Energy Tidbits

Orsted Cuts Renewable Energy Investment by $30b to 2030, Which Cuts its Wind Power Capacity Additions by 24-30%

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Short-Term Energy Outlook

Overview

U.S. energy market indicators	2023	2024	2025
Brent crude oil spot price (dollars per barrel)	**$82**	**$82**	**$79**
Retail gasoline price (dollars per gallon)	**$3.52**	**$3.31**	**$3.31**
U.S. crude oil production (million barrels per day)	**12.93**	**13.10**	**13.49**
Natural gas price at Henry Hub (dollars per million British thermal units)	**$2.54**	**$2.65**	**$2.94**
U.S. liquefied natural gas gross exports (billion cubic feet per day)	**11.8**	**12.1**	**14.4**
Shares of U.S. electricity generation			
Natural gas	42%	42%	41%
Coal	17%	15%	14%
Renewables	22%	24%	26%
Nuclear	19%	19%	19%
U.S. GDP (percentage change)	**2.4%**	**1.8%**	**1.6%**
U.S. CO_2 emissions (billion metric tons)	**4.78**	**4.79**	**4.72**

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook,* February 2024

- **Natural gas production.** Because of disruptions in mid-January related to cold weather across the central United States, we estimate that U.S. dry natural gas production fell from a monthly record of 106 billion cubic feet per day (Bcf/d) in December to 102 Bcf/d in January. The January average was 3 Bcf/d lower than we had forecast in last month's STEO. We forecast that U.S. natural gas production will increase in February and reach 105 Bcf/d by March as the weather-related disruptions subside and will stay close to that level for the rest of the year. Dry natural gas production averages 104 Bcf/d for all of 2024 in our forecast, almost 1 Bcf/d less than we forecast in last month's STEO. We expect production will increase in 2025 to average more than 106 Bcf/d.

- **Natural gas consumption.** We estimate that more than 118 Bcf/d of natural gas was consumed in the United States in January, a new monthly record, driven by the electric power sector. Although our forecast assumes that the United States will see milder weather with 4% fewer heating degree days than is typical during February and March, we forecast that U.S. natural gas consumption will increase by 5% in the first quarter of 2024 (1Q24) compared with 1Q23, which was one of the warmest first quarters on record.

- **Natural gas storage.** In January, increased natural gas consumption and reduced production resulted in a withdrawal of almost 920 Bcf from storage for the month, the third-most ever. However, because January began with 13% more natural gas in storage than average over the past five years, inventories remain above the five-year (2019–2023) average. We expect U.S. natural gas inventories in February and March will fall by less than the five-year average because of milder-

than-normal weather. We forecast inventories will end this winter heating season (November–March) at about 1,910 Bcf, which would be 15% more than the five-year average.

- **Natural gas prices.** The Henry Hub spot price averaged $3.18 per million British thermal units (MMBtu) in January. However, spot prices were volatile, rising sharply to $13.20/MMBtu on Friday January 12 in anticipation of severely cold weather for the coming weekend. After the weekend, prices quickly fell and continued to decrease until January 23, when the price hit the monthly low of $2.15/MMBtu. We forecast that mild weather for the remainder of 1Q24 will keep the average Henry Hub spot price near $2.40/MMBtu during February and March. But volatility could return if severely cold weather emerges, even for a short period.

- **Crude oil prices.** The Brent crude oil spot price increased in January, averaging $80 per barrel (b) because of heightened uncertainty about global oil shipments as attacks to vessels in the Red Sea intensified. Although we expect crude oil prices will rise into the mid-$80/b range in the coming months, we expect downward price pressures will emerge in 2Q24 as global oil inventories generally increase through the rest of our forecast. However, ongoing risks of supply disruptions in the Middle East create the potential for crude oil prices to be higher than our forecast.

- **U.S. crude oil production.** We estimate that U.S. crude oil production reached an all-time high in December of more than 13.3 million barrels per day (b/d). However, crude oil production fell to 12.6 million b/d in January because of shut-ins related to cold weather. We forecast production will return to almost 13.3 million b/d in February but then decrease slightly through the middle of 2024 and will not exceed the December 2023 record until February 2025.

- **Electricity generation.** Generation from renewable sources will likely grow in every region of the United States in 2024, driven by our forecast of a 36-gigawatt increase in solar generating capacity. We forecast U.S. solar generation will rise by 43% in 2024 and wind generation will rise by 6%. However, we revised our forecast generation from renewable sources down slightly in 2025 from last month's STEO because of lower reported capacity additions from generators in recent months. That factor, along with slightly more total generation in 2025, increased our forecast of coal-fired electricity generation in 2025 in this month's outlook.

Notable forecast changes

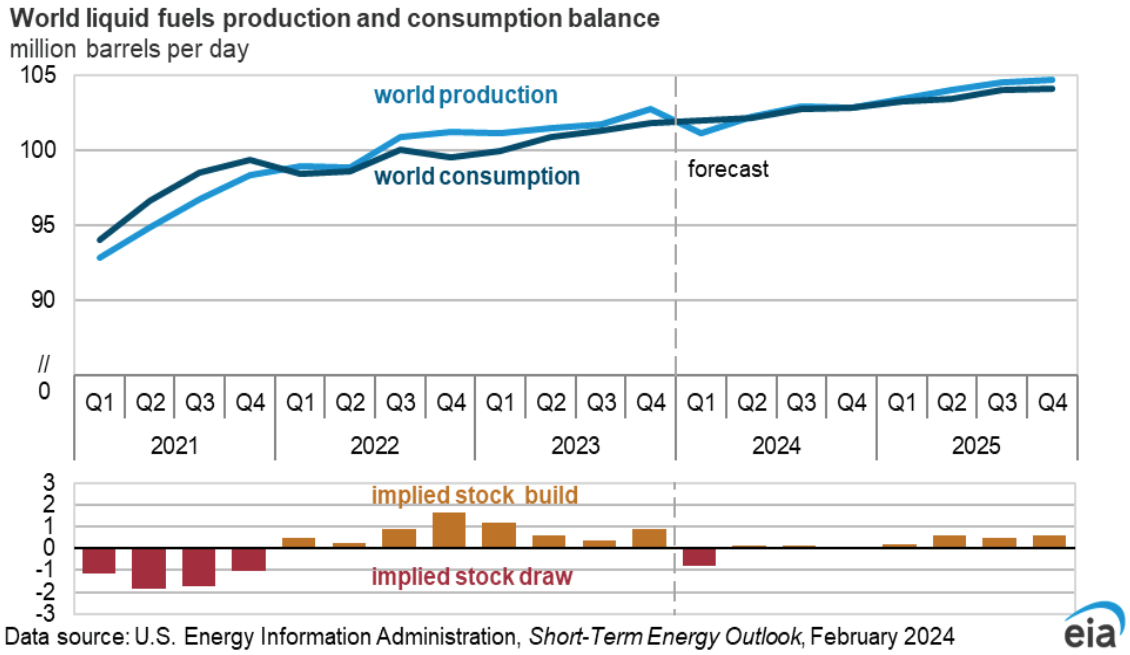
Current forecast: February 6, 2024; previous forecast: January 9, 2024	**2024**	**2025**
U.S. coal-fired power generation (billion kilowatthours)	**614**	**570**
Previous forecast	609	548
Percentage change	0.9%	4.2%
U.S. coal production (million short tons)	**470**	**456**
Previous forecast	489	429
Percentage change	-4.0%	6.3%

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*

Global Oil Markets

Global oil prices and inventories

The Brent crude oil spot price averaged $80 per barrel (b) in January, an increase of $2/b from December, the first monthly increase in the crude oil price since September 2023. Prices rose primarily because of heightened uncertainty about global oil shipments as attacks to vessels around the critical Red Sea shipping channel intensified. The Red Sea is more critical to the flexibility of global oil trade than in years past following Russia's full-scale invasion of Ukraine. These attacks have increased both transit times and shipping costs for oil, limiting the flexibility of the oil market to adjust to any future supply disruptions. The attacks also add a risk premium to prices due to the potential that oil production in the Middle East could be shut in during the forecast period, although no oil production has been lost as of February 6.



The impact of the Red Sea attacks on oil prices has been limited because of prolonged global oil inventory accumulation during 2022 and 2023 and the lack of disruptions to oil production. Our current assessment is that global oil inventories increased by 0.8 million barrels per day (b/d) on average from October 2023, the month before the Red Sea attacks began, through January 2024 and by an average of 0.7 million b/d for all of 2023.

We expect that OPEC+ production cuts will lead to global oil inventory withdrawals during February and March, resulting in an average draw of 0.8 million b/d in 1Q24, which we expect will put upward pressure on oil prices in the coming months. After a period of relatively balanced markets during the rest of 2024, we forecast the market will gradually return to moderate inventory builds in 2025 as slowing growth in oil demand is again outpaced by increasing oil production growth. We forecast that global oil inventories will increase by an average of 0.1 million b/d in the final three quarters of 2024 and by an average of almost 0.5 million b/d in 2025.

We expect that the falling inventories in 1Q24 will increase oil prices into the mid-$80/b range, before slight downward price pressures emerge through the remainder of our forecast. We forecast the Brent crude oil price will average $81/b in December 2024 and fall to $78/b by December 2025.

Global oil production and consumption

We expect that global production of liquid fuels will increase by 0.6 million b/d in 2024, slowing from the increase of almost 1.8 million b/d in 2023. In our forecast, global growth in liquid fuels production is led by non-OPEC supply, which increases by almost 0.8 million b/d, offsetting an OPEC production decline of 0.2 million b/d. Global liquids fuel production increases by almost 1.9 million b/d in 2025 in our forecast. The expiration of existing OPEC+ production targets at the end of 2024 contributes to our forecast that OPEC will increase crude oil production by 0.7 million next year. However, we expect the increase will be limited because Saudi Arabia and other OPEC+ countries will maintain some level of cuts in an attempt to balance markets. Our forecast for non-OPEC production growth averages 1.2 million b/d in 2025, led by the United States, Canada, Brazil, and Guyana.

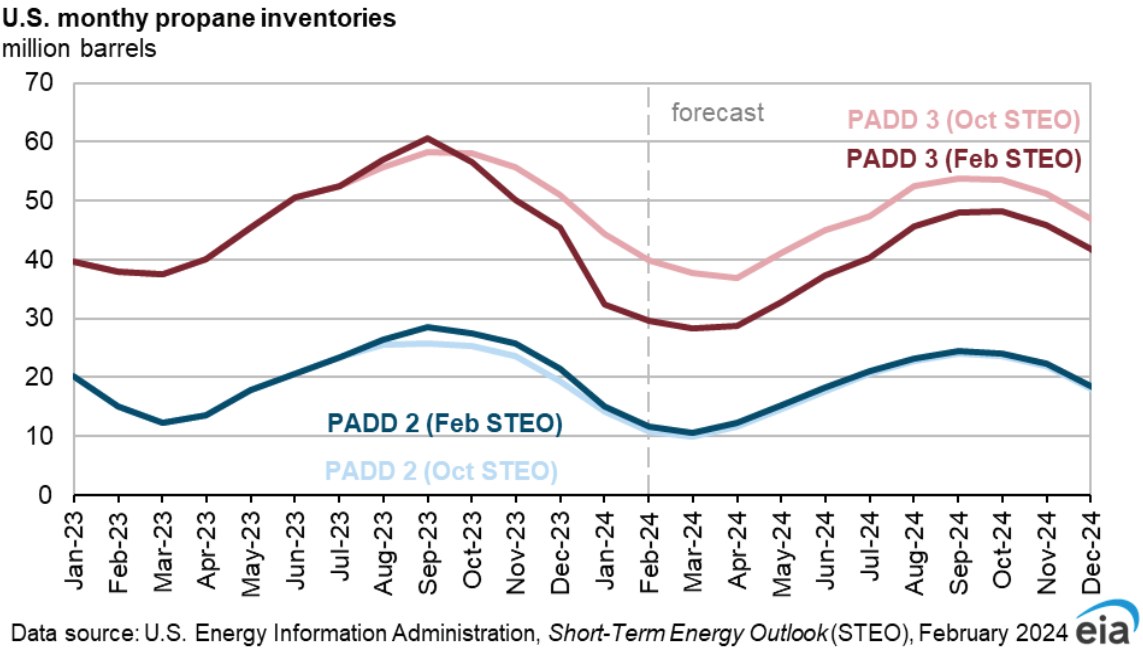
We forecast that global consumption of liquid fuels will increase by 1.4 million b/d in 2024 and 1.3 million b/d in 2025. Most of the expected liquid fuels demand growth is in non-OECD Asia, led by China and India, which we expect will increase consumption by a combined 0.6 million b/d in 2024 and 0.5 million b/d in 2025. In OECD countries, liquid fuels consumption stays relatively flat in 2024 and 2025.

Petroleum Products

U.S. propane stocks and prices

A cold weather snap in mid-January increased propane consumption—particularly in the Midwest (PADD 2), where it is most widely used for home heating—and resulted in stock withdrawals that were more than the five-year average. Despite the significant withdrawal from stocks, our forecast for Midwest propane stocks at the end of this winter (March 2024) is up slightly from our October 2023 forecast, when we issued our *Winter Fuels Outlook*. Stocks increased more than we had expected for September 2023, with Midwest propane stocks increasing to a seven-year high before the start of winter. Increased starting stocks and our expectation for milder-than-normal weather in February and March lead us to forecast end-of-winter Midwest propane stocks at 11 million barrels, up almost 1 million barrels from our original forecast from October 2023.

Withdrawals from propane stocks on the U.S. Gulf Coast (PADD 3) were also very high in January because of strong overseas demand rather than weather. Based on data from our *Weekly Petroleum Status Report*, we estimate that January propane exports averaged 1.7 million barrels per day (b/d). If realized, that would set the record for propane exports in January. Demand for U.S. propane overseas remains high because the commodity is used as a feedstock in petrochemicals as well as a heating fuel. Although delays at the Panama Canal are increasing shipping times and costs for liquified petroleum gas (LPG) carriers, these issues have so far not affected U.S. propane exports, the bulk of which come from the U.S. Gulf Coast. We now expect Gulf Coast stocks to end March at 28 million barrels, down by more than 9 million barrels from our October 2023 forecast.

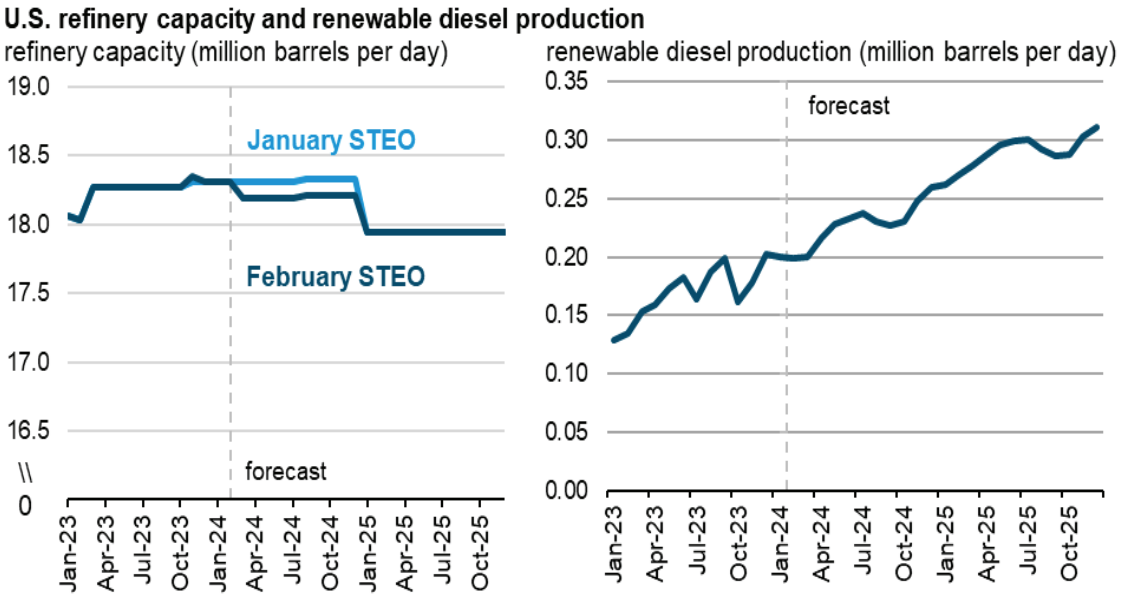


The combined effects of increased consumption from cold weather and record exports increased spot prices by more than we had previously forecast. In the October 2023 STEO, we forecast the Mont Belvieu, Texas, propane spot price would average 75 cents per gallon (gal) in January. The actual price averaged 78 cents/gal. We expect that lower inventories this year will keep propane prices higher than in 2023 for the rest of the year. The Mont Belvieu spot price in our forecast averages close to 80 cents/gal from 2Q24 through 4Q24, up from less than 70 cents/gal during that period last year.

U.S. refinery capacity

We are reducing our U.S. crude oil refining capacity forecast by 120,000 b/d beginning in March 2024, following reports that Phillips 66 will permanently stop processing crude oil in February at its Rodeo facility near San Francisco, California. Phillips 66 plans to fully convert the facility to renewable fuels production. We originally forecast the conversion would be finalized at the end of 2024. According to Phillips 66, the refinery produced around 60,000 b/d of distillate fuel and around 65,000 b/d of motor gasoline before the conversion. After conversion, the plant will produce around 50,000 b/d of renewable diesel, almost replacing the lost petroleum diesel the refinery produced. The Rodeo refinery is of average size compared with others in California and currently runs a combination of domestically produced crude oils and imported crude oil, mostly from Saudi Arabia and Canada.

We expect U.S. renewable diesel production to increase because of the Phillips 66 Rodeo conversion and other scheduled capacity expansions in the next two years. We forecast U.S. renewable diesel production will average 230,000 b/d in 2024 and 290,000 b/d in 2025, both about 30% annual increases.



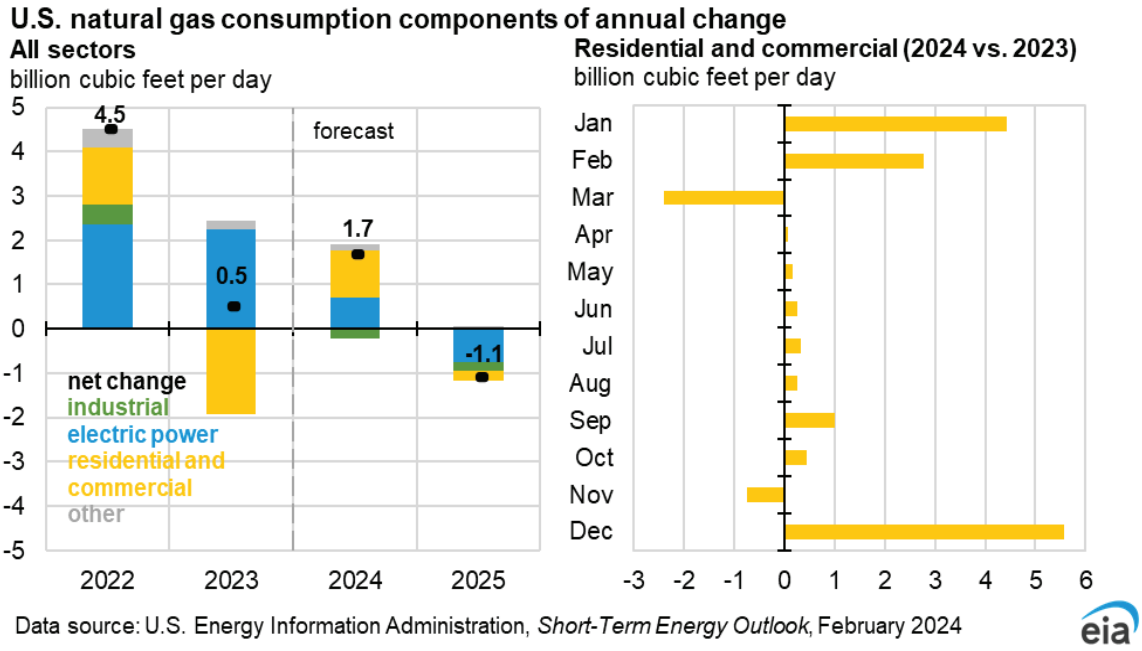
Natural Gas

Natural gas consumption

We estimate that 118 billion cubic feet per day (Bcf/d) of natural gas was consumed in the United States in January, the most in any month on record. Residential and commercial natural gas consumption in January averaged an estimated 46 Bcf/d, 4 Bcf/d more than January 2023. A mass of cold air covering much of the United States for several days in mid-January increased space heating demand across the country. According to data from S&P Global Commodity Insights, the cold weather led to record-high daily natural gas consumption on January 16. In addition, natural gas consumed for electricity generation increased by 5 Bcf/d in January compared with a year earlier, establishing a new January record of almost 37 Bcf/d. Despite the cold snap that briefly increased natural gas prices, the Henry Hub spot price stayed below $3 per million British thermal units (MMBtu) for most of January, which increased use of natural gas for electricity generation.

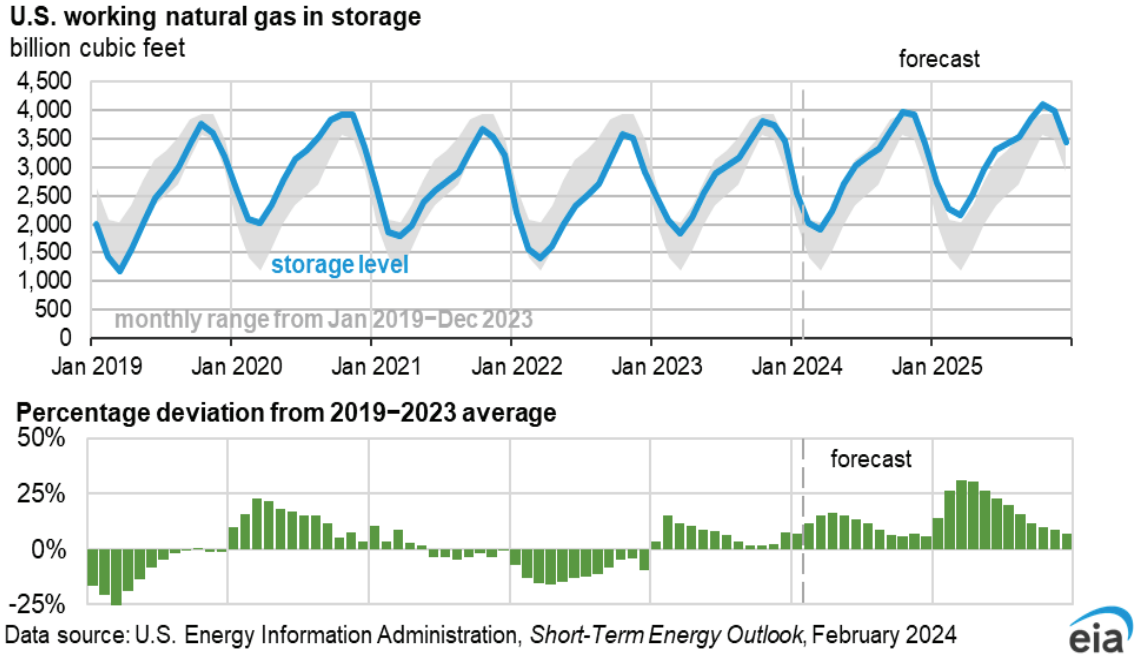
We forecast consumption of natural gas in the U.S. residential and commercial sectors will increase slightly in 2024, averaging 22 Bcf/d for the year. Residential and commercial sector natural gas consumption is highest in winter months due to increased space heating demand.

In February and March 2024, we forecast less natural gas consumption than average as a result of milder weather represented by 4% fewer heating degree days (HDDs) than the prior 10-year (2014–2023) average for those two months. However, winter storms could significantly affect consumption. In addition, natural gas exports are likely to decrease in February compared with January due to a partial outage at the Freeport LNG facility that began toward the end of January and that Freeport expects will last about a month.



Natural gas storage

We forecast U.S. natural gas inventories will decrease to 1,910 billion cubic feet (Bcf) by the end of this winter heating season (November–March), which would still be 15% above the previous five-year average. According to our *Weekly Natural Gas Storage Report*, the third-largest U.S. storage withdrawal on record occurred during the week ending January 19 as a result of cold weather that increased natural gas demand across the country at the same time as a drop in natural gas production. Although the large weekly withdrawal reduced the natural gas storage surplus to the five-year (2019–2023) average, we estimate that inventories still ended January 7% above the five-year average. We forecast that mild weather during February and March will reduce natural gas consumption and increase natural gas production and that storage inventories will remain above the five-year average at the end of the winter heating season.

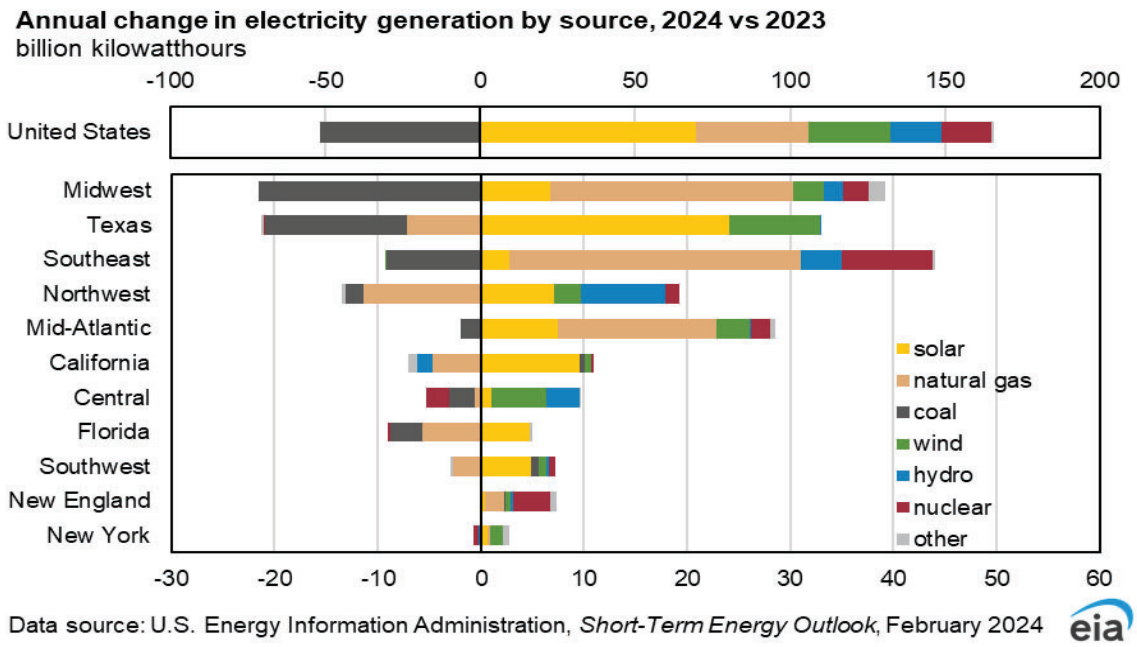


Electricity, Coal, and Renewables

Electricity generation

The mix of energy sources used for generating electricity in the United States is evolving, with a steady shift to renewable energy resources and away from fossil fuels. We expect that solar power will account for the most growth in electricity generation in 2024, driven by a 36-gigawatt increase in solar generating capacity. In our forecast, the U.S. electric power sector generates 43% more electricity from solar in 2024 than in 2023, an increase of 70 billion kilowatthours (BkWh). We forecast U.S. wind generation will grow by 6% (26 BkWh), following a slight drop in 2023 due to lower average wind speeds, mostly in the Midwest. U.S. hydropower generation grows by 7% in 2024 (17 BkWh) in our forecast due to slightly higher water supply levels, particularly in the Northwest, compared to last year.

The strong growth in renewable generation in 2024 results in slower growth or declines in electricity generation from fossil fuel sources in our forecast. We expect U.S. natural gas generation will grow by 2% (37 BkWh) this year, compared with growth of 7% (109 BkWh) in 2023. Generation from coal-fired power plants is likely to continue falling, with a forecast decline of 8% (52 BkWh) in 2024.



Generation from renewable sources will likely grow in every region of the United States as a result of new generating capacity scheduled to come on line this year. We expect solar and wind power will grow the most in the portion of Texas that is part of the electric grid managed by the Electric Reliability Council of Texas (ERCOT). Forecast solar generation in ERCOT grows by 90% in 2024 (24 BkWh) and wind generation by 8% (9 BkWh).

We expect U.S. coal generation to continue to decline as generation from natural gas remains competitive, some coal plants retire, and more renewable energy sources come online. In 2024, we forecast coal generation in ERCOT to fall 23% (14 BkWh) as solar generation increases. Forecast natural gas generation falls in ERCOT by 4% (7 BkWh) this year with more renewable energy generation.

Coal generation also falls by 22 BkWh in the Midwest in 2024, the largest coal decline among the regions, and by 9 BkWh in the Southeast. Decreased coal generation in the Midwest is offset by an increase of 24 BkWh in generation from natural gas-fired power plants taking advantage of continued low fuel costs. We expect nuclear generation in the Southeast region to rise by 9 BkWh this year as the new Unit 3 reactor opened at the Vogtle power plant in the second half of 2023. Our forecast current assumed that Unit 4 would come online at the end of 1Q24. However, recent reports indicate that it will likely begin operations in 2Q24.

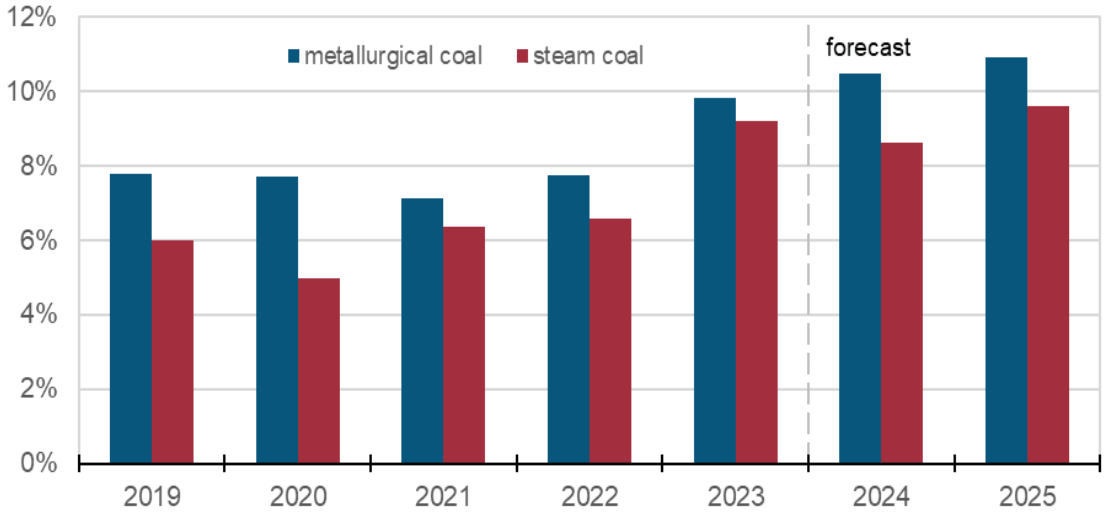
Coal markets

U.S. coal consumption increased by almost 50% in the electric power sector in January 2024 from December 2023, as cold temperatures covered a wide swath of the country in the middle of the month. Despite the increase in January, on an annual basis we forecast that coal consumption by the power sector will fall by 7% in 2024 and then will decline by 6% in 2025 as new solar and wind generating capacity comes online and as 11 gigawatts of coal-fired plant generating capacity is retired as scheduled. Although coal consumption declines through the forecast, the 6% forecast decline in 2025 is less than

the 8% decline we were expecting in last month's STEO. The slower decline reflects our expectation of slightly more electricity generation in 2025 and slightly fewer renewable capacity additions compared with last month's forecast. We expect coal production to decrease 19% in 2024 as domestic consumption of coal falls and inventories decline. Coal production in the forecast falls by a further 3% in 2025.

As domestic consumption falls, foreign consumption of U.S. coal will make up a larger share of the disposition of U.S. coal in 2025 even though we expect exports of U.S. coal to fall 7% to 95 million short tons (MMst) in 2024 and then remain near that level in 2025. Exports as a share of the total disposition of U.S. coal rise to 20% by 2025 from 14% in 2022 and 19% in 2023.

U.S. coal exports per total coal disposition
percentage

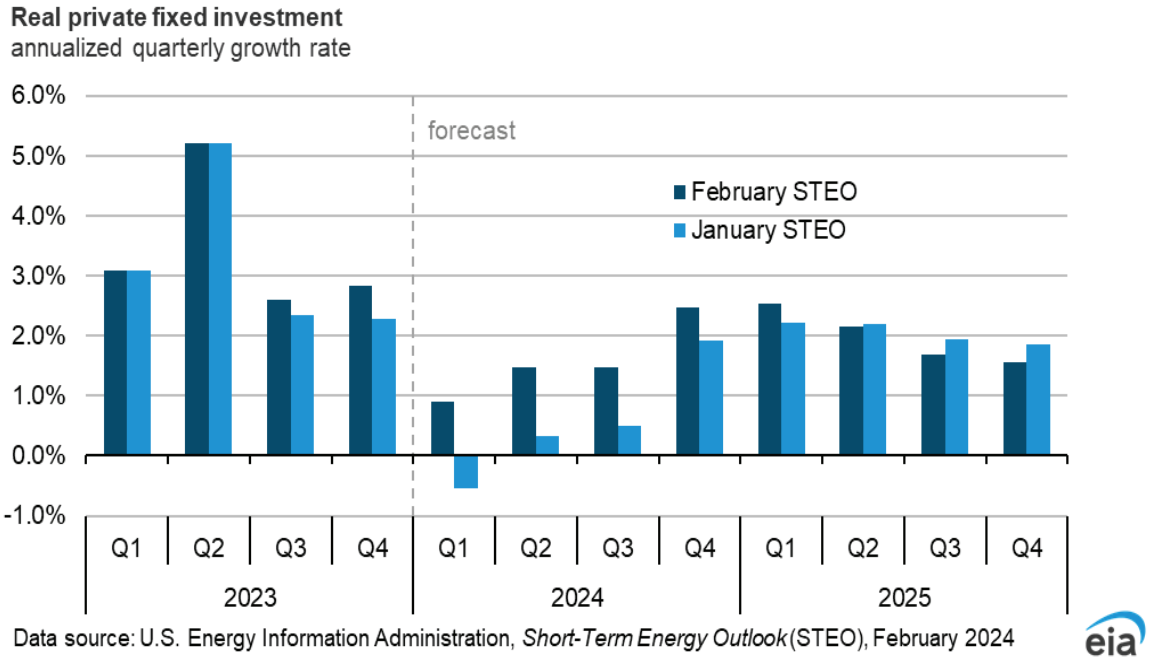


Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, February 2024
Note: Total coal disposition = domestic coal consumption plus coal exports.

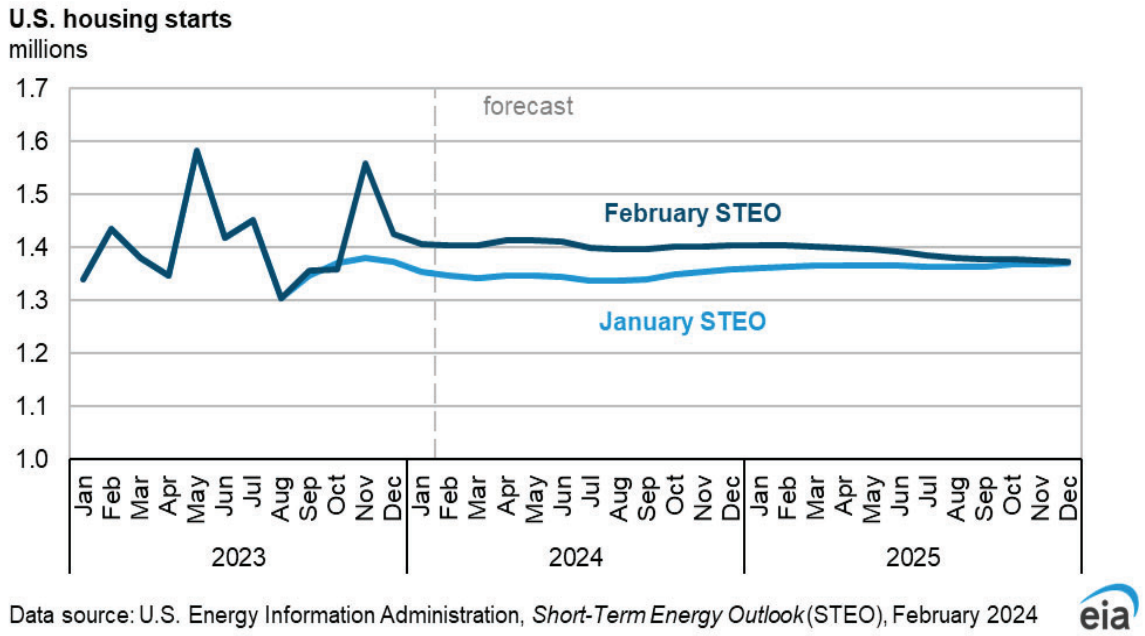
Economy, Weather, and CO_2

U.S. macroeconomics

Our forecast assumes U.S. real GDP will grow by 1.8% in 2024 and 1.6% in 2025 after upward revisions of 0.2% in 2024 and 0.3% in 2025 compared with last month's forecast. The revision primarily reflects an increase in growth in real private fixed investment, which we now assume will grow by 2.0% in 2024, outpacing GDP growth. Our U.S. macroeconomic forecasts are based on S&P Global's macroeconomic model. We incorporate STEO energy price forecasts into the model to obtain the final macroeconomic assumptions.



The upward revision to economic growth follows the December meeting of the Federal Open Market Committee (FOMC) of the U.S. Federal Reserve. In that meeting, the FOMC announced that it would keep the target for the federal funds rate at its current level, easing expected financial conditions in 2024. The macroeconomic forecast used in this STEO was compiled before the most recent FOMC meeting concluded on January 31, but at that meeting the FOMC largely confirmed its stance from the December meeting that there is little chance of rate increases in the near future. The effect is evident in the forecast for privately owned housing starts. Compared with last month's forecast, there are an additional 600,000 housing starts in 2024 and 230,000 in 2025. Housing construction consumes energy, and additional housing starts increase demand for petroleum products, particularly asphalt and road oil, which in turn increases total petroleum demand.

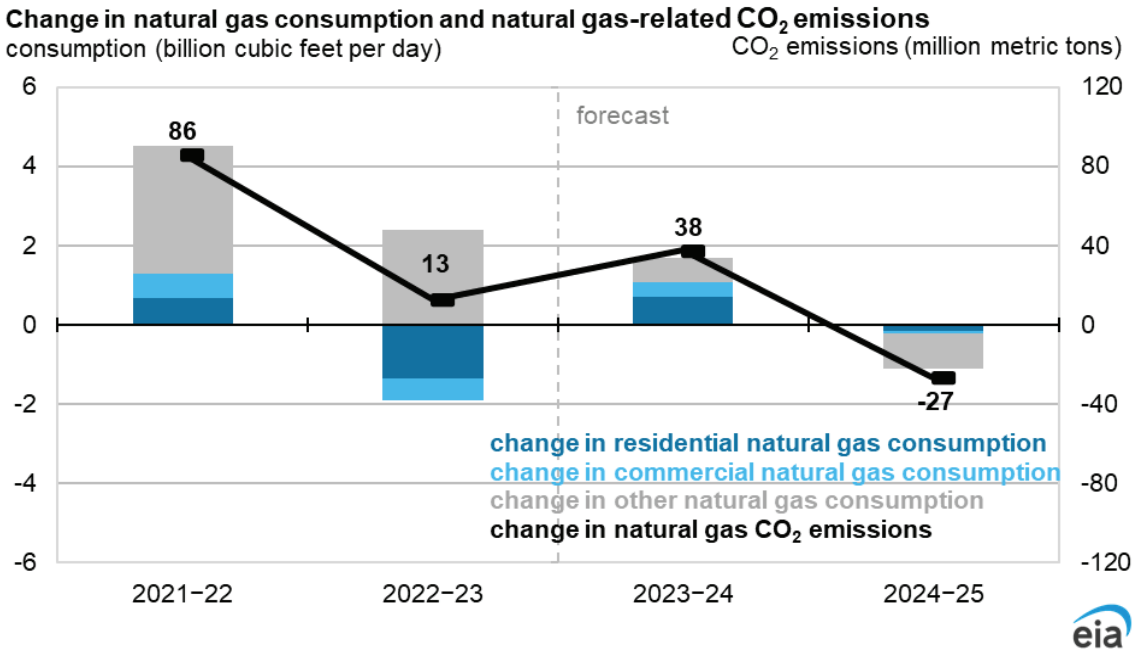


Inflation, measured as the year-over-year growth rate of the Consumer Price Index (CPI), declined from a peak of 9.0% in June 2022 to 3.3% in December 2023. Our forecast assumes that CPI inflation will continue to decline, falling to 2.0% by the fourth quarter of 2024 (4Q24). Our forecast assumes the unemployment rate will remain flat at just below 4.0% through 4Q25. Higher-than-anticipated inflation or deterioration in the labor market could affect the outlook for interest rates and energy consumption and are a source of uncertainty in our forecast.

Emissions

Total U.S. energy-related carbon dioxide (CO_2) emissions in our forecast remain unchanged in 2024, with decreasing CO_2 emissions from coal offsetting increased CO_2 emissions from natural gas. Coal-related CO_2 emissions decline by 5% in 2024 because of decreasing coal-fired electricity generation. Natural gas-related CO_2 emissions in our forecast increase by 2%, mostly from increased consumption in the residential and commercial sectors. Between 2024 and 2025, we forecast CO_2 emissions decrease by 1% as both natural gas and coal-fired generation decline as result of the addition of electricity generating capacity from renewable sources.

Along with the addition of renewable generating capacity, weather is one of the primary drivers influencing energy-related CO_2 emissions in our forecast for 2024 and 2025. This factor is particularly true for the residential and commercial sectors, where weather changes space heating and cooling demand in buildings. Demand for space heating in our forecast, and consequently natural gas-related CO_2 emissions, increase in 2024 as a result of relatively colder forecast temperatures, indicated by an 7% increase in HDDs. Natural gas emissions decrease in 2025 as milder weather, indicated by 2% fewer HDDs, decreases demand for space heating.



Weather

Following a warmer start to the winter season (November–March), the United States experienced a relatively normal January. Despite the cold snap in the middle of the month, there were almost 850 HDDs in January, similar to the 10-year average, but nearly 20% more than in January 2023. The cold weather experienced in mid-January increased our forecast by 140 (7%) more HDDs in 1Q24 compared with 1Q23. Overall, we expect a cooler 2024 in the United States, with almost 4,000 HDDs, up 7% from 2023.

Table 3a. International Petroleum and Other Liquids Production, Consumption, and Inventories

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Production (million barrels per day) (a)															
OECD	**33.48**	**33.80**	**34.55**	**35.20**	*34.64*	*34.47*	*34.55*	*35.06*	*35.40*	*35.26*	*35.36*	*35.87*	**34.26**	*34.68*	*35.47*
U.S. (50 States)	**21.05**	**21.69**	**22.27**	**22.62**	*21.95*	*22.19*	*22.18*	*22.29*	*22.54*	*22.82*	*22.82*	*23.04*	**21.91**	*22.15*	*22.81*
Canada	**5.79**	**5.44**	**5.79**	**5.94**	*5.96*	*5.64*	*5.84*	*6.06*	*6.13*	*5.84*	*6.04*	*6.18*	**5.74**	*5.88*	*6.05*
Mexico	**2.07**	**2.16**	**2.11**	**2.13**	*2.10*	*2.07*	*2.04*	*2.01*	*2.01*	*1.99*	*1.97*	*1.94*	**2.12**	*2.06*	*1.98*
Other OECD	**4.56**	**4.51**	**4.39**	**4.51**	*4.63*	*4.56*	*4.49*	*4.70*	*4.71*	*4.62*	*4.53*	*4.70*	**4.49**	*4.60*	*4.64*
Non-OECD	**67.63**	**67.68**	**67.14**	**67.51**	*66.53*	*67.80*	*68.32*	*67.81*	*68.02*	*68.75*	*69.17*	*68.82*	**67.49**	*67.62*	*68.69*
OPEC	**32.77**	**32.46**	**31.63**	**31.90**	*31.51*	*32.03*	*32.24*	*32.13*	*32.53*	*32.70*	*32.78*	*32.50*	**32.19**	*31.98*	*32.63*
Crude Oil Portion	**27.38**	**27.23**	**26.37**	**26.60**	*26.12*	*26.76*	*26.95*	*26.79*	*27.25*	*27.42*	*27.50*	*27.22*	**26.89**	*26.66*	*27.35*
Other Liquids (b)	**5.40**	**5.22**	**5.26**	**5.30**	*5.40*	*5.27*	*5.30*	*5.33*	*5.28*	*5.28*	*5.28*	*5.28*	**5.29**	*5.32*	*5.28*
Eurasia	**14.11**	**13.65**	**13.42**	**13.70**	*13.55*	*13.66*	*13.67*	*13.74*	*13.82*	*13.82*	*13.73*	*13.88*	**13.72**	*13.65*	*13.81*
China	**5.32**	**5.32**	**5.19**	**5.23**	*5.27*	*5.30*	*5.29*	*5.33*	*5.28*	*5.30*	*5.29*	*5.33*	**5.26**	*5.30*	*5.30*
Other Non-OECD	**15.43**	**16.26**	**16.90**	**16.68**	*16.20*	*16.82*	*17.12*	*16.62*	*16.40*	*16.92*	*17.37*	*17.10*	**16.32**	*16.69*	*16.95*
Total World Production	**101.11**	**101.48**	**101.69**	**102.71**	*101.18*	*102.27*	*102.88*	*102.87*	*103.42*	*104.01*	*104.54*	*104.69*	**101.75**	*102.30*	*104.17*
Non-OPEC Production	**68.33**	**69.02**	**70.06**	**70.81**	*69.66*	*70.24*	*70.63*	*70.74*	*70.89*	*71.30*	*71.76*	*72.19*	**69.56**	*70.32*	*71.54*
Consumption (million barrels per day) (c)															
OECD	**45.22**	**45.67**	**46.02**	**46.48**	*45.91*	*45.56*	*46.25*	*46.31*	*45.94*	*45.58*	*46.27*	*46.35*	**45.85**	*46.01*	*46.04*
U.S. (50 States)	**19.66**	**20.38**	**20.37**	**20.48**	*20.17*	*20.47*	*20.53*	*20.39*	*20.29*	*20.57*	*20.63*	*20.51*	**20.23**	*20.39*	*20.50*
U.S. Territories	**0.12**	**0.12**	**0.12**	**0.12**	*0.11*	*0.11*	*0.11*	*0.11*	*0.11*	*0.11*	*0.11*	*0.11*	**0.12**	*0.11*	*0.11*
Canada	**2.33**	**2.47**	**2.63**	**2.38**	*2.37*	*2.32*	*2.42*	*2.40*	*2.34*	*2.29*	*2.39*	*2.37*	**2.45**	*2.38*	*2.35*
Europe	**13.09**	**13.54**	**13.62**	**13.55**	*13.21*	*13.36*	*13.77*	*13.53*	*13.19*	*13.34*	*13.75*	*13.51*	**13.45**	*13.47*	*13.45*
Japan	**3.73**	**3.10**	**3.10**	**3.47**	*3.60*	*2.98*	*3.09*	*3.42*	*3.54*	*2.94*	*3.04*	*3.36*	**3.35**	*3.27*	*3.22*
Other OECD	**6.29**	**6.06**	**6.19**	**6.48**	*6.44*	*6.30*	*6.32*	*6.46*	*6.47*	*6.32*	*6.35*	*6.48*	**6.25**	*6.38*	*6.41*
Non-OECD	**54.72**	**55.23**	**55.31**	**55.34**	*56.07*	*56.57*	*56.52*	*56.48*	*57.31*	*57.85*	*57.78*	*57.75*	**55.15**	*56.41*	*57.68*
Eurasia	**4.34**	**4.49**	**4.82**	**4.72**	*4.48*	*4.64*	*4.96*	*4.87*	*4.51*	*4.66*	*5.00*	*4.90*	**4.59**	*4.74*	*4.77*
Europe	**0.74**	**0.76**	**0.77**	**0.77**	*0.75*	*0.77*	*0.77*	*0.78*	*0.75*	*0.77*	*0.78*	*0.78*	**0.76**	*0.77*	*0.77*
China	**15.90**	**16.09**	**15.78**	**15.99**	*16.23*	*16.42*	*16.10*	*16.31*	*16.48*	*16.67*	*16.35*	*16.56*	**15.94**	*16.27*	*16.52*
Other Asia	**14.36**	**14.23**	**13.70**	**14.07**	*14.81*	*14.79*	*14.18*	*14.50*	*15.30*	*15.28*	*14.65*	*14.98*	**14.09**	*14.57*	*15.05*
Other Non-OECD	**19.37**	**19.65**	**20.25**	**19.79**	*19.79*	*19.95*	*20.50*	*20.03*	*20.27*	*20.46*	*21.02*	*20.52*	**19.76**	*20.07*	*20.57*
Total World Consumption	**99.93**	**100.90**	**101.33**	**101.82**	*101.98*	*102.12*	*102.77*	*102.79*	*103.25*	*103.43*	*104.05*	*104.10*	**101.00**	*102.42*	*103.71*
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	**-0.08**	**-0.11**	**-0.25**	**0.17**	*0.25*	*-0.38*	*-0.08*	*0.35*	*-0.05*	*-0.42*	*-0.15*	*0.23*	**-0.07**	*0.03*	*-0.10*
Other OECD	**0.32**	**-0.02**	**-0.15**	**0.14**	*0.18*	*0.07*	*-0.01*	*-0.13*	*-0.03*	*-0.05*	*-0.10*	*-0.25*	**0.07**	*0.03*	*-0.11*
Other Stock Draws and Balance	**-1.41**	**-0.45**	**0.05**	**-1.20**	*0.38*	*0.16*	*-0.02*	*-0.29*	*-0.08*	*-0.11*	*-0.23*	*-0.56*	**-0.75**	*0.06*	*-0.25*
Total Stock Draw	**-1.17**	**-0.58**	**-0.36**	**-0.89**	*0.81*	*-0.15*	*-0.11*	*-0.08*	*-0.17*	*-0.58*	*-0.48*	*-0.58*	**-0.75**	*0.12*	*-0.45*
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	**1,231**	**1,264**	**1,283**	**1,265**	*1,233*	*1,262*	*1,270*	*1,238*	*1,243*	*1,281*	*1,295*	*1,273*	**1,265**	*1,238*	*1,273*
OECD Commercial Inventory	**2,746**	**2,782**	**2,815**	**2,783**	*2,735*	*2,757*	*2,766*	*2,746*	*2,754*	*2,797*	*2,820*	*2,822*	**2,783**	*2,746*	*2,822*

(a) Supply includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

(b) Includes lease condensate, natural gas plant liquids, other liquids, and refinery processing gain. Includes other unaccounted-for liquids.

(c) Consumption of petroleum by the OECD countries is synonymous with "petroleum product supplied," defined in the glossary of the EIA *Petroleum Supply Monthly* , DOE/EIA-0109. Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel and loss, and bunkering.

- = no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkiye, United Kingdom, and United States.

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Congo (Brazzaville), Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates, Venezuela.

Notes: EIA completed modeling and analysis for this report on February 1, 2024.

The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Historical data: Latest data available from Energy Information Administration *International Energy Statistics* (https://www.eia.gov/international/data/world).

Minor discrepancies with published historical data are due to independent rounding.

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 4a. U.S. Petroleum and Other Liquids Supply, Consumption, and Inventories

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	**12.63**	**12.75**	**13.07**	**13.29**	*13.03*	*13.12*	*13.06*	*13.18*	*13.37*	*13.46*	*13.50*	*13.64*	**12.93**	*13.10*	*13.49*
Alaska	**0.44**	**0.43**	**0.40**	**0.43**	*0.43*	*0.41*	*0.39*	*0.41*	*0.42*	*0.40*	*0.39*	*0.41*	**0.43**	*0.41*	*0.40*
Federal Gulf of Mexico (b)	**1.87**	**1.77**	**1.94**	**1.91**	*1.96*	*1.95*	*1.90*	*1.94*	*1.99*	*2.01*	*1.95*	*1.98*	**1.87**	*1.94*	*1.98*
Lower 48 States (excl GOM)	**10.31**	**10.55**	**10.73**	**10.95**	*10.64*	*10.76*	*10.77*	*10.83*	*10.96*	*11.06*	*11.17*	*11.26*	**10.64**	*10.75*	*11.11*
Transfers to Crude Oil Supply	**0.39**	**0.51**	**0.70**	**0.65**	*0.58*	*0.56*	*0.59*	*0.57*	*0.56*	*0.58*	*0.61*	*0.59*	**0.56**	*0.57*	*0.58*
Crude Oil Net Imports (c)	**2.27**	**2.51**	**2.61**	**2.46**	*1.84*	*2.31*	*2.09*	*1.47*	*1.42*	*1.77*	*1.70*	*1.31*	**2.46**	*1.93*	*1.55*
SPR Net Withdrawals	**0.01**	**0.26**	**-0.04**	**-0.04**	*-0.10*	*-0.07*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.05**	*-0.04*	*0.00*
Commercial Inventory Net Withdrawals	**-0.39**	**0.12**	**0.41**	**-0.15**	*-0.12*	*0.10*	*0.17*	*-0.08*	*-0.32*	*0.09*	*0.16*	*-0.09*	**0.00**	*0.02*	*-0.04*
Crude Oil Adjustment (d)	**0.34**	**0.00**	**-0.22**	**-0.28**	*0.25*	*0.17*	*0.14*	*0.16*	*0.17*	*0.16*	*0.13*	*0.15*	**-0.04**	*0.18*	*0.15*
Total Crude Oil Input to Refineries	**15.25**	**16.15**	**16.51**	**15.92**	*15.47*	*16.20*	*16.06*	*15.30*	*15.21*	*16.07*	*16.10*	*15.59*	**15.96**	*15.76*	*15.74*
Other Supply															
Refinery Processing Gain	**0.97**	**1.01**	**1.07**	**1.04**	*0.97*	*1.00*	*0.99*	*0.97*	*0.97*	*1.00*	*1.01*	*1.02*	**1.02**	*0.98*	*1.00*
Natural Gas Plant Liquids Production	**6.01**	**6.42**	**6.58**	**6.72**	*6.43*	*6.51*	*6.55*	*6.55*	*6.60*	*6.69*	*6.66*	*6.71*	**6.43**	*6.51*	*6.67*
Renewables and Oxygenate Production (e)	**1.24**	**1.29**	**1.31**	**1.34**	*1.31*	*1.35*	*1.35*	*1.38*	*1.40*	*1.44*	*1.44*	*1.47*	**1.30**	*1.35*	*1.44*
Fuel Ethanol Production	**1.00**	**1.00**	**1.02**	**1.05**	*1.01*	*1.01*	*1.01*	*1.02*	*1.02*	*1.03*	*1.01*	*1.03*	**1.02**	*1.01*	*1.02*
Petroleum Products Adjustment (f)	**0.20**	**0.22**	**0.23**	**0.23**	*0.21*	*0.22*	*0.21*	*0.21*	*0.20*	*0.21*	*0.21*	*0.22*	**0.22**	*0.21*	*0.21*
Petroleum Products Transfers to Crude Oil Supply	**-0.39**	**-0.51**	**-0.70**	**-0.65**	*-0.58*	*-0.56*	*-0.59*	*-0.57*	*-0.56*	*-0.58*	*-0.61*	*-0.59*	**-0.56**	*-0.57*	*-0.58*
Product Net Imports (c)	**-3.91**	**-3.71**	**-4.03**	**-4.48**	*-4.11*	*-3.83*	*-3.79*	*-3.88*	*-3.79*	*-3.75*	*-3.88*	*-4.22*	**-4.04**	*-3.90*	*-3.91*
Hydrocarbon Gas Liquids	**-2.47**	**-2.39**	**-2.42**	**-2.59**	*-2.58*	*-2.59*	*-2.51*	*-2.51*	*-2.62*	*-2.68*	*-2.60*	*-2.57*	**-2.47**	*-2.55*	*-2.62*
Unfinished Oils	**0.28**	**0.27**	**0.22**	**0.21**	*0.39*	*0.43*	*0.45*	*0.35*	*0.33*	*0.43*	*0.47*	*0.37*	**0.24**	*0.41*	*0.40*
Other HC/Oxygenates	**-0.05**	**-0.07**	**-0.04**	**-0.05**	*-0.06*	*-0.05*	*-0.04*	*-0.05*	*-0.08*	*-0.07*	*-0.06*	*-0.07*	**-0.05**	*-0.05*	*-0.07*
Motor Gasoline Blend Comp.	**0.45**	**0.67**	**0.57**	**0.40**	*0.39*	*0.56*	*0.57*	*0.40*	*0.50*	*0.66*	*0.55*	*0.33*	**0.52**	*0.48*	*0.51*
Finished Motor Gasoline	**-0.75**	**-0.58**	**-0.67**	**-0.78**	*-0.59*	*-0.41*	*-0.47*	*-0.60*	*-0.58*	*-0.44*	*-0.47*	*-0.62*	**-0.70**	*-0.52*	*-0.53*
Jet Fuel	**-0.05**	**0.01**	**-0.05**	**-0.10**	*-0.08*	*0.00*	*0.03*	*0.08*	*0.01*	*0.05*	*0.02*	*0.00*	**-0.05**	*0.01*	*0.02*
Distillate Fuel Oil	**-0.76**	**-0.97**	**-1.01**	**-0.97**	*-0.83*	*-1.00*	*-1.06*	*-0.86*	*-0.66*	*-0.96*	*-0.98*	*-0.90*	**-0.93**	*-0.94*	*-0.88*
Residual Fuel Oil	**0.01**	**-0.04**	**-0.03**	**0.00**	*0.01*	*-0.01*	*-0.07*	*0.03*	*0.01*	*0.01*	*-0.07*	*0.02*	**-0.01**	*-0.01*	*-0.01*
Other Oils (g)	**-0.58**	**-0.61**	**-0.59**	**-0.59**	*-0.77*	*-0.75*	*-0.70*	*-0.73*	*-0.70*	*-0.74*	*-0.73*	*-0.78*	**-0.59**	*-0.74*	*-0.74*
Product Inventory Net Withdrawals	**0.30**	**-0.49**	**-0.61**	**0.36**	*0.46*	*-0.42*	*-0.26*	*0.43*	*0.26*	*-0.52*	*-0.31*	*0.32*	**-0.11**	*0.05*	*-0.06*
Total Supply	**19.67**	**20.38**	**20.37**	**20.48**	*20.17*	*20.47*	*20.53*	*20.39*	*20.29*	*20.57*	*20.63*	*20.51*	**20.23**	*20.39*	*20.50*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**3.40**	**3.36**	**3.25**	**3.72**	*3.84*	*3.34*	*3.39*	*3.73*	*3.85*	*3.41*	*3.42*	*3.81*	**3.43**	*3.58*	*3.62*
Other HC/Oxygenates	**0.22**	**0.28**	**0.28**	**0.27**	*0.28*	*0.31*	*0.31*	*0.34*	*0.33*	*0.37*	*0.37*	*0.40*	**0.27**	*0.31*	*0.37*
Unfinished Oils	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.00*	*0.00*
Motor Gasoline	**8.67**	**9.13**	**9.05**	**8.91**	*8.69*	*9.14*	*9.10*	*8.76*	*8.65*	*9.12*	*9.08*	*8.73*	**8.94**	*8.92*	*8.90*
Fuel Ethanol blended into Motor Gasoline	**0.90**	**0.94**	**0.94**	**0.95**	*0.90*	*0.95*	*0.95*	*0.94*	*0.91*	*0.96*	*0.95*	*0.94*	**0.93**	*0.93*	*0.94*
Jet Fuel	**1.55**	**1.67**	**1.72**	**1.65**	*1.58*	*1.71*	*1.74*	*1.69*	*1.63*	*1.75*	*1.77*	*1.72*	**1.65**	*1.68*	*1.72*
Distillate Fuel Oil	**4.01**	**3.93**	**3.90**	**3.91**	*3.96*	*3.96*	*3.89*	*3.99*	*4.09*	*3.96*	*3.91*	*4.01*	**3.94**	*3.95*	*3.99*
Residual Fuel Oil	**0.29**	**0.22**	**0.27**	**0.30**	*0.26*	*0.23*	*0.22*	*0.25*	*0.23*	*0.23*	*0.22*	*0.25*	**0.27**	*0.24*	*0.23*
Other Oils (g)	**1.53**	**1.79**	**1.89**	**1.73**	*1.55*	*1.78*	*1.90*	*1.63*	*1.51*	*1.74*	*1.86*	*1.60*	**1.73**	*1.72*	*1.68*
Total Consumption	**19.66**	**20.38**	**20.37**	**20.48**	*20.17*	*20.47*	*20.53*	*20.39*	*20.29*	*20.57*	*20.63*	*20.51*	**20.23**	*20.39*	*20.50*
Total Petroleum and Other Liquids Net Imports	**-1.64**	**-1.20**	**-1.42**	**-2.02**	*-2.27*	*-1.51*	*-1.70*	*-2.41*	*-2.36*	*-1.98*	*-2.18*	*-2.91*	**-1.57**	*-1.98*	*-2.36*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**465.4**	**454.7**	**417.5**	**431.6**	*442.3*	*433.2*	*417.2*	*424.4*	*452.9*	*444.3*	*429.6*	*438.0*	**431.6**	*424.4*	*438.0*
Hydrocarbon Gas Liquids	**174.3**	**225.4**	**279.1**	**231.8**	*183.4*	*230.6*	*272.7*	*230.3*	*198.4*	*251.9*	*295.4*	*259.2*	**231.8**	*230.3*	*259.2*
Unfinished Oils	**88.6**	**87.0**	**88.3**	**82.0**	*88.3*	*87.3*	*86.7*	*79.6*	*88.0*	*86.4*	*86.5*	*80.7*	**82.0**	*79.6*	*80.7*
Other HC/Oxygenates	**34.3**	**30.1**	**30.3**	**32.7**	*34.1*	*32.8*	*32.5*	*32.8*	*34.9*	*33.7*	*33.4*	*33.7*	**32.7**	*32.8*	*33.7*
Total Motor Gasoline	**225.3**	**223.2**	**227.6**	**240.4**	*237.4*	*229.7*	*221.6*	*233.4*	*231.9*	*228.3*	*219.4*	*231.2*	**240.4**	*233.4*	*231.2*
Finished Motor Gasoline	**14.7**	**17.6**	**15.3**	**16.8**	*15.9*	*20.2*	*18.9*	*20.8*	*17.4*	*19.4*	*18.8*	*21.1*	**16.8**	*20.8*	*21.1*
Motor Gasoline Blend Comp.	**210.6**	**205.6**	**212.3**	**223.6**	*221.5*	*209.4*	*202.6*	*212.6*	*214.4*	*208.9*	*200.6*	*210.1*	**223.6**	*212.6*	*210.1*
Jet Fuel	**37.7**	**42.7**	**43.5**	**39.5**	*39.6*	*39.9*	*41.0*	*37.3*	*36.1*	*38.1*	*38.7*	*35.1*	**39.5**	*37.3*	*35.1*
Distillate Fuel Oil	**112.3**	**112.6**	**119.2**	**128.7**	*119.3*	*121.8*	*122.1*	*123.4*	*113.1*	*113.5*	*117.9*	*120.8*	**128.7**	*123.4*	*120.8*
Residual Fuel Oil	**29.6**	**30.4**	**27.5**	**25.2**	*27.4*	*27.3*	*25.6*	*25.1*	*26.7*	*26.4*	*24.6*	*24.1*	**25.2**	*25.1*	*24.1*
Other Oils (g)	**63.3**	**58.3**	**50.5**	**52.8**	*61.8*	*59.5*	*50.1*	*51.4*	*60.5*	*58.4*	*49.1*	*50.5*	**52.8**	*51.4*	*50.5*
Total Commercial Inventory	**1230.8**	**1264.4**	**1283.4**	**1264.7**	*1233.5*	*1262.0*	*1269.5*	*1237.7*	*1242.5*	*1281.0*	*1294.5*	*1273.2*	**1264.7**	*1237.7*	*1273.2*
Crude Oil in SPR	**371.2**	**347.2**	**351.3**	**354.6**	*363.5*	*369.7*	*369.7*	*369.7*	*369.7*	*369.7*	*369.7*	*369.7*	**354.6**	*369.7*	*369.7*

(a) Includes lease condensate.

(b) Crude oil production from U.S. Federal leases in the Gulf of Mexico (GOM).

(c) Net imports equal gross imports minus gross exports.

(d) Crude oil adjustment equals the sum of disposition items (e.g. refinery inputs) minus the sum of supply items (e.g. production).

(e) Renewables and oxygenate production includes pentanes plus, oxygenates (excluding fuel ethanol), and renewable fuels. Beginning in January 2021, renewable fuels includes biodiesel, renewable diesel, renewable jet fuel, renewable heating oil, renewable naphtha and gasoline, and other renewable fuels. For December 2020 and prior, renewable fuels includes only biodiesel.

(f) Petroleum products adjustment includes hydrogen/oxygenates/renewables/other hydrocarbons, motor gasoline blending components, and finished motor gasoline.

(g) "Other Oils" includes aviation gasoline blend components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

- = no data available

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

Notes: EIA completed modeling and analysis for this report on February 1, 2024.

The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Supply Monthly* , DOE/EIA-0109; *Petroleum Supply Annual* , DOE/EIA-0340/2; and *Weekly Petroleum Status Report* , DOE/EIA-0208.

Minor discrepancies with published historical data are due to independent rounding.

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 5a. U.S. Natural Gas Supply, Consumption, and Inventories

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Supply (billion cubic feet per day)															
Total Marketed Production	**111.18**	**112.50**	**113.64**	**115.19**	*113.08*	*114.67*	*114.02*	*114.34*	*115.23*	*116.55*	*116.33*	*117.13*	**113.14**	*114.03*	*116.31*
Alaska	**1.08**	**1.01**	**0.91**	**1.03**	*1.03*	*0.95*	*0.87*	*1.00*	*1.01*	*0.94*	*0.87*	*0.99*	**1.01**	*0.96*	*0.95*
Federal GOM (a)	**2.13**	**1.89**	**2.02**	**1.98**	*2.06*	*2.07*	*2.01*	*2.06*	*2.11*	*2.13*	*2.04*	*2.04*	**2.00**	*2.05*	*2.08*
Lower 48 States (excl GOM)	**107.97**	**109.60**	**110.70**	**112.18**	*109.98*	*111.65*	*111.14*	*111.28*	*112.11*	*113.47*	*113.43*	*114.09*	**110.13**	*111.02*	*113.28*
Total Dry Gas Production	**102.26**	**103.16**	**104.12**	**105.42**	*103.50*	*104.96*	*104.37*	*104.66*	*105.48*	*106.68*	*106.48*	*107.21*	**103.75**	*104.37*	*106.46*
LNG Gross Imports	**0.09**	**0.02**	**0.02**	**0.04**	*0.10*	*0.04*	*0.04*	*0.06*	*0.10*	*0.04*	*0.04*	*0.06*	**0.04**	*0.06*	*0.06*
LNG Gross Exports	**11.45**	**11.76**	**11.40**	**12.72**	*11.69*	*11.92*	*11.73*	*13.03*	*13.07*	*13.60*	*14.82*	*16.20*	**11.83**	*12.09*	*14.43*
Pipeline Gross Imports	**8.45**	**7.32**	**7.94**	**8.07**	*8.43*	*7.03*	*7.26*	*7.48*	*8.29*	*6.98*	*7.24*	*7.48*	**7.94**	*7.55*	*7.49*
Pipeline Gross Exports	**8.93**	**8.75**	**9.19**	**8.84**	*9.18*	*9.15*	*9.43*	*9.34*	*9.53*	*9.53*	*9.87*	*9.65*	**8.93**	*9.28*	*9.64*
Supplemental Gaseous Fuels	**0.22**	**0.17**	**0.16**	**0.15**	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	**0.17**	*0.18*	*0.18*
Net Inventory Withdrawals	**11.97**	**-11.69**	**-6.44**	**0.25**	*17.16*	*-12.42*	*-6.76*	*2.60*	*13.96*	*-12.44*	*-5.98*	*4.35*	**-1.53**	*0.13*	*-0.07*
Total Supply	**102.61**	**78.46**	**85.21**	**92.38**	*108.49*	*78.71*	*83.92*	*92.61*	*105.40*	*78.30*	*83.27*	*93.43*	**89.63**	*90.92*	*90.05*
Balancing Item (b)	**0.30**	**-0.47**	**-1.40**	**-1.08**	*-0.30*	*-0.36*	*-0.79*	*0.35*	*-0.29*	*-1.25*	*-0.66*	*0.19*	**-0.67**	*-0.28*	*-0.50*
Total Primary Supply	**102.92**	**77.99**	**83.82**	**91.30**	*108.18*	*78.35*	*83.13*	*92.96*	*105.11*	*77.06*	*82.62*	*93.62*	**88.96**	*90.64*	*89.55*
Consumption (billion cubic feet per day)															
Residential	**23.50**	**7.29**	**3.57**	**14.84**	*24.57*	*7.29*	*3.84*	*16.14*	*24.17*	*7.26*	*3.83*	*16.09*	**12.25**	*12.94*	*12.79*
Commercial	**14.51**	**6.43**	**4.72**	**10.68**	*15.04*	*6.59*	*4.98*	*11.17*	*14.85*	*6.58*	*4.99*	*11.15*	**9.06**	*9.44*	*9.37*
Industrial	**24.84**	**22.40**	**21.98**	**24.22**	*25.28*	*21.94*	*21.56*	*23.76*	*24.69*	*21.72*	*21.52*	*23.79*	**23.35**	*23.13*	*22.93*
Electric Power (c)	**30.71**	**33.39**	**44.79**	**32.44**	*33.60*	*33.92*	*43.99*	*32.72*	*31.72*	*32.84*	*43.41*	*33.24*	**35.36**	*36.07*	*35.33*
Lease and Plant Fuel	**5.31**	**5.37**	**5.43**	**5.50**	*5.40*	*5.48*	*5.44*	*5.46*	*5.50*	*5.57*	*5.56*	*5.59*	**5.40**	*5.45*	*5.55*
Pipeline and Distribution Use	**3.86**	**2.93**	**3.15**	**3.43**	*4.08*	*2.91*	*3.10*	*3.49*	*3.96*	*2.87*	*3.09*	*3.53*	**3.34**	*3.39*	*3.36*
Vehicle Use	**0.18**	**0.18**	**0.18**	**0.20**	*0.22*	*0.22*	*0.22*	*0.22*	*0.22*	*0.22*	*0.22*	*0.22*	**0.19**	*0.22*	*0.22*
Total Consumption	**102.92**	**77.99**	**83.82**	**91.30**	*108.18*	*78.35*	*83.13*	*92.96*	*105.11*	*77.06*	*82.62*	*93.62*	**88.96**	*90.64*	*89.55*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,850**	**2,900**	**3,490**	**3,467**	*1,905*	*3,036*	*3,657*	*3,418*	*2,162*	*3,294*	*3,844*	*3,444*	**3,467**	*3,418*	*3,444*
East Region (d)	**334**	**646**	**853**	**787**	*349*	*664*	*860*	*794*	*411*	*718*	*862*	*766*	**787**	*794*	*766*
Midwest Region (d)	**417**	**701**	**993**	**955**	*432*	*732*	*1,017*	*924*	*485*	*791*	*1,079*	*933*	**955**	*924*	*933*
South Central Region (d)	**919**	**1,136**	**1,092**	**1,189**	*776*	*1,152*	*1,200*	*1,189*	*921*	*1,275*	*1,308*	*1,236*	**1,189**	*1,189*	*1,236*
Mountain Region (d)	**79**	**171**	**239**	**226**	*124*	*159*	*218*	*189*	*121*	*182*	*234*	*200*	**226**	*189*	*200*
Pacific Region (d)	**74**	**216**	**278**	**279**	*199*	*301*	*329*	*293*	*201*	*301*	*329*	*282*	**279**	*293*	*282*
Alaska	**27**	**30**	**35**	**31**	*25*	*28*	*33*	*29*	*24*	*27*	*32*	*29*	**31**	*29*	*29*

(a) Marketed production from U.S. Federal leases in the Gulf of Mexico.

(b) The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

(c) Natural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

(d) For a list of States in each inventory region refer to *Weekly Natural Gas Storage Report, Notes and Definitions (http://ir.eia.gov/ngs/notes.html)* .

- = no data available

LNG: liquefied natural gas.

Notes: EIA completed modeling and analysis for this report on February 1, 2024.

The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , Minor discrepancies with published historical data are due to independent rounding.

Forecasts: EIA Short-Term Integrated Forecasting System.

https://www.qatarenergy.qa/en/MediaCenter/Pages/newsdetails.aspx?ItemId=3793

QATARENERGY, PETRONET SIGN 20-YEAR AGREEMENT TO SUPPLY 7.5 MTPA OF LNG TO INDIA -

DOHA, Qatar • 6 February 2024 – QatarEnergy announced that it has entered into a 20-year LNG Sale and Purchase Agreement (SPA) with Petronet LNG Limited for the supply of 7.5 million tons per annum (MTPA) of LNG destined to the Republic of India.

Pursuant the terms of the SPA, the contracted LNG volumes from Qatar will be delivered ex-ship to terminals across India onboard QatarEnergy's vast LNG fleet starting May 2028.

The signing of the SPA was celebrated during a special ceremony held in Goa, India under the patronage of His Excellency Mr. Saad Sherida Al-Kaabi, the Minister of State for Energy Affairs, the President and CEO of QatarEnergy, and His Excellency Hardeep Singh Puri, the Minister of Petroleum & Natural Gas, and Housing & Urban Affairs in the Republic of India. In attendance were Mr. Pankaj Jain, Secretary, Ministry of Petroleum & Natural Gas and Chairman of Petronet LNG, Mr. Sandeep Kumar Gupta, the Chairman and Managing Director of GAIL (India) Limited, Mr. Shrikant Madhav Vaidya, the Chairman of Indian Oil Corporation, and Mr. Krishnakumar Gopalan, the Chairman and Managing Director of Bharat Petroleum Corporation Limited.

To mark this important achievement, a document commemorating the occasion was signed by Mr. Akshay Kumar Singh, the Managing Director & CEO of Petronet LNG Limited and Mr. Abdulla Ahmad Al-Hussaini, QatarEnergy's Executive Vice President for Marketing.

In remarks welcoming the successful conclusion of this important SPA, His Excellency Mr. Saad Sherida Al-Kaabi said: "This agreement is another key milestone in the long-standing energy partnership between Qatar and India and comes on the heels of the 20th anniversary of the first LNG shipment to India."

His Excellency Minister Al-Kaabi added: "We believe that this new agreement, with our valued customers Petronet LNG and its esteemed shareholder companies, will further strengthen the relationship with India and support its vision to increase the contribution of natural gas in its energy mix."

Petronet first entered into an agreement for the supply of LNG from Qatar in 1999 for the delivery of 7.5 MTPA. It was followed in 2015 by another agreement for the supply of an additional 1 MTPA of LNG, raising the total annual long-term volumes contracted between the two sides to 8.5 MTPA.

Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs

Posted 11am on July 14, 2021

The last 7 days has shown there is a sea change as Asian LNG buyers have made an abrupt change in their LNG contracting and are moving to lock in long term LNG supply. This is the complete opposite of what they were doing pre-Covid when they were trying to renegotiate Qatar LNG long term deals lower and moving away from long term deals to spot/short term sales. Why? We think they did the same math we did in our April 28 blog "*Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?*" and saw a much bigger and sooner LNG supply gap driven by the delay of 5 bcf/d of Mozambique LNG that was built into most, if not all LNG supply forecasts. Asian LNG buyers are committing real dollars to long term LNG deals, which we believe is the best validation for the LNG supply gap. Another validation, Shell, Total and others are aggressively competing to invest long term capital to partner in Qatar Petroleum's massive 4.3 bcf/d LNG expansion despite plans to reduce fossil fuels production in the 2020s. And even more importantly to LNG suppliers, the return to long term LNG contracts provides the financing capacity to commit to brownfield LNG FIDs. The abrupt change by Asian LNG buyers to long term contracts is a game changer for LNG markets and sets the stage for brownfield LNG FIDs likely as soon as before year end 2021. It has to be brownfield LNG FIDs if the gap is coming bigger and sooner. And we return to our April 28 blog point, if brownfield LNG is needed, what about Shell looking at 1.8 bcf/d brownfield LNG Canada Phase 2? LNG Canada Phase 1 at 1.8 bcf/d capacity is already a material positive for Cdn natural gas producers. A FID on LNG Canada Phase 2 would be huge, meaning 3.6 bcf/d of Cdn natural gas will be tied to Asian LNG markets and not competing in the US against Henry Hub. And with a much shorter distance to Asian LNG markets. This is why we focus on global LNG markets for our views on the future value of Canadian natural gas.

Sea change in Asian LNG buyers is also the best validation of the LNG supply gap and big to LNG supply FIDs. Has the data changed or have the market participants changed in how they react to the data? We can't recall exactly who said that on CNBC on July 12, it's a question we always ask ourselves. In the LNG case, the data has changed with Mozambique LNG delays and that has directly resulted in market participants changing and entering into long term contracts. We can't stress enough how important it is to see Asian LNG buyers move to long term LNG deals. (i) Validates the sooner and bigger LNG supply gap. We believe LNG markets should look at the last two weeks of new long term deals for Asian LNG buyers as being the validation of the LNG supply gap that clearly emerged post Total declaring force majeure on its 1.7 bcf/d Mozambique LNG Phase 1 that was under construction and on track for first LNG delivery in 2024. Since then, markets have started to realize the Mozambique delays are much more than 1.7 bcf/d. They have seen major LNG suppliers change their outlook to a more bullish LNG outlook and, most importantly, are now seeing Asian LNG buyers changing from trying to renegotiate long term LNG deals lower to entering into long term LNG deals to have security of supply. Asian LNG buyers are cozying up to Qatar in a prelude to the next wave of Asian buyer long term deals. What better validation is there than companies/countries putting their money where their mouth is. (ii) Provides financial commitment to help push LNG suppliers to FID. We believe these Asian LNG buyers are doing much more than validating a LNG supply gap to markets. The big LNG suppliers can move to FID based on adding more LNG supply to their portfolio, but having more long term deals provides the financial anchor/visibility to long term capital commitment from the buyers. Long term contracts will only help LNG suppliers get to FID.

It was always clear that the Mozambique LNG supply delay was 5.0 bcf/d, not just 1.7 bcf/d from Total Phase 1. LNG markets didn't really react to Total's April 26 declaration of force majeure on its 1.7 bcf/d Mozambique LNG Phase 1. This was an under construction project that was on time to deliver first LNG in 2024. It was in all LNG supply forecasts. There was no timeline given but, on the Apr 29 Q1 call, Total said that it expected any restart decision would be least a year away. If so, we believe that puts any actual construction at least 18 months away. There will be work to do just to get back to where they were when they were forced to stop development work on Phase 1. Surprisingly, markets didn't look the broader implications, which is why we posted our 7-pg Apr 28 blog "*Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?*" [LINK] We highlighted that Mozambique LNG delays were actually 5 bcf/d, not 1.7 bcf/d. And this 5 bcf/d of Mozambique LNG supply was built into most, if not all, LNG supply forecasts. The delay in Total Phase 1 would lead to a commensurate delay in its Mozambique LNG Phase 2 of 1.3 bcf/d. Total Phase 2 was to add 1.3 bcf/d. There was no firm in service date, but it was expected to

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follow closely behind Phase 1 to maintain services. That would have put it originally in the 2026/2027 period. But if Phase 1 is pushed back at least 2 years, so will the follow on Phase 2, so more likely, it will be at least 2028/2029. The assumption for most, if not all, LNG forecasts was that Phase 2 would follow Phase 1. Exxon Rozuma Phase 1 of 2.0 bcf/d continues to be pushed back in timeline especially following Total Phase 1. Exxon's Mozambique Rozuma Phase 1 LNG will add 2.0 bcf/d and, pre-Covid, was originally expected to be in service in 2025. The project was being delayed and Total's force majeure has added to the delays. Rozuma onshore LNG facilities are right by Total. On June 20, we tweeted [LINK] on the Reuters report "*Exclusive: Galp says it won't invest in Rovuma until Mozambique ensures security*" [LINK]. Galp is one of Exxon's partners in Rozuma. Reuters reported that Galp said they won't invest in Exxon's Rozuma LNG project until the government ensures security, that this may take a while, they won't be considering the project until after Total has reliably resumed work on its Phase 1, which likely puts any Rozuma decision until at least end of 2022 at the earliest. Galp has taken any Rozuma Phase 1 capex out of their new capex plans thru 2025 and will have to take out projects in their capex plan if Rozuma does come back to work. This puts Rozuma more likely 2028 at the earliest as opposed to before the original expectations of before 2025. Pre-pandemic, Exxon's March 6, 2019 Investor Day noted their operated Mozambique Rovuma LNG Phase 1 was to be 2 trains each with 1.0 bcf/d capacity for total initial capacity of 2.0 bf/d with FID expected in 2019 and first LNG deliveries sometime before 2025. LNG forecasts had been assuming Exxon Rozuma would be onstream around 2025. The 2019 FID expectation was later pushed to be expected just before the March 2020 investor day. But the pandemic hit, and on March 21, 2020, we tweeted [LINK] on the Reuters story "*Exclusive: Coronavirus, gas slump put brakes on Exxon's giant Mozambique LNG plan"* [LINK] that noted Exxon was expected to delay the Rovuma FID. There was no timeline, but now, any FID is not expected until late 2022 at the earliest, that would push first LNG likely to at least 2028. What this means is that the Mozambique LNG delays are not 1.7 bcf/d but 5.0 bcf/d of projects that were in all, if not most, LNG supply forecasts. There is much more in our 7-pg blog. But Mozambique is what is driving a much bigger and sooner LNG supply gap starting ~2025 and stronger outlook for LNG prices

<u>One of the reasons why it went under the radar is that major LNG suppliers played stupid on the Mozambique impact.</u> It makes it harder for markets to see a big deal when the major LNG suppliers weren't making a big deal of Mozambique or playing stupid in the case of Cheniere in their May 4 Q1 call. In our May 9, 2021 Energy Tidbits memo, we said we had to chuckle when we saw Cheniere's response in the Q&A to its Q1 call on May 4 that they only know what we know from reading the Total releases on Mozambique and its impact on LNG markets. It's why we tweeted [LINK] "*Hmm! $LNG says only know what we read on #LNG market impact from $TOT $XOM MZ LNG delays*. *Surely #TohokuElectric & other offtake buyers are reaching out to #Cheniere. MZ LNG delays is a game changer to LNG in 2020s, see SAF Group blog. Thx @olympe_mattei @TheTerminal #NatGas".* How could they not be talking to LNG buyers for Total and /or Exxon Mozambique LNG projects. In the Q1 Q&A, mgmt was asked about Mozambique and didn't know any more than what you or I have read. Surely, they were speaking to Asian LNG buyers who had planned to get LNG supply from Total Mozambique or Exxon Rozuma Mozambique or both. Mgmt is asked "*wanted to just kind of touch on the color use talking about for these supply curve. And are you able to kind of provide any thoughts on the Mozambique and a deferral with the project of that size on 13 and TPA being deferred by we see you have you noticed any impact to the market has is there any impact for stage 3 with that capacity? Thanks*." Mgmt replies "*No. Look, I only know about the Mozambique delay with what I read as well as what you read that from total and an Exxon. And it's a sad situation and I hope everybody is safe and healthy that were there to experience that unrest but no I don't think it's, again it's a different business paradigm than what we offer. So, we offer a full value product, the customer doesn't have to invest in equity, customer doesn't have to worry about the E&P side of the business because, we've been able to both the by at our peak almost 7 Dee's a day of US NAT gas from almost a 100 different producers on 26 different pipelines and deliver it to our to facilities. So we take care of a lot of what the customer needs".*

<u>There are other LNG supply delays/interruptions beyond Mozambique.</u> There have been a number of other smaller LNG delay or existing supply interruptions that add to Asian LNG buyers feeling less secure about the reliability of mid to long term LNG supply. Here are just a few examples. (i) Total Papua LNG 0.74 bcf/d. On June 8, we tweeted [LINK] *"Timing update Papua #LNG project. $OSH June 8 update "2022 FEED, 2023 FID targeting 2027 first gas". $TOT May 5 update didn't forecast 1st gas date. Papua is 2 trains w/ total capacity 0.74 bcf/d."* We followed the tweet saying [LINK] *"Bigger #LNG supply gap being created >2025. Papua #LNG originally expected FID in 2020 so 1st LNG is 2 years delayed.*

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Common theme - new LNG supply is being delayed ie. [Total] Mozambique. Don't forget need capacity>demand due to normal maintenance, etc. Positive for LNG." (ii) Chevron's Gorgon. A big LNG story in H2/20 was the emergence of weld quality issues in the propane heat exchangers at Train 2, which required additional downtime for repair. Train 2 was shut on May 23 with an original restart of July 11, but the repairs to the weld quality issues meant it didn't restart until late Nov. The same issue was found in Train 1 but repairs were completed. However extended downtime for the trains led to lower LNG volumes. Gorgon produced ~2.3 bcf/d in 2019 but was down to 2.0 bcf/d in 2020. (iii) Equinor's Melkoeya 0.63 bcf/d shut down for 18 months due to a fire. A massive fire led to the Sept 28, 2020 shutdown of the 0.63 bcf/d Melkoeya LNG facility in Norway. On April 26, Equinor released "*Revised start-up date for Hammerfest LNG*" [LINK] with regard to the 0.63 bcf/d Melkoeya LNG facility. The original restart date was Oct 1, 2021 (ie. a 12 month shut down), but Equinor said "*Due to the comprehensive scope of work and Covid-19 restrictions, the revised estimated start-up date is set to 31 March 2022".* When we read the release, it seemed like Equinor was almost setting the stage for another potential delay in the restart date. Equinor had two qualifiers to this March 31, 2022 restart date. Equinor said "*there is still some uncertainty related to the scope of the work*" and "*Operational measures to handle the Covid-19 situation have affected the follow-up progress after the fire. The project for planning and carrying out repairs of the Hammerfest LNG plant must always comply with applicable guidelines for handling the infection situation in society. The project has already introduced several measures that allow us to have fewer workers on site at the same time than previously expected. There is still uncertainty related to how the Covid-19 development will impact the project progress."*

Cheniere stopped the game playing the game on June 30. Our July 4, 2021 Energy Tidbits memo noted that it looks like Cheniere has stopped playing stupid with respect to the strengthening LNG market in 2021. We can't believe they thought they were fooling anyone, especially their competitors. Bu that week, they came out talking about how commercial discussions have picked up in 2021 and it's boosted their hope for a Texas (Corpus Christi) LNG expansion. On Wednesday, Platts reported "*Pickup in commercial talks boosts Cheniere's hopes on mid-scale LNG project*" [LINK] Platts wrote "*Cheniere Energy expects to make a "substantial dent" by the end of 2022 in building sufficient buyer support for a proposed mid-scale expansion at the site of its Texas liquefaction facility, Chief Commercial Officer Anatol Feygin said June 30 in an interview." " As a result, he said, " The commercial engagement, I think it is very fair to say, has really picked up steam, and we are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization."* Platts also reported that Cheniere noted this has been a tightening market all year (ie would have been known by the May 4 Q1 call). Platts wrote "*We obviously find ourselves at the beginning of this year and throughout in a very tight market where prices today into Asia and into Europe are at levels that we frankly haven't seen in a decade-plus," Feygin said. "We've surpassed the economics that the industry saw post the Fukushima tragedy in March 2011, and that's happened in the shoulder period."* It's a public stance as to a more bullish LNG outlook

But we still see major LNG suppliers like Australia hinting but not outright saying that LNG supply gap is coming sooner. We have to believe Australia will be unveiling a sooner LNG supply gap in their September forecast. On June 28, we tweeted [LINK] on Australia's Resources and Energy Quarterly released on Monday [LINK] because there was a major change to their LNG outlook versus their March forecast. We tweeted "*#LNGSupplyGap. AU June fcast now sees #LNG mkt tighten post 2023 vs Mar fcast excess supply thru 2026. Why? $TOT Mozambique delays. See below SAF Apr 28 blog. Means brownfield LNG FID needed ie. like #LNGCanada Phase 2. #OOTT #NatGas".* Australia no longer sees supply exceeding demand thru 2026. In their March forecast, Australia said "*Nonetheless, given the large scale expansion of global LNG capacity in recent years, demand is expected to remain short of total supply throughout the projection period."* Note this is thru 2026 ie. a LNG supply surplus thru 2026. But on June 28, Australia changed that LNG outlook and now says the LNG market may tighten beyond 2023. Interestingly, the June forecast only goes to 2023 and not to 2026 as in March. Hmmm! On Monday, they said "*Given the large scale expansion of global LNG capacity in recent years, import demand is expected to remain short of export capacity throughout the outlook period. Beyond 2023, the global LNG market may tighten, due to the April 2021 decision to indefinitely suspend the Mozambique LNG project, in response to rising security issues. This project has an annual nameplate capacity of 13 million tonnes, and was previously expected to start exporting LNG in 2024*." 13 million tonnes is 1.7 bcf/d so they are only referring to Total Mozambique LNG Phase 1. So no surprise the change is Mozambique LNG driven but we have to believe the reason why they cut their forecast off this time at 2023 is that they are looking at trying to figure out what to forecast beyond 2023 in addition to Total Phase 1. And, importantly, we believe they will be changing their LNG forecast for more than Mozambique ie. India

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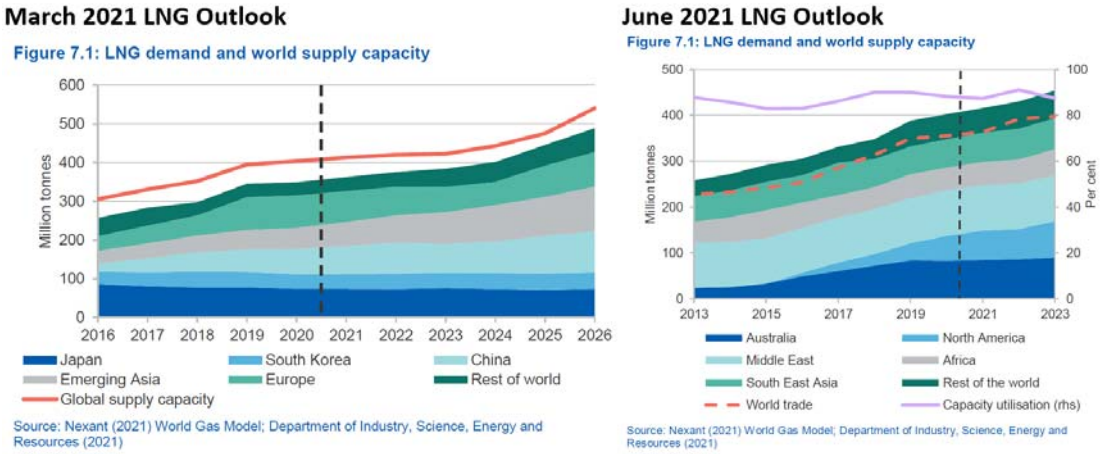
demand that we highlight later in the blog. They didn't say anything else specific on Mozambique but, surely they have to also be delaying the follow on Total Phase 2 of 1.3 bcf/d and Exxon Rozuma Phase 1 of 2.0 bcf/d.

Australia's LNG Outlook: March 2021 vs June 2021 Forecasts



Source: Australia Resources and Energy Quarterly

Clearly Asian LNG buyers did the math, saw the new LNG supply gap and were working the phones in March/April/May trying to lock up long term supply. We wrote extensively on the Total Mozambique LNG situation before the April 26 force majeure as it was obvious that delays were coming to a project counted on for first LNG in 2024. Total had shut down Phase 1 development in December for 3 months due to the violence and security risks. It restarted development on Wed March 24, violence/attacks immediately resumed for 3 consecutive days, and then Total suspended development on Sat March 27. That's why no one should have been surprised by the April 26 force majeure. Asian LNG buyers were also seeing this and could easily do the same math we were doing and saw a bigger and sooner LNG supply gap. They were clearly working the phones with a new priority to lock up long term LNG supply. Major long term deals don't happen overnight, so it makes sense that we started to see these new Asian long term LNG deals start at the end of June.

A big pivot from trying to renegotiate down long term LNG deals or being happy to let long term contracts expire and replace with spot/short term LNG deals. This is a major pivot or abrupt turn on the Asian LNG buyers contracting strategy for the 2020s. There is the natural reduction of long term contracts as contracts reach their term. But with the weakness in LNG prices in 2019 and 2020, Asian LNG buyers weren't trying to extend long term contracts, rather, the push was to try to renegotiate down its long term LNG deals. The reason was clear, as spot prices for LNG were way less than long term contract prices. And this led to their LNG contracting strategy – move to increase the proportion of spot LNG deliveries out of total LNG deliveries. Shell's LNG Outlook 2021 was on Feb 25, 2021 and included the below graphs. The spot LNG price derivation from long term prices in 2019 and 2020 made sense for Asian LNG buyers to try to change their contract mix. Yesterday, Maeil Business News Korea reported on the new Qatar/Kogas long term LNG deal with its report "*Korea may face LNG supply cliff or pay hefty price after long-term supplies run out*" [LINK], which highlighted this very concept – Korea wasn't worried about trying to extend expiring long term LNG contracts. Maeil wrote "*Seoul in 2019 secured a long-term LNG supply contract with the U.S. for annual 15.8 million tons over a 15-year period. But even with the latest two LNG supply contracts, the Korean government needs extra 6 million tons or more of LNG supplies to keep up the current power pipeline. By 2024, Korea's long-term supply contracts for 9 million tons of LNG will expire - 4.92 million tons on contract with Qatar and 4.06 million tons from Oman, according to a government official who asked to be unnamed."*

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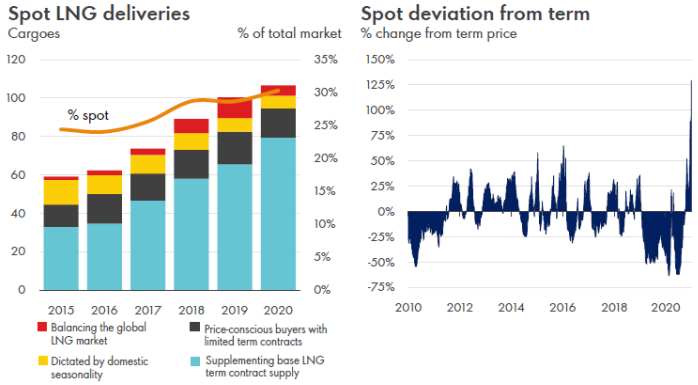
Spot LNG deliveries and Spot deviation from term price



Source: Shell LNG Outlook 2021 on Feb 25, 2021

Asian LNG buyers moving to long term LNG deals provide financing capacity for brownfield LNG FIDs. We believe this abrupt change and return to long term LNG deals is even more important to LNG suppliers who want to FID new projects. The big LNG players like Shell can FID new LNG supply without new long term contracts as they can build into their supply options to fill their portfolio of LNG contracts. But that doesn't mean the big players don't want long term LNG supply deals, as having long term LNG contracts provide better financing capacity for any LNG supplier. It takes big capex for LNG supply and long term deals make the financing easier.

Four Asian buyer long term LNG deals in the last week. It was pretty hard to miss a busy week for reports of new Asian LNG buyer long term LNG deals. There were two deals from Qatar Petroleum, one from Petronas and one from BP. The timing fits, it's about 3 months after Total Mozambique LNG problems became crystal clear. And as noted later, there are indicators that more Asian buyer LNG deals are coming.

> Petronas/CNOOC is 10 yr supply deal for 0.3 bcf/d. On July 7, we tweeted [LINK] on the confirmation of a big positive to Cdn natural gas with the Petronas announcement [LINK] of a new 10 year LNG supply deal for 0.3 bcf/d with China's CNOOC. The deal also has special significance to Canada. (i) Petronas said "*This long-term supply agreement also includes supply from LNG Canada when the facility commences its operations by middle of the decade*". This is a reminder of the big positive to Cdn natural gas in the next 3 to 4 years – the start up of LNG Canada Phase 1 is ~1.8 bcf/d capacity. This is natural gas that will no longer be moving south to the US or east to eastern Canada, instead it will be going to Asia. This will provide a benefit for all Western Canada natural gas. (ii) First ever AECO linked LNG deal. It's a pretty significant event for a long term Asia LNG deal to now have an AECO link. Petronas wrote "*The deal is for 2.2 million tonnes per annum (MTPA) for a 10-year period, indexed to a combination of the Brent and Alberta Energy Company (AECO) indices. The term deal between PETRONAS and CNOOC is valued at approximately USD 7 billion over ten years.*" 2.2 MTPA is 0.3 bcf/d. (iii) Reminds of LNG Canada's competitive advantage for low greenhouse gas emissions. Petronas said "*Once ready for operations, the LNG Canada project paves the way for PETRONAS to supply low greenhouse gas (GHG) emission LNG to the key demand markets in Asia."*
>
> Qatar Petroleum/CPC (Taiwan) is 15 yr supply deal for 0.16 bcf/d. Pre Covid, Qatar was getting pressured to renegotiate lower its long term LNG contract prices. Now, it's signing a 15 year deal. On July 9, they entered in a new small long term LNG sales deal [LINK], a 15-yr LNG Sale and Purchase Agreement with CPC Corporation in Taiwan to supply it ~0.60 bcf/d of LNG. LNG deliveries are set to begin in January 2022. H.E. Minister for Energy Affairs & CEO of Qatar Petroleum Al-Kaabi said *"We are pleased to enter into this long term LNG SPA, which is another milestone in our relationship with CPC, which dates back to almost three decades. We look forward to commencing deliveries under this SPA and to continuing our supplies as a trusted and reliable global LNG provider."* The pricing was reported to be vs a basket of crudes.

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BP/Guangzhou Gas, a 12-yr supply deal for 0.13 bcf/d. On July 9, there was a small long term LNG supply deal with BP and Guangzhou Gas (China). Argus reported [LINK] BP had signed a 12 year LNG supply deal with Guangzhou Gas (GG), a Chinese city's gas distributor, which starts in 2022. The contract prices are to be linked to an index of international crude prices. Although GG typically gets its LNG from the spot market, it used a tender in late April for ~0.13 bcf/d starting in 2022. BP's announcement looks to be for most of the tender, so it's a small deal. But it fit into the trend this week of seeing long term LNG supply deals to Asia. This was intended to secure deliveries to the firm's Xiaohudao import terminal which will become operational in August 2022.

Qatar/Korea Gas is a 20-yr deal to supply 0.25 bcf/d. On Monday, Reuters reported [LINK] "*South Korea's energy ministry said on Monday it had signed a 20-year liquefied natural gas (LNG) supply agreement with Qatar for the next 20 years starting in 2025. South Korea's state-run Korea Gas Corp (036460.KS) will buy 2 million tonnes of LNG annually from Qatar Petroleum".* There was no disclosure of pricing.

More Asian buyer long term LNG deals (ie. India) will be coming. There are going to be more Asian buyer long term LNG deals coming soon. Our July 11, 2021 Energy Tidbits highlighted how India's new petroleum minister Hardeep Singh Puri (appointed July 8) hit the ground running with what looks to be a priority to set the stage for more India long term LNG deals with Qatar. On July 10, we retweeted [LINK] "*New India Petroleum Minister hits ground running. What else w/ Qatar but #LNG. Must be #Puri setting stage for long term LNG supply deal(s). Fits sea change of buyers seeing #LNGSupplyGap (see SAF Apr 28 blog http://safgroup.ca) & wanting to tie up LNG supply. #OOTT".* It's hard to see any other conclusion after seeing what we call a sea change in LNG buyer mentality with a number of long term LNG deals this week. Puri tweeted [LINK] "*Discussed ways of further strengthening mutual cooperation between our two countries in the hydrocarbon sector during a warm courtesy call with Qatar's Minister of State for Energy Affairs who is also the President & CEO of @qatarpetroleum HE Saad Sherida Al-Kaabi".* As noted above, we believe there is a sea change in LNG markets that was driven by the delay in 5 bcf/d of LNG supply from Mozambique (Total Phase 1 & Phase 2, and Exxon Rozuma Phase 1) that was counted on all LNG supply projections for the 2020s. Puri's tweet seems to be him setting the stage for India long term LNG supply deals with Qatar.

Supermajors are aggressively competing to commit 30+ year capital to Qatar's LNG expansion despite stated goal to reduce fossil fuels production. It's not just Asian LNG buyers who are now once again committing long term capital to securing LNG supply, it's also supermajors all bidding to be able to commit big capex to part of Qatar Petroleum's 4.3 bcf/d LNG expansion. Qatar Petroleum received a lot of headlines following the their June 23 announcement on its LNG expansion [LINK] on how they received bids for double the equity being offered. And there were multiple reports that these are on much tougher terms for Qatar's partners. Qatar Petroleum CEO Saad Sherida Al-Kaabi specifically noted that, among the bidders, were Shell, Total and Exxon. Shell and Total have two of the most ambitious plans to reduce fossil fuels production in the 2020's, yet are competing to allocate long term capital to increase fossil fuels production. And Shell and Total are also two of the global LNG supply leaders. It has to be because they are seeing a bigger and sooner LNG supply gap.

Remember Qatar's has a massive expansion but India alone needs 3x the Qatar expansion LNG capacity. In addition to the competition to be Qatar Petroleum's partners, we remind that, while this is a massive 4.3 bcf/d LNG expansion, India alone sees its LNG import growing by ~13 bcf/d to 2030. The Qatar announcement reminded they see a LNG supply gap and continued high LNG prices. We had a 3 part tweet. (i) First, we highlighted [LINK] "*1/3. #LNGSupplyGap coming. big support for @qatarpetroleum expansion to add 4.3 bcf/d LNG. but also say "there is a lack of investments that could cause a significant shortage in gas between 2025-2030" #NatGas #LNG".* This is after QPC accounts for their big LNG expansion. The QPC release said "*However, His Excellency Al-Kaabi voiced concern that during the global discussion on energy transition, there is a lack of investment in oil and gas projects, which could drive energy prices higher by stating that "while gas and LNG are important for the energy transition, there is a lack of investments that could cause a significant shortage in gas between 2025-2030, which in turn could cause a spike in the gas market."* (ii) Second, this is a big 4.3 bcf/d expansion, but India alone has 3x the increase in LNG import demand. We tweeted [LINK] "*2/3. Adding 4.3 bcf/d is big, but dwarfed by items like India. #Petronet gave 1st specific forecast for what it means if #NatGas is to be 15%*

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of energy mix by 2030 - India will need to increase #LNG imports by ~13 bcf/d. See SAF Group June 20 Energy Tidbits memo." (iii) Third, Qatar's supply gap warning is driven by the lack of investments in LNG supply. We agree, but note that the lack of investment is in great part due to the delays in both projects under construction and in FIDs that were supposed to be done in 2019. We tweeted [LINK] "3/*3. #LNGSupplyGap is delay driven. $TOT Mozambique Phase 1 delay has chain effect, backs up 5 bcf/d. See SAF Group Apr 28 blog Multiple Brownfield LNG FIDs Now Needed To Fill New #LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2? #NatGas*."

Seems like many missed India's first specific LNG forecast to 2030. Our June 20, 2021 Energy Tidbits memo highlighted the first India forecast that we have seen to estimate the required growth in natural gas consumption and LNG imports if India is to meet its target for natural gas to be 15% of its energy mix by 2030. India will need to increase LNG imports by ~13 bcf/d or 3 times the size of the Qatar LNG expansion. Our June 6, 2021 Energy Tidbits noted the June 4 tweet from India's Energy Minister Dharmendra Pradhan [LINK] reinforcing the 15% goal "*We are rapidly deploying natural gas in our energy mix with the aim to increase the share of natural gas from the current 6% to 15% by 2030."* But last week, Petronet CEO AK Singh gave a specific forecast. Reuters report "*LNG's share of Indian gas demand to rise to 70% by 2030: Petronet CEO"* [LINK] included Petronet's forecast if India is to hit its target for natural gas to be 15% of energy mix by 2030. Singh forecasts India's natural gas consumption would increase from current 5.5 bcf/d to 22.6 bcf/d in 2030. And LNG shares would increase from 50% to 70% of natural gas consumption ie. an increase in LNG imports of ~13 bcf/d from just under 3 bcf/d to 15.8 bcf/d in 2030. Singh did not specifically note his assumption for India's natural gas production, but we can back into the assumption that India natural gas production grows from just under 3 bcf/d to 6.8 bcf/d. It was good to finally see India come out with a specific forecast for 2030 natural gas consumption and LNG imports if India is to get natural gas to 15% of its energy mix in 2030. Petronet's Singh forecasts India natural gas consumption to increase from 5.5 bcf/d to 22.6 bcf/d in 2030. This forecast is pretty close to our forecast in our Oct 23, 2019 blog "*Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030*". Here part of what we wrote in Oct 2019. "*It's taken a year longer than we expected, but we are finally getting visibility that India is taking significant steps towards India's goal to have natural gas be 15% of its energy mix by 2030. On Wednesday, we posted a SAF blog [LINK] "Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030".* Our 2019 blog estimate was for India natural gas demand to be 24.0 bcf/d in 2030 (vs Singh's 22.6 bcf/d) and for LNG import growth of +18.4 bcf/d to 2030 (vs Singh's +13 bcf/d). The difference in LNG would be due to our Oct 2019 forecast higher natural gas consumption by 1.4 bcf/d plus Singh forecasting India natural gas production +4 bcf/d to 2030. Note India production peaked at 4.6 bcf/d in 2010.

Bigger, nearer LNG supply gap + Asian buyers moving to long term LNG deals = LNG players forced to at least look at what brownfield LNG projects they could advance and move to FID. All we have seen since our April 28 blog is more validation of the bigger, nearer LNG supply gap. And now market participants (Asian LNG buyers) are reacting to the new data by locking up long term supply. Cheniere noted how the pickup in commercial engagement means they "*are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization."* Cheniere can't be the only LNG supplier having new commercial discussions. It's why we believe the Mozambique delays + Asian LNG buyers moving to long term deals will effectively force major LNG players to look to see if there are brownfield LNG projects they should look to advance. Prior to March/April, no one would think Shell or other major LNG players would be considering any new LNG FIDs in 2021. Covid forced all the big companies into capital reduction mode and debt reduction mode. But Brent oil is now solidly over $70, and LNG prices are over $13 this summer and the world's economic and oil and gas demand outlook are increasing with vaccinations. And we are starting to see companies move to increasing capex with the higher cash flows. The theme in Q3 reporting is going to be record or near record oil and gas cash flows, reduced debt levels and increasing returns to shareholders. And unless new mutations prevent vaccinations from returning the world to normal, we suspect that major LNG players, like other oil and gas companies, will be looking to increase capex as they approve 2022 budgets. The outlook for the future has changed dramatically in the last 8 months. The question facing major LNG players like Shell is should they look to FID new LNG brownfield projects in the face of an increasing LNG supply gap that is going to hit faster and harder and Asian LNG buyers prepared to do long term deals. We expect these decisions to be looked at before the end of 2021 for 2022 capex budget/releases. One wildcard that could force these decisions sooner is the already stressed out global supply chain. We have to believe that discussion there will be pressure for more Asian LNG buyer long term deals sooner than later.

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For Canada, does the increasing LNG supply gap provide the opportunity to at least consider a LNG Canada Phase 2 FID over the next 6 months? Our view on Shell and other LNG players is unchanged since our April 28 blog. Shell is no different than any other major LNG supplier in always knowing the market and that the oil and gas outlook is much stronger than 9 months ago. Even 3 months post our April 28 blog, we haven't heard any significant talks on how major LNG players will be looking at FID for new brownfield LNG projects. We don't have any inside contacts at Shell or LNG Canada, but that is no different than when we looked at the LNG markets in September 2017 and saw the potential for Shell to FID LNG Canada in 2018. We posted a September 20, 2017 blog *"China's Plan To Increase Natural Gas To 10% Of Its Energy Mix Is A Global Game Changer Including For BC LNG*" [LINK]. Last time, it was a demand driven supply gap, this time, it's a supply driven supply gap. We have to believe any major LNG player, including Shell, will be at least looking at their brownfield LNG project list and seeing if they should look to advance FID later in 2021. Shell has LNG Canada Phase 2, which would add 2 additional trains or approx. 1.8 bcf/d. And an advantage to an FID would be that Shell would be able to commit to its existing contractors and fabricators for a continuous construction cycle following on LNG Canada Phase 1 ie. to help keep a lid on capital costs. We believe maintaining a continuous construction cycle is even more important given the stressed global supply chain. No one is talking about the need for these new brownfield LNG projects, but, unless some major change in views happen, we believe its inevitable that these brownfield LNG FID internal discussions will be happening in H2/21. Especially since the oil and gas price outlook is much stronger than it was in the fall and companies will be looking to increase capex in 2022 budgets.

A LNG Canada Phase 2 would be a big plus to Cdn natural gas. LNG Canada Phase 1 is a material natural gas development as its 1.8 bcf/d capacity represents approx. 20 to 25% of Cdn gas export volumes to the US. The EIA data shows US pipeline imports of Cdn natural gas as 6.83 bcf/d in 2020, 7.36 bcf/d in 2019, 7.70 bcf/d in 2018, 8.89 bcf/d in 2017, 7.97 bcf/d in 2016, 7.19 bcf/d in 2015 and 7.22 bcf/d in 2014. A LNG Canada Phase 2 FID would be a huge plus for Cdn natural gas. It would allow another ~1.8 bcf/d of Cdn natural gas to be priced against pricing points other than Henry Hub. And it would provide demand offset versus Trudeau if he moves to make electricity "emissions free" and not his prior "net zero emissions". Mozambique has been a game changer to LNG outlook creating a bigger and sooner LNG supply gap. And with a stronger tone to oil and natural gas prices in 2021, the LNG supply gap will at least provide the opportunity for Shell to consider FID for its brownfield LNG Canada Phase 2 and provide big support to Cdn natural gas for the back half of the 2020s. And perhaps if LNG Canada is exporting 3.6 bcf/d from two phases, it could help flip Cdn natural gas to a premium vs US natural gas especially if Biden is successful in reducing US domestic natural gas consumption for electricity. The next six months will be very interesting to watch for LNG markets and Cdn natural gas valuations. Imagine the future value of Cdn natural gas is there was visibility for 3.6 bcf/d of Western Canada natural gas to be exported to Asia.

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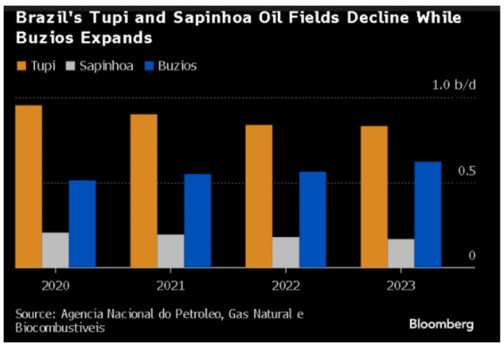
Petrobras Hunts for More Oil as Production Growth Falters (1)
2024-02-07 11:58:48.613 GMT
By Mariana Durao
(Bloomberg) -- The oil market is losing a key source of growth this year because production from Brazilian oil giant Petrobras is flat-lining after a surge in 2023.
The problem is twofold. Some major fields that the state-controlled oil giant brought on line in the early 2010s have peaked and started to fade. At the same time, there's a lull in the delivery of new production equipment for its fields that are still expanding. As a result, Petrobras doesn't expect to report year-on year growth again until 2026.
This means any near-term expansion from Brazil will come from foreign oil companies and local junior producers who only operated 12% of the country's output last year. Petrobras's head of exploration and production, Joelson Mendes, is in a rush to explore areas outside of a deep-water region in the Atlantic known as the pre-salt that delivers more than 70% of Brazil's production. Otherwise, Brazil's overall output only grow until about 2030 and then start to plummet.
"The pre-salt won't last forever," Mendes said in an interview at one of the company's corporate towers in Rio de Janeiro. "By 2050, Brazil will be an insignificant country in terms of oil production" unless Petrobras finds more oil.

It's a sharp reversal. Brazil grew more last year than any other country apart from the US and Iran in a development that contributed to OPEC+ constraining output to shore up prices. Petrobras's extended lull will offer a modicum of relief to OPEC and Russia, even though output in the US and Guyana is set to continue growing. Recent geopolitical tension in the Middle East highlights how production from other regions is crucial for global energy security.

Fading Fields
Petrobras's main challenge is Tupi. It was the first field in the pre-salt — named for the thick layers of salt above the crude — to come into production in 2010 and is still Brazil's biggest producer at 832,000 barrels a day of oil last year. But it has declined 13% since peaking in 2020. Petrobras's partners at the field are Shell PLC and Galp Energia SGPS SA. A smaller pre-salt field known as Sapinhoa has fallen 18% since 2020, according to Brazil's oil regulator. The declines are offsetting growth at other projects such as Buzios, which is even bigger than Tupi in terms of potential.



The company is taking action to limit Tupi's annual pace of decline to 7% to 8% a year, compared to an average of about 10% for Petrobras as a whole, said Mendes. It is waiting on the oil regulator to extend the contract into the 2060s. Petrobras needs the approval to justify investing billions of dollars to extract additional barrels.

A new floating production vessel and associated equipment could cost up to $7 billion, and wouldn't be ready until 2029 at the earliest, Mendes said. This year Petrobras is only adding one of the 14 so-called FPSOs that it plans to install by 2028, which pushes out the next big jump in production to later in the decade.

According to Mendes, many analysts have a more optimistic view on production than the company, which takes into account complications from maintenance work and equipment delivery delays. The International Energy Agency expects Brazil to grow by 240,000 barrels a day this year.

Equatorial Margin

The offshore basin Petrobras is most excited to explore is known as Foz do Amazonas, where it has been battling with Brazilian authorities for drilling permits in an environmentally sensitive area off the coast of the mouth of the Amazon. Petrobras was expecting an appeal to be resolved this month, but an ongoing strike at the Ibama environmental agency adds uncertainty, Mendes said.

In the meantime, the company will drill a second well in another section of what is known as the Equatorial Margin as soon as this month. The oil industry has high expectations that the region could hold major fields similar to what Exxon Mobil Corp. is developing in Guyana.

Internationally, Petrobras's main focus is Colombia where it continues to explore a major offshore gas discovery and plans to drill at least two more wells this year. If successful, there could be enough gas to supply Colombia and also justify an export terminal, Mendes said.

Petrobras is also studying seismic data at three exploration blocks in Sao Tome and Principe, two volcanic islands off the coast of central Africa that have shown geologic similarities to Guyana. The company bought minority stakes in the blocks from Shell late last year, marking a return to Africa where previous management had sold assets. Petrobras is also interested in acquisitions elsewhere in Africa, including Nigeria.

"We have ongoing talks," he said. "We're going back because we have interest and we have experience."

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opened their arbitrage, that's been closed for quite a while. So that's, of course, a positive indicator for the crude differential.

And then your question on Valhall and the impairment case. Valhall is not impaired in this quarter. And I don't think there are any changes to the 2C reserves or resources on Valhall in this quarter either.

A - David Tonne {BIO 20925193 <GO>}

I can qualify that. So there's impairment of technical goodwill on Valhall this quarter, together with Edvard Grieg and Ivar Aasen, which is, of course, is a bit specific. But it's not impairment of resources. So this is, of course, driven, as you know, and most of you on the line know, by previous acquisitions and the way that we have to account for the differences in accounting and tax. So, that's to be expected over time, specifically in quarters, when the forward curve for oil and gas prices drops. And as you are producing out, call it volumes in the asset.

Q - Yoann Charenton {BIO 17372477 <GO>}

Thank you. Have a nice day, then.

A - Karl Johnny Hersvik {BIO 18337255 <GO>}

Thank you. Let's move on, Kjetil.

A - Kjetil Bakken {BIO 20629786 <GO>}

Yes, absolutely. It's from John Olaisen from ABG. Please, John, go ahead.

Q - John Olaisen {BIO 4949660 <GO>}

Yeah, thank you for taking my question. And good morning, everybody. I can see from fax [ph] pages from the Norwegian offshore directorate that the water production is increasing significantly at the Johan Sverdrup field. So I just wonder if the watering production is higher than expected? And also I had hoped for plateau to be taken -- coming off the plateau would be taking place a little bit later than 2024. But if you could elaborate a little bit about that, do you have sufficient water handling capacity on the top sides, et cetera? And is there anything you could do to handle the water -- increase the water handling capacity and thereby extend plateau? And also maybe if you could elaborate a little bit of what kind of depletion rates we should expect from Johan Sverdrup once it goes off the plateau. And what can be done to fight that apart from, of course, a Phase 3? Thank you.

A - Karl Johnny Hersvik {BIO 18337255 <GO>}

Good. Excellent question. Yes, you are right. We are seeing water in some wells in Johan Sverdrup. The behavior is really related to well by well coning and not -- it's not an overall well. It's not an overall field water-cut development. It's a well issue. We are, in the course of 2024, putting another eight wells on stream on Johan Sverdrup, which will limit the issue as it's directly correlated and linked to well rates.

And of course, the total field rails are capped to the water handling and oil handling capacity. Oil handling, of course, standing at 755,000 barrels of oil equivalents.

So I think the main issue here is to get more wells on stream and therefore more or less production per well. And then, of course, the water handling capacity is at the moment significant and quite in line with what we expected and sufficient for treating the water. And then, of course, the last issue will be mass balance in the reservoir, and we're just doing a turnaround to change out the water injection pump, which are now basically done I think, to make sure that there is sufficient capacity. So those are the three main initiatives that is ongoing in 2024 to extend the plateau. And then, of course, the next line of things will be new wells. And this is as with all oil and gas fields, as you reach the end of the plateau, the way to extend the plateau is to increase capacity, particularly water treatment capacity and gas treatment capacity, and add IOR wells. I mean, this is bread and butter for the oil and gas industry. This is what we do in all fields.

Q - John Olaisen {BIO 4949660 <GO>}

And then on depletion rates once it goes off plateau, please?

A - Karl Johnny Hersvik {BIO 18337255 <GO>}

Yeah. That's -- I don't think I'll guide on that John, at this point in time. And the reason is that, yeah, of course, from a technical perspective, you will see the largest depletion rates, relatively speaking, in the first few months after you go off battle. But they will depend on water volume, on the increase in water volume, well stock, et cetera, et cetera. So that's a pretty difficult assessment to make at this point in time.

Q - John Olaisen {BIO 4949660 <GO>}

But the potential plateau in the second half of 2024, is that what you had expected and what you already have in your charts showing the expected production profile for (inaudible) in the years to come, or is it a little bit earlier?

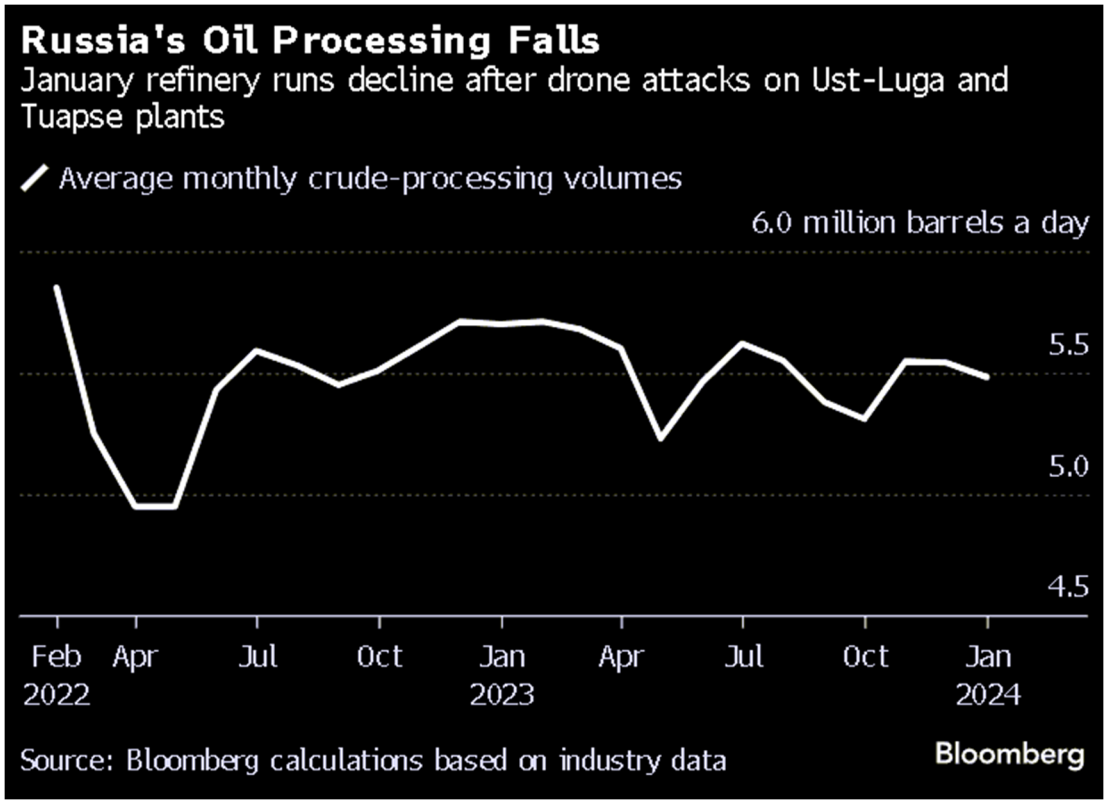
A - Karl Johnny Hersvik {BIO 18337255 <GO>}

So I would say that this -- as you know, we increased the plateau level quite significantly above nameplate capacity in 2023. And it's been producing extremely well at this level, with nearly 100% uptime, low cost, highly energy efficient. One year ago, I would say we expected it to continue that well into 2025. And the operator has now basically said that they assume that this level can be sustained. It's probably a good word until late 2024 or early 2025.

And it's the uncertainty and that timing that is basically incorporated into the guidance of 2024. And of course, that means that maybe starting another -- but that means that when we assessed this earlier, we had an assumption that it'll carry well into 2025. That, of course, means that the guidance for 2024 is a bit lower than we assumed a year ago, but it also means that in the next couple of years, we'll be impacted by this, call it, a little bit more conservative phasing of production. But it's important to note that there are no reserve changes. This is essentially a phasing of production related to the production strategy at the field.

Russian Oil-Refining Drops as Drone Attacks Halt Two Plants
2024-02-05 15:42:12.465 GMT

By Bloomberg News
(Bloomberg) -- Russia's latest weekly oil-processing rates dropped to the lowest in almost two months following the halt of two major refineries that were struck by Ukrainian drones.
The nation processed 5.41 million barrels a day in the seven days through Jan. 31, the first full week showing the impact of Ukraine's attacks, a person with knowledge of industry data said. That's 135,000 barrels a day below the average for most of December, according to Bloomberg calculations.
As the war between the two countries enters a third year later this month, Ukraine has intensified its drone attacks and targeted an industry that is key for Russian coffers. Strikes on oil-processing and export facilities have become increasingly disruptive in recent weeks, threatening Russia's ability to supply fuel to foreign and domestic markets.
Average processing in January was slightly higher than in the last week of the month, at 5.48 million barrels a day, according to Bloomberg calculations. That's still about 60,000 barrels a day less than during most of December.



Two major export-focused refineries — Novatek PJSC's condensate processing plant on the Baltic coast and Rosneft PJSC's Tuapse refinery near the Black Sea — completely halted primary crude processing in the last week of January following drone attacks on Jan. 21 and Jan. 25 respectively, according to a person with knowledge of the matter. Combined, the two

facilities accounted for almost 5% of the nation's daily processing average in December.

Novatek and Rosneft didn't immediately respond to requests for comment on the halts of the facilities and how long they could last.

The drop was partially offset by increased activity elsewhere. Processing rates rose by a combined 204,000 barrels at other refineries, including Gazprom Neft PJSC's facilities in Omsk and Moscow, Surgutneftegas PJSC's Kirishi plant, the Afipsky and Ilsky refineries, and Lukoil's sites in Perm and Volgograd.

A sizable amount of refining capacity at the facility in Volgograd is likely to be offline after a fire caused by a drone on Feb. 3. It's one of the nation's biggest refineries and supplies fuel both to domestic and foreign markets. The attack was meant to slash its production capacity, an official with knowledge of the matter in Kyiv said at the time.

In the last week of January, Russia's daily diesel output was flat compared to the average for the most of December, according to Bloomberg calculations based on data from the person familiar. Gasoline production rose 2.7% as Lukoil's Norsi restored processing rates.

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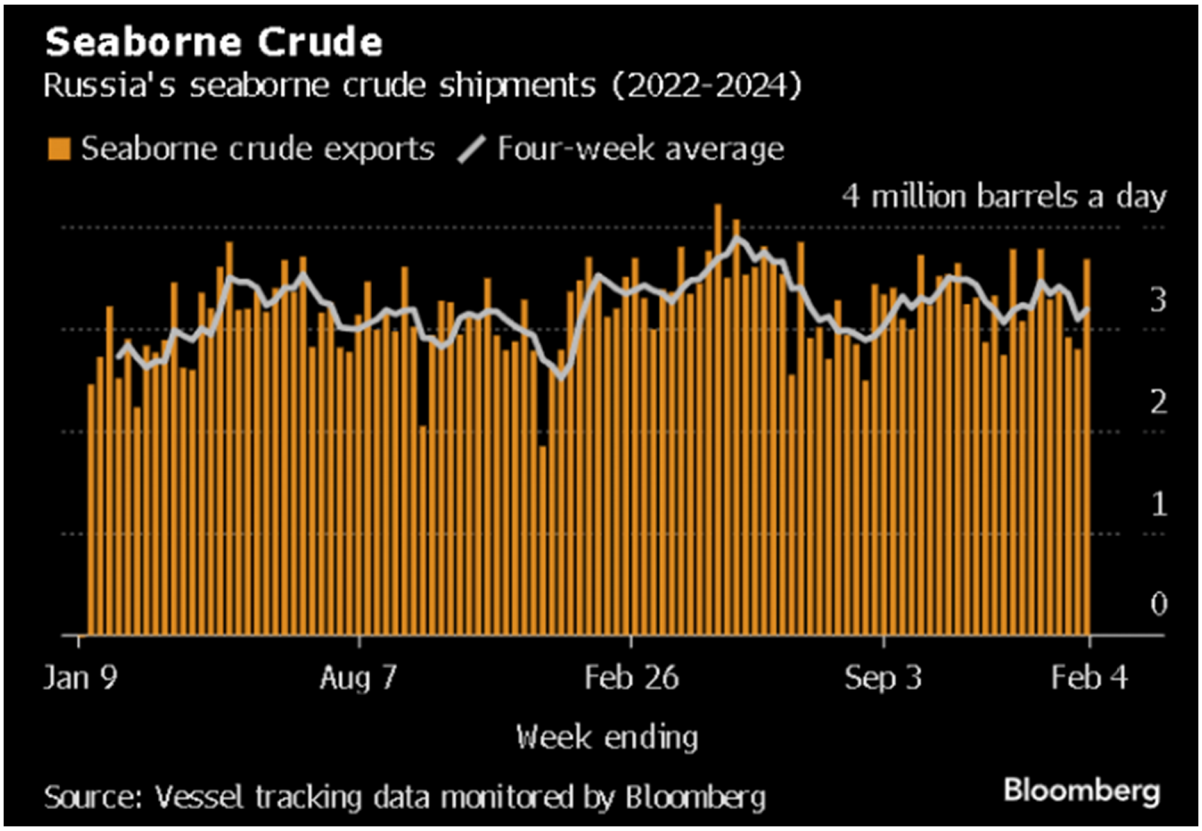
Russia’s Seaborne Crude Exports Surge After Disruptions End
2024-02-06 11:25:22.801 GMT

By Julian Lee
(Bloomberg) -- Russia’s seaborne crude shipments rebounded strongly from two weeks of disruptions, with record-equaling flows from the country’s main export terminals.

Eleven tankers completed loading of the country’s ESPO crude at the Pacific port of Kozmino, recovering after a storm halved exports the week before and matching previous highs. Volumes from the Baltic port of Ust-Luga also gained in the week to Feb. 4, after maintenance work cut flows late last month, while shipments from Primorsk equaled the previous week's record.
The bounce back saw weekly average shipments surge by about 880,000 barrels a day to the highest this year. That put flows 400,000 barrels a day above the level Moscow has pledged to its OPEC+ partners for the first quarter on a weekly basis, though 100,000 barrels a day below that target on a four-week measure, which helps to smooth out short-term factors.
Russian exporters are having to rely more heavily on the country’s own tankers and the shadow fleet of aging vessels, with Greek owners disengaging from the Russian crude trade after a ramp-up in US sanctions. The number of Greek-owned tankers hauling Moscow’s crude fell in January to just a fifth of the levels seen last May, vessel tracking-data compiled by Bloomberg show.



Russia has said it will cut oil exports by 500,000 barrels a day below the May-June average during the first quarter, after several other members of the OPEC+ group agreed to make further output curbs. The Russian cut will be shared between crude shipments, which will be reduced by 300,000 barrels a day, and refined products.

Russian crude cargoes continue to run the gauntlet of the southern Red Sea, despite attacks on merchant vessels from Yemen-based Houthi rebels. The Houthis assured Russia and China that the group is "ready to ensure the safe passage of their ships in the Red Sea." However, the only two tankers reported to have been struck off Yemen were both carrying Russian cargoes. The Sai Baba, hauling Urals crude, was hit by a drone off Yemen on Dec. 23, while the Marlin Luanda, struck by a missile and set on fire last month, was carrying Russian naphtha.

Russia is still struggling to sell its Sokol crude. Sixteen cargoes, totaling about 11 million barrels, are sitting on tankers that appear to be going nowhere. Another three 700,000 barrel cargoes are awaiting transfer from the shuttle tankers that haul them from Sakhalin Island. Two ships have headed back to India, while four have gone to China.

Russia has now lost all its European markets for seaborne crude since its invasion of Ukraine almost two years ago. Bulgaria — Moscow's last customer in the region — has taken nothing since the end of 2023.

The gross value of Russia's crude exports jumped to $1.79 billion in the seven days to Feb. 4 from $1.32 billion the previous week. That's the highest in more than three months. Meanwhile four-week average income rose by $86 million to $1.49 billion a week.

Flows by Destination

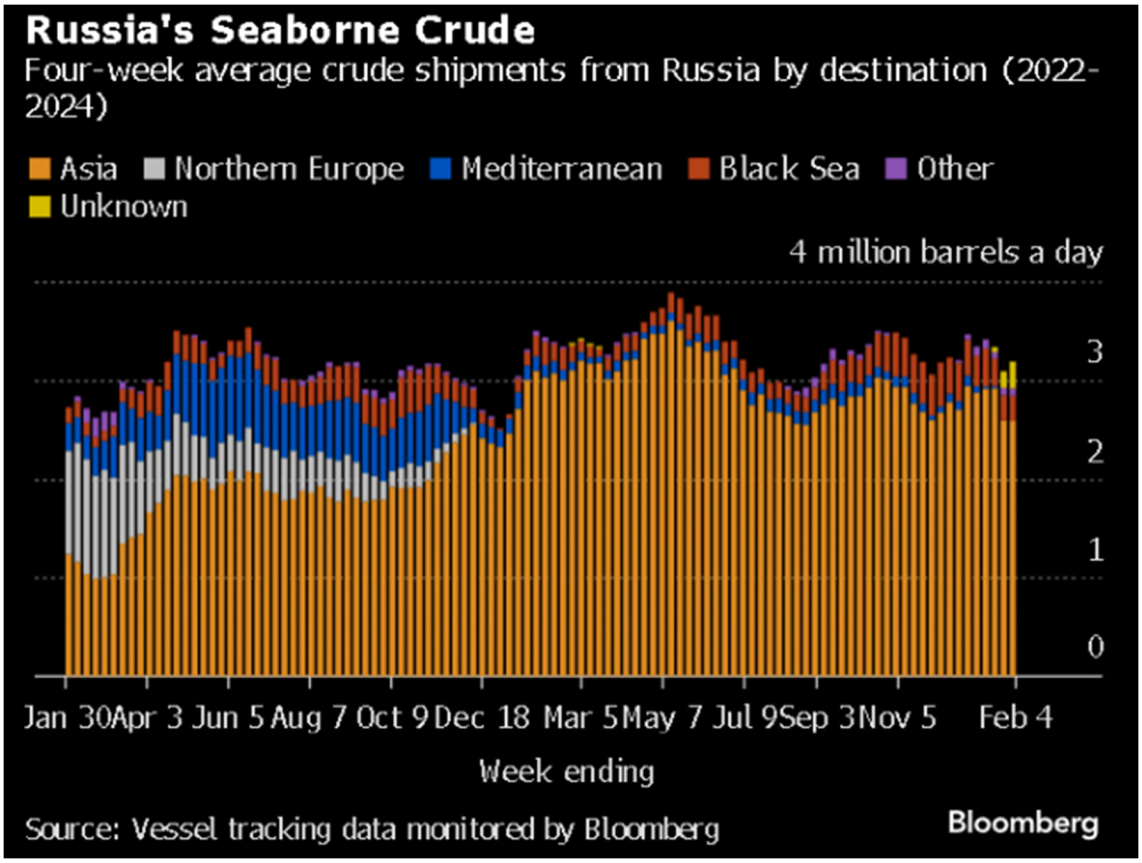
Russia's seaborne crude flows in the four weeks to Feb. 4 rose to 3.19 million barrels a day. That was up from 3.09 million barrels a day in the period to Jan. 28. Shipments were about 400,000 barrels a day below the average seen in May and June, or about 100,000 barrels a day below Russia's first quarter target. Weekly shipments reached a five-week high of 3.68 million barrels a day.

The four-week average continues to be affected by the storm that closed Kozmino for five days in the week to Jan. 28 and disruptions to shipments from Ust-Luga caused by a drone strike on a neighboring condensate refinery, followed by several days of maintenance.

About 1.8 million barrels of Russian crude is heading to the Caribbean on a VLCC and is due to arrive at its unspecified destination in the region on Feb. 18, according to navigation signals from the ship.

A fourth cargo is heading to Tema in Ghana, where a new refinery built by Chinese investors has begun refining crude. The plant will initially process 40,000 barrels a day, rising to

100,000 barrels with completion of a second phase, due by the end of 2025.



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 the Baltic port of 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 grade. Since Russia's invasion of Ukraine, Kazakhstan has rebranded its cargoes to distinguish them from those shipped by Russian companies.

*** Asia**

Observed shipments to Russia's Asian customers, including those showing no final destination, rose to 2.86 million barrels a day in the four weeks to Feb. 4, up from 2.76 million in the previous four-week period.
About 1.1 million barrels a day of crude was loaded onto tankers heading to China. 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 about 840,000 barrels a day.
Both the Chinese and Indian figures will rise as the discharge ports become clear for vessels that are not currently

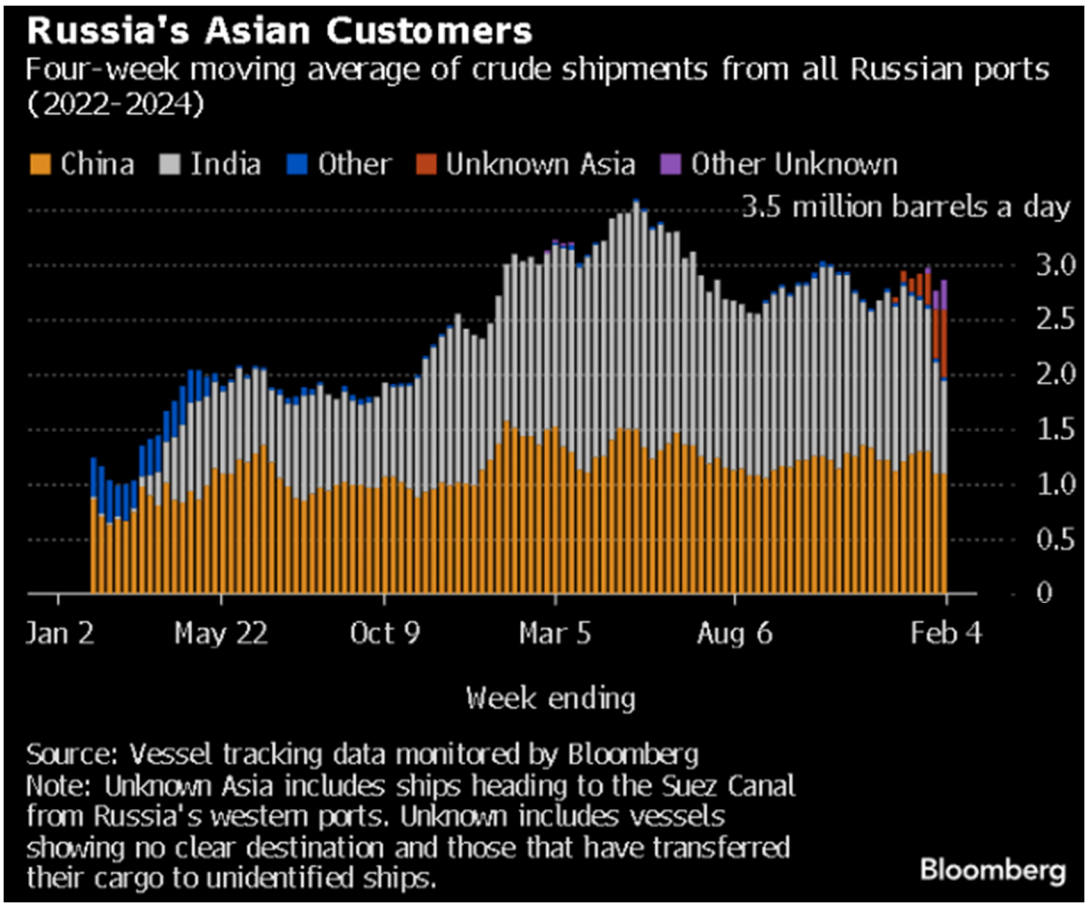
showing final destinations.

The equivalent of about 615,000 barrels a day was on vessels signaling Port Said or Suez in Egypt, or are expected to be transferred from one ship to another off the South Korean port of Yeosu. Those voyages typically end at ports in India or China and show up in the chart below as “Unknown Asia” until a final destination becomes apparent. This figure includes more than 12.5 million barrels of Sokol crude originally destined for India that has been stuck on ships since late November.

Several subsequent cargoes of Sokol have been delivered to ports in China. The country typically takes one or two cargoes a month, out of the nine usually loaded. So far, it has taken four of the cargoes loaded in January, while two more await transfer from the shuttle tankers used to haul shipments from the export terminal at De Kastri.

The “Other Unknown” volumes, running at about 270,000 barrels a day in the four weeks to Feb. 4, are those on tankers showing no clear destination. Most of those cargoes originate from Russia’s western ports and go on to transit the Suez Canal, but some could end up in Turkey. Others could be moved from one vessel to another, with most such transfers now taking place in the Mediterranean, off the coast of Greece.

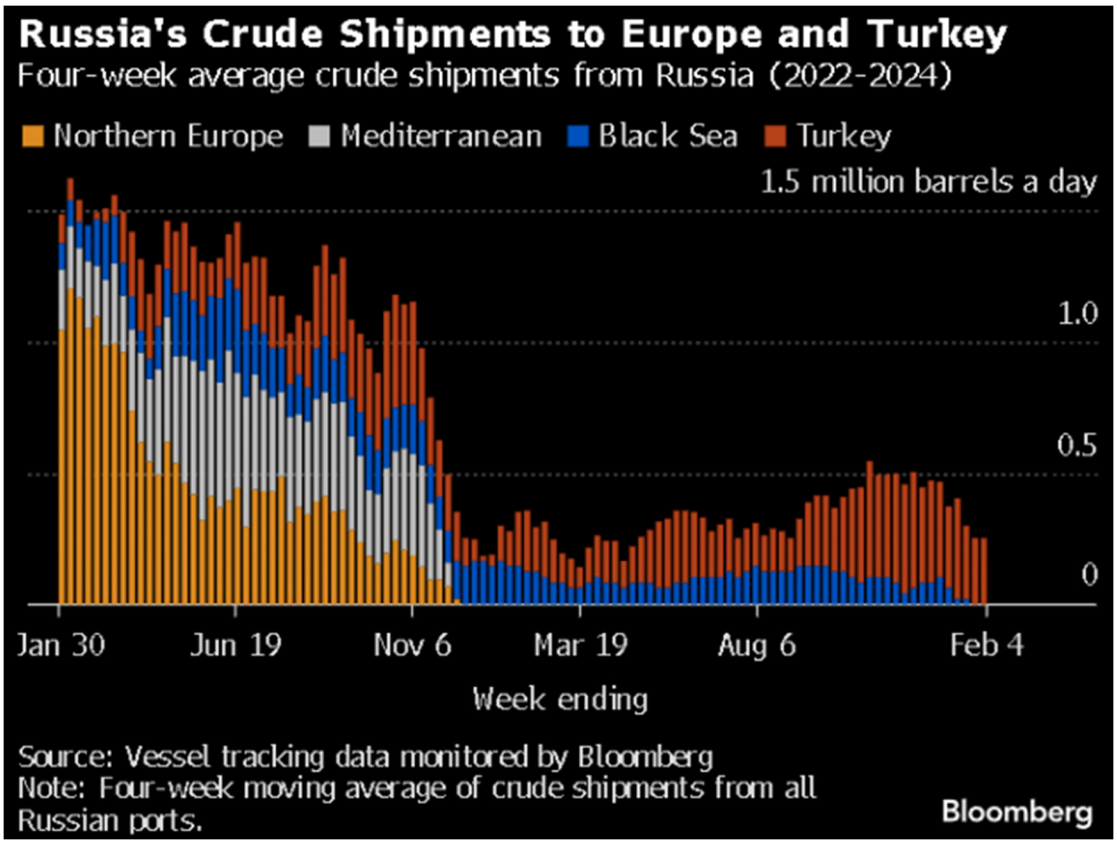
Ship-to-ship transfers of crude in the Laconian Gulf off Greece have picked up after several months of inactivity. The VLCC Ligera, holding about 1.8 million barrels, is heading for the Caribbean after taking on cargoes from two smaller tankers. A second supertanker, Achelous, is taking on cargoes at the time of writing.



Europe and Turkey

Russia's seaborne crude exports to European countries have collapsed since Moscow's troops invaded Ukraine in February 2022. A market that consumed about 1.5 million barrels a day of short-haul seaborne crude, coming from export terminals in the Baltic, Black Sea and Arctic has been lost almost completely, to be replaced by long-haul destinations in Asia that are much more costly and time-consuming to serve.

Flows to Bulgaria appear to have halted at the end of last year, even sooner than the March deadline to end imports approved by Bulgaria's parliament. That leaves Turkey as the only short-haul market for shipments from Russia's western ports.



Exports to Turkey were steady at about 260,000 barrels a day in the four weeks to Feb. 4. The recent surge in flows, which took them to more than 440,000 barrels a day in the four weeks to Dec. 12, appears to have waned.

Flows to Bulgaria remained at zero in the most recent four-week period. No cargoes of Russian crude have been delivered to the port of Burgas since the end of 2023.

No Russian crude was shipped to northern European countries, or those in the Mediterranean in the four weeks to Feb. 4.

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.

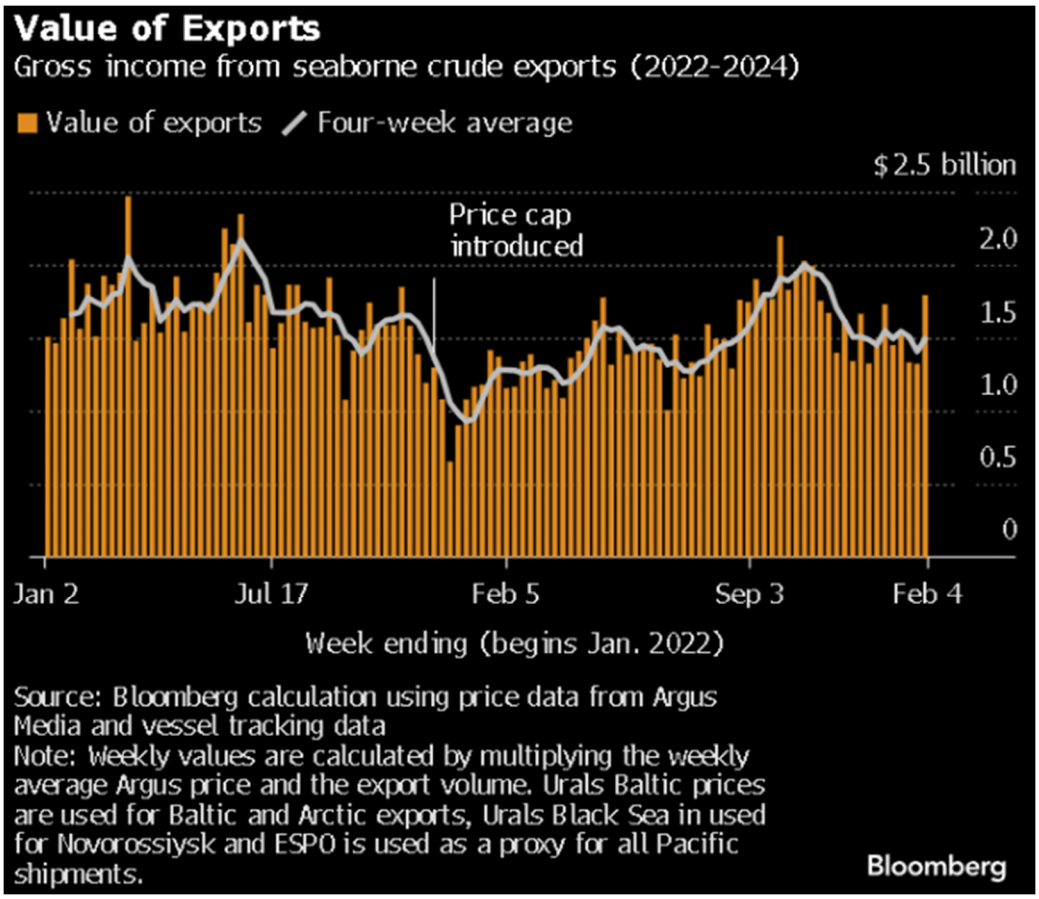
Export Value

Following the abolition of export duty on Russian crude, we have begun to track the gross value of seaborne crude exports, using Argus Media price data and our own tanker tracking.

The gross value of Russia's crude exports jumped to $1.79 billion in the seven days to Feb. 4 from $1.32 billion the previous week. That's the highest in more than three months.

Meanwhile four-week average income rose by $86 million to $1.49 billion a week. The four-week average peaked at $2.17 billion a week in the period to June 19, 2022. The highest it reached last year was $2 billion a week in the period to Oct. 22.

During the first four weeks after the Group of Seven nations' price cap on Russian crude exports came into effect in early December 2022, the value of seaborne flows fell to a low of $930 million a week, but soon recovered.



The chart above shows a gross value of Russia's seaborne oil exports on a weekly and four-week average basis. The value is calculated by multiplying the average weekly crude price from Argus Media Group by the weekly export flow from each port. For shipments from the Baltic and Arctic ports we use the Urals FOB Primorsk dated, London close, midpoint price. For shipments from the Black Sea we use the Urals Med Aframax FOB Novorossiysk dated, London close, midpoint price. For Pacific shipments we use the ESPO blend FOB Kozmino prompt, Singapore close, midpoint price.

Export duty was abolished at the end of 2023 as part of Russia's long-running tax reform plans.

Ships Leaving Russian Ports

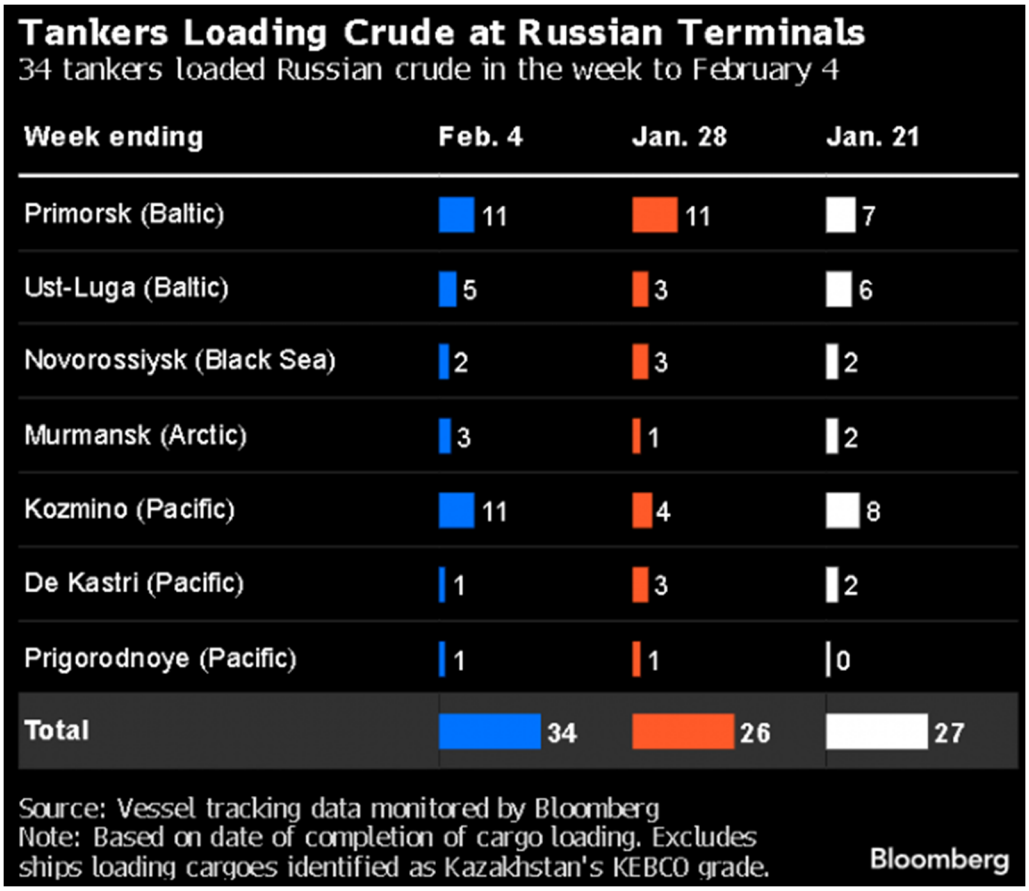
The following table shows the number of ships leaving each export terminal.

A total of 34 tankers loaded 25.8 million barrels of Russian crude in the week to Feb. 4, vessel-tracking data and port agent reports show. That was up by about 6.2 million barrels from the previous week.

A record-equaling 11 tankers completed loading ESPO crude at the Pacific port of Kozmino, rebounding after a storm halved exports the previous week.

Exports from the Baltic port of Ust-Luga also rebounded in the week to Feb. 4, after maintenance work cut flows the

previous week. A record-equaling 11 tankers also loaded at Primorsk during the week.



All figures exclude cargoes identified as Kazakhstan's KEBCO grade. Three cargoes of KEBCO were loaded at Ust-Luga during the week.NOTES

Note: This story forms part of a weekly series tracking shipments of crude from Russian export terminals and the gross value of those flows. Weeks run from Monday to Sunday. The next update will be on Tuesday, Feb. 13.

Note: All figures exclude cargoes owned by Kazakhstan's KazTransOil JSC, which transit Russia and are shipped from Novorossiysk and Ust-Luga as KEBCO grade crude.

If you are reading this story on the Bloomberg terminal, click here 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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- 09 Feb 2024 | 17:58 UTC

OPEC+ output sees biggest drop in six months, but short of pledged cuts: Platts survey

HIGHLIGHTS

January crude oil production down 340,000 b/d

OPEC produces 26.49 mil b/d, allies add 14.72 mil b/d

Members with quotas pump 275,000 b/d above targets

- Author: Charlie Mitchell, Rosemary Griffin, Herman Want, support @platts.com
- United States

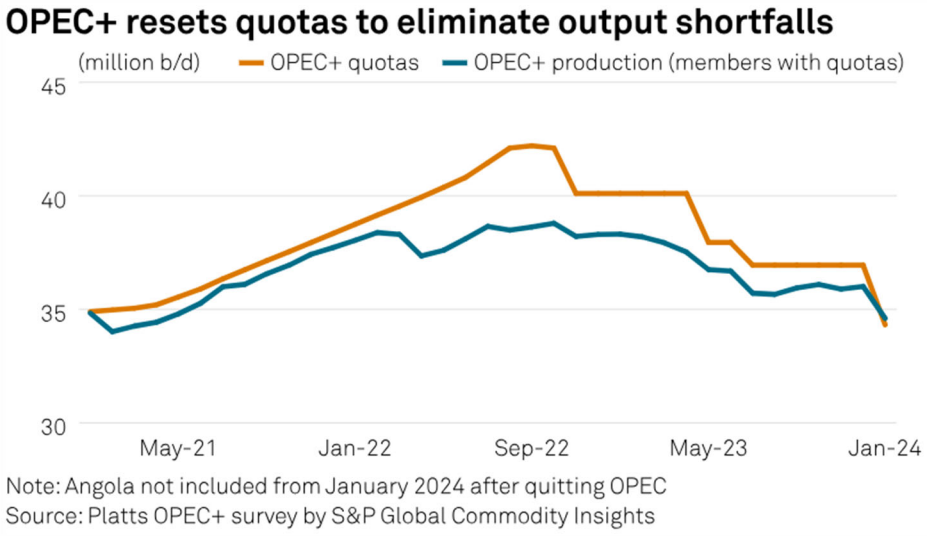
OPEC+ crude output fell 340,000 b/d in January, the steepest drop in six months, as some members implemented voluntary cuts and protesters shut down Libya's largest field for more than two weeks, the latest Platts survey from S&P Global Commodity Insights found.

The production decline, however, was far less than the approximately 700,000 b/d in cuts pledged by the group for the first quarter of 2024, with Iraq well above its quota, while Kazakhstan, the UAE and Kuwait also missed their new targets, according to the survey.

OPEC's 12 countries contributed the lion's share of the month-on-month production decline, with core group output slipping 310,000 b/d.

OPEC members pumped 26.49 million b/d of crude collectively, down from 26.80 million b/d in December, when Angolan production is removed. The West African country quit the group in January following a row over quota cuts.

Meanwhile 10 Russia-led allies, who began coordinating with the producing group in 2016 to create OPEC+, saw their oil output fall 30,000 b/d month-on-month to 14.72 million b/d, driven by slight declines in Omani and Russian production, the survey found.



New cuts

Libya, which is exempt from a quota under the OPEC+ deal, recorded the largest drop in the alliance in January after its 300,000 b/d Sharara oil field suffered an 18-day shut-in by protesters, invoking memories of political actors targeting oil installations in the North African country.

Meanwhile, Kuwait and Iraq, which both agreed to cut output significantly at the last OPEC+ meeting in November, saw crude output fall 100,000 b/d and 80,000 b/d respectively. Both, however, are above their quotas, according to the survey, with Iraq overproducing by 270,000 b/d.

Nigeria and Algeria also saw slight declines in production, with the latter completing its voluntary reductions agreed last year. Some crude was processed at Nigeria's Dangote refinery, a long-delayed mega-project near Lagos that finally began testing in January, but the bulk of it was supplied in December by state-owned NNPC.

The UAE was one of the few gainers in the month, after securing a long-awaited production baseline increase under the OPEC+ deal in November, with its production rising 50,000 b/d in January, the survey found.

OPEC kingpin Saudi Arabia continued to hold the line on its crude output, pumping just below its target. The kingdom has been implementing a voluntary 1 million b/d cut since July as it leads the producer bloc in its market tightening efforts.

Market share

The OPEC+ coalition has implemented a number of overlapping production cuts since 2022, the most recent of which came into force on Jan. 1, when Saudi Arabia pledged to maintain its 1 million b/d cut, while Iraq, the UAE, Kuwait, Kazakhstan, Algeria and Oman said they would roll back a combined 696,000 b/d and Russia said it would reduce its oil exports -- though not necessarily production -- by 500,000 b/d.

At the same time, quotas for underproducing African members like Nigeria and Republic of Congo were reduced to reflect shrinking capacity, while the UAE was awarded a baseline increase for its capacity additions.

The failure of most African members to pump anywhere near their targets over the past several months had masked non-compliance from Iraq and other members.

Under the new quotas, the 18 members subject to output limits pumped 275,000 b/d above their collective targets for January.

Still, January's OPEC+ production fall could augur a further drop in market share for the alliance, just as non-OPEC countries like the US, Canada and Guyana, as well as Brazil, are seeing crude output surge. Brazil joined OPEC+ in January but is not subject to production quotas.

OPEC+ production accounts for some 40% of global supply.

It also comes as the alliance battles to improve a weak market outlook amid disappointing economic indicators from China, the world's largest crude importer, and significant volatility caused by wars in Europe and the Middle East.

Dated Brent was last assessed by Platts, a unit of S&P Global, at $81.69/b on Feb. 7 after flirting with the $100/b mark last September.

While OPEC+ ministers have said they are ready to deepen cuts at or before the next meeting on June 1 in Vienna, analysts say compliance could become a bone of contention in the coming months. Riyadh, which has called for production discipline from fellow members, is producing at lows not seen since the depths of the COVID-19 pandemic.

The Platts survey measures wellhead production and is compiled using information from oil industry officials, traders and analysts, as well as by reviewing proprietary shipping, satellite and inventory data.

OPEC+ crude production (million b/d)

	Jan-24	Change	Dec-23	Quota	Over/under
OPEC-10					
Algeria	0.91	-0.04	0.950	0.910	0.000
Congo-Brazzaville	0.26	0.00	0.260	0.280	-0.020
Equatorial Guinea	0.05	0.00	0.050	0.070	-0.020
Gabon	0.23	0.00	0.230	0.170	0.060
Iraq	4.27	-0.08	4.350	4.000	0.270
Kuwait	2.45	-0.10	2.550	2.410	0.040
Nigeria	1.48	-0.05	1.530	1.500	-0.020
Saudi Arabia	8.97	0.02	8.9500	8.980	-0.010
UAE	2.95	0.05	2.900	2.910	0.040
Total OPEC-10	**21.57**	**-0.20**	**21.770**	**21.230**	**0.340**
OPEC exempt					
Iran	3.11	0.01	3.10	—	—
Libya	1.02	-0.12	1.14	—	—
Venezuela	0.79	0.00	0.79	—	—
Total OPEC-13	**26.49**	**-0.31**	**26.8**	**—**	**—**
Non-OPEC with quotas					
Azerbaijan	0.48	0.00	0.48	0.551	-0.071
Bahrain	0.17	0.00	0.17	0.196	-0.026
Brunei	0.08	0.01	0.07	0.083	-0.003
Kazakhstan	1.56	0.00	1.56	1.468	0.092
Malaysia	0.37	0.00	0.37	0.401	-0.031
Oman	0.77	-0.03	0.80	0.759	0.011
Russia	9.42	-0.01	9.43	9.449	-0.029
Sudan	0.03	0.00	0.03	0.064	-0.034
South Sudan	0.15	0.00	0.15	0.124	0.026
Total Non-OPEC with quotas	**13.03**	**-0.03**	**13.06**	**13.095**	**-0.065**
Non-OPEC exempt					
Mexico	1.69	0.00	1.69	—	—
Total Non-OPEC	**14.72**	**-0.03**	**14.75**	**—**	**—**
OPEC+ members with quotas					
Total	**34.60**	**-0.23**	**34.83**	**34.325**	**0.275**
OPEC+					
Total	**41.21**	**-0.34**	**41.55**	**—**	**—**

Note: Quotas include voluntary extra cuts implemented by Saudi Arabia, Russia, Iraq, UAE, Kuwait, Kazakhstan, Algeria, Oman and Gabon

Source: Platts OPEC+ survey by S&P Global Commodity Insights

https://www.saba.ye/en/news3303224.htm

Revolution leader calls for exit of millions in solidarity with Palestinian people

Revolution leader calls for exit of millions in solidarity with Palestinian people

[08/February/2024]

SANA'A Feb 08. 2024 (Saba) - The leader of the revolution, al-Sayeed Abdul-Malik Badr al-Din al-Houthi, directed a call to the Yemeni people for a massive demonstration tomorrow, Friday in the squares and squares, a millions-strong demonstration that enrages the enemies and expresses the steadfastness of the Yemeni position towards the Palestinian people.

Al-Sayeed Abdul-Malik Al-Houthi said in his speech today regarding the latest updates, "We will not evacuate the squares as long as Palestinian blood shed and the tears of the bereaved and orphans are shed."

He stressed that the voice of the Yemeni people will remain loud and their position will continue because they are a people who say and act within the framework of their response to Allah.

He stressed the need to act within the framework of urging, encouraging, and emphasizing the boycott of American and Israeli goods.

The leader of the revolution pointed out that the brutal Israeli aggression on Gaza exceeds the seventeenth week in a row, with American and British participation.

He reviewed statistics of the martyrs, the wounded, and the missing in Gaza, which are not complete because there are many cases that have not yet been recorded, indicating that the Zionist genocidal massacres in Gaza amounted to 2,370 massacres.

He considered the genocide crimes in Gaza to be the greatest evidence of the extent of the Zionist enemy's criminal tendency to exterminate the Palestinian people.

Al-Sayeed Abdul-Malik Al-Houthi reported that the Israeli enemy continues to target hospitals and health personnel, prevent medicines, and target ambulances.

He explained that American and British reconnaissance planes are playing an essential role in preparing to target Rafah, pointing out that the displaced people and residents are facing a tragedy in terms of bombing and hunger.

He stressed that the Israeli enemy has reached such a level of criminal practices that it sometimes does not allow children to cross without their parents, and all the titles of evil, tyranny and disbelief apply to these practices.

Al-Sayeed reiterated that America, in its primary role in the Security Council is a source of evil, crime, injustice and tyranny against vulnerable peoples.

The leader of the revolution said, "There is no strong, effective, and tangible international movement to prevent injustice in Gaza and stop crime."

He stressed the failure of the Zionist enemy to achieve its declared goal of eliminating al-Mujahideen in the Gaza Strip.

He added, "The great failure of the Zionist enemy is measured by the extent of the crime, aggression, bombing, and the extent of the American-British intervention with him."

Al-Sayeed Abdulmalik Badr al-Din al-Houthi continued, "The Palestinian people, the more effort, jihad, and sacrifice they accumulate with their great oppression, the closer they are to divine victory."

He also confirmed Americans estimate that the Israeli army needs at least five years to restore its losses from the October 7 strike.

Al-Sayeed said, "The enemy's approach to negotiations is clear evidence of Israeli and American desperation."

He stated that the American is facing elections and has become involved in the Iraq and Yemen fronts and other fronts, and this is costing him, worrying him, and affecting him.

The leader of the revolution criticized the negative role of some Arab regimes on the level of weakness and conspiracy.

He stressed that the steadfastness of the Palestinian people is what is relied upon, and with it comes the role of the supporting fronts, from the Hezbollah front in Lebanon, which has a great influence in distracting the enemy.

He added, "The Iraqi front supportive and serious, targeting the Israeli and American enemies and making sacrifices."

Al-Sayeed Abdul-Malik Al-Houthi confirmed that the Yemen Front will continue to target the enemy in Palestine and in its naval operations until the aggression and siege on Gaza stops.

He went on to say, "Our operations continued this week to the Red Sea and the Bab al-Mandab Strait, and the movement of ships linked to Israel is almost non-existent. As for Israeli ships, their movement completely stopped from Bab al-Mandab and across the Red Sea. This is a real achievement and victory."

He pointed out that the Zionist enemy relied on chartered ships to carry its goods, and by targeting them, the situation became difficult for it, and the cost of its economic losses was high as a result of the Yemeni operations.

He said, "The American and the British were both involved in the aggression against our country in their efforts to protect Israeli ships and the continued flow of goods to the enemy. They also do nothing for other countries and what they say about protecting international navigation is a lie, the real victim primarily from the operations in the Red Sea is the Israelis, along with the Americans and the British."

He continued, "It has become known to shipping companies that the confrontation is coming with the Americans and the British, due to their aggression against our country, and this week there were five operations, including a major operation in which the American said the clash lasted for 14 hours."

He also stressed that the American and British involvement has negative consequences for them, and will not protect Israeli ships, and that for the first time since World War II, the American is facing such a predicament, with his ships and battleships becoming targets.

The leader of the revolution set a vision for the solution and the correct position, which is to stop the siege on Gaza and allow food and medicine to enter, pointing out that the Americans, instead of accepting a humanitarian position that allows food and medicine to enter Gaza, risked entering into war and confrontation.

He reiterated that the American is affecting international navigation through its militarization of the Red Sea, and seeks to worry other countries, and many countries realize that the danger to their navigation in the Red Sea is from the American, not Yemen.

He said, "Our operations will continue as long as the aggression and siege on Gaza continues, and food, medicine, and humanitarian needs must be delivered to all parts of the Strip," calling on all countries to coordinate more with Yemen, to be more reassured about its commercial movement, and to never listen to American interference.

Sayyed. Abdulmalik Badr al-Din al-Houthi stated that the number of American-British strikes on Yemen this week reached 86, which had no effect at all in limiting Yemeni capabilities... stressing that the Yemeni strikes are continuing, clearly effective and influential.

He added, "The American talk about the impact of the strikes on our military capabilities is just entertainment and to preserve some of their save face, the Americans, starting with the president and the army commanders, admit their inability to prevent Yemeni strikes on ships linked to Israel."

He stressed that the correct solution is to bring food and medicine into Gaza, and continuing strikes on Yemen will benefit nothing neither for America nor Britain nor for Israel, considering what the Americans and the British are doing as aggression and a violation of sovereignty and a danger that will come back to them.

The leader of the revolution continued, "Our military operations are part of a comprehensive movement by our people in the battle of the promised conquest and holy jihad, and these operations carried out by Yemen are to support the Palestinian people."

He also confirmed that the Yemeni military capabilities are developing at a rapid pace and in a distinct manner, and there is progress at the level of tactics, manufacturing, and development of military capabilities, and capabilities at the level of readiness and military equipment have become accumulated and developed, and according to the American press, the Americans began trying to benefit from the Yemeni tactics that they were surprised by in the strikes.

The leader of the revolution touched upon the issue of military mobilization, training and qualification, the outputs of which now number in the tens of thousands, adding to the hundreds of thousands... pointing out that the broad popular interaction and the millions of people attending the demonstrations are of very great importance.

He said, "With all types of solidarity and support that our people can participate in to support the Palestinian people, we do not hesitate to do any of them, as the popular position and the widespread presence in the demonstrations are taken into account by the enemy."

He stated that the American knows that the Yemeni army has a long and varied experience in which it faced all American tactics during nine years of aggression against Yemen, and those battles against the country were managed by American experts and advisors.

He added, "The Americans see a people who are natural fighters, armed, possess millions of weapons, and are morally and

psychologically ready. They take into consideration the will of our people, their stance, their military preparedness, and their serious approach, the launch of a ballistic or winged missile is seen as an expression of an entire people, and if the situation of our people were different than it is today, the American response would be different from what is happening."

The leader of the revolution continued, "The American is arrogant. He is not accustomed to having his ships and battleships hit with missiles, then he responds with simple raids that have no effect. He did not dare, while targeting his ships and battleships, to invade Yemen. Rather, he is looking for someone to fight on his behalf on the ground."

He pointed out that the American policy is an aggressive, arrogant imperialist policy and a true translation of tyranny and arrogance.. He said, "Instead of sending his army to the field to fight, he is looking for mercenaries and cheap tools whose blood has no value, and he will not dare to confront our people with a ground war and a direct military intervention because he sees a comprehensive movement ahead of him."

He added, "I assure our dear people that our position, since it was a comprehensive movement for our country, had this weight, importance and influence, and it is important that we continue our movement in the arenas and our broad interaction in full, and it is hoped that our people will continue their comprehensive movement without getting tired or tired as long as the Zionist aggression and siege on Gaza continues." We will continue our position in word and deed as part of a comprehensive action."

He determined the Yemeni path in the future if the humanitarian tragedy in Gaza worsens. He said, "Our path is escalation as long as the human tragedy in Gaza worsens and injustice and mass killing continue."

He stated that the American and British battle with Yemen is not for the sake of international navigation, but for the sake of Israeli navigation, pointing out that the British are playing a rude and aggressive role without any justification and are still carrying aggression towards the Yemeni people since their previous colonization in Aden.

He added, "If the Briton has any dreams left, he should realize that they are a fantasy and a false illusion that will have no possibility of being implemented in reality. If he has delusions of colonizing our country, then they are a psychological illness whose medicine and treatment is here."

He continued by saying, "If the last dose to the British ship that burned from night to night was insufficient, more doses can be directed to it." He stressed that there is no point in the American and British aggression against Yemen, and that the only feasible solution and way to end the problem is the entry of food and medicine to the people of Gaza and to stop aggression, siege and genocide against the population of the Gaza Strip.

Sayyed. Abdul-Malik Al-Houthi renewed his advice to America and Britain to have a positive stance towards the Hamas movement's response to the proposals and within the framework of the diplomatic efforts undertaken by both the countries of Qatar and Egypt... stressing that Hamas has provided a response to the proposals submitted to it and they are supposed to deal with it positively so that it will be a way out for them from the predicament they are in.

He stated that the continuation of crime and aggression against Gaza and the aggression against Yemen will not have any results in the interest of America, Britain and their criminal alliance.

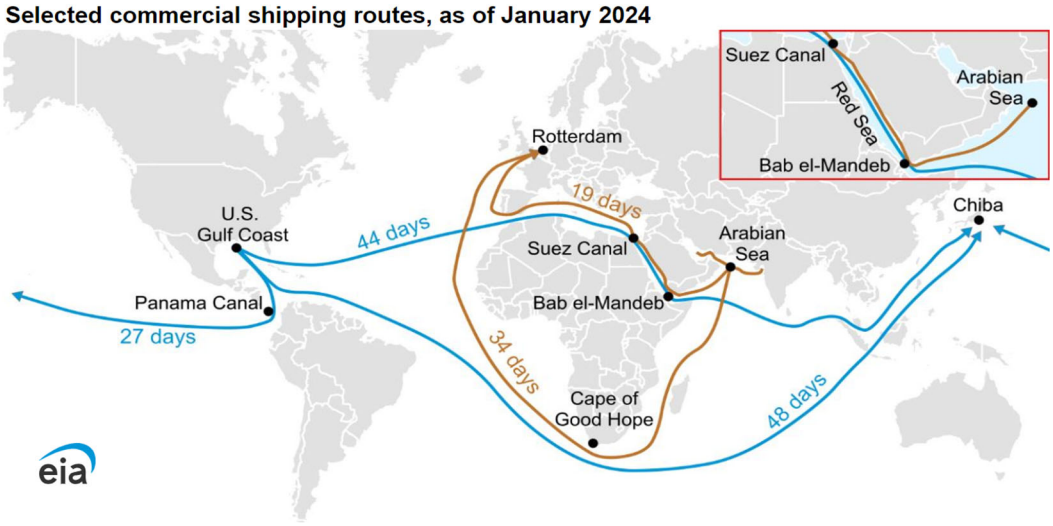
At the end of his speech, the Leader of the Revolution addressed the Palestinian people, saying, "To the Palestinian people and their mujahideen, we say with all sincerity and earnestness, you are not alone. God is with you, our people are with you, and all the free people in this world are with you, until victory is achieved in word and deed, and we are confident of victory and the outcome for the righteous."

M.M, E.M

https://www.eia.gov/todayinenergy/detail.php?id=61363

FEBRUARY 1, 2024

Red Sea attacks increase shipping times and freight rates



Data source: U.S. Energy Information Administration using calculations from Vortexa
Note: Voyage time is calculated for laden Suezmax tankers traveling at 14 knots without extended chokepoint delays.

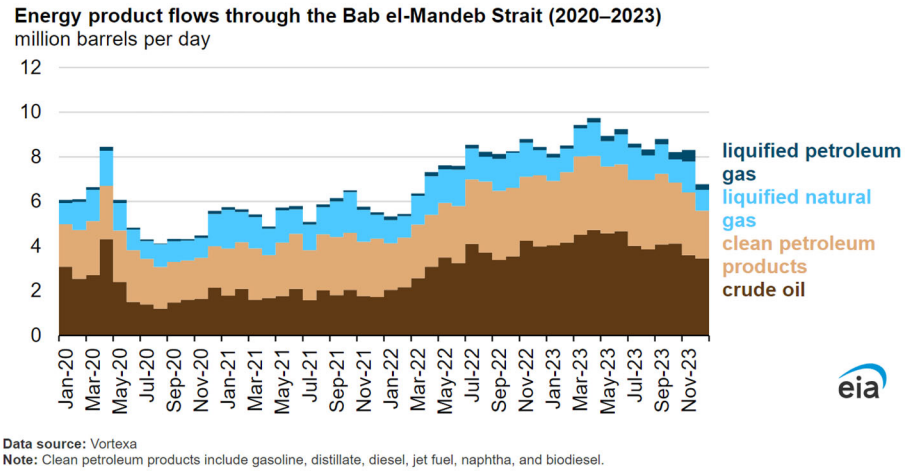
After Yemen-based Houthi militia attacks on commercial ships transiting the Red Sea started in November 2023, some vessels began opting to avoid the Bab el-Mandeb chokepoint—a narrow strait that borders the Yemeni coast and is the southern entrance to the Red Sea. Instead, they're choosing to take longer, more costly routes around the tip of Africa.

Ships transiting between Europe and Asia via the Suez Canal must pass through the Bab el-Mandeb Strait, which connects the Red Sea to the Gulf of Aden. The Bab el-Mandeb Strait is an important oil and natural gas chokepoint, accounting for 12% of seaborne oil trade and 8% of liquefied natural gas (LNG) trade in the first half of 2023. Major oil and natural gas companies that are avoiding the Red Sea include Equinor, which operates mostly natural gas carriers, and bp, which operates both oil and natural gas carriers. As of January 23, 2024, other major energy companies pausing Red Sea transits include Euronav, QatarEnergy, Torm, Shell, and Reliance.

Vessels that do not pass through the Suez Canal via the Bab el-Mandeb Strait and Red Sea can go around southern Africa via the Cape of Good Hope, but that route can add significant time to the voyage, depending on the ship's origin and its destination. A typical voyage from the Persian Gulf to the Amsterdam-Rotterdam-Antwerp petroleum trading hub (ARA) via the Suez Canal takes 19 days. If the ship takes the Cape of Good Hope route, it takes nearly 35 days to reach the ARA. For products leaving the U.S. Gulf Coast and heading toward Asia, vessels typically pass through the Panama Canal, which is nearly a month-long trip. Due to the ongoing drought and restrictions at the Panama Canal, more Very Large Gas Carriers (VLGCs), which primarily carry propane and butane, started going through the Suez Canal. Now some of these VLGCs are going around the Cape of Good Hope. A journey from the U.S. Gulf Coast to Chiba in Japan through the Suez Canal adds about 17 days and one through the Cape of Good Hope adds about 21 days, compared with going through the Panama Canal.

Longer routes put upward pressure on freight rates because of fuel costs and fewer available ships. A VLGC, for example, consumes about $30,000 to $35,000 worth of fuel per day if using high-sulfur bunker fuel at average 2023 prices. In addition to adding to fuel costs, a longer voyage requires more

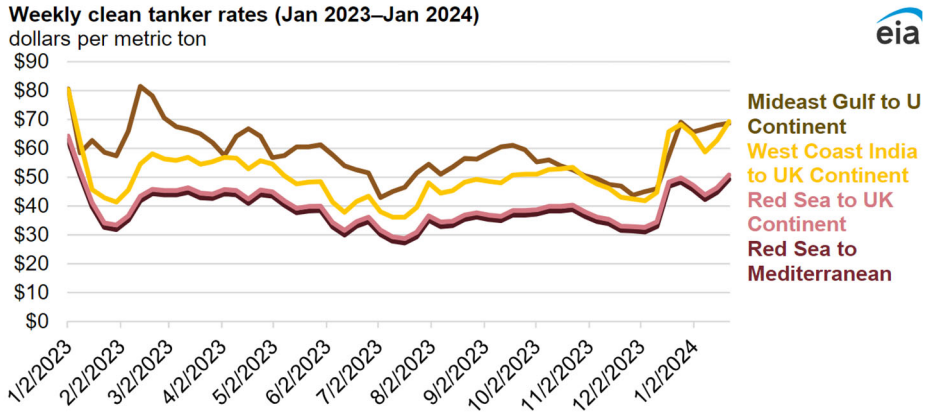
ships to maintain the same delivery schedule, and fewer available ships contribute to higher tanker rates and costs.



Data source: Vortexa
Note: Clean petroleum products include gasoline, distillate, diesel, jet fuel, naphtha, and biodiesel.

After the attacks began in November, flows of oil, refined products, and natural gas passing through the Bab el-Mandeb Strait slowed. About 18% less crude oil flowed through the Bab el-Mandeb in December than on average from January to November 2023. Most crude oil trade that goes through the Bab el-Mandeb Strait leaves Russia and Iraq en route to Asia and the Mediterranean, respectively. Clean petroleum product flows through the Bab el-Mandeb Strait were 30% lower in December than the rest of 2023. The majority of petroleum product trade leaves Saudi Arabia and India bound for Europe and leaves Russia bound for Asia.

In December, 24% less LNG and 1% more liquefied petroleum gas (LPG) were traded globally compared with the rest of 2023. Vessel restrictions at the Panama Canal due to a drought are causing more VLGCs leaving from the United States to head east toward either the Suez Canal or the Cape of Good Hope. LPG flows through the Bab el-Mandeb increased by 59% in 2023 compared with 2022 because water conservation efforts at the Panama Canal began in January 2023, causing delays and higher costs for VLGCs. The Combined Maritime Forces, a partnership representing 39 nations, warned ships to avoid the Bab el-Mandeb Strait on January 12, which will likely reduce passages through January 2024.



Data source: Argus Freight
Note: Rates are for long-range 1 tankers, except the Mideast Gulf to UK Continent rates, which are for medium-range tankers.

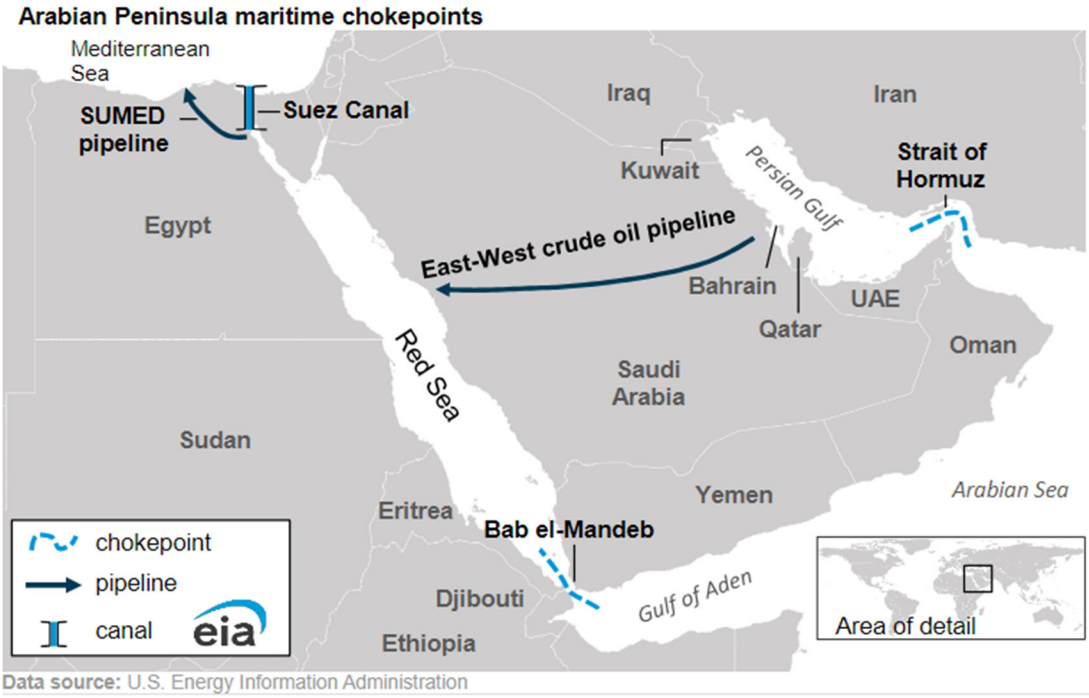
Clean petroleum product tanker rates for routes that cross the Bab el-Mandeb Strait and Suez Canal increased in December 2023 because of the ongoing conflict in the Red Sea. Because routes going through the Red Sea have elevated risk insurance premiums, these costs are passed on to tanker rates. For the four tanker rates that pass through the Red Sea, the average increase was 20% in December compared with November, according to Argus Freight. Long-range 1 tankers traveling from the western coast of India to the UK Continent increased the most (23%), and tankers traveling from the Mideast Gulf to the UK Continent increased the least (16%). Rates for dirty tankers, which mostly transport crude oil, have been relatively unchanged from the elevated prices in November.
Brent crude oil spot prices for the week ending November 17, 2023, the week before attacks on ships in the Red Sea began, were $82 per barrel (b). Since then, prices have traded in range, and they closed at $79/b as of January 18, 2024.

Principal contributor: Josh Eiermann

https://www.eia.gov/todayinenergy/detail.php?id=61025

DECEMBER 4, 2023

Red Sea chokepoints are critical for international oil and natural gas flows



Data source: U.S. Energy Information Administration

The Suez Canal, the SUMED pipeline, and the Bab el-Mandeb Strait are strategic routes for Persian Gulf oil and natural gas shipments to Europe and North America. Total oil shipments via these routes accounted for about 12% of total seaborne-traded oil in the first half of 2023, and liquefied natural gas (LNG) shipments accounted for about 8% of worldwide LNG trade.

The Suez Canal and SUMED pipeline are located in Egypt and connect the Red Sea with the Mediterranean Sea. The SUMED pipeline transports crude oil north through Egypt and has a capacity of 2.5 million barrels per day. The Bab el-Mandeb Strait is between the Horn of Africa and the Middle East, connecting the Red Sea to the Gulf of Aden and Arabian Sea. Most exports of petroleum and natural gas from the Persian Gulf to Europe and North America pass through multiple chokepoints, including the Suez Canal or the SUMED pipeline and both the Bab el-Mandeb and the Strait of Hormuz.

Volume of crude oil, condensate, and petroleum products transported through the Suez Canal, SUMED pipeline, and Bab el-Mandeb Strait (2018–1H23)
million barrels per day

	2018	2019	2020	2021	2022	1H23
Total oil flows through Suez Canal and SUMED pipeline	**6.4**	**6.2**	**5.3**	**5.1**	**7.2**	**9.2**
crude oil and condensate	3.4	3.1	2.6	2.2	3.6	4.9
petroleum products	3.0	3.1	2.6	2.9	3.6	4.3
LNG flows through Suez Canal (billion cubic feet per day)	**3.3**	**4.1**	**3.7**	**4.5**	**4.5**	**4.1**
Total oil flows through Bab el-Mandeb Strait	**6.1**	**5.9**	**5.0**	**4.9**	**7.1**	**8.8**
crude oil and condensate	**3.0**	**2.7**	**2.2**	**1.9**	**3.3**	**4.5**
petroleum products	**3.1**	**3.2**	**2.8**	**3.1**	**3.8**	**4.4**
LNG flows through Bab el-Mandeb Strait (billion cubic feet per day)	**3.1**	**3.9**	**3.7**	**4.5**	**4.5**	**4.1**

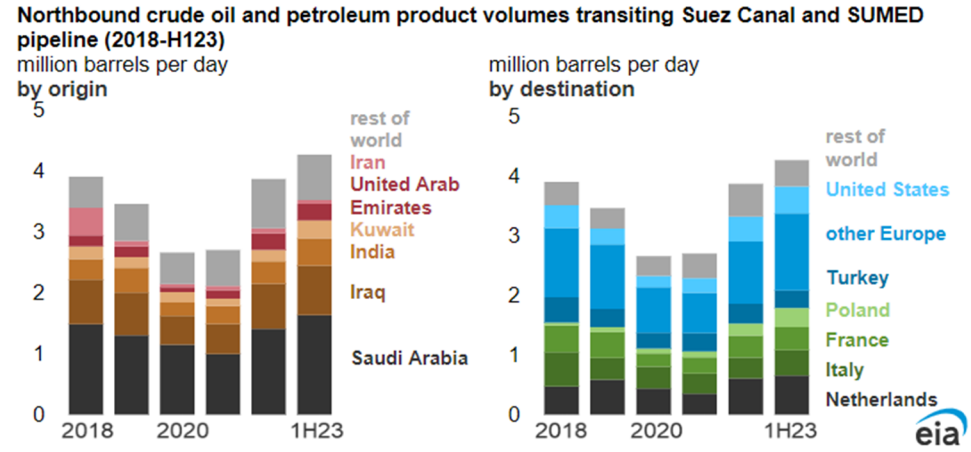
Data source: U.S. Energy Information Administration analysis based on Vortexa tanker tracking
Note: LNG=liquefied natural gas, 1H23=first half of 2023

Oil shipments

Northbound oil flows toward Europe via the Suez Canal and SUMED pipeline fell between 2018 and 2020. Renewed U.S. sanctions on

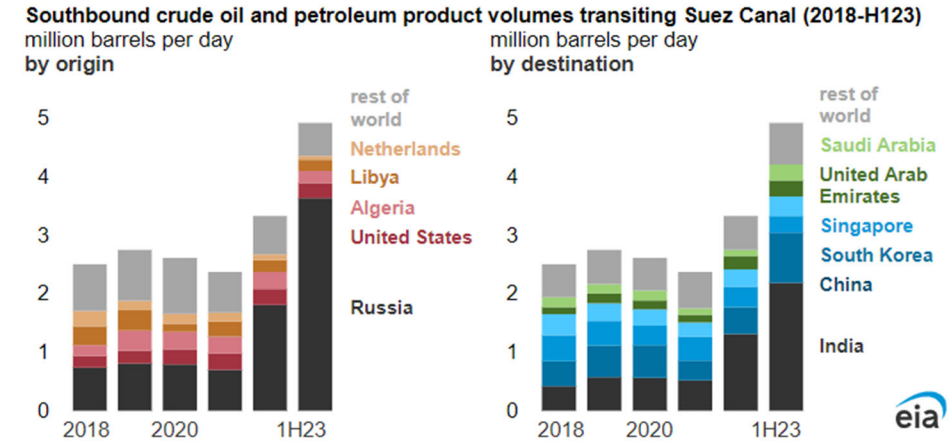
Iran reduced all exports from Iran, including those through the Suez Canal. In addition, less crude oil and oil products from Middle East producers moved through the Suez Canal because Europe imported less oil from the Middle East and more from the United States. The COVID-19 pandemic further reduced flows through the Suez Canal because of slowing global oil demand.

In the first half of 2023, northbound crude oil flowing through the Suez Canal and SUMED pipeline had increased by more than 60% from 2020, as demand in Europe and the United States rose from pandemic-induced lows. Also, Western sanctions on Russia's oil beginning in early 2022 shifted global trade patterns, leading Europe to import more oil from the Middle East via the Suez Canal and SUMED pipeline and less from Russia.



Data source: U.S. Energy Information Administration analysis based on Vortexa tanker tracking
Note: 1H23=first half of 2023.

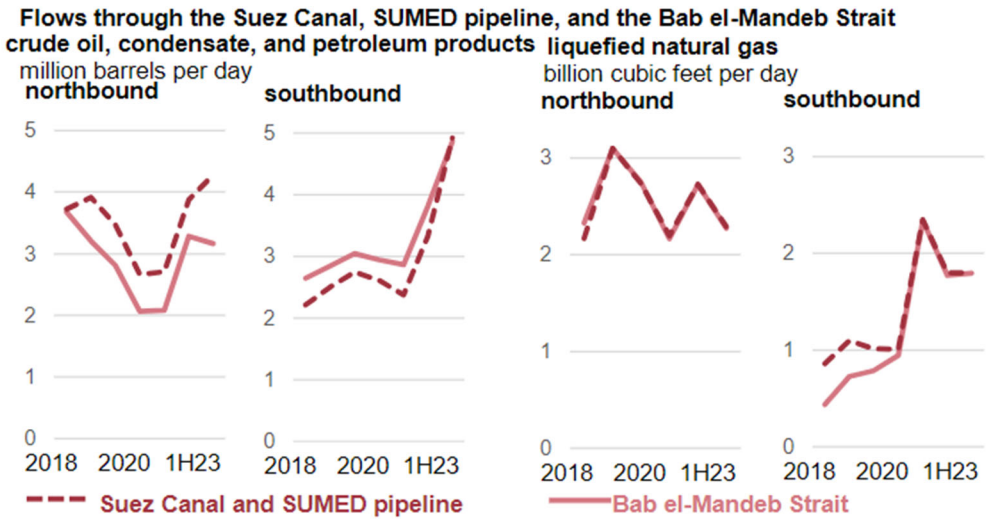
Southbound shipments through the Suez Canal rose significantly between 2021 and 2023, largely because of Western sanctions on Russia's oil exports. Oil exports from Russia accounted for 74% of Suez southbound oil traffic in the first half of 2023, up from 30% in 2021. Most of those export volumes were destined for India and China, which imported mostly crude oil from Russia. The Middle East, primarily Saudi Arabia and the United Arab Emirates, increased imports of refined oil products from Russia in 2022 and the first half of 2023 in order to generate electric power or to store or re-export.



Data source: U.S. Energy Information Administration analysis based on Vortexa tanker tracking

LNG shipments

LNG flows through the Suez Canal in both directions rose to a combined peak in 2021 and 2022 of 4.5 billion cubic feet per day (Bcf/d) before total flows declined in the first half of 2023 to 4.1 Bcf/d. Southbound LNG flows more than doubled from 2020 to 2021, mainly driven by growing exports from the United States and Egypt heading to Asia. In 2022 and the first half of 2023, southbound LNG volumes via the Suez Canal declined as U.S. and Egyptian LNG exports both favored European destinations over Asian markets, supplanting some of the natural gas exports that Russia historically sent to Europe. Most of the variation in northbound volumes reflects changes in Qatar's exports to Europe (via the Suez Canal) compared with Asia. Qatar also sent more LNG to Europe in 2022 to replace some volumes from Russia, increasing northbound flows.



Data source: U.S. Energy Information

Although oil flow trends through the Bab al-Mandeb Strait are similar to those of the Suez Canal, more oil exits the Red Sea (northbound via the Suez Canal and southbound via the Bab el-Mandeb Strait) than enters the Red Sea through these chokepoints. Saudi Arabia transports some crude oil from the Persian Gulf via pipeline to the Red Sea for export mostly to Europe. LNG flows through the Bab el-Mandeb Strait have matched those in the Suez Canal over the last few years because the few LNG import terminals in the Red Sea have been used less.

Principal contributors: Candace Dunn, Justine Barden

https://www.submarinecablemap.com/

Submarine Cable Map

The Submarine Cable Map is a free and regularly updated resource from TeleGeography.

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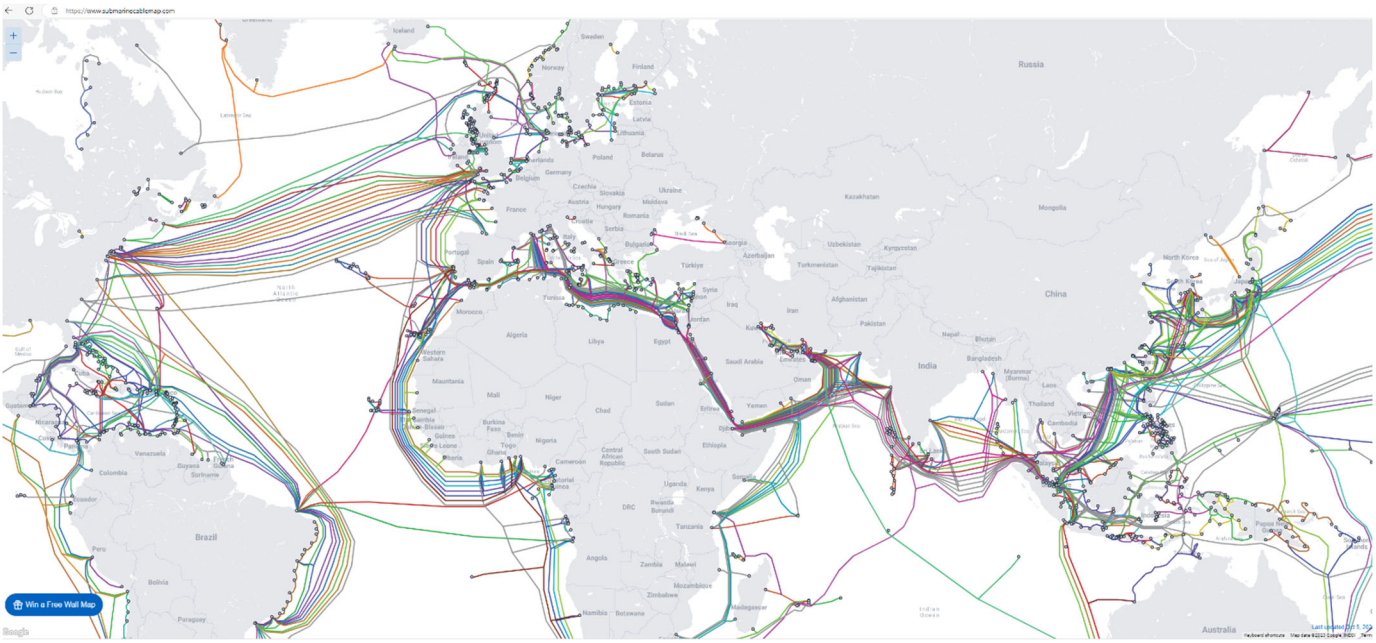

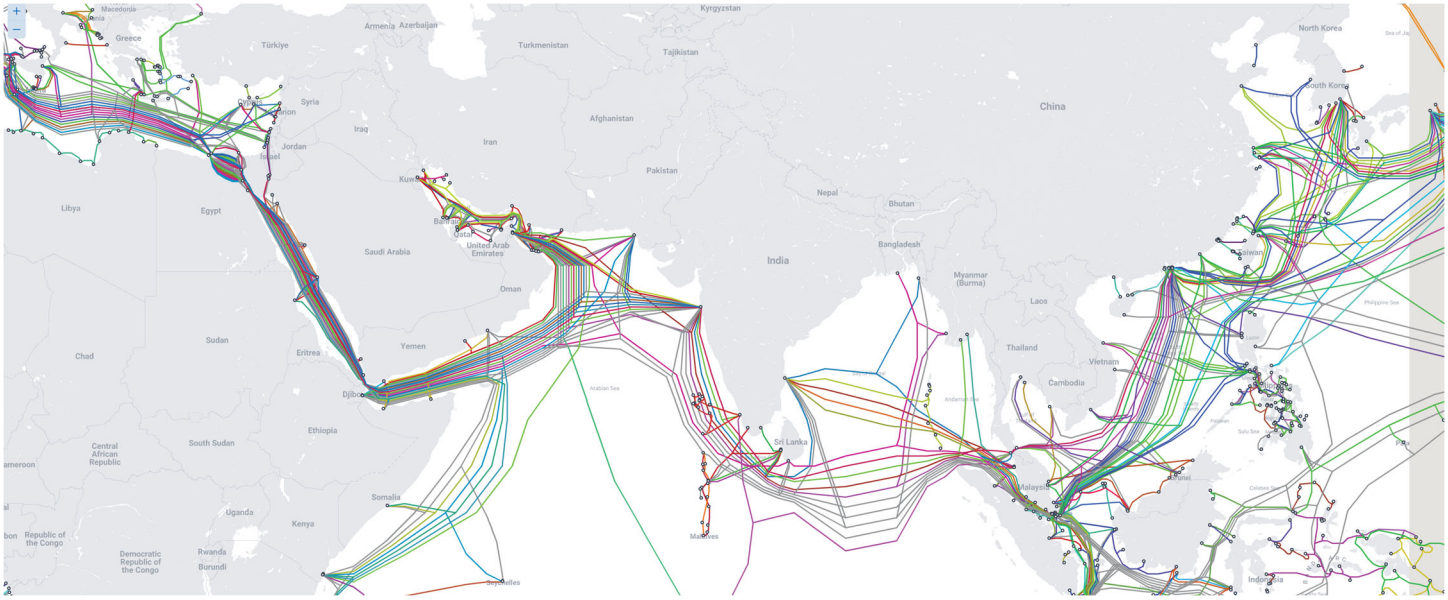

Map included with attributions in SAF Group Energy Tidbits memo https://safgroup.ca/news-insights/

https://www.globaltimes.cn/page/202402/1306860.shtml

Chinese stocks rise for a second consecutive day, with turnover exceeding 1 trillion yuan Wednesday

By Global Times Published: Feb 07, 2024 05:17 PM

Chinese stocks rallied for a second consecutive day on Wednesday, with the benchmark Shanghai Composite Index rising 1.44 percent to close at 2,829.70 points. Turnover in Shanghai and Shenzhen bourses exceeded 1 trillion yuan ($139 billion) on Wednesday, the first time since November 21, 2023.

Observers said that the rising indexes reflects investors' recovering confidence combined with a stabilizing market, amid top securities regulator's all-out effort to shore up the equities, including pledges from the "national team" to ramp up investment in the A-shares, which staged their biggest rally in five years on Tuesday.

The Shenzhen Component Index soared 2.93 percent on Wednesday, while the ChiNext Index, China's Nasdaq-style board consisting of largely technology enterprises, jumped 2.37 percent, rising for the third day in a row. Market gains were led by stocks of rare earth, superconductivity, large fund holdings as well as state-owned enterprises.

The net inflow of "northbound capital," or overseas money flowing into Chinese mainland's A-share market through stock connect programs, reached 1.684 billion on Wednesday, recording net purchase for seven consecutive days.

The China Securities Regulatory Commission (CSRC) in recent days issued a number of policy statements aiming to address various aspects of the securities market and crack down on illicit conduct. The watchdog vowed on Tuesday that it will, in accordance with the law, suspend securities companies' new business involving share lending for short selling.

On the same day, it also held two symposiums themed on elevating the investment value of listed companies, as well as mergers and acquisitions of listed companies, respectively.

The commission has reportedly also organized visits from late January to key listed companies across the country, as part of the measures to step up supervision and improve valuation of listed companies.

Relevant authorities in Shenzhen reportedly visited thee listed firms including logistics service provider SF Express, medical firm Mindray and property developer Vanke from Tuesday to Wednesday, and they vowed to boost the high-quality development of listed companies to elevate market confidence, maintain the stability of capital market and the high-quality development of the economy, Shanghai Securities News reported.

On Tuesday, state-owned Central Huijin Investment, a subsidy of China's sovereign wealth fund China Investment Corporation, announced plans to increase holdings in major Exchange-Traded Funds (ETFs), a move aimed at bolstering the stability and healthy operation of the A-share market.

On Wednesday, high-volume purchases were noticed in four major ETFs tracking CSI 300. Their trading volume totaled 38.23 billion yuan, up 25.2 billion yuan from Tuesday.

In another development, the Communist Party of China (CPC) Central Committee has made a decision to appoint Wu Qing as secretary of the Party committee of the China Securities Regulatory Commission (CSRC), replacing Yi Huiman.

Meanwhile, the State Council made a decision to appoint Wu as chairman of the CSRC, replacing Yi.

Global Times

https://www.globaltimes.cn/page/202401/1306103.shtml

China braces for Spring Festival travel rush with record 9 billion passenger trips expected

By Xiong Xinyi and Tu Lei
Published: Jan 25, 2024 10:34 PM Updated: Jan 25, 2024 11:38 PM

The chunyun or Spring Festival travel rush for 2024 - the world's largest annual human migration - officially starts on Friday, and is expected to set a new record of 9 billion passenger trips during the 40-day travel peak. From jam-packed transportation hubs to the hustle and bustle seen in markets nationwide, the anticipated booming Chinese New Year holidays are poised to continue the country's steady recovery while ushering in a lively 2024.

At the Beijing Capital International Airport on Thursday, crowds of tourists were seen in the departure hall, children and parents were holding hands waiting for checked luggage at the counter, and Year of the Dragon stickers were also pasted on glass doors, adding to the coming Chinese Lunar New Year atmosphere.

The airport will see 7.2 million passenger trips during chunyun, a growth of more than 60 percent from the same period of 2023, the airport said on Thursday, adding that overseas passenger flow will reach 1.41 million passenger trips following the implementation of visa reciprocity policies between China and many countries.

The scene witnessed by the Global Times at the airport is just a snapshot illustrating the brisk personnel flow nationwide at one of the busiest times of the year in China. Observers expected the travel rush to boost consumption for the upcoming holidays, which will inject fresh vitality and bolster the country's economic progress in 2024.

Flourishing consumption

A retired white-collar worker surnamed Yin from Southwest China's Chongqing Municipality recently completed a self-driving road trip in South China's Hainan Province with her family. Yin told the Global Times on Thursday that she had already experienced a tourism boom with crowds of visitors and packed restaurants even before the holidays officially kicked off, adding that the well-constructed roads and convenient infrastructure facilities have elevated the traveling experience.

Propelled by the record-high personnel flow and China's steady economic recovery, both domestic and international tourism is set to become major driving forces spurring consumption.

China and Singapore on Thursday agreed on mutual visa exemption which will officially come into effect on February 9, 2024 - the eve of the Chinese New Year, as ordinary passport holders from both sides will be able to enter each other's countries without visa requirements for activities including tourism for 30 days.

Searches for hotels in Singapore on Chinese online travel platform Qunar.com surged four times after the two countries announced the decision, the company told the Global Times on Thursday. Meanwhile, Tongcheng Travel told the Global Times that Singapore-related searches rose by more than 340 percent on the platform within an hour after the visa-free policy announcement.

Domestic tourism is also thriving, represented by the sparkling ice-snow trips in popular cities such as Harbin in Northeast China's Heilongjiang Province. Bookings for products related to winter tourism on Trip.com for the holidays increased by more than 10 times year-on-year, the company told the Global Times in a recent statement.

The record-high chunyun reflected China's rapid development in transportation construction amid its advancing economic recovery, Jiang Yiyi, deputy head of the School of Leisure Sports and Tourism at Beijing Sport University, told the Global Times on Thursday.

Jiang emphasized that activities related to the cultural sector such as visiting museums will also play a significant role in promoting consumption.

In addition, consumption themed around the Chinese New Year's holidays has also been jacked up. Restaurants have been busy taking bookings for traditional Spring Festival reunion dinners, while e-commerce

platforms saw sales surging as consumers stocked up on holiday necessities, according to media reports.

Among the 9 billion passenger trips, around 1.8 billion will be made through rail, road, aviation and water transportation, while the remaining 7.2 billion trips are expected to be self-driving trips, according to recent data released by the Ministry of Transport.

China's railway system already saw a pre-Spring Festival ticket sales peak with 61.08 million tickets for chunyun sold since January 12, a year-on-year increase of 159 percent, China State Railway Group Co said in a statement sent to the Global Times on Wednesday.

Amid the expected record-breaking chunyun, domestic carriers have ramped up efforts to ensure transportation capacity.

Air China said on Tuesday that it plans to arrange 67,691 flights during the 40-day travel peak with an average of 1,693 flights per day, an increase of 32 percent compared with 2019 and 40.6 percent compared with 2023. Meanwhile, four homegrown C919 aircraft from China Eastern Airlines will also be serving the travel rush. The four planes will fly routes between Beijing and Shanghai, and Shanghai and Chengdu in Southwest China's Sichuan Province, the first time the aircraft is being used for the Spring Festival travel.

Vital momentum to last in 2024

Consumption played an indispensable role in bolstering China's economic growth in 2023, with the final consumption contributing to 82.5 percent of GDP growth, official data showed. Experts noted that the momentum will extend into 2024 with optimistic outlooks, while the consumption boom for the Chinese New Year holidays will become an essential engine driving economic growth in the first quarter.

The recently released GDP data from multiple Chinese provinces and cities have showcased the uplifting achievements realized nationwide, while last year's considerable economic growth rate will lay a solid foundation for this year's economic expectations, Cong Yi, a professor at the Tianjin School of Administration, told the Global Times on Thursday.

Shanghai's GDP expanded by 5 percent year-on-year in 2023, while Guangdong's GDP passed 13 trillion yuan ($1.83 trillion) for the first time, according to the "report cards" released by the local governments.

Meanwhile, Cong highlighted the culture-infused tourism boom as an example of the country's continuous upgrading in consumption structure, further adding to optimistic expectations for the coming year.

In 2023, the consumption sector, especially the services industry, contributed primarily to the GDP growth rather than the primary and secondary industries, Cao Heping, a professor of economics at Peking University, told the Global Times on Thursday.

Data from the National Bureau of Statistics showed that the growth of retail sales of services increased by 20 percent year-on-year last year, while the catering sector achieved a revenue exceeding 5 trillion yuan for the first time.

Cao noted that developing consumption-related investment along with relevant industries will be a major focal point for China's economic transformation.

Cao said that holiday consumption is set to hugely boost GDP growth for the first quarter of 2024. He added that if the GDP growth rate for the first quarter exceeds 5.2 percent and can get close to 5.5 percent, then the growth rate for 2024 is very like to approach 5.5 percent, higher than the estimate of 4.6 percent projected by some foreign institutions.

The world's second-largest economy posted a GDP growth of 5.2 percent for 2023, successfully meeting the previously set annual target and aligning with market forecasts.

https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/120423-cop28-saudi-aramco-ceo-says-fossil-fuel-investment-more-viable-than-renewables-to-meet-demand

- 04 Dec 2023 | 17:18 UTC

COP28: Saudi Aramco CEO says fossil fuel investment more viable than renewables to meet demand

HIGHLIGHTS

Fossil fuel investment down 40% from 2014 levels: Nasser

Q4 2023 oil demand set to be higher than Q4 2019

Renewables, hydrogen not viable in the short term, he says

- Author Jennifer Gnana
-

Saudi Aramco's CEO Amin Nasser on Dec. 4 called for more investment in oil compared to renewables to meet energy demand growth.

"If you look at this quarter, there is 103 million b/d of demand, compared to 2019 where we were running around 100 million b/d," Nasser told the Saudi Green Initiative, a side event at COP28 UN climate summit in Dubai, where fossil fuel companies have called for a seat at the table to discuss their contributions to the future energy mix.

"We anticipate there is going to be further growth in demand going forward and as such you need that investment to meet the call on our production and at the same time manage the decline in existing fields," he added.

Nasser's call for greater investment in fossil fuels is at odds with climate activists and observers at the United Nations Framework Convention on Climate Change event, who have questioned the sensibility of fossil fuel producers such as the UAE hosting climate talks.

Saudi Aramco has exclusive rights to produce crude oil within Saudi Arabia, pumping some 9-11% of global supply, depending on the kingdom's production quota under the OPEC+ accord. At the moment, Saudi Arabia has agreed to hold output at 9 million b/d, as the OPEC+ alliance seeks to bolster flagging prices, leaving some 3 million b/d of capacity offline.

According to S&P Global Commodity Insights, global oil demand is set to reach pre-pandemic levels for the first time in 2023 and hit an all-time high of 105 million b/d in 2025.

S&P Global forecasts global oil demand to be "solid" in the fourth quarter of this year with a 2.4 million b/d increase on the year. Mild-to-average global recession is set to slow growth to 1.2 million b/d for 2024, according to estimates.

Expensive hydrogen

Saudi Aramco's chief called for more investment in fossil fuels while dismissing the short-term viability of renewables due to what he suggested were higher costs and low demand for clean energy.

"I think we need more investment," Nasser said citing a 40% decline in investment in fossil fuels from 2014 levels.

"If you look at existing fields today and the level of maturity that we're seeing in conventional and unconventional resources, you're looking at a 7% decline," he added.

Saudi Aramco is currently boosting domestic oil production capacity to 13 million b/d by 2027 from around 12 million b/d presently. The company is also committed to reaching net-zero emissions by 2050, with projects underway to capture and store carbon dioxide from upstream processes, as well as investments in renewables and hydrogen.

It has said its capital expenditures for 2023 will be between $48 billion to $52 billion, with Q3 spending at $11 billion, an increase over the $9 billion spent in the same quarter of 2022.

"We're investing in renewables, hydrogen, e-fuels and all of that, but still you need a lot more investment and it needs to pass a certain threshold to make it commercial," Nasser said.

"Hydrogen now is waiting for demand. Demand is still not there for obvious reasons: it is expensive. At the same time, we need to continue to invest in oil and gas because there is more demand," he added.

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02/09/2024 06:49:17 [BN] Bloomberg News

OIL DEMAND MONITOR: China's Supply Chain Signals Subdued Usage

- Refiners face weak margins, may undertake more maintenance
- Asia still seen as demand driver; analysts see tighter market

By John Deane

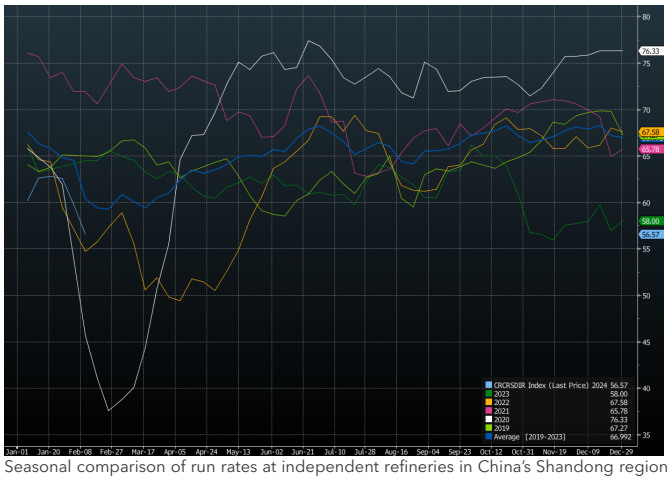
(Bloomberg) -- China is showing tell-tale signs of faltering demand for fuels as the biggest crude importer struggles to bolster its stuttering economy.

Imports of feedstocks including crude and fuel oil into Shandong and Tianjin dropped by more than a fifth month-on-month in January, according to Mysteel OilChem. Private refiners -- the main takers of feedstocks from the ports -- face wilting margins, with run rates at Shandong's plants sliding in recent weeks. State refiners plan almost a fifth more maintenance this year than last, OilChem said in a separate report.

Meanwhile, tanker tracking data for January showed big declines in oil shipments to the Asian nation from a string of producing countries and regions, including West Africa, Saudi Arabia, Kuwait, Oman and Brazil.

Oil traders are watching closely as Beijing struggles to reinvigorate the world's second-largest economy, which is wrestling with economic ills including a housing sector slump and deflationary forces that have seen prices fall for three consecutive quarters. The indications of demand softness come despite the travel rush associated with the Lunar New Year holiday season. While the extra movement tends to lift gasoline consumption, emptying factories and building sites depresses demand for diesel to power trucks and machinery.

Read More: China Is Oversupplied With Commodities as Deflation Persists



Seasonal comparison of run rates at independent refineries in China's Shandong region

On the suppliers' side too, there are signs of concern about the trajectory for global demand. Late last month, Saudi Aramco abandoned a plan to boost its oil output capacity, a big reversal that immediately raised doubts about the kingdom's view on future consumption growth.

The OPEC+ alliance -- of which Saudi Arabia and Russia are the de facto leaders -- will decide in early March whether to extend existing output cuts into the second quarter. The group is collectively withholding roughly 2 million barrels of daily output to avert a glut and defend prices, and Riyadh has said the curbs "absolutely" can be prolonged. If OPEC and its partners want to maintain prices near $80 a barrel, they may have little choice but to persevere.

Still, looking beyond the near-term, there are brighter outlooks for the year as a whole. China's crude refining volumes may ultimately rise by almost 3% in 2024, with jet fuel demand adding as much as 15%, according to GL Consulting. There are positive signals from India too, where government figures showed oil consumption jumped more than 8% in January.

Read More: Global Oil Demand Growth to Hinge on India's Path, IEA Says

India and China will continue to drive demand gains in the near future, according to the US Energy Information Administration. In its monthly Short-Term Energy Outlook released on Tuesday, the EIA saw global consumption of liquid fuels rising by 1.4 million barrels a day in 2024 and 1.3 million in 2025, with the two Asian giants leading the way. By comparison, the EIA pegged growth in production at 0.6 million barrels a day in 2024, before surging by almost 1.9 million in 2025.

Global Estimates (m b/d)	2024	2024	2025	2025
Agency	Output	Demand	Output	Demand
EIA (February STEO)	102.3	102.42	104.17	103.71

See related story

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OPEC (January market report)	n/a	104.36	n/a	106.21
See related story				
IEA (January market report)	103.5	102.96	n/a	n/a
See related story				

On the wider economic front, the International Monetary Fund recently raised its forecast for global growth this year on better−than−expected expansion in the US and the prospect of fiscal stimulus in China. The global economy should grow 3.1% this year, up from 2.9% seen in October, the Washington−based institution said in its quarterly World Economic Outlook at the end of January.

Delivering their latest earnings reports, some of the biggest energy companies remained firmly upbeat about the prospects for oil consumption.

"Demand has been strong, we saw demand go up a couple of million barrels a day last year," Chevron Chief Executive Officer Mike Wirth said in an interview with Bloomberg Television. BP Chief Executive Officer Murray Auchincloss told analysts that demand continues to be " very strong," with little spare capacity beyond Saudi Arabia.

There is optimism about the outlook for demand from market analysts, too.

"The market is much tighter than current prices might imply," Standard Chartered's head of commodities research Paul Horsnell said in a note this week, as he flagged up the prospect for shrinking stockpiles. In another report, JPMorgan Chase & Co. head of global commodities research Natasha Kaneva said the bank's outlook "continues to project a tightening market with prices rising from here by another $10 by May," with data suggesting an improving global economy.

The Bloomberg oil demand monitor uses a range of high−frequency data to help identify emerging trends. Following are the latest indicators. The first table shows fuel demand, the second shows air travel globally and the third refinery activity.

Demand Measure	Location	%vs 2023	%vs 2022	% vs 2021	% vs 2020	% vs 2019	% m/m	Freq	Latest Date	Latest Value	Source
Gasoline product supplied	US	+4.5	−3.5	+12	−1.4	−2.9	+5.8	w	Feb. 2	8.81m b/d	EIA
Distillates product supplied	US	+1.5	−11	−11	−9.4	−18	+11	w	Feb. 2	3.82m b/d	EIA
Jet fuel product supplied	US	+4.1	+14	+27	−3.2	−13	+0.4	w	Feb. 2	1.6m b/d	EIA
Total oil products supplied	US	−1.5	−7.6	+0.2	−2.8	−7.3	+3.2	w	Feb. 2	20.23m b/d	EIA
Car use	UK	−1.1	+6.1	+55		−13	−9.4	m	Jan. 8	87	DfT
Heavy goods vehicle use	UK	−3	−3.9	+1		−2	−6.7	m	Jan. 8	98	DfT
All motor vehicle use index	UK	−1.1	+5.7	+46		−8	−8.9	m	Jan. 8	92	DfT
Gasoline (petrol) avg sales per filling station	UK	+0.9	+6.9	+71		−5.3	+16	m	Week to Jan. 28	6,808 liters/d	BEIS
Diesel avg sales per station	UK	−4.6	−6.3	+16		−18	+57	m	Week to Jan. 28	8,560 liters/d	BEIS
Total road fuels sales per station	UK	−2.2	−0.8	+35		−13	+36	m	Week to Jan. 28	15,369 liters/d	BEIS
Diesel sales	India	+3.5					−2.4	m	January	7.43m tons	PPAC
Gasoline sales	India	+9.7					+3.7	m	January	3.1m tons	PPAC
Jet fuel sales	India	+7.2					−0.6	m	January	716k tons	PPAC
LPG sales	India	+7.6					+2.7	m	January	2.7m tons	PPAC
Total oil products	India	+8.2					−0.1	m	January	20.04m tons	PPAC
Gasoline deliveries	Spain	+21					−7.1	m	January	512k m3	Exolum

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Diesel (and heating oil) deliveries	Spain	+10				−1.5	m	January	2,288k m3	Exolum
Jet fuel deliveries	Spain	+15				−7.8	m	January	484k m3	Exolum
Total oil products deliveries	Spain	+13				−3.4	m	January	3,285k m3	Exolum
Road fuel sales	France		−4.9			+1.3	m	December	3.91m m3	UFIP
Gasoline sales	France		+2.1				m	December	n/a	UFIP
Road diesel sales	France		−7.6				m	December	n/a	UFIP
Jet fuel sales	France		+9		−2.7	+6.2	m	December	647k m3	UFIP
All petroleum products sales	France		−4.7			+1.7	m	December	4.42m tons	UFIP
All vehicles traffic	Italy		unch.			−2	m	December	n/a	Anas
Heavy vehicle traffic	Italy		−3			−16	m	December	n/a	Anas
Gasoline sales	Italy		−2.2		+7.7	+0.6	m	December	658k tons	Energy Ministry
Transport diesel sales	Italy		−3.7		−3.7	−2.9	m	December	1.88m tons	Energy Ministry
Diesel/gasoil sales	Italy		−4.1		−4.9	−3.5	m	December	2.14m tons	Energy Ministry
LPG sales	Italy		−2.6		−8.7	+20	m	December	305k tons	Energy Ministry
Jet fuel sales	Italy		+22		+3.1	+7	m	December	366k tons	Energy Ministry
Total oil product sales	Italy		−1.3		−6.8	−2.8	m	December	4.14m tons	Energy Ministry
Gasoline consumption	Portugal		+3.3	+11 +30	+8.5	+3.2	m	December	96,904 tons	ENSE
Diesel consumption	Portugal		−2.2	unch. +11	−3.3	+2	m	December	405,904 tons	ENSE
Jet fuel consumption	Portugal		+16	+35 +155	+10	+4.5	m	December	130,935 tons	ENSE
% change in toll roads kms traveled	France		+1.1		−2.1		m	December	n/a	Mundys
% change in toll roads kms traveled	Italy		+3		+1.8		m	December	n/a	Mundys
% change in toll roads kms traveled	Spain		+4.6		−2.9		m	December	n/a	Mundys
% change in toll roads kms traveled	Brazil		+11		+8.2		m	December	n/a	Mundys
% change in toll roads kms traveled	Chile		−1.7		+5.5		m	December	n/a	Mundys
% change in toll roads kms traveled	Mexico		−0.1		+13		m	December	n/a	Mundys

Notes: Click here for a PDF with more information on sources, methods. The frequency column shows w for data updated weekly, 2/m for twice a month and m for monthly.

Note: Some month−on−month comparisons were likely affected by Christmas and New Year holidays.

Congestion:

- Road Traffic Indicators: China's Congestion Falls Again
- Oil Price Indicators Weekly: Run Cuts, Macro Dissonance
- NOTE: Due to ongoing issues with data feeds, this issue omits the table showing BNEF calculations of road congestion changes based on TomTom data. We are looking into potential alternative approaches.

Air Travel:

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Measure	Location	vs 2023	vs 2022	vs 2021	vs 2020	vs 2019	m/m	w/w	Freq.	Latest Date	Latest Value	Source
					changes shown as %							
All flights	Worldwide	+7.8	+21	+44	+12	+20	+8.2	−5.3	d	Feb. 5	193,224	Flightradar24
Commercial flights	Worldwide	+12	+44	+95	+13	+12	+2.9	+0.1	d	Feb. 5	117,939	Flightradar24
Air traffic (flights)	Europe					−10	−1.4	+3.9	d	Feb. 5	24,529	Eurocontrol
Airline passenger throughput (7−day avg)	US	+6	+39	+186	+3	+11	−17	−1	w	Feb. 4	1.99m	TSA
Air passenger traffic per month	China		+171	+87	+20	−4.2	+3.3		m	December	50.6m	CAAC
Heathrow airport passengers	UK		+13	+115	+486	+0.1	+9.3		m	December	6.7m	Heathrow
Rome % change in passengers carried	Italy		+28			+0.3			m	December	n/a	Mundys

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

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

Refineries:

Measure	Location	vs 2023	vs 2022	vs 2021	vs 2019	m/m chg	Latest as of Date	Latest Value	Source
				Changes are in ppt unless noted					
Crude intake	US	−3.7	−4.7%	+0.3%	−10.8	−10.2%	Feb. 2	14.84m b/d	EIA
Utilization	US	−5.5	−5.8	−0.6	−8.3	−10.5	Feb. 2	82.4%	EIA
Utilization	US Gulf	−11.1	−11.8	−8.2	−13.8	−17.4	Feb. 2	77.1%	EIA
Utilization	US East	−3.9	+1.7	+18.8	+12.3	−1.3	Feb. 2	86.9%	EIA
Utilization	US Midwest	+2.5	+1.3	+9.7	+2.2	−0.1	Feb. 2	95.1%	EIA
Utilization (indep. refs)	Shandong, China	−4.4	+0.3	−12	−5.3	−0.4	Feb. 2	59.82%	Oilchem

Note: US refinery data is weekly. Changes are shown in percentages for the row on crude intake, while refinery utilization changes are shown in percentage points.

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- Oil Demand Better−Than−Expected on China Holiday, Weather: JPM
- Aviation Indicators Weekly: Asia to Drive Modest Uptick
- Asia Again Leads Modest Weekly Rise in Jet Fuel Use: BNEF Chart
- China's Refilling of Oil Stockpiles to Be Curbed by Tepid Demand

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- China Dec. Crude Oil Imports +0.6% Y/y, LNG +28.4%: Details
- Oil Demand Better-Than-Expected on China Holiday, Weather: JPM
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- Global Oil Demand Growth Rates Have Peaked: Bank of America
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- Puny Chinese Oil Refining Margins Signal Weak Demand for Crude
- Oil Demand Hit by 'Unseasonably Warm Weather': JPMorgan
- Oil Demand Defies Bearish Market Narrative: Standard Chartered

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DER SPIEGEL

https://www.spiegel.de/wirtschaft/soziales/kraftwerkstrategie-regierung-will-stromversorgung-in-zwei-schritten-umbauen-a-fa528a18-388e-4404-b136-db6085edc639

Power plant strategyGovernment wants to restructure electricity supply in two steps

After months of negotiations, the German government has agreed on a plan to restructure Germany's power plant fleet. The solution is now to be a two-stage approach.

By **Stefan Schultz**

05.02.2024, 10.39 a.m.

The German government has agreed on a compromise for the construction of new power plants. This was announced by the responsible Federal Ministry of Economics. The strategy, which, according to SPIEGEL information, had already emerged at the end of last week, comprises two stages.

- **In the first step...**

... ten gigawatts of hydrogen-capable gas-fired power plants are to be built. Construction is to take place as soon as possible, and the builders are to receive funding for this. According to SPIEGEL information, the government wants to promote both construction investments (Capex) and the subsequent operation of the plants (Opex).

The new power plants to be built are to be completely converted to hydrogen between 2035 and 2040 and will be built at locations that secure the power supply in the best possible way and put as little strain on the grids as possible, it added.

The exact timetable for the switch to hydrogen is to be decided by 2032, when there is more clarity about the quantities of hydrogen available on the global market. A fully CO_2free electricity sector by 2035, as the Greens are aiming for, is thus hardly achievable.

The subsidised construction of the new gas-fired power plants still has to be coordinated with the Brussels Competition Commission. The Ministry of Economic Affairs had already agreed in principle on such funding in the summer of 2023. However, the final approval from Brussels is still pending.

In particular, the relatively late planned switch to hydrogen from 2035 is unlikely to meet with enthusiasm in the EU Commission. The traffic light compromise also leaves open whether the subsidised gas-fired power plants should be operated exclusively with hydrogen from renewable energies – or whether hydrogen from natural gas or nuclear power is also permitted.

- **In the second step...**

... By 2028 at the latest, a so-called capacity market is to be launched, in which power plants will provide dedicated on-call service for low-power hours. The aim is not to charge by kilowatt hour, but also to remunerate for a service provided – even if it is not needed at all.

The design of such a secondary market, including the approval procedure in Brussels, is considered to be extremely complex and time-consuming. The traffic light therefore wants to agree on the shape of the capacity market by summer 2024 at the latest, it said.

A secure, sustainable energy supply, including a rapid coal phase-out, depends on the conversion of Germany's power plant fleet. By the end of the decade, the German government wants 80 percent of electricity to come from renewable energy sources.

Since the electricity production of solar and wind farms fluctuates, there is a need for some power plants that can flexibly produce electricity at any time. The government wants to replace the climate-damaging coal-fired power plants that have been doing this so far with hydrogen-capable gas-fired power plants. A good 28 gigawatts of secured, always available power have to be compensated. The traffic light coalition had agreed to "ideally" bring forward the coal phase-out to 2030. The Greens, in particular, are pushing for this date.

The construction of new gas-fired power plants has been slow for years. This is because it is not profitable to finance it by companies alone. After all, the plants are only supposed to step in if the supply from renewable energies cannot completely cover the country's electricity demand – which severely limits the potential income of the operators from the sale of electricity. The Ministry of Economic Affairs therefore drew up a plan to promote the construction of new power plants.

Expedited procedures

The negotiations on the power plant strategy at the top of the coalition had been going on for months and were extremely tough. Instead of a capacity market, the Ministry of Economic Affairs had originally proposed much higher quantities of power plants to be put out to tender.

By the end of last week at the latest, a two-step solution had become apparent – because the FDP "imperatively" insisted on a capacity market.

The coalition had argued above all about the total costs of the so-called power plant strategy. The Ministry of Economic Affairs had initially estimated this at up to 60 billion euros. Now it has been said from coalition circles that the costs for the next 20 years still amount to around 16 billion euros.

The construction of the tendered power plants is expected to begin quickly. The planning and approval procedures are to be substantially accelerated, it said.

https://orsted.com/en/company-announcement-list/2024/02/capital-markets-update--oersted-presents-updated-b-82051

Capital Markets Update: Ørsted presents updated business plan following comprehensive portfolio review – Thomas Thune Andersen steps down as Chair at upcoming AGM

07.02.2024 00:00

Today, Ørsted's Board of Directors has approved a business plan with the ambition of 35-38 GW of installed capacity by 2030 and updated financial targets, following the completion of a comprehensive portfolio review. The updated ambition and financial targets that Ørsted announces today confirm that Ørsted, despite the challenges in 2023, remains a global leader within offshore wind with the ambition of delivering attractive growth and returns towards 2030.

Despite strong underlying business progress, 2023 marked a year with substantial challenges for Ørsted as its US offshore projects caused significant impairments and additional costs for terminating contracts, leading to a negative impact on Ørsted's credit metric (FFO/adjusted net debt) projections.

In response to this, Ørsted is implementing measures to ensure a robust balance sheet, supporting long-term growth and capital structure resilience towards 2030. Based on the learnings from the US offshore projects, Ørsted has also concluded an extensive review of its project portfolio and has taken actions to reduce risks.

Mads Nipper, Group President and CEO of Ørsted, says:
"We have prioritised projects within our portfolio and are implementing significant changes in our business, including revising our operating model to reduce risks. We now present a robust business plan, and with an uncompromising focus on value creation, we plan to more than double our current installed capacity of renewable energy by 2030."

Review of risk and portfolio
Ørsted's fundamental strategic choices on technologies and regions are unchanged, and Ørsted still aims to be the world leader in Offshore and a regional player in Onshore and P2X in Europe and the US. However, Ørsted has revisited its portfolio to prioritise growth options with the highest potential for value creation and lower risks.

Ørsted is implementing the learnings from its US offshore projects into its operating model to reduce risks in the development and execution of projects, with a particular focus on contingency planning, monitoring of suppliers, inflation protection, scrutiny of pre-FID commitments, greater flexibility on project timelines and commissioning dates, and project governance and reviews.

As previously communicated, Ørsted has ceased the development of the offshore wind projects Ocean Wind 1 and Ocean Wind 2 in the form that they were awarded by the New Jersey Board of Public Utilities, has decided to reposition the offshore wind project Skipjack Wind in the US, and will primarily focus its US offshore portfolio towards the North-East Atlantic. To reduce development costs and create further strategic market focus, Ørsted is exiting several offshore markets (including

Norway, Spain, and Portugal), deprioritising development activities in Japan, and planning for a leaner development within floating offshore wind and P2X.

Project cancellations and phasing of capital expenditure across the portfolio will result in approx. DKK 35 billion of capital expenditure relief in 2024-2026 compared to the numbers presented at the Capital Markets Day in June 2023.

As a result of the review, Ørsted now believes that it has a more robust portfolio of projects, and it has refocused its offshore strategy for the US. The portfolio changes will result in approx. DKK 3 billion of development expenditure reductions in 2024-2026 compared to the numbers presented at the Capital Markets Day in June 2023.

Ensuring a robust balance sheet
Besides reducing capital expenditure and project development costs, Ørsted pauses dividends for the financial years 2023-2025.

Furthermore, Ørsted will accelerate its divestment programme. Farm-downs and divestments are expected to contribute with proceeds of approx. DKK 115 billion towards 2030, of which approx. DKK 70-80 billion are expected in 2024-2026.

In addition, Ørsted will look at measures to become a leaner and more efficient organisation and has set a target to reduce its fixed costs by DKK 1 billion by 2026 compared to 2023, on a like-for-like basis. This will include a reduction of 600-800 positions globally. Not all reductions will result in redundancies, but there will be redundancies throughout 2024, and today, Ørsted is announcing that approx. 250 people globally will be made redundant and leave Ørsted within the coming months.

Mads Nipper, Group President and CEO of Ørsted, says:
“In order to improve our competitiveness, ensure value creation, and ensure our ability to attract capital to the renewable build-out, we will make Ørsted a leaner and more efficient company. This will include reducing the number of positions across the company. We are committed to carrying this through in a fair and respectful manner.”

Updated strategic ambition, financial targets, and financial policies
As a result of the business plan approved by Ørsted’s Board of Directors, Ørsted has updated its ambition for installed renewable capacity from approx. 50 GW to 35-38 GW by 2030, which will be more than double its current installed capacity of 15.7 GW. By 2026, Ørsted expects to have an installed capacity of approx. 23 GW.

Ørsted has also updated its financial targets for 2024-2030 and its financial policies to reflect the new strategic ambition for installed capacity by 2030 (targets announced in June 2023 in parentheses):

- Ørsted maintains its target of an unlevered, fully loaded lifecycle IRR at 150-300 bps spread to WACC when we bid in tenders or take FIDs (whichever comes first).
- Ørsted expects EBITDA (excluding new partnerships) to increase to approx. DKK 39-43 billion in 2030, corresponding to an annual growth (CAGR) of 8 % in the period 2023-2030 (previously DKK 50-55 billion in 2030, corresponding to a targeted annual growth of 13-14 %).
- Ørsted expects to achieve a return on capital employed (ROCE) of approx. 14 % on average during 2024-2030 (previously approx. 14 % on average during 2023-2030).
- Ørsted is committed to a solid investment grade credit rating with an FFO/NIBD ratio above 30 % (previously an FFO/NIBD above 25 %).

- Ørsted has decided to pause dividends for the financial years 2023, 2024, and 2025. Hereafter, the target is to reinstate dividends from the financial year 2026.

Ørsted plans a DKK 270 billion investment programme in the period 2024-2030, of which Ørsted expects to invest approx. DKK 130 billion by 2026.

The business plan is fully financed without any need for raising new equity. It is financed through a combination of operating cash flow, partnerships and divestments, tax equity, as wells as debt and hybrid issuance.

Ørsted continues to be fully committed to a sustainable build-out that creates further positive impact on nature and society, going beyond decarbonising energy systems. Ørsted has taken considerable steps with its suppliers to decarbonise its whole supply chain and is progressing towards its science-based targets of reducing carbon emissions by 98 % (scopes 1 and 2) in 2025 and achieving net-zero for the entire value chain in 2040.

Thomas Thune Andersen steps down as Chair
Following the approval of the above-mentioned business plan, Thomas Thune Andersen, Chair of the Board of Directors of Ørsted A/S, has today informed the Board of Directors about his decision to step down as Chair at the upcoming annual general meeting on 5 March 2024.

Thomas Thune Andersen, Chair of Ørsted A/S, says:
“2023 was a challenging year for Ørsted. We have learned from the challenges and today, we are announcing a robust business plan with revised strategic growth ambitions for 2030. The plan has been developed in close collaboration between the executive management team and the Board of Directors, and we are confident that this is a robust plan that will secure our continued long-term growth.”

Thomas Thune Andersen continues:
“I have had the pleasure and the privilege to serve as the Chair of the Board of Directors of Ørsted for the past ten years, which have seen the transformation of DONG Energy to a world-leading renewable utility renamed Ørsted. We now have a new plan in place that will more than double Ørsted’s capacity by the end of the decade and fulfil our continued ambition to be a major renewable energy company. With the plan in place and at this juncture, it is an appropriate time for me to step down and let a new chair take the plan forward.”

Following Thomas Thune Andersen’s decision to step down as Chair, the Board of Directors will as soon as possible come with a recommendation regarding a new Chair to be elected at the annual general meeting on 5 March 2024.

Investor and analyst update
Mads Nipper, Group President and CEO of Ørsted, and Rasmus Errboe, interim CFO of Ørsted, will present the full-year results and a Capital Markets Update on Wednesday, 7 February at 13:00 CET.

To follow the presentation via live streaming, please click here: Ørsted full-year results 2023 and Capital Markets Update (getvisualtv.net)

Presentation slides will be available prior to the Capital Markets Update at Investors | Ørsted (orsted.com)

Today we present an updated business plan based on a comprehensive portfolio review

Solid results for 2023 despite challenges

Solid underlying financial results with adjusted EBITDA slightly above guidance

Several strategic milestones achieved in 2023

Ocean Wind impairment and cancellation fees in line with Q3 2023 announcement

Risk reduced across portfolio

Concluded thorough review of project portfolio

Actions taken to further reduce risks on execution projects

Learnings from challenged US offshore projects are being implemented in remainder of portfolio

Several portfolio changes including market exits and a re-focused offshore strategy for US

Robust business plan in place

Measures in place to ensure robust balance sheet incl.:

- CAPEX reduction & phasing
- Cost reductions and efficiency improvements
- Partnership and divestment programme
- 3-year dividend holiday

High visibility on short-term earnings and investments

Flexibility to allocate capital into the most value-creating opportunities

Delivering attractive and accretive growth

150-300 bps targeted range for spread to WACC[1]

~14 % average ROCE (2024-2030)

DKK ~270 bn total gross investments (2024-2030)

Strategic ambition of ~35-38 GW installed renewable capacity by 2030

DKK 39-43 bn EBITDA[2] in 2030

Notes: 1. Our targeted range for the fully loaded unlevered lifecycle spread to weighted average cost of capital (WACC), at the time of bid/final investment decision (FID) whichever comes first, for our offshore and onshore projects will be 150-300 basis points. The targeted range is not a hurdle rate and, consequently, there could be projects that deviate from the targeted range. 2. Excluding new partnerships.

Ørsted

Several adverse developments have impacted our business plan and led us to take a number of actions in recent months

Developments since CMD in June 2023

- Short-term negative impact from ceased project development
- Declining forward power price curves leading to lower expected revenue
- Further supply chain delays and cost of mitigation actions
- Further CAPEX and OPEX increases following cost inflation and supply chain bottlenecks

Actions since our Q3 2023 results

1. Concluded review of events that led to the Ocean Wind challenges and taken decisive actions to further optimise our operating model
2. Comprehensive risk review across offshore projects under construction and awarded with focus on further reducing execution risks
3. Portfolio revisited to prioritise growth opportunities with the most value creation potential
4. Implementing measures to ensure robust balance sheet supporting long-term growth and capital structure resilience as part of a balanced 2030 plan

We are implementing the learnings from our Ocean Wind review to reduce risks in project development and execution

Ocean Wind 1 challenges

General adverse industry developments

Development and execution in parallel (due to permitting delays) with high pre-FID commitments

New and developing supply chain with some suppliers not delivering contractual commitments

No back-up capacity available for mitigation towards 2025 installation schedule

Federal and local permit challenges

Lack of clarity on obtaining additional 10 % ITC at time of decision

We are implementing learnings to revise our project operating model, with particular focus on:

Supply chain and inflation

Contingency planning including more proactive contracting for back-up supply chain capacity

Monitoring of suppliers including intensified factory and supplier management visits to track manufacturing progress

Inflation protection in offtake arrangements in future projects

CAPEX and break away profiles

Scrutiny of pre-FID commitments, seeking to avoid high capital commitments relative to project maturity

Securing all critical local permits ahead of FID and significant capital commitments

Ensuring greater flexibility on project timelines and commissioning dates with phasing of CAPEX

Governance and reviews

Stage gate process with more independent reviews, including internal peer assessments

Structured external reviews for select projects when relevant

Monitoring and more frequent updates on project execution including risk reviews in Group Executive Team and Board of Directors

Ørsted

While the supply chain remains tight, we consider our offshore portfolio to be more robust

	Under construction (6.7 GW)						Awarded (3.7 GW)		
	Changhua 1 and 2a	South Fork	German programme[2]	Changhua 2b and 4	Revolution Wind	Hornsea 3	Sunrise Wind[4]	Baltica 2	Baltica 3
Capacity[1]	900 MW	130 MW	1,166 MW[2]	920 MW	704 MW	2,852 MW	924 MW	1,498 MW	1,255 MW[6]
COD	Q1 2024	Q1 2024	2024/25[3]	2025	2025	2027	2026	2027	2029
Status	Installation is nearly complete 107 of 111 turbines installed, vessel secured for last 4 turbines	First power delivered into the grid Turbine installation is ongoing with 10 out of 12 turbines installed	Gode Wind 3 progressing as planned, all monopiles installed Borkum Riffgrund 3 foundation, cable and turbine installation planned for 2024 but on a compressed schedule	Manufacture of offshore substation close to completion ahead of schedule 2025 installation schedule tight, mitigations under planning	All major contracts signed Back-up vessel secured and work in progress to secure second back-up vessel Strong focus on timely monopile delivery Offshore construction start Q2 2024	Contingency & mitigations increased prior to FID Critical paths proactively monitored and mitigated Bid part of capacity into Allocation Round 6	Most major contracts signed OREC re-bid submitted ROD expected in Q1 ahead of potential FID[5] Strong focus on timely monopile delivery Back up vessel under discussion	Major contracts signed with relatively low cancellation costs, assuming FID in mid-2024 CAPEX contingency increased	Reconfigu-ration in progress Permitting work initiated on revised design envelope

Notes: 1. Gross capacity in MW. 2. Borkum Riffgrund 3 (913 MW) and Gode Wind 3 (253 MW). 3. Expected COD for Gode Wind 3 and Borkum Riffgrund 3 is 2024 and 2025, respectively. 4. Subject to re-award in New York 4 offshore wind solicitation. 5. Remaining federal permits to follow after FID. 6. Includes both Baltica 3 (1,045 MW) and the awarded lease capacity for Baltica 2+ (210 MW).

Ørsted

We have re-focused capital allocation towards the most value-accretive opportunities in prioritised markets

Core portfolio principles

- **Value over volume**
- **Solid capital structure**
- **Focused market prioritisation**

Portfolio decisions

US offshore wind portfolio re-focused towards the North-East Atlantic (e.g., withdrew OREC[1] for Skipjack)

Exiting Norway, Spain, and Portugal as well as deprioritising development in other markets including Japan

Leaner floating offshore wind and P2X development

Acceleration of partnership and divestment programme

Notes: 1. In consultation with the State of Maryland, Ørsted has withdrawn from its OREC awards for Skipjack 1 & 2 and is exploring the most value-creating path forward. Development will continue.

We have re-focused our US offshore pipeline providing optionality in the most attractive US states

Outcome of our US review

Withdrew from Skipjack OREC awards and exploring path forward[1]

Submitted OREC re-bid for Sunrise in New York auction and conditional acquisition of full ownership

Continue developing select US seabed leases with strong financial discipline and cost focus

Pursue offtake opportunities where attractive with low pre-FID commitments and inflation protection

Closely monitor key drivers of long-term US offshore attractiveness, including:

- Political support, federal incentives and improved permitting
- Increasing offtake prices including risk-sharing, e.g., inflation-indexed PPAs

Attractive portfolio now focused predominantly on the North-East

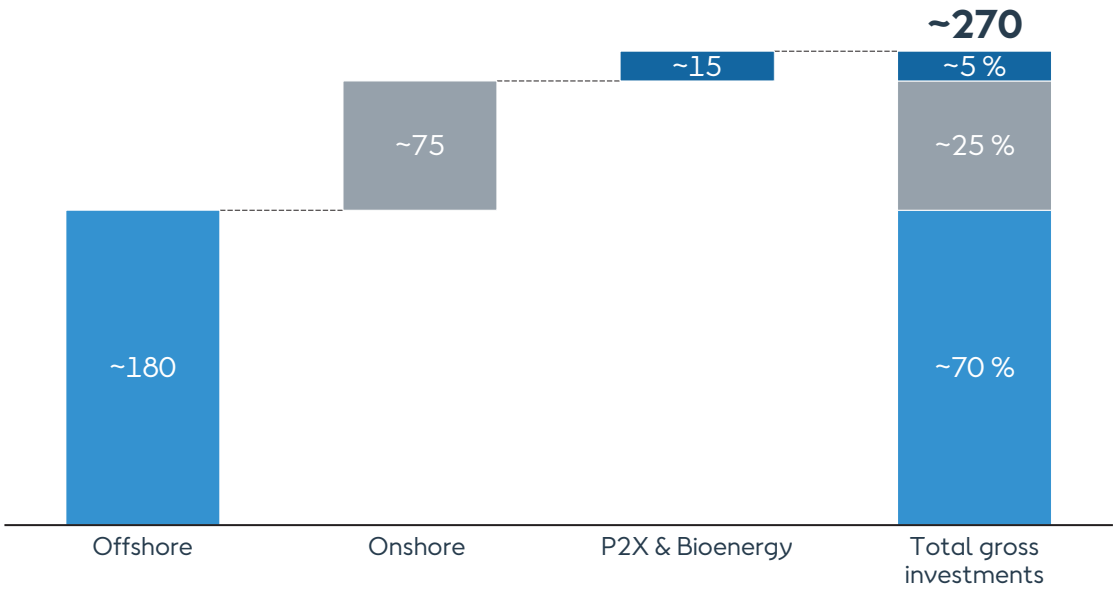
Hub	Ørsted sites	Capacity, gross GW	Project/site status
North-East	Block Island	0.03	In operation
	South Fork Wind	0.1	Under construction, expected COD in Q1 2024
	Revolution Wind	0.7	Under construction, expected COD in 2025
	Sunrise Wind[2]	0.9	OREC re-bid submitted in New York Round 4
	Lease Area 500	4.0	In development, to be bid where attractive (e.g., MA, RI, CT, NY)
Mid-Atlantic	Garden State Lease	0.7	In development with minimal spend
	Skipjack Wind	1.0	Withdrew from ORECs[1]; development will continue with minimal spend
	Ocean Wind		Ceased development[3]; exploring divestment of our leases as an opportunity for value creation

Notes: 1. In consultation with the State of Maryland, Ørsted has withdrawn from its OREC awards for Skipjack 1 & 2 and is exploring the most value-creating path forward. 2. Subject to re-award in New York 4 offshore wind solicitation. 3. Ceased development of the projects in the form they were awarded by the BPU as Ørsted explores the most value-creating path forward.

We plan to deploy DKK ~270 bn gross investments towards 2030

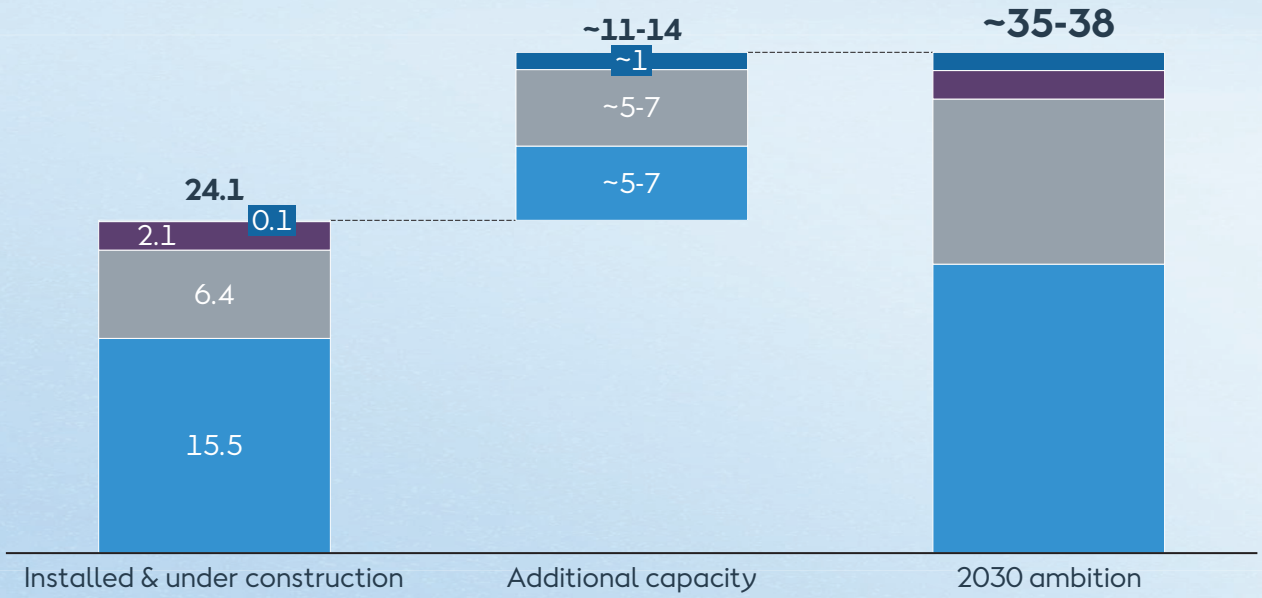
Capital allocation towards 2030

Gross investments (Ørsted share, excl. partners' CAPEX spend)
2024-2030, DKKbn



We update our renewable capacity ambition to ~35-38 GW by 2030

Installed renewable capacity ambition by 2030
Gross capacity, GW



~1 GW Power-to-X

~2 GW Bioenergy

~11-13 GW Onshore

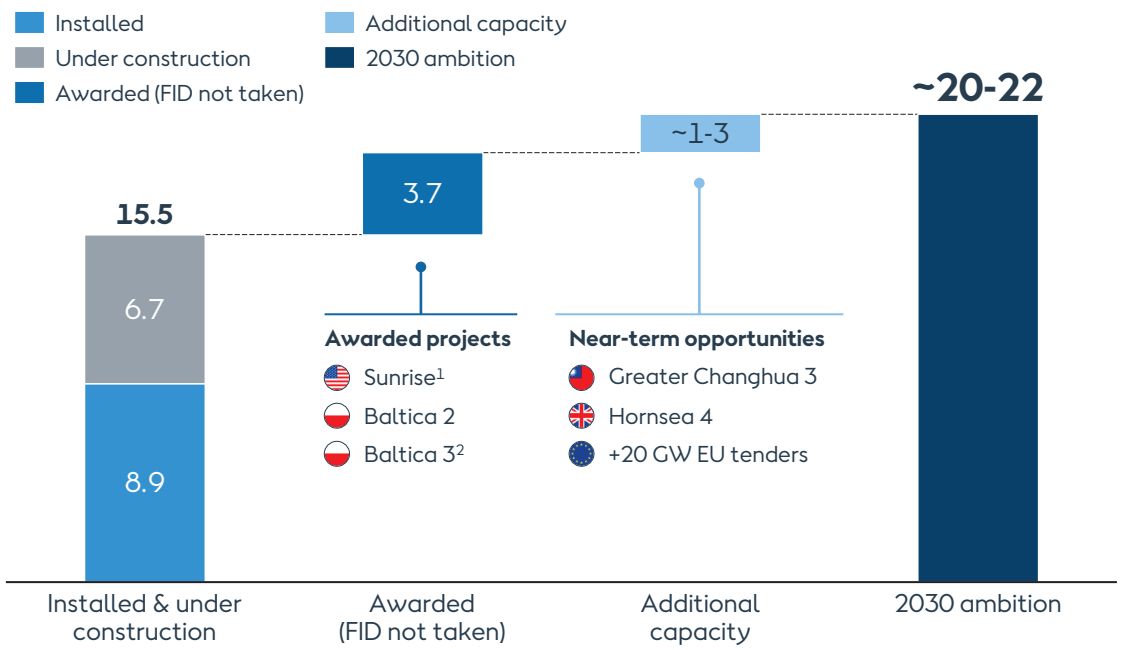
~20-22 GW Offshore

Ørsted

We have strong visibility on our offshore projects towards 2030

Offshore wind build-out

Gross capacity, GW



Notes. 1. Subject to re-award in New York 4 offshore wind solicitation. 2. Includes both Baltica 3 (1,045 MW) and the awarded lease capacity for Baltica 2+ (210 MW).

Strong position for offshore growth towards 2030

15.5 GW offshore wind already installed and under construction

3.7 GW awarded capacity across Sunrise Wind (0.9 GW[1]), Baltica 2 (1.5 GW) and Baltica 3 (1.3 GW[2])

Only 1-3 GW additional capacity to be added from a strong pipeline of near-term opportunities predominantly from Europe

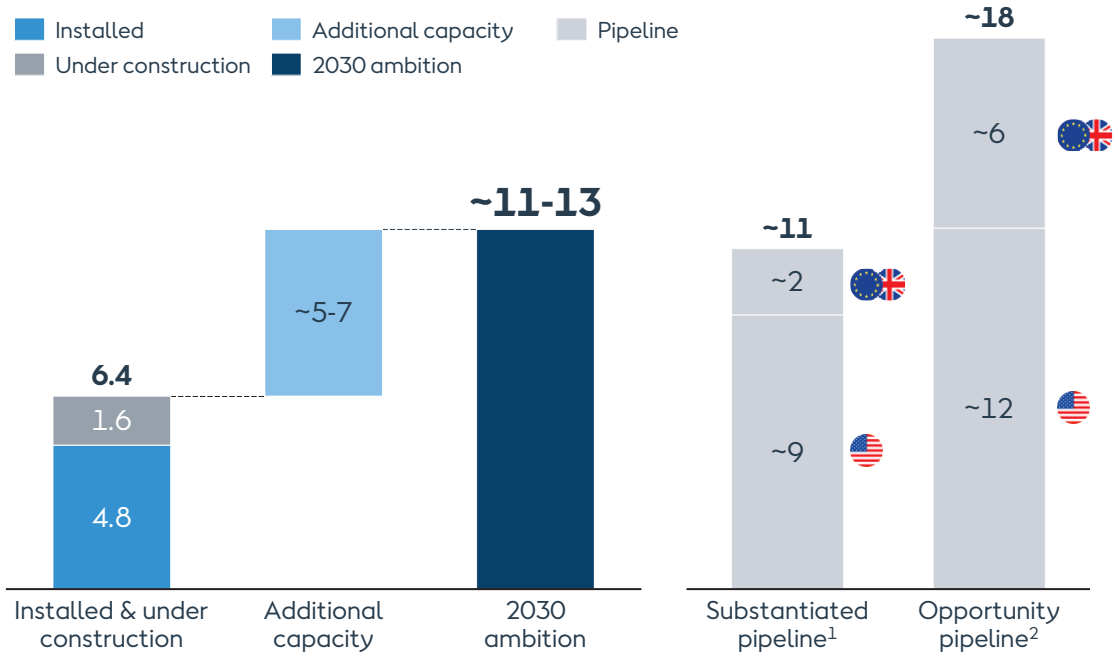
Pipeline of seabed to bid in near-term auctions with Greater Changhua 3 and Hornsea 4

+20 GW tenders in the near term within the EU

We have broad optionality in onshore due to our extensive pipeline

Onshore wind and solar build-out

Gross capacity, GW



Notes: 1. Projects that have reached a level of maturity (e.g., reached site control stage), but not yet taken final investment decision (FID). 2. Projects where early development activities have been initiated.

Strong position for onshore growth towards 2030

Broad optionality to select the most value-creating opportunities from our ~30 GW pipeline across US & Europe

Deep regional experience and proven track record in early-stage project acquisitions, greenfield development, execution, tax equity monetisation and CPPAs

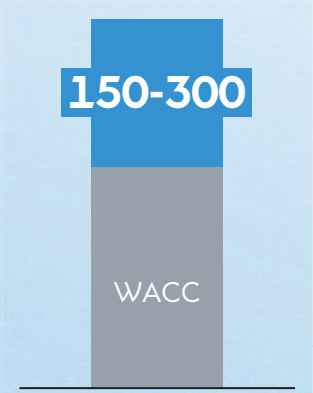
Flexibility to optimise on execution timelines and CAPEX phasing

Ability to leverage onshore for short-cycle CAPEX investments with offtake levels following cost profile

We plan to deliver strong returns and growth towards 2030

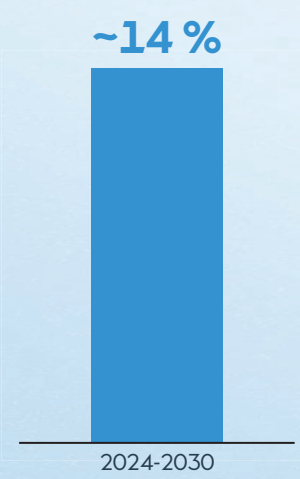
Spread to WACC

Targeted range at time of bid/FID[1], basis points



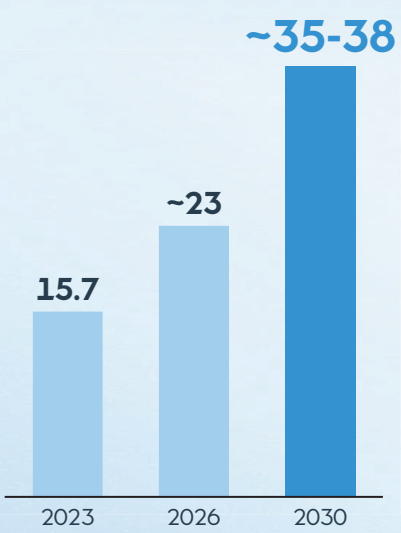
ROCE

Average ROCE, %



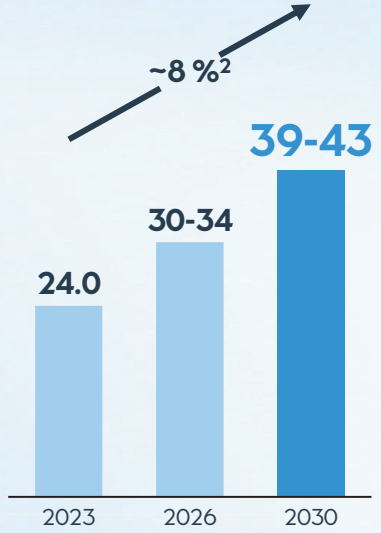
Renewable capacity

Installed renewable capacity, gross GW



EBITDA

Group EBITDA excluding new partnerships and cancellation fees, DKKbn, %



Notes: 1. Our targeted range for the fully loaded unlevered lifecycle spread to weighted average cost of capital (WACC), at the time of bid/final investment decision (FID) whichever comes first, for our offshore and onshore projects will be 150-300 basis points. The targeted range is not a hurdle rate and, consequently, there could be projects that deviate from the targeted range.
2. Compound annual growth rate (CAGR) 2023-2030. The EBITDA CAGR of ~8 % is partly a result of overperformance in 2023 with DKK 24 bn adjusted EBTIDA (i.e., above DKK 20-23 bn guided range). If EBITDA for 2023 had been at mid-point of guided range (i.e., DKK 21.5 bn), the CAGR towards 2030 would be ~10% (on a like-for-like basis versus CMD 2023).

Ørsted

Labour cuts £28bn green investment pledge by half

Keir Starmer announces party will now spend less than £15bn on green projects a year if it wins election

- **UK politics live – latest updates**

Kiran Stacey *and* Fiona Harvey
Thu 8 Feb 2024 19.26 GMT

Labour has cut its green investment plans by half, ending weeks of speculation and confirming the biggest and most controversial U-turn of Keir Starmer's leadership.

In a move that prompted an angry response from environmental groups, unions and some in the energy sector, Starmer and Rachel Reeves, the shadow chancellor, jointly announced they would slash the green prosperity plan from £28bn a year to under £15bn – only a third of which would be new money.

It ended a protracted internal battle within Labour over the policy, with some senior officials urging Starmer to stick to his green commitments and others warning it would be an electoral liability.
While intended to shield against repeated Conservative attacks on the scale of borrowing required, the climbdown infuriated environmental campaigners, who said it would push up costs in the long term and make it harder for Labour to reach ambitious green targets.

The Unite union said Labour risked "outsourcing their policymaking to the Conservatives", while the energy industry's trade group said it was concerned about the reduced ambition for "the future of our sector in the UK".

Speaking to reporters in Westminster, Starmer said: "We will not reach the £28bn – the £28bn, therefore, is stood down and we focus on the outcomes. We want to get to that place because at the moment all you are ever asked about is the size of the cheque and we want to have an argument about the outcomes, which is what matters."

He added: "We announced the £28bn two and a half years or so ago, when interest rates were very, very low. Since then, Liz Truss crashed the economy and other damage has been done. [Interest rates] are now very, very high – interest on government debt is already tens of billions of pounds a year.

"We've always said we have to be within the fiscal rules and fiscal rules come first."

Labour announced the £28bn spending plan in 2021, as Reeves promised to be the UK's "first green chancellor". She said at the time the money would be spent on battery manufacturing, hydrogen power, offshore wind, tree planting, flood defences and home insulation.

How Labour ditched its flagship £28bn green investment pledge
Read more

Since then the party has come under increasing attack over the plan, as Starmer and Reeves struggled to explain how they could stick to the spending commitment and keep a separate promise to cut government debt levels in the long term.

The Guardian revealed last week that Starmer had decided to scale back the plan after lengthy internal discussion and heavy lobbying from aides, such as Morgan McSweeney, Labour's campaign chief, who said sticking to it would be an electoral liability.
Ed Miliband, the shadow net zero secretary, had pushed back against diluting the plan. There was even speculation, denied by his team, that he could resign over the issue. However, in a sign of unity, he contributed a quote to the press release confirming the U-turn.

Starmer had continued to cite the £28bn target as recently as Tuesday, telling Times Radio it was "desperately needed" for the party's mission of achieving clean power by 2030. On Thursday, he told reporters he no longer believed this was needed. Instead, Labour would spend just over £4.7bn a year, on top of £10bn of green schemes it says the government has already committed to.

About half of that money would come from changes to the government's oil and gas windfall tax, with Labour planning to raise the rate from 75% to 78% and extend it until the end of the parliament. The other half would come from new borrowing.

The biggest cuts have been to the party's home insulation scheme. Labour had previously promised to spend up to £6bn a year insulating 19m homes over a decade.
Under the revised plans Starmer and Reeves intend to spend just £6.6bn over the parliament – an average of £1.3bn a year.

The cuts will mean the party reducing its targets for the number of properties it can insulate. Starmer said Labour now intended to insulate 5m homes over the first five years of government, and that it would take as long as 14 years to reach the 19m target.

Other schemes, including a £7.3bn national wealth fund and an £8.3bn national energy supplier called Great British Energy, will remain, in an effort to meet the clean power pledge.

Reeves said: “Something had to give if we were going to be within our fiscal rules and to achieve clean power by 2030. We have got to get on with the national wealth fund and GB Energy, and so we have scaled back our ambition on warm homes.”

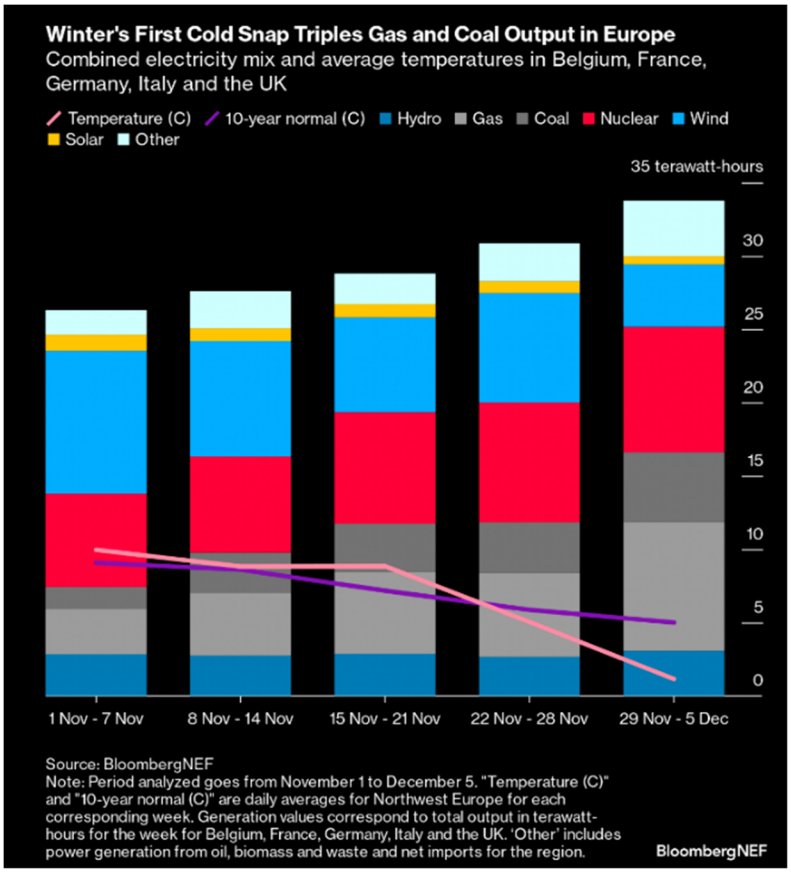
Labour’s U-turn dismayed many green campaigners, who said their energy targets would be difficult to hit without the promised level of spending.

Areeba Hamid, the co-executive director of Greenpeace UK, said Starmer had “caved like a house of cards in the wind”.
Mike Childs, the head of policy at Friends of the Earth, said Labour had “turned its back on the people who most urgently need these essential upgrades – the many millions of low-income households suffering from living in poorly insulated homes”.

Emma Pinchbeck, the chief executive of Energy UK, the trade association for the energy industry, said the issue was less the actual sum spent than “the signal it sends”. She said: “The party has been engaging constructively with business over recent months, but retaining the confidence of the market is dependent on not making U-turns that damage the UK’s investability.”

A number of Labour MPs simply expressed relief that the policy had been decided. One shadow cabinet minister said: “The policy is the main thing. To put a number on it was always a hostage to fortune with a flatlining economy and a government spending all that it has.”

Winter Cold Snap Triples European Coal and Gas Generation: BNEF
2023-12-06 08:20:51.896 GMT
By Adriana Martins and Andreas Gandolfo
(BloombergNEF) -- The first cold week of the 2023/24 winter saw gas and coal output in Belgium, France, Germany, Italy and the UK rise sharply. Temperatures dropped to under 2C — almost 4C below the 10-year average — for the week commencing Nov. 29. This led to a week-on-week rise in electricity demand of 5%, and an accumulated 27% increase since temperatures started dropping at the beginning of November.
Nuclear output over the same period rose by 36%, meeting some of the increase in demand. However, the cold spell also brought with it a halving of output from renewables. As temperatures dropped, wind speeds around Europe dipped. The correlation between wind output and temperature during the winter months — contrary to the summer seasons — is positive. This means as temperatures reduce, wind output is also expected to drop.
Weather forecasts show temperatures rising back above the 10-year average in the coming days. Yet, coal and gas output is likely to remain elevated even if demand falls, mainly because output from renewables is also less likely to recover in the coming weeks. For short-term forecasts on power production, see EFOR, and weather forecasts can be seen at WFOR.



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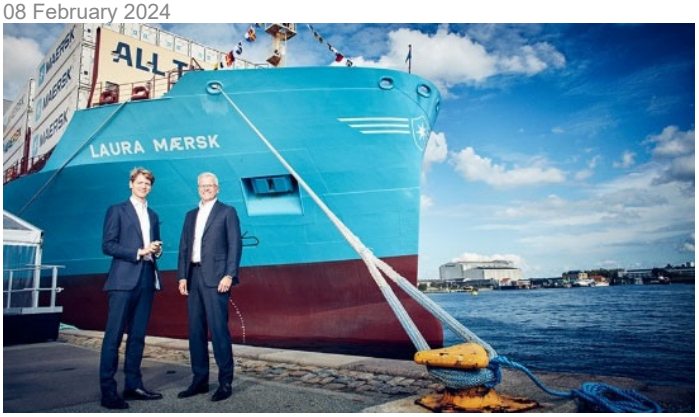
https://blinks.bloomberg.com/news/stories/S58KB1DWX2PS

***“ By 2030, A.P. Moller - Maersk alone will need up to 5 million tonnes of green fuels to deliver on our green pledges, while current global production of green methanol is under 100,000 tonnes”* Maersk Chair and the CEO.**

https://www.maersk.com/news/articles/2024/02/08/letter-from-the-chair-and-the-ceo

Letter from the Chair and the CEO

08 February 2024



Dedicated to fulfilling our customers’ supply chain needs
In 2023, our purpose of ‘Improving life for all by integrating the world’ was prominently reflected in our role as leaders in the decarbonisation of the maritime industry and our consistent investments into advanced and robust logistic solutions, aimed at equipping our customers for various type of disruption and ensuring the resilience of global supply chains. Together with our customers, we navigated a year of profound change in the global logistics industry, marked by a rapidly evolving market environment. We are pleased to report that A.P. Moller - Maersk delivered financial performance in line with our guidance for the year, demonstrating resilience and adaptability throughout these highly transformative times.

Markets normalised after the years of lock-down and subsequent boom in consumer demand. The market correction began in the fourth quarter of 2022 as supply chain bottlenecks gradually eased. In the first six months of the year, we saw a trend of reducing stock, leading to a decrease in demand. The second half revealed a new industry standard, marked by robust volumes but constrained by pricing pressures due to over-supply in shipping, with no immediate signs of more ships being idled or recycled.

Measures for a changed reality
During the year, we actively responded to the shifting environment. Early cost containment measures were initiated, deployed capacity was adjusted, and efficient management of Ocean unit costs, cost per move in terminals, and SG&A cost level in Logistics & Services helped safeguard our financial performance. Our workforce was realigned with our evolving book of business, reducing our global staff from 110,000 to around 100,000. Moreover, we prudently reduced our capital expenditure plans for 2023 and 2024.

Post-pandemic resilient supply chains
Despite the absence of significant congestions, the vulnerabilities that triggered disruptions during the pandemic years still linger in global supply chains, and new challenges keep emerging. Supply chains have become increasingly complex and fragmented, and customers are dealing with uncertainty from geopolitical tensions and changing consumer behaviour causing fluctuating demand.
Consequently, steps are taken to diversify sourcing and nearshore production to enhance resilience and flexibility in logistics.

Throughout the year, we have further deepened our understanding of our customers’ diverse supply chain needs to help them develop resilient solutions. We remain committed to manage any complexities our customers may experience by continuously improving and innovating our services and offerings.

Additionally, Terminals is further enhancing supply chain efficiency by expanding current terminals and establishing new ones. Key projects include the USD 1 billion expansion in Rotterdam, the Netherlands, advancements in automation at Pier400 in Los Angeles, USA and plans for new terminal developments, like the announced strategic partnership in Hai

Phong, Vietnam. Terminals consistently demonstrates robust business performance, maintaining a strong focus on cost management, safety and operational excellence.

Digitising to deliver on customer needs

We have advanced further on enhancing the operational reliability of our digital infrastructure, enabling very stable execution of business and significantly improved system availability. Furthermore, we have hit some fundamental milestones in our efforts to develop modern platforms across the supply chain. Aiming to unlock truly integrated logistics for our customers, we have moved from basic visibility to multi-carrier, multi-modal visibility.

Beyond this, we have made progress on standardising and rolling out our inland platform and our warehousing solution across regions. Focus is now on unlocking productivity gains through further platform integration and work-flow automation.

Decarbonising logistics

In 2023, we marked a noteworthy achievement in our efforts to decarbonise the logistics industry by introducing the world's first green fuel-enabled vessel – Laura Mærsk. As a pioneering force in decarbonising the industry, we are acutely aware that we heavily rely on the partnership and support from the industry, from regulations and, fundamentally, from our customers.

To transition away from fossil fuels, collaboration across sectors is crucial. By 2030, A.P. Moller - Maersk alone will need up to 5 million tonnes of green fuels to deliver on our green pledges, while current global production of green methanol is under 100,000 tonnes. The need for green fuels in shipping is immense and the challenge to provide it is too big a task for any one company or investor to manage alone.

Our industry's progress depends on robust regulatory frameworks. At UN's annual COP meeting in November 2023, we stood united with leading players in our industry calling for lawmakers to introduce measures that – if implemented – will accelerate the decarbonisation of global maritime transport. Together with CEOs from four of the largest container carriers, we proposed in a joint declaration a carbon tax scheme to help close the price gap between fossil and green fuels recognising that not all customers are ready to pay the higher prices currently associated with sustainable transport.

Reconfirming our transformational journey

While we continue to streamline our organisation and operations, we remain dedicated to our strategy of fulfilling our customers' diversified supply chain needs while pursuing growth opportunities across our Terminals and Logistics & Services businesses. We are pleased to note great commercial wins, which reflect the value our customers place on our integrated logistics solutions and close partnerships.

In our Ocean business, focus is steadfast on maintaining best-in-class margins and building an even more efficient and reliable future Ocean network. In Logistics & Services, we are looking to expand our offering while optimising performance and driving growth. Meanwhile, in Terminals focus is on continued optimisation and ongoing growth initiatives.

The market dynamics of 2023 underscored the critical importance of diversifying our revenue streams beyond the Ocean business and forging stronger, more collaborative relationships with our customers. These efforts are key to our ongoing success and adaptation in a rapidly evolving market and to our strategy of being the global integrator of logistics.

Thank you for your support

2023 ended with multiple distressing attacks on cargo ships in the Red Sea and the Gulf of Aden, including two A.P. Moller - Maersk vessels. We are horrified by the escalation of this unfortunate conflict. Ensuring the safety of our people and customers' supply chains is our priority. We are encouraged by the strong international support to restore this essential shipping lane. Our sincere wish is for rapid control of the situation, to allow for the resumption of safe transportation in 2024.

In closing, we would like to express our sincere gratitude to all A.P. Moller - Maersk colleagues around the world for their relentless efforts and unwavering dedication. We would also like to express our appreciation to the Executive Leadership Team and the Board of Directors. In particular, we welcome Kasper Rørsted, who joined the Board in 2023.

Last but not least, we are extending a profound thanks to our customers. The support and partnership from our customers are the driving force behind our commitment to delivering excellence in global logistics.

https://www.globaltimes.cn/page/202402/1306992.shtml

Chinese experts forecast minor baby boom in the Year of Dragon due to cultural influence, post-pandemic rebound and policy support

By Leng Shumei Published: Feb 10, 2024 07:00 PM

Photo:VCG

Chinese medical staff and experts predict a minor baby boom in the Year of the Dragon due to triple impact of a preference for the dragon zodiac in Chinese culture, a rebound in fertility post-pandemic, and improving fertility support policies.

As of 8 am on Saturday, the first day of the Year of the Dragon, a total of nine dragon babies had been delivered in the Fudan University Affiliated Maternity Hospital. Between midnight and 8 am on Saturday, Shanghai First Maternity and Infant Health Hospital also received a total of seven dragon babies, local news portal in Shanghai thepaper.cn reported.

In the early hours of Saturday, at 1:47 am, a 3,057g baby girl was born at the Fengxian branch of the International Peace Maternity and Child Health Hospital of the China Welfare Institute in Shanghai. This marked the first dragon baby born in the hospital this year. By 8 am, a total of four dragon babies, including three boys and a girl, were born in the Fengxian District, according to the paper.cn.

"Many mothers were eagerly awaiting the birth of their dragon babies," Hu Yanjun, the head of the Obstetrics Department at Wenzhou People's Hospital, was quoted as saying by the paper.cn. The hospital received its first newborn on the first day of the Chinese Lunar New Year at 8:08 am on Saturday.

Medical staff in the obstetrics and gynecology department at the Binhu Hospital of Hefei First People's Hospital in East China's Anhui Province also stayed up all night, welcoming four rabbit babies and four dragon babies. Niu Yuwei, deputy chief physician of the department, said they expect a small baby boom in the Year of the Dragon as dragon is considered auspicious in Chinese culture.

In accordance with the lunar Chinese calendar, the year 2024 will be the Year of the Wood Dragon. Dragon is the totem of Chinese nationality that symbolizes power, nobility, and intelligence. Combined with Wood, which holds the meaning of growth, development, and prosperity in Chinese wuxing (five elements) culture, 2024 is forecasted to bring about opportunities, changes, and challenges.

As China faces a crucial point in its economic recovery, the Year of the Dragon inspires great expectations for new life and new arrivals among Chinese people.

As early as the Year of the Rabbit, there was a noticeable increase in prospective parents planning to have

dragon babies, media reported.

Zhai Zhenwu, president of the China Population Association and a professor at Renmin University of China, has previously told media that Chinese people have a special preference for the zodiac sign "dragon," and during the previous Year of the Dragon in 2012, there was a baby boom. Considering these factors, it is expected that the birth rate in 2024 will see a significant increase.

China's population decreased by 2.08 million people in 2023 to 1.40967 billion, the National Bureau of Statistics (NBS) data showed in January. In 2023, 9.02 million babies were born, resulting in a birth rate of 6.39 per thousand people.

Yuan Xin, a professor from the Institute of Population and Development at Nankai University's School of Economics, told the Global Times that he agreed with Zhai regarding the baby boom across the coming year.

The boom is a result of the impact of three effects: first, the preference for the dragon as zodiac in Chinese culture. A similar baby boom occurred on the Chinese mainland in 2012 as well as in previous years of Dragon in the Taiwan island; second, a rebound in fertility due to the effects the post-pandemic, the expert said.

A serious wave of COVID-19 hit China at the end of 2022 and the early beginning of 2023. Some doctor suggest people do not have babies until three months after they recover from COVID-19. This led to delayed birth of many babies, Yuan noted.

Third, improving fertility support policies in China will also encourage people to have larger families, Yuan noted.

While the country welcomed 9.02 million newborns in 2023, the expert estimated that the number would increase in 2024, but it is hard to predict to what degree.

https://www.globaltimes.cn/page/202401/1305550.shtml

China’s population decreases by 2.08 million in 2023 to 1.40967 billion

By Global Times Published: Jan 17, 2024 11:39 AM

China's population decreased by 2.08 million people in 2023 to 1.40967 billion, the National Bureau of Statistics (NBS) data showed on Wednesday. In 2023, 9.02 million babies were born, resulting in a birth rate of 6.39 per thousand people. Meanwhile, 11.1 million people died in 2023, equal to a death rate of 7.87 per thousand people, the data showed.

The natural population growth rate was negative 1.48 per thousand people, the NBS said.

The male population was 720.32 million, surpassing the female population that was 689.35 million, data showed. The overall gender ratio was 104.49 (per 100 females).

In terms of age, the working-age population (aged 16-59) stood at 864.81 million, making up 61.3 percent of the total population.

The population aged 60 and above was 296.97 million, accounting for 21.1 percent of the total population, with population aged 65 and above being 216.76 million, making up 15.4 percent of the total.

Regarding urban-rural composition, the urban population was 932.67 million in 2023, an increase of 11.96 million compared to the previous year, while the rural population was 477.00 million, a decrease of 14.04 million. The urban population accounted for 66.16 percent of the total population, which increased by 0.94 percentage points compared to the previous year, according to the data.

Following China's first-ever population decline in 2022, the extent of population decline in China had been expected to deepen in 2023, according to demographic forecasts.

The latest China Development Report 2023 released by the State Council's Development Research Center pointed out that over the past 12 years, China has experienced two significant turning points in terms of population: the peak of the working-age population and the peak of the total population. Currently, China's total population is at its peak, and it is expected to continue declining for the foreseeable future.

Professor Yuan Xin, deputy head of the Population Association of China and a demographer from Nankai University in Tianjin, was quoted as saying in media reports on Wednesday that international experience suggests that the initial stages of population decline are often accompanied by fluctuations in population growth and decline.

Due to changes in population size and the impact of the COVID-19 pandemic, population decline in 2023 is expected to be more pronounced than in 2022, Yuan said. However, in 2024, the Year of the Dragon according to Chinese zodiac sign, during which people more prefer to have baby, and with the potential rebound in fertility due to the effects the post-pandemic, population decline may ease somewhat, the expert noted.

The report states that a continued decline in the birth rate will be the dominant long-term trend impacting China's population change. It is estimated that in the coming years, the number of births is expected to decrease by approximately one million every decade.

The report identifies four main reasons for the expected continuation of low birth rates in the future including delayed marriage age, decreased willingness among young people to have children, reduction in the number of women of childbearing age and higher prevalence of infertility and subfertility.

Global Times

https://www.theguardian.com/money/2024/feb/05/uk-state-pension-age-will-soon-need-to-rise-to-71-say-experts

UK state pension age will soon need to rise to 71, say experts

Research on life expectancy and birthrates shows that ill health makes status quo unsustainable

- **'I can't take it much longer': workers too young for UK pension**

Amelia Hill
@byameliahill
Mon 5 Feb 2024 05.00 GMT

The retirement age will have to rise to 71 for middle-aged workers across the UK, according to research into the impact of growing life expectancy and falling birthrates on the state pension.

The UK pension age of 66 is set to rise to 67 between May 2026 and March 2028. From 2044, it is expected to rise to 68.

But the research suggests that this is not enough, and that anyone born after April 1970 may have to work until they are 71 before claiming their pension.

This age limit may need to be set even higher, say experts, thanks to the high rate of workers exiting the workforce before they reach state pension age, predominantly due to preventable ill health.

Les Mayhew, associate head of global research at the International Longevity Centre and author of the report State Pension Age and Demographic Change, said: "In the UK, state pension age would need to be 70 or 71 compared with 66 now, to maintain the status quo of the number of workers per state pensioner.
"But if you bring preventable ill health into the equation, that would have to increase even more," added Mayhew, who is also professor of statistics at Bayes Business School and has advised the government on rises to the state pension age multiple times as a senior civil servant and in his current roles.
By age 70, only 50% of adults in England and Wales are now disability-free and able to work. A smaller working population and a large economically inactive population reduces the tax base to pay for pensions – and creates huge labour shortages, which creates its own problems.
According to the Office for Budget Responsibility, pensioner benefits will cost the UK government £136bn in 2023-24, of which £124bn will be spent on state pensions.

Jonathan Cribb, associate director and head of retirement at the Institute for Fiscal Studies, said that while he did not disagree with a higher pension age, increasing it without addressing other cost-saving measures was not "realistic or equitable".

He added: “It would disproportionately impact poorer individuals whose ill-health means they have shorter lives, and so who receive pensions for less time.”

While the ILC’s solution is “illustrative of the kind of pressure that an ageing population puts on the public finance”, a rise in the retirement age to 71 was not a “realistic policy option unless you have a real emergency”, he added.

Cribb pointed out that while state pensions and pension benefits are estimated to increase by £45bn by 2050, the pressure on public finance from health and social care is estimated to increase by £105bn in today’s terms over the same period. “The real issue is actually around the NHS and social care,” he said.

The Intergenerational Foundation, an independent thinktank, agreed that the pension age had to rise, but questioned on whose shoulders that cost should fall.
Younger people, their research has found, do not have the financial assets that their parents and grandparents did. In 2010, those under 40 held £7.53 of every £100 of wealth. By 2020, that had fallen to £3.98. One-third of the UK’s 14 million Gen-Xers are at high risk of retiring on insufficient income.

Angus Hanton, co-founder of the thinktank, said pension age should be based on life expectancy and occupation. He also supports a wealth tax to fund and pay more towards people’s retirement, and reducing income tax and national insurance.

“The over-60s should finance their own extra retirement years since they have received such generous treatment from the state,” he said. “The money raised can be used to invest in improving the health and prospects of younger generations so they are less of an economic burden as they age.”

Andrew Scott, co-author of the 100-Year Life, whose new book, The Longevity Imperative, will be published shortly, said there needs to be a greater focus on preventing ill health not just in old age but from early age through adulthood.

“Increasing the state pension age would be a terrible policy – a really bad way of attempting to make people more productive,” he said.

David Finch, assistant director at the Health Foundation, said increasing the state pension age without providing support for workers with health issues would worsen the situation by exacerbating existing health inequalities. “The government should provide more support for people already out of work due to health issues,” he said. “Employers can help by adapting roles and maintaining contact with employees on sick leave.”

The government said it would ensure that the state pension remained “a sustainable and fair foundation of income for future generations”.

A spokesperson said: “We have committed £70m in employment and skills support for the over-50s, which has seen an extra 54,000 over-50s added to company payrolls. Our £2.5bn Back to Work plan is supporting people to stay fit and find work, in addition to £14.1bn to improve health services to help people live longer, healthier lives.”

https://www.kornferry.com/insights/this-week-in-leadership/unretiring-to-work

‘Unretiring’ to Work

A new study shows retirees returning to work is no longer just a trend—it’s a permanent feature of the new world of work. How are leaders and other workers reacting?

John Long North America Retail Sector Leader & Senior Client Partner

Shanda Mints Vice President, Implementation

Tracy Bosch Senior Client Partner, Leader of Work Measurement, North America

Tom Wrobleski Global Account Leader, Consumer, Co-leader, Supply Chain Talent Optimization

Maria Amato Associate Client Partner

For a growing number of older workers, retirement is turning out to be short-lived.

In what is no longer just a trend but rather a permanent feature of the new world of work, more people are “unretiring” and returning to the workforce. According to a new survey, 12% of retirees aged 62 to 85 plan to go back to work this year, while one-quarter have already done so. Experts say unretiring is gaining momentum because it solves problems for both employees and employers. “Sixty-five isn’t as old as it used to be,” says John Long, North America retail sector leader at Korn Ferry, referring to the view from both sides of the hiring table.

To be sure, just because retired people are looking for work doesn’t mean they’re going to find it—despite strong hiring figures. Many candidates complain that navigating new job offerings has become too complex. HR officials, meanwhile, still worry about the ability of older workers to adapt to technological change, particularly since the advent of generative AI.

But many older workers seem eager to upskill to get back into the workforce; according to the study, they cite inflation and high living costs as their top reasons for coming back. To explain their inability to remain retired, one-third (much like seniors in the general population) also cite a lack of savings and too much debt. On the employer side, these “unretirees” can help fill vacant jobs, particularly in states where flexible work has made hiring tough (or in management roles that younger workers have been reluctant to take). “In many ways, people who unretire serve as a much-needed stabilizing force for the talent issues employers are facing,” says Shanda Mints, vice president of the RPO Implementation team at Korn Ferry. Citing the four million people who are expected to turn 65 every year between now and 2027, Mints says that employers need some of these people to stay in or return to the workforce in order to avoid a major attrition issue.

But even before many boomers retired, many corporate experts expressed concern that older employees could clog up the succession pipeline for eager younger workers. Tracy Bosch, leader of work measurement in North America for Korn Ferry, says younger generations may worry that older workers are “overstaying their welcome” and leaving them less prepared to eventually step up. “Leaders have to consider a long-term pipeline strategy along with short-term hiring,” Bosch says.

One approach firms have taken is to bring people out of retirement and pair them on an interim basis with high-potential younger workers. “We’re having a lot more discussions with clients like that because of the economy,” says Tom Wrobleski, a global account leader in the Consumer practice at Korn Ferry. Firms see value, he says, in the mentor-mentee relationship between formerly retired managers who understand how to balance

growth with cost management and younger managers who've never experienced a prolonged downturn. "It's putting people who have been there and done that together with people who have not," says Wrobleski.

Maria Amato, senior client partner in the Organizational Strategy practice at Korn Ferry, says the rise of "unretirement" underscores the need for recruiting and retention strategies that motivate talent at different points in their lives. "Building robust talent-acquisition strategies needs to take into account that employees aren't a monolith," she says. She cites a client who groups talent into three categories based on different motivators. One category is for those who prioritize compensation and work-life balance, another is for those who value job security and leadership quality, and a third is for employees who want to learn new skills and advance up the corporate ladder. "There are younger employees in each group, and older employees in each group," Amato says.

https://www.nationalchickencouncil.org/americans-to-eat-1-45-billion-chicken-wings-for-the-big-game/

Americans to Eat 1.45 Billion Chicken Wings for the Big Game

- January 31, 2024

WASHINGTON, D.C. – With the second biggest eating day of the year after Thanksgiving upon us, there's no hotter time for chicken wings. According to the National Chicken Council's 2024 Wing Report, Americans will devour 1.45 billion wings while watching Kansas City and San Francisco battle for the championship trophy.

"Football is great. Wings are great. But they're even better together," said Council spokesman Tom Super. "Sure, you can have your chips, your guacamole, your pizza. But when it comes to menus next Sunday, wings rule the roost. So, grab a wet nap and enjoy America's favorite party food for the Big Game."

To help visualize just how many wings that is:

- 1.45 billion wings is enough for every man, woman and child in the United States to eat **four wings each**.
- If Kansas City Coach Andy Reid ate 50 wings every day, it would take him **79,452 years** to eat all 1.45 billion.
- 1.45 billion wings is enough to put **693 wings** on every seat in all 30 NFL stadiums.
- If laid end-to-end, 1.45 billion wings would stretch **1/3 of the way to the moon**.
- If each wing represented one second moving forward, 1.45 billion would be **46 years from now**, or the year **2070**.

Visit our TikTok page to watch a video animation of these numbers: https://www.tiktok.com/@chickencheck.in/video/7330083982559677742

This year's projection is flat compared to 2023, with USDA reporting chicken production levels are slightly down from last year and wing stocks in cold storage down 13% in November compared to the year prior. This could explain the higher demand and thus the higher wholesale prices we are seeing on wings. At the retail level, fresh chicken wing prices are down approximately 5%, and frozen wing prices are down 11% compared to January of 2023, according to Circana data.

One of these days, Buffalo will get back to the Big Game which would give wing consumption a nice boost," Super noted. "Maybe we'll see Taylor Swift breaking out the 'seemingly ranch' again, to dip a wing in this time, though."

High resolution photos of chicken wings are available to download here, here and here.

Buffalo chicken wing history

Deep-fried chicken wings have long been a staple of Southern cooking. But one well-traveled tale of how the concept of cooking wings in peppery hot sauce was born took place in 1964 at the Anchor Bar in Buffalo, New York, when co-owner Teressa Bellissimo cooked leftover wings in hot sauce as a late-night snack for her son and his friends. The guys liked them so much that the Bellissimos put them on the menu the next day. Served with celery slices and bleu cheese sauce, "Buffalo Wings" were an instant hit.

Dick Winger, who sold hot sauce to the bar, went on the road with Dominic Bellissimo, the owners' son, to promote the item and sell hot sauce, and the item gradually caught on with restaurant operators around the country. The concept hit the big time in 1990, when McDonald's began selling Mighty Wings at some of its restaurants. KFC rolled out Hot Wings a year later, and Domino's Pizza introduced its own wings in 1994. They've remained hot ever since. McDonald's was back in the wing business in 2013, and its Mighty Wings were featured nationwide at most restaurants through the first quarter of 2014.

Chicken wings and football – A love story

The rise of the chicken wing and its correlation to American football all had to do with timing.

Cooking the whole bird was trendy in the 1960s and 1970s, but in the 1980s, U.S. consumers started preferring boneless-skinless breast meat, and wings became an inexpensive byproduct for chicken producers. Restaurants and bars realized they could charge low

prices for the relatively inexpensive protein, and due to the spicy/salty nature of the sauce, they discovered that beer sales would go through the roof when customers ate wings.

At the same time, sports bars with multiple TVs and satellite dishes were becoming more and more common in America thanks to rapidly developing technology; and the most popular sporting event to watch with friends in bars is football. Wings were easily shareable and affordable, a great "group food" to eat with other people, and are the perfect pairing with a pitcher of beer. And so the pigskin-chicken wing bond was born.

Wing Tips

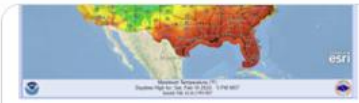
- Americans are more likely to prefer eating bone-in, traditional wings (53%) than "boneless wings."
- Two in five (38%) Americans say that the breast is their favorite cut of chicken, but wings (20%) are second.
- While there are a variety of wing sauces to choose from, BBQ (52%), ranch (46%) and buffalo/hot sauce (41%) are the preferred.
- French fries are by far the preferred side for wings (72%), distantly followed by celery (14%).

Dan Tsubouchi @Energy_Tidbits · 18h ·

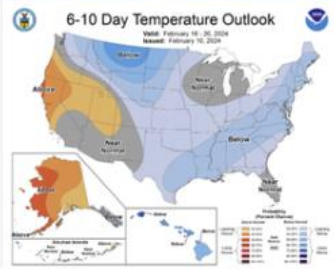
Still warmer than normal in US today but turning normal to cooler than normal in a week.

HH #NatGas closed at $1.86 so any cooler weather will help BUT it's mid Feb and cooler than normal in NYC still means above freezing temps so no panic in markets.

Thx @NOAA
#OOTT



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



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

2 1 10 2.7K

Dan Tsubouchi @Energy_Tidbits · Feb 10

It took a few weeks, but it seems like longer tanker trips & use of oil in storage is sorting out impact of Red Sea diversions?

#Oil floating storage at Feb 9 -8.63 mmb WoW to 74.96.

But revisions +11.34 to Feb 2, +7.66 to Jan 26, +5.51 to Jan 19.

Thx @Vortexa @business

Source: Bloomberg, Vortexa

Posted Feb 10, 9am MT | Feb 3, 9am MT | Jan 27, 9amMT

Source: Bloomberg, Vortexa

Vortexa Crude Oil Floating Storage by Region (mmb)				Original Posted	Recent Peak	
Region	Feb 9/24	Feb 2/24	WoW	Feb 2/24	Jun 23/23	Feb 9 vs Jun 23
Asia	37.27	41.01	-3.74	33.87	73.83	-36.56
Europe	2.23	4.27	-2.04	4.51	6.44	-4.21
Middle East	15.44	8.96	6.48	10.10	6.76	8.68
West Africa	7.37	9.84	-2.47	7.42	7.62	-0.25
US Gulf Coast	0.40	3.83	-3.43	3.79	1.05	-0.65
Other	12.25	15.68	-3.43	12.55	37.45	-25.20
Global Total	74.96	83.59	-8.63	72.25	133.15	-58.19

Vortexa crude oil floating storage posted on Bloomberg 9am MT on Feb 10
Source: Vortexa, Bloomberg

1 | 8 | 14 | 2.8K

Dan Tsubouchi @Energy_Tidbits · Feb 10

Wishful thinking to stop population decline?

"*Chinese people have a special preference for the zodiac sign "dragon," and during the previous Year of the Dragon in 2012, there was a baby boom. .... expected that the birth rate in 2024 will see a significant increase*"

#OOTT

> **Dan Tsubouchi** @Energy_Tidbits · Jan 16
>
> 
>
> China population down 2.08 million YoY to 1.40967b at 12/31/23
>
> Population declined for 2nd consecutive year.
> ...

1 · 3 · 3.2K

Dan Tsubouchi @Energy_Tidbits · Feb 9 ·

321 crack spreads hit $30 today. normally $30 spreads provides big incentives for refineries to keep up runs and first response is to drag up #Oil prices a bit.

Thx @business
#OOTT

2 · 16 · 72 · 8.1K

Dan Tsubouchi @Energy_Tidbits · Feb 9

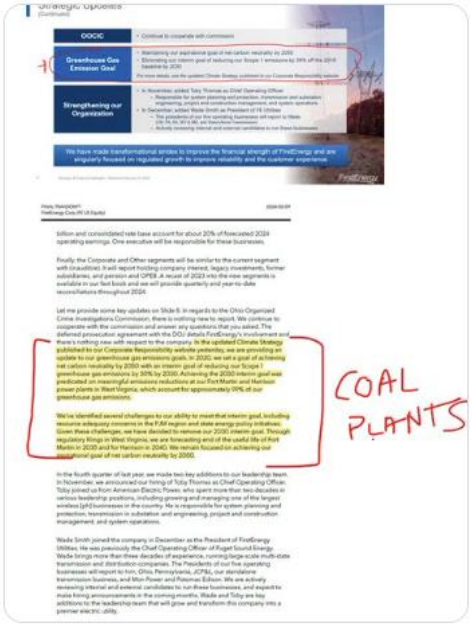
Reality check: Coal power needed for longer!

FirstEnergy eliminates interim 2030 Scope 1 emissions reduction target.

Its Fort Martin (2035) & Harrison (2040) coal plants needed for longer.

Shares +3.7% today

#OOTT #NatGas



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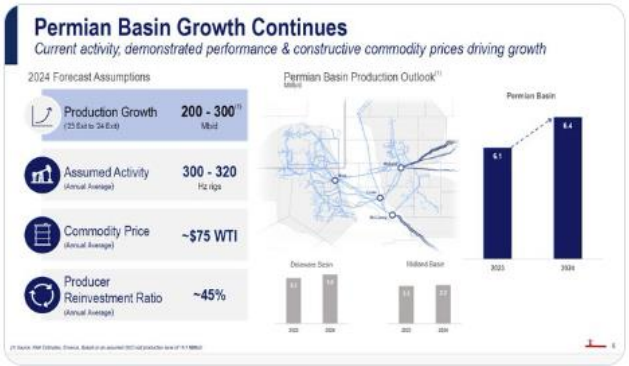
Dan Tsubouchi @Energy_Tidbits · Feb 9

Will total US #Oil production be fighting to stay flat or modestly grow in 2024 if Permian oil is only +200-300,000 b/d 23 exit to 24 exit as per Plains forecast.

Reminder Plains is likely involved in half of Permian barrels.

#OOTT



2 7 26 5.2K

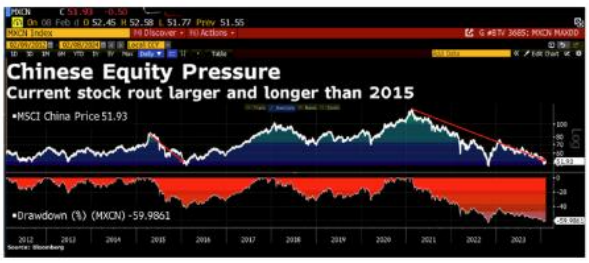
Dan Tsubouchi @Energy_Tidbits · Feb 9

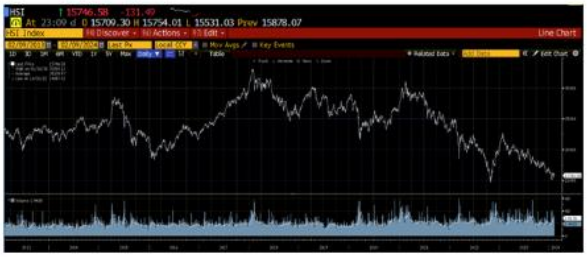
No wonder Chinese have been saving, at least as opposed to investing in stock markets.

China MSCI: -60% vs 2/17/21 peak, -31% vs recent 1/27/23 peak.

For same periods, Hang Seng -49% vs 2/17/21, -31% vs 1/27/23.

Thx @business. #OOTT





> **Dan Tsubouchi** @Energy_Tidbits · Jan 28
>
> 
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>
> Will Chinese get back to spending instead of just saving?
>
> 01/26/24, China commerce ministry "*declared 2024 the "year of promoting consumption" as it stressed ...*

1 · 3 · 3.4K

Dan Tsubouchi @Energy_Tidbits · Feb 8

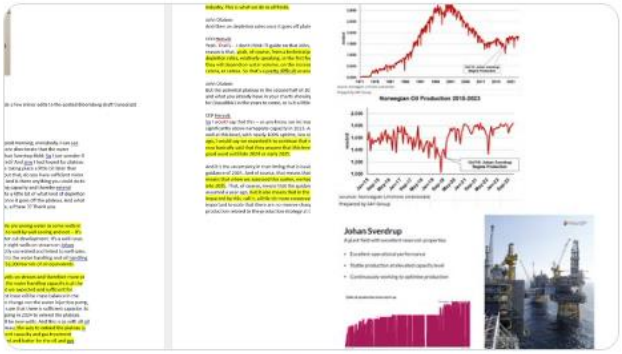
#Oil bulls will like this.

Johan Sverdrup 0 to 0.75 mmbd led to Norway 1.31 mmbd in 09/19 to 1.85 mmbd today

BUT Aker BP says JS moving from plateau to decline in late 24/early 25. Water now hitting some wells.

Can they arrest decline with H2O handling, more wells, etc?...

Show more



4 13 53 7.6K

Dan Tsubouchi @Energy_Tidbits · 2h

Election yr. Biden doesn't want pump price jump so hard to enforce #Oil sanctions on Iran, RUS or resume on VEN.

👇 BofA Liz Everett Krisberg Americans say inflation more of an issue in 2024 as **Big 3** (restaurants/bars, groceries, gas) "*continue to be significantly higher*".

#OOTT...

Show more

3 982

Dan Tsubouchi @Energy_Tidbits · 3h

Sad but true line of the day.

"so we can rely on people down in Washington DC to fix this" @FerroTV to @lisaabramowicz1 @annmarie re interest on US govt debt now highest % of GDP since WWII 1940, and now more than defense spending

#OOTT

1 · 984

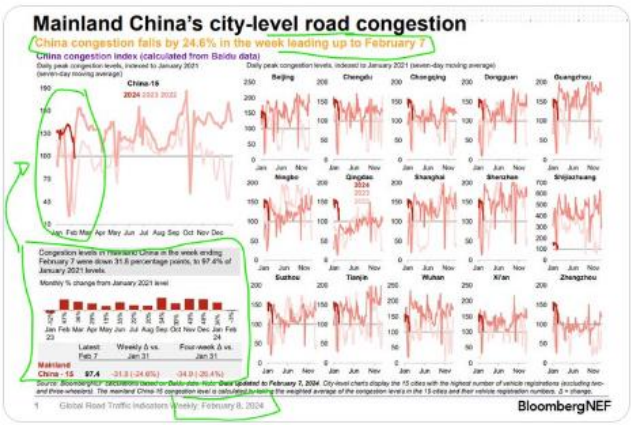
Dan Tsubouchi @Energy_Tidbits · 4h

World's largest annual human migration is on!

China Baidu city-level road congestion -24.6% WoW for Feb 7 week.

Lunar New Year is Feb 10 so rush to leave cities is still going higher.

Thx @BloombergNEF
#OOTT



> **Dan Tsubouchi** @Energy_Tidbits · Jan 25
>
> 
>
> Will we see more signs Chinese consumer is back to spending?
>
> *"Spring Festival travel rush for 2024 - the world's largest annual human migration - officially starts on ...*

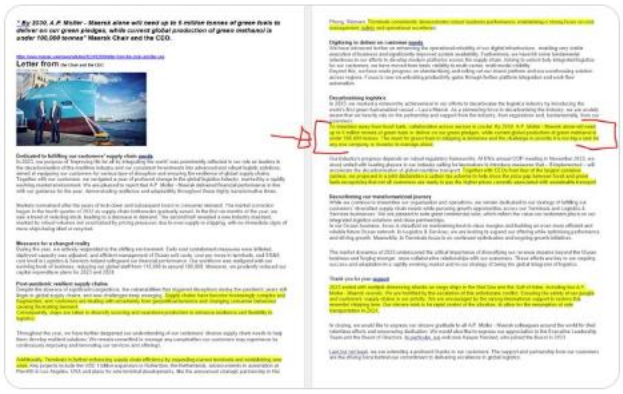
1 · 1.5K

Dan Tsubouchi @Energy_Tidbits · 5h

Shipping won't be any real help to reach IEA Peak #Oil Demand by 2030

"*By 2030, A.P. Moller - Maersk alone will need up to 5 million tonnes of green fuels to deliver on our green pledges, while current global production of green methanol is under 100,000 tonnes*" Maersk.

#OOTT



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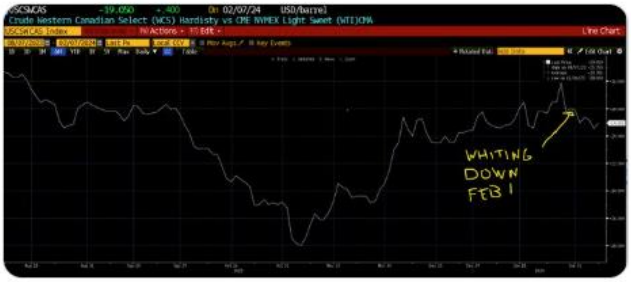
Dan Tsubouchi @Energy_Tidbits · 14h

WCS less WTI diffs widened ~$1 since bp Whiting 435,000 b/d refinery went down on Feb 1. Whiting takes Cdn crude via Enbridge.

@Reuters reporting Whiting to be shut for up to 3 weeks.

#OOTT

boereport.com/2024/02/07/bp-...



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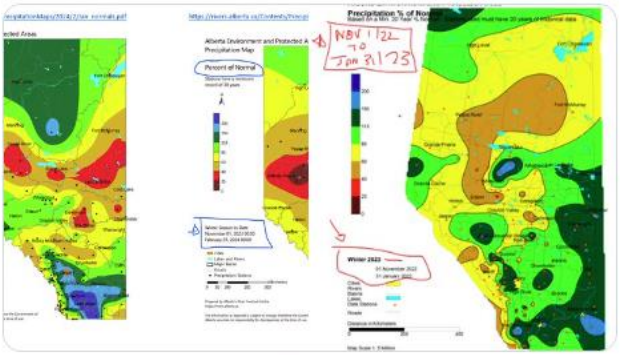
Dan Tsubouchi @Energy_Tidbits · 16h

More snow in Jan in Alberta **BUT** still a brutal lack of snow this winter Nov 1-Jan 31.

Risk for early & abrupt end to winter drilling.

Big negative for 2024 wildfire season & crops. Way less snow vs last winter.

#OOTT



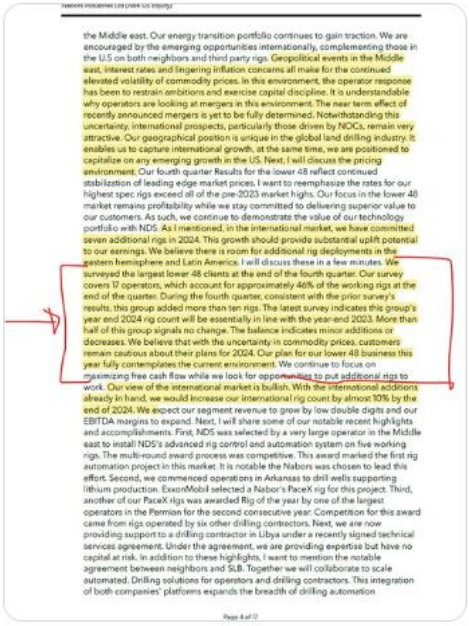
1 2 7 2.3K

Dan Tsubouchi @Energy_Tidbits · 18h

Nabors Lower 48 survey of 17 operators w/ 46% of rigs: yr end 2024 to be "essentially in line" with yr end 2023.

Flat YoY rigs, but these big players sb able to hold or modestly grow #Oil production.

Key issue for US 2024 oil growth - can the remaining 54% do the same? #OOTT



the Middle east. Our energy transition portfolio continues to gain traction. We are encouraged by the emerging opportunities internationally, complementing those in the U.S on both neighbors and third party rigs. Geopolitical events in the Middle east, interest rates and lingering inflation concerns all make for the continued elevated volatility of commodity prices. In this environment, the operator response has been to restrain ambitions and exercise capital discipline. It is understandable why operators are looking at mergers in this environment. The near term effect of recently announced mergers is yet to be fully determined. Notwithstanding this uncertainty, international prospects, particularly those driven by NOCs, remain very attractive. Our geographical position is unique in the global land drilling industry. It enables us to capture international growth, at the same time, we are positioned to capitalize on any emerging growth in the US. Next, I will discuss the pricing environment. Our fourth quarter Results for the lower 48 reflect continued stabilization of leading edge market prices. I want to reemphasize the rates for our highest spec rigs exceed all of the pre-2023 market highs. Our focus in the lower 48 market remains profitability while we stay committed to delivering superior value to our customers. As such, we continue to demonstrate the value of our technology portfolio with NDS. As I mentioned, in the international market, we have committed seven additional rigs in 2024. This growth should provide substantial uplift potential to our earnings. We believe there is room for additional rig deployments in the eastern hemisphere and Latin America. I will discuss these in a few minutes. We surveyed the largest lower 48 clients at the end of the fourth quarter. Our survey covers 17 operators, which account for approximately 46% of the working rigs at the end of the quarter. During the fourth quarter, consistent with the prior survey's results, this group added more than ten rigs. The latest survey indicates this group's year end 2024 rig count will be essentially in line with the year-end 2023. More than half of this group signals no change. The balance indicates minor additions or decreases. We believe that with the uncertainty in commodity prices, customers remain cautious about their plans for 2024. Our plan for our lower 48 business this year fully contemplates the current environment. We continue to focus on maximizing free cash flow while we look for opportunities to put additional rigs to work. Our view of the international market is bullish. With the international additions already in hand, we would increase our international rig count by almost 10% by the end of 2024. We expect our segment revenue to grow by low double digits and our EBITDA margins to expand. Next, I will share some of our notable recent highlights and accomplishments. First, NDS was selected by a very large operator in the Middle east to install NDS's advanced rig control and automation system on five working rigs. The multi-round award process was competitive. This award marked the first rig automation project in this market. It is notable the Nabors was chosen to lead this effort. Second, we commenced operations in Arkansas to drill wells supporting lithium production. ExxonMobil selected a Nabor's PaceX rig for this project. Third, another of our PaceX rigs was awarded Rig of the year by one of the largest operators in the Permian for the second consecutive year. Competition for this award came from rigs operated by six other drilling contractors. Next, we are now providing support to a drilling contractor in Libya under a recently signed technical services agreement. Under the agreement, we are providing expertise but have no capital at risk. In addition to these highlights, I want to mention the notable agreement between neighbors and SLB. Together we will collaborate to scale automated. Drilling solutions for operators and drilling contractors. This integration of both companies' platforms expands the breadth of drilling automation

4 13 2.2K

Dan Tsubouchi @Energy_Tidbits · Feb 7

#1 oil challenge every year!

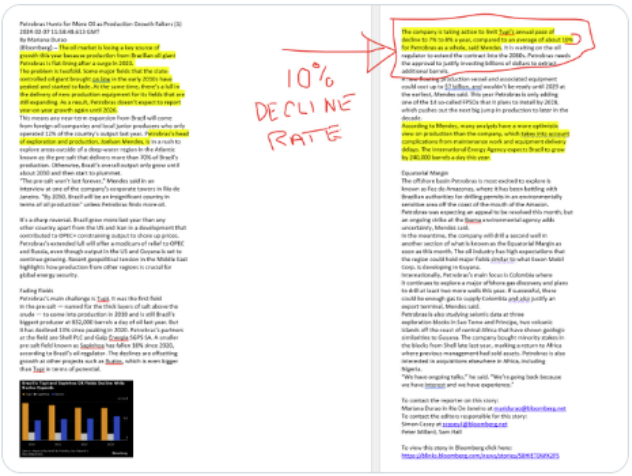
#Oil production declines every year so co's have to replace declines just to stay flat.

Petrobras: Brazil average decline is 10% so have to add 280,000 boe/d each year just to stay flat.

Petrobras reminds no YoY oil growth in 2024 & 2025.

...

Show more



> **Dan Tsubouchi** @Energy_Tidbits · Feb 6
>
> 
>
> 1st challenge to meet increasing #Oil demand, even IEA fcasts increase, is that existing production is always declining.
>
> most use ~5% base decline or 5 mmb/d for world to ...

15 67 15K

Dan Tsubouchi @Energy_Tidbits · Feb 7

For those not near their laptops, @EIAgov just released at 8:30am MT its #Oil #Gasoline #Distillates inventory as of Feb 2. Table below compares EIA data vs @business expectations and vs @APIenergy yesterday. Prior to release, WTI was $73.65. #OOTT

Oil/Products Inventory Feb 2: EIA, Bloomberg Survey Expectations, API			
(million barrels)	EIA	Expectations	API
Oil	5.52	2.07	0.67
Gasoline	-3.15	1.50	3.65
Distillates	-3.22	-2.50	-3.70
	-0.85	1.07	0.62
Note: Oil is commercial so builds in +0.6 mmb in SPR for the Feb 2 week			
Note: Included in the oil data, Cushing had a 0.03 mmb draw for Feb 2 week			
Source EIA, Bloomberg			
Prepared by SAF Group https://safgroup.ca/news-insights/			

1 7 1.3K

Petrobras reminds its 11/23/23 2024-28 plan forecasts flat Brazil #Oil production in 24 & 25 vs IEA forecast for +240,000 b/d YoY in 2024.

Thx @maridurao
#OOTT

11 38 4K