

Energy Tidbits

Vitol: Strong YoY Growth in Oil Demand BUT Seeing an Easing of 2024 Demand Forecasts including Less Diesel

Produced by: Dan Tsubouchi

May 12, 2024

Dan Tsubouchi
Chief Market Strategist
dtsubouchi@safgroup.ca

Ryan Dunfield
CEO
rdunfield@safgroup.ca

Aaron Bunting
COO, CFO
abunting@safgroup.ca

Ian Charles
Managing Director
icharles@safgroup.ca

Ryan Haughn
Managing Director
rhaughn@safgroup.ca

Short-Term Energy Outlook

Overview

U.S. energy market indicators	2023	2024	2025
Brent crude oil spot price (dollars per barrel)	\$82	\$88	\$85
Retail gasoline price (dollars per gallon)	\$3.50	\$3.50	\$3.50
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	\$2.20	\$3.10
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%	41%
Coal	17%	16%	14%
Renewables	21%	23%	25%
Nuclear	19%	19%	19%
U.S. GDP (percentage change)	2.5%	2.5%	1.9%
U.S. CO₂ emissions (billion metric tons)	4.8	4.8	4.7

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

- Global oil prices.** We expect voluntary OPEC+ crude oil production cuts and ongoing geopolitical risks will keep the Brent crude oil spot price near \$90 per barrel (b) for the remainder of 2024 before falling to an average of \$85/b in 2025 as global oil production growth picks up.
- Global oil production tables.** This month we are [publishing streamlined global oil data tables](#). These tables provide a more complete breakout of OPEC+ production data and provide a new breakout of world crude oil and other liquid fuels production.
- U.S. retail gasoline prices.** Across the United States, we forecast that retail gasoline prices will average near [\\$3.70 per gallon from April through September](#), which is similar to prices during the same period last year. Refinery operations are a source of uncertainty for gasoline markets this summer. An upcoming *Perspectives* supplement looks in more depth at the effect refinery operations could have on retail gasoline prices.
- Natural gas production.** We expect U.S. dry natural gas production to fall by 2% from the first quarter of 2024 (1Q24) to 2Q24 as a result of low natural gas prices. We expect 1% less natural gas will be produced in the United States in 2024 than last year before production increases by 2% in 2025 to a record of almost 105 billion cubic feet per day (Bcf/d).
- Natural gas consumption.** U.S. natural gas consumption in our forecast is mostly unchanged in 2024 compared with last year, averaging 89 Bcf/d. We expect that less consumption in the industrial

sector will offset increases in natural gas consumption in the electric power, residential, and commercial sectors.

- **Electricity generation.** Solar supplies most of our forecast growth in U.S. electricity generation this year. We expect total U.S. electricity generation will grow by 3% (114 billion kilowatthours) in 2024, and we forecast generation from utility-scale solar will contribute almost 60% of that increase. Among other renewable sources, wind contributes 19% of 2024 U.S. electricity generation growth, and [hydropower](#) contributes 13%.
- **Coal markets.** We have revised our estimate of U.S. coal exports in 2024 upwards by 4% compared with the April *Short-Term Energy Outlook* (STEO) due to more-than-expected metallurgical coal exports from the Appalachia region in February. We now expect U.S. coal exports in 2024 will be almost unchanged from 2023. However, we still expect coal production will decline by 14% in 2024 to about 500 million short tons and then fall by about 1% next year. But more coal exports in this STEO compared with last month's forecast mean the decline is less than we had forecast last month; we raised our forecast for U.S. coal production from last month by 3% in 2024 and by 6% in 2025.

Notable forecast changes

Current forecast: May 7, 2024; previous forecast: April 9, 2024

	2024	2025
Coal exports (million short tons)	99	106
Previous forecast	94	105
Percentage change	4.5%	0.8%
Coal production (million short tons)	499	494
Previous forecast	485	464
Percentage change	2.9%	6.3%
Secondary coal inventories (million short tons)	142	154
Previous forecast	138	128
Percentage change	2.4%	20.9%

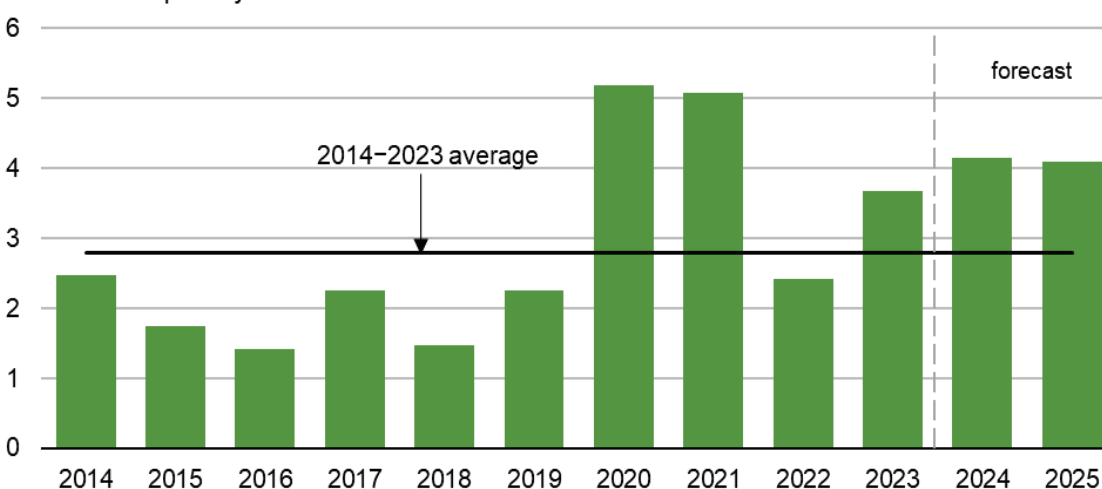
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*

Global Oil Markets

Global oil prices and inventories

The spot price of Brent crude oil averaged \$90 per barrel (b) in April, up \$5/b from March and the fourth consecutive monthly increase. However, daily crude oil spot prices have since fallen, and the Brent spot price settled at \$84/b on May 2. Prices increased in April due to falling global oil inventories. Geopolitical tensions also supported crude oil prices amid conflict between Iran and Israel, which added uncertainty to already heightened tensions in the Middle East. Despite these tensions, crude oil price volatility has been subdued for much of this year by significant spare crude oil production capacity. If holders of spare production capacity choose to deploy it, supply can be available to the oil market in the event of any short-term supply disruption. We estimate OPEC spare production capacity will be around 4 million barrels per day (b/d) through 2025.

OPEC surplus crude oil production capacity
million barrels per day



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

Note: Black line represents 2014–2023 average (2.8 million barrels per day).



We assess that [voluntary OPEC+ production cuts](#) are reducing global oil inventories in the first half of 2024 (1H24). We estimate that global oil inventories are decreasing by an average of 0.3 million b/d in 1H24. We anticipate some OPEC+ producers will continue to limit production after current voluntary OPEC+ cuts expire at the end of June. Our expectation of ongoing production restraint leads to our forecast of a relatively balanced oil market in 2H24, which we expect will keep oil prices near \$90/b for the remainder of 2024, before stronger supply growth contributes to global oil inventory builds of 0.4 million b/d in 2025, causing prices to fall to an average of \$85/b next year. However, there remains significant uncertainty centered around ongoing developments in the Middle East, which have the potential to increase oil price volatility and lead to sharp increases in oil prices.

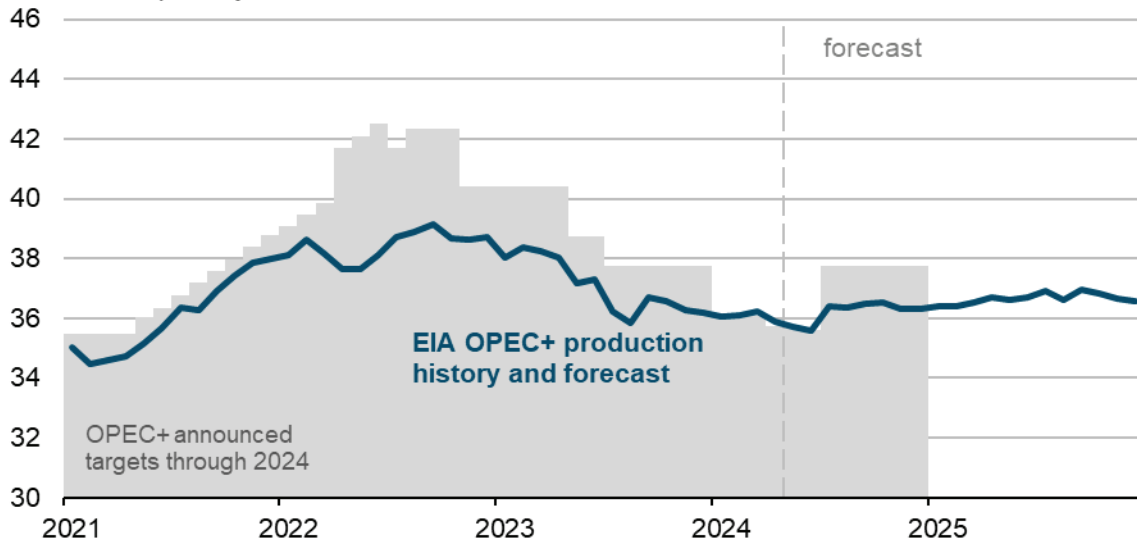
Global oil production

Beginning with this month's STEO, we will include new [streamlined global oil data tables](#). These tables provide a more complete breakout of OPEC+ production data and provide a new breakout of world

crude oil production that is separate from other liquid fuels production. We are also including liquid fuels and crude oil production breakouts for OPEC+ members. Given the large role OPEC+ plays in global oil markets, this new layout will allow stakeholders to more easily find relevant OPEC+ production data in our tables while also accurately summarizing the role that the OPEC+ agreement plays in our STEO forecast.

OPEC+ crude oil production and targets

million barrels per day



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



Based on our estimates, OPEC+ producers have largely adhered to the latest round of OPEC+ voluntary production cuts, which are set to expire at the end of June 2024. The production cuts removed approximately 2.2 million b/d of supply from the world oil market in 1Q24 and have tightened markets further in 2Q24 as additional voluntary production cuts from OPEC+ have taken effect. Many of the current OPEC+ voluntary production cuts are set to expire beginning in 2H24, but we assume some OPEC+ members will continue to voluntarily limit production to keep global oil supplies balanced and to prevent significant builds in global oil inventories. Although we assume some extension of voluntary cuts, we expect a gradual unwinding of the cuts leads to OPEC+ crude oil production increasing by 0.5 million b/d from 1H24 to 2H24, before increasing by an additional 0.5 million b/d on average in 2025.

The OPEC+ cuts are restraining world oil production growth this year, partly offsetting growth from outside of OPEC+. We expect that global production of petroleum and other liquid fuels will increase by 1.0 million b/d in 2024, slowing from growth of 1.8 million b/d in 2023. Although OPEC+ liquid fuels production decreases by 0.8 million b/d in 2024, production outside of OPEC+ increases by 1.8 million b/d, led by growth in the United States, Canada, Brazil, and Guyana.

In Canada, we expect the [startup of the Trans Mountain pipeline expansion \(TMX\)](#) on May 1 will alleviate existing distribution bottlenecks and allow for gradual increases in crude oil production. We forecast liquid fuels production will increase in Canada by 0.5 million b/d over the forecast period, which is more than 0.2 million b/d above our forecast in last month’s STEO prior to the announcement of the pipeline’s startup.

Global liquid fuels production increases by 1.9 million b/d in 2025 as the OPEC+ production cuts expire and production outside of OPEC+ continues to grow.

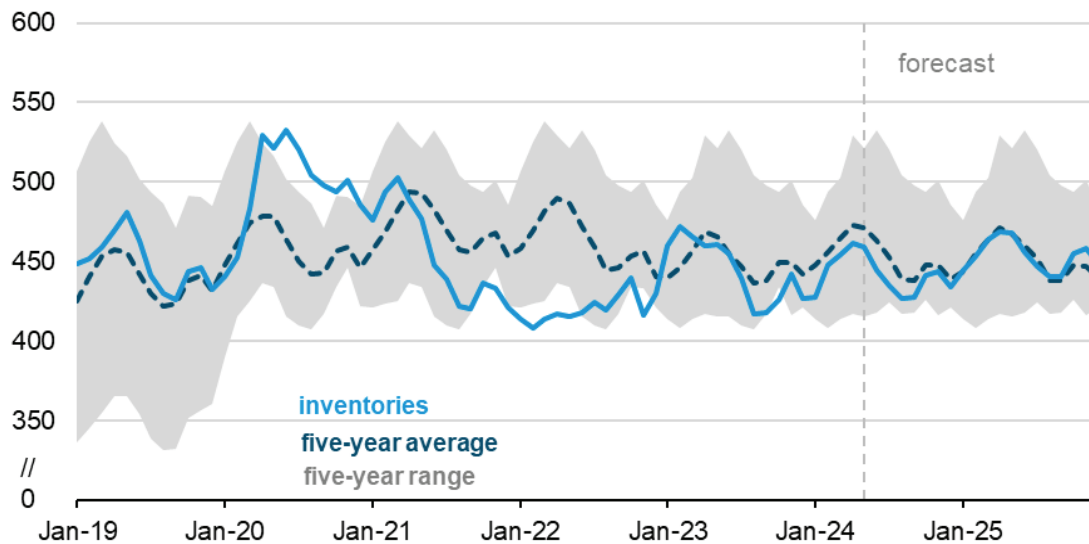
Petroleum Products

Crude oil inventories

We forecast that [U.S. commercial crude oil inventories](#) (inventories that exclude crude oil in the [Strategic Petroleum Reserve](#)) will fall near the bottom of the five-year (2019–23) range in July and August 2024 and then increase to near the 2020–24 average during the second half of 2025 (2H25).

U.S. commercial crude oil inventories

million barrels



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



At the end of April, U.S. commercial crude oil inventories were 461 million barrels. We forecast that U.S. commercial crude oil inventories will fall to below 430 million barrels in August, near the previous five-year low for that month. The decline in commercial crude oil inventories reflects our expectation of increasing U.S. refinery runs in the coming months. We forecast that refinery runs will increase from an average of 15.4 million b/d in 1Q24 to an average of 16.2 million b/d in 3Q24 contributing to a draw in inventories between the end of 1Q24 and the end of 3Q24. Our forecast of U.S. crude oil production growth over the same period does not increase inventories because we expect relatively tight global oil markets in the coming months will mean that additional production will either be exported due to strong global demand for U.S. crude oil or displace some existing crude oil imports. Despite the strong increase in runs between 1Q24 and 3Q24, we forecast that overall refinery runs in 2024 will average 15.9 million b/d, down slightly from 16.0 million b/d in 2023.

We forecast that U.S. commercial crude oil inventories will generally increase relative to the five-year average after August 2024, surpassing the average in October 2025. Rising crude oil inventories are driven by increasing U.S. crude oil production and decreasing U.S. refinery runs, along with loosening global oil market balances. We forecast that U.S. crude oil production will increase to an average of 13.7

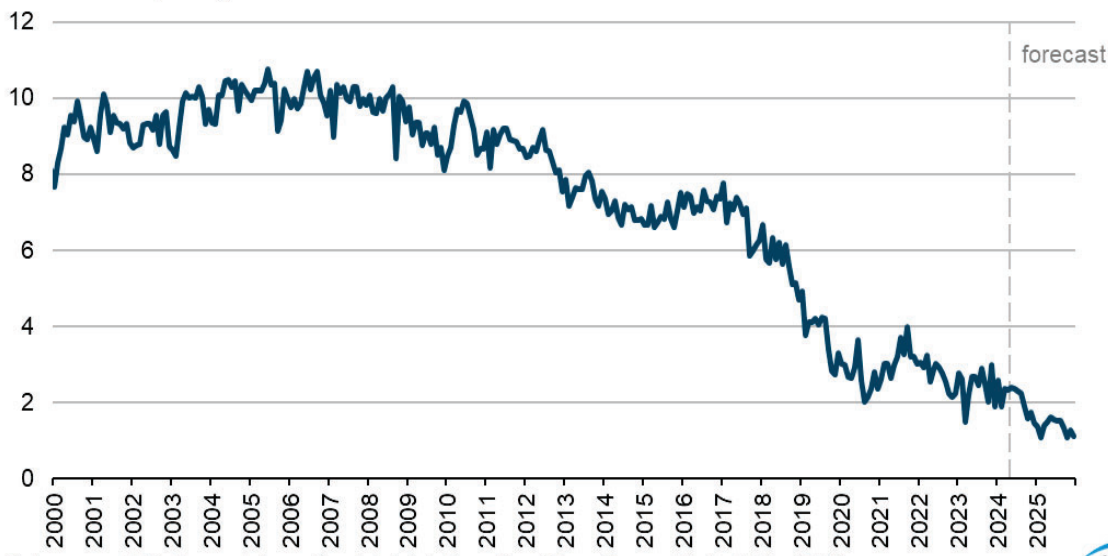
million b/d in 2025, surpassing the previous record of 12.9 million b/d set in 2023. We forecast that U.S. refinery runs will fall by 1%, averaging 15.8 million b/d in 2025, down from 16.0 million b/d in 2023.

Crude oil net imports

Increasing U.S. crude oil production and decreasing refinery runs will reduce net imports of crude oil (the difference between crude oil imports and crude oil exports) in late 2024 and in 2025. Crude oil net imports have been generally declining for many years, and we expect that trend to continue. The United States has imported less crude annually in most years since 2005, and U.S. crude oil exports have generally increased since December 2015, when the United States lifted restrictions on exporting crude. In the STEO, however, we forecast net crude oil imports and not gross exports and gross imports separately. We forecast that U.S. crude oil net imports will fall from 2.4 million b/d in 2023 to 2.1 million b/d in 2024 and then fall to 1.3 million b/d in 2025.

U.S. crude oil net imports

million barrels per day



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



An area of uncertainty for net crude oil imports is the effect of the [TMX pipeline](#), which began operations on May 1, 2024. Most of Canada’s crude oil exports go to the U.S. Midwest. We expect the startup of TMX will result in more of Canada’s crude oil being exported from Canada’s West Coast. This change could have two effects. First it could decrease imports from Canada to Midwest refiners. Second, crude oil imports from Canada to the U.S. West Coast could increase. However, the ultimate effect on U.S. crude oil trade from the TMX expansion will depend on demand for Canada’s crude oil from refiners globally relative to those in the United States and on the pace of crude oil production increases in Canada.

Natural Gas

Natural gas production

Low natural gas prices are reducing natural gas production in the United States. We expect U.S. dry natural gas production to fall by 2% from 1Q24 to 2Q24, with natural gas production in June averaging 102 billion cubic feet per day (Bcf/d), down 4% from the monthly record set in December 2023.

Production is falling as some producers [have announced](#) curtailments because of low natural gas prices. In addition, a wide difference between the price of natural gas and petroleum products is encouraging producers to [extract higher-value hydrocarbon gas liquids \(HGLs\)](#) from the natural gas stream.

We expect dry natural gas production in the United States will be down 1% this year compared with last year before production rises by 2% in 2025 to a record of almost 105 Bcf/d. The increase in production next year is the result of our forecast of rising natural gas prices, which will create an incentive for more drilling in dry natural gas production regions. Increases in crude oil production in our forecast next year also result in more associated natural gas production. We expect the gap between natural gas and petroleum prices will narrow in 2025, which could keep more HGLs in the natural gas stream next year.

Natural gas consumption

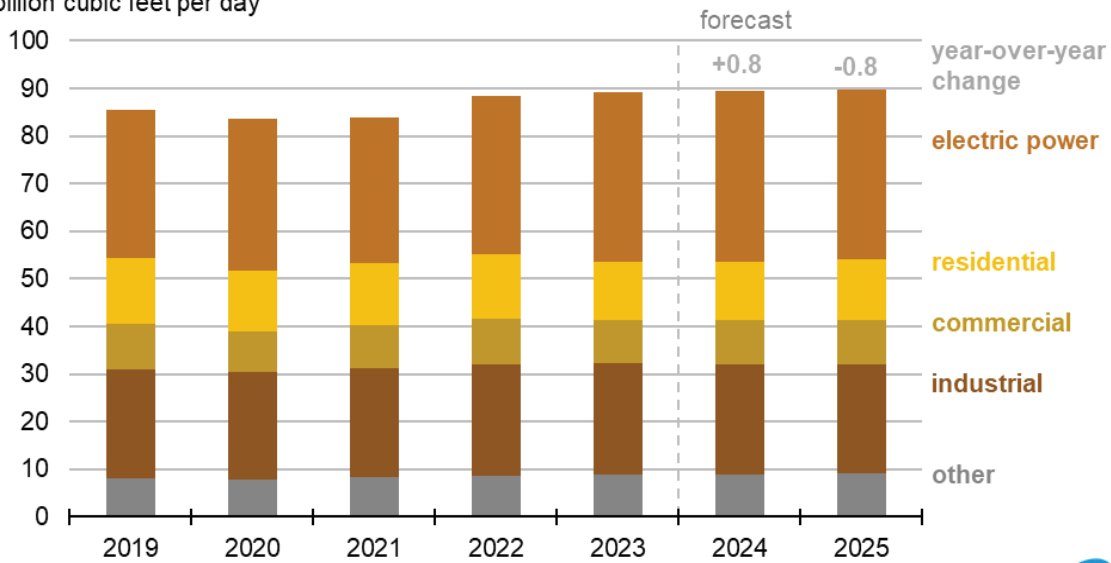
We forecast U.S. natural gas consumption in 2024 will be unchanged from last year, averaging 89 Bcf/d for the year. Small consumption increases in our forecast occur in the residential, commercial, and electric power sectors, and those increases are offset by a slight year-over-year decline in industrial sector consumption of natural gas.

In May 2024, we forecast natural gas consumption to average 72 Bcf/d, 3% less than in May 2023. The decrease from May 2023 mostly reflects our expectation of less natural gas used to generate electricity because of cooler temperatures and more generation from renewables. Less natural gas is typically consumed in May in the United States than in other months of the year because demand for space heating declines and demand for air conditioning brought on by warmer weather has yet to increase.

Following the year-over-year drop in natural gas consumption in May, we forecast relatively flat consumption through the end of next year. We forecast that U.S. natural gas consumption will average 88 Bcf/d in 2H24, about 1% more than in 2H23. The increase comes mostly from the residential and commercial sectors. We expect the sectors to consume 7% more because our forecast assumes that 4Q24 will be colder than 4Q23, which was very mild, increasing demand for space heating.

U.S. annual natural gas consumption by sector

billion cubic feet per day



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

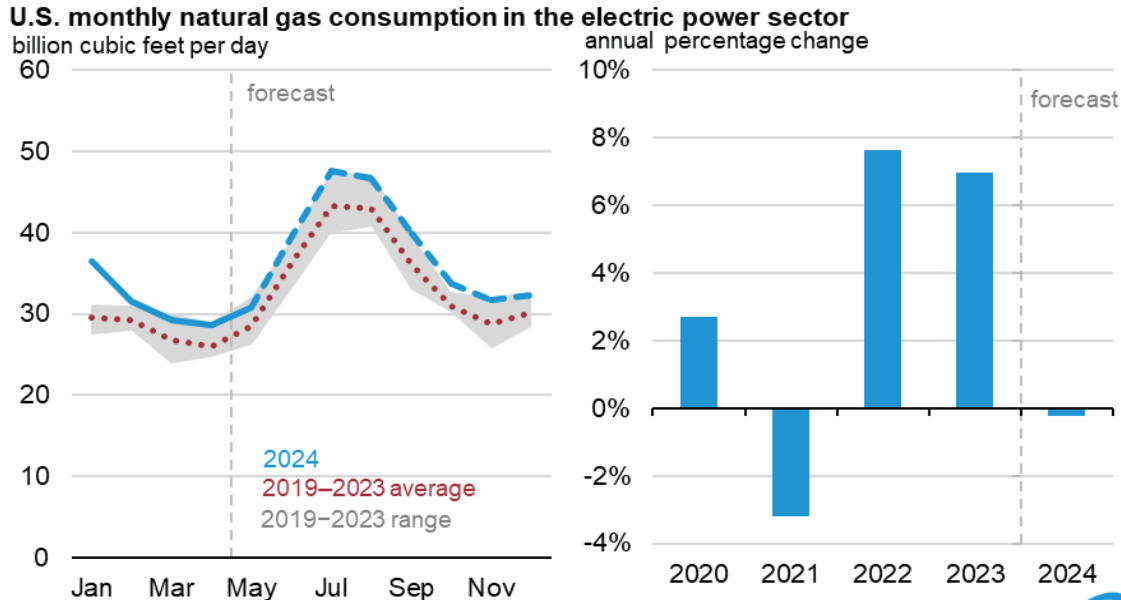


Natural gas consumption for electric power

The availability of [more electricity generation from renewable sources](#), particularly solar, in 2024 compared with 2023 is preventing growth in natural gas consumption beyond 2023 levels. Despite our expectation that 3% more electricity will be generated in the United States this summer (May–September) compared with last summer, we forecast that natural gas consumption in the electric power sector will be about the same as last summer, which saw the most power sector consumption on record. U.S. natural gas consumption for electricity generation typically peaks in the summer months as warm temperatures increase air-conditioning use.

Similar to last year, natural gas-fired electric power generation this summer is driven by both declines in coal-fired electricity generation due to [retirements](#) and more overall electricity generation because of warmer-than-normal temperatures in our forecast. We also expect low natural gas prices will encourage the dispatch of natural gas-fired power plants. These factors help keep U.S. natural gas consumption to generate electricity near last year’s record.

In the summer of 2025, we forecast natural gas consumed for electricity generation will again average about 41 Bcf/d, as trends toward growing electricity demand, less coal-fired generation, and more renewables generation continue.



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

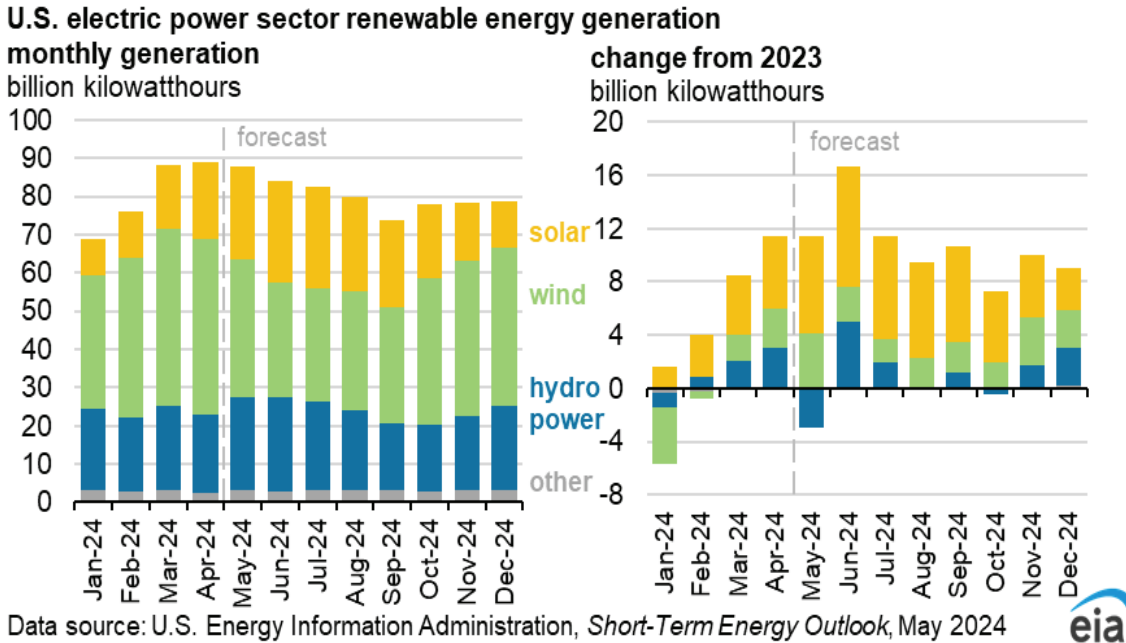


Electricity, Coal, and Renewables

Electricity generation

U.S. electricity generation in our forecast grows in 2024 compared with last year because warmer weather drives air-conditioning demand, manufacturing activity increases, and large-scale data centers and computing facilities expand. We expect total U.S. generation will grow by 3%, or 114 billion kilowatthours (BkWh), in 2024 and by 1%, or 33 BkWh, in 2025. Renewable energy sources supply most of that growth.

Utility-scale solar photovoltaic power plants generate 41% (66 BkWh) more electricity in 2024 in our forecast compared with 2023 as a result of 19 gigawatts (GW) of generating capacity that was added late last year and 37 GW of solar capacity scheduled to be added this year. The increase in solar generation will be especially pronounced in summer 2024 (June–September). We expect solar generation will increase a further 25% (58 BkWh) in 2025.



Renewables have historically generated the most electricity in the spring when output from wind turbines peaks. We expect an increase of 5% (21 BkWh) from wind generation in 2024 with about 7 GW more generating capacity at the end of April than at the same time last year. However, [wind speeds in recent months](#) have been slower than normal. If this pattern continues, annual wind generation this year could be less than expected. Our forecast of wind generation grows 3% (14 BkWh) in 2025.

Hydropower output can vary greatly from year-to-year in the United States, and hydropower generation typically peaks during the water runoff season in late spring. On an annual basis, we forecast 6% (14 BkWh) more [U.S. hydropower](#) in 2024 than in 2023. Higher water supply in key areas of the Southeast and Northwest this year are the main driver of our forecast increase in hydropower generation. Most hydropower is generated in the western half of the country, but we expect that the Southeast will be the region with the largest increase in hydroelectric generation this year (up 10%). We expect U.S. hydropower will again grow by 6% in 2025, with growth centered in the Northwest.

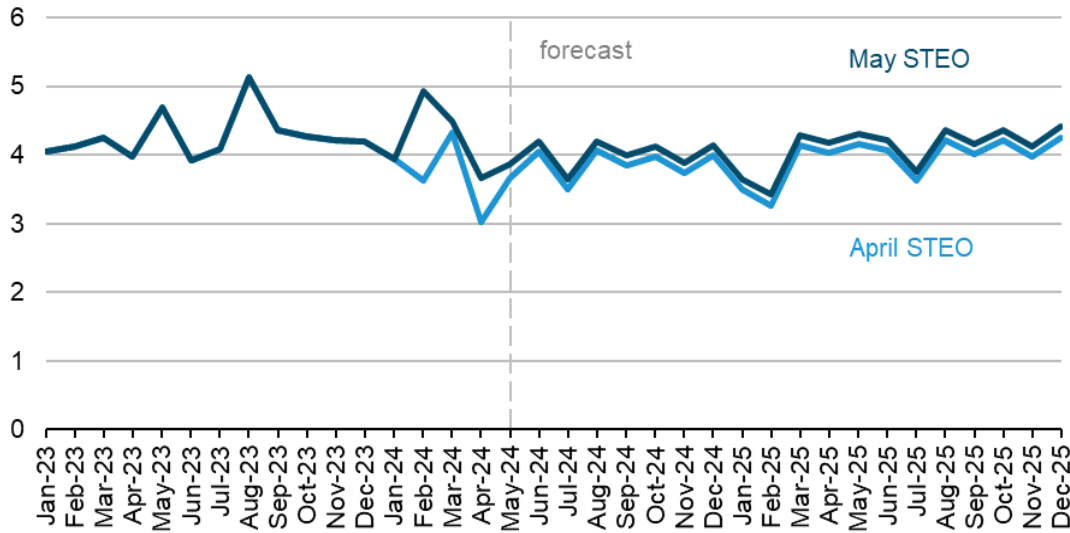
The increased generation from renewables is likely to constrain growth in generation from natural gas-fired power plants, even with relatively low natural gas prices in the forecast. We expect U.S. natural gas generation in 2024 will be relatively flat throughout the forecast period. Low natural gas prices and retirements of coal-fired capacity will continue to reduce U.S. coal generation, which we forecast will decline 4% (28 BkWh) in 2023 and 7% (48 BkWh) in 2024.

Coal markets

Data for metallurgical coal exports in February, which we receive with a two-month lag, were greater than we expected in the April STEO. The bulk of metallurgical coal is produced in Appalachia and roughly 20% of metallurgical coal exports flow through the Port of Baltimore. With February exports higher than we expected and efforts to clear the Port of Baltimore progressing, we expect metallurgical coal exports to total nearly 8 million short tons (MMst) in April and May, an increase of 13% from the April STEO,

when uncertainty surrounding the Port of Baltimore led us to expect a significant slowdown in metallurgical coal exports. As a result, we have lifted our estimate of total coal exports in April and May 2024 to 13 MMst, up 9% from the April STEO. We now forecast coal exports in 2024 to total 99 MMst, up 4% from the April STEO, and we expect exports to rise to 106 MMst in 2025.

U.S. metallurgical coal exports
million short tons

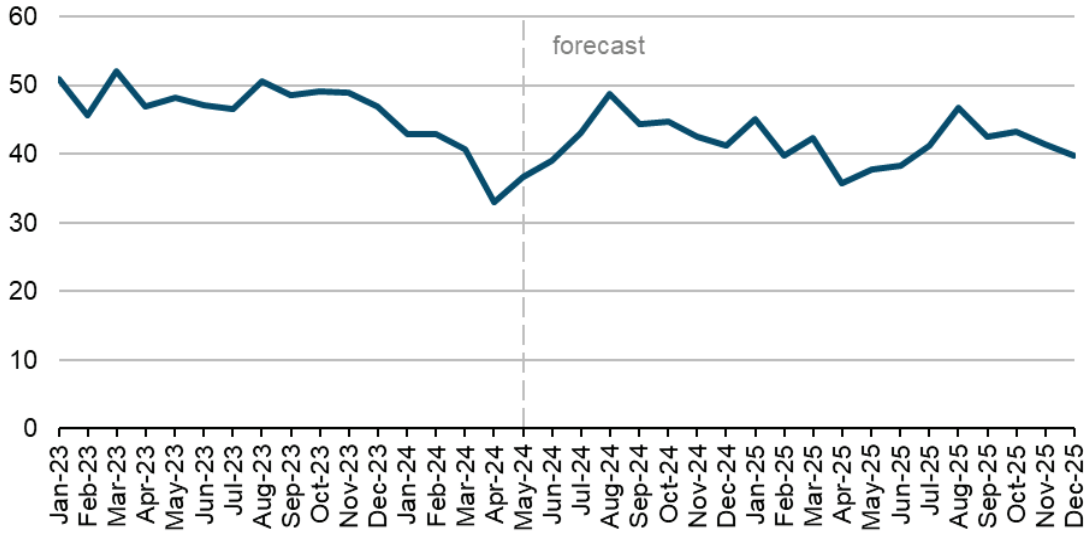


Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook* (STEO), May 2024



Coal production declined by 19% from March to April. Production fell as miners reduced activity because the coal industry was starting the shoulder season with increasing inventories. We expect production to increase in subsequent months, peaking at 49 MMst in August before declining through the end of the year. Our expectation of more coal exports than in last month’s STEO contributed to a 3% increase in our forecast for coal production in 2024. We now expect U.S. coal production will total about 500 MMst in 2024 and decline by about 1% to near 490 MMst next year.

U.S. coal production
million short tons



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



Economy, Weather, and CO₂

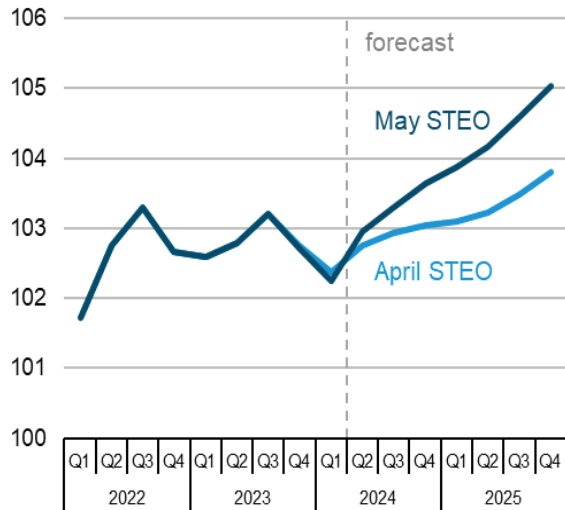
U.S. macroeconomics

Our forecast for May 2024 assumes real GDP will grow by 2.5% in 2024, unchanged from the forecast in April. The forecast for GDP growth was revised lower in 1Q24 but higher in 2H24 and beyond, resulting in the unchanged overall growth rate for 2024. We revised our assumption of annual GDP growth in 2025 higher by 0.3 percentage points to 1.9%.

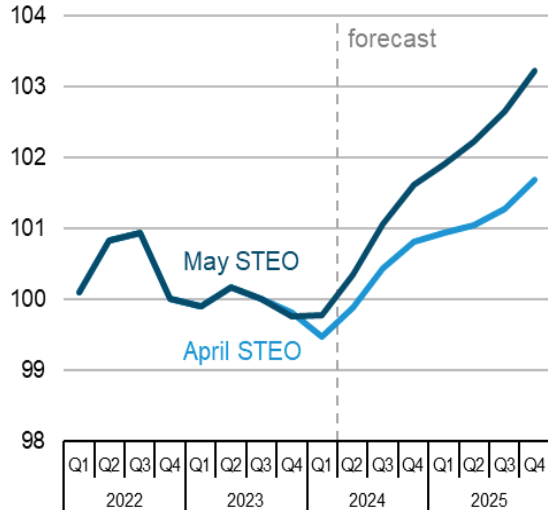
Our macroeconomic forecasts are based on S&P Global’s macroeconomic model. We incorporate energy price forecasts from STEO into the model to obtain the final macroeconomic assumptions.

This month’s forecast includes an upward revision to industrial and manufacturing production from last month’s STEO. The revision follows the release of the U.S. Bureau of Economic Analysis’s third estimate of 4Q23 GDP. The report showed value added from private-goods-producing industries increased 7.0%, led by both durable and non-durable goods manufacturing as well as construction. An increase in the forecast for industrial production increased our forecast for residual fuel oil consumption in 2025 compared with last month’s STEO. Residual fuel oil is used in a variety of industrial processes. An increase in manufacturing tends to increase demand for transporting goods by trucks and trains, and the forecast for more manufacturing production led us to increase our distillate fuel demand in 2025. We now expect U.S. distillate consumption to rise by 2% next year, up from our forecast of 1% last month.

Macroeconomic indicators
total industrial production
index, 2017=100



manufacturing production
index, 2017=100



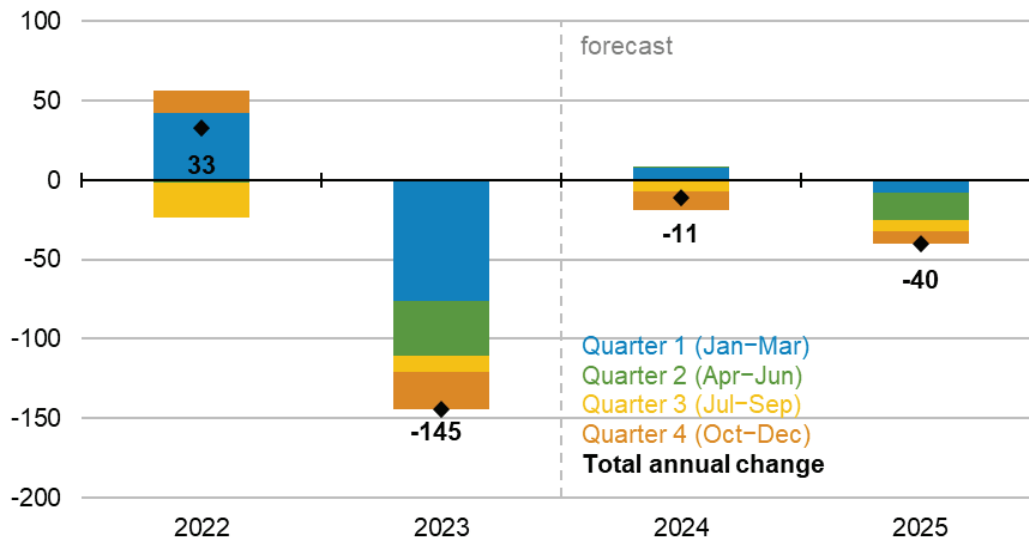
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*(STEO), May 2024

Emissions

U.S. energy-related carbon dioxide (CO₂) emissions decrease year-over-year in almost every quarter during the forecast period, continuing [an ongoing downward trend](#), and leading to 1% fewer annual emissions in 2025 compared with 2023. Coal-related CO₂ emissions decline by 4% in 2024 as coal-fired electricity generation continues to fall. Natural gas emission rise by around 1% over the course of the year, mostly from increased natural-gas-fired power generation during 1Q24 and increased residential and commercial sector consumption in 4Q24. Petroleum emissions remain relatively unchanged in 2024.

U.S. CO₂ emissions in our forecast decline by 1% from 2024 to 2025. Small reductions in CO₂ emissions are mostly a result of continued changes in the electricity generation mix. Continued decreases in coal-fired generation reduce emissions in 2Q24 and 4Q24, and decreasing natural gas-fired generation reduces emissions in 3Q24.

Change in U.S. energy-related CO₂ emissions by quarter
million metric tons



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



Weather

Our forecast assumes the United States will experience a warmer summer (May–September) in 2024 than in 2023, averaging almost 440 [cooling degree days](#) (CDDs) in 2Q24, 21% more CDDs than in 2Q23. As a result, we expect 2024 to be hotter than it was last year with around 1,550 CDDs (5% more than in 2023). We expect the summer warming trend to continue into 2025 with about 1% more CDDs during 2Q25 through 3Q25 than during the same period in 2024. However, we expect next winter to be slightly cooler than last winter with the United States averaging 3,440 [heating degree days](#) in 4Q24 through 1Q25, 6% more than in the same period last winter.

Table 4a. U.S. Petroleum and Other Liquids Supply, Consumption, and Inventories
U.S. Energy Information Administration | Short-Term Energy Outlook - May 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	12.63	12.75	13.07	13.26	12.96	<i>13.10</i>	<i>13.25</i>	<i>13.50</i>	<i>13.55</i>	<i>13.73</i>	<i>13.76</i>	<i>13.87</i>	12.93	<i>13.20</i>	<i>13.73</i>
Alaska	0.44	0.43	0.40	0.43	0.43	<i>0.41</i>	<i>0.39</i>	<i>0.42</i>	<i>0.42</i>	<i>0.40</i>	<i>0.38</i>	<i>0.41</i>	0.43	<i>0.41</i>	<i>0.40</i>
Federal Gulf of Mexico (b)	1.87	1.77	1.94	1.87	1.78	<i>1.80</i>	<i>1.81</i>	<i>1.85</i>	<i>1.92</i>	<i>1.93</i>	<i>1.88</i>	<i>1.91</i>	1.86	<i>1.81</i>	<i>1.91</i>
Lower 48 States (excl GOM)	10.31	10.55	10.73	10.96	10.75	<i>10.89</i>	<i>11.06</i>	<i>11.24</i>	<i>11.22</i>	<i>11.40</i>	<i>11.50</i>	<i>11.55</i>	10.64	<i>10.99</i>	<i>11.42</i>
Transfers to Crude Oil Supply	0.39	0.51	0.70	0.58	0.51	<i>0.48</i>	<i>0.50</i>	<i>0.48</i>	<i>0.46</i>	<i>0.50</i>	<i>0.54</i>	<i>0.51</i>	0.55	<i>0.49</i>	<i>0.50</i>
Crude Oil Net Imports (c)	2.27	2.51	2.61	2.29	2.28	<i>2.35</i>	<i>2.14</i>	<i>1.59</i>	<i>1.28</i>	<i>1.54</i>	<i>1.44</i>	<i>1.14</i>	2.42	<i>2.09</i>	<i>1.35</i>
SPR Net Withdrawals	0.01	0.26	-0.04	-0.04	-0.10	<i>-0.10</i>	<i>-0.10</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	0.05	<i>-0.08</i>	<i>0.00</i>
Commercial Inventory Net Withdrawals	-0.39	0.12	0.41	-0.10	-0.30	<i>0.11</i>	<i>0.18</i>	<i>-0.07</i>	<i>-0.33</i>	<i>0.09</i>	<i>0.16</i>	<i>-0.08</i>	0.01	<i>-0.02</i>	<i>-0.04</i>
Crude Oil Adjustment (d)	0.34	0.00	-0.22	-0.06	0.03	<i>0.27</i>	<i>0.23</i>	<i>0.25</i>	<i>0.27</i>	<i>0.23</i>	<i>0.20</i>	<i>0.23</i>	0.01	<i>0.20</i>	<i>0.23</i>
Total Crude Oil Input to Refineries	15.25	16.15	16.51	15.93	15.38	<i>16.20</i>	<i>16.20</i>	<i>15.75</i>	<i>15.23</i>	<i>16.09</i>	<i>16.09</i>	<i>15.66</i>	15.96	<i>15.88</i>	<i>15.77</i>
Other Supply															
Refinery Processing Gain	0.97	1.01	1.07	1.05	0.94	<i>1.04</i>	<i>1.05</i>	<i>1.04</i>	<i>0.97</i>	<i>1.03</i>	<i>1.06</i>	<i>1.05</i>	1.03	<i>1.02</i>	<i>1.03</i>
Natural Gas Plant Liquids Production	6.01	6.42	6.58	6.70	6.38	<i>6.53</i>	<i>6.62</i>	<i>6.63</i>	<i>6.63</i>	<i>6.77</i>	<i>6.77</i>	<i>6.83</i>	6.43	<i>6.54</i>	<i>6.75</i>
Renewables and Oxygenate Production (e)	1.24	1.29	1.31	1.35	1.32	<i>1.34</i>	<i>1.35</i>	<i>1.38</i>	<i>1.40</i>	<i>1.45</i>	<i>1.45</i>	<i>1.47</i>	1.30	<i>1.35</i>	<i>1.44</i>
Fuel Ethanol Production	1.00	1.00	1.02	1.05	1.03	<i>1.02</i>	<i>1.02</i>	<i>1.03</i>	<i>1.03</i>	<i>1.03</i>	<i>1.02</i>	<i>1.04</i>	1.02	<i>1.03</i>	<i>1.03</i>
Petroleum Products Adjustment (f)	0.20	0.22	0.23	0.23	0.21	<i>0.21</i>	<i>0.21</i>	<i>0.22</i>	<i>0.20</i>	<i>0.21</i>	<i>0.21</i>	<i>0.22</i>	0.22	<i>0.21</i>	<i>0.21</i>
Petroleum Products Transfers to Crude Oil Supply	-0.39	-0.51	-0.70	-0.58	-0.51	<i>-0.48</i>	<i>-0.50</i>	<i>-0.48</i>	<i>-0.46</i>	<i>-0.50</i>	<i>-0.54</i>	<i>-0.51</i>	-0.55	<i>-0.49</i>	<i>-0.50</i>
Product Net Imports (c)	-3.91	-3.71	-4.03	-4.56	-4.59	<i>-4.08</i>	<i>-3.97</i>	<i>-4.32</i>	<i>-4.01</i>	<i>-3.89</i>	<i>-4.06</i>	<i>-4.44</i>	-4.06	<i>-4.24</i>	<i>-4.10</i>
Hydrocarbon Gas Liquids	-2.47	-2.39	-2.42	-2.58	-2.62	<i>-2.62</i>	<i>-2.53</i>	<i>-2.49</i>	<i>-2.70</i>	<i>-2.73</i>	<i>-2.64</i>	<i>-2.61</i>	-2.46	<i>-2.57</i>	<i>-2.67</i>
Unfinished Oils	0.28	0.27	0.22	0.18	0.13	<i>0.37</i>	<i>0.42</i>	<i>0.32</i>	<i>0.30</i>	<i>0.38</i>	<i>0.41</i>	<i>0.32</i>	0.24	<i>0.31</i>	<i>0.35</i>
Other HC/Oxygenates	-0.05	-0.07	-0.04	-0.05	-0.05	<i>-0.06</i>	<i>-0.05</i>	<i>-0.05</i>	<i>-0.08</i>	<i>-0.08</i>	<i>-0.07</i>	<i>-0.08</i>	-0.05	<i>-0.05</i>	<i>-0.08</i>
Motor Gasoline Blend Comp.	0.45	0.67	0.57	0.41	0.37	<i>0.65</i>	<i>0.63</i>	<i>0.46</i>	<i>0.53</i>	<i>0.68</i>	<i>0.62</i>	<i>0.35</i>	0.52	<i>0.53</i>	<i>0.54</i>
Finished Motor Gasoline	-0.75	-0.58	-0.67	-0.81	-0.75	<i>-0.62</i>	<i>-0.68</i>	<i>-0.93</i>	<i>-0.68</i>	<i>-0.51</i>	<i>-0.61</i>	<i>-0.78</i>	-0.70	<i>-0.74</i>	<i>-0.65</i>
Jet Fuel	-0.05	0.01	-0.05	-0.09	-0.09	<i>-0.05</i>	<i>-0.02</i>	<i>-0.05</i>	<i>-0.06</i>	<i>0.01</i>	<i>0.01</i>	<i>-0.01</i>	-0.05	<i>-0.05</i>	<i>-0.01</i>
Distillate Fuel Oil	-0.76	-0.97	-1.01	-1.01	-0.88	<i>-1.02</i>	<i>-0.99</i>	<i>-0.92</i>	<i>-0.63</i>	<i>-0.90</i>	<i>-0.98</i>	<i>-0.91</i>	-0.94	<i>-0.95</i>	<i>-0.85</i>
Residual Fuel Oil	0.01	-0.04	-0.03	0.00	-0.02	<i>-0.07</i>	<i>-0.09</i>	<i>-0.01</i>	<i>-0.04</i>	<i>-0.04</i>	<i>-0.10</i>	<i>-0.02</i>	-0.01	<i>-0.05</i>	<i>-0.05</i>
Other Oils (g)	-0.58	-0.61	-0.59	-0.61	-0.67	<i>-0.68</i>	<i>-0.65</i>	<i>-0.65</i>	<i>-0.64</i>	<i>-0.71</i>	<i>-0.70</i>	<i>-0.72</i>	-0.60	<i>-0.66</i>	<i>-0.69</i>
Product Inventory Net Withdrawals	0.30	-0.49	-0.61	0.44	0.74	<i>-0.44</i>	<i>-0.26</i>	<i>0.37</i>	<i>0.32</i>	<i>-0.52</i>	<i>-0.25</i>	<i>0.40</i>	-0.09	<i>0.10</i>	<i>-0.01</i>
Total Supply	19.67	20.38	20.37	20.56	19.87	<i>20.32</i>	<i>20.69</i>	<i>20.60</i>	<i>20.29</i>	<i>20.63</i>	<i>20.73</i>	<i>20.68</i>	20.25	<i>20.37</i>	<i>20.59</i>
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	3.40	3.36	3.25	3.81	3.79	<i>3.34</i>	<i>3.46</i>	<i>3.86</i>	<i>3.84</i>	<i>3.44</i>	<i>3.50</i>	<i>3.91</i>	3.46	<i>3.61</i>	<i>3.67</i>
Other HC/Oxygenates	0.22	0.28	0.28	0.28	0.29	<i>0.30</i>	<i>0.30</i>	<i>0.33</i>	<i>0.34</i>	<i>0.37</i>	<i>0.38</i>	<i>0.40</i>	0.27	<i>0.30</i>	<i>0.37</i>
Unfinished Oils	0.00	0.00	0.00	0.00	0.00	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	0.00	<i>0.00</i>	<i>0.00</i>
Motor Gasoline	8.67	9.13	9.05	8.93	8.62	<i>9.08</i>	<i>9.14</i>	<i>8.81</i>	<i>8.67</i>	<i>9.15</i>	<i>9.10</i>	<i>8.76</i>	8.94	<i>8.91</i>	<i>8.92</i>
Fuel Ethanol blended into Motor Gasoline	0.90	0.94	0.94	0.94	0.89	<i>0.95</i>	<i>0.95</i>	<i>0.94</i>	<i>0.90</i>	<i>0.96</i>	<i>0.95</i>	<i>0.94</i>	0.93	<i>0.93</i>	<i>0.94</i>
Jet Fuel	1.55	1.67	1.72	1.66	1.58	<i>1.70</i>	<i>1.72</i>	<i>1.67</i>	<i>1.61</i>	<i>1.74</i>	<i>1.76</i>	<i>1.72</i>	1.65	<i>1.67</i>	<i>1.71</i>
Distillate Fuel Oil	4.01	3.93	3.90	3.90	3.83	<i>3.83</i>	<i>3.91</i>	<i>3.99</i>	<i>4.07</i>	<i>3.95</i>	<i>3.90</i>	<i>3.99</i>	3.93	<i>3.89</i>	<i>3.98</i>
Residual Fuel Oil	0.29	0.22	0.27	0.31	0.30	<i>0.27</i>	<i>0.22</i>	<i>0.25</i>	<i>0.23</i>	<i>0.24</i>	<i>0.22</i>	<i>0.25</i>	0.27	<i>0.26</i>	<i>0.24</i>
Other Oils (g)	1.53	1.79	1.89	1.67	1.46	<i>1.80</i>	<i>1.94</i>	<i>1.69</i>	<i>1.53</i>	<i>1.75</i>	<i>1.89</i>	<i>1.64</i>	1.72	<i>1.73</i>	<i>1.70</i>
Total Consumption	19.66	20.38	20.37	20.56	19.87	<i>20.32</i>	<i>20.69</i>	<i>20.60</i>	<i>20.29</i>	<i>20.63</i>	<i>20.73</i>	<i>20.68</i>	20.25	<i>20.37</i>	<i>20.59</i>
Total Petroleum and Other Liquids Net Imports	-1.64	-1.20	-1.42	-2.28	-2.31	<i>-1.73</i>	<i>-1.83</i>	<i>-2.72</i>	<i>-2.73</i>	<i>-2.35</i>	<i>-2.62</i>	<i>-3.30</i>	-1.64	<i>-2.15</i>	<i>-2.75</i>
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	465.4	454.7	417.5	426.4	453.9	<i>444.3</i>	<i>427.7</i>	<i>434.3</i>	<i>463.8</i>	<i>455.5</i>	<i>440.9</i>	<i>448.2</i>	426.4	<i>434.3</i>	<i>448.2</i>
Hydrocarbon Gas Liquids	174.3	225.4	279.1	223.3	161.2	<i>211.6</i>	<i>252.0</i>	<i>208.4</i>	<i>171.2</i>	<i>224.6</i>	<i>265.3</i>	<i>224.1</i>	223.3	<i>208.4</i>	<i>224.1</i>
Unfinished Oils	88.6	87.0	88.3	84.1	90.5	<i>87.2</i>	<i>86.7</i>	<i>79.6</i>	<i>88.8</i>	<i>86.6</i>	<i>86.5</i>	<i>80.7</i>	84.1	<i>79.6</i>	<i>80.7</i>
Other HC/Oxygenates	34.3	30.1	30.3	33.2	37.9	<i>36.1</i>	<i>35.8</i>	<i>36.1</i>	<i>38.2</i>	<i>36.9</i>	<i>36.6</i>	<i>36.9</i>	33.2	<i>36.1</i>	<i>36.9</i>
Total Motor Gasoline	225.3	223.2	227.6	241.3	228.1	<i>222.0</i>	<i>216.5</i>	<i>231.4</i>	<i>229.2</i>	<i>225.4</i>	<i>217.3</i>	<i>229.8</i>	241.3	<i>231.4</i>	<i>229.8</i>
Finished Motor Gasoline	14.7	17.6	15.3	18.1	13.5	<i>18.4</i>	<i>17.3</i>	<i>19.3</i>	<i>15.8</i>	<i>18.1</i>	<i>17.0</i>	<i>20.0</i>	18.1	<i>19.3</i>	<i>20.0</i>
Motor Gasoline Blend Comp.	210.6	205.6	212.3	223.2	212.6	<i>203.5</i>	<i>199.2</i>	<i>212.1</i>	<i>213.5</i>	<i>207.2</i>	<i>200.3</i>	<i>209.8</i>	223.2	<i>212.1</i>	<i>209.8</i>
Jet Fuel	37.7	42.7	43.5	39.8	41.0	<i>40.2</i>	<i>41.8</i>	<i>38.5</i>	<i>36.7</i>	<i>37.3</i>	<i>39.0</i>	<i>34.6</i>	39.8	<i>38.5</i>	<i>34.6</i>
Distillate Fuel Oil	112.3	112.6	119.2	130.7	116.8	<i>118.9</i>	<i>118.6</i>	<i>122.1</i>	<i>112.0</i>	<i>114.6</i>	<i>114.7</i>	<i>115.3</i>	130.7	<i>122.1</i>	<i>115.3</i>
Residual Fuel Oil	29.6	30.4	27.5	24.1	29.6	<i>29.5</i>	<i>27.3</i>	<i>26.7</i>	<i>28.1</i>	<i>27.8</i>	<i>25.7</i>	<i>25.2</i>	24.1	<i>26.7</i>	<i>25.2</i>
Other Oils (g)	63.3	58.3	50.5	49.3	55.5	<i>53.2</i>	<i>44.4</i>	<i>46.2</i>	<i>55.7</i>	<i>53.8</i>	<i>44.8</i>	<i>46.5</i>	49.3	<i>46.2</i>	<i>46.5</i>
Total Commercial Inventory	1230.8	1264.4	1283.4	1252.2	1212.4	<i>1243.1</i>	<i>1250.9</i>	<i>1223.2</i>	<i>1223.6</i>	<i>1262.5</i>	<i>1270.8</i>	<i>1241.4</i>	1252.2	<i>1223.2</i>	<i>1241.4</i>
Crude Oil in SPR	371.2														

Table 5a. U.S. Natural Gas Supply, Consumption, and Inventories
U.S. Energy Information Administration | Short-Term Energy Outlook - May 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Supply (billion cubic feet per day)															
Total Marketed Production	111.18	112.50	113.64	115.19	113.26	111.78	111.90	112.92	113.50	114.64	114.72	115.26	113.14	112.46	114.54
Alaska	1.08	1.01	0.91	1.04	1.08	0.98	0.89	1.01	1.02	0.95	0.87	0.99	1.01	0.99	0.96
Federal GOM (a)	2.13	1.89	2.02	1.93	1.89	1.89	1.89	1.93	2.00	2.00	1.94	1.97	1.99	1.90	1.98
Lower 48 States (excl GOM)	107.97	109.60	110.70	112.22	110.29	108.91	109.12	109.98	110.48	111.69	111.91	112.30	110.14	109.57	111.60
Total Dry Gas Production	102.26	103.16	104.12	105.57	104.01	102.27	102.38	103.31	103.84	104.89	104.97	105.46	103.79	102.99	104.79
LNG Gross Imports	0.09	0.02	0.02	0.03	0.10	0.04	0.04	0.06	0.10	0.04	0.04	0.06	0.04	0.06	0.06
LNG Gross Exports	11.45	11.76	11.40	12.97	12.38	11.00	11.64	13.37	13.71	13.81	14.39	15.26	11.90	12.10	14.30
Pipeline Gross Imports	8.45	7.32	7.94	8.23	9.00	6.93	7.22	7.47	8.29	6.98	7.24	7.48	7.98	7.66	7.49
Pipeline Gross Exports	8.93	8.75	9.19	8.94	9.57	9.40	9.51	9.36	9.53	9.53	9.87	9.65	8.95	9.46	9.65
Supplemental Gaseous Fuels	0.22	0.17	0.16	0.15	0.18	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Net Inventory Withdrawals	11.96	-11.71	-6.38	0.29	12.84	-11.18	-5.94	3.61	14.83	-11.60	-5.84	4.06	-1.51	-0.17	0.31
Total Supply	102.60	78.45	85.27	92.36	104.17	77.82	82.72	91.90	103.98	77.12	82.32	92.32	89.63	89.14	88.89
Balancing Item (b)	0.39	-0.41	-1.40	-0.69	-0.44	-1.16	1.36	0.91	0.60	0.20	1.40	0.81	-0.53	0.17	0.75
Total Primary Supply	102.99	78.04	83.87	91.67	103.74	76.66	84.08	92.80	104.57	77.32	83.72	93.13	89.10	89.31	89.64
Consumption (billion cubic feet per day)															
Residential	23.51	7.29	3.57	14.95	22.79	6.84	3.83	16.15	24.18	7.26	3.83	16.09	12.28	12.39	12.79
Commercial	14.52	6.43	4.72	10.69	14.23	6.57	5.23	11.20	14.54	6.76	5.23	11.16	9.07	9.30	9.40
Industrial	24.83	22.43	21.98	24.35	24.76	21.94	21.56	23.77	24.70	21.73	21.53	23.81	23.39	23.01	22.93
Electric Power (c)	30.77	33.41	44.84	32.56	32.46	32.93	44.79	32.62	31.61	33.02	44.33	32.87	35.43	35.72	35.48
Lease and Plant Fuel	5.31	5.37	5.43	5.50	5.41	5.34	5.34	5.39	5.42	5.47	5.48	5.50	5.40	5.37	5.47
Pipeline and Distribution Use	3.87	2.93	3.15	3.44	3.89	2.84	3.13	3.48	3.94	2.88	3.13	3.50	3.34	3.33	3.36
Vehicle Use	0.18	0.18	0.18	0.18	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.18	0.20	0.20
Total Consumption	102.99	78.04	83.87	91.67	103.74	76.66	84.08	92.80	104.57	77.32	83.72	93.13	89.10	89.31	89.64
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	1,850	2,902	3,490	3,457	2,289	3,307	3,854	3,521	2,187	3,243	3,780	3,407	3,457	3,521	3,407
East Region (d)	334	646	853	787	363	687	875	787	407	701	853	760	787	787	760
Midwest Region (d)	417	701	993	950	511	779	1,053	938	472	774	1,063	925	950	938	925
South Central Region (d)	919	1,138	1,092	1,183	1,001	1,292	1,302	1,249	933	1,247	1,271	1,212	1,183	1,249	1,212
Mountain Region (d)	79	171	239	228	163	196	248	217	144	202	249	211	228	217	211
Pacific Region (d)	74	216	278	280	228	326	342	302	207	292	312	270	280	302	270
Alaska	27	30	35	30	24	28	33	29	24	27	32	28	30	29	28

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

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

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

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

- = no data available

LNG: liquefied natural gas.

Notes: EIA completed modeling and analysis for this report on May 2, 2024.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Q - Joshua Stone {BIO 23767285 <GO>}

Q1/24 CALL

Yeah, thanks, and good afternoon.

Two questions please. One on LNG You'd be connected in the press with a couple of transactions that would expand your LNG portfolio. I understand you won't be able to comment but maybe more broadly why now would be the right time to add to your LNG portfolio through acquisition and how you would ensure you get a fair value given what it seems to be a competitive process. And second question on the departure from the from the power market in China.

Maybe just talk about what was it about this business that led your decision to depart. Also curious you haven't exited the EV charging business. So is it the case that maybe you don't see the need to integrate between your power business and your EV charging business for the portfolio more broadly. Thank you.

A - Wael Sawan {BIO 17559980 <GO>}

Thank you, Josh. I'll take the first one. Sinead, if you want to take the power market. I suspect I have a sense of the deals that you have referenced there Josh that are being talked about in the press.

I'd sort of be -- I'd separate them. I think one for example been talked about Ruwais LNG in Abu Dhabi. That's one which Abu Dhabi is developing on a on a greenfield basis. I won't give any specific comments other than to say organic opportunities to continue to grow our LNG portfolio opportunities that potentially can add more supply points to the portfolio in attractive locations where the carbon intensity is low and the value potential is high are very much down the lane that we want to continue to grow.

We have a fundamental conviction that this is not an LNG sprint of a few years but that LNG will be required for decades to come. And this is why continuing to find those differentiated opportunities is something we will look at. We are indeed not looking at big M&A in that space. Whenever we're looking at LNG opportunities we're looking at bolt-ons to our existing port for you where we feel that the capabilities we have the portfolio, we have the positions that we have built up over the years would allow us to be able to unlock more value than maybe a seller would be.

And so we would be looking at any of these opportunities of course being creative to our overall delivery as as an energy business for, for sure. I'll leave it at that. Maybe Sinead, you should may.

Q - Henry Tarr {BIO 7026283 <GO>}

Hi, there, and thanks for taking my questions. Two quick ones. One on LNG Canada, again, posted this, the impairment. Does that have any implications for a second phase of that project or not really, either from a returns perspective or anything else? And then, secondly, could you give a quick update on Pennsylvania and the cracker, that would be great? Thank you.

A - Wael Sawan {BIO 17559980 <GO>}

Okay. I'm happy to cover both. And, Henry, I talked earlier about Pennsylvania. So maybe I'll just quickly connect that back up again. So on the Pennsylvania one, I tried to reference the strategic advantage of our cracker there, multiple dimensions, supply, demand, as well as the fiscal advantage. Two of the three polyethylene trains up and running. The third one is -- has some technical issues, which we are working through and expected to be up and running by the first quarter of next year.

LNG Canada, I'll use the same frame. LNG Canada continues to be an advantaged asset, a really advantaged asset. You have, in essence, a captive export scheme for Western Canadian gas. You have a demand, a market, the Asian market that is within proximity. And you have, in essence, the cleanest, the lowest carbon intensity LNG out there in the market, all coming together at a good point in time for those volumes to, all of which will

Page 20 of 23

Q2 | 23 CALL

Company Name: Shell PLC
Company Ticker: SHEL LN Equity
Date: 2023-07-27

be full flexibility portfolio volumes for us, something which we, of course, like a lot. All that coming together around middle of this year.

That's a project that now is over 75% complete on the midstream, over 90% complete on the pipeline. So it's coming along nicely. All the major units are either at the plant or are en route to the plant. So knock on wood, all seems to be going well.

Phase 2 is going to -- the impairment itself does not impact at all our view on Phase 2. In fact, all the reasons that Sinead, explained around this being more driven by accounting and of course, while the asset itself is very attractive for us, a big part of the attraction is also the optimization opportunities that full flex LNG cargoes offers us in a portfolio like ours. And that doesn't change, of course.

And so what we will do is we will wait for the joint venture to have put their best proposal forward, and with the other joint venture partners, we will assess it and make a decision at the time. Thank you for the question. Can we go to the next question, please, Dan?

May 8, 2024 | IR Press Release

Work continues on diversifying sources of gas: EnBW signs LNG procurement agreement with ADNOC

Deliveries to start once the low-carbon Ruwais project has been commissioned/ Volume of 0.6 million metric tons per annum (mmtpa)/ EnBW Board Member Heydecker: The next step in establishing an LNG value chain

| [Share](#) ↗



Signing of the contract with Peter Heydecker, Board Member for Sustainable Generation Infrastructure at EnBW, and Fatema Al Nuaimi, Executive Vice President, Downstream Business Management at ADNOC. (Copyright: ADNOC)

[Download image](#)

Karlsruhe. EnBW Energie Baden-Württemberg AG (EnBW) has signed an agreement with the Abu Dhabi National Oil Company (ADNOC) to purchase liquefied natural gas (LNG) over a period of 15 years. The company from the United Arab Emirates will supply EnBW with 0.6 million metric tons per annum (mmtpa) once the Ruwais LNG project has been commissioned as planned in 2028. EnBW is thus continuing to pursue its strategy of further expanding its LNG activities and diversifying its sources of gas.

Peter Heydecker, EnBW's Board Member for Sustainable Generation Infrastructure, underlined: "We are delighted that EnBW has signed its first LNG contract in the Middle East with our experienced partner ADNOC. In doing so, we are taking the next step in terms of diversifying our procurement portfolio and establishing our own LNG value chain. We can also use the experience gained here for our medium-term goal of establishing an import structure for green gases, since the two business fields are very similar."

Once commissioned, the Ruwais project will have a total capacity of 9.6 mmtpa and be the first LNG liquefaction plant in the Middle East to cover its electricity needs from low-carbon sources. The electrically powered liquefaction plant will

optimize the carbon footprint for LNG production, while the use of state-of-the-art AI technologies will also guarantee a high level of energy efficiency in the overall process.

Fatema Al Nuaimi, ADNOC Executive Vice President, Downstream Business Management, said: "The Ruwais LNG project continues to gain momentum, reinforcing ADNOC's position as a reliable global natural gas provider. This new agreement builds on the UAE-Germany Energy Security and Industry Accelerator and will support Germany as it strives to diversify its energy sources and enhance its energy security."

About EnBW

With a workforce of over 28,000 employees, EnBW is one of the largest energy supply companies in Germany and Europe. It supplies electricity, gas and water together with infrastructure and energy-related products and services to around 5.5 million customers. In the company's transformation from a traditional energy provider to a sustainable infrastructure group, the expansion of renewable energy sources and of the distribution and transportation grids for electricity and gas are cornerstones of EnBW's growth strategy and the focus of its investment spending. By 2030, EnBW plans gross investment of 40 billion euros, around 90 percent of which is earmarked for Germany. By the end of 2025, renewables are set to account for more than half of EnBW's generation portfolio. The aim is to phase out coal by the end of 2028. These are key milestones on the way to the company being carbon-neutral by 2035.

www.enbw.com

Press contact

Christopher Engelmann

Mobile: [+49 170 6530869](tel:+491706530869)

christopher.engelmann@enbw.com



GLOBAL COMMODITY STRATEGY AND MENA | RESEARCH

This report is intended for dsubouchi@safgroup.ca. Unauthorized redistribution of this report is prohibited.

Geopolitical Update: Temperatures Rising

Analysis and Updates on Conflicts in Ukraine and the Middle East

March 27, 2024

RBC Capital Markets, LLC

Helima Croft (Head of Global Commodity Strategy and MENA Research) (212) 618-7798; helima.croft@rbccm.com

President Biden faces the prospect of a cruel summer if the Russia-Ukraine and Middle East conflicts continue to pose risks to global energy supplies.

- **This week brought more attacks by Ukraine on Russian refineries with drones circling back to two previously targeted refineries, Novokuibyshevsky and Kuibyshevsky, in the Samara region, resulting in significant damage to the latter's primary crude distillation unit.** As a result, we now count 5 refineries facing significant throughput disruptions, with our estimates for downed refining capacity rising to 13% of Russia's total. These attacks seem to be serving the twin purposes of partially denying the Russian frontlines diesel as well as reducing Russia's essential energy revenue to fund the war. Preliminary estimates already show aggregate Russian refinery runs in March down 650 kb/d y/y. While it is still too early to see how these disruptions will ultimately affect seaborne refined product export flows, the largest impacts would be seen on global gasoil and fuel oil markets. Turkey, Africa, and Brazil have been the top destinations for Russian gasoil since exports were barred from Europe.
- **There have been reports that the White House has tried to dissuade Kyiv from this strategy, fearing the energy price impact – we find this entirely credible based on our conversations.** As we have repeatedly noted, the White House has sought to avert a Russian supply disruption and has shaped policy towards this end; including price caps designed as a release valve to ensure Russian barrels locked out of Europe would flow to Asia, or directly telling Ukraine to not target Black Sea oil tankers. However, with US assistance being held up in Congress, and Russia making battlefield gains, Ukraine and key regional allies appear to be questioning the utility of this energy bargain with Washington.
- **A key dynamic worth watching is whether Congress moves to approve the \$60bn supplementary military, budgetary, and humanitarian aid package being held up in the House after already passing in the Senate.** House Speaker Mike Johnson (R-LA) has signaled a willingness to hold a vote on Ukraine support after Congress's Easter recess, however at the time of writing, there are no clear indications of imminent passage. Moreover, with a complete cutoff of funding potentially in the offing if President Trump wins in November, the window for Ukraine to make battlefield advances in the two-year conflict may be closing.

- **Hence, we will be closely watching whether Ukraine moves at some stage to target actual export facilities to strike a deeper blow on the Russian balance sheet.** We continue to contend that Ukraine seemingly has the capability to target the majority of export facilities in western Russia, which would put ~60% of Russia's crude exports at risk. While Washington would certainly not be happy with such a move because of the serious price implications, Kyiv could decide that such asymmetrical measures may be necessary. Resilient energy revenue has been essential for Russia's continued military strength – the 2024 budget contains record defense spending, with the Russian Federation for the time poised to spend over 6% of GDP on military and defense spending. At the same time, Moscow is forecasting a shrinking deficit based on an anticipated rise in revenue this year. According to the Carnegie Endowment, the 2024 budget is based on the assumption that revenue will climb by over a third to over R35trn (\$378bn), of which R11.5trn (\$124bn) is expected to come from the oil and gas sector.
- **While OPEC is sitting on over 2 mb/d of spare capacity, we do not think the producer group would rush in to cool the rally and ramp up output given what transpired in the months immediately following the Russian invasion of Ukraine.** Washington made unprecedented interventions in the market by releasing 180 mb from the SPR after the IEA and other market participants warned of a multimillion b/d Russian disruption that never materialized. Certainly, we do not see any indications that the recent run up in prices due to the heightened Russian infrastructure risk will prompt any policy reversal at next week's Joint Ministerial Monitoring Committee Meeting. Any serious shift will likely have to wait until the June 1 Ministerial Meeting, and even then, we believe the group will be very judicious when it comes to unwinding any cuts.
- **Complicating the challenge for the White House is the lack of progress in resolving the six-month Middle East war.** The Houthis continue to attack ships in the Red Sea, claiming six attacks on Tuesday, while Houthi officials this week have renewed threats against Saudi Arabia over providing support and airspace access to US jets conducting strikes in Yemen. In addition, the continuing exchange of fire between Hezbollah and Israel – with Hezbollah launching “dozens” of rockets in response to deadly Israeli strikes in southern Lebanon yesterday – still represents a serious contagion risk.
- **Hence, it is our view that Washington may once again have to resort to policy tools such as the SPR if these twin conflicts continue to imperil global energy supplies. Certainly, this raises a campaign risk for President Biden, as his opponents will likely accuse him of endangering energy security by tapping further into the strategic reserve. However, if President Biden cannot find a way to ameliorate the risk from these conflicts, the White House may decide that SPR releases are more politically palatable than retail gasoline prices north of \$4/gallon for the summer driving season.**

Continue Reading

RBC Capital Markets, LLC

Helima Croft (Head of Global Commodity Strategy and MENA Research) (212) 618-7798; helima.croft@rbccm.com

Christopher Louney (Commodity Strategist) (212) 437-1925; christopher.louney@rbccm.com

Michael Tran (Commodity and Digital Intelligence Strategist) (212) 266-4020; michael.tran@rbccm.com

Brian Leisen (AVP) (212) 437-9956; brian.leisen@rbccm.com

John Soughan (Senior Associate) (212) 428-5491; john.soughan@rbccm.com

Allison Enck (Senior Associate) (646) 618-6547; allison.enck@rbccm.com

Victoria Silva (Associate) (212) 905-5841; victoria.silva@rbccm.com

Link to **Full Research Report**, including Required Disclosures and Disclaimer.

05/08/2024 13:22:10 [BN] Bloomberg News

Russia Pumps Oil Above Target as New Voluntary Cuts Enter Force

- Output of 9.4 million b/d exceeded target of 9.1 million b/d
- Moscow pledged to deepen production cuts from April to June

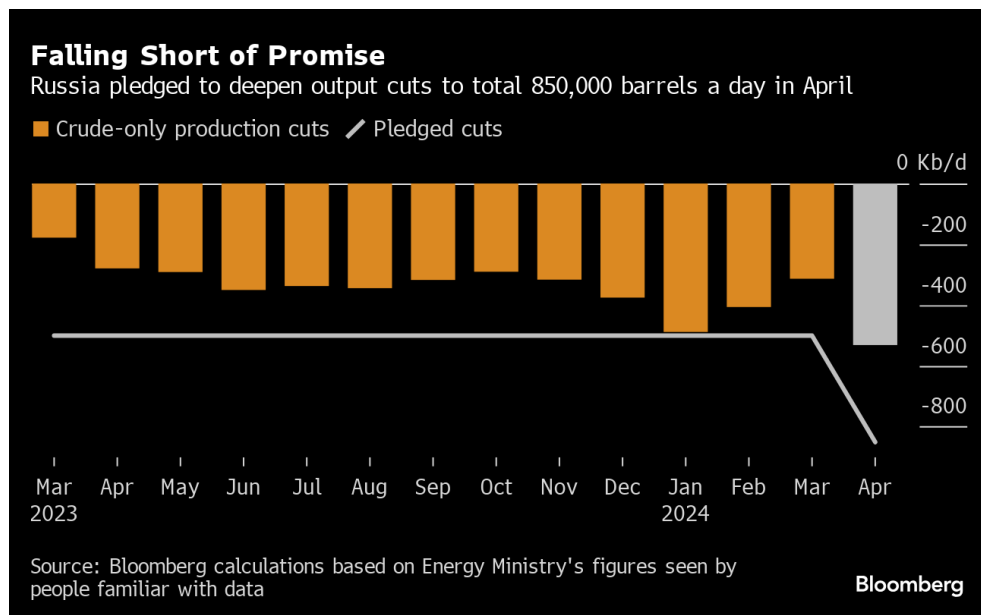
By Bloomberg News

(Bloomberg) -- Russia cut its crude oil production by less than pledged last month, exceeding the voluntary target agreed in March with OPEC+, according to Bloomberg calculations based on official data.

Daily crude production averaged just under 1.285 million tons last month, said people familiar with data from the Energy Ministry, who spoke on condition of anonymity because the figures aren't public. That equates to 9.418 million barrels a day, based on the typical 7.33 barrel-per-ton conversion ratio for the nation's crude.

That means Russia's crude output in April was about 219,000 barrels below March level, but still some 319,000 barrels above the level specified in its agreement with the Organization of Petroleum Exporting Countries. Moscow had promised to put greater emphasis on production cuts, instead of export reductions, in a joint move to avert a global surplus and shore up prices.

Russia's Energy Ministry didn't immediately respond to requests for comment on the April and March crude-output figures.



Russia is the only OPEC+ nation splitting its curbs between production and exports of crude and refined products. This quarter, Moscow promised to reduce its output more, while expanding its exports by a similar amount.

This report may not be modified or altered in any way. The BLOOMBERG PROFESSIONAL service and BLOOMBERG Data are owned and distributed locally by Bloomberg Finance LP ("BFLP") and its subsidiaries in all jurisdictions other than Argentina, Bermuda, China, India, Japan and Korea (the "BFLP Countries"). BFLP is a wholly-owned subsidiary of Bloomberg LP ("BLP"). BLP provides BFLP with all the global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. BFLP, BLP and their affiliates do not provide investment advice, and nothing herein shall constitute an offer of financial instruments by BFLP, BLP or their affiliates.

For April, Russia pledged to pump 350,000 barrels a day less than the prior month, which came on top of 500,000 barrels a day of production curbs announced in February 2023. The country's targeted daily production level for April was 9.099 million barrels.

Russia has promised to deepen its total daily output cuts to 900,000 barrels and 971,000 barrels in May and June respectively. That would put Russia's total output curbs in the second quarter roughly in line with Saudi Arabia's reductions. OPEC+ is set to meet next month in Vienna to consider whether to prolong its cuts into the second half of the year.

Moscow classified its oil production data last year due to its sensitivity amid Western sanctions over the Kremlin's aggression against Ukraine. The ministry doesn't disclose the tons-to-barrels conversion ratio it uses for its own assessment of monthly compliance, so the internal calculations may differ from those made by Bloomberg.

To contact Bloomberg News staff for this story:

James Herron in London at jherron9@bloomberg.net

To contact the editor responsible for this story:

James Herron at jherron9@bloomberg.net

05/07/2024 09:54:05 [BN] Bloomberg News

Russian Crude Flows Top 2023 Levels With Refineries Constrained

More crude diverted to export shipments as processing rates fall

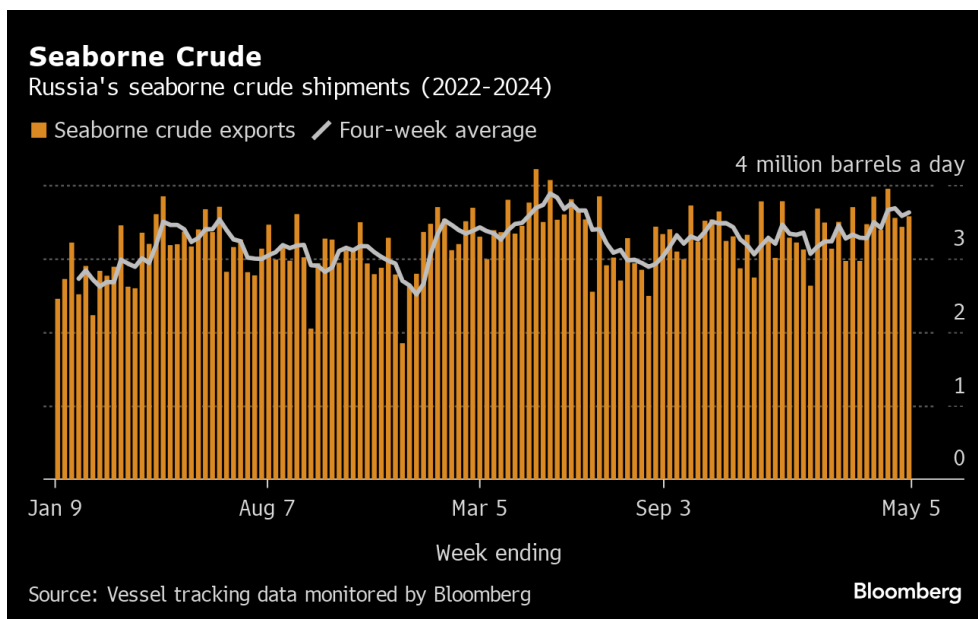
By Julian Lee

(Bloomberg) -- Russia's crude flows rebounded in the seven days to May 5, with additional vessels leaving the major ports of Kozmino on the Pacific coast and Murmansk on the Arctic. The four-week average also rose.

Buoyed by last week's increase, crude shipments for the year so far are running ahead of the average for 2023, with domestic oil processing still under pressure as refineries that have barely recovered from Ukrainian drone strikes enter seasonal maintenance. Attacks on processing plants continue, and Russia plans to reduce daily diesel shipments from its key western ports in May to the lowest since at least 2021.

That's likely to support crude flows, with Moscow continuing to shift the burden of supply management under commitments to the OPEC+ group onto production and away from exports. Its target for May is to hold exports 71,000 barrels a day below the average level for May-June 2023. That compares with a cut of 121,000 barrels a day for April.

The higher export volumes, together with rising oil prices and a weaker ruble combined to boost the Kremlin's oil revenue. Proceeds for the Russian budget from oil-related taxes doubled in April from a year earlier, despite international sanctions intended to limit the flow of money to pay for President Vladimir Putin's war in Ukraine.



The first sanctioned Russian tanker to load crude after being listed is now heading through the Red Sea. The SCF Primorye, cited by the US in October for breaching a Group of Seven price cap, loaded Urals at Novorossiysk on the

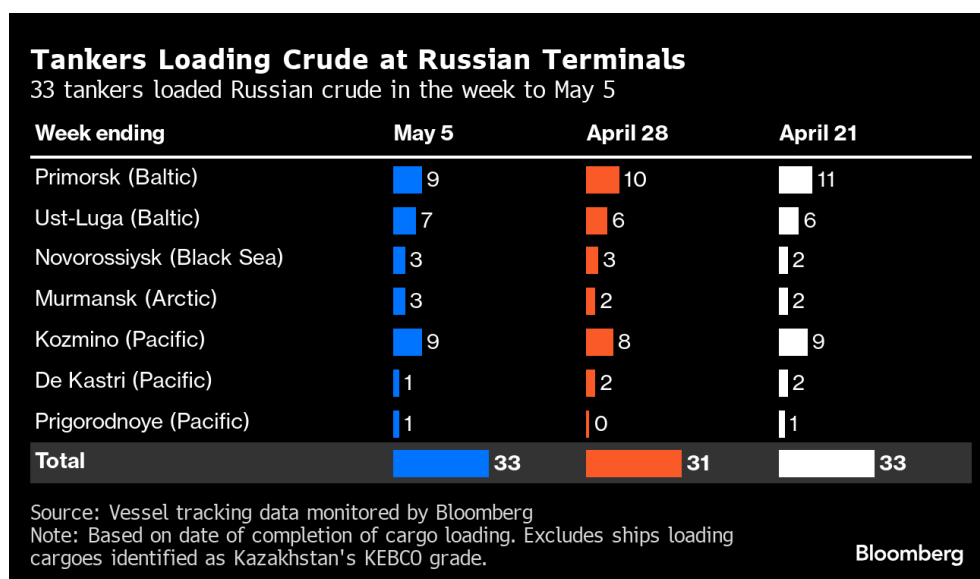
This report may not be modified or altered in any way. The BLOOMBERG PROFESSIONAL service and BLOOMBERG Data are owned and distributed locally by Bloomberg Finance LP ("BFLP") and its subsidiaries in all jurisdictions other than Argentina, Bermuda, China, India, Japan and Korea (the "BFLP Countries"). BFLP is a wholly-owned subsidiary of Bloomberg LP ("BLP"). BLP provides BFLP with all the global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. BFLP, BLP and their affiliates do not provide investment advice, and nothing herein shall constitute an offer of financial instruments by BFLP, BLP or their affiliates.

Black Sea in late April and is now showing a destination of Singapore. It is most likely en route for China, whose ports have been more willing than those elsewhere to handle vessels owned by sanctioned entities. If it is able to discharge its cargo without difficulty, it could pave the way for other sanctioned tankers owned by state controlled Sovcomflot PJSC to return to work.

Separately, a backlog of as many as 18 million barrels of Russia's Sokol crude, shunned by Indian refiners in December, has cleared after being stranded on tankers for months. About 9.1 million barrels, half of the total, have been delivered to refineries in China. Another 7.7 million barrels eventually found their way back to India, or are now heading there. Two cargoes have been delivered to Pakistan.

Crude Shipments

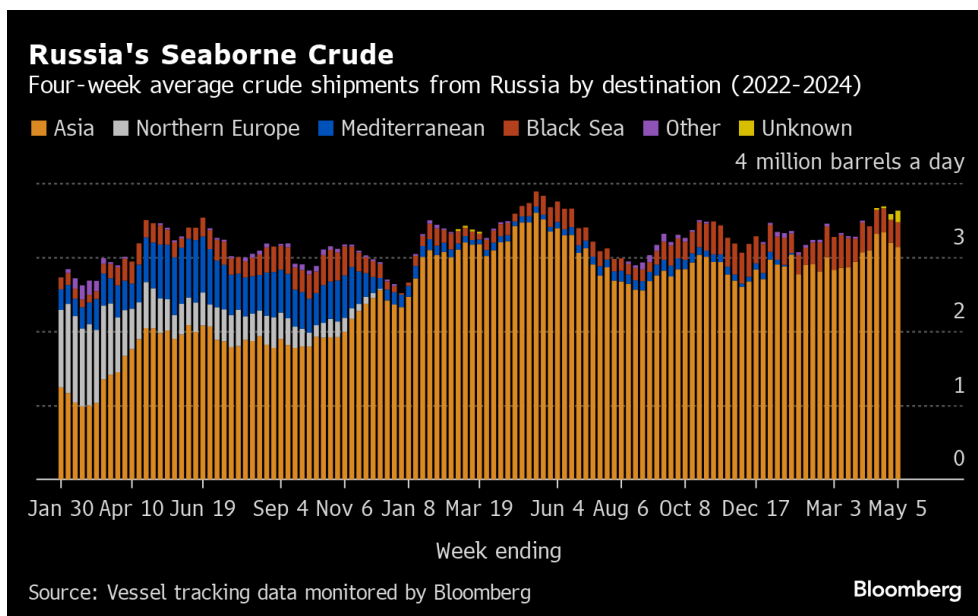
A total of 33 tankers loaded 25.75 million barrels of Russian crude in the week to May 5, vessel-tracking data and port agent reports show. That was up by about 1.73 million barrels, from the previous week.



Russia's seaborne crude flows in the week to May 5 rose by about 250,000 barrels a day to 3.68 million from 3.43 million for the week to April 28. The less volatile four-week average was up by about 70,000 barrels a day at 3.65 million.

The increase was driven by an additional shipment from Kozmino on the Pacific coast and through the port of Murmansk on the Arctic.

Crude shipments so far this year are running about 25,000 barrels a day higher than the average for 2023.



Weekly shipments were about 170,000 barrels a day above Russia’s May target, which is part of the OPEC+ alliance’s broader effort to curb supplies and support prices. The four-week average was about 180,000 barrels a day above a separate target, which was calculated as the weighted average of those for April and May.

Russia said it would cut crude exports during April by 121,000 barrels a day from their average May–June level, while May shipments would be 71,000 barrels a day below the same starting point. The move is part of the wider OPEC+ initiative, with Moscow shifting more of the burden onto production targets, which are preferred by other members of the group. Seaborne shipments in the first three months of the year exceeded Russia’s target level for that period by just 16,000 barrels a day.

Crude Shipments

Russian crude shipments in million barrels a day

	To May 5	To April 28
Weekly shipments	3.678	3.431
Four-week average shipments	3.652	3.580
May-June 2023 average shipments	3.583	3.583
April target to meet OPEC+ commitment	3.462	3.462
May target to meet OPEC+ commitment	3.512	
Weekly shipments versus OPEC+ target	0.166	-0.031
Four-week shipments versus OPEC+ target	0.178	0.118

Source: Vessel tracking data compiled by Bloomberg
 Note: Positive numbers in the last two rows reflect exports above target. For the calculation in the final row, the four-week average target is calculated as three weeks at April target and one at the May target.

Bloomberg

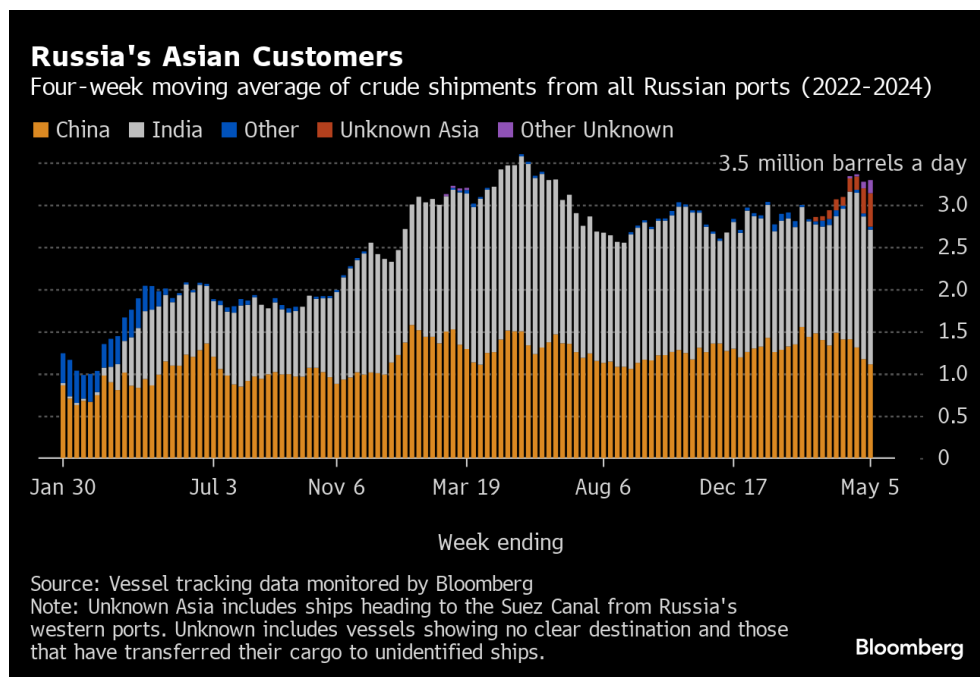
One cargo of Kazakhstan’s KEBCO was loaded at Ust–Luga and one at Novorossiysk during the week.

This report may not be modified or altered in any way. The BLOOMBERG PROFESSIONAL service and BLOOMBERG Data are owned and distributed locally by Bloomberg Finance LP ("BFLP") and its subsidiaries in all jurisdictions other than Argentina, Bermuda, China, India, Japan and Korea (the "BFLP Countries"). BFLP is a wholly-owned subsidiary of Bloomberg LP ("BLP"). BLP provides BFLP with all the global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. BFLP, BLP and their affiliates do not provide investment advice, and nothing herein shall constitute an offer of financial instruments by BFLP, BLP or their affiliates.

Flows by Destination

- Asia

Observed shipments to Russia’s Asian customers, including those showing no final destination, edged higher to 3.32 million barrels a day in the four weeks to May 5, from 3.27 million in the previous four-week period.



About 1.15 million barrels a day of crude was loaded onto tankers heading to China. The Asian nation’s seaborne imports are boosted by about 800,000 barrels a day of crude delivered from Russia by pipeline, either directly, or via Kazakhstan.

Flows on ships signaling destinations in India averaged about 1.63 million barrels a day.

Both the Chinese and Indian figures are likely to rise as the discharge ports become clear for vessels that are not currently showing final destinations.

The equivalent of about 430,000 barrels a day was on vessels signaling Port Said or Suez in Egypt. Those voyages typically end at ports in India or China and show up as “Unknown Asia” until a final destination becomes apparent.

The “Other Unknown” volumes, running at about 80,000 barrels a day in the four weeks to May 5, are those on tankers showing no clear destination. Most originate from Russia’s western ports and go on to transit the Suez Canal, but some could end up in Turkey. Others may be moved from one vessel to another, with most such transfers now taking place in the Mediterranean, or more recently off Sohar in Oman.

This report may not be modified or altered in any way. The BLOOMBERG PROFESSIONAL service and BLOOMBERG Data are owned and distributed locally by Bloomberg Finance LP (“BFLP”) and its subsidiaries in all jurisdictions other than Argentina, Bermuda, China, India, Japan and Korea (the “BFLP Countries”). BFLP is a wholly-owned subsidiary of Bloomberg LP (“BLP”). BLP provides BFLP with all the global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. BFLP, BLP and their affiliates do not provide investment advice, and nothing herein shall constitute an offer of financial instruments by BFLP, BLP or their affiliates.

Crude Shipments to Asia

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

4 weeks ending	China	India	Other	Unknown Asia	Other Unknown	Total
March 31, 2024	1.51	1.38	0.07	0.10	0.00	3.06
April 7, 2024	1.43	1.55	0.04	0.08	0.00	3.09
April 14, 2024	1.43	1.75	0.00	0.13	0.03	3.34
April 21, 2024	1.31	1.83	0.04	0.16	0.03	3.36
April 28, 2024	1.17	1.69	0.04	0.35	0.03	3.27
May 5, 2024	1.15	1.63	0.04	0.43	0.08	3.32

Source: Vessel tracking data compiled by Bloomberg

Bloomberg

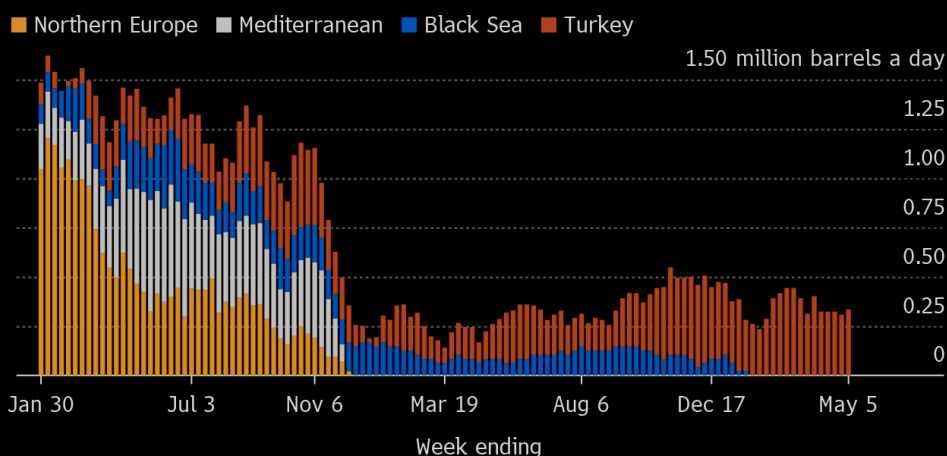
• Europe and Turkey

Russia’s seaborne crude exports to European countries have ceased, with flows to Bulgaria halted at the end of last year.

Turkey is now the only short-haul market for shipments from Russia’s western ports, with flows in the four weeks to May 5 rising to 335,000 barrels a day.

Russia's Crude Shipments to Europe and Turkey

Four-week average crude shipments from Russia (2022-2024)



Source: Vessel tracking data monitored by Bloomberg

Note: Four-week moving average of crude shipments from all Russian ports.

Bloomberg

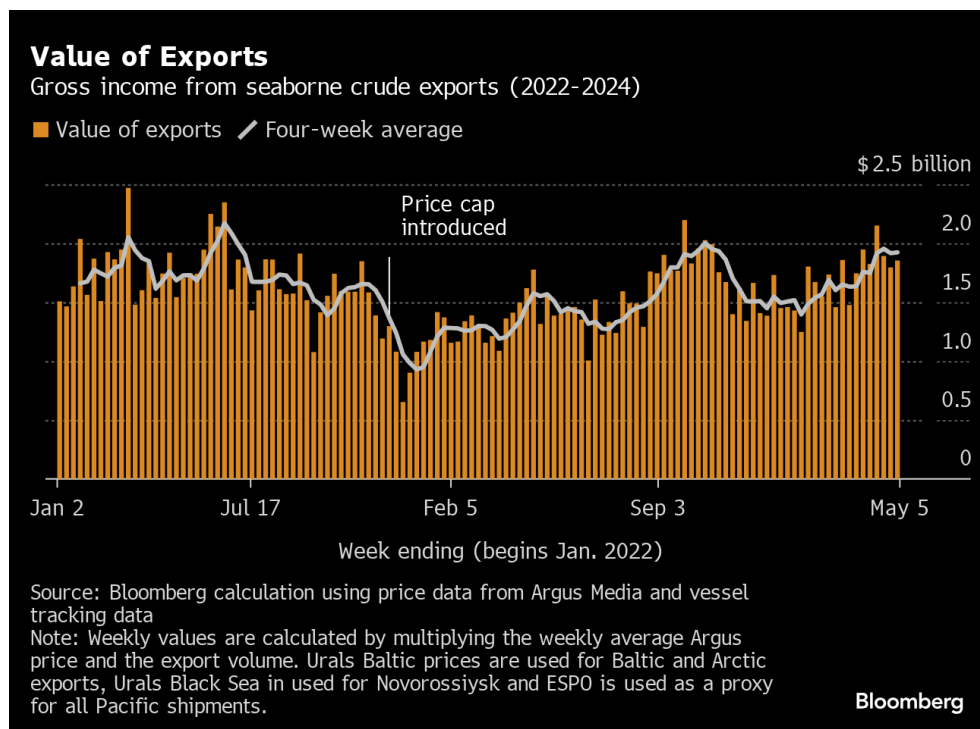
Export Value

The gross value of Russia’s crude exports rose to \$1.85 billion in the seven days to May 5 from about \$1.8 billion in the period to April 28. Four-week average income was also up, edging higher by about \$7 million to \$1.92 billion a

This report may not be modified or altered in any way. The BLOOMBERG PROFESSIONAL service and BLOOMBERG Data are owned and distributed locally by Bloomberg Finance LP ("BFLP") and its subsidiaries in all jurisdictions other than Argentina, Bermuda, China, India, Japan and Korea (the "BFLP Countries"). BFLP is a wholly-owned subsidiary of Bloomberg LP ("BLP"). BLP provides BFLP with all the global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. BFLP, BLP and their affiliates do not provide investment advice, and nothing herein shall constitute an offer of financial instruments by BFLP, BLP or their affiliates.

week, despite a dip in oil prices. The four-week average is still below its peak of \$2.17 billion a week, reached in the period to June 19, 2022.

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



NOTES

This story forms part of a weekly series tracking shipments of crude from Russian export terminals and the gross value of those flows. The next update will be on Tuesday, May 14 .

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

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

If you are reading this story on the Bloomberg terminal, click [here](#) or a link to a PDF file of four-week average flows from Russia to key destinations.

This report may not be modified or altered in any way. The BLOOMBERG PROFESSIONAL service and BLOOMBERG Data are owned and distributed locally by Bloomberg Finance LP ("BFLP") and its subsidiaries in all jurisdictions other than Argentina, Bermuda, China, India, Japan and Korea (the "BFLP Countries"). BFLP is a wholly-owned subsidiary of Bloomberg LP ("BLP"). BLP provides BFLP with all the global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. BFLP, BLP and their affiliates do not provide investment advice, and nothing herein shall constitute an offer of financial instruments by BFLP, BLP or their affiliates.

--With assistance from [Sherry Su](#).

To contact the author of this story:

[Julian Lee in London at \[jlee1627@bloomberg.net\]\(mailto:jlee1627@bloomberg.net\)](#)

To contact the editor responsible for this story:

[John Deane at \[jdeane3@bloomberg.net\]\(mailto:jdeane3@bloomberg.net\)](#)

OPEC holds constructive workshop between Iraq, Kazakhstan and secondary sources on compensation plans

No 05/2024

Vienna, Austria

03 May 2024

The 35th OPEC and non-OPEC Ministerial Meeting (ONOMM) held 04 Jun 2023 reiterated the critical importance of adhering to full conformity, and subscribing to the concept of compensation. Furthermore, the 53rd Meeting of Joint Ministerial Monitoring Committee (JMCC) held on 3 April 2024 stated that participating countries with outstanding overproduced volumes for the months of January, February and March 2024 will submit their detailed compensation plans to the OPEC Secretariat by 30 April 2024.

In light of the above, the OPEC Secretariat organized a very productive technical workshop today via videoconference between technical experts from Iraq and Kazakhstan, and industry experts from the secondary sources providing data on production of countries participating in Declaration of Cooperation (DoC).

The successful exchange aimed to share compensation plans for Iraq and Kazakhstan for their outstanding overproduced volumes for the months of January, February and March 2024, which totaled about 602 tb/d for Iraq and for 389 tb/d Kazakhstan. The plans shared by both countries below show in details that the entire over-produced volumes will be fully compensated for by end of this year. Moreover, any overproduction that may arise in the month of April 2024 for these countries will be accommodated in the respective compensation plans over the remaining months in 2024.

Table: Overproduction Compensation Plan for Iraq and Kazakhstan

Country	Cumulative over-production Jan. 2024 to March 2024 (tb/d)	Compensation Plan								
		*April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Iraq	602	na.	50	50	50	50	50	100	100	152
Kazakhstan	389	-100	18	0	0	131	0	299	40	0

*The overproduction that may arise in the month of April 2024 for these countries will be accommodated in the respective compensation plans over the remaining months in 2024.

[Advisories](#)

Maersk Operations through Red Sea / Gulf of Aden

Updated 6 May 2024

[Europe](#) [India Middle East and Africa](#) [Asia Pacific](#) [Latin America](#) [North America](#)

Share

For vessel contingency and diversion updates, please [click here](#) to visit our tracker. For the most up-to-date information on specific shipments, please use our [shipment and container tracking](#). For service updates, please [click here](#).

For information on Red Sea / Gulf of Aden-related surcharges for cargo from Far East Asia, [click here](#). For information on surcharges for exports from all other locations, [click here](#).

06 May 2024 – Update 09

The effects of the situation in the Red Sea are widening and continuing to cause industry-wide disruptions. We are developing solutions with the goal of offering our customers greater reliability for their supply chains.

In this email, you will find an overview of the challenges we are facing, as well as the steps we are taking to minimise the impact of delays and disruption. Importantly, you can also gauge what this means for your business – now and in the months to come.

The effects of the Red Sea situation

The complexity of the situation in Red Sea has intensified over the last few months. To safeguard our crew, vessels, and your cargo, we are rerouting around the Cape of Good Hope for the foreseeable future. However, the risk zone has expanded, and attacks are reaching further offshore. This has forced our vessels to lengthen their journey further, resulting in additional time and costs to get your cargo to its destination for the time being.

The knock-on effects of the situation have included bottlenecks and vessel bunching, as well as delays and equipment and capacity shortages. We estimate an industry wide capacity loss of 15-20% on the Far East to North Europe and Mediterranean market during Q2.

We are doing what we can to boost reliability, including sailing faster and adding capacity.

What can you expect?

We have added capacity, where possible, in line with our customers' needs. So far, we have leased more than 125,000 additional containers.

You will see relevant surcharges on your latest invoices. These are to offset the costs of the longer journeys, increased sailing speed, and additional fuel costs. For example, we are currently using 40% more fuel per journey and charter rates are currently three times higher, often fixed for five years.

While we reduced the Peak Season Surcharge (PSS) recently, it has been increased again to help cover the additional costs outlined above. We will continue to review the surcharges regularly and will keep you up to date of any changes.

We will continue to seek ways to improve our offering and meet your supply chain needs.

We're here to help

If you have any further questions, please contact your local Maersk representative. They are standing by to help you plan your future supply chain moves and can offer more information on the options available to you.

Thank you for your understanding during this challenging time.

Owji announces 60% rise in crude production in 2.5 years



SHANA (Tehran) -- Iranian Minister of Petroleum Javad Owji said on Wednesday the 28th Iran International Oil, Gas, Refining and Petrochemical Exhibition (Iran Oil Show 2024) is a good opportunity to showcase the great achievements of his ministry in recent 2.5 years in the 13th government which took office in August 2021.

Speaking in the inauguration ceremony of the expo in Tehran, the minister noted that over 1,700 domestic and foreign companies are participating in this year's event, as the increase in the number of participants makes every Iranian proud.

From the very beginning, the current government (13th government) has never waited for negotiations to remove international sanctions, Owji stated, adding that in recent 2.5 years, relying on domestic new technology-based firms (NTBFs), Iran's oil industry has gained great achievements.

Stating that at the beginning of the current administration, the amount of oil production and export was not favorable, the minister said: "Today, we have achieved such figures in this field that are hard for many to believe."

"By the end of last Iranian year (March 19, 2024), we have completed about 132 unfinished projects worth \$28.5 billion, and at the same time, we have started the implementation of 50 projects worth \$47.5 billion," he announced.

Pointing to the 54-million-cubic-meter increase in the gas production, as well as a rise of 220,000 barrels in processing capacity and 10 million tons of petrochemicals in the last 2.5 years, Owji said a large part of the achievements obtained thanks to the completion and exploitation of unfinished projects, some of which were delayed for more than 10 years.

No dependency on foreigners

Owji said the development of Phase 11 of South Pars Gas Field, which was passed around by foreign companies for 20 years, is one of the main achievements of the Ministry of Petroleum during the tenure of the 13th administration.

"This achievement was gained by the efforts of the managers and employees of the oil industry and by relying on domestic contractors, which currently produces 12 million cubic meters (mcm) of gas, and according to plans, will increase to 30 mcm by the end of the 13th administration, and in the coming years will hit 50 mcm."

Pointing out that the previous administration had announced that it was ready to hand over the Abadan Refinery which is the country's oldest refinery for free, Owji stated: "Today, we see that the refinery contributes greatly to the production of oil products in Iran as last year it made a profit of 12 trillion tomans (\$200 million)."

The executive works of the second part of Phase 2 of the refinery's development project will also start soon, he added.

Contracts worth over \$5 billion were signed for the collection of associated petroleum gas (APG) in the 13th administration for field gas collection of the West Karoun and East Karoun fields of Karun as well as fields in the west of Iran, the minister stated.

"Currently, 11.5 mcm of APG are collected, which will reach 30 mcm by the end of the current Iranian year (March 20, 2025). Methane from the processing of these flare gases is injected into the national gas network as heavy compounds are fed to petrochemical complexes in order to create more added value."

He mentioned the completion of South Pars Phase 14 Refinery after a decade and said: With the full launch of the complex, more than 50 mcm per day was added to Iran's gas refining capacity.

Self-sufficient oil industry

Referring to the implementation of very important projects in the field of gas storage, the petroleum minister said in the last [Iranian] year of 1402, more than one billion cubic meters (bcm) of additional gas storage was done compared to its preceding year of 1401.

Owji explained about the increase in the quality of petroleum products in the country's refineries stating that the production of Euro 5 products was achieved in the Isfahan Refinery last year, and according to e plannings, the boosting of quality for petroleum products in all refineries is carried out by relying on domestic capacity.

He referred to the implementation of more than 1,000 kilometers of gas pipelines in the country, and continued: "In the current administration, five gas pressure boosting stations were put into operation and gas was supplied to more than 6,000 villages."

Five petrochemical projects are ready for the official opening in the presence of President Ebrahim Raisi, the minister announced, explaining that with the launch of new petrochemical projects by the end of the current [Iranian] year, the annual production capacity of the petrochemical industry will increase by 10 million tons.

Iran's oil industry has attained self-sufficiency in all sectors, including the development of offshore and onshore fields, marine structures, the construction of petro-refineries, the collection of APG, and the drilling of horizontal and vertical wells, relying on the domestic manufacturers of the industry.

Planning has been done to increase the production of oil and gas, oil and petrochemical products in the Seventh Development Plan which relies on the potentials of domestic companies.

There is no limit to investment in the oil industry, the minister said inviting all investors to invest in the industry, as the Ministry of Petroleum will also provide full support.

According to statistics released by the Statistical Center of Iran (SCI) and the Central Bank of Iran (CBI), the Ministry of Petroleum had a magnificent performance last Iranian year, Owji said adding the economic growth of the oil and gas sector was over 20 percent last year, which had a significant impact on the overall economic growth of the country.

\$35-billion revenues

Referring to the export of \$35 billion worth of crude oil in 1402 despite all the restrictions, Owji stated that the enemies made efforts to stop Iran's oil tankers, but they failed.

He went on to say that during winter, we witnessed an explosion in the gas pipeline, which was repaired in less than 24 hours, as there was no halt in supplying gas to people.

Talking about the Ministry of Petroleum's plan for the current Iranian year, Owji said a sum of 79 projects valued at \$25 billion will be put into operation in the upstream and downstream sectors, as 50 new projects have also been kicked off.

"With the implementation of new oil industry projects, 300,000 to 400,000 bpd will be added to oil production, 35 mcm to crude gas production, 50,000 barrels to refining capacity and three million to five million tons to the annual production capacity of petrochemical complexes of the country."

Referring to the signing of contracts for the development of oil and gas fields by the NIOC with domestic contractors, the minister said adding four contracts were inked with domestic firms valued at \$20 billion for the pressure boosting project in the South Pars joint field and \$13 billion worth of contracts for the development of seven oilfields has been signed by the NIOC.

He pointed to the call of the Ministry of Petroleum to supply gas feed to petrochemical units and stated: "During last weeks, important documents were signed with 13 petrochemical companies to supply their gas feed from 20 gas fields."

Petroleum Ministry welcomes private sector

All the capacities of the country in the technical, financial, contractors and advisory sectors are used for the prosperity of the oil industry, the minister stated, noting that “There is no better place than investing in oil industry, as the return on capital in the oil industry occurs in the shortest time.

He expressed his hope that with the unveiling of the new form of oil contracts, the economic growth of the oil and gas sector will be realized this year as well.

The Ministry of Petroleum has not neglected optimizing energy consumption, Owji said, adding that projects valued at about \$40 billion have been approved in the Economic Council in the fields of transportation, increasing power plant efficiency, and optimizing consumption in industries, construction sector, and railways.

“This year, with the initiative of the Parliament, an account of optimization has been opened supplied from sources that can be provided for at least 30 trillion tomans (\$500 million) in order to optimize energy consumption.”

Owji pointed to the development of energy diplomacy by the 13th administration and added: “Today, despite all the restrictions, compared to [the Iranian year of 1397], the highest level of exports is carried out.”

The ground is paved for cooperation on oil sector with foreign countries which was done by the President Raisi’s visits to other countries, the minister stated noting that oil cooperation with foreigners in the field of exporting oil, oil products, petrochemical products and exporting techno-engineering services is increasing day by day.

At the end of his speech, Owji thanked all the industrialists and companies active in the field of oil industry and said his ministry welcomes investors from the private sector to participate in the oil industry.

In addition to 1,500 Iranian firms, a sum of 250 companies from 12 countries have taken part in this year’s exhibition, whose motto is “Petroleum industry, production leap and technological optimization”.

Participants from the upstream, intermediate and downstream sectors of the oil industry, along with associations and unions of oil industry equipment manufacturers, first-time producers NTBFs are showcasing their achievements in the Iran Oil Show 2024, which is the most important Iranian event related to the oil industry.

The exhibition will be open to visitors at the Tehran International Permanent Fairground every day from 9:00 a.m. to 4:00 p.m. (0530 to 1330 GMT) until Saturday.

News ID 641076

Malaysia rebuffs US on Iran oil sales, says it recognises only UN sanctions

[Zunaira Saieed](#) Malaysia Correspondent

UPDATED MAY 09, 2024, 11:51 PM

KUALA LUMPUR – Malaysia will recognise sanctions imposed by the United Nations only and not by individual countries, said **Home Minister Saifuddin Nasution Ismail on May 9**, following claims by a top US official that Iran has relied on Malaysian service providers to sell US-sanctioned oil in the region.

"I emphasised that we will only recognise sanctions if they are imposed by the United Nations Security Council.

"The delegation from the US respected our stance," Datuk Seri Saifuddin told reporters following a meeting with the US Treasury Department's top sanctions official Brian Nelson, who was visiting Kuala Lumpur.

Washington [has imposed sanctions on Iran and its proxies](#), including on the sale of Iranian oil, aimed at choking money flows that it claimed were being used to foment instability in the Middle East.

Mr Nelson, speaking to the local media after the meeting, said of the Washington claims against Malaysian service providers: "I would only say we have seen and we've promulgated some sort of guidance to the (Malaysian) marine sector about the type of services that they are engaging in.

"These are ship-to-ship transfers, particularly at night, which we see from time to time.

"They are really designed to obfuscate the origin of the commodity, in this case, Iranian oil," he told Malaysiakini.

Mr Nelson had said that the capacity of Iran to move its oil depended on parties such as port administrators and tugboat operators.

"Typical markers that we see are like when they turn off their location device and when they're trying to obscure the name of the ship, or they falsify or forge critical documents about the commodities that were issued," he added.

A recent Reuters report cited an unnamed senior US Treasury official as saying that there has been an uptick in money moving to Iran and its proxies, including Hamas, through the Malaysian financial system.

In the meeting with Mr Nelson, Mr Saifuddin said he underlined Malaysia's commitment to combating terrorism financing, with a clear strategic plan to tackle illicit financing activities and money laundering.

The minister also acknowledged concerns raised by US officials over possible money laundering activities involving certain individuals and organisations in Malaysia with purported ties to Iran and its proxies like Hamas, and said these needed verification.

Malaysian government spokesman Fahmi Fadzil, speaking to reporters on May 8, said the country would comply with UN sanctions, but not necessarily with those imposed by individual countries.

"We want to assert that Malaysia, as a sovereign nation, we comply with UN sanctions," Mr Fahmi told reporters.

"But when it comes to unilaterally applied sanctions, then I think we have to assess this situation."

Commenting on the issue, economics professor Geoffrey Williams at the Malaysia University of Science and Technology said: “Malaysian businesses can do business with anyone unless there are UN sanctions regulations to stop it, but the US cannot stop Malaysian companies doing business with others.

“However, if Malaysian companies are involved in activities that the US does not like, then the Americans can stop doing business with them,” he said.

Malaysian Prime Minister Anwar Ibrahim has been vocal in his support for Hamas amid the ongoing war in Gaza, even at the risk of US sanctions against those who support the group that Washington has deemed a terrorist organisation.

Meanwhile, Mr Nelson, who earlier visited Singapore, had said that sanctions imposed in 2023 against four Malaysian firms accused of helping Iran’s drone production have been impactful, while also highlighting the issue of the illicit sale of Iranian oil in the region.

“Malaysia clearly doesn’t want its financial institutions and its shipping industry to be abused by rogue nations and outside actors. We don’t want that because of the central importance of Malaysia, both as a trading nation and as a financial centre, and given America’s significant business presence here,” Mr Nelson, who is the US Treasury Department’s undersecretary for terrorism and financial intelligence, told reporters on May 9.

Mr Halmie Azrie Abdul Halim, a senior analyst at political risk consultancy Vriens and Partners, said the US delegation trip to Malaysia is an “intimidation tactic” because of Datuk Seri Anwar’s pro-Palestine stance.

Still, the “US would also not want to lose the support of Malaysia, which is one of its key Asean partners, as the country will assume the role of Asean chair next year”, he said.

Malaysia is among the US’ top 20 trading partners, with bilateral trade between the two nations amounting to US\$78.3 billion (S\$106 billion) in 2022.

Oil companies welcome formation of joint Erbil-Baghdad committees

51 minutes ago

[Rudaw](#)

ERBIL, Kurdistan Region - The Association of the Petroleum Industry of Kurdistan (APIKUR) on Friday said it welcomes the recent formation of two joint committees between Erbil and Baghdad to work on the resumption of the Kurdistan Region's oil exports which have been halted for over a year.

"APIKUR welcomes the formation of the Baghdad-Erbil committees, recently announced by the Iraqi Minister of Oil with the stated goal to restore oil exports through the Iraq Türkiye pipeline. **We are awaiting official notification of international oil companies' role in these critical negotiations.**" Myles B. Caggins, the association's spokesperson, said in a statement.

Iraqi Oil Minister Hayyan Abdul Ghani told reporters on Thursday that two joint Baghdad-Erbil committees have **been formed to resolve the contract situation between Erbil and the international oil companies (IOCs) as they are production-sharing contracts - agreements he said are incompatible with the Iraqi constitution.**

The committees will meet next week to work towards resuming the flow of oil, he added.

Oil exports from the Kurdistan Region through the Iraq-Turkey pipeline have been halted since March 23, 2023 after a Paris-based arbitration court ruled in favor of Baghdad against Ankara, saying the latter had breached a 1973 agreement by allowing Erbil to begin independent oil exports in 2014.

Before the halt, around 400,000 barrels a day were being exported by Erbil through Ankara, in addition to some 75,000 barrels of Kirkuk's oil.

"There has not yet been an agreement with the Kurdistan Regional Government on handing over the oil produced in the Region to the federal oil ministry," the Iraqi oil minister said on Thursday, adding that there are "differences regarding contracts signed with the international companies."

Iraqi Prime Minister Mohammed Shia' al-Sudani visited the US in mid-April, meeting with US President Joe Biden. The resumption of Kurdistan Region's oil exports was one of the topics discussed.

Sudani and Biden "affirmed the importance of ensuring Iraqi oil can reach international markets and expressed their desire to reopen the Iraq-Turkiye Pipeline," according to a joint statement between the two leaders following their meeting.

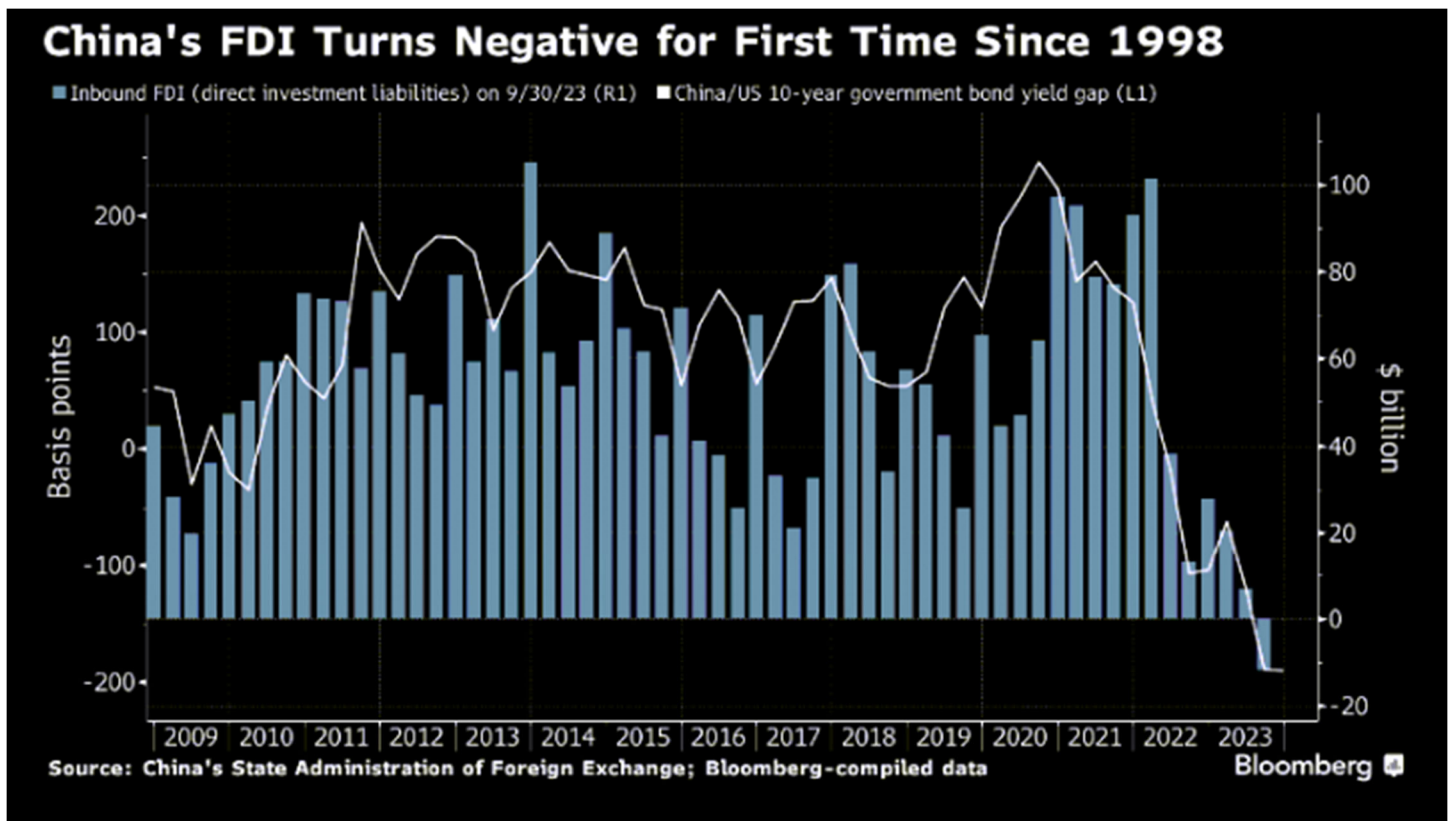
By Bloomberg News

(Bloomberg) -- China is struggling in its attempt to lure foreigners back as data shows more direct investment flowing out of the country than coming in, suggesting companies may be diversifying their supply chains to reduce risks.

Direct investment liabilities in the country's balance of payments have been slowing in the last two years. After hitting a near-peak value of more than \$101 billion in the first quarter of 2022, the gauge has weakened nearly every quarter since. It fell \$11.8 billion in the July-to-September period, marking the first contraction since records started in 1998.

"It's concerning to see net outflows where China's doing its best at the moment to try and open — certainly the manufacturing sector — to new inflows," said Robert Carnell, regional head of research for Asia-Pacific at ING Groep NV.

"Maybe this is the beginning of a sign that people are just increasingly looking at alternatives to China for investment."



The Chinese government has embarked on a big push in recent months to lure foreign investment back to the country. On Wednesday, the Ministry of Commerce asked local governments to clear discriminatory policies facing foreign companies in a bid to stabilize investment confidence.

It cited the need to ensure subsidies for new energy vehicles are not limited to domestic brands as one example. In

some industries, foreign firms wait longer and are subject to more rigorous reviewing process when applying for licenses. In August, the internet regulator met with executives from dozens of international firms to ease concerns about new data rules. The government has also pledged to offer overseas companies better tax treatment and make it easier for them to obtain visas.

But Beijing's pledges have rung hollow for some firms, with foreign business groups decrying "promise fatigue" amid skepticism about whether meaningful policy support is forthcoming. They also have incentive to repatriate earnings overseas because of the wide gap in interest rates between China and the US, which may be pushing them to seek higher returns elsewhere.

The FDI outflows are adding pressure on the onshore yuan, which has hit the weakest level since 2007 earlier this year. China's benchmark 10-year government bond yield is trading at 191 basis points below that of comparable US Treasuries, versus an average premium of about 100 basis points over the past decade.

"Decoupling" or "derisking" from China is an important reason for the declining FDI data reported by the State Administration of Foreign Exchange, according to Louis Kuijs, chief economist for Asia Pacific at S&P Global Ratings. Concerns about geopolitics and US-China relations were cited as major reasons for foreign corporate pessimism in a survey published in September by the American Chamber of Commerce in Shanghai. Companies have cited various countries in the region as destinations for their supply chain shifts. Japan, India and Vietnam were floated as "top destinations gaining more attraction" in a spring survey of companies by UBS Group AG. A March AmCham report pointed to developing Asia and the US as places where members were considering moving capacity to from China.

Widespread Consequences

The lack of investment among global firms in China may have far reaching effects on the world's second-largest economy, especially as it tries counter US curbs on access to advanced technology.

Aside from geopolitical risks, companies had also been pulling back on investment in China last year as the country rolled out pandemic restrictions. While those curbs have been removed, firms are still contending with other challenges from rising manufacturing costs in China and regulatory hurdles as Beijing scrutinizes activity at foreign corporations due to national security concerns.

"Some of the most damaging things have been the abrupt regulatory changes that have taken place," said Carnell, pointing to this year's anti-espionage campaign, which resulted in some firms having their offices raided by local authorities.

"Once you damage the sort of perception of the business

environment, it's quite difficult to restore trust. I think it will take some time."

*T

=====
Read More About Foreign Firms in China:
=====

Why Global Investors Are Unloading China Stocks:

QuickTakeWestern Firms in China Are Historically Glum About Outlook
US Due Diligence Firm Mintz Staff Detained in China, NYT Reports
Majority of US Firms Don't See China as Priority for Investment
US Companies in China Grow More Pessimistic About Bilateral Ties

*T

Foreign companies make up less than 3% of the total number of corporations in China, but contribute to 40% of its trade, more than 16% of tax revenue and almost 10% of urban employment, state media has reported. They've also been key to China's technological development, with foreign investment in the country's high-tech industry growing at double-digit rates on average since 2012, according to the official Xinhua News Agency.

"A decline in trade and investment links with advanced economies will be a particularly significant headwind for a catching up economy such as China, weighing on productivity growth and technological progress," Kuijs said.

Limited Optimism

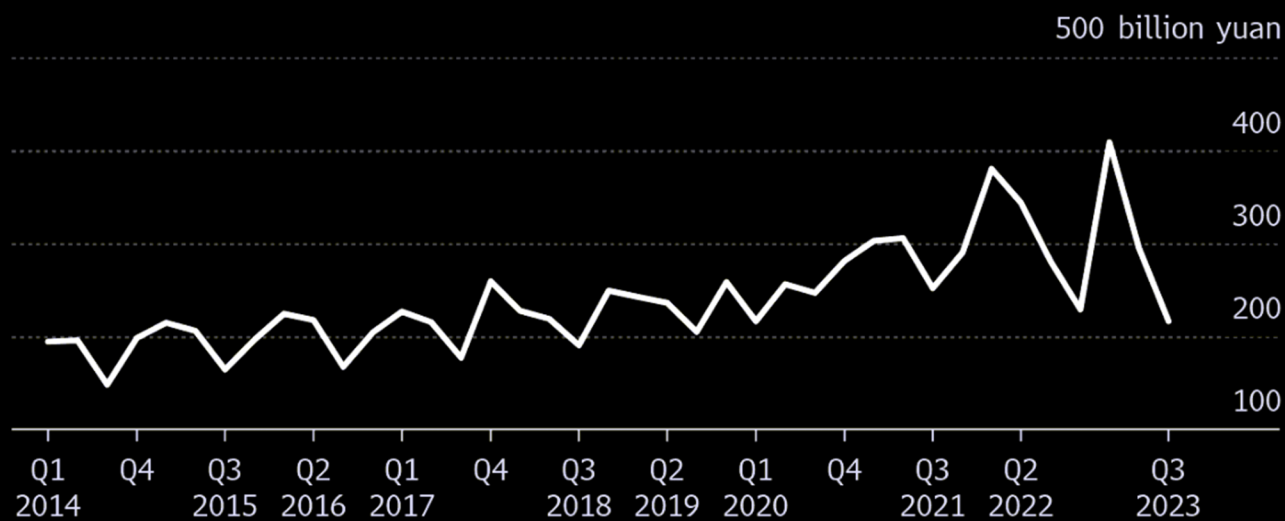
There are some reasons for optimism in the coming weeks and months. President Joe Biden is set to meet with his Chinese counterpart Xi Jinping on the sidelines of the Asia-Pacific Economic Cooperation summit in San Francisco later this month, which may help stabilize strained bilateral ties.

It would be helpful if increased communication yielded some "more stability and clarity on the geopolitical front," Kuijs said, though he added it is unlikely the US will meaningfully change its policy stance.

Another Measure of FDI in China Holds Up Better Than SAFE's

Still, investment actually utilized in third quarter was less than year ago

Quarterly actually-utilized FDI



Source: Bloomberg calculations based on data from China's Ministry of Commerce.

Bloomberg

Some economists also argue that FDI will stabilize once the China-US yield differential narrows. They also point to data on actually utilized FDI published by the Ministry of Commerce, which holds up better the SAFE data: Those figures show FDI fell 8.4% in the first nine months of this year from the same time period in 2022, to 920 billion yuan.

"I think things are not as bad as they seem from the SAFE data, otherwise policy tightening for China's capital account management would be witnessed," said Bruce Pang, chief economist for Greater China at Jones Lang LaSalle Inc.

In any case, China still needs to convince investors that they are welcome in the country.

"The more that it can offer a stable, conducive policy environment, the better it would be for FDI," Kuijs said. "That includes minimizing the impact of national security-related measures on the economy and sentiment."

--With assistance from Wenjin Lv and Evelyn Yu.

To contact Bloomberg News staff for this story:

John Liu in Beijing at jliu42@bloomberg.net;

Fran Wang in Beijing at fwang315@bloomberg.net

To contact the editors responsible for this story:

Jenni Marsh at jmarsh74@bloomberg.net

Jill Disis, Jasmine Ng

To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/S3SYJMT0AFB4>

Biden Poised to Impose Tariffs on China EVs, Strategic Sectors

2024-05-10 00:45:11.527 GMT

By Josh Wingrove, Jennifer Jacobs and Eric Martin

(Bloomberg) -- President Joe Biden's administration is poised to unveil a sweeping decision on China tariffs as soon as next week, one that's expected to target key strategic sectors with new levies while rejecting the kind of across-the-board hikes sought by Donald Trump, people familiar with the matter said.

The decision is the culmination of a review of so-called Section 301 tariffs first imposed under Trump. The administration is set to impose new, targeted tariffs on some key sectors including electric vehicles, batteries and solar equipment. The full announcement is expected to also largely maintain existing levies. An announcement is scheduled for Tuesday, two of the people said.

The full details aren't clear, and the White House declined comment.

While a decision could be delayed, it nonetheless presents one of Biden's biggest moves in the economic race with China. It builds on a call last month to hike tariffs on Chinese steel and aluminum, and the formal launch of a fresh probe into Chinese shipbuilding.

To contact the reporters on this story:

Josh Wingrove in Washington at jwingrove4@bloomberg.net;

Jennifer Jacobs in Washington at jjacobs68@bloomberg.net;

Eric Martin in Washington at emartin21@bloomberg.net

To contact the editor responsible for this story:

Mario Parker at mparker22@bloomberg.net

To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/S7OE0YDWLU68>

First quarter highlights

Global market conditions in the first quarter of 2024 improved compared to the previous quarter, driven by increased crude oil prices as a result of lower global oil inventories and higher forecasted demand. Through its low-cost upstream operations and strategically integrated Downstream business, Aramco captured value from these market conditions and delivered robust earnings and free cash flow. In line with its aim to maximize value for shareholders, the Board declared a base dividend of SAR 76.1 billion (\$20.3 billion) and the fourth distribution of the performance-linked dividends of SAR 40.4 billion (\$10.8 billion), bringing the total declared dividends for the first quarter to SAR 116.5 billion (\$31.1 billion).

Aramco believes it is well positioned to help meet the world's growing need for affordable and reliable energy, and that oil and gas will continue to be an important part of the global energy mix. The Company continues to implement its capital program, with the growth in capital spending directed mainly towards upstream liquids and gas, downstream liquids to chemicals, and new energies such as renewables, lower-carbon fuels, and blue ammonia and hydrogen. Capital expenditures in the first quarter were SAR 40.6 billion (\$10.8 billion), reflecting the Company's intention to increase investment to capture unique growth opportunities and create long-term value for shareholders.

During the quarter, the Company announced the expansion of its venture capital funding available to Aramco Ventures by SAR 15.0 billion (\$4.0 billion). Half of the new funding will be directed toward disruptive technologies outside the energy sector, with the remaining portion earmarked for late-stage, larger-ticket ventures in the sustainability and digital domains. The increased funding will bring the total investment funds in Aramco's venture capital programs to SAR 28.1 billion (\$7.5 billion), including Wa'ed Ventures.

In March 2024, the Government announced it had transferred 8.0% of

the Company's issued shares to PIF's wholly-owned companies. This private transfer did not affect the Company's total number of issued shares and has no impact on the Company's operations, strategy, dividend distribution policy, or governance framework. The Government remains Aramco's largest shareholder, retaining an 82.19% direct shareholding.

In April 2024, Aramco announced a four-year global partnership to become FIFA's Major Worldwide Partner with rights across multiple events, including the FIFA World Cup 26™ and FIFA Women's World Cup 2027™. The partnership, which runs until the end of 2027, builds on a shared commitment to innovation and development, and will combine football's unique global reach with Aramco's history of championing innovation and community engagement. Through the partnership, Aramco aims to create impactful social initiatives and enable vibrant communities.

Upstream

Aramco achieved total hydrocarbon production of 12.4 mmbpd in the first quarter, reflecting its safe, reliable operations and unique operational flexibility.

In January 2024, the Government directed Aramco to maintain MSC at 12.0 mmbpd. This directive will have no impact on announced, near-term projects including the Dammam development and the Marjan, Berri, and Zuluf crude oil increments. Production from these projects will be used to maintain MSC at 12.0 mmbpd, which provides operational flexibility to increase production and supports Aramco's unique ability to rapidly respond to changing market conditions. Key developments during the quarter for these projects include the following:

- Construction activities continued for the Dammam development project, which is expected to add crude oil production of 25 mbpd in 2024 and 50 mbpd in 2027;

- Construction and procurement activities continued on the Marjan and Berri crude oil increments, which are expected to be onstream by 2025 and add crude oil production capacity of 300 mbpd and 250 mbpd, respectively; and,
- Construction and engineering work progressed at the Zuluf crude oil increment, which is expected to process 600 mbpd of crude oil from the Zuluf field through a central facility by 2026.

Consistent with the Company's strategy to increase gas production by more than 60% over 2021 production levels by 2030, subject to domestic demand, and to develop an integrated global LNG business, Aramco delivered a number of key developments in the quarter:

- Announced the addition of 15 tscf of raw gas and two billion stock tank barrels of condensate as proven reserves at the Jafurah unconventional field.
- Progressed design, procurement, and construction activities at the Jafurah Gas Plant, part of the Jafurah unconventional gas field development that is expected to commence production in 2025 and gradually increase natural gas deliveries to reach a sustainable rate of 2.0 bscfd by 2030;
- Continued construction and procurement activities at the Tanajib Gas Plant, part of the Marjan development program. The Plant is expected to be onstream by 2025, adding 2.6 bscfd of additional processing capacity from the Marjan and Zuluf fields;
- Awarded SAR 28.9 billion (\$7.7 billion) of engineering, procurement, and construction contracts for the expansion of the Fadhili Gas Plant, which is expected to add additional processing capacity of 1.5 bscfd by 2027; and,
- Completed the acquisition of a minority stake in MidOcean, which subsequently acquired interests in a portfolio of integrated Australian LNG projects.

+ 550
+ 600

12 MMBPD

+ 75

• 04 Dec 2023 | 17:18 UTC

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

HIGHLIGHTS

Fossil fuel investment down 40% from 2014 levels: Nasser

Q4 2023 oil demand set to be higher than Q4 2019

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

• Author Jennifer Gnana

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

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

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

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

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

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

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

Expensive hydrogen

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

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

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

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

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

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

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

Rice's Whales Spotted in the Western Gulf of Mexico

April 30, 2024

NOAA Fisheries scientists had the rare opportunity to observe two Rice's whales during aerial surveys in the western Gulf of Mexico.



One of two Rice's whales observed by the Southeast Fisheries Science Center in the western Gulf of Mexico during an aerial survey on April 11, 2024. Credit: NOAA Fisheries/Paul Nagelkirk (Permit #21938)

On April 11, 2024, NOAA Fisheries scientists observed two endangered Rice's whales in the western Gulf of Mexico. There are likely fewer than 100 Rice's whales in the Gulf of Mexico, the only area where the species is known to occur.

The whales were observed 55 nautical miles off the coast of Corpus Christi, Texas. The [three characteristic ridges](#) on their rostra (in front of their blowhole) were clearly visible and allowed the team to confirm they were Rice's whales. The whales were observed at the ocean surface, and were [diving](#) within a small area. They were in an area where the water was approximately 224 meters deep.

In addition to [a confirmed sighting in 2017](#), this event reinforces findings from [acoustic monitoring](#) that Rice's whales occur in waters near Texas. In fact, the whales were observed 4.8 nautical miles from one of these passive acoustic monitoring instruments.

These sightings occurred within the [proposed Rice's whale critical habitat](#), which encompasses waters 100–400 meters deep throughout the U.S. Gulf of Mexico.

Laura Dias and Jesse Wicker, NOAA Fisheries affiliates through the University of Miami Cooperative Institute for Marine and Atmospheric Studies, were co-leads on the mission.

Mid-flight, Laura Dias asked the NOAA Corps pilots to turn the aircraft towards where she saw some movement on the water.



Caption: Laura Dias points to mark the whale's last surfacing onboard the NOAA's Aircraft Operations Center's Twin Otter aircraft. Credit: NOAA Fisheries/Jesse Wicker

“Conditions were improving but there were still some waves on the surface. That movement could have been anything, but when we got there, I felt a wave of excitement and relief—we found our first whale! That was the beginning of an intense effort to photograph this whale and further document the presence of Rice’s whales in the western Gulf of Mexico.”

A Better Vantage Point

These sightings happened during an aerial survey to document the abundance and distribution of marine mammals and sea turtle species, including the endangered Rice’s whale, in the western Gulf. In addition to advancing our understanding of these species in the Gulf, the survey data will support marine spatial planning efforts related to the [New Blue Economy](#).

Previously, aerial surveys in this region surveyed from shore out to 200 meters water depth. This time, the study area targeted a different depth range, from 100 to 500 meters. This includes areas over which passive acoustic monitoring devices have previously recorded Rice’s whale sounds.

Aerial surveys complement traditional ship-based surveys by allowing the team to:

- Cover a broader area faster
- Cover areas of interest multiple times
- Photograph animals directly from above to assess body condition
- View the whales’ characteristic three rostral ridges
- Collect overhead imagery of the entire body of the animal
- Observe these endangered animals using non-invasive methods

[NOAA's Aircraft Operations Center](#) supported this survey with their [De Havilland DHC-6-300 Twin Otter](#), N46RF.

What This Means for Rice’s Whales

These sightings will help us target additional surveys that could be used to improve the Rice’s whale abundance estimate.

“These sightings, combined with the nearby 2017 vessel-based sighting and a year of acoustic recordings showing Rice's whale calls present in this area on 25 percent of days, highlight the strength of using complementary visual and acoustic survey methods for improving our understanding of how important this area is to this very rare endangered species,” said Melissa Soldevilla, the Southeast Fisheries Science Center’s passive acoustic monitoring program lead.

Image



One of two Rice's whales observed by the Southeast Fisheries Science Center in the western Gulf of Mexico during an aerial survey on April 11, 2024. Credit: NOAA Fisheries/Paul Nagelkirk (Permit #21938)

Threats to Rice's whales from human activities include:

- Vessel strikes
- Noise from vessels and energy exploration
- Oil spills and other pollutants, including lingering effects of the *Deepwater Horizon* oil spill
- Ingestion of and entanglement in marine debris
- Climate change and its effect on prey
- Entanglement in fishing gear

The Rice's whale, which was [determined to be a unique species](#) in 2021, is now a part of NOAA Fisheries' [Species in the Spotlight](#) initiative. This campaign brings additional awareness to endangered species. NOAA Fisheries continues to study and monitor Rice's whales to help conserve and recover the species.

[Check out our frequently asked questions on Rice's whales](#)

Help Keep Whales Safe

Boaters, anglers, and others should report all suspected sightings of Rice's whales by calling (877) WHALE-HELP (877-942-5343). This information is valuable for helping us learn more about this endangered species. You can also use this same number to report any marine mammal that is in distress, injured or dead.

Harassing, harming, pursuing, wounding, killing, capturing, or collecting protected marine mammals is prohibited by the [Endangered Species Act](#) and [Marine Mammal Protection Act](#). Observe marine animals from a safe and respectful distance—at least 100 yards (the length of a football field)—and never approach or touch them.

Minister's foreword

Gas plays a critical role in Australia's economy.

Gas is also an important part of Australia's future, because it will enable us to compete successfully in the global race for jobs and opportunities in a net zero world. The global shift to clean energy is Australia's biggest opportunity for growth and prosperity.

Over the past year, my department has rigorously researched, modelled and analysed the future of gas. This work has been real-world tested through extensive consultation and peer-review. I am proud to publish this work alongside the strategy in a comprehensive analytical report.



The analytical findings are clear. Under all credible net zero scenarios, natural gas is needed through to 2050 and beyond, though its production and use will change over this period. Gas will be essential to the transition because our energy system needs gas to achieve net zero. Gas will be a transition fuel that firms renewable power generation and is required for manufacturing and minerals processing until such time as alternatives are viable. Gas can support our future made in Australia. However, the greenhouse gas emissions associated with gas must sharply decline and where gas use cannot be reduced, emissions must be increasingly abated and offset.

The Future Gas Strategy sets out the Australian Government's approach to gas policy. The strategy uses evidence and data to establish 6 clear, enduring principles that will underpin future government policies and actions. It is vital for the whole community that discussion of gas and gas policy moves beyond unthoughtful slogans and centres on evidence-based principles.

We cannot rely on past investments in gas to get us through the next decades. We need continued investment in, and development of, gas supply and transport infrastructure to get us through the energy transition with thriving industries. To secure the clean, affordable and reliable energy Australia needs to compete in the global race for jobs and opportunities, and we need to capitalise on our natural resource endowment.

I want to make a point I have made many times before and will continue to make: Australia is and will remain a reliable and trusted trade and investment partner, including for liquified natural gas (LNG). Our trade partners have made large investments over decades in Australia's resources industry. They are relying on Australian gas to transition their economies to net zero. Australia is broadening and deepening our existing energy partnerships into emerging industries like critical minerals, hydrogen, carbon capture and storage, and other clean energy exports. The strength of our relationships, based on mutual economic benefit and friendship, will endure.

I would like to thank and acknowledge the significant contribution from all who helped develop this strategy. I look forward to continuing to work closely with industry and communities as we work towards net zero and a future made in Australia. The road to both runs through the Australian resources sector.

The Hon Madeleine King MP

Minister for Resources
Minister for Northern Australia

The strategy at a glance

The Future Gas Strategy maps the Australian Government's plan for how gas will support our economy's transition to net zero in partnership with the world.

The Future Gas Strategy is our plan for gas production and consumption in Australia. The strategy explains the principles the Australian Government will use to guide policymaking about gas to support the transition to net zero.

The strategy is an evidence-based framework built around 6 principles. It draws on the [Future Gas Strategy Analytical Report](#), which provides in-depth analysis of relevant data about gas supply, consumption and emissions. The strategy is also shaped by extensive public consultation, which revealed the barriers and opportunities around gas supply and consumption for Australian households and businesses and our international trade partners.

The role of gas will change as we reach net zero in Australia by 2050. Even in net zero scenarios, Australia and the world will need gas at lower levels through to 2050 and beyond. Australian gas will play an important role in an orderly global and domestic energy transformation. However to meet our legislated climate goals, we must find alternatives to gas, and gas-related emissions must decline.

Throughout the strategy, we use several scenarios to help shape our understanding of the future of Australian gas. These scenarios are not predictions. They let us compare potential versions of the future based on different assumptions. This helps decision makers understand potential trade-offs and make the best choices possible. Read more information about these scenarios in Appendix A.

Objectives of the Future Gas Strategy

The Future Gas Strategy outlines a pathway for Australia to manage its evolving role as a trusted gas producer and as a responsible climate actor which acts with transparency, integrity, and from a strong evidence base.

The strategy does not exist in isolation. Our policies for gas are shaped by a complex geopolitical environment, energy security, national security, wellbeing, living standards and the net zero transformation.

Managing the complexity of the future of gas will require continued collaboration, close monitoring, regular review, and adjustment of actions.

The strategy's objectives are to:

- support decarbonisation of the Australian economy
- safeguard energy security and affordability
- entrench Australia's reputation as an attractive trade and investment destination
- help our trade partners on their own paths to net zero.

Guiding principles for Australia's gas

The strategy adopts 6 principles that will guide policy actions to achieve the strategy's aims.

1. **Australia is committed to supporting global emissions reductions to reduce the impacts of climate change and will reach net zero emissions by 2050.** Gas production and use must be optimised through the transition and residual use must be abated or offset to achieve this economy-wide commitment.
2. **Gas must remain affordable for Australian users throughout the transition to net zero.** A future made in Australia, our competitive advantage in abundant resources, and our standard of living requires reliable, affordable and clean energy. Continued gas development and more flexible gas infrastructure is needed to increase the resilience of Australia's energy system and keep costs down as we transition. Government decisions on gas development rights should prioritise timely development and discourage repeated delays to ensure supply and affordability.
3. **New sources of gas supply are needed to meet demand during the economy-wide transition.** Government policies to enable natural gas exploration and development should focus on optimising existing discoveries and infrastructure in producing basins. This includes applying technology-neutral approaches to exploration data acquisition (to minimise seismic surveying where possible), prioritise energy security, and align with our net zero emissions targets. Robust environmental approval processes are key to the social license of the gas industry.
4. **Reliable gas supply will gradually and inevitably support a shift towards higher-value and non-substitutable gas uses.** Households will continue to have a choice over how their energy needs are met.
5. **Gas and electricity markets must adapt to remain fit for purpose throughout the energy transformation.**
6. **Australia is, and will remain, a reliable trading partner for energy, including Liquefied Natural Gas (LNG) and low emission gases.** Australia's ambition to become a renewable energy superpower will involve developing new low emissions energy exports to support the energy security and decarbonisation efforts of our trade partners.

Immediate actions arising from these principles include:

- updating Commonwealth retention lease policies to encourage more timely development of existing gas discoveries, and considering a firmer 'use it or lose it' policy
- working with regulators and industry to reduce and, where possible, eliminate gas venting and flaring, unless required for safety purposes
- continuing to release offshore acreage for greenhouse gas storage
- establish a new Transboundary Carbon Capture and Storage (CCS) Program which will provide options for energy security and carbon management solutions for our regional partners
- clarifying consultation requirements for offshore petroleum and greenhouse gas storage activities as part of a broader three year review of the offshore environmental management regime.

These actions will be adapted and refined as we move toward 2050.

This strategy is supported by the [Future Gas Strategy Analytical Report](#) that provides the Australian Government's assessment of the latest available evidence.

How we wrote the strategy

The government developed the *Future Gas Strategy Analytical Report* to provide the data for the Future Gas Strategy. When writing the strategy, we also consulted with domestic and international stakeholders.

As part of the consultation, the department received almost 300 written submissions and met individually with more than 50 stakeholders. The department engaged with representatives from:

- industry groups
- unions
- academic institutions
- household and business advocacy groups
- environmental advocacy groups
- gas producers
- foreign governments
- gas retailers
- transmission networks
- First Nations peoples
- land holders impacted by gas developments.

Written submissions that the department received consent to publish are available on the [Department of Industry, Science and Resources website](#).

The feedback from consultation, and the conversations that have followed, highlight the complex role that gas plays in households, businesses, electricity generation, and liquefied natural gas (LNG) exports, both in Australia and for our trade partners. This feedback shows the uncertainty stakeholders have around emerging technology for industrial applications of gas, such as high-heat minerals processing and carbon capture, use and storage. It shows uncertainty about natural gas alternatives and their pathways to commercialisation. It also shows that stakeholders have concerns about greenhouse gas emissions and the environmental impact of gas.

The [Future Gas Strategy Analytical Report](#) is an essential companion to this document. It provides in-depth analysis of relevant data about gas supply and consumption both in Australia and, where relevant, by our trading partners. The analytical report uses International Energy Agency (IEA) and Australian Energy Market Operator (AEMO) scenarios. These scenarios are well known and tested, and reflect policy decisions and intentions both globally and in Australia. Read more information about these scenarios in Appendix A.

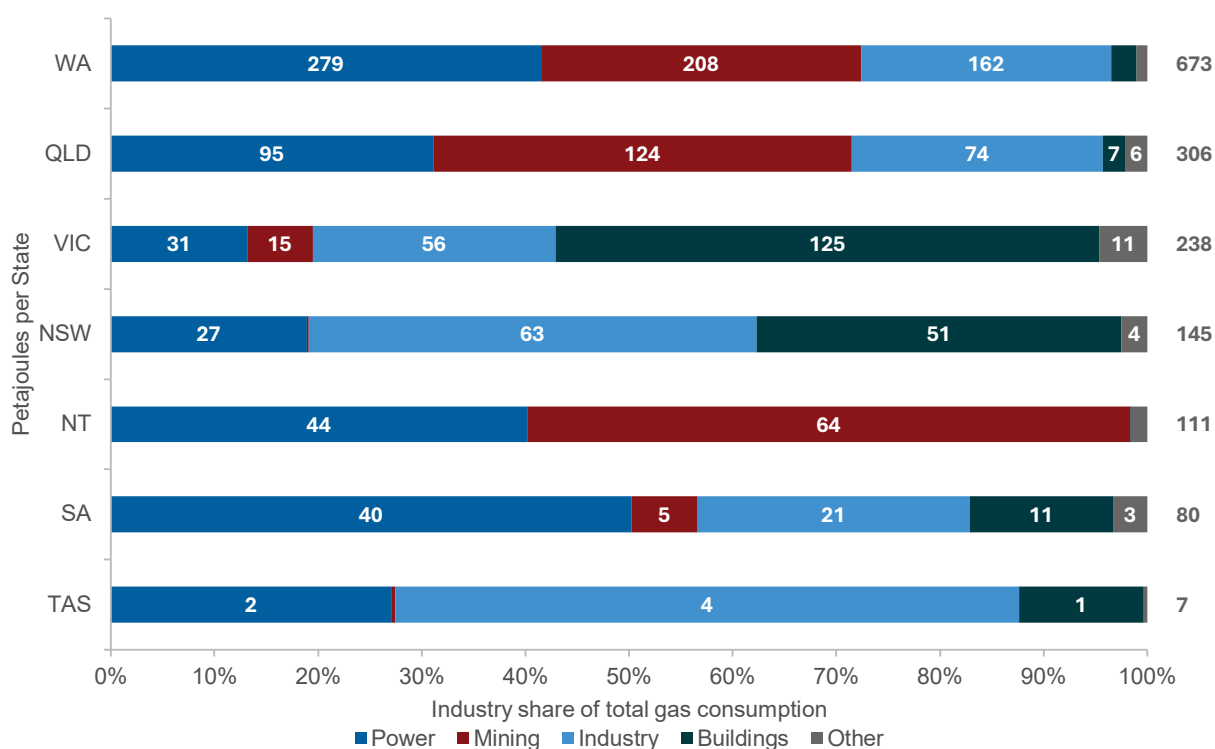
How Australian gas is used today

Gas use in Australia

Sustaining investment in all parts of our energy system to achieve our climate, energy, and social goals is a key challenge for Australia.

Today, natural gas supports our standard of living and Australia’s energy security, providing over a quarter of our energy needs. We use gas to heat and cool our homes and businesses, heat our water and cook our food. Gas is also an essential part of how we generate electricity. However, the way we use it in electricity generation varies across the country (figure 1). In Western Australia, gas-power generation supports the electricity grid and many remote mine sites. The Western Australian Government has announced that gas will replace coal-fired generation by 2029. Uniquely among Australian jurisdictions, most Victorian gas consumption is in buildings (households and small businesses like restaurants). Victoria has policies to reduce this consumption by, for example, banning gas connections in new buildings. In the Northern Territory, gas is responsible for 88% of electricity generation. South Australia, which has some of the highest uptake of renewable power generation in the world, uses solar and wind during the day. At night, gas-powered generation helps fill the gap.

Figure 1: Gas consumption by state/territory and sector, 2021–22



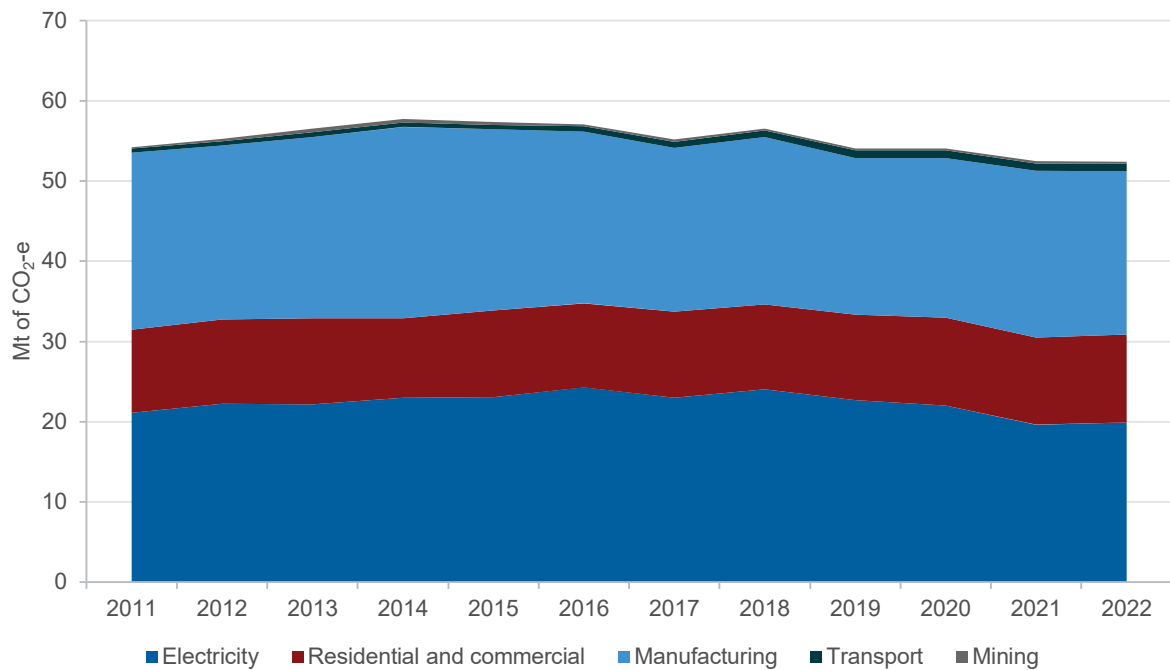
Notes: ACT included in NSW. On-site electricity generation is included in the power sector. Buildings demand includes gas use in both commercial and residential buildings. Mining demand includes gas used to power LNG liquefaction. Power demand includes gas consumed by the manufacturing sector to generate off-grid electricity. Other demand consists of gas use for transportation, agriculture, construction, water and waste treatment and gas supply. Data in this graph may not align with that produced by AEMO. Source: Analytical Report Fig 3.1

With this use of gas comes associated greenhouse gas emissions (figure 2). To achieve net zero globally, we need gas to:

- support renewable generation
- process critical minerals
- help to lower emissions in steel and cement
- produce fertiliser
- manufacture the products we need to build a net zero economy.

Most of Australia’s gas is exported as LNG to our region. Australia’s LNG exports support and sustain millions of households and businesses which rely on the energy generated from LNG. Australia has benefited from the high levels of investment, income and employment that our LNG exports bring to our nation’s economy. Between 2010 and 2020, direct investments in both up and downstream LNG facilities in Australia was nearly \$250 billion. For the 2022-23 financial year, LNG was Australia’s second largest export by value, with export earnings of \$92 billion (nearly 20% of total Australian export earnings).

Figure 2: Emissions from the use of gas by sector



Notes: Gas consumption is calculated as the AEMO consumption figures for electricity, industrial and residential and commercial sectors. It excludes the LNG sector. Emissions from electricity generated at mining sites is allocated to the electricity sector. Source: Analytical Report Fig 2.2

Australia, like other countries, must move towards cleaner energy sources to reach net zero by 2050. To support this shift, Australia’s gas sector must make deep and permanent cuts to its greenhouse gas emissions while scaling up carbon management solutions. By 2050, Australia’s gas sector will be substantially different from today. Low emissions energy sources will grow in response to market signals and government policy. The ongoing role of natural gas both in Australia and globally will be defined by its cost and carbon competitiveness.

Read [Section 1](#) of the analytical report for more information about Australia’s gas markets, and [Section 3](#) for more information about the domestic demand outlook.

Gas-powered generation

The electricity sector is a major source of domestic gas demand. In 2021-22, gas-powered generation (GPG) consumed 520 PJ, or 33% of total Australian gas demand, producing around 5.7% of Australia's greenhouse gas emissions. GPG is important for grid security and reliability as it can start up quickly. This means it can complement variable wind and solar generation and provide extra power supply during periods of peak electricity demand.

“... GPG is one of the key technologies to provide the firm capacity the power system needs to support high penetrations of variable renewable energy such as wind and solar. ... Barker Inlet Power Station (BIPS) ... often generates in the morning and evening peaks, when demand from households is high and output from solar is limited.

[AGL Energy](#)

The extent to which we use GPG in any given year depends on several factors. These include the coldness of the winter and the cost-competitiveness of alternatives. Gas-powered generators are versatile. They can scale up and down rapidly, and so can supply power during peak electricity demand (called ‘peaking’) and complement variable wind and solar generation (called ‘firming’). Consequently, the volume of gas used for electricity generation fluctuates with electricity market conditions.

Remote communities are often powered by stand-alone diesel grids. The cost and reliability of these can be challenged by the logistical complexities of trucking fuel over large distances, year round. Those relying on them, disproportionately First Nations communities, note that the unreliability of these microgrids has adverse community effects. This unreliability affects access to education and healthcare, and makes it harder to remain engaged on issues critical to culture and communities.

Energy security is a pressing issue. ... an overwhelming number of all [NT] households (91%) experienced a disconnection from electricity during the 2018–2019 financial year. Almost three quarters of households (74%) were disconnected more than ten times. ... The loss of essential electricity supply has wide-ranging impacts on us. It makes it hard to safely store medicine and food, makes it hard to sleep and for children to turn up at school...

[Nurrdalinji Native Title Aboriginal Corporation](#)

The mining industry often generates electricity using stand-alone micro grids. Mine sites are increasingly using GPG, or renewables firmed by GPG, to replace diesel power generation.

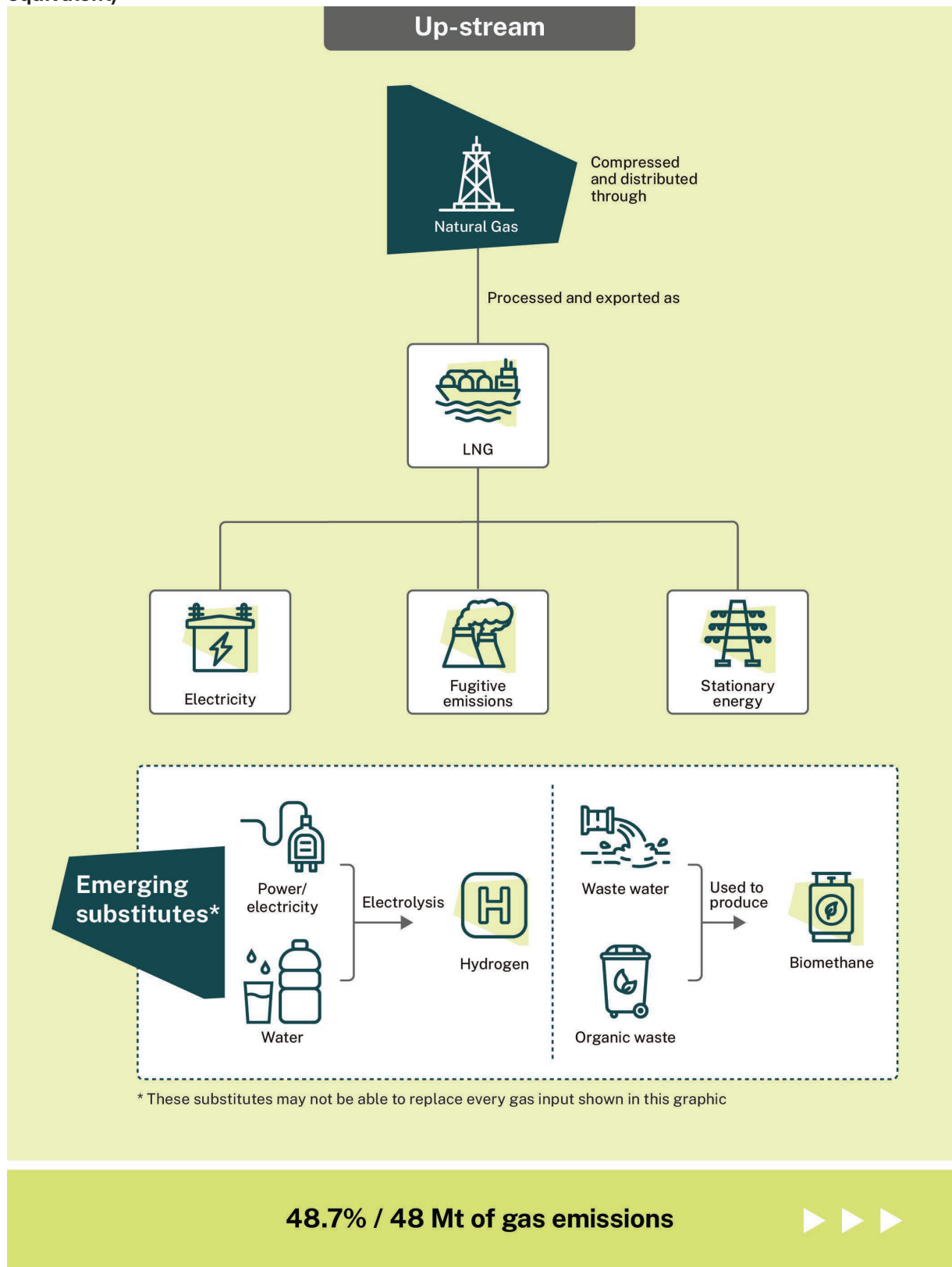
Gas use in industry

Natural gas is the largest source of energy for Australian industry. In 2020-21, Australia's manufacturing sector consumed 380 PJ of gas, or about 26% of domestic gas supply.

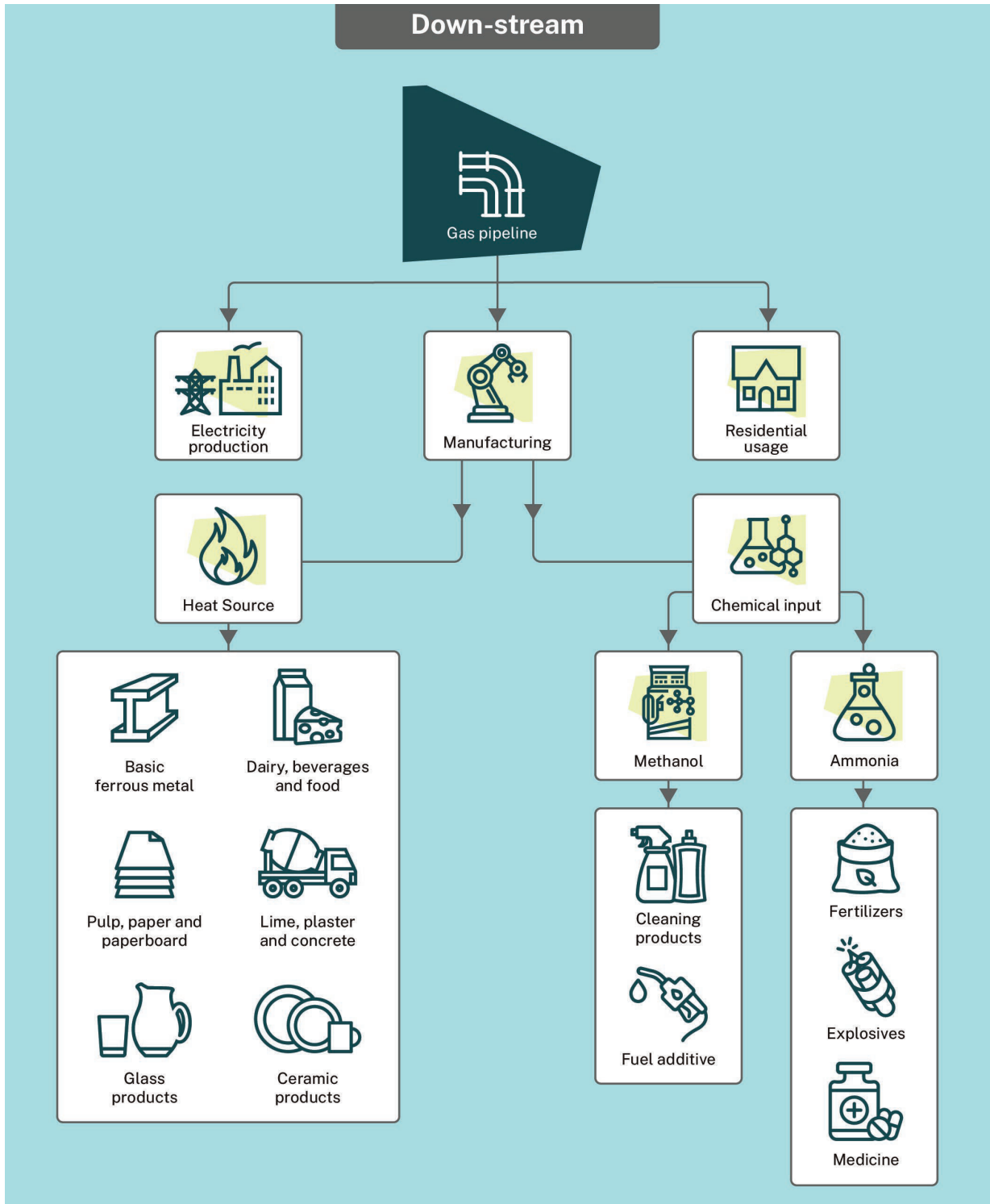
Around 74% of industrial gas consumption is for heat. Industrial heat is part of many processes that support our modern economy and plays a pivotal role in our everyday lives. From the buildings we live and work in to the food we eat, society would look very different if we did not have access to industrial heat (figure 3).

LNG facilities are significant consumers of gas to power compressors and generate electricity on-site.

Figure 3: Gas production and use in the Australian economy, including emissions (CO₂ equivalent)



Down-stream



49.4% / 48.7 Mt of gas emissions

**Total emissions:
98.1%/96.7 MT**

Note: data in this graphic is based on estimated emissions in 2023, and 1.9% of gas production and use emissions occur through other processes not captured such as stationary energy emissions from domestic gas production and other downstream uses of natural gas.

Industrial heat use can be broken down into low, medium, and high heat applications.

Lower-heat range temperatures (below 150°C) are used for:

- manufacturing food and beverages
- chemical and paper production
- drying
- baking
- evaporation
- pasteurisation.

Medium heat range temperature (from 150° to 500°C) are used for:

- more advanced chemical production processes
- refining biofuel
- dyeing and drying materials in the textiles industry.

High-heat range temperatures (over 500°C) are used for:

- producing plastics
- smelting metals
- transforming limestone into clinker for cement
- heating kilns that fire bricks and ceramics.

Historically, the decision to use gas in these facilities has depended on how cost competitive the source and quality of heat is against alternatives. Low-emissions sources of industrial heat are entering the market for low temperature ranges through industrial heat pumps. For higher temperature ranges, the adoption of alternatives is limited because of technology challenges and high costs.

Being a trade-exposed sector, any policy that affects food, beverage and grocery manufacturers' access to a reliable and affordable gas supply can impact their ability to compete in international markets. This is crucial given the intense competition from international competitors benefiting from lower-cost energy.

[Australian Food and Grocery Council](#)

Around 17% (65 PJ) of Australian industrial gas is consumed as a chemical feedstock. In addition to its use as an energy source, natural gas molecules are chemically transformed into other products. Many of these products are used in our everyday lives such as:

- plastics
- fertilisers
- packaging
- clothing
- tyres
- detergents
- insulators
- rubber
- propellants
- medical products
- adhesives
- cosmetics.

Decarbonising these everyday products will depend on the availability and price of substitutes like hydrogen and biomethane. These substitutes are not currently cost competitive with natural gas and will require sufficient scale. Achieving scale and cost efficiencies in low-emission hydrogen production is the only way to decarbonise chemical processes that need ammonia as an input. The Australian Government is undertaking a review of the National Hydrogen Strategy. This will position Australia on a path to be a global hydrogen leader by 2030 on both an export basis and for the decarbonisation of Australian industries.

Commercial and industrial (C&I) users of gas include those using gas as feedstock for a wide range of products such as fertilizers, plastics, explosives, clothing, and medicines, as well as those requiring gas for high heat applications, such as in the smelting metals and minerals, particularly in the steel, aluminium and critical minerals. There are currently no ready alternatives to the use of gas in these applications.

[Australian Chamber of Commerce and Industry](#)

Read [Section 3](#) of the analytical report for more information about the use of natural gas as a feedstock.

Gas in homes and small businesses

Australian homes consumed an average of around 200 PJ of gas per year between 2011-2021, representing around 2.3% of Australia's national net greenhouse gas emissions. Today, about 5 million households in Australia rely on natural gas. Most gas use in homes and small business is across Victoria, New South Wales, the Australian Capital Territory and to a lesser extent Western Australia and South Australia.

Homes and small businesses use gas to:

- cook food
- heat water
- warm and cool buildings.

Household gas consumption is relatively stable, although unusually cold winters can increase demand. Electrification is possible as there are widely available, cost competitive electric alternatives to household gas appliances. Low-income households, renters and those in community housing face barriers to electrification. These include the cost of switching and a lack of control over which appliances to install. The retail cost of gas appliances remains competitive with electric alternatives. The cost of adding more electrical circuits or upgrading the household connection to the grid is likely to remain a barrier to low-income households, and will be a factor in landlords' decision making.

Electrification of homes, business, industry and transport, underpinned by renewable energy and storage, is a key decarbonisation strategy for the Australian economy, and should be expedited wherever possible, noting the energy productivity benefits it offers consumers.

[Clean Energy Council](#)

How gas can help get us to net zero

The Australian Government is committed to sustaining an economy underpinned by reliable, affordable and clean energy. In 2021-22, gas provided 27% of Australia's energy needs. Production and domestic use of gas accounts for 24% of Australia's total emissions. Australia will need gas into the future, including as a bridging fuel. We also need to manage the emissions from gas, while ensuring affordability and reliability of energy as we undergo our energy transition.

Through consultation, we heard concerns about the role of gas and its contribution to climate change. Ensuring we reach net zero while maintaining living standards, industrial capacity, robust environmental standards, regional energy security and meeting our commitments to our trading partners are imperatives for the Australian Government.

We cannot turn off Australia's gas without significant adverse impacts on Australians and our region. Reducing supply without also reducing demand would put upward pressure on prices across the economy. This could lead to business closures and shortages of consumer goods and services. The food processing industry, for instance, relies heavily on gas. Manufacturing cement, bricks, glass products, nitrogen-based fertiliser and electric vehicle batteries all depend on a reliable and affordable supply of gas. Steel production is looking to gas to transition away from higher-emissions coal while developing new, net zero technology. Without GPG, the electricity grid would be unable to cope with peak electricity demand.

The detailed analysis underpinning this strategy shows that to meet net zero, gas consumption may increase in some parts of the Australian economy.

The role of gas is changing. Two factors will decide how quickly demand reduces:

- the development, scale-up and commerciality of renewables and low emission alternatives to gas, such as hydrogen or biomethane
- the development and commercialisation of new, net zero technology for industrial applications.

Consultation responses made it clear that both low-emission gases and technology transformation are necessary elements of the pathway to net zero. However, the development pathways for both are just beginning. Success in the long term will depend on supply chain development and cost competitiveness.

Australian gas will continue to be required, not only by us, but by our trading partners. International investment in Australia's LNG industry exceeded \$398 billion between 2010 and 2022. The associated long-term offtake agreements mean that we export around 73% of Australian gas production as LNG. The level of investment required to create the large-scale projects that underpin Australia's LNG industry is far greater than our domestic gas demand can support. Australia's export percentage is likely to stay relatively consistent until 2035 due to long-term contracts. The ratio of exports to domestic consumption may change, based on changes in technology and the scaling up of alternatives. However, we will need further investment to support both domestic and export consumption. Arguments that Australia could divert gas developed for export fail to recognise the domestic gas market's reliance on supply from gas export projects, the nature of Australia's trade and investment relationships and the role of Australian gas in our trade partners decarbonisation pathways.

Emissions must be eliminated where possible and reduced where they cannot be eliminated. Gas emissions reduction strategies will be considered through [the 6 sectoral plans](#) which are being developed as part of Australia's Net Zero Plan. Over 97% of Australia's trade also goes to

partners with net zero targets and new clean energy export industries will be important to Australia's long-term trading relationships and prosperity.

Read [Section 1](#) of the analytical report for background on global and Australian gas markets, [Section 2](#) for analysis of emissions from supply and use of gas, [Section 3](#) of the analytical report for analysis of the domestic demand outlook, [Section 4](#) for the international demand outlook, and [Section 7](#) for options to close the supply gap.

Principle 1: Getting to net zero emissions by 2050.

Principle 1: Australia is committed to supporting global emissions reductions to reduce the impacts of climate change and will reach net zero emissions by 2050. Gas production and use must be optimised through the transition and residual use must be abated or offset to achieve this economy-wide commitment.

Summary

In 2050, Australia's natural gas use will look very different from today. Australia cannot reach our 2050 net zero targets without reducing and decarbonising our consumption of natural gas. Natural gas consumption will continue on the pathway to net zero. Decarbonising natural gas use in Australia will need:

- increased energy efficiency and electrification of processes that currently use natural gas
- replacing natural gas with low-emission gases
- any remaining emissions from natural gas use to be reduced as low as possible, and where not possible, fully offset.

Gas consumption is not uniform across sectors or across Australia. Gas is used by households and small businesses, by industry and in power generation. Each of these broad sectors has a different pattern of gas consumption.

Gas is used in all states and territories. Each state and territory also has a different pattern of gas consumption.

Read Appendix A for information about the scenarios used to help shape forecasts in this section.

Read [Section 3](#) of the analytical report for analysis of domestic demand for natural gas.

Gas use in Australia's transition to a net zero economy

Gas will support our economy during the transition to net zero and will remain a critical part of the energy landscape in 2050 and beyond. Transforming how we make products and power our economy will be challenging, but the energy transformation is already underway.

Technologies allowing households and businesses to decarbonise are becoming increasingly available. For industrial gas use, the transition pathway is more complex and will depend on the cost and availability of alternatives. In some cases, these alternatives will require new technologies. In other cases, solutions will combine existing technologies in new ways. A challenge for governments, society, investors, and market participants will be to maintain investment across the energy sector at the pace required to achieve net zero.

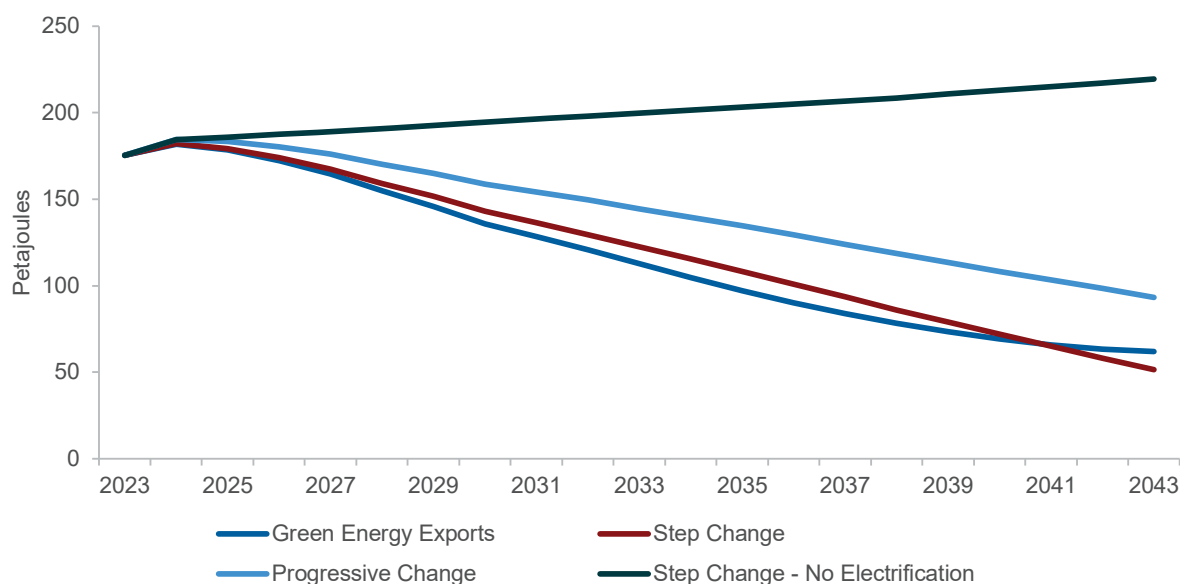
We explore these opportunities and challenges based on detailed projections of the east coast and west coast gas demand scenarios produced each year by the Australian Energy Market Operator (AEMO).

Australia’s forecast natural gas demand depends on many factors. Each AEMO projection is based on assumptions about how quickly we adopt alternatives to gas, as well as social and economic conditions. These projections reflect the best knowledge available.

The largest declines in gas consumption are anticipated in east coast buildings

The largest declines in gas demand on the east coast are forecast for commercial and residential buildings. Depending on the scenario, by 2043, domestic and small business consumption of gas will decline between 49% and 72% on 2023 levels. This is unless residential and commercial consumers are unable, or choose not to, electrify (figure 4). These projections assume an increase in the rate of electrification (the replacement of existing gas appliances with electric alternatives), and a reduction in the rate of new natural gas connections.

Figure 4: Building demand for gas by scenario, 2023–43



Note: Building demand covers gas used for residential and commercial heating on the east coast

Source: Analytical Report, Figure 3.7; AEMO (2024b)

Achieving the reduction in household gas demand assumed in AEMO’s high-ambition scenario (‘green energy exports’) will be challenging. In this scenario, Australia’s east coast would need to disconnect, or provide low-emission gases to, around 144,000 houses each year for the next 20 years. This equates to removing just under 400 houses per day, which is a large logistics challenge. In 2021, about 68,000 households joined the gas network across NSW, Victoria, South Australia and the ACT.

Building (households and small business) gas demand makes up a small portion of Australia’s domestic gas consumption (21%, excluding demand from the LNG sector). This means that reducing building gas consumption will have a modest impact on Australia’s gas-related emissions and climate targets.

... to reach net zero by 2045, which Victoria is committed to ... about 200 Victorian homes would need to be upgraded every day between now and 2045.

Master Plumbers Australia and New Zealand

Electrifying Australian homes will mean a surge in demand for electricians and/or tradespeople with electrical licences...

AGL Energy

GPG will play a crucial role in assisting the transformation of our electricity markets

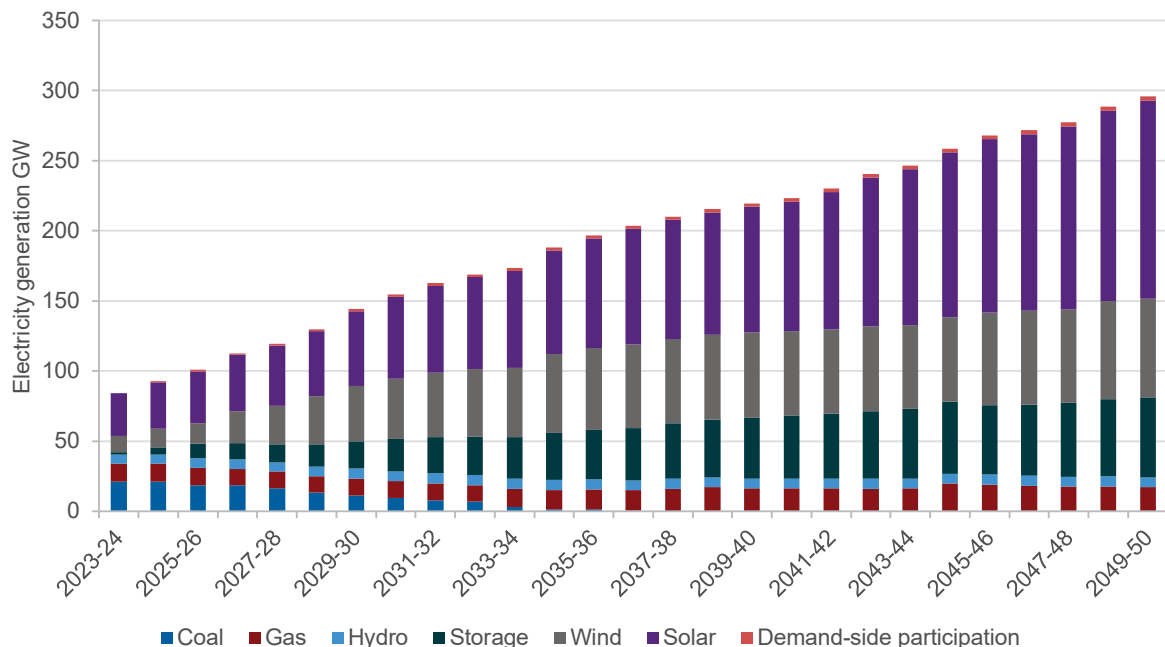
AEMO forecasts that 2035 gas demand from the electricity sector (GPG) could be 10% lower, or up to 96% higher than in 2024. The large range in forecast demand reflects the complex interaction between gas and electricity markets, driven by:

- the closure of coal-fired power generators
- how quickly renewables can be added, scaled up and commercialised
- the greater volume of electricity generation needed to support electrification of current gas consumption.

Under all scenarios, a point to note is that while we may use more gas overall, we may need less gas during specific periods of time. There is a strong potential for declining use of GPG up until 2032.

Figure 5 gives a simplified view by focusing on the Step Change scenario. Under this scenario, electricity generation is projected to more than triple by 2050 as more parts of our economy electrify. GPG capacity grows in absolute terms, but decreases significantly as a percentage of overall power generation.

Figure 5: Projected energy source in the NEM, Step Change



Notes: Data derived from the 2024 Draft Integrated System Plan (ISP) report for the Step Change scenario.

Source: Analytical Report, Figure 3.10;

From 2035 to 2050, annual demand for GPG is forecast to increase, with the need for large, time-limited contributions from GPG expected to continue.

Over time, clean and economic substitutes to unabated natural gas for power generation will emerge. We do have some grid scale alternatives today, such as pumped hydro power and battery power, while others such as biomethane, hydrogen and other biofuels are emerging. Which options ultimately prevail will depend on factors such as safety, reliability, whole-of-life cost, and carbon efficiency and performance.

Industrial users of natural gas may have few options available to switch from gas

For industrial gas consumers, through to 2035 on Australia's east coast, AEMO projects only small declines in industrial gas use. Even in the high-climate ambition, 'green energy exports', scenario, industrial gas demand is expected to fall by a maximum of 20% by 2042. This will follow an initial rise because of the rapid decrease in the use of coal.

Industrial gas demand will vary considerably by industry and is more likely to be a series of step-changes, including in some cases, increased demand over the medium-long term ...

[Manufacturing Australia](#)

These modest projected declines in gas consumption reflect the limited alternatives currently available for many gas uses in Australia's heavy industry and resources sectors. Reducing demand will need advances in a range of different technologies. Deployment of these technologies is likely to need substantial changes to facilities that use large amounts of gas. Consultation indicates that some large emitters plan to use natural gas as the first step to reduce emissions before alternative energy sources (like hydrogen) and alternative technologies are commercially available at scale. This emissions reductions task will require large capital investments in Australian industry.

Substituting gas applications for other technologies requires the business to understand the replacement technology, its business case, and how its technical characteristics relate to the operations of the business. For many businesses, especially smaller businesses, the lack of expertise on these matters is a significant barrier ...

[Business NSW](#)

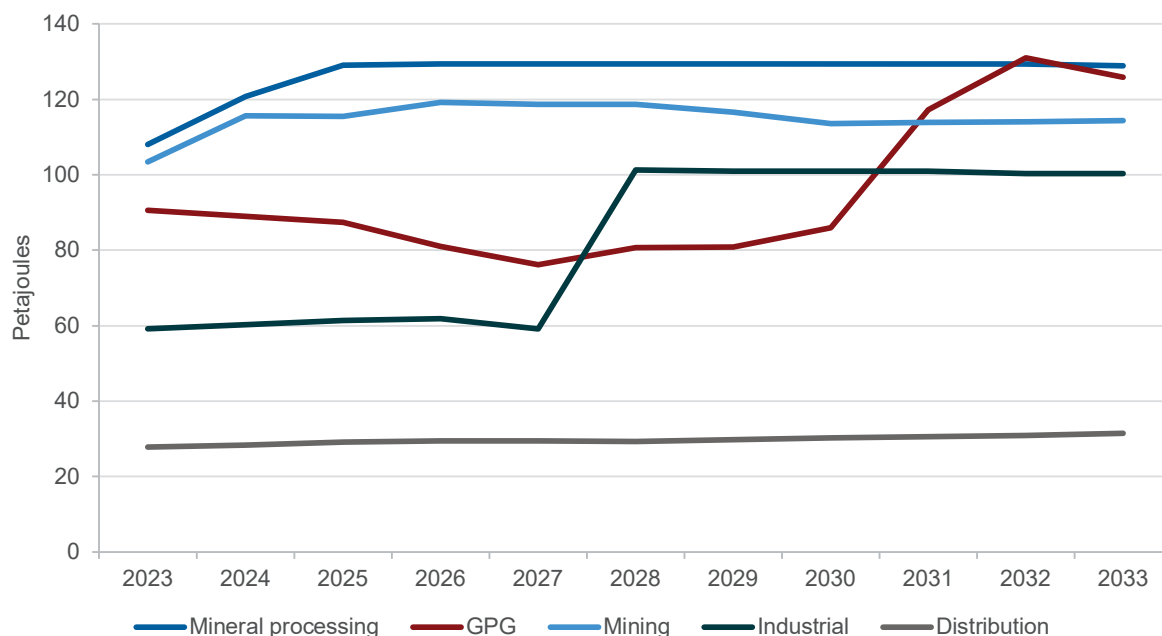
Direct reduced iron (DRI) processes can be configured to use natural gas and transitioned (at relatively low cost) to hydrogen once it is price competitive ... Use of natural gas to manufacture DRI would ... reduce BlueScope's Scope 1 GHG emissions by approximately 3.7 million tonnes per annum.

[BlueScope low emissions iron and steelmaking study](#)

Gas demand may increase on Australia's west coast

Through to 2035 on Australia's west coast, there are similar drivers for change in gas markets (figure 6). Demand from mining and mineral processing is forecast to increase slightly then remain flat. Industrial demand is likely to climb sharply in 2027, in large part due to Perdaman Industries bringing its new urea plant (essential for fertiliser production) online in Karratha. Annual GPG gas use is expected to be broadly flat until 2030, before increasing to offset the exit of coal fired generation assets. The initial decline in GPG demand is driven by new renewable generation, specifically as wind combined with batteries is expected to replace a loss in coal generation capacity. High-efficiency GPG will meet an increasing portion of demand as coal exits WA's electricity system from 2030 to 2033.

Figure 6: West coast gas demand by sector, 2016–2033



Notes: Projections are derived from WA’s expected case scenario.

Source: Analytical Report, Figure 3.13

AEMO’s projections for WA gas use do not extend beyond 2033. However, the [WA Government’s Energy Transformation Strategy](#) sees GPG remaining important beyond this outlook period. Western Australia has recently reviewed its Domestic Gas Policy, through which it aims to secure Western Australia’s long-term energy needs.

Household use is a small component of west coast gas consumption and is expected to grow slightly over the outlook period. The increased uptake of electrical appliances, or addition of low-emission gases into the gas network, could instead see demand fall by the same amount.

Western Australia has a high concentration of industries that need high heat (for example, smelting) and a large mining and minerals processing sector. These sectors create future gas demand over the outlook period, and few commercially viable technology substitutions are expected to emerge during the forecast period to 2033. Expected rates of growth in gas demand will be driven by new minerals processing such as lithium hydroxide, and mining and manufacturing consumers.

Hard rock lithium processing

Western Australia has large deposits of lithium ore (spodumene). As demand for battery technology continues to grow to meet net zero targets, Australia is increasing its spodumene processing capabilities.

Lithium can be extracted from mineral concentrate by roasting and acid roasting at temperatures of around 1050°C and 200°C, respectively. From this process, lithium sulphate (which is soluble in water) is then transformed into lithium hydroxide which is used in electric vehicle batteries.

The technology to run high heat kilns on electricity or hydrogen is not yet available. Processing lithium still requires gas.

MAY 08, 2024

Fact Sheet: President Biden to Highlight \$3.3 Billion Investment in Racine, Wisconsin, and How His Investing in America Agenda is Driving Economic Comebacks in Communities Across the Country

Six years ago, the prior administration touted a \$10 billion investment by Foxconn that never materialized – now Microsoft will build a new AI datacenter on the same land, powering industries of the future in Wisconsin

Today, President Biden will travel to Racine, Wisconsin – the same location as the failed Foxconn investment that the prior administration visited six years ago – to showcase a community at the heart of his commitment to invest in places that have been historically overlooked or failed by the last administration’s policies. President Biden will announce a \$3.3 billion investment by Microsoft to build a new artificial intelligence (AI) datacenter in Racine, creating 2,300 union construction jobs and 2,000 permanent jobs over time. Microsoft will also provide skilling opportunities for thousands more Wisconsinites in the digital economy. The datacenter will be built on the same land as a failed \$10 billion investment from Taiwanese electronics manufacturer Foxconn six years ago, which left behind Wisconsin residents and workers.

President Biden’s Investing in America agenda is growing the economy from the middle-out and bottom-up, giving Americans more breathing room, and unleashing hundreds of billions of dollars of private sector investment in industries of the future, including AI, clean energy, semiconductors, and more. Breaking from failed trickle-down policies of past administrations, President Biden’s agenda is bringing innovation hubs to every corner of the country. President Biden is delivering on his promise to create good jobs that will have a lasting impact on communities and families.

Delivering on promises for Racine workers and families

From after the Civil War through the 1960s, manufacturing powered growth in Racine, Wisconsin. At its peak, manufacturing employed roughly half of Racine’s workforce, but over the years, trickle-down economics wore that away. Manufacturers shut down and shipped jobs overseas.

Six years ago, the prior administration touted a \$10 billion investment by Foxconn that would purportedly create 13,000 manufacturing jobs in Racine. But after 100 homes and farms were bulldozed to make way for the manufacturing plant and over \$500 million in taxpayer dollars were invested to prepare the site, no such investment materialized. Foxconn abandoned plans to manufacture LCD screens in the state and created only a fraction of the promised jobs. In fact, in the four years prior to President Biden taking office, 1,000 manufacturing jobs left Racine, and 6,000 manufacturing jobs left Wisconsin.

President Biden promised that unlike his predecessor, he wouldn’t leave communities like Racine behind. Since President Biden took office, nearly 4,000 jobs have been added in Racine – a third of them in manufacturing — and 177,000 jobs have been added in Wisconsin. With new business applications up 68% from pre-pandemic levels, Racine has experienced some of the strongest new business growth in the state under President Biden’s leadership. And, President Biden’s Investing in America agenda is attracting industries of the future, investing in workforce pipelines that leave no community behind, and helping Racine power the AI and innovation economy.

Building an AI ecosystem in Wisconsin

On the land left vacant by Foxconn’s failed investment in Racine County, Microsoft will invest \$3.3 billion in a new datacenter. Microsoft is committed to creating good-paying jobs with growth pathways and comprehensive benefits such as paid family leave. Microsoft will pair its datacenter investment with a commitment to investing in innovation and workforce in Racine and statewide. Microsoft will partner with Gateway Technical College to develop a Datacenter Academy that trains 1,000 Wisconsinites for datacenter and STEM roles by 2030, and will employ up to 2,000 people in permanent roles at its Racine facility. And, Microsoft will build a Co-Innovation Lab in southeast Wisconsin, as well as team up with the startup accelerator Gener8tor to train 1,000 business leaders to adopt AI in their operations, so that Wisconsin manufacturers can seize AI’s promise. Together, these investments will position the industrial heartland to lead the way in industries of the future.

President Biden has acted boldly to ensure America leads in AI innovation, driven by communities like Racine. The President signed a landmark Executive Order on AI last year that directed actions to provide AI entrepreneurs access to technical assistance and resources, help small businesses commercialize AI breakthroughs, and expand grants for AI research in vital areas like healthcare and climate change. In January, through the new Regional Innovation Engines (NSF Engines) program, the Biden Administration announced 10 awards for place-based research and development

partnerships, including ones with a focus on advancing AI. And, President Biden has taken bold steps to ensure workers and organized labor are front and center in the growth and development of AI. The President's landmark Executive Order on AI directed new protections for workers, including the release of guidance to assist federal contractors and employers with complying with worker protection laws as they deploy AI in the workplace. As part of Microsoft's efforts to build an AI ecosystem in Wisconsin, their training programs will help introduce workers to AI skills and technologies, helping them access and benefit from the AI economy.

Investing in Wisconsin and Investing in America

Today's announcement is part of President Biden's broader effort to invest in industries of the future and American workers in communities across the country. Already, his Investing in America agenda has unleashed \$866 billion in private sector investments in clean energy and manufacturing, and the Administration has announced 51,000 infrastructure projects across the country. These investments are creating an environment where companies are building lasting relationships in communities like Racine. Under the President's agenda:

1. The Department of Commerce designated the Wisconsin Biohealth Tech Hub as a Tech Hub under the CHIPS and Science Act. The Wisconsin Biohealth Tech Hub, serving the Madison and Milwaukee-Waukesha regions, aims to position Wisconsin as a global leader in personalized medicine, an emerging healthcare approach that tailors tests, treatments, and therapies informed by a patient's unique genetic code, medical record, and environment.
2. Milwaukee has been named an Investing in America Workforce Hub—an initiative to bring together state and local elected officials, community leaders, and federal staff to drive evidence-based partnerships for place-based workforce development programs.
3. Wisconsin has received \$6.9 billion from the President's Investing in America agenda for infrastructure and clean energy. That includes \$1.06 billion to replace the Blatnik Bridge — a 1.5-mile-long bridge that connects Duluth, MN and Superior, WI that cannot currently carry large or heavy trucks, causing lengthy detours for regional freight — \$1.6 billion to deliver internet to everyone in Wisconsin, and \$811 million to provide clean water across Wisconsin.
4. The Grow Milwaukee Coalition was selected as one of 22 finalists for the Department of Commerce Recompete Distressed Area Pilot Program to invest in revitalizing Milwaukee's historic 30th Street Industrial Corridor and connecting the historically segregated Black community to economic opportunity across the city. Grow Milwaukee will compete for \$190 million in total funding for locally-led economic development plans.
5. Wisconsin has seen an influx of investments from industries of the future, including clean energy and advanced manufacturing.
 - a. Last summer, thanks to President Biden's Made in America policies and commitment to ensure internet access for all Americans by 2030, Nokia announced a new partnership with Sanmina Corporation to create 200 jobs and manufacture fiber-optic broadband electronics in the United States for the first time in the company's history. The investment was in part spurred by the Biden-Harris Administration's investment of \$1.1 billion to connect every home and business in Wisconsin to high-speed internet through the Bipartisan Infrastructure Law.
 - b. Ingeteam, a clean energy manufacturing company with a plant in Milwaukee, will begin manufacturing electric vehicle fast chargers this year, driven by the Made in America requirements for U.S.-made EV charging infrastructure funded by the Bipartisan Infrastructure Law.

Giving Racine families breathing room

In addition to keeping his promise to leave no community behind, President Biden's agenda is lowering costs for working families in Racine and across Wisconsin, including by:

1. Saving [426,000 Wisconsin families](#) \$30–75 per month on their internet bills thanks to the Affordable Connectivity Program, which Republicans in Congress need to extend this month so these families' internet bills do not increase.
2. Saving customers of a [Milwaukee-based utility company](#) around \$2 billion on utility bills thanks to an investment in clean energy.

3. Saving 1.3 million Wisconsin Medicare beneficiaries money on prescription drugs, insulin, and vaccines.
4. Saving 266,000 people in Wisconsin hundreds of dollars per year on health insurance.
5. Canceling student debt for [44,000 borrowers in Wisconsin](#), and announcing in Madison new plans to provide debt relief to [over 30 million Americans](#).
6. President Biden would lower housing costs by building more than 2 million homes.

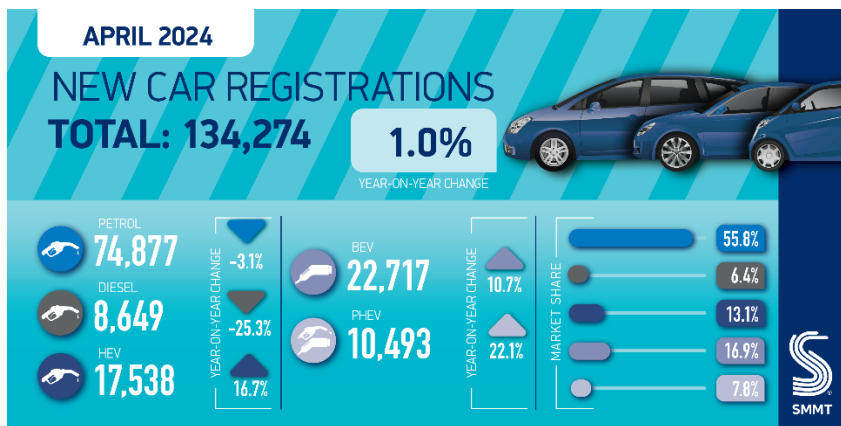
Congressional Republicans have no plan to lower costs. In fact, their plan raises cost for working families in Wisconsin by:

1. Increasing costs for health care, prescription drugs, and insulin by repealing the Inflation Reduction Act and Affordable Care Act and slash Medicare.
2. Increasing utility bills and energy costs by repealing the Inflation Reduction Act.
3. Cutting Social Security by \$1.5 trillion and raising Medicare costs for seniors.
4. Raising taxes for middle-class families by repealing the Inflation Reduction Act and Affordable Care Act.
5. Raising housing costs by cutting rental assistance and programs to build new homes.
6. Repealing the Biden-Harris Administration's SAVE Plan, which is helping millions of Americans save money on their monthly student loan payments.

New car market growth continues despite declining private demand

07 MAY 2024 #CARS #REGISTRATIONS #SMMT NEWS

- New car registrations record 21st month of growth, rising 1.0% in April.
- Battery electric vehicle (BEV) market share rises to 16.9%, sustained entirely by business buyers, as private retail demand continues to drop.
- New 2024 market outlook revises overall uptake upwards to 1.984m units, but BEV share downgraded to 19.8% as weakened private retail demand moderates expectations.



UK new car registrations grew for the 21st consecutive month in April, rising by a modest 1.0% to reach 134,274 units, according to the latest data published by the Society of Motor Manufacturers and Traders (SMMT). As a result, this was the market's best April since 2021, although uptake was still -16.6% below the pre-pandemic level in what is traditionally a low volume month following the March plate change.¹

Continuing the trend seen throughout the year, growth was driven entirely by fleets, where registrations rose by 18.5% to reach 81,207 units – more than six in 10 of all new cars registered in April. Private buyer uptake fell by -17.7% to 50,458 units, while business registrations declined by -16.1%, to 2,609.

APRIL

	2024	2023	% change	Mkt share -24	Mkt share -23
Private	50,458	61,342	-17.7%	37.6%	46.1%
Fleet	81,207	68,537	18.5%	60.5%	51.5%
Business	2,609	3,111	-16.1%	1.9%	2.3%
TOTAL	134,274	132,990	1.0%		

Year to date

	YTD 2024	YTD 2023	% change	Mkt share -24	Mkt share -23
Private	257,804	289,595	-11.0%	37.9%	46.2%
Fleet	407,661	321,817	26.7%	60.0%	51.3%
Business	14,357	15,838	-9.4%	2.1%	2.5%
TOTAL	679,822	627,250	8.4%		

Electrified vehicles continued to be the main drivers of market expansion. Plug-in Hybrids (PHEVs) recorded the strongest growth, rising by 22.1% to account for 7.8% of the market, followed by Hybrid Electric Vehicles (HEVs), up 16.7% with a 13.1% share of demand. April was a brighter month for battery electric vehicle (BEV) registrations, predominantly due to compelling fiscal incentives for businesses. Overall, BEV uptake rose 10.7%, pushing up market share to 16.9%, a significant uplift on last April's 15.4%.

While the overall increase in BEV demand is positive, urgent action is needed to re-enthuse private buyers into switching. Fewer than one in six new BEVs bought in April went to consumers, whose uptake volumes fell by -21.9%.² Drivers today enjoy the widest ever choice of BEV models – more than 100 – powered by the latest technology, and manufacturers continue to provide compelling offers to encourage their uptake. However, the lack of government incentives for private motorists remains a barrier that cannot be overcome by industry alone.

APRIL

	2024	2023	% change	Mkt share -24	Mkt share -23
Diesel	8,649	11,572	-25.3%	6.4%	8.7%
Petrol	74,877	77,275	-3.1%	55.8%	58.1%
BEV	22,717	20,522	10.7%	16.9%	15.4%
PHEV	10,493	8,595	22.1%	7.8%	6.5%
HEV	17,538	15,026	16.7%	13.1%	11.3%
TOTAL	134,274	132,990	1.0%		

YEAR TO DATE

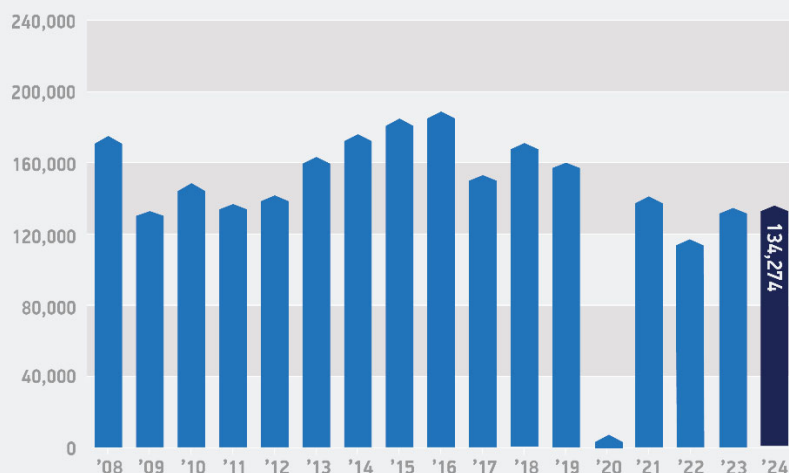
	YTD 2024	YTD 2023	% change	Mkt share -24	Mkt share -23
Diesel	46,304	51,336	-9.8%	6.8%	8.2%
Petrol	381,802	357,912	6.7%	56.2%	57.1%
BEV	107,031	96,755	10.6%	15.7%	15.4%
PHEV	53,052	40,360	31.4%	7.8%	6.4%
HEV	91,633	80,887	13.3%	13.5%	12.9%
TOTAL	679,822	627,250	8.4%		

BEV - Battery Electric Vehicle; PHEV - Plug-in Hybrid Electric Vehicle; HEV - Hybrid Electric Vehicle.
Diesel and Petrol figures include Mild Hybrid Electric Vehicle (MHEV)

Given tax incentives are proven to deliver a rapid shift to BEVs in the fleet market, providing private buyers with a similar level of support would accelerate an overall market shift, fuel economic growth and deliver a sustainable, fair transition. Temporarily halving VAT on new BEV purchases would help more than a quarter of a million drivers to switch from fossil fuel to electric over the next three years. Similarly, altering the threshold for the 'expensive car' supplement to Vehicle Excise Duty – due to apply to EVs from April 2025 – would send the message to the market that zero emission vehicles are necessities, not luxuries.³

Action is also needed on infrastructure, with nationwide chargepoint installation essential for consumer confidence. While last year saw more chargepoints installed than ever before, there is currently just one standard charger available for every 35 plug-in cars on the road – a negligible improvement on 2022 when the ratio was one for every 36.⁴ With current levels of infrastructure insufficient to inspire more consumers to go electric, there is a clear need for measures to accelerate chargepoint rollout.

APRIL NEW CAR REGISTRATIONS 2008 to 2024



Such actions are crucial as, based on current conditions, the latest market outlook shows a diminishing share for BEVs despite a growing overall new car market. 1.984 million new cars are now anticipated to be registered in 2024 – a 4.2% rise on last year, and a 0.5% increase on January’s outlook. However, BEV volumes for this year have been revised downwards by -5.2%, with anticipated market share now 19.8%, significantly below the government target of 22% per manufacturer under the Vehicle Emissions Trading Scheme.⁵ While the scheme’s flexibilities mean manufacturers can still meet government mandated targets, long term success depends on a growing market built on strong consumer EV demand.

TOP MODELS

APRIL 2024			YEAR-TO-DATE		
①	Ford Puma	4,339	①	Ford Puma	19,393
②	Volkswagen Polo	3,413	②	Nissan Qashqai	17,050
③	Audi A3	3,010	③	Kia Sportage	15,824
④	Nissan Qashqai	2,495	④	Audi A3	13,503
⑤	Volkswagen Golf	2,361	⑤	Nissan Juke	13,070
⑥	Kia Sportage	2,192	⑥	Volkswagen Golf	12,651
⑦	Volkswagen T-Roc	2,162	⑦	BMW 1 Series	12,210
⑧	MG HS	2,073	⑧	MG HS	12,101
⑨	Volvo XC40	2,069	⑨	Volkswagen T-Roc	11,096
⑩	Volkswagen Tiguan	2,004	⑩	MINI	11,067

Mike Hawes, SMMT Chief Executive, said,

“The new car market continues to grow even in the quieter months, driven primarily by fleet demand. This is particularly true of the electric vehicle sector, where the absence of government incentives for private buyers is having a marked effect. Although attractive deals on EVs are in place, manufacturers cannot fund the mass market transition single-handedly. Temporarily cutting VAT, treating EVs as fiscally mainstream not luxury vehicles, and taking steps to instil consumer confidence in the chargepoint network will drive the market growth on which Britain’s net zero ambition depends.”

Notes to editors

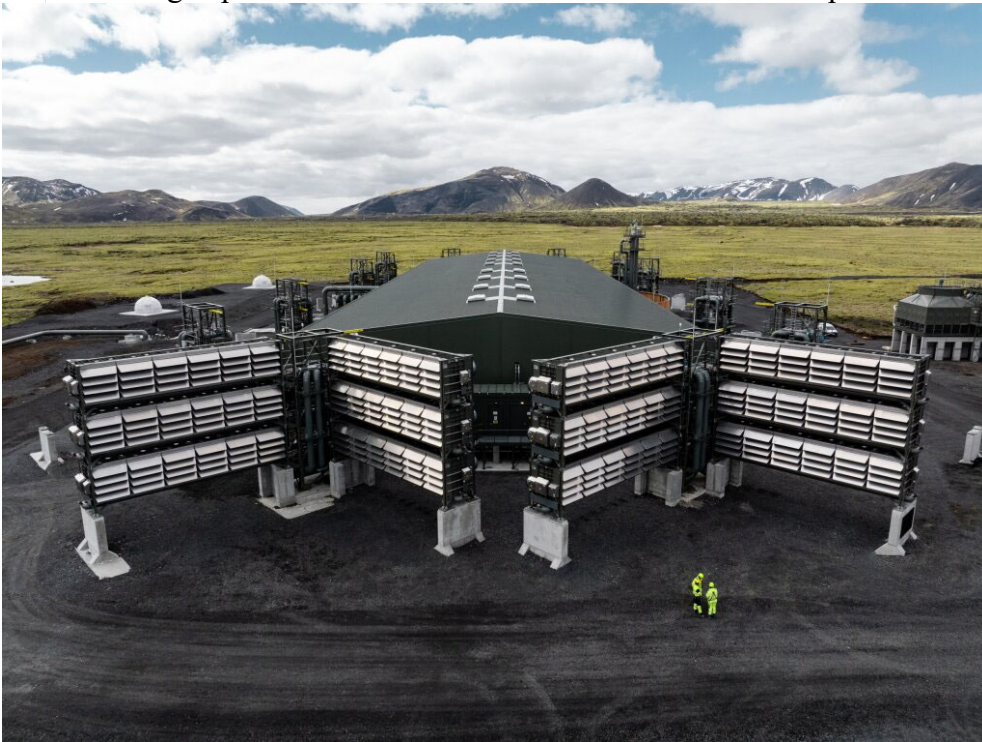
1. April 2021: 141,583; April 2019: 161,064
2. April 2024 private share of BEV uptake: 15.6%; April 2023: 22.1%
3. [Car industry urges ‘fair tax for a fair transition’ to put EVs back in the fast lane](#), 1 March 2024
4. [EVs drive down carbon emissions and lift vehicle ownership to record high](#), 20 April 2024
5. 393,000 BEV registrations anticipated in 2024

Climeworks switches on world's largest direct air capture plant

08.05.2024

Key take-aways

- Climeworks starts operations of its to-date largest direct air capture and storage (DAC+S) plant, Mammoth, in Iceland. It is the second commercial DAC+S facility of Climeworks and is about ten times bigger than its predecessor plant, Orca.
- The plant is designed for a nameplate capture capacity of up to 36,000 tons of CO₂ per year once in full swing by filtering CO₂ from the air and storing it permanently underground. The plant has successfully started to capture its first CO₂, with twelve of its total 72 collector containers installed onsite.
- Mammoth is another milestone in Climeworks journey to reach megaton carbon removal capacity by 2030 and gigaton scale by 2050, which is needed to fight global warming.
- Beyond Iceland, Climeworks is developing multiple megaton hubs in the U.S. with operational and testing experience derived from its now two commercial plants in Iceland.



Mammoth, the world's largest direct air capture and storage plant, is designed for a nameplate capture capacity of up to 36,000 tons of CO₂ per year.

Hellisheiði, Iceland, 8 May 2024 – The largest direct air capture and storage plant, named Mammoth, starts operations in Iceland. It is the second commercial facility of Climeworks in Iceland and is about ten times bigger than its predecessor, Orca. Mammoth will bring new high-quality carbon removal capacity to the market for Climeworks to provide to its customers.

Mammoth – the facts in a nutshell

Climeworks broke ground on Mammoth in June 2022. The plant is built in a modular design, with twelve of its total 72 [collector containers](#) currently installed onsite. The plant will be completed throughout 2024. It is designed for a nameplate capture capacity of up to 36,000 tons of CO₂ per year.

Mammoth has successfully started to capture its first CO₂. Climeworks uses renewable energy to power its direct air capture process, which requires low-temperature heat like boiling water. The geothermal energy partner ON Power in Iceland provides the energy necessary for this process. Once the CO₂ is released from the filters, storage partner [Carbfix](#) transports the CO₂ underground, where it reacts with basaltic rock through a natural process, which transforms into stone, and remains permanently stored. Climeworks verifies and certifies the whole process by independent third parties.

Learn and improve continuously



Jan Wurzbacher, Co-founder and Co-CEO of Climeworks

Starting operations of our Mammoth plant is another proof point in Climeworks' scale-up journey to megaton capacity by 2030 and gigaton by 2050. It is exemplary of our continuous R&D investments to further optimize our technology and gain maturity through on-the-ground experience. Constructing multiple real-world plants in rapid sequences makes Climeworks the most deployed carbon removal company with direct air capture at the core.

Climeworks looks back on seven years of field experience. Its engineers process close to 200 million data points daily. The derived learnings were applied to Mammoth which increases plant performance, efficiency, recovery and ensure better availability to maximize CO₂ capture through the year. With Mammoth, Climeworks will gain further operational field experience, and its 180 science and R&D experts will continue large-scale testing and development.

100x scale-up through 2030

The operational and testing learnings will be deployed in the next direct air capture projects. Until 2030, Climeworks' roadmap focuses on megaton hub roll-out. Climeworks is part of three megaton direct air capture hub proposals in the U.S., all of which were selected by the US Department of Energy for public funding for a total of more than 600 million USD. The largest one, Project Cypress in Louisiana, was granted an initial 50 million US dollars in March to kickstart the project. Climeworks will replicate its megaton hubs worldwide to reach a global scale. The company actively develops projects in [Norway](#), [Kenya](#), and [Canada](#) and explores further potential direct air capture and storage sites.

Learn more about Mammoth

[Climeworks' Mammoth taking final shape in Iceland](#)

The core infrastructure of Climeworks' newest and largest direct air capture plant is in place



[Mammoth: manufacturing direct air capture plants at new scales](#)

The construction of Mammoth is well underway,, 2023 kicked off with the start of the CO₂ collector container production.



Mammoth's CO₂ collector containers – three of them stacked onto one foundation.

[Mammoth: innovating the DAC+S process with a CO₂ absorption tower](#)

Mammoth, Climeworks' DAC+S plant currently under construction, is making steady progress in Iceland with a CO₂ absorption tower developed by Carbfix.





Sign In

SOLUTIONS

DATA

INDUSTRIES

ABOUT US

INSIGHTS

Contact

Events

Home > Real Estate News & Articles > U.S. Homeowner Equity Remains Elevated But Dips Downward Again in First Quarter

U.S. Homeowner Equity Remains Elevated But Dips Downward Again in First Quarter

by ATTOM Team | May 8, 2024 | Home Sales & Prices, Real Estate News - Recent Articles



Equity-Rich Portion of Mortgaged Homes Hits Two-Year Low While Seriously Underwater Level Climbs; Total Owner Equity Also Ticks Downward Again as Home Prices Dip



IRVINE, Calif. — May 9, 2024 — ATTOM, a leading curator of land, property, and **real estate data**, today released its first-quarter 2024 U.S. Home Equity & Underwater Report, which shows that 45.8 percent of

mortgaged residential properties in the United States were considered equity-rich in the first quarter, meaning that the combined estimated amount of loan balances secured by those properties was no more than half of their estimated market values.

The portion of mortgaged homes that were equity-rich in the first quarter of 2024 is down from 46.1 percent in the fourth quarter of 2023, marking the third straight quarterly decline. The latest figure also was down from 47.2 percent in the first quarter of 2023, hitting the lowest point in two years.

At the same time, the report shows that the portion of mortgaged homes that were seriously underwater in the U.S. rose slightly in the first few months of 2024, from 2.6 percent to 2.7 percent of all residential mortgages. Seriously underwater mortgages are those with combined estimated balances of loans secured by properties that are at least 25 percent more than those properties' estimated market values.

"Homeowner balance sheets continue to benefit in a huge way from the boom times in the form of elevated equity that can be used to help finance all kinds of things, from home renovations to business startups. Still, the windfalls are starting to erode bit by bit amid mounting signs that the market is no longer so super-heated," said Rob Barber, CEO for ATTOM. "It's too early to make any broad statements about the market direction, especially coming off the typically slower Fall and Winter months. But amid the recent trends, this year's Spring buying season will be of heightened importance in telling us if there is a new long-term market pattern developing."

The latest equity drop-offs emerged as the national median single-family home and condo value slipped 4 percent over the Winter and was up just a modest 3 percent year-over-year during the first quarter. When prices flatten out or drop, equity usually follows even as homeowners pay off mortgages. That's because equity is based on mortgage debt as a portion of estimated property values.

Heading into the Spring buying season, the market faces a mix of forces that could drive it back up or hold it steady. Those forces include a tight supply of homes for sale and a strong investment market but also mortgage interest rates that have climbed back above 7 percent for a 30-year loan on top of home prices that remain a financial stretch for average wage earners.

Equity-rich share of mortgages declines quarterly in a majority of U.S.

The portion of mortgages that were equity-rich decreased in 26 of the 50 U.S. states from the fourth quarter of 2023 to the first quarter of 2024, commonly by less than two percentage points. Measured annually, equity-rich levels dropped from the first quarter of 2023 to the same period this year in 25 states.

The biggest quarterly declines came in the South regions, led by Kentucky (portion of mortgages homes considered equity-rich decreased from 35.4 percent in the fourth quarter of 2023 to 28.7 percent in the first quarter of 2024), South Carolina (down from 42.4 percent to 40 percent), Georgia (down from 46 percent to 43.7 percent), Delaware (down from 39.4 percent to 37.2 percent) and Indiana (down from 43 percent to 40.9 percent).

At the other end of the scale, equity-rich levels rose in 23 states from the fourth quarter of 2023 to the first quarter of 2024, mostly by less than one percentage point. The largest improvements were concentrated in the Midwest and West regions, led by South Dakota (up from 49.8 percent to 51.5 percent), Hawaii (up from 55 percent to 56.5 percent), Montana (up from 57.3 percent to 58.7 percent), North Dakota (up from 30.4 percent to 31.5 percent) and Mississippi (up from 37.3 percent to 38.3 percent).

Seriously underwater mortgage levels tick upward in most states

The portion of mortgaged homes considered seriously underwater rose slightly nationwide from one in 38 during the fourth quarter of last year

to one in 37 during the first quarter of this year. The ratio went up in 37 states, mostly by less than one percentage point.

The biggest increases were clustered in the South, which already had some of the nation's highest levels of seriously underwater mortgages. The largest quarterly increases were in Kentucky (share of mortgaged homes that were seriously underwater up from 6.3 percent in the fourth quarter of 2023 to 8.3 percent in the first quarter of 2024), West Virginia (up from 4.4 percent to 5.4 percent), Oklahoma (up from 5.5 percent to 6.1 percent), Arkansas (up from 5.2 percent to 5.7 percent) and Delaware (up from 2.3 percent to 2.7 percent).

On the flip side, states where the percentage of seriously underwater homes decreased most from the fourth quarter of 2023 to the first quarter of 2024 were Missouri (down from 5.6 percent to 4.5 percent), Mississippi (down from 8 percent to 7.1 percent), Arizona (down from 1.9 percent to 1.6 percent), Hawaii (down from 1.7 percent to 1.6 percent) and Tennessee (down from 2.9 percent to 2.8 percent).

Upscale markets in Northeast and West continue to have highest levels of equity-rich homeowners

Nine of the 10 states with the highest levels of equity-rich mortgaged properties around the U.S. during the first quarter of 2024 again were in the Northeast or West regions. Those with the largest portions were Vermont (82 percent of mortgaged homes were equity-rich), Maine (59.2 percent), Montana (58.7 percent), California (58.6 percent) and New Hampshire (57 percent).

Nine of the 10 states with the lowest percentages of equity-rich properties during the first quarter of 2024 were again in the Midwest or South. The smallest portions were in Louisiana (20.1 percent of mortgaged homes were equity-rich), Oklahoma (28.1 percent), Illinois (28.3 percent), Kentucky (28.7 percent) and Alaska (29.5 percent).

Among 107 metropolitan statistical areas around the nation with a population of at least 500,000, upscale markets where median home values topped \$400,000 dominated the list of places with the highest

portion of mortgaged properties that were equity-rich during the first quarter. (See ATTOM's latest [Q1 2024 home sales report](#)).

They were led by San Jose, CA (69.3 percent equity-rich, with a first-quarter median home price of \$1.4 million); Miami, FL (64.5 percent, with a median price of \$440,000); Los Angeles, CA (64.3 percent, with a median price of \$900,000); San Diego, CA (64.2 percent, with a median price of \$835,000) and Portland, ME (63.2 percent, with a median price of \$470,000).

The leader in the Midwest continued to be Grand Rapids, MI (53 percent, with a median price of \$287,000).

The metro areas with the lowest percentages of equity-rich properties in the first quarter of 2024 were mainly in low-priced markets. The smallest levels were in Baton Rouge, LA (12.7 percent of mortgaged homes were equity-rich, with a first-quarter median home price of \$212,533); Little Rock, AR (24 percent, with a median price of \$197,000); Virginia Beach, VA (26.2 percent, with a median price of \$305,000); and Tulsa, OK (27.6 percent, with a median price of \$215,000).

The portion of mortgaged homes considered equity rich declined from the fourth quarter of 2023 to the first quarter of 2024 in 63 of the 107 metro areas with sufficient data (59 percent) while the portion decreased from the first quarter of 2023 to the same period of 2024 in 70 percent.

Top equity-rich counties remain in Midwest, Northeast and West

Among 1,743 counties that had at least 2,500 homes with mortgages in the first quarter of 2024, the top 25 equity-rich locations were in the Midwest, Northeast or West regions, with none located in the South.

Counties with the highest share of equity-rich properties were Chittenden County (Burlington), VT (88.6 percent equity rich); Benzie County (Beulah), MI (86.6 percent); Addison County (Middlebury), VT (86.3 percent); Washington County (Montpelier), VT (85.3 percent) and Manistee County, MI (85.2 percent).

Counties with populations of at least 500,000 and the highest equity-rich levels were Santa Clara County (San Jose), CA (70.2 percent equity-rich); San Mateo County, CA (69.8 percent); Orange County, CA (outside Los Angeles) (68.1 percent); Palm Beach County (West Palm Beach), FL (67.5 percent) and Miami-Dade County, FL (67.5 percent).

Twenty-three of the 25 counties with the smallest share of equity-rich homes in the first quarter of 2024 were in the South. The lowest were in Campbell County (Gillette), WY (3.9 percent equity-rich); Vernon Parish (Leesville), LA (7.9 percent); Ascension Parish, LA (outside Baton Rouge) (8 percent); Jefferson County (Mount Vernon), IL (8.2 percent) and Marshall County, WV (outside Pittsburgh, PA) (8.9 percent).

Counties with populations of at least 500,000 and the smallest equity-rich portions were Baltimore City/County, MD (25.4 percent equity-rich); Prince George's County, MD (outside Washington, DC) (26.2 percent); Cook County (Chicago), IL (26.5 percent); Jefferson County (Louisville), KY (26.7 percent) and Anne Arundel County (Annapolis), MD (27.9 percent).

At least half of all mortgaged properties considered equity-rich in more than one-third of zip codes

Among 9,101 U.S. zip codes that had at least 2,000 residential properties with mortgages in the first quarter of 2024, there were 3,334 (37 percent) where at least half the mortgaged properties were equity-rich.

Among the top 50 zip codes, 32 were in California or Florida. The largest shares were in zip codes 83340 in Ketchum, ID (86.4 percent of mortgaged properties were equity-rich); 49855 in Marquette, MI (84.9 percent); 92657 in Newport Coast, CA (84.8 percent); 93108 in Santa Barbara, CA (84.6 percent) and 94024 in Los Altos, CA (84.2 percent).

Midwest and South have largest shares of seriously underwater mortgages

The Midwest and South regions had nine of the top 10 states with the highest shares of mortgages that were seriously underwater in the first quarter of this year. The top five were Louisiana (11.3 percent seriously

underwater), Wyoming (8.8 percent), Kentucky (8.3 percent), Mississippi (7.1 percent) and Oklahoma (6.1 percent).

The smallest shares were in Vermont (0.8 percent seriously underwater), Rhode Island (1.1 percent), New Hampshire (1.1 percent), California (1.2 percent) and Massachusetts (1.3 percent).

Among 107 metropolitan statistical areas with a population greater than 500,000, those with the largest shares of mortgages that were seriously underwater in the first quarter of 2024 were Baton Rouge, LA (13.4 percent); New Orleans, LA (7.3 percent); Jackson, MS (6.5 percent); Little Rock, AR (6 percent) and Syracuse, NY (5.6 percent).

More than 20 percent of residential mortgages seriously underwater in just 40 zip codes

Among 9,101 U.S. zip codes that had at least 2,000 homes with mortgages in the first quarter of 2024, there were only 40 locations where more than 20 percent of mortgaged properties were seriously underwater.

The top five zip codes with the largest shares of seriously underwater properties in the first quarter of 2024 were 82716 in Gillette, WY (87 percent of mortgaged homes were seriously underwater); 82718 in Gillette, WY (79.2 percent); 62864 in Mount Vernon, IL (55 percent); 42728 in Columbia, KY (49.3 percent) and 42445 in Princeton, KY (42.2 percent).

Report methodology

The ATTOM U.S. Home Equity & Underwater report provides counts of properties based on several categories of equity — or loan to value (LTV) — at the state, metro, county and zip code level, along with the percentage of total properties with a mortgage that each equity category represents. The equity/LTV is calculated based on record-level loan model estimating position and amount of loans secured by a property and a record-level **automated valuation model (AVM)** derived from publicly recorded **mortgage and deed of trust data** collected and licensed by ATTOM nationwide for more than 155 million U.S.

properties. The ATTOM Home Equity and Underwater report has been updated and modified to better reflect a housing market focused on the traditional home buying process. ATTOM found that markets where investors were more prominent, they would offset the loan to value ratio due to sales involving multiple properties with a single jumbo loan encompassing all of the properties. Therefore, going forward such activity is now excluded from the reports in order to provide traditional consumer home purchase and loan activity.

Definitions

Seriously underwater: Loan to value ratio of 125 percent or above, meaning the property owner owed at least 25 percent more than the estimated market value of the property.

Equity-rich: Loan to value ratio of 50 percent or lower, meaning the property owner had at least 50 percent equity.

About ATTOM

ATTOM provides premium **property data** to power products that improve transparency, innovation, efficiency, and disruption in a data-driven economy. ATTOM multi-sources property tax, deed, mortgage, foreclosure, environmental risk, natural hazard, and **neighborhood data** for more than 155 million U.S. residential and commercial properties covering 99 percent of the nation's population. A rigorous data management process involving more than 20 steps validates, standardizes, and enhances the **real estate data** collected by ATTOM, assigning each property record with a persistent, unique ID — the ATTOM ID. The 30TB ATTOM Data Warehouse fuels innovation in many industries including mortgage, real estate, insurance, marketing, government and more through flexible data delivery solutions that include **ATTOM Cloud, bulk file licenses, property data APIs, real estate market trends, property navigator** and more. Also, introducing our newest innovative solution, making property data more readily accessible and optimized for AI applications— **AI-Ready Solutions**.

Media Contact:

Financial Stability Report—2024

Households

Households are adjusting to the rise in debt-servicing costs.

Following sharp declines during the COVID-19 pandemic, many indicators of financial stress have now returned to more normal levels.⁶ Signs of stress are concentrated primarily among households without a mortgage and survey data suggest that, of these households, renters are most affected. In contrast, indicators of stress among mortgage holders are largely unchanged, remaining at levels lower than their historical averages. Factors such as income growth, accumulated savings and reduced discretionary spending are supporting households' ability to deal with higher debt payments.

Over the coming years, more mortgage holders will be renewing at higher interest rates. Based on market expectations for interest rates, payment increases will generally be larger for these mortgage holders than for borrowers who renewed over the past two years. Higher debt-servicing costs reduce financial flexibility for households and businesses and make them more vulnerable in the event of an economic downturn.

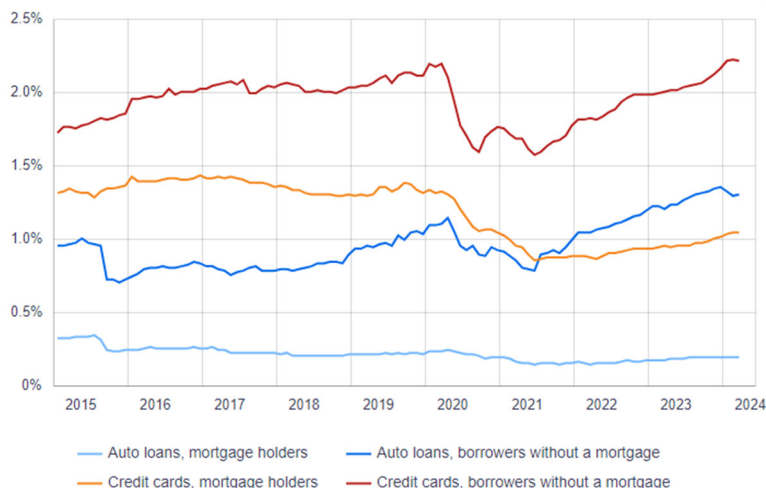
Signs of financial stress have risen primarily among households without a mortgage

The combination of higher inflation and higher interest rates continues to put pressure on household finances. Many indicators of financial stress, which had declined during the pandemic, are now close to pre-pandemic levels. Signs of increased financial stress appear mainly concentrated among renters.^{7, 8}

The rates of arrears on credit cards and auto loans for households without a mortgage—which includes renters and outright homeowners—are back to pre-pandemic levels and continue to grow ([Chart 1](#)).⁹ In contrast, arrears on these products for households with a mortgage have remained low and stable.

Chart 1: The increase in delinquencies on consumer debt products over the past 12 months has been concentrated among borrowers without a mortgage

Share of borrowers with credit products in arrears by 60 days or more, by mortgage status, seasonally adjusted

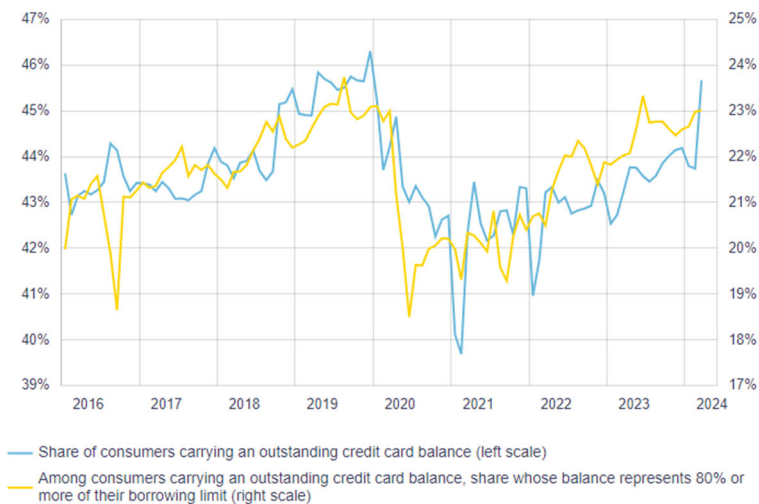


Sources: TransUnion and Bank of Canada calculations
Last observation: March 2024

Households have also increased their reliance on credit card debt. Research by Bank staff finds that households relying on credit cards to finance spending are more likely to experience financial stress in the future.¹⁰ In particular, borrowers without a mortgage who carry a credit card balance of at least 80% of their credit limit are significantly more likely to miss a future debt payment. Over the past 12 months, the share of these borrowers has continued to trend up ([Chart 2](#), yellow line).

Chart 2: Households without a mortgage have increased their reliance on credit card debt over the past 12 months

Indicators of credit card use by Canadians without a mortgage, seasonally adjusted



Note: Consumers are categorized as carrying an outstanding credit card balance when they do not pay fully their credit card balance—on at least one of their credit cards—for at least two consecutive months.
Sources: TransUnion and Bank of Canada calculations
Last observation: March 2024

More mortgage holders will be facing higher payments in the coming years

About half of all outstanding mortgages are held by borrowers who have yet to face higher rates because their payments were fixed for five years (with either a fixed or variable mortgage rate).¹¹ Households that hold these mortgages will generally see a larger payment increase than

those that have already renewed ([Chart 3](#)). The impact of the rise in debt-servicing costs will be partially offset for households whose income has grown over the intervening period.

Chart 3: Mortgages renewing over the coming years will see gradually larger payment increases

Median percentage increase in mortgage payment at renewal compared with at origination



Note: The mortgage rates used to calculate results are based on market expectations as at April 25, 2024. Increases are estimated on the stock of mortgages outstanding in February 2022.

Sources: Regulatory filings of Canadian banks and Bank of Canada calculations

Last data plotted: 2026

As mentioned in previous Reports, the financial pressure will increase most for households that took out a mortgage in 2021 and early 2022 when house prices were close to their peak and mortgage rates were very low. These borrowers generally:

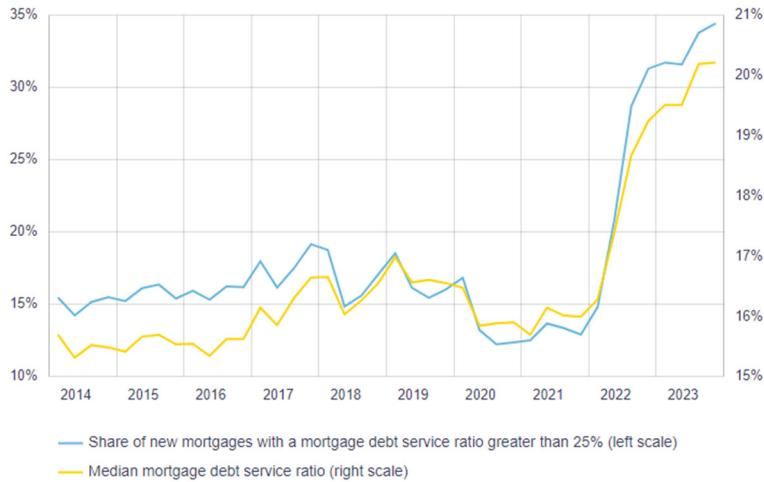
- have taken on large mortgages relative to their income
- have seen little increase (and potentially a decrease) in home equity
- will see larger increases in payments at renewal

Debt-servicing costs for new mortgages remain elevated

The share of income dedicated to mortgage payments—also called the mortgage debt service ratio—has been much larger for households that took on a mortgage after interest rates started rising in 2022 relative to households that took on a mortgage in prior years ([Chart 4](#)). As a result, at the end of 2023, over one-third of new mortgages had a mortgage debt service ratio greater than 25%, double the share of new mortgages with the same ratio in 2019. This growth has occurred despite households opting for smaller mortgages relative to their income and for longer amortization periods.¹²

Chart 4: Debt-servicing costs for new mortgages have risen substantially since 2022

Indicators of debt-servicing costs on new mortgages



Sources: Regulatory filings of Canadian banks and Bank of Canada calculations
Last observation: 2023Q4

Higher debt-servicing costs reduce a household’s financial flexibility, making them more financially vulnerable if their income declines or they face an unexpected material expense.

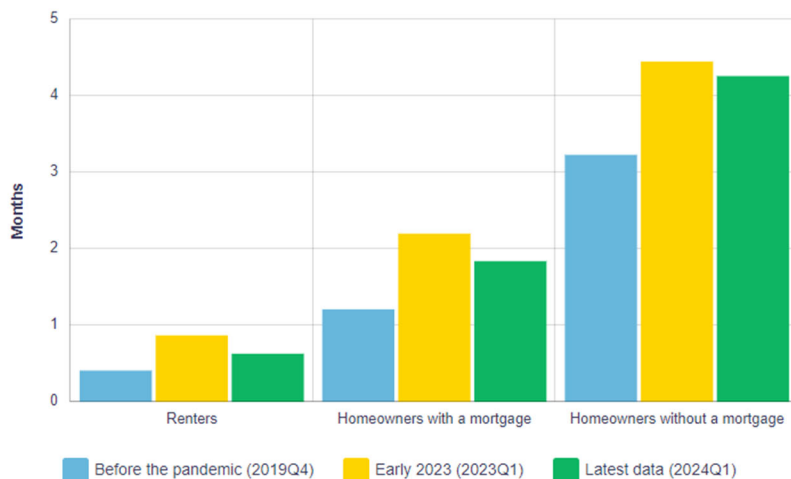
Most households retain some financial flexibility

The rise in house prices since the beginning of the pandemic has increased equity for most homeowners. In cases where mortgage holders run into financial stress, higher levels of home equity can act as a financial buffer, leaving room for borrowers to reduce their payments.

Similarly, access to liquid assets gives households some capacity to adjust to unexpected budget pressures. Survey data show that households—regardless of homeownership status—generally have more liquid assets as a share of their income than before the pandemic ([Chart 5](#)). That said, mortgage holders and renters hold fewer liquid assets as a share of their income compared with homeowners without a mortgage. In addition, the value of some of these assets could decline significantly during periods of stress when the funds are needed.¹³

Chart 5: Households still carry larger holdings of liquid assets than before the pandemic

Median equivalent number of months of after-tax income held in liquid assets, by homeownership status



Note: Liquid assets include chequing and savings deposits, guaranteed investment certificates, stocks, bonds, exchange-traded funds, mutual funds held in non-registered accounts and tax-free savings accounts.

Sources: Canadian Financial Monitor Survey and Bank of Canada calculations
Last observation: 2024Q1

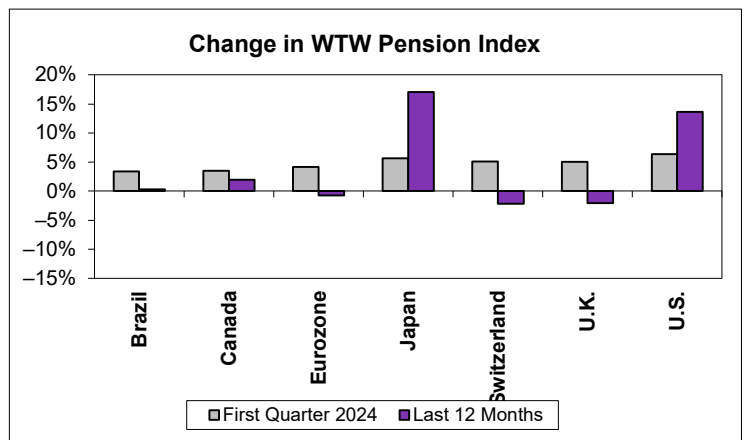
Global Pension Finance Watch – First Quarter 2024

Improved First Quarter Index Results

Resilient economic data drove a positive and more stable first quarter of the new year compared to the final quarter of 2023. Discount rates increased across all markets and asset performance was largely positive. Overall, the combined effects drove positive first quarter pension index results for all countries.

While it is always the case that Global Pension Finance Watch captures results at the end of each quarter, we particularly want to highlight the point in time view of this publication in light of recent volatility. WTW supports the daily monitoring of pension funded status and other key pension financial metrics for those organizations wishing to inform key business decisions.

Change in WTW Pension Index	Q1 2024	Last 12 Months
Brazil	3.4%	0.3%
Canada	3.5%	1.9%
Eurozone	4.1%	-0.8%
Japan	5.6%	17.1%
Switzerland	5.1%	-2.2%
U.K.	5.1%	-2.1%
U.S.	6.3%	13.6%



The WTW Pension Index is the ratio of the market value of assets to the projected benefit obligation (PBO) for a hypothetical benchmark plan.

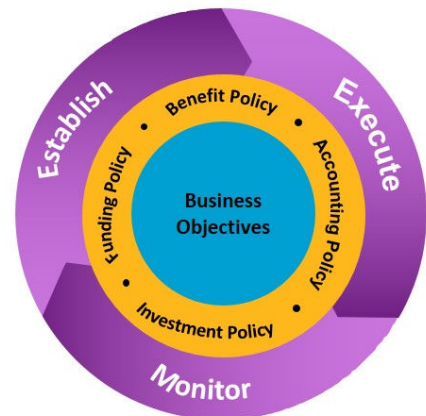
About this report

Global Pension Finance Watch, published quarterly, reviews how capital market performance affects defined benefit pension plan financing in major retirement markets worldwide, with a focus on linked asset/liability results. We cover defined benefit pension plans in Brazil, Canada, the Eurozone, Japan, Switzerland, the U.K. and the U.S. Specific plan results will vary, often substantially, based on liability characteristics, contribution policy, portfolio composition and management strategy among other factors. The passage of time since quarter end, may also have a significant impact on pension plan financing.

The impact of capital markets on these pension plans is twofold:

- Investment performance on fund assets
- Changes in economic assumptions on plan liabilities (as measured under international accounting standards)

If you have questions or comments about this report, please contact George Pantelides in New York at george.pantelides@wtwco.com or Frans Badenhorst in London at frans.badenhorst@wtwco.com



Role of monitoring as part of successful global pension risk management

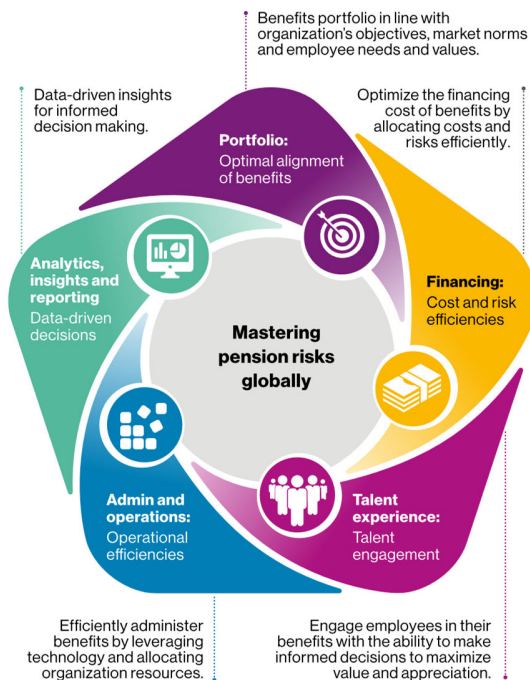
Those organizations that monitor their global pension plans are prepared to act quickly when market conditions evolve and have been most successful in achieving their cost and risk management objectives. Monitoring for such conditions is most effective when done in real-time, tailored to the specific characteristics of each retirement plan and supporting assets.

Email our experts to talk about daily monitoring and risk reduction.



The Global Pension Finance Watch captures results for benchmark plans at the end of each quarter and can be a useful guide. For those organizations wishing to inform key business decisions for their own plans, WTW supports the daily monitoring of funded status and other key pension financial metrics via the [Cost and Risk Management Channel](#).

Broader risk management perspective



Beyond financial monitoring, we observe multinationals with the greatest success in managing their defined benefit pension risks exhibit a number of consistent characteristics. They:

- Take the time to understand the complex risks inherent in the plans and the levers available to managing that risk
- Establish a clear, central level of tolerable risk and strategy to managing within those metrics
- Employ a systematic, multi-local approach to evaluating and deploying risk management actions
- Monitor financial markets, changing practices, legislation, and trends.

For more insights on the common techniques multinational organizations have deployed to manage pension risk, we encourage you to read our article on [Mastering DB Risks Globally](#).

Trends in global retirement
Resources for multinational employers

- A broad look at global retirement
- Global market updates
- Global legislative updates



Investment returns and liability growth

All countries, with the exception of the U.K., experienced positive asset returns during the first quarter.

Investment returns	Q1 2024	Last 12 Months
Brazil	0.7%	16.5%
Canada	1.2%	7.6%
Eurozone	2.8%	9.0%
Japan	5.8%	12.0%
Switzerland	5.0%	9.8%
U.K.	-1.5%	-0.7%
U.S.	5.2%	16.1%

Note: All regional financial results are stated on a local currency basis.

Benchmark discount rates experienced increases in all countries.

Benchmark discount rate*	Plan Duration	Mar. 2024	Dec. 2023	Sep. 2023
Brazil	13.6	10.12%	9.69%	10.08%
Canada	13.9	4.86%	4.62%	5.63%
Eurozone	16.6	3.27%	3.14%	4.08%
Japan	15.7	2.39%	2.36%	2.43%
Switzerland	15.4	1.36%	1.32%	1.86%
U.K.	16.6	4.84%	4.50%	5.55%
U.S.	13.8	5.38%	5.18%	5.98%

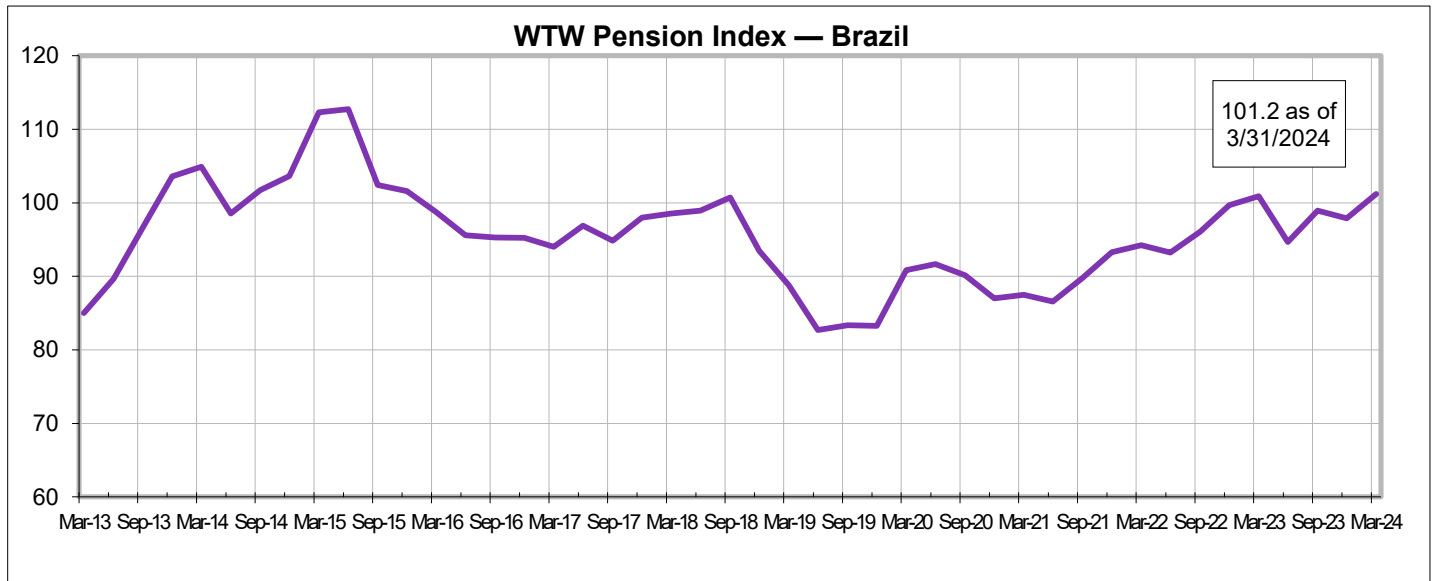
*Discount rates for the benchmark plans were determined using WTW's RATE:Link methodology in those countries where it is available. There is generally more than one acceptable approach for determining the discount rate in each country. The approach used for index purposes is one of several possible approaches; other acceptable methodologies may result in higher or lower discount rates.

Liability values decreased over the first quarter for all regions, except for Japan.

Liability growth factor	Q1 2024	Last 12 Months
Brazil	-2.6%	16.2%
Canada	-2.2%	5.6%
Eurozone	-1.2%	9.8%
Japan	0.1%	-4.3%
Switzerland	-0.1%	12.2%
U.K.	-6.3%	1.4%
U.S.	-1.0%	2.2%

Note: The liability growth factor reflects the net change in the benchmark plan's PBO due to interest accumulation and changes in financial assumptions.

Brazil



Bonds exhibited positive returns while equities experienced negative returns. Overall, the benchmark portfolio increased 0.7% over the quarter.

The nominal benchmark discount rate increased 43 basis points over the quarter. This change combined with interest accumulation resulted in a liability decrease of 2.6% over the first quarter.

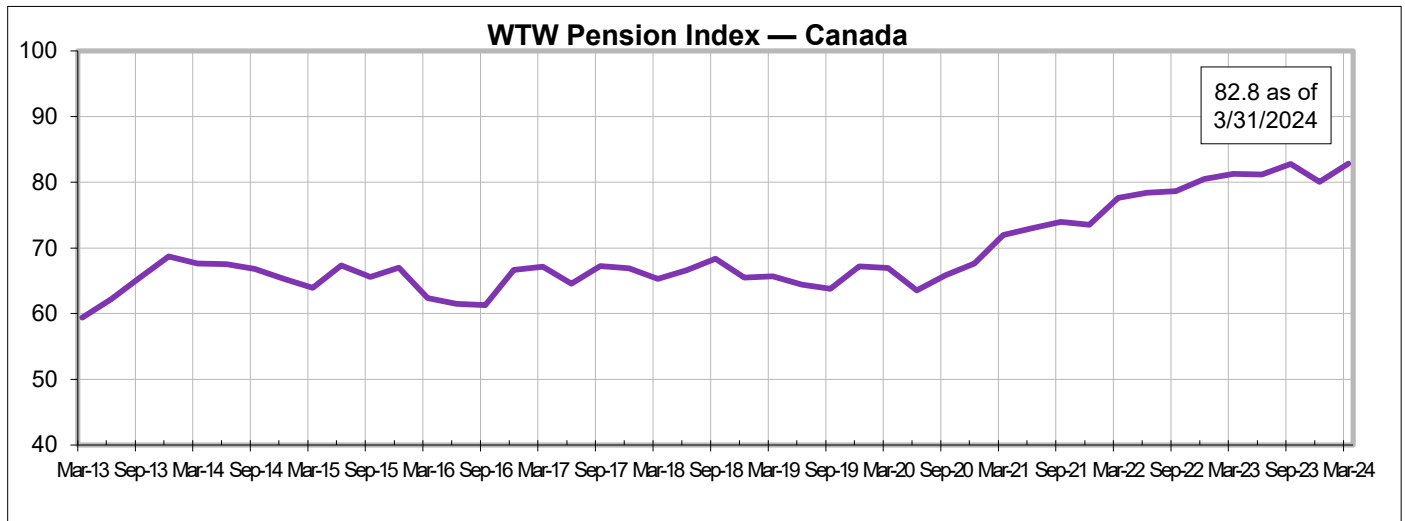
The combined asset and liability effect was a 3.4% increase in the pension index for the quarter.

Investment returns	Q1 2024	Last 12 Months
Domestic equity	-4.0%	36.9%
International equity	NA	NA
Domestic fixed income	1.3%	47.8%
International fixed income	NA	NA
Benchmark portfolio	0.7%	46.7%

Interest rates	Mar. 2024	Dec. 2023	Dec. 2023
30-year govt. bond (real)	5.88%	5.47%	5.85%
10-year govt. bond (real)	5.82%	5.33%	5.69%
Three-month benchmark yield (nominal)	10.37%	11.30%	12.26%
Long-term AA-rated corporate bond	NA	NA	NA
Benchmark discount rate (nominal)	10.12%	9.69%	10.08%



Canada



Equities showed positive returns over the quarter while bonds showed negative returns. Overall, the benchmark portfolio increased 1.2% over the quarter.

The benchmark discount rate decreased by 25 basis points over the quarter, which taken together with interest accumulation, decreased the liability by 2.2% over the quarter.

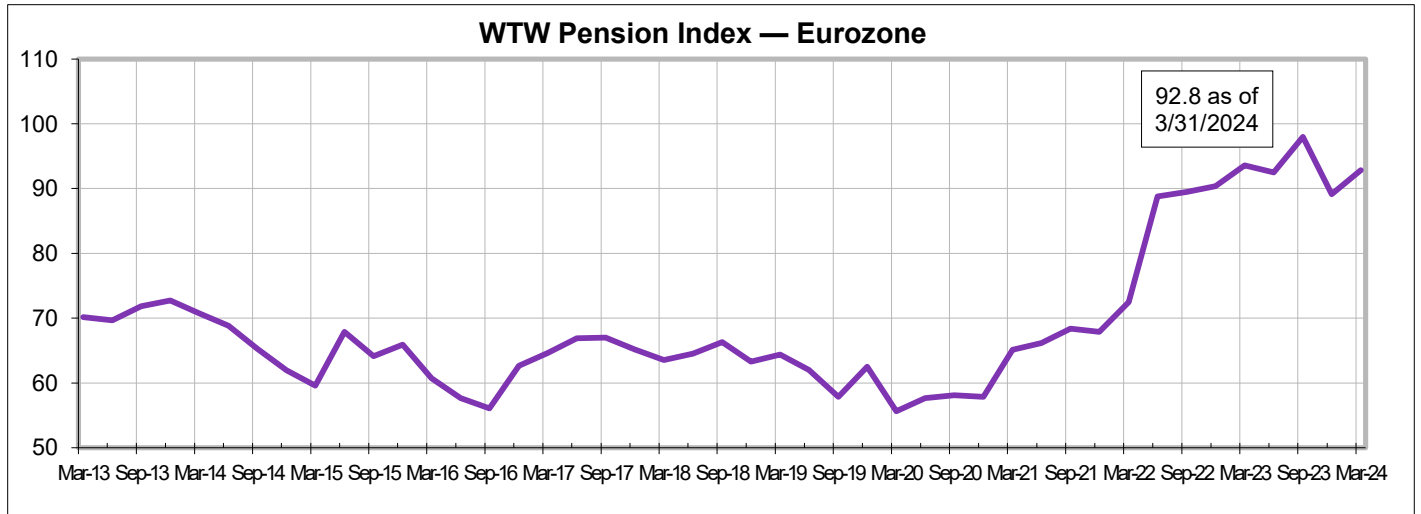
The combined effect of the asset and liability movements was a 3.5% increase in the pension index over the first quarter.

Investment returns	Q1 2024	Last 12 Months
Domestic equity	6.6%	14.0%
International equity	10.9%	22.7%
Domestic fixed income	-3.6%	0.8%
International fixed income	NA	NA
Benchmark portfolio	1.2%	7.6%

Interest rates	Mar. 2024	Dec. 2023	Sep. 2023
30-year govt. bond	3.34%	3.02%	3.81%
10-year govt. bond	3.45%	3.10%	4.03%
Three-month govt. bond	5.01%	5.05%	5.13%
Long-term AA-rated corporate bond	4.33%	4.04%	4.94%
Benchmark discount rate	4.86%	4.62%	5.63%



Eurozone



Equities showed positive returns over the quarter while bonds showed negative returns. Overall, the benchmark portfolio increased 2.8% over the quarter.

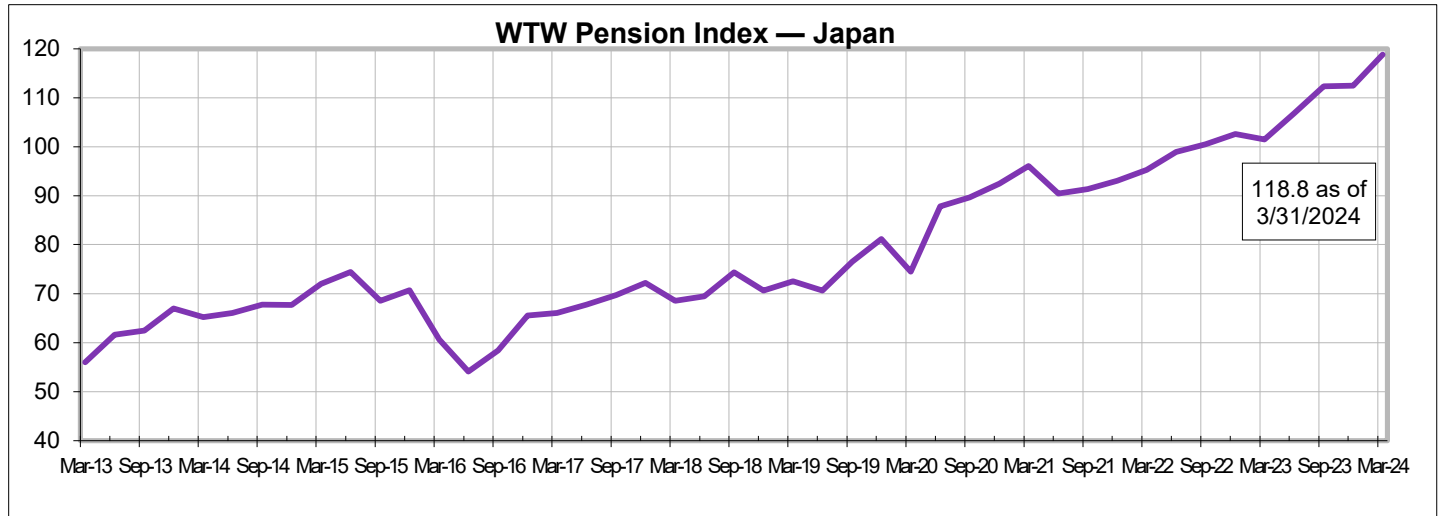
The benchmark discount rate increased by 13 basis points over the quarter, which combined with interest accumulation decreased the liability by 1.2% over the first quarter.

The combined effect of the asset and liability movements was 4.1% increase in the pension index over the quarter.

Investment returns	Q1 2024	Last 12 Months
Domestic equity	7.8%	15.5%
International equity	NA	NA
Domestic fixed income	-0.4%	4.7%
International fixed income	NA	NA
Benchmark portfolio	2.8%	9.0%

Interest rates	Mar. 2024	Dec. 2023	Sep. 2023
30-year gov. bond	2.46%	2.26%	3.03%
10-year gov. bond	2.30%	2.02%	2.84%
Three-month gov. bond	N/A	N/A	N/A
Long-term AA-rated corporate bond	3.32%	3.17%	4.06%
Benchmark discount rate	3.27%	3.14%	4.08%

Japan



Domestic equities and international bonds showed positive returns while domestic bonds showed negative returns. This resulted in a 5.8% increase in the overall benchmark portfolio over the quarter.

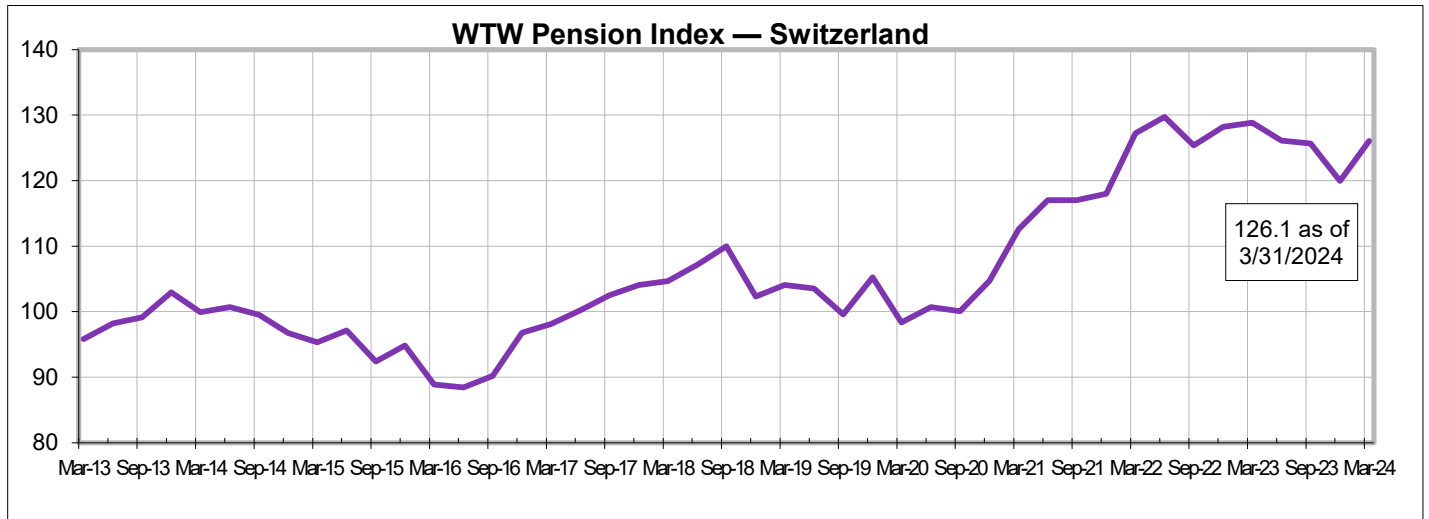
The benchmark discount rate increased by 3 basis points over the quarter. Overall with interest accumulation the liability increased by 0.1% over the quarter.

The combined effect of the asset and liability movements was a 5.6% increase in the pension index over the quarter.

Investment returns	Q1 2024	Last 12 Months
<i>Domestic equity</i>	18.7%	42.1%
<i>International equity</i>	17.0%	43.0%
<i>Domestic fixed income</i>	-0.6%	-3.1%
<i>International fixed income</i>	4.1%	10.9%
<i>Benchmark portfolio</i>	5.8%	12.0%

Interest rates	Mar. 2024	Dec. 2023	Sep. 2023
30-year govt. bond	1.86%	1.78%	1.72%
10-year govt. bond	0.75%	0.67%	0.79%
Three-month govt. bond	-0.05%	-0.21%	-0.22%
Long-term AA-rated corporate bond	NA	NA	NA
Benchmark discount rate	2.39%	2.36%	2.43%

Switzerland



Both bonds and equities exhibited positive returns. Overall, the benchmark portfolio increased 5.0% over the quarter.

The benchmark discount rate increased 4 basis points over the quarter. This change combined with interest accumulation decreased liabilities by 0.1% over the quarter.

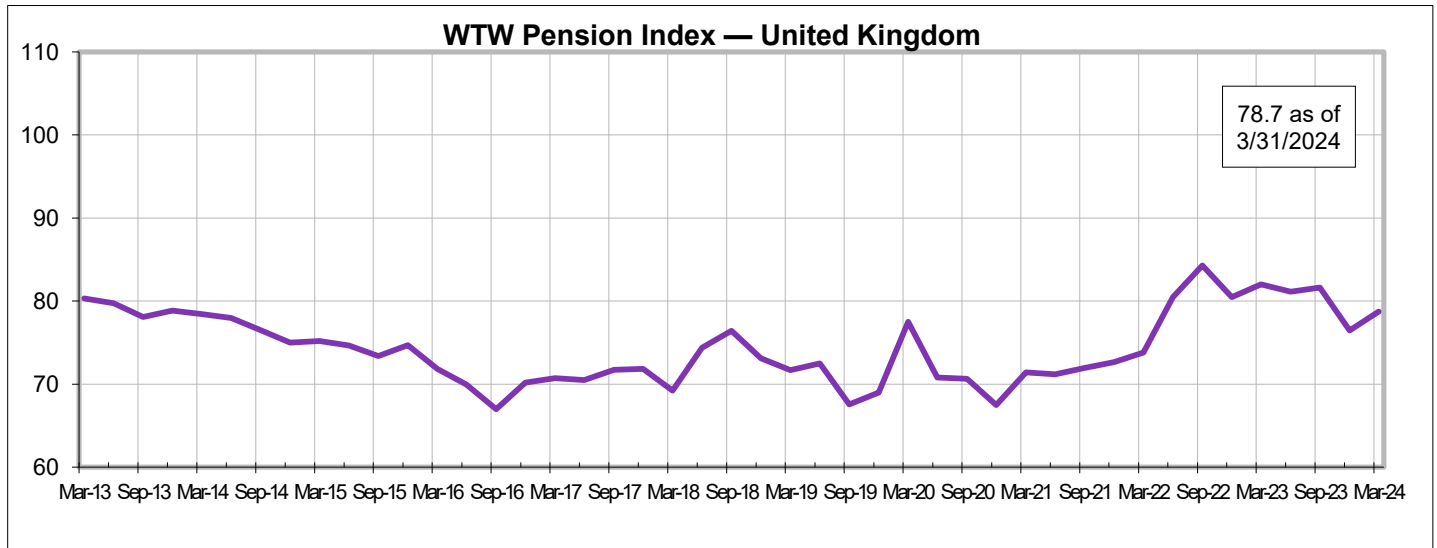
The combined effect of the asset and liability movements was a 5.1% increase in the pension index over the quarter.

Investment returns	Q1 2024	Last 12 Months
Domestic equity	6.0%	6.2%
International equity	NA	NA
Domestic fixed income	0.5%	6.4%
International fixed income	NA	NA
Benchmark portfolio	5.0%	9.8%

Interest rates	Mar. 2024	Dec. 2023	Sep. 2023
30-year govt. bond	0.65%	0.54%	1.04%
10-year govt. bond	0.65%	0.70%	1.08%
Three-month govt. bond	NA	NA	NA
Long-term AA-rated corporate bond	NA	NA	NA
Benchmark discount rate	1.36%	1.32%	1.86%



United Kingdom



Equities showed positive returns while bonds showed negative returns during the quarter. Overall, the benchmark portfolio decreased 1.5% over the quarter.

The benchmark discount rate increased 34 basis points over the quarter. Overall, this change combined with interest accumulation decreased the liability by 4.4% over the quarter.

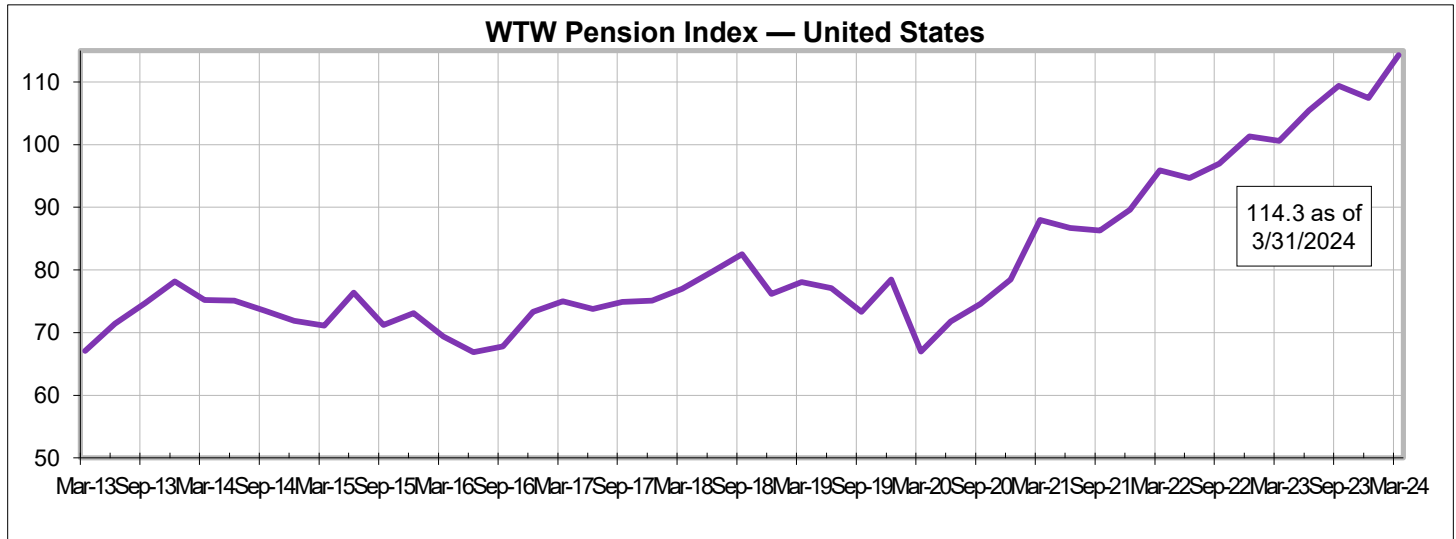
The combined effect of the asset and liability movements was a 3.0% increase in the pension index over the quarter.

Investment returns	Q1 2023	Last 12 Months
Domestic equity	4.6%	10.0%
International equity	9.3%	21.4%
Domestic fixed income	-3.6%	-4.6%
International fixed income	NA	NA
Benchmark portfolio	-1.5%	-0.7%

Interest rates	Mar. 2024	Dec. 2023	Sep. 2023
30-year govt. bond	4.42%	4.14%	4.90%
10-year govt. bond	3.93%	3.53%	4.44%
Three-month govt. bond	5.25%	5.24%	5.34%
Long-term AA-rated corporate bond	4.80%	4.51%	5.44%
Benchmark discount rate	4.84%	4.50%	5.55%



United States



Equities showed positive returns while bonds showed negative returns during the first quarter. Overall, the benchmark portfolio increased 5.2% over the quarter.

The benchmark discount rate increased 20 basis points for the quarter. This change combined with interest accumulation decreased the liability by 1.0% over the quarter.

The combined effect of the asset and liability movements was a 6.3% increase in the pension index for the quarter.

Investment returns	Q1 2024	Last 12 Months
Domestic equity	9.9%	28.2%
International equity	5.8%	15.3%
Domestic fixed income	-0.5%	2.2%
Benchmark portfolio	5.2%	16.1%

Interest rates	Mar. 2024	Dec. 2023	Sep. 2023
30-year govt. bond	4.34%	4.03%	4.73%
10-year govt. bond	4.20%	3.88%	4.59%
Three-month govt. bond	5.46%	5.40%	5.55%
Long-term AA-rated corporate bond	5.05%	4.82%	5.59%
Benchmark discount rate	5.38%	5.18%	5.98%



General comments

In order to obtain a general indication of pension plan performance in various countries, we defined a benchmark pension plan that is intended to be representative of the pension liabilities and plan assets (including asset mix) that are typically found in each global market. Note that certain simplifying assumptions are made about cash contributions made to the benchmark plan and other characteristics.

Liability measurement

Pension plan liabilities under many commonly used international accounting standards (including ASC 715, CICA 3461, CVM 371, FRS 17 and IAS 19) are measured using a discount rate that is set based on yields available on high-quality corporate bonds as of the date that liabilities are measured.

While the discount rate is the most commonly quoted assumption, liability and expense calculations depend on a number of additional assumptions, both economic (such as expected salary increases and expected benefit increases) and demographic. Other financial assumptions are adjusted so as to remain consistent with changes in the discount rate.

Asset smoothing

ASC 715 and CICA 3461 allow plan sponsors to use smoothing mechanisms to buffer the effects of year-to-year investment performance. Plans using these approaches will see the effect of investment return experience spread over a period of years.

Currency effects

The results presented in this document are in local currency. Changes in relative currency values may have a significant impact on asset and liability measurements. The effect of currency movements depends on the company's reporting currency and its global allocation of assets and liabilities. The accompanying table shows the value of foreign currency that equates to one U.S. dollar at various measurement dates.

Exchange rates (currency per US\$1)	Mar. 2024	Dec. 2023	Sep. 2023
Brazil	5.01	4.85	5.02
Canada	1.35	1.32	1.35
Eurozone	0.93	0.91	0.94
Japan	151.30	141.0	149.26
Switzerland	0.90	0.84	0.91
U.K.	0.79	0.79	0.82

Local regulatory requirements

This update reviews financial results for pension plans based on measurements defined by international accounting standards. Local accounting or funding requirements may be based on significantly different types of asset or liability measures in some locations.

Eurozone benchmark plan

The results shown for the Eurozone are based on typical funded plans found in Belgium and the Netherlands.



Definition of terms

Bond yields

- Government bond yields are based on published information. Government bond yields for the Eurozone are based on German government bonds. Due to the lack of marketable securities, Brazilian government bond yields are real rates, except for the three-month government bond yield, which is a nominal rate (i.e., includes inflation).
- Corporate bond yields reflect the FTSE TMX Corporate Bond Index for Canada, iBoxx EURO Corporates AA 10+ for the Eurozone, iBoxx 15+ AA Corporate Bond Index for the U.K. and ML 10+ High-Quality Index in the U.S.
- Benchmark discount rates are determined for the average plan based on yields available on high-quality corporate bonds as of the date that liabilities are measured. Discount rates for Canada, the Eurozone, Japan, Switzerland, the U.K. and the U.S. are based on our RATE:Link methodology. Discount rates for Brazil are a proxy for the yield on corporate bonds, developed from the real yield on 30-year government bonds with an adjustment to account for liquidity characteristics and the addition of a long-term inflation assumption. Higher or lower discount rates might be appropriate for other plans.

Benchmark investment returns

- Benchmark investment returns reflect the combined effect of price changes and interest or dividend income. This will typically differ from the daily results published in financial journals, which are based solely on price changes.
- Investment returns have been based on commonly quoted local benchmarks, as detailed below:
 - For Brazil, domestic equity returns are based on the FTSE All-World Brazil index, and domestic fixed-income returns on the iBoxx GEMX Brazil index.
 - For Canada, domestic equity returns are based on the S&P/TSX Composite, international equity returns on 10% S&P 500 (in Canadian dollars), 20% S&P TSX Composite (in Canadian dollars), 10% MSCI EAFE Total Return Index Net Dividends (in Canadian dollars) and domestic fixed-income returns on 60% FTSE TMX Long Bond Total Return.
 - For the Eurozone, domestic equity returns are based on the MSCI Eurozone market index, international equity returns on the MSCI World ex-EMU total return index and domestic fixed-income returns on the iBoxx EUR Overall index.
 - For Japan, domestic equity returns are based on the FTSE All-World Japan index, international equity returns on the MSCI World (ex-Japan) Index with net dividends reinvested, domestic fixed-income returns on the FTSE Japan Government Total index and international fixed-income returns on the FTSE Global Government Bond index.
 - For Switzerland, portfolio returns are based on the Pictet Index 2005 BVG-40+ index.
 - For the U.K., domestic equity returns are based on the FTSE All Share, international equity returns on the FTSE All-World ex-U.K. and domestic fixed-income returns on the FTSE Over 15 Years Gilts.
 - For the U.S., domestic equity returns are based on 80% S&P 500 Index and 20% Russell 2500, international equity returns on the MSCI EAFE Index, and domestic fixed-income returns on 87.5% Barclays Capital Aggregate Bond Index and 12.5% three-month T-bills.
- Benchmark portfolio returns have been based on a typical diversified portfolio in each country that has not yet been secured via an insurance policy. Benchmark portfolio returns for this quarter have been based on the following asset allocations:
 - Brazil: 10% domestic equity and 90% domestic fixed income
 - Canada: 40% equity (20% domestic, 20% international) and 60% domestic fixed income
 - Eurozone: 40% domestic equity and 60% domestic fixed income
 - Japan: 30% equity (20% domestic, 10% international) and 70% fixed income (50% domestic, 20% international)
 - Switzerland: 30% equity (10% domestic, 20% international), 50% fixed income (30% domestic, 20% international), 10% real estate and 10% other assets (5% hedge funds, 5% private equity)
 - U.K.: 20% equity (10% domestic, 10% international) and 80% domestic fixed income
 - U.S.: 60% equity (50% domestic, 10% international) and 40% domestic fixed income

WTW Pension Index

- The WTW Pension Index is a measure of the PBO funded ratio, or the ratio of the market value of assets to the PBO for a benchmark plan. Asset values change from quarter to quarter based on the investment performance of the benchmark portfolio, assumed contributions and benefit payments. Liability values change with accumulated service cost and interest, benefit payments and the effect of any changes in financial assumptions. Contributions are assumed to be equal to the service cost for each benchmark plan, so that the Index captures the impact of capital market results.



- Pension Finance Watch is designed to support our clients in the ongoing financial management of their global retirement plans. The report tracks the value of the WTW Pension Index in a series that was initiated in 1990. The index reflects the asset/liability performance of a hypothetical benchmark pension plan, and it provides an indicator of capital market effects on pension plan financing. Individual plan results will vary based on such factors as portfolio composition, investment management strategy, liability characteristics and contribution policy.

About WTW

At WTW (NASDAQ: WTW), we provide data-driven, insight-led solutions in the areas of people, risk and capital. Leveraging the global view and local expertise of our colleagues serving 140 countries and markets, we help you sharpen your strategy, enhance organizational resilience, motivate your workforce and maximize performance.

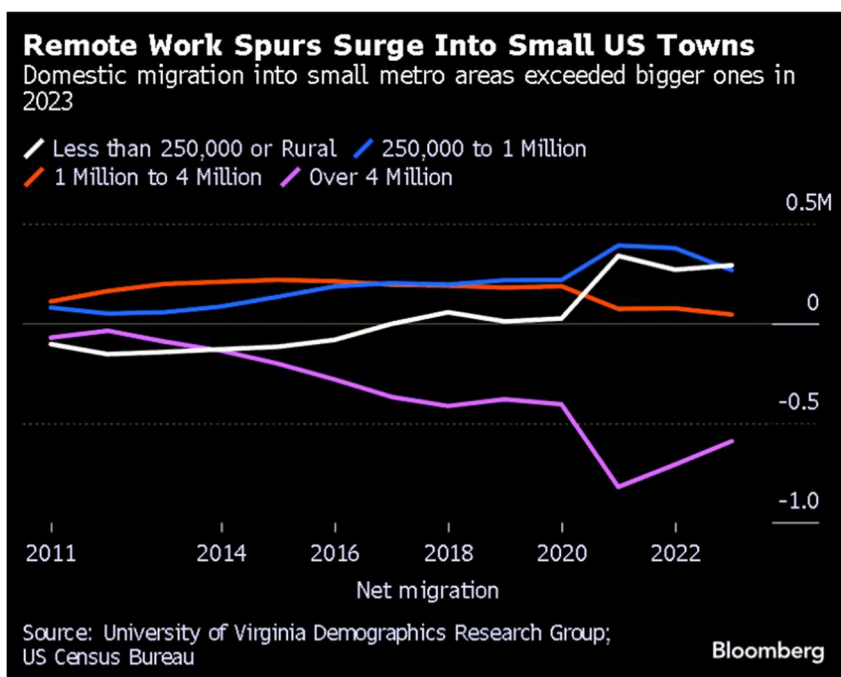
Working shoulder to shoulder with you, we uncover opportunities for sustainable success—and provide perspective that moves you.

For more information on *Global Pension Finance Watch*, visit [wtwco.com](https://www.wtwco.com).

By Michael Sasso

(Bloomberg) -- Score a victory for Mayberry. America's small towns, like the iconic setting of television's *The Andy Griffith Show* from the 1960s, saw more in-migration in 2023 than larger areas for the first time in decades.

The remote work boom that prompted Americans to flee urban areas for mountain hamlets and seaside towns during the pandemic continued at least through last year, according to University of Virginia demographer Hamilton Lombard. An estimated 291,400 people last year migrated from other areas into America's small towns and rural areas, which Lombard defines as metropolitan areas with 250,000 people or fewer.



That number exceeded net migration into larger areas for the first time since at least the 1970s, estimated Lombard, who works with the university's Demographics Research Group. Areas with 250,000 to 1 million people saw a net in-migration of 266,448 people last year, while areas with 1 million to 4 million people recorded only a modest gain. Areas with more than 4 million people were the big losers, shedding almost 600,000 people last year, according to Lombard's research using US Census Bureau data.

"With a third of workdays being done remotely in 2023, Americans have more geographic flexibility and have been increasingly willing to move far from large population centers if their destination offers a good quality of life," Lombard wrote.

The study focuses only on in-country migration, and does not include immigration from outside the US.

Starbucks Responds

The influx of people is already changing the Mayberry-esque nature of the US' small towns. In southern Virginia, tiny Martinsville, once dubbed the world's "Sweatshirt Capital" for its textile industry, has seen some of the state's strongest wage growth. Its domestic migration rate ranked second in Virginia last year.

Starbucks noticed the growth and in 2021 opened its first coffee shop in Martinsville, Lombard noted in his report. Since then the ubiquitous chain has spread across other southern Virginia towns, he said.

To be sure, the continued growth of small towns depends, in part, on the work-from-home trend continuing, Lombard said. He pointed to research on remote work from Stanford University, which estimated that about 28% of paid days in the US as of March were work-from-home days. That's down from the pandemic period, but far higher than before Covid.

"If remote work sticks around, it seems like this trend will stick around," Lombard said.

To contact the reporter on this story:

Michael Sasso in Atlanta at msasso9@bloomberg.net

To contact the editors responsible for this story:

Cécile Daurat at cdaurat@bloomberg.net

Christopher Condon, Robert Jameson

To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/SD4F3DDWLU68>

Korea's working-age population to dip nearly 10 mil. by 2044 amid low births

Posted : 2024-05-06 10:07

Updated : 2024-05-07 13:48

Korea's economically active population is anticipated to plunge nearly 10 million by 2044 amid the country's critically low births, data showed Monday.

The number of people aged 15 to 64, which stood at 36.57 million in 2023, is projected to decrease to 27.17 million in 2044, according to a report from the Korean Peninsula Population Institute for the Future.

The report also showed the number of elementary school freshmen, which came to 430,000 last year, is set to nearly halve to 220,000 in 2033.

The number of deaths was expected to reach 746,000 in 2060, compared with births estimated at just 156,000, leading to a natural population decline of 590,000.

Accordingly, Korea's total population, estimated at 51.71 million in 2023, was forecast to drop to 39.69 million by 2065.

"The decline in the economically active population will damage consumption, leading to the collapse of the domestic market. It will also increase the burden of supporting the senior population, leading to an economic slowdown and prolonged low growth," the institute said.

Korea has been grappling with a chronically low birth rate, with the total fertility rate, the average number of children expected to be born per woman over her lifetime, reaching a record low of 0.72 in 2023.

This figure is far below the 2.1 births per woman needed to maintain a stable population without immigration.

In February 2024, only 19,362 babies were born, marking the lowest number for any February since the statistics agency began collecting data in 1981. (Yonhap)

<https://www.jpost.com/israel-news/article-800590>

A break down of Israel's population on the country's 76th Independence Day

Israel's population currently stands at 9.9 million people. When broken down into sectors, there are 7.247 million Jews, who make up 73.2% of the population, while the Arab population stands at 2.089

By JERUSALEM POST STAFF MAY 9, 2024 18:38 **Updated:** MAY 10, 2024 12:52



People watch the military airshow as part of Israel's 75th Independence Day celebrations, in Saker Park, Jerusalem, April 26, 2023.(photo credit: YONATAN SINDEL/FLASH90)

With [Israel's Independence Day](#) coming up next Tuesday, [the Central Bureau of Statistics](#) has released new data regarding the country's population in 2024, comparing the growth of the country to the population 76 years ago, at the state's founding.

Israel's population currently stands at 9.9 million people. When broken down into sectors, there are 7.247 million Jews, who make up 73.2% of the population, while the Arab population stands at 2.089 million, making up 21.1% of the population.

The study showed that 564,000 people do not fall into either sector, making up 5.7% of the population.

Growth since 1948

These numbers show Israel's population has grown by 189,000 people (1.9%) since last year's Independence Day. Over the course of the year, 196,000 babies were born, 37,00 people made Aliyah, and 60,000 people passed away.

Furthermore, the Central Bureau of Statistics compared these numbers to the population of Israel 76 years ago, when the country declared its independence. At the time, Israel's population stood at 806,000 people, showing that the country's population has increased by 12 times in size.



Israel's population on Israel's

76th Independence Day 2024. (credit: CENTRAL BUREAU OF STATISTICS)

Israel's population is considered to be young, with 28% of it consisting of children between the ages of 0 and 14, while only 12% of the population is made up of adults aged 65 and over.

From looking at the rate of the country's growth through these numbers, it is expected that by next year, in 2025, Israel's population will hit [the mark of ten million](#).

By Israel's 100th Independence Day in 2048, it is expected that Israel's population will reach 15 million.

KFF The independent source for health policy research, polling, and news.

<https://www.kff.org/health-costs/press-release/poll-1-in-8-adults-say-theyve-taken-a-glp-1-drug-including-4-in-10-of-those-with-diabetes-and-1-in-4-of-those-with-heart-disease/>

Poll: 1 in 8 Adults Say They've Taken a GLP-1 Drug, Including 4 in 10 of Those with Diabetes and 1 in 4 of Those with Heart Disease

About Half Who Have Taken the Drugs Say It Was Difficult to Afford Even with Insurance

May 10, 2024

Contact: [Tammie Smith](#)

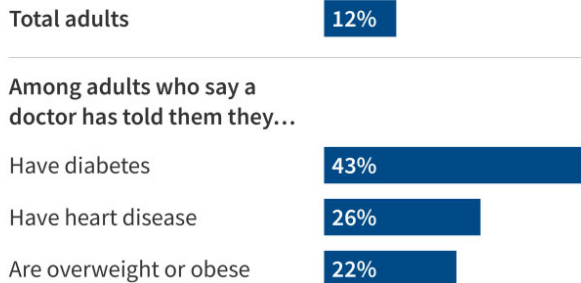
About one in eight adults (12%) say they have taken one of an increasingly popular class of prescription drugs known as GLP-1s that are used for weight loss and to treat diabetes and reduce the risk of heart disease and stroke, a [new KFF Health Tracking Poll](#) finds. This includes 6% of adults who say they are currently taking one of these drugs, which include Ozempic, Wegovy and Mounjaro

The shares of adults who report ever taking these drugs is highest among people with diabetes (43%), followed by those with heart disease (26%) and those who have obesity or overweight (22%), the poll finds.

Among those who report ever taking the drugs, most (61%) say that they took the drugs to treat a chronic condition such as diabetes or heart disease – either alone (39%) or in combination with losing weight (23%). Nearly four in ten (38%) say that they took the drugs solely to lose weight.

One in Eight Adults Say They Have Ever Used GLP-1 Drugs, Rising to Four in Ten Among Adults Who Have Been Diagnosed With Diabetes

Percent who say they have ever used GLP-1 agonist drugs to lose weight or treat a chronic condition such as diabetes or heart disease:



Note: See topline for full question wording.

Source: KFF Health Tracking Poll (April 23 – May 1, 2024)

KFF

List prices for GLP-1 drugs can top \$1,000 for a month's supply prior to insurance coverage, rebates, and discount coupons. About half (54%) of those who report ever taking the drugs say it was difficult to afford them, including one in five (22%) who say it was "very difficult."

Having insurance coverage makes little difference to patients' perceptions of the drugs' affordability, with similar shares of those covered by insurance saying the drugs were difficult (53%) or very difficult (23%) to afford.

Most of the Public Favors Medicare Coverage of Weight-Loss Drugs Even After Hearing Competing Arguments

While 9% of older adults ages 65 and older report ever taking the drugs, few (1%) say they did so solely for weight loss – likely reflecting Medicare's prohibition on the coverage of prescription weight-loss drugs. Medicare covers some of the drugs for diabetes and other conditions.

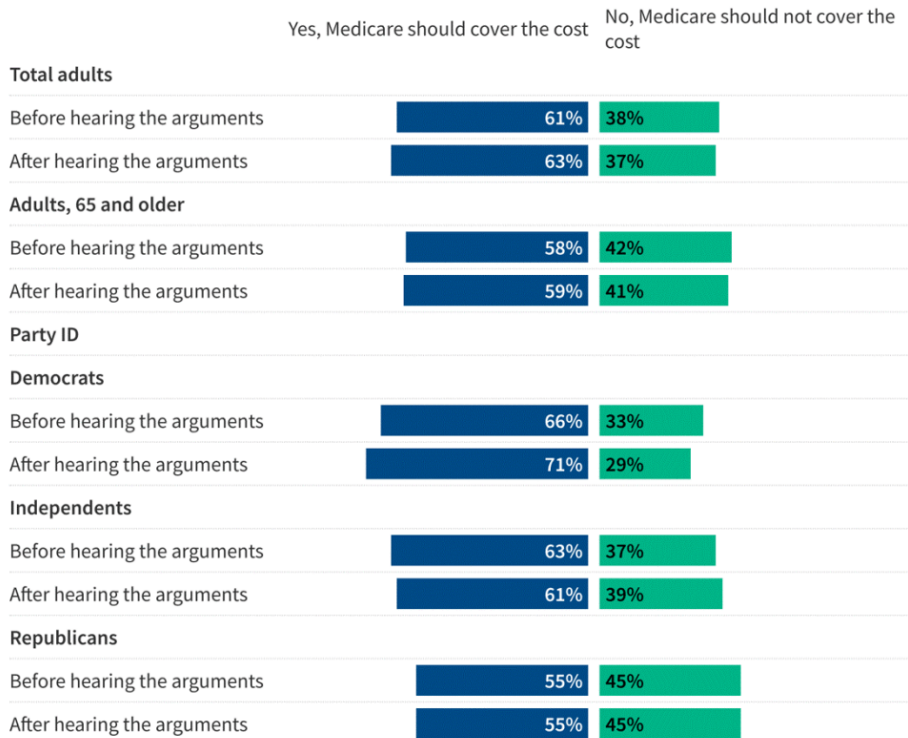
About six in ten adults (61%) say that Medicare should cover these drugs when prescribed for weight loss for people who are overweight. This includes similar shares across age groups, and more than half of Democrats, independents, and Republicans.

The poll also tested the impact of arguments for and against Medicare coverage, with short descriptions explaining that it could increase premiums for people with Medicare and place financial pressure on the Medicare program and the federal budget, but that it could help more people afford the medications and improve the health and quality of life of people who are overweight.

Those arguments did little to change the public’s views, with similar shares of the public overall and the various subgroups continuing to favor Medicare coverage.

Opinion Regarding Medicare Coverage of GLP-1 Drugs Remains Largely Unchanged After Hearing Arguments on Both Sides of the Debate

Do you think Medicare should cover the costs of GLP-1 agonist drugs when prescribed for weight loss for people who are overweight?



Note: See topline for full question wording.
 Source: KFF Health Tracking Poll (April 23-May 1, 2024)



Other findings include:

- About eight in ten (82%) adults say they have heard at least “a little” about these drugs, including about three in ten (32%) who say they have heard “a lot” about them. Awareness is up since July 2023, when about one in five (19%) said they heard a lot about the drugs.
- About eight in ten (79%) adults who have taken GLP-1 drugs report getting these drugs or a prescription for them from their primary care doctor or a specialist. Fewer report getting them from an online provider or website (11%), a medical spa or aesthetic medical center (10%), or somewhere else (2%).

Designed and analyzed by public opinion researchers at KFF. The survey was conducted April 23-May 1, 2024, online and by telephone among a nationally representative sample of 1,479 U.S. adults in English and in Spanish. The margin of sampling error is plus or minus 3 percentage points for the full sample. For results based on other subgroups, the margin of sampling error may be higher.



Dan Tsubouchi @Energy_Tidbits · 3h
Easing 2024 #Oil demand fcasts.

"People had been looking at close to 2 mmbpd year-on-year growth and I see consultants easing those numbers off into the 1.65, 1.8 type range" "area where it's been giving back a little is diesel" @vitolnews @michaelwmuller

#OOTT @sean_evers...
Show more

"People had been looking at close to 2 million bpd year-on-year growth [oil demand] and I see consultants easing those numbers off into the 1.65, 1.8 type range." Mike Muller, Head, Vitol Asia.



SAF Group created transcript of comments by Mike Muller (Head, Vitol Asia), Christof Ruhl (Senior Research Scholar, center on Global Energy Policy Columbia University with host Sean Evers (Founder & Managing Partner Gulf Intelligence) on Gulf Intelligence Daily Energy Markets Podcast on May 12, 2024

Items in "Italics" are SAF Group created transcript.

At 1:35 min mark, Evers asked why giving up all the gains in oil from the first quarter, Muller *"I guess the geopolitical turbulence that we saw early this year is still as is. We still have a recent attack on a Russian refinery far into Russian territory just the other day. We still have disruptions in the Gulf of Aden. And we still have great global concern around Gaza. The point I guess is that none of these events have severely disrupted supply of actual oil flows. And we therefore have now moved from a Q1, which has the added hope of cold weather and concerns like that, into a Q2 trading window. Indeed, for crude oil we are already trading into Q3 because the actual trading month is now July. We're through the period of uncertainty which is characterized by refinery turnarounds every springtime. And people are doing their forward stock projections and factoring the latest inputs on the demand side of the equation where there continues to be concern over Chinese growth rates. So various analysts out there have seen a peaking of the year-on-year demand growth projections. The backdrop is as follows - 2024 is going to go down as one of the years where demand growth, year-on-year, has been the greatest. Possibly one of the top five year-on-year demand growth years ever. That said, people had been looking at close to 2 million barrels per day year-on-year growth and I see consultants easing those numbers off into the 1.65, 1.8 type range. Still a very big year-on-year growth. And if you dissect what that is, where it's coming from. There lots of petrochemicals, lots of NGLs, but the area where it's been giving back a little is diesel. So I think various people have been looking at the nowcast real-time data coming out of eastern economies, China in particular, and have seen fit to reduce, somewhat taper off their forward demand projections. So that's what's giving us a slightly flatter outlook. Now we're still in the low 80s, \$82.80 is not a number too many producing nations will be too upset about. It just happens to be \$8, \$9 off the recent highs you referred to."*

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

7 6 16 1.7K



Dan Tsubouchi @Energy_Tidbits · 4h

"I think the smart money in trading circles will assume he [Iraq] did not mean to say he was going to depart from the group & start opening the taps", also doesn't Iraq is opposed to extending voluntary cuts in place. @vitolnews @michaelwmuller

#OOTT @sean_evers @CrystalEnergy

"What he [Iraq oil minister] did not say, I don't think, is whether he was opposed to an extension of the voluntary cuts that are in place. I think the smart money in trading circles will assume he did not mean to say he was going to depart from the group and start opening the taps" Mike Muller, Head, Vitol Asia.



SAF Group created transcript of comments by Mike Muller (Head, Vitol Asia), Christof Ruhl (Senior Research Scholar, center on Global Energy Policy Columbia University with host Sean Evers (Founder & Managing Partner Gulf Intelligence) on Gulf Intelligence Daily Energy Markets Podcast on May 12, 2024

Items in "Italics" are SAF Group created transcript.

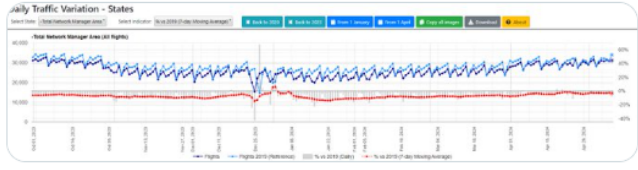
At 19:00 min mark, Evers asks about some of the reports of a throwaway comment from the Iraq oil minister on the sidelines of a conference that Iraq won't roll over OPEC+ cuts for the second half and if OPEC+ has the luxury to start to unravel its cuts. Muller *"The market has always felt that OPEC+ but Saudi in particular, would have the luxury of a market that was going to call for extra production and therefore there was a possible scenario where an easing of the voluntary Saudi cut was possible. However, I think, now that your participants have had enough time to, I didn't want to spoil the question butting in any earlier. We have to be very careful with the reporting of the comments by Hayan Abdul Ghani, the Iraq oil minister. Because while he did say we've reduced output enough, we will not agree to any new cuts. What he did not say, I don't think, is whether he was opposed to an extension of the voluntary cuts that are in place. I think the smart money in trading circles will assume he did not mean to say he was going to depart from the group and start opening the taps. Far from it. I think that would be a move that wouldn't just make him unpopular with his peers. But I think it almost goes without saying that should OPEC+ see fit to maintain a rollover, I think that's the expectation of Iraq. So I mean the statement, I'm just looking it up myself here. This is on the sidelines of a conference in Baghdad. What he said was they will not agree to any new cut. But I think by that, you can drive a bus through the interpretations but my interpretation of it is further cuts are off the table. He thinks that the market is sufficiently balanced for them to just continue, that was my interpretation of it."*

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

2 1 3 936

Dan Tsubouchi @Energy_Tidbits · 18h
 Daily Europe air traffic still stuck just below pre-Covid.

7-day average as of:
 May 9: 3.2% below pre-Covid
 May 2: 2.9% below
 Apr 25: 3.2% below
 Apr 22: 1.5% below
 Apr 18: 3.2% below
 Apr 11: 3.7% below
 Apr 4: 6.2% below...



2 replies, 1 retweet, 7 likes, 1.3K views

Dan Tsubouchi @Energy_Tidbits · 20h
 US gasoline prices -\$0.03 WoW to \$3.63.

Now flat MoM and \$0.09 YoY.
 California at \$5.29 is -\$0.07 WoW, +\$0.16 MoM..
 6 or last 10 Mays have seasonally increased into June. 2 were flat, 2 decreased.
 Biden doesn't want \$4 gas in election year. T...

NATIONAL AVERAGE GAS PRICES

Region	Mid-2020	Jan-2021	Mar-2021	Apr-2021	May-2021
Current Avg.	\$3.63	\$4.00	\$4.04	\$3.87	\$3.63
Yesterday Avg.	\$3.63	\$4.00	\$4.02	\$3.84	\$3.60
Week Ago Avg.	\$3.60	\$4.14	\$4.05	\$3.80	\$3.58
Month Ago Avg.	\$3.60	\$4.02	\$4.19	\$4.04	\$3.60
Year Ago Avg.	\$3.00	\$2.80	\$4.20	\$4.40	\$3.00

CALIFORNIA AVERAGE GAS PRICES

Region	Mid-2020	Jan-2021	Mar-2021	Apr-2021	May-2021
Current Avg.	\$5.29	\$5.10	\$5.06	\$5.04	\$5.29
Yesterday Avg.	\$5.29	\$5.10	\$5.04	\$5.01	\$5.26
Week Ago Avg.	\$5.29	\$5.10	\$5.10	\$5.10	\$5.10
Month Ago Avg.	\$5.10	\$5.10	\$5.10	\$5.10	\$5.10
Year Ago Avg.	\$3.63	\$3.63	\$4.00	\$4.00	\$3.63

HIGHEST RECOMMENDED AVERAGE PRICE

Region	Price	Date
Regular Unleaded	\$3.63	04/30/21
Diesel	\$3.63	04/30/21

3 replies, 2 likes, 1.3K views



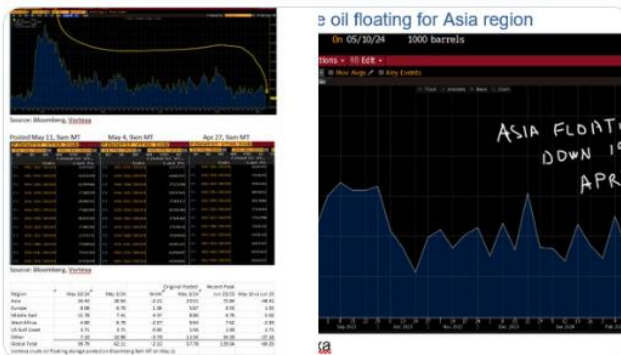
Dan Tsubouchi @Energy_Tidbits · May 11

Another low week for #Oil floating storage 59.79 mmb May 10.

Big decline was Apr 12-26, with Asia -19 mmb, likely driven by Iran cutting prices to reduce floating.

Crude on water may be big with tankers avoiding Red Sea BUT floating storage is low.

Thx @vortexa @business #OOTT



4 7 32 2.3K

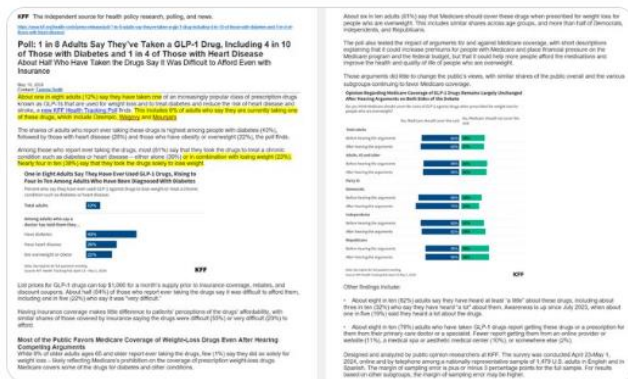


Dan Tsubouchi @Energy_Tidbits · May 11

Still early days but, extrapolating the poll results, would put ~15 million Americans currently using GLP-1 drugs ie. Ozempic, Wegovy and Mounjaro

Poll is 6% of American adults currently taking.

Thx @KFF #OOTT



2 3 1.2K

SAF

Dan Tsubouchi @Energy_Tidbits · May 11

...

Evacuation **alert** notice to Fort McMurray with Out-of-Control 1,000 ha wildfire just west of city & winds ~25 kph from the west.

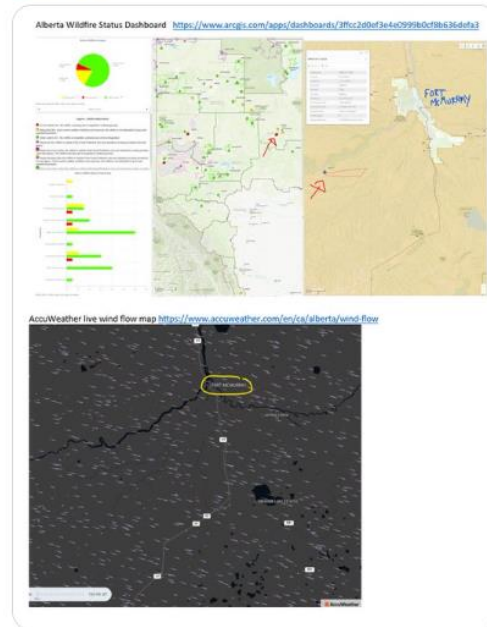
Key wildfire links.

Alberta wildfire status map [arcgis.com/apps/dashboard/...](https://www.arcgis.com/apps/dashboard/)

@accuweather live wind flow map
[accuweather.com/en/ca/alberta/...](https://www.accuweather.com/en/ca/alberta/)

...

Show more



1

4

4

1.8K

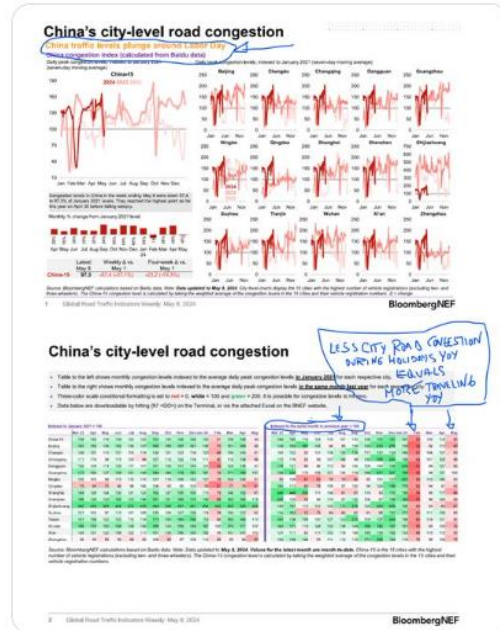
Share



Dan Tsubouchi @Energy_Tidbits · May 10
Positive indicator for more Chinese are travelling in 2024.

China Baidu city-level road congestion down YoY in New Year and Labor Day holidays points to more Chinese travelling YoY.

Thx @BloombergNEF.
#OOTT



1 4 15 2.6K



Dan Tsubouchi @Energy_Tidbits · May 10
321 crack spreads down again, -\$1.70 WoW to \$25.89 & WTI ~flat WoW.

\$25.89 crack are solid margin but spreads down for past couple wks normally point to softer WTI to follow.

But summer demand increase should carry the day keeping any softness short in length.

Thx @business...
Show more



1 8 21 4.2K



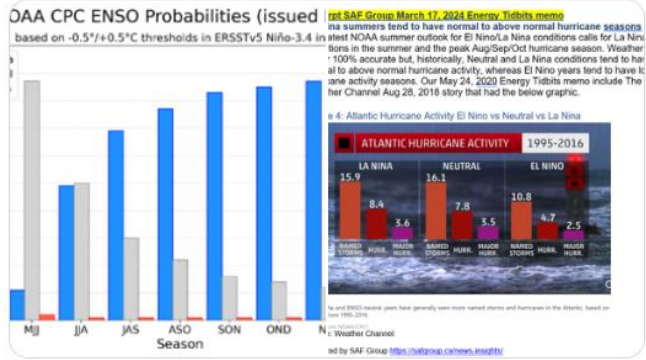
Dan Tsubouchi @EnergyTidbits · May 10

Forecasts have been for higher than normal Atlantic hurricane activity this summer.

@NOAA 📌 latest outlook is for La Nina summer.

Hurricane season is far from predictable but La Nina summers tend to have increased hurricane activity. @weatherchannel

#OOTT #NatGas #LNG



1 5 1.6K

SAF... Dan Tsubouchi @Energy_Tidbits · 23m
Big test for Grid!

"at least seven earth-directed Coronal Mass Ejections (CMEs) are in transit" @NWSSWPC

Mar 13, 1989 all of Quebec blackout was due to 1, possibly 2, CMEs hitting.

#NatGas #OOTT



SAF... Dan Tsubouchi @Energy_Tidbits · 53m



Breaking!
"Severe Geomagnetic Storm is LIKELY ... continuing thru weekend" @NWSSWPC 1130am ET

1 3 713

SAF Dan Tsubouchi @Energy_Tidbits · 53m Breaking!

"Severe Geomagnetic Storm is LIKELY ... continuing thru weekend"
@NWSSWPC 1130am ET

"Impacts: HF communication, GPS, power grids (voltage control), spacecraft, satellite navigation & other technologies may be affected"

One positive - Northern Lights will be...

Show more

2 1 1.3K

SAF Dan Tsubouchi @Energy_Tidbits · 6h Methane Emissions 101

IEA estimates Agriculture methane emissions > #Oil #NatGas #Coal Bioenergy emissions.

Bioenergy was ~0.5% of Oil + NatGas + Coal 2022 production. Yet Bioenergy, an accepted Net Zero fuel, contributes way, way more methane per boe.

Thx @aaronclark1...

Show more

3 2 3 1K

SAF

Dan Tsubouchi @EnergyTidbits · 15h

...

Expect new tariffs on China to accelerate with US election <6 mths away.

Next week, Biden "administration is set to impose new, targeted tariffs on some key sectors including electric vehicles, batteries and solar equipment". @josh_wingrove @JenniferJacobs @EMPosts

#OOTT

Biden Poised to Impose Tariffs on China EVs, Strategic Sectors

2024.05.10 00:45:11.527 GMT

By Josh Wingrove, Jennifer Jacobs and Eric Martin

(Bloomberg) — President Joe Biden's administration is poised to unveil a sweeping decision on China tariffs as soon as next week, one that's expected to target key strategic sectors with new levies while rejecting the kind of across-the-board hikes sought by Donald Trump, people familiar with the matter said.

The decision is the culmination of a review of so-called Section 301 tariffs first imposed under Trump. The administration is set to impose new, targeted tariffs on some key sectors including electric vehicles, batteries and solar equipment. The full announcement is expected to also largely maintain existing levies. An announcement is scheduled for Tuesday, two of the people said.

The full details aren't clear, and the White House declined comment.

While a decision could be delayed, it nonetheless presents one of Biden's biggest moves in the economic race with China. It builds on a call last month to hike tariffs on Chinese steel and aluminum, and the formal launch of a fresh probe into Chinese shipbuilding.

To contact the reporters on this story:

Josh Wingrove in Washington at jwingrove4@bloomberg.net;

Jennifer Jacobs in Washington at jjacobs68@bloomberg.net;

Eric Martin in Washington at emartin21@bloomberg.net

To contact the editor responsible for this story:

Mario Parker at mparker22@bloomberg.net

To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/S70E0YDWLU68>



6

4

5K



SAF  Dan Tsubouchi  @Energy_Tidbits · 12h ...
Big wins to Biden if he pushes harder on increasing fuel mileage in ICE vehicles vs DAC push.


Can push all costs down to the automakes and NOT have to subsidize.

Proven big impact!

Take the low hanging fruit

See 📌 SAF Group May 2, 2021 Energy Tidbits memo.....

[Show more](#)

Energy Tidbits SAF 

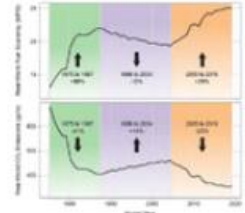
Excerpt SAF Group May 2, 2021 Energy Tidbits Memo

Energy Transition - What's taken Biden so long to focus on vehicle fuel economy?
We have noted our surprise that Biden hasn't placed a priority on conservation and efficiency items like fuel economy in vehicles and were reminded of this when, on Thursday, Axios Media reported [@Axios](#) "US readies 'very aggressive' fuel economy targets" "President Joe Biden's administration is preparing to pursue fuel economy standards for cars and trucks that are ambitious enough to offset the effects of recent regulatory rollbacks, according to a top government official." Fuel economy in vehicles should have been a no brainer for Biden. We tweeted [@Axios](#) "how do you go after ACU Pharoah Co's, but why wasn't the play 1 in Biden emissions reduction playbook? The same Carter & Obama fuel economy push = big emissions reduction. [@AxiosMedia](#) LI reaches 'very aggressive' fuel economy targets. #DGT7 #ClimateChange #NoAgenda". For someone who wants to reduce emissions, we previously said its kind of amusing that Biden didn't go back to the Obama playbook and the Carter playbook and put a priority on restoring increasing fuel economy limits for cars/trucks because its clear that increasing fuel economy can materially reduce emissions. Looks like Biden will finally get it fuel economy. The EPA did a big report in Jan "The 2020 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975" [@EPA](#). The EPA graphs are posted below and shows how it all started with post Jimmy Carter election in 1976. If you look at the numbers behind the graphs, Obama did well also. If you look at the data, Obama elected in 2008. From 2007 thru 2016, he reduced CO2 by -17%, and fuel economy increased by 28%. Gains under Trump were small.

Fuel economy is a no brainer lower emissions

Figure 4B: Fuel economy vs CO2 emissions

Figure 2.3: Trends in Fuel Economy and CO₂ Emissions Since Model Year 1975



Source: EPA

SAF  Dan Tsubouchi  @Energy_Tidbits · 13h



CO2 Direct Air Capture works, **BUT** could remove multiples more CO2 by increasing fuel mileage.

Climeworks new Mammoth DAC takes out 9x more CO2 than its Orca. ...

 2

 2

 6

 2.8K

Dan Tsubouchi @Energy_Tidbits · 23h
#EVs + #Hybrids continue to close the gap on ICE in China.

Don't have EVs vs Hybrid split so only have total NEV

April only:
NEVs +34% YoY to 706,000 units or 44% of total China passenger vehicles.
ICE at 884,000 units or 56%.

#OOTT

<https://enr.com/news/2024/05/08/china-passenger-vehicle-sales-up-9-pct-in-jan-april>
China's passenger vehicle sales up 9 pct in Jan-April
Source: Xinhua
Editor: huaxia
2024-05-08 18:10:30

BEIJING, May 8 (Xinhua) – China's retail sales of passenger cars reached nearly 6.42 million units in the first four months of this year, marking an increase of 9 percent year on year, according to data from an industry association.

In April alone, sales of passenger cars decreased 2 percent year on year to nearly 1.59 million units, data from the China Passenger Car Association showed.

During the January-April period, nearly 2.48 million units of new energy vehicles (NEVs) were sold through retail channels, surging 35 percent year on year.

Retail sales of NEVs stood at 706,000 units in April, up 34 percent from a year ago, the association said.

4 1 5 1.4K

Dan Tsubouchi @Energy_Tidbits · 23h
What Iran sanctions?


Iran oil production keeps increasing providing key cash flow to Iran.

Export revenues \$35b. Don't know price but if they got \$60, that's 1.6 mmb/d

Oil production to increase 300-400,000 b/d in 24/25.

Started \$47.5b of projects...
Show more

OPEC announces 60% rise in crude production in 2.5 years



Oil and gas industry has obtained self-sufficiency in all sectors, including the development of offshore and modern fields, marine and continental shelf, the collection of oil and gas, and the delivery of liquefied and natural gas, relying on the domestic production of the industry.

Planning has been done to increase the production of oil and gas, oil and petrochemical products in the Seventh Development Plan which begins the production of domestic companies.

There is no lack of investment in the oil industry, the relevant unit leading oil business to invest in the industry, as the Ministry of Petroleum will also provide full support.

According to statistics released by the Statistical Center of Iran (SCI) and the Central Bank of Iran (CBI), the Ministry of Petroleum had a significant increase in the number of oil and gas wells in the country, with a total of 10,000 wells in the first 100 days of the year, which had a significant impact on the overall economic growth of the country.

Oil production to increase 300-400,000 b/d in 24/25.

As a result of the high oil prices, an investment of an equivalent to the gas pipeline, which was expected to be more than 20 billion, is now being used to supply gas to ports.

Taking into account the Ministry of Petroleum's plan for the current five-year plan, 100 projects worth 125 billion will be put into operation in the upstream and downstream sectors, as 10 new projects have already been approved.

With the implementation of the current industry program, 100,000 bpd will be added to oil production, 10 million bpd in petrochemicals, and 10 million bpd in natural gas production, with a total of 120 million bpd in the next five years.

At the end of the report, 100 projects of oil and gas exploration and production were announced, which will be carried out in the next five years.

In addition to 100 projects, a set of 200 competitive tenders will be held in the next year to attract investment, which will be held in 100 projects, production and technological advancement.

Participants from the upstream, downstream and distribution sectors of the oil industry, along with associations and unions of domestic equipment manufacturers, will also participate in the report, announcing their performance in the first 100 days of the year.

The activities will be open to visitors at the Tehran International Parliament Fairground every day from 9:00 am to 4:00 pm (GMT+3:30) until Sunday.

News ID: 141717

1 2 12 2.2K

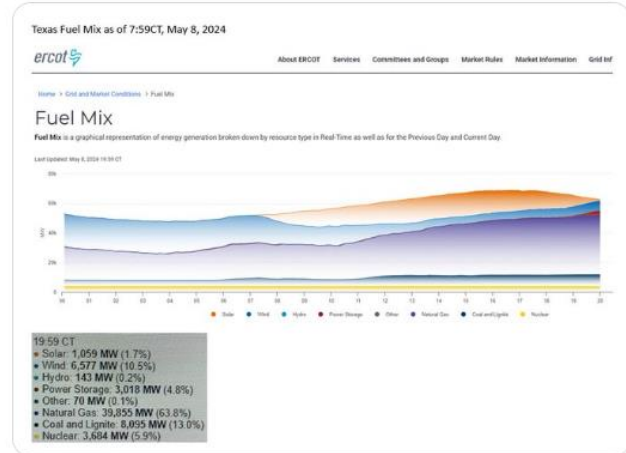


Dan Tsubouchi @Energy_Tidbits · May 8

#NatGas & #Coal saving the day in Texas when the sun goes down and the wind isn't blowing very hard.

@ERCOT_ISO Texas fuel mix as of 7:59pm CT

NatGas 63.8%
Coal 13.0%
Wind 10.5%
Nuclear 5.9%
Power Storage 4.8%...
[Show more](#)



7 7 22 3.5K



Dan Tsubouchi @EnergyTidbits · May 8
 Mercedes public AGM backtrack from all #EV future!



"transformation might take longer than expected"

"makes sure all relevant drive systems are fully up to date. And then the customer decides".

"we can produce combustion engine models alongside electric cars"

Peak #Oil demand...
[Show more](#)

4

Today's proposal for the dividend is 5 euros and 30 cents. This reflects the solid results. And it shows that the current share buybacks are already having a positive impact on the value of each individual share.

Total shareholder return has more than doubled since the 2019 Annual General Meeting.

That is good. But Mercedes can do even more. Two things are crucial for further increases in the value of the company:

- sustainable financial success
- and a clear plan for the future.

That's what I'll talk about next.

MERCEDES AGM MAY 8
CHAIRMAN REMARKS

Ambitious strategy

Our ambitious strategy also makes Mercedes-Benz, Mercedes-Benz.

We want a CO₂-neutral new car fleet by 2039. Across the entire value chain. That's why the strategic aim of Mercedes-Benz is zero emissions. That is certain.

However, the transformation might take longer than expected.

We are therefore prepared for all market scenarios.

We are creating the conditions to become fully electric.

But many factors influence the pace of transformation. For example, the expansion of the charging infrastructure.

There will be both in the coming years:

Electric cars and cars with ultra-modern, electrified combustion engines.

If the demand is there, well into the 2030s.

We make sure that all relevant drive systems are fully up to date.

And then the customer decides. We will build the perfect Mercedes for every wish.

We have set our plants up for flexibility.

That way we can produce combustion engine models alongside electric cars.

And react quickly to the market.

5 10 13 2.8K



Dan Tsubouchi @Energy_Tidbits · May 8

Corrected the table for the API May 3 data as i hadn't updated and so had the Apr data left in.
#OOTT

CORRECTED API TO MAY 3 and NOT APR 26

Oil/Products Inventory May 3: EIA, Bloomberg Survey Expectations, API

(million barrels)	EIA	Expectations	API
Oil	-1.36	no forecasts	0.50
Gasoline	0.92	no forecasts	1.50
Distillates	0.56	no forecasts	1.70
	0.12		3.70

Note: Bloomberg said there were no analyst forecasts for the weekly inventory data
Note: Oil is commercial. So excludes a +0.9 mmb build in SPR for the May 3 week
Note: Included in the oil data, Cushing had a 1.88 mmb build for May 3 week
Source EIA, Bloomberg
Prepared by SAF Group <https://safgroup.ca/news-insights/>

1 1 3 1.2K



Dan Tsubouchi @Energy_Tidbits · May 8

Biden/Microsoft new AI/data center in Wisconsin likely ~85% powered by #Coal and #NatGas

Data centers need 24/7 power.

See 📌

#OOTT

Dan Tsubouchi @Energy_Tidbits · May 8

AI/Data Centers 101: Need 24/7 Reliable Power so More AI/Data Centers = More #Coal #NatGas

Biden announced \$3.5b Microsoft AI/Data Center in Wisconsin didn't mention electricity source....

Show more

The document 'AI/Data Centers 101' discusses the energy requirements for AI and data centers. It highlights that these facilities require 24/7 reliable power, which often leads to increased reliance on fossil fuels like coal and natural gas. The text references Biden's announcement of a \$3.5 billion Microsoft AI/data center in Wisconsin, noting that the source of electricity was not specified. It also includes a table with data and a map of Wisconsin.

1 7 13 6.5K



Dan Tsubouchi @Energy_Tidbits · May 8
UK Apr EV sales

@SMMT "(BEV) market share rises to 16.9%, **sustained entirely by business buyers**, as private retail demand continues to drop".

"BEV volumes for this year have been **revised downwards by -5.2%**, with anticipated market share now 19.8%"

Hybrids winning.
#OOTT



1 2 7 1.7K



Dan Tsubouchi @Energy_Tidbits · May 8
FYI.

When @EIAgov releases Oil, Gasoline, Distillates inventory data as of May 3 at 8:30am MT, there won't be any "expectations" to compare against.

as of 6:20am MT, @business showing no analyst forecasts (expectations) for EIA oil, gasoline, distillates inventory.

#OOTT



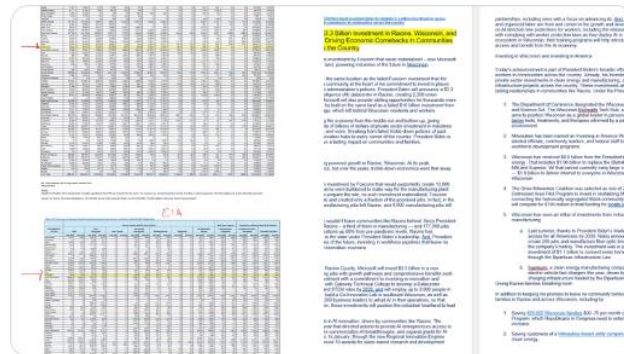
8 1.2K

SAF **Dan Tsubouchi** @Energy_Tidbits · May 8
AI/Data Centers 101: Need 24/7 Reliable Power so More AI/Data Centers = More #Coal #NatGas

Biden announced \$3.5b Microsoft AI/Data Center in Wisconsin didn't mention electricity source.

EIA data: **Fossil fuels (#Coal #NatGas)** provide 85% of electricity in Wisconsin.

#OOT



1 8 26 22K

SAF **Dan Tsubouchi** @Energy_Tidbits · May 7
Chinese still being hit by falling house prices BUT, if they have money in stocks, are making strong returns in Chinese stock markets.

Gives local investors more money for when they get confidence to start spending savings!

Graph earlier from @HaidiLun @BelleDroulers
#OOT



1 1 3 1.4K

SAF Dan Tsubouchi @Energy_Tidbits · May 7
#Oil 101: Need to add ~6-7 mmbd new oil supply/yr to stay flat.

Aramco Q1 : Damman, Marjan, Berri & Zuluf to add 1.225 mmbd to "maintain MSC at 12.0 mmbpd".

Saudi ~3.5% oil decline would fit Aramco 12/07/23 tweet global conventional + unconventional decline of 7%.

#OOTT

Saudi Aramco
First quarter interim report 2024

ARAMCO Q1/24

First quarter highlights

Global market conditions in the first quarter of 2024 improved compared to the previous quarter, driven by increased crude oil prices as a result of lower global oil inventories and higher forecasted demand. Through its low-cost upstream operations and strategically managed downstream business, Aramco captured value from these market conditions and delivered robust earnings and free cash flow. In line with its aim to maximize value for shareholders, the Board declared a base dividend of SAR 16.1 billion (USD 3 billion) and the fourth distribution of the performance linked dividends of SAR 40.4 billion (USD 8 billion), bringing the total declared dividends for the first quarter to SAR 116.5 billion (USD 21 billion).

Aramco believes it is well positioned to help meet the world's growing need for affordable and reliable energy, and that oil and gas will continue to be an important part of the global energy mix. The Company continues to implement its capital program, with the growth in capital spending directed mainly towards upstream liquids and gas, downstream liquids to chemicals, and new energies such as renewables, lower carbon fuels, and low ammonia and hydrogen. Capital expenditures in the first quarter were SAR 20.6 billion (USD 3.8 billion), reflecting the Company's intention to increase investment to capture unique growth opportunities and create long-term value for shareholders.

During the quarter, the Company announced the expansion of its venture capital funding available to Aramco Ventures by SAR 15.0 billion (USD 2.7 billion). Half of the new funding will be directed toward disruptive technologies outside the energy sector, with the remaining portion earmarked for late stage, larger ticket ventures in the sustainability and digital domains. The increased funding will bring the total investment funds in Aramco's venture capital programs to SAR 28.1 billion (USD 5.1 billion), including World Ventures.

In March 2024, the Government announced it had transferred 4.0% of the Company's issued shares to PIF's wholly-owned companies. This share transfer did not affect the Company's total number of issued shares and has no impact on the Company's operations, planning, dividend policy, or governance framework. The Government remains Aramco's largest shareholder, retaining an 82.13% direct shareholding.

In April 2024, Aramco announced a four-year global partnership to become FIFA World Cup Partner with rights across multiple events, including the FIFA World Cup 2026 and FIFA Women's World Cup 2027. The partnership, which runs until the end of 2027, builds on a shared commitment to innovation and development, and will combine football's unique global reach with Aramco's history of championing innovation and community engagement. Through the partnership, Aramco aims to create impactful social initiatives and enable vibrant communities.

Upstream
Aramco achieved total hydrocarbon production of 12.4 mmbpd in the first quarter, reflecting its safe, reliable operations and unique operational flexibility.

In January 2024, the Government directed Aramco to maintain MSC at 12.0 mmbpd. This directive will have no impact on announced, near-term projects including the Dammam development and the Marjan, Berri and Zuluf crude oil increments.

Production from these projects will be used to maintain MSC at 12.0 mmbpd, which enables operational flexibility to increase production and support Aramco's unique ability to rapidly respond to changing market conditions. Key developments during the quarter for these projects include the following:

- Construction activities continued for the Dammam development program, which is expected to add crude oil production of 2.5 mmbpd in 2024 and 1.5 mmbpd in 2027. **+ 7.5**
- Construction and procurement activities continued on the Marjan and Berri crude oil increments, which are expected to be completed by 2022 and add crude oil production capacity of 1.0 mmbpd and 0.9 mmbpd, respectively. **+ 5.0**
- Construction and engineering work progressed at the Zuluf crude oil increment, which is expected to increase 500 mmbpd of crude oil from the Zuluf field through a central facility by 2026. **+ 6.0**

Consistent with the Company's strategy to increase gas production by more than 60% over 2021 production levels by 2030, subject to domestic demand, and to develop an integrated global LNG business, Aramco delivered a number of key developments in the quarter:

- Announced the addition of 15 bcf of new gas and two billion stock tank barrels of condensate as proven reserves at the Safaniya environmental field.
- Advanced design, procurement, and construction activities at the Safaniya Gas Plant, part of the Safaniya unconventional gas field development that is expected to commence production in 2025 and gradually increase natural gas reserves to reach a sustainable rate of 2.0 bcf by 2030.
- Continued construction and procurement activities at the Farafra Gas Plant, part of the Marjan development program. The plant is expected to be completed by 2025, adding 2.5 bcf of additional processing capacity from the Marjan and Zuluf fields.
- Awarded SAR 28.9 billion (USD 5.2 billion) of engineering, procurement, and construction contracts for the expansion of the Farafra Gas Plant, which is expected to add additional processing capacity of 1.5 bcf by 2027, and.
- Completed the acquisition of a minority stake in InaDraam, which subsequently acquired interests in a portfolio of integrated Australian LNG projects.

SAF Dan Tsubouchi @Energy_Tidbits · May 7
No surprise, "... if we need to use the SPR, the president has shown a willingness to use it to support the U.S. economy" @amoshochstein

High grocery prices aren't going down, Biden can't afford to have \$4 gasoline for summer driving on top of that.

Thx @nicholagroom
#OOTT

<https://www.reuters.com/markets/commodities/us-has-sufficient-of-supply-reserve-address-any-supply-concerns-biden-advisor-2024-05-09/>

US has sufficient oil supply reserve to address any supply concerns, Biden adviser says

By Nicholas Groom
May 6, 2024 5:33 PM EDT, updated 14 hours ago
LOS ANGELES (Reuters) - The U.S. has sufficient supply of oil in the Strategic Petroleum Reserve to address any supply concerns and is monitoring markets on how to use it, Amos Hochstein, President Joe Biden's energy adviser, said on Monday.

The SPR is still near 40-year lows after Biden directed the largest ever sale of 100 million barrels from the reserve after Russia's 2022 invasion of Ukraine. The Biden administration recently stopped buying back oil for the reserve as crude has been trading above the \$79 per barrel price it wants to pay to purchase oil.

"We have been replenishing into the SPR for the last several months. I think we have sufficient supply in the SPR to address any kind of concern in the economy if we need it," Hochstein said on the sidelines of the Milken Institute Global Conference.

"For now I think we'll continue to monitor markets and if we need to use the SPR the president has shown a willingness to use it to support the U.S. economy."

Last month the Energy Department said it canceled the purchase of about 3 million barrels of crude for the SPR due to rising oil prices. The SPR currently has about 367 million barrels. The most of it ever held was nearly 727 million barrels in 2000.

The number missed forecasts and compared with a \$6 billion profit a year before.

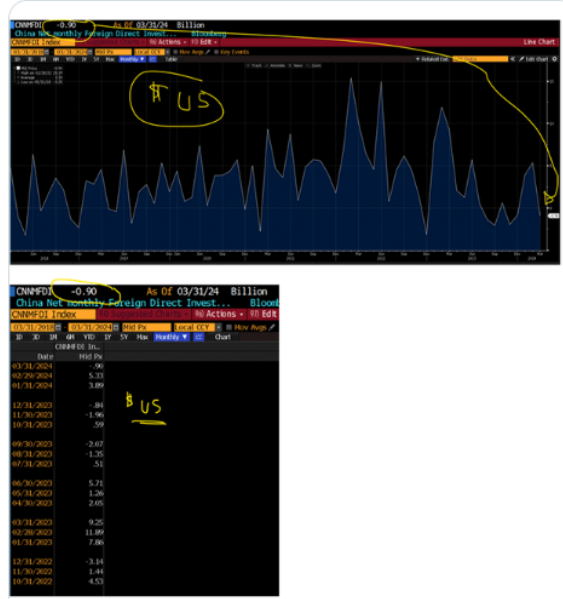
Reporting by Nicholas Groom, Timothy Gahner, Editing by Leslie Adler and David Gregorio
Our Standards: The Thomson Reuters Trust Principles.

2 3 8 2.5K

Dan Tsubouchi @Energy_Tidbits · May 6
Back to negative indicator for China.

Net monthly foreign direct investment back to net negative flows in Mar, after positive net flows in Jan/Feb that followed negative in Nov/Dec.

Mar: -\$0.9b
Feb: \$5.3b
Jan: \$3.9b
Dec: -\$0.8b
Nov: -\$2.0b...



1 3 1.5K

Dan Tsubouchi @EnergyTidbits · May 6
 Israeli media "TV report: Israeli officials say not the same proposal they agreed to with Egyptian mediators 10 days ago"

"new clauses, among other issues, relate to the cardinal questions of if, how and when the war would end, and what kind of guarantees are being offered..."
[Show more](#)

3 likes 1.1K views

Dan Tsubouchi @EnergyTidbits · May 6
 Buffett: higher taxes are coming!
 "with the present fiscal policies i think that something has to give & i think that higher taxes are quite likely and if the govt wants to take a greater share of your income, mine or berkshire's, they dan do it"
 thx @BeckyQuick #OOTT



4 retweets 7 likes 4.6K views

Dan Tsubouchi @EnergyTidbits · May 6
 Bad 2024 for German EV sales, Good 2024 for Hybrid, Petrol, Diesel car sales.

Apr YoY % & YTD Apr 30 YoY %
 Total: +19.8%, +7.8%
 BEF: -0.2%, -10.8%
 Hybrid: +26.4%, +16.1%
 Petrol: +18.6%, +7.5%
 Diesel: +28.2%, +9.5%...
[Show more](#)

Vehicle registrations in April 2024 Press Release No. 15/2024

8 May 2024

Category	April 2024	April 2023	Change (%)
Total	1,100,000	920,000	+19.8%
BEV	100,000	110,000	-9.1%
Hybrid	250,000	190,000	+31.6%
Petrol	400,000	370,000	+8.1%
Diesel	350,000	330,000	+6.1%

Among the German States, Bavaria achieved the most significant increase in registrations in April with +18.8 percent, followed by Baden-Württemberg with +17.8 percent. The largest decrease in registrations was recorded in North Rhine-Westphalia with -1.2 percent.

Among the EU countries, Germany achieved the most significant increase in registrations in April with +19.8 percent, followed by France with +16.1 percent. The largest decrease in registrations was recorded in Italy with -10.8 percent.

The EU registered an increase of 19.8 percent compared to the same month last year and was also again the strongest registered in April with a share of 69.2 percent. New cars in the transport class achieved the strongest growth of 26.4 percent, amounting to a share of 22.6 percent. Roadside high growth was also...

New registrations of passenger cars from 2022 to 2024 - April

5 comments 12 retweets 21 likes 5.4K views

SAF Dan Tsubouchi @Energy_Tidbits · May 6
Maersk new Advisory.

Houthis "risk zones has expanded and attacks are reaching further offshore. This has forced our vessels to lengthen their journey further"

Houthis attacking far into Indian Ocean ie. 300-400 nm south of Yemen.

#OOTT

INCIDENT NO.	ACCIDENT TIME	ACCIDENT DETAILS
00000001	2024/05/03 04:15	00000001

SAF Dan Tsubouchi @Energy_Tidbits · May 3
Houthis don't plan to go away.
Even if Hamas ceasefire, "conflict with the enemy will not end unless it is removed from all of the land of Palestine"...

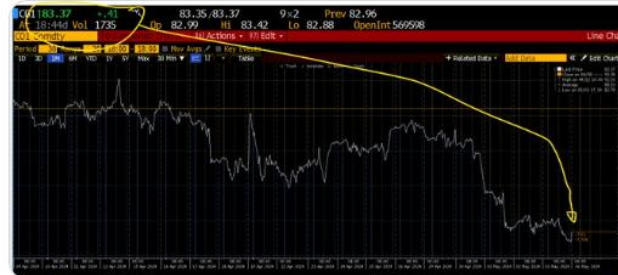
3 10 14 7K

SAF Dan Tsubouchi @Energy_Tidbits · May 5
1st 45 min of trading, Brent +\$041 to \$83.37.

Last week, Brent sank on momentum for Hamas/Israel deal.

So still down ~\$6 from Apr 26 close of \$89.33.

#OOTT



SAF Dan Tsubouchi @Energy_Tidbits · May 5
Breaking!
Still critical differences between Israel & Hamas
Netanyahu "Israel will not agree to Hamas's demands..."

2 10 2.6K