Energy Tidbits

Trafigura Sees *"a Tight Market for Commodities and Heightened Prices for Some Time to Come"*

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Short-Term Energy Outlook

Forecast highlights

Global liquid fuels

- The June *Short-Term Energy Outlook* (STEO) is subject to heightened levels of uncertainty resulting from a variety of factors, including Russia's full-scale invasion of Ukraine. Global macroeconomic assumptions in STEO are from Oxford Economics and include global GDP growth of 3.1% in 2022 and 3.4% in 2023, compared with growth of 6.0% in 2021. A range of potential macroeconomic outcomes could affect energy markets in the forecast period. Factors driving energy supply uncertainty include how sanctions affect Russia's oil production, the production decisions of OPEC+, and the rate at which U.S. oil and natural gas producers increase drilling.

- The Brent crude oil spot price averaged $113 per barrel (b) in May. We expect the Brent price will average $108/b in the second half of 2022 (2H22) and then fall to $97/b in 2023. Current oil inventory levels are low, which amplifies the potential for oil price volatility. Actual price outcomes will largely depend on the degree to which existing sanctions imposed on Russia, any potential future sanctions, and independent corporate actions affect Russia's oil production or the sale of Russia's oil in the global market.

- We forecast Russia's production of total liquid fuels will decline from 11.3 million b/d in the first quarter of 2022 (1Q22) to 9.3 million b/d in 4Q23. This STEO incorporates the recently announced EU ban of seaborne crude oil and petroleum product imports from Russia. We assume the crude oil import ban will be imposed in six months and the petroleum product import ban in eight months. This forecast does not reflect restrictions on shipping insurance, as details regarding such restrictions were not available when we finalized this forecast on June 2. The possibility that these sanctions or other potential future sanctions reduce Russia's oil production by more than expected creates upward risks for crude oil prices during the forecast period.

- At its June 2 meeting, OPEC+ announced an upward adjustment of production targets for July and August. We updated our forecast to reflect these targets. We expect OPEC crude oil production to average 29.2 million b/d in 2H22, up 0.8 million b/d from 1H22.

- The U.S. average retail price for regular grade gasoline averaged $4.44 per gallon (gal) in May, and the average retail diesel price was $5.57/gal. Rising prices for gasoline and diesel reflect refining margins for those products that are at or near record highs amid

Note: EIA completed modeling and analysis for this report on Thursday, June 2, 2022

low inventory levels. We expect the gasoline wholesale margins (the difference between the wholesale gasoline price and Brent crude oil price) to fall from $1.17/gal in May to average 81 cents/gal in 3Q22, and we expect retail gasoline prices to average $4.27/gal in 3Q22. Diesel wholesale margins in the forecast fall from $1.53/gal in May to $1.07/gal in 3Q22, and retail diesel averages $4.78/gal in 3Q22.

- U.S. refinery utilization averages 94% in 3Q22 in our forecast, as a result of high wholesale product margins. Despite our expectation that refinery utilization will be at or near the highest levels in the past five years, operable refinery capacity is about 900,000 b/d less than at the end of 2019, and as a result, we do not expect total refinery output of products to reach its highest level in the past five years. Although we expect high refinery utilization will help bring wholesale margins down from record levels.

Natural gas

- We expect the Henry Hub spot price to average $8.69 per million British thermal units (MMBtu) in 3Q22, up from an average of $8.13/MMBtu in May. Natural gas prices are rising mainly because of three factors: natural gas inventories that are below the five-year average, steady demand for U.S. liquefied natural gas (LNG) exports, and high demand for natural gas from the electric power sector given limited opportunities for natural gas-to-coal switching. In 2023, we expect the Henry Hub price will average $4.74/MMBtu amid rising natural gas production.

- U.S. natural gas inventories ended May at 2.0 trillion cubic feet (Tcf), which is 15% below the five-year average. We forecast that natural gas inventories will end the 2022 injection season (end of October) at just over 3.3 Tcf, which would be 9% below the five-year average.

- We forecast that U.S. LNG exports will average 11.7 billion cubic feet per day (Bcf/d) during 2Q22 and 3Q22 and 11.9 Bcf/d for all of 2022, a 22% increase from 2021, as a result of additional U.S. LNG export capacity that has come online. Since the end of 2021, the EU and the UK imported record-high LNG volumes because of low natural gas inventories. Europe has become the main destination for U.S. LNG exports and accounted for 74% of total U.S. LNG exports during the first four months of 2022. We forecast LNG exports will average 12.6 Bcf/d in 2023. Expected growth in LNG exports in 2023 results from LNG export terminals that came online in mid-2022 being operational for the whole year in 2023.

- U.S. consumption of natural gas in our forecast averages 85.3 Bcf/d in 2022, up 3% from 2021. Rising U.S. natural gas consumption reflects increased consumption across all sectors. In the residential and commercial sectors, increasing consumption results from colder temperatures in 2022 than in 2021, and in the industrial sector, rising economic activity contributes to higher consumption. Limited natural gas-to-coal switching in the

electric power sector, despite high natural gas prices, results in increased consumption of natural gas for power generation. For 2023, we forecast that natural gas consumption will average 85.1 Bcf/d, about the same as 2022.

- We forecast U.S. dry natural gas production to average 95.7 Bcf/d in June and to average 97.9 Bcf/d in 2H22, which would be 2.7 Bcf/d (3%) more than in 2H21. We expect dry natural gas production to average 101.6 Bcf/d in 2023.

Electricity, coal, renewables, and emissions

- The largest increases in U.S. electricity generation in the next two years are likely to come from renewable energy sources, driven by expanded generating capacity from these sources. We expect renewable energy will provide 22% of U.S. generation in 2022 and 24% in 2023, up from a share of 20% last year. Solar capacity additions in the electric power sector total 20 gigawatts (GW) for 2022 and 22 GW for 2023. Solar PV installation delays from 2022 to 2023 account for about 1 GW of the expected installed solar capacity. We expect that small-scale (systems less than 1 GW) solar capacity will grow to a total of 39 GW by the end of 2022 and to 46 GW in 2023.We estimate that wind capacity additions in the U.S. electric power sector will total 11 GW in 2022 and 5 GW in 2023.

- The continued retirement of coal-fired generating capacity in the United States contributes to our forecast that the share of electricity generation from coal will decline from 23% in 2021 to 21% in 2022 and to 20% in 2023. The coal fleet has been facing constraints in raising its share of generation despite high natural gas prices. The constraints include limited rail capacity for fuel delivery, low coal stocks at power plants, reduced coal mining capacity, and rising generation from renewable sources.

- Although we expect annual U.S. natural gas fuel costs for electricity generators will increase 59% in 2022, we do not expect a significant decline in generation from natural gas-fired power plants because of the limited ability of coal power plants to act as an alternative source of generation. We forecast the U.S. natural gas generation share will average 37% in 2022, about the same as last year. The forecast natural gas share averages 36% in 2023 as the share of generation from renewable sources increases.

- We forecast the U.S. residential electricity price will average 14.6 cents/kWh between June and August 2022, up 4.8% from summer 2021. The forecast summer commercial sector price averages 12.0 cents/kWh (up 4.7%) and the forecast industrial sector price averages 7.7 cents/kWh (up 3.2%). Higher retail electricity prices largely reflect higher wholesale power prices and higher natural gas prices. We expect the summer increases in retail residential electricity prices will range from an increase of 2.4% in the West South Central region to a 16.1% increase in New England.

- U.S. coal production in the forecast increases by 23 million short tons (MMst) (3.9%) in 2022 to 601 MMst and then declines by 13 MMst (2.1%) to 588 MMst in 2023. The forecast increase occurs despite our expectation that coal use in the electric power sector will decline. We expect rising coal production will replenish electric power sector inventories and contribute to U.S. coal exports.

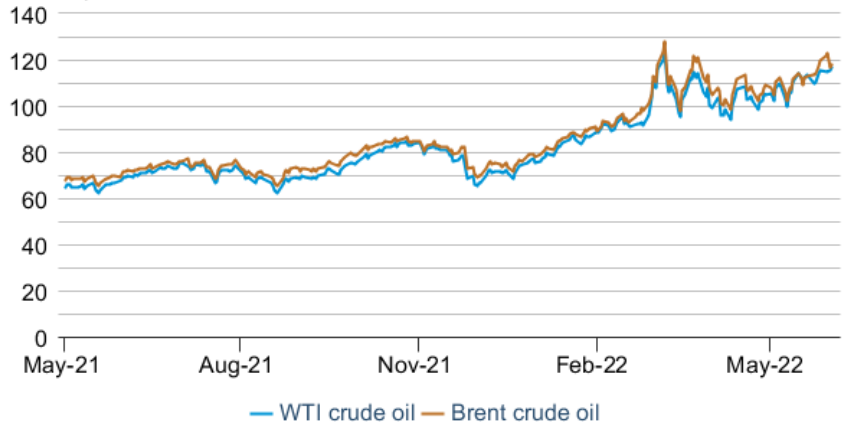
- We expect energy-related carbon dioxide (CO_2) emissions in the United States to increase 1.3% in 2022 and fall by 0.7% in 2023. Forecast emissions increases in 2022 primarily reflect growth in transportation demand.

Petroleum and Natural Gas Markets Review

Crude oil

Prices: The front-month futures price for Brent crude oil settled at $117.61 per barrel (b) on June 2, 2022, an increase of $10.03/b from the May 2, 2022 price of $107.58/b. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, increased by $11.70/b during the same period, settling at $116.87/b on June 2 **(Figure 1)**.

Figure 1. Crude oil front-month futures prices



eia Data source: CME Group, Intercontinental Exchange, and Bloomberg L.P.
Note: WTI=West Texas Intermediate

The average front-month Brent price in May was $112/b, which was higher than the April average of $106/b and about the same as the March average. Crude oil prices increased at the end of May as COVID-19 restrictions began to ease in Shanghai and Beijing and after the EU announced it will reduce crude oil imports from Russia by 90% by the end of the year. These factors contributed additional upward pressure on prices that have been high because of low inventory levels globally and uncertain supply from Russia following its full-scale invasion of Ukraine.

Many of the key uncertainties that we noted in last month's STEO remain, including:

- The impact of sanctions on Russia in relation to its full-scale invasion of Ukraine and the ongoing effects of current sanctions and private-sector actions
- The potential for new sanctions on Russia, and the pace that the EU implements its partial ban on energy imports from Russia
- The pace of petroleum demand growth through the summer and the potential for demand destruction because of high retail fuel prices
- The volume and timing of new crude oil production that will come online at price levels near or above $100/b
- Renewed concerns over potential resurgences in COVID-19 cases and the nature of individual, business, and government responses
- The ongoing impact of the coordinated release of petroleum supplies from strategic reserves in the United States and in Europe
- Other geopolitical uncertainties related to Libya, the ceasefire in Yemen, or potential new developments on an Iran deal

Although crude oil prices remain high because of low oil inventories and significant geopolitical uncertainty, we estimate that world production of petroleum and other liquids has returned to within 1% of its pre-pandemic level in March 2020. We estimate that U.S. production of crude oil and other liquids averaged 19.9 million b/d in May, which was within 3% of January 2020's record high production of 20.5 million b/d. We also estimate that OPEC crude oil and other liquids production has returned to pre-pandemic levels: May OPEC production was 33.7 million b/d, 1% higher than the first quarter of 2020 (1Q20) OPEC production of 33.4 million b/d. Furthermore, OPEC+ announced on June 2 that they will increase crude oil production targets for July and August. We forecast that OPEC crude oil and total liquid fuels production will increase to 34.6 million b/d in 3Q22, the highest since 2Q19.

After seven consecutive quarters of global oil inventory draws from 3Q20 to 1Q22, we forecast that oil stocks in OECD will generally increase but remain below their five-year average levels until 4Q23. However, in response to the EU ban on seaborne imports of crude oil from Russia and previous sanctions on Russia, we forecast that Russia's oil production will decrease from 11.3 million b/d in 1Q22 to 9.3 million b/d in 4Q23. Our forecast reflects the EU's announcement that that it will impose its crude oil import ban in six months. We assume that about 80% of the crude oil subject to the EU import ban will find alternative buyers, mainly in Asia. Our forecast does not reflect restrictions on shipping insurance, as details regarding such restrictions were not available when we finalized this forecast on June 2. The possibility that these sanctions or other potential future sanctions reduce Russia's oil production by more than expected creates upward risks for crude oil prices during the forecast period. We forecast the Brent crude oil price will average $111/b in 3Q22 and $97/b in 2023.

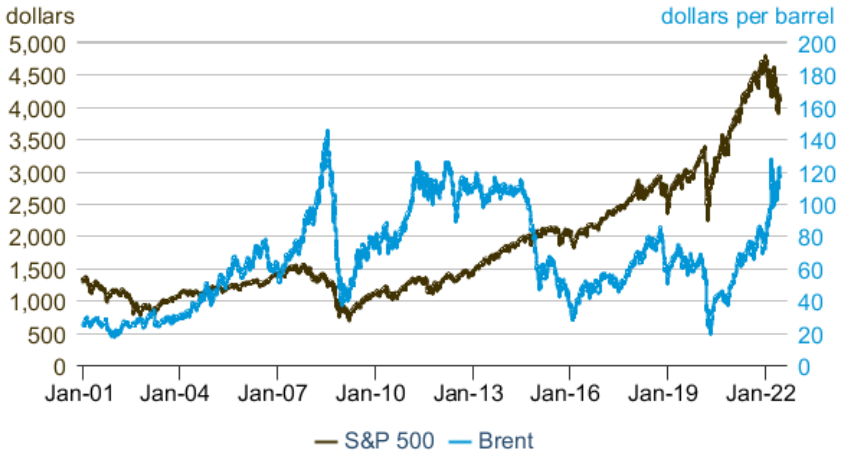
Ratio of S&P 500 to Brent crude oil: The value of the S&P 500, an equity index of widely traded U.S. public companies, has been decreasing both in nominal value and in terms of its ratio to the price of Brent crude oil. After peaking in April 2020 when the value of the S&P 500 index was 104 times the value of Brent crude oil, the ratio has decreased to 36 in May 2022 **(Figure 2)**.

Figure 2. Ratio of S&P 500 to the price of Brent crude oil

eia Data source: CME Group, Intercontinental Exchange, and Bloomberg L.P.

Historically, the ratio between the S&P 500 and crude oil prices changes when factors specific to oil supply or demand affect oil prices more than general economic growth alone would. Most of the decrease in the ratio since April 2020 can be attributed to increasing crude oil prices. Front-month future prices for Brent crude oil averaged $27/b in April 2020 and averaged $112/b in May 2022 **(Figure 3)**. Although the S&P 500 index has also increased since April 2020, it has decreased in recent months from its December 2021 highs, and this decline explains much of the decrease in the ratio in 2022.

Figure 3. S&P 500 and Brent crude oil prices



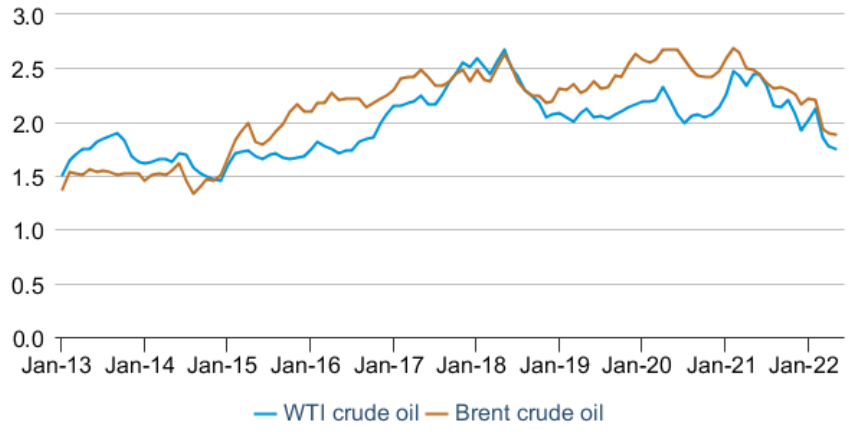
eia Data Source: CME Group, Intercontinental Exchange, and Bloomberg L.P

In the second half of 2020 (2H20) and much of 2021, the ratio between the S&P 500 and crude oil prices was stable because economic growth was reflected in rising profitability of companies as well as higher demand and prices for oil. However, recently, crude oil prices have been driven mostly by sector-specific, supply-side restraints that have lingered since the onset of the COVID-19 pandemic and that have become more prominent following Russia's full-scale invasion of Ukraine.

Rising oil prices have contributed to inflation and have increased input costs for companies. Inflation concerns have led the Federal Reserve to increase interest rates, which has further increased company borrowing costs. Higher input costs from inflation combined with increased borrowing costs could lead to lower net income for companies in the S&P 500, a factor that may be contributing to lower equity prices. Aside from some of the companies that produce and refine petroleum, which make up less than 3% of the S&P 500, companies in the S&P 500 have mostly experienced decreasing stock values while crude oil prices remain elevated. The S&P 500 decreased in value by 12% from the January average to May average although the Brent crude oil price has increased 31%.

Open interest: The average daily open interest of Brent and WTI oil futures markets have generally been declining since February 2021. Open interest is a measure of the total outstanding number of contracts for a commodity at a single point in time, and a decreasing open interest indicates that the number of unsettled contracts for the commodity is decreasing because either traders are not opening positions for the commodity or traders are closing positions. The average daily open interest for Brent was 1.88 million contracts in May, the lowest since July 2015, and for WTI was 1.74 million, the lowest since July 2016 **(Figure 4)**.

Figure 4. Average daily open interest in Brent and WTI futures contracts



Data source: CME Group, Intercontinental Exchange, and Bloomberg L.P.
Note: WTI=West Texas Intermediate

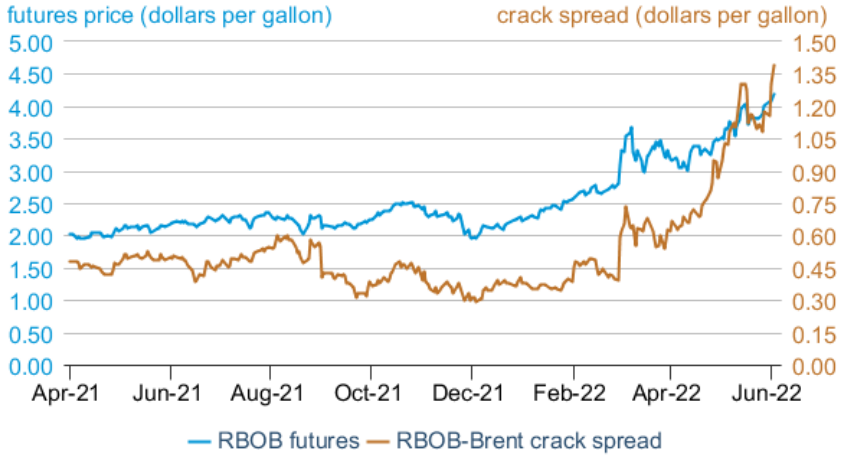
Based on the weekly U.S. Commodity Futures Trading Commission (CFTC) Commitments of Traders data, WTI futures open interest declined from the first week of 2022 to the week ending

May 24 as a result of the closure of long and short positions by Producers and Merchants as well as Swap Dealers. The Producers and Merchants category and Swap Dealers category typically represent participants in the futures market whose primary purpose is risk management in the production or processing of a commodity. Fewer futures contracts held by these traders suggest some producers or end users could be reducing their hedging activity, in part, because higher commodity prices and higher volatility are likely making it more expensive to hedge. In addition, higher interest rates may be increasing the costs of opening a futures position, such as higher margin rates.

Petroleum products

Gasoline prices: The front-month futures price of RBOB (the petroleum component of gasoline used in many parts of the country) settled at $4.19 per gallon (gal) on June 2, up 68 cents/gal from May 2 **(Figure 5)**. The RBOB–Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) settled at $1.39/gal on June 2, up 44 cents/gal during the same period.

Figure 5. Historical RBOB front-month futures prices and crack spreads



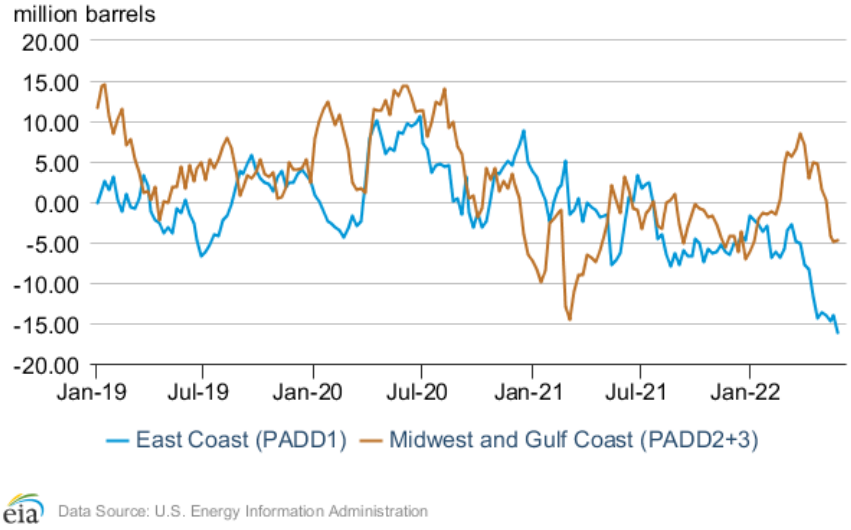
Data Source: CME Group, Bloomberg L.P.
Note: RBOB is the petroleum component of gasoline used in many parts of the country.

Rising crude oil prices and the news of the EU's phasing out of crude oil and petroleum product imports from Russia contributed to a rising gasoline wholesale price and crack spread during the first trading days of June. High crack spreads in the middle of the month contributed to monthly average crack spreads of $1.13/gal during May, an increase from $0.73/gal in April. Relatively lower refinery production (compared with pre-COVID levels), lower imports in April, and increasing seasonal demand for gasoline moving into the summer have contributed to lower gasoline inventories in the United States. The low inventories are most pronounced along the East Coast, the highest demand region in the United States, which has in turn contributed to higher gasoline prices in the region, including at New York Harbor (NYH). Far more gasoline is

consumed in the East Coast than is produced, and imports and transfers from other regions in the United States help meet its consumption needs.

In April, low inventories along the East Coast were partially offset by higher inventories along the Gulf Coast and in the Midwest (although capacity to transfer gasoline from the Midwest to the East Coast is more limited than capacity to transfer from the Gulf Coast). By the end of April, gasoline inventories on the East Coast were 14 million barrels below their five-year (2017–2021) average levels **(Figure 6)**. At the same time, combined Gulf Coast and Midwest inventories were almost 2 million barrels above their five-year average level. In May, East Coast gasoline inventories remained low and did not decrease much further, while Midwest and Gulf Coast inventories drew down substantially. On May 27, combined Gulf Coast and Midwest inventories were down by 6 million barrels from their end-April levels while East Coast gasoline inventories were down by almost 1 million barrels. As a result, net inventories in the United States continued to decrease through the month, contributing to increased crack spreads to meet increased demand for gasoline.

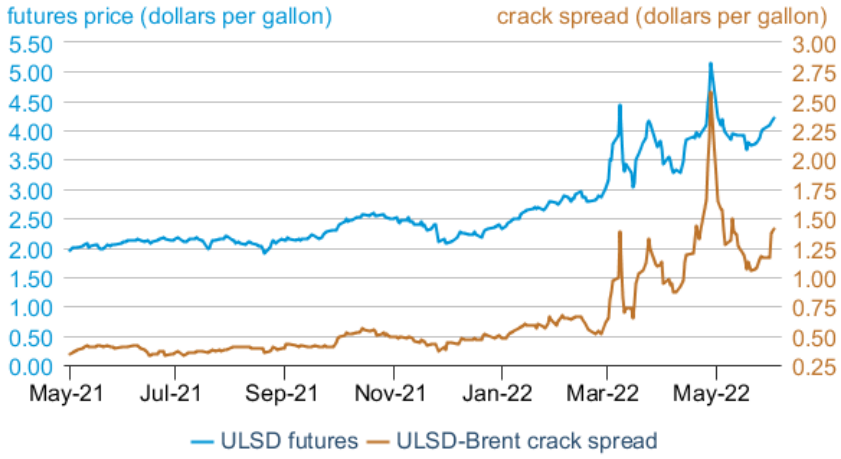
Figure 6. Weekly total gasoline inventory minus rolling 5-year average



Data Source: U.S. Energy Information Administration

Ultra-low sulfur diesel prices: The front-month futures price for ultra-low sulfur diesel (ULSD) for delivery in New York Harbor settled at $4.21/gal on June 2, almost unchanged from May 2 **(Figure 7)**. The ULSD-Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) decreased by 24 cents/gal during the same period and settled at $1.41/gal on June 2.

Figure 7. Historical ULSD front-month futures prices and crack spreads



Data Source: CME Group, Bloomberg L.P.
Note: ULSD=ultra-low sulfur diesel

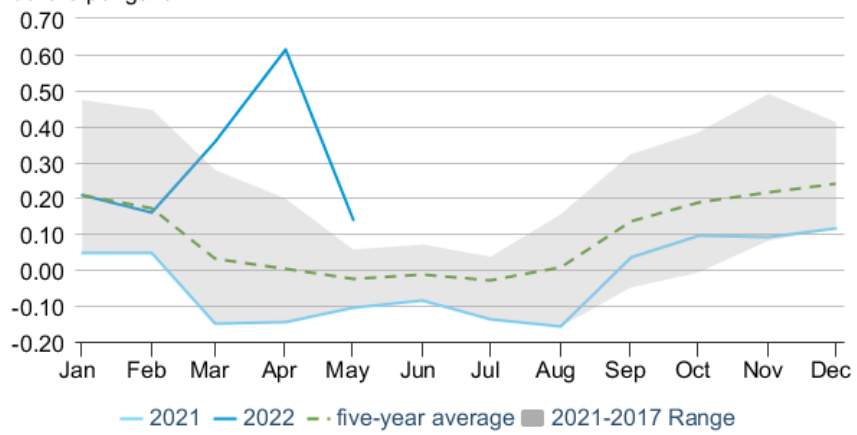
Front-month ULSD prices and crack spreads in May fell from recent record highs at the end of April, albeit to levels much higher than the historical norm. The ULSD-Brent crack spread averaged $1.27/gal during May, 8 cents/gal less than the all-time average high of $1.35/gal during April but still 30 cents/gal higher than the second-highest recorded monthly average of 97 cents/gal in March 2022. In real terms, the last time crack spreads were close to these levels was in May 2008, when the crack spread averaged 86 cents/gal when adjusted to 2022 dollars. The ULSD front-month futures price averaged $3.92/gal during May, 6 cents/gal higher than April.

Tight global distillate markets and low domestic inventories kept ULSD prices high in May. U.S. distillate inventories increased for the first time this year, building by 2.5 million barrels (2.3%) over April. However, inventories remained 25% below the five-year average. We estimate domestic consumption averaged 3.9 million b/d in May, a 2% increase over April and the first time consumption increased from April to May since 2018. We estimate distillate imports, which would normally increase to help rebuild low inventories and moderate prices, were below the five-year average at 145,000 b/d for the four weeks ending May 27. If confirmed in monthly data, this recent decrease in distillate imports would signal that global demand remains strong as markets continue to adjust to sanctions on Russia's exports, reduced export quotas in China, and overall lower global refinery capacity.

ULSD-RBOB future price spreads: Front-month ULSD and RBOB futures typically follow seasonal trends: RBOB trades at a premium in the summer months during the peak summer driving season and ULSD trades at a premium when heating fuel demand is highest in the winter **(Figure 8)**. Gasoline prices usually start trading at a premium to ULSD prices in March when the RBOB futures contract represents the more expensive summer grade of gasoline. However, global demand for distillate and reduced distillate exports from Russia, a major exporter of distillate fuel to Europe, have disrupted this trend. ULSD front-month futures traded at an average

monthly premium to RBOB of 61 cents/gal in April, the highest April premium in real terms in data going back to 2006. Although ULSD has previously traded at a premium during the spring, typically with historically low gasoline prices, RBOB prices in real terms are currently at a nine-year high and RBOB crack spreads are higher than seasonal norms. The ULSD-RBOB spread decreased to 14 cents/gal in May but remains elevated compared with the historical average. ULSD futures prices were relatively flat in May while RBOB futures prices increased by 16% from the start of the month.

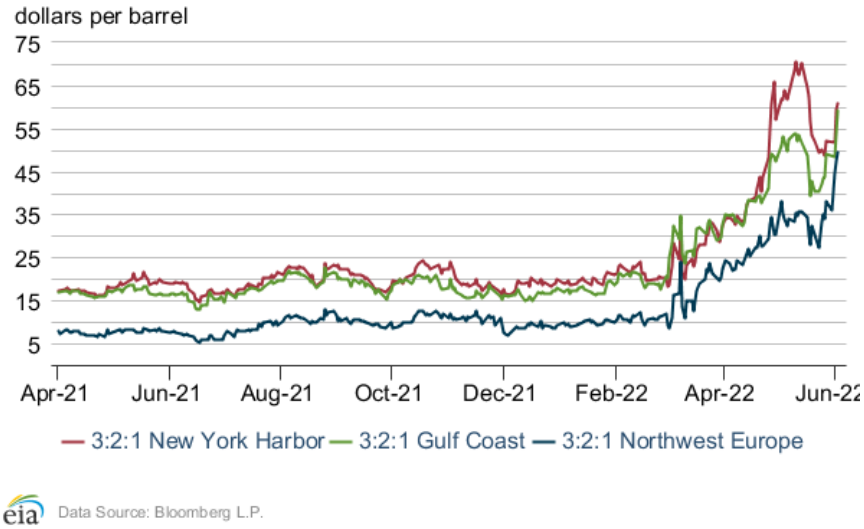
Figure 8. ULSD-RBOB front-month futures price spread



eia Data Source: CME Group, Bloomberg L.P.

Regional refinery crack spreads: Inventories for gasoline and diesel in the United States are low at the same time that they are similarly low in Europe and elsewhere in the Atlantic Basin, contributing to broad increases in crack spreads for both products. The reduction in refining capacity along the East Coast appears to have contributed to particularly high product price premiums. The 3:2:1 crack spread (reflecting the price of two barrels of gasoline and one barrel of diesel, minus three barrels of crude oil) at NYH increased far more than the same spread in Europe or along the U.S. Gulf Coast in April and May **(Figure 9)**. The Northwest Europe (NWE) 3:2:1 crack spread is often lower than the U.S. Gulf Coast or NYH crack spreads, which reflects the relatively higher demand for gasoline in the United States and the larger weighting that gasoline has in the 3:2:1 spread calculation. Higher U.S. crack spreads suggest greater market pressure to increase refinery production from U.S. markets than markets in Europe, based on the wholesale prices of gasoline, diesel, and crude oil (although the 3:2:1 crack spread does not account for other factors such as regulatory costs, electricity prices, variations in crude oil input costs, or the value of other refined products).

Figure 9. 3:2:1 regional crack spreads



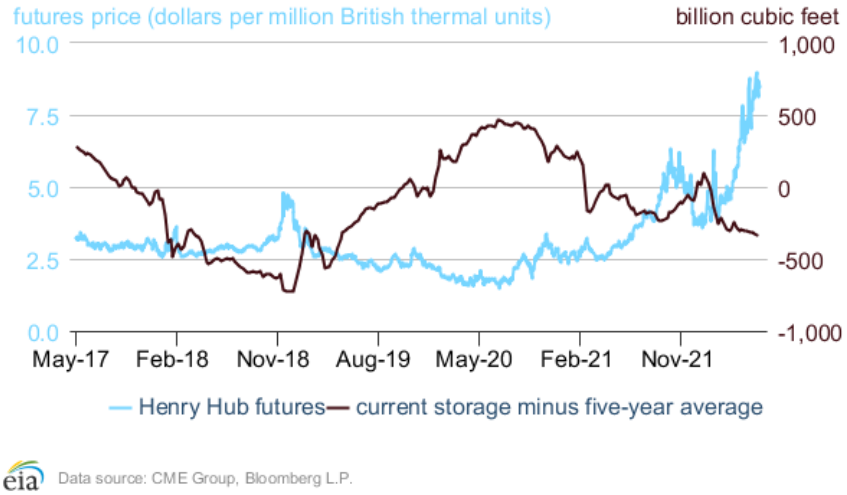
eia Data Source: Bloomberg L.P.

Initially, the impact of Russia's full-scale invasion of Ukraine coincided with a narrowing difference between North American and European crack spreads. In March 2022, the NYH monthly average 3:2:1 crack spread was 56% higher than NWE, reaching its narrowest point in percentage terms since before the onset of the COVID-19 pandemic. The narrowing likely reflected the impact of higher petroleum product prices in Europe related to concerns that European importers may stop taking gasoline and diesel volumes from Russia. However, the difference between the crack spreads has since widened to 74% in May, reflecting increasing demand and low inventories for diesel and for gasoline, particularly on the U.S. East Coast. We expect crack spreads for gasoline and distillate to decrease in 3Q22 as increasing refinery runs partially reduce prices compared with their current levels. However, the impact of capacity constraints—both in the United States and globally—will continue to limit increases in both production and inventories and will contribute to above-average crack spreads, on top of higher crude oil prices, through the end of 2022.

Natural gas

***Prices*:** On June 2, 2022, the front-month natural gas futures contract for delivery at the Henry Hub settled at $8.49 per million British thermal units (MMBtu), up $1.01/MMBtu from May 2, 2022 **(Figure 10)**. The average closing price for front-month natural gas futures contracts in May was $8.16/MMBtu, the highest May monthly average in real terms since May 2008.

Figure 10. U.S. natural gas front-month futures prices and current storage deviation from five-year average



eia Data source: CME Group, Bloomberg L.P.

High demand for natural gas in the electric power sector and for U.S. liquefied natural gas (LNG) exports amid relatively flat natural gas production thus far in 2022 has kept U.S. natural gas inventories below the five-year (2017–2021) average and has contributed to high natural gas prices. Natural gas stock builds in May were 386 billion cubic feet (Bcf), compared with the five-year average build of 417 Bcf. At the end of May, natural gas inventories were 1,983 Bcf, which was 351 Bcf (15%) lower than the five-year average. The below-average storage builds at the beginning of this injection season along with our forecast of average storage injections this summer mean that we expect natural gas inventories to begin the winter heating season below average.

Natural gas consumption in the electric power sector averaged 30.2 Bcf/d in May, which was 3.9 Bcf/d higher than last year and 4.2 Bcf/d higher than the five-year average. We estimate U.S. LNG exports averaged 11.6 Bcf/d in May, which was 1.5 Bcf/d higher than last year and 0.2 Bcf/d higher than the average from January through April 2022. High exports are being supported by high international LNG prices, as well as by additional export capacity created by a new U.S. LNG export facility, Calcasieu Pass LNG, which continues to ramp up exports.

***Futures price spreads*:** The natural gas 1st–13th price spread averaged $3.37/MMBtu in May, the highest average monthly backwardation (where near-term contract prices are higher than longer-dated contract prices) on record **(Figure 11)**. Natural gas futures prices have been increasingly backwardated since early March. The 1st–13th price spread averaged $1.28/MMBtu in March and $2.36/MMBtu in April. Often, the 1st–13th price spread increases when natural gas inventories are below the five-year range, and the price spread often decreases when inventories are above the five-year range. Low storage inventories to start the injection season, lower-than-expected production levels compared with late 2021 production levels, continued high demand for U.S. LNG exports, and high demand from the electric power sector are all

contributing to near-term natural gas prices being much higher now compared with natural gas futures prices for delivery next year.

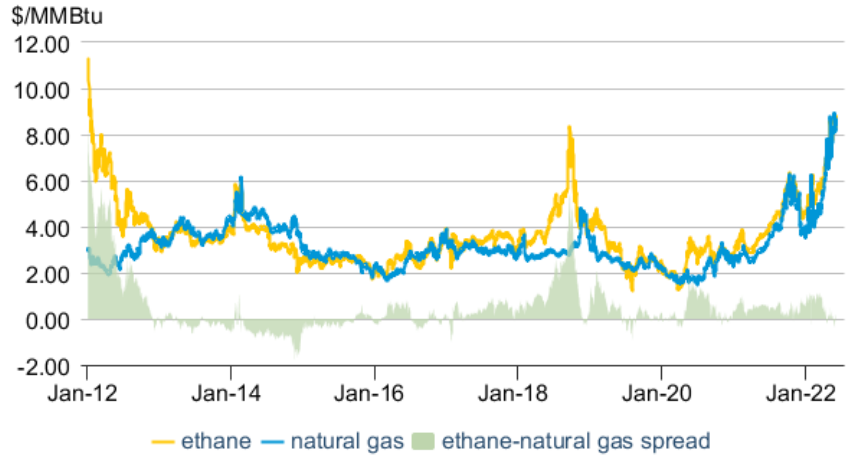
Figure 11. Natural gas 1st – 13th futures price spread

eia Data source: CME Group, Bloomberg L.P.

We expect Henry Hub natural gas prices to remain high throughout the summer, averaging $8.69/MMBtu in 3Q22, because opportunities for natural gas-to-coal switching for power generation have been limited by rail capacity for fuel delivery, low coal stocks in the electric power sector, reduced coal mining capacity, and rising generation form renewable sources. Additionally, we expect U.S. natural gas production increases will take several months to emerge, and continued high levels of LNG exports will contribute to high natural gas demand.

Ethane-natural gas price spread: U.S. production of ethane, a hydrocarbon gas liquid (HGL) produced primarily in natural gas processing plants, has grown rapidly since 2013. Ethane is primarily used in the petrochemical industry, where it is used as a feedstock at ethylene crackers. Ethane is typically priced at a premium to natural gas because it reflects the costs of extracting it from the natural gas production stream and transporting it to a petrochemical facility. The premium of ethane to natural gas averaged 47 cents/MMBtu in 2021 and 86 cents/MMBtu in 1Q22, but it decreased in April and May **(Figure 12)**.

Figure 12. Natural gas futures and ethane spot prices



eia Data source: CME Group, Bloomberg L.P.

The monthly premium averaged 17 cents/MMBtu in April, and the price of ethane fell to 1 cent/MMBtu below the price of natural gas in May, as the value of natural gas for use as energy increased. When the price of ethane decreases relative to the price of natural gas, it becomes less economical to extract ethane from natural gas production streams. This situation can lead to more ethane rejection, which is when natural gas processing plant operators choose to leave ethane in the processed natural gas (provided the processed natural gas meets pipeline specifications) and sell it into the natural gas market. More ethane rejection means more ethane will be sold as natural gas, increasing the supply of natural gas. Additionally, because ethane contains more energy than natural gas for the same volume, more ethane rejection increases the energy content of the natural gas stream. More ethane rejection also means a reduction in the amount of ethane supplied to petrochemical facilities or to export facilities. At the same time, rates of ethane rejection are determined by factors other than ethane's price spread with natural gas, such as ethylene margins in the petrochemical sector, individual contract specifications with producers and consumers, and the share of ethane allowed in the natural gas stream by pipeline specification.

Ethane consumption, both domestic and international, grew throughout 2021 We expect U.S. consumption to grow further in 2022 because of additions in U.S. petrochemical capacity, as three new crackers—Baystar and Gulf Coast Growth Ventures in Texas and Shell Chemical Appalachia in Pennsylvania—ramp up production. In addition, a cracker designed to use ethane imported from the United States as a feedstock is expected to come online in China, contributing to our expectation that U.S. ethane exports will increase.

Notable forecast changes

- This STEO incorporates the assumption that the EU will ban seaborne crude oil and petroleum product imports from Russia. We assume the crude oil import ban will be imposed in six months and the petroleum product import ban in eight months. This forecast does not reflect restrictions on shipping insurance, as details regarding such restrictions were not available when we finalized this forecast on June 2. Preliminary estimates for Russia's total liquid fuels production in May show growth of 0.1 million b/d in May compared with April. Our previous forecast was for a 0.5 million b/d month-over-month decline. This change in the May production results in a 0.6 million b/d net increase in Russia's production for May 2022 compared with last month's forecast. We now expect Russia's production to decline by 1.1 million b/d from May 2022 through the end of 2023. In the May STEO, we expected a decline of 0.8 million b/d over that period.
- You can find more information in the detailed table of forecast changes.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Production (million barrels per day) (a)															
OECD	**30.08**	**30.74**	**31.06**	**32.19**	**31.66**	*32.14*	*32.70*	*33.54*	*33.92*	*34.16*	*34.34*	*34.91*	**31.02**	*32.51*	*34.33*
U.S. (50 States)	**17.62**	**19.05**	**18.94**	**19.87**	**19.43**	*19.94*	*20.47*	*21.00*	*21.18*	*21.48*	*21.76*	*22.15*	**18.88**	*20.21*	*21.65*
Canada	**5.62**	**5.37**	**5.49**	**5.68**	**5.68**	*5.66*	*5.74*	*5.85*	*5.92*	*5.88*	*5.90*	*5.91*	**5.54**	*5.73*	*5.90*
Mexico	**1.93**	**1.95**	**1.90**	**1.92**	**1.91**	*1.91*	*1.90*	*1.86*	*1.91*	*1.87*	*1.83*	*1.80*	**1.92**	*1.90*	*1.85*
Other OECD	**4.92**	**4.37**	**4.73**	**4.71**	**4.63**	*4.63*	*4.59*	*4.83*	*4.92*	*4.93*	*4.85*	*5.04*	**4.68**	*4.67*	*4.94*
Non-OECD	**62.53**	**63.95**	**65.58**	**66.08**	**67.17**	*67.07*	*68.14*	*67.87*	*67.55*	*67.89*	*68.07*	*67.55*	**64.55**	*67.57*	*67.77*
OPEC	**30.34**	**30.88**	**32.28**	**33.10**	**33.75**	*33.99*	*34.57*	*34.86*	*35.07*	*34.92*	*34.91*	*34.90*	**31.66**	*34.29*	*34.95*
Crude Oil Portion	**25.08**	**25.49**	**26.84**	**27.67**	**28.19**	*28.55*	*29.09*	*29.34*	*29.51*	*29.49*	*29.43*	*29.38*	**26.28**	*28.80*	*29.45*
Other Liquids (b)	**5.26**	**5.39**	**5.44**	**5.44**	**5.56**	*5.43*	*5.48*	*5.52*	*5.56*	*5.43*	*5.48*	*5.52*	**5.38**	*5.50*	*5.50*
Eurasia	**13.38**	**13.61**	**13.58**	**14.23**	**14.34**	*13.17*	*13.11*	*13.02*	*12.81*	*12.55*	*12.44*	*12.40*	**13.70**	*13.41*	*12.55*
China	**4.99**	**5.03**	**5.01**	**4.93**	**5.18**	*5.16*	*5.14*	*5.18*	*5.22*	*5.25*	*5.24*	*5.28*	**4.99**	*5.17*	*5.25*
Other Non-OECD	**13.82**	**14.42**	**14.70**	**13.82**	**13.90**	*14.74*	*15.32*	*14.81*	*14.45*	*15.17*	*15.48*	*14.96*	**14.19**	*14.70*	*15.02*
Total World Production	**92.62**	**94.69**	**96.64**	**98.27**	**98.83**	*99.21*	*100.84*	*101.41*	*101.47*	*102.05*	*102.40*	*102.45*	**95.57**	*100.08*	*102.10*
Non-OPEC Production	**62.28**	**63.81**	**64.35**	**65.16**	**65.08**	*65.22*	*66.27*	*66.56*	*66.41*	*67.13*	*67.49*	*67.55*	**63.91**	*65.78*	*67.15*
Consumption (million barrels per day) (c)															
OECD	**42.45**	**44.08**	**45.82**	**46.80**	**45.83**	*45.33*	*46.14*	*46.59*	*46.20*	*45.60*	*46.35*	*46.68*	**44.80**	*45.98*	*46.21*
U.S. (50 States)	**18.45**	**20.03**	**20.21**	**20.41**	**20.22**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.53*	*20.73*
U.S. Territories	**0.21**	**0.19**	**0.19**	**0.20**	**0.22**	*0.20*	*0.20*	*0.22*	*0.22*	*0.20*	*0.21*	*0.22*	**0.20**	*0.21*	*0.21*
Canada	**2.26**	**2.24**	**2.50**	**2.40**	**2.36**	*2.38*	*2.51*	*2.49*	*2.47*	*2.42*	*2.52*	*2.50*	**2.35**	*2.44*	*2.48*
Europe	**11.91**	**12.62**	**13.83**	**13.88**	**13.05**	*13.26*	*13.59*	*13.29*	*13.16*	*13.18*	*13.58*	*13.35*	**13.07**	*13.30*	*13.32*
Japan	**3.73**	**3.08**	**3.18**	**3.67**	**3.77**	*3.12*	*3.19*	*3.52*	*3.78*	*3.12*	*3.15*	*3.46*	**3.42**	*3.40*	*3.38*
Other OECD	**5.89**	**5.92**	**5.90**	**6.23**	**6.21**	*6.00*	*6.03*	*6.19*	*6.18*	*6.01*	*6.04*	*6.18*	**5.99**	*6.11*	*6.10*
Non-OECD	**51.78**	**52.20**	**52.53**	**53.64**	**53.04**	*53.44*	*53.98*	*54.14*	*55.07*	*55.49*	*55.12*	*54.77*	**52.54**	*53.65*	*55.11*
Eurasia	**4.66**	**4.73**	**5.09**	**4.95**	**4.46**	*4.32*	*4.67*	*4.60*	*4.27*	*4.43*	*4.74*	*4.66*	**4.86**	*4.51*	*4.53*
Europe	**0.74**	**0.74**	**0.74**	**0.76**	**0.75**	*0.75*	*0.75*	*0.76*	*0.75*	*0.77*	*0.77*	*0.78*	**0.75**	*0.75*	*0.77*
China	**15.27**	**15.48**	**14.99**	**15.33**	**15.25**	*15.29*	*15.46*	*15.79*	*16.36*	*16.25*	*15.62*	*15.54*	**15.27**	*15.45*	*15.94*
Other Asia	**13.43**	**12.98**	**12.84**	**13.69**	**13.80**	*13.90*	*13.49*	*13.90*	*14.52*	*14.49*	*13.91*	*14.20*	**13.23**	*13.77*	*14.28*
Other Non-OECD	**17.68**	**18.27**	**18.87**	**18.91**	**18.78**	*19.18*	*19.60*	*19.08*	*19.17*	*19.55*	*20.09*	*19.60*	**18.44**	*19.16*	*19.60*
Total World Consumption	**94.23**	**96.29**	**98.35**	**100.44**	**98.87**	*98.77*	*100.12*	*100.73*	*101.27*	*101.09*	*101.47*	*101.45*	**97.35**	*99.63*	*101.32*
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	**0.47**	**0.51**	**0.37**	**0.77**	**0.75**	*0.85*	*0.64*	*0.69*	*-0.04*	*-0.39*	*-0.09*	*0.34*	**0.53**	*0.73*	*-0.04*
Other OECD	**0.87**	**0.15**	**0.97**	**0.67**	**-0.23**	*-0.41*	*-0.44*	*-0.44*	*-0.05*	*-0.18*	*-0.27*	*-0.43*	**0.66**	*-0.38*	*-0.23*
Other Stock Draws and Balance	**0.28**	**0.94**	**0.38**	**0.73**	**-0.48**	*-0.88*	*-0.92*	*-0.93*	*-0.11*	*-0.40*	*-0.58*	*-0.91*	**0.58**	*-0.81*	*-0.50*
Total Stock Draw	**1.61**	**1.60**	**1.72**	**2.17**	**0.04**	*-0.44*	*-0.72*	*-0.68*	*-0.21*	*-0.97*	*-0.93*	*-1.00*	**1.78**	*-0.45*	*-0.78*
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	**1,302**	**1,271**	**1,241**	**1,194**	**1,154**	*1,160*	*1,191*	*1,165*	*1,173*	*1,216*	*1,227*	*1,206*	**1,194**	*1,165*	*1,206*
OECD Commercial Inventory	**2,908**	**2,864**	**2,745**	**2,636**	**2,616**	*2,660*	*2,731*	*2,746*	*2,759*	*2,818*	*2,854*	*2,872*	**2,636**	*2,746*	*2,872*

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

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

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

- = no data available

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

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

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

Historical data: Latest data available from Energy Information Administration international energy statistics.

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	**10.69**	**11.28**	**11.13**	**11.63**	**11.45**	*11.71*	*12.08*	*12.43*	*12.64*	*12.82*	*13.07*	*13.33*	**11.19**	*11.92*	*12.97*
Alaska	**0.46**	**0.44**	**0.41**	**0.44**	**0.45**	*0.38*	*0.40*	*0.42*	*0.44*	*0.39*	*0.41*	*0.45*	**0.44**	*0.41*	*0.42*
Federal Gulf of Mexico (b)	**1.80**	**1.79**	**1.49**	**1.73**	**1.67**	*1.79*	*1.77*	*1.82*	*1.89*	*1.87*	*1.78*	*1.77*	**1.70**	*1.76*	*1.83*
Lower 48 States (excl GOM)	**8.44**	**9.05**	**9.24**	**9.46**	**9.33**	*9.54*	*9.92*	*10.18*	*10.31*	*10.57*	*10.88*	*11.12*	**9.05**	*9.74*	*10.72*
Crude Oil Net Imports (c)	**2.87**	**2.96**	**3.60**	**3.09**	**3.00**	*2.77*	*3.07*	*2.92*	*2.81*	*3.22*	*2.97*	*2.14*	**3.13**	*2.94*	*2.78*
SPR Net Withdrawals	**0.00**	**0.18**	**0.04**	**0.26**	**0.31**	*0.92*	*0.98*	*0.41*	*0.04*	*0.09*	*0.03*	*0.11*	**0.12**	*0.66*	*0.07*
Commercial Inventory Net Withdrawals	**-0.18**	**0.59**	**0.30**	**-0.01**	**0.08**	*0.23*	*0.22*	*-0.07*	*-0.40*	*0.11*	*0.21*	*-0.13*	**0.18**	*0.11*	*-0.05*
Crude Oil Adjustment (d)	**0.42**	**0.63**	**0.54**	**0.54**	**0.72**	*0.59*	*0.23*	*0.16*	*0.22*	*0.22*	*0.23*	*0.16*	**0.53**	*0.42*	*0.21*
Total Crude Oil Input to Refineries	**13.81**	**15.65**	**15.60**	**15.51**	**15.56**	*16.23*	*16.57*	*15.85*	*15.31*	*16.46*	*16.51*	*15.62*	**15.15**	*16.05*	*15.98*
Other Supply															
Refinery Processing Gain	**0.84**	**0.97**	**0.97**	**1.04**	**0.95**	*1.06*	*1.06*	*1.05*	*1.02*	*1.01*	*1.01*	*0.99*	**0.95**	*1.03*	*1.01*
Natural Gas Plant Liquids Production	**4.86**	**5.46**	**5.52**	**5.74**	**5.61**	*5.78*	*5.93*	*6.10*	*6.13*	*6.24*	*6.27*	*6.37*	**5.40**	*5.86*	*6.25*
Renewables and Oxygenate Production (e)	**1.03**	**1.13**	**1.10**	**1.24**	**1.19**	*1.17*	*1.18*	*1.21*	*1.18*	*1.20*	*1.19*	*1.24*	**1.12**	*1.19*	*1.20*
Fuel Ethanol Production	**0.90**	**0.99**	**0.96**	**1.06**	**1.02**	*0.98*	*1.00*	*1.01*	*0.98*	*0.99*	*0.99*	*1.01*	**0.98**	*1.00*	*0.99*
Petroleum Products Adjustment (f)	**0.19**	**0.22**	**0.22**	**0.23**	**0.22**	*0.22*	*0.22*	*0.22*	*0.21*	*0.22*	*0.22*	*0.22*	**0.22**	*0.22*	*0.21*
Product Net Imports (c)	**-2.94**	**-3.13**	**-3.24**	**-3.86**	**-3.74**	*-3.79*	*-3.79*	*-3.88*	*-3.78*	*-3.87*	*-4.01*	*-3.81*	**-3.29**	*-3.80*	*-3.87*
Hydrocarbon Gas Liquids	**-2.02**	**-2.23**	**-2.16**	**-2.19**	**-2.14**	*-2.25*	*-2.29*	*-2.37*	*-2.40*	*-2.57*	*-2.61*	*-2.60*	**-2.15**	*-2.26*	*-2.55*
Unfinished Oils	**0.14**	**0.25**	**0.22**	**0.08**	**0.09**	*0.38*	*0.37*	*0.21*	*0.18*	*0.25*	*0.37*	*0.21*	**0.17**	*0.26*	*0.25*
Other HC/Oxygenates	**-0.08**	**-0.04**	**-0.03**	**-0.06**	**-0.09**	*-0.03*	*-0.04*	*-0.03*	*-0.04*	*-0.03*	*-0.03*	*-0.02*	**-0.05**	*-0.05*	*-0.03*
Motor Gasoline Blend Comp.	**0.55**	**0.79**	**0.66**	**0.40**	**0.40**	*0.68*	*0.50*	*0.21*	*0.38*	*0.63*	*0.38*	*0.43*	**0.60**	*0.45*	*0.45*
Finished Motor Gasoline	**-0.66**	**-0.66**	**-0.68**	**-0.85**	**-0.76**	*-0.83*	*-0.75*	*-0.63*	*-0.74*	*-0.73*	*-0.75*	*-0.75*	**-0.71**	*-0.74*	*-0.74*
Jet Fuel	**0.03**	**0.09**	**0.09**	**0.00**	**-0.04**	*-0.13*	*-0.05*	*-0.03*	*-0.07*	*0.04*	*0.05*	*0.06*	**0.05**	*-0.06*	*0.02*
Distillate Fuel Oil	**-0.49**	**-0.90**	**-0.94**	**-0.89**	**-0.81**	*-1.27*	*-1.09*	*-0.92*	*-0.67*	*-1.06*	*-1.02*	*-0.87*	**-0.80**	*-1.02*	*-0.91*
Residual Fuel Oil	**0.08**	**0.05**	**0.08**	**0.16**	**0.14**	*0.14*	*0.06*	*0.13*	*0.03*	*0.06*	*0.03*	*0.13*	**0.09**	*0.12*	*0.07*
Other Oils (g)	**-0.49**	**-0.49**	**-0.50**	**-0.50**	**-0.54**	*-0.47*	*-0.50*	*-0.47*	*-0.45*	*-0.46*	*-0.44*	*-0.41*	**-0.49**	*-0.50*	*-0.44*
Product Inventory Net Withdrawals	**0.65**	**-0.26**	**0.03**	**0.52**	**0.37**	*-0.30*	*-0.55*	*0.35*	*0.32*	*-0.59*	*-0.33*	*0.36*	**0.23**	*-0.03*	*-0.06*
Total Supply	**18.43**	**20.03**	**20.21**	**20.41**	**20.16**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.51*	*20.73*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**3.40**	**3.33**	**3.31**	**3.60**	**3.87**	*3.33*	*3.39*	*3.90*	*4.02*	*3.46*	*3.46*	*3.90*	**3.41**	*3.63*	*3.71*
Other HC/Oxygenates	**0.11**	**0.13**	**0.11**	**0.16**	**0.13**	*0.18*	*0.17*	*0.22*	*0.21*	*0.21*	*0.19*	*0.25*	**0.13**	*0.18*	*0.21*
Unfinished Oils	**0.05**	**0.03**	**-0.05**	**-0.01**	**0.13**	*0.03*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.04*	*0.00*
Motor Gasoline	**8.00**	**9.07**	**9.13**	**8.96**	**8.47**	*9.00*	*9.14*	*8.95*	*8.53*	*9.06*	*9.11*	*8.91*	**8.80**	*8.89*	*8.90*
Fuel Ethanol blended into Motor Gasoline	**0.82**	**0.93**	**0.94**	**0.95**	**0.87**	*0.94*	*0.92*	*0.92*	*0.87*	*0.93*	*0.93*	*0.93*	**0.91**	*0.91*	*0.91*
Jet Fuel	**1.13**	**1.34**	**1.52**	**1.49**	**1.45**	*1.55*	*1.56*	*1.55*	*1.46*	*1.62*	*1.66*	*1.62*	**1.37**	*1.53*	*1.59*
Distillate Fuel Oil	**3.97**	**3.93**	**3.87**	**4.00**	**4.14**	*3.83*	*3.87*	*4.03*	*4.09*	*3.96*	*3.93*	*4.03*	**3.94**	*3.97*	*4.00*
Residual Fuel Oil	**0.26**	**0.25**	**0.33**	**0.41**	**0.38**	*0.39*	*0.33*	*0.33*	*0.29*	*0.30*	*0.32*	*0.33*	**0.31**	*0.36*	*0.31*
Other Oils (g)	**1.53**	**1.95**	**1.98**	**1.81**	**1.65**	*2.05*	*2.14*	*1.91*	*1.80*	*2.06*	*2.19*	*1.95*	**1.82**	*1.94*	*2.00*
Total Consumption	**18.45**	**20.03**	**20.21**	**20.41**	**20.22**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.53*	*20.73*
Total Petroleum and Other Liquids Net Imports	**-0.07**	**-0.16**	**0.35**	**-0.77**	**-0.74**	*-1.01*	*-0.72*	*-0.96*	*-0.97*	*-0.64*	*-1.04*	*-1.67*	**-0.16**	*-0.86*	*-1.08*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**501.9**	**448.0**	**420.4**	**421.4**	**414.4**	*393.7*	*373.7*	*380.2*	*416.5*	*406.2*	*387.0*	*399.3*	**421.4**	*380.2*	*399.3*
Hydrocarbon Gas Liquids	**168.6**	**195.8**	**225.6**	**188.4**	**142.0**	*191.5*	*237.7*	*192.9*	*156.6*	*207.1*	*247.9*	*205.3*	**188.4**	*192.9*	*205.3*
Unfinished Oils	**93.3**	**93.0**	**90.2**	**80.3**	**87.9**	*88.0*	*89.2*	*82.8*	*92.3*	*89.6*	*89.3*	*82.4*	**80.3**	*82.8*	*82.4*
Other HC/Oxygenates	**29.1**	**27.5**	**25.4**	**28.6**	**34.1**	*31.5*	*31.2*	*31.5*	*33.5*	*32.3*	*32.0*	*32.3*	**28.6**	*31.5*	*32.3*
Total Motor Gasoline	**237.6**	**237.2**	**227.0**	**232.2**	**238.5**	*223.3*	*219.9*	*235.3*	*233.7*	*236.1*	*227.1*	*241.4*	**232.2**	*235.3*	*241.4*
Finished Motor Gasoline	**20.3**	**18.6**	**18.5**	**17.7**	**17.3**	*19.6*	*22.1*	*25.4*	*22.1*	*23.3*	*24.2*	*26.9*	**17.7**	*25.4*	*26.9*
Motor Gasoline Blend Comp.	**217.4**	**218.6**	**208.5**	**214.5**	**221.2**	*203.7*	*197.9*	*209.9*	*211.6*	*212.8*	*202.9*	*214.5*	**214.5**	*209.9*	*214.5*
Jet Fuel	**39.0**	**44.7**	**42.0**	**35.8**	**35.6**	*39.3*	*42.0*	*39.0*	*38.5*	*39.4*	*42.0*	*38.9*	**35.8**	*39.0*	*38.9*
Distillate Fuel Oil	**145.5**	**140.1**	**131.7**	**129.9**	**114.6**	*109.9*	*123.3*	*125.8*	*114.5*	*119.1*	*125.8*	*127.7*	**129.9**	*125.8*	*127.7*
Residual Fuel Oil	**30.9**	**31.1**	**28.0**	**25.4**	**27.9**	*28.2*	*28.0*	*30.1*	*30.0*	*30.8*	*29.4*	*31.0*	**25.4**	*30.1*	*31.0*
Other Oils (g)	**55.8**	**54.1**	**50.5**	**51.8**	**58.5**	*54.5*	*45.6*	*47.5*	*57.0*	*55.1*	*46.1*	*47.6*	**51.8**	*47.5*	*47.6*
Total Commercial Inventory	**1301.7**	**1271.5**	**1240.7**	**1193.8**	**1153.6**	*1159.9*	*1190.7*	*1165.1*	*1172.6*	*1215.6*	*1226.5*	*1205.8*	**1193.8**	*1165.1*	*1205.8*
Crude Oil in SPR	**637.8**	**621.3**	**617.8**	**593.7**	**566.1**	*482.0*	*392.0*	*354.2*	*350.4*	*342.6*	*340.0*	*329.5*	**593.7**	*354.2*	*329.5*

(a) Includes lease condensate.

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

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

(d) Crude oil adjustment balances supply and consumption and was previously referred to as "Unaccounted for Crude Oil."

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

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

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

- = no data available

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Supply (billion cubic feet per day)															
Total Marketed Production	**97.65**	**101.12**	**101.89**	**104.86**	**102.77**	*103.79*	*105.36*	*107.59*	*108.81*	*110.27*	*111.39*	*111.75*	**101.40**	*104.89*	*110.57*
Alaska	**1.02**	**0.95**	**0.90**	**1.02**	**1.06**	*0.79*	*0.73*	*0.87*	*0.93*	*0.78*	*0.74*	*0.89*	**0.97**	*0.86*	*0.84*
Federal GOM (a)	**2.26**	**2.25**	**1.82**	**2.11**	**2.04**	*2.25*	*2.16*	*2.14*	*2.18*	*2.12*	*2.00*	*1.95*	**2.11**	*2.15*	*2.06*
Lower 48 States (excl GOM)	**94.37**	**97.92**	**99.17**	**101.73**	**99.67**	*100.75*	*102.47*	*104.58*	*105.70*	*107.38*	*108.65*	*108.90*	**98.32**	*101.88*	*107.67*
Total Dry Gas Production	**90.59**	**93.15**	**93.86**	**96.53**	**94.61**	*95.48*	*96.90*	*98.94*	*99.94*	*101.30*	*102.33*	*102.66*	**93.55**	*96.50*	*101.57*
LNG Gross Imports	**0.15**	**0.02**	**0.03**	**0.04**	**0.15**	*0.18*	*0.18*	*0.20*	*0.32*	*0.18*	*0.18*	*0.20*	**0.06**	*0.18*	*0.22*
LNG Gross Exports	**9.27**	**9.81**	**9.60**	**10.32**	**11.50**	*11.74*	*11.74*	*12.78*	*13.08*	*12.51*	*12.19*	*12.78*	**9.76**	*11.94*	*12.63*
Pipeline Gross Imports	**8.68**	**6.81**	**7.24**	**7.82**	**8.92**	*6.85*	*6.42*	*6.71*	*7.78*	*6.47*	*6.32*	*6.50*	**7.63**	*7.22*	*6.76*
Pipeline Gross Exports	**8.31**	**8.66**	**8.50**	**8.40**	**8.43**	*8.39*	*9.24*	*9.20*	*9.12*	*9.02*	*9.33*	*9.24*	**8.47**	*8.82*	*9.18*
Supplemental Gaseous Fuels	**0.17**	**0.15**	**0.15**	**0.17**	**0.19**	*0.17*	*0.17*	*0.17*	*0.17*	*0.18*	*0.18*	*0.18*	**0.16**	*0.17*	*0.18*
Net Inventory Withdrawals	**17.18**	**-9.12**	**-7.87**	**1.03**	**20.14**	*-9.40*	*-7.96*	*2.17*	*13.52*	*-12.50*	*-8.41*	*3.09*	**0.24**	*1.16*	*-1.12*
Total Supply	**99.18**	**72.53**	**75.31**	**86.87**	**104.08**	*73.14*	*74.73*	*86.22*	*99.53*	*74.10*	*79.08*	*90.61*	**83.42**	*84.46*	*85.79*
Balancing Item (b)	**0.26**	**-0.53**	**-0.23**	**-1.25**	**0.23**	*1.20*	*0.31*	*1.72*	*0.86*	*-1.48*	*-1.66*	*-0.25*	**-0.44**	*0.87*	*-0.64*
Total Primary Supply	**99.44**	**72.00**	**75.08**	**85.62**	**104.30**	*74.34*	*75.04*	*87.94*	*100.39*	*72.61*	*77.42*	*90.36*	**82.98**	*85.33*	*85.15*
Consumption (billion cubic feet per day)															
Residential	**25.67**	**7.50**	**3.63**	**14.43**	**26.09**	*7.66*	*3.48*	*16.82*	*24.70*	*8.10*	*4.04*	*16.74*	**12.75**	*13.46*	*13.35*
Commercial	**14.87**	**6.25**	**4.68**	**10.08**	**15.62**	*6.11*	*4.44*	*10.41*	*15.04*	*6.63*	*5.01*	*10.45*	**8.94**	*9.12*	*9.26*
Industrial	**23.81**	**21.49**	**21.12**	**23.44**	**25.23**	*22.01*	*20.91*	*23.10*	*23.33*	*21.22*	*21.84*	*25.05*	**22.46**	*22.80*	*22.86*
Electric Power (c)	**26.79**	**29.20**	**37.94**	**29.47**	**28.65**	*30.79*	*38.36*	*29.20*	*28.42*	*28.65*	*38.30*	*29.43*	**30.88**	*31.77*	*31.22*
Lease and Plant Fuel	**4.87**	**5.04**	**5.08**	**5.23**	**5.12**	*5.17*	*5.25*	*5.36*	*5.42*	*5.50*	*5.55*	*5.57*	**5.05**	*5.23*	*5.51*
Pipeline and Distribution Use	**3.29**	**2.38**	**2.48**	**2.83**	**3.45**	*2.44*	*2.46*	*2.90*	*3.33*	*2.37*	*2.53*	*2.98*	**2.74**	*2.81*	*2.80*
Vehicle Use	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	**0.15**	*0.15*	*0.15*
Total Consumption	**99.44**	**72.00**	**75.08**	**85.62**	**104.30**	*74.34*	*75.04*	*87.94*	*100.39*	*72.61*	*77.42*	*90.36*	**82.98**	*85.33*	*85.15*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,801**	**2,585**	**3,306**	**3,210**	**1,401**	*2,257*	*2,989*	*2,789*	*1,573*	*2,710*	*3,484*	*3,199*	**3,210**	*2,789*	*3,199*
East Region (d)	**313**	**515**	**804**	**766**	**242**	*462*	*740*	*644*	*277*	*609*	*887*	*772*	**766**	*644*	*772*
Midwest Region (d)	**395**	**630**	**966**	**887**	**296**	*523*	*853*	*769*	*340*	*648*	*980*	*859*	**887**	*769*	*859*
South Central Region (d)	**760**	**993**	**1,053**	**1,143**	**587**	*866*	*916*	*939*	*676*	*1,021*	*1,084*	*1,088*	**1,143**	*939*	*1,088*
Mountain Region (d)	**113**	**175**	**205**	**171**	**90**	*146*	*199*	*183*	*111*	*151*	*213*	*192*	**171**	*183*	*192*
Pacific Region (d)	**197**	**246**	**248**	**218**	**165**	*238*	*260*	*233*	*146*	*258*	*297*	*267*	**218**	*233*	*267*
Alaska	**23**	**27**	**30**	**25**	**21**	*22*	*22*	*22*	*22*	*22*	*22*	*22*	**25**	*22*	*22*

(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 June 2, 2022.

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.

Pipe Leak Seen as Possible Cause of Fire at US LNG Terminal (1)
2022-06-10 18:21:36.750 GMT

By Gerson Freitas Jr.
(Bloomberg) -- A probe into the causes of Freeport LNG terminal explosion has found early indications of a leak from piping in the tank area of the facility, according to the Pipeline and Hazardous Materials Safety Administration.
It's unclear how long the liquefied natural gas facility will remain shut down as the extend of damage is still being evaluated, PHMSA said in an emailed response to questions. It "will be a while" until the investigation is complete, the agency added.
Freeport LNG blast on Wednesday sent US natural gas prices plunging as it means gas exports would be curtailed for at least a few weeks, alleviating a strain on depleted inventories. The incident also limits America's ability to help Europe replenish its storage and move away from Russian fuel supplies.
On Wednesday, Freeport LNG said that facility would remain offline for a minimum of three weeks.

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To view this story in Bloomberg click here:
https://blinks.bloomberg.com/news/stories/RD9WSXDWRGG1

https://ir.energytransfer.com/news-releases/news-release-details/energy-transfer-signs-lng-sale-and-purchase-agreement-china-gas

June 5, 2022 at 8:00 PM EDT
PDF Version

25-Year Agreement for LNG for Supply from Energy Transfer's Lake Charles LNG Export Facility Represents First Long-Term LNG Contract Signed by China Gas

DALLAS--(BUSINESS WIRE)--Jun. 5, 2022-- **Energy Transfer LP (NYSE: ET)** and **China Gas Holdings Limited (HKEX:00384)** today announced that China Gas Hongda Energy Trading Co., LTD, a subsidiary of China Gas Holdings Limited (China Gas) has entered into an LNG Sale and Purchase Agreement with Energy Transfer LNG Export, LLC (Energy Transfer LNG), a subsidiary of Dallas-based Energy Transfer LP, related to its Lake Charles LNG project.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220603005512/en/

Under the SPA, Energy Transfer LNG will supply 0.7 million tonnes of LNG per annum to China Gas on a free-on-board (FOB) basis. The purchase price is indexed to the Henry Hub benchmark plus a fixed liquefaction charge. The SPA is for a term of 25 years, and first deliveries are expected to commence as early as 2026. The SPAs will become fully effective upon the satisfaction of the conditions precedent, including Energy Transfer LNG taking final investment decision (FID).

"This LNG SPA signed with Energy Transfer LNG, which is the first long-term contract of China Gas, strengthens our existing portfolio for the import of LNG, and will further enable China Gas to reliably and securely meet our natural gas customers' needs. It is also an important step along the path to realizing China's carbon peaking and carbon neutrality goals," said Yalong Qi, General Manager of China Gas Hongda Energy Trading Co., LTD.

"China Gas is a premier natural gas distribution company in China, and we are pleased to enter into this 25-year LNG offtake agreement with them," said Tom Mason, President of Energy Transfer LNG. "This SPA brings our total amount of LNG contracted from our Lake Charles LNG export facility to nearly 6.0 mtpa and is an important step towards our goal of reaching FID later this year."

Energy Transfer is one of the largest and most diversified midstream energy companies in North America, with a strategic footprint in all of the major U.S. production basins. Energy Transfer's Lake Charles LNG export facility will be constructed on the existing brownfield regasification facility and will capitalize on four existing LNG storage tanks, two deep water berths and other LNG infrastructure. Lake Charles LNG has received all federal, state and local permits necessary for the construction for the project, including authorizations from the Federal Energy Regulatory Commission, as well as export authorizations from the Department of Energy. Lake Charles LNG will also benefit from its direct connection to Energy Transfer's existing Trunkline pipeline system that in turn provides connections to multiple intrastate and interstate pipelines. These pipelines allow access to multiple natural gas producing basins, including the Haynesville, the Permian and the Marcellus Shale.

About China Gas

China Gas Holdings Limited (HKEX: 00384) is a leading gas service provider in China, principally engaged in the investment, construction and management of city gas pipeline infrastructure, distribution of natural gas and LPG to residential, industrial and commercial users, and gas refilling stations for vehicles and vessels. China Gas owns a total of 652 city and township gas projects with concession rights, 32 natural gas long-distance pipeline transmission projects, 554 CNG/LNG refilling stations for vehicles, as well as the license to import and export LNG and other fuel products in China, in addition to 113 LPG distribution projects.

About Energy Transfer

Energy Transfer LP (NYSE: ET) owns and operates one of the largest and most diversified portfolios of energy assets in North America, with a strategic footprint in all of the major U.S. production basins. Energy Transfer is a publicly traded limited partnership with core operations that include complementary natural gas midstream, intrastate and interstate transportation and storage assets; crude oil, natural gas liquids (NGL) and refined product transportation and terminalling assets; and NGL fractionation. Energy Transfer also owns Lake Charles LNG Company, as well as the general partner interests, the incentive distribution rights and 28.5 million common units of Sunoco LP (NYSE: SUN), and the general partner interests and 46.1 million common units of USA Compression Partners, LP (NYSE: USAC).

https://lngir.cheniere.com/news-events/press-releases/detail/249/cheniere-and-equinor-sign-long-term-lng-sale-and-purchase

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

JUNE 09, 2022 8:00AM EDT

HOUSTON--(BUSINESS WIRE)-- Cheniere Energy, Inc. (“Cheniere” or the “Company”) (NYSE American: LNG) announced today that its subsidiary, Cheniere Marketing, LLC (“Cheniere Marketing”), has entered into a liquefied natural gas (“LNG”) sale and purchase agreement (“SPA”) with Equinor ASA (“Equinor”).

Under the SPA, Equinor has agreed to purchase approximately 1.75 million tonnes per annum (“mtpa”) of LNG from Cheniere Marketing on a free-on-board basis for a term of approximately 15 years. The deliveries under the SPA will start in the second half of 2026 and reach the full 1.75 mtpa in the second half of 2027. Half of the volume, or approximately 0.9 mtpa, is subject to Cheniere making a positive final investment decision (“FID”) to construct additional liquefaction capacity at the Corpus Christi LNG Terminal beyond the seven-train Corpus Christi Stage III Project.

“Equinor is one of Europe’s premier energy companies, and we are excited to form a long-term relationship with another strategic customer that shares our ambitions for a sustainable future,” said Jack Fusco, Cheniere’s President and Chief Executive Officer. “This SPA further reinforces Cheniere’s leadership in providing the flexible, reliable and cleaner burning long-term LNG supply sought by our customers across the globe focused on energy security and environmental priorities. The SPA also reflects the urgency in demand for investment in additional LNG capacity, not only for the Corpus Christi Stage III Project, which is nearing FID, but also for capacity beyond the project’s initial seven trains.”

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

For additional information, please refer to the Cheniere website at www.cheniere.com and Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, filed with the Securities and Exchange Commission.
About Equinor

Equinor is an international energy company committed to long-term value creation in a low-carbon future. Equinor's purpose is to turn natural resources into energy for people and progress for society. Equinor's portfolio of projects encompass oil and gas, renewables and low-carbon solutions, with an ambition of becoming a net-zero energy company by 2050. Equinor is the second largest exporter of pipeline gas to Europe and operator of Europe's only large-scale LNG plant at Hammerfest, Norway. Headquartered in Stavanger (Norway), Equinor is the leading operator on the Norwegian continental shelf, present in around 30 countries worldwide.

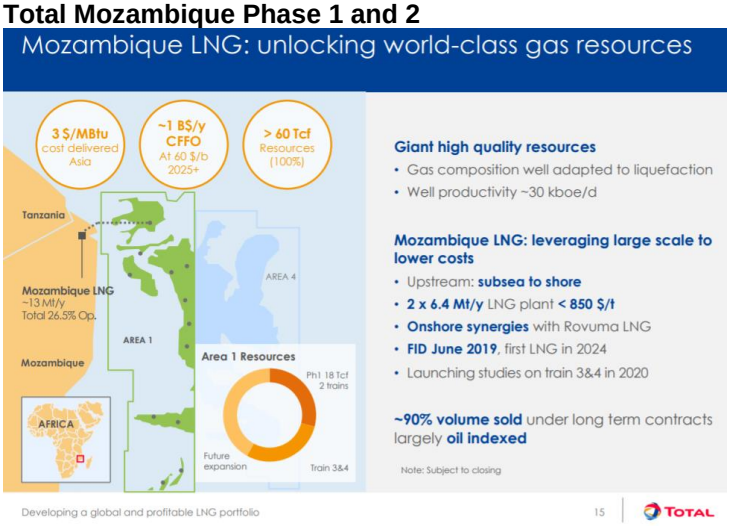
Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?

Posted Wednesday April 28, 2021. 9:00 MT

The next six months will determine the size and length of the new LNG supply gap that is hitting harder and faster than anyone expected six months ago. Optimists will say the Mozambique government will bring sustainable security and safety to the northern Cabo Delgado province and provide the confidence to Total to quickly get back to LNG development such that its LNG in-service delay is a matter of months and not years. We hope so for Mozambique's domestic situation, but will it be that easy for Total's board to quickly look thru what just happened? Total suspended LNG development for 3 months, restarted development on March 25, but then 3 days of violence led it to suspend development again on March 28, and announce force majeure on Monday April 26. Even if the optimists are right, Mozambique LNG is counted on for LNG supply and the major LNG supply project that are in LNG supply forecasts are now all delayed – Total Phase 1 of 1.7 bcf/d and its follow on Phase 2 of 1.3 bcf/d, and Exxon's Rozuma Phase 1 of 2.0 bcf/d. It is important to remember this 5.0 bcf/d of major LNG supply is being counted in LNG supply forecasts and starting in 2024. At a minimum, we think the more likely scenario is a delay of at least 2 years in this 5.0 bcf/d from the pre-Covid timelines. And this creates a much bigger and sooner LNG supply gap starting ~2025 and stronger outlook for LNG prices. Thermal coal in Asia will play a role in keeping a lid on LNG prices. But there will be the opportunity for LNG suppliers to at least review the potential for brownfield LNG projects to fill the growing supply gap. The thought of increasing capex was a non-starter six months ago, but there is a much stronger outlook for global oil and gas prices. Oil and gas companies are pivoting from cutting capex to small increases in 2021 capex and expecting for higher capex in 2022. We believe this sets the stage for looking at potential FID of brownfield LNG projects before the end of 2021 to be included in 2022 capex budgets. Mozambique is causing an LNG supply gap that someone will try to fill. And if brownfield LNG is needed, what about Shell looking at 1.8 bcf/d brownfield LNG Canada Phase 2? Cdn natural gas producers hope so as this would mean more Cdn natural gas will be tied to Asian LNG markets and not competing in the US against Henry Hub.

Total declares force majeure on Mozambique LNG, Yesterday, Total announced [LINK] "*Considering the evolution of the security situation in the north of the Cabo Delgado province in Mozambique, Total confirms the withdrawal of all Mozambique LNG project personnel from the Afungi site. This situation leads Total, as operator of Mozambique LNG project, to declare force majeure. Total expresses its solidarity with the government and people of Mozambique and wishes that the actions carried out by the government of Mozambique and its regional and international partners will enable the restoration of security and stability in Cabo Delgado province in a sustained manner".* Total is working Phase 1 is ~1.7 bcf/d (Train 1 + 2, 6.45 mtpa/train) and was originally expected to being LNG deliveries in 2024. There was no specific timeline for Phase 2 of 1.3 bcf/d (Train 3 + 4, 5.0 mtpa/train), but was expected to follow Phase 1 in short order to keep capital costs under control with a continuous construction process with a potential onstream shortly after 2026.

Total Mozambique Phase 1 and 2



Source: Total Investor Day September 24, 2019

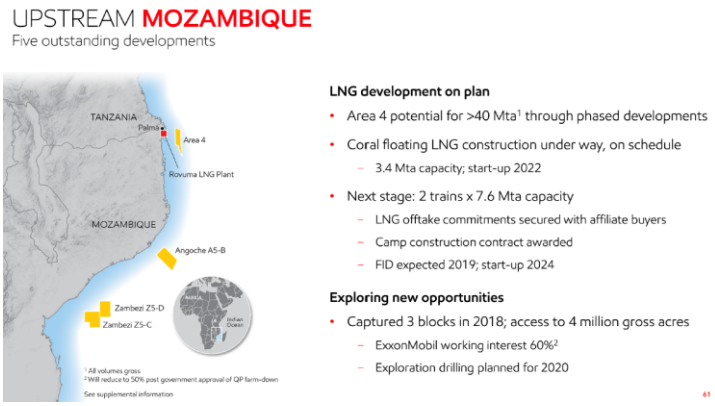
Total's Mozambique force majeure is no surprise, especially the need to the restoration of security and stability "in a sustained manner". Yesterday, Total announced [LINK] "*Considering the evolution of the security".* No one should be surprised by the force majeure or the sustained manner caveat. SAF Group posts a weekly Energy Tidbits research memo [LINK], wherein we have, in multiple weekly memos, that Total had shut down development in December for 3 months due to the violent and security risks. It restarted development on Wed March 24, violence/attacks immediately resumed for 3 consecutive days, and then Total suspended development on Sat March 27. Local violence/attacks shut development down in Dec, the situation gets settled enough for Total to restart in March, only to be shut down 3 days thereafter. No one should be surprised especially with Total's need to see security and stability "in a sustained manner".

Does anyone really think Total will risk another quick 2-3 month restart or even in 2021? The Mozambique government will be working hard to convince Total to restart soon. We just find it hard to believe Total board will risk a replay of March 24-27 in 2021. Unfortunately, Mozambique has had internal conflict for years. It reached a milestone to the positive in August 2019. Our SAF Group August 11, 2019 Energy Tidbits memo [LINK] highlighted the signing of a peace pact between Mozambique President Nyusi and leader of the Renamo opposition Momade. This was the official end to a 2013 thru 2016 conflict following a failure to hold up the prior peace pact. At that time, FT reported [LINK] "Mr Nyusi has said that "*the government and Renamo will come together and hunt" rebels who fail to disarm. The government has struggled to stem the separate insurgency in the north, which has killed or displaced hundreds near the gas-rich areas during the past two years. While the roots of the conflict remain murky, it is linked to a local Islamist group and appears to be drawing on disaffection over sharing gas investment benefits, say analysts*." This is just a reminder this is not a new issue. LNG is a game changer to Mozambique's economic future. It is, but also has been, a government priority to have the security and safety for Total and Exxon to move on their LNG developments. Its hard to believe the Mozambique government will be able to quickly convince Total and Exxon boards that they can be comfortable there is a sustained security/safety situation and they can send their people back in to develop the LNG. Total's board would allow any resumption of development before year end 2021. The last thing Total wants is a replay of March 24-27. The first question is how long will it take before the Total board is convinced its safe to restart. Could you imagine them doing a replay of what just happened? Wait three months, restart development and have to stop again right away? We have to believe that could lead the Total board to believe it is unfixable for years. We just don't think they are to prepared to risk that decision in 3 months. Its why we have to think there isn't a restart approval until at least in 2022 at the earliest ie. why we think the likely scenario is a delay of 2-3 years, and not a matter of months.

Mozambique's security issues pushes back 5.0 bcf/d of new LNG supply at least a couple years. The global LNG issue is that 5 bcf/d of new Mozambique LNG supply (apart from the Eni Coral FLNG of 0.45 bcf/d) won't start up in 2024 and

continuing thru the 2020s. And we believe all LNG forecasts included this 5.0 bcf/d to be in service in the 2020s as Mozambique had been considered the best positioned LNG supply to access Asia after Australia and Papua New Guinea. (i) Eni Coral Sul (Rovuma Basin) FLNG of 0.45 bcf/d planned in service in 2022. [LINK] This is an offshore floating LNG vessel that is still expected to be in service in 2022. (ii) Total Phase 1 to add 1.7 bcf/d with an in service originally planned for 2024. We expect the in service data to be pushed back to at least 2026 assuming Total gives a development restart approval in Dec 2021. In theory, this would only be a 1 year loss of time. However, Total has let services go, the project will be idle for 9 months, it isn't clear if the need to get people out quickly let them do a complete put the project on hold, and how many people will be on site maintaining the status of the development during the force majeure. Also what new procedures and safety will be put in place for a restart. These all mean there will be added time needed to get the project back to where it was when force majeure was declared ie. why we think a 12 month time delay will be more like an 18 month project delay. (iii) Exxon's Rozuma Phase 1 LNG will add 2.0 bcf/d and, pre-Covid, was expected to be in service in 2025. We believe the delays related to security and safety at Total are also going to impact Exxon. We find it highly unlikely the Exxon board would take a different security and safety decision than Total. Pre-pandemic, Exxon's March 6, 2019 Investor Day noted their operated Mozambique Rovuma LNG Phase 1 was to be 2 trains each with 1.0 bcf/d capacity for total initial capacity of 2.0 bf/d with FID expected in 2019 and first LNG deliveries in 2024. The 2019 FID expectation was later pushed to be expected just before the March 2020 investor day. But the pandemic hit, and on March 21, 2020, we tweeted [LINK] on the Reuters story "*Exclusive: Coronavirus, gas slump put brakes on Exxon's giant Mozambique LNG plan"* [LINK] that noted Exxon was expected to delay the Rovuma FID. There was no timeline, but the expectation was that FID would now be in 2022 (3 years later than original timeline0 and that would push first LNG likely to 2027. (iv) Total Phase 2 was to add 1.3 bcf/d. There was no firm in service date but it was expected to follow closely behind Phase 1 to maintain services. That would have put it originally in the 2026/2027 period. But if Phase 1 is pushed back 2 years, so will Phase 2 so more likely 2028/2029.. (v) Total Phase 1 + 2 and Exxon Rozuma Phase 1 total 5.0 bcf/d and would have been (and still are) in all LNG supply forecasts for the 2020s. (vi) We aren't certain if the LNG supply forecasts include Exxon Rozuma Phase 2 ,which would be an additional 2.0 bcf/d on top of the 5.0 bcf/d noted above. Exxon Rozuma has always been expected to be at least 2 Phases. This has been the plan since the Anadarko days given the 85 tcf size of the resource on Exxon's Area 4. There was no firm in service data for Phase 2, but it was expected they would also closely follow Phase 1 to maintain services. We expect that original timeline would have been 2026/2027 and that would not be pushed back to 2029/2030. (vii) It doesn't matter if its only 5 bcf/ of Mozambique that is delayed 2 to 3 years, it will cause a bigger LNG supply gap and sooner. The issue for LNG markets is this is taking projects that are in development effectively out of the queue for some period.

Exxon Mozambique LNG



Source: Exxon Investor Day March 6, 2019

Won't LNG and natural gas get hit by Biden's push for carbon free electricity? Yes, in the US. For the last 9 months, we have warned on Biden's climate change plan that were his election platform and now form his administration's energy transition map. We posted our July 28, 2020 blog "*Biden To Put US On "Irreversible Path to Achieve Net-Zero Emissions, Economy-Wide" Is a Major Negative To US Natural Gas in 2020s* "[LINK] on Biden's platform "*The Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future*" [LINK]. Biden's new American Jobs Plan

[LINK] lines up with his campaign platform including to put the US "*on the path to achieving 100 percent carbon-free electricity by 2035*.". Our July 28, 2020 blog noted that it would require replacing ~60% of US electricity generation with more renewable and it could eliminate ~40% (33.5 bcf/d) of 2019 US natural gas consumption. If Biden is 25% successful by 2030, it would replace ~6.3 bcf/d of natural gas demand. It would be a negative to US natural gas and force more US natural gas to export markets. The wildcard when does US natural gas start to decline if producers are faced with the reality of natural gas being phased out for electricity. The other hope is that when Biden says "carbon-free", its not what ends up in the details of any formal policy statement ie. carbon electricity will be allowed with Biden's push for CCS.

Will Cdn natural gas be similarly hit by if Trudeau move to "emissions free" and not "net zero emissions" electricity? Yes and No. Our SAF Group April 25, 2021 Energy Tidbits memo [LINK] was titled ""*Bad News For Natural Gas, Trudeau's Electricity Goal is Now 100% "Emissions Free" And Not "Net Zero Emissions*". On Thursday, PM Trudeau spoke at Biden's global climate summit [LINK] and looks like he slipped in a new view on electricity than was in last Monday's budget and his Dec climate plan. Trudeau said "*In Canada, we've worked hard to get to over 80% emissions-free electricity, and we're not going to stop until we get to 100%."* Speeches, especially ones made on a global stage are checked carefully so this had to be deliberate. Trudeau said "*emissions free*" and not net zero emissions electricity. It seems like this language is carefully written to exclude any fossil fuels as they are not emissions free even if they are linked to CCS. Recall in Liberals big Dec 2020 climate announcement [LINK], Liberals said ""*Work with provinces, utilities and other partners to ensure that Canada's electricity generation achieves net-zero emissions before 2050*." There is no way Trudeau changed the language unless he meant to do so. And this is a major change as it would seem to indicate his plan to eliminate all fossil fuels used for electricity. If so this would be a negative to Cdn natural gas that would be stuck within Western Canada and/or continuing to push into the US when Biden is trying to switch to carbon free electricity. We recognize that there is still some ambiguity in what will be the details of policy and the Liberals aren't changing to no carbon sourced electricity at all. Let's hope so. But let's also be careful that politicians don't change language without a reason or at least with a view to setting up for some future hit. Plus Trudeau had a big warning in that same speech saying "*we will make it law to respect our new 2030 target and achieve net-zero emissions by 2050*". They plan to make it the law that Canada has to be on track for the Liberals 2030 emissions targets. This means that the future messaging will be that the Liberals have no choice but to take harder future emissions actions as it is the law. They will be just obeying the law as they will be obligated to obey the law. Everyone knows the messaging will be we have to do more get to Net Zero, that in itself will inevitably mean it will be the law if he actually does move to eliminate any carbon based electricity. So yes it's a negative, that is unless more Cdn natural gas can be exported via LNG to Asia. We believe this would be a plus to be priced against global LNG instead of Henry Hub.

Biden's global climate summit reminded there is too much risk to skip over natural gas as the transition fuel. Apart from the US and Canada, we haven't seen a sea shift to eliminating natural gas for power generation, especially from energy import dependent countries. There is a strong belief that hydrogen and battery storage will one day be able to scale up at a competitive cost to lead to the acceleration away from fossil fuels. But that time isn't yet here, at least not for energy import dependent countries. One of the key themes from last week's leader's speeches at the Biden global climate summit – to get to Net Zero, the world is assuming there wilt be technological advances/discoveries that aren't here today and that have the potential to immediately ramp up in scale. IEA Executive Director Faith Birol was blunt in his message [LINK] saying "*Right now, the data does not match the rhetoric – and the gap is getting wider*." And "*IEA analysis shows that about half the reductions to get to net zero emissions in 2050 will need to come from technologies that are not yet ready for market. This calls for massive leaps in innovation. Innovation across batteries, hydrogen, synthetic fuels, carbon capture and many other technologies.* US Special Envoy for Climate John Kerry said a similar point that half of the emissions reductions will have to come from technologies that we don't yet have at scale. UK PM Johnson [LINK] didn't say it specifically, but points to this same issue saying "*To do these things we've got to be constantly original and optimistic about new technology and new solutions whether that's crops that are super-resistant to drought or more accurate weather forecasts like those we hope to see from the UK's new Met Office 1.2bn supercomputer that we're investing in*." It may well be that the US and other self sufficient energy countries are comfortable going on the basis of assuming technology developments will occur on a timely basis. But, its clear that countries like China, India, South Korea and others are not prepared to do so. And not prepared to have the confidence to rid themselves of coal power generation. This is why there hasn't been any material change in the LNG demand outlook

We expect the IEA's blunt message that the gap is getting wider will be reinforced on May 18. We have had a consistent view on the energy transition for the past few years. We believe it is going to happen, but it will take longer, be a bumpy road and cost more than expected. This is why we believe the demise of oil and natural gas won't be as easy and fast as hoped for by the climate change side. The IEA's blunt warning on the gap widening should not be a surprise as they warned on this in June 2020. Birol's climate speech also highlighted that the IEA will release on May 18 its roadmap for how the global energy sector can reach net zero by 2050. Our SAF Group June 11, 2020 blog "*Will The Demise Of Oil Take Longer, Just Like Coal? IEA and Shell Highlight Delays/Gaps To A Smooth Clean Energy Transition*" [LINK] feature the IEA's June 2020 warning that the critical energy technologies needed to reduce emissions are nowhere near where they need to be. In that blog, we said "there was an excellent illustration of the many significant areas, or major pieces of the puzzle, involved in an energy transition by the IEA last week. The IEA also noted the progress of each of the major pieces and the overall conclusion is that the vast majority of the pieces are behind or well behind where they should be to meet a smooth timely energy transition. It is important to note that these are just what the IEA calls the "*critical energy technologies*" and does not get into the wide range of other considerations needed to support the energy transition. The IEA divides these "critical energy technologies "into major groupings and then ranked the progress of each of these pieces in its report "*Tracking Clean Energy Progress"* [LINK] by on track, more efforts needed, or not on track". Our blog included the below IEA June 2020 chart.

IEA's Progress Ranking For "Critical Energy Technologies" For Clean Energy Transition

Power	Renewable Power	Geothermal
	Solar PV	Ocean Power
	Onshore Wind	Nuclear Power
	Offshore Wind	Natural Gas-Fired Power
	Hydropower	Coal-Fired Power
	Bioenergy Power Generation	CCUS in Power
	Concentrating Solar Power	
Fuel Supply	Methane Emissions from O&G	Flaring Emissions
Industry	Chemicals	Pulp and Paper
	Iron and Steel	Aluminum
	Cement	CCUS in Industry and Transformation
Transport	Electric Vehicles	Transport Biofuels
	Rail	Aviation
	Fuel Consumption of Cars and Vans	International Shipping
	Trucks and Busses	
Buildings	Building Envelopes	Lighting
	Heating	Appliances and Equipment
	Heat Pumps	Data Centres and Data Transmission Networks
	Cooling	
Energy Integration	Energy Storage	Demand Response
	Hydrogen	Direct Air Capture
	Smart Grids	

Source: IEA

On Track More Efforts Needed Not on Track

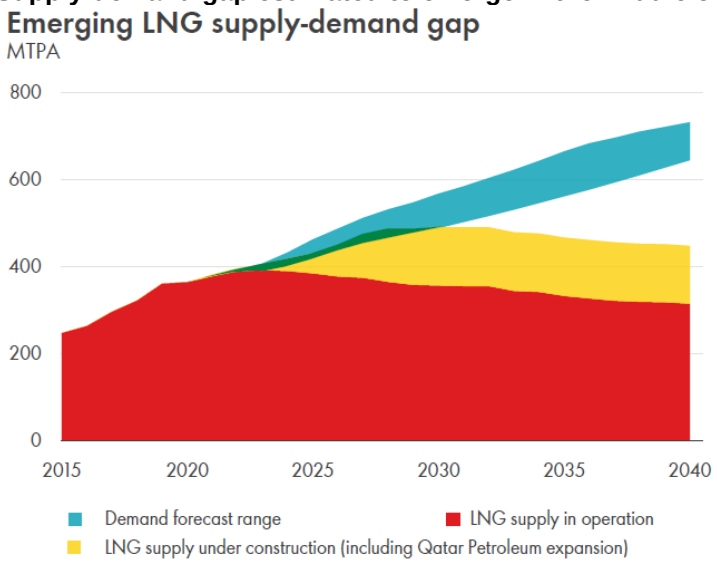
Source: IEA Tracking Clean Energy Progress, June 2020

We are referencing Shell's long term outlook for LNG We recognize there are many different forecasts for LNG, but are referencing Shell' LNG Outlook 2021 from Feb 25, 2021 for a few reasons. (i) Shell's view on LNG is the key view for when and what decision will be made for LNG Canada Phase 2. (ii) Shell is one of the global leaders in LNG supply and trading. (iii) Shell provides on the record LNG outlooks every year so there is the ability to compare and make sure the outlook fits the story. It does. (iv) Shell, like other supermajors, has had to make big capex cuts post pandemic and that certainly wouldn't put any bias to the need for more capex.

Shell's March 2021 long term outlook for LNG demand was basically unchanged vs 2020 and leads to a LNG supply gap in mid 2020s Shell does not provide the detailed numbers in their Feb 25, 2021 LNG forecast. We would assume they

would have reflected some delay, perhaps 1 year, at Mozambique but would be surprised if they put a 2-3 year delay in for the 5 bcf/d from Total Phase 1 +2 and Exxon Rozuma Phase 1. Compared to their LNG Outlook 2020, it looks like there was no change for their estimate of global natural gas demand growth to 2040, which looked relatively unchanged at approx. 5,000 bcm/yr or 484 bcf/d. Similarly, long term LNG demand looked unchanged to 2040 of ~700 mm tonnes (92 bcf/d) vs 360 mm tonnes (47 bcf/d) in 2020. In the 2021 outlook, Shell highlighted that the pandemic delayed project construction timelines and that the "*lasting impact expected on LNG supply not demand"*. And that Shell sees a LNG "*supply-demand gap estimated to emerge in the middle of the current decade as demand rebounds*". Comparing to 2020, it looks like the supply-demand gap is sooner.

Supply-demand gap estimated to emerge in the middle of the current decade



Source: Shell LNG Outlook 2021, Feb 25, 2021

Mozambique delays are redefining the LNG markets for the 2020s: Delaying 5 bcf/d of Mozambique new LNG supply 2-3 years means a much bigger supply gap starting in 2025.. Even if the optimists are right, there are now delays to all major Mozambique LNG supply from LNG supply forecasts. We don't have the detail, but we believe all LNG forecasts, including Shell's LNG Outlook 2021, would have included Total's Phase 1 and Phase 2 and Exxon Rozuma Phase 1. As noted earlier, we believe that the likely impact of the Mozambique security concerns is that these forecasts would likely have to push back 1.7 bcf/d from Total Phase 1 to at least 2026, 2.0 bcf/d Exxon Rozuma Phase 1 to at least 2027, and 1.3 bcf/d Total Phase 2 to at least 2028/2029 with the real risk these get pushed back even further. 5.0 bcf/d is equal to 38 mtpa. These delays would mean there is an increasing LNG supply gap in 2025 and increasingly significantly thereafter. And even if a new greenfield LNG project is FID's right away, it wouldn't be able to step in to replace Total Phase 1 prior startup timing for 2024 or likely the market at all until at least 2027. Its why the decision on filling the gap will fall on brownfield LNG projects.

And does this bigger, nearer supply gap force LNG players to look at what brownfield LNG projects they could advance? A greenfield LNG project would likely take at least until 2027 to be in operations. Its why we believe the Mozambique delays will effectively force major LNG players to look to see if there are brownfield LNG projects they should look to advance. Prior to the just passed winter, no one would think Shell or other major LNG players would be considering any new LNG FIDs in 2021. All the big companies are in capital reduction mode and debt reduction mode. But Brent oil is now solidly over $60 and LNG prices hit record levels in Jan and the world's economic and oil and gas demand outlook are increasing with vaccinations. And we are starting to see companies move to increasing capex with the higher cash flows. We would not expect any major LNG players to move to FID right away. But we see them watching to see if 2021 plays out to still support this increasing LNG supply gap. And unless new mutations prevent vaccinations from returning the world to normal, we suspect that major LNG players, like other oil and gas companies, will be looking to increase

capex as they approve 2022 budgets. The outlook for the future has changed dramatically in the last 5 months. The question facing Shell and others, should they look to FID new LNG brownfield projects in the face of an increasing LNG supply gap that is going to hit faster and harder than expected a few months ago. We expect these decisions to be looked at before the end of 2021. LNG prices will be stronger, but we expect the limiting cap in Asia will be that thermal coal will be used to mitigate some LNG price pressure.

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

A LNG Canada Phase 2 would be a big plus to Cdn natural gas. A LNG Canada Phase 2 FID would be a big plus for Cdn natural gas. It would allow another ~1.8 bcf/d of Cdn natural gas to be priced against Asian LNG prices and not against Henry Hub. And it would provide demand offset versus Trudeau if he moves to make electricity "emissions free" and not his prior "net zero emissions". Mozambique may be in Africa, but, unless sustained peace and security is attained, it is a game changer to LNG outlook creating a bigger and sooner LNG supply gap. And with a stronger tone to oil and natural gas prices in 2021, the LNG supply gap will at least provide the opportunity for Shell to consider FID for its brownfield LNG Canada Phase 2 and provide big support to Cdn natural gas for back half of the 2020s. And perhaps if LNG Canada is exporting 3.6 bcf/d from two phases, it could help flip Cdn natural gas to a premium to US natural gas especially if Biden is successful in reducing US domestic natural gas consumption for electricity. The next six months will be very interesting to watch for LNG markets.

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

Posted 11am on July 14, 2021

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

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

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

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

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

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

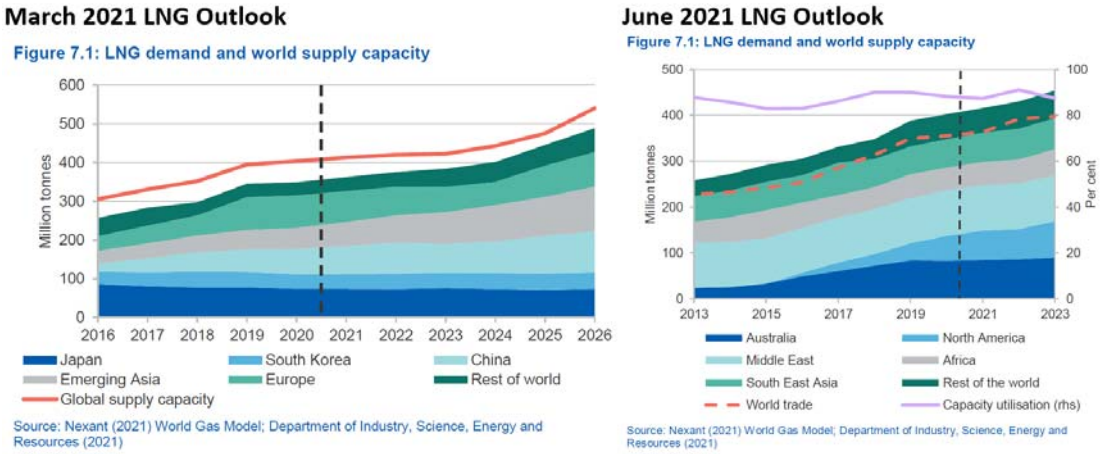
Common theme - new LNG supply is being delayed ie. [Total] Mozambique. Don't forget need capacity>demand due to normal maintenance, etc. Positive for LNG." (ii) Chevron's Gorgon. A big LNG story in H2/20 was the emergence of weld quality issues in the propane heat exchangers at Train 2, which required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

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

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

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

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

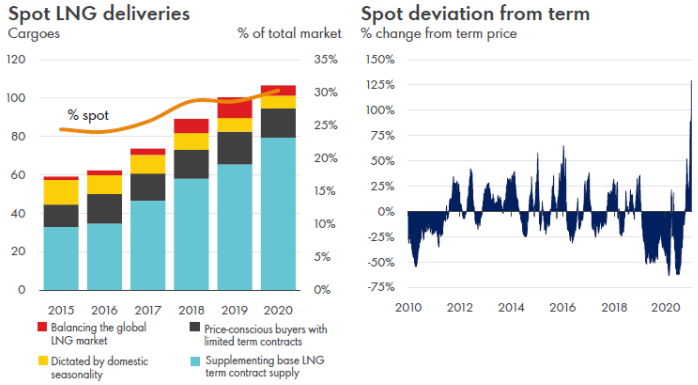


Source: Australia Resources and Energy Quarterly

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

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

Spot LNG deliveries and Spot deviation from term price



Source: Shell LNG Outlook 2021 on Feb 25, 2021

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

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

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

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

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

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

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

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

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

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

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

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

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

https://www.spglobal.com/commodityinsights/en/market-insights/blogs/lng/060122-asia-lng-imports-us-exports-henry-hub-platts-jkm

- 01 Jun 2022 | 11:25 UTC

Global LNG contracting rush leaves Asian importers in tight spot

- LNG

Featuring Eric Yep

A resurgence in LNG contracting is expected to result in many more deals being signed in the coming months as LNG importers in Asia and Europe, portfolio players and trading houses look to lock in long-term LNG prices before they start to rise again.

Asian LNG importers are seeking the protection of long-term contracts due to the volatility of spot markets, while European energy companies and utilities are looking to tie up gas supply to replace Russian volumes in the years ahead.

The market has decidedly moved in favor of LNG sellers. The narrative being pushed by LNG producers, both US LNG exporters and oil-linked producers like the Middle East, is that if Asian buyers do not lock in volumes in the next few months for post-2025 supply, they will lose out to Europe.

Some deals between South Korean importers and US LNG suppliers were announced at the World Gas Conference 2022 in Daegu last month, but several more purchases by Asian firms have not been made public. Counterparties are in various stages of negotiating more sale and purchase agreements, both new deals as well as old ones that are being finalized and which are likely to materialize in the coming months.

Japan's gas buyers are being driven by the need to switch out Russian volumes and expiring contracts, Chinese firms are covering spot exposure and securing demand from new LNG terminals, Indian companies need affordable gas to replace spot imports and some Southeast Asian firms are looking to enter the gas market for the first time.

Keeping natural gas prices low and affordable will be key to creating new demand and ensuring the role of gas in decarbonization, several executives said at the recent World Gas Conference in South Korea

Long-term prices

European buyers are hesitant to lock-in firm 20-year SPAs. Their gas requirement is focused in the short- to medium-term, with an eye on accelerating their switch to renewables in the long-

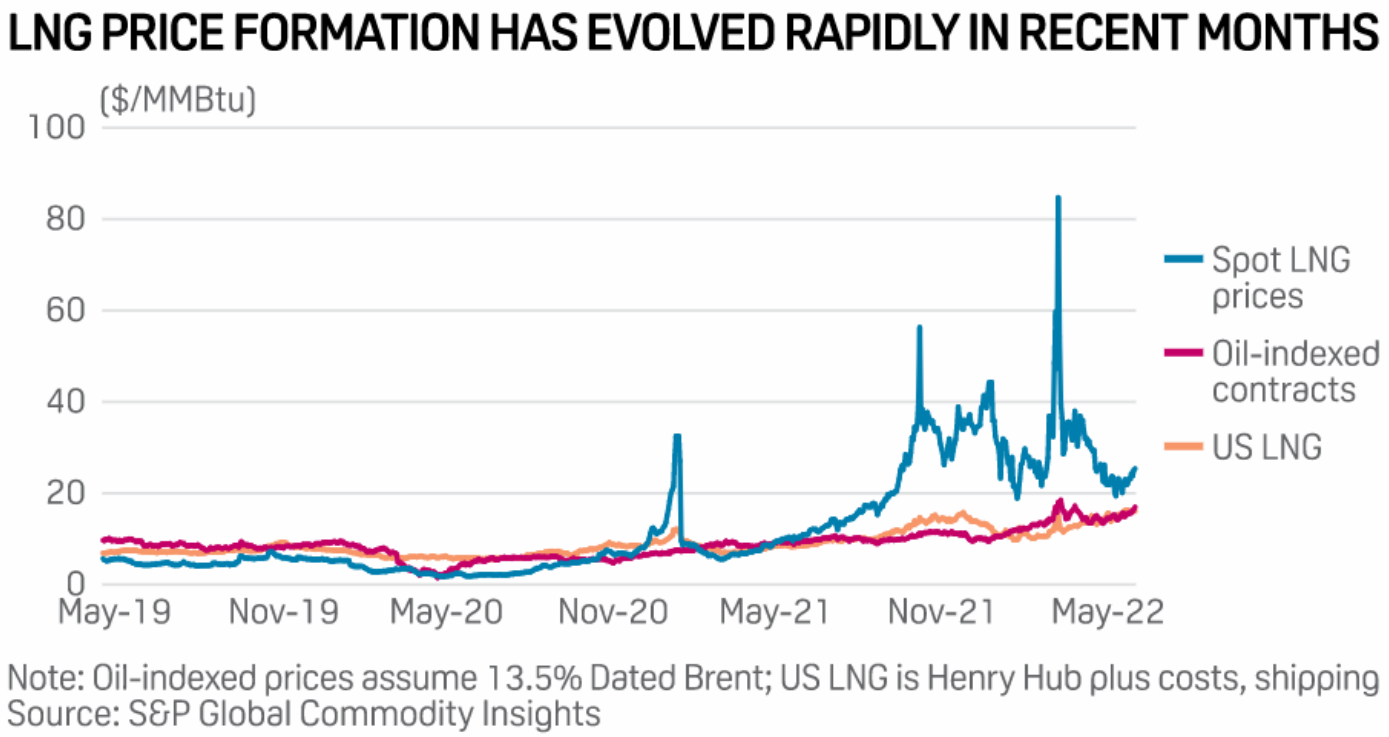
term. They are worried both about the impact of gas on net-zero goals and whether they will even need large volumes of gas for longer than 10 years.

Portfolio players and traders have proposed to step in and assume the volume risk in long-term deals by shifting supply to Asia, but they are likely to demand much lower prices and price slopes than are being offered.

Meanwhile, pricing for long-term contracts appear to be on the rise.

So far, US LNG projects linked to Henry Hub, which have some of the largest LNG expansion capacity to bring onstream from 2025 onward, have benefited the most and signed the most number of SPAs with Asian buyers.

The flexibility and optimality of US LNG cargoes, geographical diversification and the competitiveness of Henry Hub-based prices compared to both oil-indexed and spot LNG in the current market are working strongly in their favor.



While US project developers are just happy to be in a sweet spot, Qatar and other oil-linked LNG sellers are making the most of their strong negotiating position and are pushing hard for higher price slopes.

Offers in the market are in the vicinity of 15% Dated Brent, although no deals have been made public at these record levels.

Although US LNG prices may have set the price floor for long-term contracts, assuming oil and spot LNG prices remain high, traditional producers like Qatar and Australia still enjoy a distinct shipping advantage and supply certainty at a time when energy security is paramount.

Spot vs long-term

Any Asian buyer looking for short-term contracts before 2024-2025 is in a precarious situation. Southeast Asian utilities said they had been offered one-year contracts at slopes of as much as 25% Dated Brent for the next couple of years, much higher than their pain threshold of around $15/MMBtu.

Several executives admitted they were unsure how long the market will remain in favor of producers and argued that keeping natural gas prices low and affordable was key to creating new demand and ensuring the role of gas in decarbonization.

A sustained period of $20/MMBtu LNG will either incentivize the **energy transition** to renewables, or a reverse fuel switching to coal, depending on the policy framework of local economies.

LNG markets had to eventually tighten as part of the traditional commodity cycle after several years of rock-bottom LNG prices that even saw cargo cancellations to balance supply.
The **Ukraine crisis** has only served to speed up the upward price trajectory to peak price levels, several long-term market observers pointed out.

With the number of liquefaction projects going into FID and the amount of new LNG production expected post-2025, the market is quite likely to slip into another period of low spot prices and high LNG supply, exacerbated by the shift to renewables.

This leaves importers with the age-old predicament: if a country has to introduce gas into the energy mix or a utility is planning a large wave of gas-fired power generation after 2025, should it lock in an SPA in the current market or just wait till prices fall again?

BN 06/11 11:24 *FID ON TANZANIA'S HUGE GAS PROJECT EXPECTED IN 2025: PRESIDENT

Final Decision on Tanzania's $40 Billion Gas Plan Seen in 2025
2022-06-11 12:08:12.87 GMT

By Fumbuka Ng'wanakilala
(Bloomberg) -- Tanzania is edging closer to its dream of developing a $40 billion liquefied natural gas project after the government and companies, including Equinor ASA and Shell Plc, signed initial agreements.

The latest signing precedes a Host Government Agreement which is expected by the end of this year, according to President Samia Suluhu Hassan. The so-called HGA sets out the technical, commercial and legal terms of the project.

Read: Scramble for Gas Set to Draw $10 Billion Into Tanzania Project

Developing the LNG-export project could start soon after a final investment decision within three years, and would come after about a decade of prolonged negotiations. Other companies involved include ExxonMobil, Pavilion Energy and Medco Energi.

"We expect the final investment decision on the LNG project to be reached in 2025," Hassan said in a speech at the signing event on Saturday in the capital, Dodoma.

The announcement comes as several western governments seek alternative sources of fuel amid a drive to cut their dependence on Russian energy following President Vladimir Putin's invasion of Ukraine. The urgency gives Hassan's push to accelerate the project fresh impetus.

Tanzania has recoverable natural gas reserves of more than 57.5 trillion cubic feet, according to Energy Minister January Makamba. It would join with neighboring Mozambique to develop Africa's new LNG hub. Mozambique is, however, struggling with an insurgency that saw TotalEnergies SE suspend operations at its multi-billion project in the southeast African country.

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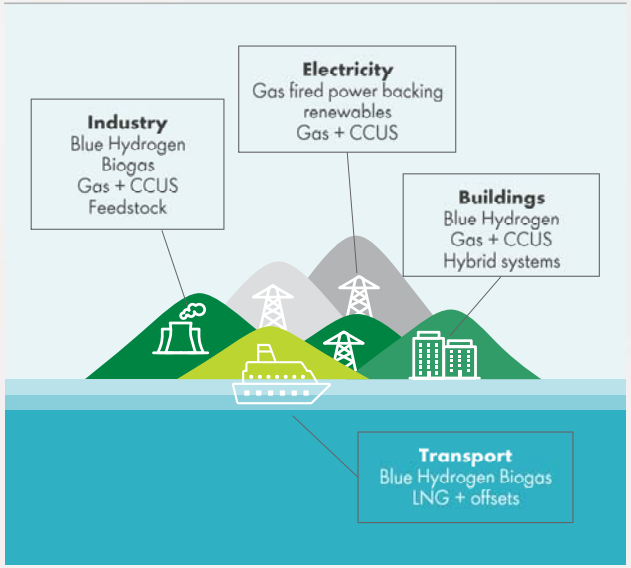
https://blinks.bloomberg.com/news/stories/RD9JKLDWRGG3

LNG OUTLOOK

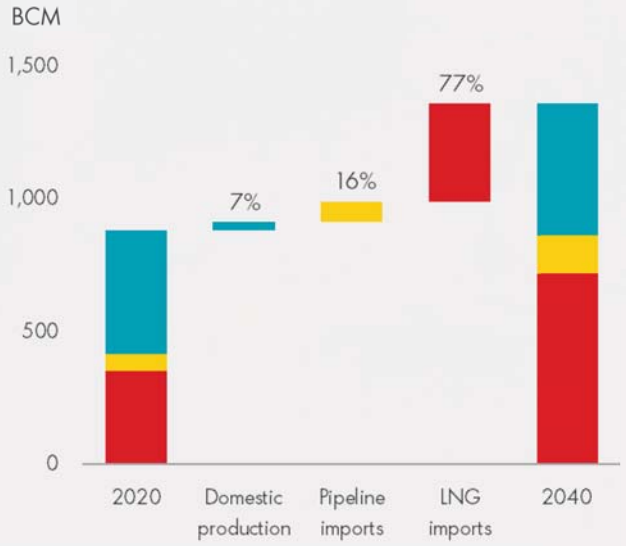
ENERGY SECURITY, EMISSIONS AND ECONOMIC GROWTH IN ASIA TO DRIVE FUTURE LNG DEMAND

- Gas has an important role in the journey to net-zero - as a partner to renewables for grid stability and an immediate option to lower emissions in hard-to-electrify energy demand sectors
- LNG needed for declining domestic gas production, coal to gas switching, substituting higher-emission energy sources, tackling air quality concerns – particularly in Asia

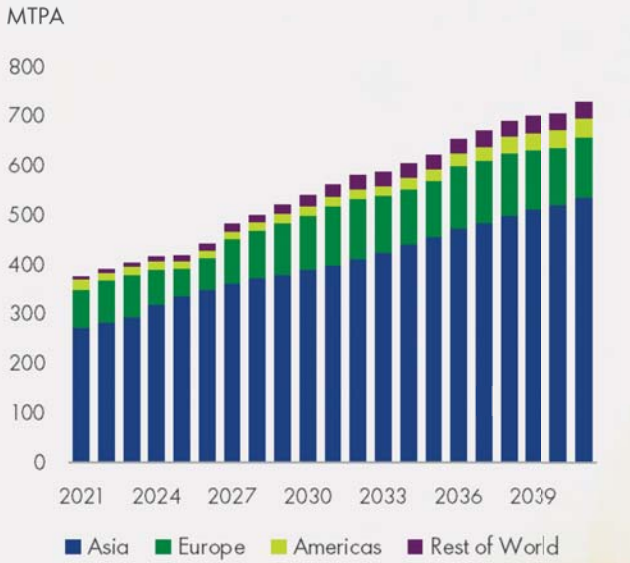
Use of gas in a decarbonised world



Asian gas demand by source



LNG imports by region



Source: Shell interpretation of Wood Mackenzie data

RUN THE BUSINESS

ACTIVELY ADDRESSING OPERATIONAL GREENHOUSE GAS EMISSIONS

Cutting operational emissions

- Pearl GTL, Qatar: significant emissions reductions already achieved, further reductions and other improvements planned through innovative catalysts
- QGC, Australia: reduced venting from dehydration units and improved efficiency on well workovers resulting in 2,500 tonnes lower methane emissions in 2021
- Real Time Production Optimisation saving fuel gas and improving efficiency across LNG sites

Managing GHG intensity

- Implementing carbon management framework for projects and operating assets
- The IG operated portfolio is well within the Group's 2025 target of ensuring methane emissions intensity is below 0.2%
- No routine flaring in IGs operated portfolio

Spearheading methane reduction initiatives

- Helping to deliver the Global Methane Pledge through oil and gas sector implementation working group
- Leading an industry working group to increase understanding of supply chain methane emissions data through detection and quantification field campaigns
- Joined industry project developing pioneering offshore North Sea drone-based methane emission quantification technology

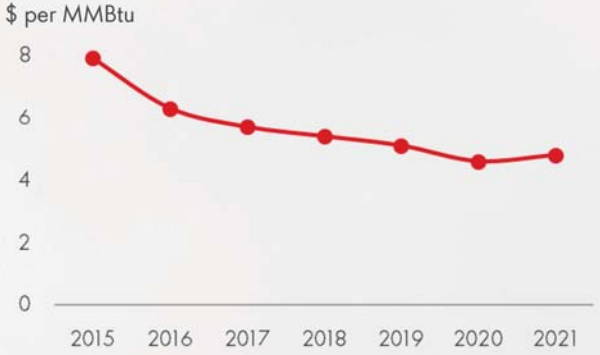
Picture credit: Flylogix

The improved efficiency on well workovers is relative to 2020.

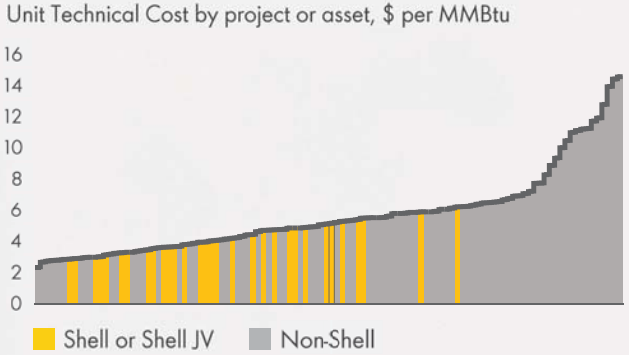
GROW THE BUSINESS

OPTIMISING CAPITAL TO CREATE VALUE

Unit technical cost reduced



Competitive project funnel



Robust project delivery

Structural decrease in cost

- UTC stable below target of $5/MMBtu set in 2015
- $4 billion per annum selective investment in competitive LNG assets, including backfill and expansion options
- Examples of competitive pre-FID projects: LNG Canada Expansion, Manatee

Commercially competitive

- Project funnel delivering LNG into Asia at total cost structure that is competitive in the industry
- We believe strong focus on scope 1 & 2 emissions reduction for new projects provides longer term competitive advantage and sustainability

Building new capacity

- LNG Canada will deliver 14 mtpa of supply into Asia. The LNG project is designed to have the lowest carbon intensity in the industry
- Nigeria LNG T7 will deliver 7.6 mtpa into Europe and Asia, with key supply from offshore assets
- Both projects to be onstream around the middle of the decade

Competitive funnel chart contains all projects and assets in the LNG industry. Non-Shell projects are a Shell interpretation of Wood Mackenzie data.

INTEGRATED GAS PORTFOLIO & MAJOR PROJECTS

KEY

- Liquefaction plants
- Liquefaction plants under construction
- Regasification terminals
- GTL
- On-stream gas projects

Project	Country	Shell share %	Peak production kboe/d	LNG capacity mtpa	Shell-operated
Under construction – Start-up 2022-2023					
Arrow - Surat Gas	Australia	50	backfill		
Colibri	Trinidad & Tobago	87	backfill		✓
Gorgon - Jansz	Australia	25	backfill		
QGC SW20+ Measure	Australia	62	backfill		✓
Oman Gas*	Oman	53	120		✓
Under construction – Start-up 2024+					
Gorgon - Jansz compression	Australia	25	backfill		
LNG Canada T1-2	Canada	40		14	
NLNG T7	Nigeria	26		7.6	
Pre-FID options					
Abadi	Indonesia	35	245	9.5	
East Med	Egypt	35	backfill		
LNG Canada Expansion	Canada	40		14	
Manatee	Trinidad & Tobago	100	backfill		✓
NWS - Browse	Australia	27	backfill		
Prelude - Crux	Australia	82	backfill		✓
Tanzania	Tanzania	25	[A]	15	✓

*FID of the project subject to the issuance of a Royal Decree by the government of the Sultanate of Oman confirming award of the Block 10 Concession Agreement.

Projects listed are a selection of our project portfolio. Peak production and LNG capacity are 100%. [A] to be confirmed.

INTEGRATED GAS

UPDATE SD21 TARGETS – PROGRESS MADE

Targets	Progress
~20% Opex reduction by 2022 vs 2019	Underlying 2021 IG Opex 15% lower than 2019
3 mtpa Develop new LNG markets by 2025	On track to deliver First LNG volumes supplied into Croatia
< $5/MMBtu Unit Technical Cost	Current project funnel average $4.8/ MMBtu
14% - 18% Average project IRR	Current project funnel average showing 14-18%

Targets	Progress
> 20% Market share in LNG bunkering sales by 2030	▪ 12 LNG fuelled crude and product tankers in operation, with a further 24 on order with expected delivery by end 2023 ▪ 5 bunker vessels in operation with a further 7 on order ▪ Completed over 700 global ship-to-ship bunkering at numerous ports in 10 countries ▪ First liquefied biomethane (BioLNG) bunkering trial in Rotterdam, together with CMA CGM
> 7 mtpa New LNG capacity onstream by the middle of the decade	Progress made on NLNG T7 and LNGC. 7.6 mtpa new capacity around middle of decade
GTL Uplift Aiming to grow value from GTL products	In Q3 2021 Pearl GTL achieved highest value uplift from GTL products on record

S**hell Integrated Business Deep Dive Feb 21, 2022 Wael Sawan.**

Items in "i*talics*" are SAF Group created transcript

Approx 9:18am MT. Analyst asks if the future equity percentage you have for the natural gas supply be less than the offtake percentage you have for the LNG? Wael, *".. typically, what I would say, as much as possible, having access across the entire value chain in as close of a percentage as you can, helps ensure that wherever value might rate at any point in time, you are capturing that value. So in general. Take our LNG Canada investment that you just referenced in the second question, we would look to be able to at least assure ourselves that we are not caught up by vagaries of one part of the market. let's say the gas supply, but we would want to have enough on the gas supply equity side to be able to make sure if gas prices go up there, we benefit from them while maybe disadvantaging the midstream or vice versa depending on where prices go. So we are not in the game of necessarily taking undue risk. we are in the game of creating integrated value chains that we can leverage as part of the broader portfolio*. "

Scotiabank asks on the media report of the infrastructure issue on LNG Canada? Wael " *on the issues around LNG Canada, a few things to say. Firstly, we're just, what is it 3 years, 3, 4 months since we have taken FID on that project. Just last oct we crossed the 50% completion on the site in Kitmat. Good progress and this was despite some real challenges with Covid. A lot of the modules coming from various yards in Asia being challenged. Credit to the team, I think some heroic efforts to be able to by and large continue to be on track. I think the challenge that you are referencing is more related to the pipeline – the Coastal GasLink pipeline. Multiple reasons for that which I won't get into in detail. This is a question better addressed to CGL themselves directly. But suffice it to say that we do have some concerns around the cost of the pipeline, we are having deep discussions with TCE, who oversee the pipeline and therefore tying to see how we can mitigate some of these cost increases. But so far, we see TCE getting back on the ball and making sure they are able to move at the pace that ensures that we have pipe before we have the plant. The last comment I will make on that pipeline. Some of you may have picked up the press the incredibly sad events of a couple days ago where we strongly, strongly condemn some of the violence that was shown. Thankfully, no one got hurt in Houston, British Columbia when a specific part of the pipeline around the Maurice River. 20 or so people attacked those who were earning a living at night and thankfully, they all came out well and safe. These events are unfortunate and I'm sure TCE and RCMP will be able to address the issue sufficiently*"

Sl 6. 8:36am MT. Sawan "*That brings me to the future. Our current integrated gas business is doing what we said we would do and is on the right trajectory. But we are not yet where we want to be. We have opportunities that we are pursuing to do even better, with our existing assets, but also to position our growth portfolio to one with even stronger returns with lower carbon emissions. Let me expand on that a bit more. For our capital spend, we need to be even more focused with a continued emphasis on value over volume. We have a capital budget of $4 to $5 billion a year in the short to medium term. We are making good progress on our two LNG capacity expansion projects under construction. In Canada, Canada LNG surpassed recently the 50% completion mark last October, after three years of construction. The project remains dedicated to have the first cargo by the middle of this decade*." He then speaks of Nigeria and that construction there is now firmly underway, and then says "*both these projects are competitively positioned for LNG growth markets in Asia. The same goes for most of our long term project funnel. We have several attractive expansion and backfill projects. A limited number of greenfield LNG projects and several promising low carbon new gaseous projects in early stages of development. For the pre-FID projects, we have an expected average internal rate of return of between 14% and 18%, and a unit technical cost below $5/mmbtu. With most of these projects clearly having lower costs than the average in the industry. These are good numbers, but you will understand that we strive to push the IRR to the higher end and to push the unit costs down even further. But the long term role of gas depends on efforts to abate emissions and develop cleaner pathways for gas. This is why we continually try to reduce the carbon intensity of our new projects. Take LNG Canada currently under construction. It will run on hydropower and is set to deliver the lowest carbon intensity in the entire industry."*

https://www.reuters.com/business/energy/shells-prelude-lng-facility-be-hit-with-industrial-action-friday-2022-06-09/

June 9, 20221:04 AM MDTLast Updated 3 days ago

Shell's Prelude LNG facility to be hit with industrial action from Friday

By Sonali Paul

MELBOURNE, June 9 (Reuters) - Workers on Shell Plc's (SHEL.L) Prelude floating liquefied natural gas (FLNG) facility off Western Australia are set to begin 12 days of industrial action on Friday over a pay fight, a union alliance said on Thursday.

Shell did not comment on what impact the mix of short work stoppages and bans on certain tasks, to run through June 21 might have on output at the 3.6 million-tonnes-a-year LNG facility.

"Shell recognises the entitlement of all workers to exercise their rights, including the right to participate in industrial action," a Shell spokeswoman said in emailed comments.

The action comes two months after Prelude resumed shipping LNG after a four-month shutdown due to a major power failure. read more

The Offshore Alliance, which combines the Australian Workers Union (AWU) and the Maritime Union of Australia, is pressing to stop Shell from hiring contract workers at lower pay than the company's own employees doing the same job.

"We will not budge from that basic starting point," AWU national secretary Daniel Walton said in emailed comments.

The wage battle follows more than two years of bargaining and comes as resource projects face a tight labour market.

Japan's Inpex Corp (1605.T)in April sealed a five-year pay deal for its Ichthys LNG project, which the AWU hailed as "outstanding" and said would serve as a benchmark for deals with other oil and gas majors. That agreement has base rates of pay between A$125,000 and A$258,000 ($90,000-$185,000) plus allowances, up from between A$92,000-A$102,000.

Separately, the National Offshore Petroleum Safety and Environmental Management Authority said on Thursday it has launched an investigation after receiving a complaint from the Offshore Alliance about problems with smoke detectors on Prelude and being notified by Shell about an issue with fire suppression equipment at the facility.

"The issue does not impact the ability to safely operate the Prelude FLNG facility, and there are no impacts to people or production as a result of the issue," Shell's spokeswoman said.

Reporting by Sonali Paul; Editing by William Mallard

https://www.facebook.com/pages/category/Labor-Union/Offshore-Alliance-524335271311416/

Offshore Alliance
June 9 at 7:26 PM ·

WA Today reports the following:

Shell is running its $23 billion Prelude floating LNG plant with critical positions filled by crew who are not fully qualified, and more than 200 safety alarms out of action, ahead of industrial action due to start on Friday.

Gas exports recommenced from the world's largest floating vessel just two months ago after it was shut down for four months following a complete power failure in December that the offshore safety regulator said could have led to a "catastrophic failure".

Shell documents seen by this masthead confirm the number and location of alarms out of action. The company classified the problem as causing a medium risk of a fire "leading to personnel injury or multiple fatalities" if it could not be contained.

Offshore Alliance members commenced Protected Industrial Action today on the Prelude in our campaign for secure jobs and Tier 1 rates and conditions. Shell's OH&S and HR management of the Prelude is in turmoil. They will only get this sorted by engaging in constructive dialogue with the Union and our members.

NOPSEMA need to hold this mob to account as clearly Shell are taking the piss out of the Regulator, time and time again.

https://www.watoday.com.au/.../shell-s-prelude-gas-ship-hit-b...

Offshore Alliance
June 9 at 2:00 PM ·

Despite Shell waging war on its Prelude workforce with a barrage of threats and other forms of intimidation, the Offshore Alliance members are standing strong. Our members will be exercising their lawful workplace rights from today, to take Protected Industrial Action to secure a Tier 1 EBA, inclusive of job security provisions.

As for Shell's response over the past week, they have told members that if they don't like it on Prelude, they can leave.

What sort of outfit,which clearly hasn't got enough trained and competent employees to fill all positions, runs with this garble?

Go Well, Go Shell. Clearly the Prelude wasn't in the minds of the Shell bosses who came up with this slogan.

Offshore Alliance

June 8 at 1:01 AM ·

Shell stand condemned for a culture of punishing workers who speak up about OH&S issues. Their Australian management clearly haven't learnt from the multitude of safety breaches on Prelude over the past 4 years.

Shell are prepared to roll the dice with workers lives by continuing production at a time when critical safety mitigation procedures and processes don't work.

Whoever made the decision to use a non-certified,non-competent, and unsupervised employee as a 'fill-in' panel operator, should be sacked. No ifs or buts.

NOPSEMA need to hold this mob to account and heads have to roll amongst Shell's senior management team.

Offshore Alliance

June 7 at 9:08 PM ·

The Offshore Alliance has made formal complaint to NOPSEMA about the following:

• Over 200 smoke detectors on the accommodation level + Main Deck (A, B and C Deck extending to H Deck) are not relaying to the Control Room and there is no capacity to take executive actions in response to fire/smoke on these levels;

• Because of these failures, fire suppression systems are not operational as per the Safety Case and operational procedures;

• Shell was made aware of these failures yesterday, about ½ way through offtake operations. Shell continued to operate and failed to treat the failure of their fire suppression systems as a pressing emergency to be rectified;

• The manual core points have not been tagged out and crew members pressing a manual call point (MCP) would not be aware that they are un-operational;

• The actions of Shell are putting the health, safety, and lives of all crew members at risk;

• Further to this, the Offshore Alliance has been advised that yesterday, an employee who has no panel operator experience, was engaged as a 'Panel Operator' during the offtake for a period of 3 hours. The employee had no experience and would not qualify for any deviation to allow them to operate.

In any case, the deviations relied upon by Shell to get around the fact that they have a shortage of experienced and competent Operators, is a sham. Simply not good enough on the world's largest offshore facility.

Shell's Australian management need to be investigated by the Regulator for how they are operating the Prelude and the culture of bullying workers who speak up and speak out about sub-standard safety standards.

NOPSEMA have been notified of these breaches and the Offshore Alliance calls upon the Regulator to take immediate action.

Shell continue to take shortcuts by putting production and profit before the safety of Prelude workers.

TotalEnergies Wins Stake in $29 Billion Qatari Gas Project (1)
2022-06-12 12:04:09.604 GMT

By Simone Foxman and Verity Ratcliffe
(Bloomberg) -- TotalEnergies SE became the first foreign company to win a stake in a multi-billion dollar project to boost Qatar's gas exports.
Qatar is expanding production of liquefied natural gas amid a worldwide energy crunch. Global demand for the fuel is soaring as European nations race to wean themselves off Russian gas supplies in the wake of Moscow's attack on Ukraine.
TotalEnergies will get a 6.25% equity stake in the first phase of the plan, state producer Qatar Energy said on Sunday. Known as North Field East, it will cost almost $29 billion and include the construction of four LNG liquefaction units, or trains. It will expand Qatar's annual capacity to 110 million tons by 2026 from 77 million. TotalEnergies will own 25% of a joint venture with Qatar Energy, with the venture in turn holding 25% of North Field East.
Exxon, Total Poised to Win Stakes in Giant Qatar Gas Project
Another partner will be announced later this week, Saad al Kaabi, Qatar's energy minister and head of Qatar Energy, told reporters in Doha. Exxon Mobil Corp. and ConocoPhillips are also poised to win stakes, Bloomberg reported last week, while Shell Plc put in a bid.
Those three companies and TotalEnergies all have stakes in Qatar's existing production facilities.
"Suddenly, because of the tragic events in Europe, everybody is rushing to get LNG," TotalEnergies Chief Executive Officer Patrick Pouyanne said. "Appetite is strong."
The roughly three-year negotiations went on "a little long, to be honest," he said, without disclosing how much TotalEnergies will invest. The energy minister and his team were "very good defenders of Qatari interests in this process."
Kaabi previously said Qatar Energy might look for investments to fund around 30% of the expansion. The country received bids for double the equity on offer, he said on Sunday. No company will get a stake larger than that of TotalEnergies, he said.
Pouyanne said the deal would strengthen Europe's energy security and aid the continent's long-term goal of using less coal and oil. While gas emits carbon when burned and methane leaks are common in the industry, it's a cleaner fossil fuel.
"It is good news for the fight against climate change as gas and LNG are key to support the energy transition," the CEO said.

Drilling Started

Qatar Energy has started drilling development wells for the North Field East project. It chose Chiyoda Corp. of Japan and London-based TechnipFMC Plc to do the main construction work.

Kaabi, the energy minister, said Qatar would announce partners for a separate expansion, known as North Field South, by the end of the year. That project will increase the Persian Gulf state's LNG capacity to 126 million tons a year, and won't be finished until 2027.

Most of Qatar's gas is contained in the North Field, an offshore behemoth extending into Iranian waters. The shallow waters and plentiful reserves mean Qatar can pump gas more cheaply than just about any other country.

"It's easy to produce," Pouyanne said.

Qatar is considering further expansion plans due to the sheer demand for LNG in the wake of the Ukrainian conflict, Bloomberg has reported.

War Is Making One of the World's Richest Countries Even Richer

Still, the multi-year length of the projects means European buyers will have to look elsewhere for alternatives to Russian gas in the meantime. Most of Qatar's gas is shipped to Asia under long-term contracts that Doha has said it won't cancel to help Europe.

European officials, including Germany Economy Minister Robert Habeck, have visited Qatar in recent couple of months in the hope of securing more supply commitments.

The war in Ukraine prompted Germany to push ahead with a previously shelved plan to construct two LNG import facilities at Brunsbuttel and Wilhelmshaven. Qatar is ready to invest in those terminals, Kaabi said, without giving further details.

US Competition

North Field East is Qatar's first gas project since it ended a self-imposed ban on further development. While Qatari LNG production stayed flat, flows from the US and Australia surged as new plants started operating. The three compete to be the world's biggest LNG exporter, though the US is likely to build a significant lead this year, according to analysts at Goldman Sachs and research firm Kpler.

Gas prices rose to record levels in Europe and Asia soon after Russia's invasion. They've since fallen but remain far higher than a year ago.

"The tightness in the LNG market is now," Kaabi said. "But with North Field East and North Field South we should have a lot of extra volumes. A lot of buyers are talking to us, whether it's in Europe or Asia."

Qatar will probably increase the proportion of its gas sales to Europe to 40%-50% once the extra gas is onstream, he said.

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https://www.reuters.com/world/asia-pacific/exclusive-pakistan-finance-minister-seek-deferred-payments-qatari-lng-2022-06-11/

June 11, 202211:52 AM MDTLast Updated 16 hours ago

Exclusive: Pakistan finance minister to seek deferred payments for Qatari LNG

By Gibran Naiyyar Peshimam

Pakistan's Federal Minister for Finance and Revenue Miftah Ismail speaks during an interview with Reuters at his office, in Islamabad, Pakistan June 11, 2022. REUTERS/Salahuddin/File Photo

- Summary

- Pakistan's FX reserves dwindle as global fuel prices spike
- Islamabad seeks third long-term LNG supply deal with Qatar
- Pakistan requests extra monthly cargo under previous deal

ISLAMABAD, June 11 (Reuters) - Pakistan will seek a deferred payment plan for liquefied natural gas bought under long term deals with Qatar, Finance Minister Miftah Ismail said on Saturday, as Islamabad faces a balance of payments crisis and falling foreign exchange reserves.

Pakistan unveiled a 2022-23 budget on Friday aimed at fiscal consolidation as it tries to convince the International Monetary Fund to restart much-needed financial support. But the lender has expressed concerns over the numbers, including its current account deficit. read more

"We've talked about a deferred payment plan ... or at least I've requested this ... and (Pakistan's) petroleum minister is doing negotiations and is going to do the talks," Ismail told Reuters in an interview.

As it awaits IMF funds, cash-strapped Pakistan is faced with falling foreign exchange reserves, enough for less than 45 days of imports, and a huge current account deficit - with energy purchases dominating its record import bill.

Global energy prices have risen to record levels in recent months amid reduced Russian supply and resurgent demand in Asia.

Petroleum Minister Musadik Malik, who was in Doha this week for talks with Qatari Minister of State for Energy Affairs and Qatar Energy chief executive Saad al-Kaabi, confirmed talks but said his government was exploring different "innovative" pricing and supply strategies in broad-based talks.

"Deferred payment obviously would be enormously beneficial for Pakistan in the way of cash flows, but that is not the only discussion that we are having," Malik said in an audio message, describing the discussions as "preliminary".

Qatar's government did not immediately respond to a request for comment.

TERM CONTRACTS

In recent years Pakistan has increased reliance on LNG for electricity generation, but is facing widespread power outrages as procurement of the chilled fuel remains unreliable and expensive.

Ismail said his government was also speaking to Qatar about a new five- or 10-year LNG supply deal for three monthly cargos, as well as an additional cargo under an existing deal.

Pakistan already has two long term supply deals with Qatar - the first signed in 2016 for five cargoes a month, and the second in 2021, under which Pakistan currently gets three monthly shipments.

Malik said Qatar was among multiple suppliers Pakistan was talking to for term contracts as it tries to navigate a "hot" and "pricy" market.

Pakistan has unsuccessfully tapped the spot market for an extra July cargo, with two tenders over the last week not returning valid bids.

Ismail said two other long-term suppliers had been unable to fulfil contractual supply obligations to Pakistan.

Reporting by Gibran Peshimam in Islamabad; Additional reporting by Andrew Mills in Doha; Editing by Mike Harrison

Hydrocarbon production in Colombia increased during April 2022

- The production of gas marketed during the fourth month of the year was 1,100.15 million cubic feet per day (mpcd), which represented an increase of 4.04% compared to April 2021
- The increase in production is explained by the restoration of the Floreña Mirador field and the increase in gas demand in The Colombian territory.
- For its part, the audited oil production stood at **751,322** barrels per day on average, 0.78% more than in April 2021.

MinEnergy. Bogota. June 03, 2022. The good news of the reactivation of the hydrocarbon sector in Colombia continues, since in April 2022 the production of gas marketed was 1,100.15 million cubic feet per day (mpcd), which represented an increase of 4.04% compared to the same month of 2021.

However, if the production of April 2022 is compared with that of March of the same year, a growth of 2.02% is evident, going from 1,078.31 mpcd to 1,100.15 mpcd.

The increase was mainly explained by the restoration in the production of the Floreña Mirador field, as well as the good performance of the Chuchupa (Manaure - La Guajira), Cupiagua Sur (Aguazul - Casanare), Floreña Mirador (Yopal - Casanare), Pandereta (Caimito - Sucre), and Toronja (Pueblo Nuevo - Córdoba) fields.

Similarly, oil production in April of this year stood at **751,322** barrels per day on average (bopd), 0.78% more than that registered in the same month of 2021 when it was 745,488.

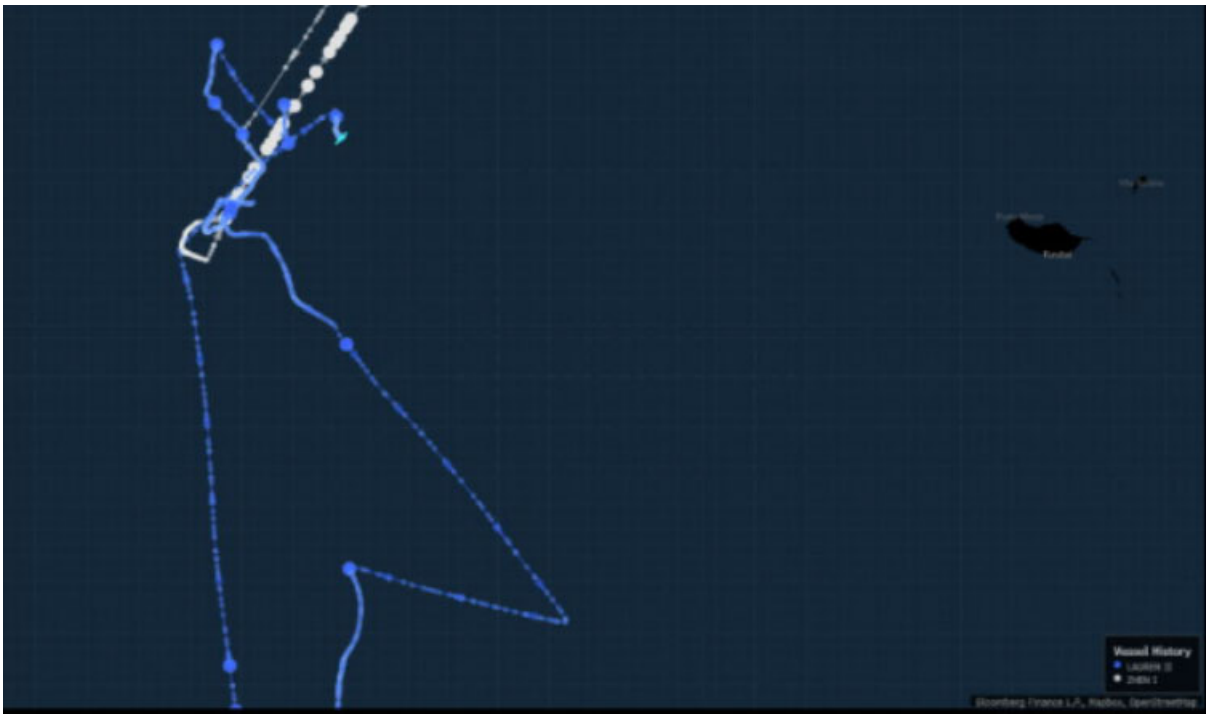
According to the National Hydrocarbons Agency, oil production fell by 0.01% compared to the previous month, standing at **751,322** bopd.

This decrease was presented by electrical failures in the Caño Limón field in Arauquita, Arauca, and by the blockades that occurred in the La Cira and Infantas fields in Barrancabermeja, Santander.

In April, 51 wells were drilled, of which 3 were exploratory and 48 under development. With a cut to April, 228 wells have been drilled this year: 212 in development and 16 in exploratory.

Oil Tankers Make Rare Mid-Atlantic Switch of Russian Crude Cargo
2022-06-06 09:07:44.593 GMT

By Julian Lee
(Bloomberg) -- Shippers of Russian crude are turning to unusual methods to move cargoes displaced from Europe over much longer distances to new customers. The most recent example is a ship-to-ship transfer in the middle of the Atlantic Ocean.
The Aframax tanker Zhen I discharged its cargo into the supertanker Lauren II in waters 300 miles west of the island of Madeira, according to ship-tracking data monitored by Bloomberg. The transfer took place May 26 to 27.



Ship-to-ship transfer of Russian crude in the mid-Atlantic, May 26-27

Moving cargoes onto larger vessels is not unusual, but what is far less common is the location where it happened. Most transfers take place in sheltered waters, where the risks of oil spills are greatly reduced. Russian cargoes have been transferred to bigger ships off Skaw in Denmark, in the western Mediterranean off the Spanish North African town of Ceuta, and even in the North Sea off Rotterdam. This is the first transfer seen on the high seas.
The Zhen I has now returned to the Baltic Sea, where it's due to load its next cargo from Primorsk, Russia, in mid-June, according to a loading program seen by Bloomberg. The Lauren II is drifting in the mid-Atlantic, possibly awaiting the transfer of another cargo. A ship as large as the Lauren II can hold as many as three cargoes of the size typically carried by a vessel like the Zhen I. That makes them a much more economic option for carrying crude over very long distances.
Self-sanctioning of Russian crude by some European refiners

is already forcing greater volumes to be moved much longer distances to buyers, particularly in India. As European Union sanctions begin to bite deeper into flows to Europe, we can expect to see more Russian crude being shipped further, with the country seeking new markets for its oil. Mid-ocean cargo transfers may become more common, if buyers and sellers start to try masking the destinations of Russia's oil exports.

--With assistance from Sherry Su.

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BN 06/06 10:21 India in Talks to Increase Russian Oil Imports From Rosneft

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India in Talks to Increase Russian Oil Imports From Rosneft (1)
2022-06-06 12:56:00.463 GMT

By Debjit Chakraborty
(Bloomberg) -- India is looking to double down on its Russian oil imports with state-owned refiners eager to take more heavily-discounted supplies from Rosneft PJSC as international buyers turn down dealings with Moscow over its invasion of Ukraine.

State processors are collectively working on finalizing and securing new six-month supply contracts for Russian crude to India, said people with knowledge of the companies' procurement plans. Cargoes are being sought on a delivered basis from Rosneft, with the seller set to handle shipping and insurance matters, they said.

These supply agreements, if concluded, will be separate and on top of shipments that India already buys from Russia via other deals. Details on volumes and pricing are still being negotiated with Indian banks set to fully finance all cargoes, said the people who asked not to be identified as discussions are confidential. Indian refiners will increasingly procure supplies directly from Russian companies such as Rosneft as top international traders like Glencore Plc wind up their dealings, they added.

The state refiners include Indian Oil Corp, Hindustan Petroleum and Bharat Petroleum, while private processors are Reliance Industries and Nayara Energy, which is partly owned by Rosneft. Procurement activities for state and private companies are done independently. Spokespeople at the three largest state-owned companies couldn't immediately comment when contacted.

Both state and privately-owned refineries in India have been ramping up purchases of Russian crude as sanctions and trade restrictions rolled out by the US, UK and European Union have caused most buyers to flee and offer levels to crash. An unprecedented amount of Russian crude was heading to India and China last month as European buyers scrambled for replacements and reached as far as the United Arab Emirates for alternatives.

The ensuing panic and rerouting of global oil flows have lifted prices by more 20% since late-February when Russia invaded Ukraine.

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*T
Refiners in Asia's second-largest oil consumer have been enjoying elevated profits from turning cheap crude into fuels that are sold domestically and also in the export market to customers in Europe and the US. Russian supplies form just part of India's overall basket of crude oil feedstock, alongside other long-term as well as spot purchases from the Middle East and Africa.

The potential ramp-up of Russian crude purchases will likely weigh on the South Asian nation's spot imports, said the people. India has bought more than 40 million barrels of Russian oil between late-February and early-May, which comes to about 20% more than flows for all of 2021, according to Bloomberg calculations based on trade data. Russian oil arrivals into India for May were at 740,000 barrels a day, up from 284,000 barrels in April and 34,000 barrels a year earlier, according to data from Kpler.

Although India's purchases of Russian crude aren't illegal or in breach of any sanctions, the country has come under pressure from the Biden administration and EU to stop doing business with Moscow in order to cut off the Kremlin's access to oil revenue and funds. The Asian nation has reiterated that its volume of Russian imports are minuscule as compared to Europe's purchases, and just a tiny fraction of the country's total consumption.

"We don't send people out there saying go buy Russian oil, we send people saying go buy oil," Subrahmanyam Jaishankar, India's foreign minister, said at a conference on Friday. "Now you buy the best oil you can in the market. I don't think I would attach a political messaging to that."

Discounted Russian oil has provided some financial relief to India -- which imports more than 85% of its needs -- just as inflation skyrockets alongside surging prices of everything from food to fuel. The access to cheap crude is already boosting India's petroleum imports, which grew almost 16% in April from last year. The share of oil from the Eurasian region, which includes Russia, expanded to 10.6% in April versus 3.3% a year earlier, according to ministry data.

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https://edition.cnn.com/2022/06/10/politics/us-saudi-relationship-reset-jamal-khashoggi/index.html

US seeks full reset with Saudi Arabia, effectively moving on from the murder of Jamal Khashoggi

By Natasha Bertrand and Alex Marquardt, CNN
Updated 1600 GMT (0000 HKT) June 10, 2022

President Joe Biden and Saudi Crown Prince Mohammed bin Salman

(CNN) Senior US officials have conveyed to Saudi Arabia that the US is prepared to move forward with a "reset" of the relationship, and effectively move on from the 2018 murder of Washington Post columnist Jamal Khashoggi in order to repair ties with the key Middle East ally, senior US officials tell CNN.

The planning for a reset is a dramatic about-face for President Joe Biden, who came into office vowing to make Saudi Arabia a "pariah" over Khashoggi's murder. His administration also released an intelligence report last year that directly accused Saudi Crown Prince Mohammed bin Salman of orchestrating Khashoggi's killing.

But officials say Biden, who is under immense pressure to crack down on Russia and lower domestic gas prices amid inflation that's rising at the fastest pace since 1981, has set aside his moral outrage to pursue warmer relations with the Kingdom amid the dramatic global upheaval spurred by the Kremlin's invasion of Ukraine.

"Both sides have decided that for the sake of achieving peace and stability in the Middle East, we need to move past it," said one senior US official, referring to Khashoggi's murder. The Saudis, for their part, consider the Khashoggi case closed—and have made that clear to the US, officials said.

That doesn't mean forgiving and forgetting, the sources noted. Biden, they said, does plan to raise Khashoggi's murder directly with MBS, as the crown prince is known, when they meet as soon as next month. And some officials inside the administration still believe more should be done to hold MBS accountable for the crime. But the shift is now well underway after months of meetings in Riyadh between two of Biden's top national security advisers, Brett McGurk and Amos Hochstein, and Saudi officials, including MBS. And it is already sparking outrage, with Khashoggi's fiancée, Hatice Cengiz, accusing Biden of losing his moral compass.

"President Biden's decision to meet MBS is horribly upsetting to me and supporters of freedom and justice everywhere," she said in a statement to CNN.

A human rights defender in Washington close to the administration, who was also a close friend of Khashoggi's, told CNN that he believes moving on and doing nothing more to hold MBS accountable for Khashoggi's killing will deal a huge blow to the prince's opposition and Arab dissidents around the world.

"The promise of accountability was the only check on this guy [MBS], now it's gone," he said. "When the President of the US goes to this murderer's hometown to appease him, he's not only glossing over his past heinous crimes with stunning impunity but enabling his future ones. It's a wink-wink nudge-nudge to commit the next crime in a cleaner, less messy fashion."

US officials told CNN that the decision to meet with MBS has been a tough pill to swallow for the President, who said in 2019 that Saudi Arabia had "no redeeming social value." But they said the countries have agreed that the relationship cannot be held "hostage" by the murder, especially given how dramatically the world has changed since Russia invaded Ukraine in February.

Among the US' most important foreign policy goals now is to isolate Russia politically and cut off funding for its war machine by banning Russian oil exports -- two objectives that officials believe will be nearly

impossible if Saudi Arabia is not on the US' side, particularly when it comes to increasing oil production to try to stabilize global oil markets. The President and his senior national security advisers therefore believe that to "shun" Saudi Arabia over the murder of Khashoggi would be shortsighted.
The troubling economic trends, particularly when it comes to record high domestic gas prices and soaring inflation, have also come to dominate the priorities of the administration and shunted others aside, said a US official outside the White House.
"I do think the desperation of the trajectory of the global economy is driving everything," the official said. "They [the White House] are anxious, they are desperate."
"Their fear, and their anxiety, is making them throw principle out the door," the official added. "The worst [economic] outcomes on this are really bad and would devastate any hopes the Democrats would have in November."
Secretary of State Antony Blinken told CNN en Español on Wednesday that the administration never sought to fully "rupture" US-Saudi relations, even after releasing the report last year that put MBS at the center of Khashoggi's murder. But he said that the US would continue "to make sure that human rights is fully reflected in our foreign policy."

Oil prices driving the reset

Biden's advisers have said openly that the need to increase oil production to stabilize prices is a key driver of the Saudi reset.
Energy Secretary Jennifer Granholm told CNN's Jake Tapper on Wednesday that "there is no doubt that Saudi Arabia has to account for what they did with Jamal Khashoggi." But, she added, "there is also no question that we have to increase global [oil] supply. And OPEC, led by Saudi Arabia, is at the head of the pack for that."
There are of course things the Saudis want in return from the US, including a viable strategy for dealing with Iran -- the Kingdom's biggest regional enemy -- as the US struggles to finalize a new nuclear deal. The Saudis also want security commitments, like the continued provision of missile defense systems, officials said.
But White House officials argue that Saudi Arabia has been working with the US in good faith over the last several months, which has made the White House more confident that a meeting between Biden and MBS will be fruitful.
US officials have repeatedly pointed to the fragile ceasefire in Yemen reached in April and the Saudi's ouster of Yemeni President Abed Rabbo Mansour Hadi, who was viewed by many officials in the region and in the US as an impediment to peace, as major diplomatic victories that would not have been possible without US engagement. The two-month-old ceasefire, which was extended last week, is the first between the warring Saudis and Houthis in six years.
"I'm not going to change my view on human rights," Biden said last week. "But as President of the United States, my job is to bring peace if I can. And that's what I'm going to try to do."

Working on a 'significant agenda'

A National Security Council spokesperson noted that the Khashoggi murder took place during the Trump administration, telling CNN that the US is "not looking past any conduct that took place before we entered office." The spokesperson pointed to the sanctions the US has imposed on Saudi individuals believed to have been involved in Khashoggi's murder and others implicated in human rights abuses.
But the spokesperson also said the US has "a significant agenda with Saudi Arabia, Israel, and the other countries of the Middle East. That agenda is focused on delivering results for the American people as well as ending wars and leading through diplomacy to bring stability to the Middle East region."
Last week's agreement by OPEC+ to increase oil production by 200,000 barrels per day in July and August, a decision spearheaded by Saudi Arabia, was another show of good faith by the Saudis, officials believe. And with help from the United States, relations between Israel and Saudi Arabia are also slowly but steadily improving, officials noted -- discussions are underway now, for example, to expand Israeli

commercial planes' access to Saudi airspace, the sources said. One regional official briefed on the discussions said Israel wants the Saudis to allow Israeli Arab Muslims to fly to the Kingdom for religious pilgrimages.

Israel has been pushing heavily for the Biden-MBS meeting to happen, multiple officials said. And underscoring the changing nature of the Israel-Saudi relationship, Biden is expected to make an extraordinarily rare flight directly from Tel Aviv to Riyadh on Air Force One while in the Middle East next month, according to two regional officials briefed on the plans.

Still, those developments are unlikely to satisfy activists and American lawmakers who continue to call for further accountability and justice for Khashoggi.

"The highest levels of the Saudi government, including Crown Prince Mohammed bin Salman, are culpable in the killing of Mr. Khashoggi, and there is no escaping that stark truth laid bare in the U.S. Intelligence Community's 2021 public assessment," top House lawmakers wrote in a letter to Biden earlier this week. "We must continue to insist on justice for this horrific crime."

Statement from the Executive Chairman and Chief Executive Officer

Another strong performance in challenging times

Jeremy Weir
Executive Chairman and Chief Executive Officer

The six-month period ending 31 March 2022 was an extremely challenging time in global markets, featuring heightened volatility, continued supply chain disruptions and, from 24 February 2022, war in Ukraine. Trafigura's global and diversified business footprint, market knowledge and customer relationships, logistical skills and robust balance sheet were all significantly tested. These qualities are also required more than ever by our customers during periods of seismic change in commodity markets, and the last few months have been no exception. I am pleased to report that Trafigura Group successfully navigated these challenges to achieve another strong commercial performance and a record profit for the period.

Russia's invasion of Ukraine has resulted first and foremost in a humanitarian crisis, but also in substantial dislocations in energy markets and global supply chains, the full impact of which is only beginning to become clear. Trafigura unconditionally condemns the war in Ukraine and we responded rapidly and effectively to the requirements of Western sanctions, engaging openly and regularly with governments and our customers throughout this turbulent and fast-changing period.

We ceased all trading of crude oil with sanctioned Russian organisations in advance of the European Union and Swiss sanctions taking effect on 15 May 2022, and we will continue to comply in full with all applicable subsequent sanctions packages. We also immediately froze our investments in Russia and announced a review of our ten percent non-operational, passive shareholding in Vostok Oil, with the intention of exiting.

At the same time, the derivatives markets – on which commodity trading firms, among others, depend to manage index price risk exposures – experienced their own disruptions. Extreme volatility, in particular after the outbreak of war in Ukraine, brought elevated margin calls and tighter position limits that made hedging activity more expensive and in some cases constrained access to commodities futures markets.

Despite these challenging conditions for our customers and for our business in the final weeks of the reporting period, both principal operating segments, Energy* and Metals and Minerals, achieved excellent profitability and handled record volumes.

The Group reported a robust financial position for the period amidst challenging market conditions and substantially increased liquidity requirements as commodity prices saw unprecedented volatility, ending the period with a strengthened balance sheet and cash position. Group equity increased to USD12.7 billion, an increase of 20 percent compared to the end of our 2021 financial year.

Our industrial assets are also now on a much sounder footing than in recent years. The Nyrstar metal refining business continued its turnaround plan with improved operational performance, although it is being severely challenged by the strong headwind of high energy prices in Europe.

* The Energy segment comprises oil, petroleum products, natural gas, Puma Energy, power, carbon and renewables.

▲ The large-scale Delta Blue Carbon mangrove forest restoration project in the Indus Delta in Pakistan, for which Trafigura is the anchor offtaker of verified carbon credits.

Puma Energy, now fully consolidated within the Trafigura Group after the buyout of its Angolan shareholders, is being streamlined under new management, including agreeing the sale of its infrastructure business during the period.

We continued to grow our power, renewables and carbon trading operations, and to invest in projects to support the energy transition. Nala Renewables, our 50/50 joint venture with IFM Investors, acquired a large portfolio of solar projects in Chile and a further four projects to construct battery energy storage systems in the United States. Our growing carbon team completed a landmark transaction, investing in the world's largest mangrove restoration project in Pakistan for which Trafigura is the anchor offtaker, to deliver high quality carbon removal credits.

Through our joint venture with H2 Energy, we are progressing plans to build a 1GW green hydrogen electrolyser in Denmark to fuel trucks and other heavy land-based transport. In addition, we are developing up to 250 green hydrogen retail refuelling stations in Austria, Denmark and Germany together with Phillips 66, the owner of JET branded stations. In Australia, we are progressing a study to develop a commercial scale green hydrogen manufacturing facility at Nyrstar's Port Pirie site. And in Norway, Trafigura is part of a consortium together with Hy2gen and Copenhagen Infrastructure Partners to produce green ammonia for the shipping sector in a project that is expected to be operational in 2027.

Looking ahead, we see no let-up in the challenging market conditions. Global supply chains remain disrupted and the geopolitical situation will continue to be turbulent. Commodity inventories are at perilously low levels across metals and energy markets as demand continues to outstrip supply, following a sustained period of structural under-investment in natural resources production over several years. In terms of demand, we are not yet seeing a slowdown in physical demand for oil and metals – all of which points to a tight market for commodities and heightened prices for some time to come. Significant investment will be required to produce, process and transport energy, minerals and metals to meet future needs and support the ongoing energy transition.

Whilst we expect another strong performance from the business in the remainder of the financial year, there are a number of growing headwinds. These include ongoing geopolitical tensions and the continued challenges of dysfunctional commodities futures markets. The very significant impact of inflation and constrained availability of energy, food and natural resources will also take their toll on global economies – with the most vulnerable unfortunately likely to bear the greatest impact.

Trafigura proved yet again in the first half of its 2022 financial year that its business and global platform are resilient and agile to adapt rapidly to difficult market conditions, and I am confident that this will continue to be the case for the full year.

Marketplace review

A turbulent and volatile time for the global economy

Saad Rahim
Chief Economist

As our fiscal year began in October 2021, most COVID-19 restrictions were being eased, and it looked like the world would begin re-opening fully, allowing the global economy to return to a modest but sustainable growth path.

Instead, the global economy has suffered multiple shocks starting with a gas crisis in Europe shortly after the beginning of our fiscal year. This was quickly followed by the outbreak of the Omicron variant of COVID-19, the spread of which led to large parts of China's economy going into lockdown, exacerbating the supply chain issues and weighing on commodities demand.

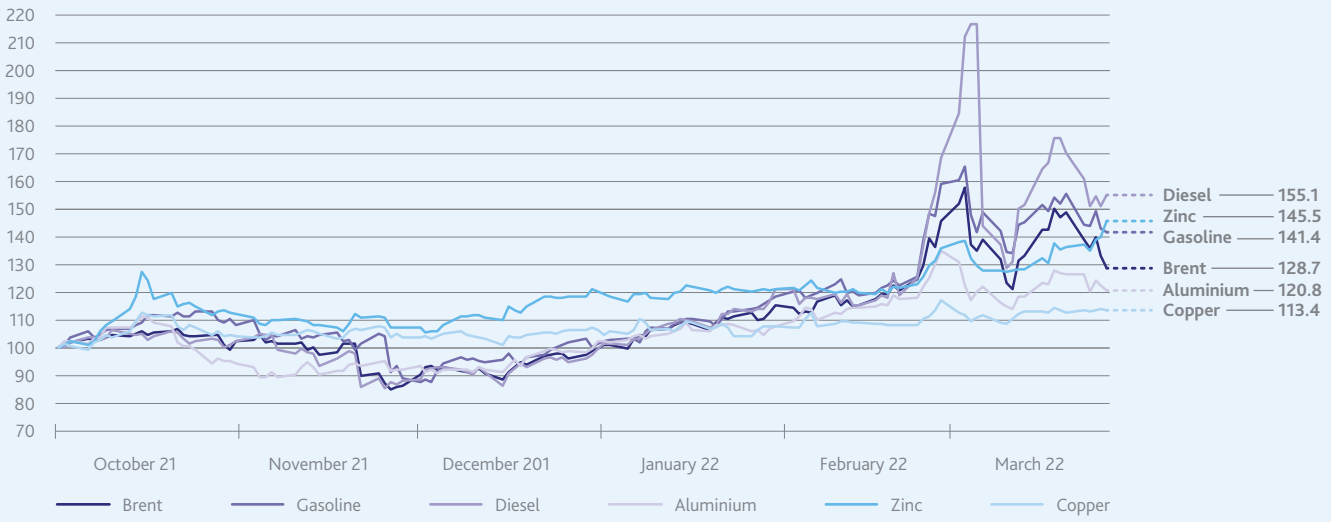
And then, the end of February saw the largest shock of all, the Russian invasion of Ukraine, which has disrupted energy and food flows to degrees that are coming in to clear focus, with significant upward pressure on prices and downward pressure on growth only expected to increase further.

In no small part due to these disruptions, inflation has reached levels not seen for 40 years in most regions. This is leading central banks around the world to tighten monetary policy more rapidly and more aggressively than expected only a few months ago. The result has been the strongest US dollar in 20 years, a surge fuelled by fears that disrupted Russian energy flows would lead to price spikes and lack of availability of supply in Europe would cause recession. The stronger USD, combined with higher interest rates globally, has been another headwind for the global economy, particularly for emerging markets.

The supply disruption from Russia and the demand disruption from China have affected our key markets differently. Base metals prices moved upwards initially, reaching all-time highs in some instances, and in the case of London Metal Exchange nickel prices, threatening to up-end markets entirely. However, subsequently, prices have faltered as the impact of developments in China outweighed that of those in Russia. The pace of post-lockdown recovery in China will be a critical factor in determining how metals markets perform in the second half of our fiscal year.

In energy markets, however, it has been a different story, as global demand has continued to grow strongly despite the drop in China, while supplies have been constrained, as a result of a lack of capacity due to under-investment or by sanctions (Iran, Russia, Venezuela). In both energy and metals markets, inventories are extraordinarily low by historical standards and will struggle to meet any sustained rebound in demand.

Selected commodity prices indexed from 1 October 2021



Source: Bloomberg, Trafigura Research

Energy markets

Even before the Russian invasion of Ukraine disrupted global energy flows, energy markets were facing challenging supply and demand dynamics. For gas markets, Europe entered the winter months with storage at very low levels, while low hydropower reserves and constrained coal output in China, combined with a strong sequential year-on-year increase in power demand, meant that Asia, and particularly China, paid record-high prices to attract record amounts of liquefied natural gas (LNG). In Europe, already low gas stocks – depleted by lower injection into storage from Russia following lower exports in the summer months – were called upon earlier and to a greater extent than expected, due to low wind power output and reduced production in the Netherlands and Norway which reduced domestic supply. On top of those temporary issues, the decline of coal-fired capacity, amounting to an over 40 percent reduction in the last five years, and reduced nuclear capacity, are structural trends that exacerbated the situation.

As a result, price pressures in European natural gas markets started to build through August and September, including periods of extreme intraday volatility. At the start of our fiscal year in October saw prices spike sharply upwards, increasing 78 percent (intraday peak) in just four trading days. At their peak, prices were about six times their normal average (EUR120/MWh vs. EUR20/MWh). The problem persisted through most of the European winter as Gazprom-owned storage in Europe was effectively empty. Prices spiked again in December, rising 85 percent in just seven days to make an all-time intraday high of EUR185/MWh. A spell of warmer than normal weather from late December through January brought much-needed respite that allowed a path out of winter without reaching critical storage levels. At the same time, China's ramp-up of coal production and usage freed up LNG imports into Europe.

Prices spiked again in the immediate wake of Russia's invasion of Ukraine; this time more than tripling from EUR105/MWh to EUR335/MWh between the invasion on 24 February and 7 March. Since then, despite some minor disruptions, Russian flows to Europe have remained largely intact. This is despite some countries being cut off from gas due to non-compliance with Russia's condition that gas imports must be paid for in Roubles. In the meantime, Europe has significantly increased LNG imports from the US, Middle East and elsewhere. This is in no small part due to the fact that high prices have led to a curtailment of price-sensitive imports into India and China, enabling those volumes to flow to Europe instead.

Increased supplies and seasonal reductions in demand have allowed inventories to build, and have led European benchmark TTF prices to return to pre-invasion – albeit still historically high – levels.

Oil markets began our financial year in relatively sedate fashion trading between USD80-USD85 per barrel for most of October and November. However, that was before Omicron hit, with the news of a significantly more transmissible variant in South Africa breaking the day after the Thanksgiving holiday in the United States, when market liquidity is substantially lower than normal, exacerbating the sharp sell-off. Prices tumbled by almost USD10 per barrel in one day, in total collapsing about USD20 per barrel (-21 percent) between 24 November and 2 December.

Initial concerns about the virulence of Omicron kept oil markets under pressure throughout December, but once it became clear by the start of 2022 that the global economy was not returning to widespread lockdowns, the constrained supply situation became increasingly in focus, with crude oil inventories (excluding-China) at extremely low levels compared with both the five-year average and range. For example, in the United States, crude inventories began 2022 at some 40 million barrels below the normal five-year level.

While prices would usually rise to incentivise increased output in the US and OPEC+, this time US shale producers have exercised significant capital discipline as pressure from shareholders to prioritise cash returns rather than new capital expenditure has significantly slowed US production growth. As at publication of this report, US production levels had recovered from their post-COVID-19 level of approximately 11.0 million barrels per day, reaching back up to 11.9 million barrels per day, but this remains well below the 13.2 million barrels per day level the US was producing at just before the pandemic. Even this recovery has in large part been made possible by the industry drawing down its inventory of half-completed wells and by high-grading to focus primarily on the most productive acreage. To highlight the challenge, since the end of 2020, US rig count has increased by 115 percent but US production has increased only by eight percent indicating the need for significant further spending in order to raise production levels back to pre-pandemic levels.

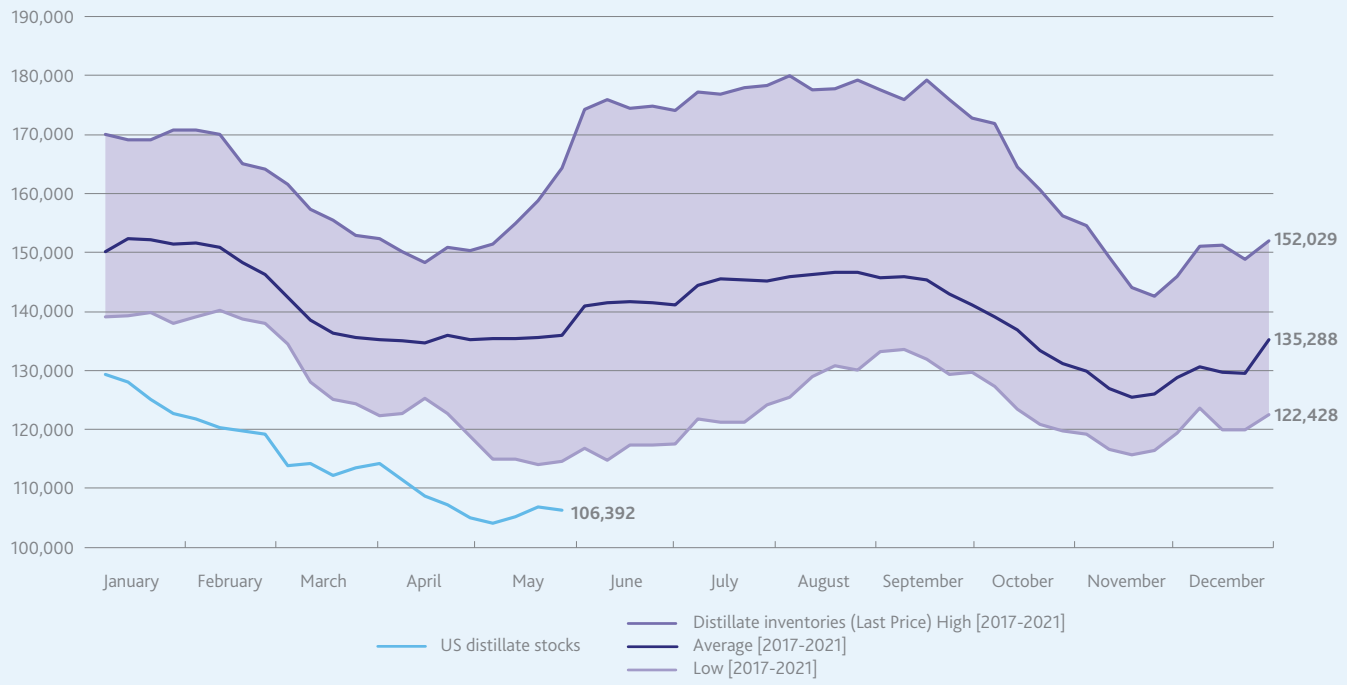
OPEC+ members (including Russia pre-invasion of Ukraine), have nominally been adding about 400,000 barrels per day of production back in to the market each month since last summer, gradually reversing the cuts they had enacted in April 2020. However, due to years of under-investment and also occasional political flare-ups in places such as Libya, the group has actually only been adding about half of their agreed amount per month. As such, pre-invasion, the group was under-producing its collective quota by at least one million barrels per day. The fact that they were doing so despite high prices (prices at the start of February 2022 were 60 percent higher than a year ago), and despite increasing pressure from oil consumer nations, the United States, the European Union and others, indicates that most countries were already producing at their maximum sustainable capacity well before the invasion. Indeed, it seems that, at the time of writing only Saudi Arabia, Iraq and the United Arab Emirates have meaningful capacity to increase. However, to keep adding barrels from here will mean going well below the critical threshold of two million barrels per day of global spare capacity. Should this happen, any unforeseen disruption would lead to a rapid tightening of oil markets.

On the day of Russia's invasion of Ukraine, oil prices broke the USD100 per barrel level for the first time since 2014 and reached one of the highest levels ever at USD139 per barrel in early trading on 7 March. Since this date, oil prices have been very volatile, falling over 30 percent in just seven days from their peak, rebounding 30 percent in six days, and then trading in a range of USD100 to USD115 per barrel.

The volatility, not just in oil but gas, food products, freight and base metals, is the direct result of Russia being one of the largest commodity producers in the world – any disruption in export flows has further tightened markets that were already, in most cases, very tight or in substantial deficit to begin with. So far, outside of food and fertiliser, exports have witnessed less severe disruption than expected, as measures restricting Russian flows of oil have only recently started to come into force. As those measures and other countries' restrictions take effect, Russian authorities are now indicating that oil production is likely to drop by over 15 percent this year, impacting global supplies of both crude oil and refined products such as gasoline and diesel.

Meeting increasingly tight supply and increasingly high demand in coming months presents a significant challenge. At some point, higher energy prices will start to mitigate demand growth, particularly as inflation is widespread across spending categories. Governments around the world are choosing to cushion demand as much as possible for the time being, via subsidies and tax cuts, so the full impact of higher prices may not be felt for some time yet.

Diesel inventories versus 5-year range and 5-year average



Source: US Department of Energy

Metals markets

While Russia is an important producer of many metals, both in terms of widely-used base metals (aluminium, nickel, copper) and more specialised metals (titanium, palladium), the impact of the war in Ukraine has not been as significant as it has been in the energy markets. The impact of COVID-19 in China has had a far greater impact over the period in review. Even beyond China, macro-economic drivers have affected prices the most, acting as a headwind as micro-level inventory balances for most metals remain historically tight. In general, metals have recovered faster from the initial impact of the pandemic than other markets primarily because the shutdown in China was relatively short-lived compared with other regions. That situation has, of course, reversed in recent months as China began to struggle with the outbreak of Omicron.

For copper markets, the start of our fiscal year in October coincided with rising awareness that inventories were historically very low in the face of robust demand as the world economy tried to replenish low stocks of everything from cars and houses to durable goods, all of which are metals intensive. This tightness was further exacerbated by rapidly expanding demand from the energy transition, in particular for electric vehicles and renewable power generation. In October alone, LME inventories drew by 86,000 tonnes, a 43 percent drop in available stocks. The combination of lack of available supply and strong demand led to LME prices reaching their second-highest level of USD10,452 per tonne. Even more tellingly, the spread between the first and second contract months spiked sharply upwards, rising to a record level of USD1,086 per tonne (for context, the long-term average is basically just above flat). That severe backwardation, when current month prices are higher than future ones, was a clear indicator that inventories were extremely tight, and that the market wanted as much material out into the physical market as possible.

The contraction in stocks continued through November, reaching the lowest levels recorded since 2005. Backwardation reduced from the October highs, but nonetheless remained very high by historical standards, between USD200-USD400 per tonne. Which in turn meant that material was delivered into the LME system, pausing the one-way trajectory of stocks before inventories started to rise again as the West and then China went into their respective holiday (and therefore slower activity) seasons.

The seasonal slow-down was compounded by the emergence of Omicron, raising fears of another round of global lockdowns, as well as a flight to safety in financial markets. This was clear from the fall in yields as investors flocked to the safety of US Treasury (USTs) securities, with the yield on the 10-year UST falling rapidly from 1.7 percent to 1.3 percent. On top of this, China had been enacting measures to address the growing indebtedness of the property sector, and as such real estate activity started to contract significantly.

Copper front spread

$/tonne

Source: LME and Bloomberg

Nevertheless, the tightening micro picture led to a slow grind higher in prices, reaching a pre-invasion peak of just under USD10,300 per tonne. The Russian invasion then caused a further spike to an all-time high of USD10,845 per tonne as concerns over possible supply disruptions grew.

Other metals followed a similar pattern. Zinc prices rose in October to a high of nearly USD4,000 per tonne, levels last reached just before the 2008 financial crisis. Zinc inventories had been drawing in a near-continuous fashion since 2012 (late 2015 being the exception), hitting a low in early 2020 before starting to climb through the rest of the year and into 2021 as the auto sector slumped due to supply chain issues. But from October 2021, inventories started to fall again as demand picked up and supply remained constrained. Although mine supply did expand in 2021, those expansions have only just managed to bring global supply back to the same level as 2015, while demand grew by over 0.6 percent annually on average over the same period.

Aluminium inventories started 2022 well below their five-year range, and about 500,000 tonnes below their five-year average, despite substantial builds during the early stages of the pandemic and again in mid-2021. Although auto demand was a drag, consumer demand and construction kept overall demand very strong outside of China, resulting in record-high premiums for material delivered into the US and Europe. Here too capacity growth is constrained, as China had been the only region globally that has added any meaningful smelting capacity since 2008 but has now placed a hard cap on growth in smelters.

Aluminium and zinc prices followed a similar pattern, to each other and to copper: higher in October, in all three cases reaching close to record highs, before retracing into the end of the calendar year and then starting to move higher as 2022 began, mainly on optimism that COVID-19 was finally behind us. Nickel prices followed a similar path initially as well, although they remained well below the previous record high (over USD50,000 per tonne) for the most part.

However, once the Russian invasion of Ukraine occurred, prices of all metals spiked to all-time highs: Aluminium hit close to USD4,100 per tonne, copper to USD10,845 per tonne, zinc to just under USD4,900 per tonne. Nickel was the metal that really surprised markets as prices rose 60 percent in a single day, and then a further 100 percent the next day. The speed and magnitude of the move meant that many market participants faced significant margin calls, which further exacerbated the volatility. Eventually, the LME cancelled trades made on the second day of the spike to restore an orderly market: a consequence has been that the paper market for nickel has until very recently been stuck in limbo as price discovery has been hampered due to the small volumes being traded.

The sharp move higher in metals prices in early March was driven by fears that exports from Russia would be disrupted, further tightening already-constrained markets. In the event, not much supply has been disrupted so far; but thanks to the emergence of Omicron, China has had to undergo the most serious lockdowns since the early days of the pandemic. After significantly impacting Hong Kong, the spread of the virus on the mainland has led to an extended lockdown in Shanghai, and in many other provinces and areas. The result overall has been a sharp shock to economic growth, in some ways more severe than the initial 2020 outbreak.

Property in particular continues to be hit hard, with slumping sales and construction activity, in turn dragging on metals consumption. Furthermore, Shanghai and Jilin, one of the other provinces hit hardest, together produce some 22-25 percent of China's cars, so the shutting down of manufacturing facilities in those areas has led to another curtailment of auto production, exacerbating the ongoing issues in that sector globally and weakening metals demand.

As such, metals prices (excluding nickel) have been trading some 15-30 percent off the highs as the market waits for China's next steps in terms of re-opening. China's strategy has shifted to vastly expanding testing capacity in order to be able to move to more rapid but more targeted lockdowns. This approach appears to be paying dividends outside of Shanghai, allowing areas such as Shenzhen and others to open back up after a short, sharp lockdown. However, cases in Shanghai and Beijing remained elevated, slowing their full re-openings, although at the time of writing, indications are of an improving situation.

In the meantime, China has reversed many of the policies it had put in place last year, designed to prevent certain sectors of the economy from taking on too much debt or overheating, and also to bring costs of living down in order to foster demographic growth. In addition, the government has undertaken major stimulus efforts, lowering interest rates, encouraging lending, cutting taxes, targeting consumption growth, and boosting infrastructure spending. So far, given the ongoing lockdowns, these measures have failed to kickstart growth. The expectation, however, is that once the economy is substantively re-opened, these measures, totalling some USD5.5 trillion, will lead to a strong second half of the calendar year.

A resurgent China might be good for global economic growth, but given that commodity inventories are already extremely, and in some cases unprecedently, low, it remains to be seen how prices might react from here. Inflation is already problematically elevated, but Chinese demand for commodity imports could further spur inflationary pressures.

SAF Group created transcript of excerpts from Energy Aspects Founder & Director of Research Amrita Sen with Becky Quick on CNBC Squawk Box on June 10, 2022. https://www.cnbc.com/video/2022/06/10/i-do-not-see-a-respite-in-oil-prices-in-near-term-says-energy-aspects-amrita-sen.html?__source=sharebar|twitter&par=sharebar

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

At 0.15 min mark. Sen "*I don't see any respite in the near term. I think crude could easily go up another 20, maybe even 30 dollars. I think it's really about, at this stage, it's a number. The problem we have, we've talked about it before as well, the lack of spare capacity, the lack of inventories. Governments have thrown SPR at this problem and that's just been absorbed. And even with that, inventories continue to draw down. So unless and until prices go to the point that demand actually really gets curtailed, there is just no solution."*

At 1:45 min mark, Quick "*yesterday we spoke with Jeff Currie from Goldman Sachs, he thinks we are only about 18 months into potentially 10 year super spike period where oil prices continue to climb and climb and climb because it takes a long time to invest in these things. First the lure of the dollars and then to put those dollars to work, does that sound like a base case scenario to you? Does it sound like something you agree with*?" Sen "*I think Jeff's come around to our views, I'm happy to hear that. We've been saying this for some time that this is a structural story, it's not a cyclical story. And this is very important for everybody to understand because the reason we are here today and really nothing to do with Russia, we were at $95 oil price, crude prices well before the invasion. We would have gotten to a hundred regardless, maybe six months later. This is to do with years of underinvestment. And we were going to get to $100 precisely because of that, but now, even with these price signals, I'm in Calgary right now seeing producers in Canada, there is so little incentive, whether it be here, whether it be in the US, to reinvest because of ESG concerns. So the market is not functioning as it should. That is why this is a structural story. And could easily be with us for a decade*".

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

Oil price outlook – Snapshot: June 6, 2022

Disclaimer: Please note that BNEF does not offer investment advice. Clients must decide for themselves whether current market prices fully reflect the issues discussed in this note.

Category	Indicator	Signal	Comment
Fundamentals	**Refinery margins**	⇔	• Front-month (M1) refinery margins strengthened over the past week due to stronger middle distillate cracks, but M2-M4 refinery margins weakened.
	Crude stocks	↑	• In the week ending May 27, land crude-oil storage levels in BloombergNEF's tracked regions (US, ARA, Japan) fell by 0.1% to 534.1 million barrels (m bbl). The stockpile **deficit** against the five-year average (2015-19) **widened from 86.1m bbl to 89.2m bbl**. • Including global floating crude stockpiles from the same week, total crude oil inventories increased by 0.1% to 634.9m bbl, with the stockpile **deficit widening from 50.8m bbl to 53.1m bbl.** In the week to June 3, floating crude stockpiles fell by 11.4% to 89.3m bbl.
	Product stocks	↑	• In the week ending May 27, gasoline and light distillate stockpiles in BNEF's tracked regions (US, ARA, Singapore, Japan and Fujairah) grew by 0.3% week-on-week to 261.7m bbl, with the stockpile **deficit** against the three-year average (2017-19) **widening from 12.7m bbl to 15m bbl**. Gasoil and middle distillate stockpiles in BNEF's tracked regions dropped by 1.6% to 136m bbl, with the stockpile **deficit** against the three-year average **widening from 32.5m bbl to 37.8m bbl**. • Total oil product stockpiles in tracked regions increased by 0.5% to 897.3m bbl, with the stockpile **deficit** against the three-year seasonal average **widening from 68.8m bbl to 77.9m bbl**. Altogether, crude and product stockpiles rose by 0.3% to 1,532.2m bbl, with the stockpile **deficit widening from 119.6m bbl to 131m bbl.**
	Demand indicators	⇔	• In the week to May 31, global jet fuel demand from commercial passenger flights was virtually flat week-on-week at 4.93 million barrels per day. Jet fuel consumption by international passenger departures was up by 60,700 barrels per day (or +2.2%) week-on-week, while consumption by domestic passenger departures fell by 62,000 barrels per day (or -2.8%). In the week to June 5, flight departures in the Eurocontrol area stood at 85% of the equivalent week in 2019 (down from 85.9% last week), while in the week to June 4, passenger throughput in the US surged to 87.6% of the equivalent week in 2019 (down from 94.7% last week). • Global mobility indices were weaker due to holidays over the past week, according to BNEF's calculation based on Google, TomTom and Baidu data. The Google global mobility index fell by 1.2% in the week to June 1, driven by falling activities in Europe (-3.2%) and the Americas (-2.2%). Meanwhile, in the week to June 1, TomTom's peak congestion data showed declines in Europe (-14.6%), North America (-8.3%) and Asia Pacific ex-China (-5.1%). Road congestion in China's key 15 cities was up by 1.4 percentage points to 105% of January 2021 levels in the week to May 25, according to BNEF's calculation based on Baidu data. • Daily average Covid-19 cases fell by 4% to 466,000 in the week to May 28. The Asia Pacific number dropped by 17% to 157,000 daily cases, with China falling by 68% to 154 daily cases. The Americas was up 7% to 167,000 daily cases, while Europe rose by 4% to 130,000 daily cases.
Financial	**Macro indicators**	↑	• The dollar index averaged at 102 over the past week and was 0.1% higher than the week before. The Global Manufacturing PMI rose to 52.4 in May from 52.3 in April. The Manufacturing PMI fell to 57 from 59.2 in the US, dropped to 54.6 from 55.5 in the Eurozone and rose to 48.1 from 46 in China.
	Hedge fund positioning	↑	• In the week to May 31, Managed Money net positioning in the oil complex was up by 32.1m bbl (or +5.4%) week-on-week to 630.9m bbl, and rose to the 39th percentile (versus the 32nd percentile last week) of the past five years.
	Options chains and volatility	⇔	• There was a notable increase in open interest for WTI Jun-23 $150 and $200 calls. Brent and WTI 1M volatility skews were mixed over the past week.
Outlook	**Weekly call**	⇔	• BNEF is neutral on oil prices for the week ahead, with Brent Aug-22 trading at $119.88/bbl and WTI Jul-22 trading at $118.94/bbl at the time of writing. Global mobility indices were weaker over the past week due to holidays in key demand regions. While jet fuel demand remained flat in the week to May 31, more recent indicators suggest a drop in flight demand. On the other hand, China's oil demand seems to be recovering. Shandong refinery run rates have also seen a 11.1 percentage points increase since early-May. However, teapots' profitability could be hindered by stringent fuel export quotas. • OPEC+ made a surprising decision to increase its output monthly quotas for both July and August by 648,000 b/d instead of the usual ~432,000 b/d. As it stands, it is unlikely that OPEC+ will be able to fully deliver the increases as several member countries are lacking sufficient sustainable production capacities. However, this could be a sign that OPEC+ is somewhat amenable to increasing supply. Should oil prices continue to increase, OPEC+ may choose to reallocate more quotas to members with adequate spare production capacities (e.g. Saudi Arabia, UAE). Yet, as mentioned in the previous weekly reports, the world still faces a refinery capacity crunch outside of China and Russia. The current high prices are driven more by the tightness of the oil products markets - as reflected in the weekly inventory data – than by the crude markets.

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Past outlooks

Disclaimer: Please note that BNEF does not offer investment advice. Clients must decide for themselves whether current market prices fully reflect the issues discussed in this note

Date of report	Refinery margins	Crude stocks	Product stocks	Demand indicators	Commitment of traders	Options chain and volatility	BNEF week ahead call	Brent/WTI price at time of writing ($/bbl)	Web Link
June 6	⇔	↑	↑	⇔	↑	⇔	⇔	Brent-Aug: 119.88 WTI-Jul: 118.94	
May 30	⇔	↑	↓	⇔	⇔	⇔	⇔	Brent-Aug: 116.46 WTI-Jul: 115.81	
May 23	↑	↑	↑	⇔	↑	↑	↑	Brent-Aug: 110.88 WTI-Jul: 111.11	
May 16	↓	↓	⇔	↑	↓	↓	⇔	Brent-Jul: 112.22 WTI-Jul: 109.69	
May 9	⇔	↓	⇔	↑	↓	⇔	↑	Brent-Jul: 109.93 WTI-Jun: 107.22	
May 2	↑	⇔	↑	↑	⇔	⇔	↑	Brent-Jul: 103.87 WTI-Jun: 101.25	
April 25	↑	↑	⇔	↓	↑	⇔	⇔	Brent-Jul: 101.31 WTI-Jun: 97.39	
April 18	↑	↓	⇔	↑	↓	↓	⇔	Brent-Jun: 111.97 WTI-Jun: 106.31	
April 11	↑	↓	⇔	↓	↓	↓	↓	Brent-Jun: 98.34 WTI-May: 93.69	
April 4	↑	↑	⇔	↑	↓	↓	↑	Brent-Jun: 104.71 WTI-May: 99.73	
March 28	↑	⇔	⇔	⇔	↑	↓	⇔	Brent-Jun: 109.53 WTI-May: 105.58	
March 21	⇔	⇔	⇔	↓	↓	⇔	⇔	Brent-May: 112.35 WTI-May: 107.56	
March 14	↑	↑	↑	⇔	↓	↓	⇔	Brent-May: 108.66 WTI-Apr: 104.77	
February 28	⇔	⇔	⇔	↑	⇔	⇔	⇔	Brent-May: 99.00 WTI-Apr: 96.38	

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

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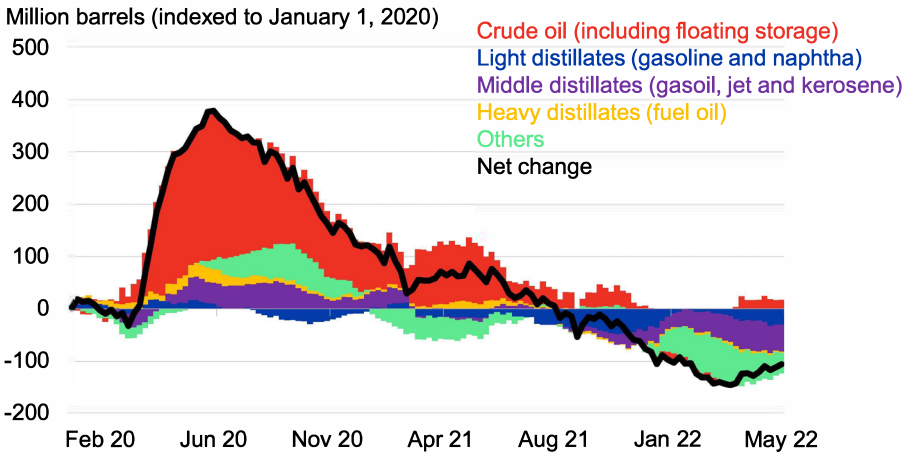
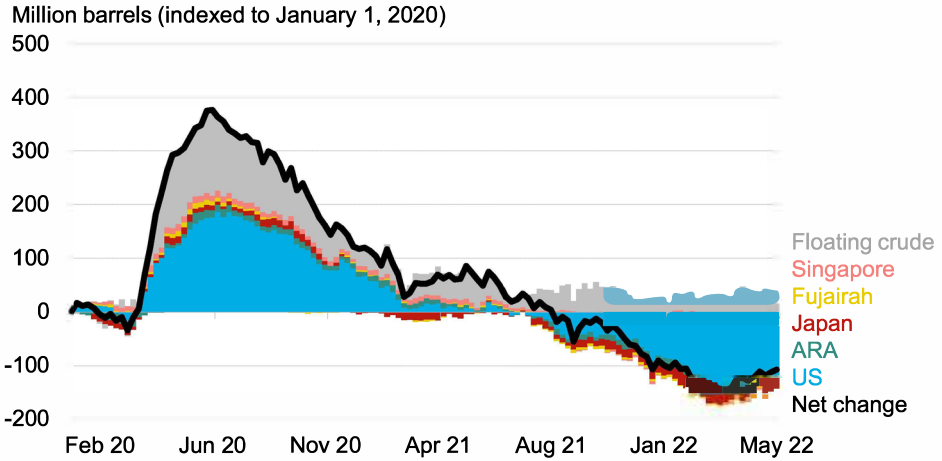
Weekly oil inventories

Oil inventories steady over the past week

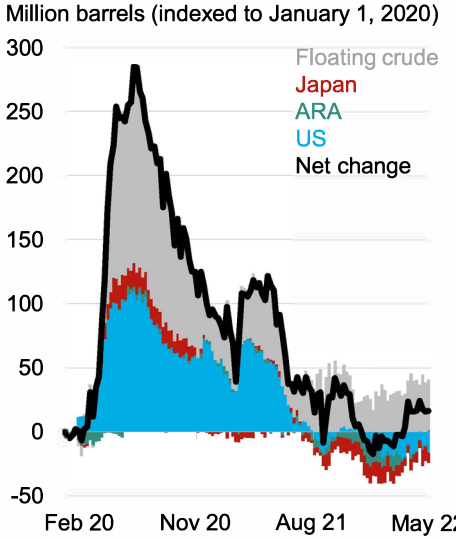
Weekly oil inventories by type



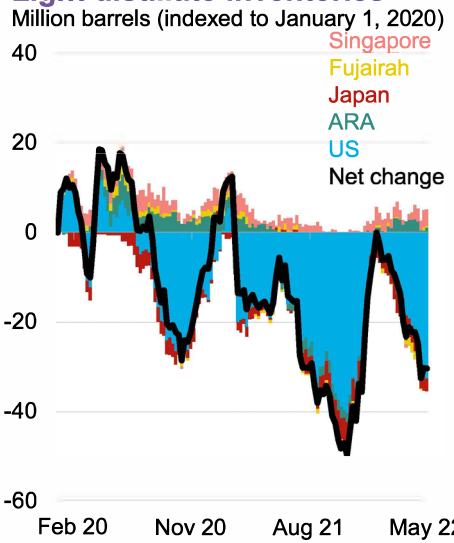
Weekly oil inventories by region



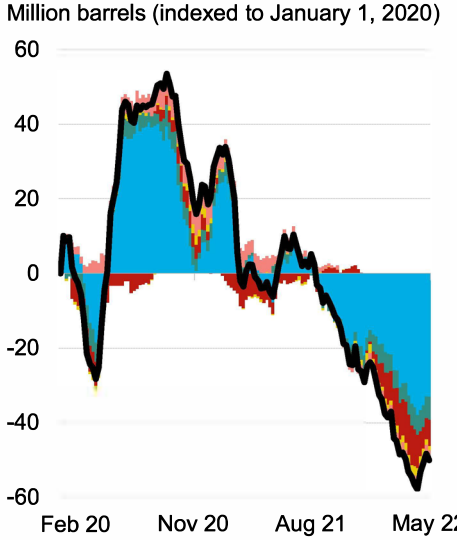
Crude inventories



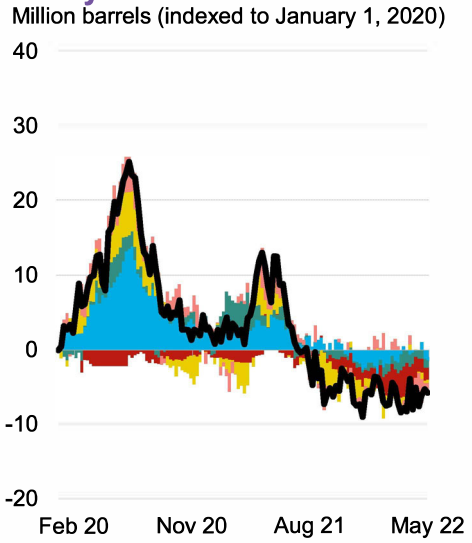
Light distillate inventories



Middle distillate inventories



Heavy distillate inventories



Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ ,Vortexa, Genscape. As of the week ending ***May 27, 2022****.*

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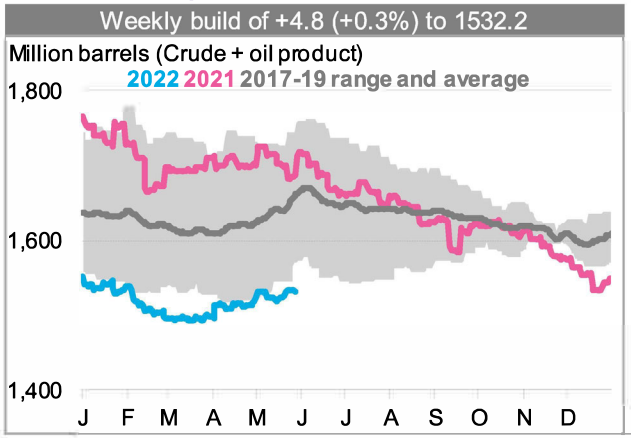
Aggregated oil stockpiles

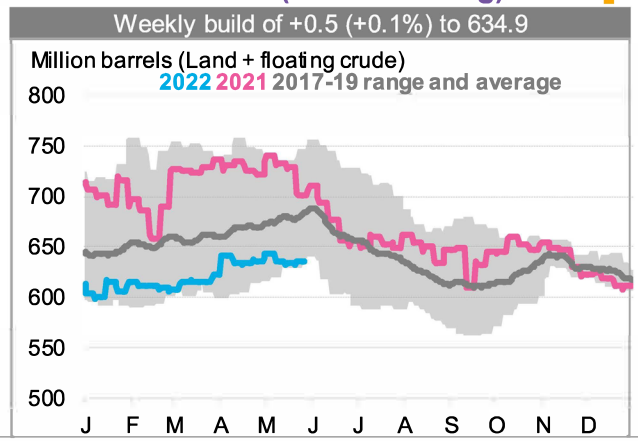
Note: We will continue to compare current inventory levels with the three-year (2017-19) seasonal average for the time being. Crude inventory data for Shandong teapots were excluded since January 10.

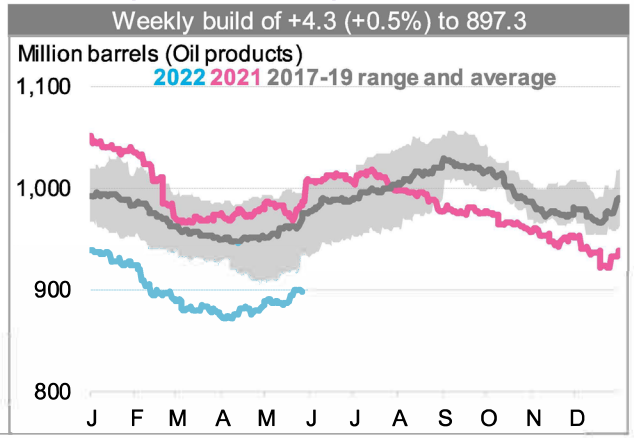
Bullish: Stockpiles deficit widened from 119.6m bbl to 131m bbl

- Charts below use the **2017-19** (three-year) seasonal stockpiles. All calculations are recalibrated to measure against their respective three-year seasonal averages, so the values below may differ from the previous slides.
- Land crude inventories include the US, ARA, Japan and Shandong Teapots. Floating storage data are global. Oil product storage includes the US, ARA, Japan, Singapore, Shandong Teapots and Fujairah. Floating crude inventories may have been adjusted since the previous report – see slide 8 for further info.

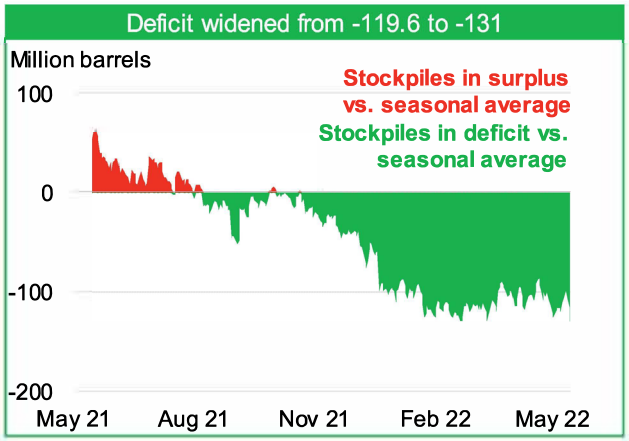
Total oil and product stocks = **Total crude stocks (land + floating)** + **Total oil product stockpiles**

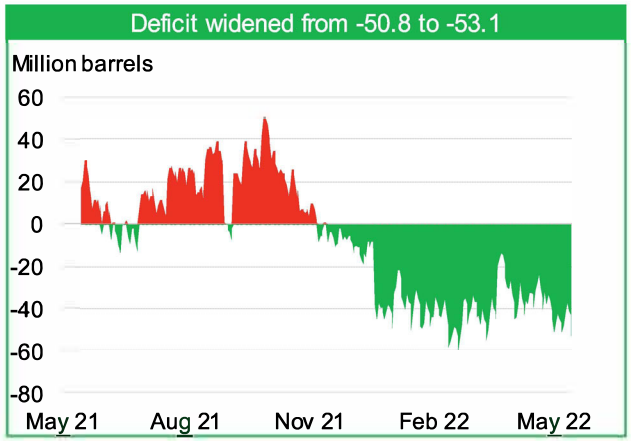


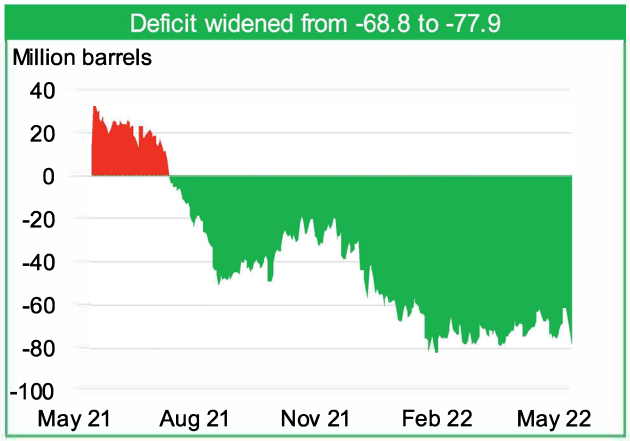




Charts below subtract current stockpiles by the 2017-19 (three-year) seasonal average







*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ ,Vortexa, Genscape. As of the **week ending May 27, 2022.***

BloombergNEF

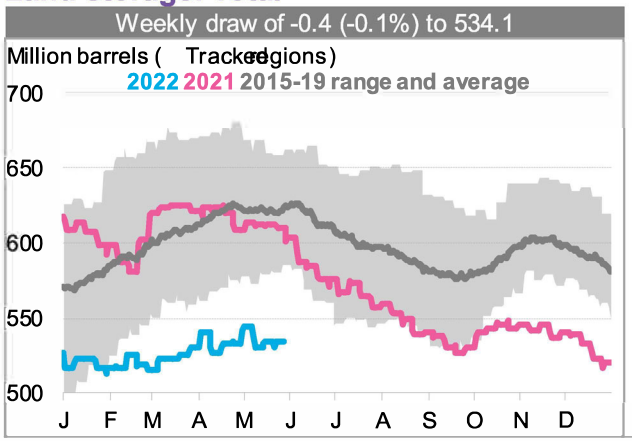
Crude stocks: Land

Note: We will continue to compare current inventory levels with the three-year (2017-19) seasonal average for the time being. Crude inventory data for Shandong teapots have been excluded since January 10.

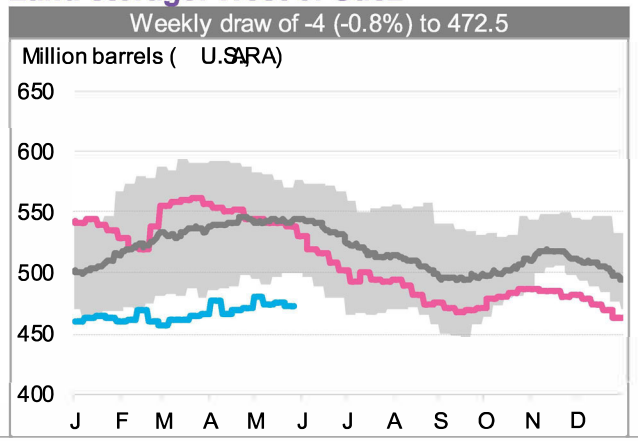
Neutral: Deficit widened from 86.1m bbl to 89.2m bbl against the seasonal average

- Crude inventory rises when supply outstrips demand (meaning more physical oil is available than is needed). High or rising inventories are therefore a bearish factor for oil prices. Every year, storage levels fluctuate due to seasonal demand trends. The intra-year directional movement of stockpile levels is somewhat predictable, yet the magnitude of movement can differ significantly from expectations.
- A useful way to gauge if the intra-year storage levels differ from the norm is to measure the difference between the current and seasonal average inventory levels.

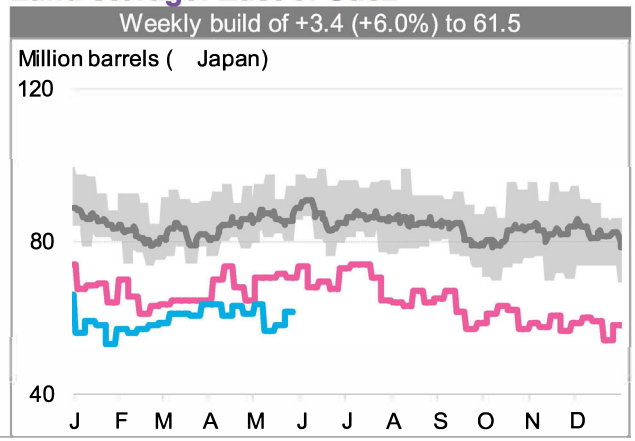
Land storage: Total



Land storage: West of Suez

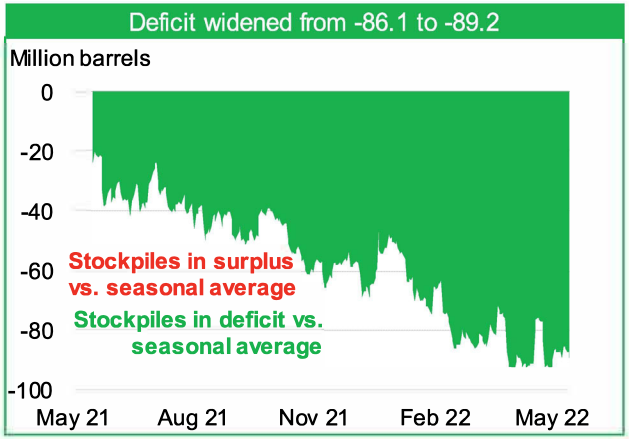


Land storage: East of Suez

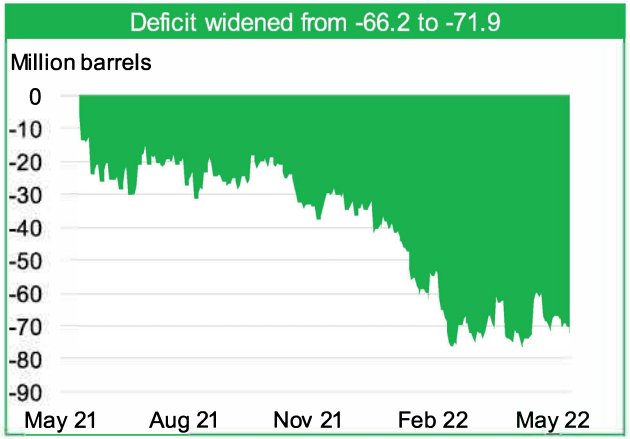


Charts below subtract current stockpiles by the 2015-19 (five-year) seasonal average

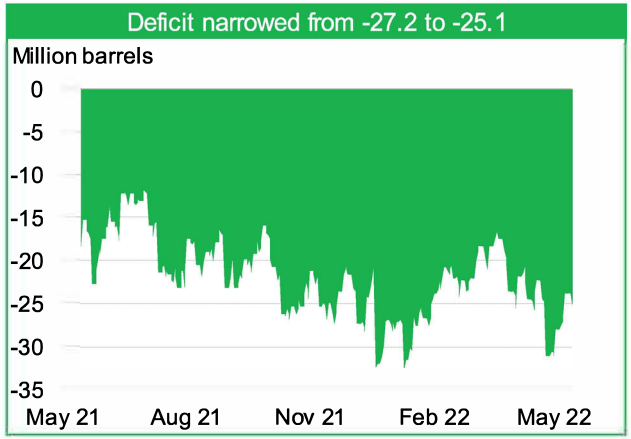
Deficit widened from -86.1 to -89.2



Deficit widened from -66.2 to -71.9



Deficit narrowed from -27.2 to -25.1



*Source: BloombergNEF, US EIA, Genscape, PAJ. Note: As of the **week ending May 27, 2022.***

Crude stocks: Floating

Bullish: Surplus narrowed significantly

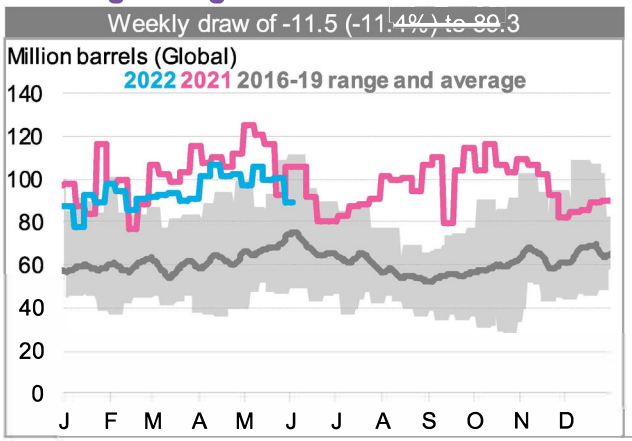
- Floating storage is only profitable if the strength of contango (future vs. prompt price) is greater than the tanker costs. Therefore, tankers become floating storage when the profit from a storage play exceeds the cost of the forward freight agreement (FFA).
- The floating storage data used in the "Oil Price Outlook" slide is for the previous week (i.e., the week before the latest data shown below). That data are available in the table to the right.

Vortexa's revision to global floating crude inventories

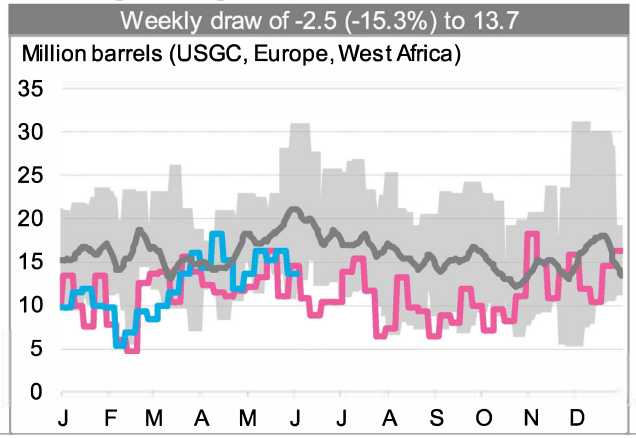
Million barrels	Previous report	Current report	Vortexa's revision
Inventories in week of May 27	99.0	**100.8***	+1.8
Inventories in week of May 20	100.0	99.9	-0.1

*Note: *Figure used to aggregate total oil inventories on page 8.*

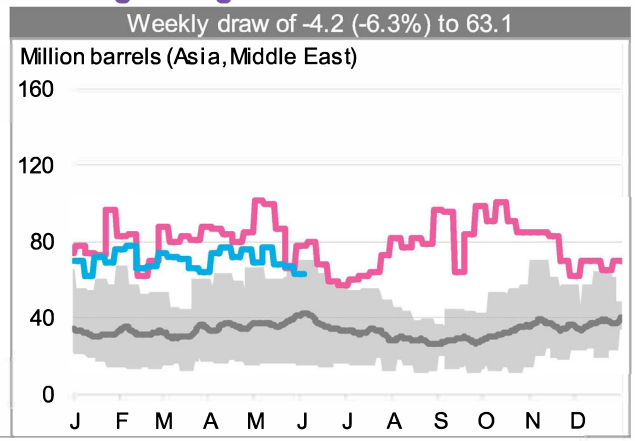
Floating storage: Total



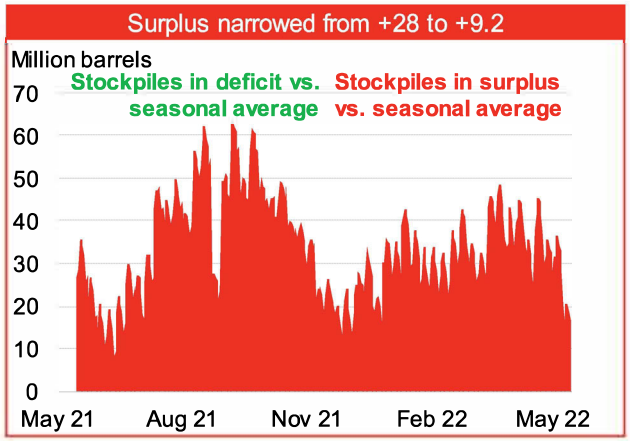
Floating storage: West of Suez

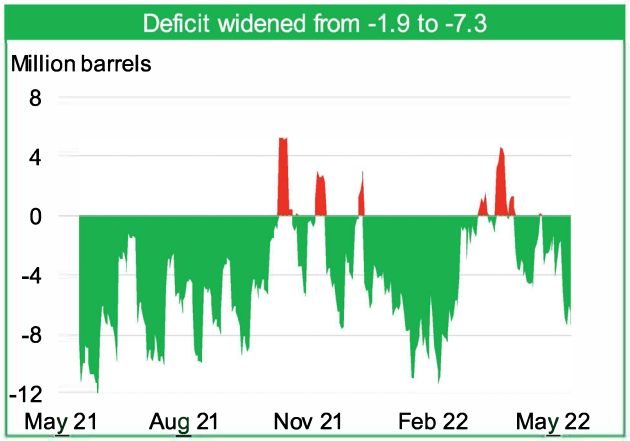


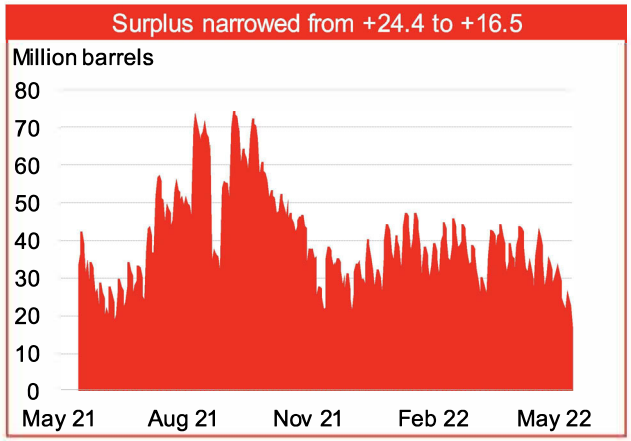
Floating storage: East of Suez



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







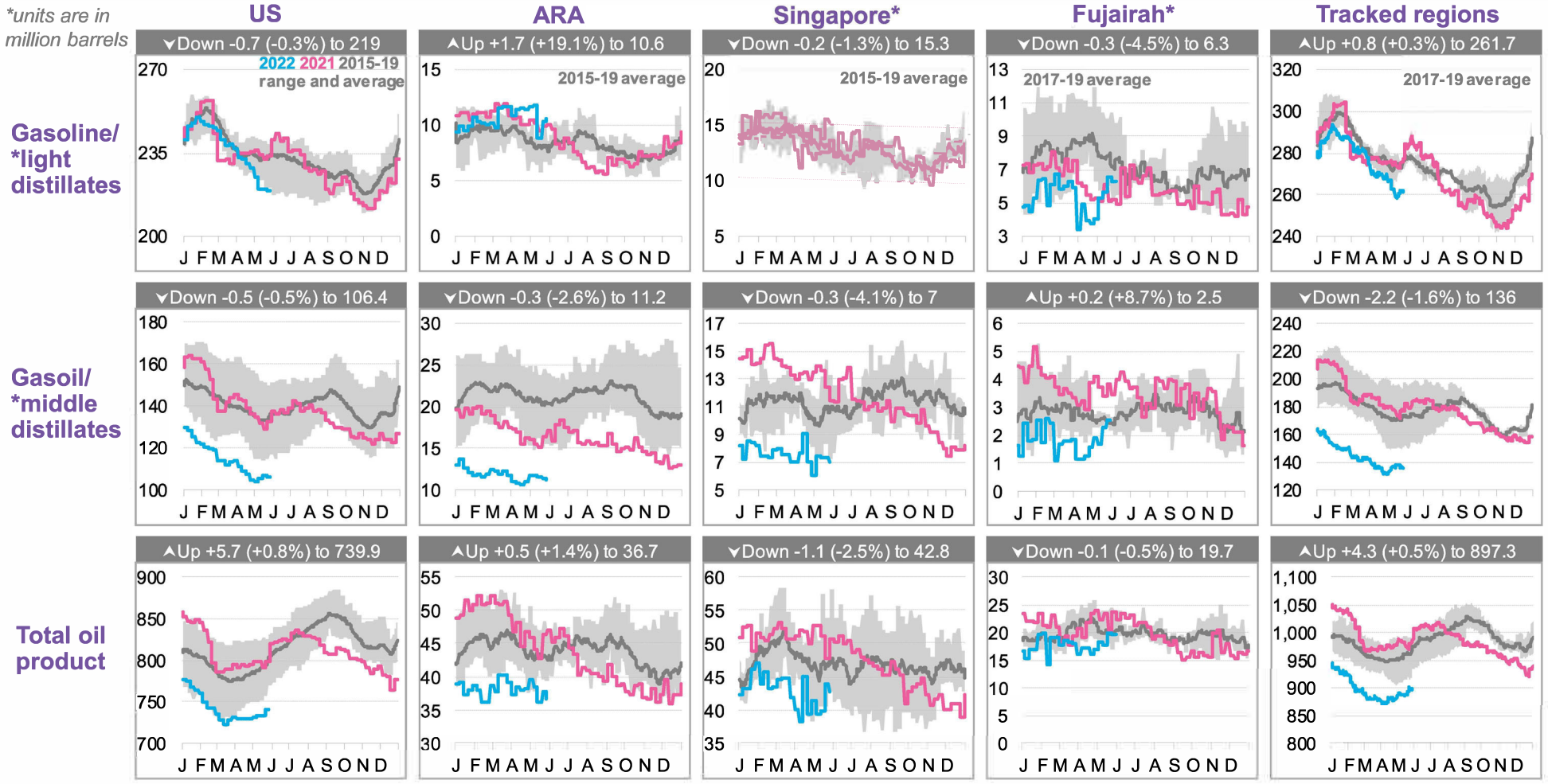
*Source: BloombergNEF, Vortexa. Note: As of the **week ending June 3, 2022**. **Raw data from Vortexa are revised frequently, so the data in this report might change week-to-week.***

BloombergNEF

Product stocks: Current vs. seasonal average

Bullish: Oil product stockpiles in tracked regions fell by 0.5% week-on-week

- Chart legend are as follows: 2021, 2020 and the 2015-19 range and average. For Fujairah and tracked regions, the **2017-19 (three-year) seasonal range** is shown. Tracked regions include US, ARA, Singapore, Japan and Fujairah



*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the **week ending May 27, 2022.***

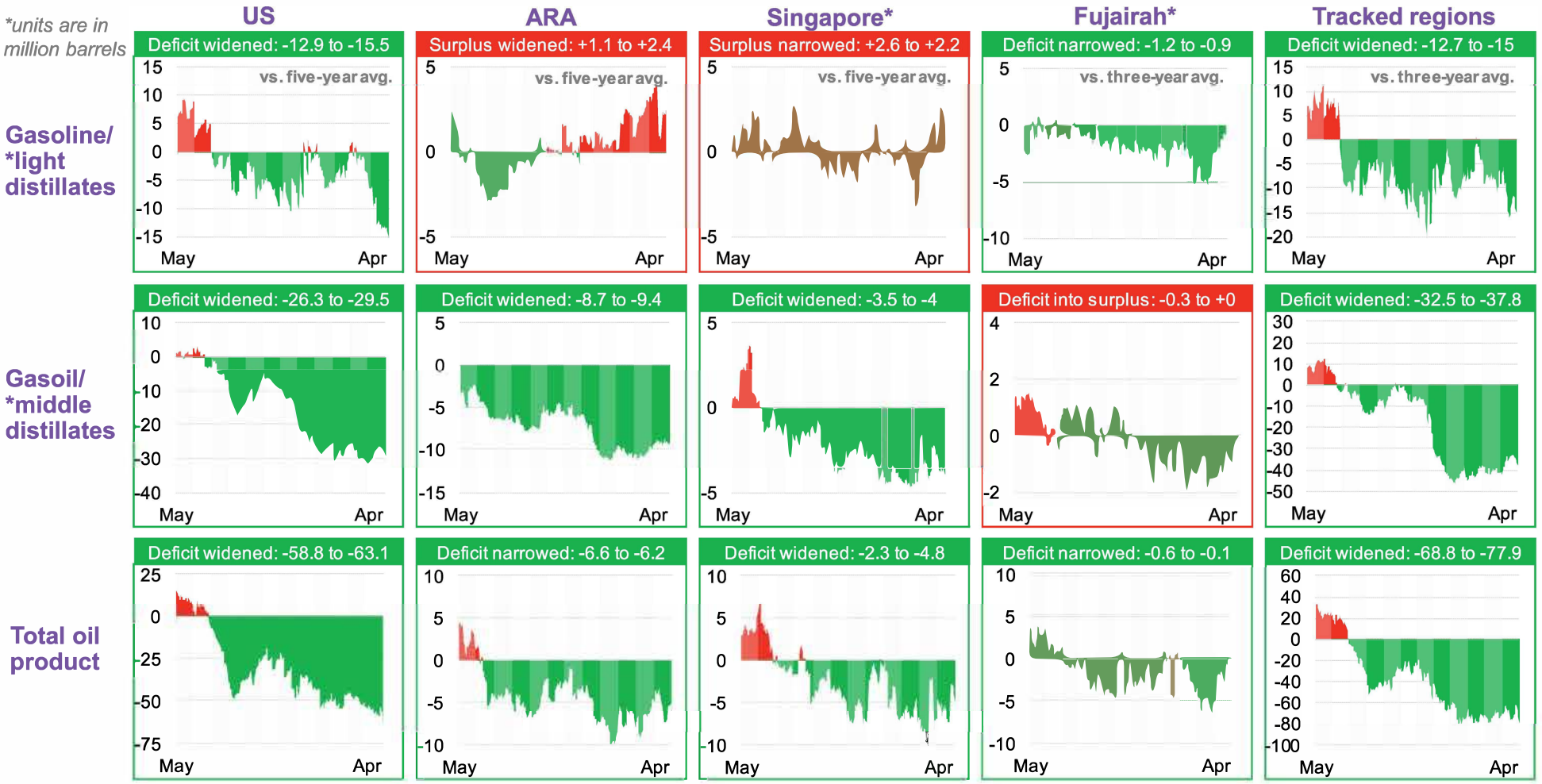
BloombergNEF

Product stocks: Current vs. seasonal average

Bullish: Oil product stockpile deficit against the seasonal average widened from 68.8m bbl to 77.9m bbl

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

**units are in million barrels*



*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the **week ending May 27, 2022.***

BloombergNEF

Jun 09, 2022 06:18:27

OIL DEMAND MONITOR: Fuel Use Near Normal Except China, Aviation

Gasoline demand above 2019 in India, slightly below in US, UK

Tokyo's Monday morning traffic exceeded 2019 average: TomTom

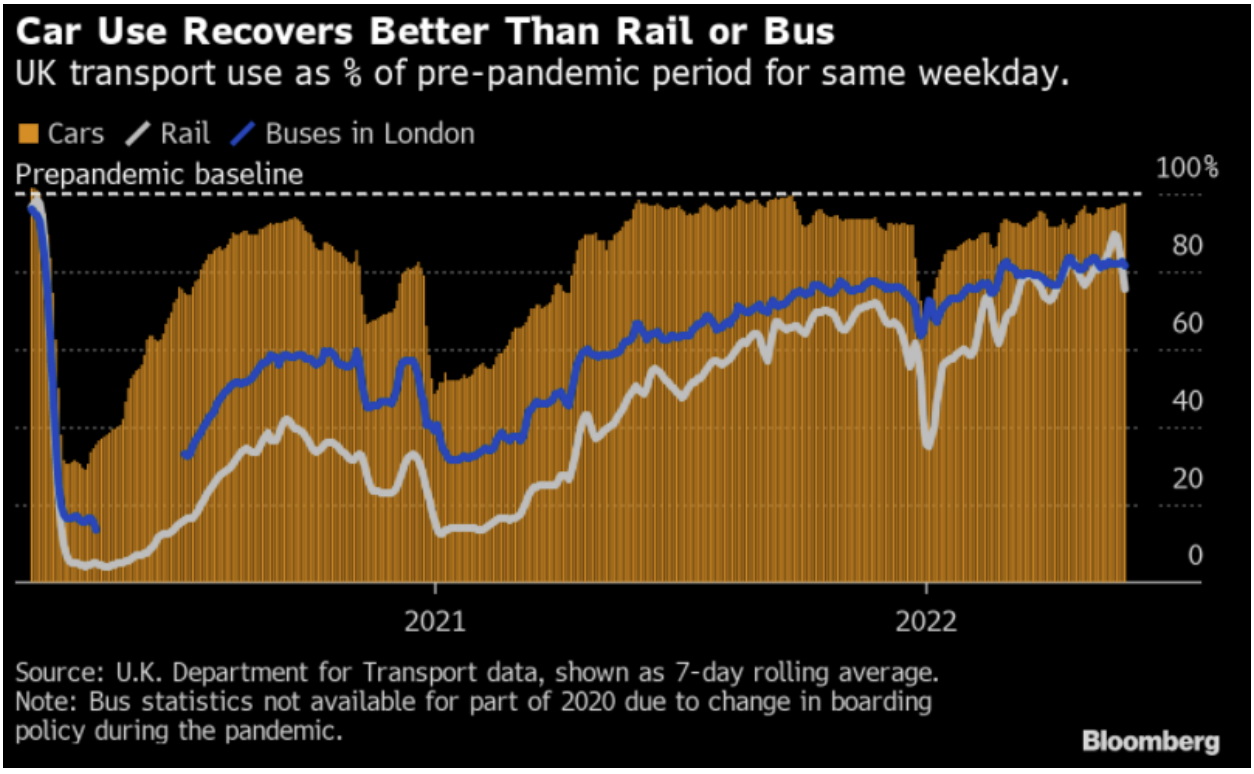
By Stephen Voss

(Bloomberg) -- Oil demand is essentially back to normal, or almost back, in many key consuming nations. Aviation fuel remains the slowest to recover, with Chinese flights gradually building up again as strict coronavirus travel restrictions ease.

US oil product demand was about 4% higher than the same week of 2019, according to the latest government estimate, even with gasoline and jet fuel down by 3% and 16%, respectively. And in India, the world's third-largest oil consumer, May gasoline sales exceeded 2019 levels by 12%, while diesel was just 2.3% below, a Bloomberg survey of refinery officials showed.

A general post-pandemic recovery in demand is coinciding with concern about a reduction in oil and natural gas supply from Russia as well as OPEC's unwillingness, or inability, to make up the difference. That's pushing oil back toward the March highs reached soon after Russia's invasion of Ukraine, with Brent crude now trading above $120 a barrel, hurting developing nations the most.

Car usage in the UK remains slightly below pre-pandemic levels while truck traffic is a little higher, according to the Department for Transport The data also show that rail and bus use has never managed to equal the recovery in car use, when compared against a pre-Covid baseline.



Separate government data from more than 4,000 filling stations across Great Britain show that UK demand for road fuels is currently about 8% below pre-pandemic levels, with both gasoline and diesel lagging. That may reflect soaring fuel costs, with the bill for filling up a family car with either gasoline or diesel having risen above £100 for the first time, according to UK motoring group RAC.

"The oil price is rising due to increased demand for fuel across the world as China eases its Covid restrictions and America and Europe go into the peak summer driving season," RAC spokesman Simon Williams said on Tuesday.

Traffic and fuel statistics for several other European nations are issued monthly, with information for May not yet released. However, higher frequency data on inner city congestion from TomTom NV shows an uptick in traffic. Readings for 8 a.m. local time on Monday across a sample of 13 world cities showed that Rome, London, Jakarta and Tokyo all had congestion levels higher than the 2019 average for that time of the week. Paris and Berlin had unusually low traffic because of religious holidays.

The Tokyo reading was notable since it's the first time Monday morning congestion has exceeded the 2019 norm since Dec. 20.

Separate data covering congestion in China as of May 30 -- the prior Monday -- remains mixed. Beijing and Shanghai continued to show much-reduced congestion, with Covid-19 restrictions keeping commuters at home in both cities, while roads got slightly busier in other places such as Guangzhou.

Average congestion in 15 Chinese cities with the highest vehicle registrations has now been above a January 2021 baseline for more than three straight weeks after spending much of April and March at reduced levels, according to BloombergNEF calculations using Baidu congestion data.

The harshest virus restrictions in Shanghai are expected to ease gradually from late June, paving the way for a recovery in Chinese oil demand, UBS analysts including Giovanni Staunovo wrote in a June 2 note.

READ MORE: China Oil Demand Set to Soar as Shanghai Emerges From Lockdown

Another sign of demand recovery is the pace at which US refineries are working. Last week some 16.39 million barrels a day of crude oil was processed in US plants, the most since January 2020. That meant about 94% of available capacity was being used, marking a similar milestone. To be sure, some of the eagerness for refiners to run operations at near-maximum levels is linked to record refining margins, which will become evident in the next set of quarterly earnings.

Air Travel

The global number of seats offered by airlines on planes for the week ahead climbed above 95 million after stalling near 90 million for most of May, according to estimates by OAG Aviation. That figure, which includes domestic and international routes, is still some 18% lower than the equivalent 2019 level of about 116 million a week.

North East Asia, which includes China, saw the biggest weekly increase, followed by Eastern Europe and North America.

"With another large capacity hike showing in the schedule for China's domestic market next week, domestic capacity inches closer to where it was before the pandemic," OAG said in a note on its website.

Looking ahead, the number of domestic seats worldwide is scheduled to surpass 2019 levels within a few weeks, while the international figure is expected to remain stuck between 2021 and 2019 levels, according to OAG. However, recent history shows that China usually does not operate as many flights as its forward schedule shows, so this may temper the global projection.

"Central/Western Africa capacity is now 22.6% ahead of where it was in 2019 making it the most recovered region in the world," OAG said.

China has been a consistent drag on the global aviation industry's recovery this year, hampered by coronavirus travel restrictions, while European flight activity has improved steadily in recent weeks. Still, the Chinese situation appears to be improving: the combined domestic and international seat capacity for North East Asia is now 31% lower than the equivalent week of 2019, whereas two weeks earlier the deficit was 45%.

Separately, tracking by Flightradar24 shows that the worldwide number of commercial flights is about 17% less than the equivalent pre-pandemic date in 2019. The latest seven-day rolling average was 99,351 flights as of June 7, stuck halfway between 2021 and 2019 levels, similar to the picture provided by OAG's seat capacity data.

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

Following are the latest indicators. The first three tables shows fuel demand and road congestion, the next shows air travel globally and the fifth is refinery activity:

Demand Measure	Location	% y/y	% vs 2020	% vs 2019	% m/m	Freq	Latest Date	Latest Value	Source
Gasoline	US	+8.5	+16	-2.6	+5.7	w	June 3	9.20m b/d	EIA
Distillates	US	+6.9	+11	+7.8	-3.4	w	June 3	3.65m b/d	EIA
Jet fuel	US	+48	+114	-16	+5.6	w	June 3	1.52 b/d	EIA
Total oil products	US	+14	+15	+4.3	+5.2	w	June 3	20.23 b/d	EIA
All motor vehicle use index	UK	-2	+43	-3	-3	w	June 6	97	DfT
Car use	UK	-2.1	+48	-7	-2.1	w	June 6	93	DfT
Heavy goods vehicle use	UK	-4.6	+20	+4	-4.6	w	June 6	104	DfT
Gasoline (petrol) avg sales per filling station	UK	-2.1	+68	-5	+0.5	w	May 29	6,927 liters/d	BEIS
Diesel avg sales per station	UK	-6.5	+51	-9.6	+0.7	w	May 29	9,444 liters/d	BEIS
Total road fuels sales per	UK	-4.7	+58	-7.7	+0.6	w	May 29	16,372 liters/d	BEIS

China 15 cities congestion	China				+7.1	d	May 30	104	Baidu / BNEF
Gasoline	India	+56		+12	+8.2	2/m	May 1-31	2.8m tons	Bberg
Diesel	India	+39		-2.3	+1.8	2/m	May 1-31	6.83m tons	Bberg
LPG	India	+1.5		+8	-0.9	2/m	May 1-31	2.19m tons	Bberg
Jet fuel	India	+110		-16	+7.5	2/m	May 1-31	540k tons	Bberg
Total Products	India	+12	+99	+1.6	-4	m	April	18.6m tons	PPAC
Toll roads volume	France	+62		-4.9		m	April	n/a	Atlantia
Toll roads volume	Italy	+42		-2.4		m	April	n/a	Atlantia
Toll roads volume	Spain	+64		-2.8		m	April	n/a	Atlantia
Toll roads volume	Brazil	+19		+7.9		m	April	n/a	Atlantia
Toll roads volume	Chile	+66		+11		m	April	n/a	Atlantia
Toll roads volume	Mexico	+14		+11		m	April	n/a	Atlantia
Gasoline	Spain	+31			+11	m	April	496 m3	Exolum
Diesel (and heating oil)	Spain	+17			+2.9	m	April	2273k m3	Exolum

Jet fuel	Spain	+239			+29	m	April	503k m3	Exolum
Road fuel sales	France	+16			-2.6	m	April	4.035m m3	UFIP
Gasoline	France	+33		+9.8		m	April	n/a	UFIP
Road diesel	France	+10		-11		m	April	n/a	UFIP
Jet fuel	France	+115		-25	+8.5	m	April	550k m3	UFIP
All petroleum products	France	+12		-10	-7.8	m	April	4.4m tons	UFIP
All vehicles traffic	Italy	+16			+3.6	m	May	n/a	Anas
Heavy vehicle traffic	Italy	+10			+14	m	May	n/a	Anas
Gasoline	Portugal	-4.4	+103	-22	-34	m	April	72k tons	ENSE
Diesel	Portugal	-14	+40	-23	-37	m	April	329k tons	ENSE
Jet fuel	Portugal	+273	+1395	-1	+28	m	April	124k tons	ENSE
Total fuel sales	Italy	+12		-3	-5.4	m	April	4.24m tons	Ministry
Gasoline	Italy	+27		+0.5	unch	m	April	619k tons	Ministry
Diesel /gasoil	Italy	+9.4		-2.3	-7.3	m	April	2.17m tons	Ministry
Jet fuel	Italy	+158		-25	+24	m	April	294k tons	Ministry

Notes: Click here for a PDF with more information on sources, methods. The frequency column shows w for data updated weekly, 2/m for twice a month and m for monthly. The column showing "vs 2020" is used for some data, such as comparing Indian products demand for April 2022 vs April 2020.

In DfT UK daily data, which is updated once a week, the column showing versus 2019 is actually showing the change versus the first week of February 2020, to represent the pre-Covid era.

In BEIS UK daily data, which is updated once a week, the column showing versus 2019 is actually showing the change versus the average of Jan. 27-March 22, 2020, to represent the pre-Covid era.

Atlantia is publishing toll road data on a monthly basis, rather than the weekly format seen in 2021, and DoT also switched to monthly data after the week ended April 3.

City congestion:

Measure	Location	% chg vs avg 2019	% chg m/m	June 6	May 30	May 23	May 16	May 9	May 2	Apr. 25	Apr. 18	Apr. 11
		(for June 6)		Congestion minutes added to 1 hr trip at 8am* local time								
Congestion	Tokyo	+2	+31	38	31	33	32	29	15	32	31	28
Congestion	Taipei	-42	+48	20	14	12	19	14	11	21	25	26
Congestion	Jakarta	+11	+106	43	41	39	zero	21	zero	40	40	33
Congestion	Mumbai	-63	-6	18	16	19	10	19	16	22	23	25
Congestion	New York	-13	-6	27	1	29	28	29	21	27	13	28
Congestion	Los Angeles	-19	-4	29	2	28	29	30	31	31	25	22
Congestion	London	+13	-1	43	18	38	42	43	2	38	1	18
Congestion	Rome	+17	+14	57	49	52	50	50	46	zero	zero	42
Congestion	Madrid	-20	-6	28	29	29	1	30	zero	26	5	4
Congestion	Paris	-96	-96	2	40	41	43	43	14	21	1	38
Congestion	Berlin	-98	-98	1	26	27	29	37	29	28	1	19
Congestion	Mexico City	-30	-11	34	37	38	38	38	40	41	24	20
Congestion	Sao Paulo	-32	unch	29	30	28	30	29	34	31	30	34

Source: TomTom. Click here for a PDF with more information on sources, methods.

* 9am statistics are used for Mumbai, rather than 8am. All other cities, including Sao Paulo, use 8am.

NOTE: m/m comparisons are June 6 vs May 9. There were holidays in Paris and Berlin on June 6, in New York and Los Angeles on May 30 and in Jakarta on May 16, reducing traffic those days. TomTom has been unable to provide Chinese data since April 2021. Taipei and Jakarta were added to the table in December 2021.

Chinese City Congestion:

Measure	Location	% chg vs Jan. 2021	% chg m/m	% chg w/w	May 30	May 23	May 16	May 9	May 2	Apr. 25	Apr. 18	Apr. 11	Apr. 4	Mar. 28	Mar. 21
		(comparisons for May 30)													
Congestion	Beijing	-24	-10	unch	76	76	76	77	84	105	101	92	104	95	98
Congestion	Guangzhou	+17	+18	+2	117	115	110	99	99	91	80	92	96	108	95
Congestion	Shanghai	-22	+4	+0.8	78	78	77	76	75	77	76	73	74	78	78
Congestion	China-15	+4	+7.1	-0.4	104	104	103	96	97	99	95	93	96	96	94

Source: BNEF calculations based on Baidu congestion data, showing a seven-day moving average indexed against a January 2021 baseline. China-15 is the weighted average of the 15 cities with the highest number of vehicle registrations. m/m comparisons are May 30 vs May 2.

Air Travel:

Measure	Location	y/y	vs 2 yrs ago	vs 2019	m/m	w/w	Freq.	Latest Date	Latest Value	Source
		changes shown as %								
Airline passenger throughput	US	+31	+506	-22	+7.9	-2.7	d	June 7	2.05m	TSA
Airline passenger throughput (7d avg)	US	+24	+502	-12	+5.1	-1.1	d	June 7	2.18m	TSA
Commercial flights	Worldwide	+22	+141	-17	+5.3	+5.6	d	June 7	99,351	Flightradar24
All flights	Worldwide	+14	+89	+1.5	+7.5	+0.4	d	June 7	205,215	Flightradar24
Air traffic (flights)	Europe			-15	+9.9	+3.5	d	June 7	29,285	Eurocontrol
Air traffic (flights)	UK			-15	+9.7	+3.2	d	June 7	5,699	Eurocontrol
Air traffic (flights)	Germany			-19	+10	+1.3	d	June 7	5,106	Eurocontrol
Seat capacity	Worldwide	+39	+155	-18	+5	+4.4	w	June 6-12	95.2m	OAG
Seat capacity	North America			-9.2		+3.2	w	June 6-12	n/a	OAG
Seat capacity	North East Asia			-31		+26	w	June 6-12	n/a	OAG
Seat capacity	South East Asia			-34		+1	w	June 6-12	n/a	OAG
Seat capacity	South Asia			-1.6		+0.5	w	June 6-12	n/a	OAG
Seat capacity	Western Europe			-13		+1.1	w	June 6-12	n/a	OAG
Seat capacity	Central America			+4.5		-0.5	w	June 6-12	n/a	OAG
Heathrow airport passengers	UK	+848	+2360	-25	+21		m	April 2022	5.08m	Heathrow

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

FlightRadar 24 data shown above, and comparisons thereof, all use 7-day moving averages, except for w/w which uses single day data.

Refineries:

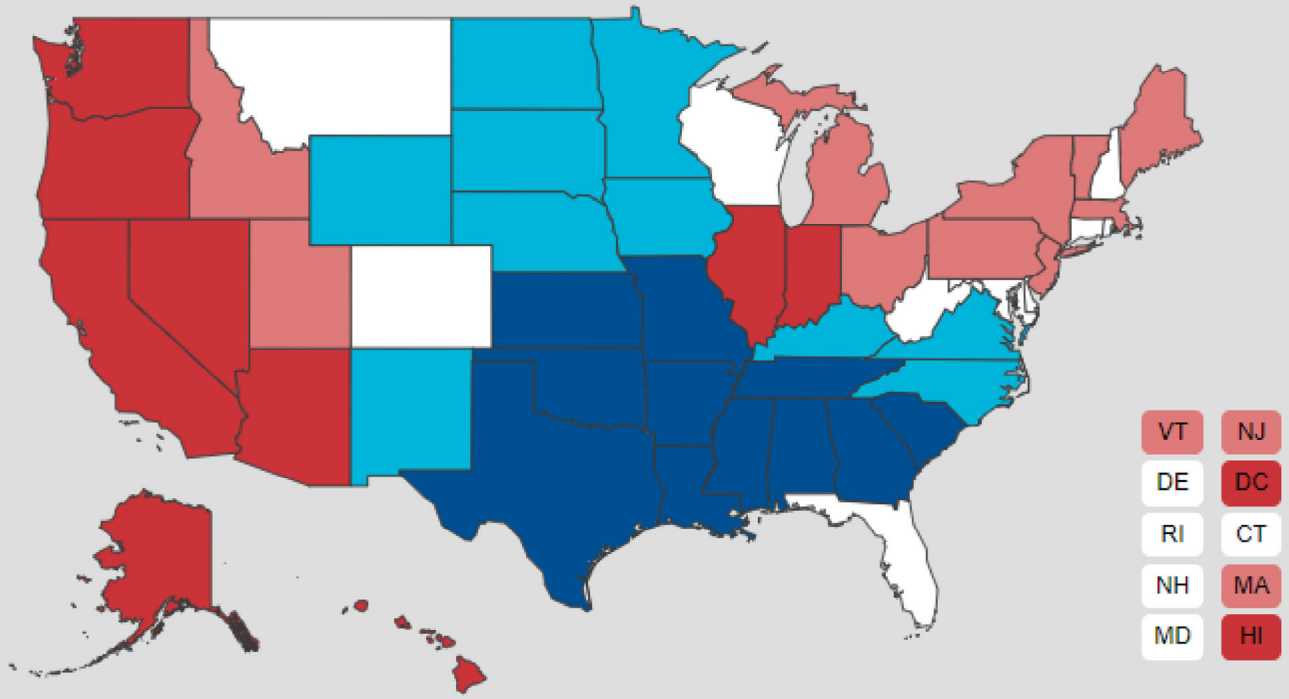
Measure	Location	y/y	chg vs 2019	m/m chg	Latest as of Date	Latest Value	Source
		Changes are in ppt unless noted					
Crude intake	US	+2.9%	-3.3%	+4.4%	June 3	16.4m b/d	EIA
Apparent Oil Demand	China	-6.7%	+0.1%	-9.3	April 2022	12.09m b/d	NBS
Utilization	US	+2.9	+2.4	+4.2	June 3	94.2 %	EIA
Utilization	US Gulf	+3.6	+2.1	+2.6	June 3	96.5 %	EIA
Utilization	US East	+9.5	+5.5	+8.2	June 3	99.2 %	EIA
Utilization	US Midwest	+3.3	+10	+6.2	June 3	94.2 %	EIA

NOTE: All of the refinery data is weekly, except NBS apparent demand, which is usually monthly. Changes are shown in percentages for the rows on crude intake and Chinese apparent oil demand, while refinery utilization changes are shown in percentage points. SCI99 data on Chinese refinery run rates was discontinued in late 2021.

Today's AAA National Average

$5.004 ▲

Price as of 6/11/22



NEWS: National Average Increases Alongside Gas Demand and Oil Prices Read more »

NATIONAL AVERAGE GAS PRICES

	Regular	Mid-Grade	Premium	Diesel	E85
Current Avg.	$5.004	$5.371	$5.666	$5.765	$4.325
Yesterday Avg.	$4.986	$5.353	$5.641	$5.753	$4.316
Week Ago Avg.	$4.819	$5.161	$5.451	$5.617	$4.136

US Oil Indicators Weekly

Takeaways: Crude oil prices look to finally be shaking off demand-side concerns as China emerges from lockdowns alongside growing optimism for US gasoline demand going into the summer driving season. West Texas Intermediate front-month prices marched past $120 a barrel on Wednesday in the hours following this week's Energy Information Administration report. According to the report, last week's US crude production remained unchanged for fourth straight week at 11.9 million barrels per day. Refiners are operating at full-tilt in order to capitalize on near-record high margins, processing the most crude since January 2020.

Gasoline demand surged dramatically based on weekly product supplied – a stark reversal from the tepid growth seen in recent weeks. The closely watched four-week average rose above 9 million barrels for the first time this year, bringing demand closer to typical seasonal levels. Still, there is quite a lot of ground to make up through the summer.

	Frequency	Source	Snapshot: June 8, 2022
Overall market indicators:			
Mobility	Daily	Google mobility	Mobility metrics continue to fall sharply nationwide; North American traffic levels slid below 70% of 2019 levels for the first time since January
Economic activity	Daily	New York MTA, Moovit, OpenTable, Prodco	NYC vehicle entries still appear strong as traffic appears to be faltering in other parts of the country; US restaurant activity has held flat since February
Crude oil prices	Daily	Bloomberg	WTI prices are running up once again; front-month contracts broke the $110 a barrel barrier, sitting firmly above $120 at June 8 market close
Oil demand:			
Road congestion & gasoline	Weekly, Hourly	US EIA, TomTom	Implied demand surged dramatically last week, a stark reversal from the tepid growth in recent weeks, driving the four-week average above 9 million b/d for the first time this year
Air travel & jet fuel	Daily	US TSA, FlightStats	US airport foot traffic slipped back below 90% of 2019 levels, but it's still uncertain whether the typical appetite for summer flights can hold up amid steep ticket prices
Refinery operations	Daily	US EIA	US refiners are processing the most crude since January 2020, as fuelmakers work at full-steam to take advantage of near-record high margins
Crude/product inventories	Weekly	US EIA	Commercial oil inventories posted a larger-than-expected gain; another draw at Cushing renews concerns that the key oil hub may soon hit operational lows
Oil production	Weekly	US EIA	US crude production was unchanged; the rig count failed to grow two weeks in a row for the first time in nearly two years, despite WTI sitting at $120/bbl and Henry Hub surpassing $9/MMBtu

Source: BloombergNEF. Note: Green signals an upturn from the disruption caused by Covid-19, red indicates downturn, orange indicates no/mixed change. In most cases, the colors are indicative of changes from the prior week.

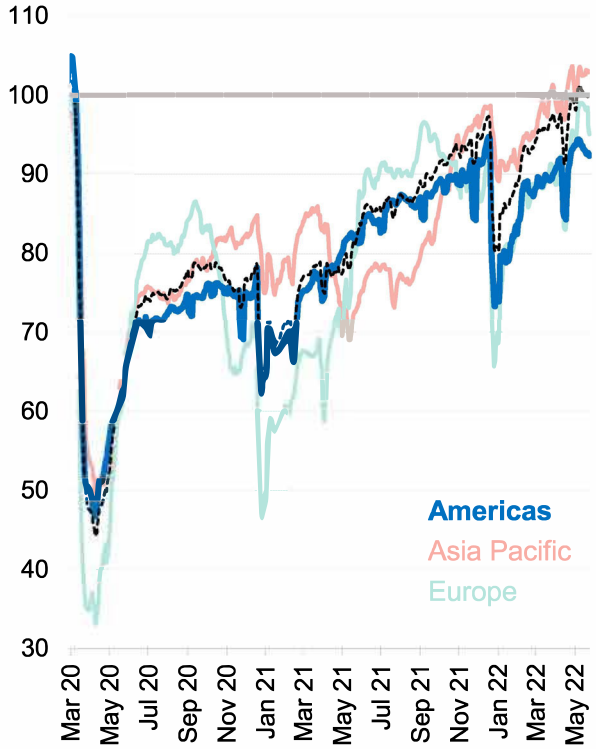
Mobility

Note: Apple Mobility reports were discontinued on April 14, 2022. We will resume updating TomTom congestion data, which were previously updated to March 16.

Mobility metrics continue to fall sharply in the Americas; North American traffic levels slid below 70% of 2019 levels for the first time since January

Google mobility index

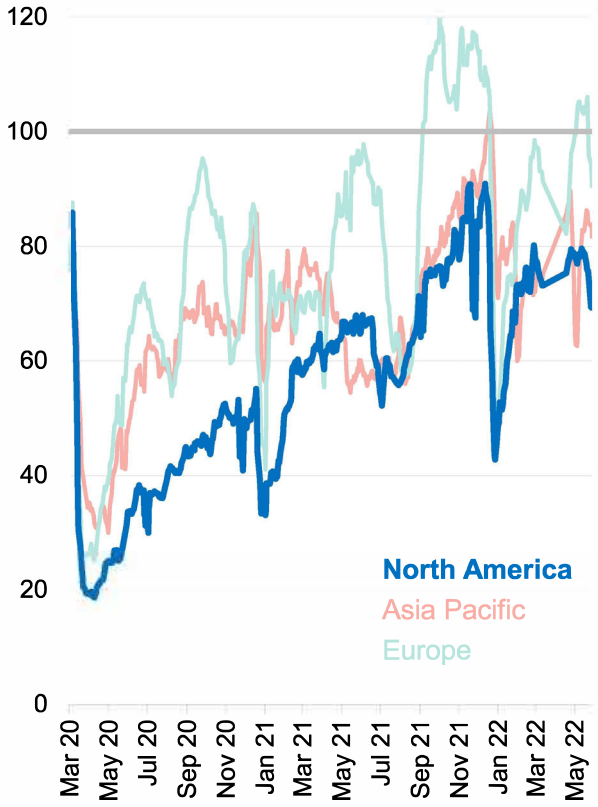
Indexed to Jan - Feb 2020 (seven day MA)



Source: Google Community Mobility Report, BloombergNEF. Note: Data exclude China and Russia. Calculation includes retail & recreation, workplaces, transport hubs. The world/regional index is weighted by the 2019 road fuels demand of each country. ***Data updated to May 26.***

TomTom congestion index

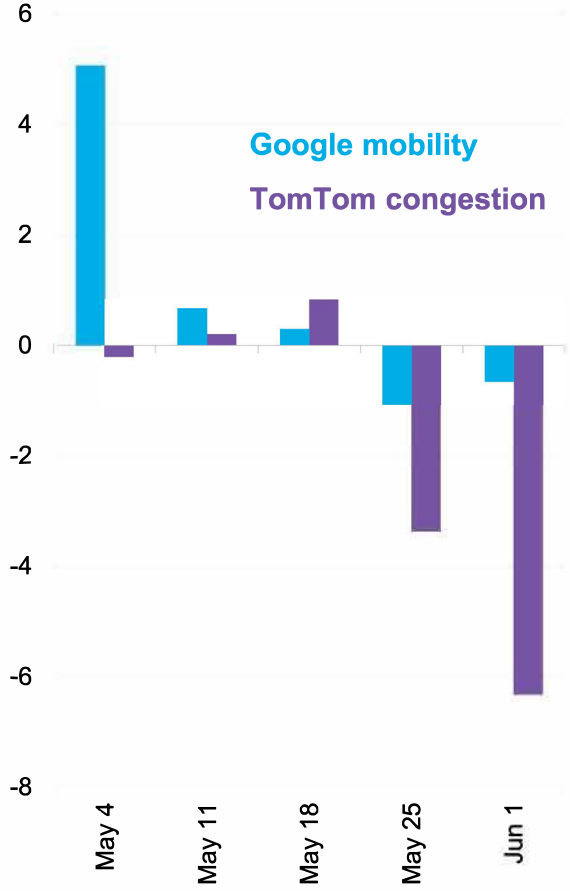
Indexed to Jan 13, 2020 (seven day MA)



Source: BloombergNEF, TomTom Traffic Index. Note: 'Peak congestion index' is calculated by BNEF. Index is the arithmetic daily average of the hourly weekday peak congestion data of various cities within the region, compared to the 2019 average values. ***Data updated to June 1.***

Americas week-on-week change

Weekly change in respective indexed value



Note: TomTom data not available for March 16 – April 22 as noted above.

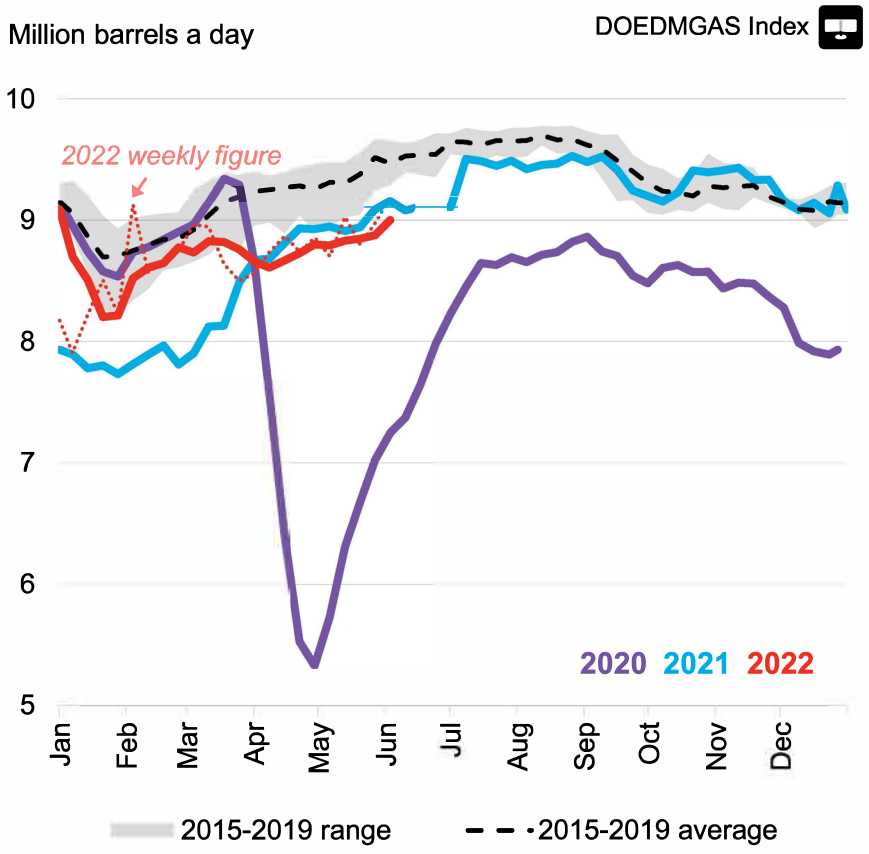
BloombergNEF

Gasoline demand

For more data on congestion around the world, see the BNEF Covid-19 Indicators: Road Traffic

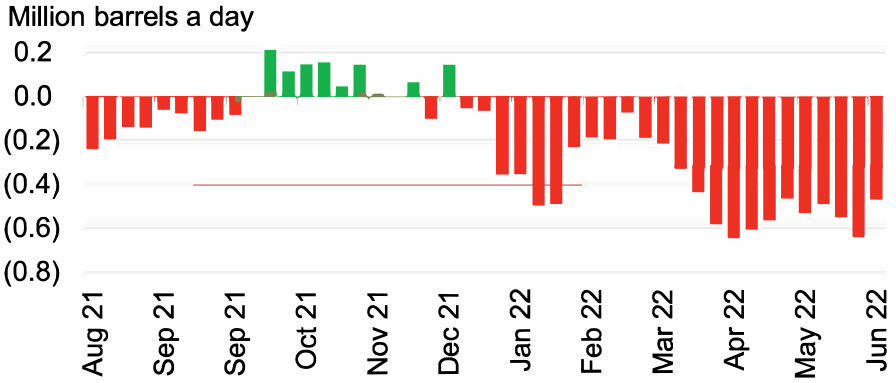
Implied demand surged dramatically last week, a stark reversal from the tepid growth in recent weeks, driving the four-week average above 9 million b/d for the first time this year

Implied gasoline demand*

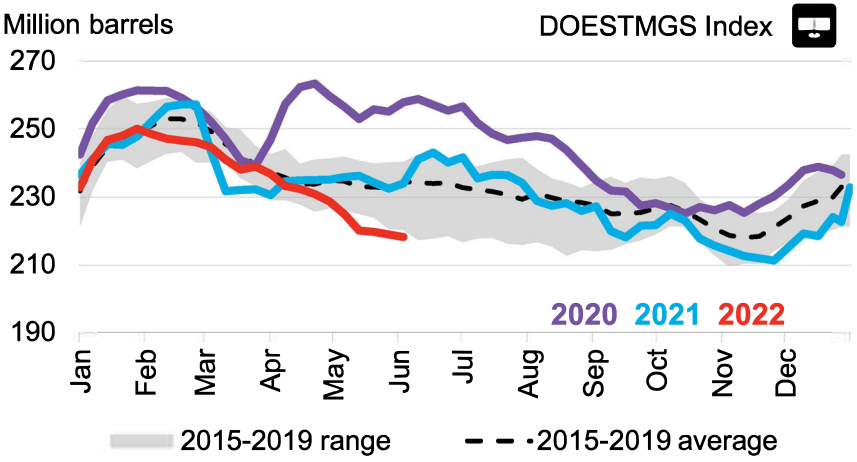


*Source: BloombergNEF, EIA; Note: *Based on the four-week moving average, except the 2022 weekly figure*

Demand difference to 5-year seasonal average



Gasoline inventory

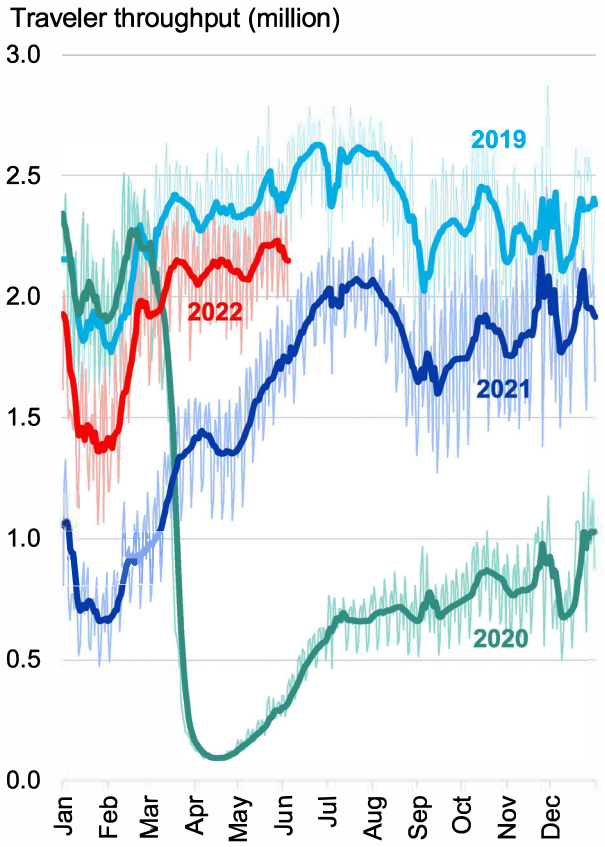


Source: BloombergNEF, EIA

Jet fuel demand

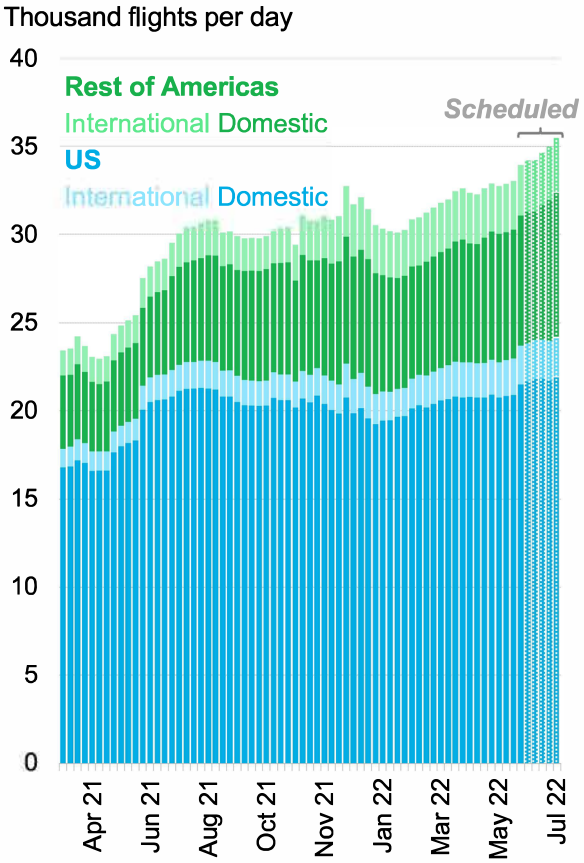
US airport foot traffic slipped back below 90% of 2019 levels, but it's still uncertain whether the typical appetite for summer flights can hold up amid steep ticket prices

TSA checkpoint traffic



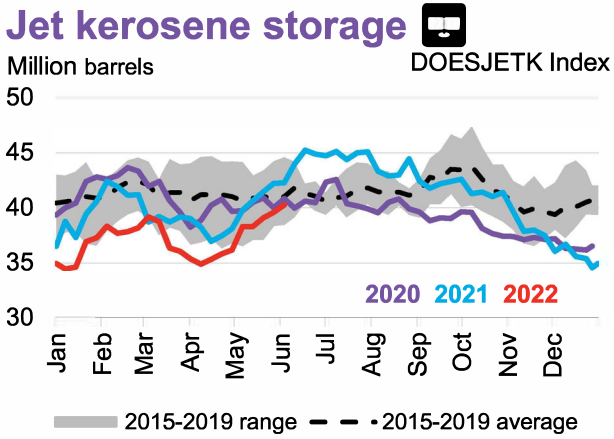
Source: BloombergNEF, TSA

Daily flight departures

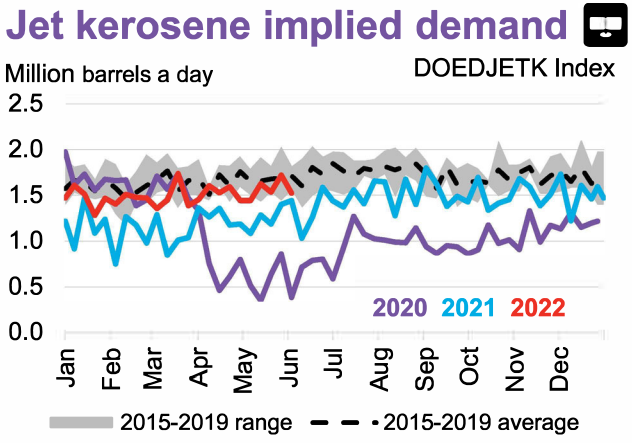


Source: BloombergNEF, FlightStats.

Jet kerosene storage



Jet kerosene implied demand



Source: BloombergNEF, EIA

For more data on congestion around the world, see the BNEF Covid-19 Indicators: Aviation

Excerpt https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/06/10/remarks-by-president-biden-on-inflation-and-actions-taken-to-lower-prices-and-address-supply-chain-challenges/

THE WHITE HOUSE

Remarks by President Biden on Inflation and Actions Taken to Lower Prices and Address Supply Chain Challenges

JUNE 10, 2022•SPEECHES AND REMARKS

USS Iowa
Port of Los Angeles
Los Angeles, California

Q Are you going to go after Exxon's profits, sir? Exxon's profits — are you going to — are you going to go after them?

THE PRESIDENT: We're going to make sure that everybody knows Exxon's profits. Why don't you tell them what Exxon's profits were this year — this quarter? Exxon made more money than God this year. And, by the way, nothing has changed.

And they're not — by the way, one thing I want to say about the oil companies: They talk about how we have — they have 9,000 permits to drill. They're not drilling. Why aren't they drilling? Because they make more money not producing more oil. The price goes up, number one. And, number two, the reason they're not drilling is they're buying back their own stock — which should be taxed, quite frankly — buying back their own stock and making no new investments.

So I — I always thought Republicans are for investment. Exxon, start investing, start paying your taxes.

Thanks.

11:11 A.M. PDT

https://www.reuters.com/markets/europe/exclusive-spains-repsol-talks-sell-25-oil-gas-unit-eig-sources-say-2022-06-07/?taid=629f27807385bc0001a4f3f3&utm_campaign=trueAnthem:+Trending+Content&utm_medium=trueAnthem&utm_source=twitter

June 7, 20224:06 AM MDTLast Updated 30 min ago

EXCLUSIVE Spain's Repsol in talks to sell 25% of oil and gas unit to EIG, sources say

By Andres Gonzalez , Gram Slattery and Isla Binnie

3 minute read

A Repsol logo at a petrol station in Bormujos near the Andalusian capital of Seville, southern Spain March 3, 2016. REUTERS/Marcelo del Pozo

LONDON, June 7 (Reuters) - EIG Global Energy Partners is in early discussions with Repsol (REP.MC) to buy a slice of the Spanish company's oil and gas exploration and production business, three sources with knowledge of the matter told Reuters.

The U.S. fund is seeking to purchase up to 25% of Repsol's so-called upstream business, the sources said, in a deal that would give the Spanish group cash for its plans to build clean energy capacity such as solar plants and wind farms.

The sources did not give a value for any deal, but analysts have said the upstream business is worth between 14 billion and 18 billion euros ($15 billion and $19 billion), including debt.

The companies began talks after EIG made an unsolicited offer, said the sources, who declined to be identified because the discussions were private. They said talks could take months and there was no guarantee a deal would be reached.

Repsol and EIG declined to comment when contacted by Reuters.

Repsol shares spiked higher after the Reuters report. By 0953 GMT, they were up almost 3% at their highest since June 2008. Europe's broader oil & gas index (.SXEP) was up 0.4%.

A deal would give Repsol funds to help achieve its goal of more than doubling its low-carbon power generation capacity by 2025 to 7.5 gigawatts (GW). One gigawatt is roughly equivalent to the output of one nuclear plant.

Like other oil companies, Repsol's upstream division has a complex structure, consisting of more than 100 individual units, according to its 2021 annual financial statements.

In a bid to streamline operations, the company has sold its stakes in exploration businesses in several countries, and sold its remaining Russian assets to Gazprom Neft in January.

Washington-based EIG specialises in private investments in energy and related infrastructure. It led a consortium that spent $12.4 billion on a 49% stake in pipelines owned by oil giant Saudi Aramco (2222.SE) last year. read more

CLIMATE GOALS

Russia's invasion of Ukraine has pushed oil and gas prices to multi-year highs, swelling returns for producers.

Repsol was among the first global oil and gas producers to commit to ensuring that by 2050 its products emitted no more carbon than could be absorbed by natural sinks such as forests or artificial systems like carbon capture.

The company has said it will spend more than a third of the 19.3 billion euro it plans to invest by 2025 on low-carbon projects, such as renewable power or on the production of hydrogen without creating planet-warming emissions.

In oil and gas, it has pledged to prioritise less carbon-intensive projects which will be pumping for a shorter time.

Repsol's main oil and gas production sites are in North America, Bolivia, Colombia, Venezuela, Trinidad and Tobago, Brazil and Libya. Its produces more natural gas than oil, with gas accounting for 70% of its proven reserves.

Repsol's upstream business carries higher production costs than its competitors, churning out lower revenues per barrel, but it has one of the industry's highest organic reserve replacement ratios, analysts says.

The company expects to produce an average of 585,000 barrels of oil equivalent per day in 2022.

Repsol sold its last remaining stakes in Russian exploration businesses in January, leaving it free from the potential write-downs on assets there that larger peers including BP are now navigating after Moscow's invasion of Ukraine.

($1= 0.9356 euros)

Editing by Edmund Blair

https://www.oecd.org/economic-outlook/

The Price of War

OECD Economic Outlook, June 2022

The world is paying a heavy price for Russia's war in Ukraine. It is a humanitarian disaster, killing thousands and forcing millions from their homes. The war has also triggered a cost-of-living crisis, affecting people worldwide. When coupled with China's zero-COVID policy, the war has set the global economy on a course of slower growth and rising inflation - a situation not seen since the 1970s. Rising inflation, largely driven by steep increases in the price of energy and food, is causing hardship for low-income people and raising serious food security risks in the world's poorest economies.

Here are the three key take-aways:

> **The war is slowing the recovery**

> **Inflationary pressures have intensified**

> **The cost of living crisis will cause hardship and risks famine**

The war is slowing the recovery

Prior to the war, the world economy was on track for a strong, albeit uneven, recovery from COVID-19. The conflict in Ukraine and the supply-chain disruptions exacerbated by shutdowns in China due to the zero-COVID policy are dealing a serious blow to the recovery.

Global GDP growth is now projected to slow sharply this year, to around 3%, and remain at a similar pace in 2023. This is well below the pace of recovery projected last December.

Growth is set to be markedly weaker than expected in almost all economies. Many of the hardest-hit countries are in Europe, which is highly exposed to the war through energy imports and refugee flows.

Countries worldwide are being hit by higher commodity prices, which add to inflationary pressures and curb real incomes and spending, further dampening the recovery.

This growth slowdown is a price of war which will be paid through lower incomes and fewer job opportunities.

Inflationary pressures have intensified

The war in Ukraine has quashed hopes for a quick end to rising inflation from COVID-19 related supply bottlenecks seen across the global economy during 2021 and early 2022.

High food and energy prices and the continued worsening of supply-chain problems imply that consumer price inflation will peak later and at higher levels than previously foreseen.

The new OECD projections show the large and global impact the war is having on inflation, which has already reached 40-year highs in Germany, the United Kingdom and the United States.

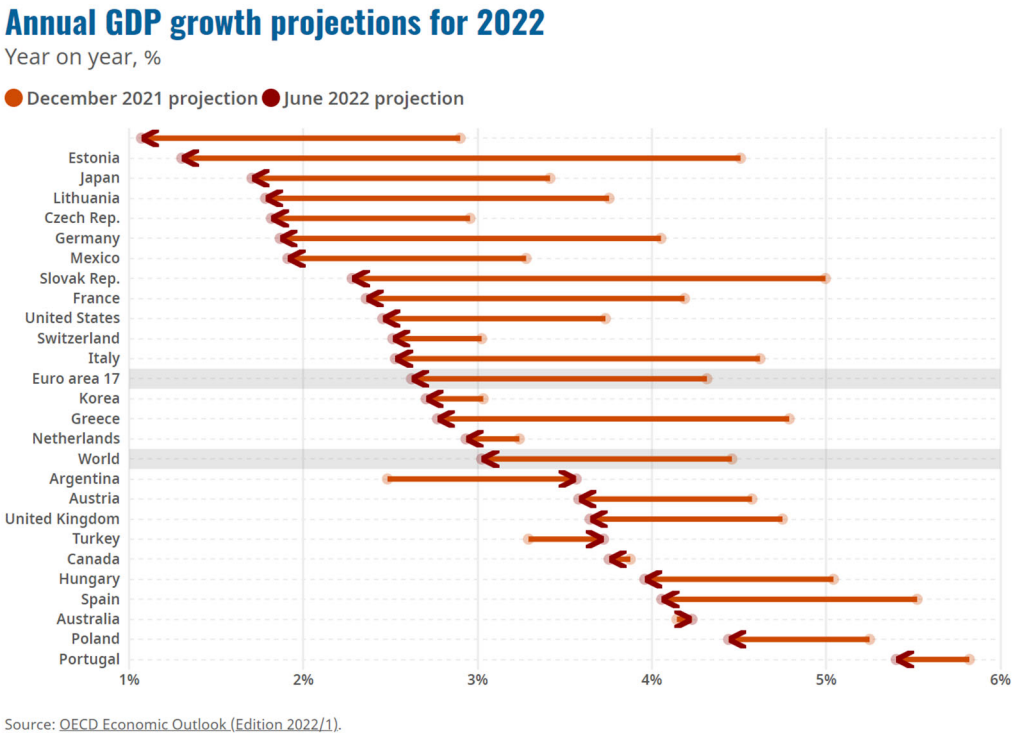
A gradual reduction of supply chain and commodity price pressures and the impact of rising interest rates should begin to be felt through 2023, but core inflation is nonetheless projected to remain at or above central bank objectives in many major economies at year-end.

The cost of living crisis will cause hardship and risks famine

Russia and Ukraine are important suppliers in many commodity markets. Together they accounted for about 30% of global wheat exports, 20% for corn, mineral fertilisers and natural gas, and 11% for oil. Prices for these commodities increased sharply after the onset of the war.

Without action, there is high risk of a food crisis. Supply disruptions are rising, particularly threatening low-income countries that are highly dependent on Russia and Ukraine for basic food staples. With public budgets stretched by two years of the pandemic, these countries could struggle to provide food and energy at affordable rates to their populations, risking famine and social unrest.

The surge in commodity prices and possible disruptions to production will have significant consequences. The sharp rise in prices is already undermining purchasing power, which will force lower income households worldwide to cut back on other items to pay for basic energy and food needs

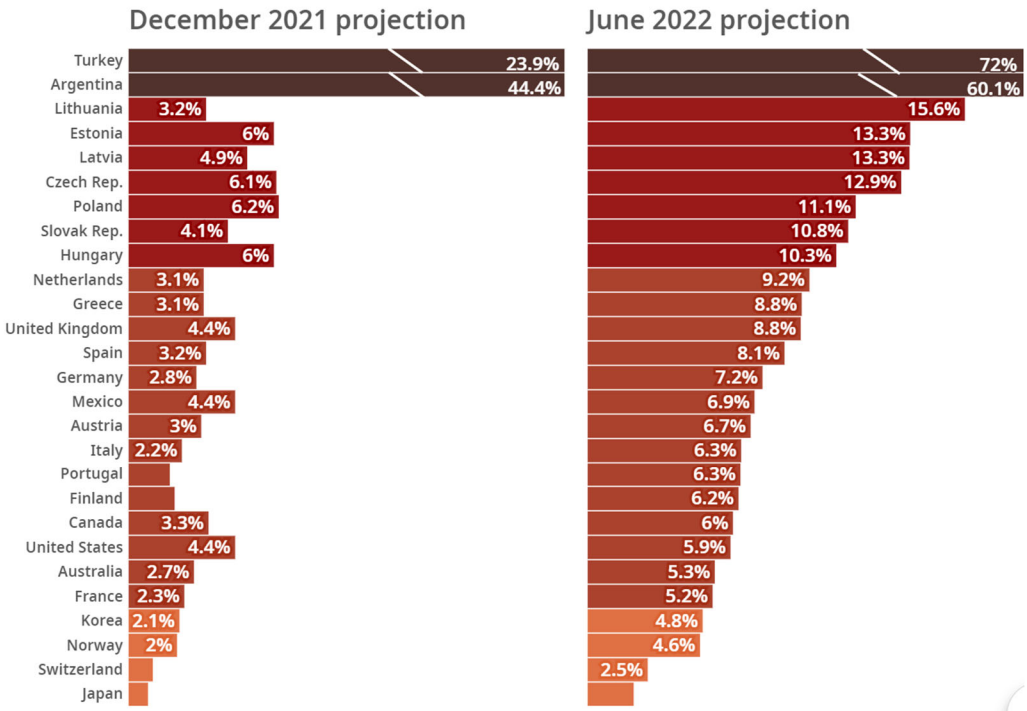


Source: OECD Economic Outlook (Edition 2022/1).

Annual inflation projections for 2022

Year-on-year, %

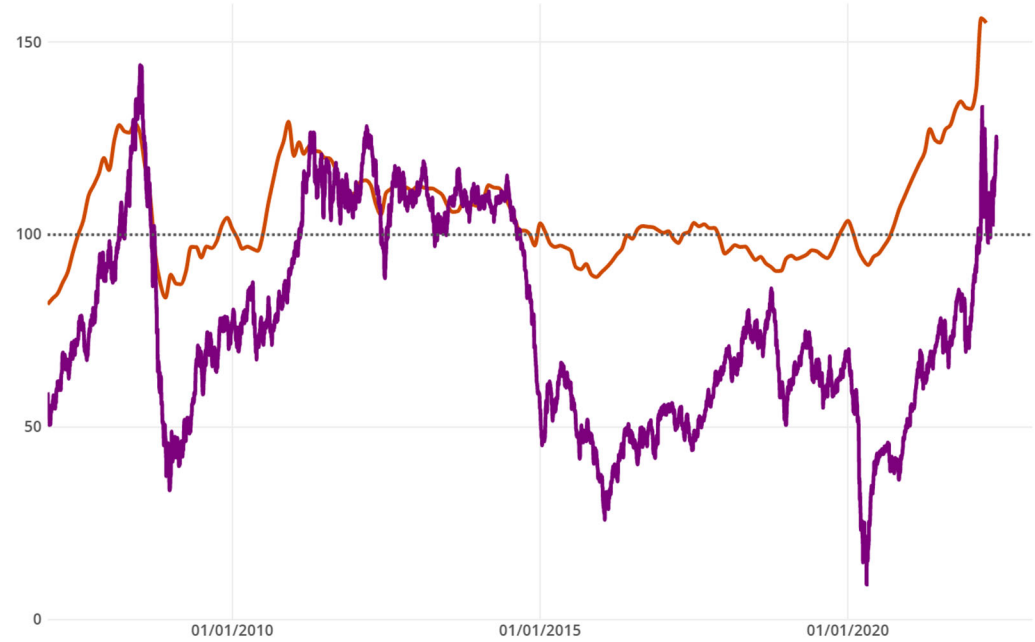
June 2022 projection: >20% 10-20% 5-10% <5%



Source: OECD Economic Outlook (Edition 2022/1).

Food and energy prices have risen sharply

Food price index (2014-2016=100) Brent oil (USD/barrel)

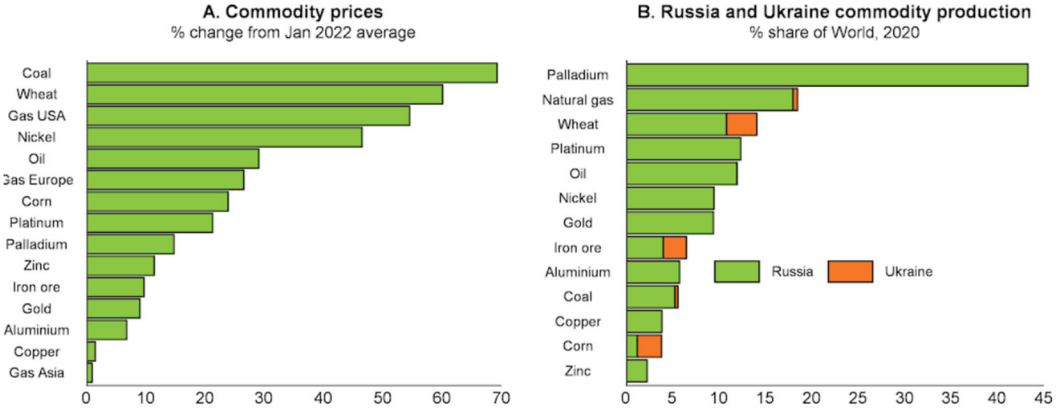


Source: OECD Economic Outlook (Edition 2022/1).

Table 1.1. **Global growth is projected to be subdued**

	Average 2013-2019	2020	2021	2022	2023	2021 Q4	2022 Q4	2023 Q4
				Per cent				
Real GDP growth[1]								
World[2]	3.3	-3.4	5.8	3.0	2.8	4.3	1.9	3.0
G20[2]	3.5	-3.0	6.2	2.9	2.8	4.3	1.9	2.9
OECD[2]	2.2	-4.6	5.5	2.7	1.6	4.8	1.5	1.6
United States	2.4	-3.4	5.7	2.5	1.2	5.5	1.2	0.7
Euro area	1.9	-6.5	5.3	2.6	1.6	4.6	1.2	1.8
Japan	0.8	-4.5	1.7	1.7	1.8	0.3	2.5	0.9
Non-OECD[2]	4.3	-2.3	6.1	3.3	3.8	3.8	2.3	4.2
China	6.8	2.2	8.1	4.4	4.9	3.9	4.9	4.5
India[3]	6.8	-6.6	8.7	6.9	6.2			
Brazil	-0.4	-4.2	5.0	0.6	1.2			
OECD unemployment rate[4]	6.5	7.1	6.2	5.2	5.3	5.5	5.3	5.3
Inflation[1]								
G20[2,5]	3.0	2.8	3.8	7.6	6.3	5.0	7.8	5.8
OECD[6,7]	1.7	1.5	3.7	8.5	6.0	5.2	8.9	5.2
United States[6]	1.4	1.2	3.9	5.9	3.5	5.5	5.1	2.8
Euro area[8]	0.9	0.3	2.6	7.0	4.6	4.6	6.8	3.9
Japan[9]	0.9	0.0	-0.2	1.9	1.9	0.5	2.4	1.6
OECD fiscal balance[10]	-3.2	-10.4	-7.4	-5.0	-3.8			
World real trade growth[1]	3.4	-8.1	10.0	4.9	3.9	8.5	2.6	4.1

Figure 1.1. **Commodity prices have risen sharply since the invasion of Ukraine**



Note: Data in Panel A are based on an average of daily prices between February 24 2022 and June 1 2022 for all commodities apart from wheat and corn, which are based on average prices over March-May 2022.

Source: Refinitiv; International Energy Agency; OECD Agricultural Outlook database; World Bank; and OECD calculations.

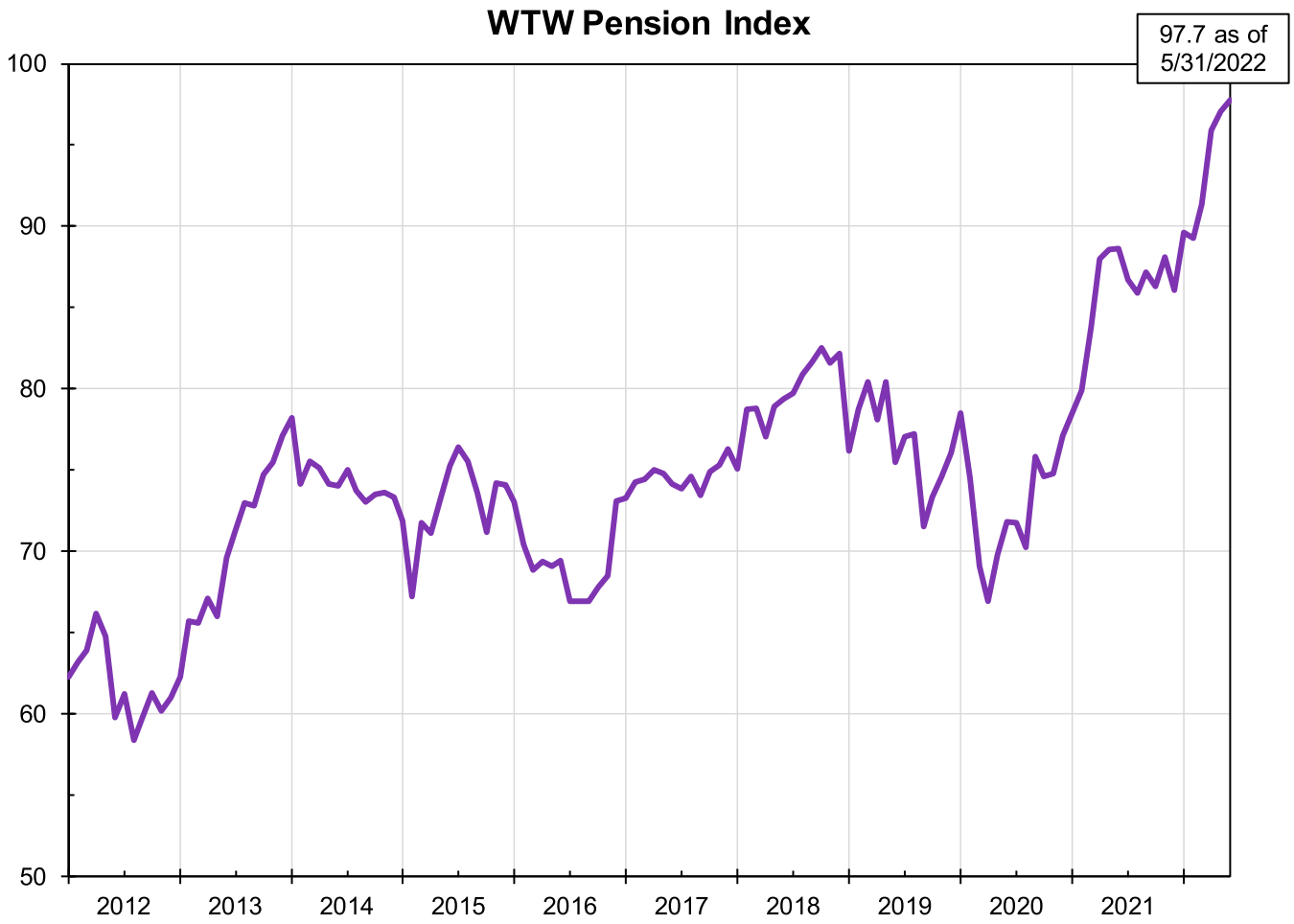
StatLink https://stat.link/u4ox26

Pension Finance Watch

See our complete library of monthly reports

Pension index increased in May

The WTW Pension Index continued to increase in May to the highest level it has seen since March 2002, despite continued volatility during the month. Modest investment returns combined with reduction in liabilities due to increases in discount rates contributed to raising the end-of-May index to 97.7, an increase of 0.7% for the month.



About this report

Pension Finance Watch is designed to support our clients in the ongoing financial management of their U.S. 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.

If you have questions or comments about this report, please contact
Christopher Kludy, FSA, MAAA, EA, CFA at chris.kludy@willistowerswatson.com

Investment returns

The equity portion of the benchmark portfolio returned 0.3% in May, with the international equity asset class incurring the largest increase. The fixed income investments of the tracked benchmark portfolio also had a modest return at 0.6%, with Long Corporate and U.S. Aggregate bond returns being partially offset by Long Treasury bond returns.

Asset Class Returns

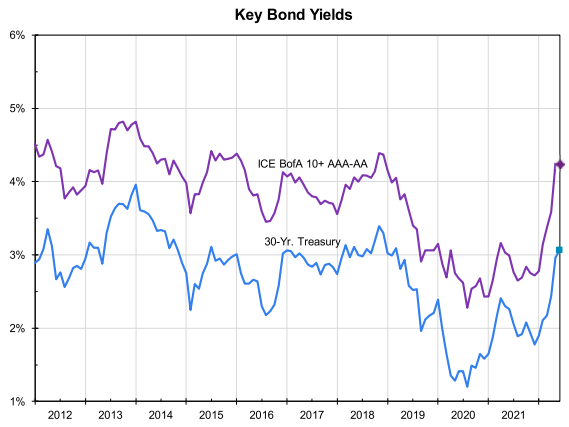
	May 2022	*YTD*	*Last 12 Months*
Stock Returns			
S&P 500 (Large Cap)	0.2%	-12.8%	-0.3%
Russell 2500 (U.S. Small/Mid-Cap)	0.3%	-13.6%	-11.6%
EAFE (International)	0.7%	-11.3%	-10.4%
Fixed Income Returns			
3-Month T-Bills	0.0%	0.1%	0.1%
Long Treasury Bonds	-1.9%	-20.1%	-14.3%
Bloomberg Barclays U.S. Aggregate	0.6%	-8.9%	-8.2%
Long Corporate Bonds (AAA/AA)	0.3%	-19.3%	-14.8%

Interest rates

Yields on long high-quality corporate bond indices remained relatively unchanged. Long Treasury Rates experience a modest increase (30-year Treasury bond yields increased by 11 basis points), while shorter term rates declined (10-year Treasury bond yields decreased by 4 basis points).

Bond Yields

	May 2022	*Dec 2021*	*May 2021*
U.S. Treasuries			
30-Year	3.07	1.90	2.26
10-Year	2.85	1.52	1.58
3-Month	1.16	0.06	0.01
Corporate Bonds			
ICE BofA 10+ AAA-AA	4.25	2.78	2.99
Moody's Aa	4.25	2.78	3.02
BB Aggregate	3.38	1.76	1.51



Effect on pension index

The WTW Pension Index tracks the performance of a hypothetical pension plan invested in a 60% equity/40% fixed income portfolio. This portfolio recorded a 0.4% return for the month. Several alternative portfolios are also monitored. Portfolios with 20% and 60% fixed income allocations produced 0.4% and 0.5% returns, respectively. A variation of the 60% fixed income portfolio that incorporates longer-duration fixed income investments generated a -0.3% monthly return.

Discount rates used by U.S. plan sponsors to measure pension obligations are typically measured with reference to yields on high quality corporate bonds. The index relies on WTW's proprietary RATE:Link model for this purpose.

Pension obligations move in the opposite direction of the interest rates used for their valuation. The liability implicit in the index decreased by 0.3% from the discount rate change and the accumulation of interest.

These factors contributed to an overall increase of 0.7% in the WTW Pension Index, which closes the month at 97.7.

Pension Index Results

	May 2022	*YTD*	*Last 12 Months*
Benchmark Portfolio Returns			
20% Fixed Income	0.4%	-11.6%	-4.5%
40% Fixed Income (benchmark)	0.4%	-10.7%	-5.1%
60% Fixed Income	0.5%	-9.7%	-5.7%
60% Fixed Income (long duration version)	-0.3%	-15.8%	-9.3%
Benchmark Plan Liability Results			
Discount Rate (at valuation date)*	4.59	3.03	3.25
Liability Growth Factor	-0.3%	-18.1%	-13.9%
Pension Index*	97.7	89.6	88.6
Percentage change	+0.7%	+9.1%	+10.3%

*Discount rates and pension index values in the three columns are as of 5/31/2022, 12/31/2021 and 5/31/2021, respectively.

Definition of terms

Asset Class Returns

- Total return incorporates the combined effect of price changes and interest/dividend income; this may differ from index results which are based only on price changes.
- The Russell 2500 Index tracks companies ranked 501 to 3000 ordered by market value of equity; these are considered small and mid-capitalization stocks.
- EAFE refers to the Morgan Stanley Capital International Europe, Australasia, Far East Index of equity securities; total return is reported in U.S. dollars, which includes the effect of currency changes.
- 3-Month T-Bill returns are based on the FTSE 3-Month Treasury Bill Index.
- Long Treasury Bond returns are based on the Bloomberg Barclays Long Treasury Bond Index.
- Prior to April 2022, Long Corporate Bond returns were based on the FTSE High Grade Credit Index (as described below). As the FTSE Index has been decommissioned at the end of March 2022, starting on April 2022, returns are based on the ICE BofA 10+ AAA-AA Index (as described below).

Bond Yields

- Treasury yields are constant maturity yields reported by the Federal Reserve.
- ICE BofA 10+ AAA-AA Index includes issues with 10+ years to maturity and AA or AAA ratings from the ICE Bank of America U.S. Corporate Master Index.
- FTSE High Grade Credit Index includes issues with 10+ years to maturity and a minimum rating of AA-/Aa3.
- Moody's Aa Corporate Bond Index is a component of Moody's Long Term Corporate Bond Indexes; Included bonds have maturities of 20+ years.
- Bloomberg Barclays U.S. Aggregate Bond Index covers the broad range of investment grade bonds, including government and corporate securities (minimum grade Baa) and mortgages.
- Bond yields are stated as yields to maturity, on a bond-equivalent basis (reflecting semi-annual coupons).

Benchmark Portfolio Returns

- The benchmark portfolio reflects a diversified asset allocation of 60% equity (40% large cap, 10% small/mid-cap, 10% international) and 40% fixed income (35% BB Aggregate bonds, 5% T-bills). This generally aligns with the average portfolio for the 300 large companies included in WTW's benchmarking database.
- Alternative portfolios with 20% and 60% fixed income allocations are constructed with similar asset class ratios within their equity and fixed income segments.
- The 60% fixed income-long duration portfolio includes a similarly constructed equity segment along with a fixed income segment consisting of 27.5% long corporate bonds, 27.5% long Treasury bonds and 5% T-bills.

Benchmark Discount Rate

- The discount rate is determined for our benchmark plan each month using a yield curve developed based on high-quality corporate bonds (10th-90th percentiles). This calculation uses WTW's RATE:Link methodology to develop an appropriate discount rate based on the benchmark plan's projected cash flows. Higher or lower discount rates might be appropriate for other plans.

Liability Growth Factor

- The benchmark plan is based on a traditional final-pay based formula and covers a relatively mature population. Roughly one-half of the plan's obligations are related to inactive participants. The liability growth factor measures the change in the plan's projected benefit obligation due to the accumulation of interest and changes in financial assumptions.*

WTW Pension Index

- The index is designed to capture the impact of capital market results, without influence from the costs of ongoing accruals or cash inflows/outflows related to contributions and benefit payments.

  The index reflects the PBO funded ratio (market value of assets/projected benefit obligation) for a benchmark pension plan. The asset value changes from month to month based on the investment performance of the 40% fixed income portfolio. Liability values are adjusted to reflect changes in financial assumptions.

* Discount rate and compensation increase assumptions are adjusted to reflect changes in market interest rates. The net sensitivity of the benchmark plan's benefit obligation to a percentage point change in interest rates is roughly 14%. These dynamics vary considerably among plans, depending on characteristics such as the benefit formula and on the demographic profile of the covered population.

https://www.wsj.com/articles/howard-schultz-says-starbucks-is-seeking-fresh-blood-in-ceo-search-11654488060?mod=hp_lista_pos1

- WSJ NEWS EXCLUSIVE

Howard Schultz Says Starbucks Is Seeking Fresh Blood in CEO Search

Coffee chain conducts external search for permanent chief; company's future 'requires a different type of leader,' Mr. Schultz says

Starbucks's cold and to-go drinks account for most of the chain's sales, a change from five years ago. A New York City store in April.PHOTO: GABBY JONES FOR THE WALL STREET JOURNAL

By *Heather Haddon*

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Updated June 6, 2022 9:21 am ET

SEATTLE—Starbucks Corp. SBUX 0.46%▲ is considering only external candidates for its next chief executive officer, as interim CEO Howard Schultz said the company needs to add new talent and skills to its senior leadership ranks.

Mr. Schultz—who said he isn't a candidate to hold the position permanently—said Starbucks has recently talked to several promising CEO prospects, and that the company aims to identify a new chief executive by the fall. He said he plans to leave the coffee giant's C-suite by the shareholder meeting in March.

"For the future of the company, we need a domain of experience and expertise in a number of disciplines that we don't have now," Mr. Schultz said during an interview at the company's headquarters. "It requires a different type of leader."

Mr. Schultz returned in April to succeed Kevin Johnson on an interim basis, his third stint running the company that he built from a local Seattle coffee-shop chain into a global giant. Mr. Schultz said Mr. Johnson was a good CEO for the company but that he hasn't reached out to him upon returning.

Starbucks trails only McDonald's as the largest restaurant chain by market capitalization. WSJ's Heather Haddon explains why mobile technology has become a business priority for Starbucks and garnered it a loyal customer base. Photo: Stanislav Kogiku/Zuma Press

In recent weeks, Mr. Schultz said, he has arrived at work many mornings by 7 a.m. Known for involving himself in all aspects of company decision-making, he wants Starbucks's corporate employees to return to the office. He regularly pops into meetings and greets employees by their first names, and they call him "Howard" in return. He has rejoined the company's board of directors, where he said he plans to remain after stepping back as CEO.

"I'm a candidate for a smooth, healthy transition," Mr. Schultz said, drinking a cup of aged Sumatra black coffee brewed in a French press.

Starbucks is a far different chain than it was in 2017, when Mr. Schultz previously stepped down as CEO. Some of Starbucks's current problems are self-induced, Mr. Schultz said, but others are a result of a rapid change in consumer behavior, sped up by the pandemic. The majority of Starbucks's sales now come from cold beverages bought to-go, not the hot coffee sipped at tables when the chain first started. That's requiring Starbucks to rethink its operations in ways no CEO could have fully anticipated, Mr. Schultz said.

Starbucks said the company has several viable CEO candidates under consideration.

Some investors and former executives have wondered about Mr. Schultz's ability to separate himself from the company after his latest return. Mr. Schultz said he has been encouraged by the quality and diversity of candidates interested in Starbucks's top job.

"My only interest is seeing that person succeed," Mr. Schultz said.

In his weeks back on the job, Mr. Schultz said he has asked some company veterans to leave to make room for fresh blood. Last month, Starbucks said its chief human-resources officer, executive vice president of public affairs and senior vice president of public policy would depart in May, according to a message viewed by The Wall Street Journal. Two of those executives had worked for the company for more than 15 years.

As Mr. Schultz expanded Starbucks to tens of thousands of locations across the world, he developed a reputation for weighing in on issues such as race and social unrest, and pushing the company and its employees to address them. Those positions have sometimes made Starbucks a target of criticism and controversy. After departing Starbucks in 2017, he considered a potential run for president.

In the past month, Mr. Schultz has urged lawmakers to do more to address gun violence after the school shooting in Uvalde, Texas, and extended company benefits to workers who travel for abortions or gender-affirming care. He said he still believes CEOs have a responsibility to speak out on national issues, though some investors have grown cautious about companies taking political stances.

"In the environment we are in now, I don't think a company or CEO can hide," he said.

Mr. Schultz said company executives need to be careful to be consistent, pointing to what he said was Walt Disney Co. CEO Bob Chapek's changing public stance on Florida's Parental Rights in Education bill. Chief executives shouldn't use public political statements as brand advertising, Mr. Schultz said.

A Disney spokesman declined to comment. The company has said it was re-evaluating its political giving and has apologized to employees for not taking a stronger stance on the bill sooner.

Some Starbucks U.S. workers have said they no longer feel as confident in the company, and have organized under the Starbucks Workers United union to bargain for better pay, benefits and treatment. Around 275 of Starbucks's 9,000 U.S. company stores have filed for union elections, according to the National Labor Relations Board. The federal agency had certified unions at 72 U.S. stores as of last Tuesday, and Starbucks Workers United has officially lost five locations.

Starbucks executives have appealed to workers to maintain a direct relationship with Starbucks, rather than unionizing, and the company is boosting wages this summer.

Starbucks has said that after the pandemic set in, the lack of contact between corporate and regional leaders and baristas hurt worker relations and the company's ability to address store problems promptly, fueling the current union drive. Mr. Schultz said he asked to attend a company board meeting a little more than two years ago, after he grew

concerned about what he had seen in Starbucks's stores and learned through informal conversations with Starbucks leaders.

Mr. Schultz has pledged to do more to help workers. He announced around $200 million in additional spending on stores and employees, and promised more resources would be coming. Still, around 100 additional cafes have filed for union representation since his first day back as chief executive, NLRB records show.

Mr. Schultz, who is now the company's fourth-largest shareholder, said he is optimistic about helping the company to move into a new phase of growth and development.

"I don't look back. My eyes are looking forward," Mr. Schultz said.

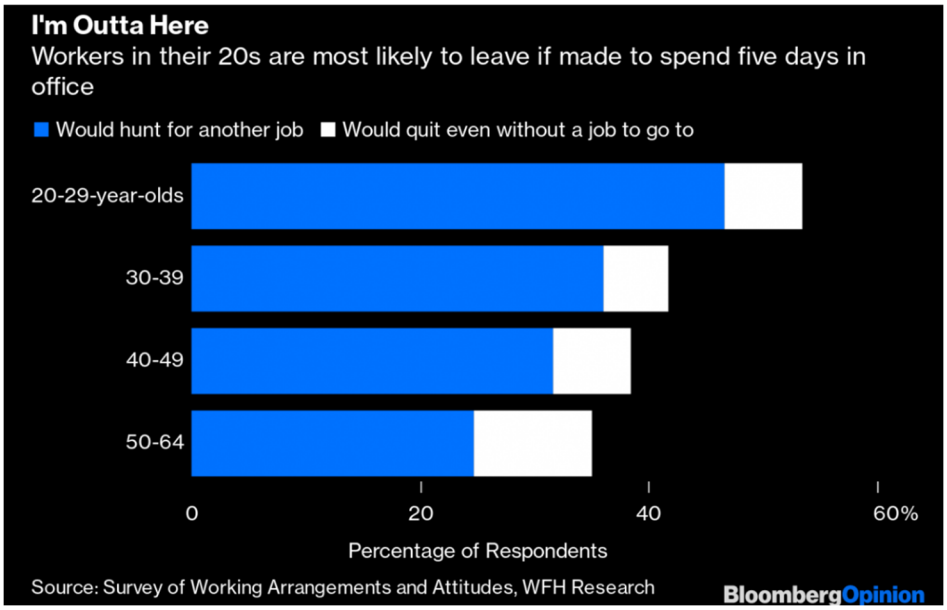
Write to Heather Haddon at heather.haddon@wsj.com

Corrections & Amplifications
Howard Schultz is CEO of Starbucks. An earlier version of this article misspelled his last name as Schutz in one instance. (Corrected on June 6)

Appeared in the June 6, 2022, print edition as 'Starbucks Seeks New Blood in CEO Hunt'.

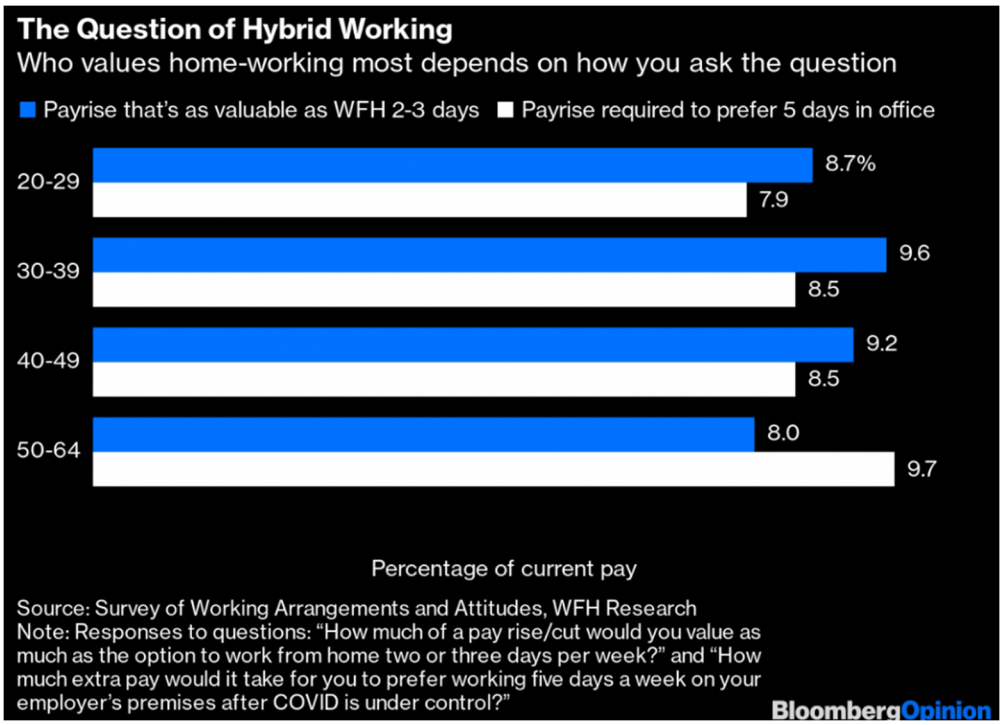
Gen Z, Millennials, Gen X Basically Agree on WFH: Chris Hughes
2022-06-10 04:00:15.859 GMT

By Chris Hughes
(Bloomberg Opinion) -- During the early days of the pandemic, the narrative was that remote-working was a grind for younger workers stuck in cramped apartments and bliss for their seniors living it up in airy home offices. The juniors were missing out on in-person learning, while their superiors were more focused on how to spend the savings from fewer train tickets.
In fact, attitudes to remote working are far less polarized.
The majority of traditional office workers appears to value the chance to work from home at least one day a week. There is some variation according to age, but it's not large or consistent enough to be significant.



A recent study by consultants McKinsey & Co. found that workers aged 18 to 34 were 59% more likely to leave than 55- to 64-year-olds if their employer didn't offer a hybrid work arrangement.

The larger Survey of Working Arrangements and Attitudes (a collaboration between Chicago, ITAM, MIT and Stanford universities) presents more nuanced findings. Workers in their 20s were most likely to start looking for a new job if their employer denied them hybrid working. But over-50s were most likely to quit there and then. (Of course, younger workers may have itchier feet generally, and older workers may have an eye on retirement.)



A lot depends on how you ask the question. Invite workers to think of the option of WFH for two or three days in terms of a pay rise, and those in their 30s will give it the highest value. Ask what pay rise would be needed to work in their employer's premises five days a week and it's the over-50s who want the biggest bump.

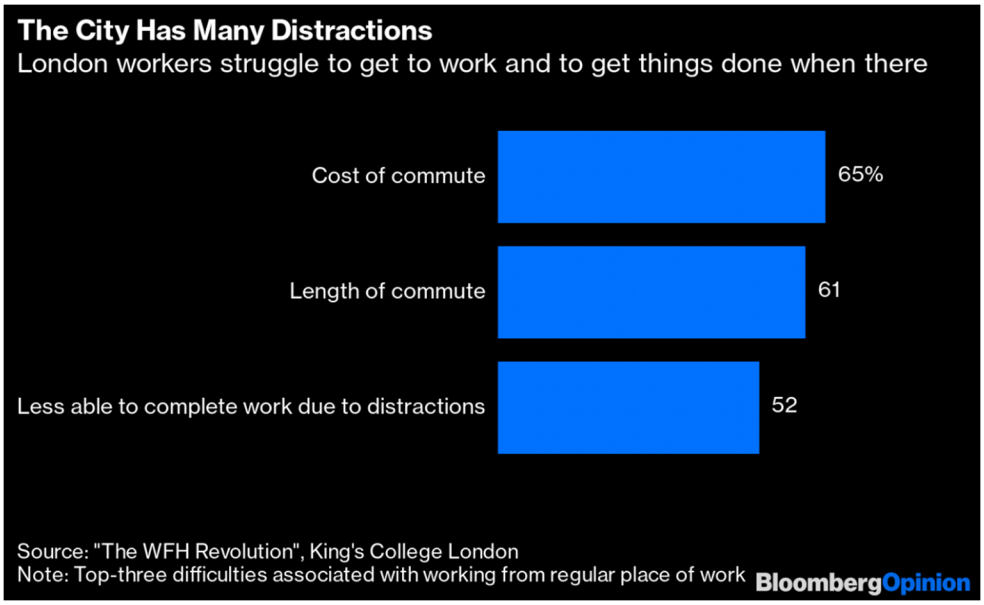
The important point is that support for a hybrid arrangement is high across the board. The appeal of reduced commuting time — often the most cited benefit of remote working — clearly goes beyond older workers. Younger workers may feel the hit of transport costs on their disposable income more acutely; the more central parts of public-transport networks are often the most crowded. Meanwhile, millennials have had a couple years to get used to co-working and negotiating communal space with housemates.

What does all this mean for employers? The tightness of the labor market and the need to attract up-and-coming talent will continue to force most large firms to offer the option of at least some remote working. The snag is that the long-term impact of this shift remains unknown.

Part of that early pandemic meme — the loss of on-the-job learning and in-person interaction — should remain a concern. Lower office occupancy means less knowledge transfer between generations and weaker internal relationships. These can be seen as sources of competitive advantage as much as the ability to attract talent. When things go wrong at companies, the explanation often comes down to culture.

Even if activity can be neatly divided into solo tasks best done remotely and collaborative tasks best done in the office, something inevitably gets lost in the divorce — learning by imitation and the ability to tap on a colleague's metaphorical open door, for example. These benefits don't disappear with

hybrid working, but they risk being diminished.
So expect employers to offer the hybrid option while encouraging use of the office. One thing that might help on this front is proposing more flexible working hours to dodge peak travel times and deal with non-work commitments. The second-biggest reason that WFH is attractive is the ability to manage domestic and social responsibilities, according to a survey of London workers by King's College London. Commuting costs may become a more explicit part of salary negotiations.



Companies should also respond to what people consider the downsides of office work — often, the prevalence of distractions. For example, Alphabet Inc.'s Google reportedly plans for future offices to give people more room. This reinforces the trend towards corporate tenants seeking higher-quality space in prime locations. Vacancy rates for top-grade offices were just 4% in central London against 8% overall at the end of 2021, according to property consultants Cushman & Wakefield. Developer British Land Co. recently pre-let a building in London's financial district four years ahead of its scheduled completion.
But upgrading the offices of the world's major cities for the post-pandemic era won't happen overnight. Unless attitudes radically change, or the balance of power between employers and employees shifts, the hybrid experiment is going to have plenty of time to show results.
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Hong Kong continues its reign as the most expensive location in the world

7 June 2022

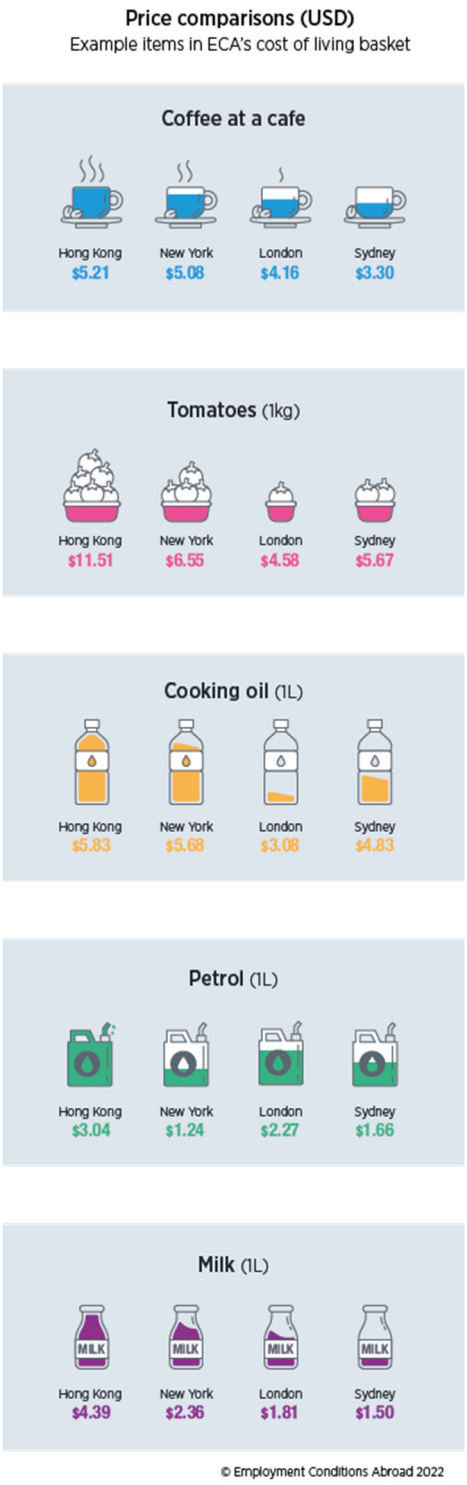
Cost of living, Data, Expatriate management, Inflation

- Strong currency ensures Hong Kong keeps its crown for another year
- High inflation pushes New York and London up the rankings to second and fourth respectively
- Geneva, Switzerland is third in the global rankings, while Tokyo falls to fifth despite higher than usual inflation

Hong Kong has maintained its position as the most expensive location in the world, bolstered by higher prices and a stronger currency over the past year. This was one of the findings of the latest cost of living research published by ECA International, the world's leading provider of knowledge, information and software for the management and assignment of employees around the world.

"Although Hong Kong has been impacted by rising global inflation less than other regional and global locations in the past year, it nonetheless remains the most expensive location in the world" said Lee Quane, Regional Director – Asia at ECA International. "Year on year price rises of 3%, as measured by our basket of goods and services, are higher than we typically see in Hong Kong, but are lower than rates in similar cities both within the region and globally. Rather, it has been the strength of the Hong Kong dollar, which is pegged to the US dollar, in the past year which has enabled it to maintain its position as the most expensive location worldwide as other currencies have weakened."

ECA International has been conducting research into cost of living for 50 years. It carries out two main surveys per year to help companies calculate cost of living allowances so that their employees' spending power is protected while on an international assignment. The surveys compare a basket of like-for-like consumer goods and services commonly purchased by assignees in over 490 locations worldwide. ECA's accommodation data is also factored in, comparing rental costs in areas typically inhabited by expatriate staff in over 410 locations worldwide.



Asia Highlights

Many locations in Asia have witnessed above-trend rates in inflation in the past 12 months. The location which has seen the fastest rate of price growth in the past year has been Colombo in Sri Lanka, causing it to rise 23 places in ECA's rankings to 149 globally.

"Shortages of supplies for some essential items prompted by lack of foreign currency have resulted in price increases of more than 15% at the time of the survey when compared to the previous year," said Quane. "Protests, which arose in response to the higher prices, have led

to the resignations of leading government figures, most notably the prime minister of the country."

Many mainland Chinese cities have continued to rise in the rankings, with four cities now included in the 15 most expensive cities globally while Shanghai is also now the third most expensive city in Asia after Hong Kong and Tokyo.

Quane said, "The majority of the mainland Chinese cities in our rankings have higher rates of inflation than we are used to seeing, but they are still typically lower than elsewhere in Asia. Therefore, the main reason for their rise in the rankings has been the continued strength of the Chinese yuan against other major currencies, due to China's relatively strong economic performance during the survey period which makes these cities more expensive relative to other locations."

A similar story was seen in Taiwan, with all surveyed cities rising in the rankings owing largely to the continued strength of the Taiwan dollar against other currencies, which reflected the buoyant economy.

Singapore's ranking remained unchanged in 2022 despite significant price rises in the past 12 months, with housing rental costs, utilities and petrol prices seeing particular growth. "The fact that Singapore only retained its ranking as the 13th most expensive location globally despite higher than average inflation of 5%, fuelled by rising costs for rents, utilities and petrol, is because the Singapore dollar has weakened against other regional currencies, such as the yuan, and the US dollar, mainly because of a sharp slowdown in manufacturing and exports during the latter part of the survey period," advised Quane.

Japanese locations have all dropped in the latest rankings as the yen weakened due to unexpectedly higher inflation, alongside negative interest rates. Tokyo has dropped three places to fifth in the global rankings, while other Japanese cities featured in the rankings have also dropped.

Quane stated, "Although prices have risen in Japan at rates which are high in comparison to recent norms for the country, Japanese cities are cheaper relative to many other locations worldwide. This is because the yen has weakened over the course of the past year as the US and other countries have raised interest rates to combat inflation while rates in Japan remain negative. The weaker yen makes goods relatively cheaper for visitors and expatriate workers paid in other currencies as their money will now go further."

Global Highlights

Most locations within the EU have seen drops in the rankings after an unsteady period for the euro, with Paris falling out of the global top 30 and cities such as Madrid, Brussels and Rome all falling too.

Quane said, "Nearly every major Eurozone city saw a drop in the rankings this year as the euro performed worse in the last 12 months than the US dollar and British pound. The euro's

weakness was mainly caused by market expectations of the ECB raising interest rates more slowly than its peers."

Moscow is down one place to 62nd in the rankings, while St Petersburg is unchanged at 147th.

"At the time of the survey the rouble had plunged in value as economic sanctions against Russia for its invasion of Ukraine shook confidence in the economy. The sanctions and weaker currency helped push up inflation which counteracted the exchange rate losses, leaving the country stable in the overall ranking," said Quane.

Top ten most expensive locations for overseas workers

Location	2022 global ranking	2021 global ranking
Hong Kong	1	1
New York	2	4
Geneva	3	3
London	4	5
Tokyo	5	2
Tel Aviv	6	7
Zurich	7	6
Shanghai	8	9
Guangzhou	9	10
Seoul	10	8

Top ten most expensive Asian locations for overseas workers

Location	2022 global ranking	2021 global ranking
Hong Kong	1	1
Tokyo	5	2
Shanghai	8	9
Guangzhou	9	10
Seoul	10	8
Shenzhen	12	12
Singapore	13	13
Beijing	14	16
Yokohama	17	11
Taipei	20	21

-ENDS-

Notes to Editors

About ECA's Cost of Living Ranking

ECA International's cost of living rankings combine ECA's cost of living and accommodation research to enable a comparison of costs faced by expatriates around the world in 207 cities in 120 countries and territories.

This comparison of cost of living is calculated on a base composed of various developed countries and is used to reflect an international lifestyle. Other indices available from ECA reflect specific city-to-city comparisons and different levels of shopping efficiency.

ECA's Cost of Living Research

ECA International's cost of living research is carried out in March and September using a basket of day-to-day goods and services commonly purchased by assignees. The data used above refers to the March 2022 data collection period with changes compared to the March 2021 period. ECA's cost of living rankings began in 2005.

Cost of living indices are used by ECA clients to calculate cost of living allowances for assignees. The research covers:

- Food: Groceries; dairy produce; meat and fish; fresh fruit and vegetables
- Basic: Household goods; recreational goods; general services; leisure services
- General: Clothing; electrical goods; motoring; meals out; alcohol and tobacco
- Utilities costs
- Public transport

ECA's Accommodation Research

This ranking uses data from ECA's 2022 accommodation reports. The reports have been published annually since 1996.

The reports provide comprehensive and reliable information for locations worldwide on the rental trends, types of accommodation and districts commonly sought by expatriates. To ensure impartiality and to maintain the accuracy of information, data from a number of sources is used to compile each accommodation report. ECA uses a global network of estate agents, relocation agents and extensive in-house research into worldwide property markets to establish and verify the housing data in the reports.

About ECA International

ECA International is a market leader in the provision of knowledge, information and technology that enables businesses to manage their international reward programmes.

Partnering with thousands of clients globally, we provide a fully-integrated suite of quality data, specialist software, consultancy and training. Our insights guide clients as they mobilise their most valuable resource: people.

We make the complex world of international mobility simple, providing clients with the expertise and support they need to make the right decisions - every time.

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ECA's blog provides updates and commentary on currency, inflation and expatriate cost of living. Follow the blog here: https://eca-international.com/insights/blog

For further information, please contact:

Remarks on East-West Relations at the Brandenburg Gate in West Berlin

June 12, 1987

Thank you very much. Chancellor Kohl, Governing Mayor Diepgen, ladies and gentlemen: Twenty four years ago, President John F. Kennedy visited Berlin, speaking to the people of this city and the world at the city hall. Well, since then two other presidents have come, each in his turn, to Berlin. And today I, myself, make my second visit to your city.

We come to Berlin, we American Presidents, because it's our duty to speak, in this place, of freedom. But I must confess, we're drawn here by other things as well: by the feeling of history in this city, more than 500 years older than our own nation; by the beauty of the Grunewald and the Tiergarten; most of all, by your courage and determination. Perhaps the composer, Paul Lincke, understood something about American Presidents. You see, like so many Presidents before me, I come here today because wherever I go, whatever I do: "Ich hab noch einen koffer in Berlin." [I still have a suitcase in Berlin.]

Our gathering today is being broadcast throughout Western Europe and North America. I understand that it is being seen and heard as well in the East. To those listening throughout Eastern Europe, I extend my warmest greetings and the good will of the American people. To those listening in East Berlin, a special word: Although I cannot be with you, I address my remarks to you just as surely as to those standing here before me. For I join you, as I join your fellow countrymen in the West, in this firm, this unalterable belief: Es gibt nur ein Berlin. [There is only one Berlin.]

Behind me stands a wall that encircles the free sectors of this city, part of a vast system of barriers that divides the entire continent of Europe. From the Baltic, south, those barriers cut across Germany in a gash of barbed wire, concrete, dog runs, and guardtowers. Farther south, there may be no visible, no obvious wall. But there remain armed guards and checkpoints all the same--still a restriction on the right to travel, still an instrument to impose upon ordinary men and women the will of a totalitarian state. Yet it is here in Berlin where the wall emerges most clearly; here, cutting across your city, where the news photo and the television screen have imprinted this brutal division of a continent upon the mind of the world. Standing before the Brandenburg Gate, every man is a German, separated from his fellow men. Every man is a Berliner, forced to look upon a scar.

President von Weizsacker has said: "The German question is open as long as the Brandenburg Gate is closed." Today I say: As long as this gate is closed, as long as this scar of a wall is permitted to stand, it is not the German question alone that remains open, but the question of freedom for all mankind. Yet I do not come here to lament. For I find in Berlin a message of hope, even in the shadow of this wall, a message of (Pg. 635) triumph.

In this season of spring in 1945, the people of Berlin emerged from their air raid shelters to find devastation. Thousands of miles away, the people of the United States reached out to help. And in 1947 Secretary of State--as you've been told-George Marshall announced the creation of what would become known as the Marshall plan. Speaking precisely 40 years ago this month, he said: "Our policy is directed not against any country or doctrine, but against hunger, poverty, desperation, and chaos."

In the Reichstag a few moments ago, I saw a display commemorating this 40th anniversary of the Marshall plan. I was struck by the sign on a burnt-out, gutted structure that was being rebuilt. I understand that Berliners of my own generation can remember seeing signs like it dotted throughout the Western sectors of the city. The sign read simply: "The Marshall plan is helping here to strengthen the free world." A strong, free world in the West, that dream became real. Japan rose from ruin to become an economic giant. Italy, France, Belgium--virtually every nation in Western Europe saw political and economic rebirth; the European Community was founded.

In West Germany and here in Berlin, there took place an economic miracle, the Wirtschaftswunder. Adenauer, Erhard, Reuter, and other leaders understood the practical importance of liberty--that just as truth can flourish only when the journalist is given freedom of speech, so prosperity can come about only when the farmer and businessman enjoy economic freedom. The German leaders reduced tariffs, expanded free trade, lowered taxes. From 1950 to 1960 alone, the standard of living in West Germany and Berlin doubled.

Where four decades ago there was rubble, today in West Berlin there is the greatest industrial output of any city in Germany-busy office blocks, fine homes and apartments, proud avenues, and the spreading lawns of park land. Where a city's culture seemed to have been destroyed, today there are two great universities, orchestras and an opera, countless theaters, and museums. Where there was want, today there's abundance--food, clothing, automobiles-the wonderful goods of the Ku'damm. From devastation, from utter ruin, you Berliners have, in freedom, rebuilt a city that once again ranks as one of the greatest on Earth. The Soviets may have had other plans. But, my friends, there were a few things the Soviets didn't count on Berliner herz, Berliner humor, ja, und Berliner schnauze. [Berliner heart, Berliner humor, yes, and a Berliner schnauze.] [Laughter]

In the 1950's, Khrushchev predicted: "We will bury you." But in the West today, we see a free world that has achieved a level of prosperity and well-being unprecedented in all human history. In the Communist world, we see failure, technological backwardness, declining standards of health, even want of the most basic kind-too little food. Even today, the Soviet Union still cannot feed itself. After these four decades, then, there stands before the entire world one great and inescapable conclusion: Freedom leads to prosperity. Freedom replaces the ancient hatreds among the nations with comity and peace. Freedom is the victor.

And now the Soviets themselves may, in a limited way, be coming to understand the importance of freedom. We hear much from Moscow about a new policy of reform and openness. Some political prisoners have been released. Certain foreign news broadcasts are no longer being jammed. Some economic enterprises have been permitted to operate with greater freedom from state control. Are these the beginnings of profound changes in the Soviet state? Or are they token

gestures, intended to raise false hopes in the West, or to strengthen the Soviet system without changing it? We welcome change and openness; for we believe that freedom and security go together, that the advance of human liberty can only strengthen the cause of world peace.

There is one sign the Soviets can make that would be unmistakable, that would advance dramatically the cause of freedom and peace. General Secretary Gorbachev, if you seek peace, if you seek prosperity for the Soviet Union and Eastern Europe, if you seek liberalization: Come here to this gate! Mr. Gorbachev, open this gate! Mr. Gorbachev, tear down this wall!

I understand the fear of war and the pain (Pg. 636) of division that afflict this continent--and I pledge to you my country's efforts to help overcome these burdens. To be sure, we in the West must resist Soviet expansion. So we must maintain defenses of unassailable strength. Yet we seek peace; so we must strive to reduce arms on both sides. Beginning 10 years ago, the Soviets challenged the Western alliance with a grave new threat, hundreds of new and more deadly SS-20 nuclear missiles, capable of-striking every capital in Europe. The Western alliance responded by committing itself to a counterdeployment unless the Soviets agreed to negotiate a better solution; namely, the elimination of such weapons on both sides. For many months, the Soviets refused to bargain in earnestness. As the alliance, in turn, prepared to go forward with its counterdeployment, there were difficult days--days of protests like those during my 1982 visit to this city--and the Soviets later walked away from the table.

But through it all, the alliance held firm. And I invite those who protested then--I invite those who protest today--to mark this fact: Because we remained strong, the Soviets came back to the table. And because we remained strong, today we have within reach the possibility, not merely of limiting the growth of arms, but of eliminating, for the first time, an entire class of nuclear weapons from the face of the Earth. As I speak, NATO ministers are meeting in Iceland to review the progress of our proposals for eliminating these weapons. At the talks in Geneva, we have also proposed deep cuts in strategic offensive weapons. And the Western allies have likewise made far-reaching proposals to reduce the danger of conventional war and to place a total ban on chemical weapons.

While we pursue these arms reductions, I pledge to you that we will maintain the capacity to deter Soviet aggression at any level at which it might occur. And in cooperation with many of our allies, the United States is pursuing the Strategic Defense Initiative-research to base deterrence not on the threat of offensive retaliation, but on defenses that truly defend; on systems, in short, that will not target populations, but shield them. By these means we seek to increase the safety of Europe and all the world. But we must remember a crucial fact: East and West do not mistrust each other because we are armed; we are armed because we mistrust each other. And our differences are not about weapons but about liberty. When President Kennedy spoke at the City Hall those 24 years ago, freedom was encircled, Berlin was under siege. And today, despite all the pressures upon this city, Berlin stands secure in its liberty. And freedom itself is transforming the globe.

In the Philippines, in South and Central America, democracy has been given a rebirth. Throughout the Pacific, free markets are working miracle after miracle of economic growth. In

the industrialized nations, a technological revolution is taking place--a revolution marked by rapid, dramatic advances in computers and telecommunications.

In Europe, only one nation and those it controls refuse to join the community of freedom. Yet in this age of redoubled economic growth, of information and innovation, the Soviet Union faces a choice: It must make fundamental changes, or it will become obsolete. Today thus represents a moment of hope. We in the West stand ready to cooperate with the East to promote true openness, to break down barriers that separate people, to create a safer, freer world.

And surely there is no better place than Berlin, the meeting place of East and West, to make a start. Free people of Berlin: Today, as in the past, the United States stands for the strict observance and full implementation of all parts of the Four Power Agreement of 1971. Let us use this occasion, the 750th anniversary of this city, to usher in a new era, to seek a still fuller, richer life for the Berlin of the future. Together, let us maintain and develop the ties between the Federal Republic and the Western sectors of Berlin, which is permitted by the 1971 agreement.

And I invite Mr. Gorbachev: Let us work to bring the Eastern and Western parts of the city closer together, so that all the inhabitants of all Berlin can enjoy the benefits that come with life in one of the great cities of the world. To open Berlin still further to (Pg. 637) all Europe, East and West, let us expand the vital air access to this city, finding ways of making commercial air service to Berlin more convenient, more comfortable, and more economical. We look to the day when West Berlin can become one of the chief aviation hubs in all central Europe.

With our French and British partners, the United States is prepared to help bring international meetings to Berlin. It would be only fitting for Berlin to serve as the site of United Nations meetings, or world conferences on human rights and arms control or other issues that call for international cooperation. There is no better way to establish hope for the future than to enlighten young minds, and we would be honored to sponsor summer youth exchanges, cultural events, and other programs for young Berliners from the East. Our French and British friends, I'm certain, will do the same. And it's my hope that an authority can be found in East Berlin to sponsor visits from young people of the Western sectors.

One final proposal, one close to my heart: Sport represents a source of enjoyment and ennoblement, and you many have noted that the Republic of Korea--South Korea-has offered to permit certain events of the 1988 Olympics to take place in the North. International sports competitions of all kinds could take place in both parts of this city. And what better way to demonstrate to the world the openness of this city than to offer in some future year to hold the Olympic games here in Berlin, East and West?

In these four decades, as I have said, you Berliners have built a great city. You've done so in spite of threats--the Soviet attempts to impose the East-mark, the blockade. Today the city thrives in spite of the challenges implicit in the very presence of this wall. What keeps you here? Certainly there's a great deal to be said for your fortitude, for your defiant courage. But I believe there's something deeper, something that involves Berlin's whole look and feel and way of life--not mere sentiment. No one could live long in Berlin without being completely disabused of illusions. Something instead, that has seen the difficulties of life in Berlin but chose to accept

them, that continues to build this good and proud city in contrast to a surrounding totalitarian presence that refuses to release human energies or aspirations. Something that speaks with a powerful voice of affirmation, that says yes to this city, yes to the future, yes to freedom. In a word, I would submit that what keeps you in Berlin is love--love both profound and abiding.

Perhaps this gets to the root of the matter, to the most fundamental distinction of all between East and West. The totalitarian world produces backwardness because it does such violence to the spirit, thwarting the human impulse to create, to enjoy, to worship. The totalitarian world finds even symbols of love and of worship an affront. Years ago, before the East Germans began rebuilding their churches, they erected a secular structure: the television tower at Alexander Platz. Virtually ever since, the authorities have been working to correct what they view as the tower's one major flaw, treating the glass sphere at the top with paints and chemicals of every kind. Yet even today when the Sun strikes that sphere--that sphere that towers over all Berlin--the light makes the sign of the cross. There in Berlin, like the city itself, symbols of love, symbols of worship, cannot be suppressed.

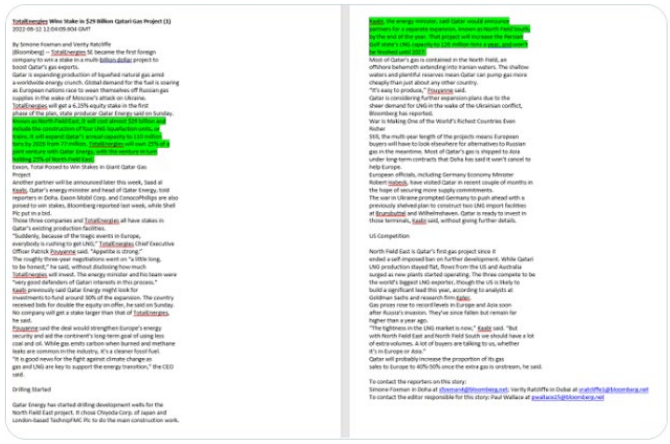
As I looked out a moment ago from the Reichstag, that embodiment of German unity, I noticed words crudely spray-painted upon the wall, perhaps by a young Berliner, "This wall will fall. Beliefs become reality." Yes, across Europe, this wall will fall. For it cannot withstand faith; it cannot withstand truth. The wall cannot withstand freedom.

And I would like, before I close, to say one word. I have read, and I have been questioned since I've been here about certain demonstrations against my coming. And I would like to say just one thing, and to those who demonstrate so. I wonder if they have ever asked themselves that if they should have the kind of government they apparently seek, no one would ever be able to do what they're doing again.

Thank you and God bless you all.

Dan Tsubouchi @Energy_Tidbits · 2h

Qatar names @TotalEnergies as 1st partner. Reminder Qatar's #LNG expansion is 2 phases. Phase 1 North Field East, adds 4.4 bcfd BY 2026. Phase 2 North Field South adds 2.1 bcf operational IN 2027. Current 10.1 reaches 16.6 bcfd. Thx @SimoneFoxman @V_Ratcliffe. #NatGas #OOTT



TotalEnergies Wins Stake in $29 Billion Qatari Gas Project (1)
2022-06-12 12:04:05 604 GMT

By Simone Foxman and Verity Ratcliffe
(Bloomberg) -- TotalEnergies SE became the first foreign company to win a stake in a multi-billion dollar project to boost Qatar's gas exports.
Qatar is expanding production of liquefied natural gas amid a worldwide energy crunch. Global demand for the fuel is soaring as European nations race to wean themselves off Russian gas supplies in the wake of Moscow's attack on Ukraine.
TotalEnergies will get a 6.25% equity stake in the first phase of the plan, state producer Qatar Energy said on Sunday.
Known as North Field East, it will cost almost $29 billion and include the construction of four LNG liquefaction units, or trains. It will expand Qatar's annual capacity to 110 million tons by 2026 from 77 million. TotalEnergies will own 25% of a joint venture with Qatar Energy, with the venture in turn holding 25% of North Field East.
Exxon, Total Poised to Win Stakes in Giant Qatar Gas Project
Another partner will be announced later this week, Saad al Kaabi, Qatar's energy minister and head of Qatar Energy, told reporters in Doha. Exxon Mobil Corp. and ConocoPhillips are also poised to win stakes, Bloomberg reported last week, while Shell Plc put in a bid.
Those three companies and TotalEnergies all have stakes in Qatar's existing production facilities.
"Suddenly, because of the tragic events in Europe, everybody is rushing to get LNG," TotalEnergies Chief Executive Officer Patrick Pouyanne said. "Appetite is strong."
The roughly three-year negotiations went on "a little long, to be honest," he said, without disclosing how much TotalEnergies will invest. The energy minister and his team were "very good defenders of Qatari interests in this process."
Kaabi previously said Qatar Energy might look for investments to fund around 30% of the expansion. The country received bids for double the equity on offer, he said on Sunday.
No company will get a stake larger than that of TotalEnergies, he said.
Pouyanne said the deal would strengthen Europe's energy security and aid the continent's long-term goal of using less coal and oil. While gas emits carbon when burned and methane leaks are common in the industry, it's a cleaner fossil fuel.
"It is good news for the fight against climate change as gas and LNG are key to support the energy transition," the CEO said.

Drilling Started

Qatar Energy has started drilling development wells for the North Field East project. A chose Chiyoda Corp. of Japan and London-based TechnipFMC Plc to do the main construction work.

Kaabi, the energy minister, said Qatar would announce partners for a separate expansion, known as North Field South, by the end of the year. That project will increase the Persian Gulf state's LNG capacity to 126 million tons a year, and would be finished years later.
Most of Qatar's gas is contained in the North Field, an offshore behemoth extending into Iranian waters. The shallow wells and plentiful reserves mean Qatar can pump gas more cheaply than just about any other country.
"It's easy to produce," Pouyanne said.
Qatar is considering further expansion plans due to the sheer demand for LNG in the wake of the Ukrainian conflict, Bloomberg has reported.
War is Making One of the World's Richest Countries Even Richer.
Still, the multi-year length of the projects means European buyers will have to look elsewhere for alternatives to Russian gas in the meantime. Most of Qatar's gas is shipped to Asia under long-term contracts that Doha has said it won't cancel to help Europe.
European officials, including Germany Economy Minister Robert Habeck, have visited Qatar in recent couple of months in the hope of securing more supply commitments.
The war in Ukraine prompted Germany to push ahead with a previously shelved plan to construct two LNG import facilities at Brunsbuttel and Wilhelmshaven. Qatar is ready to invest in those terminals, Kaabi said, without giving further details.

US Competition

North Field East is Qatar's first gas project since it ended a self-imposed ban on further development. While Qatari LNG production stayed flat, flows from the US and Australia surged as new plants started operating. The three compete to be the world's biggest LNG exporter, though the US is likely to build a significant lead this year, according to analysts at Goldman Sachs and research firm Kpler.
Gas prices rose to record levels in Europe and Asia soon after Russia's invasion. They've since fallen but remain far higher than a year ago.
"The tightness in the LNG market is now," Kaabi said. "But with North Field East and North Field South we should have a lot of extra volumes. A lot of buyers are talking to us, whether it's in Europe or Asia."
Qatar will probably increase the proportion of its gas sales to Europe to 40%-50% once the extra gas is onstream, he said.

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Dan Tsubouchi @Energy_Tidbits · 3h

Pakistan foreign exchange reserves <45 days imports, have requested deferred payment plan from Qatar for #LNG. Can't help think of more than markets when see poorer countries are getting hammered by the two essentials - food and energy prices and access. Thx @gibranp #OOTT

> **Reuters** @Reuters · 21h
>
> EXCLUSIVE Pakistan finance minister to seek deferred payments for Qatari LNG reut.rs/3QeWSyA

Dan Tsubouchi @Energy_Tidbits · 16h

Beijing Covid watch back on. "The sporadic outbreak that started at a bar in Beijing is at a rapidly spreading stage and the transmission risk remains high, said a Beijing health official on Sat" reports Global Times. #Oil #OOTT

https://www.globaltimes.cn/page/202206/1267831.shtml

Bar-related outbreak makes 115 people infected, 6,158 quarantined in Beijing

By Global Times Published: Jun 11, 2022 03:58 PM

The sporadic outbreak that started at a bar in Beijing is at a rapidly spreading stage and the transmission risk remains high, said a Beijing health official on Saturday as infections related to the outbreak amounted to 115 as of 3 pm on Saturday.

More cases are expected to be discovered among visitors to the bar and their close contacts, deputy director of Beijing disease control and prevention center Liu Xiaofeng said at a press conference on Saturday.

Beijing reported 46 new cases on Saturday as of 3 pm, which were all discovered among people who had already been placed under centralized quarantine due to the outbreak, according to Beijing officials.

Among the cases, 107 are visitors to the bar named Heaven Supermarket located in Sanlitun in Chaoyang district, including three people who work at the Universal Beijing Resort. Two are employees of the bar and the other six are those who contacted visitors to the bar, according to authorities.

In total, 6,158 close contacts of the confirmed infection cases and another 901 secondary close contacts had been identified, Yang Beibei, deputy director of the Chaoyang district, said at the Saturday press conference.

One of the cases reportedly has not received nucleic acid test for 14 days. The case visited the bar on June 6 despite the requirement of Beijing authority that people have to show negative nucleic acid test results taken within the previous 72 hours before entering any public place, media reported.

The case got a fever on June 8 evening. Despite the fever, the case visited the bar again on early June 9 and received a positive result after a nucleic acid test on the same day.

Beijing authorities stressed at the Saturday press conference that major industries like restaurants and entertainment venues have must accept responsibility to ask visitors to scan health codes, monitor employee's health conditions strictly and disinfect venues.

So far, 54 employees of the bar and three of their roommates have been put under centralized quarantine, media reported Saturday.

The Global Times reporter learned that some districts in Chaoyang have been locked down for 10 days starting Saturday for being found related to the outbreak. Some districts kicked off mass nucleic acid testing in the following three consecutive days.

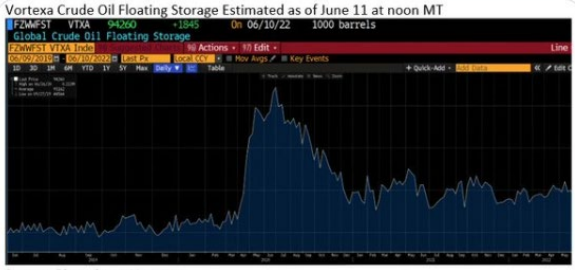
The sporadic COVID-19 cases found in Beijing and Shanghai and the tightening of regional measures have cast a shadow on the gradual reopening of China's two largest cities. But observers said the resumption of normal life and work in the two cities and across the country will not be impeded as China has updated its regular epidemic policy to better cope with the stealth Omicron based on experience from the last two months.

Global Times

Dan Tsubouchi @Energy_Tidbits · 20h

#Vortexa crude #Oil floating storage at 06/10 est 94.26 mmb, +1.84 mmb WoW vs revised up 92.42 mmb as of 06/03. Last 2 wks in low 90s, but prior 2 mths mostly in 100-105 mmb range. Thx @Vortexa @TheTerminal #OOTT

Vortexa Crude Oil Floating Storage Estimated as of June 11 at noon MT



Source: Bloomberg, Vortexa

Est as of June 11, noon MT

Date	Last Px
Fr 06/10/2022	94260
Fr 06/03/2022	92415
Fr 05/27/2022	99911
Fr 05/20/2022	98358
Fr 05/13/2022	110.132k
Fr 05/06/2022	97831
Fr 04/29/2022	102.054k
Fr 04/22/2022	102.07k
Fr 04/15/2022	106.081k
Fr 04/08/2022	99352
Fr 04/01/2022	92359

Est as of June 4, noon MT

Date	Last Px
Fr 06/03/2022	87719
Fr 05/27/2022	100.524k
Fr 05/20/2022	99092
Fr 05/13/2022	106.368k
Fr 05/06/2022	96040
Fr 04/29/2022	100.888k
Fr 04/22/2022	101.224k
Fr 04/15/2022	106.867k
Fr 04/08/2022	101.242k
Fr 04/01/2022	91669
Fr 03/25/2022	90456

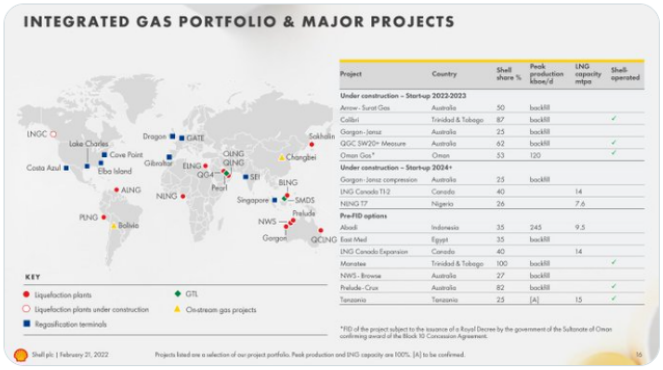
Est as of May 29, 6am MT

Date	Last Px
Fr 05/27/2022	98704
Fr 05/20/2022	99945
Fr 05/13/2022	107.943k
Fr 05/06/2022	96610
Fr 04/29/2022	101.589k
Fr 04/22/2022	102.899k
Fr 04/15/2022	106.256k
Fr 04/08/2022	102.156k
Fr 04/01/2022	91461
Fr 03/25/2022	91549
Fr 03/18/2022	95244

Source: Bloomberg, Vortexa

Dan Tsubouchi @Energy_Tidbits · Jun 11

Hmm! Is @Shell #LNGCanada Phase 2 FID coming? 05/30 FID Crux backfill #NatGas supply for #PreludeFLNG . 05/12 #Inpex says FID Abadi LNG delayed till 2024/25. 06/11, potential FID Tanzania LNG in 2025. Only new LNG capacity left on its pre-FID is LNG Canada 1.8 bcfd Phase 2. #OOTT



> **Dan Tsubouchi** @Energy_Tidbits · Jun 11
>
> 
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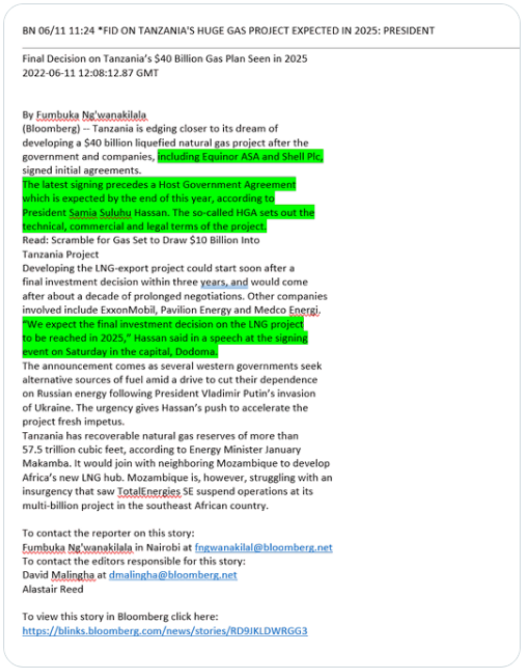
> "We expect the final investment decision on the #LNG project to be reached in 2025" says Tanzania President at HGA sign w/ @Equinor & @Shell on its ~2 bcfd project. #NatGas #LNG looks strong thru 2030. Thx @business Fumbuka Ng'wanakilala. #OOTT

Dan Tsubouchi @Energy_Tidbits · Jun 11

"We expect the final investment decision on the #LNG project to be reached in 2025" says Tanzania President at HGA sign w/ @Equinor & @Shell on its ~2 bcfd project. #NatGas #LNG looks strong thru 2030. Thx @business Fumbuka Ng'wanakilala. #OOTT



BN 06/11 11:24 *FID ON TANZANIA'S HUGE GAS PROJECT EXPECTED IN 2025: PRESIDENT

Final Decision on Tanzania's $40 Billion Gas Plan Seen in 2025
2022-06-11 12:08:12.87 GMT

By Fumbuka Ng'wanakilala
(Bloomberg) -- Tanzania is edging closer to its dream of developing a $40 billion liquefied natural gas project after the government and companies, including Equinor ASA and Shell Plc, signed initial agreements.
The latest signing precedes a Host Government Agreement which is expected by the end of this year, according to President Samia Suluhu Hassan. The so-called HGA sets out the technical, commercial and legal terms of the project.
Read: Scramble for Gas Set to Draw $10 Billion Into Tanzania Project
Developing the LNG-export project could start soon after a final investment decision within three years, and would come after about a decade of prolonged negotiations. Other companies involved include ExxonMobil, Pavilion Energy and Medco Energi.
"We expect the final investment decision on the LNG project to be reached in 2025," Hassan said in a speech at the signing event on Saturday in the capital, Dodoma.
The announcement comes as several western governments seek alternative sources of fuel amid a drive to cut their dependence on Russian energy following President Vladimir Putin's invasion of Ukraine. The urgency gives Hassan's push to accelerate the project fresh impetus.
Tanzania has recoverable natural gas reserves of more than 57.5 trillion cubic feet, according to Energy Minister January Makamba. It would join with neighboring Mozambique to develop Africa's new LNG hub. Mozambique is, however, struggling with an insurgency that saw TotalEnergies SE suspend operations at its multi-billion project in the southeast African country.

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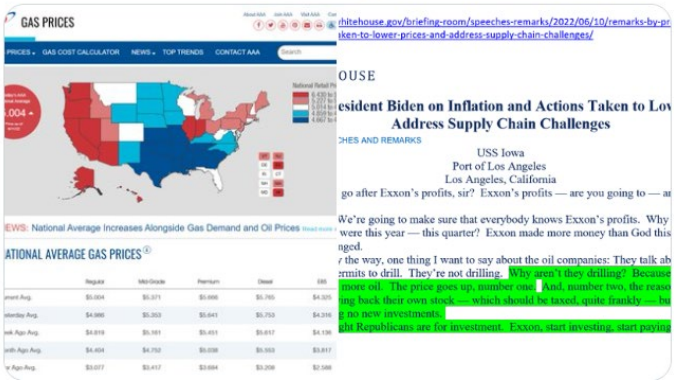
To view this story in Bloomberg click here:
https://blinks.bloomberg.com/news/stories/RD9IKLDWRGG3

Dan Tsubouchi @Energy_Tidbits · Jun 11

New addition to this day in history websites. @AAAnews report US national average regular unleaded #Gasoline prices hit $5.00, premium $5.67 and #Diesel $5.77. All time highs. Should hear more of #Biden's new tag line "Exxon, start paying your taxes" #OOTT gasprices.aaa.com



Dan Tsubouchi @Energy_Tidbits · Jun 10

"#Exxon, start investing, start paying your taxes" and "the reason they're [$XOM] not drilling is they're buying back their own stock — which should be taxed, quite frankly" says #Biden. #Oil #NatGas sector to be THE prominently featured villain in Dems mid-terms messaging. #OOTT

Excerpt https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/06/10/remarks-by-president-biden-on-inflation-and-actions-taken-to-lower-prices-and-address-supply-chain-challenges/

THE WHITE HOUSE

Remarks by President Biden on Inflation and Actions Taken to Lower Prices and Address Supply Chain Challenges

JUNE 10, 2022 SPEECHES AND REMARKS

USS Iowa
Port of Los Angeles
Los Angeles, California

Q Are you going to go after Exxon's profits, sir? Exxon's profits — are you going to — are you going to go after them?

THE PRESIDENT: We're going to make sure that everybody knows Exxon's profits. Why don't you tell them what Exxon's profits were this year — this quarter? Exxon made more money than God this year. And, by the way, nothing has changed.

And they're not — by the way, one thing I want to say about the oil companies: They talk about how we have — they have 9,000 permits to drill. They're not drilling. Why aren't they drilling? Because they make more money not producing more oil. The price goes up, number one. And, number two, the reason they're not drilling is they're buying back their own stock — which should be taxed, quite frankly — buying back their own stock and making no new investments.

So I — I always thought Republicans are for investment. Exxon, start investing, start paying your taxes.

Thanks.

11:11 A.M. PDT

Dan Tsubouchi @Energy_Tidbits · Jun 10

#FreeportLNG. damages extent still being evaluated, "@PHMSA_DOT said in an emailed response to questions. It “will be a while” until the investigation is complete, the agency added" reports @GersonFreitasJr. Feels like more >3 wks for 2.2 bcfd #LNG shut down. #NatGas #OOTT

Pipe Leak Seen as Possible Cause of Fire at US LNG Terminal (1)
2022-06-10 18:21:36.750 GMT

By Gerson Freitas Jr.
(Bloomberg) -- A probe into the causes of Freeport LNG terminal explosion has found early indications of a leak from piping in the tank area of the facility, according to the Pipeline and Hazardous Materials Safety Administration.
It’s unclear how long the liquefied natural gas facility will remain shut down as the extend of damage is still being evaluated, PHMSA said in an emailed response to questions. It “will be a while” until the investigation is complete, the agency added.
Freeport LNG blast on Wednesday sent US natural gas prices plunging as it means gas exports would be curtailed for at least a few weeks, alleviating a strain on depleted inventories. The incident also limits America’s ability to help Europe replenish its storage and move away from Russian fuel supplies.
On Wednesday, Freeport LNG said that facility would remain offline for a minimum of three weeks.

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Kasia Klimasinska

To view this story in Bloomberg click here:
https://blinks.bloomberg.com/news/stories/RD9WSXDWRGG1

Dan Tsubouchi @Energy_Tidbits · Jun 9

#FreeportLNG. Note this thread of great images from @Ronh999. shows location of explosion and its key role in the supply chain for moving the LNG to tanks & then for tankers. Seems like a lot longer than 3 weeks for repairs and integrity testing? #LNG #NatGas #OOTT twitter.com/Ronh999/status…

Dan Tsubouchi @Energy_Tidbits · Jun 10

Positive for #Oil. Govts have thrown SPR at this problem & it just gets absorbed. Oil is a structural story, not a cyclical story. prices need to go higher to curtail demand, happy to hear #Goldman has come around to @EnergyAspects views says @ea_amrita to @BeckyQuick. #OOTT

SAF Group created transcript of excerpts from Energy Aspects Founder & Director of Research Amrita Sen with Becky Quick on CNBC Squawk Box on June 10, 2022. https://www.cnbc.com/video/2022/06/10/i-do-not-see-a-respite-in-oil-prices-in-near-term-says-energy-aspects-amrita-sen.html?__source=sharebar|twitter&par=sharebar

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

At 0.15 min mark. Sen "*I don't see any respite in the near term. I think crude could easily go up another 20, maybe even 30 dollars. I think it's really about, at this stage, it's a number. The problem we have, we've talked about it before as well, the lack of spare capacity, the lack of inventories. Governments have thrown SPR at this problem and that's just been absorbed. And even with that, inventories continue to draw down. So unless and until prices go to the point that demand actually really gets curtailed, there is just no solution.*"

At 1:45 min mark, Quick "*yesterday we spoke with Jeff Currie from Goldman Sachs, he thinks we are only about 18 months into potentially 10 year super spike period where oil prices continue to climb and climb and climb because it takes a long time to invest in these things. First the lure of the dollars and then to put those dollars to work, does that sound like a base case scenario to you? Does it sound like something you agree with?*" Sen "*I think Jeff's come around to our views, I'm happy to hear that. We've been saying this for some time that this is a structural story, it's not a cyclical story. And this is very important for everybody to understand because the reason we are here today and really nothing to do with Russia, we were at $95 oil price, crude prices well before the invasion. We would have gotten to a hundred regardless, maybe six months later. This is to do with years of underinvestment. And we were going to get to $100 precisely because of that, but now, even with these price signals, I'm in Calgary right now seeing producers in Canada, there is so little incentive, whether it be here, whether it be in the US, to reinvest because of ESG concerns. So the market is not functioning as it should. That is why this is a structural story. And could easily be with us for a decade*".

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

Dan Tsubouchi @Energy_Tidbits · Jun 10

Hmmm! Thx @MeesEnergy for good graph, Iran used to be a big #Oil supplier to Europe. Reminds that Iran would be a good substitute for banned Russia oil in Europe. #OOTT

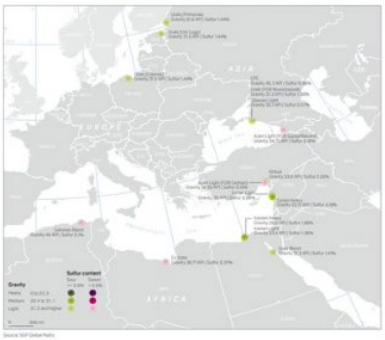
twitter.com/Energy_Tidbits...

Excerpt from SAF Group March 13, 2022 Energy Tidbits Memo https://safgroup.ca/news-insights/

Oil – Iran's oil would be a good crude quality replacement for Urals crude to Europe

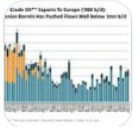
On Wednesday, we tweeted [LINK] on a good reminder from the Gulf Intelligence daily Podcast [LINK] that Iran's crude oil quality would be a good replacement for Russian Urals crude oil to Europe. We tweeted "*#JCPOA. Good reminder from @gulf_intel podcast. Matt Stanley @starfuels reminds Iran light matches API and H2S very well and is a good substitute RUS Urals. See below @SPGlobalPlatts crude specs map. #OOTT*". Our tweet included the below Platts map that noted crude qualities for Russia were Urals (Primorsk) 31.5 API 1.44% H2S, Urals (Ust Luga) 31.5 API 1.44% H2S, and Urals Gdansk 31.5 API 1.44% H2S, which compares to Iranian Light 33.4 API 1.36% H2S.

Figure 29: Platts Specifications Guide Europe and Africa Crude Oil



Source: Platts

MEES @MeesEnergy · Jun 10



Amid a historic market dislocation, MEES examines the potential for an influx of Middle Eastern crude into Europe in the second half of 2022. Read it here: bit.ly/3O8HB0k

Dan Tsubouchi @Energy_Tidbits · Jun 10

"In both energy & metals markets, inventories are extraordinarily low by historical standards & will struggle to meet any sustained rebound in demand", one of many other @Trafigura @saadrahim quotes. Bullish for #Oil #NatGas for 2020s. #OOTT trafigura.com/brochure/2022-...

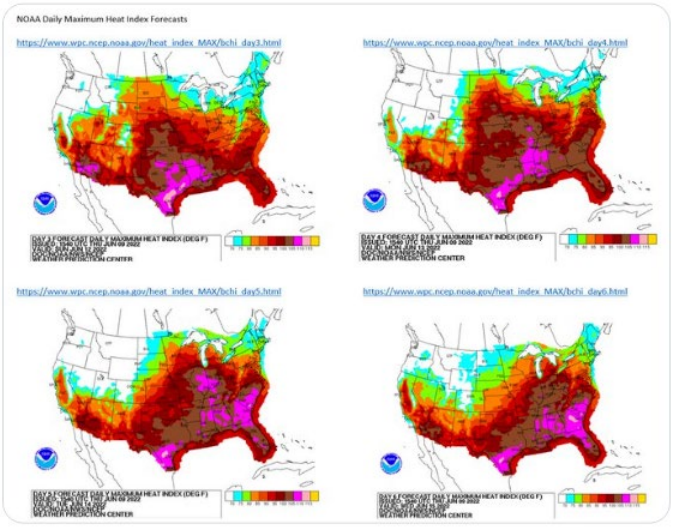
> **Dan Tsubouchi** @Energy_Tidbits · Jun 10
>
> "tight market for commodities & heightened prices for some time to come", need significant investment to meet future energy needs as well as #EnergyTransition. see 👇Must Read @Trafigura H1 outlook. Very bullish for #Oil #NatGas in 2020s. Thx @@saadrahim. #OOTT

Dan Tsubouchi @Energy_Tidbits · Jun 10

"tight market for commodities & heightened prices for some time to come", need significant investment to meet future energy needs as well as #EnergyTransition. see 👇Must Read @Trafigura H1 outlook. Very bullish for #Oil #NatGas in 2020s. Thx @@saadrahim. #OOTT

Dan Tsubouchi @Energy_Tidbits · Jun 9

Continued hot weather expected across the US south & east. Thx @NOAA. #NatGas #OOTT



v

Dan Tsubouchi @Energy_Tidbits · Jun 9

Note @SullyCNBC linked tweet. Reality check on #F150Lightning, not meant for normal truck users, but for urban cowboys. #OOTT #EV

> **Dan Tsubouchi** @Energy_Tidbits · Jun 9
>
> Replying to @SullyCNBC
>
> For sure, see 👇 #Ford CEO Jim Farley warned on Apr 26 that #F150Lightning wasn't good for heavy users ie. ranchers, contactors, or people that towed. But perfect for urban cowboy & commuting to work. #OOTT
>
> twitter.com/Energy_Tidbits…
>
> SAF Group created transcript of except from Bloomberg Technology interview with Ford CEO Jim Farley on April 26, 2022. https://www.youtube.com/watch?v=7HFPXI1SN5Y
>
> Items in "italics" are SAF Group created transcript
>
> Bloomberg's Sonali Basak, *"Jim, look out into the future for a second here, can you see all the F150's going electric? And what would it take for that to happen?"* Farley *"No way. I don't see that happening. If you're towing a fifth wheel in Wyoming, or you know with a horse trailer, there is no way. An electric vehicle is not a good solution for super duty customers. We're 50% of all commercial light duty vehicles in the US so we know. And the technology is not right for that. For retail customer who is doing some light towing or commuting to work, it's perfect. But for heavy duty usage, it's not the right solution. So you're going to see a mix of ICE and BEV."*
>
> Prepared by SAF Group https://safgroup.ca/news-insights/
>
> Excerpts F150 Lightning Ford video https://www.youtube.com/watch?v=g5d_xUb0US8
>
> 
>

Dan Tsubouchi @Energy_Tidbits · Jun 9

#FreeportLNG. Note this thread of great images from @Ronh999. shows location of explosion and its key role in the supply chain for moving the LNG to tanks & then for tankers. Seems like a lot longer than 3 weeks for repairs and integrity testing? #LNG #NatGas #OOTT

> **RonH** @Ronh999 · Jun 8
>
> Freeport LNG map showing LNG producing trains and location of explosion.
>
> Show this thread

Dan Tsubouchi @Energy_Tidbits · Jun 9

good reminder of who will be looking for replacement #LNG cargos. #FreeportLNG is ~2.2 bcfd. thx @lng_the. #NatGas #OOTT

> **TheLNGAnalyst** @lng_the · Jun 8
>
> BP,Total,Jera,Osaka Gas,SK,Uniper are going to be affected by this fire at Freeport !

Dan Tsubouchi @Energy_Tidbits · Jun 8

>2 mm people are in "Parts of Shanghai began imposing new lockdown restrictions on Thursday, with residents of sprawling Minhang district forced to stay home for two days in a bid to control COVID-19 transmission risks" reports @DavidStanway #OOTT

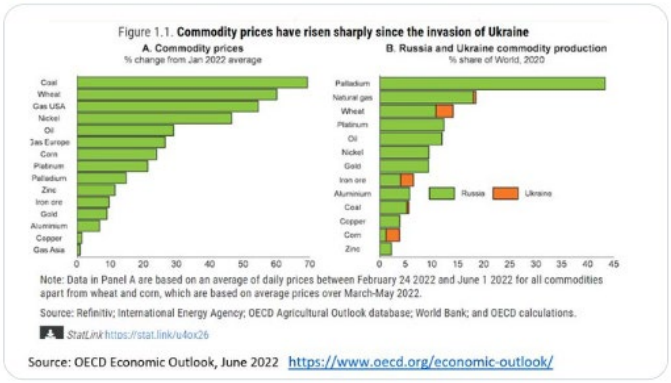
reuters.com

Shanghai's Minhang district announces new lockdown

The sprawling district of Minhang in central Shanghai has implemented new lockdown measures to detect and control COVID-19 transmission...

Dan Tsubouchi @Energy_Tidbits · Jun 8

Good reminder graph of RUS/UKR % share of World commodity production & commodity price % change from Jan 2022. Lots more good charts @OECD Economic Outlook, June 2022. #Oil #NatGas #LNG #OOTT



Dan Tsubouchi @Energy_Tidbits · Jun 8

#FreeportLNG shut at least 3 weeks. Liquefaction capacity of 3 trains is ~2.2 bcf/d. Thx @MolinskiDan. #NatGas #LNG #OOTT

> **Dan** @MolinskiDan · Jun 8
>
> Freeport LNG Facility to be Shut at Least 3 Weeks After Fire #OOTT #NatGas marketwatch.com/story/freeport...

Dan Tsubouchi @Energy_Tidbits · Jun 8

Want a good news people story. Was looking to see if Houston news coverage on Freeport LNG explosion and saw this report. Kudos to @Dallas_Sheriff' Deputy Keith Rose. listen to him and it's kind of like just doing my job. very impressive.

abc13.com

Dashcam video shows deputy save choking girl in busy Dallas traffic

A mother ran to the deputy with her daughter in her arms in the middle of traffic. The deputy said the little girl was not responsive, so his ...

Dan Tsubouchi @Energy_Tidbits · Jun 8

Video post small explosion at #FreeportLNG, hard to tell extent of damage. But HH down ~50 cents on this news. #NatGas #LNG #OOTT Thx @KPRC2

> **Aaron Fernandez-Wische** @KPRC2Aaron · Jun 8
>
> WATCH LIVE: @KPRC2 chopper over Freeport LNG facility in Surfside Beach where an explosion was reported. Emergency officials say everyone has been accounted for and there's no risk to public. @KPRC2Syan headed to area where residents say their homes shook. click2houston.com/news/local/202...

Dan Tsubouchi @Energy_Tidbits · Jun 8

For those not near their laptop, @EIAgov weekly #Oil #Gasoline #Distillates inventory as of June 3 just out. Table below compares vs @APIenergy yesterday and expectations. Prior to release, WTI was $119.72. #OOTT

ir.eia.gov/wpsr/overview....

nventory June 3: EIA, Bloomberg Survey Expectations,		
	EIA	Expectations
	2.03	-2.50
	-0.81	0.80
	2.59	0.60
	3.81	-1.10

nmercial so builds in impact of 7.3 mmb draw from SPR for J
in the oil data, Cushing had a draw of 1.59 mmb for June 3 v
oomberg
AF Group https://safgroup.ca/news-insights/

Dan Tsubouchi @Energy_Tidbits · Jun 8

Re Beijing/Shanghai reopening,"what gives me confidence, If you remember when Shenzhen shut down in southern China, business went away, but in about 90 days after it reopened, business was back to normal" @IHGCorporate CEO to @SaraEisen. Pent up China travel to return. #Oil #OOTT

SAF Group created transcript of excerpt of Keith Barr (IHG Hotels & Resorts CEO) with CNBC Sara Eisner on CNBC Closing Bell on June 7, 2022 https://www.cnbc.com/video/2022/06/07/demand-is-so-strong-in-so-many-markets-we-have-the-ability-to-price-says-ihg-hotels-resorts-ceo.html

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

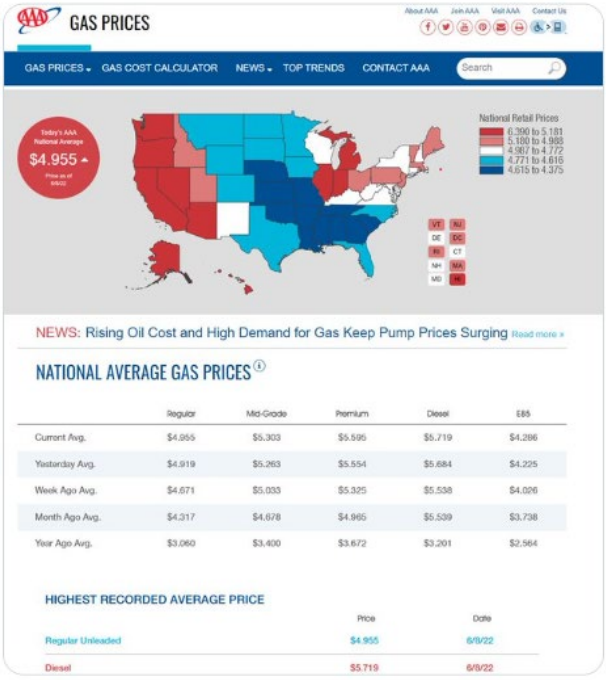
At 1:30 min mark.
Barr "*... the only real big challenge right now is of course Greater China*".
Eisner "*what is it like there? you've got how many hotels there?*"
Barr "*we have 600 hotels open, another four, five hundred in development right now*".
Eisner "*are they open at this point?*"
Barr "*we have the vast majority are open, but some are quarantine hotels. But I talk to the team regularly, Shanghai has reopened, Beijing just reopened. We are seeing our bookings come back. What gives me confidence, If you remember when Shenzhen shut down in southern China, business went away, but in about 90 days after it reopened, business was back to normal. And so when restrictions are lifted across China, it's going to be a really strong market again*"

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

Dan Tsubouchi @Energy_Tidbits · Jun 8

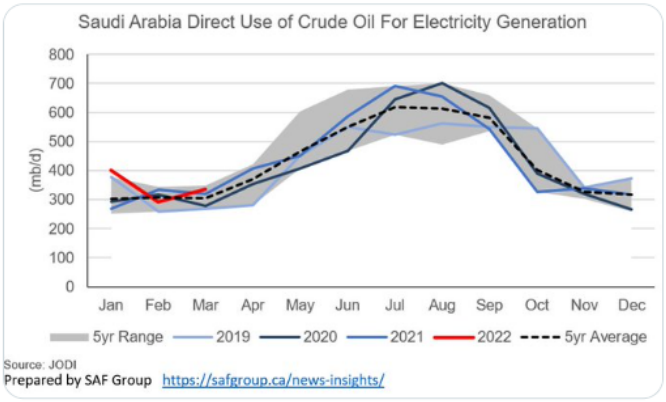
Looks like US #Gasoline prices to hit $5 on a nationwide basis today. Link to AAA gasoline price tracker is here gasprices.aaa.com, provides nationwide and zoom in for state data. #OOTT

gasprices.aaa.com



Dan Tsubouchi @Energy_Tidbits · Jun 7

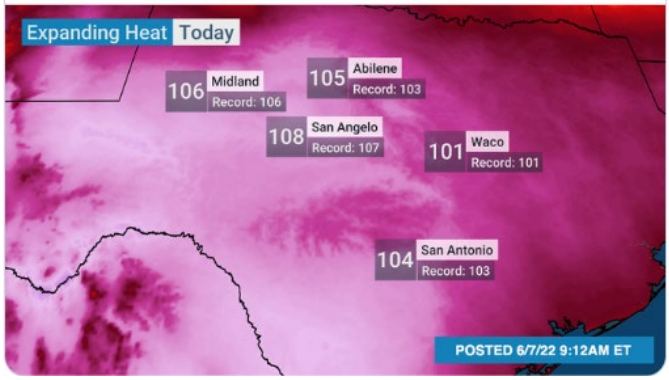
Summer isn't just increased #Oil demand for driving season in northern hemisphere. It's also when Saudi uses 300-400,000 b/d more #Oil for electricity generation during summer heat. ie. less Saudi oil oil for export unless they reduce inventories. #OOTT



Dan Tsubouchi @Energy_Tidbits · Jun 7

With record heat in Texas today, here is the key Texas #Electricity link ercot.com/gridmktinfo/da... to have handy - @ERCOT dashboard includes key watch items today - supply/demand balance graph and real time electricity prices. #NatGas #OOTT

> **The Weather Channel** @weatherchannel · Jun 7
>
> Record highs are possible for many this week, with some cities hitting triple digits.
>
> What's the HOTTEST temp you've ever experienced? ⬇️



Dan Tsubouchi @Energy_Tidbits · Jun 7

Think of @EIGGlobalEnergy side! Must strongly believe demand & strong prices are here to stay for #Oil #NatGas if make a $14-18b investment in #Repsol upstream. A huge deal, #EIG website says committed $40.1b to energy sector over its 40-yr history #OOTT

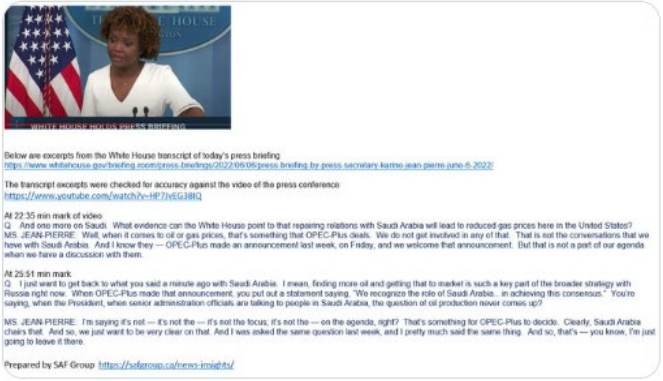
reuters.com

EXCLUSIVE Spain's Repsol in talks to sell 25% of oil and gas unit to EI...

EIG Global Energy Partners is in early discussions with Repsol to buy a slice of the Spanish company's oil and gas exploration and production...

Dan Tsubouchi @Energy_Tidbits · Jun 6

Surprise! What will #Biden talk with #MBS if they meet? See 👇, @PressSec says oil or gas prices are "not the conversations that we have with Saudi Arabia" and "not a part of our agenda when we have a discussion with them." #OOTT



Below are excerpts from the White House transcript of today's press briefing:
https://www.whitehouse.gov/briefing-room/press-briefings/2022/06/06/press-briefing-by-press-secretary-karine-jean-pierre-june-6-2022/

The transcript excerpts were checked for accuracy against the video of the press conference:
https://www.youtube.com/watch?v=HF7IvEG3BIQ

At 22:35 min mark of video:
Q And one more on Saudi. What evidence can the White House point to that repairing relations with Saudi Arabia will lead to reduced gas prices here in the United States?
MS. JEAN-PIERRE: Well, when it comes to oil or gas prices, that's something that OPEC-Plus deals. We do not get involved in any of that. That is not the conversations that we have with Saudi Arabia. And I know they — OPEC-Plus made an announcement last week, on Friday, and we welcome that announcement. But that is not a part of our agenda when we have a discussion with them.

At 25:51 min mark:
Q I just want to get back to what you said a minute ago with Saudi Arabia. I mean, finding more oil and getting that to market is such a key part of the broader strategy with Russia right now. When OPEC-Plus made that announcement, you put out a statement saying, "We recognize the role of Saudi Arabia...in achieving this consensus." You're saying, when the President, when senior administration officials are talking to people in Saudi Arabia, the question of oil production never comes up?

MS. JEAN-PIERRE: I'm saying it's not — it's not the — it's not the focus, it's not the — on the agenda, right? That's something for OPEC-Plus to decide. Clearly, Saudi Arabia chairs that. And so, we just want to be very clear on that. And I was asked the same question last week, and I pretty much said the same thing. And so, that's — you know, I'm just going to leave it there.

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

Dan Tsubouchi @Energy_Tidbits · Jun 6

And while Pakistan is running out of foreign exchange reserves. @IsmailDilawar reported roughly a 50% drop since Aug to $9.72b at May 27.

twitter.com/rhjameson/stat...

> **Stephen Stapczynski** @SStapczynski · Jun 6
>
> Pakistan is facing widespread rolling blackouts 🇵🇰 🚨
>
> ⚡ High demand, coupled with lack of fuel, resulted in a big power supply deficit which requires load shedding
> 🚢 Pakistan is struggling to secure necessary LNG and coal to generate electricity
>
> (Via previous energy minister) twitter.com/hammad_azhar/s...
>
> Show this thread

Dan Tsubouchi @Energy_Tidbits · Jun 6

Potential great deal for India: double down on RUS #Oil imports to take heavily-discounted #Rosneft oil & "cargoes are being sought on a delivered basis from Rosneft, with the seller set to handle shipping and insurance matters." Why only 6-mth deal? Thx @JournoDebjit #OOTT

By Debjit Chakraborty
(Bloomberg) -- India is looking to double down on its Russian oil imports with state-owned refiners eager to take more heavily-discounted supplies from Rosneft PJSC as international buyers turn down dealings with Moscow over its invasion of Ukraine.

State processors are collectively working on finalizing and securing new six-month supply contracts for Russian crude to India, said people with knowledge of the companies' procurement plans. Cargoes are being sought on a delivered basis from Rosneft, with the seller set to handle shipping and insurance matters, they said.

These supply agreements, if concluded, will be separate and on top of shipments that India already buys from Russia via other deals. Details on volumes and pricing are still being negotiated with Indian banks set to fully finance all cargoes, said the people who asked not to be identified as discussions are confidential. Indian refiners will increasingly procure supplies directly from Russian companies such as Rosneft as top international traders like Glencore Plc wind up their dealings, they added.

The state refiners include Indian Oil Corp, Hindustan Petroleum and Bharat Petroleum, while private processors are Reliance Industries and Nayara Energy, which is partly owned by Rosneft. Procurement activities for state and private companies are done independently. Spokespeople at the three largest state-owned companies couldn't immediately comment when contacted.

Both state and privately-owned refineries in India have been ramping up purchases of Russian crude as sanctions and trade restrictions rolled out by the US, UK and European Union have caused most buyers to flee and offer levels to crash. An unprecedented amount of Russian crude was heading to India and China last month as European buyers scrambled for replacements

Dan Tsubouchi @Energy_Tidbits · Jun 6

Desperate times call for desperate measures. @JLeeEnergy reports RUS oil tanker transfer in Atlantic, "Most transfers take place in sheltered waters, where the risks of oil spills are greatly reduced""This is the first transfer seen on the high seas. #OOTT

bloomberg.com
Oil Tankers Make Rare Mid-Atlantic Switch of Russian Crude Cargo
Shippers of Russian crude are turning to unusual methods to move cargoes displaced from Europe over much longer distances to new ...

Dan Tsubouchi @Energy_Tidbits · Jun 5

Best indicator for strong #LNG #NatGas thru 2020s. Another Asian LNG buyer locks up long term LNG supply. China Gas, 25 yr deal starting in 2026 for 0.09 bcf/d from #EnergyTransfer. Now >8.8 bcf/d of long term LNG supply locked up since July 1/21. #OOTT

ir.energytransfer.com

Energy Transfer Signs LNG Sale and Purchase Agr...

25-Year Agreement for LNG for Supply from Energy Transfer's Lake Charles LNG Export Facility ...

Dan Tsubouchi @Energy_Tidbits · Jun 5

Brent +$1.15 tonight to $120.87. Beijing announces more reopening - most areas reopen dine-in, schools, also residents who previously worked at home will be allowed to commute to offices, and buses subways, and taxies will resume normal operation. #OOTT

Stay informed

This Tweet links to a China state-affiliated media website.

Find out more

globaltimes.cn

China's economic recovery on fast track for H2 in 2022 as Beijing, Sh...

As Beijing on Sunday announced a major reopening of dine-in services, schools and scenic spots, Shanghai has embraced a fully normal life ...

Dan Tsubouchi @Energy_Tidbits · Jun 5

reminder of this announcement that came out friday after the close/ $ATH $PD $PSE $SDE #OOTT

> **Dan Tsubouchi** @Energy_Tidbits · Jun 3
>
> More #Oil #NatGas companies added to S&P TSX Composite Index effective open of trading on Mon June 20. $ATH Athabasca Oil, $PD Precision Drilling, $PSI Pason Systems, and $SDE Spartan Delta. #OOTT
>
> spglobal.com/spdji/en/docum...

S&P Dow Jones Indices
A Division of S&P Global

PRESS RELEASE

S&P Dow Jones Indices Announces Changes to the S&P/TSX Composite Index

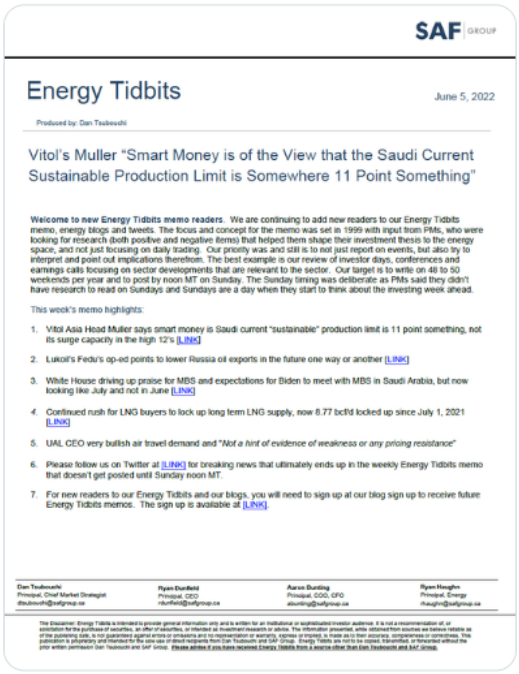
Toronto, Ontario, June 3, 2022 – As a result of the quarterly review, S&P Dow Jones Indices will make the following changes in the S&P/TSX Composite Index prior to the open of trading on Monday, June 20, 2022:

S&P/TSX COMPOSITE INDEX – June 20, 2022			
	COMPANY	GICS SECTOR	GICS SUB-INDUSTRY
ADDED	Athabasca Oil Corporation (TSX:ATH)	Energy	Oil & Gas Exploration & Production
ADDED	Definity Financial Corporation (TSX:DFY)	Financials	Property & Casualty Insurance
ADDED	Filo Mining Corp. (TSX:FIL)	Materials	Diversified Metals & Mining
ADDED	Precision Drilling Corporation (TSX:PD)	Energy	Oil & Gas Drilling
ADDED	Pason Systems Inc (TSX:PSI)	Energy	Oil & Gas Equipment & Services
ADDED	Spartan Delta Corp. (TSX:SDE)	Energy	Oil & Gas Equipment & Services
DELETED	Cascades Inc (TSX:CAS)	Materials	Paper Packaging
DELETED	Docebo Inc. (TSX:DCBO)	Information Technology	Application Software
DELETED	Hut 8 Mining Corp. (TSX:HUT)	Information Technology	Application Software
DELETED	Lion Electric Company (TSX:LEV)	Industrials	Construction Machinery & Heavy Trucks
DELETED	Martinrea International Inc (TSX:MRE)	Consumer Discretionary	Auto Parts & Equipment
DELETED	WELL Health Technologies Corp. (TSX:WELL)	Health Care	Health Care Services

For more information about S&P Dow Jones Indices, please visit www.spdji.com

Dan Tsubouchi @Energy_Tidbits · Jun 5

Our weekly SAF June 5, 2022 Energy Tidbits memo is posted on our SAF Group website. This 52-pg energy research memo expands upon & covers more items than tweeted this week. See news/insights section of SAF website #Oil #OOTT #LNG #NatGas #EnergyTransition safgroup.ca/news-insights/



SAF GROUP

Energy Tidbits

June 5, 2022

Produced by: Dan Tsubouchi

Vitol's Muller "Smart Money is of the View that the Saudi Current Sustainable Production Limit is Somewhere 11 Point Something"

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. Our priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector. Our target is to write on 48 to 50 weekends per year and to post by noon MT on Sunday. The Sunday timing was deliberate as PMs said they didn't have research to read on Sundays and Sundays are a day when they start to think about the investing week ahead.

This week's memo highlights:

1. Vitol Asia Head Muller says smart money is Saudi current "sustainable" production limit is 11 point something, not its surge capacity in the high 12's [LINK]
2. Lukoil's Fedu's op-ed points to lower Russia oil exports in the future one way or another [LINK]
3. White House driving up praise for MBS and expectations for Biden to meet with MBS in Saudi Arabia, but now looking like July and not in June [LINK]
4. Continued rush for LNG buyers to lock up long term LNG supply, now 8.77 bcf/d locked up since July 1, 2021 [LINK]
5. UAL CEO very bullish air travel demand and "*Not a hint of evidence of weakness or any pricing resistance*"
6. Please follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK].

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