	4,110	4,122	4,134	4,147	4,159	4,171	4,183	4,196	4,208	4,220	**4,431**
Kuwait	2,413	2,421	2,428	2,436	2,443	2,451	2,458	2,466	2,473	2,481	2,488	2,496	2,503	2,511	2,518	2,526	2,533	2,541	2,548	**2,676**
Saudi Arabia	8,978	9,034	9,089	9,145	9,200	9,256	9,311	9,367	9,422	9,478	9,534	9,589	9,645	9,700	9,756	9,811	9,867	9,922	9,978	**10,478**
UAE	2,912	2,938	2,963	2,989	3,015	3,041	3,066	3,092	3,118	3,144	3,169	3,195	3,221	3,246	3,272	3,298	3,324	3,349	3,375	**3,519**
Kazakhstan	1,468	1,473	1,477	1,482	1,486	1,491	1,495	1,500	1,504	1,509	1,514	1,518	1,523	1,527	1,532	1,536	1,541	1,545	1,550	**1,628**
Oman	759	761	764	766	768	771	773	775	778	780	782	785	787	789	792	794	796	799	801	**841**
Russia	8,978	9,004	9,030	9,057	9,083	9,109	9,135	9,161	9,187	9,214	9,240	9,266	9,292	9,318	9,344	9,371	9,397	9,423	9,449	**9,949**

(1) Required production levels as per the 38th ONOMM before applying the additional voluntary adjustments announced in April 2023 and November 2023.

(2) UAE required production has been increased by 300 kbd. This increase will be phased in gradually starting April 2025 until the end of September 2026 as per the 38th ONOMM.

https://www.opec.org/opec_web/en/press_room/7418.htm

38th OPEC and non-OPEC Ministerial Meeting

No 21/2024
Vienna, Austria
05 Dec 2024

In light of the continued commitment of the OPEC and non-OPEC Participating Countries in the Declaration of Cooperation (DoC) to achieve and sustain a stable oil market, and to provide long-term guidance and transparency for the market, and in line with the approach of being precautious, proactive, and pre-emptive, which has been consistently adopted by OPEC and non-OPEC Participating Countries in the Declaration of Cooperation, the Participating Countries decided to:

1. Reaffirm the Framework of the Declaration of Cooperation, signed on 10 December 2016 and further endorsed in subsequent meetings; as well as the Charter of Cooperation, signed on 2 July 2019.
2. Extend the level of overall crude oil production for OPEC and non-OPEC Participating Countries in the DoC as agreed in the 35th OPEC and non-OPEC Ministerial Meeting, as per the attached table until 31 December 2026.
3. Reaffirm the mandate of the Joint Ministerial Monitoring Committee (JMMC) to closely review global oil market conditions, oil production levels, and the level of conformity with the DoC, assisted by the Joint Technical Committee (JTC) and the OPEC Secretariat. The JMMC meeting is to be held every two months.
4. Hold the OPEC and non-OPEC Ministerial Meeting (ONOMM) every six months in accordance with the ordinary OPEC scheduled conference.
5. Grant the JMMC the authority to hold additional meetings, or to request an OPEC and non-OPEC Ministerial Meeting at any time to address market developments, whenever deemed necessary.
6. Reaffirm that the DoC conformity is to be monitored considering crude oil production, using the average of the approved seven secondary sources, and according to the methodology applied for OPEC Member Countries.
7. Reiterate the critical importance of adhering to full conformity and compensation mechanism.
8. Extend the assessment period by the three independent sources to the beginning of November 2026, to be used as guidance for 2027 reference production levels.
9. The countries participating in the Declaration of Cooperation (DoC) express their deepest gratitude to the Kingdom of Saudi Arabia for its exceptional leadership and unwavering commitment to global oil market stability. Under the chairmanship of HRH Prince Abdulaziz bin Salman Al Saud, the DoC countries have navigated challenges with strategic vision, fostering cohesion through consensus building efforts and ensuring balance and transparency in the oil market.
10. Hold the 39th OPEC and non-OPEC Ministerial Meeting on 28 May 2025.

Country	Required Production Levels for 2025 and 2026
Algeria	1,007 [2]
Congo	277
Eq.Guinea	70
Gabon	177
Iraq	4,431 [2]
Kuwait	2,676 [2]
Nigeria	1,500
Saudi Arabia	10,478 [2]
UAE	3,519 [1][2]
Azerbaijan	551
Bahrain	196
Brunei	83
Kazakhstan	1,628 [2]
Malaysia	401
Mexico	1,753
Oman	841 [2]
Russia	9,949 [2]
Sudan	64
South Sudan	124
OPEC	**24,135**
Non-OPEC	**15,590**
OPEC+	**39,725**

Notes:

(1) UAE required production has been increased by 300 kbd. This increase will be phased in gradually starting April 2025 until the end of September 2026.

(2) The required production level is before applying any additional production adjustments.

“ They are going to help Hezbollah, Hamas, the Houthis rebuild if they can. And as long as they are flush with cash, the Middle East is never going to have peace. … There will be a shift. The president has been very clear about that. He was very clear in his 1st term in exerting maximum pressure on Iran until they are ready to come to the table from a very different perspective than they did with the Iran deal.” **Mike Waltz, Trump’s National Security Advisor**

SAF Group created transcript of Trump pick for National Security Advisor, Mike Waltz, on with Becky Quick, Joe Kernen and Andrew Ross Sorkin on CNBC Squawk Box on Nov 26, 2024.
https://www.cnbc.com/video/2024/11/26/rep-mike-waltz-the-middle-east-is-a-key-component-to-resolving-the-russia-ukraine-conflict.html

Items in “italics” are SAF Group created transcript

At 4:55 min mark, Waltz *“The change you are going to see is more focused on Iran. I don’t believe that you restore stability. I don’t believe you solve Gaza. And I think this is shared across many in the administration with the President. Necessarily there you saw that dealing with Tehran. Tehran is the world’s* largest *backer of terrorism. They are going to help Hezbollah, Hamas, the Houthis rebuild if they can. And as long as they are flush with cash, the Middle East is never going to have peace. … There will be a shift. The president has been very clear about that. He was very clear in his 1st term in exerting maximum pressure on Iran until they are ready to come to the table from a very different perspective than they did with the Iran deal”:*

At 6:20 min mark “*I just want to make one more point on Iran. China buys 90% [he may have said 98% but hard to hear] of Iran’s illicit oil. Roughly 2017/2018, they were exporting 4 mmb/d. By the end of Trump’s first administration, it was down to around 3, 4 hundred thousand so I think we will be having some conversations with China about those purchases. But again, going back to that full maximum pressure. Not only will it help stability in the Middle East, it will help stability in the Russia/Ukraine theatre as well as Iran provides ballistic missiles and literally thousands and thousands of drones that are going into that theatre. So the Middle East is also a key component to resolving the Russia/Ukraine conflict*. “ \

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

"what President Trump did say in Riyadh was that he would isolate Iran diplomatically and weaken them economically so they can't fund all of the violence that is going with the Houthis in Yemen, Hamas, Hezbollah, PIJ and these proxies that around Iraq and Syria today. All of whom destabilize Israel and our Gulf Partners" **Brian Hook.**

SAF Group created transcript of comments by Brian Hook (former US envoy on Iran under Trump) with CNN's Becky Anderson on Nov 7, 2024. https://www.youtube.com/watch?v=aKsxggdQX0k

Items in *"italics"* are SAF Group created transcript

At 0:00 min mark, Anderson asks on the reports Hook is going to lead the transition team at the State Dept *".. will you be leading the transition team at the State Dept?"* Hook "I *don't have any comment on that."*

At 3:15 min mark, Hook "*... President Trump came to Riyadh at that Arab Muslim summit, 55 nations were there, and he laid out a very coherent strategy for how we are going to focus on shared interests. We're going to combat ideologies that are killing not only American troops in the region but also citizens of Arab and Muslim nations. And we're going to do that in a spirt of friendship and partnership. So over the course of those four years, he executed against that strategy. Defeated ISIS. Put Iran in a political and financial crisis. Deepened his ties with Israel. Deepened his ties with our Gulf partners. Got out of the Iran nuclear deal. And did four peace treaties in five months. I would be very happy to put President Trump's record in the Middle East against any other President*."

At 6:15 min mark, Hook "*well look Becky, President Trump's foreign policy is hiding in plain sight. I'm not swerving any of your answers. I just think it's fairly obvious what he did in the first term. It's obvious that he isolated Iran and he weakened Iran economically. And you talked about a regional balance of power shifting. Israel has had enormous success against Hamas and Hezbollah, which are two terrorist proxies of Iran, Muslim brotherhood offshoots, and part of this extremist ideology that President Trump worked with leaders in Saudi Arabia, UAE and Egypt to combat. I have no reason to think he won't do that again. And he was very successful at it. The leaders in the region that I described enjoyed working with President Trump. And I think that they are looking forward to him coming back into office. In fact, I'm sure of it*." [Note earlier in the interview, Hook highlighted it was significant that Trump's Day 1 calls included leaders of Saudi Arabia, UAE, Egypt and Israel"

At 7:10 min mark, Anderson “Do you expect the Gulf countries to support a further policy of maximum pressure, for example? Further escalation between Israel and Iran if that is what Donald Trump is supporting?” Hook ““*President Trump understands that the chief driver of instability in today’s Middle East is the Iranian regime. And the Gulf is I think the most sort of economically dynamic and culturally vibrant region in the world today. And this sort of extremism and revolutionary ideology that the Iranian regime exports is one of the obstacles. Right, to continuing on this good path. And when the US decides to seek accommodation with Iran, it then creates the space for other countries to do the same. But in my personal experience, I know that when we deter the Iranian regime, you have the countries that you described, who are on the frontlines of Iranian aggression, doing everything they can to be a part of that deterring Iran. President Trump has no interest in regime change. The future of Iran will be decided by the Iranian people. We’ve said that repeatedly over four years. But what President Trump did say in Riyadh was that he would isolate Iran diplomatically and weaken them economically so they can’t fund all of the violence that is going with the Houthis in Yemen, Hamas, Hezbollah, PIJ and these proxies that around Iraq and Syria today. All of whom destabilize Israel and our Gulf Partners.”*

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

https://english.news.cn/20241203/fa8fe87be48543ad9c359746035feca0/c.html

China's air freight volume hits record high

Source: Xinhua

Editor: huaxia

2024-12-03 16:01:45

BEIJING, Dec. 3 (Xinhua) -- The volume of China's air cargo has reached a historic peak, fueled by robust growth in international air freight, an official with the Civil Aviation Administration of China (CAAC) said on Tuesday.

Between January and October of this year, the country's aviation sector handled nearly 7.3 million tonnes of cargo and mail, marking a 19.3 percent increase compared to the same period in 2019, Shang Kejia, a CAAC official told a press conference.

Notably, international routes carried about 2.93 million tonnes of cargo and mail, up by a significant 48.5 percent from the same period in 2019, Shang said.

Over the past week, for instance, the average daily cargo flights reached 752, including 498 international flights, reflecting year-on-year growth of 70.9 percent and 100.4 percent, respectively.

The surge in air cargo comes in the backdrop of China's industrial transformation, deeper Belt and Road cooperation, and the rapid development of cross-border e-commerce, Shang noted.

Looking ahead, Shang said the CAAC will continue to focus on enhancing the allocation of air traffic rights, refining route and flight management policies, and advancing cost reduction and efficiency improvements in air logistics. ■

Embargoed until 0945 CST (0145 UTC) 2 December 2024

Caixin China General Manufacturing PMI®

Manufacturing sector expansion accelerates

The expansion of China's manufacturing sector accelerated midway through the final quarter of the year. Higher new work inflows, including from abroad, led to a solid rise in production. Purchasing activity and inventory levels also rose as confidence about the year ahead grew.

That said, employment levels declined despite a further accumulation of backlogged work. This was partially attributed to cost concerns as input price inflation accelerated in November. Average selling prices also rose at a quicker pace as a result.

The headline seasonally adjusted Purchasing Managers' Index™ (PMI®) – a composite indicator designed to provide a single-figure snapshot of operating conditions in the manufacturing economy – rose to 51.5 in November, up from 50.3 in October. Rising further past the 50.0 neutral mark, the latest data signalled that conditions in the manufacturing sector improved for a second straight month. The pace of growth was the fastest since June and above the series average.

Central to the latest advancement in manufacturing sector conditions was greater new business inflows. Incoming new orders placed with Chinese manufacturers increased amongst the fastest rate in three-and-a-half years. A renewed rise in export orders also supported the rise in overall new orders. Panellists revealed that better underlying demand conditions, new product launches and stockpiling following the US election were amongst the reasons for the rise in new work.

Production levels increased on the back of higher new work, rising at the quickest rate since June, with intermediate goods makers recording the fastest rate of growth among the monitored segments.

A second successive month of backlog accumulation was meanwhile observed in the Chinese manufacturing sector, though firms remained cautious about hiring. Headcounts declined for a third straight month in November due to resignations and redundancies. The rate of job shedding eased from October and was modest, however.

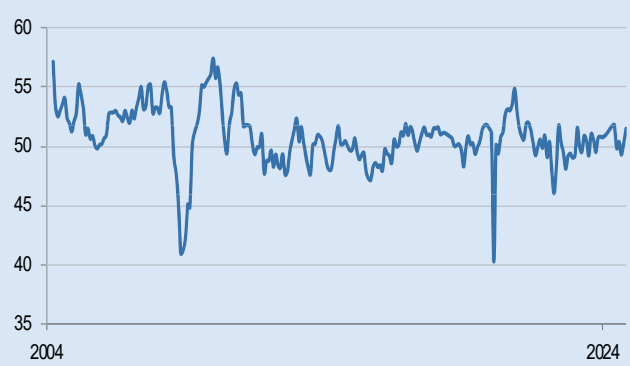
Meanwhile, purchasing activity and stocks of purchases both increased in the latest survey period. Anecdotal evidence suggested that rising production requirements led Chinese manufacturers to build safety stock. Post-production inventory also rose in November with instances of outbound shipment delays being mentioned. In contrast, lead times for the delivery of inputs stabilised after lengthening through the past five months.

Turning to prices, average input prices increased at the fastest pace in five months as raw material costs were reported to have risen. In turn, firms shared their additional cost burdens with clients, leading to the quickest gain in selling prices since October 2023. Export charges continued to fall marginally, however, with international pricing power impacted by competition.

Finally, sentiment in the Chinese manufacturing sector improved in the penultimate month of the year. The level of confidence was the highest since March. Firms signalled hopes that better economic conditions and government policies can support sales in the year ahead.

China General Manufacturing PMI

sa, >50 = improvement since previous month



Sources: Caixin, S&P Global PMI

Key findings:

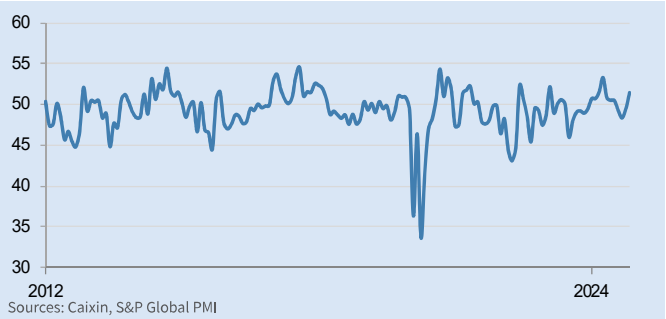
New orders rise at quickest pace since February 2023 amid renewed export growth

Output price inflation at 13-month high

Business confidence at strongest in eight months

New Export Orders Index

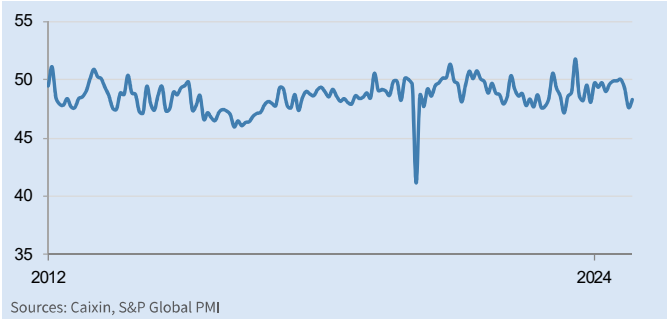
sa, >50 = growth since previous month



Sources: Caixin, S&P Global PMI

Employment Index

sa, >50 = growth since previous month



Sources: Caixin, S&P Global PMI

Commenting on the China General Manufacturing PMI® data, Dr. Wang Zhe, Senior Economist at Caixin Insight Group said:

"The Caixin China General Manufacturing PMI came in at 51.5 in November, up 1.2 points from the previous month, marking the second straight month of expansion in the sector.

"Growth in supply and demand accelerated. Manufacturers' output maintained expansion amid a stable increase in demand. The gauge for output stayed in expansionary territory for the 13th consecutive month while hitting the highest level in the second half of this year. However, the production of investment goods shrank slightly.

"Total new orders also picked up, with the corresponding gauge rising more than 2 points to a high not seen since February 2023. Demand for consumer goods was particularly strong. External demand bounced back, due partly to some overseas clients upping purchases after the U.S. election, pushing the indicator into positive territory for the first time in four months.

"The labor market remained in contraction. Despite the growth in supply and demand, manufacturers maintained a cautious approach to hiring, keeping employment in contraction for the third straight month, though the pace of contraction slowed from October. Companies producing consumer goods or investment products saw a reduced workforce, while employment at intermediate goods producers remained stable.

"The backlogs of work continued to increase amid improved supply and demand, with the corresponding gauge staying in expansionary territory for the second straight month and reaching a new high since May. Increases were most pronounced at manufacturers of intermediate goods.

"Price levels rose. The upward trend in both input costs and output prices observed in October accelerated in November. Rising prices for raw materials, especially steel, pushed up input costs. Manufacturers were able to pass some of those costs downstream amid the uptick in demand.

"Supplier logistics remained steady, reflected by the indicator for delivery times reading 50. Manufacturers continued to increase purchases amid improved markets, resulting in increased inventories of raw materials and finished goods.

"Business optimism improved. Surveyed companies expressed confidence in the effects of recent stimulus policies and the economic recovery in the near term. The gauge for future output expectations rose significantly, approaching its historical average.

"Overall, in November, manufacturers increased supply amid expanded demand. Businesses purchased more to add stocks while market optimism bounced back, growth in input costs and output prices picked up, and supply logistics were stable. However, companies remained cautious about hiring.

"Since late September, the synergy of existing policies and additional stimulus measures has constantly acted on the market, which is reflected in the improved economic performance in the past two months. Positive factors have increased, which contributed to an accelerated economic recovery in November.

"That said, it is worth noting that the downward pressure facing the economy remains prominent, marked by continued contraction of employment, indicating the effect of economic stimulus is yet to be felt in the labor market and businesses' confidence in expanding workforce needs to be strengthened.

"While the economic downturn appears to be bottoming out, it needs further consolidation. The consistency and effectiveness of those additional stimulus measures deserves close attention. The structural and cyclical pressures facing the economy are expected to continue, coupled with the likelihood of continued accumulation of external uncertainties, which requires sufficient policy buffers."

Excerpt from https://www.vitol.com/china-medium-term-demand-outlook-vitols-view/?utm_source=Linkedin&utm_medium=Social&utm_id=China+demand+medium

China medium term oil demand outlook – Vitol's view

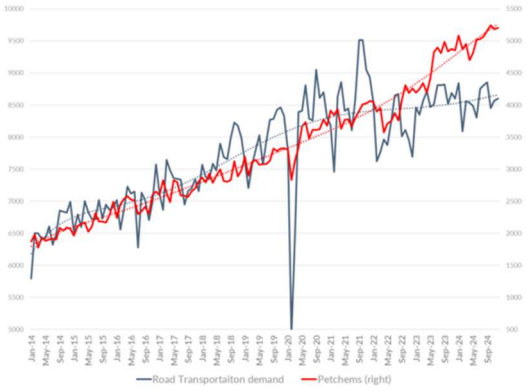
Giovanni Serio, Vitol's global head of research, recently presented our China medium term demand outlook at the FT Commodities Asia conference.

China outlook

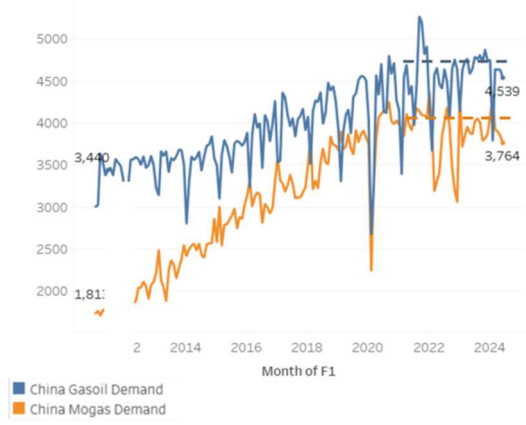
Oil demand trend and outlook

There has been a lot of focus in the last few months on the economic slow-down in China and the impact this might have on oil demand. Notwithstanding the headlines, the demand growth trend of imports + domestic crude production, looks similar to the slope before Covid.

It's been weak in the last couple of months – but that is just volatility – the trend is the same. What has changed is the composition of that demand. It is very clear when you break it down that peak transport fuel has been reached in China, but that petchem continues to expand and drive demand growth.



China demand trends / kbpd



Mogas and gasoil demand / kbpd

EV sales

Chinese policy has ensured that China's EV penetration is higher than any other major market, with sales surpassing those of internal combustion engines for the first time this year.

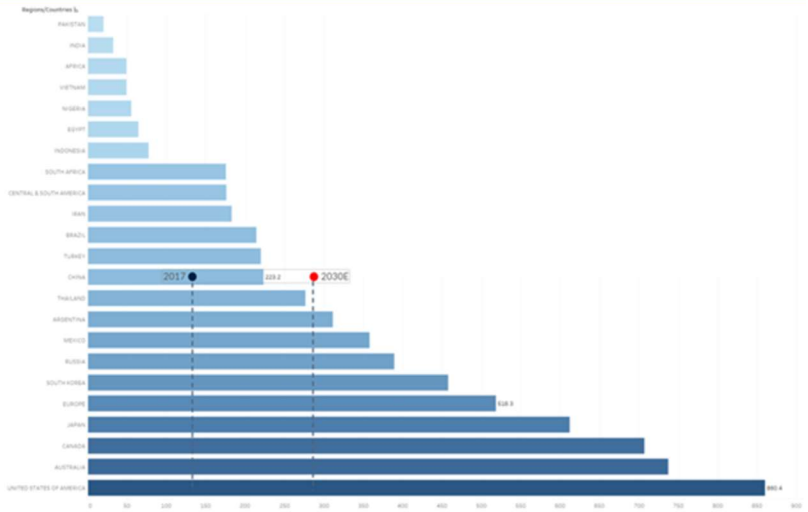
One of the strongest drivers of this are plug-in hybrid electric vehicles (PHEVs), while battery electric vehicles (BEVs) have been growing but at a much slower pace. This is important because when you look at the outlook for oil demand you need to break it down by vehicle type – BEVs will not add to oil demand, while PHEVs will continue to drive some level of demand.

Other factors

Despite the high penetration of the electric fleet – particularly in the taxi and ride-hailing categories – there are some potential mitigating factors to the decline in gasoline demand. How these play out may have some impact on the overall trajectory that we're seeing.

There has been a disconnect between the growth of the ICE fleet and gasoline demand. This is likely because car utilisation rates have not yet recovered to pre-pandemic levels in China, unlike most other countries. In addition, China has a per capita car ownership of 223.2 vehicles per thousand inhabitants, placing it between Turkey and Thailand. Should either of these factors materially change, (increased utilisation of ICE fleet, or increased ownership of ICE vehicles) then the demand outlook for gasoline may be affected.

But above all, two key factors stand out between bullish and bearish mogas – to what extent the current aging ICE fleet is renewed with EVs, and within that, what percentage of those are PHEVs.



Global car ownership rate (selected markets) / vehicles per 1,000 inhabitants

Gasoil demand medium term outlook

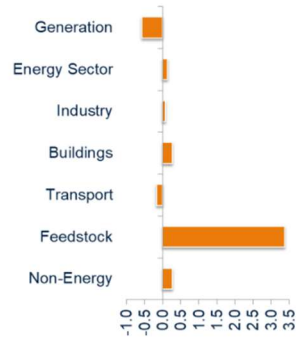
Largely drivers for gasoil demand are either linked to:

- the economy: like off-road consumption and total freight growth which is closely aligned to industrial production, or
- the energy transition: like road to waterway and railway freight. Freight accounts for 70% of total diesel demand. Heavy duty vehicle demand, which is most exposed to the switch to LNG, accounts for 40%.
-

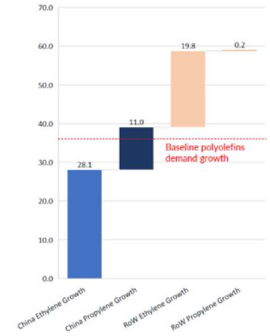
LNG consumption – and therefore a reduction in gasoil demand – is entirely dependent on economics. Where LNG costs less, LNG truck sales rise and LNG consumption increases, and the reverse when diesel is less expensive. We're forecasting poor LNG truck economics to 2027 and then a resumption of the LNG penetration trend once the economics make sense.

Global demand drivers going forward

The big change globally, and evidenced here by China, will be that the driver of oil demand growth, will switch from transport fuels to petchem feedstock.



Global oil demand growth by sector 2025-30 / mbpd



Olefins capacity growth, 2028 vs 2023 / mtpa

China is set to play a significant role with capacity increases in the next few years. The growth next year is entirely capable of satisfying the global plastic demand growth. And subsequent years will follow the same trajectory.

It is likely that petchem feedstocks will be the driving force of oil demand in China and globally.

Air Passenger Market Analysis

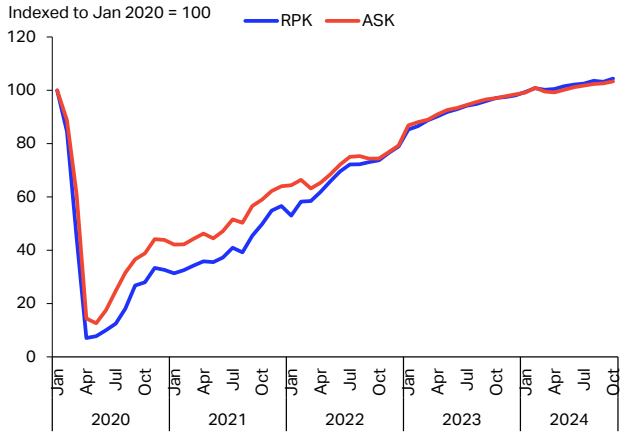
October 2024

Stable growth trend continues in October

- Industry total Revenue Passenger-Kilometer (RPK) grew 7.1% year-on-year (YoY) in October, surpassing the historical highs. Available Seat-Kilometer (ASK) climbed 6.1% YoY, in line with passenger demand. Passenger load factor (PLF) increased by 0.8 percentage points (ppt) compared to the previous year, as the industry total load factor reached 83.9%.
- Total domestic traffic grew 3.5% YoY. PR China is still in the leading position with 9.7% YoY. All monitored markets continued to display signs of stability.
- Industry international passenger traffic climbed 9.5% YoY in October. North American and European carriers achieved higher growth this month than the previous, while the remaining regions saw further deceleration in RPK increase in line with general expectations.
- International traffic within Europe is at an all-time high, North American international markets were strong again this month, and the growth momentum in Asia Pacific international route areas continues.

Global stable growth sustained in October

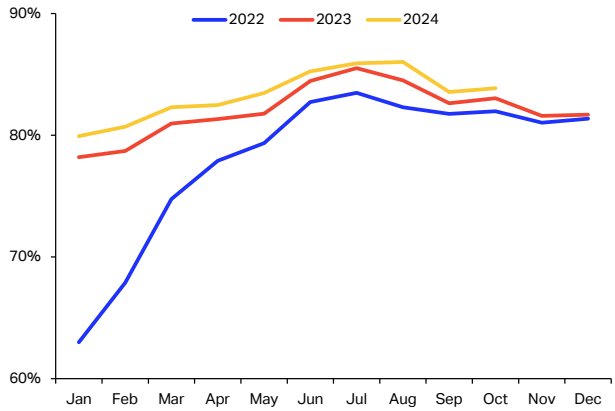
Chart 1 – Global RPK and ASK, Seasonally Adjusted, Indexed to Jan 2020 = 100



Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

Global passenger traffic maintained a stable growth pace in October. Industry-wide Revenue Passenger-Kilometers (RPK), grew 7.1% year-on-year in October. In seasonally adjusted terms, RPK increased 1.1% month-on-month (MoM) (**Chart 1**). Airline seat capacity, measured in Available Seat Kilometers (ASK), climbed 6,1% YoY and 0.7% MoM. The industry average passenger load factor (PLF) reached 83.9% (**Chart 2**). Overall all industry-wide traffic indicators indicate a stable growth trend while passenger traffic continues to surpass historical levels. Noticeably, PLF has been increasing over the past two years. The latest data shows that in October 2024, PLF was almost 2 percentage points higher than in October 2019 and 0.9 points compared to the previous year. Current supply chain challenges causing fewer new aircraft deliveries to airlines and strong demand for air travel are likely to contribute to the recent PLF trend.

Chart 2 – Industry PLF, RPK's % share of ASK



Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

In domestic and international markets, the same observation can be made, as PLF reached all-time high levels for the month of October while RPK continued to grow. Regional differences remained, however. Carriers from North America, Latin America, and the Middle East achieved lower average load factors this year than the previous year, while the remaining regions established new records (**Chart 3**). African

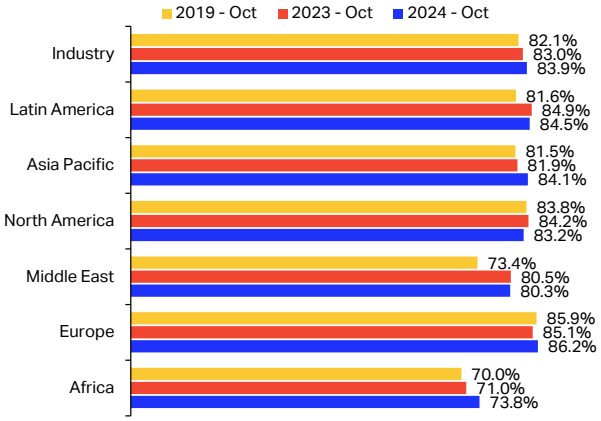
Air passenger market in detail - October 2024

	World share [1]	October 2024 (% year-on-year)				October 2024 (% year-to-date)			
		RPK	ASK	PLF (%-pt)	PLF (level)	RPK	ASK	PLF (%-pt)	PLF (level)
TOTAL MARKET	***100.0%***	**7.1%**	**6.1%**	**0.8%**	**83.9%**	**10.8%**	**9.3%**	**1.2%**	**83.5%**
International	*60.1%*	9.5%	8.6%	0.6%	83.5%	14.1%	13.8%	0.2%	83.2%
Domestic	*39.9%*	3.5%	2.0%	1.2%	84.5%	5.9%	2.6%	2.6%	83.9%

[1] % of industry RPKs in 2023

airlines showed the largest change compared to 2023 and 2019. Indeed, October 2024 PLF was 3.8 and 2.8 percentage points higher than in 2019 and 2023 respectively.

Chart 3 – Regional and industry passenger load factors, RPK's %share of ASK



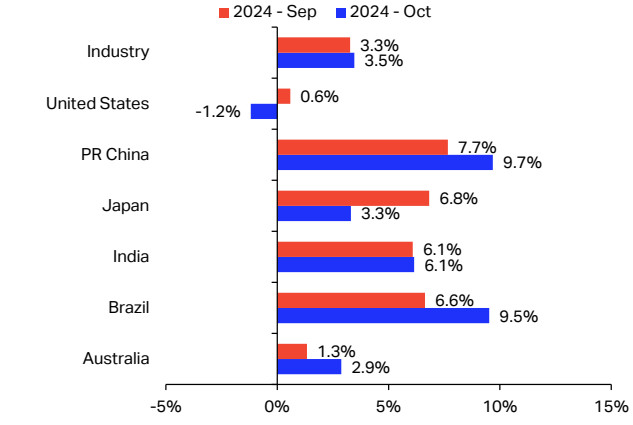
Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

Diverse domestic traffic outcomes across countries

Domestic RPK increased 3.5% over the previous year, slightly accelerating from the last month. In actual volume, domestic passenger traffic has again surpassed the historical record passed the previous year. Overall, all key markets saw stable traffic levels, while only the US saw a contraction compared to the prior year. RPK contracted 1.2% YoY in the US, as traffic levels remained almost identical to last year's (**Chart 4**). PLF also fell by 1.7 points in October as airline seat capacity expanded by 0.8% YoY.

PR China continued to lead among the countries with 9.7% YoY. While 2023 RPK figures in the country surpassed by far the peak of 2019, this year's traffic levels were almost 13% higher than in 2023 in cumulative terms. Domestic traffic continues to grow rapidly in the country, while outbound international travel has slowly risen over the past months.

Chart 4 – Domestic RPK growth by market, YoY%



Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

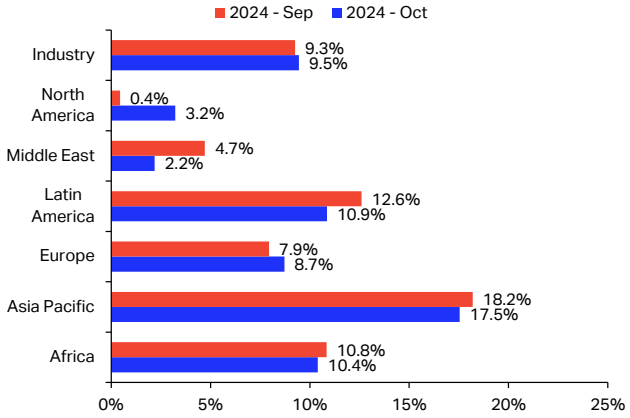
ASK grew by a modest 2.2%, contrasting with passenger demand. Over 2023, the country had seen a large increase in airline seat capacity, partly resulting from the use of widebody aircraft on domestic routes, which was previously not so common. The relatively slower growth in seat capacity thus represents a small rise from the higher base of 2023.

Japan's passenger traffic grew 3.3% YoY, while seat capacity decreased by 0.2% YoY, resulting in a 2.9-point increase in PLF. The country has seen ASK growth to fluctuate while the seat capacity level remained unchanged over that period. In the meantime, demand for air travel increased in the country, pushing load factors above past records.

In India passenger traffic levels grew 6.1% YoY while seat capacity increase was still ahead, resulting in 2.7 points decrease in load factor. Brazil's air traffic growth accelerated further in October, reaching 9.5% YoY. In Australia, RPK was 2.9% higher than the previous year. Similarly to other markets, Australia's ASK levels have stagnated over the past year while passenger demand increased.

Steady growth momentum for international travel

Chart 5 – International RPK growth by airline region of registration, YoY%



Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

The international RPK increase in October remained largely similar to the previous month's, halting the deceleration of the growth momentum. International passenger traffic was 9.5% higher YoY (**Chart 5**). International traffic continues to drive most of the industry-wide increase in RPK. On the supply side, ASK growth is still aligned with demand. As we move further away from the pandemic period, RPK growth rates are expected to decline towards pre-pandemic figures. However, this month, North America and Europe, two of the three largest regions in terms of traffic, accelerated in growth, greatly contributing to a higher industry figure this month. The remaining

regions' growth was lower than previous measures, as expected.

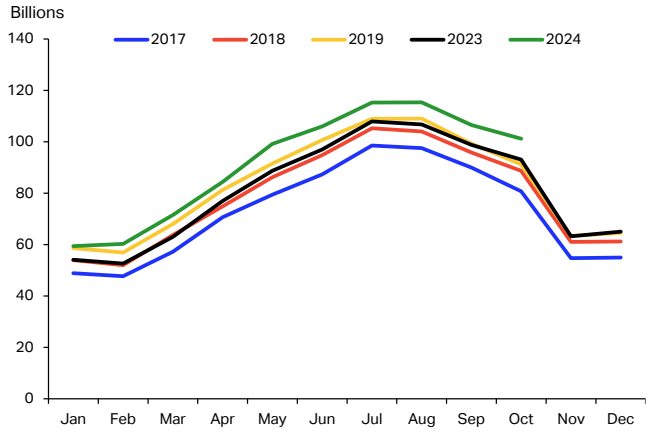
Asia Pacific airlines are still leading among the regions. RPK increased 17.5% YoY well beyond the industry average, and PLF reached 82.9%. The surge in domestic travel demand in PR China is driving most of the increase in traffic for this region.

Latin American carriers registered a 10.9% yearly expansion in international traffic, still surpassing pre-pandemic levels. Middle East and African carriers' international RPK rose 2.2% and 10.4%, respectively.

Traffic within Europe continues to expand

Data suggests that the intra-European international market saw slow expansion over the last decade but has seen tremendous growth this year, exceeding 2019 levels. The drivers of this increase are likely to be the dynamism of Eastern and Central European passenger markets and solid demand for air travel in Western European countries despite general pressures on consumers' budgets. In October, international RPK within Europe increased 8.7% YoY while PLF was still lower than 2019 levels (**Chart 6**).

Chart 6 – International RPK, Within Europe route area

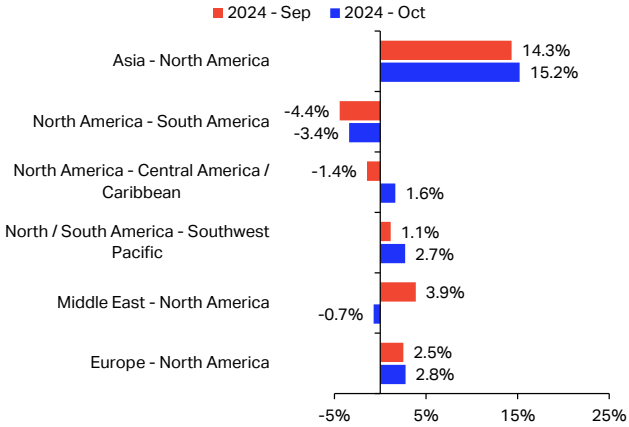


Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

North American international route areas saw disparate results

International passenger traffic route areas from and to North America saw disparate results in comparison to the previous year. The Asia–North America route showed the highest growth but remains the only route that has not yet exceeded 2019 levels. RPK increased 15.2%, from a lower base as air services between PR China and the US are still under historical levels. International flows from North America to South America and Central America/Caribbean saw a contraction in traffic over the year. However, these route areas had seen a tremendous surge in demand in 2023. Consequently, the recent decreases in traffic occurred from a higher base. Still, the North America – South America route area recorded three consecutive months of RPK decline. Traffic between Europe and North America continued to increase at a stable pace. In October, RPK had increased by 2.8% YoY (**Chart 7**).

Chart 7 – International RPK, YoY% **–** Major route areas from and to North America

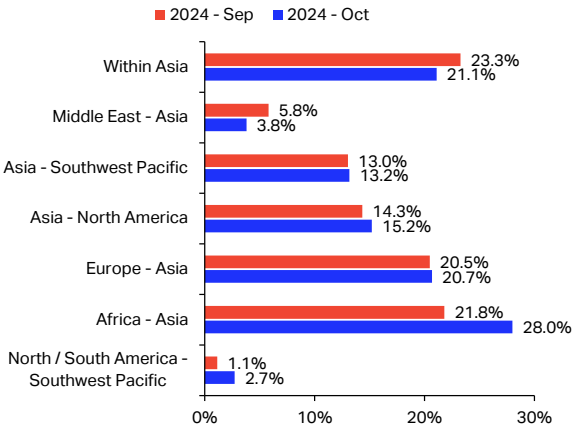


Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

Asia international traffic climbs rapidly

All major international route areas from and to Asia Pacific saw comparable yearly increases in RPK in October compared to the month prior. RPK on the Africa—Asia route had the highest growth rate, reaching 28.0% YoY. Overall, most markets have not recovered their pre-pandemic levels of traffic while growth momentum still propels RPK growth at a fast pace.

Chart 8 - International RPK, YoY% **–** Major route areas from and to Asia Pacific



Sources: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

Air passenger market in detail - October 2024

	World share[1]	October 2024 (% year-on-year)				October 2024 (% year-to-date)			
		RPK	ASK	PLF (%-pt)	PLF (level)	RPK	ASK	PLF (%-pt)	PLF (level)
TOTAL MARKET	***100.0%***	**7.1%**	**6.1%**	**0.8%**	**83.9%**	**10.8%**	**9.3%**	**1.2%**	**83.5%**
Africa	*2.1%*	9.3%	5.2%	2.8%	73.8%	13.3%	10.2%	2.0%	74.8%
Asia Pacific	*31.7%*	12.7%	9.7%	2.2%	84.1%	17.9%	13.3%	3.2%	83.2%
Europe	*27.1%*	7.9%	6.5%	1.1%	86.2%	9.0%	8.4%	0.4%	84.7%
Latin America	*5.5%*	7.0%	7.5%	-0.4%	84.5%	8.1%	7.3%	0.6%	83.8%
Middle East	*9.4%*	2.5%	2.7%	-0.1%	80.3%	9.5%	9.1%	0.3%	80.7%
North America	*24.2%*	0.3%	1.6%	-1.1%	83.2%	4.8%	5.3%	-0.3%	84.4%
International	***60.1%***	**9.5%**	**8.6%**	**0.6%**	**83.5%**	**14.1%**	**13.8%**	**0.2%**	**83.2%**
Africa	*1.8%*	10.4%	5.3%	3.4%	73.2%	13.2%	9.8%	2.2%	74.3%
Asia Pacific	*14.7%*	17.5%	17.2%	0.3%	82.9%	28.0%	27.5%	0.4%	83.6%
Europe	*23.6%*	8.7%	7.3%	1.1%	85.7%	10.0%	9.5%	0.3%	84.0%
Latin America	*2.7%*	10.9%	11.6%	-0.6%	85.3%	15.1%	14.9%	0.2%	85.1%
Middle East	*9.1%*	2.2%	2.5%	-0.2%	80.2%	9.4%	9.2%	0.2%	80.7%
North America	*8.1%*	3.2%	2.9%	0.3%	84.2%	7.3%	8.6%	-1.0%	84.4%
Domestic	***39.9%***	**3.5%**	**2.0%**	**1.2%**	**84.5%**	**5.9%**	**2.6%**	**2.6%**	**83.9%**
Dom. Australia	*0.8%*	2.9%	-0.5%	2.8%	86.2%	3.6%	2.6%	0.7%	80.9%
Domestic Brazil	*1.2%*	9.5%	7.8%	1.3%	83.7%	3.8%	2.4%	1.1%	81.5%
Dom. China P.R.	*11.2%*	9.7%	2.2%	5.9%	86.2%	12.8%	3.3%	7.0%	83.2%
Domestic India	*1.8%*	6.1%	9.6%	-2.7%	81.7%	5.0%	6.2%	-1.0%	85.8%
Domestic Japan	*1.1%*	3.3%	-0.2%	2.9%	84.0%	2.9%	-0.6%	2.7%	77.5%
Domestic US	*15.4%*	-1.2%	0.8%	-1.7%	82.5%	3.8%	3.8%	0.0%	84.0%

[1]% of industry RPKs in 2023

Note: the six domestic passenger markets for which broken-down data are available account for approximately 31.4% of global total RPKs and 78.8% of total domestic RPKs

Note: The total industry and regional growth rates are based on a constant sample of airlines combining reported data and estimates for missing observations. Airline traffic is allocated according to the region in which the carrier is registered; it should not be considered as regional traffic. Historical statistics are subject to revision.

IATA Sustainability & Economics
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3 December 2024

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Air Cargo Market Analysis

October 2024

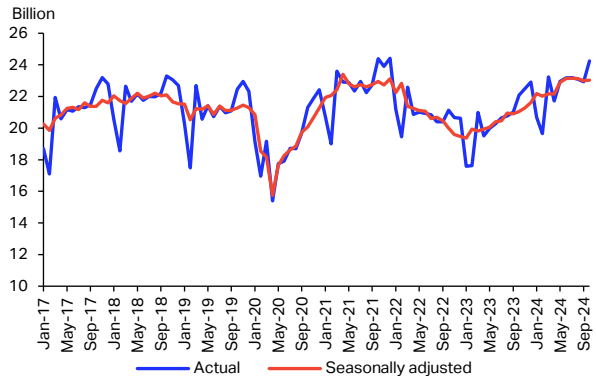
Industry capacity reaches new peaks.

- Global Cargo Tonne-Kilometers (CTK) grew by 9.8% year-on-year (YoY) in October, marking the 15th consecutive month of growth. Month-on-month (MoM) demand increased by 5.7% after seasonal adjustments.
- International CTK expanded by 10.3% compared to last year, with growth evident across all regions and major trade lanes. Latin America and Caribbean carriers led with a 17.6% YoY increase. The Middle East-Europe trade lane recorded a significant 15.3% annual rise in cargo demand.
- Global air cargo capacity, measured in Available Cargo Tonne-Kilometers (ACTK), grew by 5.9% YoY in October, reaching record-high levels.
- Global air cargo yield continues to rise, while jet fuel prices have fallen YoY.

Air cargo demand enters 15-month consecutive YoY growth

October marked the global air cargo industry's 15th consecutive month of demand growth, with a 9.8% YoY **(Chart 1)**. In MoM terms, the industry's CTK grew by 5.7%, reversing a brief contraction seen in the previous two months (after seasonal adjustment).

Chart 1 – Industry CTK, billion



Source: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

The largest contributors to the industry's annual CTK's growth remained carriers from Asia Pacific, followed by North American ones, taking the second spot for the first time since August 2023. Of the industry's 9.8% YoY, Asia Pacific carriers contributed 46.1% and North American one contributed 26%. The increased growth from North American carriers was likely driven by the three-day port strike in the USA, prompting maritime shippers to mitigate the risk by transporting some commodities by air. Additionally, the Golden Week holiday in China, during which factories shut down for a week, may have further boosted demand for air freight handled by these carriers. European airlines contributed 16.6%, while the Middle East contributed 6.4% during the same period.

In year-to-date terms, the industry's air cargo demand in October surged 12.2% compared to 2023. Concurrently, the latest CTK volume reached a new year-to-date record.

Healthy growth in international cargo demand in October from all regions

International routes have seen remarkable traffic for five consecutive months, with a 10.3% YoY increase in October. Airlines benefit from the growing e-commerce demand in the US and Europe, especially with the ongoing capacity limits in ocean shipping. Carriers worldwide have experienced growth in international traffic for most of the year, with October increasing between 1.8% and 19.8% **(Chart 2)**.

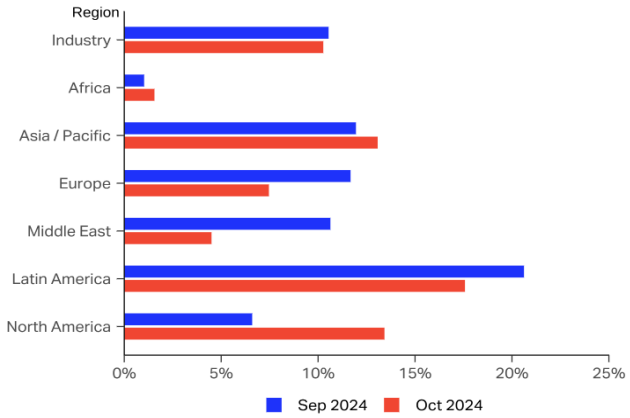
Airlines in Latin America and the Caribbean again marked the highest annual growth in international CTK at 17.6% YoY. North American airlines followed with 13.4%, and Asia Pacific airlines saw a 13.1% increase.

Air cargo market in detail - October 2024

	World share [1]	October 2024 (% year-on-year)				October 2024 (% year-to-date)			
		CTK	ACTK	CLF (%-pt)	CLF (level)	CTK	ACTK	CLF (%-pt)	CLF (level)
TOTAL MARKET	***100.0%***	**9.8%**	**5.9%**	**1.7%**	**47.3%**	**12.2%**	**8.1%**	**1.7%**	**45.4%**
International	*86.6%*	10.3%	7.2%	1.5%	52.9%	13.1%	10.4%	0.2%	50.9%

Note 1: % of industry CTKs in 2023

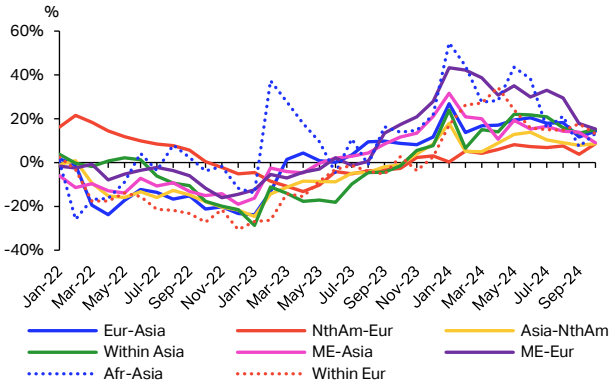
Chart 2 – International CTK by airline region of registration, YoY, %



Source: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

Annual international CTK growth was positive across all major routes, though at varying degrees **(Chart 3)**. The highest increase was on the Middle East-Europe route at 15.3%, marking 14 months of double-digit growth and 15 consecutive months of overall growth. Within Asia, cargo traffic followed with 15% YoY growth, sustaining growth for 12 months, including eight months at double digits. Europe - Asia ranked third, rising 14.3% YoY, maintaining 20 consecutive months of growth, 11 of which were double digits. Asia-North America, the largest market, grew more moderately at 8.6% for 12 consecutive months.

Chart 3 – International CTK by route area, YoY, %

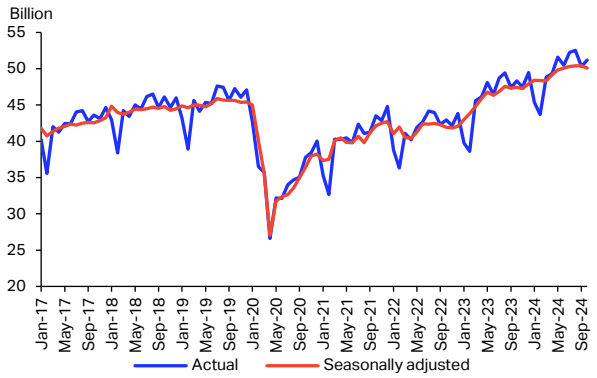


Source: IATA Sustainability and Economics using data from IATA Information and Data

October extends record-breaking air cargo capacity growth

In October, global ACTK increased by 5.9% YoY, while decreasing by 0.6% MoM after seasonal adjustment **(Chart 4)**. Throughout 2024, industry capacity has reached record highs for ten straight months. Year-to-date, ACTK has surged by 8.1%, highlighting 2024 as an outstanding year for cargo capacity. Additionally, the air cargo load factor (CLF), which measures the balance between demand and supply, rose by 1.7 percentage points compared to the year-to-date value in October 2023. This increase in CLF is expected to boost airline revenue and profitability.

Chart 4 – Industry ACTK, billion

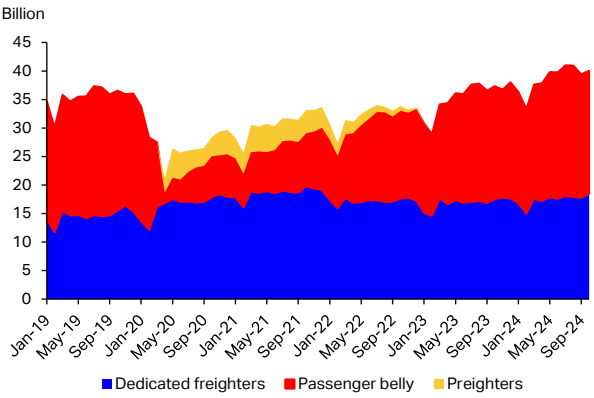


Source: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics

Last month, air cargo capacity growth aligned with demand trends, primarily driven by international routes, which saw a 7.2% YoY increase. This growth continued the recent pattern, with international belly-hold capacity rising by 8.5% YoY, marking the 43rd consecutive yearly growth month in this category **(Chart 5)**.

Yearly growth in belly-hold capacity has slowed since its peak in April 2021, but volumes remained at record highs in the last month, continuing the trend since April. Meanwhile, dedicated freighter capacity increased by 5.6% YoY in October, marking the seventh consecutive month of growth, with volumes nearing their 2021 peaks.

Chart 5 – International ACTK by cargo business type, billion



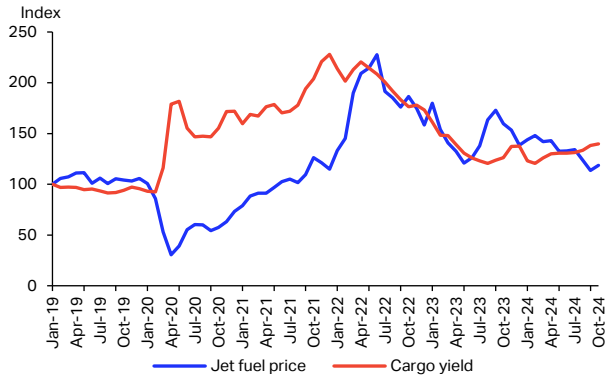
Source: IATA Sustainability and Economics using data from IATA Information and Data

Air cargo profits grow as fuel costs continue to drop

In October, average global jet fuel prices rose by 4.4% from the previous month, marking the first increase in three months. On the other hand, in YoY terms, they dropped by 25.7% YoY, the fifth consecutive decrease, settling at USD 89.8 per barrel on October 31.

The average monthly jet fuel crack spread widened slightly to USD 14.2, reversing a seven-month decline. Global oil demand growth is slowing, partly due to weaker consumption in China. Given these developments, airlines stand to benefit from lower oil prices through reduced jet fuel costs, which are a significant part of their operating expenses **(Chart 6)**.

Chart 6 – Jet fuel price and air cargo yield (with surcharges), global index, Jan 2019 = 100

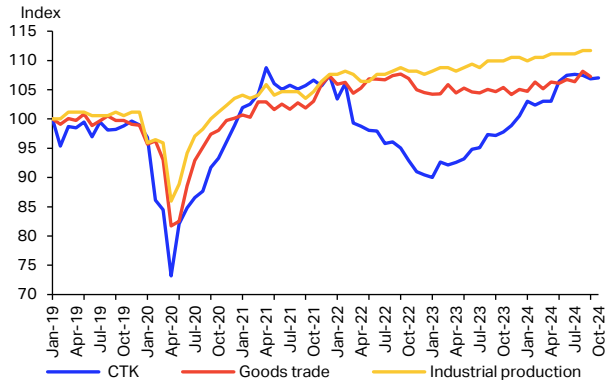


Source: IATA Sustainability and Economics using data from IATA Jet fuel price monitor, CargoIS

In the meantime, global air cargo yield (including surcharges) increased by 1.2% MoM and 10.6% YoY, marking the second consecutive month of double-digit growth. By the end of October, air cargo yields were 49% above 2019 levels. This favorable yield is partly driven by booming e-commerce, with Asian companies shipping products directly to American and European consumers. Additionally, the reduced reliability of ocean shipping and associated rate hikes, primarily due to geopolitical tensions, have led some shippers to switch from sea to air transport.

Industrial production and trade grow mildly as manufacturing PMIs signal expansion

Chart 7 – CTK, industrial production at constant USD prices, and cross-border goods trade volume, global index, seasonally adjusted, Jan 2019 = 100

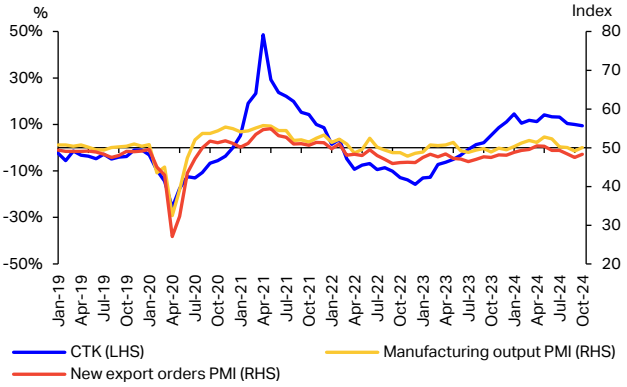


Source: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics, Macrobond

In September, industrial production, including mining, manufacturing, and utilities, remained flat month-over-month in constant USD terms **(Chart 7)**. On the contrary, the index grew 1.6% YoY, maintaining the growth rate seen in August. Global goods trade increased by 2.4% from the previous year, while monthly growth contracted by 0.9%. The rise in trade is partly ascribed to inventory stockpiling in anticipation of potential uncertainties, such as the port strike in the US.

Global manufacturing activity rebounded in October, with the Purchasing Managers' Index (PMI) rising to 50.9, indicating expansion. This marks a turnaround from the previous month's contraction. Meanwhile, the global new export orders PMI remained below the 50-point threshold, signaling a fifth consecutive month of decline in international trade demand. This reflects ongoing uncertainty and weakness in global trade, with purchasing managers anticipating further shrinkage in new export orders. **(Chart 8)**.

Chart 8 – Seasonally adjusted industry CTK, YoY, % (LHS), and global manufacturing PMIs, 50 = no change (RHS)

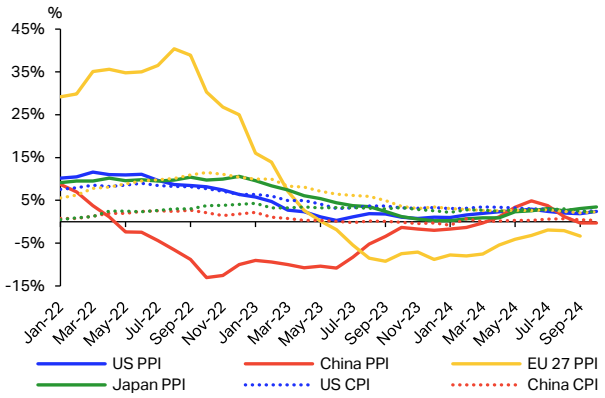


Source: IATA Sustainability and Economics using data from IATA Information and Data - Monthly Statistics, S&P Global Markit

Consumer price inflation is within the Central Banks' target rate for major economies but China

U.S. headline inflation, measured by the annual Consumer Price Index (CPI), rose by 0.17 percentage points to 2.58% in October, ending a six-month decline. Similarly, EU inflation increased by 0.24 percentage points to 2.33%. Conversely, Japan's consumer price inflation rate fell by 0.25 percentage points to 2.25%, the second month of deceleration in a row. In all these markets, inflation levels within central bank targets signal economic stability, ensuring consistent operating costs for air cargo and fostering a favorable environment for demand growth. China's consumer inflation fell to 0.29% in October, sparking concerns about an economic slowdown. Weak domestic activity may lead to reduced air cargo exports as lower consumer spending and deflationary pressures on producers could decrease demand for imported goods and reduce outbound trade volumes **(Chart 9)**.

Chart 9 – Consumer price index and producer price index in major economies, YoY, %



Source: IATA Sustainability and Economics using data from Macrobond

The Producer Price Index (PPI), a measure of price changes at the producer level, often indicates future consumer inflation trends. In October, the U.S. PPI rose to 2.4%, up 0.5 percentage points—the first increase in four months. Japan's PPI also climbed to 3.4%, gaining 0.3 points. Meanwhile, China's PPI remained at -0.3%, marking its second month of deflation. The EU's PPI for September fell further into deflation at -3.3% YoY, with October data pending.

These PPI changes can impact air cargo supply and demand. Rising PPI figures in the U.S. and Japan may increase production costs, potentially reducing air cargo demand as businesses adjust. On the other hand, deflation in China and the EU might result in lower production costs, which could enhance air cargo demand as exports become more competitive.

Air cargo market in detail - October 2024

	World share [1]	October 2024 (% year-on-year)				October 2024 (% year-to-date)			
		CTK	ACTK	CLF (%-pt)	CLF (level)	CTK	ACTK	CLF (%-pt)	CLF (level)
TOTAL MARKET	***100.0%***	**9.8%**	**5.9%**	**1.7%**	**47.3%**	**12.2%**	**8.1%**	**1.7%**	**45.4%**
Africa	*2.0%*	1.6%	7.7%	-2.4%	40.1%	10.7%	16.3%	-2.1%	41.8%
Asia Pacific	*33.3%*	13.4%	9.3%	1.8%	49.3%	15.3%	12.0%	1.4%	46.8%
Europe	*21.4%*	7.6%	3.9%	1.9%	55.5%	12.9%	8.7%	2.0%	53.2%
Latin America	*2.8%*	18.5%	5.8%	4.4%	41.1%	12.6%	7.9%	1.5%	36.6%
Middle East	*13.5%*	4.5%	0.8%	1.7%	48.0%	15.0%	6.8%	3.3%	46.6%
North America	*26.9%*	9.5%	5.8%	1.4%	41.1%	6.4%	3.6%	1.0%	39.7%
International	***86.6%***	**10.3%**	**7.2%**	**1.5%**	**52.9%**	**13.1%**	**10.4%**	**0.2%**	**50.9%**
Africa	*2.0%*	1.6%	7.7%	-2.5%	41.1%	10.6%	16.1%	2.2%	42.9%
Asia Pacific	*29.8%*	13.1%	12.4%	0.3%	55.8%	15.3%	15.8%	0.4%	54.3%
Europe	*21.0%*	7.5%	4.4%	1.7%	57.1%	13.1%	9.2%	0.3%	55.2%
Latin America	*2.4%*	17.6%	5.6%	4.8%	47.3%	11.5%	9.3%	0.2%	40.7%
Middle East	*13.4%*	4.5%	0.7%	1.8%	48.3%	15.0%	6.8%	0.2%	46.9%
North America	*17.9%*	13.4%	7.9%	2.5%	50.3%	8.6%	6.3%	-1.0%	47.1%

Note 1: % of industry CTKs in 2023

Note 2: the total industry and regional growth rates are based on a constant sample of airlines combining reported data and estimates for missing observations. Airline traffic is allocated according to the region in which the carrier is registered; it should not be considered as regional traffic. Historical statistics are subject to revision.

IATA Sustainability and Economics
economics@iata.org
3 December 2024

Get the data

Access data related to this briefing through IATA's Monthly Statistics publication:
www.iata.org/monthly-traffic-statistics

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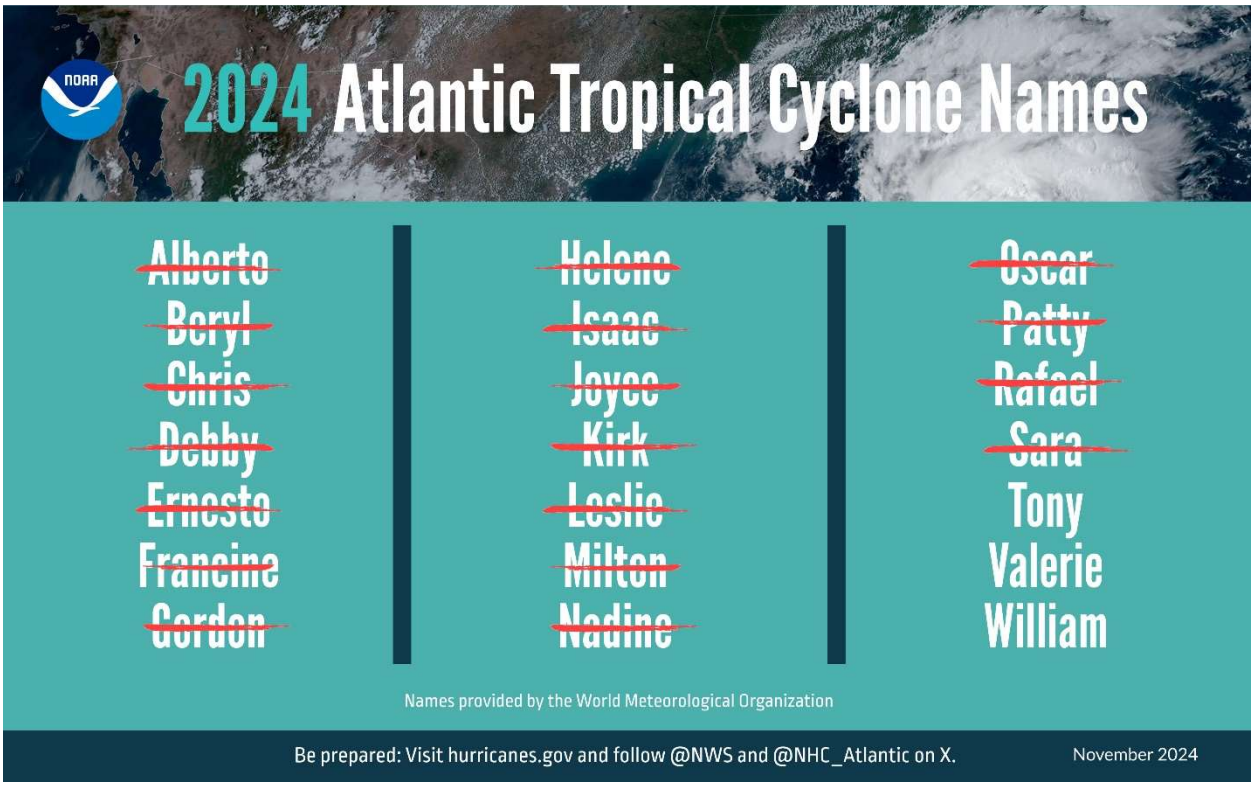
https://www.noaa.gov/news-release/atlantic-hurricane-season-races-to-finish-within-range-of-predicted-number-of-named-storms

Atlantic hurricane season races to finish within range of predicted number of named storms

2024 season came roaring back despite slowdown during typical peak period
November 25, 2024

The 2024 Atlantic hurricane season, which officially ends on Nov. 30, showcased above-average activity, with a record-breaking ramp up following a peak-season lull.

The Atlantic basin saw 18 named storms in 2024 (winds of 39 mph or greater). Eleven of those were hurricanes (winds of 74 mph or greater) and five intensified to major hurricanes (winds of 111 mph or greater). Five hurricanes made landfall in the continental U.S., with two storms making landfall as major hurricanes. The Atlantic seasonal activity fell within the predicted ranges for named storms and hurricanes issued by NOAA's Climate Prediction Center in the 2024 August Hurricane Season Outlook. An average season produces 14 named storms, seven hurricanes and three major hurricanes.



The Atlantic basin saw 18 named storms in 2024, with five reaching major hurricane status. Tropical cyclone names are selected by the World Meteorological Organization. (Image credit: NOAA)

"As hurricanes and tropical cyclones continue to unleash deadly and destructive forces, it's clear that NOAA's critical science and services are needed more than ever by communities, decision makers and emergency planners," said NOAA Administrator, Rick Spinrad, Ph.D. "I could not be more proud of the contributions of our scientists, forecasters, surveyors, hurricane hunter pilots and their crews for the vital role they play in helping to safeguard lives and property."

Twelve named storms formed after the climatological peak of the season in early September. Seven hurricanes formed in the Atlantic since September 25 — the most on record for this period.

“The impactful and deadly 2024 hurricane season started off intensely, then relaxed a bit before roaring back,” said Matthew Rosencrans, lead hurricane forecaster at NOAA’s Climate Prediction Center, a division of NOAA’s National Weather Service. “Several possible factors contributed to the peak season lull in the Atlantic region. The particularly intense winds and rains over Western Africa created an environment that was less hospitable for storm development.”

The record-setters
Hurricane Beryl was the earliest Atlantic basin Category-5 hurricane on record. It caused significant storm surge flooding across parts of Texas and Louisiana after making landfall near Matagorda, Texas, as a Category-1 storm.

Hurricane Helene made landfall as a Category-4 storm on the Florida Gulf Coast on September 26. The storm caused catastrophic flooding across the southern Appalachians, widespread wind damage from the Gulf Coast to the North Carolina mountains and storm surge flooding along portions of western Florida. Preliminary data indicate that Helene was the deadliest hurricane to affect the continental U.S. since Katrina in 2005, with more than 150 direct fatalities, the majority of which occurred in North Carolina and South Carolina. Hurricane Helene marked the first time ever that NOAA’s National Hurricane Center (NHC) forecasted a system to become a major hurricane before it became a tropical depression or tropical storm. NWS was forecasting extreme rainfall totals and rates over western North Carolina more than 48 hours in advance.

Hurricane Milton made landfall as a Category-3 near Siesta Key, Florida, on October 9 and resulted in a tornado outbreak that produced 46 tornadoes and caused torrential rainfall and localized flooding with total rainfall amounts of 10-15 inches (and higher). Milton produced a destructive storm surge between Siesta Key, Florida, and Ft. Myers Beach, Florida, including Charlotte Harbor. Milton's rate of rapid intensification was among the highest ever observed, with a 90-mile-per-hour increase in wind speed during the 24-hour period from early October 6 to early October 7. NHC’s first forecast for Hurricane Milton indicated the potential of a major hurricane landfall along the coast of west-central Florida almost two days before it formed into one, and more than four days prior to landfall.

The 2024 Pacific Hurricane Season
Hurricane season activity was below-normal for both the eastern Pacific basin and central Pacific basin and fell within predicted ranges, respectively.

The eastern Pacific basin hurricane season had 12 named storms, with four becoming hurricanes and three intensifying to major hurricane status. The central Pacific had two named storms.

A season of advancement
NOAA’s Hurricane Analysis and Forecast System aided NHC forecasters with improved predictions this season.

“During this active season in the Atlantic, NOAA’s National Weather Service, National Hurricane Center and NOAA Research hurricane scientists continued to advance our modeling and observation

capabilities, preliminarily resulting in the most accurate NHC track forecasts ever issued at all forecast lead times in 2024," said Michael Brennan, Ph.D., director, NOAA's National Hurricane Center.

NHC implemented an experimental version of the cone graphic in 2024 that includes U.S. tropical storm and hurricane watches and warnings over inland areas. NHC scientists will evaluate public feedback on the usefulness of the experimental cone during the off-season months before NHC determines the future of the new cone graphic.

By the numbers: NOAA's hurricane research and response

This season, NOAA Hurricane Hunter aircraft flew 392 mission hours to collect atmospheric data that are critical to hurricane forecasting and research. The Hurricane Hunters passed through the eye of hurricanes 80 times and deployed more than 1,246 scientific instruments.

NOAA's Atlantic Oceanographic and Meteorological Laboratory hurricane researchers participated in 67 Hurricane Hunter missions, processing Tail Doppler Radar scans and dropsonde profiles that are critical for real-time decision making and improving forecasts. Researchers also set records while testing new technology used to study hard-to-reach areas of the storms, releasing 17 Black Swift Technologies S0 uncrewed aircraft systems and 91 Skyfora StreamSondes. NOAA Research and partners also observed the ocean throughout the season to support hurricane intensification research and forecasts, using ocean gliders, saildrones, wave buoys and drifters.

NOAA's National Ocean Service (NOS) captured more than 26,000 aerial overflight images of areas impacted by hurricanes Debby, Francine, Helene and Milton, and their navigation response teams surveyed 316 linear nautical miles in and around impacted ports to inform their safe reopening. The NOS Integrated Ocean Observing System coordinated a hurricane ocean glider field campaign with partners to monitor and track dynamic ocean features known to influence hurricane intensity. More than 100 gliders captured ocean conditions ahead of hurricanes aimed at the U.S. coast and contributed ocean temperature data to forecasts.

On the horizon

The NHC and Central Pacific Hurricane Center Tropical Cyclone Reports for 2024 will be published as they are completed through early 2025 on the Tropical Cyclone Report site.

CANADIAN ASSOCIATION OF ENERGY CONTRACTORS

EST. 1949

CAOEC

75 YEARS

STATE OF THE INDUSTRY

2024 REPORT AND 2025 FORECAST

CAOEC IS COMMITTED TO:

- Safety, environmental, and operational excellence in the industry
- Acting in the best interests of its member companies, their employees, and the industry
- Responding to climate change through sustainable solutions
- Engagement and participation with Indigenous peoples in energy development
- A strong tradition of leadership and cooperation

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FOR IMMEDIATE RELEASE: NOVEMBER 29, 2024

PRESS RELEASE

CAOEC releases their 2024/25 Drilling and Service Rig Forecast and 2024 State of the Industry Report

THE CANADIAN ASSOCIATION OF ENERGY CONTRACTORS (CAOEC) SEES POCKETS OF OPTIMISM IN NEXT YEAR'S DRILLING AND SERVICE RIG FORECAST, BUT COMPETITIVENESS CONCERNS REMAIN.

- **Projected 2025 wells drilled:** 6,604 – an increase of 448 (7.3%) from 2024 (6,156)
- **Projected 2025 drilling operating days:** 69,344 – an increase of 4,706 (7.3%) from 2024 (64,638)
- **Projected 2025 service operating hours:** 1,064,083 – an increase of 52,753 (5.2%) from 2024 (1,011,330)
- **Total jobs expected:** 41,800 – an increase of 2,720 (7.0%) from 2024 (39,080)

Building on the modest but steady growth of last year, the Association is optimistic that growth will continue through 2025. With increased pipeline capacity following the completion of the Trans Mountain Expansion (TMX) and LNG Canada projects, combined with the new U.S. administration's strong interest in securing more affordable energy, Canada's growth potential in oil and gas is only expected to increase.

Despite the industry's positive impact and demonstrated commitment to responsible resource development, however, the Association has been sorely disappointed by the lack of support from the federal government. Policies like the oil and gas emissions cap and anti-greenwashing provisions in Bill C-59 have left Canada's energy sector in a difficult position, severely weakening its investment climate and creating additional uncertainty at a time when affordability and global energy security are already under threat.

While other nations have acknowledged the ongoing role that hydrocarbons will play in the world's energy future, taking measures to promote reliability and affordability, Ottawa's top-down approach with energy-producing provinces has not only ignored the strategic value of Canada's resources but also posed potential constitutional challenges.

The Trump administration will have profound implications for Canada's economy as it adopts a pro-business agenda and seeks to expand the U.S. energy sector. CAOEC President & CEO Mark Scholz warns that unless Canada responds with its own pro-business and pro-development approach, the ones to pay the price will be Canadian families, particularly those who live in rural, remote, and Indigenous communities. He states, *"Recent projects like LNG Canada and TMX, as well as the growth indicated in our 2025 Rig Forecast, have demonstrated that the energy sector not only helps sustain Canadian jobs but also strengthens our ability to support domestic and international consumers facing energy insecurity."*

The Association will continue to push for informed legislation that would allow Canada to strike a healthy balance between supporting a robust economy—preserving the jobs and livelihoods of millions of Canadians—and upholding environmental stewardship in the industry. As Scholz asserts, *"Our future and the future of generations to come depend on Canada's ability to compete on the world stage, which will never be achieved unless the positive contributions and economic significance of our industry are recognized at the highest levels of government. We must work together to design pragmatic legislation that reflects our potential and strengthens our presence in the global energy sector, and our Association is committed to collaborating with any government to reach that goal."*

ABOUT CAOEC

The Canadian Association of Energy Contractors (CAOEC) represents 95 land drilling, offshore drilling, and service rig member companies on the frontlines of energy security and transformation. They operate a fleet of 385 drilling rigs and 715 service rigs in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, and Atlantic Canada. CAOEC's members are varied and diverse, and include many small- and medium-sized enterprises that have been leaders in creating opportunities for young people, Indigenous communities, and middle-class workers.

By Mark A. Scholz
President & CEO
Canadian Association of
Energy Contractors (CAOEC)

MESSAGE FROM THE CEO

LEADING CANADA'S ENERGY EVOLUTION

Since our inception 75 years ago, the Canadian Association of Energy Contractors (CAOEC) has remained firmly committed to supporting our members in the pursuit of innovation, operational excellence, and sustainable growth. As the energy landscape continues to evolve and our industry faces increasing complexity, from emerging technologies to shifting regulatory frameworks and political uncertainty, it is our mission to empower members with the knowledge, resources, and collaboration they need to succeed in this dynamic environment.

Our industry's core commitment is to protect the health, safety, and well-being of the people who make our industry what it is. Energy service workers are the backbone of our sector, and their safety and mental wellness are of paramount importance. Whether it's in the field or at the office, our members know that the physical and psychological health of their people directly impacts productivity, performance, and overall success.

This year, our Association partnered with Movember, one of the world's leading men's health charities, to drive awareness around the issues affecting men's health and foster a culture of well-being. We understand that by investing in our people's health and wellness, we are ensuring a sustainable and resilient workforce for a thriving energy services sector.

To keep our industry at the forefront of the emerging energy transformation, we have also collaborated on forward-thinking initiatives, like the Alberta Drilling Accelerator (ADA) that was announced earlier this year by the Alberta Government. As we've witnessed with the extraction of resources like helium, lithium, and geothermal energy, and the development of carbon capture and storage, the drilling and service rig sector remains a leader in the deployment of advanced and sustainable solutions, and our people will play an essential role in Canada's energy future.

Despite our industry's commitment to responsible resource development, however, we are acutely aware of the challenges our sector faces from our own federal government and the discriminatory policies that overlook the strategic value of our energy resources. Measures such as an oil and gas emissions cap and the offensive provisions in Bill C-59 leave our industry's hands tied at a time when other world leaders are pivoting toward energy strategies that provide reliability, affordability, and a continued role for hydrocarbons in the foreseeable future. The United States, our closest ally and largest trading partner, has taken bold steps to expand its energy sector. Canada must do the same or risk falling behind, watching from the sidelines as the world moves on without us.

With the new U.S. administration in transition, a Trump White House will pursue a pro-business agenda through lower taxes and intentional regulatory reform. The U.S. will build energy infrastructure quicker and become a magnet for investment and innovation. Canada needs to take this approach seriously or risk further eroding our GDP growth potential, which will directly translate into smaller paychecks and a lower standard of living for Canadian families, especially those who live in rural, remote, and Indigenous communities.

Canada cannot keep its seat at the global energy table without policies that preserve and promote a competitive investment climate, which is why the Association spent much of this year engaging with federal and provincial governments to inform policymakers on our members' capacity to responsibly develop oil, natural gas, and other energy assets. Recent projects like LNG Canada and TMX, as well as the growth indicated in our 2025 Rig Forecast, have demonstrated that the energy sector not only helps sustain Canadian jobs but also strengthens our ability to support domestic and international consumers facing energy insecurity.

Our industry has the power to enhance both domestic and global stability, environmental responsibility, and economic opportunity. Our future and the future of generations to come depend on Canada's ability to compete on the world stage, which will never be achieved unless the positive contributions and economic significance of our industry are recognized at the highest levels of government. We must work together to design pragmatic legislation that reflects our potential and strengthens our presence in the global energy sector, and our Association is committed to collaborating with any government to reach that goal.

As we look ahead, CAOEC will continue to be a trusted partner to our members, providing the advocacy and support they need to build on their successes. Whether it's through initiatives that improve worker health and safety, advance innovation, or help navigate policy change, we will ensure that our members are equipped to lead the way forward in Canada's energy evolution.

Thank you for your ongoing trust and partnership over the last 75 years. We look forward to shaping the future of energy together for many more years to come.

Message from the Premier of Alberta

On behalf of the Government of Alberta, it is my pleasure to send greetings for the 2024 Canadian Association of Energy Contractors' (CAOEC) State of the Industry report.

Alberta's energy industry is the backbone of our economy and critical to our province's contributions to Canada's growth. There is no path forward—for our country or our planet—without safe, secure, responsibly produced energy. That's why Alberta is continuing work to reduce emissions without killing jobs and investment. Innovation and diversification are leading the way, and our government values the efforts of partners like the CAOEC in supporting Canadian energy and responding to climate change through sustainable solutions.

The CAOEC's annual report provides valuable insights for industry, investors and government, and I appreciate the hard work that goes into the report and the event each year. My sincere thanks to everyone at the CAOEC and the Explorers and Producers Association of Canada for your continued leadership and commitment to your members and their employees.

Honourable Danielle Smith, Premier of Alberta

MESSAGE FROM THE EXPLORERS AND PRODUCERS ASSOCIATION OF CANADA

By Tristan Goodman
President & CEO
The Explorers and Producers Association of Canada (EPAC)

Looking ahead to 2025, there are important opportunities and signals for growth in our sector.

Within Canada, TMX coming online has brought much needed egress, and LNG Canada's in-service date is drawing closer with an expected start-up early next year.

In the macro international environment, there are major shifts underway. We are seeing energy security and affordability crises in countries around the world. People (and governments) are unfortunately experiencing the realities of implementing energy and climate policy in a way that negatively affects energy costs and reliability, and they are pivoting as a result. The U.S. election outcome is a recent example of this, and the incoming Trump administration is likely to intensify the global push toward energy policies that promote affordable and reliable energy sources, both domestically and for international allies. This signals a continued demand for huge amounts of oil and natural gas, and our allies want to buy this oil and gas from responsible producers like those in Canada's energy sector.

And who are these producers? Multinational companies have left or are decreasing their footprint in Canada. The vast majority of Canada's production is now developed by Canadian-based companies, whom EPAC is proud to represent.

The key to unleashing our sector's potential is rebuilding Canada's reputation as a place where things can get done, projects can get built, and environmental performance is recognized. The focus by the new U.S. administration on growing oil and gas production and dramatically reducing government spending and inefficiencies has the potential to draw investment into the U.S. at Canada's expense. Canada must take decisive and quick action to set competitive policy, improve regulatory efficiency, and make further improvements to market access.

Canada's oil and gas entrepreneurs are innovative and come to the table with practical solutions when we are consulted. We are vocal when policies and regulations are harmful, as well as when they are helpful. We want to continue to be a major contributor to Canada's economy, with opportunities to contribute even more in terms of creating massive amounts of wealth for all Canadians – which means great jobs, improved affordability, and increased funding of social programs.

By Pierre Alvarez
Pierre is the Vice Chair of Global Public Affairs. He was a member of Prime Minister Brian Mulroney's energy team that dismantled the National Energy Program, a former President of the Canadian Association of Petroleum Producers (CAPP), and an executive at Trans Mountain.

CRITICAL TIME FOR INDUSTRY ASSOCIATION ENGAGEMENT AND MOBILIZATION

The start-up of TMX and the upcoming commissioning of LNG Canada have brought long-awaited optimism to the oil and gas industry. This is welcome news as the political landscape is shifting at a dizzying rate across North America. A new Trump administration in the U.S., a minority Liberal government in Ottawa facing defeat, and a slim victory for the NDP in British Columbia leaves only Alberta, Saskatchewan, and Newfoundland and Labrador as stable, openly pro-oil and gas jurisdictions in Canada.

For drillers and service companies, political uncertainty underscores a critical need to remain involved and engaged with policy discussions and to advocate for their interests. CAOEC's role in monitoring policy developments, establishing relationships with decision-makers, and effectively advocating for the industry is crucial.

In the U.S., Big Political Questions Remain

On November 5th, the U.S. election concluded with former President Trump and the Republican Party sweeping to victory in both the presidency and Congress. Their campaign signalled major policy shifts directly impacting energy and drilling industries. Though the incoming Trump administration has stated strong support for the oil and gas industry and promised to streamline regulations, it is unclear how it will view exports from Canada. The looming threat of across-the-board tariffs on all exports is the most immediate concern, but longer-term key issues such as the renegotiation of the Canada-U.S. Free Trade Agreement (CUFSA) and the pursuit of tariff carve-outs will be immediate points of concern that will require an all-of-industry response.

In Canada, Political Change with More Expected

The Trudeau government appears to be nearing the end of its tenure, with an election required by the end of 2025. The Canadian electorate is increasingly focused on economic stressors, affordability, and the rising costs associated with carbon taxes. Promises by the Conservative Party of Canada under Leader Pierre Poilievre to abolish some of the most egregious Liberal policies and legislation, such as the greenwashing elements of Bill C-59 and the discriminatory oil and gas emissions cap, removing the consumer carbon tax, plus a commitment to regulatory reform, offer hope to industry.

In British Columbia and Saskatchewan, Premiers Eby and Moe avoided defeat in recent elections, but in both cases, personnel changes will be dramatic. It will be like working with new governments, with Eby winning the slimmest majority and every minister in Moe's Cabinet taking on new portfolios.

Alberta Premier Danielle Smith is approaching mid-mandate and has strengthened her political position with a strong policy program of change and pro-resource sector growth, often restating her commitment to doubling production. Record population growth and fluctuating commodity prices will challenge both industry and government.

Opportunity and Risk for Industry

The top concerns for Canadian and U.S. voters align with economic pocketbook issues, a double-edged sword for industries like oil and gas. On one hand, a strong economy depends on energy and natural resources, potentially creating opportunities for growth. However, sweeping changes in leadership and the emergence of new policymakers mean an unpredictable policy and regulatory environment.

Governments dependent on other parties for support, such as Canada's federal Liberals, may focus their energy on niche policies that appeal to select voter groups, leaving core industries like drilling at risk of being sidelined. When political survival is prioritized, there is a tendency to bypass engagement and consultation with affected sectors, creating heightened risks of unintended policy consequences.

Adapting and swiftly responding to shifting political winds will be key, and it's up to business leaders and advocates like CAOEC to ensure the energy services sector is not overlooked in critical policy discussions.

ALBERTA DRILLING ACCELERATOR: BREAKING NEW GROUND

By Jeanine Vany
Jeanine is the Executive Vice President of Corporate Affairs at Eavor Technologies Inc., a Next Generation Geothermal technology-based energy company.

Canada's drilling and service rig sector is set to play an imperative role in bringing emerging technologies and commodities like geothermal to a commercial-ready state. In part, achieving market entry and broader commercialization aims rely on innovation to drive economies of scale. Recognizing the ability of CAOEC members to enable geothermal technologies that stimulate drilling activity and expedite economic growth, Eavor, CAOEC, and the Canadian Geothermal Energy Association launched the Alberta Drilling Accelerator (ADA) in conjunction with the Government of Alberta on April 30, 2024. The ADA's initial phase consisted of a feasibility study that evaluated economic, regulatory, social, and environmental considerations to inform project design and mandate, which includes:

1. Developing and testing cutting-edge drilling techniques to optimize resource extraction.
2. Fostering collaboration between industry, academia, and government to progress novel geothermal technologies.
3. Promoting Alberta's leadership in responsible energy development by sharing best practices related to high-performance drilling solutions.

The ADA is poised to usher in the next wave of drilling-reliant commodities and technologies, prioritizing geothermal innovation at the onset. This will be achieved through the inception of Canada's first open-access, technology-agnostic geothermal drilling testbed, mirroring other initiatives globally, like the Utah FORGE and the Icelandic Deep Drilling Project.

Technology development transpiring at the ADA will help enable geothermal anywhere by improving drilling efficiency and commercial economics, allowing geothermal companies to harvest heat emanating from superhot rock, often situated at depths that exceed 5 km. A recent report, Pathways to Commercial Liftoff: Next Generation Geothermal Power, issued by the United States Department of Energy, concluded that drilling speeds at the FORGE site increased by over 500% in 3 years while significantly decreasing well development costs, expediting commercial applications and underscoring the importance of research and development hubs for the industry.

Alberta's immediate-term opportunity for the geothermal sector is predicated upon technology exports, which can, in turn, advance energy security and emissions reduction efforts abroad. This vision is enabled by Alberta's world-class conventional energy sector labour pool and drilling assets, which would be harnessed at the ADA to maximize the sector's potential.

The ADA has the capability to write the next great chapter in Alberta's storied legacy of energy and drilling innovation. Rooted in initiatives like the Alberta Oil Sands Technology and Research Authority and through modern-day organizations like Alberta Innovates and Emissions Reduction Alberta, the ADA—in collaboration with CAOEC—will position Alberta as an international leader in geothermal technology development and exports, promoting domestic economic growth.

By Evan Connor
Evan is the Senior Manager of Development at Movember, one of the world's largest charities whose aim is to help men live healthier, happier, and longer lives.

ENERGIZING MEN'S HEALTH: THE OIL RIG RUMBLE

For the men and women powering Canada's energy sector, Movember created the Oil Rig Rumble – a challenge that goes beyond raising awareness. It's a call to action for a workforce facing unique health risks, especially in mental health and cancer prevention.

With men representing 76% of the workforce, the health statistics for Canadian men hit close to home: three in four suicides in Canada are men, and young men aged 15–39 are the most common demographic for testicular cancer. Prostate cancer is the most common cancer for Canadian men, with 25,000 new cases each year. The Oil Rig Rumble unites energy companies and field teams across Canada for 30 days of fundraising and health advocacy each November, bringing critical men's health resources to the forefront of an industry that prioritizes both safety and resilience.

Friendly Competition with High Stakes

The Oil Rig Rumble rallies teams across the energy sector to compete, fundraise, and change the conversation around men's health. Companies can get started by signing up on Movember.com, creating a company team, and joining the Oil Rig Rumble challenge page. From there, they engage employees to participate, fundraise, and host creative events throughout the month — using the Rumble not only as a fundraising effort but as a crucial spark for conversations around mental health and early cancer detection within their workforce.

Partners like the Edmonton Oilers add extra excitement. This year's Oil Rig Rumble kicked off with an event featuring the Oilers' starting goalie Stuart Skinner, and teams that raise over $20,000 earn a chance to skate and play a game at Rogers Place in early December. The top fundraising team will also take home the coveted Oil Rig Rumble trophy – a 25 lbs replica oil rig that symbolizes industry pride, bragging rights and commitment to men's health.

Transforming Health Through Community

The Rumble isn't just about helping those in crisis today; it aims to transform health outcomes for men and their families across Canada. Funds raised go directly to Movember's health programming in mental health, suicide prevention, and prostate and testicular cancer research, supporting communities that need it most – including fathers, Indigenous men, and veterans to name a few. With over 300 funded projects in Canada, Movember ensures every dollar raised makes an impact where it's most needed.

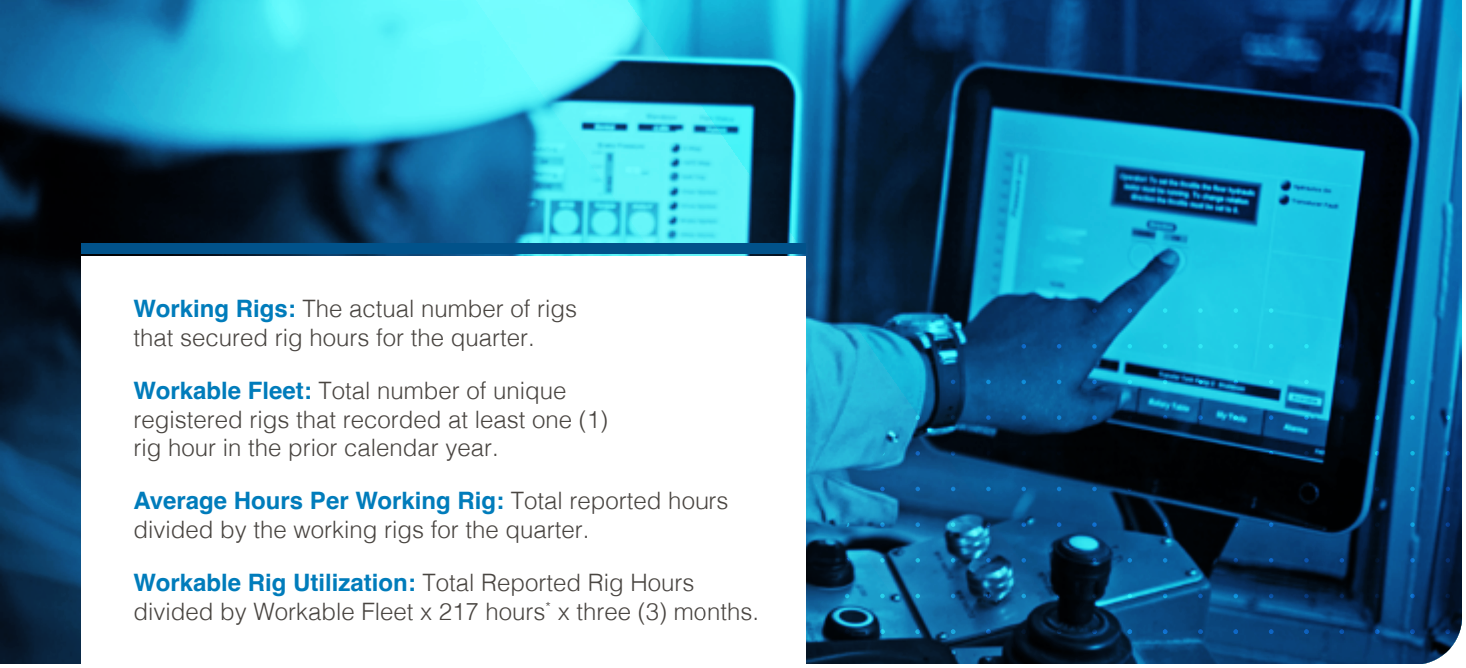
Championing the Cause: CAOEC President & CEO Mark Scholz Joins In

CAOEC got behind the cause in 2024, stepping up this year to help elevate the Oil Rig Rumble's impact across the energy sector. With President & CEO Mark Scholz leading the way, they put a bounty on his moustache, aiming to raise funds and inspire conversations across CAOEC's membership. Mark shared what inspired their involvement: *"As an association whose mission is to advocate for the needs of Canada's energy services sector, CAOEC understands the importance of promoting the health and well-being of our workers. That's why I've agreed to go clean shaven for our 2024 State of the Industry event if we reach our fundraising target, despite how much I love my mo. It's a small price to pay in support of the many men who make up the backbone of our industry, and I look forward to CAOEC's continued partnership with Movember to raise awareness around the issues affecting men's health."*

We Can All "Drill Deep" for Men's Health

Beyond raising funds, the Rumble encourages participants to actively engage with men's health. Teams compete to grow moustaches, get physically active, and host creative fundraisers – all to ignite conversations and reduce stigma. *"At Movember, we believe that even one conversation can make a difference,"* says Evan Connor, the campaign's lead coordinator. *"By taking part in the Oil Rig Rumble, energy sector workers are helping to tackle the stigma around men's health, and that's just as valuable as the dollars raised."*

To learn more about the Oil Rig Rumble, men's health resources, or get involved in the 2025 campaign, visit ***movember.com/oilrigrumble*** or reach out to Evan at ***evan.connor@movember.com.***



Working Rigs: The actual number of rigs that secured rig hours for the quarter.

Workable Fleet: Total number of unique registered rigs that recorded at least one (1) rig hour in the prior calendar year.

Average Hours Per Working Rig: Total reported hours divided by the working rigs for the quarter.

Workable Rig Utilization: Total Reported Rig Hours divided by Workable Fleet x 217 hours* x three (3) months.

SERVICE RIG ACTIVITY 2024

	Q1	Q2	Q3	Q4 (F)	
Working Rigs	455	395	443	490	**Average: 446**
Workable Fleet	649	649	649	649	
Operating Hours	276,328	214,523	259,308	261,171	**Total: 1,011,330**
Average Hours Per Working Rig	607	544	586	533	
Workable Rig Utilization	65%	51%	61%	62%	**Average: 60%**

SERVICE RIG FORECAST 2025

Operating Hours: UP 5.2% Year-Over-Year

	Q1	Q2	Q3	Q4	
Working Rigs	478	407	475	529	**Average: 472**
Workable Fleet	600	600	600	600	
Operating Hours	286,351	218,523	273,720	285,489	**Total: 1,064,083**
Average Hours Per Working Rig	599	537	576	540	
Workable Rig Utilization	73%	56%	70%	73%	**Average: 68%**

** 217 hours per month delineates more accurately a 100 per cent utilized crew and uses the "potentially" workable rigs*

Assumptions: $77.00/bbl WTI (USD) • $2.62/GJ AECO (CDN)
Source: Alberta Energy Regulator

DRILLING RIG ACTIVITY 2022-2024

2022

Total Number of Wells: **5,723**

Period	Active Rigs	Average Fleet	Operating Days
Q1	180	464	16,186
Q2	108	462	9,830
Q3	183	461	16,831
Q4	174	451	15,986
Average	**161**	**459**	**Total: 58,833**

2023

Total Number of Wells: **5,389**

Period	Active Rigs	Average Fleet	Operating Days
Q1	198	439	17,808
Q2	109	440	9,930
Q3	169	440	15,576
Q4	159	437	14,630
Average	**159**	**439**	**Total: 57,944**

2024

Total Number of Wells: **6,156 (F)**

Period	Active Rigs	Average Fleet	Operating Days
Q1	198	397	17,565
Q2	118	385	10,725
Q3	190	385	17,470
Q4 (F)	205	384	18,878
Average	**178**	**388**	**Total: 64,638**

DRILLING RIG FORECAST

2025 Total Number of Wells
6,604

2025

Active Rigs & Operating Days: UP 7.3% Year-Over-Year

Period	Active Rigs	Average Fleet	Operating Days
Q1	208	379	18,748
Q2	126	374	11,408
Q3	205	375	18,837
Q4	221	376	20,351
Average	**190**	**376**	**Total: 69,344**

Wells based on spud to rig release data

Assumptions: $77.00/bbl WTI (USD) • $2.62/GJ AECO (CDN) • 10.5 days/well
Source: Alberta Energy Regulator

ACTIVITY YEAR-OVER-YEAR

Year	Average Active Rigs	Rig Release Wells Drilled	Operating Days
2014	358	13,089	131,021
2015	178	6,199	64,893
2016	119	4,627	43,229
2017	184	7,091	66,524
2018	176	7,428	64,722
2019	122	5,545	45,428
2020	81	3,293	29,790
2021	119	4,638	43,840
2022	161	5,723	58,833
2023	159	5,389	57,944
2024 Actual + Q4 Forecast	178	6,156	64,638
2025 Forecast	190	6,604	69,344

Source: CAOEC, geoLOGIC systems ltd.

EMPLOYMENT YEAR-OVER-YEAR

Year	Direct Jobs *20 Per Rig*	Indirect Jobs *200 Per Rig*	Total Jobs *220 Per Rig*
2014	7,163	71,630	78,793
2015	3,561	35,606	39,167
2016	2,379	23,790	26,169
2017	3,687	36,865	40,552
2018	3,528	35,277	38,805
2019	2,442	24,421	26,863
2020	1,628	16,283	17,911
2021	2,385	23,850	26,235
2022	3,229	32,291	35,520
2023	3,177	31,771	34,948
2024 Actual + Q4 Forecast	3,553	35,528	39,081
2025 Forecast	3,800	38,000	41,800

Source: CAOEC

Total Jobs: UP 7.0% Year-Over-Year

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Overview

Table 1. Libya's energy overview, 2022

	Petroleum and other liquids	Natural gas	Coal	Nuclear	Hydro	Other renewables	Total
Primary energy consumption (quads)[a]	0.5	0.3	--	--		<0.1	0.8
Primary energy consumption (percentage)	57.1%	42.5%	--	--		0.4%	100.0%
Primary energy production (quads)[a]	2.3	0.4	--	--		<0.1	2.7
Primary energy production (percentage)	83.8%	16.2%	--	--		<0.1%	100.0%
Electricity generation (terawatthours)	8.8	21.5	--	--	--	<0.1	30.3
Electricity generation (percentage)	29.0%	70.9%	--	--	--	<0.1%	100.0%

Data source: U.S. Energy Information Administration, International Energy Statistics
Note: Electricity generation includes less than 1 terawatthours of other gases. Quads=quadrillion British thermal units; -- signifies not applicable
[a] Hydropower and other renewables are combined, and small-scale solar accounts for all other renewables.

- Libya was the seventh-largest crude oil producer in OPEC and the third-largest total petroleum liquids producer in Africa, after Nigeria and Algeria, in 2023.[1] At the beginning of 2024, Libya held 3% of the world's proved oil reserves and 41% of Africa's proved oil reserves (Figure 1).[2] Despite Libya's large oil reserves, political conflicts and militia attacks on hydrocarbon infrastructure have limited investments in the country's oil and natural gas sectors. These challenges have also constrained exploration and development of its reserves since 2011.
- Although Libya is a member of OPEC, it is exempt from the production cuts under the OPEC+ agreement.[3] Crude oil production is very volatile and is frequently shut in because of conflicts, labor disputes, budget constraints, ongoing maintenance issues, and insufficient storage capacity.
- Political instability that began with Libya's civil war in 2011 continues to pose risks for the energy sector.[4] The two government factions, the Government of National Accord (GNA) in the western region and the Libyan National Army (LNA) in the eastern region, and other local militias used oil exports as leverage, and their fighting caused massive disruptions to Libya's oil production between 2014 and 2020. The GNA and the LNA signed a ceasefire agreement in October 2020 and formed an interim unity government, the Government of National Unity (GNU), in March 2021.[5,6] The GNU scheduled presidential and parliamentary elections for late December 2021. However, the various parties could not agree on election laws and candidates, leading to the GNU indefinitely postponing the elections. The United Nations has been working with factions in Libya for almost three years to reach an agreement on constitutional laws and

procedures regarding the election process, but the political impasse has impeded elections moving forward.[7]

- In March 2022, Libya's parliament in the eastern region installed a new interim government and prime minister, Fathi Bashagha, in Tripoli, but the previous prime minister of the GNU, Abdulhamid al-Dbeibah, did not step down, resulting in the continuation of a divided government. Although Bashagha attempted to replace al-Dbeibah in Tripoli in July 2022, he was unsuccessful.[8] Al-Dbeibah and the eastern military leader Khalifa Haftar struck a deal in July 2022, which involved replacing the head of the national oil company, the eastern government no longer pushing for Bashagha to become the interim prime minister, and eastern factions ending a blockade on oil infrastructure.[9]
- The most recent conflict, which began in 2024, involves a conflict between the eastern and western governments over leadership of the Central Bank of Libya (CBL). The GNU replaced the CBL's long-time governor, Sadiq al-Kabir, in August 2024 after he attempted to put more fiscal restrictions on spending by the GNU. In response, the eastern government imposed blockades on oil fields and eastern ports.[10] However, the eastern government allowed a limited amount of oil cargoes to leave certain ports and oil production to go to refineries.[11] The two governments negotiated an agreement that installed an interim governor of the CBL at the end of September 2024.[12]
- Crude oil and natural gas export revenues are a significant part of Libya's economy, accounting for an estimated 97% of Libya's total government revenues and an estimated 93% of the country's total value of exports in 2023.[13] We estimate that Libya's net oil export revenues totaled $30 billion in 2023, similar to 2022 totals. Although Libya's oil exports rose in 2023, oil prices decreased from 2022.[14]
- Fossil fuels met nearly all of Libya's energy demand, with oil accounting for 57% and natural gas accouting for almost 43% in 2022. Rooftop solar projects met less than 1% of the remaining energy demand.[15]

Petroleum and Other Liquids

- At the beginning of 2024, Libya held Africa's largest proved oil reserves, at 48 billion barrels, representing 41% of the continent's total reserves (Figure 1). Libya ranked in the top 10 countries for global proved oil reserves.[16] About 95% of Libya's recoverable reserves are located in the onshore Sirte Basin in the northeast and Murzuq Basin in the southwest. These two basins also account for most of the country's oil production capacity.[17] Most of Libya remains unexplored for oil, and ongoing civil unrest has prevented a large-scale exploration program.[18]
- Libya produces mostly high-quality light, sweet (low sulfur) crude oil grades, which can be processed into valuable petroleum products in simple refineries.[19] After Libya's crude oil production (excluding condensates) reached around 1.7 million barrels per day (b/d) prior to the start of the 2011 civil war, political dissention over the following decade caused a steep production decline and several major disruptions to production and exports. Libya's production could return to pre-2011 averages if the various political factions could form a unified and stable government, attract foreign investment for exploration and development projects, and provide sufficient revenue to strengthen the country's aging oil infrastructure (Figure 2).[20]
- Following the ceasefire agreement signed by the eastern and western governments in October 2020, Libya's crude oil production recovered to more than 1.1 million b/d by 2021 (Figure 2).[21] In 2022, crude oil production again dipped, to below 700,000 b/d from May through July,

because of a dispute, later resolved, between the two rival governments that resulted in blockades of eastern ports.

- Despite Libya experiencing stable oil production for nearly two years, crude oil production was severely disrupted in August 2024. The large Sharara oil field in the country's southwestern region went offline in early August, except for its output that serves oil-fired electricity production and the Zawiya refinery on the western coast.[22] Disputing the Spanish government over a charge made against one of General Haftar's sons, the Haftar family decided to close the Sharara field, which is partially operated by Spanish oil company Repsol.[23] The second disruption, primarily in the eastern oil fields, occurred in late August 2024 after the western government replaced the Central Bank of Libya's leadership. The dispute led to the eastern government closing or reducing production from most of Libya's oil fields and disrupting export flows from the eastern ports.[24] Crude oil production fell to below 600,000 b/d by the end of August and during September 2024.[25] After the two sides came to an agreement on leadership at the CBL and the national oil company (NOC) lifted the force majeure at Libya's oil fields and ports, production began to rise in early October 2024.[26]
- Libya's natural gas fields produce condensates and natural gas plant liquids (NGPL) and contribute relatively small volumes to the country's total petroleum and other liquids production. We estimate that condensate and NGPL production was less than 100,000 b/d in 2023.[27]
- Libya's NOC intends to bolster crude oil and condensate production to more than 1.5 million b/d by the end of 2024 and 2.0 million b/d by 2025.[28] To reach this target, the NOC's plans include increasing oil production through developing new projects, rehabilitating fields that were damaged during the conflicts of the past decade, and increasing power supply to the fields. To increase its production and offset current declines from older fields, Libya needs to attract more foreign investment and technical capacity. The NOC and international companies announced several projects, most from the Waha oil concessions, over the past few years (Table 2), although many of these projects have faced delays because of the complications from Libya's political conflicts.[29]
- Despite the numerous challenges to maintaining oil production, the NOC kept oil production stable in 2023 and through July 2024 by starting production from new wells or rehabilitating existing wells across the country.[30]
- After declining to just below 200,000 b/d in 2020, Libya's petroleum and other liquids consumption increased each year since then and reached 235,000 b/d in 2023.[31] We estimate that the shares of gasoline (47%), diesel (32%), and fuel oil (8%) accounted for most of Libya's petroleum consumption in 2022.[32]
- Most of the domestically consumed crude oil is processed in Libya's refineries, and less than 20,000 b/d of crude oil directly fuels power plants.[33] Libya has five refineries with a combined nameplate crude oil distillation capacity of 380,000 b/d (Table 3).[34] However, the country produced around 130,000 b/d of petroleum products, about one-third of total nameplate capacity.[35] The low plant utilization is the result of damage that occurred to some facilities during the civil war and the slow progress made to rehabilitate all of the plants.[36] Ras Lanuf, Libya's largest refinery by nameplate capacity, was significantly damaged after the 2011 civil war and has been offline since 2013. A legal dispute over the damages between the joint venture (JV) owners, the NOC and Trasta (an Emirati-owned company) was finally settled in February 2022. The arbitration ruled that the NOC did not owe any damage compensation to Trasta and could buy Trasta's 50% share in the JV. Although this agreement is a significant step toward bringing the Ras Lanuf refinery back online, negotiations regarding the sale of Trasta's stake in

the JV are ongoing, and the NOC would need to rehabilitate the refinery to bring it back into operation.[37]

- The NOC is planning to build a 30,000-b/d refinery in southwestern Libya near the Sharara oil field (Table 2). Despite the facility's small size, it would be the first refinery to serve southern Libya. This region is far from the energy demand centers along the coast, and it relies on petroleum products transported a long distance by truck from the western coast. Construction has not begun, but the NOC estimates that the facility will be completed in about three years from the time that construction begins. The NOC signed an engineering contract with Honeywell International, Inc., in 2023. NOC subsidiary, Zallaf Company, reported in mid-2024 that the project is proceeding.[38]

Table 2. Key oil projects in Libya, 2024

Project	Operator or project investor	Additional estimated capacity (thousand barrels per day)	Announced start date	Notes
North Gialo	ConocoPhillips, TotalEnergies, Libya's NOC	100	TBA	Part of the Waha concession fields
Dahra rehabilitation	ConocoPhillips, TotalEnergies, Libya's NOC	40	August 2022, but project is stalled over political dispute[39]	40,000 b/d for the mid-term; output was 120,000 b/d in 2015 when damaged by Islamic State (ISIS).[40] Part of the Waha concession fields
Block NC-98	ConocoPhillips, TotalEnergies, Libya's NOC	80	TBA	Structures A & F to be developed.[41] Part of the Waha concession fields
Gialo III	ConocoPhillips, TotalEnergies, Libya's NOC	53	TBA	Part of the Waha concession fields
Mabruk rehabilitation	TotalEnergies, Equinor, Libya's NOC	25	2025[42]	25,000 b/d for 2025; output was 40,000 b/d in 2014 when damaged by ISIS[43]
North Hamada	Libya's NOC	50	August 2023	Field began in August 2023, but production was 10,000 b/d in late 2024.[44] Indonesia's MedcoEnergi divested its 50% stake in the project to Libya in May 2024[45]
Total		**348**		

Data source: *Middle East Economic Survey*, Energy Intelligence, Libya Oil Monitor, Fitch Solutions/BMI, TotalEnergies
Note: TBA=to be announced; NOC=national oil company

Table 3. Libya's existing crude oil refineries and projects

Refinery	Capacity (thousand barrels per day)	Status	Notes
Ras Lanuf	220	Closed since 2013	NOC is in the process of dissolving the joint venture with UAE's Trasta company and will rehabilitate the refinery
Zawiya	120	Existing	
Tobruk	20	Existing	Topping plant in eastern Libya
Brega	10	Existing	Topping plant in eastern Libya
Sarir	10	Existing	Topping plant in eastern Libya
South Refinery	30	Planned	The NOC signed an engineering contract with Honeywell International, Inc., in 2023
Total nameplate capacity	**380**		

Data source: Fitch Solutions/BMI, *Middle East Economic Survey,* Reuters, and Libya Observer

Figure 1. Largest proved reserve holders of total oil, January 2024

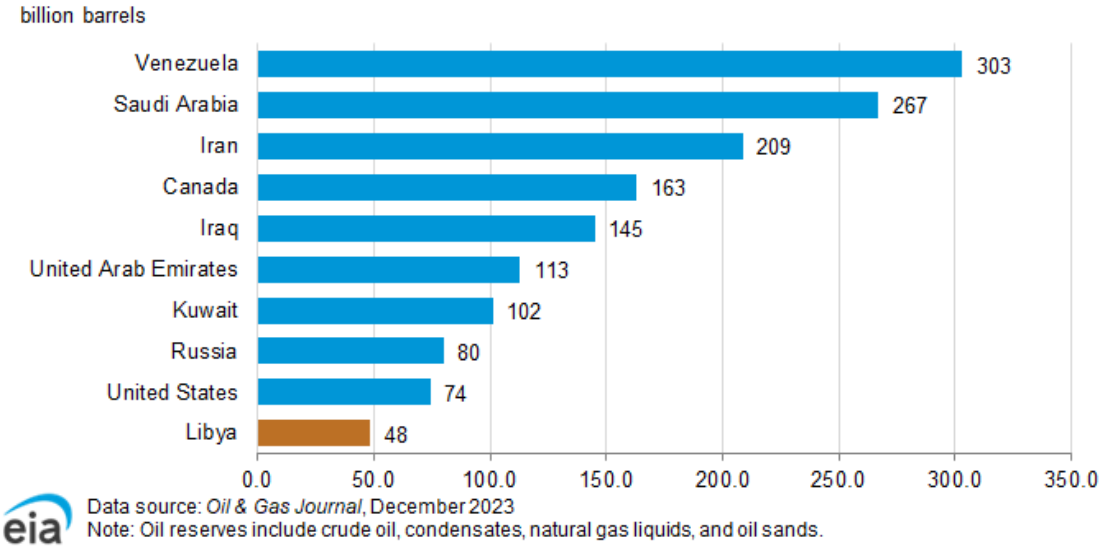
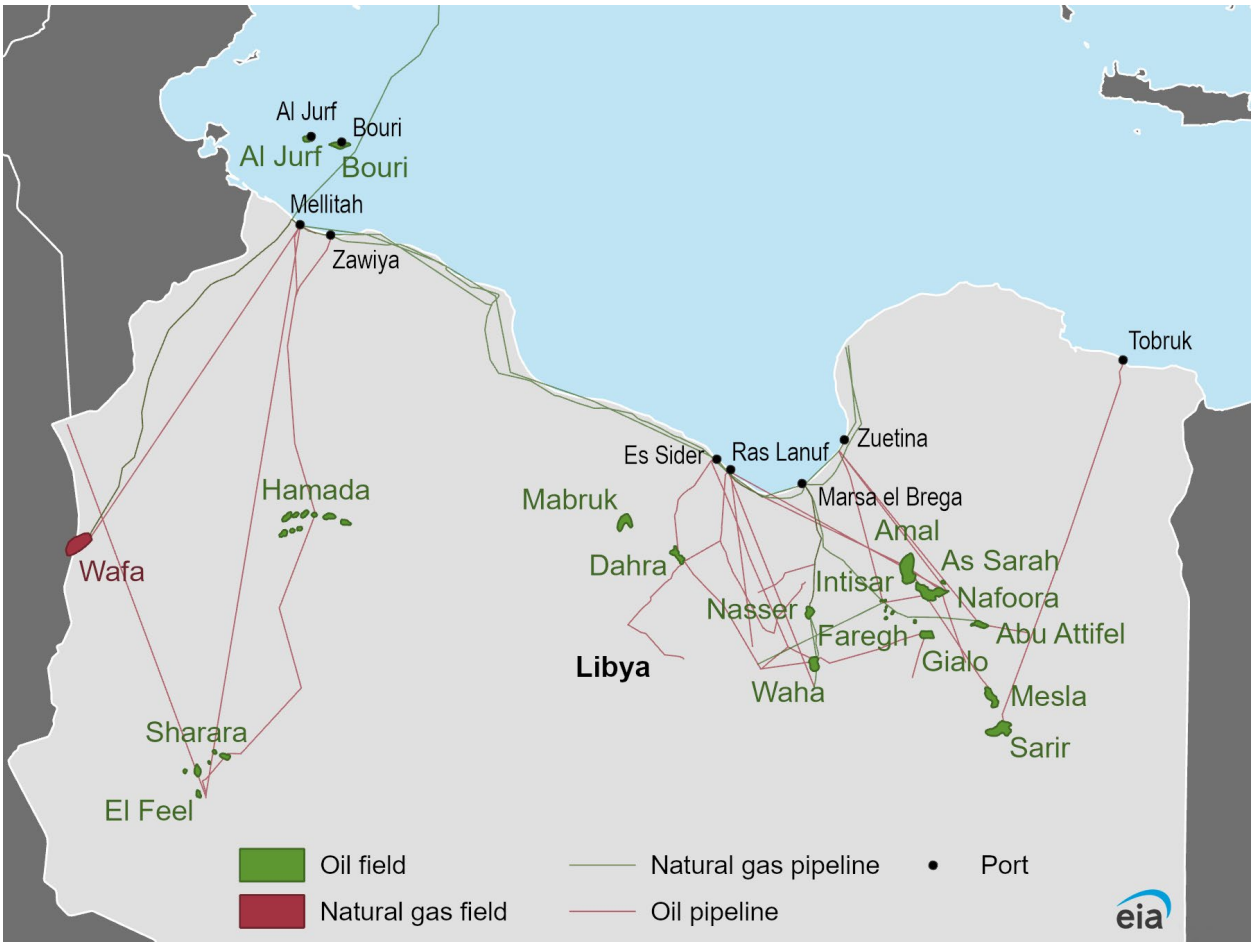
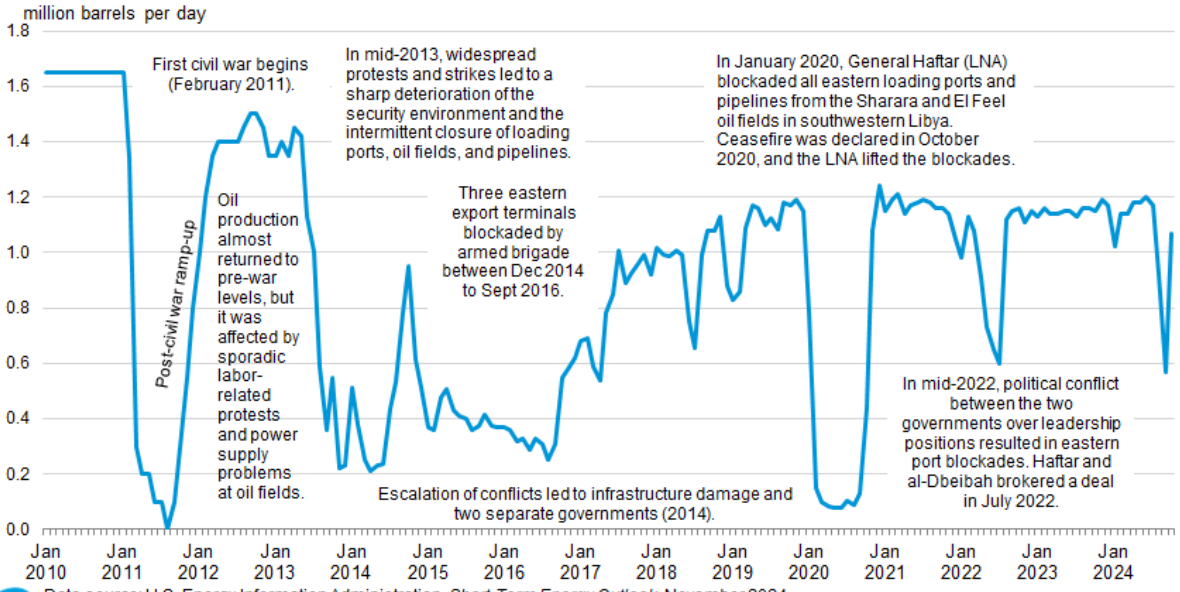


Figure 2. Maps of Libya's largest oil and natural gas fields



Data source: U.S. Energy Information Administration, Global Energy Monitor, *Global Gas Infrastructure Tracker* and *Global Oil Infrastructure Tracker*, National Energy Technology Laboratory, *Global Oil and Gas Infrastructure database*, and World Bank

Figure 3. Crude oil production in Libya, January 2010 to October 2024



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, November 2024
Note: Libyan National Army is the LNA.

Natural Gas

- At the beginning of 2024, Libya had proved natural gas reserves of 53 trillion cubic feet (Tcf), the fifth largest in Africa behind Nigeria, Algeria, Mozambique, and Egypt (Figure 4).[46]
- Non-associated gas, which accounted for more than 90% of Libya's natural gas production over the past decade, is from the offshore Bahr Essalam fields northwest of Tripoli and the onshore Wafa field in the western Ghadames Basin straddling Algeria.[47] Most of Libya's natural gas associated with crude oil fields is in the onshore Sirte Basin in the eastern region.
- Libya’s dry natural gas production fell from 423 billion cubic feet (Bcf) in 2022 to 394 Bcf in 2023 (Figure 5).[48] Output has declined from a high in 2017 because the volatile security situation and unfavorable regulatory environment have deterred upstream investment by international oil companies. Also, associated gas fields have been offline for significant periods of time when the accompanying oil fields are shut in.
- Because the NOC expects production from major natural gas fields Bahr Essalam and Wafa to decline starting in 2025, Libya will face domestic natural gas shortages if it cannot secure foreign investment to develop its proposed projects. Libya plans to increase natural gas production by reducing flaring and developing new fields to help meet growing domestic demand and export obligations. However, Libya’s current political stalemate and budget constraints are major downside risks to reaching these goals. Oil and natural gas projects in Libya are typically delayed for several years because of security, regulatory, and financial challenges.[49]
- The NOC plans to offset expected declines from mature fields and increase natural gas production from both offshore and onshore fields in western Libya (Table 4). Italy’s Eni and Libya’s NOC are developing a major offshore project to tie back to the Mellitah natural gas processing complex, Structures A & E. The project, which is slated to add 277 Bcf/y, is expected to begin production in 2027.[50] The NOC has proposed several other natural gas development projects, notably Atshan in the southwestern region, two projects in the Hamada Basin region,

and the offshore Bouri Gas Utilization project; some of these projects are in early stages of development.

- Libya's natural gas consumption totaled 305 Bcf in 2023 and accounted for more than 70% of domestic production after 2020 (Figure 5).[51] The electric power sector drives Libya's domestic natural gas demand, accounting for about 85% of Libya's domestic natural gas use in 2022. The country's major industries and its oil sector consume the remainder.[52] Libya's natural gas production is not able to fully meet domestic natural gas demand and export commitments, and the electric power sector often burns petroleum products when the natural gas supply is disrupted or is insufficient during the peak summer season.[53]
- Libya ranked as the seventh-highest natural gas flaring country in 2023, when it vented or flared approximately 240 Bcf in 2023, up from 191 Bcf in 2022 and the highest in a decade. Flaring increased because Libya's associated gas production rose in tandem with crude oil production during 2023.[54] Libya lacks sufficient natural gas infrastructure, particularly processing plants, to capture natural gas from fields associated with oil production and to transport it to demand centers or power plants. Libya plans to eliminate natural gas flaring by 2030. Libya's NOC is in discussions with international oil companies to reduce flaring, increase the production of marketed natural gas, and free up more oil for export.[55]

Table 4. Key natural gas projects in Libya, 2024

Project	Operator or project investor	Additional estimated capacity (Bcf/y)	Announced start date	Notes
Structures A & E	Eni and Libya's NOC	277 (58 Bcf/y for Structure A; 219 Bcf/y for Structure E)	2027 for Structure A; 2028 at the earliest for Structure E	Final investment decision made January 2023 between Eni and Libya's NOC for $8 billion.[56] Slated to produce 42,000 barrels per day of condensates[57]
Hamada field (Area NC-7)	TBA	91	TBA	Natural gas development is slated for Phase 2. Negotiations are ongoing to recruit international companies to develop the project, but political conflict about project's contract details poses a challenge[58]
Atshan	Zallaf Oil and Gas	73	TBA	Located near the Sharara oil field in the southwestern region and will replace the crude oil feedstock at the Ubari power plant[59]
North Hamada (Area 47)[60]	Libya's NOC	33	TBA	Located onshore in the Ghadames Basin in the northwestern area of the country
Bouri Gas Utilization Project	Eni and Libya's NOC	31	2026	Intended to capture natural gas flared from the Bouri oil field. Saipem awarded engineering contract August 2023[61]
Total		**505**		

Data source: *Middle East Economic Survey*, Libya Oil Monitor, Fitch Solutions/BMI, Eni, Saipem
Note: TBA=to be announced; Bcf/y=billion cubic feet per year; NOC=national oil company

Figure 4. Largest proved reserve holders of natural gas reserves in Africa, January 2024

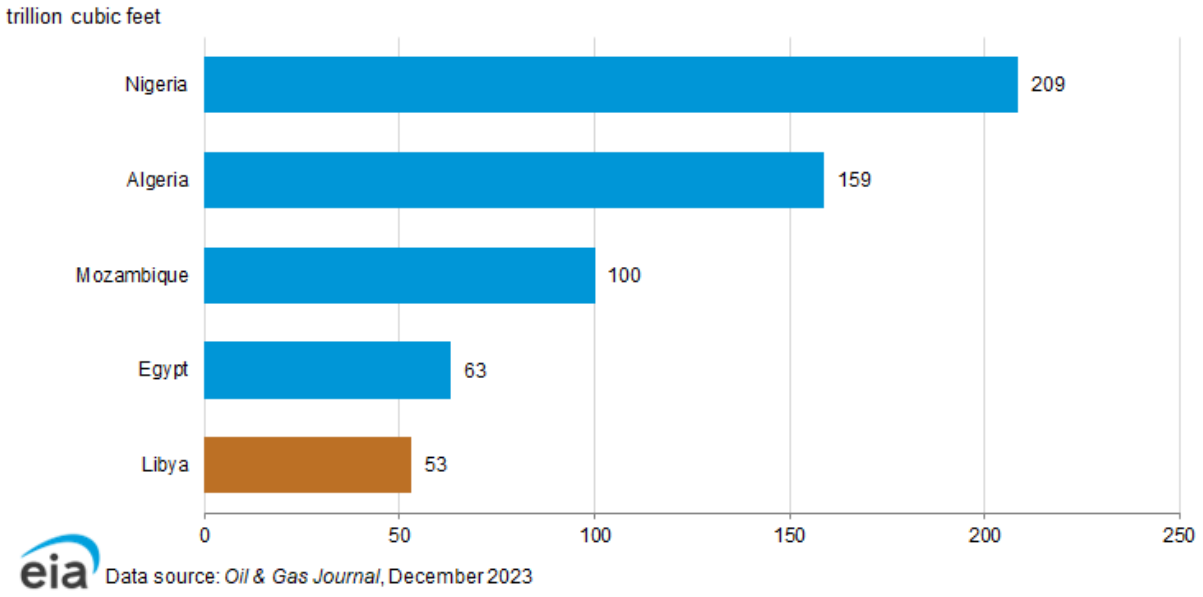
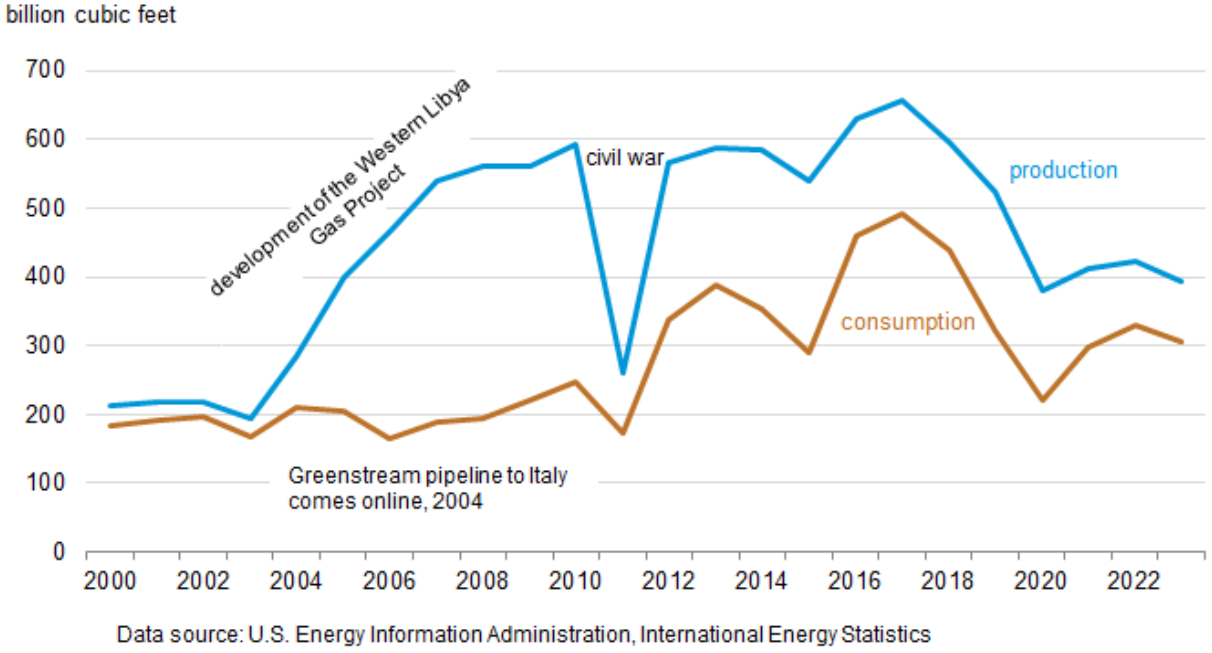


Figure 5. Libya's dry natural gas production and consumption, 2000–2023



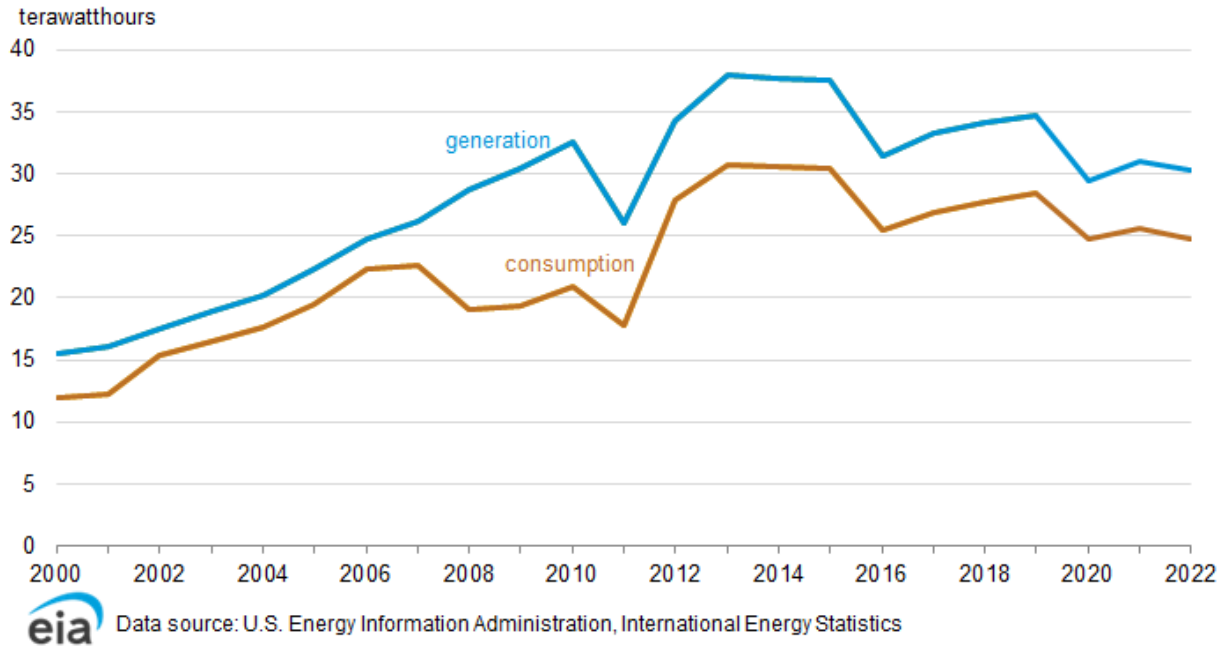
Electricity

- Libya's electricity generation has declined overall since 2013, and output was an estimated 30 terawatthours (TWh) of power generation in 2022.[62] Over a decade of civil war and insufficient maintenance and investment in aging plants and equipment reduced Libya's ability to produce electricity. Libya fueled its electricity generation with natural gas (71%) and oil (29%) in 2022.[63]

Diesel and fuel oil accounted for most of the petroleum used in power plants, although the Ubari power plant at the Sharara oil field uses crude oil as a fuel. Because of frequent historical blackouts, many businesses in Libya own diesel-fired generators for backup power generation.[64]

- Historically, scheduled power curtailments and unscheduled blackouts have occurred frequently in Libya especially during the peak summer season because of heavily subsidized electricity tariffs, rising demand, aging or damaged infrastructure, and occasional fuel shortages.[65] However, in 2023, Libya's state-owned electricity company, GECOL, reported that operational capacity rose to 8.2 gigawatts (GW), the highest ever reported, from 5.8 GW a year earlier.[66] Libya's government changed the management at GECOL and pressed for the company to restore more operational capacity.[67] With the financial and technical assistance of foreign companies and USAID, GECOL was able to reduce electricity demand through efficiency measures, refurbishing existing facilities, bringing on new plants, and enhancing grid operations.[68] For the first time in several years, in 2023, Libya averted load shedding and blackouts.[69]
- To meet growing electricity needs, Libya aims to capture more associated gas that is currently flared and develop more nonassociated gas fields, although these goals depend on greater investment in natural gas upstream projects and infrastructure development.
- Currently, solar power makes up a negligible amount of power generation in Libya, which has no utility-scale plants. All of Libya's solar power is from small-scale ventures such as microgrids at hospitals and public lighting projects.[70] Libya's government seeks to diversify its power supply and aims to produce at least 20% of its electricity from renewable power by 2035, according to a new renewable and energy efficiency plan published by the Libyan government and USAID in December 2023. The plan would increase Libya's solar and wind capacity to 4 GW by 2035, up from less than 0.1 GW in 2022, and promote installion of 500 MW of rooftop solar panels, especially in areas in southern Libya that are not connected to the grid.[71] Libya's vast solar potential has attracted some foreign investors. In addition to its recent investment in Libya's oil and natural gas sectors, TotalEnergies intends to develop 500 MW of solar power projects in the country.[72] Libya has also discussed solar power projects with Repsol, PowerChina, Petro Techna (Canada), and others.[73]

Figure 6. Electricity net generation and consumption in Libya, 2000–2022



Data source: U.S. Energy Information Administration, International Energy Statistics

Energy Trade

Petroleum and other liquids

- Libya exported an estimated 1 million b/d of crude oil and condensates in 2023, up from 930,000 b/d in 2022. The oil supply disruption to many of the eastern fields in Libya in the summer of 2022 affected that year's export levels, which declined from nearly 1.2 million b/d in 2021.[74]
- Most of Libya's crude oil is sold to European countries. In 2023, Europe's imports accounted for about 78% of Libya's crude oil and condensate exports. Most of Libya's exports went to Italy, Germany, and Spain. Asia, mostly China, received an estimated 10% of Libya's oil exports in 2023 (Figure 7). Libya sent a greater share of its crude oil and condensates to Europe in 2023 (78%, up from 72% in 2022) because Russia shifted more of its crude oil away from Europe to Asia and because China purchased more of Iran's crude oil.
- According to trade data, Libya is a net importer of petroleum products as a result of its low operational refining capacity. Petroleum product imports rose in 2023 to nearly 200,000 b/d from less than 150,000 b/d in 2021 as a result of higher oil demand.[75] Libya highly subsidizes its oil products to customers, which drives up oil demand. These subsidies also distort market prices and is one of the causes for significant levels of fuel smuggling.[76] Libya imports primarily gasoline and diesel fuel, and it exports mostly naphtha. In 2023, Russia captured a larger share

(29%, up from 5% in 2022) of Libya's oil product import market after Europe and the G7 countries instituted a price cap on Russia's petroleum product sales in early 2023.[77]

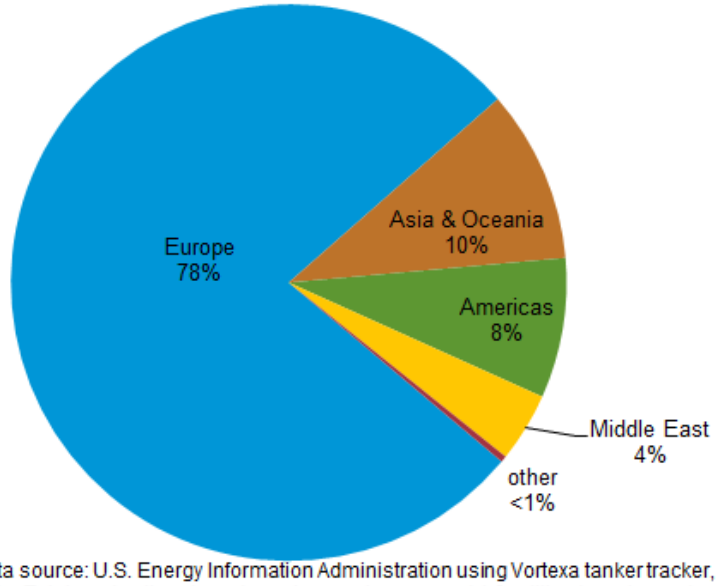
Natural gas

- The Greenstream natural gas pipeline connects Mellitah on Libya's northwestern coast to Gela, Italy, and became the only outlet of natural gas exports after armed conflict from the civil war destroyed the country's sole liquefaction terminal in 2011.
- Libya's natural gas exports reached around 200 Bcf in 2019, the most recent high, but fell by more than half to 89 Bcf in 2023, well below the pipeline's capacity of 283 Bcf/y.[78] Libya's reduced natural gas production and higher domestic demand have hindered exports during the past few years. Also, Libya's large Mellitah natural gas processing plant, which processes most of Libya's natural gas, has gone offline for maintenance, technical, or political issues several times during the past few years, limiting export levels.[79]

Electricity

- Libya, which has electricity interconnections with Tunisia and Egypt, began to import significantly more electric power from these neighboring countries after 2015. Libya's electricity imports reached more than 0.8 TWh in 2022.[80] Egypt plans to expand its interconnection capacity to Libya from 150 MW to 2 GW, but as of September 2024, the expansion date is unknown.[81]

Figure 7. Libya's crude oil and condensates exports by destination, 2023



Data source: U.S. Energy Information Administration using Vortexa tanker tracker, Global Trade Tracker, Eurostat
Note: Total crude oil and condensate exports averaged 1.0 million barrels per day.

[1] U.S. Energy Information Administration, *Short-Term Energy Outlook*, August 2024.

[2] *Oil & Gas Journal*, "Worldwide look at reserves and production", December 2023.
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https://www.prnewswire.com/news-releases/meta-selects-northeast-louisiana-as-site-of-10-billion-artificial-intelligence-optimized-data-center-that-will-be-companys-largest-in-the-world-302322851.html

Meta Selects Northeast Louisiana as Site of $10 Billion Artificial Intelligence Optimized Data Center That Will Be Company's Largest in the World

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News provided by **Louisiana Economic Development**
Dec 04, 2024, 13:18 ET

- **Project is expected to result in 500 or more direct new jobs, more than 1,000 indirect jobs and 5,000 construction workers at peak.**
- **Expansive technology campus will occupy 4 million square feet on 2,250 acres in Richland Parish.**
- **Entergy worked with Meta to address energy needs, and Meta will match its electricity use with 100% clean and renewable energy.**

RICHLAND PARISH, La., Dec. 4, 2024 /PRNewswire/ -- Today, Meta and **Louisiana Economic Development** (LED) announced a $10 billion artificial intelligence data center in northeast Louisiana, a transformational investment that cements the state's status as a major innovation hub and leader in the global digital revolution. The 4 million square foot data center, to be located in Richland Parish, will be Meta's largest in the world. Construction on the facility is expected to continue through 2030.

Meta projects the data center will support at least 500 direct new jobs in Richland Parish. LED estimates the project will result in the creation of more than 1,000 indirect jobs, for a total of more than 1,500 potential new jobs in the Northeast Region. The company estimates 5,000 construction workers at peak of construction on a 2,250-acre site.

"Today, Louisiana begins a new chapter. Today, we are delivering new jobs and economic growth on a scale unimaginable before we took office," Governor Jeff Landry said. "Meta's investment establishes the region as an anchor in Louisiana's rapidly expanding tech sector, revitalizes one of our state's beautiful rural areas, and creates opportunities for Louisiana workers to fill high-paying jobs of the future. I thank Meta for their commitment to our state, and to the State Legislature for positioning Louisiana to win this project by passing new tax reform legislation that attracts capital investment and improves Louisiana's business tax climate."

Hyperscaler data centers such as the one planned for Richland Parish are housed in huge physical structures designed to process the vast amounts of data required to support digital technologies, including Artificial Intelligence (AI) workloads. The facility is the largest of more than 20 Meta data centers around the world. Once operational, the Richland Parish Data Center will be optimized for Meta's AI workloads as part of the highly advanced infrastructure that helps bring Meta's technologies, including Facebook, Messenger, Instagram, WhatsApp, and Threads to life.

"Meta is building the future of human connection and the technology that makes it possible. And this data center will be an important part of that mission," said Kevin Janda, Meta Director of Data Center Strategy. "Richland Parish in Louisiana is an outstanding location for Meta to call home for a number of reasons. It provides great access to infrastructure, a reliable grid, a business-friendly climate, and wonderful community partners that have helped us move this project forward. We're thrilled to be a new member of the Richland Parish community and are committed to investing in its long-term vitality."

LED expects the project, one of the largest private capital investments in the state's history, to spark new economic activity and investments throughout northeast Louisiana as multiple industries benefit from the billions of dollars invested. Meta makes a concerted effort to source labor and materials locally, and partners with local schools and organizations to advance STEAM education and digital skills that can be used to compete in the digital workforce.

"This project is an example of what Louisiana can accomplish when economic development partners play offense rather than waiting for good projects to come to them," LED Secretary Susan B. Bourgeois said. "Louisiana has been actively positioning itself as a hub for AI innovation, with plans to support startups, grow a skilled workforce, and shape forward-thinking policy. Meta's historic investment is just the beginning of a bold strategy to drive economic growth through AI, expand and diversify the state's tech sector, and prove to the world that when Louisiana says that we are ready to compete on the global stage, we mean business."

The company is expected to take advantage of a new Louisiana incentive program, established by Act 730, that offers qualifying projects a state and local sales and use tax rebate on the purchase or lease of data center equipment. The company is also expected to participate in the state's Quality Jobs program.

To power the data center, which at its largest point extends more than one mile from front to back, Entergy will add clean, efficient power plants to its system to meet growing power demands, including from the data center. Meta has pledged to match its electricity use with 100% clean and renewable energy and will be working with Entergy to bring at least 1,500 MW of new renewable energy to the grid through its Geaux Zero program. In addition, Meta has committed to contribute up to $1 million a year to Entergy's "The Power to Care" low-income ratepayer support program, a figure that will be matched by Entergy Louisiana.

"This partnership underscores Entergy Louisiana's commitment to powering progress and driving innovation," Entergy Louisiana President and CEO Phillip May said. "By supporting this transformational investment, we are not only delivering the energy needed today, but also building the infrastructure that will support a brighter, more sustainable future for all of Louisiana. Together, we're laying the foundation for economic growth that will benefit generations to come. We could not be more proud to play a critical role in this monumental endeavor."

In addition to Meta's commitment to match its electricity usage with clean and renewable energy, the company prioritizes water stewardship in its operations, including minimizing water use at its data centers. Meta has pledged to restore more water than it consumes at this data center by investing in water restoration projects in Louisiana.

To support both the construction and eventual operation of the data center, Louisiana Community and Technical College System (LCTCS) has committed $250,000 in Workforce Rapid Response funding to Delta Community College to develop programs and expand capacity. Delta will scale up its construction trades programs to meet the initial construction needs, and partner with peer institutions experienced in developing and delivering curricula for data center operations.

Meta expects construction to continue through 2030 with site work beginning in December. The company has also committed to invest more than $200 million in local infrastructure improvements, including roads and water systems.

About LED
Louisiana Economic Development is responsible for driving capital investment, job creation and economic opportunity for the people of Louisiana and employers of all sizes. Explore how LED is positioning Louisiana to win at **OpportunityLouisiana.com**.

About Entergy Louisiana
Entergy Louisiana, LLC provides electric service to more than 1 million customers in 58 parishes and natural gas service to more than 94,000 customers in Baton Rouge. Entergy Louisiana is a subsidiary of Entergy Corporation (NYSE: **ETR**), a Fortune 500 company. Entergy powers life for 3 million customers through its operating companies in Arkansas, Louisiana, Mississippi and Texas. It is investing in the reliability, and resilience and growth of the energy system while helping the region transition to cleaner, more efficient energy solutions. With roots in Louisiana communities for more than 100 years, Entergy is a nationally recognized leader in sustainability and corporate citizenship delivering more than $100 million in local economic benefits each year through philanthropy, volunteerism and advocacy. Entergy is headquartered in New Orleans, and has approximately 12,000 employees. Learn more at **Entergy-Louisiana.com**.

SOURCE Louisiana Economic Development

https://www.reuters.com/business/energy/shell-slows-investments-offshore-wind-splits-power-business-2024-12-04/

Exclusive: Shell slows offshore wind spending, splits power business in CEO review

By Ron Bousso
December 4, 202410:03 AM MST

LONDON, Dec 4 (Reuters) - Shell (SHEL.L), opens new tab is stepping back from new offshore wind investments and is splitting its power division following an extensive review of the business that was once seen as a key driver of the company's energy transition strategy.

The changes are part of a company-wide review launched in 2023 aimed at reducing costs as CEO Wael Sawan focuses on activities with the highest returns. In many cases that has meant reducing spending on low-carbon and renewable businesses and increasing the focus on oil, gas and biofuels.

“While we will not lead new offshore wind developments, we remain interested in offtakes where commercial terms are acceptable and are cautiously open to equity positions, if there is a compelling investment case,” a company spokesperson said in a statement.

Shell and other major energy companies have in the past touted offshore wind as a key market they can invest in as part of the world's energy transition, drawing on their decades-long experience in offshore oil and gas production.

But the sector has been hit in recent years by soaring costs, supply chain issues and rising interest rates, leading companies to review investments as profit margins narrowed.

Shell's retreat mirrors moves by rivals BP (BP.L), opens new tab and Equinor (EQNR.OL), opens new tab that have slowed investments in renewables and low-carbon business as they face investor pressure to boost returns and maintain large shareholder payouts.

Their change of direction reflects two major developments - the energy shock from Russia’s invasion of Ukraine and a drop in profitability for many renewables projects.

Shell will continue to develop offshore wind projects already underway, it said. The company in recent months has retreated from several offshore wind projects, including in South Korea and the United States.

The changes were announced in an internal presentation by Shell Energy boss Greg Joiner on Wednesday, two company sources said.

SHELL ENERGY SPLIT

Shell Energy, which includes renewables, power generation and supply to customers, will be split into two separate power generation and trading units, the company spokesperson told Reuters.

"These two parts of our business will work closely together. In line with our simplification drive, the change is aimed at improving focus, accountability and delivery," the person said.

Joiner will become head of Shell Power, while David Wells will lead Shell Energy, Shell said.

Shell, one of the world's largest energy traders, will focus on selling power to customers and developing battery storage sites.

"In selected markets, we see increasing value in using batteries and flexible gas-fired power plants to manage intermittency and help us to meet our customers’ needs as renewables play increasing roles in power markets," it said.

Shell currently has around 3.4 gigawatts (GW) of renewable capacity in operation around the world. In 2023, it sold around 279 terawatt-hours (TWh) of electricity to customers, equivalent to about 88% of Britain's power consumption.

As part of Sawan's strategy, Shell plans to grow its liquefied natural gas division and steady its oil production by the end of the decade.

Shell in recent months scaled back operations in offshore wind, solar and hydrogen, sold retail power businesses, refineries and some oil and gas production, including in Nigeria.

In March, the company weakened a 2030 carbon reduction target and scrapped a 2035 objective, citing expectations for strong gas demand and uncertainty in the energy transition, angering climate-focused investors and activists.

https://www.bbc.com/news/articles/c33dvekx021o

Lifespan of four nuclear power stations extended

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Kevin Keane

BBC Scotland environment correspondent

Torness is one of four advanced-gas nuclear reactors owned by EDF in the UK

The lifespan of Scotland's last remaining nuclear power station and three other plants in England are to be extended.

EDF Energy says Torness, in East Lothian, and its sister site Heysham 2, in Lancashire, will continue generating for an extra two years until 2030.

Two other sites - Hartlepool and Heysham 1 - will continue for an extra year until 2027.

The French state-owned company says it will now invest £1.3bn across its operational nuclear estate over the next three years.

Construction work on Hartlepool power station started in 1968, taking 15 years to complete

Torness employs about 550 people with a further 180 contractors also working on site.

It began generating electricity in 1988 and was originally due to be decommissioned last year.

Construction work on Hartlepool power station started in 1968, taking 15 years to complete. Heysham 1 began generating in 1983 followed by Heysham 2 five years later.

In 2016, a decision was taken to extend Torness' life until 2030 - but the discovery of cracks in the graphite bricks, which make up the reactor cores of some advanced gas-cooled power stations, led to a review.

As a result, it was announced in 2021 that the closure dates for Torness and Heysham 2 would be brought forward again by two years to 2028.

EDF says it has spent several years studying the progress of cracking and engineers feel they have a better understanding of the issues.

It says regular inspections will be carried out to ensure the sites can continue to operate safely.

East Lothian council leader Norman Hampshire said he welcomed the decision, but warned the eventual decommissioning of the facility meant its power baseload needed to be replaced.

He said: “While it has always been recognised that the power station would have a limited lifespan and decisions on energy policy are made at a national level, Torness will continue to be major employer in the region beyond its scheduled closure date as defueling and then decommissioning commences.

“East Lothian will continue to play a major part in delivering the energy the country needs with the expansion of renewables we have with on and offshore wind around East Lothian.

“However, the baseload that Torness provides needs to be replaced and all options need to be explored including the potential of small modular reactors under consideration by UK government.”

EDF

Heysham 1 began generating in 1983 followed by Heysham 2 five years later

The four power stations support around 3,000 workers and can generate up to 4.6 gigawatts of electricity.

That’s enough to power about 4.5 million homes.

The decision to extend the lives of the power stations will help bridge the gap before EDF'S Hinkley Point C nuclear power station in Somerset begins generating around 2030.

The company made the decision following a year-long review into the four sites.

A separate review is looking at the possibility of extending its Sizewell B facility in Suffolk for a further 20 years.

Mark Hartley, managing director of EDF's nuclear operations business, said the decision to continue operating the four sites was testament to the workers and the billions it has invested.

He added: "When EDF acquired these stations in 2009 they were all due to end generation by early 2023 which would have left the UK with just one generating nuclear power station at Sizewell B.

"Careful stewardship and around £8bn of investment has seen several life extensions for these stations and much higher output than was predicted."

Homegrown energy

The decision has been welcomed by the National Energy Systems Operator, a new publicly-owned body tasked with connecting generation projects to the grid.

It says that nuclear will play an important role in the UK's energy mix up to 2030 and then with new capacity out to 2050.

EDF says keeping the existing facilities operating will help preserve some of the skills needed for new nuclear.

The UK government says the decision is a "strong endorsement" of its clean power mission.

Energy Secretary Ed Miliband added: "These extensions are a major win for our energy independence.

"We can't achieve clean power by 2030 without nuclear, which provides an all important steady supply of homegrown clean energy."

VOLUNTARY ANNOUNCEMENT

PRODUCTION AND SALES VOLUME FOR NOVEMBER 2024

This announcement is made voluntarily by BYD Company Limited (the "**Company**").

The Board of the Company is pleased to announce that the total production and sales volume of the Company for the month of November 2024 (Units):

	Production Volume					Sales Volume				
Items	November 2024	November 2023	Year-to-date November 2024	Year-to-date November 2023	Percentage Year on Year	November 2024	November 2023	Year-to-date November 2024	Year-to-date November 2023	Percentage Year on Year
New energy vehicle	540,588	316,510	3,837,632	2,736,259	40.25%	506,804	301,903	3,757,336	2,683,374	40.02%
– Passenger vehicle	536,926	315,985	3,820,365	2,725,555	40.17%	504,003	301,378	3,740,930	2,672,728	39.97%
– Battery electric vehicle	208,859	172,746	1,588,206	1,413,198	12.38%	198,065	170,150	1,557,258	1,384,068	12.51%
– Plug-in hybrid electric vehicle	328,067	143,239	2,232,159	1,312,357	70.09%	305,938	131,228	2,183,672	1,288,660	69.45%

	Production Volume					Sales Volume				
Items	November 2024	November 2023	Year-to-date November 2024	Year-to-date November 2023	Percentage Year on Year	November 2024	November 2023	Year-to-date November 2024	Year-to-date November 2023	Percentage Year on Year
– Commercial vehicle	3,662	525	17,267	10,704	61.31%	2,801	525	16,406	10,646	54.10%
– Bus	449	391	4,205	3,900	7.82%	449	391	4,205	3,900	7.82%
– Others	3,213	134	13,062	6,804	91.98%	2,352	134	12,201	6,746	80.86%
Total	540,588	316,510	3,837,632	2,736,259	40.25%	506,804	301,903	3,757,336	2,683,374	40.02%

Note:

The oversea sales volume of New Energy Passenger Vehicle achieved 30,977 units of the Company for the month of November 2024, of which 28,141 units were exported.

The installed capacity of NEV power battery and energy storage battery of the Company for the month of November 2024 was approximately 22.472 GWh. The cumulative installed capacity for the year 2024 was approximately 171.210 GWh.

Please note that the production and sales volumes above are unaudited figures and have not been confirmed by the Company's auditors and may be subject to adjustment and final confirmation. Shareholders and potential investors are advised to read the financial results of the Company carefully when it is published.

NEWS RELEASE
MARKET SENSITIVE INFORMATION
Embargoed until 0955 CET (0855 UTC) 2 December 2024

HCOB Germany Manufacturing PMI®

Manufacturing sector still firmly in contraction territory midway through Q4

Key findings:

HCOB Germany Manufacturing PMI at 43.0 (Oct: 43.0). Unchanged.

HCOB Germany Manufacturing PMI Output Index at 43.1 (Oct: 42.8). 5-month high.

Employment, purchasing activity and stocks all fall at faster rates

Data were collected 12-22 November 2024.

At the midway point in the final quarter of 2024, the German manufacturing sector remained deep in contraction territory, the latest HCOB PMI® survey showed. Rates of decline in both output and new orders eased for the second month running but remained sharp, while there were faster falls in employment, purchasing activity and stocks.

Weak demand and competitive pressures meanwhile led to further decreases in both input costs and output prices, the latter falling at one of the quickest rates over the past 15 years.

Business expectations edged higher for the second month running. However, a backdrop of political and economic uncertainty meant confidence was still low by historical standards.

The headline **HCOB Germany Manufacturing PMI®** is a gauge of overall business conditions derived from measures of new orders, output, employment, supplier delivery times and stocks of purchases. Its latest reading of 43.0 in November was unchanged from that recorded in October and well below the 50.0 threshold that separates growth from contraction.

The rate of decline in manufacturing production eased to the weakest since June. Nevertheless, it was still sharp and slightly quicker than the average recorded over the current sequence of contraction in output that stretches back to May 2023.

German manufacturers cut production as they continued to have difficulty winning new business. They reported headwinds to demand from a range of factors including an ongoing destocking cycle, political and geopolitical uncertainty, and a generally challenging economic climate. New orders fell sharply, albeit at the slowest rate for six months. The latest fall in export sales was even slightly quicker than that seen in October, led by a particularly sharp decline in the investment goods sector.

There remained a distinct lack of pressure on capacity across the manufacturing sector, as evidence by a further sharp (albeit slower) drop in backlogs of work. As such, workforces were scaled back for the seventeenth month running during November. The rate at which factory employment fell was the second quickest seen since the initial phase of the pandemic in 2020, just behind that recorded in September.

Goods producers also made deeper cuts to their purchasing activity and stock levels during the penultimate month of the year. The decrease in post-production inventories was the joint-quickest for more than three years, while stocks of input fell at one of the fastest rates since 2009. Firms reported reducing inventories not only because of decreasing demand and production requirements, but also to save costs and due to improved material availability.

Lead times on inputs quickened for the twenty-fifth month in a row in November. The rate of improvement in vendor performance was the fastest seen since August but still only modest overall.

Amid reports of strong competition among suppliers, November saw a further decrease in average input prices faced by German manufacturers. The rate at which costs decreased was solid but the slowest for three months. Factory gate charges, on the other hand, fell to the greatest extent since May and at one of the quickest rates since 2009.

Lastly, November's survey showed an uptick in business confidence towards future output, with sentiment turning positive for the first time in three months. Some firms reported hopes of an economic upturn following next year's election. Still, growth expectations were well below the long-run average.

Comment

Commenting on the PMI data, Dr. Cyrus de la Rubia, Chief Economist at Hamburg Commercial Bank, said:

"The situation for German industry is looking pretty grim. People are feeling the pinch as reports of companies in the manufacturing sector planning massive job cuts are coming in almost daily. The PMI Employment Index backs this up, showing a trend of accelerating staff reductions since mid-2023. So far, this has only slightly impacted the unemployment rate, but it makes it even more urgent for the new federal government to take action and boost Germany's competitiveness.

"New orders aren't dropping as fast as they were in recent months, but that's little consolation. When we look at foreign orders alone, the situation has actually got worse. The slight speed-up in delivery times also points to weakening demand.

"Companies are more confident about their future than they have been in recent months. This could be because of the coalition collapse and the hope that the new government will finally bring about a real economic turnaround. This would involve things like lower energy prices and a reform of the debt brake. However, confidence is still very low compared to historical standards.

"The capital goods sector is getting hit particularly hard right now, mainly due to geopolitical uncertainty according to some companies. The PMI indicates that the recession is deepening in this sector, while the downturn in the intermediate goods sector has slowed down a bit for the second month in a row. Overall, it looks like the recession in the manufacturing industry will drag on into the new year."

-Ends-

https://www.globaltimes.cn/page/202412/1324585.shtml

Beijing's population hit 21.858 million in 2023, up by 15,000 from previous year: blue book

By Global Times Published: Dec 08, 2024 03:55 PM

Beijing skyline Photo: IC

By the end of 2023, Beijing's resident population was 21.858 million, marking an increase of 15,000 compared to the previous year and reflecting population stability. Meanwhile, Beijing's urbanization rate recorded at 87.8 percent, significantly higher than the national average, according to a blue book of population in Beijing.

In terms of population structure, the Beijing Population Development Research Report (2024), which was released in Beijing on Saturday, highlights that Beijing continues to experience a "window of demographic opportunity," providing a critical strategic opportunity for accelerating the transformation of old and new growth drivers.

In 2023, the elderly population aged 60 and above in Beijing reached 4.948 million, accounting for 22.6 percent of the resident population, with a significant increase compared to 2022. The proportion of children, however, decreased to 12 percent. Although the total dependency ratio has risen yearly, increasing from 20.9 percent in 2010 to 38.7 percent in 2023.

The blue book highlights that Beijing's population-driven economic vitality has steadily improved, and now ranks first nationwide. The proportion of the resident population in central urban areas continues to decline, while the proportion in new urban development zones has increased.

Meanwhile, significant progress has been achieved in green development. The concentration of pollutants such as PM 2.5 continues to decline, and per capita park green space has significantly increased.

Addressing the opportunities and challenges in Beijing's population development, the blue book proposes several policy recommendations.

The focus of the recommendations centers on fostering a birth-friendly society. It suggests establishing

dedicated fiscal funds to support fertility, enhancing legal frameworks and policy designs, strengthening the government's leading role, and providing support for the implementation of fertility policies. It also recommends increasing the supply of universal childcare services and promoting integrated childcare and preschool education.

To tackle challenges related to an aging population, it recommends establishing a comprehensive health system covering medical care, elderly care, rehabilitation, and nursing services, utilizing Beijing's advanced medical resources, and coordinating the development of senior human resources and employment planning.

In advancing the construction of high-level talent hubs and further enhancing talent creativity, the report advises exploring long-term mechanisms to stabilize the labor supply, continuously innovating policies for youth employment, housing, psychological care, and career development, optimizing the environment for youth growth and success, and enhancing the cohesion of various talent groups.

The report also urges Beijing to further enhance population monitoring and early warning mechanisms, improving the population management and service system, with a focus on optimizing resource allocation in housing, medical care, education, and other fields.

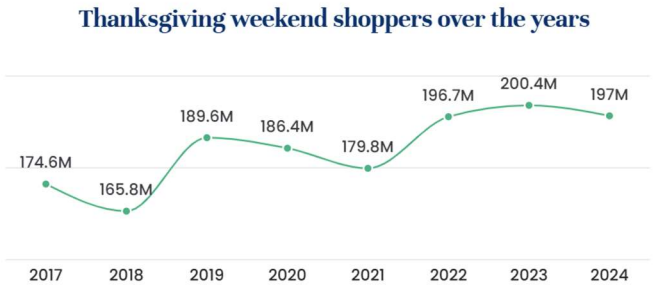
Global Times

https://nrf.com/media-center/press-releases/197-million-consumers-shop-over-thanksgiving-holiday-weekend

197 Million Consumers Shop Over Thanksgiving Holiday Weekend

WASHINGTON – The five-day holiday weekend from Thanksgiving through Cyber Monday saw an estimated 197 million shoppers, according to the annual survey released today by the National Retail Federation and Prosper Insights & Analytics. The figure is the second highest number in the survey's history after last year's record of 200.4 million, and surpassed NRF's initial expectations of 183.4 million shoppers.

"Thanksgiving weekend retains its prominence among holiday spending events and continues to play a significant role in the holiday season for both consumers and retailers," NRF President and CEO Matthew Shay said. "Even with this year's shortened shopping period and the multitude of early sales promotions from retailers, this past weekend exceeded expectations in terms of the sheer volume of shoppers."



Shoppers opted for convenience both in-store and online throughout the weekend. A total of 126 million consumers shopped in-store, up from 121.4 million in 2023. Online shoppers totaled 124.3 million, down from 134.2 million shoppers last year.

Black Friday remains the most popular day for both in-store and online shopping: 81.7 million consumers shopped in stores on Black Friday, up from 76.2 million last year and the highest level since the pandemic. Approximately 87.3 million shopped online, down slightly from 90.6 million in 2023.

Momentum carried on throughout the weekend, as Saturday was the second highest for in-store shopping when 61.1 million consumers went to browse and buy in stores.

Cyber Monday remains the second most popular day for online shopping, attracting 64.4 million consumers compared with 73.1 million in 2023. The online event continues to evolve, with a majority (63%) of Cyber Monday online shoppers opting to use their mobile device, up from 55% last year and the highest since NRF first started tracking this.

The top shopping destinations during Thanksgiving weekend were department stores (42%), online (42%), grocery stores and supermarkets (40%), clothing and accessories stores (37%) and discount stores (32%).

“Whether it’s tradition, the deals or simply an activity with friends and family, consumers continue to embrace Thanksgiving holiday weekend shopping,” Prosper Executive Vice President of Strategy Phil Rist said. “Additional offerings like free shipping, a limited sale or promotion or a positive review helped convince most shoppers to move items from their shopping carts to the purchase finish line.”

While consumers shopped for several items over the weekend, many focused on picking up holiday gifts. Consistent with last year, 86% of shoppers during the five-day period purchased gifts, spending $235 — or $8 more than 2023 — on average.

The top gifts purchased during this period included clothing and accessories (bought by 49% of those surveyed), toys (31%), gift cards (27%), food and candy (23%) and personal care or beauty items (23%).

With an overall shorter window for holiday shopping this year, 38% of shoppers took advantage of sales specifically during the week before the Thanksgiving holiday weekend. Still, consumers have plenty of items remaining to check off their lists with half (52%) of their shopping left to do at this point.

NRF defines the holiday season as Nov. 1 through Dec. 31 and has forecast that holiday spending is expected to reach record levels and will grow between 2.5% and 3.5% over 2023, totaling $979.5 billion to $989 billion.

The survey of 3,055 adult consumers was conducted Nov. 27-Dec. 1 and has a margin of error of plus or minus 1.8 percentage points.

As the leading authority and voice for the retail industry, NRF provides data on consumer behavior and spending for key periods such as holidays throughout the year.

Dan Tsubouchi
@Energy_Tidbits

Trump boosts China smaller & export oriented firms in Nov, expect more in Dec as buyers put in China orders before Trump takes over.

"*External demand bounced back,* ***due partly to some overseas clients upping purchases after the us election,*** *pushing the indicator into positive territory for the 1st time in 4 months*"

China Caixin Manufacturing PMI:
Nov 51.5 vs Est 50.6
Oct 50.3
Sep 49.3
Aug 50.4
Jul 49.8
Jun 51.8
May 51.7
Apr 51.4
Mar 51.1
Feb 50.9
Jan 50.8
Dec 50.8

Thx @SPGlobalPMI
#OOTT

8:18 PM · Dec 1, 2024 · **5,016** Views

Dan Tsubouchi
@Energy_Tidbits

Oil sands growth = #NatGas consumption growth.

Oil sands consumed 3.8 bcf/d in 2023, forecast to consume 4.6 bcf/d in 2033. @AER_news

Rule of thumb, #NatGas use per b/d of oil prod.
SAGD 1.3 mcf/b of oil
CSS 1.7 mcf/b
Mining with upgrading 0.8 mcf/b

Thx @garquake #OOTT

OIL SANDS USED 3.8 BCF/D IN 2023

Excerpt from

Alberta Energy Regulator

https://www.aer.ca/data-and-performance-reports/statistical-reports/alberta-energy-outlook-st98/natural-gas/natural-gas-production

Updated June 2024

Oil Sands Gas Use

In 2023

The oil sands sector used 105.8 10^6 m^3/d (3.8 Bcf/d) of gas in 2023. In mining and upgrading in 2023, purchased gas use increased by 4% and processed gas by 6%.

Forecast for 2024 to 2033

Oil sands gas use is expected to reach 129.2 10^6 m^3/d (4.6 Bcf/d) by 2033, a 22% increase from 2023. Although total gas use increases in line with bitumen production, the bulk of the incremental gas use is gas purchased for in situ bitumen recovery. In situ operations use a high volume of natural gas for steam generation and account for most of the bitumen production growth in the forecast, which triggers increased natural gas use for the sector.

Purchased Gas

Table S5.2 shows the average use rates of purchased gas for oil sands operations in 2023.

Table S5.2 Average use rates of purchased gas for oil sands operations, 2023

Extraction method	Excluding purchased gas for cogeneration (m^3/m^3)[a]	(Mcf/bbl)	Including purchased gas for cogeneration (m^3/m^3)	(Mcf/bbl)
In situ				
Steam-assisted gravity drainage	189	1.1	226	1.3
Cyclic steam stimulation	228	1.3	298	1.7
Mining with upgrading	99	0.6	142	0.8

Note: Thousand cubic feet (Mcf) and barrels (bbl).
[a] Expressed as either cubic metres of natural gas per cubic metre of bitumen produced or thousand cubic feet of natural gas per barrel of bitumen produced. Rates are an average of typical schemes with sustained production.

Dan Tsubouchi
@Energy_Tidbits

Trump warns Hamas. Also Iran?

"*..will be ALL HELL TO PAY* ***in the Middle East****, and* ***for those in charge*** *who perpetrated these atrocities against Humanity.* ***Those responsible will be harder*** *than anybody has been in hit in the long and storied history of the USA*"

#OOTT

7:44 PM · Dec 2, 2024 · **1,306** Views

Dan Tsubouchi
@Energy_Tidbits

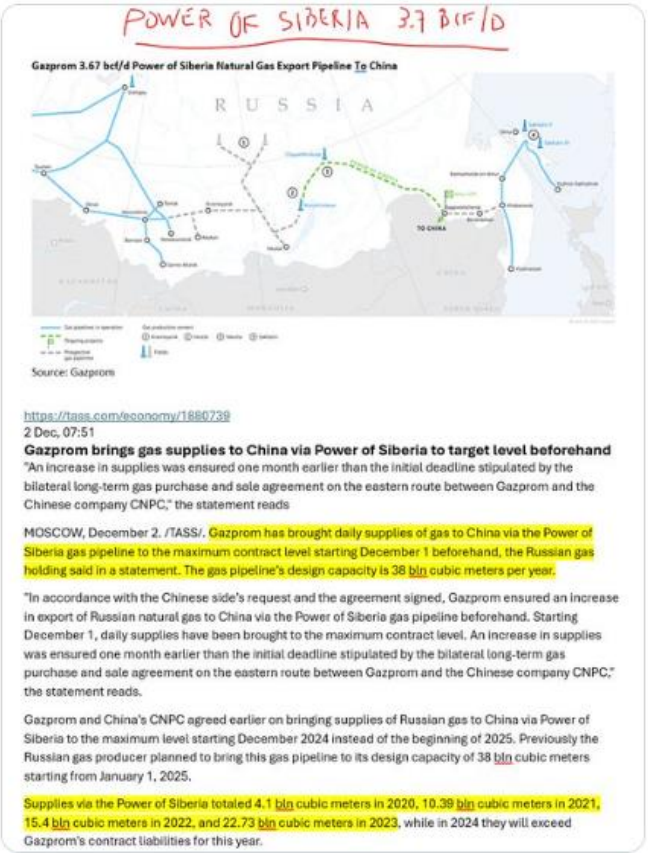
The big negative to LNG post Covid.

China prioritizes cheap Gazprom Power of Siberia pipeline #NatGas vs more expensive LNG imports.

Power of Siberia just hit max capacity of 3.7 bcfd.

Ramp was:
0.4 bcfd in 2020.
1.0 bcfd in 2021.
1.5 bcfd in 2022
2.2 bcfd in 2023.

#OOTT



https://tass.com/economy/1880739
2 Dec, 07:51

Gazprom brings gas supplies to China via Power of Siberia to target level beforehand

"An increase in supplies was ensured one month earlier than the initial deadline stipulated by the bilateral long-term gas purchase and sale agreement on the eastern route between Gazprom and the Chinese company CNPC," the statement reads

MOSCOW, December 2. /TASS/. Gazprom has brought daily supplies of gas to China via the Power of Siberia gas pipeline to the maximum contract level starting December 1 beforehand, the Russian gas holding said in a statement. The gas pipeline's design capacity is 38 bln cubic meters per year.

"In accordance with the Chinese side's request and the agreement signed, Gazprom ensured an increase in export of Russian natural gas to China via the Power of Siberia gas pipeline beforehand. Starting December 1, daily supplies have been brought to the maximum contract level. An increase in supplies was ensured one month earlier than the initial deadline stipulated by the bilateral long-term gas purchase and sale agreement on the eastern route between Gazprom and the Chinese company CNPC," the statement reads.

Gazprom and China's CNPC agreed earlier on bringing supplies of Russian gas to China via Power of Siberia to the maximum level starting December 2024 instead of the beginning of 2025. Previously the Russian gas producer planned to bring this gas pipeline to its design capacity of 38 bln cubic meters starting from January 1, 2025.

Supplies via the Power of Siberia totaled 4.1 bln cubic meters in 2020, 10.39 bln cubic meters in 2021, 15.4 bln cubic meters in 2022, and 22.73 bln cubic meters in 2023, while in 2024 they will exceed Gazprom's contract liabilities for this year.

Dan Tsubouchi
@Energy_Tidbits

A joke but feels like Trump is already toying with Trudeau

"if Canada can't survive without ripping off the U.S. to the tune of $100 billion a year then maybe Canada should become the 51st state and Trudeau could become its governor"

Hope Trudeau can at least try to be like Rocky Balboa after Apollo Creed toyed with him?

Thx @pdoocy #OOTT

Last edited 8:43 PM · Dec 2, 2024 · **5,046** Views

Dan Tsubouchi
@Energy_Tidbits

Reality why #Coal isn't going away soon.

"*we need to always ensure that we do have available, affordable energy. If we don't do that .... because what we are seeing today is coal, which was supposed to have peaked and declined, is increasing. Maybe because it provides security of supply .... And it is a lower cost.*" Aramco CEO Nasser

#OOTT

"we need to always ensure that we do have available, affordable energy. If we don't do that .... because what we are seeing today is coal, which was supposed to have peaked and declined, is increasing. Maybe because it provides security of supply .... And it is a lower cost." Saudi Aramco CEO Nasser.

SAF Group created transcript of comments by Saudi Aramco CEO Amin Nasser with CNBC Dan Murphy at the Saudi Green Initiative on Dec 3, 2024. https://www.cnbc.com/2024/12/03/realistic-green-policies-good-for-the-us-aramcos-amin-nasser-says.html

Items in "italics" are SAF Group created transcript

At 0:45 min mark, Nasser "... if you look at last year alone, out of 2% growth last year in energy consumption, 60% of that came from conventional energy. So we need to always ensure that we do have available, affordable energy. If we don't do that, what we are introducing is more coal because what we are seeing today is coal, which was supposed to have peaked and declined, is increasing. Maybe because it provides security of supply for certain countries. And it is a lower cost."

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

5:04 PM · Dec 3, 2024 · **719** Views

Dan Tsubouchi
@Energy_Tidbits

It's like when a comedian tries out new material on the audience & gets big applause.

Trump isn't going to stop toying with Trudeau.

Nothing to lose if Trudeau starts to be like Rocky Balboa after Apollo Creed keeps hitting Rocky to start the fight until Rocky hits back hard.

#OOTT

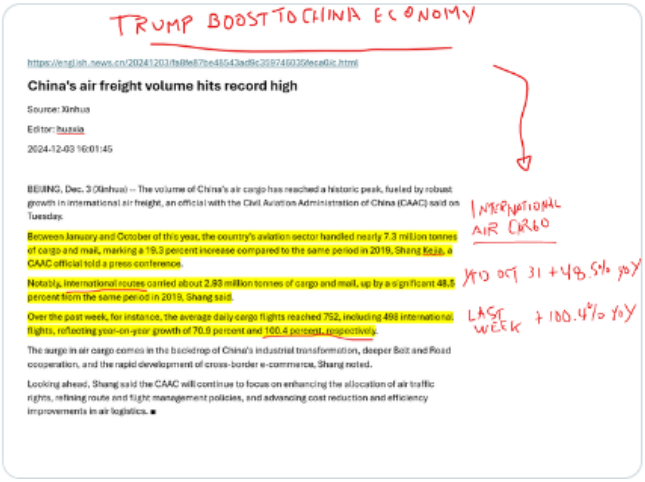
Dan Tsubouchi
@Energy_Tidbits

Trump boost to China economy.

Big jump to record international air cargo as customers pay up for air cargo to get their China goods pre Trump.

International air cargo.
YTD Oct 31: +48.5% YoY.
Last week: +100.4% YoY.

Fits 👇 12/01/24 post. Caixin PMI external orders for China good up post Trump.
#OOTT



Dan Tsubouchi ✓
@Energy_Tidbits

Headline "*situation for Germany industry is looking pretty grim*"

HCOB Manufacturing PMI: Nov 43.0. Oct 43.0. Sept 40.6. Aug 42.4. July 43.2.

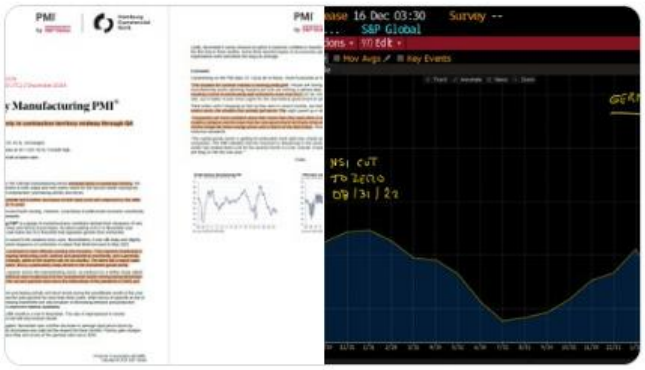
Overlooked: "***Co's are more confident about their future*** *.... hope that the new govt will finally bring about a real economic turnaround. T****his would involve things like lower energy prices ...***"

What else can DEU control to lower energy prices in 2025 besides more #Coal and cheaper #NatGas ie. return of RUS pipeline gas.

Can't make the wind blow more or sun shine more or add nuclear energy in 2025.

Should be an interesting election.

Thx @HCOB_Economics @SPGlobal #OOTT



7:18 PM · Dec 3, 2024 · **345** Views

Dan Tsubouchi ✓
@Energy_Tidbits

Here's why expectations are moving for OPEC to defer adding back any voluntary cut barrels until after Q1/25

See 👇 11/25 post.

Oil demand in Q1 every year is always seasonally lower than the preceding Q4.

OPEC Nov MOMR forecasts Q1/25 demand down 1.27 mmb/d QoQ vs Q4/24.

#OOTT

> **Dan Tsubouchi** ✓ @Energy_Tidbits · Nov 29
> Don't forget oil demand fundamentals when ;ooking for why OPEC is expected to delay adding back voluntary cuts.
>
> See 👇 11/25 tweet.
> ...
> Show more

8:42 PM · Dec 3, 2024 · **4,509** Views

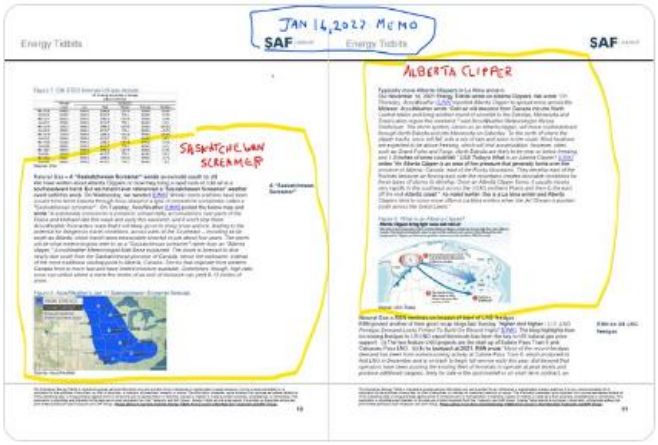
Dan Tsubouchi
@Energy_Tidbits

An "Alberta Clipper" is bringing winter weather to the US today.

See 👇 01/16/22 Energy Tidbits memo for what is an Alberta Clipper and also a Saskatchewan Screamer.

Warning that La Nina winters tend to have more Alberta Clipper events.

#OOTT #NatGas



8:00 AM · Dec 4, 2024 · **1,146** Views

Dan Tsubouchi
@Energy_Tidbits

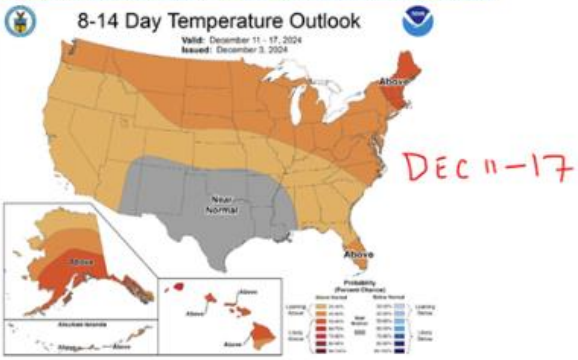
Weather forecasts are never 100% but it's worth being cautious with forecast the current cold east coast changing to warmer than normal around the end of hte week.

@NOAA updated 6-10 & 8-14 day temperature outlook from yesterday.

#OOTT #NatGas

https://www.cpc.ncep.noaa.gov/products/predictions/610day/

https://www.cpc.ncep.noaa.gov/products/predictions/814day/index.php



8:12 AM · Dec 4, 2024 · **1,580** Views

Dan Tsubouchi
@Energy_Tidbits

For those who aren't near their laptops, at 8:30 am MT, @EIAgov released #Oil #Gasoline #Distillates inventory as of Nov 29. Table below compares EIA data vs @business analyst survey expectations and vs @APIenergy estimates yesterday. Prior to release, WTI was $69.70. #OOTT

Oil/Products Inventory Nov 29: EIA, Bloomberg Survey Expectations, API

(million barrels)	EIA	Expectations	API
Oil	-5.07	-1.82	1.20
Gasoline	2.36	-0.68	4.60
Distillates	3.38	1.00	1.00
	0.67	-1.50	6.80

Note: Oil is commercial. So excludes a +1.4 mmb build in SPR for the Nov 29 week
Note: Included in the oil data, Cushing had a 0.05 mmb build for Nov 29 week
Source EIA, Bloomberg
Prepared by SAF Group https://safgroup.ca/news-insights/

8:32 AM · Dec 4, 2024 · **1,257** Views

Dan Tsubouchi
@Energy_Tidbits

Bullish #NatGas for coming decade.

Meta's $10b AI data center tol be in Louisiana.

Read release closely, doesn't say the data center will be powered by renewables. And carefully doesn't mention #NatGas power.

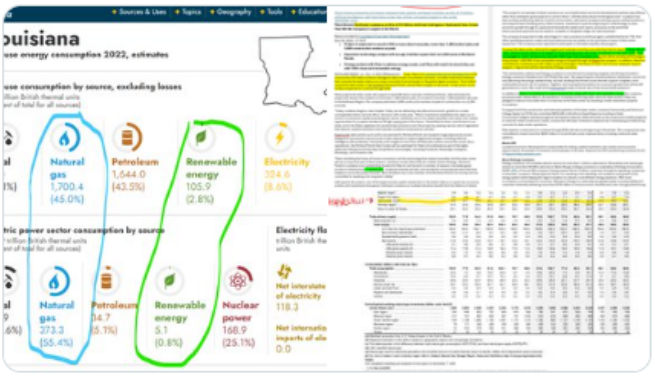
AI data centers need reliable, available 24/7 power.

Louisiana is a big #NatGas producer incl the Haynesville shale.

EIA's electricity profile shows LA's electricity generation is driven by #NatGas and renewable energy is immaterial.

Unless Meta can divert existing nuclear from going into the grid, no one may want to say it BUT it will be #NatGas providing the 24/7 power.

#OOTT



1:03 PM · Dec 4, 2024 · **15.5K** Views

Dan Tsubouchi ✓
@Energy_Tidbits

Reminder.

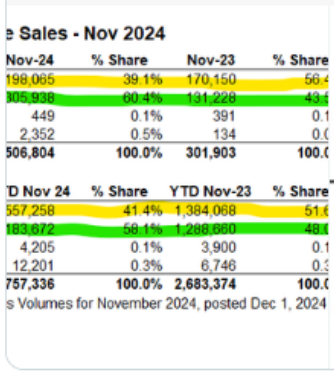
PHEVs keep dominating BEVs in China.

NEVs are BEVs + PHEVs and most normally just reference NEVs.

👇BYD's Nov car sales show PHEVs dominate BEVs.

PHEVs mean gasoline consumption decline is slower than expected.
#OOTT

> **Dan Tsubouchi** ✓ @Energy_Tidbits · Dec 1
> Breaking!
>
> PHEVs keep dominating BEVs in China.
>
> Don't forget NEVs = BEVs + PHEVs...
> Show more

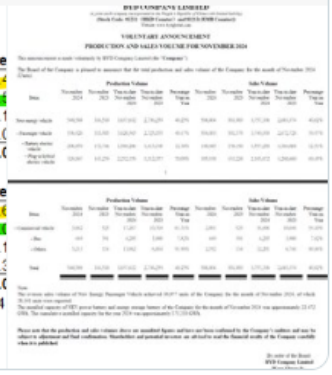


e Sales - Nov 2024

Nov-24	% Share	Nov-23	% Share
198,065	39.1%	170,150	56.4
305,938	60.4%	131,228	43.5
449	0.1%	391	0.1
2,352	0.5%	134	0.0
506,804	100.0%	301,903	100.0

D Nov 24	% Share	YTD Nov-23	% Share
557,258	41.4%	1,384,068	51.6
183,672	58.1%	1,286,660	48.0
4,205	0.1%	3,900	0.1
12,201	0.3%	6,746	0.3
757,336	100.0%	2,683,374	100.0

s Volumes for November 2024, posted Dec 1, 2024



5:42 PM · Dec 4, 2024 · **2,794** Views

Dan Tsubouchi ✓
@Energy_Tidbits

What else besides new #NatGas generation, not retiring #Coal #Nuclear generation can scale up to provide 24/7 electricity to meet growing electricity demand given disappointing ramp up in renewables by big players such as Shell?

Exclusive: Shell slows offshore wind spending reports @ronbousso1
#OOTT
reuters.com/business/energ...

6:05 PM · Dec 4, 2024 · **3,394** Views

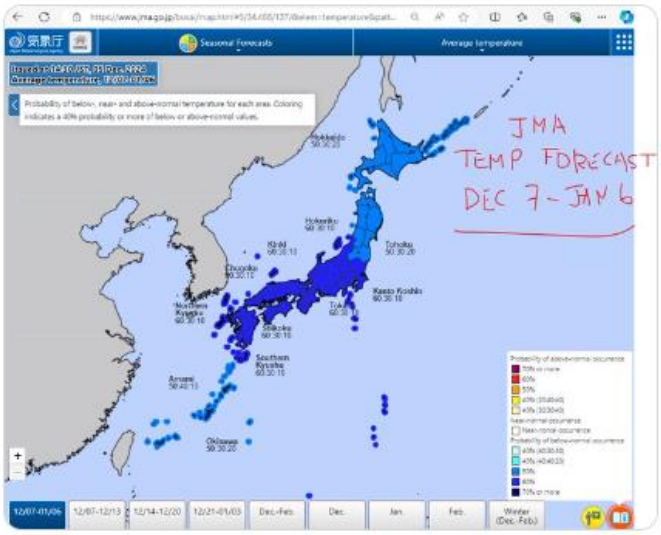
3 10 22 2

Dan Tsubouchi
@Energy_Tidbits

Much colder than normal temps forecast for Japan for Dec 7-Jan 6.

Japan Meteorological Agency's updated 30-day temp outlook.

Just need cold to stay in Europe and US>
#OOTT #NatGas



4:30 AM · Dec 5, 2024 · 1,688 Views

Dan Tsubouchi ✓
@Energy_Tidbits

Upside wildcard to #Oil in Q1/25.

And why Saudi et al only pushed back the return of voluntary cut barrels to Apr 1/25 and not longer.

See 👇 my 11/26/24 post: Trump's NSA pick Waltz was clear they are going to cut off Iran's cash flow and that means oil exports.

#OOTT

> **Dan Tsubouchi** ✓ @Energy_Tidbits · Nov 26
> Bullish for 2025 #Oil.
>
> See 👇 transcript.
>
> Trump NSA pick Mike Waltz. ...
> Show more
>
> ***" They are going to help Hezbollah, Hamas, the Houthis rebuild if they can. And as long as they are flush with cash, the Middle East is never going to have peace. ... There will be a shift. The president has been very clear about that. He was very clear in his 1st term in exerting maximum pressure on Iran until they are ready to come to the table from a very different perspective than they did with the Iran deal."* Mike Waltz, Trump's National Security Advisor**
>
> 
>
>
> SAF Group created transcript of Trump pick for National Security Advisor, Mike Waltz, on with Becky Quick, Joe Kernen and Andrew Ross Sorkin on CNBC Squawk Box on Nov 26, 2024.
> https://www.cnbc.com/video/2024/11/26/rep-mike-waltz-the-middle-east-is-a-key-component-to-resolving-the-russia-ukraine-conflict.html
>
> Items in "italics" are SAF Group created transcript
>
> At 4:55 min mark, Waltz *"The change you are going to see is more focused on Iran. I don't believe that you restore stability. I don't believe you solve Gaza. And I think this is shared across many in the administration with the President. Necessarily there you saw that dealing with Tehran. Tehran is the world's largest backer of terrorism. They are going to help Hezbollah, Hamas, the Houthis rebuild if they can. And as long as they are flush with cash, the Middle East is never going to have peace. ... There will be a shift. The president has been very clear about that. He was very clear in his 1st term in exerting maximum pressure on Iran until they are ready to come to the table from a very different perspective than they did with the Iran deal"*:
>
> At 6:20 min mark *"I just want to make one more point on Iran. China buys 90% [he may have said 98% but hard to hear] of Iran's illicit oil. Roughly 2017/2018, they were exporting 4 mmb/d. By the end of Trump's first administration, it was down to around 3, 4 hundred thousand so I think we will be having some conversations with China about those purchases. But again, going back to that full maximum pressure. Not only will it help stability in the Middle East, it will help stability in the Russia/Ukraine theatre as well as Iran provides ballistic missiles and literally thousands and thousands of drones that are going into that theatre. So the Middle East is also a key component to resolving the Russia/Ukraine conflict. "* \
>
> Prepared by SAF Group https://safgroup.ca/insights/energy-tidbits/

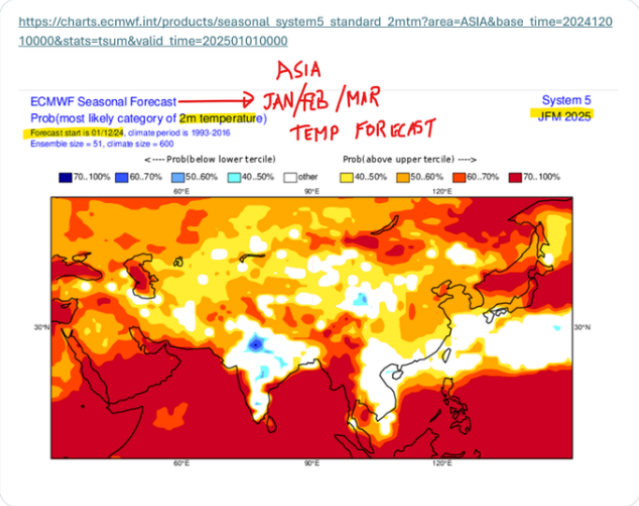
8:33 AM · Dec 5, 2024 · **1,436** Views

Dan Tsubouchi
@Energy_Tidbits

Warm JFM end to winter is never a positive for #LNG #NatGas prices.

Asia forecast warmer than normal temperatures in Jan/Feb/Mar for most of China, Japan and South Korea per @ECMWF Dec update.

Forecasts are never 100% but seems reasonable to be cautious for now.
#OOTT



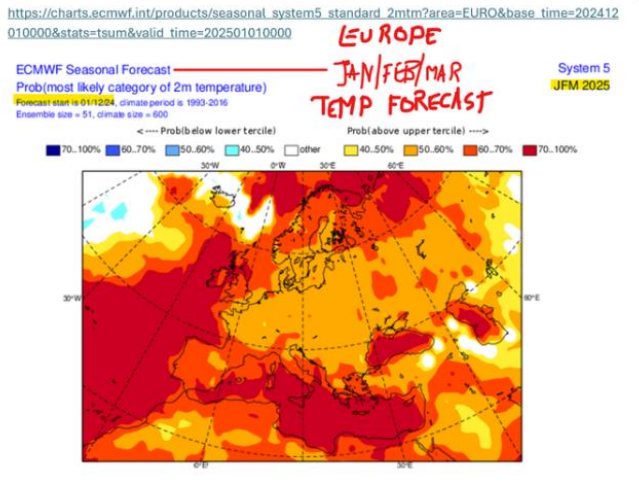
5:38 PM · Dec 5, 2024 · **1,664** Views

Dan Tsubouchi
@Energy_Tidbits

Reason to be cautious on Europe #NatGas going into January.

@ECMWF updated Dec/Jan/Feb temperature forecast is for warmer than normal temperatures across Europe.

Absent unexpected supply interruption, warm winters are never positive for #NatGas
#OOTT



Dan Tsubouchi
@Energy_Tidbits

"***We expect a modest rebound [China oil demand] in 2025.....*** *In 2024, a lot happened to contribute to the decline... so we do not expect a drop again like in 2024...*" Victor Yang with on the ground #Oil views from China.

See 👇 transcript.

Thx @sean_evers @gulf_intel Victor Yang
#OOTT

Dan Tsubouchi
@Energy_Tidbits

On the ground China views from Victor Yang.

Sees recent drop in China oil imports from Iran as temporary, back to normal in 2025.

China will still be main importer of sanctioned crude as price discount is attractive.

See 👇 transcript
Thx @sean_evers @gulf_intel Victor Yang
#OOTT

Dan Tsubouchi
@Energy_Tidbits

Oil demand 101.

OPEC decision to delay bringing barrels back to Q2 *"is more tied to the issue of the fact that 1st QT Is not a good quarter to bring volumes because there is always, that quarter is known to be a quarter for building stocks..."* Saudi HRH Abdulaziz at 5:55 min mark to @dan_murphy
x.com/dan_murphy/sta...

See 👇 11/25/24 post. oil demand -1.27 mmb/d QoQ in Q1/25 is why oil stocks build in Q1.

#OOTT

> **Dan Tsubouchi** @Energy_Tidbits · Dec 3
> Here's why expectations are moving for OPEC to defer adding back any voluntary cut barrels until after Q1/25
>
> See 👇 11/25 post.
> ...
> Show more

1:21 PM · Dec 6, 2024 · **2,852** Views

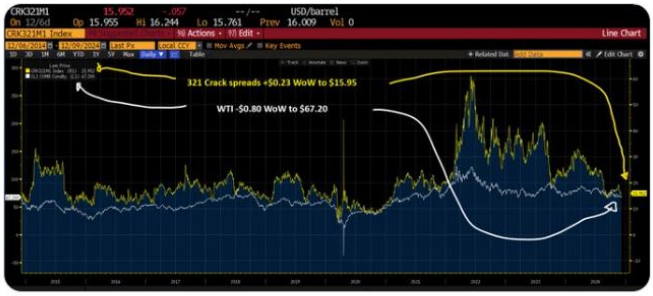
Dan Tsubouchi
@Energy_Tidbits

321 crack spreads +$0.23 WoW to $15.95 on Dec 6.

WTI -$0.80 WoW to $67.23.

Reinforces WTI is impacted more by global markets than by cracks as WTI was softer to end the week as market watchers weren't excited about OPEC moves.

Thx @business #OOTT



6:33 PM · Dec 6, 2024 · **2,555** Views

Dan Tsubouchi
@Energy_Tidbits

Big continuing win for Cdn #Oil Q4/24 cash flows.

Ramp up of volumes on 590,000 b/d TMX kept WCS less WTI differentials from normal Sept/Oct/Nov widening.

WCS less WTI diffs:
12/06/24: $12.35
12/06/23: $18.65
12/06/22: $27.50

Thx @garquake @business
#OOTT

6:55 PM · Dec 6, 2024 · **4,040** Views

Dan Tsubouchi
@Energy_Tidbits

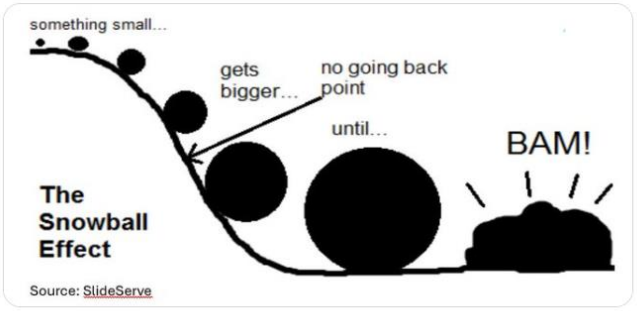
Snowball effect!

"Canada's cities are suffering from an infrastructure deficit with aging roads & bridges just the start. ***As we aim to build more homes, the gap will only be getting bigger since every new home requires up to $100k worth of new infrastructure"*** @AmandaLang on @CANURB data.

Need federal/provincial/municipal govts to recognize & deal with this accelerating problem before it's unstoppable.

Thx Amanda for interesting economy issues on @takingstockca.

#OOTT



7:40 AM · Dec 7, 2024 · **1,094** Views

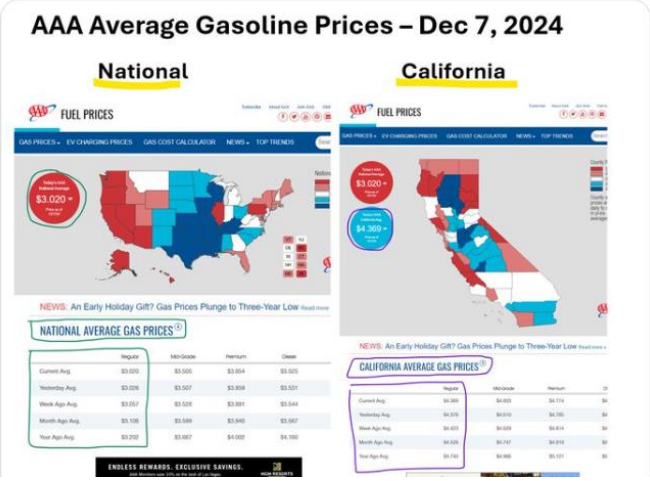
Dan Tsubouchi
@Energy_Tidbits

AAA National average gasoline prices -$0.04 WoW at $3.02 on Dec 7, -$0.09 MoM & -$0.18 YoY.

California average prices -$0.05 WoW to $4.37, -$0.16 MoM & -$0.37 YoY

National average gasoline price hasn't been below $3 since May 11, 2021.

Thx @AAAnews
#OOTT



Dan Tsubouchi
@Energy_Tidbits

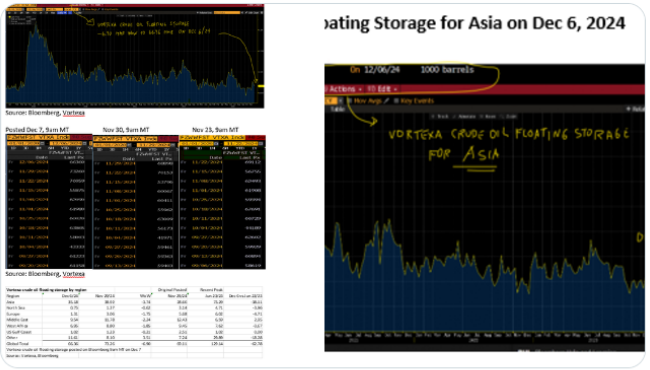
Vortexa crude #Oil floating storage

66.36 mmb on Dec 6, -6.90 mmb WoW vs revised up by +4.36 mmb Nov 29 of 73.26 mmb

Worth watching as has been higher last 3 wks incl Asia (35.18, 38.92 & 33.75 mmb) highest since Aug:

Last 7 wks all revised up by average +3.12 mmb per wk.

Thx @vortexa @business
#OOTT



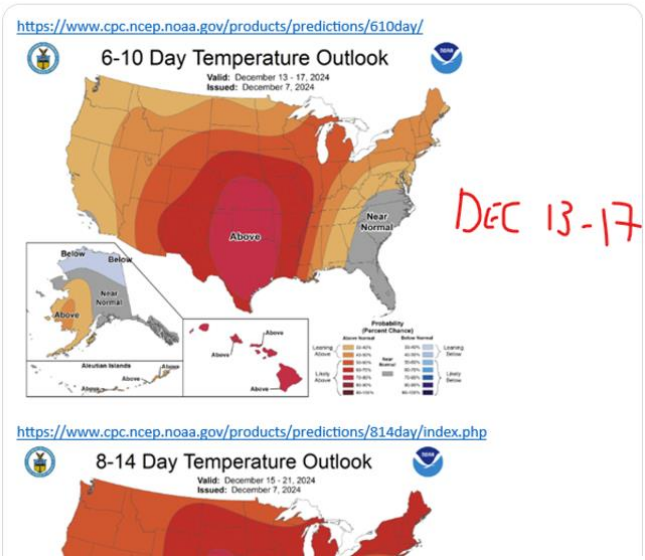
9:08 AM · Dec 7, 2024 · **1,815** Views

Dan Tsubouchi
@Energy_Tidbits

Never good for #NatGas if much warmer than normal temperatures in Dec.

@NOAA updated 6-10 & 8-14 day temperature forecast calls for much warmer than normal temperatures across the Lower 48

#OOTT



Dan Tsubouchi
@Energy_Tidbits

Reason to be cautious on #NatGas with 👇 @NOAA forecasts much warmer than normal temp starting in a week.

Other than 2022 when global #NatGas prices were driven up post RUS 02/24/22 UKR invasion, a warm Dec led to HH prices being seasonally weaker thru winter

#OOTT

> **Dan Tsubouchi** @Energy_Tidbits · 19h
> Never good for #NatGas if much warmer than normal temperatures in Dec.
>
> @NOAA updated 6-10 & 8-14 day temperature forecast calls for much warmer than normal temperatures across the Lower 48
> ...
> Show more
>
> https://www.cpc.ncep.noaa.gov/products/predictions/610day/

Dan Tsubouchi
@Energy_Tidbits

A pinched EU consumer?

Daily Europe air traffic lowest since Apr.

7-day moving average as of:

Dec 5: -4.0% below pre-Covid
Nov 28: -4.3%
Nov 21: -5.5%
Nov 14: -3.8%
Nov 7: -2.9%
Oct 31: -2.0%
Oct 24: -1.6%
Oct 17: -1.9%
Oct 10: -1.7%
Oct 3: -2.9%

Thx @eurocontrol #OOTT

5:27 PM · Dec 7, 2024 · **1,316** Views

Dan Tsubouchi
@Energy_Tidbits

Qatar Energy CEO says won't supply LNG to EU if its Corporate Sustainability Due Diligence Directive comes into effect in 2027.

At 3:30 min. "*What will make you I think be shocked is the penalty can be up to 5% of your total generated revenue worldwide. So the EU can penalize Qatar Energy for not being compliant with one of these things with my worldwide sales revenue to the world. So it makes absolutely no sense. So to me, my message to Europe and to the EU Commission is: that are you telling us "I don't want your LNG into the EU?" Because I sure am not going to supply EU with LNG to support their requirements for energy and then be penalized with my total revenue worldwide going to EU*"

CSDDD is more than emissions and will impact all large companies selling into EU, not just #Oil #NatGas

Thx @qatarenergy for posting.
Great interview @dan_murphy

#OOTT

> **QatarEnergy** @qatarenergy · 8h
> متحدثا خلال مقابلة خاصة نظمها منتدى الدوحة 2024
>
> سعادة المهندس سعد بن شريده الكعبي: "رسالتي إلى أوروبا هي: هل تقولون لنا نحن لا نريد غازكم الطبيعي المسال في الاتحاد الأوروبي؟ لأننا لن نزود الاتحاد الأوروبي بالغاز الطبيعي المسال لدعم متطلبات الطاقة، ثم نتعرض لعقوبة تبلغ 5% من
> Show more

Dan Tsubouchi
@Energy_Tidbits

Is Lower 48 shale/tight oil finally peaking in 2025?

12/05/24: Chevron Permian production growth reduced in favor of free cash flow.

11/01/24: CEO Wirth "*As we move towards the I million barrel-a-day mark next year, we will begin to shape our profile there a little bit towards a plateau and we'll really begin to focus on free cash flow*"

Chevron clearly says it is moving to peak/plateau Permian production in 2025.

Does this point to others doing the same in Permian? ie. moving to hold flat/plateau instead of growth.

Permian has been the Lower 48 shale/tight growth regions. So If Permian is only flat, does that mean Lower 48 shale/tight oil in total will start to be down a little bit.

If so, positive for #Oil with forecasts of peak oil demand getting pushed further out.

One weird item is why did they include their July 2023 Permian long term growth slide in their 11/04/24 slide deck?

#OOTT