Energy Tidbits

Did Summer Oil Demand Pick Up? Vortexa Global Oil Floating Storage Last Two Weeks are Two of Lowest since Covid

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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**	**$84**	**$86**
Retail gasoline price (dollars per gallon)	**$3.50**	**$3.40**	**$3.30**
U.S. crude oil production (million barrels per day)	**12.9**	**13.2**	**13.7**
Natural gas price at Henry Hub (dollars per million British thermal units)	**$2.50**	**$2.30**	**$3.30**
U.S. liquefied natural gas gross exports (billion cubic feet per day)	**12**	**12**	**14**
Shares of U.S. electricity generation			
Natural gas	42%	42%	40%
Coal	17%	16%	16%
Renewables	21%	23%	25%
Nuclear	19%	19%	19%
U.S. GDP (percentage change)	**2.5%**	**2.4%**	**1.6%**
U.S. CO_2 emissions (billion metric tons)	**4.8**	**4.8**	**4.8**

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

- **Crude oil prices.** Although crude oil prices have fallen recently, we continue to expect crude oil prices will rise in the second half of 2024 (2H24). The Brent crude oil spot price ended July at $81 per barrel (b), compared with an average for the month of $85/b. We expect the Brent price will return to between $85/b and $90/b by the end of the year. Rising crude oil prices in our forecast are the result of falling global oil inventories. We estimate global oil inventories decreased by 0.4 million barrels per day (b/d) in 1H24 and will fall by 0.8 million b/d in 2H24. Inventory withdrawals stem in part from ongoing OPEC+ production cuts. Although we expect crude oil prices to rise in the coming months, our forecast for the annual average Brent crude oil price in 2025 is down from a forecast of $88/b in our July STEO, owing mostly to reduced oil consumption.

- **World oil consumption.** We forecast that global consumption of liquid fuels will increase by 1.1 million b/d in 2024 and 1.6 million b/d in 2025, down from a forecast of 1.8 million b/d in our previous STEO. Most of the reduction in our oil consumption forecast is in China, where we expect slowing economic growth will continue to reduce diesel consumption.

- **Jet fuel consumption.** Jet fuel consumption is rising based on increased air travel. In our August STEO, we forecast 3% more U.S. jet fuel consumption in 2024 compared with 2023 and growth of another 3% in 2025. In our forecast, U.S. jet fuel consumption exceeds 2019's pre-pandemic level in 2025. We expect that relatively strong jet fuel consumption will cause jet fuel prices to rise by more than prices for other fuels in 2025.

- **Natural gas markets.** Following a very hot July across much of the United States, we expect slightly milder weather in August will reduce natural gas consumption. We forecast natural gas consumed to generate electricity generation will average 46 billion cubic feet per day (Bcf/d) in August, down 2% from July. Dry natural gas production in our forecast for August stays close to its level in July. Because of falling consumption and flat production, we expect the Henry Hub price to stay relatively low, remaining below $2.50/MMBtu through October. However, we expect seasonal increases in consumption for space heating, along with a ramp up in liquefied natural gas (LNG) exports from new facilities in Texas and Louisiana, will push the Henry Hub price to average about $3.10/MMBtu from November through March.

- **Electricity prices.** Residential electricity price are increasing more slowly because of lower natural gas prices. We expect electricity prices will rise by about 1% this year for residential customers, which would be the lowest percentage growth since 2020. Natural gas prices started falling in 2023, and the resulting lower costs of producing electricity are now being reflected in retail electricity prices as regulatory authorities approve new rates.

Notable forecast changes

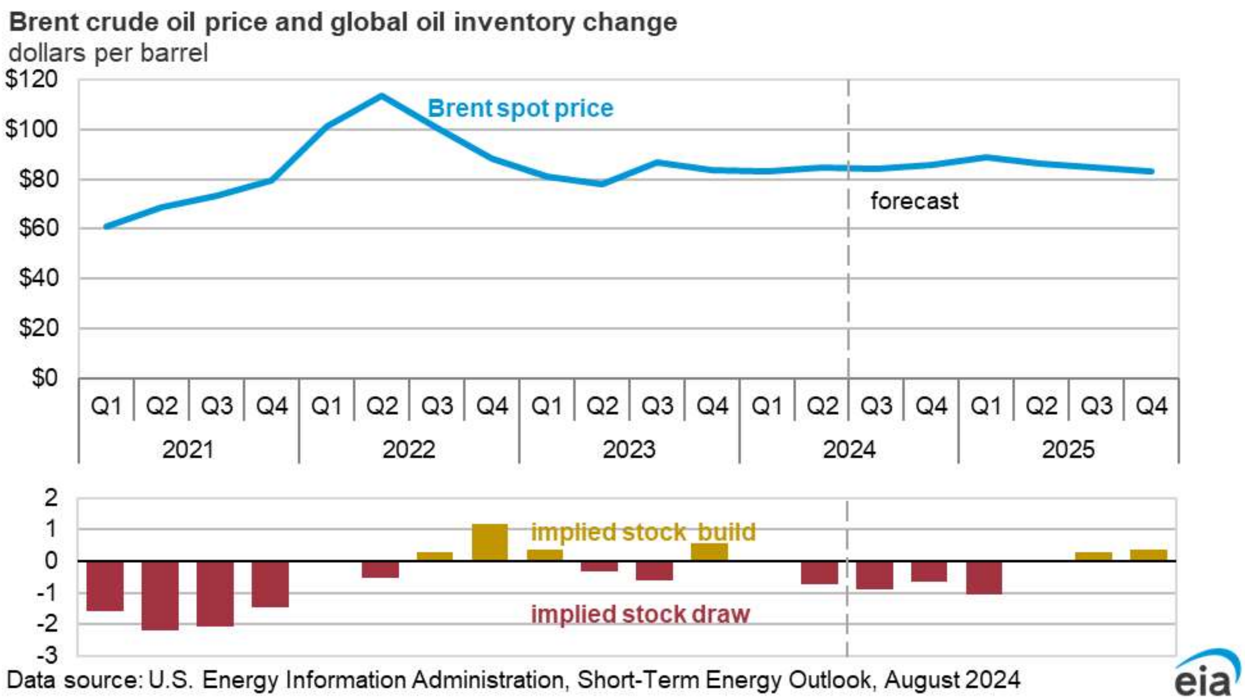
Current forecast: August 6, 2024; previous forecast: July 9, 2024	**2024**	**2025**
World liquid fuels consumption growth (million barrels per day)	**1.1**	**1.6**
Previous forecast	1.1	1.8
Change	0.0	-0.2
Brent crude oil spot price (dollars per barrel)	**84**	**86**
Previous forecast	**86**	**88**
Percentage change	-2.2%	-3.0%

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 $85 per barrel (b) in July, up $3/b from the average in June. Although the monthly average Brent spot price was higher in July, daily spot prices fell toward the end of the month driven in part by signals that global economic conditions may be slowing, which has the potential to reduce global oil demand growth. Although market concerns about the economy have lowered crude oil prices in recent days, we still expect that the most recent round of OPEC+ production cuts will reduce global oil inventories over the next three quarters in our forecast and push oil prices higher.



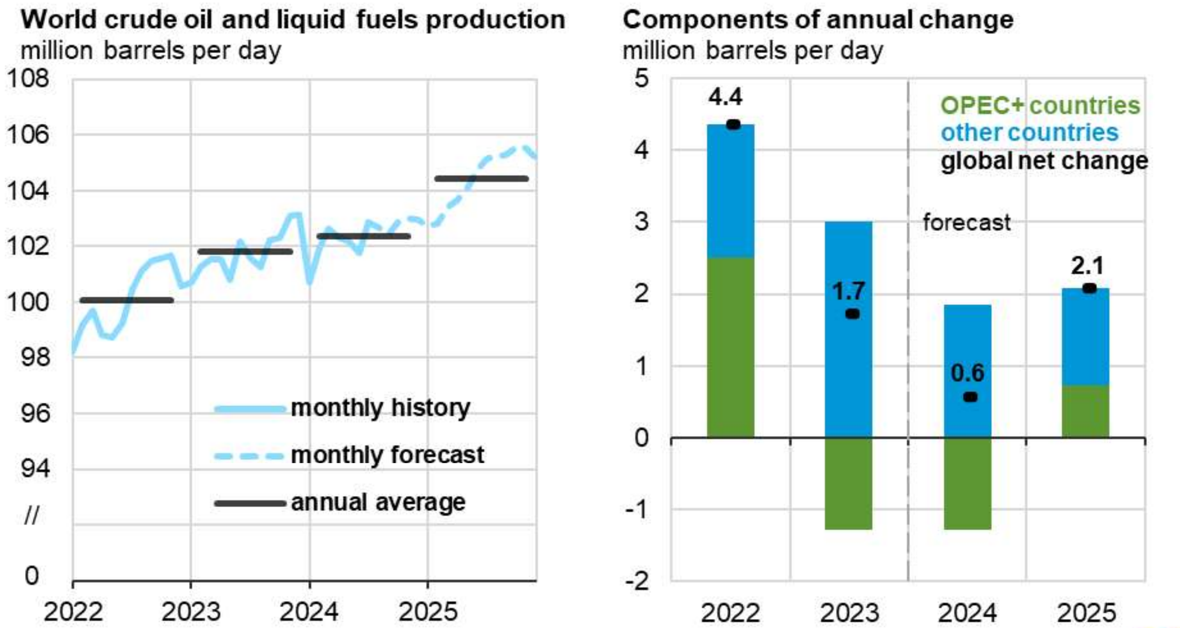
We expect the Brent crude oil spot price will increase from its current level below $80/b to average $85/b for the remainder of 2024 and $89/b in the first quarter of 2025 (1Q25). The main source of this upward price pressure is falling global oil inventories resulting from OPEC+ production cuts. We expect global oil inventories will decrease by an average of 0.8 million barrels per day (b/d) in 2H24, with further declines in 1Q25.

We anticipate that the market will gradually return to moderate inventory builds in mid-2025 after the expiration of voluntary OPEC+ supply cuts in 4Q24 and as forecast production growth from countries outside of OPEC+ begins to outweigh global oil demand growth. We estimate that global oil inventories will increase by an average of 0.3 million b/d in the second half of 2025. We forecast the Brent price will average $86/b in 2025 and fall to $83/b by the end of the year.

Global oil production and consumption

Although OPEC+ cuts are limiting world oil production growth, we expect that growth outside of OPEC+ will remain strong. We forecast that global production of petroleum and other liquid fuels will increase by 0.6 million b/d in 2024, the net result of a 1.3 million-b/d decline from OPEC+ countries and a more than 1.8 million b/d-increase from countries outside of OPEC+, led by growth in the United States, Canada, Guyana, and Brazil.

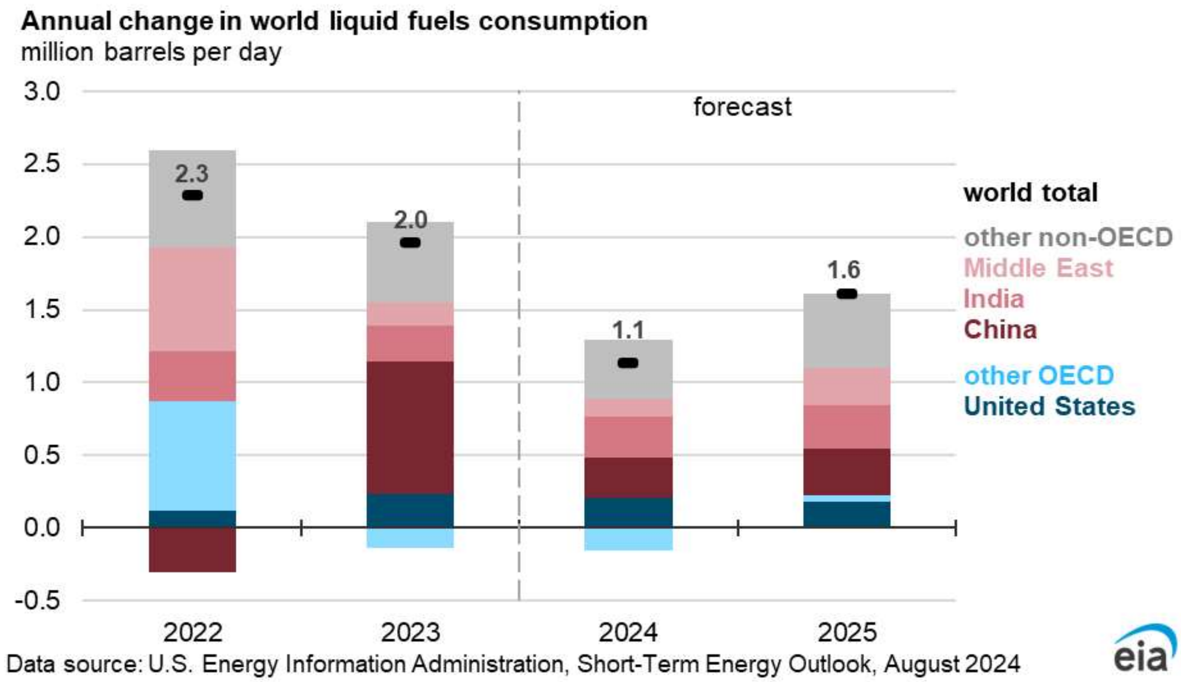
We expect that global production of liquid fuels will increase by 2.1 million b/d in 2025, as the OPEC+ voluntary production cuts unwind throughout the year. OPEC+ production increases by 0.7 million b/d, combined with 1.4 million b/d of production growth from countries outside of OPEC+.



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

The recent outbreak of wildfires near production centers in Alberta has reduced Canada's crude oil production. We estimate that an average of 0.2 million b/d of Canada's production was taken offline in July, but based on the latest reports of wildfires abating and crews returning to production fields, we assume that the outages will not persist.

In addition, the ramp up of the Trans Mountain Expansion pipeline has increased export capacity and alleviated distribution bottlenecks for Canada's producers, with tanker tracking data showing many of those early volumes initially flowing to the United States—a key consumer of Canadian crude oil. Despite the temporary disruption to supply, Canada's liquid fuels production increases in our forecast by nearly 0.5 million b/d from 2023 through 2025.



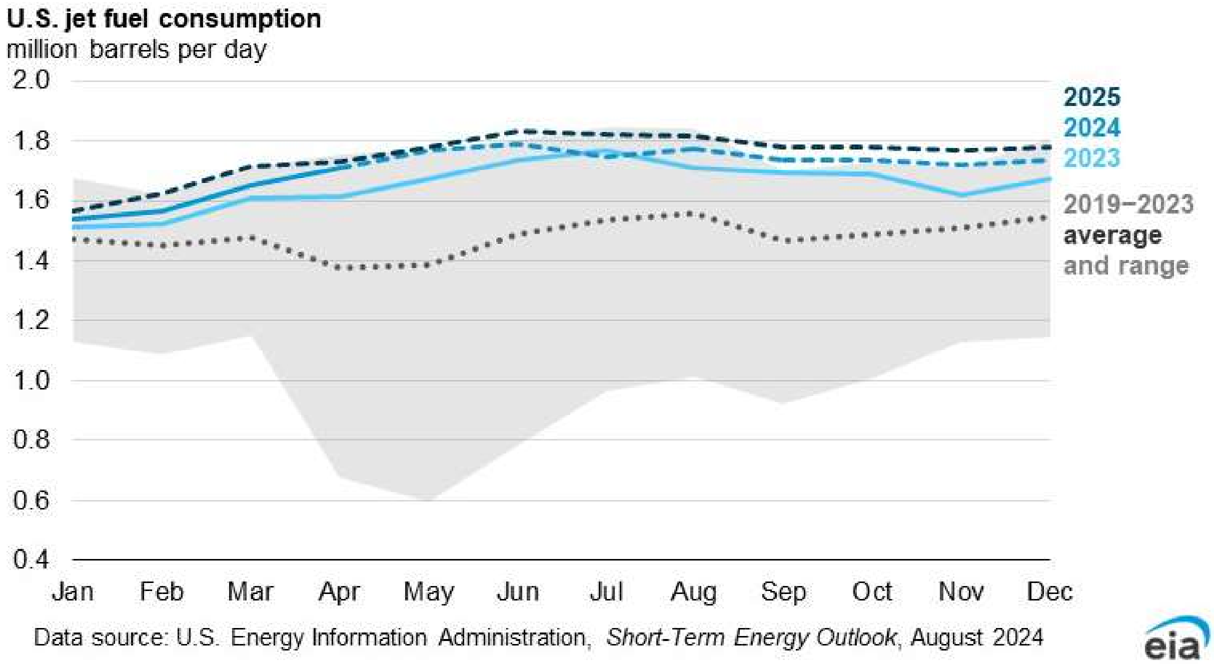
We forecast that global consumption of liquid fuels will increase by 1.1 million b/d in 2024 and 1.6 million b/d in 2025; the latter is 0.2 million b/d less than in our previous STEO. Nearly all of our expected liquid fuels demand growth is from non-OECD countries, which increase their liquid fuels consumption by 1.1 million b/d in 2024 and 1.4 million b/d in 2025.

We reduced our forecast of petroleum consumption growth in China for 2024 and 2025 because of slower economic activity as well as updated monthly statistics showing reduced diesel demand, crude oil imports, and crude oil refinery runs in China. China's GDP for 2Q24 grew 4.7% from last year, slightly less than the government's 5% target, reflecting slower investment in the country's real estate and construction sectors. We now forecast consumption of petroleum and liquid fuels consumption will grow in China by about 0.3 million b/d in 2024 and in 2025, which would be less than the 2015–2019 average growth rate of 0.5 million b/d.

U.S. Petroleum Products

Jet fuel consumption

U.S. jet fuel consumption is rising due to increasing airline travel. In our August STEO, we forecast U.S. jet fuel consumption to increase by 3% in 2024 compared with 2023 and another 3% in 2025. We forecast that U.S. jet fuel consumption will exceed 2019's pre-pandemic level in 2025. Jet fuel consumption is primarily driven by commercial air travel demand, which can be influenced by economic activity, employment, and the cost of air travel.



According to TSA passenger volumes from January through July 2024, 6% more passengers boarded flights at U.S. airports compared with the same period in both 2019 and 2023. Despite more passengers, jet fuel consumption this year remains below 2019 levels for a few reasons:

- Commercial airlines continue to improve the fuel economy of their fleets to reduce operating costs.
- U.S. airlines are shifting to larger (and more full) aircraft, so airlines have been flying more passengers per flight than in 2019, according to the July 12 *Industry Review and Outlook* from Airlines for America.
- Passengers are taking fewer international flights, which consume more fuel.

We forecast more jet fuel to be consumed in 2025 in the United States than in 2019 based on our assumption that U.S. flight departures and TSA passenger volumes will continue to grow. Sources of uncertainty in the forecast include aircraft supply-chain issues that could worsen aircraft shortages and air traffic controller shortages.

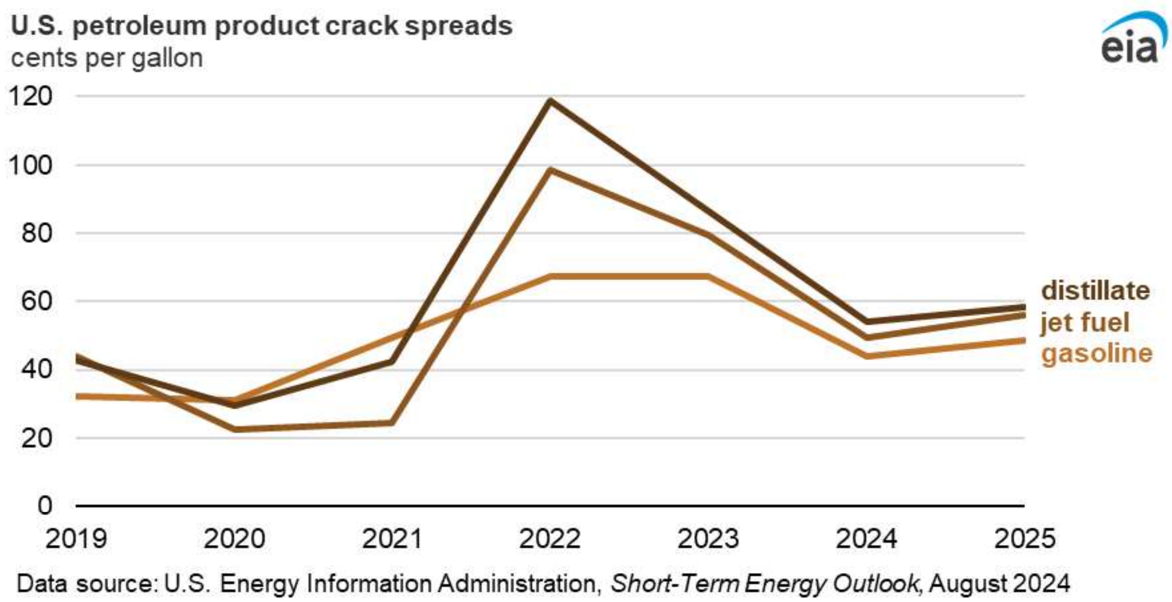
Petroleum product crack spreads

In our forecast, increases in U.S. jet fuel consumption cause the wholesale price of jet fuel to rise by more than gasoline and diesel prices next year. We expect more jet fuel will be consumed next year in the United States than before the pandemic in 2019, but we expect gasoline and distillate consumption to remain below 2019 volumes.

Crack spreads are the difference between the price for wholesale refined products and the price of an equivalent volume of crude oil. We use them as an estimate of refinery margins for various fuels. In the first seven months of 2024, the jet fuel crack spread has been, on average, higher than the gasoline crack spread and about equal to the distillate fuel oil crack spread.

We forecast strong jet fuel consumption to drive increases in U.S. refinery margins for jet fuel, and consequently the crack spread in 2025. As jet fuel consumption increases, we expect jet fuel inventories to decrease to near-five-year (2019–2023) lows beginning in 2Q25.

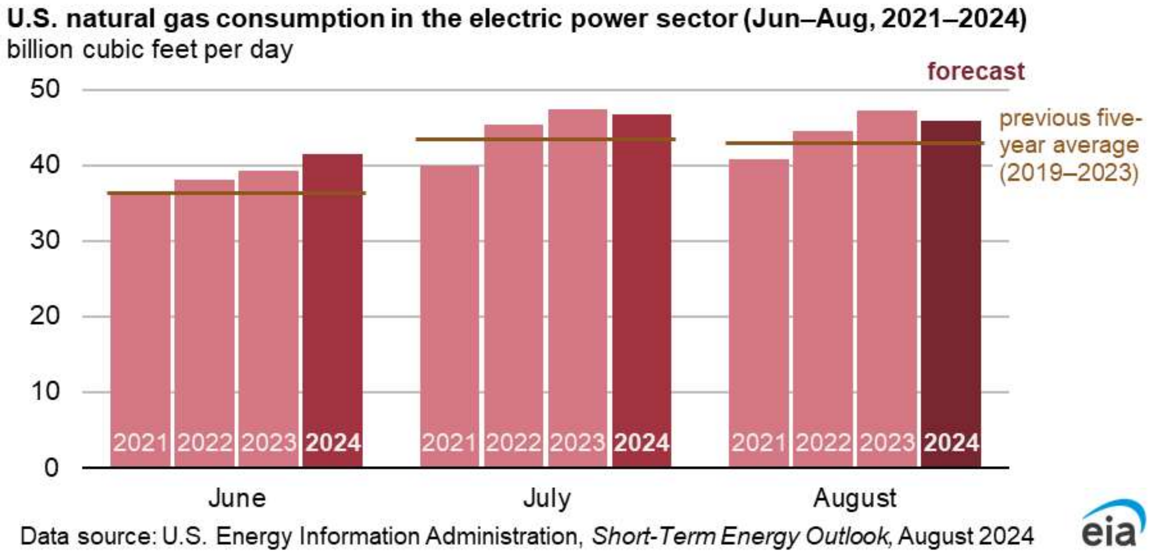
We forecast 4% less consumption of gasoline in the United States in 2025 than in 2019 and 3% less distillate fuel oil consumption. We forecast inventories for all three transportation fuels to be below their five-year averages in 2025 and for crack spreads to average higher in 2025 than in 2024.



Natural Gas

Natural gas consumption

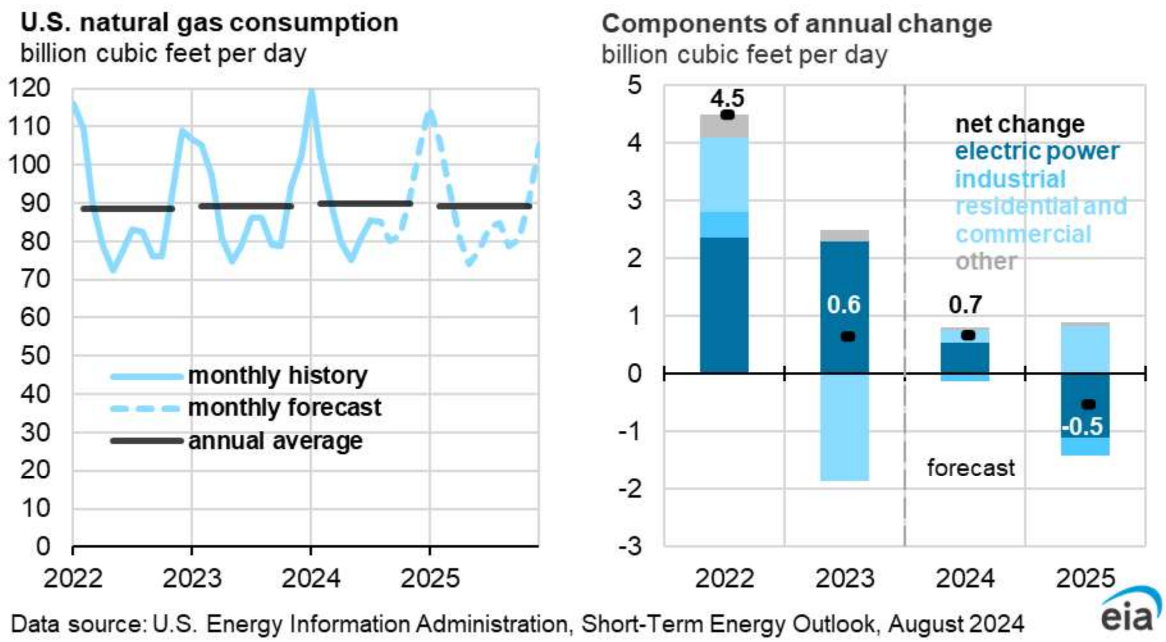
After a hot start to the summer, we expect close-to-normal temperatures will reduce U.S. natural gas consumption in August. We forecast natural gas consumption in the United States in August will fall slightly from July because of less natural gas consumption in the electric power sector. The electric power sector consumed 13% (5 Bcf/d) more natural gas in July than it did in June because of a heat wave and subsequent spike in natural gas-fired electricity generation.



Because electricity is used to meet demand for air conditioning during warm weather, natural gas consumption in the U.S. electric power sector is the primary driver of total natural gas consumption in the summer months. We forecast natural gas consumed to generate electricity in the United States to average 46 Bcf/d in August, down 2% from July.

U.S. natural gas consumption in the electric power sector in July approached the record level set a year earlier, despite Hurricane Beryl leaving millions of homes and businesses in Texas without electricity for several days in early July. More natural gas is consumed regularly to generate electricity in Texas than any other state, according to our *Natural Gas Monthly*. Heat wave conditions in other States in early July, particularly those in the West Coast and in the Northeast, and increased use of natural gas-fired electricity generation offset any declines in natural gas consumption for electric power because of the hurricane.

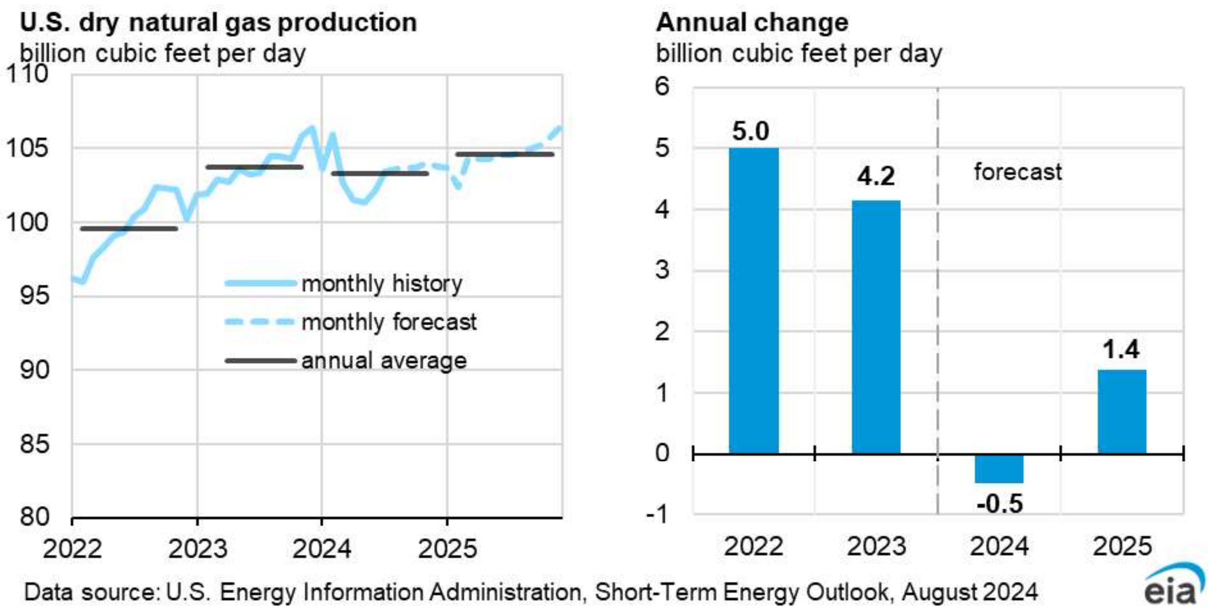
For 2024, we forecast about 1% more natural gas consumption in the United States than last year, averaging 90 Bcf/d. An increase in consumption in the residential and commercial sectors and the electric power sector offsets a decline in natural gas consumption in the industrial sector. Our forecast U.S. natural gas consumption declines by 1% in 2025 because of less consumption in the electric power sector. The forecast decline in U.S. natural gas-fired generation is the result of our assumption that next summer will be slightly cooler than this summer, reducing overall electricity generation, as well as the expansion of electricity generation for solar.



Natural gas production and prices

U.S. dry natural gas production averaged 103 Bcf/d in July, up about 1% (1 Bcf/d) from June. We forecast natural gas production in August to be about the same as it was in July, but 1% (1 Bcf/d) less than in August 2023. Record-low Henry Hub natural gas spot prices in 1H24 led producers to curtail natural gas production earlier this year. EQT, the largest natural gas producer in the United States, recently announced that it would continue to curtail production by about 0.5 Bcf/d through 2H24.

We forecast U.S. natural gas production to average 103 Bcf/d in 2024, down slightly from 2023, and then increase to average of 105 Bcf/d in 2025. The main drivers for our forecast of growth in U.S. production next year are an increasing Henry Hub price and growing natural gas demand as feedgas for liquefied natural gas (LNG) projects scheduled to come on line in 2H24 and 2025.



The U.S. benchmark Henry Hub spot price averaged $2.07 per million British thermal units (MMBtu) in July. We forecast the price will average about $2.60/MMBtu for the rest of 2024 (August–December), which is slightly less than the average of $2.69/MMBtu during the same period in 2023, and we expect the price to average $2.30/MMBtu for all of 2024. If natural gas production is greater and consumption in the electric power sector is less than we expect, prices could be lower than in our forecast.

Electricity, Coal, and Renewables

Electricity generation

We forecast that U.S. power plants will generate about 4,300 billion kilowatthours of electricity in 2024, which would be 3% more than in 2023, in response to a hotter-than-normal start to summer and increasing power consumption by the residential and commercial sectors. Forecast electricity generation grows by an additional 1% in 2025.

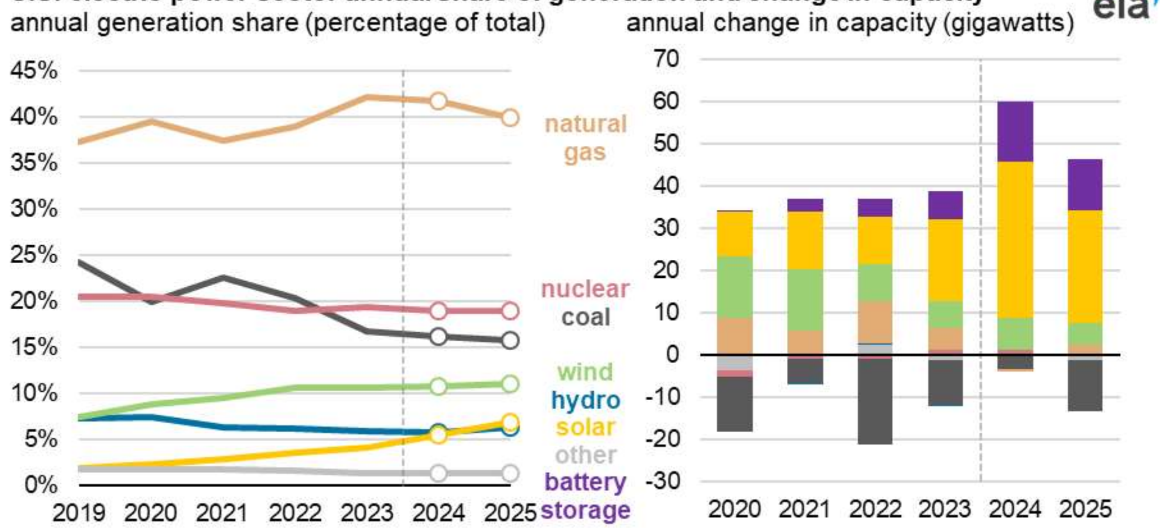
The fastest-growing source of electricity in the United States is solar power. We expect utility-scale solar in the electric power sector to account for 5% of U.S. generation in 2024, up from 4% last year, and to increase to a share of 7% in 2025. Current plans indicate the electric power sector will increase solar generating capacity by 64 gigawatts (GW) (71%) between 2023 and 2025. Similarly, wind power capacity is set to increase 13 GW (9%) over the next two years, but its generation share remains relatively stable at 11% of total U.S. generation.

The intermittent generation patterns of solar and wind are assisted by additions of battery storage capacity, which charge during low-cost periods of the day and generate power during high-cost periods. We expect battery storage capacity will grow by 26 GW (169%) between 2023 and 2025.

Although natural gas continues to provide more U.S. electricity generation than any other source, we expect growing generation from renewables will displace more natural gas over time. The forecast natural gas generation share in 2024 averages 42%, similar to what it was in 2023, and falls to 40% in

2025. We expect coal's generation share will fall to a record low of 16% in 2024 as a result of recent capacity retirements and lower utilization rates of the remaining coal fleet.

U.S. electric power sector annual share of generation and change in capacity

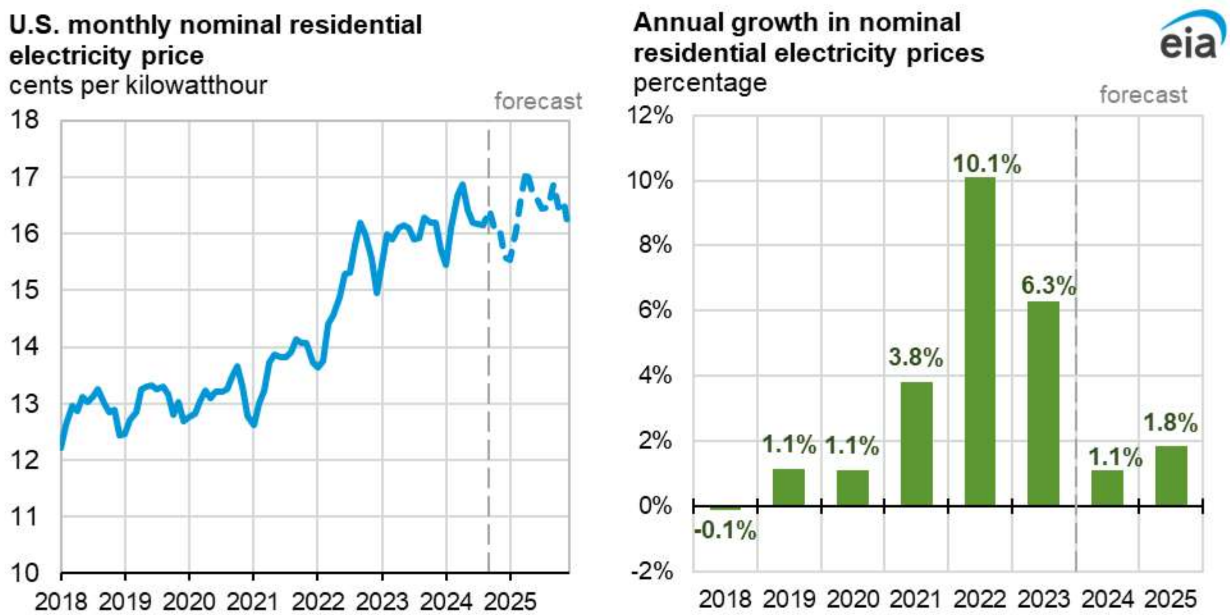


Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, August 2024

Residential electricity prices

Our forecast growth rate in residential electricity prices this year would represent the slowest rise in electricity rates since 2020. Electricity prices increased by an annual average of almost 7% between 2021 and 2023 as a result of highly volatile natural gas prices, which is the primary fuel used for power generation. We expect that the U.S. price of electricity to residential end-use customers will average 16.2 cents per kilowatthour in 2024, which would be 1% higher than the average price in 2023. The forecast average U.S. price to residential end-use customers increases by about 2% in 2025.

U.S. natural gas prices started falling in 2023, and the resulting lower costs of producing electricity are now being reflected in retail electricity prices after regulatory authorities have approved new rates. Although natural gas prices in our forecast are lower this year than they were from 2021 through 2023, other factors continue to cause electricity prices to rise. Electricity rates also reflect costs for delivering electricity to end-use customers. Utilities have faced increased costs for building new transmission lines and distribution upgrades in recent years, which are offsetting declines in fuels prices.

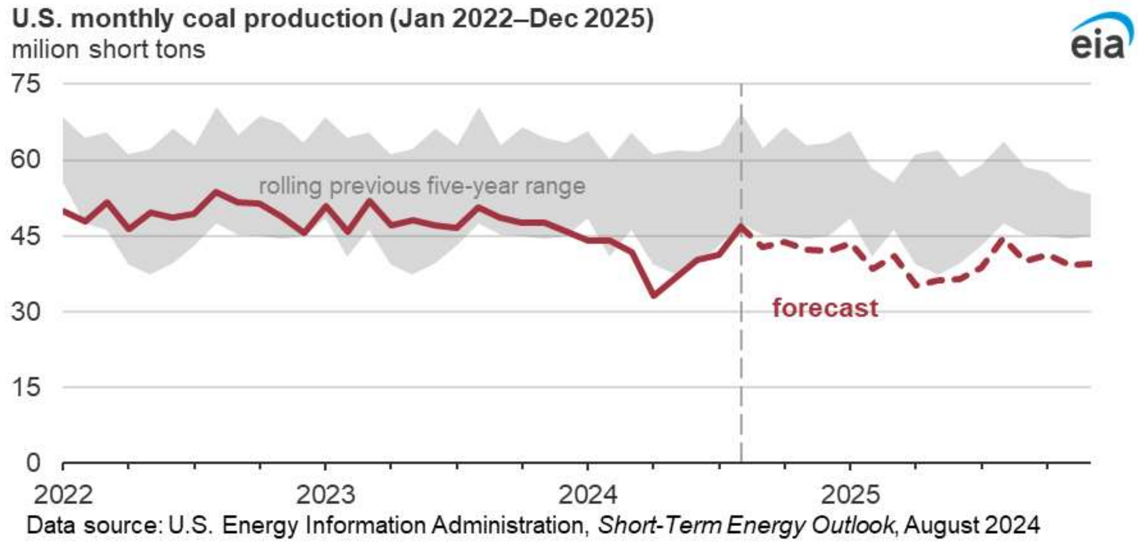


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2024

Coal markets

For 2024, we forecast that coal production in the United States will total about 500 million short tons (MMst), a 14% decline from last year, and we forecast a further 5% dop in production in 2025. Although coal exports in our forecast remain robust, ongoing declines in coal production are the result of less coal being used to generate electric power domestically due to relatively low natural gas prices and 12 GW of coal-fired electricity generating capacity going into retirement.

We expect the U.S. electricity power sector will consume 384 MMst of coal this year, 1% less than it did in 2023. We expect the power sector will consume an additional 2% less coal next year. With U.S. coal production falling more quickly than coal consumption, we expect that coal will be consumed from inventories next year. The U.S. electric power sector’s coal inventories stood at 120 MMst at the end of July, and we forecast those inventories will be reduced to 118 MMst at the end of 2024 and 84 MMst at the end of 2025.

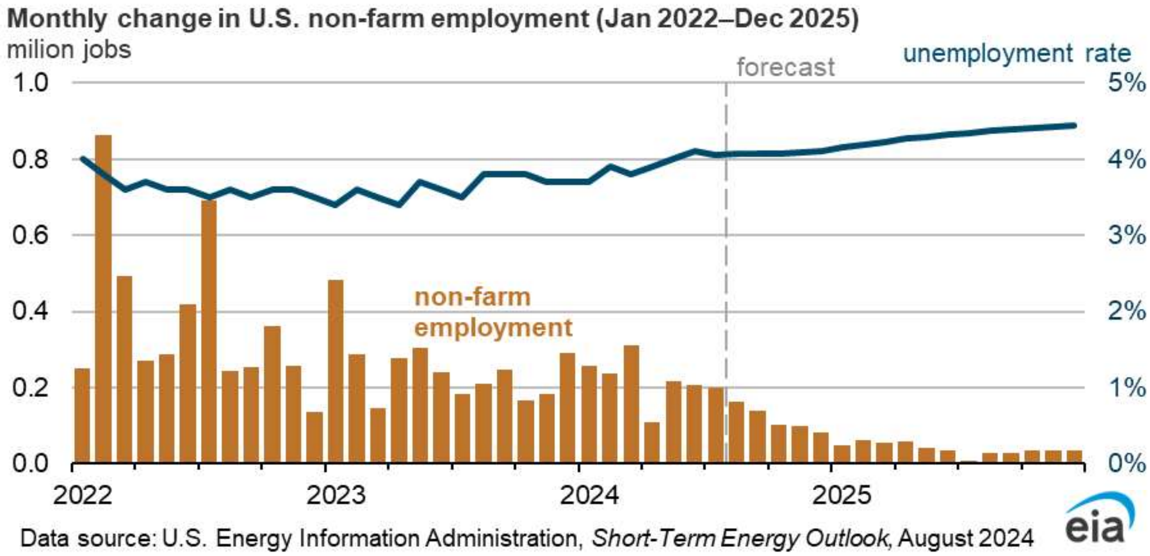


Economy, Weather, and CO_2

U.S. macroeconomics

The Bureau of Labor Statistics (BLS) reported that the U.S. unemployment rate for June was slightly higher than in our July STEO. As a result, we now expect a higher unemployment rate throughout our forecast than we expected last month. The unemployment rate in June was 4.1%, an increase of 0.2 percentage points from what we assumed in last month's STEO. Our forecast now shows the unemployment rate will reach 4.4% by 4Q25, compared with the July STEO forecast of 4.1% in 4Q25. BLS data also showed that the U.S. economy added 206,000 jobs in June, for an average monthly gain of 222,000 jobs during 1H24. Our forecast assumes that job gains will slow to an average of 131,000 per month in 2H24 and 39,000 per month in 2025.

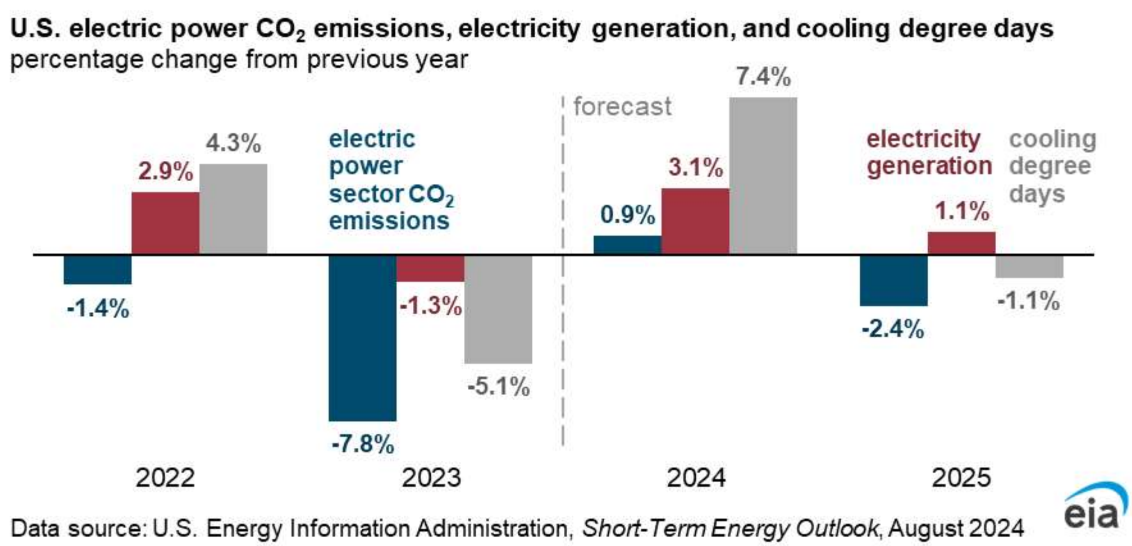
The BLS released employment statistics for July on Friday August 2, after we had completed our analysis for this report. The BLS reported that the unemployment rate rose to 4.3% in July, and the U.S. economy added 114,000 jobs for the month. Although the rising unemployment rate and slowing job growth are directionally consistent with our forecast, they represent an employment situation that is declining more sharply than our forecast assumes. In general, the labor market outlook affects our forecast for gasoline consumption. Assuming all other factors remain equal, fewer employed workers means less driving and less gasoline consumption. Fewer employed workers could also mean less disposable income for consumers on average resulting in less economic activity and reduced energy consumption.



Emissions

We expect U.S. energy-related carbon dioxide (CO_2) emissions to be relatively unchanged between 2023 and 2025. CO_2 emissions in 2024 remain close to 2023 levels as emissions from natural gas, which increase by 1%, are offset by lower CO_2 emissions from coal, which decrease by 1%. These changes reflect increasing electricity generation from natural gas and decreasing generation from coal.

We expect a warmer 2024, with 7% more cooling degree days than in 2023. We expect notable growth in cooling demand in 2024, increasing U.S. electricity generation by 3%. This growth in generation is met by renewables as well as by fossil fuels, notably natural gas, leading to a slight increase in electric power sector CO_2 emissions. CDDs and demand for cooling fall slightly in our forecast for 2025, and we forecast a slight decrease in electric power emissions, primarily from less natural gas-fired generation. As renewable generation continues to grow, the emissions intensity of electricity declines, falling by 2% in 2024 and by 3% in 2025, down to 0.33 metric tons per megawatthour by the end of the forecast. Most growth in renewable generation comes from solar, followed by wind and hydropower.



Weather

Overall, our forecast assumes 2024 is a relatively hot year. Initial data from the National Oceanic and Atmospheric Administration show average U.S. temperatures in July were similar to July 2023, which was hotter than normal. However, the regions experiencing hot weather have shifted from last summer. In July, the Pacific region experienced 12% more CDDs than a year ago, and CDDs in the Northeast totaled 4% more than a year ago. But the West South Central Census Division (which includes Texas) experienced 17% fewer CDDs compared with the very hot July of last year in that region.

Table 3a. World Petroleum and Other Liquid Fuels Production, Consumption, and Inventories

U.S. Energy Information Administration | Short-Term Energy Outlook - August 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)															
World total	**101.15**	**101.49**	**101.67**	**102.84**	**101.75**	**102.08**	**102.67**	**102.92**	**102.98**	**104.14**	**105.21**	**105.41**	**101.79**	**102.36**	**104.44**
Crude oil	77.15	76.61	76.17	77.13	76.53	76.10	76.62	77.19	77.63	78.04	78.86	79.23	76.76	76.61	78.45
Other liquids	24.00	24.88	25.50	25.71	25.22	25.98	26.05	25.74	25.34	26.10	26.35	26.18	25.03	25.75	26.00
World total	**101.15**	**101.49**	**101.67**	**102.84**	**101.75**	**102.08**	**102.67**	**102.92**	**102.98**	**104.14**	**105.21**	**105.41**	**101.79**	**102.36**	**104.44**
OPEC total (b)	32.77	32.46	31.63	31.88	32.02	31.87	32.06	32.04	32.13	32.40	32.70	32.51	32.18	32.00	32.44
Crude oil	27.38	27.23	26.37	26.58	26.63	26.60	26.76	26.71	26.85	27.11	27.42	27.23	26.89	26.67	27.15
Other liquids	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
Non-OPEC total	**68.38**	**69.03**	**70.04**	**70.96**	**69.73**	**70.21**	**70.61**	**70.88**	**70.85**	**71.74**	**72.51**	**72.90**	**69.61**	**70.36**	**72.01**
Crude oil	49.77	49.38	49.80	50.54	49.91	49.50	49.86	50.47	50.79	50.92	51.44	52.00	49.88	49.93	51.29
Other liquids	18.60	19.66	20.24	20.41	19.82	20.72	20.75	20.41	20.06	20.82	21.07	20.90	19.74	20.43	20.72
Consumption (million barrels per day) (c)															
World total	**100.80**	**101.82**	**102.27**	**102.27**	**101.81**	**102.80**	**103.55**	**103.58**	**104.02**	**104.19**	**104.91**	**105.05**	**101.80**	**102.94**	**104.55**
OECD total (d)	**45.09**	**45.56**	**45.95**	**45.98**	**44.80**	**45.41**	**46.24**	**46.32**	**45.66**	**45.40**	**46.22**	**46.39**	**45.65**	**45.69**	**45.92**
Canada	2.34	2.48	2.63	2.37	2.37	2.33	2.51	2.49	2.47	2.42	2.52	2.50	2.45	2.42	2.48
Europe	13.12	13.57	13.69	13.39	12.84	13.41	13.75	13.51	13.18	13.34	13.75	13.51	13.45	13.38	13.45
Japan	3.68	3.05	3.06	3.38	3.44	2.95	3.06	3.38	3.48	2.89	2.99	3.30	3.29	3.21	3.16
United States	19.66	20.38	20.37	20.56	19.80	20.53	20.79	20.67	20.26	20.63	20.82	20.79	20.25	20.45	20.63
U.S. Territories	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Other OECD	6.19	5.96	6.09	6.16	6.23	6.07	6.02	6.15	6.14	6.01	6.03	6.16	6.10	6.12	6.08
Non-OECD total	**55.71**	**56.27**	**56.33**	**56.29**	**57.02**	**57.39**	**57.31**	**57.26**	**58.36**	**58.79**	**58.68**	**58.67**	**56.15**	**57.24**	**58.63**
China	16.02	16.22	15.89	16.11	16.48	16.38	16.14	16.36	16.72	16.83	16.44	16.66	16.06	16.34	16.66
Eurasia	4.66	4.82	5.16	5.06	4.69	4.85	5.20	5.10	4.74	4.91	5.26	5.16	4.93	4.96	5.02
Europe	0.74	0.76	0.77	0.77	0.75	0.77	0.77	0.78	0.76	0.78	0.78	0.78	0.76	0.77	0.78
Other Asia	14.57	14.45	13.92	14.22	15.01	15.04	14.42	14.71	15.57	15.55	14.91	15.25	14.29	14.80	15.32
Other non-OECD	19.71	20.02	20.59	20.13	20.08	20.34	20.77	20.31	20.56	20.73	21.29	20.81	20.12	20.38	20.85
Total crude oil and other liquids inventory net withdrawals (million barrels per day)															
World total	**-0.35**	**0.33**	**0.60**	**-0.57**	**0.06**	**0.72**	**0.88**	**0.66**	**1.04**	**0.05**	**-0.30**	**-0.36**	**0.00**	**0.58**	**0.10**
United States	-0.08	-0.11	-0.25	0.30	0.14	-0.53	-0.04	0.20	0.04	-0.37	-0.07	0.27	-0.03	-0.06	-0.03
Other OECD	0.32	-0.02	-0.15	0.09	-0.02	0.38	0.28	0.14	0.31	0.12	-0.07	-0.19	0.06	0.19	0.04
Other inventory draws and balance	-0.59	0.46	1.01	-0.96	-0.06	0.87	0.64	0.31	0.70	0.29	-0.16	-0.44	-0.02	0.44	0.09
End-of-period commercial crude oil and other liquids inventories (million barrels)															
OECD total	**2,746**	**2,782**	**2,815**	**2,776**	**2,756**	**2,761**	**2,728**	**2,685**	**2,654**	**2,677**	**2,689**	**2,682**	**2,776**	**2,685**	**2,682**
United States	1,231	1,264	1,283	1,252	1,230	1,269	1,262	1,233	1,229	1,263	1,269	1,244	1,252	1,233	1,244
Other OECD	1,515	1,517	1,531	1,523	1,526	1,491	1,465	1,452	1,425	1,414	1,420	1,438	1,523	1,452	1,438

(a) Includes crude oil, lease condensate, natural gas plant liquids, other liquids, refinery processing gain, and other unaccounted-for liquids. Differences in the reported historical production data across countries could result in some inconsistencies in the delineation between crude oil and other liquid fuels.

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

(c) Consumption of petroleum by the OECD countries is the same as "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.

(d) 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.

Notes:

EIA completed modeling and analysis for this report on August 1, 2024.

- = no data available

The approximate break between historical and forecast values is shown with historical data with no shading; estimates and forecasts are shaded gray.

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

Sources:

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 3d. World Crude Oil Production (million barrels per day)

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Crude oil production (a)															
World total	**77.15**	**76.61**	**76.17**	**77.13**	**76.53**	**76.10**	**76.62**	**77.19**	**77.63**	**78.04**	**78.86**	**79.23**	**76.76**	**76.61**	**78.45**
OPEC+ total (b)	38.20	37.50	36.25	36.34	36.12	35.48	35.56	35.76	36.10	36.45	36.80	36.72	37.07	35.73	36.52
United States	12.67	12.76	13.05	13.25	12.94	13.20	13.33	13.44	13.46	13.66	13.76	13.90	12.93	13.23	13.69
Non-OPEC+ excluding United States	26.27	26.35	26.87	27.54	27.48	27.41	27.73	27.98	28.08	27.93	28.30	28.60	26.76	27.65	28.23
OPEC total (c)	**27.38**	**27.23**	**26.37**	**26.58**	**26.63**	**26.60**	**26.76**	**26.71**	**26.85**	**27.11**	**27.42**	**27.23**	**26.89**	**26.67**	**27.15**
Algeria	1.01	0.98	0.95	0.96	0.91	0.91	-	-	-	-	-	-	0.97	-	-
Congo (Brazzaville)	0.27	0.25	0.26	0.26	0.25	0.25	-	-	-	-	-	-	0.26	-	-
Equatorial Guinea	0.06	0.06	0.06	0.05	0.06	0.05	-	-	-	-	-	-	0.06	-	-
Gabon	0.20	0.21	0.20	0.21	0.21	0.22	-	-	-	-	-	-	0.20	-	-
Iran	2.60	2.74	2.97	3.18	3.24	3.26	-	-	-	-	-	-	2.87	-	-
Iraq	4.41	4.19	4.33	4.33	4.29	4.24	-	-	-	-	-	-	4.32	-	-
Kuwait	2.68	2.59	2.56	2.53	2.46	2.49	-	-	-	-	-	-	2.59	-	-
Libya	1.14	1.15	1.15	1.17	1.10	1.18	-	-	-	-	-	-	1.15	-	-
Nigeria	1.24	1.19	1.21	1.31	1.28	1.24	-	-	-	-	-	-	1.24	-	-
Saudi Arabia	10.02	10.18	9.02	8.93	9.12	9.00	-	-	-	-	-	-	9.53	-	-
United Arab Emirates	3.06	2.94	2.91	2.90	2.91	2.93	-	-	-	-	-	-	2.95	-	-
Venezuela	0.70	0.75	0.76	0.75	0.79	0.83	-	-	-	-	-	-	0.74	-	-
OPEC+ total (b)	**38.20**	**37.50**	**36.25**	**36.34**	**36.12**	**35.48**	**35.56**	**35.76**	**36.10**	**36.45**	**36.80**	**36.72**	**37.07**	**35.73**	**36.52**
OPEC members subject to OPEC+ agreements (d)	**22.94**	**22.60**	**21.49**	**21.48**	**21.49**	**21.33**	**21.61**	**21.63**	**21.75**	**22.01**	**22.32**	**22.13**	**22.12**	**21.52**	**22.05**
OPEC+ other participants total	**15.27**	**14.90**	**14.76**	**14.86**	**14.63**	**14.15**	**13.95**	**14.13**	**14.35**	**14.43**	**14.49**	**14.59**	**14.94**	**14.22**	**14.47**
Azerbaijan	0.52	0.50	0.49	0.49	0.47	0.47	-	-	-	-	-	-	0.50	-	-
Bahrain	0.17	0.20	0.17	0.15	0.13	0.13	-	-	-	-	-	-	0.17	-	-
Brunei	0.08	0.06	0.07	0.08	0.08	0.07	-	-	-	-	-	-	0.07	-	-
Kazakhstan	1.61	1.58	1.49	1.57	1.58	1.52	-	-	-	-	-	-	1.56	-	-
Malaysia	0.39	0.36	0.36	0.38	0.37	0.36	-	-	-	-	-	-	0.37	-	-
Mexico	1.67	1.67	1.65	1.63	1.60	1.56	-	-	-	-	-	-	1.66	-	-
Oman	0.84	0.82	0.80	0.80	0.76	0.76	-	-	-	-	-	-	0.81	-	-
Russia	9.78	9.52	9.49	9.53	9.44	9.19	-	-	-	-	-	-	9.58	-	-
South Sudan	0.13	0.13	0.16	0.17	0.13	0.06	-	-	-	-	-	-	0.15	-	-
Sudan	0.07	0.07	0.07	0.07	0.06	0.03	-	-	-	-	-	-	0.07	-	-
Crude oil production capacity															
OPEC total	**30.45**	**30.33**	**30.58**	**30.91**	**31.06**	**31.16**	**31.10**	**31.03**	**31.09**	**31.23**	**31.34**	**31.34**	**30.57**	**31.09**	**31.25**
Middle East	25.83	25.69	25.92	26.13	26.35	26.37	26.33	26.31	26.41	26.56	26.68	26.68	25.89	26.34	26.58
Other	4.63	4.64	4.67	4.78	4.71	4.79	4.77	4.72	4.68	4.67	4.66	4.66	4.68	4.75	4.67
Surplus crude oil production capacity															
OPEC total	**3.08**	**3.09**	**4.21**	**4.33**	**4.43**	**4.56**	**4.34**	**4.32**	**4.24**	**4.12**	**3.93**	**4.11**	**3.68**	**4.41**	**4.10**
Middle East	3.05	3.04	4.13	4.25	4.33	4.45	4.23	4.21	4.15	4.03	3.86	4.04	3.63	4.31	4.02
Other	0.02	0.05	0.08	0.07	0.11	0.11	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.11	0.08
Unplanned production outages															
OPEC total	**1.94**	**2.13**	**1.95**	**1.52**	**1.52**	**1.48**	**-**	**-**	**-**	**-**	**-**	**-**	**1.88**	**-**	**-**

(a) Differences in the reported historical production data across countries could result in some inconsistencies in the delineation between crude oil and other liquid fuels.

(b) OPEC+ total = OPEC members subject to OPEC+ agreements plus Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan, and Sudan.

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

(d) Iran, Libya, and Venezuela are not sbuject to the OPEC+ agreements.

Notes:

EIA completed modeling and analysis for this report on August 1, 2024.

\- = no data available

The approximate break between historical and forecast values is shown with historical data with no shading; estimates and forecasts are shaded gray.

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

Sources:

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

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 - August 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)															
U.S. total crude oil production (a)	**12.67**	**12.76**	**13.05**	**13.25**	**12.94**	**13.20**	**13.33**	**13.44**	**13.46**	**13.66**	**13.76**	**13.90**	**12.93**	**13.23**	**13.69**
Alaska	0.44	0.43	0.40	0.43	0.43	0.41	0.40	0.42	0.42	0.40	0.38	0.41	0.43	0.41	0.40
Federal Gulf of Mexico (b)	1.88	1.77	1.92	1.88	1.78	1.81	1.80	1.82	1.83	1.84	1.84	1.89	1.87	1.80	1.85
Lower 48 States (excl GOM) (c)	10.35	10.56	10.72	10.94	10.73	10.98	11.13	11.21	11.21	11.41	11.53	11.61	10.64	11.01	11.44
Appalachia region	0.15	0.15	0.15	0.16	0.15	0.15	0.14	0.15	0.16	0.17	0.17	0.18	0.15	0.15	0.17
Bakken region	1.14	1.17	1.26	1.31	1.23	1.26	1.31	1.33	1.31	1.31	1.34	1.35	1.22	1.28	1.32
Eagle Ford region	1.14	1.18	1.18	1.14	1.10	1.08	1.09	1.13	1.14	1.15	1.16	1.16	1.16	1.10	1.15
Haynesville region	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Permian region	5.73	5.79	5.88	6.06	6.04	6.32	6.39	6.40	6.42	6.60	6.66	6.73	5.86	6.29	6.60
Rest of Lower 48 States	2.14	2.22	2.22	2.23	2.17	2.13	2.17	2.17	2.16	2.16	2.17	2.16	2.20	2.16	2.16
Total Supply	**19.67**	**20.38**	**20.37**	**20.56**	**19.80**	**20.53**	**20.79**	**20.67**	**20.26**	**20.63**	**20.82**	**20.79**	**20.25**	**20.45**	**20.63**
Crude oil input to refineries	**15.25**	**16.15**	**16.51**	**15.93**	**15.39**	**16.47**	**16.27**	**15.68**	**15.20**	**16.04**	**16.22**	**15.69**	**15.96**	**15.95**	**15.79**
U.S. total crude oil production (a)	12.67	12.76	13.05	13.25	12.94	13.20	13.33	13.44	13.46	13.66	13.76	13.90	12.93	13.23	13.69
Transfers to crude oil supply	0.39	0.51	0.70	0.58	0.50	0.55	0.44	0.40	0.37	0.42	0.45	0.42	0.55	0.47	0.41
Crude oil net imports (d)	2.27	2.51	2.61	2.29	2.12	2.82	2.20	1.67	1.28	1.53	1.56	1.14	2.42	2.20	1.38
SPR net withdrawals (e)	0.01	0.26	-0.04	-0.04	-0.10	-0.10	-0.11	-0.12	0.00	0.00	0.00	0.00	0.05	-0.11	0.00
Commercial inventory net withdrawals	-0.39	0.12	0.41	-0.10	-0.23	0.02	0.26	-0.04	-0.27	0.12	0.18	-0.08	0.01	0.00	-0.01
Crude oil adjustment (f)	0.29	-0.02	-0.21	-0.05	0.16	-0.02	0.15	0.33	0.36	0.31	0.28	0.31	0.00	0.16	0.32
Refinery processing gain	**0.97**	**1.01**	**1.07**	**1.05**	**0.91**	**1.00**	**1.05**	**1.04**	**0.97**	**1.03**	**1.07**	**1.05**	**1.03**	**1.00**	**1.03**
Natural Gas Plant Liquids Production	**6.01**	**6.42**	**6.58**	**6.70**	**6.51**	**6.81**	**6.60**	**6.57**	**6.58**	**6.74**	**6.74**	**6.82**	**6.43**	**6.62**	**6.72**
Renewables and oxygenate production (g)	**1.24**	**1.29**	**1.31**	**1.35**	**1.34**	**1.34**	**1.36**	**1.36**	**1.37**	**1.39**	**1.39**	**1.41**	**1.30**	**1.35**	**1.39**
Fuel ethanol production	1.00	1.00	1.02	1.05	1.04	1.02	1.03	1.02	1.02	1.02	1.02	1.04	1.02	1.03	1.02
Petroleum products adjustment (h)	**0.20**	**0.22**	**0.23**	**0.23**	**0.21**	**0.22**	**0.22**	**0.22**	**0.20**	**0.21**	**0.21**	**0.21**	**0.22**	**0.22**	**0.21**
Petroleum products transfers to crude oil supply	**-0.39**	**-0.51**	**-0.70**	**-0.58**	**-0.50**	**-0.55**	**-0.44**	**-0.40**	**-0.37**	**-0.42**	**-0.45**	**-0.42**	**-0.55**	**-0.47**	**-0.41**
Petroleum product net imports (d)	**-3.91**	**-3.71**	**-4.03**	**-4.56**	**-4.53**	**-4.31**	**-4.07**	**-4.16**	**-3.99**	**-3.88**	**-4.13**	**-4.33**	**-4.06**	**-4.27**	**-4.08**
Hydrocarbon gas liquids	-2.47	-2.39	-2.42	-2.58	-2.59	-2.70	-2.62	-2.53	-2.69	-2.77	-2.71	-2.67	-2.46	-2.61	-2.71
Unfinished oils	0.28	0.27	0.22	0.18	0.09	0.25	0.39	0.31	0.27	0.35	0.37	0.29	0.24	0.26	0.32
Other hydrocarbons and oxygenates	-0.05	-0.07	-0.04	-0.05	-0.06	-0.08	-0.03	-0.04	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.08
Motor gasoline blending components	0.45	0.67	0.57	0.41	0.40	0.63	0.70	0.46	0.60	0.79	0.75	0.58	0.52	0.55	0.68
Finished motor gasoline	-0.75	-0.58	-0.67	-0.81	-0.76	-0.59	-0.67	-0.83	-0.82	-0.66	-0.81	-0.95	-0.70	-0.71	-0.81
Jet fuel	-0.05	0.01	-0.05	-0.09	-0.09	-0.06	-0.09	0.01	-0.03	0.01	-0.02	0.01	-0.05	-0.06	-0.01
Distillate fuel oil	-0.76	-0.97	-1.01	-1.01	-0.86	-1.12	-1.12	-0.93	-0.67	-0.85	-0.95	-0.85	-0.94	-1.00	-0.83
Residual fuel oil	0.01	-0.04	-0.03	0.00	-0.03	-0.05	-0.03	0.00	0.00	-0.02	-0.05	0.00	-0.01	-0.03	-0.01
Other oils (i)	-0.58	-0.61	-0.59	-0.61	-0.64	-0.59	-0.61	-0.60	-0.58	-0.66	-0.66	-0.66	-0.60	-0.61	-0.64
Petroleum product inventory net withdrawals	**0.30**	**-0.49**	**-0.61**	**0.44**	**0.47**	**-0.45**	**-0.19**	**0.36**	**0.31**	**-0.48**	**-0.24**	**0.36**	**-0.09**	**0.05**	**-0.01**
Consumption (million barrels per day)															
U.S. total petroleum products consumption	**19.66**	**20.38**	**20.37**	**20.56**	**19.80**	**20.53**	**20.79**	**20.67**	**20.26**	**20.63**	**20.82**	**20.79**	**20.25**	**20.45**	**20.63**
Hydrocarbon gas liquids	3.40	3.36	3.25	3.81	3.80	3.37	3.40	3.85	3.87	3.42	3.46	3.91	3.46	3.60	3.66
Other hydrocarbons and oxygenates	0.22	0.28	0.28	0.28	0.30	0.32	0.30	0.33	0.32	0.33	0.33	0.35	0.27	0.31	0.33
Motor gasoline	8.67	9.13	9.05	8.93	8.57	9.22	9.17	8.81	8.63	9.09	9.08	8.77	8.94	8.94	8.89
Fuel ethanol blended into motor gasoline	0.90	0.94	0.94	0.94	0.88	0.95	0.95	0.94	0.90	0.94	0.94	0.94	0.93	0.93	0.93
Jet fuel	1.55	1.67	1.72	1.66	1.58	1.76	1.75	1.73	1.64	1.78	1.81	1.77	1.65	1.71	1.75
Distillate fuel oil	4.01	3.93	3.90	3.90	3.82	3.79	3.91	3.94	3.98	3.96	3.95	4.01	3.93	3.87	3.98
Residual fuel oil	0.29	0.22	0.27	0.31	0.28	0.28	0.33	0.33	0.29	0.29	0.28	0.31	0.27	0.31	0.29
Other oils (i)	1.53	1.79	1.89	1.67	1.44	1.79	1.93	1.69	1.53	1.76	1.91	1.66	1.72	1.71	1.72
Total petroleum and other liquid fuels net imports (d)	**-1.64**	**-1.20**	**-1.42**	**-2.28**	**-2.41**	**-1.49**	**-1.88**	**-2.49**	**-2.71**	**-2.35**	**-2.57**	**-3.19**	**-1.64**	**-2.07**	**-2.71**
End-of-period inventories (million barrels)															
Total commercial inventory	**1230.8**	**1264.4**	**1283.4**	**1252.2**	**1230.3**	**1269.3**	**1262.6**	**1232.6**	**1228.7**	**1261.5**	**1267.3**	**1241.7**	**1252.2**	**1232.6**	**1241.7**
Crude oil (excluding SPR)	465.4	454.7	417.5	426.4	447.2	445.1	421.3	424.7	448.7	437.5	420.8	428.5	426.4	424.7	428.5
Hydrocarbon gas liquids	174.3	225.4	279.1	223.3	169.2	225.5	265.3	218.4	180.0	232.3	271.9	229.8	223.3	218.4	229.8
Unfinished oils	88.6	87.0	88.3	84.1	91.7	87.7	85.5	79.3	88.7	86.8	86.2	80.5	84.1	79.3	80.5
Other hydrocarbons and oxygenates	34.3	30.1	30.3	33.2	38.2	31.7	34.1	34.4	36.4	35.2	34.9	35.2	33.2	34.4	35.2
Total motor gasoline	225.3	223.2	227.6	241.3	233.4	229.7	220.5	237.1	235.4	230.0	225.8	241.4	241.3	237.1	241.4
Finished motor gasoline	14.7	17.6	15.3	18.1	14.6	17.2	16.0	16.4	14.7	16.8	17.6	17.6	18.1	16.4	17.6
Motor gasoline blending components	210.6	205.6	212.3	223.2	218.8	212.4	204.5	220.7	220.7	213.3	208.1	223.8	223.2	220.7	223.8
Jet fuel	37.7	42.7	43.5	39.8	42.2	44.5	45.2	41.2	39.3	39.9	40.3	36.8	39.8	41.2	36.8
Distillate fuel oil	112.3	112.6	119.2	130.7	121.2	124.6	121.4	126.7	118.2	119.9	118.2	119.2	130.7	126.7	119.2
Residual fuel oil	29.6	30.4	27.5	24.1	29.9	27.5	24.9	24.8	26.2	26.1	24.2	24.0	24.1	24.8	24.0
Other oils (i)	63.3	58.3	50.5	49.3	57.3	53.2	44.4	46.2	55.7	53.9	44.9	46.5	49.3	46.2	46.5
Crude oil in SPR (e)	**371.2**	**347.2**	**351.3**	**354.7**	**363.9**	**373.1**	**383.5**	**394.4**	**394.4**	**394.4**	**394.4**	**394.4**	**354.7**	**394.4**	**394.4**

(a) Includes lease condensate.

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

(c) Regional production in this table is based on geographic regions and not geologic formations.

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

(e) SPR: Strategic Petroleum Reserve

(f) The crude oil adjustment equals the sum of disposition items (e.g. refinery inputs) minus the sum of supply items (e.g. production).

(g) 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.

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

(i) Other oils includes aviation gasoline blending components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

Notes:

EIA completed modeling and analysis for this report on August 1, 2024.

\- = no data available

The approximate break between historical and forecast values is shown with historical data with no shading; estimates and forecasts are shaded gray.

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

Sources:

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 4b. U.S. Hydrocarbon Gas Liquids (HGL) and Petroleum Refinery Balances (million barrels per day, except inventories and utilization factor)
U.S. Energy Information Administration | Short-Term Energy Outlook - August 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
HGL production, consumption, and inventories															
Total HGL production	**6.45**	**7.23**	**7.31**	**7.04**	**6.95**	**7.64**	**7.35**	**6.92**	**7.05**	**7.58**	**7.50**	**7.19**	**7.01**	**7.21**	**7.33**
Natural gas processing plant production	**6.01**	**6.42**	**6.58**	**6.70**	**6.51**	**6.81**	**6.60**	**6.57**	**6.58**	**6.74**	**6.74**	**6.82**	**6.43**	**6.62**	**6.72**
Ethane	2.49	2.65	2.63	2.71	2.63	2.87	2.72	2.72	2.70	2.77	2.72	2.81	2.62	2.74	2.75
Propane	1.89	2.00	2.05	2.10	2.05	2.06	2.08	2.08	2.12	2.14	2.15	2.16	2.01	2.07	2.14
Butanes	0.99	1.06	1.09	1.10	1.07	1.10	1.13	1.15	1.15	1.16	1.17	1.19	1.06	1.11	1.17
Natural gasoline (pentanes plus)	0.64	0.73	0.81	0.79	0.75	0.77	0.67	0.63	0.61	0.66	0.69	0.66	0.74	0.71	0.65
Refinery and blender net production	**0.47**	**0.83**	**0.75**	**0.36**	**0.46**	**0.84**	**0.76**	**0.37**	**0.49**	**0.86**	**0.78**	**0.39**	**0.60**	**0.61**	**0.63**
Ethane/ethylene	0.01	0.00	0.01	0.02	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Propane	0.27	0.29	0.28	0.27	0.27	0.28	0.28	0.27	0.28	0.30	0.30	0.29	0.28	0.27	0.29
Propylene (refinery-grade)	0.24	0.26	0.25	0.26	0.24	0.28	0.27	0.28	0.28	0.28	0.27	0.28	0.25	0.27	0.28
Butanes/butylenes	-0.05	0.28	0.21	-0.19	-0.05	0.28	0.20	-0.19	-0.08	0.27	0.20	-0.18	0.07	0.06	0.05
Renewable/oxygenate plant net production of natural gasoli	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**
Total HGL consumption	**3.40**	**3.36**	**3.25**	**3.81**	**3.80**	**3.37**	**3.40**	**3.85**	**3.87**	**3.42**	**3.46**	**3.91**	**3.46**	**3.60**	**3.66**
Ethane/Ethylene	1.99	2.19	2.07	2.25	2.24	2.26	2.23	2.26	2.23	2.24	2.25	2.26	2.13	2.25	2.25
Propane	0.98	0.62	0.62	0.95	1.02	0.53	0.61	1.01	1.13	0.62	0.66	1.06	0.79	0.79	0.87
Propylene (refinery-grade)	0.25	0.27	0.27	0.28	0.26	0.29	0.29	0.29	0.30	0.29	0.29	0.29	0.27	0.28	0.29
Butanes/butylenes	0.18	0.28	0.29	0.34	0.28	0.28	0.27	0.29	0.22	0.26	0.25	0.30	0.27	0.28	0.26
HGL net imports	**-2.47**	**-2.39**	**-2.42**	**-2.58**	**-2.59**	**-2.70**	**-2.62**	**-2.53**	**-2.69**	**-2.77**	**-2.71**	**-2.67**	**-2.46**	**-2.61**	**-2.71**
Ethane	-0.50	-0.49	-0.50	-0.40	-0.48	-0.47	-0.50	-0.50	-0.50	-0.51	-0.51	-0.55	-0.47	-0.49	-0.52
Propane/propylene	-1.40	-1.40	-1.45	-1.65	-1.60	-1.60	-1.50	-1.48	-1.52	-1.60	-1.55	-1.51	-1.47	-1.55	-1.55
Butanes/butylenes	-0.42	-0.41	-0.42	-0.41	-0.41	-0.48	-0.50	-0.40	-0.48	-0.52	-0.52	-0.46	-0.42	-0.45	-0.50
Natural gasoline (pentanes plus)	-0.15	-0.09	-0.06	-0.11	-0.11	-0.15	-0.11	-0.14	-0.18	-0.13	-0.13	-0.14	-0.10	-0.13	-0.15
HGL inventories (million barrels)	**174.3**	**225.4**	**279.1**	**223.3**	**169.2**	**225.5**	**265.3**	**218.4**	**180.0**	**232.3**	**271.9**	**229.8**	**223.3**	**218.4**	**229.8**
Ethane	54.3	51.5	58.0	65.8	58.3	71.3	71.2	68.7	67.4	69.9	67.7	68.0	65.8	68.7	68.0
Propane	55.83	79.2	102.2	79.8	51.7	69.3	90.1	75.8	51.3	69.7	89.4	76.5	79.8	75.8	76.5
Propylene (at refineries only)	1.13	1.1	1.2	0.9	0.9	1.2	1.5	1.5	1.3	1.6	1.7	1.6	0.9	1.5	1.6
Butanes/butylenes	40.2	70.1	90.2	50.1	35.1	60.4	78.7	49.8	40.1	70.2	91.4	62.7	50.1	49.8	62.7
Natural gasoline (pentanes plus)	22.9	23.4	27.4	26.8	23.2	23.3	23.7	22.6	19.8	20.9	21.8	21.0	26.8	22.6	21.0
Refining															
Total refinery and blender net inputs	**17.58**	**18.90**	**18.92**	**18.25**	**17.61**	**19.10**	**19.13**	**18.20**	**17.33**	**18.82**	**18.81**	**17.96**	**18.41**	**18.51**	**18.24**
Crude oil	15.25	16.15	16.51	15.93	15.39	16.47	16.27	15.68	15.20	16.04	16.22	15.69	15.96	15.95	15.79
HGL	0.66	0.49	0.56	0.78	0.69	0.54	0.54	0.74	0.62	0.48	0.53	0.71	0.62	0.63	0.59
Other hydrocarbons/oxygenates	1.13	1.20	1.21	1.18	1.12	1.21	1.20	1.17	1.13	1.19	1.19	1.17	1.18	1.18	1.17
Unfinished oils	0.19	0.21	0.00	0.12	-0.03	0.15	0.32	0.30	0.09	0.30	0.31	0.28	0.13	0.19	0.25
Motor gasoline blending components	0.34	0.85	0.64	0.23	0.43	0.73	0.80	0.31	0.28	0.83	0.56	0.11	0.52	0.57	0.44
Refinery Processing Gain	**0.97**	**1.01**	**1.07**	**1.05**	**0.91**	**1.00**	**1.05**	**1.04**	**0.97**	**1.03**	**1.07**	**1.05**	**1.03**	**1.00**	**1.03**
Total refinery and blender net production	**18.54**	**19.91**	**19.99**	**19.30**	**18.52**	**20.10**	**20.18**	**19.24**	**18.30**	**19.85**	**19.88**	**19.01**	**19.44**	**19.51**	**19.26**
HGL	0.47	0.83	0.75	0.36	0.46	0.84	0.76	0.37	0.49	0.86	0.78	0.39	0.60	0.61	0.63
Finished motor gasoline	9.28	9.83	9.81	9.64	9.24	9.84	9.80	9.62	9.08	9.68	9.61	9.37	9.64	9.62	9.43
Jet fuel	1.62	1.72	1.78	1.71	1.70	1.84	1.85	1.68	1.65	1.77	1.83	1.73	1.71	1.77	1.74
Distillate fuel oil	4.69	4.91	4.99	5.04	4.57	4.95	4.99	4.93	4.56	4.84	4.88	4.88	4.91	4.86	4.79
Residual fuel oil	0.27	0.27	0.27	0.28	0.37	0.30	0.34	0.33	0.30	0.30	0.31	0.30	0.27	0.34	0.31
Other oils (a)	2.21	2.35	2.40	2.26	2.17	2.34	2.45	2.31	2.22	2.40	2.48	2.35	2.30	2.32	2.36
Refinery distillation inputs	**15.78**	**16.75**	**17.02**	**16.47**	**15.80**	**16.93**	**16.67**	**16.08**	**15.61**	**16.42**	**16.66**	**16.08**	**16.51**	**16.37**	**16.20**
Refinery operable distillation capacity	**18.12**	**18.27**	**18.27**	**18.32**	**18.39**	**18.33**	**18.34**	**18.34**	**18.08**	**18.08**	**18.08**	**18.08**	**18.25**	**18.35**	**18.08**
Refinery distillation utilization factor	**0.87**	**0.92**	**0.93**	**0.90**	**0.86**	**0.92**	**0.91**	**0.88**	**0.86**	**0.91**	**0.92**	**0.89**	**0.90**	**0.89**	**0.90**

(a) Other oils include aviation gasoline blending components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

Notes:

EIA completed modeling and analysis for this report on August 1, 2024.

- = no data available

The approximate break between historical and forecast values is shown with historical data with no shading; estimates and forecasts are shaded gray.

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

Sources:

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

U.S. Energy Information Administration | Short-Term Energy Outlook - August 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)															
U.S. total marketed natural gas production	**111.2**	**112.5**	**113.6**	**115.2**	**113.4**	**111.7**	**113.0**	**113.3**	**113.0**	**114.1**	**114.5**	**115.7**	**113.1**	**112.8**	**114.3**
Alaska	1.1	1.0	0.9	1.0	1.1	1.0	0.9	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0
Federal Gulf of Mexico (a)	2.1	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	2.0	1.8	1.7
Lower 48 States (excl GOM) (b)	108.0	109.6	110.7	112.2	110.4	108.8	110.3	110.5	110.2	111.4	111.9	113.0	110.1	110.0	111.6
Appalachia region	35.4	35.7	36.0	36.7	36.0	34.8	35.3	35.3	35.2	35.0	34.7	34.8	36.0	35.3	34.9
Bakken region	2.9	3.0	3.2	3.3	3.2	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.1	3.3	3.3
Eagle Ford region	6.5	6.7	6.7	6.7	6.6	6.6	6.7	6.8	6.8	7.1	7.3	7.4	6.6	6.7	7.1
Haynesville region	16.4	16.6	16.4	15.9	15.4	14.8	15.0	14.8	14.9	15.0	15.3	16.0	16.4	15.0	15.3
Permian region	21.7	22.5	23.2	24.1	24.2	24.9	24.9	25.2	24.8	25.8	26.1	26.5	22.9	24.8	25.8
Rest of Lower 48 States	25.0	25.1	25.1	25.5	25.1	24.5	25.2	25.1	25.4	25.2	25.1	25.0	25.2	25.0	25.2
Total primary supply	**103.0**	**78.0**	**83.9**	**91.7**	**104.0**	**78.5**	**83.6**	**93.0**	**104.7**	**77.4**	**82.6**	**92.4**	**89.1**	**89.8**	**89.2**
Balancing item (c)	0.4	-0.4	-1.4	-0.6	-0.2	-0.8	-1.0	-0.2	0.8	0.1	1.3	0.2	-0.5	-0.6	0.6
Total supply	**102.6**	**78.5**	**85.2**	**92.3**	**104.2**	**79.3**	**84.6**	**93.2**	**103.9**	**77.3**	**81.2**	**92.2**	**89.6**	**90.3**	**88.6**
U.S. total dry natural gas production	102.2	103.2	104.1	105.5	104.0	101.7	103.6	103.8	103.5	104.4	104.8	105.9	103.8	103.3	104.6
Net inventory withdrawals	12.0	-11.7	-6.4	0.3	12.7	-9.7	-5.7	4.3	15.0	-10.9	-6.7	3.5	-1.5	0.4	0.2
Supplemental gaseous fuels	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Net imports	-11.8	-13.2	-12.6	-13.7	-12.7	-12.9	-13.4	-15.1	-14.8	-16.3	-17.0	-17.4	-12.8	-13.5	-16.4
LNG gross imports (d)	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1
LNG gross exports (d)	11.4	11.8	11.4	13.0	12.4	11.4	11.5	13.4	13.7	13.8	14.4	15.3	11.9	12.2	14.3
Pipeline gross imports	8.4	7.3	7.9	8.2	9.0	7.6	7.5	7.6	8.3	7.0	7.2	7.5	8.0	7.9	7.5
Pipeline gross exports	8.9	8.7	9.2	8.9	9.4	9.1	9.4	9.3	9.5	9.5	9.9	9.6	9.0	9.3	9.6
Consumption (billion cubic feet per day)															
Total consumption	**103.0**	**78.0**	**83.9**	**91.7**	**104.0**	**78.5**	**83.6**	**93.0**	**104.7**	**77.4**	**82.6**	**92.4**	**89.1**	**89.8**	**89.2**
Residential	23.5	7.3	3.6	15.0	22.8	6.6	3.7	16.1	24.2	7.3	3.8	16.1	12.3	12.3	12.8
Commercial	14.5	6.4	4.7	10.7	14.3	6.3	5.2	11.4	15.1	6.7	5.3	11.4	9.1	9.3	9.6
Industrial	24.8	22.4	22.0	24.3	24.9	22.3	21.9	23.9	24.7	21.7	21.5	23.8	23.4	23.3	22.9
Electric power (e)	30.8	33.4	44.8	32.6	32.5	34.8	44.0	32.4	31.1	33.1	43.1	31.9	35.4	36.0	34.8
Lease and plant fuel	5.3	5.4	5.4	5.5	5.4	5.3	5.4	5.4	5.4	5.4	5.5	5.5	5.4	5.4	5.5
Pipeline and distribution	3.9	2.9	3.1	3.4	3.9	2.9	3.1	3.5	4.0	2.9	3.1	3.5	3.3	3.4	3.4
Vehicle	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
End-of-period working natural gas inventories (billion cubic feet) (f)															
United States total	**1,850**	**2,902**	**3,490**	**3,457**	**2,301**	**3,179**	**3,706**	**3,314**	**1,963**	**2,956**	**3,573**	**3,250**	**3,457**	**3,314**	**3,250**
East region	334	646	853	787	369	666	848	748	347	624	804	729	787	748	729
Midwest region	417	701	993	950	507	785	1,051	917	449	707	1,025	896	950	917	896
South Central region	919	1,138	1,092	1,183	1,003	1,177	1,206	1,156	853	1,146	1,193	1,144	1,183	1,156	1,144
Mountain region	79	171	239	228	168	241	259	205	120	188	238	204	228	205	204
Pacific region	74	216	278	280	231	284	309	260	170	266	282	248	280	260	248
Alaska	27	30	35	30	24	27	33	29	24	27	32	28	30	29	28

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

(b) Regional production in this table is based on geographic regions and not geologic formations.

(c) The balancing item is the difference between total natural gas consumption (NGTCPUS) and total natural gas supply (NGPSUPP).

(d) LNG: liquefied natural gas

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

(f) 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)* .

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- = no data available

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Sources:

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , DOE/EIA-0226.

Forecasts: EIA Short-Term Integrated Forecasting System.

Eric M. Hambly {BIO 20750675 <GO>}

Good morning. Slide 10. Murphy produced 28,000 barrels of oil equivalent per day in the second quarter from the Eagle Ford Shale with 86% liquids, and due to stronger well performance, we exceeded guidance by 1,700 barrels of oil equivalent per day. We brought online 11 operated wells in Catarina and four gross non-operated wells in Tilden during the quarter.

We're on track to bring on five operated and three gross non-operated wells in Tilden in the third quarter. Our 2024 Catarina wells are showing great performance compared to Murphy's recent historical average, and I'm also pleased at the results we have seen across our completions activities this year. Our completed lateral foot per day has increased by approximately 50%, while our completion cost per completed lateral foot is down nearly 40%. Additionally, we've reduced our drilling diesel cost by 10% after installing EcoCell on our Patterson-UTI rig.

Slide 11. We produced an average of 400 million cubic feet per day in the second quarter in Tupper Montney, exceeding guidance by nearly 20 million cubic feet per day, primarily due to well performance, as we brought online 13 wells and completed our 2024 program. Also during the quarter, we achieved a record high peak gross production rate of 496 million cubic feet per day, thereby reaching processing plant capacity in conjunction with the sanctioning of our Tupper Montney plant expansion in the fourth quarter of 2020.

We continue seeing great well performance from our optimized completion design. In particular, our average IP30 rate in our Tupper Main area has increased approximately 120% since 2019, and more than 200% since 2016. Overall, five of our 2024 wells are among Murphy's top 20 Tupper Montney wells based on IP30 rates.

Slide 12. In the second quarter, our Kaybob Duvernay asset produced 4,000 barrels of oil equivalent per day with 72% liquids, which was slightly above guidance. Murphy brought online three operating wells during the quarter, which completes our well delivery program for 2024. We're also seeing some of our highest rates in company history for Kaybob Duvernay with an average peak rate of 1,900 barrels of oil per day. This ranks in the top tier among our peers when normalized per lateral length. Overall, recent well performance has mirrored our Catarina wells in the Eagle Ford Shale, and I look forward to seeing further results.

Slide 13. Murphy produced an average 74,000 barrels of oil equivalent per day in the second quarter from the Gulf of Mexico with 82% oil volumes. We progressed our Gulf of Mexico well program as we brought online the operated Khaleesi number 4 well and non-operated Lucius number 11. We also drilled the operated Mormont number 3 well, which is on track to come online in the third quarter. In offshore Canada, we produced an average of 8,000 barrels of oil equivalent per day with 100% oil. Non-operated Terra Nova production was impacted by additional downtime during the quarter.

that will flow for the whole year as you put on these wells, and they come in with pretty high rates. So that's how that's going to march upward on that, Arun.

Q - Arun Jayaram {BIO 5817622 <GO>}

Thank you, sir.

A - Roger W. Jenkins {BIO 7268013 <GO>}

Thank you.

Operator

Your next question comes from Neil Mehta from Goldman Sachs. Please go ahead.

A - Roger W. Jenkins {BIO 7268013 <GO>}

Good morning.

Q - Neil Mehta {BIO 16213187 <GO>}

Good morning, sir. Thanks for taking the time. I had a couple of Canada questions for you, if you will. I guess the first is, we're in a challenging environment for AECO. I think there's an interesting multi-year outlook for Western Canadian gas prices from where we are here, but just your perspective on the way some of the U.S. gas producers are holding back molecules until we get into a better environment, does it make sense to change the cadence of your production profile to monetize into a better price environment?

A - Roger W. Jenkins {BIO 7268013 <GO>}

Thank you, Neil. Great question. We're a little different than the big gas-only players in the U.S. We have a plant and an infrastructure can only handle $500 million a day, so it's not an enormous multi-Bcf business. We have, as benchmarked by your competitors and many other Toms in the industry, the lowest breakeven in North America adjusted for AECO and for C$ type of exchange. So we have very extremely low breakeven prices. We have hellacious wells.

We have commitments to our pipelines and to this plant. And so far, economically, it's shown us to want to do that. And we see a future there with LNG Canada over a long haul. We have relationships that are key to us in differentiating to our peers. Both Eric, Tom, and I all lived in KL. We're very well known in Asia, very well known to deliver gas into LNG systems. We're a little different animal there. There are multiple LNG outlets being built in Western Canada.

But right now, it's better for us with the commitments we have at our plant and pipes to continue on with our low breakeven and continue to make free cash flow there with the assets that we have. But I understand that question, and that's how we're going at this time.

Neil. So, also, Neil, one more thing. Pretty good hedging situations. If you look at our netbacks, while I would imagine of your coverage list, you probably have some of the highest nat gas netbacks there is, because we have forward sales in Canada. And we're actually forward selling and looking into the business for '25 today as well. So that, at times, has been a little below, but we're winning with the hedging today. It's not really hedging. It's forward sales of molecules. They're not adjusted for market. So you have to look in the back of the filing here today to see that. And that puts us in a -- we don't get the $0.50 AECO too much. We have differentiation and forward sales, and we're at a different level, I think, based on U.S. peers, probably in pretty good shape on gas, actually.

Q - Neil Mehta {BIO 16213187 <GO>}

Thank you, sir. And then the follow-up is just, you alluded to Terra Nova and recognize it's smaller in the context of your portfolio, and then you're not the operator here, but just your perspective on, as an owner, how far are we away from getting that to optimal operations?

A - Roger W. Jenkins {BIO 7268013 <GO>}

I'll let Eric opine on that. I'm too emotional about it, Neil.

A - Eric M. Hambly {BIO 20750675 <GO>}

Thanks, Roger. We're a bit frustrated with the operator's performance in the second quarter. You can see it had a fairly significant impact to us in underperforming second quarter oil at Terra Nova. We are an 18% working interest owner in that with Suncor and Cenovus, obviously, having large ownership. We work with the operator and offer assistance and guidance to the extent we can as a non-operated partner.

I feel that they have continued to make improvement, and we're expecting that ultimately they will get through their larger-than-expected downtime issues and have steady operations. And later this year, we ought to see a 6,000 barrel a day net-to-us type production rate. So I'm confident they'll get there, just a little slower than we'd like.

Q - Neil Mehta {BIO 16213187 <GO>}

Thanks, Eric. Thanks, Roger.

A - Roger W. Jenkins {BIO 7268013 <GO>}

No, thank you, Neil. Good talking to you. Take care.

Operator

Your next question comes from Carlos Escalante from Wolfe Research. Please go ahead.

A - Roger W. Jenkins {BIO 7268013 <GO>}

wondering, is that just a happy coincidence? Or is there some overarching kind of unifying theme there?

A - Roger W. Jenkins {BIO 7268013 <GO>}

No, we've just been doing so well. If you go back to Eric's commentary in the script, which was an hour go, I guess, we have some top wells we've ever had, we continue to improve our fracking and our execution based on our four or five year now reorganization of one operating team in Houston and lessons learned between Eagle Ford and there, and just really been delivering some record wells.

Tupper Montney is an older part of Tupper that we got. I might have got that 17 years ago. And we went in there and did some old fracking and development there, came back with a new, some incredible wells there, industry leading wells there. If you benchmark Murphy against all North American gas, lowest breakeven price there is adjusted back to AECO, et cetera.

Just a good run of great wells in the Montney, and Kaybob too is a place where we've been dormant. We wanted to go and drill some wells and take our new ideas and take our new fracking to Duvernay Shale and prove that we have another Catarina. It's exactly like the Catarina, which is a major Eagle Ford area that's drilled by many peers, many public peers, sought after acreage in the Eagle Ford. So we have another Eagle Ford business in Duvernay that just makes $5 a barrel less of oil and much higher NGL.

So these wells are very economic and it just proves up our long-term giant onshore business for. We're not a company run out of locations or opportunities to go along with all the opportunities we have in the ocean, and our big Vietnam future with exploration and a big project there. So just wanted to highlight that then on Slide 12 shows that we're the second best operator in Kaybob, and we haven't put wells on the ground there in three or four years, and we're one of the top operators on a productivity basis in the Montney. So that's what I was getting at there, Charles.

Q - Charles Meade {BIO 17614470 <GO>}

Thank you. Thanks for that, Roger.

A - Eric M. Hambly {BIO 20750675 <GO>}

Charles, just to add briefly, we took our learnings from our Eagle Ford completions, and in 2023 had a fundamentally different completion style in our Montney, and we saw tremendous results, and we used that information. And when we went in to do the Kaybob completions this year, we made some adjustments for localizing it for Kaybob, but the same type of benefits we saw in Tupper we applied in Kaybob. So really, a completely optimized completion design there, and we're able to execute it even more efficiently on timing and cost and get exceptional well results. And I expect to see those going forward to potentially have minor improvements as well.

A - Roger W. Jenkins {BIO 7268013 <GO>}

Operator

Our final question comes from Josh Silverstein from UBS. Please go ahead.

Q - Josh Silverstein {BIO 23082030 <GO>}

Thanks. Good morning, guys.

A - Roger W. Jenkins {BIO 7268013 <GO>}

Hey, Josh.

Q - Josh Silverstein {BIO 23082030 <GO>}

Just wanted to follow-up on some of the questions. Good morning. On the Montney, you guys have a deep resource space you mentioned you're kind of up against the plant capacity there. What is the next phase for that asset look like? Do you build some additional capacity up there, just to bring forward some of the inventory that you have, or is this kind of just flat at this capacity level for the foreseeable future? Thanks.

A - Eric M. Hambly {BIO 20750675 <GO>}

Okay. Yes. Thanks, Josh. We're really pleased with the performance we've had here in the Montney and able to execute on our multi-year plan of building production while generating free cash flow in that asset. We are up against capacity. We anticipate over the coming years to allocate capital to effectively keep that plant full or just under full. And for the near term, that's what we expect to do. If we were to consider a significant growth in production there, we would need to commit to an expansion of the plant and also additional pipeline capacity.

And from a decision to do that to being online is approximately a three-year process from a permitting, engineering, construction, commissioning type of cycle. And so it's not an easy flip a switch and suddenly have a lot more. We do evaluate the potential of expanding the plants and increasing the rate there since we recognize that we have such a large resource with so many decades of remaining gas, bringing that value forward is something that we consider, we model, we evaluate. If we decide to do it, it'll be pretty well signaled since there's a three-year timeline on it.

We are also very conscious of the fact that we're producing 0.50 Bcf in a 17 Bcf market. So, if we added 0.50 Bcf, it would be a significant increase to what is happening in the AECO market. And we're sort of going to watch a little bit on the sidelines of what happens with LNG capacity. And as that grows with takeaway that's been different than what we've seen in the past to a totally different market, that perhaps AECO strengthens and additional 0.50 Bcf of volumes would be supported by reasonable AECO prices.

So we're sort of carefully watching and evaluating that. And it's something we could do. We also may have a possibility in the future of participating in LNG opportunity through selling our gas to some potential partners that are involved in the Phase 2 of LNG Canada, if that's something that is of interest to them.

Q - Josh Silverstein {BIO 23082030 <GO>}

Got it. That's helpful. And then maybe just on the balance sheet, return to capital framework, I'm curious what you think the kind of base level of cash is that you want to hold. I mean, even if you're still at that 50% of free cash flow level, it goes to the buybacks. You can run scenarios in which you get to a basically zero net debt position in 2026. Do you want to continue to build that cash relative to the $300 million, $400 million that you guys have beforehand or is that kind of a comfort level for you guys around there? Thanks.

A - Thomas J. Mireles {BIO 17541852 <GO>}

All right. Thanks. Thanks, Josh. I'll give you a little color on that. Our base level cash to run our business, we do try to maintain roughly $325 million, $350 million just for the needs that we have around the corporation.

As we move past our debt target, once we get to $1 billion, and we do start putting more cash on the balance sheet, that'll give us more flexibility, and we'll have to see where we are a few years down the road. Is it -- does it lead us to more debt reduction? Do we have exploration success that we can fund? So that's -- or additional buybacks. So those are the types of options we'd be looking at that time. We look forward to getting to that point. We think we're just a few quarters away from our pushing to the right into 2025 on our debt target. But at that point, when we start accumulating more cash, then we'll make those decisions then.

Q - Josh Silverstein {BIO 23082030 <GO>}

Got it. Thank guys.

Operator

There are no further questions from our phone lines. I would now like to turn the call back over to Roger Jenkins for any closing remarks.

A - Roger W. Jenkins {BIO 7268013 <GO>}

Thanks, everyone, for calling in today. Had a good call, had a lot of good questions. We appreciate those. Kelly and Megan, their team standing by to help our investors with further clarifications. And as usual, our management team stands by to respond to investors and our analysts. So, take care and have a great day. And see you in another quarter. Thanks.

Operator

Ladies and gentlemen, this concludes your conference call for today. We thank you for participating and we ask that you disconnect your lines.

August 5, 2024

Cheniere and Galp Sign Long-Term LNG Sale and Purchase Agreement

HOUSTON--(BUSINESS WIRE)-- Cheniere Energy, Inc. (“Cheniere” or the “Company”) (NYSE: LNG) announced today that its subsidiary Cheniere Marketing, LLC (“Cheniere Marketing”), entered into a long-term liquefied natural gas (“LNG”) sale and purchase agreement (“SPA”) with Galp Trading S.A. (“Galp”), a subsidiary of Galp Energia, SGPS, S.A. (“Galp Energia”).

Under the SPA, Galp has agreed to purchase approximately 0.5 million tonnes per annum (“mtpa”) of LNG for 20 years from Cheniere Marketing on a free-on-board basis for a purchase price indexed to the Henry Hub price, plus a fixed liquefaction fee. Deliveries are expected to commence in the early 2030s and are subject to, among other things, a positive Final Investment Decision with respect to the second train (“Train Eight”) of the Sabine Pass Liquefaction Expansion Project (“SPL Expansion Project”). The SPA includes a limited number of early cargoes to be purchased by Galp prior to the start of Train Eight.

“We are pleased to enter into this long-term agreement with Galp, a leader across Iberia’s energy sector, which reinforces the critical role US natural gas is expected to play in Europe’s energy mix into the second half of this century,” said Jack Fusco, Cheniere’s President and Chief Executive Officer. “We look forward to providing our flexible, reliable and cleaner burning LNG to Galp under this new long-term agreement. This SPA is expected to provide further support for the SPL Expansion Project, and demonstrates continued momentum as we progress development of the project.”

The SPL Expansion Project

The SPL Expansion Project is being developed for up to approximately 20 mtpa of LNG capacity, inclusive of estimated debottlenecking opportunities. In February 2024, certain subsidiaries of Cheniere Energy Partners, L.P. (NYSE: CQP) submitted an application to the Federal Energy Regulatory Commission for authorization to site, construct and operate the SPL Expansion Project, as well as an application to the Department of Energy requesting authorization to export LNG to Free-Trade Agreement (“FTA”) and non-FTA countries.

About Cheniere

Cheniere Energy, Inc. is the leading producer and exporter of LNG in the United States, reliably providing a clean, secure, and affordable solution to the growing global need for natural gas. Cheniere is a full-service LNG provider, with capabilities that include gas procurement and transportation, liquefaction, vessel chartering, and LNG delivery. Cheniere has one of the largest liquefaction platforms in the world, consisting of the Sabine Pass and Corpus Christi liquefaction facilities on the U.S. Gulf Coast, with total production capacity of approximately 45 mtpa of LNG in operation and an additional 10+ mtpa of expected production capacity under construction. Cheniere is also pursuing liquefaction expansion opportunities and other projects along the LNG value chain. Cheniere is headquartered in Houston, Texas, and has additional offices in London, Singapore, Beijing, Tokyo, and Washington, D.C.

For additional information, please refer to the Cheniere website at www.cheniere.com and Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, filed with the Securities and Exchange Commission.

About Galp Energia

Galp Energia is a Portuguese multinational integrated energy corporation, headquartered in Lisbon, Portugal. Galp Energia is engaged in every aspect of the oil and natural gas supply, from exploration and production; refining, trading, logistics and retailing and developing renewable energy solutions such as advanced biofuels, renewable hydrogen and renewable power generation.

Forward-Looking Statements

This press release contains certain statements that may include “forward-looking statements” within the meanings of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical or present facts or conditions, included herein are “forward-looking statements.” Included among “forward-looking statements” are, among other things, (i) statements regarding Cheniere’s financial and operational guidance, business strategy, plans and objectives, including the development, construction and operation of liquefaction facilities, (ii) statements regarding regulatory authorization and approval expectations, (iii) statements expressing beliefs and expectations regarding the development of Cheniere’s LNG terminal and pipeline businesses, including liquefaction facilities, (iv) statements regarding the business operations and prospects of third-parties, (v) statements regarding potential financing arrangements, (vi) statements regarding future discussions and entry into contracts, (vii) statements relating to Cheniere’s capital deployment, including intent, ability, extent, and timing of capital expenditures, debt repayment, dividends, share repurchases and execution on the capital allocation plan, and (viii) statements relating to our goals, commitments and strategies in relation to environmental matters. Although Cheniere believes that the expectations reflected in these forward-looking statements are reasonable, they do involve assumptions, risks and uncertainties, and these expectations may prove to be incorrect. Cheniere’s actual results could differ materially from those anticipated in these forward-looking statements as a result of a variety of factors, including those discussed in Cheniere’s periodic reports that are filed with and available from the Securities and Exchange Commission. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this press release. Other than as required under the securities laws, Cheniere does not assume a duty to update these forward-looking statements.

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Source: Cheniere Energy Partners, L.P. and Cheniere Energy, Inc.

08/06/2024 23:21:20 [BFW] Bloomberg First Word

China July Crude Oil Imports 42.337m Tons: Customs

By Bloomberg News

(Bloomberg) -- General Administration of Customs says on website.

- Crude oil imports YTD fell 2.4% y/y to 317.813m tons
- Oil product exports in July 4.984m tons
  - Oil product exports YTD fell 4.1% y/y to 35.08m tons
- Oil product imports in July 3.247m tons
  - Oil product imports YTD rose 4.6% y/y to 28.32m tons
- Coal imports in July 46.209m tons
  - Coal imports YTD rose 13.3% y/y to 295.779m tons
- Natural gas imports in July 10.859m tons
  - Natural gas imports YTD rose 12.9% y/y to 75.442m tons
- NOTE: China is world's second-largest oil consumer

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https://www.cbc.ca/news/politics/cn-cp-rail-strike-lockout-essential-service-cirb-1.7290323

CPKC, CN Rail both threaten lockout if labour deal isn't reached by Aug. 22

Railways call for binding arbitration in dispute with Teamsters Canada

David Baxter · CBC News · Posted: Aug 09, 2024 12:53 PM MDT | Last Updated: August 9

CN Rail is calling for binding arbitration in their labour dispute with Teamsters Canada, threatening a lockout on Aug. 22 if there is not a deal by them. Running trades workers and rail traffic controllers represented by Teamsters Canada are negotiating with Canadian Pacific Kansas City too. (Graham Hughes/Canadian Press)

Both of Canada's national railways are now threatening to lock out employees if their separate labour negotiations with Teamsters Canada aren't resolved by 12:01 a.m. on Aug. 22.

CN Rail is formally calling on the federal government to deploy binding arbitration in the company's dispute with Teamsters Canada. In a media release, CN Rail said it is making the request to "protect Canada's economy."

CN said that if the dispute isn't resolved soon, it will have "no choice" but to begin a phased network shutdown, concluding with a lockout.

Canadian Pacific Kansas City (CPKC) said in a media release it is issuing its lockout notice publicly to give customers and supply chains time to plan for a work stoppage. The rail company adds that it has offered to enter binding arbitration with the Teamsters.

In an email to CBC News, Teamsters Canada public affairs director Christopher Monette called the the threat of a lockout "unexpected and needlessly antagonizing."

"With at least thirteen days of negotiations still ahead, this move represents an unnecessary escalation that goes against the principles of good faith bargaining that CN and CPKC claims to uphold,' Monette said.

The news follows a decision by the Canada Industrial Relations Board (CIRB) that CN Rail and CPKC will not be expected to maintain service in the event of a strike or lockout because rail service is not considered "essential" under the Canada Labour Code.

The roughly 9,300 employees represented by Teamsters Canada at the two railways now have a strike mandate. The CIRB has ordered a 13-day cooling off period for both sides and a strike can't take place now before Aug. 22.

Back in May, then-labour minister Seamus O'Regan asked the CIRB to look into whether service should be maintained during a strike or lockout.

In its ruling, released Friday, the CIRB said that while what constitutes an "essential service" might seem self-evident, the Canada Labour Code's definition is specific.

The CIRB said it had to decide whether an interruption of rail service would result in an immediate, serious threat to public health and safety under the law.

The board concluded that a work stoppage would not present an immediate threat to public safety because previous work stoppages involving the parties presented no such threat, and no party brought forward convincing evidence to the contrary.

- **Railway workers warn 'work stoppage looms' after CN, CPKC seek conciliation**
- **Railway workers at CN, CPKC vote to reauthorize strike but open to federal mediation, union says**

"There is no doubt that a work stoppage at CPKC/CN would result in inconvenience, economic hardship and, possibly, as some groups and organizations have suggested, harm to Canada's global reputation as a reliable trading partner," the CIRB decision says.

"While such possible harm is by no means insignificant, these are not factors that are to be considered by the Board when addressing a referral under section 87.4 of the [Canadian Labour Code]."

Posting on the social media platform X, Labour Minister Steven MacKinnon said the parties involved have a responsibility to Canadians.

"I call upon the parties to stay at the bargaining table and continue holding productive and substantive discussions that meet the needs of this moment. A negotiated agreement is the best way forward," he wrote.

MacKinnon met with the parties on Aug. 4. At the end of that meeting, he said the parties had agreed to restart negotiations on Aug. 7, accompanied by federal mediators.

CN Rail said the union has not "engaged meaningfully" since talks resumed.

- **Nutrien cautions sales could take a hit from potential rail strike**
- **Potential strike hangs over rail industry as labour minister, shippers, union meet Monday**

Before the rail companies announced their lockout intentions, Teamsters Canada indicated it would provide 72 hours' notice of any strike action.

"From the very beginning, rail workers have only ever sought a fair and equitable agreement. Unfortunately, both rail companies are demanding concessions that could tear families apart or jeopardize rail safety. Rail workers have fought for a safer and more humane industry for decades, and we will not accept moving backwards," said Teamsters Canada Rail Conference president Paul Boucher in the statement.

Business groups call on Trudeau to act

The Business Council of Canada released a letter calling for immediate federal intervention to stop a labour disruption on the railways. The letter was co-signed by nearly 100 business groups and industry associations, and is addressed to Prime Minister Justin Trudeau, MacKinnon and Transport Minister Pablo Rodriguez.

"Rail is the backbone of the Canadian economy. Businesses of all sizes and in all sectors rely on rail to deliver goods that are essential for their operations and the employment of millions of Canadians," Business Council of Canada president and CEO Goldy Hyder said in an emailed statement.

"In addition to the overall harm to the economy and jobs, a national work stoppage would also drive up prices for essential goods at a time when Canadians are facing affordability challenges."

In their letter, the Business Council says goods worth $380 billion are shipped on Canada's railways every year.

The Canadian Manufacturers and Exporters (CME), which also signed the Business Council letter, is calling on the House of Commons transport committee to hold an emergency meeting next week to study the impacts of a rail stoppage on the broader economy.

CME says a rail work stoppage would cost manufactures an average of $275,000 daily due to decreased output and increased expenses.

ABOUT THE AUTHOR

https://www.cn.ca/en/news/2024/08/cn-asks-federal-government-to-order-binding-arbitration-to-prote

CN Asks Federal Government to Order Binding Arbitration to Protect Canada's Economy

Absence of Progress at the Negotiating Table Requires Immediate Action

MONTREAL, Aug. 09, 2024 (GLOBE NEWSWIRE) -- Following the Canada Industrial Relations Board's (CIRB) decision that does not bring the labour conflict any closer to a resolution, CN (TSX: CNR) (NYSE: CNI) is formally requesting the Minister of Labour's intervention under section 107 of the Canada Labour Code to protect Canada's economy from the impacts of prolonged uncertainty.

Negotiations with the TCRC resumed on Wednesday. However, no progress has been made as the TCRC has not engaged meaningfully at the negotiating table.

While CN is willing to keep negotiating with the TCRC, the Company has lost faith in the process and is concerned that a negotiated deal is no longer possible without a willing partner. Therefore, the Company formally requests the Minister of Labour's intervention.

Unless there is immediate and meaningful progress at the negotiating table or binding arbitration, CN will have no choice but to begin a phased and progressive shutdown of its network, starting with embargoes of hazardous goods, which would culminate in a lockout at 00:01 Eastern Time on August 22nd.

Since the beginning of the year, CN has made four offers to the TCRC. The offers included points on wages, rest, and labour availability while remaining fully compliant with the government-mandated rules overseeing duty and rest periods. None of CN's offers compromised safety in any way. The latest offer proposed third-party arbitration. The union rejected all offers and has made no counter-proposals.

Supply chains require predictability to function properly. Unfortunately, even the possibility of an unpredictable labour disruption and subsequent disorderly shutdown creates a safety risk and unacceptable uncertainty for industries that depend on rail. Prolonged uncertainty will impact consumers and workers across industries and across Canada.

Background on 2024 Negotiations and Offers

In January, CN offered the TCRC a modernized agreement that protected safety and acquired rights while improving work/life balance, which was refused.

The offer was then improved in April with a focus on better wages, job security, and guaranteed earnings for employees. The TCRC refused the improved offer.

In May, CN then presented a simplified offer within the framework of the existing agreement, which the TCRC also refused.

In the absence of a path forward, CN offered to submit to binding arbitration in June. Binding arbitration is a process where both parties empower a mutually agreed upon independent arbitrator to determine the terms of a settlement. It is an impartial approach that would achieve a resolution while avoiding a costly disruption to supply chains, Canadians, and the Canadian economy. The TCRC refused this offer.

All of the information regarding the offers, including details on the proposed wages, rest, and labour availability, is available here.

Current Rest and Wages

Rest:

- By combining Duty and Rest Period Rules (DRPR), paid sick days, personal leave days, and existing rest and vacation provisions in their collective agreements, conductors and locomotive engineers currently work approximately 160 days a year.

Wages:

- In 2023, the average conductor earned approximately $121,000, not including pension and medical benefits.
- In 2023, the average locomotive engineer earned approximately $150,000, not including pension and medical benefits.

About Embargoes

Railroads issue embargoes when, in the judgement of the railroad, an actual or threatened physical or operational impairment, of a temporary nature, warrant restrictions against such movements. It is particularly critical in the event of labor disruption to prevent sensitive and dangerous goods to be stranded on the network. The embargoes are effective within 48 hours of being issued.

Any product coming to, leaving, or moving within Canada on rail will not be transported during a work stoppage. Only limited train movements within yards will be executed as there are not enough certified management train crews to ensure intercity train movements.

Should a settlement be reached, or arbitration be agreed to, CN will remove its embargoes and resume normal operations.

CN Forward-Looking Statements

https://www.cpkcr.com/en/media/CPKC-to-issue-TCRC-lockout-notice-for-Aug-22

CPKC to issue TCRC lockout notice for Aug. 22

August 9, 2024

Calgary

Canadian Pacific Kansas City (TSX: CP) (NYSE: CP) (CPKC) today said it will issue notice to the Teamsters Canada Rail Conference (TCRC) – Train and Engine (T&E) division and TCRC - Rail Traffic Controller (RCTC) division of its plan to lock out employees at 00:01 ET on Aug. 22 if union leadership and the company are unable to come to a negotiated settlement or agree to binding interest arbitration. CPKC is committed to continuing good faith negotiation throughout.

The decision to issue a lockout notice comes after the Canada Industrial Relations Board (CIRB) on Friday issued its decision determining that no services need to be maintained during a railway strike or lockout in order to protect Canadian public health and safety. The CIRB also ordered a 13-day extension of the cooling off period which ends on Aug. 22. Following the expiration of the cooling off period, a legal strike or lockout involving the TCRC – T&E or TCRC - RCTC could occur.

All stakeholders want an end to this needless uncertainty as rapidly as possible so that we can continue serving the North American economy. Stability could be restored today if the TCRC would accept CPKC's offer to resolve the current labour dispute through binding interest arbitration.

If no resolution is reached during bargaining through the extended cooling off period, and the TCRC continues to refuse binding interest arbitration, CPKC will have no choice but to take this action. CPKC is acting to protect Canada's supply chains, and all those who depend on them, from the more widespread disruption that would be created should a work stoppage occur during the fall peak shipping period. Delaying resolution to this dispute only makes things worse, causing more disruption and damage to Canada's international reputation as a reliable trading partner.

CPKC provides this public notice to mitigate uncertainty and give our customers and supply chains proper time to plan for a safe and orderly shutdown of railway operations. As part of those preparations, CPKC will issue an embargo for all toxic by inhalation (TIH) dangerous goods traffic to allow this traffic to safely exit the rail network prior to a work stoppage. Other embargoes will be issued during the cooling off period, as necessary.

CPKC remains committed to doing its part to avoid a work stoppage. In response to opposition from TCRC leadership, CPKC has advised the union representing conductors and locomotive engineers that we will conditionally withdraw the offer for a new modernized, time-based collective agreement. That time-based agreement proposal was intended to address the union's concerns related to work and time off scheduling, while allowing significant wage increases and additional customer service flexibilities.

CPKC will focus on a status quo-style contract renewal covering three years with competitive wage increases that are consistent with recent settlements with other railway unions and maintains the status quo for all work rules. The status quo-style offer fully complies with new regulatory requirements for rest and does not in any way compromise safety.

For the TCRC - RCTC division, CPKC has also proposed a renewed agreement with the rail traffic controllers which would deliver competitive wage increases.

Visit the TCRC update page on our web site for ongoing updates.

https://teamsters.ca/blog/2024/08/09/cirb-moves-strike-or-lockout-deadline-at-cn-and-cpkc-to-august-22/

CIRB Moves Strike or Lockout Deadline at CN and CPKC to August 22

By **communications**

-

August 9, 2024

The earliest a work stoppage at CN and CPKC can occur is August 22nd, at 00:01. *The union remains focused on negotiating in good faith and reaching agreements at the bargaining table*.

Montréal, August 8, 2024 – The Teamsters Canada Rail Conference, which represents close to 10,000 workers at CN and CPKC, has taken note of today's decision from the Canada Industrial Relations Board (CIRB) on essential services.

The decision aligns with what the Teamsters, CN, and CPKC have long maintained: there is no need for essential services in the event of a work stoppage in the rail industry.

"From the very beginning, rail workers have only ever sought a fair and equitable agreement. Unfortunately, both rail companies are demanding concessions that could tear families apart or jeopardize rail safety. Rail workers have fought for a safer and more humane industry for decades, and we will not accept moving backwards," said Paul Boucher, President, Teamsters Canada Rail Conference.

New Deadline for Work Stoppages

Workers' right to strike had been temporarily suspended pending today's decision by the CIRB. This effectively robbed the union of leverage. Absent the threat of a work stoppage, neither company had been willing to compromise or show any flexibility in their demands.

With this decision, if a negotiated settlement cannot be reached, the earliest a work stoppage at CN and CPKC can occur is August 22nd, at 00:01.

The Teamsters will provide 72 hours advance notice in the event of any strike action. The union's focus remains on negotiating in good faith and reaching agreements at the bargaining table. Whether or not that is possible is entirely up to CN and CPKC.

Rail safety and forced relocation dominate talks

The main sticking points at the bargaining table are company demands, not union proposals. Both companies want concessions on issues pertaining to crew scheduling, rail safety, and fatigue management.

CPKC wants to gut the collective agreement of all safety-critical fatigue provisions. The end result will mean train crews would be forced to stay awake even longer, increasing the risk of derailments and other accidents. CPKC has also failed to address the understaffing of rail traffic controllers.

Meanwhile, CN is targeting fewer articles around fatigue, but still enough to raise safety concerns. CN aims to implement a forced relocation scheme, which would see workers ordered to move across the country for months at a time to fill labour shortages. CN also wants to extend workdays in all provinces west of Ontario.

Both companies claim to struggle with labour shortages and are trying to squeeze more out of train crews.

Compromising on safety, or threatening to tear families apart for months at a time, are not pathways to an agreement or solutions to staffing problems. CN and CPKC should instead be looking to improve working conditions and adopt a more humane approach to railroading.

At over 130,000 members, Teamsters Canada is the country's largest transportation and supply chain union. It's also the largest union in the federally regulated private sector. They are affiliated with the International Brotherhood of Teamsters, which represents over 1.2 million workers in North America.

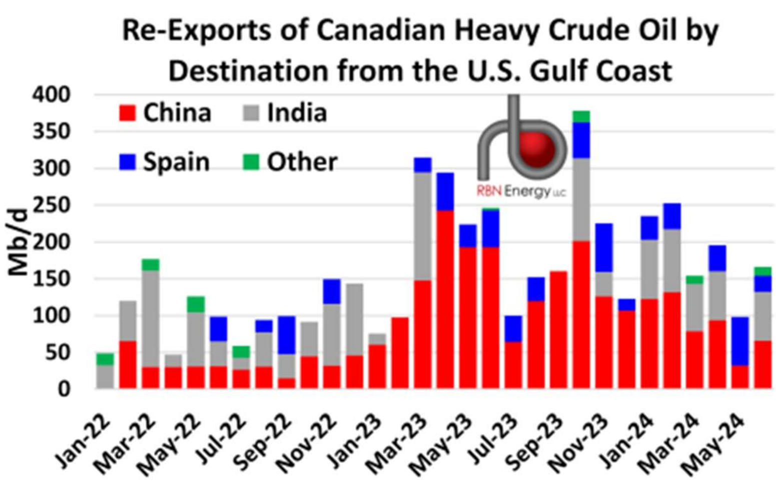
-30-

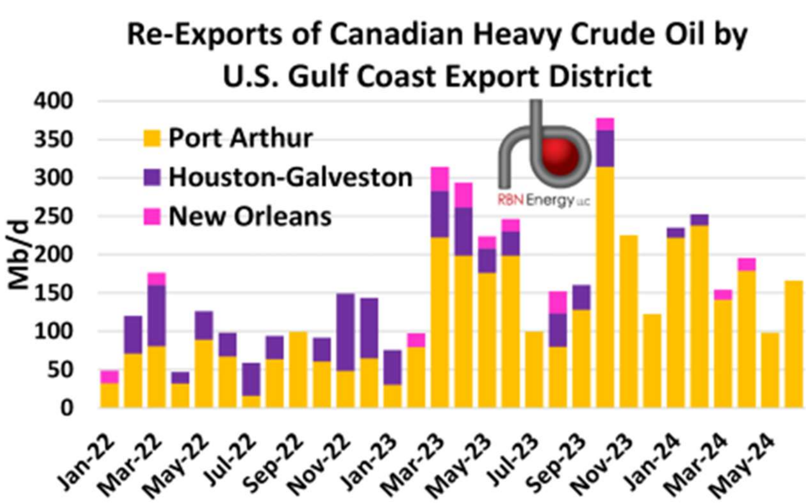
https://rbnenergy.com/analyst-insights/gulf-coast-re-exports-canadian-heavy-oil-rebound-june
Analyst Insights

Gulf Coast Re-Exports of Canadian Heavy Oil Rebound in June

Wednesday, 08/07/2024 (1:15 pm) Published by: Martin King

Based on data from the U.S. Census Bureau, re-exports of Canadian heavy crude oil from the Gulf Coast in June 2024 averaged 166 Mb/d (height of the rightmost stacked columns in chart below), a solid rebound from 98 Mb/d in May, and 80 Mb/d below the year ago level. For the first time since December 2022, India (gray columns) edged out China as the largest recipient of Canadian barrels at 67 Mb/d, up from zero in the prior month and zero one year ago. China (red columns) fell into second place at 66 Mb/d, just over a double from the prior month's total of 32 Mb/d, and about one-third of one year ago at 193 Mb/d. Spain (blue columns) was the next largest recipient of heavy crude at 22 Mb/d, one third of the volume in the prior month and less than half the 50 Mb/d of one year ago. The sole "other" country (green columns) for re-exports in June was Peru, taking in 12 Mb/d, and only the third time this nation has received Canadian heavy oil re-exported from the Gulf Coast.





All re-exports in June departed from the Port Arthur district (rightmost yellow column in chart above) up from 98 Mb/d in May, modestly below 199 Mb/d one year ago and retaining its dominant position as the most active departure point for Canadian crude.

The June rebound in re-exports overlaps with the first full month of operations of the Trans Mountain Pipeline expansion (TMX) on Canada's West Coast and appears to be in line with expectations that there might be a year-on-year drop off in re-exports from the Gulf Coast on the view that TMX would be the preferred outlet for Canadian crude to reach Asian markets. The June rebound for re-exports possibly represents a combination of higher Canadian production, a significant drawdown of crude inventories in Alberta, May volumes that were uncharacteristically low, and relatively favorable economics for re-export from the Gulf Coast given competitive pipeline and shipping costs.

08/05/2024 06:42:00 [BN] Bloomberg News

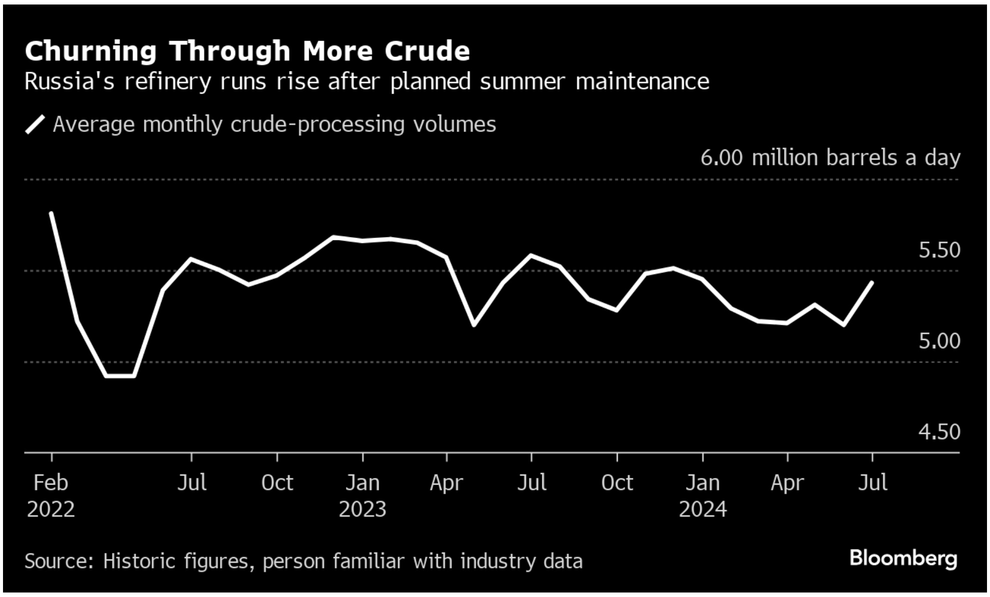
Russian Oil Processing in July Close to Highest So Far This Year

- The nation refined 5.43 million b/d after planned works ended
- Higher refinery runs are pushing Russia's crude exports down

By Bloomberg News

(Bloomberg) -- Russia's oil processing in July was close to highest since the start of the year after the nation's downstream industry completed its summer maintenance.

The country's refineries churned through a daily average of 5.43 million barrels of oil last month, according to a person with knowledge of industry data. That's more than 230,000 barrels a day above the average for most of June, and only marginally below the 5.45 million barrels a day processed in January, when Ukraine started its retaliatory drone attacks on Russia's oil industry.



Russia's refinery runs remain one of the key indicators – alongside the nation's seaborne shipments to foreign markets – for market watchers to understand trends in its oil industry, after the government classified official output data amid Western sanctions.

As major Russian producers complete planned maintenance of their refineries, they're re-directing more crude flows away from exports to the home market. As of July 28, Russia's four-week average seaborne crude shipments slumped to 2.97 million barrels a day, the lowest since August 2023, according to ship-tracking data gathered by Bloomberg. The rebalancing of Russia's domestic and seaborne export flows is happening as the nation keeps its crude production capped under a deal with the Organization of Petroleum Exporting Countries.

Read More: OPEC+ Sticks with Plan to Revive Oil Output Next Quarter

Russia's daily refinery runs grew to nearly 5.48 million barrels a day on July 25-31, up by more than 26,000 barrels compared to the week before, the person said. The growth was partly driven by two Gazprom PJSC condensate-processing plants — in Astrakhan and in Surgut — returning online, the person said.

Russia's Energy Ministry last week said that two Gazprom downstream facilities were about to complete maintenance.

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https://defapress.ir/fa/news/682730/ DefaPress.ir

Defense Press reports;

List of Possible Targets of the Axis of Resistance in the Occupied Territories

The Israelis are concerned that the retaliatory response of the Axis of Resistance will include a wide range of strategic and sensitive targets in the occupied territories and pose a serious threat to the existence of the Zionist regime.

News Code: 682730 Publish Date: 06 August 2024 - 12:07 - 05August 2024

International Defense Press Group: Despite the continuous international efforts to prevent the region from entering an all-out war and the withdrawal of the Axis of Resistance from responding to the cowardly assassinations of the Zionists in Beirut and Tehran, it has become certain for all those who follow the course of developments in the region that the response of the Axis of Resistance is certain. As Sayyed Hassan Nasrallah, the secretary-general of the Lebanese Hezbollah, emphasized in his recent speech, the issue of the response has been resolved, and the quality of this response will be different from the previous ones, and it is up to the field to decide when and where this response will be carried out.

The Israelis believe that the attacks carried out by the Axis of Resistance can target a wide range of strategic and sensitive targets of the regime and pose a serious threat to its existence. Accordingly, hundreds of thousands of Israelis are seeking a safe haven for fear of imminent retribution from the Axis of Resistance, without knowing the extent of these attacks.

The following are some of the strategic and vital goals of the Zionists that the Axis of Resistance can target:

1. Governmental Centers:

Parliament
Prime Minister's Office of the
Ministry of War

Airports:

Ben Gurion International Airport Haifa
International
Airport Ramon International Airport

3. Military bases:

Siddot Misha
Air Base Ramon
Air Base Ramat David Air Base Hatzer
Air Base Hatzrim
Air
Base Navatim
Air Base Tel Nof
Air Base Palmachim Air Base

4. Ports:

Haifa
Port Ashdod
Port Eilat Port

5. Power plants:

Orot Rabin
Station Rotenberg
Station Eshkol
Station Reading Station Haifa
Station

6. Oil and gas fields:

Karish
Square, Leviathan
Square, Tamar
Square, Shaman Square

The above, which have been briefly mentioned, are the most important and sensitive facilities of the Zionist regime that can be targeted in any possible battle, and of course, everyone acknowledges that this attack will inevitably take place soon.

Israel is in the crosshairs of the storm and despite having abundant military, intelligence, and technological capabilities and unlimited support for its allies around the world, it does not have a high level of depth and security, and it does not have enough manpower to deal with a multi-front war. In addition, there is a clear weakness on its domestic front, which could collapse under the weight of the large-scale attacks to which the Zionist regime may be exposed in the coming days or weeks.

It is true that there is a so-called regional alliance that seems ready to participate once again in support of these terrorist Zionists, but the expected attack will be different in form than before. In particular, it can include fronts where the missiles and drones of these fronts do not need a distance of 2,000 kilometers to reach Israeli settlements, so the situation that prevails in the occupied territories these days is not at all similar to previous retaliatory attacks and has caused double fear among the Zionists.

Date: Wednesday, August 7, 2024
Ref: 6411

SUBJECT: FORCE MAJEURE DECLARATION

Dear All,

Considering the current circumstances that Sharara crude oil production which prevented National Oil Corporation (NOC) from carrying out the crude oil loading operations, whereas some of these circumstances concerning will be affecting and ceasing the oil operations of crude oil productions in oil Filed and ceasing the crude oil exporting operations at Zawia terminal.

Based on the provisions of Force Majeure in the Libyan Civil Code, NOC considers these circumstances out of its control and cannot be prevented which calls NOC to declare Force Majeure from **7th of August 2024.**

Bearing in mind that the Force Majeure situation will not be applicable to loading and unloading petroleum productions operations.

NOC will notify you of returning to normal situation as soon as the circumstances caused Force Majeure to disappear.

Kind regards

National Oil Corporation
Board of Directors

NATIONAL OIL CORPORATION
نفط
Chairman Board of Directors

https://libyaherald.com/2024/08/charges-of-corruption-have-left-aldabaiba-seeking-third-oil-and-gas-minister-in-five-months/

Charges of corruption have left Aldabaiba seeking third Oil and Gas Minister in five months

by**Sami Zaptia**

August 8, 2024

Tripoli based Libyan Prime Minister, Abd Alhamid Aldabaiba, has found himself in an embarrassing position after the Attorney General yesterday detained his Acting Oil and Gas Minister Khalifa Abdel Sadig (and his Office Director) over an illegal € 457.6 million payment to a foreign company.

The Attorney General's Office reported that its Deputy Public Prosecutor investigated the fact that the defendants "deviated from the requirements of the job entrusted to them'' and inferred that they "had adopted behaviour incompatible with job duties''.

This was represented in "threatening the Corporate Accounting Officer to induce him to adopt a document authorising the disposal of € 457.6 million for the benefit of a foreign company in violation of legislation''.

Background – embarrassing for Aldabaiba

It will be recalled that Abdel Sadig was the Deputy Oil and Gas Minister under former Oil and Gas Minister Mohamed Aoun. But when Aoun was suspended by the Administrative Control Authority (ACA) on 25 March this year, Aldabaiba appointed Abdel Sadig as his Acting Oil and Gas Minister.

However, when on 28 May this year the ACA cleared Aoun of any wrongdoing, Aldabaiba refused to reinstate him and kept Abdel Sadig as Acting Oil and Gas Minister. Analysts put his refusal to reinstate Aoun to Aoun's opposing the controversial NC7 Hamada Oilfield deal with a foreign entity. It was thought that Abdel Sadig was more in-line with Aldabaiba.

Now, to the embarrassment of Aldabaiba, Abdel Sadig has been detained by the Attorney General for illegally disposing of € 457.6 million.

This leaves Aldabaiba in the position of having to find another person to appoint to the very sensitive position of Acting Oil and Gas Minister, and who would be less confrontational to Aldabaiba's policies.

The detention of Acting Oil and Gas Minister Abdel Sadig will add fuel to the general public perception that corruption is rife amongst the ruling class of Libya.

i_Cores

cores

Importaciones de crudo por países

Junio 2024

Las importaciones de crudo a España aumentan en junio (+4,5% vs. jun-23)

El crudo importado a España en junio se sitúa en 5.076 kt, aumentando las importaciones de crudo interanualmente en el mes (+4,5%), en el acumulado anual (+10,8%) y en el año móvil (+4,8%).

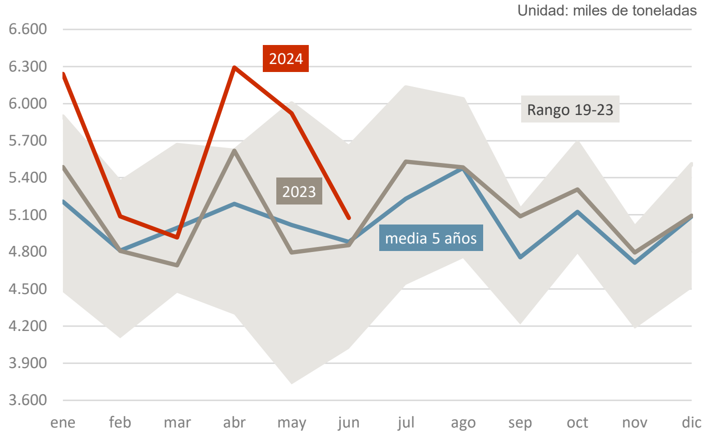
Este mes se importan 26 tipos de crudo originarios de 16 países.
Nigeria (796 kt; 15,7% del total) se sitúa como principal suministrador de crudo a España en junio, con un aumento interanual del 22,1%. Le siguen Estados Unidos (737 kt; 14,5% del total), que disminuye sus entregas un 8,5% vs. jun-23, y México (570 kt; 11,2%), que las disminuye un 12,9%.

Las importaciones de crudo de los países miembros de la OPEP aumentan en el mes un 14,2% vs. jun-23 y representan el 42,5% del total. Presentan ascensos interanuales las entradas de crudo de todos los países miembros a excepción de Libia (-16,8%), Irak (-10,8%) y Arabia Saudí (-9,0%). Las entradas de crudo de los países No-OPEP disminuyen en el mes (-1,6% vs. jun-23), y representan el 57,5% del total.

Por áreas geográficas, África (+28,7% vs. jun-23) es la principal zona de abastecimiento en el mes (32,3% del total). Le siguen América del Norte (-8,3% vs. jun-23; 31,6% del total), América Central y del Sur (+47,6%; 22,8%), Oriente Medio (-9,6%; 8,2%) y Europa y Euroasia (-56,0%; 5,1%).

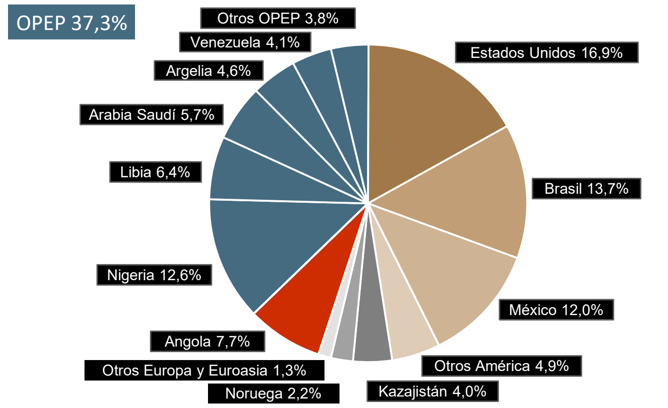
Importaciones mensuales de crudo últimos 5 años

Unidad: miles de toneladas



Fuente: Cores

Distribución importaciones de crudo Enero-Junio 2024



Fuente: Cores

Unidad: miles de toneladas

	Junio 2024			Acumulado anual		Año móvil		
	Importaciones	TV (%)*	Estructura (%)	Importaciones	TV (%)*	Importaciones	TV (%)*	Estructura (%)
Canadá	298	2,7	5,9	894	-40,3	2.308	-24,5	3,6
Estados Unidos	737	-8,5	14,5	5.656	53,8	10.689	69,7	16,5
México	570	-12,9	11,2	4.037	1,1	7.079	-5,1	10,9
Total América del Norte	**1.605**	**-8,3**	**31,6**	**10.588**	**15,5**	**20.075**	**19,4**	**31,0**
Brasil	506	6,6	10,0	4.587	66,2	8.463	51,6	13,1
Colombia	-	-100,0	-	-	-100,0	404	-68,2	0,6
Ecuador	-	-	-	-	-100,0	-	-100,0	-
Trinidad y Tobago	-	-	-	-	-100,0	51	-88,3	0,1
Venezuela	371	137,1	7,3	1.363	228,9	2.340	104,9	3,6
Otros América Central y del Sur	281	-	5,5	756	85,3	1.023	-7,4	1,6
Total América Central y del Sur	**1.158**	**47,6**	**22,8**	**6.705**	**46,7**	**12.280**	**26,9**	**18,9**
Albania	20	-49,8	0,4	119	-44,9	324	-32,6	0,5
Azerbaiyán	-	-	-	-	-100,0	447	-82,0	0,7
Italia	-	-100,0	-	269	58,0	462	6,0	0,7
Kazajistán	90	-80,5	1,8	1.332	-35,5	2.354	-36,4	3,6
Noruega	110	-	2,2	752	-3,9	1.248	-2,7	1,9
Reino Unido	39	-36,0	0,8	39	-86,2	71	-84,0	0,1
Total Europa y Euroasia	**259**	**-56,0**	**5,1**	**2.512**	**-45,2**	**4.906**	**-44,4**	**7,6**
Arabia Saudí	280	-9,0	5,5	1.927	-2,9	4.053	-6,6	6,3
Emiratos Árabes Unidos	-	-	-	-	-	-	-100,0	-
Irak	134	-10,8	2,6	853	-40,1	2.539	-40,0	3,9
Total Oriente Medio	**414**	**-9,6**	**8,2**	**2.780**	**-18,4**	**6.591**	**-24,6**	**10,2**
Angola	268	-	5,3	2.592	75,3	5.279	56,4	8,1
Argelia	242	202,2	4,8	1.550	19,8	2.708	0,2	4,2
Egipto	-	-	-	-	-100,0	78	19,7	0,1
Gabón	-	-	-	130	-	263	-	0,4
Ghana	-	-	-	-	-	131	-	0,2
Guinea Ec.	-	-100,0	-	293	-42,6	565	-39,2	0,9
Libia	334	-16,8	6,6	2.156	6,1	4.469	1,8	6,9
Nigeria	796	22,1	15,7	4.230	34,3	7.462	18,4	11,5
Túnez	-	-	-	-	-	23	-0,6	^
Total Africa	**1.641**	**28,7**	**32,3**	**10.950**	**28,4**	**20.979**	**17,9**	**32,4**
Total	**5.076**	**4,5**	**100,0**	**33.535**	**10,8**	**64.832**	**4,8**	**100,0**
OPEP	**2.157**	**14,2**	**42,5**	**12.500**	**1,7**	**27.086**	**-1,8**	**41,8**
No-OPEP	**2.919**	**-1,6**	**57,5**	**21.034**	**17,0**	**37.746**	**10,1**	**58,2**
OCDE	**1.754**	**-12,0**	**34,6**	**11.648**	**4,5**	**22.261**	**9,9**	**34,3**
No-OCDE	**3.322**	**16,0**	**65,4**	**21.887**	**14,5**	**42.571**	**2,3**	**65,7**
UE	**-**	**-100,0**	**-**	**269**	**58,0**	**462**	**6,0**	**0,7**

* Tasa de variación con respecto al mismo periodo del año anterior.

Fuente: Cores

- igual que 0,0 / ^ distinto de 0,0

Actualizado el 08-08-2024

COLORADO STATE UNIVERSITY FORECAST OF ATLANTIC HURRICANE ACTIVITY FROM AUGUST 6–19, 2024

We believe that the most likely category for Atlantic hurricane activity in the next two weeks is above-normal (85%), with near-normal (14%) and below-normal (1%) much less likely.

(as of 6 August 2024)

By Philip J. Klotzbach[1], Michael M. Bell[2], Alexander J. DesRosiers[3], and Levi G. Silvers[4]

With Special Assistance from Carl J. Schreck III[5]

In Memory of William M. Gray[6]

This discussion as well as past forecasts and verifications are available online at http://tropical.colostate.edu

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[4] Research Scientist
[5] Research Scholar at NC State University
[6] Professor Emeritus

1 Introduction

This is the 16th year that we have issued shorter-term forecasts of tropical cyclone (TC) activity starting in early August. These two-week forecasts are based on a combination of observational and modeling tools. The primary tools that are used for this forecast are as follows: 1) current storm activity, 2) National Hurricane Center Tropical Weather Outlooks, 3) forecast output from global models, 4) the current and projected state of the Madden-Julian oscillation (MJO) and 5) the current seasonal forecast.

Our forecast definition of above-normal, normal, and below-normal Accumulated Cyclone Energy (ACE) periods is defined by ranking observed activity in the satellite era from 1966–2023 and defining above-normal, normal and below-normal two-week periods based on terciles. Since there are 58 years from 1966–2023, we include the 19 years with the most ACE from August 6–19 as the upper tercile, the 19 years with the least ACE as the bottom tercile, while the remaining 20 years are counted as the middle tercile.

Table 1: ACE forecast definition and probabilistic forecast for TC activity for August 6–19, 2024.

Parameter	Definition	Probability in Each Category
Above-Normal	Upper Tercile (>6 ACE)	85%
Normal	Middle Tercile (2–6 ACE)	14%
Below-Normal	Lower Tercile (<2 ACE)	1%

2 Forecast

We are quite confident that the next two weeks will be characterized by activity at above-normal levels (>6 ACE). Tropical Storm Debby is likely to generate 2–3 ACE before dissipation, effectively guaranteeing the normal category. The National Hurricane Center is currently monitoring an area in the eastern Caribbean for tropical cyclone development in either the western Caribbean or Gulf later this week. The system currently has a 30% chance of tropical cyclone formation per the National Hurricane Center in the next seven days. Global models are also highlighting additional potential formations in the Main Development Region later in the forecast period. The Madden-Julian Oscillation (MJO) is forecast to amplify over the Indian Ocean during the two-week period, providing large-scale conditions that favor Atlantic hurricane activity.

Figure 1 displays the formation locations of tropical cyclones from August 6–19 for the years from 1966–2023, along with the maximum intensities that these storms reached. Figure 2 displays the August 6–19 forecast period with respect to climatology. This period typically marks the beginning of the ramp-up for Atlantic tropical cyclone activity. The primary threat formation area for major hurricanes in early- to mid-August is in the tropical Atlantic east of the Lesser Antilles.

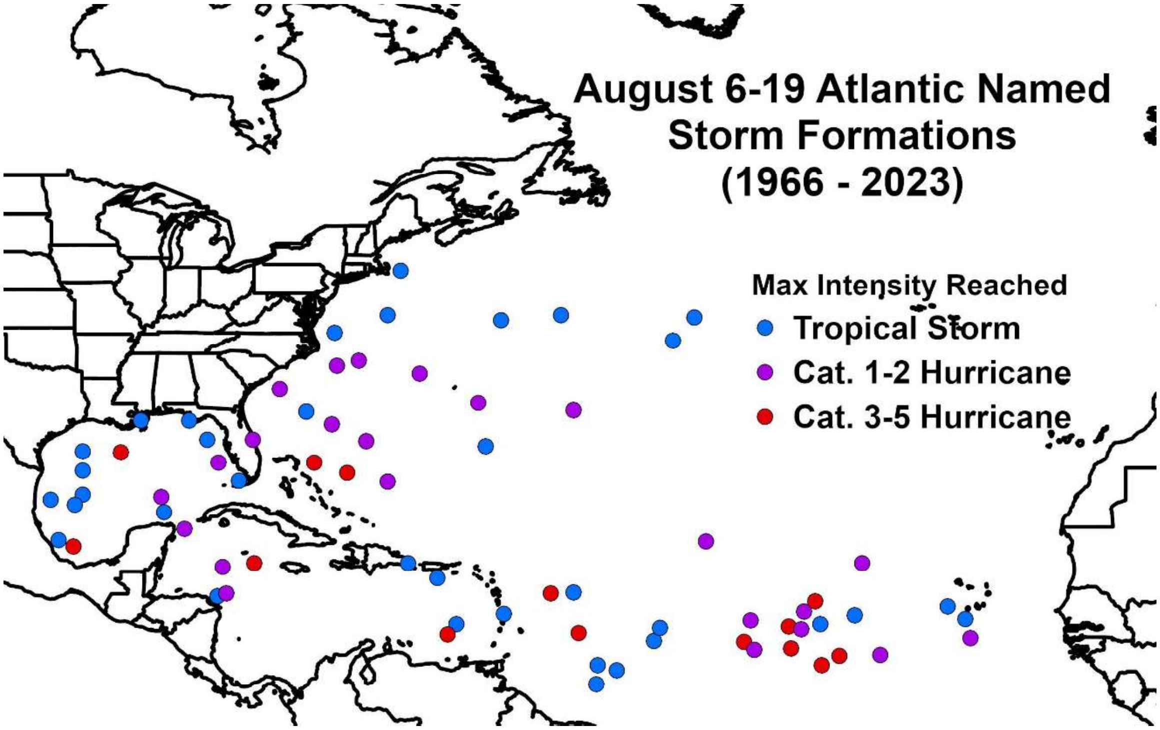


Figure 1: Atlantic named storm formations from August 6–19 from 1966–2023 and the maximum intensity that these named storms reached.

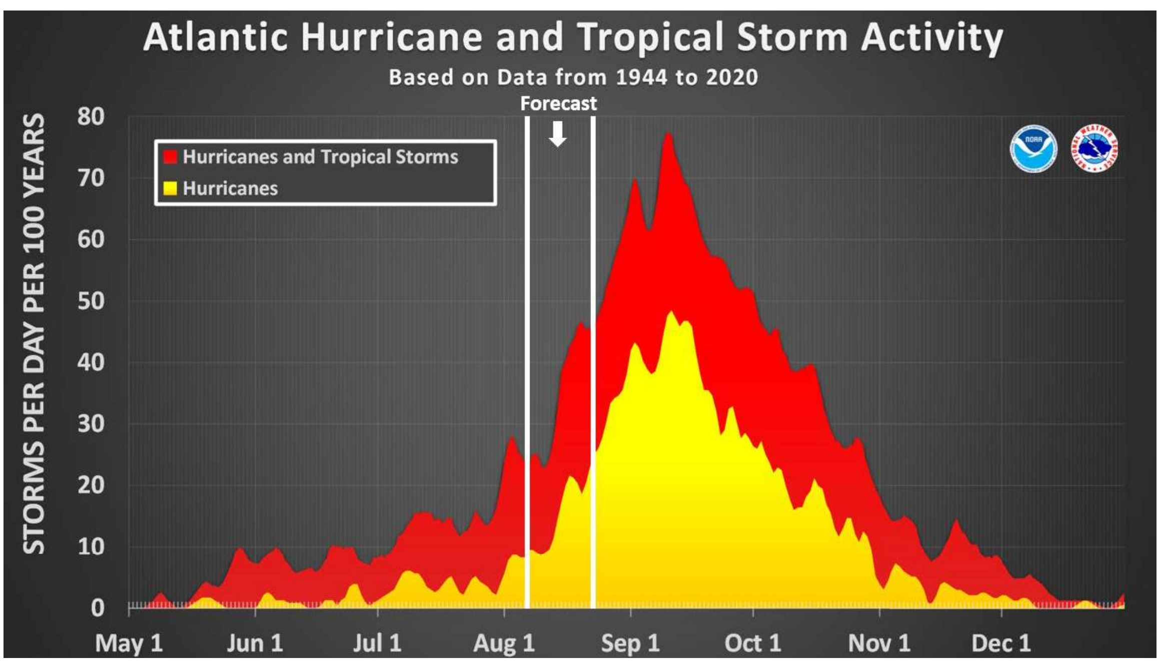


Figure 2: The current forecast period (August 6–19) with respect to climatology, delimited with white lines. Figure courtesy of NOAA.

https://www.theglobeandmail.com/opinion/article-the-liberals-will-be-forced-to-act-on-ev-tariffs-even-if-it-slows-down/

The Liberals will be forced to act on EV tariffs, even if it slows down their climate goals

KELLY CRYDERMAN

Doug Ford's call last week for Ottawa to immediately match or exceed new U.S. import taxes on "artificially cheap electric vehicles" from China was inevitable, as is the fact the federal government will have to heed the Ontario Premier's advice.

This will happen despite the considerable downsides. New tariffs on Chinese EV imports could impede the federal Liberals' climate-focused plans for 100-per-cent, zero-emission vehicle sales by 2035, and – keenly for all of Canada – open a precipitous new front in trade-wrangling with China.

But at stake are consequential items, like the more than $50-billion of federal and provincial funds poured into building a supply chain, and the dream of turning central Canada into an electric-vehicle-industry middle power. And yes, Canada's relationship with its still-largest trading partner.

Chinese automakers lead global production of EVs and now churn out more than half the world's supply. In May, U.S. President Joe Biden – eager to protect and bolster a U.S.-focused EV supply chain, and arguing that China is flooding the world with artificially low-priced exports – announced steep tariff increases on an array of Chinese imports, including lithium-ion EV batteries, and battery components such as natural graphite and permanent magnets. Most notably, his administration quadrupled duties on actual EVs to more than 100 per cent.

That compares to a tariff of 6.1 per cent on Chinese EVs here in Canada.

Chinese brands aren't really a part of Canada's EV market right now. But, according to Bloomberg, Canada is seeing a significant surge in imports of Chinese-made EVs, particularly Tesla Inc. models made in Shanghai. The number of cars arriving from China at the port of Vancouver rose more than fivefold last year, to 44,400. And Canadians get a $5,000 point-of-sale rebate on these models, to boot.

This is a problem. No matter what, Canada needs to avoid looking like a backdoor to Chinese EVs and EV parts. Already, the U.S. has grown increasingly concerned about Mexico becoming a hub for Chinese goods to skirt U.S. tariffs, and U.S. Trade Representative Katherine Tai has told reporters to "stay tuned" on what it might do to counter that.

There will be a cost if Canada adds a tariff to Chinese imports, of course. Europe is already grappling with this. China has opened an anti-dumping investigation – an early step to setting its own tariffs – into imported pork and byproducts from the European Union, in response to curbs on its EV exports.

But to put into perspective what side Canada will come down on: Ontario's total two-way trade with the U.S. in 2023 was valued at around $500-billion, whereas its trade with China is about one-tenth that.

Also in question is the $52.5-billion in government money given to 13 EV supply chain projects in Ontario and Quebec. This month, the Office of the Parliamentary Budget Officer estimated that federal support is $31.4-billion and provincial contributions are $21.1-billion. The government funding exceeds the private-sector commitment by a cool $6-billion, according to the PBO. But governments are betting on planting the seeds for a much broader industry to flourish.

Many Canadians would like to own an EV. And the federal Liberals certainly want to encourage this, even bringing in a heavy-handed ban on the sale of vehicles with tailpipe emissions by 2035. This is one of the climate-focused government's signature policies.

Without guardrails, this policy is also a gift to Chinese manufacturing, with all of its warts. Mr. Ford came armed with an environmental, social and governance (ESG) argument about why it might be a good idea to slow down Chinese exports. In his statement, he noted China is "taking every advantage of low labour standards and dirty energy" – the latter a reference to its copious use of coal.

Still, the state of household finances is Canadians' biggest concern right now, and will remain so for several years. If Chinese automakers start selling reasonably priced EVs in Canada that Canadians want to buy – rather than the smaller, more basic models sold domestically in China – it could help speed up EV adoption, Robert Karwel, a senior manager at J.D. Power's Toronto office, told The Globe. But it would be "potentially devastating" for Canada's fledging EV and battery industry.

Therein lies the conflict.

Prime Minister Justin Trudeau said last week that his government is "watching closely what the Americans and other allies have done," and said he had "significant" discussions with other G7 leaders on the topic at their summit in Italy earlier this month.

But Canada would be wise to move beyond these platitudes, and well before the U.S. presidential election in November. No matter who wins that race, American protectionism will rule the day, and thereby rule Canada's trade moves.

And to that point, we've now seen 11 consecutive years of adjusted EBITDA growth and an 8% compound annual growth rate of our adjusted EBITDA since 2018. In addition, we have realized a 19.5% return on our invested capital during the last four years, and our steadfast project execution has led to record contracted transmission capacity and will continue to drive per share growth in 2024 and beyond. In fact, our current projects in execution have higher returns than this prior four years.

So in closing, we've built a business that is delivering record profitability and strong financial returns in the present, but is positioned for an even faster growing future.

And so with that, we'll open it up to your questions. Thank you.

Questions And Answers

Operator

(Question And Answer)

Thank you. At this time, we will conduct the question-and-answer session. (Operator Instructions). Please limit your question to one question and one follow-up. Please stand by while we compile the Q&A roster. Our first question comes from the line of Praneeth Satish of Wells Fargo. Your line is now open.

Q - Praneeth Satish {BIO 17708849 <GO>}

Hi, all. Good morning. Maybe I'll start with data centers here. So, you mentioned that CESI is just the first and maybe a handful of other data center projects. I guess, two questions here. Can you give us a sense of the size and scope of some of the other projects that you're looking at in the backlog? And then how do you think about the returns on future projects for CESI? I mean, we're estimating around a 5x EBITDA multiple. Do you think that some of the future data center projects that are in the backlog could earn similar types of returns?

A - Alan S. Armstrong {BIO 1650852 <GO>}

Yes. Well, first of all, Praneeth, thank you for the question and important issue. First of all, on CESI, actually, our return is even better than that, probably, as we've mentioned, the best return we've ever seen on a large-scale project on Transco and actually any of our transmission expansions over long history for Williams, so pretty extraordinary return opportunity there.

In terms of the data center load, we are right in the throes of that. We have a very long backlog of projects. And I will tell you that, particularly in the Southeast and the mid-Atlantic, those expansion opportunities that we have, we, frankly, are kind of overwhelmed with the number of requests that we're dealing with, and we are trying to make sense of those projects. Obviously, we're not going to start or announce another expansion project on the top of CESI because, obviously, that would force a combination of projects, and so it doesn't make any sense for us to be making any announcements when we've got a large project that we've committed to our customers to do everything we can to get that permitted cleanly and push that ahead. So extremely critical expansion for our utility customers there in the mid-Atlantic and the Southeast, and we understand that, and we're going to make sure that we deliver on that first to our customers.

But despite the fact that there's a lot of attention there in the Southeast and the mid-Atlantic, we're actually seeing strong demand response in a lot of projects that we're dealing with and trying to figure out how we can respond to in the Rocky Mountain states, particularly in Eastern Washington, in the Quincy area, in Idaho, in Salt Lake City region. So a lot of demand going on everywhere, and frankly, the big developers that we're working with are looking to find where they can -- because time is of the essence probably more than we can even imagine in our business, and so they are looking to where the permitting regime is right, where there's access to abundant natural gas supplies, and frankly, where expansions on our systems are available.

And so this has moved from being one where people have been very focused previously in cloud-based data centers, they've been very focused on the latency issue, or in other words, the connection into the very fast and broadband networks to where they are now focused on the latency being less of an issue. I wouldn't say it's not an issue, but less of an issue, and the speed to market for power generation and gas resources being available to power that are coming front and center, along with the local air permitting issues associated with that.

So I would just tell you, it is kind of an exciting time for us, and even for me personally, to be in such a steep learning curve on how we are going to make the very best use of our assets, but there certainly is not a dearth of opportunity for us in that regard. In fact, as I said, it's a little bit overwhelming, and we're going to have to just make sure we make the very highest use of our assets, because there obviously is, as we expand, the lower cost expansions drive very high returns, but we only have so many of those, and those are precious, and we know that, and so we're making sure that we make the very highest return associated with the expansion around our assets.

So we're not going to put a number on it, because I hear people putting a number on it, and frankly, that's a very large guess, and it's in a time frame, frankly, that's out there so far, and if you're not speaking to the returns that you're making on the project, I'm not really the purpose of quoting those kind of numbers when you're not really talking about the economic or financial impact to your business, and we're not ready to lay that out. But I can tell you that if anybody else has more opportunity than we do, I wish them luck, because we're going to have a hard time keeping up with the opportunity in front of us right now.

So, hopefully, that gives you some color, but I would tell you, I think it's not all that meaningful to quote volumes on expansions if you're not talking about returns and you're not talking about the time frame for those opportunities.

Good morning, Jeremy. It's Micheal. Yes, I think right now, we feel good about where we're at in regard to our current forecast for the production profiles coming from our customers. You've got to look at it between the rich basins and the dry gas, and obviously, the dry gas is challenged by pricing now. So producers are making a month-by-month decision on gas volumes that they might shut in. I think you probably saw Kotter's announcement where they were shutting in $300 million for the month of August. And it's really a month-by-month decision for all the producers out there.

But right now, we've anticipated this, as you've probably seen through the first half of the year. The team did a really good job anticipating where the production shut-ins would occur and the delayed tills and ducts. I would say right now, we've got over a BCF of delayed tills in the queue right now between all of our customer base, meaning that the producers have drilled the wells and completed them and we've connected to them, and they are ready to go when the price signals are there. And there's over a BCF, as well, of ducts. So they've been drilled but not completed on our systems. So there's definitely a lot of opportunity to bring on gas as the producers see a price signal.

And so I'd say our risk basins are still outperforming. We're seeing good pricing netbacks for the producers there. And that certainly buffers the dry gas situation that we have right now. But all in all, we feel good about our end-of-year forecast. Certainly, 2025 is going to be price-sensitive as well. The Golden Pass LNG facility, you probably saw the announcements yesterday that they're going to be at end of 2025 in service it appears. And so that should have been anticipated already by the market it looks like with the forward curves and producers will be making decisions on these curves. And when prices elevate, obviously, they'll hedge into that and keep their volumes flowing is what we anticipate. So we're really comfortable with where our current forecasts are.

Q - Jeremy Tonet {BIO 15946844 <GO>}

Got it. That's very helpful. Thank you for that. And just wanted to pivot towards leg if I could and just wanted to see your latest thoughts on moving forward there with regards to FERC requesting more information. Just wondering if you could update us there and how you think about that.

A - T. Lane wilson {BIO 21089975 <GO>}

Yes. We've responded to the FERC data request and we fully anticipate that FERC is either going to dismiss this matter or find that leg as a gathering system. We don't -- really don't have any concerns there. And so there's really nothing for us to do right now except continue down the current road which is in construction. So again we feel pretty confident about where we are in this project.

Q - Jeremy Tonet {BIO 15946844 <GO>}

Got it. Understood. Thank you for that.

Operator

ability to continue to invest in these high-return projects that we have as an opportunity in front of us is how the tax impact on our business and the amount of free cash flow. So it's pretty obvious to us that that delta and something we're keeping a close eye on.

Beyond that, I will tell you that, and I have to remind people this that even during the prior Trump Administration, we had major projects get stopped like Constitution and Nessie[ph] because of the 401 Water Quality Certificate that allowed a state to stop a project without really an ability for the federal government to solve that. And so I think it's great that there will be a bigger push.

I actually think paying more attention to how Congress turns out and the legislative front is actually a bigger push because that's actually where we might see some reform in the law in a way that allows us to build out the pipeline infrastructure that we need. And so we saw recently the Manchin-Barrasso bill did really nothing for the pipeline industry. And while we are very thankful for both Senator Manchin and Senator Barrasso and what they've done for our industry, in this case, that was really a throw to the transmission side of the business and really didn't do much for pipelines.

And so we think there's got to be some -- and we get that that's the state of the current congress and the way the numbers stack up in there today. I think they both would like to do more, obviously, for pipelines if they thought that was possible. And so we do think that watching Seattle legislature turns out could be an opportunity to see some serious reform on the permitting front. So I would say we're paying a little more attention to that, frankly.

Q - Theresa Chen {BIO 16279234 <GO>}

Thank you.

Operator

One moment for our next question. Our next question comes from the line of John Mackay of Goldman Sachs. Your line is now open.

Q - John Mackay {BIO 18974956 <GO>}

Hey, good morning, everyone. I wanted to go back to the conversation quickly, if we can, around data centers. Just on the comments around speed to market, I was just wondering if you could flesh that out a little bit more for us, what that would actually look like. Is that co-location on Transco? Is that something FERC non-jurisdictional? Anything you can frame up there would be helpful.

A - Alan S. Armstrong {BIO 1650852 <GO>}

Yes. Well, John, thanks for the question. I would say that what we're seeing is a shift because I think that the big developers are realizing that they're kind of up against a brick wall right now in terms of extracting more generation off the grid. They realize that that's pretty well exhausted and so they're going to look to areas where both natural gas resource is available, the capacity for it is available and as well as the permitting environment allows them to go build out some very significant power generation behind the meter, on the one hand.

We still are seeing a lot of growth on the utilities as well, more for the conventional data centers and the cloud-based data centers, a lot of growth continuing as well as just general electrification of load, sorry, that is driving that as well. But in terms of the hyperscaler and their approach right now, we are seeing them look all the way back into areas where the gas resource is abundant and the permitting allows for getting on with developing the infrastructure that they need to have reliable and affordable power into those markets. But as Michael pointed out, I think that in my earlier comment, the speed to market seems to be the thing that is most top of mind for the big data -- big hyperscaler developers.

And so that's where we think there's going to be opportunity and in places like Wyoming, where we have a lot of gas resource available and a lot of wind resource available as well. And so I think we're going to see that, but we're also going to get a lot of indirect load from our utilities in these other areas as both the conventional data centers and electrification continues to grow in those markets.

Q - John Mackay {BIO 18974956 <GO>}

I appreciate that. And acknowledge we're at the top of the hour, we'll squeeze one more in. Gillis West, relatively small, but actually pretty interesting. I guess we've had a lot of conversations around trying to get gas out of Texas into Louisiana, given the LNG ramp. I guess I'd just be curious, your perspective, is this a macro trend kind of shifting? Is this kind of more of a maybe one-off with this customer? Anything you can kind of frame up from a kind of Louisiana demand ramp perspective would be interesting.

A - Alan S. Armstrong {BIO 1650852 <GO>}

Yes. Well, I would just say if you think about all of the supply that Haynesville has available and some of the resources even south of Haynesville that we think will get developed in a pricing environment that's coming forward right now, we think that having access to those Louisiana supplies and diversity of supply is really important. And again, as I mentioned in my comments, if you think about the pain that has been inflicted on some of the Texas utilities from the Texas intrastate market where they didn't have access to a more diverse supply, we think this is a trend.

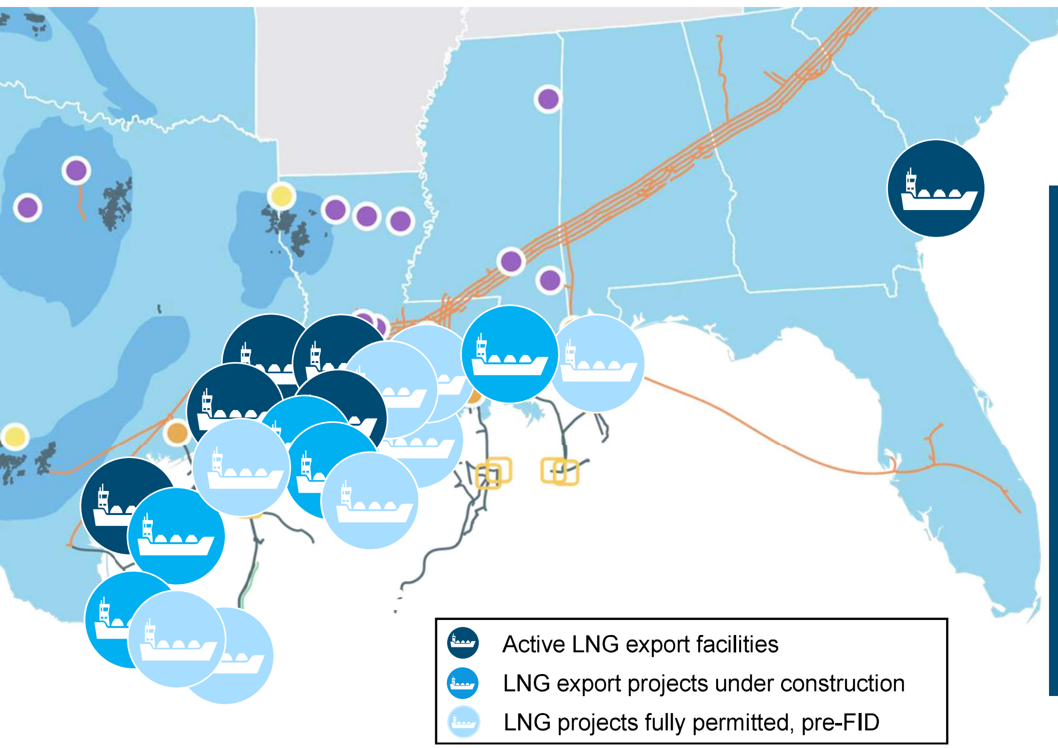
I mean, it only makes sense that they're going to look back to see what's been imposed on them from a pricing standpoint and look for more reliable, low-cost supplies to be available. And to me, that's the important thing about this is them recognizing that that fluctuation did not occur in places like Louisiana. It really only occurred on the Texas intrastate markets, and this gives them access to a more diverse supply. So that to me is the keynote to take away from that project.

Q - John Mackay {BIO 18974956 <GO>}

Interesting. Thanks for that, Alan. Appreciate the time.

Transco resides along active and growing US LNG corridor

Williams' Asset Map in U.S. Gulf Coast[1] + U.S. L-48 Large Scale Approved and Potential Liquefaction Facilities Per EIA[2]



14.3 Bcf/d[3]
LNG projects already operational within Transco footprint

\+

11.6 Bcf/d[3]
LNG export projects currently under construction within Transco footprint

\+

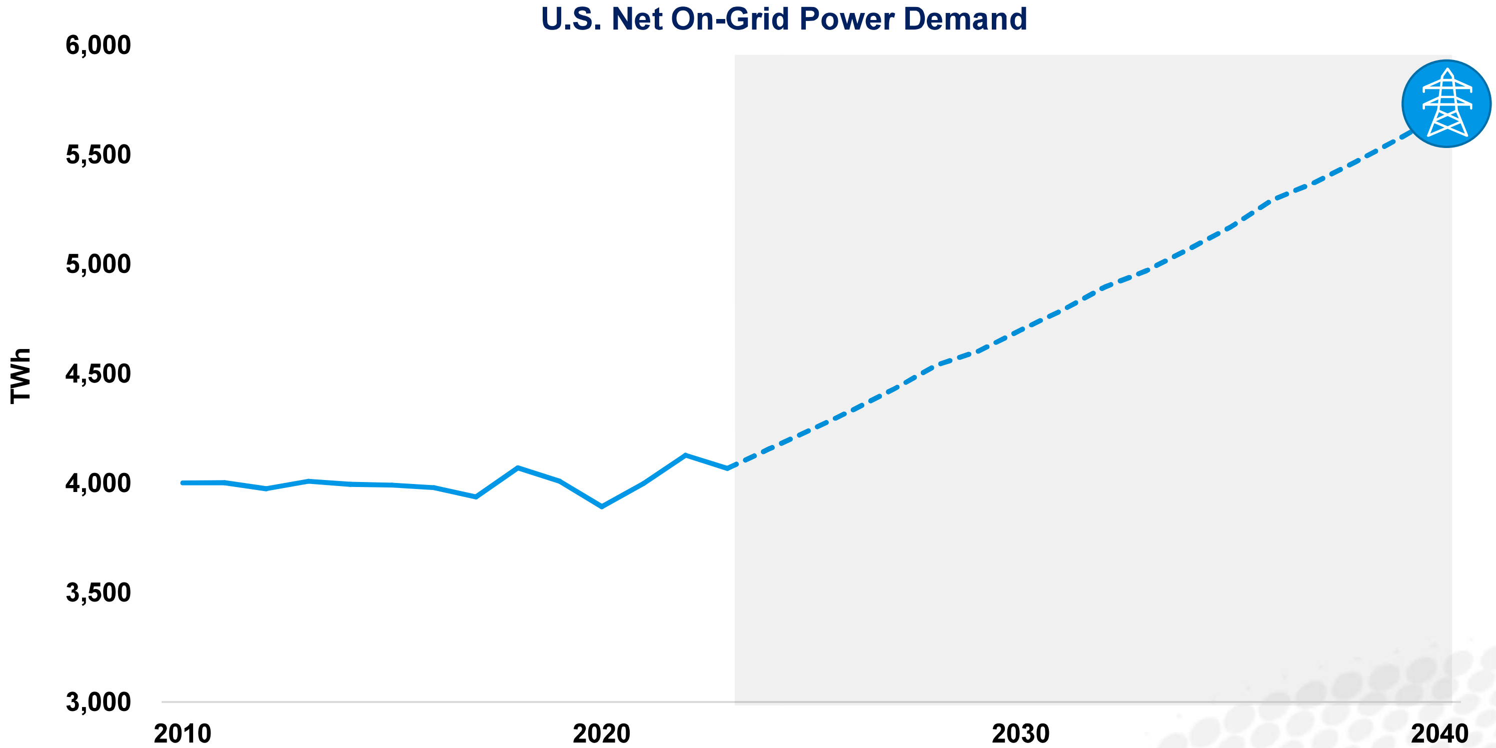
11.9 Bcf/d[3]
LNG export projects awaiting FID within Transco footprint

?

Source: U.S. Energy Information Administration (EIA) as of 6/27/2024.
[1]As of August 2024. [2]Projects need to receive two major sets of regulatory approvals from U.S. DOE & FERC/MARAD. [3]LNG export terminal capacity is the U.S. DOE-authorized maximum export quantity to non-FTA countries.

Growing electricity demand requires additional backup generation

Electrification of heating and transport, data centers and AI-driven future will create growth in power demand not seen in past two decades



Electricity demand experiencing

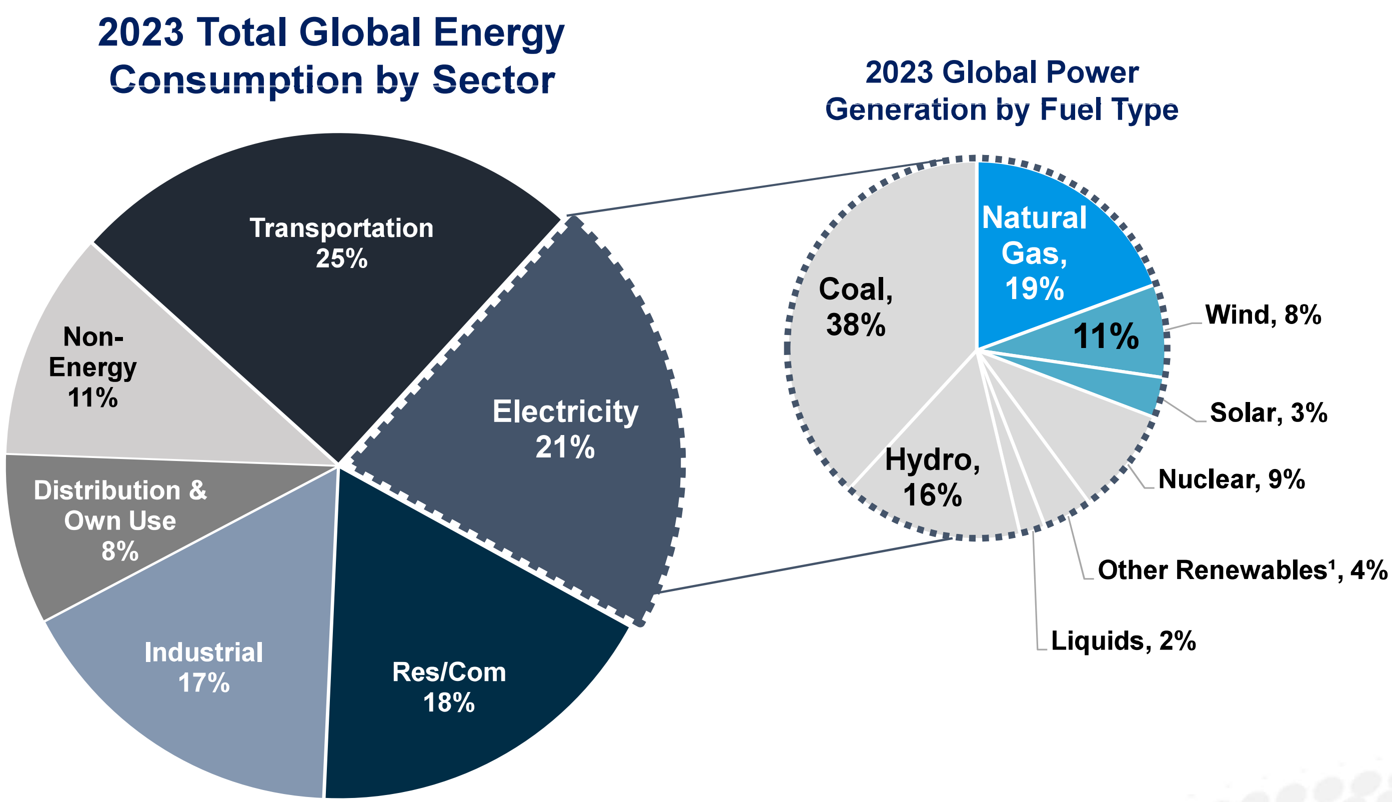
▲ 10x

faster growth per year

this decade vs. prior decade driven by emergence of large load data centers and EV growth

Source: S&P Global Commodity Insights, ©2024 by S&P Global Inc. May 2024 Planning Case

Renewables remain a small part of the total energy mix



Electricity only accounts for ~21% of total end-use energy consumption

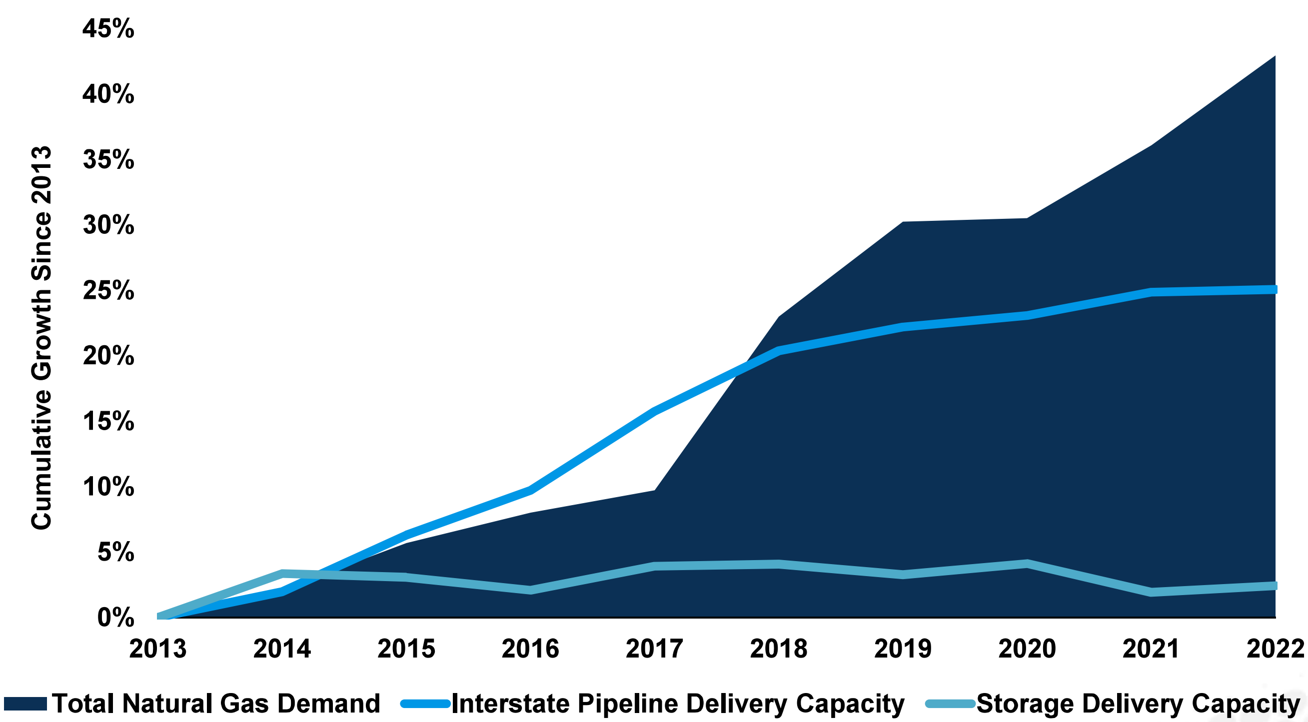
AND

Wind & Solar only account for 11% of total global power generation

[1]Other Renewables include Geothermal & Tidal. Source: S&P Global Commodity Insights, ©2024 by S&P Global Inc. June 2024 Most Likely Case.

There is a growing need for reliable infrastructure investment

Cumulative Percentage Growth in L-48 Natural Gas Demand versus Growth in Interstate Natural Gas Pipeline Capacity and Natural Gas Storage Delivery, 2013-2022



Since 2013 demand for gas has grown by

▲ **43%**

while infrastructure to deliver gas has increased by

▲ **25%**

and storage delivery capacity has grown only

▲ **2%**

Source: U.S. Energy Information Administration (EIA)

Natural gas meets the trifecta for energy solutions

CLEAN

45%

less carbon dioxide emissions than coal[1]

U.S. CO_2 emissions decline with increased coal-to-natural gas switching in the power sector

AFFORDABLE

4x

cheaper than electricity[2]

Natural gas remains the cheapest fuel for residential consumers

RELIABLE

2.5x

Performance of gas power capacity compared to solar PV power capacity[3]

Natural gas is a flexible and dispatchable energy source, making it ideal for the power sector

Sources: [1]Energy Information Administration (EIA) Carbon Dioxide Emissions Coefficients by Fuel; [2]U.S. Energy Information Administration (EIA), Annual Energy Outlook, 2023. Avg. Unit Costs of Energy for U.S. Mid Atlantic Residential Energy Sources; [3]U.S. Energy Information Administration using 2023 capacity factors for US combined-cycle gas fired-generation versus utility scale solar photovoltaic.

Executing on ~2.8 Bcf/d of Transco expansions[1]

Project		Target In-Service	Current Status	Project Capacity
IN-SERVICE Regional Energy Access	1	Placed in-service 3Q'24	In-service	829 MMcf/d
Southeast Supply Enhancement	2	4Q'27	Pre-filed FERC application	1,592 MMcf/d
Commonwealth Energy Connector	3	4Q'25	Received Notice to Proceed	105 MMcf/d
Southside Reliability Enhancement	4	4Q'24	Under construction	423 MMcf/d
Alabama Georgia Connector	5	4Q'25	Received FERC certificate	64 MMcf/d
Southeast Energy Connector	6	2Q'25	Under construction	150 MMcf/d
NEW Gillis West	7	4Q'25	Signed precedent agreement	115 MMcf/d
Texas to Louisiana Energy Pathway	8	1Q'25	Under construction	364 MMcf/d

Dekatherms converted to cubic feet at 1,000 cubic feet = 1 dekatherm. [1]Excluding in-service Regional Energy Access.

In combination with our announced asset divestitures that now total $2.6 billion, strong year-to-date EBITDA performance, and capital expenditures that are trending to the low end of our $8 billion to $8.5 billion outlook, we are well on track to reach our 2024 year-end debt to EBITDA target of 4.75 times.

We're proud to announce that we've entered into Canada's largest-ever indigenous equity ownership agreement that will enable ownership of the NGTL and foothill systems. This historic agreement is made possible by an equity loan guarantee provided by the Alberta Indigenous Opportunities Corporation in support of a newly formed indigenous-owned investment partnership. The transaction creates a pathway for equity participation ownership that delivers long-term, low risk, and stable revenue for local indigenous communities, creating a lasting and meaningful legacy.

We thank all rights holders and stakeholders involved in making this agreement possible. It is an example of what's achievable when Indigenous communities, governments, and industry come together. Never have I seen such strong prospects for North American natural gas demand growth. We are seeing natural gas demand reach record highs and this is expected to grow by nearly 40 bcf per day by 2035.

The outlook for our business has never been stronger, our assets are strategically positioned To meet growth and demand underpinned by five key pillars that give us visibility to attractive in corridor opportunities through the end of the decade. Based on capacity projects under various stages of development, we have line of sight to 5 plus bcf per day of nextwave LNG growth that will feed exports from Canada, the US, and Mexico, and we are the only company to have major assets in all three markets. In the US, we are delivering approximately 30% of LNG feed gas. In Mexico, we expect to see the first LNG cargo this month from Altamira's liquefaction facility, and in Canada, CGL remains ready to deliver gas when called for. Second, we're seeing continued demand and reliability requirements from our utility customers. We have one of the largest natural gas storage systems in North America, and that further bolsters energy reliability across the continent. Third, power generation demand is expected to increase significantly, driven by wide-scale electrification, coal-fired retirements, as well as emerging power needs from AI and data centers. As an example, we see around 300 data centers at various stages of development, 60% of which have proposed locations within 15 miles of our systems, namely Columbia. Additionally, within 15 miles of our Columbia and ANR systems, we estimate approximately 9 gigawatts of coal-fired generation is set to retire by 2031. From a capacity project standpoint, these drivers represent approximately an additional 5 bcf per day of high-quality opportunity. Fourth, our assets strategically connect the lowest-cost supply to the highest-value markets. These basins continue to see significant growth potential and our customers continue to look for additional connectivity. And finally, we have approximately $7.5 billion in our secured capital table for recoverable maintenance and modernization projects that support the safe and reliable delivery of record volumes. Our role is to execute the opportunities that maximize risk-adjusted returns while adhering to our net capital expenditure limit of $6 billion to $7 billion per year to create incremental value for our shareholders. In Mexico, We achieved critical milestones in the construction of Southeast Gateway and remain on track for commercial in service by mid-2025, at our expected cost of

US $4.5 billion. Progress on the offshore pipe installation has reached over 98% completion. The deepwater offshore section is now installed and there is approximately 3 kilometers shallow water installation remaining. We anticipate the shallow water installation to be complete in the third quarter. Onshore, we have completed construction at all three landfall sites and construction of the onshore facilities and final pipe, as well as, the tie-in activities continue to progress on schedule. To further illustrate the continued demand for natural gas, again, we saw continued high utilization of our systems. You can see on this slide that our NGTL system in Canada, our US natural gas pipelines, and our Mexico pipelines all set new all-time records for receipt or delivery volumes, with several daily records achieved in July. We reached unanimous support from customers for a five-year negotiated revenue requirement settlement on NGTL that extends from 2025 to 2029. This continues our 20 plus year track record of collaboratively working with our customers to address evolving needs while maximizing the value of our assets. The settlement is expected to result in approximately $150 million to $200 million per year of incremental EBITDA through increased depreciation rates and incentive mechanisms. The settlement supports competitive tolls for our customers and it incentivizes emissions reductions. The settlement also enables an investment framework to allocate approximately $3.3 billion toward a new multi-year growth program that will serve continued growth from the western canadian basin. The projects comprising the growth plan have targeted in service dates between 2027 and 2030, aligning with our net annual capital expenditure limit in our power segment, Bruce Power continues to reliably provide emissionless, low-cost electricity in Ontario. We achieved 78% availability in the second quarter, taking into account planned outages on four of our units, units eight Through five. The availability outlook for 2024 remains in the low 90% range now that all planned maintenance is complete for 2024. Unit 3 MCR continues to progress on plan for both cost and schedule, and the unit four MCR is expected to begin in early 2025. In the liquids business, keystone continued its strong operational performance, achieving 94% reliability in the second quarter. At our annual and special meeting in June, we received strong support from our shareholders to spin off the liquids pipelines business with voted common shares at 97% in favor of the spin. We continue to believe that spinning off South Bow will allow both companies to execute their focused strategies while maximizing the value of their respective assets. And now I'll turn the call over to Sean.

Unidentified Speaker

Thanks, Francois. Good morning everyone. I am pleased to report that TC's comparable EBITDA grew by 9% this quarter. I'll touch on the growth highlights with the chart on the left. Canada gas saw increases primarily from system expansions on NGTL and foothills. US Gas placed a number of new pipeline and modernization projects into service and they signed new contracts on a ANR and Great Lakes.

In Mexico, the main drivers were a new lateral section of Villa de Reyes going into service last September and higher equity earnings at Cerda Tejas, primarily from the strengthening dollar over the peso power and energy solutions, saw higher contributions from us marketing and canadian power which combined to offset reduced contributions from Bruce Power which had units in planned outages last quarter as Francois mentioned.

Our liquids segment was lower in the second quarter from the anticipated impacts of additional WCSB egress[ph] coming online and lower contributions from liquid marketing activities, some of which we expect to reverse later in the year. Moving to the chart on the right, our comparable earnings of $978 million were slightly lower than the second quarter of 2023. There's some variances here worth spending a moment on.

AFUDC was higher due to the increased capital spending on Southeast Gateway. The FX delta was driven by a peso that strengthened by 5% in the second quarter of 23, which was an FX derivative gain for us, but then pivoted sharply to weaken by 10% last quarter, creating an FX derivative loss. As a reminder, we do hedge our FX which flows through this line item.

For an overall net income perspective, we're generally insulated from fluctuations of the us peso and dollar movement. Income taxes decreased by $59 million in the quarter in large part

Sean O' Donnell

Part due to the peso FX Delta I just mentioned. Lastly, this quarter's deduction for noncontrolling interests increased primarily due to the sale of the 40% interest in Columbia that closed in the fourth quarter last year. To conclude our earnings update, our 2024 earnings outlook is consistent with the outlook in our 2023 annual report and that our earnings per common share are expected to be lower this year than in 2023, driven largely by the NCI adjustments from our ongoing asset divestiture program.

Turning to page 15 and continuing with our 2024 outlook due to our continued strong performance year to date and positive outlook for the remainder of the year, we are reaffirming our 2024 comparable EBITDA target of this year's growth is driven by the full-year impact of our 2023 project completions and cash flow from our $7 billion worth of projects going into service this year.

A quick reminder is that we continue to include liquids in our aggregate guidance until the spinoff closes and the trend is similar for liquids. Following a very strong first quarter, our liquids performance continues to track its 2024 outlook on the right side of the page, I wanted to echo Francois's comment that we are making meaningful progress on our deleveraging plan and are on track to achieve our 4.75 x leverage target by the end of this year.

Each component of our deleveraging strategy is contributing to our success. Our corporate development team has signed up $2.6 billion of asset sales at very attractive multiples and we're only in July. That pace makes us feel comfortable about our $3 billion program target by year-end.

Our natural gas and power teams are collectively bringing $7 billion of new capacity and associated EBITDA online this year, and our third lever is capex savings which Francois mentioned. Our project delivery organization is tracking towards the low

And then on the incentives, I just wanted to make sure that that 50 million is that additive to the incentive framework that was already in place. So, yes to the first part of your question. The $150 million in increased depreciation was largely baked into our existing plan. And then you could think of the incremental upside as being recovered through the incentive mechanisms.

Now, there's no cap on the incentive dollars. That the mechanism is very similar to what it was last time in that there's two different tiers that will go through. Tier one has a 50 50 sharing, tier two and 80 20 sharing. When we look at things, we think that there's a reasonable expectation that we should be able to generate around $50 million or so of these incentive earnings going forward.

And that would be incremental to plan. Yeah. So is that. Sorry, but that, is that incremental to what you have already been earning?

On this one. Correct. Okay, perfect. Okay, just the final one here. Strategically, Francois, you talked a lot about your payout ratio strategy, and then overall, I think, trying to get that down over time to screen favorably against regulated utilities. So this is really more the earnings payout ratio.

Can you just talk a little bit more about, you know, how are you feeling about that and how you expect to kind of achieve that and possibly over what timeframe?

A - Unidentified Speaker

Of power, which is about enough of power to fuel 77,000 homes, by the way. These 300 new data centers are going to need somewhere around 45 to 50 gigawatts of power to operate. And then if you apply just an average heat rate to that, that's how we get this notion of around 6 to 8 bcf a day of capacity that's going to be needed to serve them.

So in our discussions with various entities, what we're learning is that while power costs represent a relatively small portion of the overall cost to operate a data center, the access to reliable power could be a roadblock towards the timely build-out. Given that we're seeing a shift in siting preferences from regions where big telecom infrastructure is in place to regions where energy and supply infrastructure is in place.

And as an alternative to citing these data centers behind LDCs, we're now seeing a much greater potential for data center operators to seek laterals off of our main line and to use that gas supply to fuel onsite power generation that they would build and or own themselves. So in the US, we tend to build projects at around a 6 to 8 times build multiple, and I would expect that to continue going forward with respect to data center opportunities.

The other part of your question is actually very, very good, actually, in that our best-in-class footprint doesn't limit the opportunity set just to the US. In Canada, there's around 300 data centers that are in operation today. We could see that load increasing by one to two gigawatts before the end of the decade.

In Mexico, there's about 150 data centers in operation today, most notably in the state of Queretaro. It's ranked 13th in terms of data centers demand usage currently. And two of our pipelines via Duraiya's[ph] and the Thomas on Charlie pipeline serve the state of Queretaro. So there's opportunities for expansions there. So while entities like Google and Amazon and Microsoft are all talking about expansion plans across all three of these geographies, I think the last thing I would leave you with is while data centers are a unique opportunity and we're going to pursue them, our portfolio effect is much more than that, in that we have growth opportunities with respect to the next wave of LNG, with respect to LDC reliability, with respect to growing power generation and electrification, as well as supply access in addition to the data center opportunity.

Q - Unidentified Participant

Got it. Thank you for that. For the second one, I just want to ask, I guess on how you guys are progressing towards those productivity and cost-effectiveness initiatives you guys laid out within the last year.

A - Unidentified Speaker

Yeah, I think you're talking about what we called our focus project, which is around fundamentally changing the way we do our work on safe

Productivity and capital. And what we mentioned to you previously was we set a target of $750 million of synergy savings by 2025. At this point in time, we are well on our way to meeting that goal, having generated somewhere around $410 million of synergies as of last month, and look to get the balance taken down in the next year and potentially maybe come in a little ahead of our schedule there.

Q - Unidentified Participant

Great. Thank you.

Operator

The next question is from Keith Stanley with Wolfe Research. Please go ahead.

Q - Unidentified Participant

Hi, good morning. Curious once, as you're getting towards completion of Southeast Gateway, how you think about growth in Mexico within your $6 billion to $7 billion per year CapEx budget, are there material new opportunities you could pursue in the country, or is it more likely smaller scale opportunities?

A - Francois L. Poirier {BIO 15315625 <GO>}

Thanks for the question, Keith. It's Francois. First and foremost, we're very bullish on the role that Mexico is going to play in north american gas markets, both in terms of growing demand in the country, but also the potential for LNG exports from Mexico. So that will drive additional investment opportunities for us to consider.

I always believe that it's important for you to be the incumbent that builds the backbone of the infrastructure. That's what we're doing right now with completion of Villa de Reyes as well as Southeast Gateway. And from that comes very attractive, low build, multiple low risk ancillary lateral opportunities that tend to come your way. As the incumbent, we are starting to see a number of those opportunities present themselves.

But as we said, we are also focused on managing our aggregate exposure from Mexico as a percentage of the whole and pro forma for the spin and Southeast gateway going into service, we will be at approximately 15% of consolidated EBITDA. And prior to contemplating any additional investment in the near term, we would need to see some progress in either bringing in a joint venture partner or growing ahead of plan our other franchises, such that the percentage is lowered.

But again, the backdrop, the macro backdrop around demand growth will present us with more investment opportunities in the future, albeit a bit smaller.

Q - Unidentified Participant

Got it. That makes sense. Curious if there's anything notable to update on the coastal gas link litigation. I think there were a couple of settlements that came through. Is that all going according to your expectations?

A - Unidentified Speaker

And any meaningful cash inflows or outflows you're expecting as part of that. Yeah, this is Stan. With respect to CGL, you know, we continue to work on the post-construction reclamation activities, which we should have completed by the end of this year. We did have one settlement with respect to cost recoveries.

We're going to continue to pursue the other. And really, no change in our guidance that at the end of the day, we expect to be in a net recovery position.

Operator

Thank you. Next question is from Robert Cattellier with CIBC Capital Markets. Please go ahead.

Q - Unidentified Participant

Hi. Good morning, everyone, and congratulations on the progress towards your deleveraging goals. Thank you. Follow up questions there. Yeah, just wanted to follow up on how the us $400 million verdict in the Columbia acquisition case impacts your deleveraging plan. And then I'll have a follow up question.

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U.S. demand to increase with growth across key sectors including LNG exports, exports to Mexico and power generation	**+26** Bcf/d
Demand growth in Canada is largely driven by LNG exports and the industrial sector	**+7** Bcf/d
Power buildout, nearshoring momentum and LNG exports underpin growth across Mexico	**+5** Bcf/d

(1) As of Q2 2024 financial results. Includes sanctioned, under construction and projects in development, based on capacity. Excludes Coastal GasLink phase 1.
(2) Based on secured projects as of Q2 2024 financial results
(3) Source: TC Energy internal forecast

BN 07/01 03:00 *AMAZON LOOKING TO CONNECT NUCLEAR PLANTS TO DATA CENTERS: WSJ
BN 07/01 03:00 *AWS NEARING DEAL WITH CONSTELLATION ENERGY: WSJ
BN 07/01 03:01 *AWS NEARS DEAL WITH CONSTELLATION ENERGY ON POWER SUPPLY: WSJ

Amazon Is Among Tech Giants Looking to Connect Nuclear Plants to Data Centers, Sources Say -- WSJ
2024-07-01 03:00:00.145 GMT

By Jennifer Hiller and Sebastian Herrera

(Wall Street Journal) -- Tech companies scouring the country for electricity supplies have zeroed in on a key target: America's nuclear-power plants.

The owners of roughly a third of U.S. nuclear-power plants are in talks with tech companies to provide electricity to new data centers needed to meet the demands of an artificial-intelligence boom.

Among them, Amazon Web Services is nearing a deal for electricity supplied directly from a nuclear plant on the East Coast with Constellation Energy, the largest owner of U.S. nuclear-power plants, according to people familiar with the matter. In a separate deal in March, the Amazon.com subsidiary purchased a nuclear-powered data center in Pennsylvania for $650 million.

The discussions have the potential to remove stable power generation from the grid while reliability concerns are rising across much of the U.S. and new kinds of electricity users -- including AI, manufacturing and transportation -- are significantly increasing the demand for electricity in pockets of the country.

Nuclear-powered data centers would match the grid's highest-reliability workhorse with a wealthy customer that wants 24-7 carbon-free power, likely speeding the addition of data centers needed in the global AI race.

But instead of adding new green energy to meet their soaring power needs, tech companies would be effectively diverting existing electricity resources. That could raise prices for other customers and hold back emission-cutting goals.

Even if tech companies were to offset nuclear-power deals by funding the addition of renewable energy, experts say the likely result is more reliance on natural gas to replace diverted nuclear power. Natural gas-fired plants produce carbon emissions but, unlike renewables, can provide round-the-clock power and are cheaper and more practical to build than new nuclear plants.

The nuclear-tech marriage is fueling tensions over economic development, grid reliability, cost and climate goals in states including Connecticut, Maryland, New Jersey and Pennsylvania.

Amazon's deal in Pennsylvania set off alarm bells for Patrick Cicero, the state's consumer advocate. Cicero said he is concerned about cost and reliability if "massive consumers of energy kind of get first dibs." It is unclear if the state currently has the regulatory authority to intervene in such deals, he said.

"Never before could anyone say to a nuclear-power plant, we'll take all the energy you can give us," said Cicero.

"To supplement our wind- and solar-energy projects, which depend on weather conditions to generate energy, we're also exploring new innovations and technologies, and investing in other sources of clean, carbon-free energy," an Amazon spokeswoman said.

A new arrangement

The data center that Amazon purchased in Pennsylvania can receive up to 960 megawatts of electricity, enough to power hundreds of thousands of homes. The acquisition accelerated interest in so-called behind-the-meter deals, in which a large customer receives power directly from a plant.

The relatively new arrangements mean data centers can be built years faster because little to no new grid infrastructure is needed. Data centers could also avoid transmission and distribution charges that make up a large share of utility bills.

The new interest in nuclear power is part of a reversal of fortune for companies that own power plants in competitive power markets. That business has been difficult for two decades following overbuilding in the 1990s. Nuclear plants struggled to compete with wind, solar and natural gas, prompting a wave of closures.

But tech companies willing to pay a premium for nearly uninterrupted, carbon-free power could make good on climate-change pledges while powering AI.

Shares of Vistra, the largest competitive power generator in the U.S., have more than doubled this year. The company has been in talks for behind-the-meter deals at both nuclear and gas plants.

"In this case, the customer has come to us and come to many in the industry and said 'I need as much power as you can make available,'" said Vistra Chief Executive Jim Burke.

Constellation Energy, which owns 14 U.S. nuclear-power plants and produces more than a fifth of the nation's nuclear power, has seen its shares rise more than 70% this year.

Constellation's president and CEO, Joseph Dominguez, said there are still many places, including a swath from Pennsylvania to Illinois, with an oversupply of power. That leaves room for data centers, he said.

Contracts with data centers willing to pay a premium would cover the cost of re-licensing, he said, extending plant life another 20 years and supporting investments that could boost nuclear-power output.

"If we don't have those things, we're going to lose the nukes again," Dominguez said. "We're going to go back to where we were."

Lots of talks, and controversy

It is too early to know just how much power data centers will need. Estimates range from around 4% of power consumed last year in the U.S. to something between 4.6% and 9% by 2030, according to the Electric Power Research Institute.

In Connecticut, state Sen. Norm Needleman never envisioned taking existing power off the grid when he supported economic incentives for data centers a few years ago. Then a developer proposed connecting a data center to the Millstone nuclear plant.

"If we lose a carbon-free resource, what are we going to replace it with?" asked Needleman, whose bill to require a study of such projects didn't pass this year.

Daniel O'Keefe, commissioner for Connecticut's Department of Economic and Community Development, said the proposal could work if it is done in a thoughtful way. Neighboring states are adding data centers, with needed grid improvements shared by all New England customers, so Connecticut ought to receive some economic benefits, he said.

"Our constituents are paying for these data centers regardless of whether they're inside Connecticut," O'Keefe said.

In New Jersey, Public Service Enterprise Group CEO Ralph LaRossa has said the company has been in talks with data centers, including for direct power sales, which could support New Jersey's economic-development efforts to create an AI hub.

About 40% of the state's power comes from nuclear power, including plants owned by PSEG.

New Jersey customers have spent about $300 million a year during the past six years to help keep its plants operating, plus hundreds of millions before that, said Brian Lipman, director for the New Jersey Division of Rate Counsel.

"What happened to that investment?" asked Lipman.

New Jersey is also targeting 100% clean-energy generation by 2035, which Lipman said would be impossible without nuclear power. PSEG declined to comment.

Energy needs

Many of the negotiations are happening within the PJM Interconnection, the regional transmission organization and electricity market serving Washington, D.C., and 13 states from Virginia to Illinois. It said it would work with both plant and transmission owners, and conduct analyses to avoid reliability issues and other problems.

Last week, utilities American Electric Power and Exelon requested a hearing at the Federal Energy Regulatory Commission about Amazon's deal in Pennsylvania, arguing that as much as $140 million in costs could shift to other customers and that the data center "should not be allowed to operate as a free rider," benefiting from a transmission system others pay for.

Talen Energy, which built the data center and operates the nuclear plant, called the request a "misguided attempt to stifle this innovation."

It is unclear whether and how much data centers located at nuclear plants would need to depend on grid power. Nuclear plants are far more reliable than other kinds of power generation but have outages, too.

Before Amazon purchased the Pennsylvania data center, a Talen nuclear reactor had an outage last fall and the data-center campus had to pull power from the grid, according to people familiar with the incident. The need for grid power was unexpected, and additional system protections have been put in place since then to avoid a repeat, the people said.

Talen and grid operator PJM declined to comment on the incident.

Write to Jennifer Hiller at jennifer.hiller@wsj.com and Sebastian Herrera at sebastian.herrera@wsj.com

(END) Dow Jones Newswires

Hi. Thank you very much.

Maybe it's a two-part question, so apologies about that. But coming to the Slide 8, where you show your low-end scenario of the freight rate more or less in line with the second quarter for the end of the year, normal seasonality means the volumes are going to be down around 5%, 6% sequentially in September, October versus the peak. You've mentioned we had front-loading, so the decline might be more pronounced than that. So what are the factors that give you confidence that by October, the rates are not going to be back to pre-Red Sea disruption? If you can elaborate a little bit on that.

And so just in connection with this, if I look at your Slide 8 and the other data points that you said, it does seem that your EBITDA Q4, so your exit rate, should be meaningfully above the Q2 for three reasons. First of all, your spot rate in Q4 is more or less aligned with Q2. Secondly, you're no longer going to have the timing of revenue issue that depressed your EBITDA in Q2. And thirdly, you've mentioned throughout the call that you renegotiated higher contract rates, which we don't really see in the Q2 EBITDA So am I understanding this correctly? Your Q4 EBITDA exit rate should be meaningfully above Q2, or am I missing anything? Thank you.

A - Patrick Jany {BIO 7529926 <GO>}

Yeah. Thanks very much, Christian, for highlighting the value of our Slide on 8. So clearly, I think, as you see here, the scenarios, the low end sees a reduction of rates in the Q4, where the uncertainty relies on the volume. So you have the seasonal effect, which we have counted in our simulation, which you highlighted.

But it's really about knowing how much has been pulled forward or not, which will determine ultimately the actual level in the Q4. And that's where the uncertainty lies. So that is, I would say, the unknown effect, which then determines the deterioration of the rates in Q4. But overall, we do not see right now that rates would come back to pre-Red Sea in the Q4.

But we see them coming down sequentially, and then we can debate the rate of the decrease, depending on this volume situation in Q4. But that is the level of uncertainty we see today, having decent visibility, both on volumes and the contracted rates, which we have, as you know as you know, we are not totally exposed fully spot, which is a delay in profitability we have now, but that gives us also a certain buffer when we look into Q4, so more sequential reduction of rates should they deteriorate more on the spot rate. Now when we look at the EBITDA on Q4, so clearly, just to put everybody on the page and that we highlighted as well in our presentation here, is that Q3 will be the peak of the year, but clearly building momentum from the Q2, both because of increased contract rates and the revenue recognition effect, so we have longer transit times, you have a delay because of contracted versus spot, those two effects push profitability more into Q3 versus Q2, and then we have the uncertainty in Q4. So as we see today, Q4 will be lower than but for the above stated reasons as well, I would agree to your statement that Q3 is probably higher than Q2 in terms of EBITDA I hope that answers your question.

than not, we've seen very high charter rates. As more new tonnage comes in, then this will also slowly taper off.

Q - Dan Togo Jensen {BIO 7480447 <GO>}

Understood.

Thanks a lot.

Operator

The next question from Alex Irving, Bernstein. Please go ahead.

Q - Alex Irving {BIO 19089987 <GO>}

Hi, good morning.

Thanks for taking my question. Mine's on volumes. So, to what extent do you think the strong performance in Q2 with the result of an early peak season, shipments coming out of tariffs or just demand recovering? You called out all those factors, but where do you see the balance lying and are you expecting another peak season at the more normal late summer time, please?

A - Vincent Clerc {BIO 15177428 <GO>}

That's a good question, Alex. I wish I had a really good answer.

Unfortunately, it's not like we can put a sticker on the containers that have been preponed and the ones that are normal demand. What I can give you in terms of colour is the following. What is driving the markets that are driving most of the growth right now are actually Europe and emerging markets. It is not North America.

North America is actually sequentially quite stable, but it is Europe and emerging markets, Latin America, Africa, India that are actually driving a lot of the imports. And there I think that there are two things that are playing. Since the Ukraine invasion by Russia, there has been an expectation that Europe would go into possibly a big recession and a lot of customers have held back on orders and tried to work their inventory as far down as possible in expectations of much lower demand. What seems to have happened so far, what has happened so far and seems to be happening is actually the European consumer is withstanding the situation the situation better than had been expected.

And therefore, there is like a cyclical replenishment of inventory in Europe and an adjustment of the traffic to what is underlying demand in Europe. That's what we're seeing at the moment. The second was that a lot of the economies, the emerging economies, came out of COVID in not as good shape as some of the more mature economy because of the lack of ability from government to provide stimulus and stimulate consumption. So last year, demand was fairly subdued in most of these markets.

Now that everybody has gone back to work and is earning again, we're seeing a rebound in consumption in those emerging markets that is driving some of the year-on-year growth. So some of that part, I think, in Europe is going to kind of slow down a little bit because the higher demand will stay with us. The replenishment of inventory will eventually go away. And whether it's half and half or what it is, I don't know.

The other part into North America is a bit more complicated because their market is fairly stable. We're seeing that inventory levels in the US Are a bit higher today than they were at the beginning of the year, but they're not abnormally high. So whereas there could be some bring forward of orders out of fear of possible tariffs into next year or fear of delay from a strike or labor action on the East Coast, whereas this could be the case, it does not seem to be the case to an extent that is very significant or would cause significant concern for the lull that would follow this. So at least at this stage, our bet is -- and what we're seeing from what we have done so far in the quarter and the purchase orders we can see from customers is continuous strong volumes in the third quarter and a normal seasonal taper-off in the fourth quarter, but not much more than that.

Q - Analyst

Really helpful color. Thank you.

Operator

Next question from Lars Heindorff, Nordea. Please go ahead.

Q - Lars Heindorff {BIO 22572161 <GO>}

Yes, good morning. Thank you for taking my question. It's on the balance sheet. I'm just trying to get a sense.

I know you're probably not going to say anything about next year, but I'll give it a try anyway. So consensus for next year expect you to make around DKK5 billion to DKK6 billion in EBITDA, which also implies probably a small positive cash flow. And given the current guidance that you give for this year, you're probably likely to end up with a net cash position by the end of the year. So the question is just how strong a balance sheet do we need sort of to withstand a prolonged downturn in the ocean part of the business in order, sort of, before you start to make or announce a possible new buy-back?

A - Patrick Jany {BIO 7529926 <GO>}

Thank you, Lars.

As we try to explain, as you well know, clearly it's a good situation we are in to have a strong balance sheet and we are aware of it. But we also have to look at the still unclear balance of supply and demand looking forward, right? So, as we said, we will know more about Q4 in a few weeks' time and Q4 will then shed a bit of light on 2025 and we will start to remodel the years ahead. Clearly, you have different

A - Unidentified Speaker

Let me take this. So if you look at the press release that we published in connection with the Fleet Renewal Program, we are recommitting to having a fleet that stays around the 4.3 million TEUs. So we will match the phasing in of this new tonnage with scrapping of ships that are coming to the end of economic life.

And therefore, this order is not going to contribute in any way, shape or form to an overcapacity across the industry or anything like that. But it is really what it is, which is a renewal program as we have ships that are getting old. And we need to make those investments. It's in line with what we communicated in 2021.

It's about 160,000 TEUs a year that we just had to batch now because the delivery times are starting to get clogged up with the yards. And we need to place multiple years of orders at once. But the delivery will be pretty regular also with the ships that we already have from now all the way up to 2030 at around these 160 that we had guided at the time. Most of these ships are already ordered.

We expect about 500,000 TEUs to be on long-term charter and 300,000 TEUs to be owned. And most of it, the orders are already placed or will be in the coming weeks.

Q - Analyst

Okay, thank you. And I forgot a final part here about the fuel choice of the newbuilding.

So it's been a bit of writing that you are now using or going to place orders for the conventional dual-fuels and not the methanol ships. Could you shed some light on why doing that change now?

A - Unidentified Speaker

Yes, let me do that. So we've been clear for a while that I think the future in shipping is going to be with a lot of different technologies living side by side at the same time. We will, of course, continue to have bunker fuel for the next many years being part of the mix.

We will have methanol. We have started to have methanol. And this will grow. We have already in the market a lot of LNG And this will also continue to grow if you look also at the order book.

And I'm sure that at some time soon, we will see also ammonia coming online as a new propulsion technology that will enable the decarbonization. For us, the assessment has been the following. There is high level of uncertainty about both availability of fuel and price of fuel in the future, price of green fuels in the future. And there is a high level of uncertainty on how the regulatory and how the regulatory regime is going to shape up.

And therefore, there is a necessity for us in order to be able to reach the decarbonization agenda that we have in a way that is economically competitive. There is a need for us to hedge some of the bets that we're making on technology and not taking only one way or only one bet and then depend on assumptions that we have very little influence into making happen. So our view was that this was the opportunity for us to balance the bets. We are very happy that thanks to the work that we have done with methanol today, this is a viable and scaling technology across the segment and has a lot of momentum, but we also need to make sure we are exposed to some of the other propulsion technologies so that we don't have all of a sudden risk to have a significant disadvantage for a reason or another.

Q - Analyst

Sounds wise. Thank you so much, Gregor. I hope you're on.

Operator

The next question from Jacob Lacks, Wolfe Research.

Please go ahead.

Q - Jacob Lacks {BIO 19879839 <GO>}

Hey, thanks for your time. I just wanted to get your thoughts on any color around the potential East Coast strike and the likelihood of it happening and what impacts this would have on your business.

A - Vincent Clerc {BIO 15177428 <GO>}

Okay, let me take that, Jacob.

So I will say that I still look at the likelihood of having really strong industrial action as in a strike or something like that as being highly unlikely. It has not been the case, whereas we have had lockdowns and strikes and a lot of disruptions sometimes in connection with negotiations on the West Coast, it has never been the case on the East Coast. So it is still our expectation that the contract expires in September. There may be some extension of the contracts as there is a lot that still needs to get negotiated, but I hope that we can get to see eye to eye with the ILA without having to get there.

If this was to happen, the impact of such a strike could be potentially quite significant in terms of the congestions that it would create, the delay and the absorption of capacity that it would suddenly create. I mean, that would be a really big bottleneck in a very, very traveled trading route.

Q - Jacob Lacks {BIO 19879839 <GO>}

I appreciate the time. Thank you.

https://www.theguardian.com/environment/article/2024/aug/09/biomass-power-station-produced-four-times-emissions-of-uk-coal-plant-says-report

Biomass power station produced four times emissions of UK coal plant, says report

Drax received £22bn in subsidies despite being UK's largest emitter in 2023, though company rejects 'flawed' research

Jillian Ambrose *Energy correspondent*

Fri 9 Aug 2024 06.00 BST

Drax was responsible for 11.5m tonnes of CO2 last year, or nearly 3% of the UK's total carbon emissions. Photograph: SOPA Images/LightRocket/Getty Images

The Drax power station was responsible for four times more carbon emissions than the UK's last remaining coal-fired plant last year, despite taking more than £0.5bn in clean-energy subsidies in 2023, according to a report.

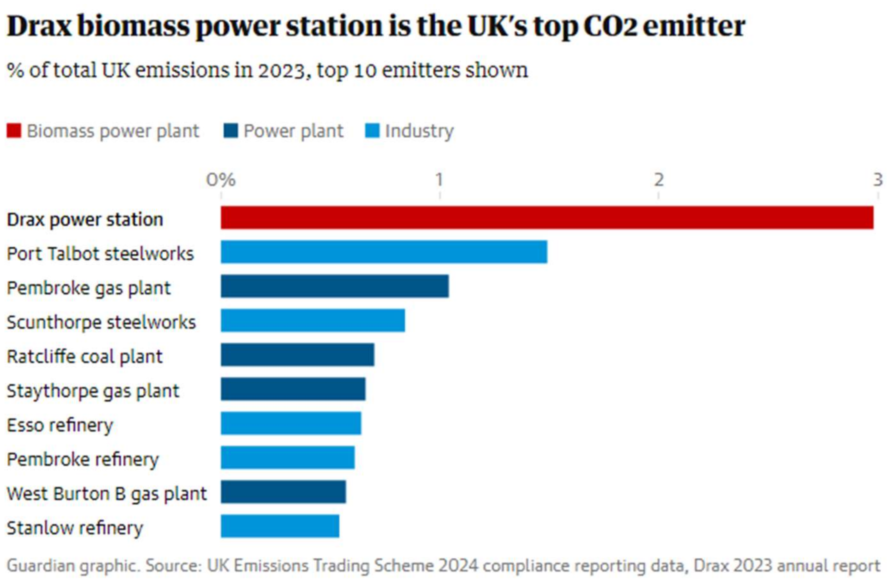
The North Yorkshire power plant, which burns wood pellets imported from North America to generate electricity, was revealed as Britain's single largest carbon emitter in 2023 by a report from the climate thinktank Ember.

The figures show that Drax, which has received billions in subsidies since it began switching from coal to biomass in 2012, was responsible for 11.5m tonnes of CO_2 last year, or nearly 3% of the UK's total carbon emissions.

Drax produced four times more carbon dioxide than the UK's last remaining coal-fired power station at Ratcliffe-on-Soar in Nottinghamshire, which is due to close in September. Drax also produced more emissions last year than the next four most polluting power plants in the UK combined, according to the report.

Frankie Mayo, an analyst at Ember, said: “Burning wood pellets can be as bad for the environment as coal; supporting biomass with subsidies is a costly mistake.”

The company has claimed almost £7bn from British energy bills to support its biomass generation since 2012, even though burning wood pellets for power generation releases more emissions for each unit of electricity generated than burning gas or coal, according to Ember and many scientists. In 2023, the period covered by the Ember report, it received £539m.



The government is considering the company’s request for billpayers to foot the cost of supporting its power plant beyond the subsidy scheme’s deadline in 2027 so it can keep burning wood for power until the end of the decade.

Drax has won the support of the government thanks to claims that its generation is “carbon neutral” because the trees that are felled to produce its wood pellets absorb as much carbon dioxide while they grow as they emit when they are burned in its power plant.

The company plans to fit carbon-capture technology at Drax using more subsidies, to create a “bioenergy with carbon capture and storage” (BECCS) project and become the first “carbon-negative” power plant in the world by the end of the decade.

A spokesperson for the company dismissed the thinktank’s findings as “flawed” and accused its authors of ignoring its “widely accepted and internationally recognised approach to carbon accounting”.

“The technology that underpins BECCS is proven, and it is the only credible large-scale way of generating secure renewable power and delivering carbon removals,” the spokesperson added.

A government spokesperson said the report “fundamentally misrepresents” how biomass emissions are measured.

“The Intergovernmental Panel for Climate Change is clear that biomass sourced in line with strict sustainability criteria can be used as a low-carbon source of energy. We will continue to monitor biomass electricity generation to ensure it meets required standards,” the spokesman said.

Climate authorities, including the UN’s Intergovernmental Panel on Climate Change and the UK’s Climate Change Committee, which provides official advice to ministers, have included BECCS in their long-term forecasts for how governments can meet their climate targets.

The government’s own spending watchdog, the National Audit Office, has warned that ministers have handed a total of £22bn in billpayer-backed subsidies to burn wood for electricity despite being unable to prove the industry meets sustainability standards.

Mayo said: “Burning wood for power is an expensive risk that limits UK energy independence and has no place in the journey to net zero. True energy security comes from homegrown wind and solar, a healthy grid and robust planning for how to make the power system flexible and efficient.”

The FTSE 100 owner of the Drax power plant made profits of £500m over the first half of this year, helped by biomass subsidies of almost £400m over this period. It handed its shareholders a windfall of £300m for the first half of the year.

https://www.bbc.com/news/science-environment-63089348

Drax: UK power station owner cuts down primary forests in Canada

- Published 1 day ago

Drax, Britain's biggest power station, generates electricity by burning millions of tonnes of imported wood pellets

By Joe Crowley and Tim Robinson

BBC Panorama

A company that has received billions of pounds in green energy subsidies from UK taxpayers is cutting down environmentally-important forests, a BBC Panorama investigation has found.

Drax runs Britain's biggest power station, which burns millions of tonnes of imported wood pellets - which is classed as renewable energy.

The BBC has discovered some of the wood comes from primary forests in Canada.

The company says it only uses sawdust and waste wood.

Panorama analysed satellite images, traced logging licences and used drone filming to prove its findings. Reporter Joe Crowley also followed a truck from a Drax mill to verify it was picking up whole logs from an area of precious forest.

Ecologist Michelle Connolly told Panorama the company was destroying forests that had taken thousands of years to develop.

"It's really a shame that British taxpayers are funding this destruction with their money. Logging natural forests and converting them into pellets to be burned for electricity, that is absolutely insane," she said.

The Drax power station in Yorkshire is a converted coal plant, which now produces 12% of the UK's renewable electricity.

It has already received £6bn in green energy subsidies. Burning wood is considered green, but it is controversial among environmentalists.

Panorama discovered Drax bought logging licences to cut down two areas of environmentally-important forest in British Columbia.

Image caption, The Panorama team used drones to survey the area

One of the Drax forests is a square mile, including large areas that have been identified as rare, old-growth forest.

The provincial government of British Columbia says old-growth forests are particularly important and that companies should put off logging them.
Drax's own responsible sourcing policy says it "will avoid damage or disturbance" to primary and old-growth forest.
However, the latest satellite pictures show Drax is now cutting down the forest.

IMAGE SOURCE,PLANET LABS PBC
Image caption, Satellite images show forests cut down in British Columbia

The company told Panorama many of the trees there had died, and that logging would reduce the risk of wildfires.
The entire area covered by the second Drax logging licence has already been cut down.

How green is burning wood?

Burning wood produces more greenhouse gases than burning coal.
The electricity is classed as renewable because new trees are planted to replace the old ones and these new trees should recapture the carbon emitted by burning wood pellets.
But recapturing the carbon takes decades and the off-setting can only work if the pellets are made with wood from sustainable sources.
Primary forests, which have never been logged before and store vast quantities of carbon, are not considered a sustainable source. It is highly unlikely that replanted trees will ever hold as much carbon as the old forest.

Drax told the BBC it had not cut down the forests itself and said it transferred the logging licences to other companies.
But Panorama checked and the authorities in British Columbia confirmed that Drax still holds the licences.
Drax said it did not use the logs from the two sites Panorama identified. It said they were sent to timber mills - to make wood products - and that Drax only used the leftover sawdust for its pellets.
The company says it does use some logs - in general - to make wood pellets. It claims it only uses ones that are small, twisted, or rotten.


Image caption, BBC Panorama visited the British Columbian forests

But documents on a Canadian forestry database show that only 11% of the logs delivered to the two Drax plants in the past year were classified as the lowest quality, which cannot be used for wood products.

Panorama wanted to see if logs from primary forests cut down by logging companies were being transferred to Drax's Meadowbank pellet plant. The programme filmed a truck on a 120-mile round trip: leaving the plant, collecting piles of whole logs from a forest that had been cut down by a logging company and then returning to the plant for their delivery.

Drax later admitted that it did use logs from the forest to make wood pellets. The company said they were species the timber industry did not want, and they would often be burned anyway to reduce wildfire risks.

The company also said the sites identified by Panorama were not primary forest because they were near roads.

But the UN definitions of primary forest do not mention proximity to roads and one of the sites is six miles from the nearest paved road.

Panorama's findings come at a critical moment for Drax.

The UK government is due to publish a new biomass strategy later this year, which will set out its policy for natural fuels like wood.

A Drax spokesperson said 80% of material in its Canadian pellets is sawmill residuals, which would be disposed of anyway.

They also said that Drax applies stringent sustainability standards to its own pellet production as well as suppliers, with verification from third-party certification schemes.

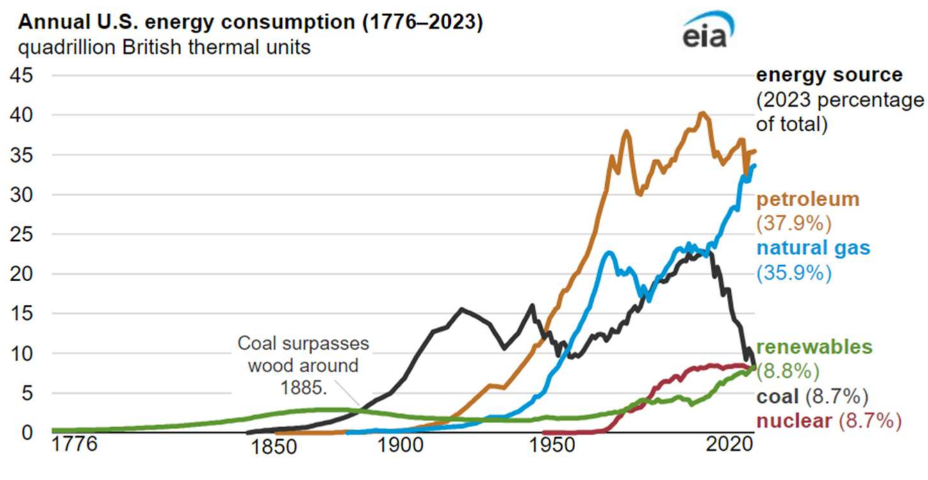
"We are constantly reviewing these policies to ensure we take account of the latest science," they added.

Panorama's ***The Green Energy Scandal Exposed*** *is on BBC One at 20:00 on Monday 3rd October and on iPlayer afterwards* https://www.eia.gov/todayinenergy/detail.php?id=62444

IN-DEPTH ANALYSIS

JULY 3, 2024

How has energy use changed throughout U.S. history?



Data source: U.S. Energy Information Administration, *Monthly Energy Review*. Pre-1949 data based on *Energy in the American Economy, 1850–1975: Its History and Prospects* and U.S. Department of Agriculture Circular No. 641, *Fuel Wood Used in the United States 1630–1930*
Note: Data use captured energy approach to account for wind, hydro, solar, and geothermal.

In 2023, 94 quadrillion British thermal units (quads) was consumed in the United States, a 1% decrease from 2022, according to our *Monthly Energy Review*. Fossil fuels—petroleum, natural gas, and coal—accounted for nearly 83% of total U.S. energy consumption in 2023. Nonfossil fuel energy—from renewable sources and from nuclear—accounted for the other 17%. In 2023, petroleum remained the most-consumed fuel in the United States, as it has been for the past 73 years, and renewables exceeded coal for the first time in about 140 years.

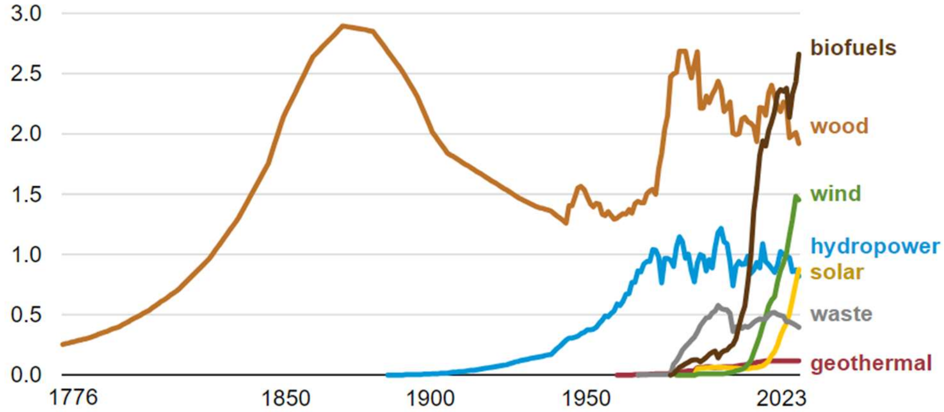
How has energy use changed throughout U.S. history?

When the Declaration of Independence was signed in 1776, wood, a renewable energy source, was the largest source of energy in the United States. Used for heating, cooking, and lighting, wood remained the largest U.S. energy source until the late 1800s, when coal surpassed it.

Early use of water to power grist, lumber, and other milling operations is not well quantified and not included in our data, but such mills were common throughout early U.S. history. The first industrial use of hydropower to generate electricity in the United States was to power lamps at a chair factory in Grand Rapids, Michigan, in 1880. The world's first hydroelectric power plant to sell electricity to the public opened on the Fox River near Appleton, Wisconsin, in 1882.

Renewable energy did not become a more significant part of U.S. energy again until more recently. Biofuels became the most-consumed U.S. renewable energy source in 2016, surpassing wood. In the 1980s, the United States began to consume more ethanol blended with petroleum motor gasoline and later biodiesel and renewable diesel blended with petroleum diesel. Renewable diesel can be substituted for petroleum diesel while chemical differences limit the amount of biodiesel that can be blended into petroleum diesel. U.S. renewable diesel surpassed biodiesel use for the first time in 2022.

Renewable energy consumption in the United States (1776–2023)
quadrillion British thermal units



Data source: U.S. Energy Information Administration, *Monthly Energy Review*. Pre-1949 data based on *Energy in the American Economy, 1850–1975: Its History and Prospects* and U.S. Department of Agriculture Circular No. 641, *Fuel Wood Used in the United States 1630–1930*
Note: Data use captured energy approach to account for wind, hydro, solar, and geothermal.

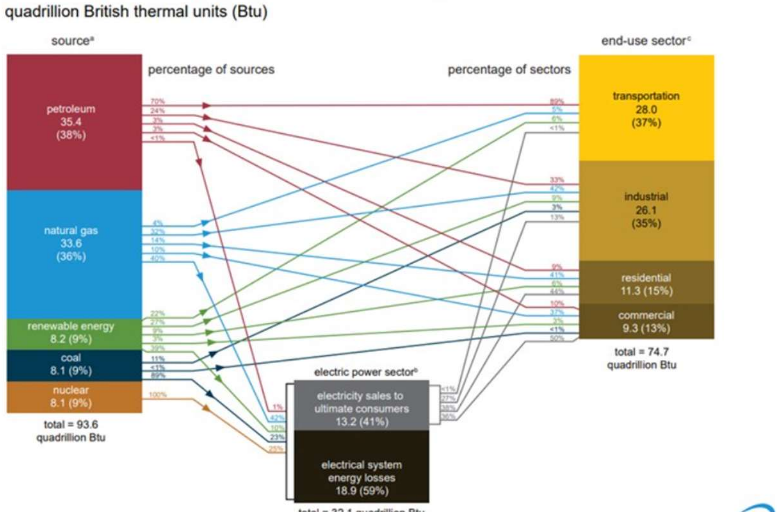
Electricity generation from zero-carbon sources such as wind and solar has increased rapidly in recent years. In 2022, U.S. energy consumption from renewable sources surpassed that from nuclear for the first time since 1984. U.S. nuclear energy consumption began in the late 1950s and has remained fairly constant since the early 2000s.

Coal was the largest source of U.S. energy for about 65 years, from 1885 until 1950, when petroleum surpassed it. Early uses of coal included many purposes that are no longer common, such as in stoves for home heating and in engines for train and boat transportation. Since the 1960s, nearly all coal consumed in the United States has been used to generate electricity.

Petroleum remains the most-consumed source of energy in the United States as it has been since 1950. Petroleum products, such as motor gasoline, diesel, jet fuel, and propane, are commonly used across all sectors of the modern U.S. economy, from transportation to industrial chemicals and plastics.

Natural gas is the second-largest source of U.S. energy consumption as it has been most years since it surpassed coal in 1958. Natural gas was once seen as a waste byproduct of crude oil production but has become a common energy source used for heating and electricity generation. In part because of recent advancements in U.S. drilling technology, the availability of natural gas in the United States increased rapidly, and its consumption almost surpassed petroleum in 2020 when the effects of the Covid pandemic limited the amount of energy consumed for transportation.

U.S. energy consumption by source and sector, 2023
quadrillion British thermal units (Btu)



Data source: U.S. Energy Information Administration, *Monthly Energy Review*

How did U.S. energy consumption change in 2023?

Renewable energy consumption in the United States increased 2% from 2022 to a record 8.2 quads in 2023, largely because of increased use of biofuels in transportation and solar to generate electricity. In 2023, U.S. wind consumption decreased for the first time in 25 years.

Coal consumption declined to 8.2 quads in 2023, the least since around 1900. U.S. coal consumption has decreased by more than half since its peak in 2005, largely because of less coal use for electricity generation.

Nuclear energy consumption totaled 8.1 quads in 2023, a slight increase compared with 2022. The small increase largely came because of the new Vogtle Unit 3 reactor in Georgia in July 2023.

Petroleum consumption in the United States remained below its 2005 peak, totaling 35.4 quads in 2023. Most petroleum energy was consumed in transportation. Although use of electric vehicles has increased, petroleum remains the predominant fuel for cars, trucks, and planes.

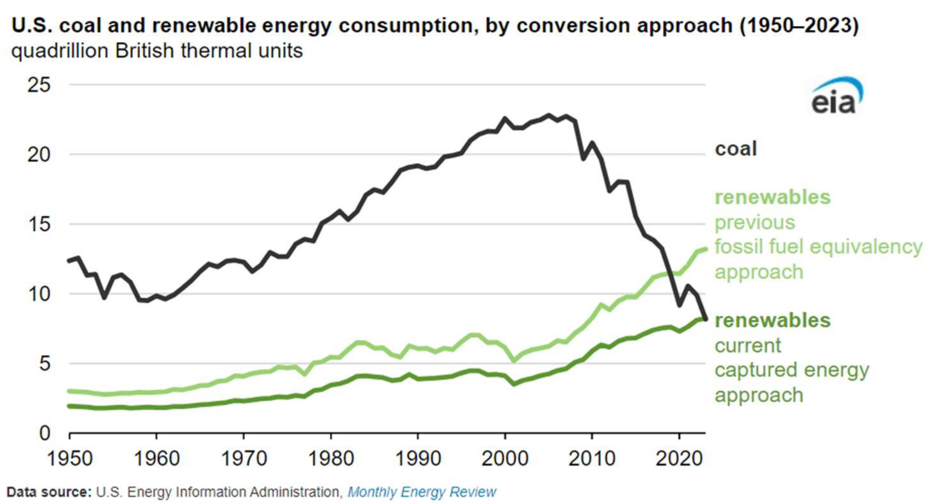
U.S. natural gas consumption reached a record 33.6 quads in 2023, largely because of increased use for electricity. More natural gas has been consumed in the U.S. electric power sector than in any other economic sector every year since 2018.

How do we compare different types of energy to one another?

We use the common unit of heat called British thermal units to compare energy across sources and sectors.

Beginning with our data release for 2023, we changed our approach to converting the electricity generated by non-combustible renewables to British thermal units, which altered our assessment of when renewable consumption passed coal consumption.

Under the *captured energy approach* we now use, U.S. consumption of renewables surpassed coal in 2023 for the first time since about 1885. Under our previous *fossil fuel equivalency approach*, renewables had surpassed coal in 2019.



Principal contributors: Mickey Francis, Owen Comstock https://www.wsj.com/finance/currencies/what-is-the-yen-carry-trade-e5ab9670

What Is the Yen Carry Trade?

The unwinding of a popular investment strategy is sending ripples through global markets

Paused

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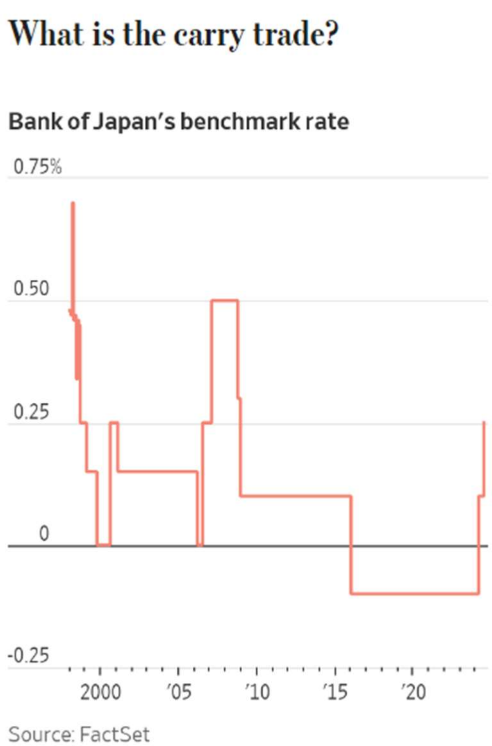
Tap For Sound

Here's how an investing strategy based on the yen contributed to a global rout. Photo: Noriko Hayashi/Bloomberg News

By Chelsey Dulaney Follow

Aug. 5, 2024 5:26 pm ET

One factor behind the market turmoil: the reversal of a popular investment strategy known as the carry trade.



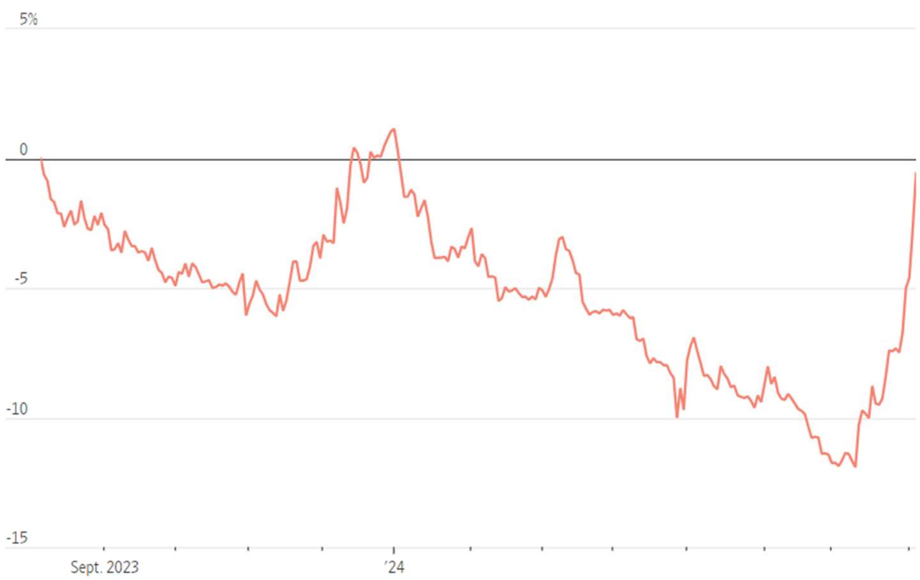
What is the carry trade?

The trade involves an investor borrowing in the currency of a place where interest rates are low, like Japan or China, and using it to invest in a currency where interest rates are higher, like Mexico.

The yen has been the most popular funding currency in recent years because of Japan's ultralow interest rates. It only exited negative rates in April, years after Western central banks began aggressively raising rates to combat inflation.

The carry trade depends on the borrowing currency remaining cheap—and market volatility remaining low. Both of those factors have turned against investors in recent weeks as the yen surged and markets were swept by instability.

Japanese yen performance against the U.S. dollar, change since last year



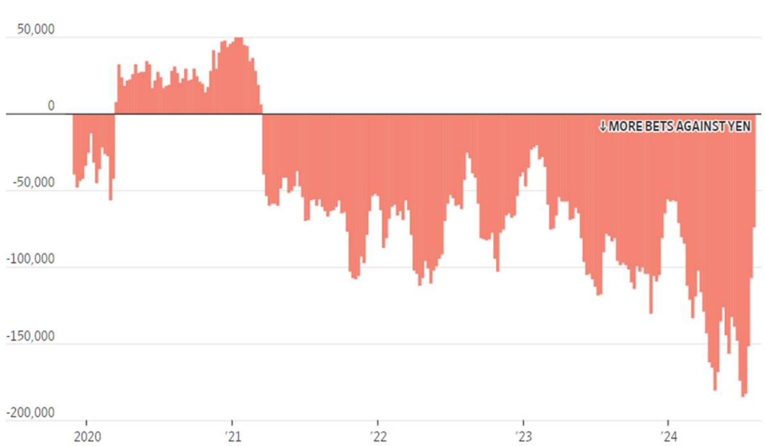
Source: Tullett Prebon

How big is the carry trade?

It is impossible to say because currency transactions aren't tracked centrally like trades in the stock market. But there are some ways to assess its popularity.

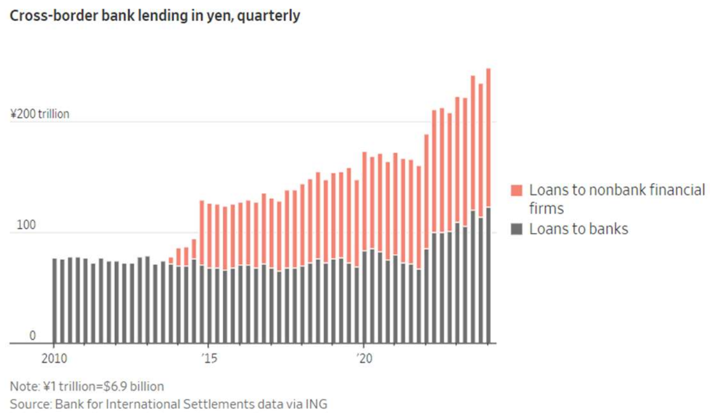
One is to look at contracts tracked by the Commodity Futures Trading Commission. That data shows hedge funds and other speculative investors were holding more than 180,000 contracts betting on a weaker yen on a net basis, worth more than $14 billion, at the start of July, according to CFTC data. By last week, those positions had been cut to around $6 billion.

Speculative positioning in the yen, net number of contracts



Note: One contract is worth 12.5 million yen. Negative values are net bets against the yen.
Source: ING analysis of Commodity Futures Trading Commission data

Another proxy is to look at Japanese banks' foreign lending, which reached $1 trillion as of March. That was a 21% rise from 2021, according to data from the Bank for International Settlements. Much of the recent growth in cross-border yen lending has been in the so-called interbank market, where banks lend to each other, and to nonbank financial firms like asset managers. Such loans have "typically been a function of global investor demand for yen-funded carry trades," said JPMorgan analysts.



How is the rising yen affecting the carry trade?

The yen's 7.5% surge over the past week has pummeled carry traders. Investors who had borrowed yen were hit with margin calls as the currency jumped, meaning their bankers were insisting on more collateral. Those investors were forced to buy yen to cover their previous positions, pushing the currency higher and triggering even more margin calls.

Is it over yet?

Probably not. One factor that could drive further yen strength: investors putting on new hedges, according to ING's Chris Turner. It has been expensive to hedge currency risk for the past few years, so some investors and banks exposed to the yen likely chose not to, said Turner. Japanese investors such as life insurers also cut back hedges on their massive portfolios of foreign bonds. Increasing hedging would essentially create more demand for yen. This risks a vicious circle, as the yen's strength causes investors and others to close out their weak-yen bets by buying more yen.

An electronic board displays the Nikkei Stock Average on Monday in Tokyo. Photo: Noriko Hayashi/Bloomberg News

Alana Pipe contributed to this article.

This explanatory article may be periodically updated.

Write to Chelsey Dulaney at chelsey.dulaney@wsj.com

Corrections & Amplifications
A chart showing cross-border bank lending in yen divides the totals into loans to banks and loans to nonbank financial firms. An earlier version of the chart incorrectly referred to the latter group as nonbank borrowers. (Corrected on Aug. 7)

Navigating the Markets

https://www.wsj.com/lifestyle/chipotle-burrito-skimp-sizes-portions-00d27593?mod=e2tw

Chipotle Fans Take Burrito ‘Skimp’ Into Their Own Hands

Restaurant chain struggles to shed scrutiny of portion sizes, as diners test them; ‘the scientific method.’

Zackary Smigel started filming his Chipotle orders earlier this year. Zackary Smigel

By Heather Haddon Follow

Aug. 5, 2024 9:23 am ET

(7 min)

Fans of Chipotle Mexican Grill are seeking an off-menu item to pair with their burrito bowls—a scale.

Chipotle is struggling to shed scrutiny on its portion sizes, and whether stores are failing to dish out a full four ounces of meat. A crowdsourced website “Stop the Skimp!” is tracking locations that serve beefier portions. Some customers are filming workers as they craft meals to try to guarantee more rice and guac.

The most extreme are weighing Chipotle orders to determine whether they are getting shorted at certain locations or by ordering online instead of at the counter.

For the pinto-bean police, the saucy stunts help channel their broader rage at food prices and shrinkflation.

Zackary Smigel, a 28-year-old YouTube creator from Hermitage, Pa., started filming his Chipotle orders this year, weighing 15 burritos and 15 bowls over 30 days at three different locations in Pennsylvania and Ohio. What he found became fodder for a documentary posted on YouTube—burritos ordered online were skimpier 70% of the time, he says.

“Bowls weren’t as bad,” said Smigel, who has shied from Chipotle since his chow checks. “But burritos themselves, it was horrible.”

Chipotle regular Peter Coleman started getting curious about discrepancies in burrito size. Last year the Minneapolis, Minn., software salesman began a nine-month odyssey of calculating his Chipotle eating in a spreadsheet.

“I decided to follow the scientific method,” said Coleman, 30, who invested in a digital scale and plotted the heft of the same burrito purchased from a single location in kilograms. Coleman then crunched numbers to determine the mean difference. He found the in-person orders were 16.48% bigger.

“I also did a T-Test to determine whether the results were statistically significant, which they were,” he said.

All this eating in the name of scientific discovery can be expensive, and a lot to digest.

Zachary Fadem, a restaurant analyst at Wells Fargo, in June ordered 75 burrito bowls with white rice, black beans, chicken, tomato salsa, cheese and lettuce from eight New York City locations. Fadem found variations in sizes. He paid around $10 to $11 a bowl. He also didn’t eat alone.

“Folks on the floor were happy to eat them. And I don’t think there were any leftovers,” he said.

Chipotle Mexican Grill has gotten granular in the quest for perfect portions. Photo: Angus Mordant/Bloomberg News

Chipotle has said it isn’t skimping on portions. But last month, the company said it had investigated more thoroughly, and it had a beef with around 10% of restaurants in their allotting beef. The company is working on training, telling workers to err on the side of generosity.

Chipotle has gotten granular in the quest for perfect portions, dissecting how workers hold scoops and spoons. The wrong level can cause chunks of chicken to fall back on the bar and not in a customer’s bowl, Chipotle chief financial officer Jack Hartung said in an interview. The company is also tinkering with serving utensils with measuring lines, but past experiments haven’t wowed.

“They’re a little clumsy,” Hartung said. “We’re still looking if there’s another spoon that is a little bit bigger or a little bit rounded.”

Still, the portion debate rages, with some suggesting workers use measuring cups to dole out toppings. Others contend meals should be sold by weight, or want to call local weights and measures authorities to investigate.

“Yah I agree they should have a scale like the deli, it would make it so simple,” wrote Alex Potter, a 34-year-old Jacksonville, Fla. resident, on a Reddit thread this year titled ”Protein should officially be 4oz and a public weight should be visible when ordering.” The thread amassed nearly 400 comments.

Americans, increasingly angst-ridden about food inflation, are taking action. Some Oreo fans, convinced the cookies no longer have as much cream in the middle, are making videos of twisting them open. Cookie Monster has decried shrinkflation, writing on X earlier this year: “Me cookies are getting smaller.” Mondelez International, Oreo’s maker, has said it hasn’t toyed with the amount of filling.

Chipotle built its reputation on big portions, once running burrito billboards boasting “Open Wide. No, Open Wider.” Founder Steve Ells, who stepped away from the chain in 2020, believes its burritos still can burst one’s jaw.

“I’m not sure I quite get it,” Ells said at the WSJ Global Food Forum in June, about the skimping allegations. “I’ve never experienced someone walking out of Chipotle hungry.”

But fans have had doubts.

Chris Mulder, a military officer in Alexandria, Va., is a longtime Chipotle fan. Photo: Chris Mulder

“Burritos have been getting smaller. It’s high time we open a dialogue about it,” former NFL defensive end J.J. Watt wrote in X in December 2022. “We want big burritos back.”

In May, TikTok food critic Keith Lee spent $40.59 to test three dishes and filmed the results. Lee, who last year collaborated with Chipotle on a “Keithadilla” quesadilla, dug the tacos, but was underwhelmed by the amount of chicken in his al pastor bowl.

“Where the chicken at?” asked Lee, digging through the vegetables, rice and cheese.

So far, the controversy hasn’t hurt the company’s performance, with Chipotle posting eye-popping sales in its latest quarter.

Chris Mulder, a Chipotle devotee since 1999, has long taken his family to the chain. The 45-year-old Alexandria, Va., military officer thinks the flack against Chipotle has been unfair, and sticks with his methods: choose extra rice or beans while ordering online, and nudge the worker in that direction when in person.

“Obviously you have to be comfortable engaging with the burrito-making specialist,” he said.

David Hayes’ son Lincoln is using burritos to gain weight for football season. Photo: David Hayes

David Hayes, a 43-year-old wine importer from Pelham, N.Y., is a frequent Chipotle customer since his 12-year-old is eating a burrito a day, seeking to bulk up for football.

“The portions absolutely vary to a significant degree. His reactions range from ‘hey, I feel shorted’ to ‘whoa, this thing is exploding,’” Hayes said about his son, Lincoln.

In some ways, that’s part of the charm, Hayes said. “It feels less fast-foody than a McDonald’s burger that basically came off a robotic assembly line.”

Write to Heather Haddon at heather.haddon@wsj.com

Appeared in the August 6, 2024, print edition as 'Chipotle Fans Take Burrito ‘Skimp’ Into Their Own Hands'.

Dan Tsubouchi @Energy_Tidbits · 3h

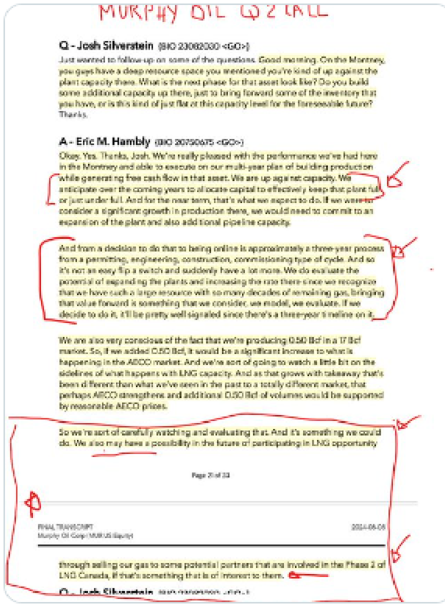
Hmmm!

Murphy says its Montney has lowest breakeven gas price in North America w/ 50 yrs inventory.

In Q&A, highlights Montney well performance has put its 0.5 bcf/d plant at capacity. But will wait for now before commit to an expansion.

Then closes "*going to watch a little bit*

Show more



MURPHY OIL Q2 CALL

Q - Josh Silverstein (BIO 23082030 <GO>)

Just wanted to follow-up on some of the questions. Good morning. On the Montney, you guys have a deep resource space you mentioned you're kind of up against the plant capacity there. What is the next phase for that asset look like? Do you build some additional capacity up there, just to bring forward some of the inventory that you have, or is this kind of just flat at this capacity level for the foreseeable future? Thanks.

A - Eric M. Hambly (BIO 20790675 <GO>)

Okay. Yes. Thanks, Josh. We're really pleased with the performance we've had here in the Montney and able to execute on our multi-year plan of building production while generating free cash flow in that asset. We are up against capacity. We anticipate over the coming years to allocate capital to effectively keep that plant full or just under full. And for the near term, that's what we expect to do. If we were to consider a significant growth in production there, we would need to commit to an expansion of the plant and also additional pipeline capacity.

And from a decision to do that to being online is approximately a three-year process from a permitting, engineering, construction, commissioning type of cycle. And so it's not an easy flip a switch and suddenly have a lot more. We do evaluate the potential of expanding the plants and increasing the rate there since we recognize that we have such a large resource with so many decades of remaining gas, bringing that value forward is something that we consider, we model, we evaluate. If we decide to do it, it'll be pretty well signaled since there's a three-year timeline on it.

We are also very conscious of the fact that we're producing 0.50 Bcf in a 17 Bcf market. So, if we added 0.50 Bcf, it would be a significant increase to what is happening in the AECO market. And we're sort of going to watch a little bit on the sidelines of what happens with LNG capacity. And as that grows with takeaway that's been different than what we've seen in the past to a totally different market, that perhaps AECO strengthens and additional 0.50 Bcf of volumes would be supported by reasonable AECO prices.

So we're sort of carefully watching and evaluating that. And it's something we could do. We also may have a possibility in the future of participating in LNG opportunity

Page 21 of 33

FINAL TRANSCRIPT
Murphy Oil Corp (MUR US Equity)
2024-08-08

through selling our gas to some potential partners that are involved in the Phase 2 of LNG Canada, if that's something that is of interest to them.

Q - Josh Silverstein

> **Dan Tsubouchi** @Energy_Tidbits · Aug 8
>
> 
>
> WOW!
>
> Tupper Montney are "*hellacious wells*" with lowest breakeven gas price in NA!
>
> ...

2 · 10 · 2.1K

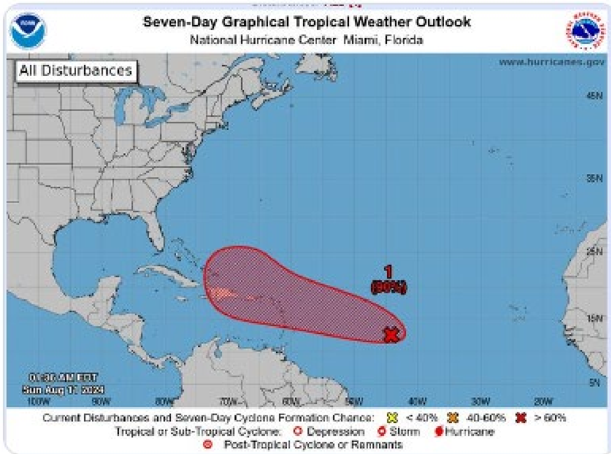
Dan Tsubouchi @Energy_Tidbits · 4h

90% probability to reach cyclone status. @NHC_Atlantic

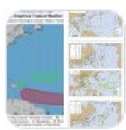
Projected path can still change but looking more to north of Dominican Republic.

See 👇 June 27 tweet. General track rule of thumb is south of DR are ones likely to hit Yucatan and come into GoM to hit Gulf Coast.

#OOTT



Dan Tsubouchi @Energy_Tidbits · Jun 27



Hurricane Track Map Rule of Thumb.

Hurricanes that move south of the Dominican Republic are the ones that are likely to hit Yucatan Peninsula or come into the GoM to hit Gulf Coast....

1 1 4 1.8K

SAF

Dan Tsubouchi @Energy_Tidbits · 18h

Updated @NOAA 6-10 & 8-14 day temperature outlook.

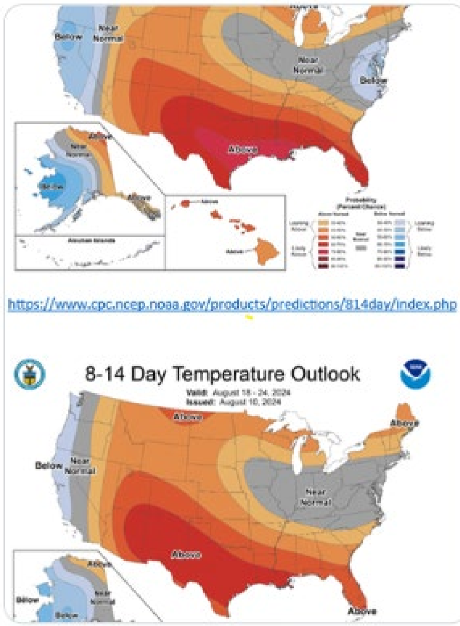
decent but not hot across all Lower 48 like in June & July.

HH #NatGas at $2.14 is still low.

Because storage is +248 bcf YoY & above the high end of 5-yr range.

Plus storage would be way higher if producers like EQT didn't

Show more



3 1 4 3.4K

Dan Tsubouchi @Energy_Tidbits · 19h

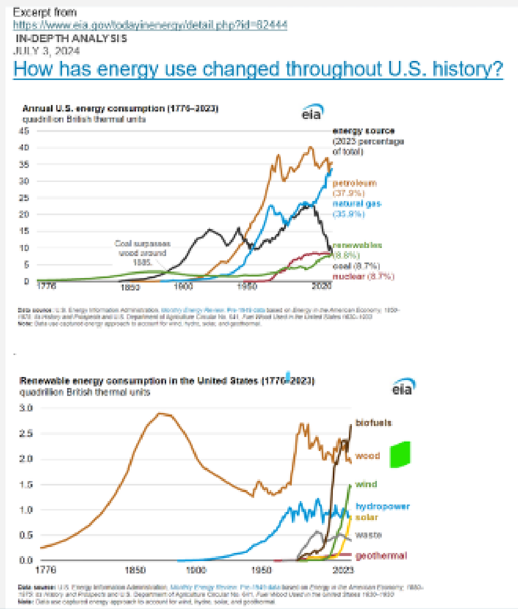
DYK?

Not just UK that subsidizes the burning of wood despite the huge emissions. x.com/Energy_Tidbits...

US consumes more energy from burning wood than it consumers from wind and solar - @EIAgov July 3 blog. See 👇 July 7 tweet.

Isn't Prime Directive of Kyoto/Paris to reduce
Show more

> **Dan Tsubouchi** @Energy_Tidbits · Jul 12
>
> Burning Wood for energy is included in #RenewableEnergy
>
> Recognize this is total energy use by US ie. not just electricity.
>
> But US uses more energy from Wood than it gets from either #Solar or...
> Show more



2 · 3 · 5 · 3.3K

Dan Tsubouchi @Energy_Tidbits · 4h

Like him or not, give @PierrePoilievre credit for giving actions and policy plans and not just pointing out shortfalls.

Headline will be on tariffs on China EVs, solar cells, steel, etc, & cancellation of rebates on Chinese made EVs.

BUT the big one - will repeal Bill C-69,

Show more

3 2 33 3.1K

Dan Tsubouchi @Energy_Tidbits · 6h

Not all renewable energy is clean energy.

"*Drax power station was responsible for four times more carbon emissions than the UK's last remaining coal-fired plant last year...*" reports @guardiannews Jillian Ambrose. Link below.

No surprise that emissions are big as the Drax

Show more

> **Dan Tsubouchi** @Energy_Tidbits · Oct 3, 2022
>
> Inconvenient Truth! Burning wood pellets fits into a clean energy plan, gets UK green subsidies to add higher emissions power. No wonder companies don't want to talk about it, especially if wood pellets come from clearing Cdn forest. Thx @joe_crowley @TimRobinsonTV. #OOTT x.com/BBCPanorama/st...

1 3 8 2.3K

Dan Tsubouchi @Energy_Tidbits · 8h

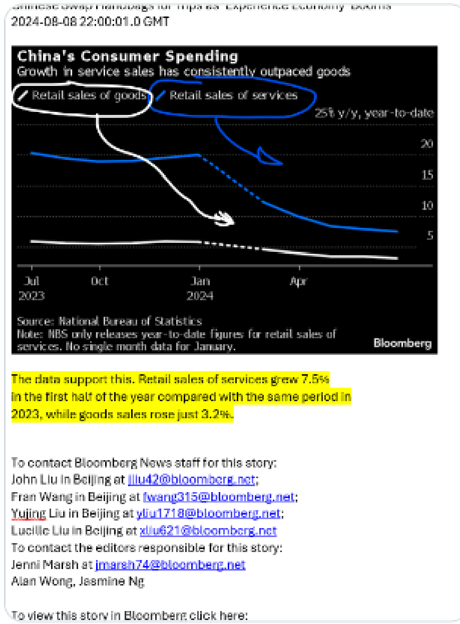
Good graph.

Chinese consumer went to the sidelines in January 2024.

Yes, Chinese consumer spending on goods and services is up YoY in H1/24

BUT Chinese consumer spending growth rate is way lower YoY for both goods & services.

Thx @business team....
Show more


2024-08-08 22:00:01.0 GMT

The data support this. Retail sales of services grew 7.5% in the first half of the year compared with the same period in 2023, while goods sales rose just 3.2%.

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Alan Wong, Jasmine Ng

To view this story in Bloomberg click here:

1 3 6 1.2K

Dan Tsubouchi @Energy_Tidbits · 20h

WOW!

Tupper Montney are "*hellacious wells*" with lowest breakeven gas price in NA!

Tupper Montney has "*the lowest breakeven in North America adjusted for AECO and for C$ type of exchange. So we have very extremely low breakeven prices. We have hellacious wells.*" Murphy Q2 call.
Show more

2 2 11 2.6K

Dan Tsubouchi @Energy_Tidbits · 20h

DYK?

Duvernay as good as key Eagle Ford.

"*our new fracking to Duvernay Shale and prove that we have another Catarina. It's exactly like the Catarina, which is a major Eagle Ford area that's drilled by many peers, many public peers, sought after acreage in the Eagle Ford. So we*

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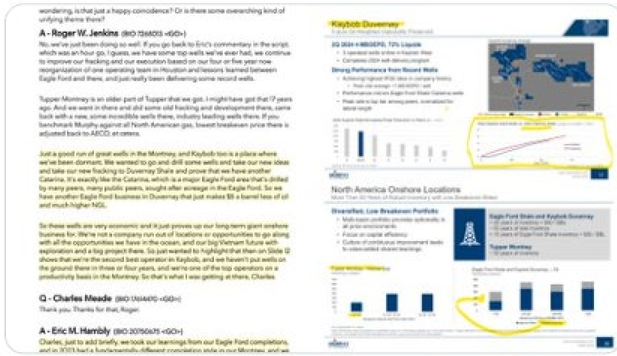

1 3 14 2.4K

Dan Tsubouchi @Energy_Tidbits · 23h

Did summer #Oil demand pick up?

2nd very low floating oil storage week in a row.

@Vortexa #oil floating storage est +4.35 mmb WoW to 60.52 mmb at Aug 9.

4th lowest since Covid, only been 3 wks <60 mmb, only 14 wks <70 mmb since Covid.

...

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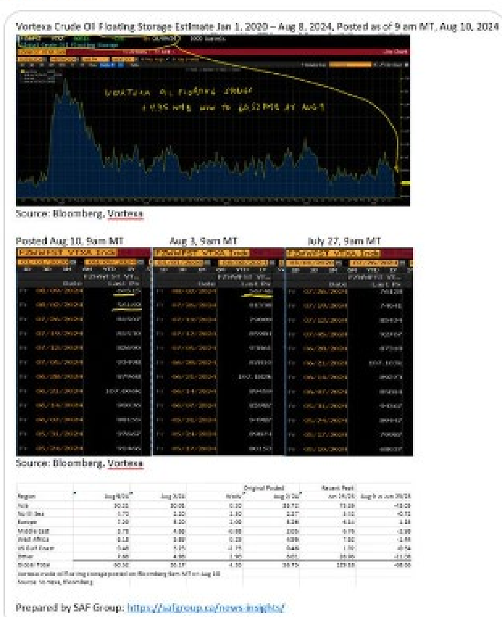

1 14 47 7.9K

Dan Tsubouchi @Energy_Tidbits · Aug 10

A key reason why Permian rigs stuck just over 300. Weak Waha spot #NatGas prices. -$3.02 WoW to -$4.12 at Aug 9 close.

Wild spot price action, -$2.68 on Friday.

Problem is spot has bounced in negative at some time every mth since Apr.

Permian #Oil wells produce associated

Show more

3 · 5 · 20 · 4K

Dan Tsubouchi @Energy_Tidbits · Aug 10

US gasoline prices keep drifting marginally lower during summer driving season.

AAA National average prices -$0.03 WoW to $3.45 on Aug 10, -$0.09 MoM and -$0.38 YoY.

California at $4.60 on Aug 10, which was -$0.03 WoW, -$0.18 MoM & -$0.49 YoY.

Thx @AAAnews...

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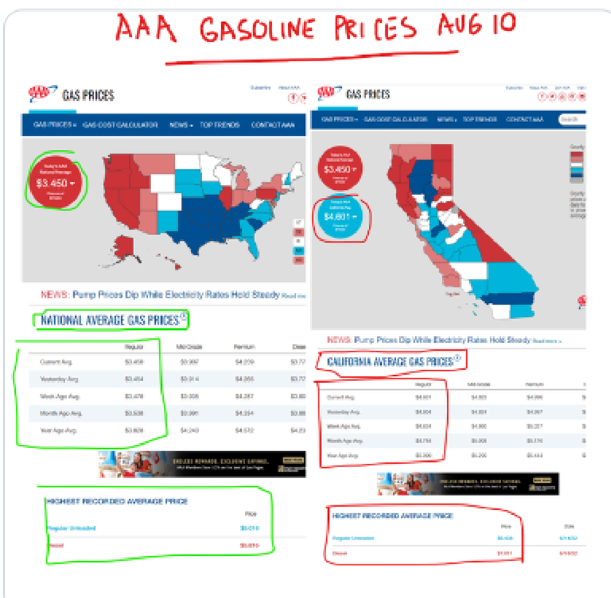
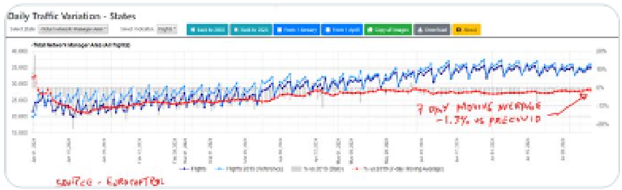


2 · 3 · 1.2K

Dan Tsubouchi @Energy_Tidbits · Aug 10

Daily Europe air traffic still stuck below pre-Covid

7-day moving average as of:
Aug 8: -1.3% below pre-Covid
Aug 1: -1.9%
Jul 25: -2.2%
Jul 18: -2.6%
Jul 11: -2.9%
Jul 4: -3.3%
Jun 27: -2.9% ...
Show more

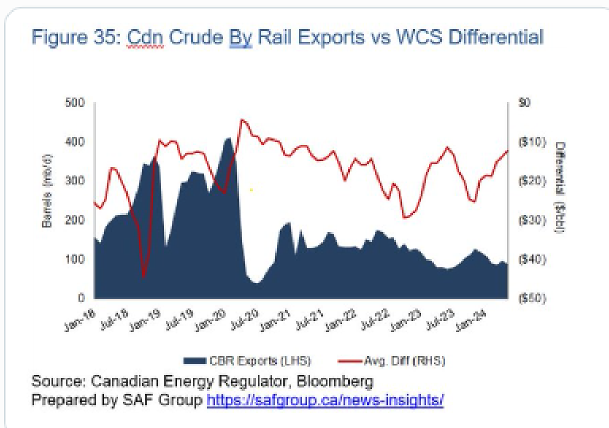


4 · 2 · 1.1K

Dan Tsubouchi @Energy_Tidbits · Aug 9

Looks like CN and CPKC to lockout starting Aug 22 absent a miracle deal with union.

"follows a decision by the Canada Industrial Relations Board (CIRB) that CN Rail and CPKC will not be expected to maintain service in the event of a strike or lockout because rail service is not
Show more



2 · 5 · 8 · 4.4K

Dan Tsubouchi @Energy_Tidbits · Aug 9

Like him or not, give @PierrePoilievre credit for giving actions and policy plans and not just pointing out shortfalls.

Headline will be on tariffs on China EVs, solar cells, steel, etc, & cancellation of rebates on Chinese made EVs.

BUT the big one - will repeal Bill C-69,

Show more

4 5 45 5K

Dan Tsubouchi @Energy_Tidbits · Aug 9

Not all renewable energy is clean energy.

"*Drax power station was responsible for four times more carbon emissions than the UK's last remaining coal-fired plant last year...*" reports @guardiannews Jillian Ambrose. Link below.

No surprise that emissions are big as the Drax

Show more

> Dan Tsubouchi @Energy_Tidbits · Oct 3, 2022
>
> Inconvenient Truth! Burning wood pellets fits into a clean energy plan, gets UK green subsidies to add higher emissions power. No wonder companies don't want to talk about it, especially if wood pellets come from clearing Cdn forest. Thx @joe_crowley @TimRobinsonTV. #OOTT x.com/BBCPanorama/st...

1 4 8 2.7K

Dan Tsubouchi @Energy_Tidbits · Aug 7

Like him or not, Trump's concept is right but would have said energy is an input cost to everything so the cost of energy flows thru to impact everything in our lives.

#Diesel #Gasoline move products & people
#NatGas power businesses
#Petrochemical products are everywhere in
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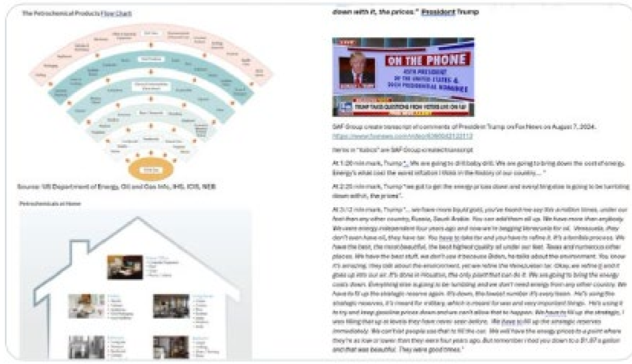


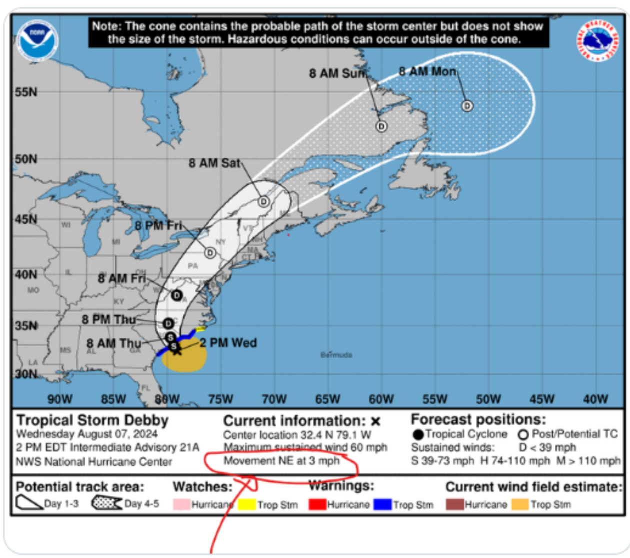
1 2 3 1.6K

Dan Tsubouchi @Energy_Tidbits · 4h

Tropical Storm Debby reminds of the big risk for storms - how fast are the moving.

Debby only moving at 3 mph so it has more time over an area for its winds to damage structures & knock down tress and, even more significantly, dump more water for flooding.

#OOTT



2 2 2 1K

Dan Tsubouchi @Energy_Tidbits · 8h

For those who aren't near their laptop,@EIAgov just released #Oil #Gasoline #Distillates inventory as of Aug 2 at 8:30am MT. Table below compares EIA data vs @business expectations and vs @APIenergy estimates yesterday. Prior to release, WTI was $74.40. #OOTT

Oil/Products Inventory Aug 2: EIA, Bloomberg Survey Expectations, API

(million barrels)	EIA	Expectations	API
Oil	-3.73	-1.80	0.18
Gasoline	1.34	-1.80	3.31
Distillates	0.95	1.00	1.22
	-1.44	-2.60	4.71

Note: Oil is commercial. So excludes a +0.7mmb build in SPR for the Aug 2 week
Note: Included in the oil data, Cushing had a 0.58 mmb build for Aug 2 week
Source EIA, Bloomberg
Prepared by SAF Group https://safgroup.ca/news-insights/

3 12 1.2K

Dan Tsubouchi @Energy_Tidbits · 11h

Houthis Red Sea impact.

Maersk Q2 call "*the situation on the ground is not de-escalating. Rather, we believe the situation is entrenched and expect to stay at least until the end of 2024*".

#OOTT

MAERSK Q2 CALL

INITIAL DRAFT TRANSCRIPT
AP Moller - Maersk A/S (MAERSKB DC Equity)

2024-08-07

organic investments, where we already have the necessary capabilities to win and to scale, as well as through value-accretive acquisitions that bring us additional capabilities and coverage. Our assessment after careful review was, however, that DB Schenker did not fit this and it would have brought along significant integration-related risks that would have put our own momentum at risk.

In Ocean, we saw profitability building up on the back of higher freight rates and we delivered a good EBIT margin of 5.6%. This is despite the fact that the higher spot rate we saw during the quarter are yet to fully materialize into higher realized rates from the way we run our business on contracts in the Ocean segment. We expect to see the full impact from higher rates in the third quarter. And as far as the Red Sea disruption is concerned, we are now entering the ninth month of continued threats and attacks on vessels passing through or near the Strait of Bahrain Monday.

RED SEA

The situation on the ground is not de-escalating. Rather, we believe the situation is entrenched and expect to stay at least until the end of 2024. Market demand has so far been very strong, leading to an increase in our full-year expectation, but we are uncertain of the extent to which this strong volume we have seen thus far will hold up into Q4 adjusted for normal seasonality patterns. And we have terminals, which continued its strong break.

3 5 7 1.4K

SAF

Dan Tsubouchi @Energy_Tidbits · 20h

AI Data Centers need lots of #NatGas for 24/7 reliable power!

See 👇 Williams Q2 Q&A.

Data center #NatGas requests are a little bit overwhelming!

Reinforces time is of the essence for data centers so data centers *"are looking to where the permitting regime is right, where*

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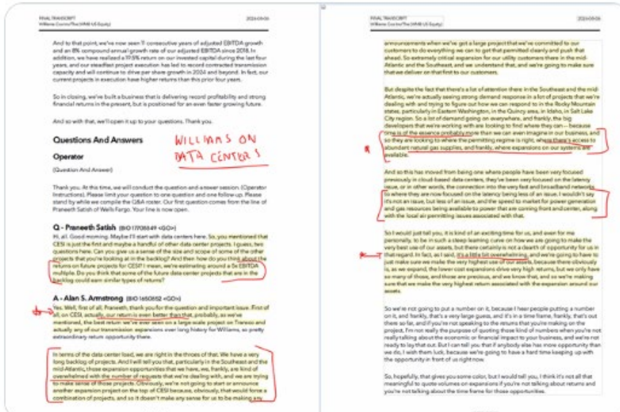


2 · 6 · 10 · 3.3K

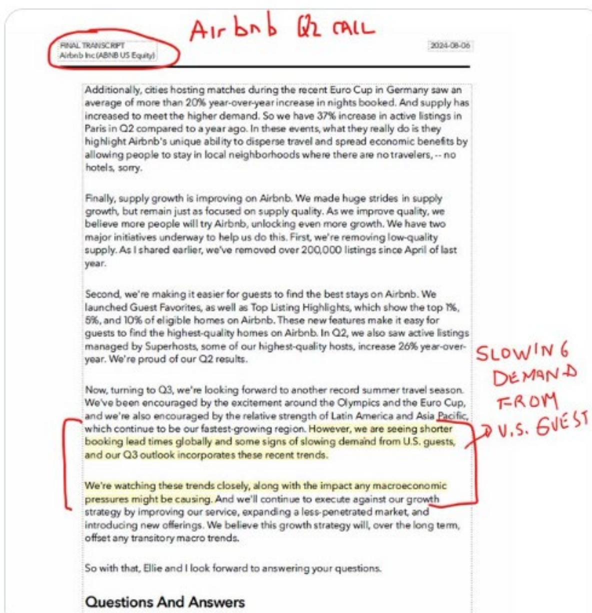
SAF

Dan Tsubouchi @Energy_Tidbits · 21h

Slowing demand from U.S guests.

Airbnb Q2 "*...some signs of slowing demand from U.S. guests..... we're watching these trends closely, along with the impact any macroeconomic pressures might be causing*".

#OOTT



Airbnb Q2 CALL

FINAL TRANSCRIPT
Airbnb Inc (ABNB US Equity) 2024-08-06

Additionally, cities hosting matches during the recent Euro Cup in Germany saw an average of more than 20% year-over-year increase in nights booked. And supply has increased to meet the higher demand. So we have 37% increase in active listings in Paris in Q2 compared to a year ago. In these events, what they really do is they highlight Airbnb's unique ability to disperse travel and spread economic benefits by allowing people to stay in local neighborhoods where there are no travelers, -- no hotels, sorry.

Finally, supply growth is improving on Airbnb. We made huge strides in supply growth, but remain just as focused on supply quality. As we improve quality, we believe more people will try Airbnb, unlocking even more growth. We have two major initiatives underway to help us do this. First, we're removing low-quality supply. As I shared earlier, we've removed over 200,000 listings since April of last year.

Second, we're making it easier for guests to find the best stays on Airbnb. We launched Guest Favorites, as well as Top Listing Highlights, which show the top 1%, 5%, and 10% of eligible homes on Airbnb. These new features make it easy for guests to find the highest-quality homes on Airbnb. In Q2, we also saw active listings managed by Superhosts, some of our highest-quality hosts, increase 26% year-over-year. We're proud of our Q2 results.

Now, turning to Q3, we're looking forward to another record summer travel season. We've been encouraged by the excitement around the Olympics and the Euro Cup, and we're also encouraged by the relative strength of Latin America and Asia Pacific, which continue to be our fastest-growing region. However, we are seeing shorter booking lead times globally and some signs of slowing demand from U.S. guests, and our Q3 outlook incorporates these recent trends.

We're watching these trends closely, along with the impact any macroeconomic pressures might be causing. And we'll continue to execute against our growth strategy by improving our service, expanding a less-penetrated market, and introducing new offerings. We believe this growth strategy will, over the long term, offset any transitory macro trends.

So with that, Ellie and I look forward to answering your questions.

Questions And Answers

SLOWING DEMAND FROM U.S. GUESTS

2 · 1 · 1.4K

Dan Tsubouchi @Energy_Tidbits · 23h

WSJ explains what is the yen carry trade.

Investor borrowing in Yen where interest rates are low & using it to invest in a currency where interest rates are higher.

"*The carry trade depends on the borrowing currency remaining cheap—and market volatility remaining low. Both of*

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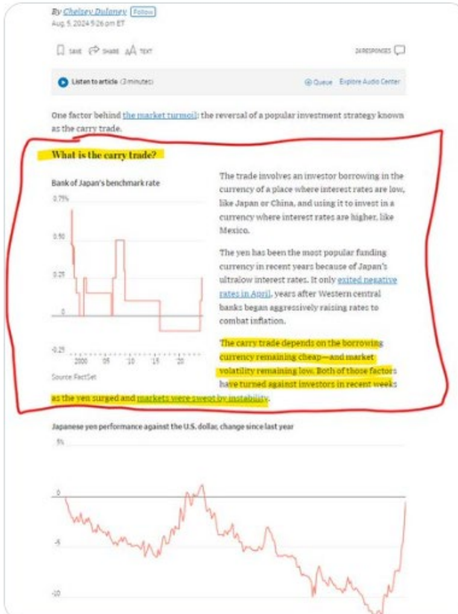

By Chelsey Dulaney Follow
Aug. 5, 2024 5:26 pm ET

Listen to article (3 minutes)

One factor behind the market turmoil: the reversal of a popular investment strategy known as the carry trade.

What is the carry trade?

The trade involves an investor borrowing in the currency of a place where interest rates are low, like Japan or China, and using it to invest in a currency where interest rates are higher, like Mexico.

The yen has been the most popular funding currency in recent years because of Japan's ultralow interest rates. It only exited negative rates in April, years after Western central banks began aggressively raising rates to combat inflation.

The carry trade depends on the borrowing currency remaining cheap—and market volatility remaining low. Both of those factors have turned against investors in recent weeks as the yen surged and markets were swept by instability.

1 · 2 · 8 · 1.4K

Dan Tsubouchi @Energy_Tidbits · Aug 6

Reminder: Oil demand is seasonally higher in H2 vs H1 every year.

@saudi_aramco critics say its too optimistic on **full year 2024** oil demand as it forecasts +1.6 mmbd YoY for 2024 & +1.4 YoY for 2025 are well above EIA July STEO +1.11 YoY & +1.77 YoY, and IEA July OMR +0.97 YoY &

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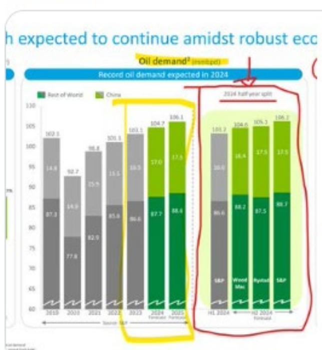
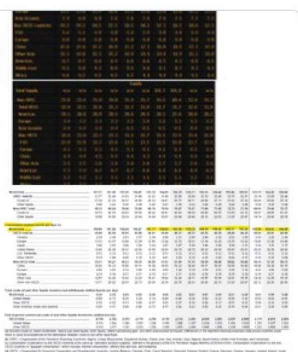




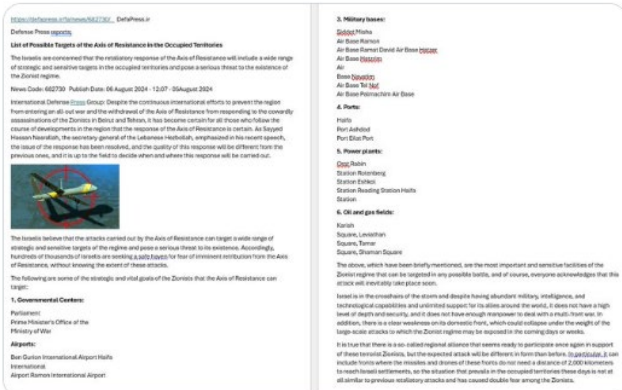
4 · 11 · 35 · 3.7K

Dan Tsubouchi @Energy_Tidbits · Aug 5

Iran military news sites posts lists of potential targets in Israel, basically includes the full gambit of potential targets.

Hard for Israel to ignore this list even if it is to force Israel to spread out its defense assets.

#OOTT



https://defapress.ir/fa/news/682730/ DefaPress.ir

Defense Press reports:

List of Possible Targets of the Axis of Resistance in the Occupied Territories

The Israelis are concerned that the retaliatory response of the Axis of Resistance will include a wide range of strategic and sensitive targets in the occupied territories and pose a serious threat to the existence of the Zionist regime.

News Code: 682730 Publish Date: 06 August 2024 - 12:07 - 05August 2024

International Defense Press Group: Despite the continuous international efforts to prevent the region from entering an all-out war and the withdrawal of the Axis of Resistance from responding to the cowardly assassinations of the Zionists in Beirut and Tehran, it has become certain for all those who follow the course of developments in the region that the response of the Axis of Resistance is certain. As Sayyed Hassan Nasrallah, the secretary-general of the Lebanese Hezbollah, emphasized in his recent speech, the issue of the response has been resolved, and the quality of this response will be different from the previous ones, and it is up to the field to decide when and where this response will be carried out.

The Israelis believe that the attacks carried out by the Axis of Resistance can target a wide range of strategic and sensitive targets of the regime and pose a serious threat to its existence. Accordingly, hundreds of thousands of Israelis are seeking a safe haven for fear of imminent retribution from the Axis of Resistance, without knowing the extent of these attacks.

The following are some of the strategic and vital goals of the Zionists that the Axis of Resistance can target:

1. Governmental Centers:

Parliament
Prime Minister's Office of the
Ministry of War

Airports:

Ben Gurion International Airport Haifa
International
Airport Ramon International Airport

3. Military bases:

Siddot Misha
Air Base Ramon
Air Base Ramat David Air Base Hatzor
Air Base Hatzrim
Air
Base Nevatim
Air Base Tel Nof
Air Base Palmachim Air Base

4. Ports:

Haifa
Port Ashdod
Port Eilat Port

5. Power plants:

Orot Rabin
Station Rotenberg
Station Eshkol
Station Reading Station Haifa
Station

6. Oil and gas fields:

Karish
Square, Leviathan
Square, Tamar
Square, Shaman Square

The above, which have been briefly mentioned, are the most important and sensitive facilities of the Zionist regime that can be targeted in any possible battle, and of course, everyone acknowledges that this attack will inevitably take place soon.

Israel is in the crosshairs of the storm and despite having abundant military, intelligence, and technological capabilities and unlimited support for its allies around the world, it does not have a high level of depth and security, and it does not have enough manpower to deal with a multi-front war. In addition, there is a clear weakness on its domestic front, which could collapse under the weight of the large-scale attacks to which the Zionist regime may be exposed in the coming days or weeks.

It is true that there is a so-called regional alliance that seems ready to participate once again in support of these terrorist Zionists, but the expected attack will be different in form than before. In particular, it can include fronts where the missiles and drones of these fronts do not need a distance of 2,000 kilometers to reach Israeli settlements, so the situation that prevails in the occupied territories these days is not at all similar to previous retaliatory attacks and has caused double fear among the Zionists.

1 · 1 · 6 · 2.7K

Dan Tsubouchi @Energy_Tidbits · Aug 5

Impressed the Chipotle customer bought a digital scale to calculate the *"in-person orders were 16.48% bigger* [vs on-line]".

Chipotle trying to shed view stores not dishing out full 4 ounces of meat but, in Q2 call Q&A, admits ~10% or more of restaurants need to be retrained to

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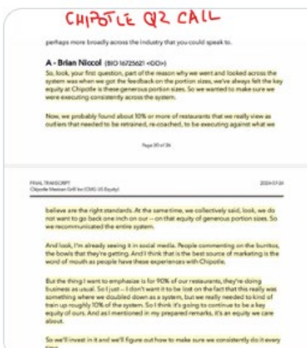


CHIPOTLE Q2 CALL

perhaps more broadly across the industry that you could speak to.

A - Brian Niccol (BIO 16725621 <GO>)

So, look, your first question, part of the reason why we went and looked across the system was when we got the feedback on the portion sizes, we've always felt the key equity at Chipotle is these generous portion sizes. So we wanted to make sure we were executing consistently across the system.

Now, we probably found about 10% or more of restaurants that we really view as outliers that needed to be retrained, re-coached, to be executing against what we

FINAL TRANSCRIPT

Chipotle Mexican Grill Inc (CMG US Equity)

believe are the right standards. At the same time, we collectively said, look, we do not want to go back one inch on our -- on that equity of generous portion sizes. So we recommunicated the entire system.

And look, I'm already seeing it in social media. People commenting on the burritos, the bowls that they're getting. And I think that is the best source of marketing is the word of mouth as people have these experiences with Chipotle.

But the thing I want to emphasize is for 90% of our restaurants, they're doing business as usual. So I just -- I don't want it to be lost on the fact that this really was something where we doubled down as a system, but we really needed to kind of train up roughly 10% of the system. So I think it's going to continue to be a key equity of ours. And as I mentioned in my prepared remarks, it's an equity we care about.

So we'll invest in it and we'll figure out how to make sure we consistently do it every time.

Heather Haddon @heatherhaddon · Aug 5

Chipotle fans have gone nutty, weighing their burritos and bowls for signs of weight infractions. "I decided to follow the scientific method." wsj.com/lifestyle/chip... via @WSJ

1 · 4 · 2K

Dan Tsubouchi @Energy_Tidbits · Aug 5

Fed Watch!

"*And so, if the conditions collectively start coming in that on the through line, there's deterioration on any of those parts, we're going to fix it.*" [non-voting] Chicago Fed President Goolsbee to @steveliesman @andrewrsorkin @JoeSquawk
#OOTT

"And so, if the conditions collectively start coming in that on the through line, there's deterioration on any of those parts, we're going to fix it." **Chicago Fed President Goolsbee**

SAF Group created transcript of comments by Chicago Fed President Austia Goolsbee with CNBC's Steve Liesman, Andrew Ross Sorkin and Joe Kernen on CNBC Squawk Box on Aug 5, 2024.

Item in "italics" are SAF Group created transcript from PVR recording.

At 6:38am MT, Liesman "*Is there a chance Austin you think of an emergency cut between now and September?*" Goolsbee: "*Look, like I say, I' m forbidden to talk about what people's opinions are or speak for the committee. You've seen the table. It's a huge table. So everything is always on the table. Whether that's increases, cuts, etc. But the Fed's job is very straightforward: maximize employment, stabilize prices and maintain financial stability. That's what we're going to do. We're forward-looking about it. And so, if the conditions collectively start coming in that on the through line, there's deterioration on any of those parts, we're going to fix it. That's the Chicago motto. There's no bad weather, there's only bad clothing. The conditions come in, we're going to respond as appropriate.*"

At 6:41am MT, Goolsbee : ...*I think we should respond to conditions on the broad through line. As I look at the broad through line, Inflation is way down and is trending the right way. Employment is still at a relatively decent spot even in the last employment report where you saw the employment to population ratio rising. You saw labor force participation rising. So we still have some strength but it's going the wrong way. And it needs to settle in to normal and full employment. If we blow though normal, then we're in a different situation and we would, my opinion we would need to react more, more robustly.*"

Prepared by SAF Group

2 1 1.4K

Dan Tsubouchi @Energy_Tidbits · Aug 5

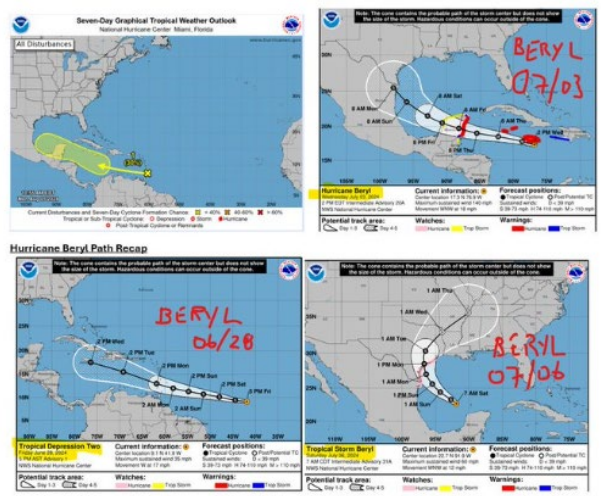
Worth watching!

30% of reaching tropical cyclone states with projected path at Yucatan Peninsula and then back into GoM.

It's still really early but reminds of recent Hurricane Beryl track.

Thx @NHC_Atlantic

#OOTT



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SAF

Dan Tsubouchi @Energy_Tidbits · Aug 5

Too good to last.

Libya #Oil supply interruption

Its biggest field, 270,000 b/d Sharara, is reported completely shut down. Thx @S_Elwardany.

Also that should mean nearby ~40,000 b/d El Feel oil field will be shut down as it links thru Sharara.

...

Show more

By Salma El Wardany

(Bloomberg) -- Libya's biggest oil field halted production Monday after the operator was forced to gradually cut output over the weekend, according to two people familiar with the operations.

Output at Sharara in southern Libya has stopped completely from nearly 270,0000 barrels on Saturday when employees received orders to trim output, according to the people, who asked not to be identified as they aren't authorized to speak to the media.

It wasn't immediately clear what prompted the decision to curtail output. Libya's internationally recognized government on Sunday said shutting the project was "political blackmail," without elaborating. The North African nation is split between dueling administrations in the capital in the west, Tripoli, and a rival in the east.

The shutdown is the latest example of the security problems that have disrupted energy infrastructure for years. Sharara had a weekslong force majeure, a clause in contracts allowing deliveries to be suspended, in January following demonstrations.

The smaller Wafa field in western Libya and a natural gas link to Italy also had a brief halt in February following protests.

The African nation's output reached almost 1.8 million barrels a day in 2008, before slumping to about 100,000 following the killing of Moammar Al Qaddafi in the 2011 civil war. It has been volatile ever since, although largely steady at about 1.2 million barrels a day in recent months.

Some local media said Sharara was closing because of protests over better socio-economic conditions, citing a letter from Akakus Oil, the operator of the field. Other news outlets attributed it to Saddam Haftar, the son of military strongman Khalifa Haftar who leads the Libyan National Army that controls the east and much of the south and has carried out blockades in recent years.

Sharara is a joint venture between Libya's state oil firm National Oil Corp., France's TotalEnergies SE, Spain's Repsol SA, Austria's OMV AG and Norway's Equinor ASA.

To contact the reporter on this story:
Salma El Wardany in Cairo at selwardany@bloomberg.net
To contact the editor responsible for this story:

2 2 12 2.1K

Dan Tsubouchi @Energy_Tidbits · Aug 5

Hurricane Debby making landfall as a Cat 1 with 80 mph max wind speed.

Moving at 10 mph so hopefully helps to minimize flooding

But 6-10 ft peak storm surge.

Thx @NHC_Atlantic

Hope everyone can stay safe!

Dan Tsubouchi @Energy_Tidbits · Aug 4

Chinese consumers still adding to savings.

China Household Savings +$225b MoM to $20.251 trillion at June 30. Equivalent each of 1.425b Chinese savings $157 in June.

Increased June savings were expected as household savings were up MoM in 10 of last 11 Junes.

The test to see

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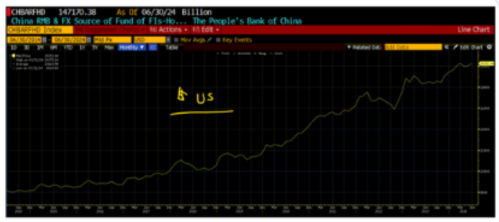

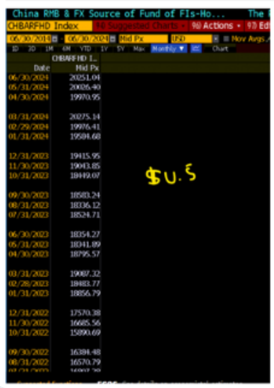
China RMB & FX Source of Fund of FIs-Ho...

CHBARFHD Index

06/30/2014 - 06/30/2024 Mid Px

Date	CHBARFHD I... Mid Px
06/30/2024	20251.04
05/31/2024	20026.40
04/30/2024	19970.95
03/31/2024	20275.14
02/29/2024	19976.41
01/31/2024	19504.68
12/31/2023	19415.95
11/30/2023	19043.85
10/31/2023	18449.07
09/30/2023	18583.24
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07/31/2023	18524.71
06/30/2023	18354.27
05/31/2023	18341.89
04/30/2023	18795.57
03/31/2023	19087.32
02/28/2023	18483.77
01/31/2023	18856.79
12/31/2022	17570.38
11/30/2022	16685.56
10/31/2022	15890.69
09/30/2022	16384.48
08/31/2022	16570.79

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