

Energy Tidbits

“\$2.5 to \$4.6 Trillion Deficit We Face in Order to Make This [Energy] Transition” Says John Kerry

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Short-Term Energy Outlook

Forecast highlights

Global liquid fuels

- The March *Short-Term Energy Outlook* (STEO) is subject to heightened levels of uncertainty resulting from a variety of factors, including Russia's further invasion of Ukraine. This STEO assumes U.S. GDP will grow by 3.6% in 2022 and by 2.7% in 2023, after growing by 5.7% in 2021. We use the S&P Global (formerly IHS Markit) macroeconomic model to generate our U.S. economic assumptions. Global macroeconomic assumptions in our forecast are from Oxford Economics and include global GDP growth of 4.3% in 2022 and 4.0% in 2023, compared with growth of 5.9% in 2021. These GDP forecasts were completed in mid-February. The rest of the forecast was completed on March 3 and accounts for available information to that point. A wide range of potential macroeconomic outcomes could significantly affect energy markets during the forecast period. Supply uncertainty results from the conflict in Ukraine, the production decisions of OPEC+, and the rate at which U.S. oil and natural gas producers increase drilling.
- Brent crude oil spot prices averaged \$97 per barrel (b) in February, an \$11/b increase from January. Daily spot prices for Brent closed at almost \$124/b in the first week of March as the further invasion of Ukraine by Russia and subsequent sanctions on Russia and other actions created significant market uncertainties about the potential for oil supply disruptions. These events are occurring against a backdrop of low oil inventories and persistent upward oil price pressures. Global oil inventories have fallen steadily since mid-2020, and inventory draws averaged 1.8 million barrels per day (b/d) from the third quarter of 2020 (3Q20) through the end of 2021. We estimate that oil inventories fell further in the first two months of 2022 and that commercial inventories in the OECD ended February at 2.64 billion barrels, which is the lowest level since mid-2014.
- We expect the Brent price will average \$117/b in March, \$116/b in 2Q22, and \$102/b in the second half of 2022 (2H22). We expect the average price to fall to \$89/b in 2023. However, this price forecast is highly uncertain. Actual price outcomes will be dependent 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. In addition, the degree to which other oil producers respond to current oil prices, as well as the effects macroeconomic developments might have on global oil demand, will be important for oil price formation

in the coming months. Although we reduced Russia's oil production in our forecast, we still expect that global oil inventories will build at an average rate of 0.5 million b/d from 2Q22 through the end of 2023, which we expect will put downward pressure on crude oil prices. However, if production disruptions—in Russia or elsewhere—are more than we forecast, resulting crude oil prices would be higher than our forecast.

- We forecast that global consumption of petroleum and liquid fuels will average 100.6 million b/d for all of 2022, up 3.1 million b/d from 2021. We forecast that consumption will increase by 1.9 million b/d in 2023 to average 102.6 million b/d. Economic forecasts in this outlook were completed before Russia's further invasion of Ukraine. The outlook for economic growth and oil consumption in Russia and surrounding countries is highly uncertain. Oil consumption will depend on how economic activity and travel respond to recent and any potential future events and sanctions.
- U.S. regular gasoline retail prices averaged \$3.52 per gallon (gal) in February, up 20 cents/gal from January and up \$1.02/gal from February 2021. Retail diesel prices averaged \$4.03/gal in February—the highest average price (not adjusted for inflation) for any month since March 2013. Product prices have risen compared with year-ago levels because of rising crude oil prices and high refining margins. We expect crude oil price increases will push the U.S. average gasoline price to \$4.10/gal on average in 2Q22, which would be the first time that gasoline prices (not adjusted for inflation) have reached at least \$4/gal in any month since July 2008. We expect diesel prices will average \$4.43/gal during 2Q22. Gasoline and diesel prices are closely tied to crude oil prices. We forecast gasoline prices will average \$3.71/gal in 2H22, and we forecast diesel prices will average \$4.04/gal over the same period. However, actual prices could be significantly affected by the same factors that affect crude oil prices.
- U.S. crude oil production fell below 11.6 million b/d in December 2021 ([the most recent monthly historical data point](#)), a decline of 0.2 million b/d from November 2021. We forecast that production will rise to average 12.0 million b/d in 2022 and then to record-high production on an annual-average basis of 13.0 million b/d in 2023. The previous annual-average record of 12.3 million b/d was set in 2019.

Natural Gas

- In February, the Henry Hub natural gas spot price averaged \$4.69 per million British thermal units (MMBtu), which was up from the January average of \$4.38/MMBtu. Although temperatures across the eastern part of the United States were close to normal in February, reducing natural gas consumption from January levels, natural gas production fell slightly last month relative to January, in part as a result of temporary freeze-offs in producing regions. The drop in production partly contributed to inventory draws outpacing the five-year (2017–2021) average in February. This outlook assumes that temperatures in March will be milder than February and near the 10-year average

for March. We expect production will rise from February levels, contributing to a lower average Henry Hub price of \$4.10/MMBtu for March. We expect the Henry Hub price will average \$3.83/MMBtu in 2Q22 and \$3.95/MMBtu for all of 2022. We expect the Henry Hub spot price will average \$3.59/MMBtu in 2023.

- We estimate that inventory withdrawals in February were 627 billion cubic feet (Bcf) and that natural gas inventories ended the month at 1.6 trillion cubic feet (Tcf). We expect natural gas inventories to fall by about 95 Bcf in March, ending the withdrawal season at about 1.5 Tcf, which would be 10% less than the five-year average for this time of year. We forecast that natural gas inventories will end the 2022 injection season (end of October) at 3.5 Tcf, which would be 4% less than the five-year average.
- In February, U.S. liquefied natural gas (LNG) exports averaged 10.9 billion cubic feet per day (Bcf/d), down from 11.2 Bcf/d in January. Similar to last year, U.S. LNG exports in February were limited by fog in the Gulf of Mexico that affected vessel traffic and led to piloting services being suspended for several days on the [Sabine Pass](#), Lake Charles (location of Cameron LNG), and Corpus Christi waterways. Although exports fell in February, they were higher than in any month prior to December 2021. Many U.S. LNG cargoes were [delivered to Europe](#) last month, where inventories are lower than the five-year average and potential supply disruptions related to the conflict in Ukraine are a concern. Although Europe's inventories are low, the additional LNG imports, as well as a mild winter, are helping bring inventories [closer to the five-year average](#) than they were [at the beginning of the winter](#). We expect high levels of U.S. LNG exports to continue in 2022, averaging 11.3 Bcf/d for the year, a 16% increase from 2021.
- We expect that U.S. consumption of natural gas will average 84.6 Bcf/d in 2022, up 2% from 2021. The increase in U.S. natural gas consumption reflects rising demand in the industrial sector as a result of increased manufacturing activity. In addition, the increase in natural gas consumption reflects higher consumption in the residential and commercial sectors as a result of colder temperatures this year compared with 2021. Higher consumption in these sectors is partly offset by lower consumption in the electric power sector due to a forecast increase in generation from renewable energy sources.
- We estimate dry natural gas production averaged 95.3 Bcf/d in the United States in February, down 0.6 Bcf/d from January. Production in January and February was lower than in December because of freezing temperatures in certain production regions. We forecast natural gas production to average 95.7 Bcf/d in March. For 2022, we expect that natural gas production will average 96.7 Bcf/d, which is 3.1 Bcf/d more than in 2021. We expect dry natural gas production to rise to an average of 99.1 Bcf/d in 2023.

Electricity, coal, renewables, and emissions

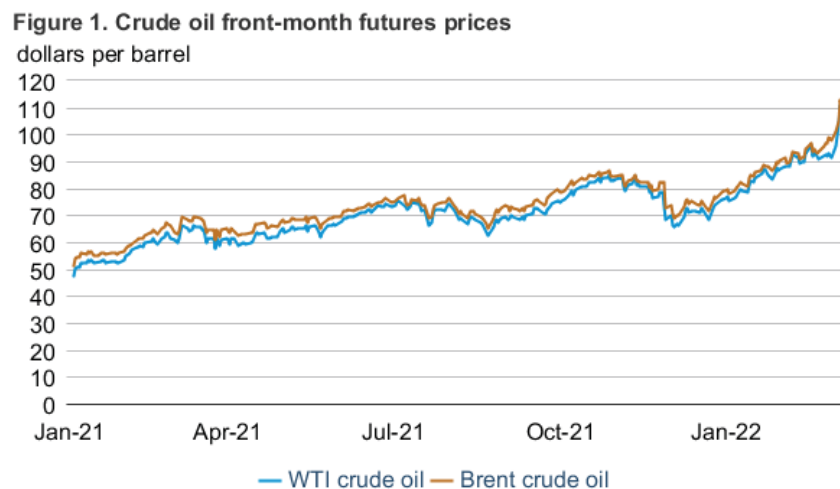
- U.S. electric power sector generation in February 2022 was 1.3% lower than generation in February 2021, when generation was high because of extreme cold weather. We forecast that the annual share of U.S. electricity generation from renewable energy sources will rise from 20% in 2021, to 22% in 2022, and to 24% in 2023, as a result of continuing increases in solar and wind generating capacity. This increase in renewables generation leads to an expected decline in natural gas generation, which falls from a 37% share in 2021, to 36% in 2022, and to 35% in 2023. Natural gas generation falls in the forecast even though we expect the cost of natural gas for power generation to fall from \$4.97/MMBtu in 2021, to \$4.16/MMBtu in 2022, and to \$3.80/MMBtu in 2023. Increasing renewable generation also contributes to our forecast that the share of generation from coal will fall from 23% in 2021 to 22% in 2022 and 21% in 2023. Nuclear generation remains relatively constant in the forecast at an average share of 20%.
- Planned additions to U.S. wind and solar capacity in 2022 and 2023 increase electricity generation from those sources in our forecast. The U.S. electric power sector added 14 gigawatts (GW) of new wind capacity in 2021. We expect 10 GW of new wind capacity will come online in 2022 and 5 GW in 2023. Utility-scale solar capacity rose by 13 GW in 2021. Our forecast for added utility-scale solar capacity is 22 GW for 2022 and 24 GW for 2023. We expect [solar additions to account for nearly half of new electric generating capacity](#) in 2022. In addition, in 2021, small-scale solar capacity (systems less than 1 megawatt) increased by 5.4 GW to 33 GW. We project that small-scale solar capacity will grow by 4.0 GW in 2022 and 4.3 GW in 2023.
- We expect U.S. coal production to increase by more than 25 million short tons (MMst) (4%) in 2022 to 604 MMst and then rise by 9 MMst (1%) in 2023. Although labor strikes at some metallurgical mines in Appalachia continue to affect production, we expect producers to regain a portion of that production later during 1H22. Increased production of coal will help support rising export demand as well as help replenish coal inventories at power plants that were depleted during 2021.
- We expect U.S. coal consumption to decrease by 7 MMst in 2022 and by 15 MMst in 2023. In both forecast years, declining consumption from the electric power sector is somewhat offset by rising consumption at coke plants.
- Coal exports in our forecast total 88 MMst in 2022, up 3% from 2021, and 91 MMst in 2023. We assume international prices will remain supportive of U.S. coal exports as the conflict in Ukraine creates the potential to disrupt supplies from that region.
- U.S. energy-related carbon dioxide (CO₂) emissions increased by nearly 7% in 2021 as economic activity increased and contributed to rising energy use. We expect a 2% increase in energy-related CO₂ emissions in 2022, primarily from growing

transportation-related petroleum consumption. Forecast energy-related CO₂ emissions remain almost unchanged in 2023. We expect petroleum emissions to increase by 4% in 2022 compared with 2021, and this growth rate slows to less than 1% in 2023. Natural gas emissions increase by 2% in 2022 and then decrease slightly in our forecast for 2023. We forecast that coal-related CO₂ emissions will fall by 3% in 2022 and by 2% in 2023.

Petroleum and natural gas markets review

Crude oil

Prices: The front-month futures price for Brent crude oil settled at \$110.46 per barrel (b) on March 3, 2022, an increase of \$21.30/b from the February 1, 2022, price of \$89.16/b. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, increased by \$19.47/b during the same period, settling at \$107.67/b on March 3 (Figure 1).



Source: Graph by EIA, based on CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.
Note: WTI=West Texas Intermediate

The Russian invasion further into Ukraine on February 24 and the subsequent escalation of armed conflict, which had been preceded by increasing tensions in earlier weeks, contributed to rising crude oil prices. On February 28, the front-month Brent crude oil price settled at over \$100/b for the first time since September 2014. The increase in crude oil prices reflects potential effects of the [extensive sanctions](#) levied by the United States, European Union, and others on Russian entities in response to Russia's continued invasion of Ukraine, as well as the risk of potential disruptions to crude oil and energy production and infrastructure related to the conflict. The sanctions that have so far been announced have primarily targeted Russian individuals and financial institutions but avoided direct sanctions on Russia's energy companies, including crude oil and natural gas production and exports. Although sanctions so far have generally avoided direct sanctions on Russia's energy companies, there are trade press reports

that sanctions targeting financial institutions have increased concerns among oil market participants about purchasing energy from Russia and about the potential for additional sanctions.

The February monthly average front-month Brent crude oil futures price was \$94/b, up \$9/b over January 2022 and up \$32/b over February 2021. The increased risks to oil supplies presented by Russia's further invasion of Ukraine builds on a number of other factors that have been underpinning crude oil price increases for the past several months. First, oil consumption has persistently been greater than oil production since mid-2020, contributing to a decline in global oil inventories in all but one month from June 2020 through February 2022. As a result, total commercial oil inventories in the OECD have fallen to their lowest levels since mid-2014. Second, several minor geopolitical disruptions contributed to increased risks in recent months. [Port closures](#) contributed to reduced crude oil production in Libya, while Houthi attacks targeting the United Arab Emirates and political unrest in Kazakhstan also contributed to additional risks to global supplies. Third, several OPEC members have been unable to increase production in line with previously agreed on targets. Finally, decreasing COVID-19 cases and natural gas-to-oil switching in the electric power sector have likely contributed to demand increases.

A number of western energy companies, including [ExxonMobil](#), [Shell](#), [BP](#), and [Equinor](#) have announced they are stopping operations in Russia and ending partnerships with Russian firms. Trade press also reports that a number of European refiners, shippers, and insurance companies are not purchasing or shipping crude oil from Russia, even without formal energy sanctions. This distancing from Russian markets by private entities has contributed to significant price discounts on some Russian crude oil streams. However, as of March 3, trade press reported significant volumes of Russian crude oil and petroleum products remained unsold as shippers and refiners refuse to take cargoes from Russia. We expect that the withdrawal of some firms from Russia, combined with limitations on finance, are likely to contribute to ongoing constraints on new field development and crude oil production with ongoing effects into the medium term. Market participant trading activity combined with the active conflict involving Russia remains a substantial source of uncertainty and risk for global crude oil production and prices.

We estimate Russia produced 11.3 million b/d of petroleum and other liquids in February 2022, and given most recent reports, we expect that production in Russia will fall by 0.25 million b/d in March, with an additional decline of 0.5 million b/d in April. We expect production to temporarily decrease as some shippers refrain from picking up crude oil cargoes from Russia, mainly as a result of current sanctions or anticipation of additional sanctions. Although Russia's crude oil production and export capacity will continue to be available, there is considerable uncertainty to which degree countries will continue to import crude oil and petroleum products from Russia. While we recognize that the range of outcomes for Russia's oil production is wide, we assume that there will be a decrease in Russian crude oil exports, and therefore in production, in the coming months. With crude oil exports decreasing, onshore storage likely will

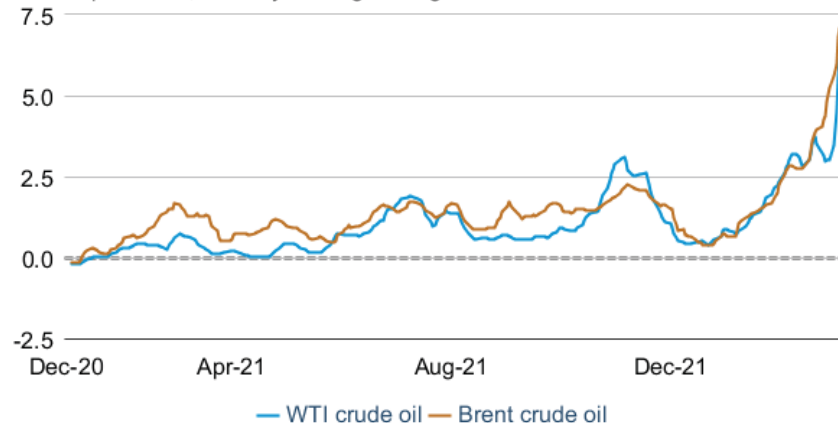
fill up quickly because of limited onshore storage capacity, which will necessitate production shut-ins and the use of floating storage on ships. We assess that most of Russia's crude oil will find export destinations, but we expect there will be a temporary dislocation of production and exports as new trade routes are established and as Russia finds other crude oil buyers. However, this assessment is based on sanctions as of March 3, 2022, and it is subject to significant uncertainty about the way in which market participants will respond to those sanctions.

We expect that Russia's liquid fuels production will decrease by about 0.7 million b/d in 2Q22 compared with 1Q22 and then increase slightly in 3Q22. Overall, we expect Russia's production to be about 0.5 million b/d lower in December 2022 compared with February and to remain flat in 2023. Compared with our forecast last month, in which we were expecting growth in Russia's liquid fuels production, we now expect Russia's liquid fuels production to be 1.0 million b/d less on average from 2Q22 through the end of 2023. This forecast remains subject to significant revisions because the extent to which sanctions and other private corporate actions will affect production remains unclear.

We expect the Brent crude oil spot price to average \$117/b in March, then average \$116/b in 2Q22 and \$102/b in 2H22, although this forecast remains highly uncertain in light of current geopolitical developments. The effect that current sanctions and private corporate action will have on production in Russia or on global purchases of crude oil from Russia remains a major source of uncertainty in the outlook. Similarly, the effect that current and near-term high price levels have on production outside of Russia remains a potential risk and is highly variable in our current outlook, because high prices increase the incentive for new production.

Crude oil front-month to 3rd month futures spread: Oil market uncertainties linked to Russia's further invasion of Ukraine have occurred while global petroleum inventory levels are low. This situation has contributed to historically high levels of backwardation (when near-term prices are higher than longer-dated ones). The spread between crude oil front-month contracts and third-month contracts (1-3) reflects heightened calls on crude oil inventories in the very short term (**Figure 2**). The Brent 1-3 spread increased to its highest level on record at \$7.06/b on March 3. The spread averaged \$3.55/b throughout February, more than doubling from January, when the spread was \$1.46/b, and is also well above the 2021 annual average of \$1.11/b. The WTI 1-3 crude oil price spread increased similarly to the Brent spread in February, reaching a high of \$6.15/b on March 3 and averaging \$3.12/b in February, also doubling the January level.

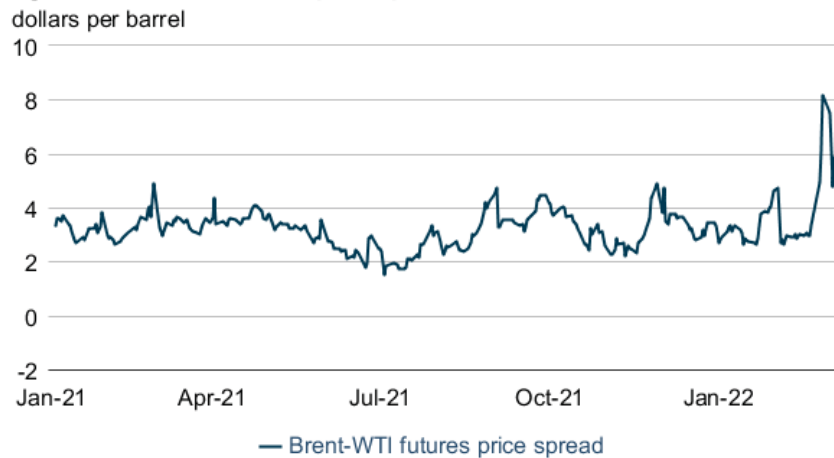
Figure 2. Crude oil front-month to third-month futures price spread
dollars per barrel, five-day moving average



Sources: CME Group, Dubai Mercantile Exchange, and Intercontinental Exchange, as compiled by Bloomberg L.P.
Note: WTI=West Texas Intermediate

The increase in the spread for WTI futures is not quite as sharp as the spread with Brent, which is also reflected in the front-month prices (**Figure 3**). The spread between Brent and WTI increased by \$1.60/b to \$4.93/b on February 22, when the possibility of further Russian invasion into Ukraine heightened, and widened another \$3.21/b over the next two days to \$8.14/b on February 24, the day the invasion escalated. The highest Brent-WTI spread in 2021 was \$4.90/b, and the spread averaged \$3.38/b in January 2022. Since February 22, the spread has averaged \$6.40/b, likely reflecting the impact of risks related to the Russian invasion further into Ukraine. European oil markets are likely to be affected more significantly than U.S. or western hemisphere markets, which may be better captured by the WTI price. Countries in OECD Europe received 24% of their crude oil and condensate imports from Russia in 2020. About 48% of Russia’s crude oil and condensate exports in 2020 went to countries in Europe. Slight differences in the delivery times of the WTI and Brent crude oil futures contracts may also be contributing to some of the difference in the spread.

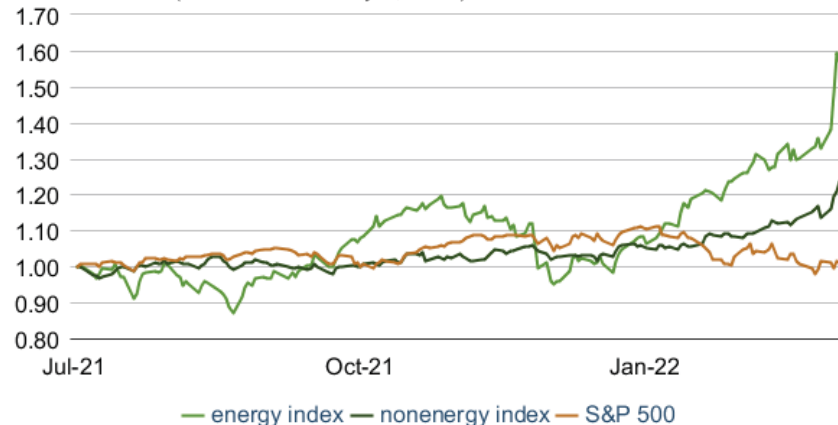
Figure 3. Brent–WTI futures price spread



Source: Graph by EIA, based on CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.
Note: WTI=West Texas Intermediate

Energy and non-energy commodity indexes: Since the start of 2022, price increases in energy commodities have outpaced increases in non-energy commodities. The energy component of the [S&P Goldman Sachs Commodity Index \(GSCI\)](#) is heavily weighted toward crude oil, although it also includes smaller shares of natural gas, gasoline, and distillate commodity prices. The non-energy component accounts for a basket of other commodities, including agricultural products, livestock, and metals. The increase in the energy segment of the index reflects the drivers of increased crude oil prices discussed previously. Non-energy commodity prices have also been increasing through much of February, although not necessarily by as much as energy commodities. Although Russia’s energy exports may be the largest source of uncertainty for global markets, Ukraine and Russia are both substantial producers and exporter of agricultural products, and the impact of the conflict is also likely reflected in risks to non-energy agricultural commodities. Equities in the S&P 500, conversely, have experienced downward pressure in February as a result of rising prices for global commodities, concerns over inflation, and risks of commercial disruptions related to the Ukraine conflict. As of March 3, the energy index had increased 57% over July 1, 2021, compared with an increase of 23% for the non-energy index, and the S&P 500 increased 1% over July 1 levels (**Figure 4**).

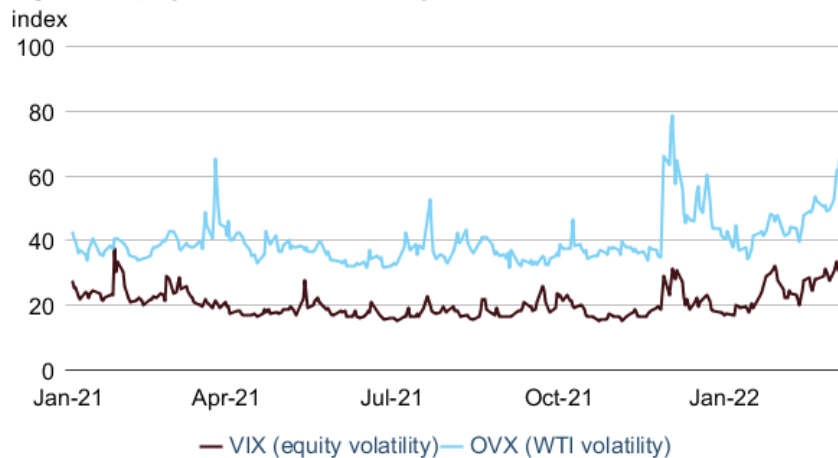
Figure 4. Energy versus non-energy commodities and equities
sub-index level (indexed to January 1, 2021)



 Source: Graph by EIA, based on data from S&P Dow Jones, as compiled by Bloomberg L.P.

U.S. volatility indexes: The [Volatility Index \(VIX\)](#) is a measure of implied volatility in U.S. equity prices, calculated from prices of put and call options on the S&P 500 index, by the Chicago Board of Options Exchange. The [Crude Oil Volatility Index \(OVX\)](#) is a similar estimate derived from options prices for the United States Oil Fund, reflecting the WTI crude oil futures price. The OVX is generally higher than the VIX, partially because it represents the price volatility of a single commodity instead of a diversified group of large U.S. companies (**Figure 5**). In addition, since the beginning of the COVID-19 pandemic, energy markets have been more volatile compared with equities markets, likely related to the unique effects of the pandemic on oil production and consumption. In 2021, the OVX averaged almost double the VIX over the course of the year. New volatility introduced by Russia’s invasion further into Ukraine in February 2022 pushed the monthly average OVX value to higher than in any month in 2021, other than December, averaging 47% in February and peaking at 64% on March 3. This volatility remained below the peak related to the COVID-19 Omicron variant on December 1, 2021, which was 78%. The impact on equities from Russia’s invasion further into Ukraine was also high, with the VIX averaging 26% in February, higher than any monthly average last year, and peaking at 33% on March 1 (exceeding the Omicron-related peak of 31% in December 2021).

Figure 5. Equity and crude oil volatility indexes

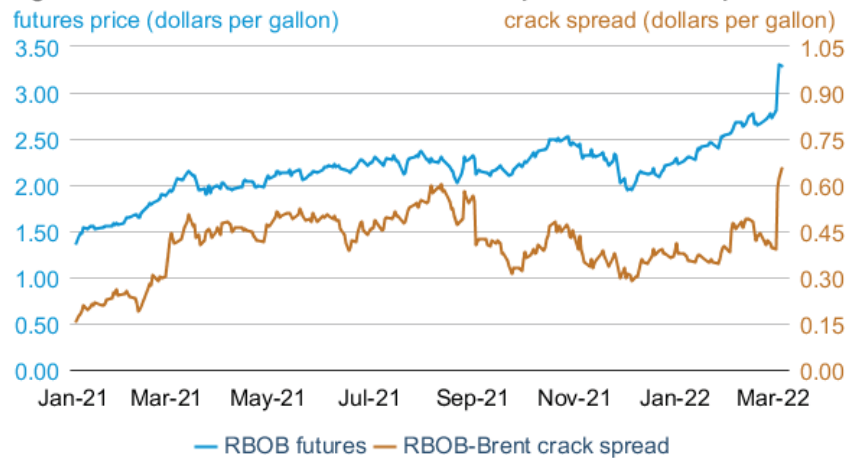


Source: Graph by EIA, based on data from Chicago Board of Options Exchange, as compiled by Bloomberg L.P.

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 \$3.28 per gallon (gal) on March 3, up 71 cents/gal from February 1 (**Figure 6**). The RBOB–Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) settled at 65 cents/gal on March 3, up 20 cents/gal during the same period. The average RBOB–Brent crack spread in February was 45 cents/gal, 8 cents/gal higher than January and 19 cents/gal higher than February 2021.

Figure 6. Historical RBOB front-month futures prices and crack spreads



Source: Graph by EIA, based on data from CME Group, as compiled by Bloomberg L.P.
 Note: RBOB is the petroleum component of gasoline used in many parts of the country.

The RBOB–Brent crack spread remains well above the average for this time of year, likely as a result of low gasoline stocks and relatively low gasoline production. Gasoline inventories **tend to build** in the winter in preparation for the summer driving season, when gasoline demand is at its

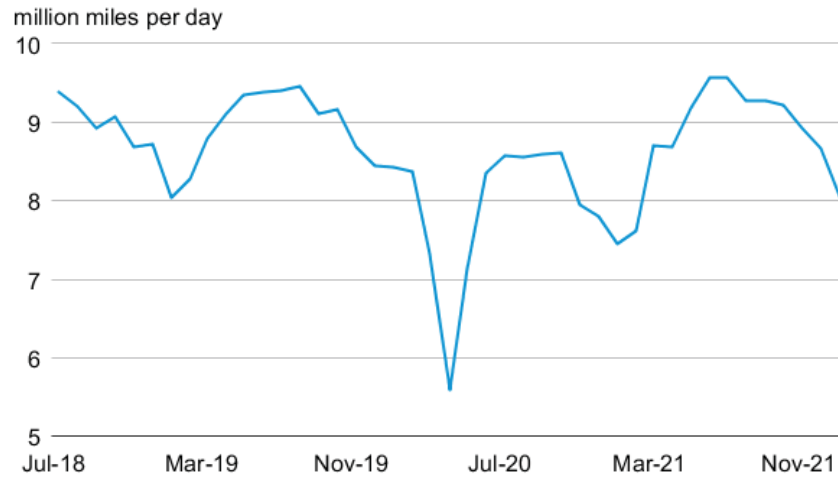
highest. However, after building in January, we estimate U.S. gasoline inventories declined to 246 million barrels, a 2.1 million barrel draw in February, putting inventories 4.3 million barrels (1.7%) below the five-year average. Gasoline inventories have been below the five-year average since January 2021. From February 28 to March 3, the RBOB-Brent crack spread increased by 67%, from 39 cents/gal to 65 cents/gal, as oil prices increased.

We estimate U.S. gasoline consumption averaged 8.5 million barrels per day (b/d) in February, about 0.5 million b/d (5.7%) below the 2016–2020 average, which for February are the years preceding the effects of the pandemic. Meanwhile, we estimate finished motor gasoline production in February totaled 9.2 million b/d, around 0.5 million b/d (4.9%) below the 2016–2020 average for this time of year. Both planned and unplanned refinery outages, including cold weather-related power outages at several Houston area refineries and an [explosion](#) at Marathon’s 578,000-b/d Garyville, Louisiana, refinery, likely contributed to lower production and higher crack spreads.

RBOB prices reached \$3.31/gal on March 2, the highest price since September 2012. Rising crude oil prices are supporting higher prices for RBOB. Starting from the most recent low of \$1.95/gal on December 1, 2021, when news of the outbreak of the Omicron variant created expectations of reduced demand, RBOB prices have increased 68%. One third of the increase happened since February 28.

Gasoline demand: The Federal Highway Administration’s (FHWA) report, [Traffic Volume Trends](#), estimates vehicle miles traveled based on hourly traffic count data reported by states. Transportation makes up 96% of the [end use](#) for motor gasoline, which makes changes in vehicle miles traveled a direct factor on gasoline demand. The latest FHWA report shows total vehicle miles traveled in December 2021 were 268.4 billion, about 1.3% above the five-year (2015–19) average of 264.9 billion. Seasonally adjusted data shows a 1.1 billion mile (0.4%) decline in total vehicle miles traveled from November to December 2021. Total vehicle miles (for both passenger vehicles and trucks) increased for most of 2021, surpassing 2019 levels in every month from June to November (**Figure 7**). For passenger vehicles alone, November marked the first time since the beginning of the COVID-19 pandemic that total miles traveled in [weekly data](#) surpassed 2019 levels. Since then, passenger vehicle miles traveled have been below 2019 levels in every week through February 27. The emergence of the Omicron variant at the end of November may have contributed to less driving in the following months.

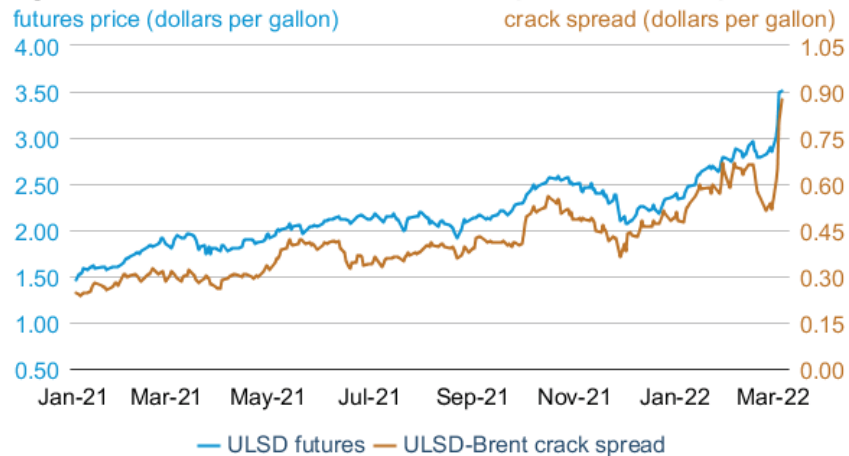
Figure 7. Vehicle miles traveled



Source: Graph by EIA, based on data from the Federal Highway Administration
 Note: January 2022 is a forecast number from the Short-Term Energy Outlook.

Ultra-low sulfur diesel prices: The front-month futures price for ultra-low sulfur diesel (ULSD) for delivery in New York Harbor settled at \$3.50/gal on March 3, a 76 cent/gal increase from February 1 (**Figure 8**). The ULSD-Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) increased 26 cents/gal during the same period and settled at 87 cents/gal on March 3.

Figure 8. Historical ULSD front-month futures prices and crack spreads

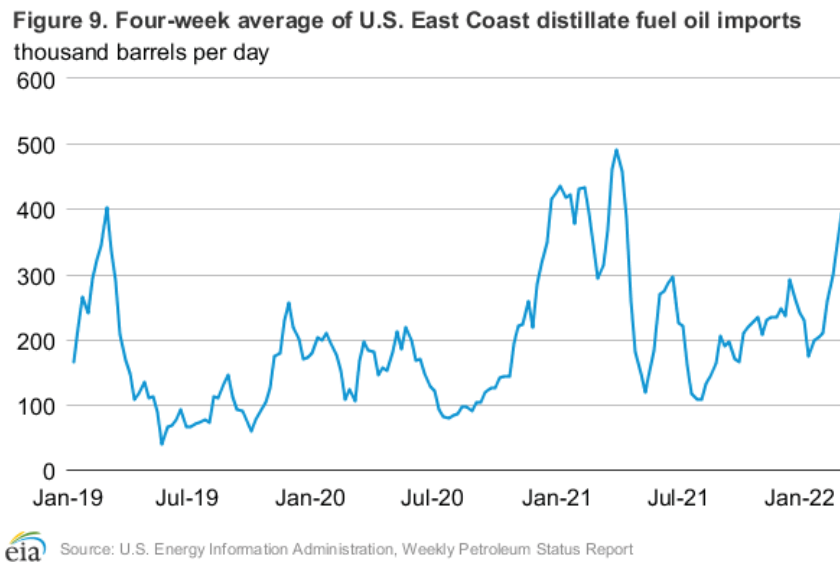


Source: Graph by EIA, based on data from CME Group, as compiled by Bloomberg L.P.
 Note: ULSD=ultra-low sulfur diesel

The front-month ULSD contract averaged higher in February than in any month since June 2008. The ULSD–Brent crack spread increased significantly on February 28 and the first three trading days of March because of the possibility of reduced distillate exports from Russia. After a particularly cold January in New England, the U.S. region that relies most heavily on heating oil, ULSD crack spreads began February at 62 cents/gal and reached as high as 67 cents/gal on February 3. Crack spreads decreased in the second half of February due in part to warmer

weather. We estimate that there were 295 (23%) fewer heating degree days in New England in February than in January, contributing to slightly lower consumption for distillate fuel in February than in January. However, our 4.3 million b/d estimate of distillate consumption for February is 0.3 million b/d (8%) higher than in February 2021. One reason for higher distillate demand from a year ago is congestion at U.S. ports leading to increased trucking demand, as shown by the [American Trucker’s Associations’ Truck Tonnage Index](#). This index measures freight tonnage transported by trucks, which increased 1.2% year-over-year in January 2022. Consistently high demand has resulted in low distillate stocks. We estimate that United States distillate fuel oil stocks totaled 118.4 million barrels in February, the lowest level since May 2018, and 17% lower than the five-year February average. We forecast distillate stocks to begin increasing in May 2022.

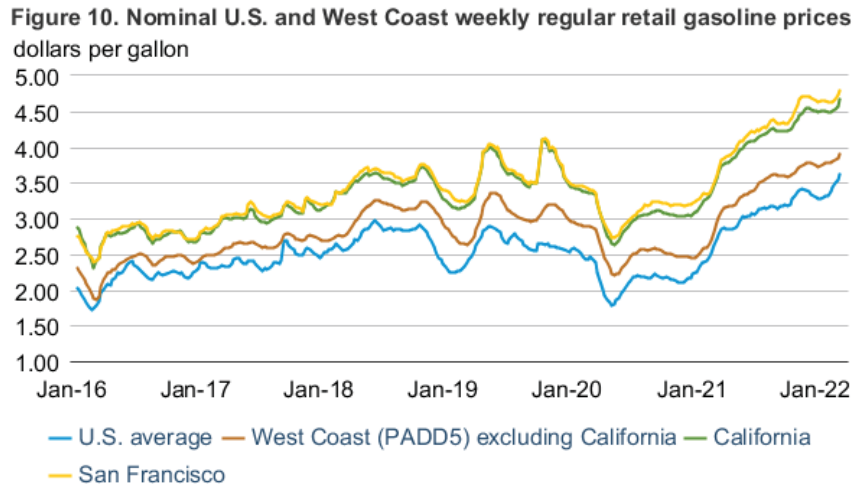
East Coast distillate fuel oil imports: Distillate imports into the U.S. East Coast (PADD 1) have recently been increasing, likely due to a combination of [lower prices abroad](#), high demand in the United States, and low domestic stocks. According to our [Weekly Petroleum Status Report](#), the four-week average of distillate imports increased every week from January 7 through February 25, and the four-week average of distillate imports to the East Coast was 393,000 b/d as of February 25 (**Figure 9**). If confirmed in monthly data, this would be the most East Coast distillate imports for the month of February since 2004, likely because of high heating oil demand.



West Coast retail fuel prices: On February 28, the average U.S. regular-grade retail gasoline price was \$3.61/gal, the highest price (in nominal terms, meaning not adjusted for inflation) since July 2014 (**Figure 10**). Over the past two years, the average U.S. gasoline price increased by \$1.84/gal (103%) from the pandemic low of \$1.77/gal on April 27, 2020. In California, a market with [higher and more variable prices](#) than other states, prices have increased more than in any other state. The average California price has increased by \$2.04/gal (77%) from the pandemic low of \$2.64/gal to average \$4.67/gal as of February 28, the highest nominal price according to

data going back to 2000. San Francisco’s average price of \$4.80/gal is the highest price in city-level data and the highest nominal price on record for any city in data going back to 2000.

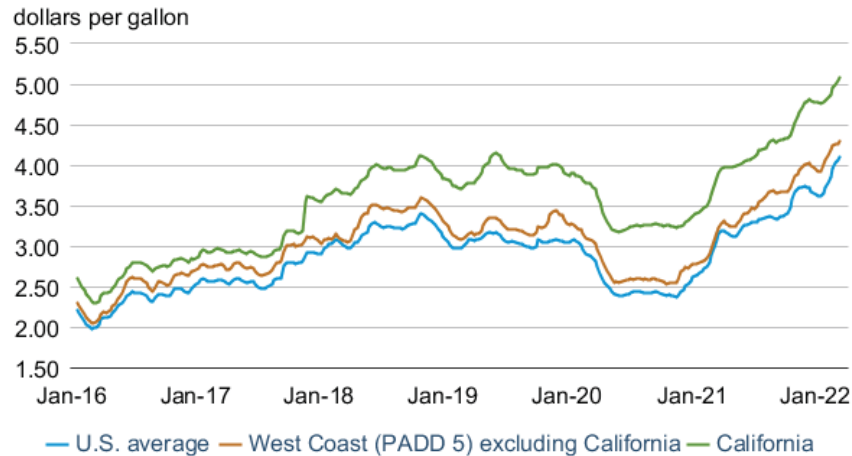
Crude oil prices are the most important factor in determining gasoline prices, making up 56% of the [total cost to produce](#) a gallon of gasoline in January 2022. In addition, [refinery closures](#) could be contributing to higher prices in the West as suppliers rely more on imports and structurally different supply sources. We forecast West Coast gasoline prices to continue to increase through May as higher crude oil prices increase the cost to produce gasoline.



 Source: U.S. Energy Information Administration, Gasoline and Diesel Fuel Update

The nominal average retail price for on-highway diesel in the United States exceeded \$4.00/gal on February 14 for the first time since March 17, 2014, and was \$4.10/gal on February 28 (**Figure 11**). Crude oil prices are the primary driver of U.S. retail diesel prices, making up 51% of the total cost to produce a gallon of diesel in January 2022. On the West Coast (PADD 5), excluding California, the average retail diesel price was \$4.30/gal on February 28. In California, the average retail diesel price was \$5.08/gal on February 28, which when adjusting for inflation is the highest retail diesel price in California since September 2013.

Figure 11. Nominal U.S. and West Coast weekly retail diesel prices

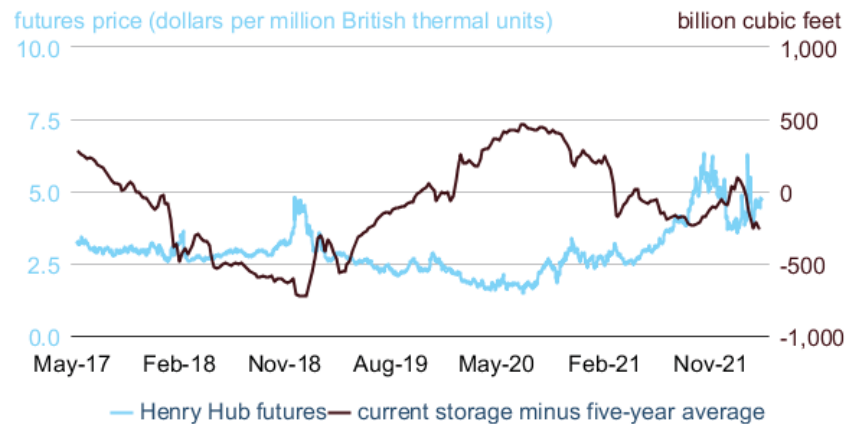


eia Source: U.S. Energy Information Administration, Gasoline and Diesel Fuel Update

Natural Gas

Prices: The front-month natural gas futures contract for delivery at the Henry Hub was \$4.72 per million British thermal units (MMBtu) on March 3, 2022, which was down 3 cents from February 1, 2022 (**Figure 12**). The average closing price for front-month natural gas futures prices in February was \$4.46/MMBtu, the highest February monthly average in real terms since February 2014.

Figure 12. U.S. natural gas front-month futures prices and current storage deviation from five-year average



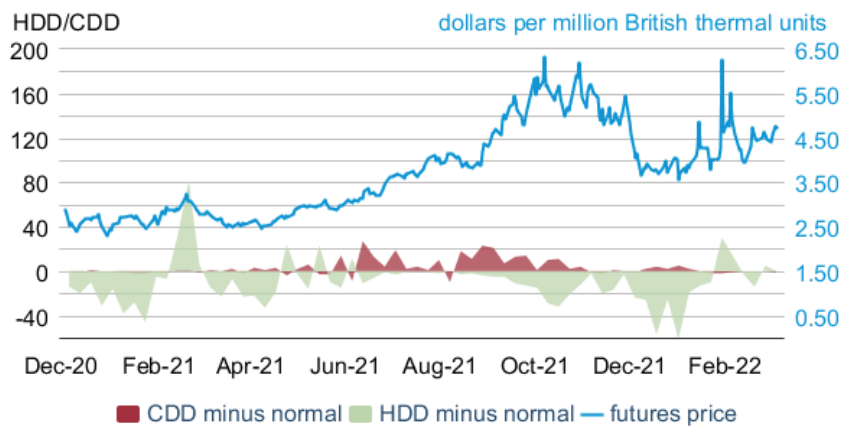
eia Source: Graph by EIA, based on data from CME Group, as compiled by Bloomberg L.P.

Natural gas storage withdrawals outpaced the five-year (2017–2021) average at the beginning of February. Colder-than-normal weather during the second half of January and early February contributed to higher-than-average consumption of natural gas used for space heating in the residential and commercial sectors, resulting in increased natural gas storage withdrawals.

Weekly storage withdrawals for the Lower 48 states during most of January and early February (weeks ending January 14 to February 11) each totaled at least 190 billion cubic feet (Bcf), compared with a five-year average range of 150 Bcf–167 Bcf for those same weeks. As a result, total inventories fell to 12% below the five-year average as of February 11.

Despite the colder-than-normal temperatures in early February, the weather across the country was near the 10-year average for the entire month. For February, heating degree days (HDDs) totaled 696, which is 1% fewer than the 10-year average (**Figure 13**). The cold start to February followed by warmer-than-normal weather for the rest of the month contributed to storage inventories ending February at 1,626 Bcf, or 13% below the five-year average.

Figure 13. Natural gas front-month futures prices and actual minus historical average HDD and CDD

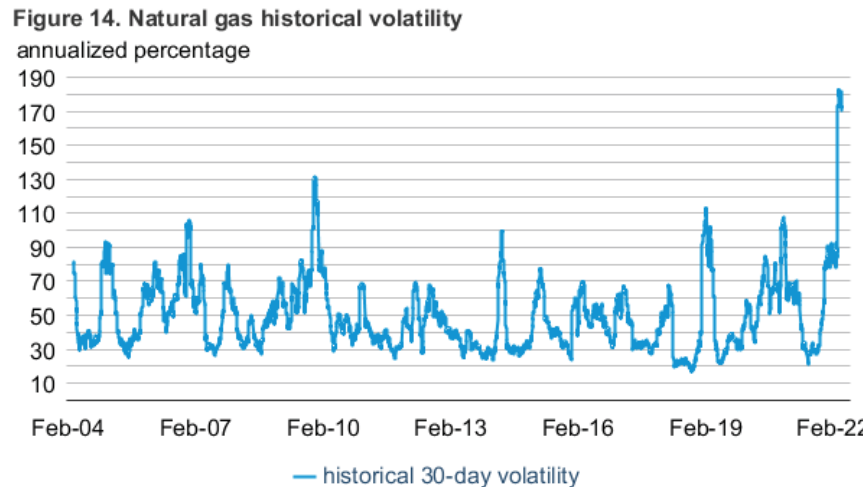


Sources: CME Group and National Oceanic and Atmospheric Administration, as compiled by Bloomberg L.P.
 Note: HDD=heating degree days, CDD=cooling degree days.

Warmer weather on average in February compared with January contributed to a decrease in natural gas consumption in the residential and commercial sectors, which averaged an estimated combined 45.5 billion cubic feet per day (Bcf/d) in February, down 4.1 Bcf/d (8%) from January. Natural gas consumption in the electric power sector was also down in February, averaging 28.4 Bcf/d, or 2.3 Bcf/d (7%) less than in January. Despite the decrease in natural gas consumption compared with January, natural gas futures prices increased in February and remained above \$4/MMBtu. Prices were supported by below-average inventories and by high demand for U.S. liquefied natural gas (LNG) exports – a result of high international prices. We estimate U.S. LNG exports were 10.9 Bcf/d in February, down 0.3 Bcf/d from January and up 3.5 Bcf/d from February 2021. We forecast U.S. LNG exports to increase to 13.0 Bcf/d by the end of 2022 and average 12.1 Bcf/d in 2023.

Historical volatility: Volatility of U.S. natural gas futures prices has risen during the past seven months, reaching record-high levels in February (**Figure 14**). Historical volatility measures the magnitude of daily changes in the closing price for a commodity during a specific time in the past. Based on rolling front-month contracts, the 30-day historical volatility of the U.S. natural

gas futures price was 179.1% for February, almost doubling from January. The previous record natural gas price volatility for any month was October 2009, when the historical volatility averaged 123.8%. The historical volatility of the natural gas futures price at the Henry Hub in February has corresponded with volatility at international pricing hubs in Europe and Asia. Daily front-month natural gas futures prices ranged from a monthly intraday high of \$5.57/MMBtu on February 2 to a low of \$3.88/MMBtu on February 11.



 Source: Graph by EIA, based on data from Bloomberg L.P.

Notable forecast changes

- We forecast the Brent crude oil spot price will average \$105/b in 2022, which is \$22/b more than we forecast in the February STEO. The higher price forecast partly reflects the uncertainties about disruptions to supply and additional sanctions related to Russia's further invasion of Ukraine. It also reflects a reduction in our forecast of OECD inventories throughout the forecast. The increase in crude oil prices in the forecast also results in higher prices for gasoline and diesel fuel in 2022 compared with last month's forecast.
- We forecast U.S. crude oil production to average 13.0 million b/d in 2023, 0.4 million b/d more than in last month's forecast. The higher production forecast is the result of higher forecast crude oil prices.
- Our forecast for Russia's liquid fuels production averages 10.8 million b/d in both 2022 and 2023, which is unchanged from 2021, but 0.7 million b/d and 1.1 million b/d lower, respectively, than we forecast in the February STEO.

- We forecast global oil inventories will rise by 0.4 million b/d in both 2022 and 2023. Our current expectation for 2022 inventory builds are 0.4 million b/d less than forecast last month and builds for 2023 are 0.6 million b/d less.
- For more information, see the [detailed table of forecast changes](#).

This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the U.S. Government. The views in this report therefore should not be construed as representing those of the U.S. Department of Energy or other federal agencies.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 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	30.07	30.74	31.07	32.25	32.27	32.65	32.97	33.73	34.13	34.37	34.44	34.84	31.04	32.91	34.45
U.S. (50 States)	17.62	19.05	18.94	19.86	19.66	20.10	20.57	21.06	21.23	21.53	21.72	21.98	18.87	20.35	21.61
Canada	5.62	5.37	5.49	5.76	5.87	5.83	5.85	5.86	5.91	5.88	5.89	5.90	5.56	5.85	5.90
Mexico	1.93	1.95	1.90	1.92	1.94	1.93	1.89	1.86	1.90	1.86	1.83	1.79	1.92	1.91	1.85
Other OECD	4.91	4.37	4.74	4.71	4.79	4.78	4.66	4.95	5.08	5.10	5.00	5.17	4.68	4.80	5.09
Non-OECD	62.51	63.91	65.52	66.04	67.35	68.02	68.64	68.33	68.07	68.63	68.91	68.50	64.51	68.09	68.53
OPEC	30.34	30.88	32.28	33.10	34.00	34.48	34.57	34.71	34.78	34.63	34.62	34.61	31.66	34.44	34.66
Crude Oil Portion	25.08	25.49	26.84	27.66	28.44	29.05	29.09	29.19	29.24	29.22	29.16	29.11	26.28	28.95	29.18
Other Liquids (b)	5.26	5.39	5.44	5.44	5.56	5.43	5.48	5.52	5.54	5.41	5.46	5.50	5.38	5.50	5.48
Eurasia	13.38	13.61	13.58	14.23	14.32	13.66	13.83	13.92	13.94	13.82	13.82	13.91	13.70	13.93	13.87
China	4.99	5.03	5.01	4.94	5.04	5.04	5.04	5.08	5.06	5.09	5.08	5.13	4.99	5.05	5.09
Other Non-OECD	13.79	14.38	14.64	13.78	14.00	14.84	15.20	14.62	14.29	15.08	15.38	14.85	14.15	14.67	14.91
Total World Production	92.58	94.65	96.59	98.29	99.62	100.67	101.61	102.06	102.20	103.00	103.35	103.34	95.55	101.00	102.97
Non-OPEC Production	62.23	63.77	64.31	65.20	65.62	66.19	67.04	67.35	67.42	68.36	68.72	68.73	63.89	66.56	68.31
Consumption (million barrels per day) (c)															
OECD	42.30	44.00	45.72	46.32	46.00	45.41	46.22	46.50	45.96	45.78	46.59	46.89	44.60	46.03	46.31
U.S. (50 States)	18.45	20.03	20.21	20.41	20.38	20.58	20.77	20.86	20.36	20.86	21.03	21.11	19.78	20.65	20.84
U.S. Territories	0.20	0.18	0.18	0.19	0.20	0.18	0.19	0.20	0.19	0.17	0.17	0.18	0.19	0.19	0.18
Canada	2.12	2.16	2.41	2.37	2.30	2.29	2.41	2.39	2.38	2.33	2.43	2.40	2.27	2.35	2.38
Europe	11.91	12.62	13.83	13.67	13.22	13.28	13.62	13.31	13.18	13.34	13.74	13.50	13.01	13.36	13.44
Japan	3.73	3.08	3.18	3.56	3.76	3.09	3.20	3.55	3.68	3.08	3.18	3.50	3.39	3.40	3.36
Other OECD	5.89	5.92	5.90	6.12	6.14	5.99	6.03	6.19	6.17	6.01	6.04	6.18	5.96	6.09	6.10
Non-OECD	52.11	52.54	52.87	54.00	54.01	54.52	54.75	55.00	56.32	56.58	56.21	55.87	52.88	54.57	56.24
Eurasia	4.65	4.73	5.08	4.94	4.77	4.68	5.06	4.97	4.75	4.91	5.25	5.16	4.85	4.87	5.02
Europe	0.74	0.74	0.74	0.76	0.76	0.76	0.77	0.78	0.76	0.78	0.78	0.79	0.75	0.77	0.78
China	15.27	15.48	14.99	15.33	15.55	15.86	15.60	15.91	16.64	16.54	15.90	15.82	15.27	15.73	16.22
Other Asia	13.61	13.16	13.01	13.89	14.02	14.15	13.76	14.16	14.84	14.81	14.22	14.52	13.42	14.02	14.60
Other Non-OECD	17.84	18.43	19.04	19.08	18.91	19.07	19.55	19.18	19.33	19.54	20.06	19.59	18.60	19.18	19.63
Total World Consumption	94.41	96.53	98.58	100.32	100.01	99.93	100.97	101.49	102.28	102.37	102.80	102.76	97.48	100.61	102.55
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	0.59	-0.47	-0.20	0.31	0.08	-0.54	-0.27	0.57	0.53	0.06	-0.04
Other OECD	0.81	0.14	0.96	0.27	-0.06	-0.08	-0.14	-0.28	0.00	-0.03	-0.09	-0.37	0.54	-0.14	-0.12
Other Stock Draws and Balance	0.56	1.24	0.66	0.98	-0.14	-0.18	-0.30	-0.60	0.00	-0.06	-0.19	-0.79	0.86	-0.31	-0.26
Total Stock Draw	1.83	1.88	1.99	2.02	0.40	-0.74	-0.64	-0.57	0.08	-0.63	-0.55	-0.58	1.93	-0.39	-0.42
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	1,302	1,271	1,241	1,194	1,167	1,249	1,267	1,246	1,247	1,304	1,326	1,284	1,194	1,246	1,284
OECD Commercial Inventory	2,911	2,868	2,749	2,677	2,656	2,745	2,776	2,781	2,782	2,841	2,871	2,863	2,677	2,781	2,863

(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 March 3, 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 - March 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	11.62	<i>11.59</i>	<i>11.89</i>	<i>12.15</i>	<i>12.48</i>	<i>12.75</i>	<i>12.91</i>	<i>13.06</i>	<i>13.24</i>	11.18	<i>12.03</i>	<i>12.99</i>
Alaska	0.46	0.44	0.41	0.44	<i>0.42</i>	<i>0.36</i>	<i>0.38</i>	<i>0.41</i>	<i>0.41</i>	<i>0.36</i>	<i>0.39</i>	<i>0.42</i>	0.44	<i>0.39</i>	<i>0.39</i>
Federal Gulf of Mexico (b)	1.80	1.79	1.49	1.73	<i>1.81</i>	<i>1.82</i>	<i>1.74</i>	<i>1.79</i>	<i>1.84</i>	<i>1.83</i>	<i>1.75</i>	<i>1.78</i>	1.70	<i>1.79</i>	<i>1.80</i>
Lower 48 States (excl GOM)	8.44	9.05	9.24	9.44	<i>9.37</i>	<i>9.71</i>	<i>10.03</i>	<i>10.29</i>	<i>10.50</i>	<i>10.72</i>	<i>10.92</i>	<i>11.05</i>	9.05	<i>9.85</i>	<i>10.80</i>
Crude Oil Net Imports (c)	2.87	2.96	3.60	3.09	<i>3.67</i>	<i>3.95</i>	<i>4.19</i>	<i>3.12</i>	<i>2.36</i>	<i>3.56</i>	<i>3.66</i>	<i>2.26</i>	3.13	<i>3.73</i>	<i>2.96</i>
SPR Net Withdrawals	0.00	0.18	0.04	0.26	<i>0.30</i>	<i>0.43</i>	<i>0.00</i>	<i>0.08</i>	<i>0.09</i>	<i>0.09</i>	<i>-0.04</i>	<i>0.11</i>	0.12	<i>0.20</i>	<i>0.06</i>
Commercial Inventory Net Withdrawals	-0.18	0.59	0.30	-0.01	<i>-0.14</i>	<i>-0.13</i>	<i>0.20</i>	<i>-0.06</i>	<i>-0.36</i>	<i>-0.09</i>	<i>0.06</i>	<i>0.06</i>	0.18	<i>-0.03</i>	<i>-0.08</i>
Crude Oil Adjustment (d)	0.42	0.63	0.54	0.55	<i>-0.06</i>	<i>0.22</i>	<i>0.23</i>	<i>0.16</i>	<i>0.22</i>	<i>0.22</i>	<i>0.23</i>	<i>0.16</i>	0.54	<i>0.14</i>	<i>0.21</i>
Total Crude Oil Input to Refineries	13.81	15.65	15.60	15.51	<i>15.37</i>	<i>16.35</i>	<i>16.77</i>	<i>15.79</i>	<i>15.06</i>	<i>16.69</i>	<i>16.97</i>	<i>15.85</i>	15.15	<i>16.07</i>	<i>16.14</i>
Other Supply															
Refinery Processing Gain	0.84	0.97	0.97	1.04	<i>1.04</i>	<i>1.03</i>	<i>1.05</i>	<i>1.06</i>	<i>1.03</i>	<i>1.00</i>	<i>1.02</i>	<i>1.01</i>	0.95	<i>1.05</i>	<i>1.01</i>
Natural Gas Plant Liquids Production	4.86	5.46	5.52	5.74	<i>5.65</i>	<i>5.79</i>	<i>5.95</i>	<i>6.09</i>	<i>6.07</i>	<i>6.20</i>	<i>6.21</i>	<i>6.24</i>	5.40	<i>5.87</i>	<i>6.18</i>
Renewables and Oxygenate Production (e)	1.03	1.13	1.10	1.24	<i>1.17</i>	<i>1.18</i>	<i>1.19</i>	<i>1.21</i>	<i>1.17</i>	<i>1.20</i>	<i>1.21</i>	<i>1.26</i>	1.12	<i>1.19</i>	<i>1.21</i>
Fuel Ethanol Production	0.90	0.99	0.96	1.06	<i>1.00</i>	<i>1.00</i>	<i>1.01</i>	<i>1.02</i>	<i>0.98</i>	<i>1.01</i>	<i>1.00</i>	<i>1.02</i>	0.98	<i>1.01</i>	<i>1.00</i>
Petroleum Products Adjustment (f)	0.19	0.22	0.22	0.23	<i>0.21</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	<i>0.21</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	0.22	<i>0.22</i>	<i>0.22</i>
Product Net Imports (c)	-2.94	-3.13	-3.24	-3.86	<i>-3.49</i>	<i>-3.22</i>	<i>-4.01</i>	<i>-3.80</i>	<i>-3.53</i>	<i>-3.90</i>	<i>-4.29</i>	<i>-3.86</i>	-3.29	<i>-3.63</i>	<i>-3.90</i>
Hydrocarbon Gas Liquids	-2.02	-2.23	-2.16	-2.19	<i>-2.20</i>	<i>-2.14</i>	<i>-2.26</i>	<i>-2.34</i>	<i>-2.44</i>	<i>-2.50</i>	<i>-2.59</i>	<i>-2.53</i>	-2.15	<i>-2.24</i>	<i>-2.52</i>
Unfinished Oils	0.14	0.25	0.22	0.08	<i>0.23</i>	<i>0.28</i>	<i>0.30</i>	<i>0.20</i>	<i>0.18</i>	<i>0.23</i>	<i>0.29</i>	<i>0.20</i>	0.17	<i>0.25</i>	<i>0.23</i>
Other HC/Oxygenates	-0.08	-0.04	-0.03	-0.06	<i>-0.05</i>	<i>-0.03</i>	<i>-0.05</i>	<i>-0.03</i>	<i>-0.04</i>	<i>-0.03</i>	<i>-0.03</i>	<i>-0.02</i>	-0.05	<i>-0.04</i>	<i>-0.03</i>
Motor Gasoline Blend Comp.	0.55	0.79	0.66	0.40	<i>0.35</i>	<i>0.75</i>	<i>0.40</i>	<i>0.21</i>	<i>0.37</i>	<i>0.60</i>	<i>0.39</i>	<i>0.41</i>	0.60	<i>0.43</i>	<i>0.44</i>
Finished Motor Gasoline	-0.66	-0.66	-0.68	-0.85	<i>-0.65</i>	<i>-0.56</i>	<i>-0.66</i>	<i>-0.56</i>	<i>-0.66</i>	<i>-0.63</i>	<i>-0.63</i>	<i>-0.73</i>	-0.71	<i>-0.61</i>	<i>-0.66</i>
Jet Fuel	0.03	0.09	0.09	0.00	<i>0.00</i>	<i>0.04</i>	<i>-0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>0.02</i>	<i>0.04</i>	<i>0.08</i>	0.05	<i>0.01</i>	<i>0.04</i>
Distillate Fuel Oil	-0.49	-0.90	-0.94	-0.89	<i>-0.65</i>	<i>-1.05</i>	<i>-1.17</i>	<i>-0.89</i>	<i>-0.58</i>	<i>-1.05</i>	<i>-1.18</i>	<i>-0.91</i>	-0.80	<i>-0.94</i>	<i>-0.93</i>
Residual Fuel Oil	0.08	0.05	0.08	0.16	<i>0.10</i>	<i>0.05</i>	<i>0.01</i>	<i>0.09</i>	<i>-0.01</i>	<i>0.01</i>	<i>-0.02</i>	<i>0.09</i>	0.09	<i>0.06</i>	<i>0.02</i>
Other Oils (g)	-0.49	-0.49	-0.50	-0.50	<i>-0.63</i>	<i>-0.55</i>	<i>-0.58</i>	<i>-0.48</i>	<i>-0.36</i>	<i>-0.54</i>	<i>-0.56</i>	<i>-0.45</i>	-0.49	<i>-0.56</i>	<i>-0.48</i>
Product Inventory Net Withdrawals	0.65	-0.26	0.03	0.52	<i>0.43</i>	<i>-0.77</i>	<i>-0.40</i>	<i>0.29</i>	<i>0.35</i>	<i>-0.54</i>	<i>-0.30</i>	<i>0.39</i>	0.23	<i>-0.11</i>	<i>-0.02</i>
Total Supply	18.43	20.03	20.21	20.41	<i>20.38</i>	<i>20.58</i>	<i>20.77</i>	<i>20.85</i>	<i>20.36</i>	<i>20.86</i>	<i>21.03</i>	<i>21.11</i>	19.78	<i>20.65</i>	<i>20.84</i>
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	3.40	3.33	3.31	3.60	<i>3.97</i>	<i>3.41</i>	<i>3.41</i>	<i>3.84</i>	<i>3.93</i>	<i>3.51</i>	<i>3.46</i>	<i>3.85</i>	3.41	<i>3.66</i>	<i>3.69</i>
Other HC/Oxygenates	0.11	0.13	0.11	0.16	<i>0.17</i>	<i>0.17</i>	<i>0.16</i>	<i>0.21</i>	<i>0.20</i>	<i>0.19</i>	<i>0.19</i>	<i>0.26</i>	0.13	<i>0.18</i>	<i>0.21</i>
Unfinished Oils	0.05	0.03	-0.05	-0.01	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>-0.03</i>	<i>-0.01</i>	<i>0.01</i>	0.00	<i>0.00</i>	<i>-0.01</i>
Motor Gasoline	8.00	9.07	9.13	8.96	<i>8.45</i>	<i>9.11</i>	<i>9.17</i>	<i>8.91</i>	<i>8.44</i>	<i>9.14</i>	<i>9.20</i>	<i>8.97</i>	8.80	<i>8.91</i>	<i>8.94</i>
Fuel Ethanol blended into Motor Gasoline	0.82	0.93	0.94	0.95	<i>0.87</i>	<i>0.94</i>	<i>0.94</i>	<i>0.93</i>	<i>0.87</i>	<i>0.94</i>	<i>0.94</i>	<i>0.94</i>	0.91	<i>0.92</i>	<i>0.92</i>
Jet Fuel	1.13	1.34	1.52	1.49	<i>1.48</i>	<i>1.58</i>	<i>1.63</i>	<i>1.61</i>	<i>1.52</i>	<i>1.65</i>	<i>1.71</i>	<i>1.67</i>	1.37	<i>1.58</i>	<i>1.64</i>
Distillate Fuel Oil	3.97	3.93	3.87	4.00	<i>4.26</i>	<i>4.02</i>	<i>3.95</i>	<i>4.06</i>	<i>4.20</i>	<i>4.07</i>	<i>4.02</i>	<i>4.10</i>	3.94	<i>4.07</i>	<i>4.10</i>
Residual Fuel Oil	0.26	0.25	0.33	0.41	<i>0.32</i>	<i>0.26</i>	<i>0.29</i>	<i>0.29</i>	<i>0.25</i>	<i>0.26</i>	<i>0.28</i>	<i>0.30</i>	0.31	<i>0.29</i>	<i>0.27</i>
Other Oils (g)	1.53	1.95	1.98	1.81	<i>1.73</i>	<i>2.03</i>	<i>2.16</i>	<i>1.93</i>	<i>1.82</i>	<i>2.07</i>	<i>2.19</i>	<i>1.96</i>	1.82	<i>1.96</i>	<i>2.01</i>
Total Consumption	18.45	20.03	20.21	20.41	<i>20.38</i>	<i>20.58</i>	<i>20.77</i>	<i>20.85</i>	<i>20.36</i>	<i>20.86</i>	<i>21.03</i>	<i>21.11</i>	19.78	<i>20.65</i>	<i>20.84</i>
Total Petroleum and Other Liquids Net Imports	-0.07	-0.16	0.35	-0.77	<i>0.18</i>	<i>0.73</i>	<i>0.18</i>	<i>-0.68</i>	<i>-1.17</i>	<i>-0.34</i>	<i>-0.64</i>	<i>-1.60</i>	-0.16	<i>0.10</i>	<i>-0.94</i>
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	501.9	448.0	420.4	421.4	<i>433.9</i>	<i>445.4</i>	<i>427.0</i>	<i>432.9</i>	<i>465.3</i>	<i>473.4</i>	<i>467.6</i>	<i>461.7</i>	421.4	<i>432.9</i>	<i>461.7</i>
Hydrocarbon Gas Liquids	168.6	195.8	225.6	188.4	<i>133.5</i>	<i>188.5</i>	<i>237.3</i>	<i>199.7</i>	<i>161.3</i>	<i>209.2</i>	<i>246.8</i>	<i>203.8</i>	188.4	<i>199.7</i>	<i>203.8</i>
Unfinished Oils	93.3	93.0	90.2	80.3	<i>90.3</i>	<i>90.4</i>	<i>89.8</i>	<i>83.0</i>	<i>92.3</i>	<i>90.4</i>	<i>89.7</i>	<i>82.6</i>	80.3	<i>83.0</i>	<i>82.6</i>
Other HC/Oxygenates	29.1	27.5	25.4	28.6	<i>31.8</i>	<i>30.6</i>	<i>30.3</i>	<i>30.6</i>	<i>32.6</i>	<i>31.4</i>	<i>31.1</i>	<i>31.4</i>	28.6	<i>30.6</i>	<i>31.4</i>
Total Motor Gasoline	237.6	237.2	227.0	232.2	<i>237.7</i>	<i>245.4</i>	<i>233.5</i>	<i>249.0</i>	<i>247.0</i>	<i>246.6</i>	<i>238.4</i>	<i>250.5</i>	232.2	<i>249.0</i>	<i>250.5</i>
Finished Motor Gasoline	20.3	18.6	18.5	17.7	<i>16.8</i>	<i>20.9</i>	<i>23.1</i>	<i>26.6</i>	<i>23.2</i>	<i>24.3</i>	<i>25.4</i>	<i>27.9</i>	17.7	<i>26.6</i>	<i>27.9</i>
Motor Gasoline Blend Comp.	217.4	218.6	208.5	214.5	<i>221.0</i>	<i>224.5</i>	<i>210.5</i>	<i>222.4</i>	<i>223.8</i>	<i>222.3</i>	<i>213.0</i>	<i>222.6</i>	214.5	<i>222.4</i>	<i>222.6</i>
Jet Fuel	39.0	44.7	42.0	35.8	<i>37.8</i>	<i>39.0</i>	<i>41.8</i>	<i>38.8</i>	<i>38.3</i>	<i>39.3</i>	<i>41.9</i>	<i>38.8</i>	35.8	<i>38.8</i>	<i>38.8</i>
Distillate Fuel Oil	145.5	140.1	131.7	129.9	<i>113.7</i>	<i>120.6</i>	<i>128.8</i>	<i>130.7</i>	<i>119.4</i>	<i>124.5</i>	<i>131.4</i>	<i>133.3</i>	129.9	<i>130.7</i>	<i>133.3</i>
Residual Fuel Oil	30.9	31.1	28.0	25.4	<i>27.7</i>	<i>30.1</i>	<i>29.2</i>	<i>30.8</i>	<i>30.5</i>	<i>31.2</i>	<i>29.9</i>	<i>31.3</i>	25.4	<i>30.8</i>	<i>31.3</i>
Other Oils (g)	55.8	54.1	50.5	51.8	<i>60.8</i>	<i>58.7</i>	<i>49.5</i>	<i>51.0</i>	<i>60.2</i>	<i>58.1</i>	<i>48.9</i>	<i>50.2</i>	51.8	<i>51.0</i>	<i>50.2</i>
Total Commercial Inventory	1301.7	1271.5	1240.7	1193.8	<i>1167.2</i>	<i>1248.7</i>	<i>1267.1</i>	<i>1246.4</i>	<i>1246.9</i>	<i>1304.1</i>	<i>1325.7</i>	<i>1283.7</i>	1193.8	<i>1246.4</i>	<i>1283.7</i>
Crude Oil in SPR	637.8	621.3	617.8	593.7	<i>566.8</i>	<i>528.1</i>	<i>528.1</i>	<i>520.3</i>	<i>512.5</i>	<i>504.7</i>	<i>508.1</i>	<i>497.6</i>	593.7	<i>520.3</i>	<i>497.6</i>

(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."

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 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	104.90	<i>103.93</i>	<i>104.36</i>	<i>105.32</i>	<i>106.44</i>	<i>106.70</i>	<i>107.38</i>	<i>108.30</i>	<i>108.84</i>	101.41	<i>105.02</i>	<i>107.81</i>
Alaska	1.02	0.95	0.90	1.02	<i>0.93</i>	<i>0.75</i>	<i>0.71</i>	<i>0.85</i>	<i>0.90</i>	<i>0.75</i>	<i>0.71</i>	<i>0.87</i>	0.97	<i>0.81</i>	<i>0.81</i>
Federal GOM (a)	2.26	2.25	1.82	2.12	<i>2.29</i>	<i>2.25</i>	<i>2.12</i>	<i>2.12</i>	<i>2.14</i>	<i>2.08</i>	<i>1.95</i>	<i>1.92</i>	2.11	<i>2.20</i>	<i>2.02</i>
Lower 48 States (excl GOM)	94.37	97.92	99.17	101.76	<i>100.71</i>	<i>101.36</i>	<i>102.50</i>	<i>103.47</i>	<i>103.66</i>	<i>104.55</i>	<i>105.63</i>	<i>106.05</i>	98.33	<i>102.02</i>	<i>104.98</i>
Total Dry Gas Production	90.59	93.15	93.86	96.57	<i>95.69</i>	<i>96.09</i>	<i>96.97</i>	<i>98.00</i>	<i>98.11</i>	<i>98.75</i>	<i>99.60</i>	<i>100.10</i>	93.56	<i>96.69</i>	<i>99.15</i>
LNG Gross Imports	0.15	0.02	0.03	0.04	<i>0.32</i>	<i>0.18</i>	<i>0.18</i>	<i>0.20</i>	<i>0.32</i>	<i>0.18</i>	<i>0.18</i>	<i>0.20</i>	0.06	<i>0.22</i>	<i>0.22</i>
LNG Gross Exports	9.27	9.81	9.60	10.32	<i>10.99</i>	<i>10.84</i>	<i>11.33</i>	<i>12.18</i>	<i>12.72</i>	<i>11.86</i>	<i>11.73</i>	<i>12.23</i>	9.76	<i>11.34</i>	<i>12.13</i>
Pipeline Gross Imports	8.68	6.81	7.24	7.82	<i>8.04</i>	<i>6.44</i>	<i>6.38</i>	<i>6.71</i>	<i>7.75</i>	<i>6.44</i>	<i>6.32</i>	<i>6.50</i>	7.63	<i>6.89</i>	<i>6.75</i>
Pipeline Gross Exports	8.31	8.67	8.50	8.41	<i>8.84</i>	<i>8.41</i>	<i>9.25</i>	<i>9.21</i>	<i>9.12</i>	<i>9.03</i>	<i>9.33</i>	<i>9.24</i>	8.47	<i>8.93</i>	<i>9.18</i>
Supplemental Gaseous Fuels	0.17	0.15	0.15	0.17	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	0.16	<i>0.17</i>	<i>0.17</i>
Net Inventory Withdrawals	17.18	-9.12	-7.87	1.03	<i>18.64</i>	<i>-11.10</i>	<i>-7.51</i>	<i>3.88</i>	<i>15.02</i>	<i>-11.49</i>	<i>-8.59</i>	<i>2.64</i>	0.24	<i>0.92</i>	<i>-0.66</i>
Total Supply	99.18	72.53	75.31	86.90	<i>103.02</i>	<i>72.52</i>	<i>75.61</i>	<i>87.58</i>	<i>99.52</i>	<i>73.17</i>	<i>76.62</i>	<i>88.14</i>	83.43	<i>84.61</i>	<i>84.31</i>
Balancing Item (b)	0.26	-0.58	-0.22	-1.27	<i>0.31</i>	<i>-0.50</i>	<i>0.54</i>	<i>-0.44</i>	<i>0.95</i>	<i>-0.19</i>	<i>0.11</i>	<i>-1.06</i>	-0.46	<i>-0.02</i>	<i>-0.05</i>
Total Primary Supply	99.44	71.95	75.09	85.64	<i>103.32</i>	<i>72.03</i>	<i>76.15</i>	<i>87.13</i>	<i>100.47</i>	<i>72.98</i>	<i>76.73</i>	<i>87.08</i>	82.97	<i>84.59</i>	<i>84.26</i>
Consumption (billion cubic feet per day)															
Residential	25.67	7.49	3.62	14.43	<i>26.48</i>	<i>7.96</i>	<i>3.73</i>	<i>16.17</i>	<i>25.29</i>	<i>8.02</i>	<i>3.79</i>	<i>16.09</i>	12.75	<i>13.53</i>	<i>13.25</i>
Commercial	14.87	6.23	4.69	10.08	<i>15.81</i>	<i>6.64</i>	<i>4.79</i>	<i>10.26</i>	<i>15.05</i>	<i>6.67</i>	<i>4.78</i>	<i>10.24</i>	8.94	<i>9.35</i>	<i>9.16</i>
Industrial	23.81	21.46	21.13	23.45	<i>24.70</i>	<i>22.14</i>	<i>22.21</i>	<i>24.91</i>	<i>24.75</i>	<i>22.29</i>	<i>22.33</i>	<i>25.20</i>	22.46	<i>23.49</i>	<i>23.64</i>
Electric Power (c)	26.79	29.20	37.94	29.47	<i>27.57</i>	<i>27.57</i>	<i>37.51</i>	<i>27.46</i>	<i>26.57</i>	<i>28.10</i>	<i>37.75</i>	<i>27.10</i>	30.88	<i>30.05</i>	<i>29.90</i>
Lease and Plant Fuel	4.87	5.04	5.08	5.23	<i>5.18</i>	<i>5.20</i>	<i>5.25</i>	<i>5.31</i>	<i>5.32</i>	<i>5.35</i>	<i>5.40</i>	<i>5.43</i>	5.06	<i>5.24</i>	<i>5.37</i>
Pipeline and Distribution Use	3.29	2.38	2.48	2.83	<i>3.42</i>	<i>2.35</i>	<i>2.49</i>	<i>2.87</i>	<i>3.33</i>	<i>2.38</i>	<i>2.51</i>	<i>2.87</i>	2.74	<i>2.78</i>	<i>2.77</i>
Vehicle Use	0.14	0.15	0.15	0.15	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	0.15	<i>0.16</i>	<i>0.16</i>
Total Consumption	99.44	71.95	75.09	85.64	<i>103.32</i>	<i>72.03</i>	<i>76.15</i>	<i>87.13</i>	<i>100.47</i>	<i>72.98</i>	<i>76.73</i>	<i>87.08</i>	82.97	<i>84.59</i>	<i>84.26</i>
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	1,801	2,583	3,305	3,208	<i>1,530</i>	<i>2,540</i>	<i>3,231</i>	<i>2,874</i>	<i>1,522</i>	<i>2,567</i>	<i>3,357</i>	<i>3,114</i>	3,208	<i>2,874</i>	<i>3,114</i>
East Region (d)	313	515	804	766	<i>262</i>	<i>535</i>	<i>786</i>	<i>649</i>	<i>264</i>	<i>572</i>	<i>848</i>	<i>752</i>	766	<i>649</i>	<i>752</i>
Midwest Region (d)	395	630	966	887	<i>328</i>	<i>586</i>	<i>907</i>	<i>799</i>	<i>333</i>	<i>623</i>	<i>949</i>	<i>842</i>	887	<i>799</i>	<i>842</i>
South Central Region (d)	760	991	1,052	1,141	<i>673</i>	<i>979</i>	<i>1,036</i>	<i>973</i>	<i>636</i>	<i>935</i>	<i>1,021</i>	<i>1,035</i>	1,141	<i>973</i>	<i>1,035</i>
Mountain Region (d)	113	175	205	171	<i>81</i>	<i>128</i>	<i>181</i>	<i>169</i>	<i>101</i>	<i>144</i>	<i>207</i>	<i>187</i>	171	<i>169</i>	<i>187</i>
Pacific Region (d)	197	246	248	218	<i>164</i>	<i>289</i>	<i>300</i>	<i>261</i>	<i>165</i>	<i>272</i>	<i>309</i>	<i>277</i>	218	<i>261</i>	<i>277</i>
Alaska	23	27	30	25	<i>22</i>	<i>22</i>	<i>22</i>	<i>22</i>	<i>22</i>	<i>22</i>	<i>22</i>	<i>22</i>	25	<i>22</i>	<i>22</i>

(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/hgs/notes.html>).

- = no data available

LNG: liquefied natural gas.

Notes: EIA completed modeling and analysis for this report on March 3, 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.

U.S. push to export LNG amid Ukraine conflict slowed by climate concerns - sources

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5 MIN READ

WASHINGTON (Reuters) - Early White House efforts to boost U.S. liquefied natural gas exports and cut Europe's reliance on gas from Russia after its invasion of Ukraine are proceeding slowly, because of concerns about climate change impacts, government and industry sources said.

The Ukraine crisis has underscored Europe's dependence on Russia, which supplies about 40% of its natural gas used to heat homes and generate electricity, and the Biden administration has promised its allies it will help break that chain.

The White House was weighing the announcement of an interagency review of ways to boost liquefied natural gas exports to Europe alongside Tuesday's decision to ban U.S. imports of Russian oil products, people briefed on government decision-making told Reuters.

However, the interagency review has been shelved, at least for now, after some in the White House argued it would counter the administration's efforts to wean the U.S. off fossil fuels consumption and production and tackle climate change, the sources said.

Natural gas burns with much lower carbon emissions than coal or oil, but its drilling and extraction and transportation in pipelines results in the leakage of methane, the second biggest cause of climate change after carbon dioxide. The U.S. LNG industry has long claimed its fuel has less climate impact than Russian gas set by leaky pipelines to Europe, but no hard data exists on Russia gas leaks.

The White House and the Department of Energy did not respond to inquiries about the change of plans. The State Department referred questions to the White House.

The European Commission published plans on Tuesday to cut EU dependency on Russian gas by two-thirds this year and end its reliance on Russian supplies of the fuel "well before 2030". {nL2N2VD0S1}

Some Biden officials hoped a more detailed U.S. commitment to boost LNG exports would help convince European allies to join in the ban of Russia oil imports, the sources said.

"It was a no-brainer to send a market signal and they easily could have combined it with a push for more exports of heat pumps, renewables, advanced nuclear, etc., to reduce natural gas demand," said one of the sources. The effort was reeled back amid "concerns from the climate team" in the Biden administration, the source said.

20-YEAR CONTRACTS

Trying to balance fighting climate change with other concerns, like keeping energy prices and inflation low and supporting union jobs, has been a dilemma for the Biden White House. Russia's invasion of Ukraine launched two weeks ago has thrown the issue into high relief. Moscow calls the action a "special military operation."

In recent weeks, officials from the White House, the State Department, the Energy Department and other agencies have held discussions on whether the Federal Energy Regulatory Commission could expedite approval of new pipelines and approve requests to increase capacity at existing export terminals to help get natural gas to Europe, several sources said.

They also discussed whether the United States and the European Union could help guarantee portions of 20-year supply contracts necessary to finance the construction of new terminals and ports, and ways to get banks to finance some new projects amid efforts by U.S. climate envoy John Kerry to coax them from staying away from fossil fuel investments, the sources said.

"Perhaps, there could be some waiver or some other mechanism to help banks finance [LNG] infrastructure projects," said one source about the alliance.

The State Department has previously said financial institutions make their own decisions and that Kerry has not pressured financial institutions into making commitments to the alliance. The United States has enough natural gas to produce at its 2020 rate for nearly 100 years, according to the latest government estimates, but tapping the nation's ample supply is constrained by lack of pipelines and export terminals, and the time it takes to build this infrastructure.

By year-end, the United States will have the world's largest LNG export capacity, with seven export terminals, enough to ship 11.5 billion cubic feet per day.

Exports are complicated: LNG needs to be pumped from underground to an export terminal, super-cooled and put onto a ship. When it reaches its destination, it is warmed and put into pipeline.

The total number of U.S. cargoes shipped to Europe and Turkey in the first two months of 2022 reached a record of 164, according to data intelligence firm ICIS. The previous record was 125 cargoes in the first quarter of 2020.

Reporting by Jarrett Renshaw and Timothy Gardner; Editing by Heather Timmons and David Gregorio
Our Standards: [The Thomson Reuters Trust Principles.](#)

BIDJP105TRND. Marist Poll National Trend

National Adults			
Do you approve or disapprove of the job Joe Biden is doing as president?			
	Approve	Disapprove	Vol: Unsure
	Row %	Row %	Row %
March 2022	47%	50%	3%
February 2022	39%	55%	6%
December 20th, 2021	41%	55%	3%
December 9th, 2021	42%	51%	7%
November 24th, 2021	42%	50%	8%
November 1st, 2021	44%	49%	8%
September 30th, 2021	45%	46%	9%
September 3rd, 2021	43%	51%	7%
August 2021	49%	44%	6%
July 2021	50%	43%	7%
June 2021	52%	46%	2%
May 27th, 2021	52%	41%	7%
May 17th, 2021	53%	41%	6%
April 27th, 2021	54%	44%	3%
April 16th, 2021	53%	39%	8%
March 30th, 2021	52%	40%	8%
March 11th, 2021	49%	42%	10%
February 2021	51%	38%	11%
January 2021	49%	35%	16%

Marist Poll National Adults

BIDJP105R. NPR/PBS NewsHour/Marist Poll National Tables March 1st through March 2nd, 2022

		National Adults				
		Do you approve or disapprove of the job Joe Biden is doing as president? [And, would you say you strongly approve/disapprove of the job he is doing or just approve/disapprove?]				
		Strongly approve	Approve	Disapprove	Strongly disapprove	Vol: Unsure
		Row %	Row %	Row %	Row %	Row %
National Adults		18%	30%	12%	38%	3%
National Registered Voters		18%	29%	12%	39%	2%
Party Identification	Democrat	39%	51%	5%	3%	2%
	Republican	4%	6%	9%	80%	1%
	Independent	11%	27%	21%	38%	3%
Region	Northeast	19%	45%	11%	22%	4%
	Midwest	14%	27%	18%	37%	4%
	South	18%	25%	12%	43%	3%
	West	19%	28%	10%	41%	1%
Household Income	Less than \$50,000	18%	34%	11%	33%	4%
	\$50,000 or more	16%	29%	14%	39%	1%
Education	Not college graduate	14%	30%	13%	40%	2%
	College graduate	23%	29%	11%	34%	4%
Race/Ethnicity	White	16%	26%	13%	42%	2%
	Non-white	19%	39%	12%	27%	3%
Race and Education	White - Not College Graduate	11%	24%	14%	49%	3%
	White - College Graduate	23%	30%	13%	33%	2%
Gender - Race - Education	Men - White - Not College Graduate	8%	20%	18%	52%	2%
	Men - White - College Graduate	18%	27%	12%	40%	2%
	Women - White - Not College Graduate	13%	26%	11%	47%	3%
Age	Women - White - College Graduate	27%	31%	13%	27%	1%
	Under 45	9%	43%	17%	29%	2%
	45 or older	23%	21%	10%	43%	3%
Generation	Gen Z/Millennials (18-40)	9%	47%	17%	25%	2%
	Gen X (41-56)	14%	25%	15%	44%	2%
	Baby Boomers (57-75)	28%	19%	8%	43%	3%
	Silent-Greatest (Over 75)	26%	19%	8%	42%	4%
Gender	Men	14%	27%	16%	41%	3%
	Women	21%	32%	10%	34%	3%
2020 Support	Biden	35%	51%	9%	3%	2%
	Trump	0%	4%	11%	83%	1%
Area Description	Big city	21%	35%	14%	27%	2%
	Small city	16%	28%	19%	34%	4%
	Suburban	17%	31%	10%	39%	2%
	Small town	13%	28%	12%	44%	3%
	Rural	18%	24%	8%	47%	3%
Small city/Suburban Men		10%	27%	18%	43%	2%
Small city/Suburban Women		24%	33%	10%	29%	4%

NPR/PBS NewsHour/Marist Poll National Adults. Interviews conducted March 1st through March 2nd, 2022. Totals may not add to 100% due to rounding.

BIDJP105RTRND. Marist Poll National Trend

National Adults

Do you approve or disapprove of the job Joe Biden is doing as president? [And, would you say you strongly approve/disapprove of the job he is doing or just approve/disapprove?]

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March 11th, 2021	24%	24%	12%	30%	10%
February 2021	23%	29%	13%	25%	11%
January 2021	25%	25%	11%	24%	16%

Marist Poll National Adults

REPowerEU: Joint European action for more affordable, secure and sustainable energy

The European Commission has today proposed an outline of a **plan to make Europe independent from Russian fossil fuels well before 2030**, starting with gas, in light of Russia's invasion of Ukraine.

This plan also outlines a series of **measures to respond to rising energy prices** in Europe **and to replenish gas stocks for next winter**. Europe **has been facing increased energy prices for several months**, but now uncertainty on supply is exacerbating the problem. REPowerEU will **seek to diversify gas supplies, speed up the roll-out of renewable gases and replace gas in heating and power generation**. This can **reduce EU demand for Russian gas by two thirds before the end of the year**.

Commission President Ursula **von der Leyen** said: *"We must become independent from Russian oil, coal and gas. We simply cannot rely on a supplier who explicitly threatens us. We need to act now to mitigate the impact of rising energy prices, diversify our gas supply for next winter and accelerate the clean energy transition. The quicker we switch to renewables and hydrogen, combined with more energy efficiency, the quicker we will be truly independent and master our energy system. I will be discussing the Commission's ideas with European leaders at Versailles later this week, and then working to swiftly implement them with my team."*

Executive Vice-President for the European Green Deal, Frans **Timmermans** said: *"It is time we tackle our vulnerabilities and rapidly become more independent in our energy choices. Let's dash into renewable energy at lightning speed. Renewables are a cheap, clean, and potentially endless source of energy and instead of funding the fossil fuel industry elsewhere, they create jobs here. Putin's war in Ukraine demonstrates the urgency of accelerating our clean energy transition."*

Commissioner for Energy, Kadri **Simson**, said: *"Russia's invasion of Ukraine has aggravated the security of supply situation and driven energy prices to unprecedented levels. For the remaining weeks of this winter, Europe has sufficient amounts of gas, but we need to replenish our reserves urgently for next year. The Commission will therefore propose that by 1 October, gas storage in the EU has to be filled up to at least 90%. We have also outlined price regulation, state aid and tax measures to protect European households and businesses against the impact of the exceptionally high prices."*

Emergency measures on energy prices and gas storage

The Commission's 'Energy Prices Toolbox' from last October has helped Member States to **mitigate the impact of high prices on vulnerable consumers** and it remains an important framework for national measures. Today the Commission is presenting Member States with **additional guidance, confirming the possibility to regulate prices in exceptional circumstances, and setting out how Member States can redistribute revenue from high energy sector profits and emissions trading to consumers**. **EU State Aid rules** also offer Member States options to provide short-term **support to companies affected by high energy prices**, and help reduce their exposure to energy price volatility in the medium to long term. Following a consultation on targeted amendments to the Emission Trading System State aid Guidelines, the Commission will also be consulting with Member States on the needs for and scope of **a new State aid Temporary Crisis Framework** to grant aid to companies affected by the crisis, in particular those facing high energy costs.

The Commission intends to **present by April a legislative proposal requiring underground gas storage across the EU to be filled up to at least 90% of its capacity by 1 October each year**. The proposal would entail the monitoring and enforcement of filling levels and build in solidarity arrangements between Member States. The Commission continues its **investigation into the gas market** in response to concerns about potential distortions of competition by operators, **notably Gazprom**.

To address the skyrocketing energy prices, the Commission will look into all possible options for emergency measures to limit the contagion effect of gas prices **in electricity prices, such as temporary price limits**. It will also **assess options to optimise the electricity market design** taking into account the final report of the EU Agency for the Cooperation of Energy Regulators (ACER) and other contributions on benefits and drawbacks of alternative pricing mechanisms to keep electricity affordable, without disrupting supply and further investment in the green transition.

REPowerEU – eliminating our dependence on Russian gas before 2030

Phasing out our dependence on fossil fuels from Russia can be done well before 2030. To do so, the Commission proposes to develop a REPowerEU plan that will increase the resilience of the EU-wide energy system based on two pillars: **Diversifying gas supplies, via higher Liquefied Natural Gas (LNG) and pipeline imports** from non-Russian suppliers, and larger volumes **of biomethane and renewable hydrogen production and imports**; and, **reducing faster the use of fossil fuels** in our homes, buildings, industry, and power system, by **boosting energy efficiency, increasing renewables** and electrification, and **addressing infrastructure bottlenecks**.

Full implementation of the Commission's 'Fit for 55' proposals would already reduce our annual fossil gas consumption by 30%, equivalent to 100 billion cubic metres (bcm), by 2030. With the measures in the REPowerEU plan, **we could gradually remove at least 155 bcm of fossil gas use, which is equivalent to the volume imported from Russia in 2021. Nearly two thirds of that reduction can be achieved within a year, ending the EU's overdependence on a single supplier**. The Commission proposes to work with Member States to identify the most suitable projects to meet these objectives, building on the extensive work done already on national Recovery and Resilience Plans.

Background

The new geopolitical and energy market reality requires us to drastically accelerate the clean energy transition and increase Europe's energy independence from unreliable suppliers and volatile fossil fuels.

Following the invasion of Ukraine, the case for a rapid clean energy transition has never been stronger and clearer. The EU imports 90% of its gas consumption, with Russia providing around 45% of those imports, in varying levels across Member States. Russia also accounts for around 25% of oil imports and 45% of coal imports.

The Commission's Energy Prices Toolbox of October 2021 has been helping citizens and businesses to face high energy prices in recent months. 25 Member States have adopted measures in line with the toolbox which are already easing energy bills for over 70 million household customers and several million micro, small and medium-sized enterprises.

The Commission continues to work with neighbours and partners in the Western Balkans, and in the Energy Community, which share the EU's fossil fuel dependencies and exposure to price hikes, while also having committed to the same long term climate goals. For Ukraine, Moldova and Georgia, the EU stands ready to provide support to ensure reliable and sustainable energy. The ongoing effort to provide for an emergency synchronisation of the Ukrainian and Moldovan electricity grids with the continental European grid is a clear token of this commitment.

Google Translate of Bloomberg terminal posting of Le Figaro <https://www.lefigaro.fr/societes/shell-pret-a-investir-4-milliards-en-france-20220121>

Ben van Beurden: "Reducing dependence on gas and oil is infeasible from day to day"

INTERVIEW - The managing director of Shell, the British oil giant, reveals to Le Figaro its group strategy for the energy transition.

By Guillaume Guichard, Ivan Letessier

Le Figaro. - You came to Paris despite the cancellation of Choose France.

Why?

Ben VAN VEURDEN. - Choose France has been cancelled, but not our projects. The France is one of the key countries in which to invest in the energy transition. For a hundred years, we have been selling gasoline in France. From now on, we want develop the energies of the future there. We are investing 100 million euros per year in France, and we can do much more: we have identified for four billion euros of investment opportunities in France: offshore wind tenders, the production of green hydrogen, the commissioning of installation of electric charging stations, or even the manufacture of biofuel for aviation. To realize our projects, we need support from public authorities. They must establish obligations use of the energies of tomorrow and put in place incentive rules for producers.

Do governments seem to you to be too cautious when it comes to supporting the energy transition?

It is up to them to create the energy markets of the future, not to groups private. Oil and gas have an incredible success, it is very difficult to get away from it. to pass. Biofuel for aviation pollutes much less, but it costs two to three times more than fossil kerosene. It is not competitive, but can become so with public support, as for wind and solar power, who have seen their costs fall drastically in 25 years.

The French government is at the forefront, forcing companies airlines to include 1% biofuel from 2022. The European Union is aiming for 5% in 2030, but it would take twice that.

How to get out of the energy crisis that Europe is going through?

Don't think this crisis is good for groups like ours.

On the contrary, price volatility undermines the will of committed companies in the energy transition. Reduce the dependence of our economies on gas and oil is infeasible overnight. Governments can take emergency action, but if they neglect the market, the exit of crisis will take longer. In the short and long term, we must increase energy supply. Europe produces 20% less gas than before the pandemic and we consume as much. There are only long-term solutions for out of this crisis, such as facilitating the construction of gas terminals liquefied natural to increase imports. The lack of contracts long-term gas supply is also a problem.

Until when will Shell produce oil?

The energy transition is going fast, but the world will need oil and gas for a very long time. That said, the future is not in these historical activities. He is into green electricity and CO2 capture. The French see us as an oil group, but we sell already as much gas as oil and have been engaged for years in offshore wind, hydrogen and biofuels. In fact, Shell is a global energy company committed to the energy transition.

What is the optimal pace for a successful energy transition?

The energy transition can never go too fast for Shell. Some think we want to slow down the process and would like us to stop oil and gas production. That's not the point. It's not we are not the ones setting the pace of the energy transition, it is our customers, consumers and political leaders. The drop in the demand for fossil fuels will never be as rapid as the depletion of our reserves if we do not invest to maintain our capacity to production.

If we stand idly by, we will produce no more gas or oil in ten years, when the demand will still be there. **The issue is not not to stop producing oil and gas, but to stop consuming it.**

If governments want to speed up the process, we can help them switch more quickly to green energies. This is the meaning of my encounters with the ministers Clement Beaune and Barbara Pompili this week, before meet, soon I hope, President Emmanuel Macron.

Does Shell's Future Depend On Profits From Its Business? oil?

Our added value is now more in services to customers than in our historical activity. Before, to succeed in the fossil fuels, you had to have the best geologists, the best relations with producing countries and the lowest production costs. That's not how it works anymore. Have the best resources in wind and the best wind turbines is not the priority. It's not these criteria that will make it possible to prevail in the new energy world, but our relationship with consumers and related services. Shell at the better position to offer services integrating the entire chain of value: for example, proposing to a large company to build a park wind farm in the North Sea and sell it green electricity 100% of the time at a guaranteed rate. We take the risk of price variation on the markets and can baptize the offshore park with the name of our client. This scheme works for biofuels and hydrogen. The product is not only the electron or the hydrogen molecule, it is the service that counts.

The two business models are radically different. A split renewable activities, demanded by certain shareholders, would it be relevant for Shell?

Financial markets are binary. They agree to finance on the one hand, profitable companies thanks to their carbon activities, and on the other, companies having to bring them only promises, but no benefit. At Shell, we want to combine promise and profit. Some investors find it difficult to assess the value of such a mix.

But it is much easier to rely on our activities

history, our know-how and our infrastructures to develop in green energies than reinventing everything from scratch. The very strong growth of renewable energies requires a lot of resources. Use profits from oil and gas makes it possible to go much faster and much further away. The shareholders will have to accept that, for ten years, we invest more money in renewable energy than we do will win.

Between investors who dream of unchanged dividends and green activists who demand the stop of oil, you are drowning under the contradictory injunctions. How do you cope?

It is useless to look for a common point between their claims. Yes we had to please everyone, we would close up shop. The best reaction is to decide on the best strategy for the group and all its stakeholders, and stick to it. Over the past two years, we have set four objectives: to generate sustainable returns on investment ; achieving net zero CO2 emissions by 2050, which means decarbonizing our products; **provide energy to our customers; while respecting the environment.**

The fields of wind turbines and solar panels are highly criticized. that do you respond to their detractors?

Onshore wind and solar were the best way to launch these channels. They face societal oppositions that I understand. The future is in solar panels attached to existing buildings and offshore wind. We especially push floating wind turbines. This is why we acquired the French company Eolfi in 2019.

Will Shell also invest in nuclear?

We may be interested in it, but the priority is the energies renewables, where there is so much to do. Nuclear has a role to play in the energy transition: the world needs it to decarbonize. Electricity represents 20% of the energy consumed. To achieve net zero emissions of CO2, its share must increase to 70% by 2050. As energy demand will increase, the production of electricity will have to be multiplied by four or five. We will need solar and wind, but also a reliable basic production, therefore nuclear.

Click here to read the article published on the Le Figaro website

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-0- Jan/21/2022 20:18 GMT

To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/R62TRE5F8XS0>

March 7, 2022 1:51 PM MST Last Updated 5 days ago

Europe energy crisis a 'big wake up call' -TotalEnergies CEO

By [Ron Bousso](#)

- Summary
- Companies
- Total did not face pressure to exit Russia -Pouyanne
- Says Europe should develop more gas infrastructure

HOUSTON, March 7 (Reuters) - Russia's invasion of Ukraine is a "big wake up call" for European governments hoping to balance the need for fossil fuels with environmental concerns, the head of French energy giant TotalEnergies ([TTEF.PA](#)) said on Monday.

Europe depends on Russian natural gas, which supplies around 40% of its needs. On Monday, benchmark gas prices shot to their highest on record, as traders worried Russia could curtail supplies.

"What is happening today in Europe is a big wake up call to a lot of policy makers if they are serious about security of supply, affordability and of course climate change compatibility," TotalEnergies Chief Executive Patrick Pouyanne said at the CERAWEEK energy conference in Houston.

"We must think about the three parts of this triangle and not think that only one part is important."

Europe aims to sharply reduce its reliance on fossil fuels in the coming decades to battle climate change, with governments restricting oil and gas production and financing of fossil fuel projects.

While Europe's solar and wind power generation capacity has grown sharply in recent years, its power and energy systems remain heavily reliant on natural gas and coal.

Pouyanne said Europe needs to build more infrastructure to import additional LNG if it wants an alternative to Russian gas.

"The reality in Europe is that we don't have enough re-gas terminals today to replace the volume of piped gas from Russia by LNG."

NO PRESSURE

Pouyanne said TotalEnergies did not come under government pressure to fully exit Russia following the Ukraine invasion.

TotalEnergies is the only major Western energy company that does not plan to fully exit Russia; BP, Shell and Exxon all announced their intentions to withdraw. TotalEnergies has said it will halt all new spending in Russia.

The French oil major holds a 19.4% stake in Novatek (NVTK.MM), Russia's largest producer of liquefied natural gas (LNG), as well as a stake in the Novatek-led Arctic LNG project.

"I had discussions obviously with the highest authority in my country and there is no push from them for us to exit Russia," Pouyanne told a gathering of energy executives.

Pouyanne said that Western sanctions on Russia exclude natural gas and that it would therefore be inconsistent for companies that produce the gas to exit the country.

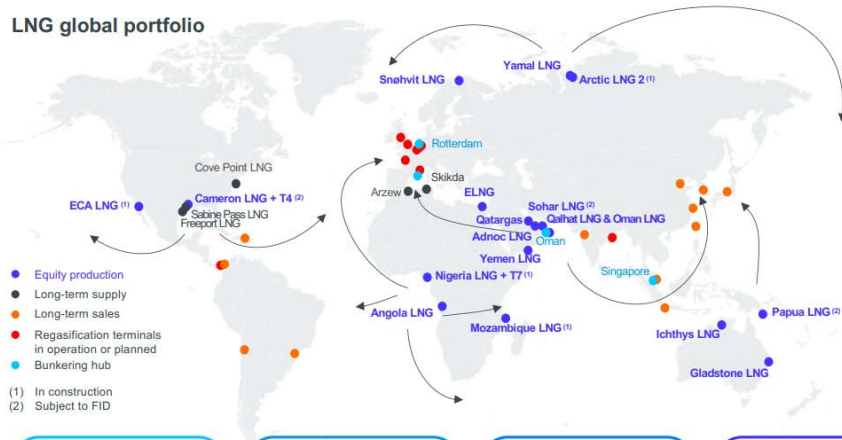
TotalEnergies nevertheless has stopped buying oil from Russia, Pouyanne added, although one its landlocked refineries in Germany continues to receive Russian crude by pipeline.

Reporting by Ron Bousso in Houston; Editing by David Gregorio

World-class LNG player integrated along the value chain



LNG global portfolio



50 Mt/y
LNG sales by 2025

+ 30%
LNG production growth
2025 vs. 2020

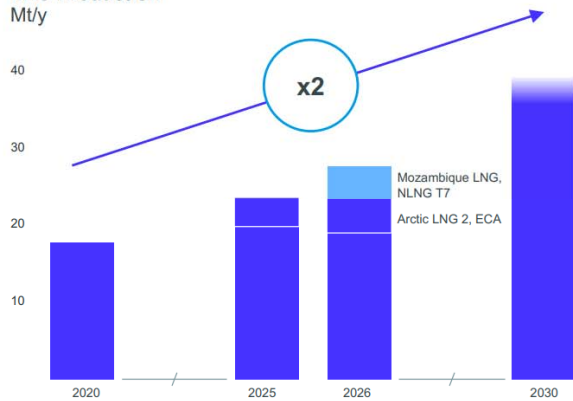


Maximizing value through global scale and integration

Rich portfolio to feed low cost LNG growth strategy



LNG Production Mt/y

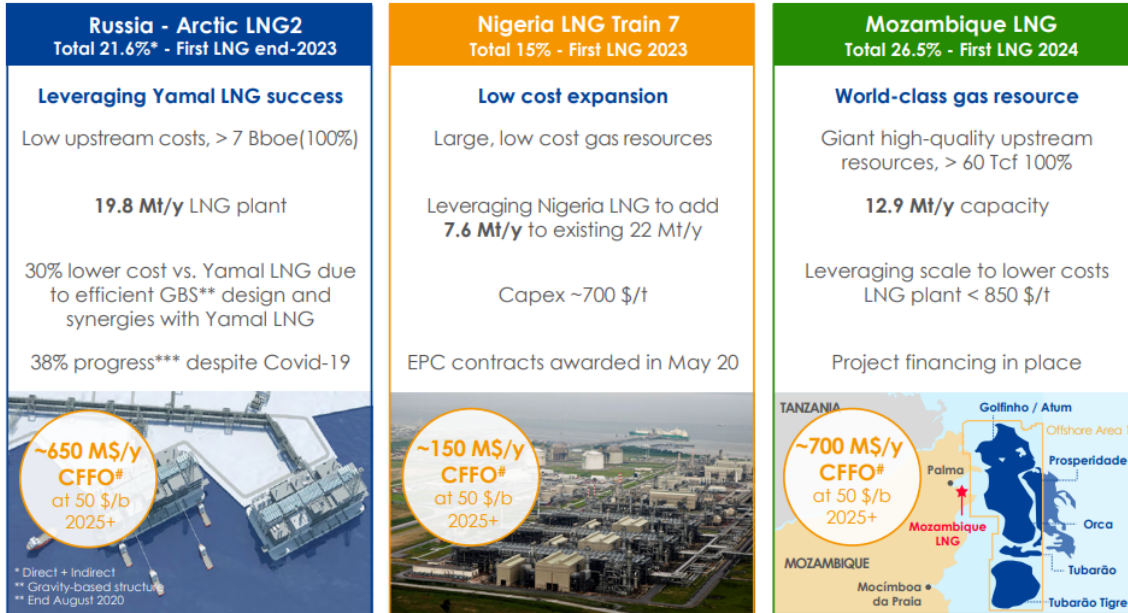


Russia giant Arctic resources	Mozambique giant Area-1 resources
US Brownfield trains (Cameron, ECA)	Papua LNG

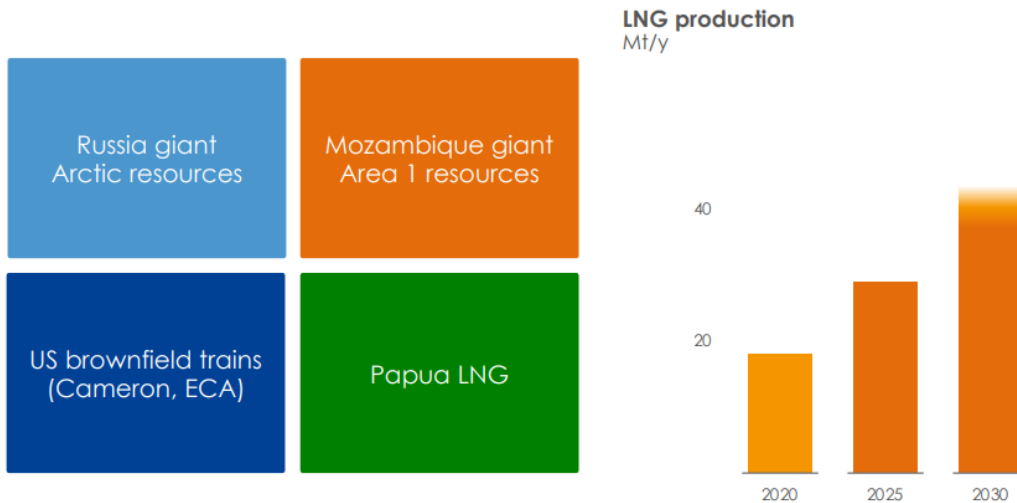
Total Sept 2020 Strategy and Outlook

Flagship LNG projects fueling 2025 growth

< 3.5 \$/Mbtu cost delivered to Asia



A rich portfolio to feed low cost LNG growth post-2025



Large resource base providing options to deliver production growth by 2030



Cheniere and Engie Increase Volume and Extend Term of LNG Sale and Purchase Agreement

[Download as PDF](#) MARCH 09, 2022 8:00AM EST

HOUSTON--(BUSINESS WIRE)-- Cheniere Energy, Inc. (“Cheniere” or the “Company”) (NYSE American: LNG) announced today that its subsidiary, Corpus Christi Liquefaction, LLC (“CCL”), has agreed with Engie SA (“Engie”) to amend the liquefied natural gas (“LNG”) sale and purchase agreement (as amended, the “SPA”) the parties previously entered into in June 2021.

Under the SPA, Engie has agreed to purchase approximately 0.9 million tonnes per annum of LNG from CCL on a free-on-board basis for a term of approximately 20 years, which began in September 2021. The purchase price for LNG under the SPA is indexed to the Henry Hub price, plus a fixed liquefaction fee.

“We are pleased to build upon the long-term agreement we signed in 2021 with Engie, one of Europe’s energy leaders in low carbon solutions, to increase the volume and extend the term beyond 2040,” said Jack Fusco, Cheniere’s President and Chief Executive Officer. “This SPA reflects the importance of a diverse and reliable long-term supply of natural gas for Europe and reinforces the value the LNG market places in Cheniere’s commitment to climate and sustainability initiatives. We look forward to continuing to supply Engie with flexible, cleaner burning LNG as part of our shared vision of a lower carbon future.”

About Cheniere

Cheniere Energy, In

<https://ventureglobalng.com/press/venture-global-lng-expands-lng-partnership-with-shell/>

VENTURE GLOBAL LNG EXPANDS LNG PARTNERSHIP WITH SHELL

For Immediate Release

March 7, 2022

Arlington, VA– Today, Venture Global LNG announced the execution of a new long-term 20-year Sales and Purchase Agreement (SPA) with Shell NA LNG LLC (Shell) for the supply of 2 million tonnes per annum (MTPA) of LNG from Venture Global’s Plaquemines LNG export facility. This new deal builds on Shell’s existing contract for 2 MTPA from the Calcasieu Pass LNG export terminal, bringing Shell’s total long-term offtake from Venture Global’s facilities to 4 MTPA.

“Venture Global is honored that Shell, our first foundational customer at Calcasieu Pass, has chosen to expand its existing cooperation with our company with a second partnership at Plaquemines,” said **Venture Global CEO Mike Sabel**. “Venture Global is committed to bringing low-cost US LNG online quickly, helping to keep the global market well supplied, while meeting our customers’ growing energy and climate goals. We look forward to working with Shell for many years to bring low-cost, clean American LNG to the markets that need it most.”

Venture Global now holds the global record for the fastest construction of a large-scale greenfield LNG facility with Calcasieu Pass and is actively under construction at Plaquemines LNG, which is expected to come online in 2024.

Global LNG demand is expected to nearly double by 2040. This deal will secure additional volumes for Shell’s leading and diverse global LNG portfolio.

About Venture Global LNG

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

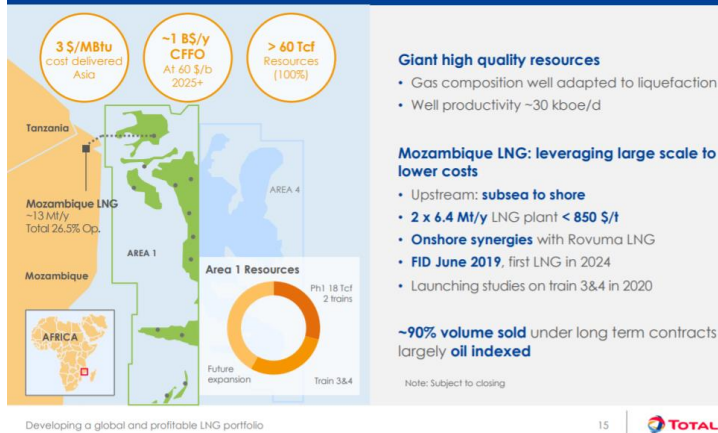
Posted Wednesday April 28, 2021. 9:00 MT

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

Mozambique LNG: unlocking world-class gas resources



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.

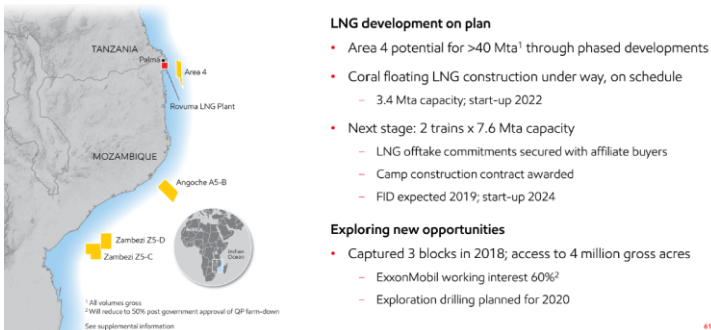
Mozambique's security issues pushes back 5.0 bcf/d of new LNG supply at least a couple years. The global LNG issue is that 5 bcf/d of new Mozambique LNG supply (apart from the Eni Coral FLNG of 0.45 bcf/d) won't start up in 2024 and

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 timeline) 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

UPSTREAM MOZAMBIQUE

Five outstanding developments



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

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[\[LINK\]](#) 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 will 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



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

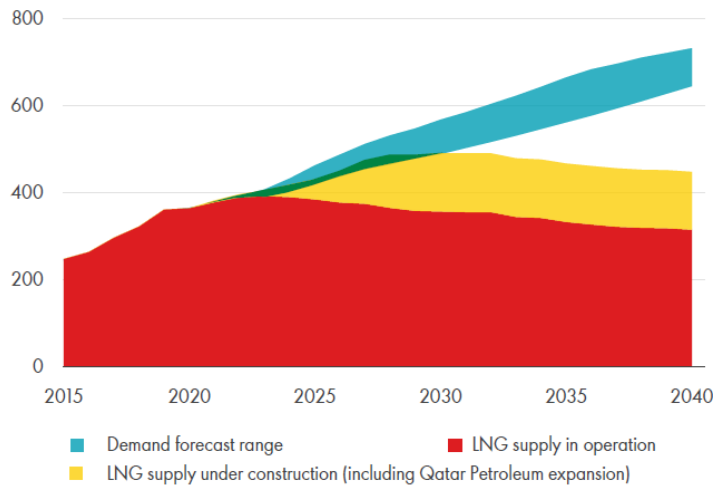
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would have reflected some delay, perhaps 1 year, at Mozambique but would be surprised if they put a 2-3 year delay in for the 5 bcf/d from Total Phase 1 +2 and Exxon Rozuma Phase 1. Compared to their LNG Outlook 2020, it looks like there was no change 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

Emerging LNG supply-demand gap

MTPA



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

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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 bcf/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

One of the reasons why it went under the radar is that major LNG suppliers played stupid on the Mozambique impact. 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 @olympemattei @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*".

There are other LNG supply delays/interruptions beyond Mozambique. 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 Melkøya 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 Melkøya 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 Melkøya 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

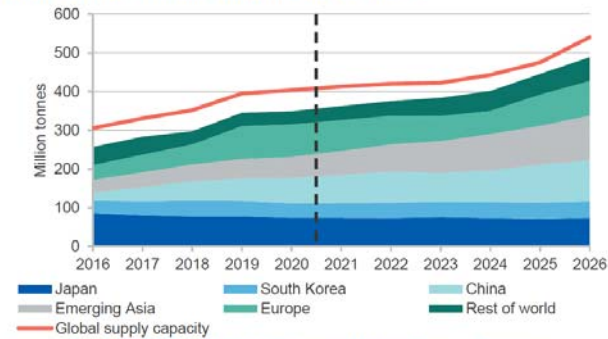
But we still see major LNG suppliers like Australia hinting but not outright saying that LNG supply gap is coming sooner. We have to believe Australia will be unveiling a sooner LNG supply gap in their September forecast. On June 28, we tweeted [\[LINK\]](#) on Australia's Resources and Energy Quarterly 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

March 2021 LNG Outlook

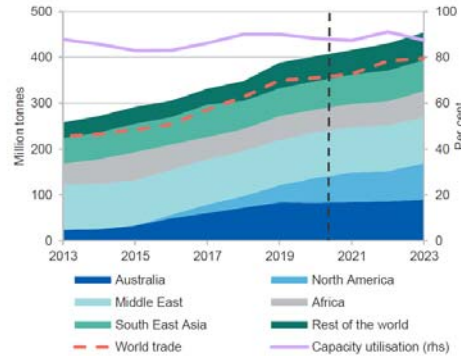
Figure 7.1: LNG demand and world supply capacity



Source: Nexant (2021) World Gas Model; Department of Industry, Science, Energy and Resources (2021)

June 2021 LNG Outlook

Figure 7.1: LNG demand and world supply capacity



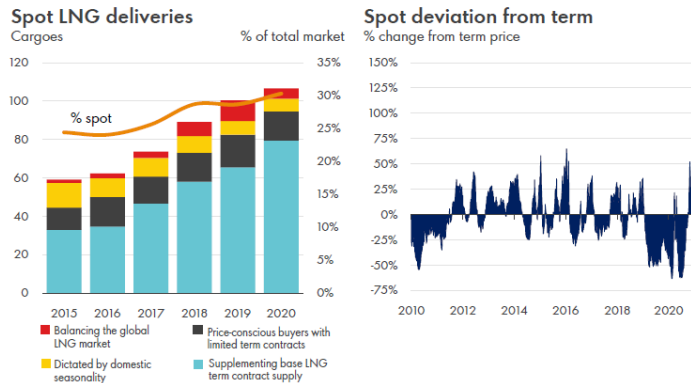
Source: Nexant (2021) World Gas Model; Department of Industry, Science, Energy and Resources (2021)

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 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.

MAR 7, 12:10Updated 12:43

Novak: Russia has the right to impose an embargo on gas pumping through Nord Stream 1

According to the Deputy Prime Minister, Moscow has not yet made such a decision, no one will benefit from this

MOSCOW, 7 March. /TASS/. Russia, in connection with unfounded accusations regarding the energy crisis in Europe and the imposition of a ban on Nord Stream 2, has every right to make a "mirror" decision and impose an embargo on gas transportation through Nord Stream 1, which is 100% loaded. Deputy Prime Minister of the Russian Federation Alexander Novak told reporters about this.

"But so far we are not making this decision. No one will benefit from this. Although European politicians are pushing us to this with their statements and accusations against Russia," Novak stressed.

According to the Deputy Prime Minister, Russia has nothing to do with the rise in oil and gas prices on the world market, this was the result of irresponsible statements by European politicians.

He drew attention to statements by European politicians on energy issues, in particular to calls to get rid of Russian oil and gas. According to him, European officials are once again trying to shift the problems and failures of their own energy policy in recent years onto Russia. "As a result, we are seeing a sharp rise in prices for energy resources. I responsibly declare that Russia has nothing to do with the current rise in prices and volatility in the market," he said.

Novak recalled that Russia provides 40% of European countries' gas consumption and has always been a reliable partner, while Gazprom fully fulfills its contractual obligations for gas supplies. In addition, according to him, gas supplies through the territory of Ukraine were increased to 109 million cubic meters. m per day, which is equivalent to about 40 billion cubic meters. m per year. "This is transit through Ukraine, and it is 100% fulfilled today. Also, deliveries are made through Nord Stream 1, Yamal - Europe, Turkish Stream, Blue Stream," the Deputy Prime Minister noted.

Yara curtails production due to increased natural gas prices

MARCH 09, 2022

Oslo, 9 March 2022: As a consequence of record high natural gas prices in Europe, Yara is temporarily curtailing production at its Ferrara (Italy) and Le Havre (France) plants. The two plants have a combined annual capacity of 1 million tonnes ammonia and 0.9 million tonnes urea. Including optimization and maintenance at other production facilities, Yara's European ammonia and urea production is expected to be operating at approximately 45% of capacity by the end of this week.

Yara will continue to monitor the situation and to the extent possible use its global production system to keep supplying customers and secure continuity in food supply chains, but curtailing production where necessary due to challenging market conditions.

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<https://www.energy.gov/articles/secretary-granholm-ceraweek-keynote-luncheon-and-11-fireside-chat-sp-globals-dan-yerqin>

Remarks as Prepared for Delivery by Secretary of Energy Jennifer Granholm at CERAweek 2022 March 9, 2022, Houston, TX

Thanks so much Dan—I'm so glad to be here at CERAWeek for the second year in a row, this time in person!

We could not be having this conversation at a more intense, troubling, *shocking* time in world history...with enormous consequences for the future of energy.

Maybe it's because a global crisis like what's happening in Ukraine sharpens the mind, but I'm in a mood to cut to the chase here and tell you what I really think about where we are at as a country and as a part of the energy sector.

Like many of you, I'm shocked and furious about what I'm seeing.

The images of Ukrainian bravery and determination are breathtaking. The images of carnage and bombing and death are sickening. Ukrainian grandmothers and grandsons will fight with knives and broomsticks if they have to, to keep their country.

Their bravery should inspire all of us to do our part, to enlist in this battle in the ways we can. It's why President Biden announced yesterday that the U.S. will ban Russian oil imports—we will not be financing Vladimir Putin's war.

Bravo to BP, Exxon, Shell and others in the private sector who are withdrawing from Russian operations. But there's more to do. There are more battles.

Putin's actions have sent the oil market reeling. I don't have to tell you that when oil is \$109 a barrel, and \$4.25 at the pump, the impacts are severe and real for people who buy your product—regular working folks, from Uber drivers to teachers to farmers.

So, what else can we do in this fight? **We are on a war footing—an emergency—and we have to responsibly increase short-term supply where we can right now to stabilize the market and to minimize harm to American families.**

That means releases from strategic reserves across the world, like we've done. **And that means you producing more right now, where and if you can.**

And at the same time, the war in Ukraine isn't the only thing sending shock waves through the energy sector. We've also got to reckon with the impact of climate change—and the clean energy transition that isn't just coming; *it's here.*

You all know that – you're wrestling with it yourselves: your *investors* are demanding climate action. And your *customers* are demanding climate action—seventy percent of voting Americans support the clean energy transition.

I get it—this is beyond hard. You've got businesses to run and employees who are nervous about the change. So we have to do this right – with the right timing, the right technologies, the right partnerships. And we CAN.

But we can't do it if we are fighting internal battles. Some people here (or at least lobbyists and Beltway politicians) seem to think this is the time to recycle old talking points.

People are arguing that if a pipeline that wouldn't have even been in operation by now were still under construction, the situation with today's oil prices would somehow be different.

Or that President Biden's policies have decreased production, when we are actually at *record* levels of natural gas and LNG, and will be at record levels of oil production by next year. When there are over 9,000 onshore drilling permits that are sitting unused.

We all know that's the same old DC BS.

Aren't we ready to finally work *together* to confront this moment of crisis...and come out stronger on the other side?

I'm here to tell you that the Department of Energy, and the entire Biden administration, is ready to work with you to seize the opportunity of clean energy.

That means we have to deploy clean technologies as fast as possible—but we're under no illusion that every American will get an EV or a heat pump tomorrow or next month or next year.

It is a *transition*...and we're pragmatic about what it means. We know it won't happen overnight.

And we're serious about decarbonizing *while* providing reliable energy that doesn't depend on foreign adversaries.

That means we'll walk and chew gum at the same time. So yes, right now, we need oil and gas production to rise to meet current demand.

And we are here to work with anyone and everyone who's serious about taking a leap toward the future...by diversifying your energy portfolio to add clean fuels and technologies, like many of you are starting to do or have been doing...by creating good-paying jobs for your talented workforce in the energy industry of the future...and by reaping the rewards of a clean energy market that will exceed \$23 trillion by the end of the decade.

Maybe you're excited about clean hydrogen. Maybe it's carbon capture and storage. Maybe it's offshore wind... geothermal...lithium from geothermal brines... sustainable aviation fuels...EV charging...you name it.

We're ready to partner with the private sector through the \$62 billion that Congress just gave us in the Bipartisan Infrastructure Law. Most of that funding is going out through competitive grants...and we're eager to receive your best and most innovative ideas.

I'm here to extend a hand of partnership...because we'll only be able to meet these challenges of oil and gas supply *and* climate change by working together.

For me, Putin's actions and the resolve of the Ukrainian people give me even *more* determination to get this energy transition right.

The truth is, the U.S. government has always partnered with the energy industry in times of need. For over a hundred years, the oil and gas industry has powered our nation and gotten us where we are today. We are eternally grateful for that.

And we want you to power this country for the *next* hundred years with zero-carbon technologies.

It's often hard to see history in the making. But we're on the cusp of the most important transition human society has ever seen. I hope we'll look back at 2022 as the year the world took giant steps to improve energy security and tackle climate change.

And to do that—to be on the right side of history—we need to work together.

Let's start now.

Thank you.

Canada's TC Energy will not revive Keystone XL oil pipeline project

Author of the article:



Reuters Nia Williams

Publishing date: Mar 08, 2022 • 4 days ago • 1 minute read • [Join the conversation](#)

CALGARY — TC Energy Corp said on Tuesday its Keystone XL (KXL) pipeline project to carry Canadian oil to U.S. refineries will not be revived, even as politicians on both sides of the border call for its resurrection to help replace Russian oil imports to North America.

The United States on Tuesday banned Russian oil imports in retaliation to Moscow's invasion of Ukraine, a decision that is expected to worsen disruptions in the global energy market.

"The Keystone XL Pipeline Project was terminated and will not proceed," a TC Energy spokesman said in an email.

KXL would have carried 830,000 barrels per day of Canadian crude from Alberta to U.S. refineries, but ran years of regulatory delays and fierce environmental opposition before ultimately being scrapped.

Alberta Premier Jason Kenney on Monday urged the U.S. government to reconsider the pipeline, which was canceled last year after U.S. President Joe Biden revoked a key permit.

In the United States, opposition Republicans including former vice-president Mike Pence have also called for KXL to be authorized.

(Reporting by Nia Williams Editing by Marguerita Choy)

Background Press Call by Senior Administration Officials Previewing the Visit of President Duque of Colombia

MARCH 10, 2022 • [PRESS BRIEFINGS](#)

Via Teleconference (March 9, 2022) 6:03 P.M. EST

Q Thanks so much, guys, for doing this call. I was hoping, [senior administration official], you could address the Colombian Energy Minister's recent comments. He gave an interview to the Financial Times where he questioned whether the United States would — he said it was difficult to justify if the United States was seeking to get Venezuelan oil. He went on to say it's hard to understand how the United States would — if the United States just banned oil from Russia, that it's hard to explain why you'd then buy it from Venezuela. That was my first question.

I was also hoping you could answer or talk about, kind of, Russian influence in the region. How will that come up tomorrow? Obviously, Cuba, Nicaragua, and Venezuela, you know, there are — have ties to Russia. But also, you know, Argentina and Brazil, the presidents were in Moscow, you know, just weeks before the invasion. So I wanted to — you know, is it important for the United States to kind of stand next to the Colombian President and talk about countering Russian influence? And lastly, you mentioned the Summit of the Americas. I was just wondering if you could say whether Guaidó will be invited or if you expect that Juan Guaidó will be invited to the Summit of the Americas. Thanks a lot.

SENIOR ADMINISTRATION OFFICIAL: Great. Thanks, Franco. So I — hard for me to qualify the Energy Minister's questions, since he would be an energy expert. What I'll just say that, you know, again, we're in a unique international environment where the United States needs to advance its national security and its economic interests around the world. And, frankly, that diplomatic outreach, regardless of whether or not we like a leader or the leaders have been democratically elected, is really fundamental toward advancing our national security interests.

The question about oil is really — I think it's speculation, given that there was a Wall Street Journal, I think, article. [Redacted.] So I — hard for me to really kind of comment on that decision that really hasn't been — hasn't been made.

Q Hi. Good evening. Thank you so much, [senior administration official], for doing this. I wanted to ask, first: Can you say whether President Biden will try to explain in the meeting to President Duque his decision to launch these talks with Maduro? Is he hoping to convince him that this is the right thing to do?

And secondly, on the release of the two American citizens, can you say definitively that there wasn't any quid pro quo involved that — anything that Venezuela might have gotten in exchange? And have you made any progress toward a deal with Venezuela to restart oil sales to the United States?

SENIOR ADMINISTRATION OFFICIAL: So just on the issue of quid pro quo, there was none. We made very clear that — when we went down there that — frankly, [redacted] traveling down there was the first visit by a White House official to Venezuela since the inauguration of Hugo Chávez in the late '90s.

And that — I think that gesture, that engagement, for us was something that, you know, we saw as an important signal and that we asked them to — you know, to reciprocate that signal by releasing —

or by liberating detained Americans.

You know, but I'll say it's the — it was a product of months of work by Special Envoy for Hostage Affairs, Roger Carstens. And I could say, I think unquestionably here, that the conversations that Roger, that Ambassador Jimmy Story, and that I had — at no point was there an offer of oil in exchange for the detention of Americans.

At no point we would do that. It would certainly risk, kind of, the Americans that are currently detained and send a signal around the world that the United States is going to barter oil for people, which is — which, frankly, is wrong.

The question of — on the question of oil, I think maybe to your question about talks — so there are no — I would say there are no talks between us and the regime.

We traveled down there to secure the release of detained Americans and to urge a return to the negotiating table, which is something that, again, the international community and even representatives from the opposition had urged us to do.

There is no dialogue between us and the regime. Dialogue really has to be between the Venezuelan people on the future of the country. And we've made clear that we are ready to lift international pressure on the basis of progress at those talks.

In regards to oil, look, the decisions about oil that have been widely reported are ones that I think are being considered on a much broader level and that it is not something that we've committed to or bartered with or, frankly, that, you know, we're — again, we discussed many things with them, but the focus throughout was the detained Americans and a return to the (inaudible). And that was the objective of the visit.

SAF Group created transcript of excerpts of comments made by Mike Muller (Head, Vitol Asia) to Sean Evers (Founder & Managing Partner, Gulf Intelligence) on their "PODCAST: Daily Energy Markets – March 6th"

<https://soundcloud.com/user-846530307/podcast-daily-energy-markets-march-6th-1>

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

6:45min mark. Evers, on substantial disruptions to oil supply chain even without sanctions on oil, the big discount of Russian oil to Brent, Shell's buying the Russian oil cargo and "*your thoughts on where the market dynamics go as long as Russian oil and gas lifting it is legal?*" Muller "*yes, I wouldn't quite put it the way that it was an irresistible opportunity or anything like that. it is not illegal to purchase Russian oil yet. However, the means to do so are being tightened, where not by government's imposition, then certainly by voluntary moral imposition of restraints be that shipowners, be that insurance companies, be that the people that help maritime things move. And in this case, of course the economic incentives compared to historical norms to Euros, which would have traded for the last 8 to 10 years between minus 10 and plus 1 dollar per barrel vs dated Brent is indeed abnormally large. On a standard sized cargo from the Baltic to Rotterdam where this cargo is probably going, you're talking about an incentive of 15 to 20 million dollars just to be conservative. However, I am pretty much convinced that that's not what Shell is after. Shell came out after and said the proceeds from this uplift in revenue would go to humanitarian aid, which I think is a smart way of putting a postscript to it. But yes, their line was very simply we had to consult with politicians. Presumably in Germany or Netherlands where Urals is such a large part of the supply chain that stock-outs will be a consequence and therefore, I imagine that Shell would have put a question to government do you prefer that we run out of oil in part of the Rhineland or are you okay with us making this purchase.*" Evers "*...is that a credible argument, is the market that tight that if you don't lift this Russian Urals. Some reporting is saying it's already disrupted by about 4 million barrels a day, if you don't lift it, your example in the Rhineland could be or whatever geography, could actually be without oil or without that requisite energy?*" Muller "*Absolutely. and I don't need to be accused of sticking out for my former company here but the market was already extremely tight on oil. Last time, you had me on this panel was early February. We had no idea nothing was going to go on in the Ukraine, and I was telling people watch out, we are just one headline away from this market spiking because of low inventories. and we had backwardation back then, which was disincentivizing storage. And we had already had SPR releases. What a headline, I guess. It is without a doubt, a fact, that in places like Germany where some refineries run 100% Urals and others have it as the largest grade in their diet, it is awfully hard to come by other crude when you have a delay or obstruction in the supply of any other crude streams. And just look at what's happening in Libya just as one of many examples of disruptions. A lot of headlines that would normally be front page have been drowned in the back pages as we are all consumed by this Ukraine tragedy. Yes, I do believe it would have resulted in stock-outs. There are some headlines that they are saying they would probably have been stock-outs. I am convinced there would have definitely been a stock-out. then it's a question do you want to start inconveniencing western consumers. This is the point, inconveniencing in the light of the tragedy we are seeing on television in the Ukraine. you are beginning to see headlines that about the fact that maybe we should start to begin inconveniencing ourselves. But a couple of observations, because in the global picture, you still have some places that are buying Russian oil. you asked about the bigger picture, China came out with a statement last week saying it's business as usual, they will not sanction and therefore continue to import Russian oil. Of course, China consumes most of the ESPO, the Pacific Russian crude that comes out just on their doorstep. The consensus you know is they might have to be the backstop home for lots of the Baltic Urals and even the Black Sea Urals to the extent that it's loading that will have to find it's way east if the west rejects it's whole sale. And in that scheme of things, yes, at \$118 Brent prices, is \$28 the right number? I think you will probably find that other companies engage with governments and get the okay to buy as well. But that's just oil. Let's look at other commodities. Oil has actually not made its all time high unless you express oil in Euro terms in which case it has. We remind ourselves the high in 2008 was \$147 so another \$20 to go. If you look at other energy markets of more importance to Europe especially as it's still the end of winter. Coal, natural gas, these are all time high prices. Natural gas went and triple peaked at a price in excess of 200 euros per MWH and API 2 coal is trading at \$430, \$440 the last time I looked. So you can again say that the oil supply chain is a little bit more resilience to it and has more depth to it and hasn't yet hasn't panicked in the way those utilities markets already have.*"

At 19:45 min mark, Evers asks if it will make any difference if US etc sanction oil as it's already disrupting itself and hence already built into the oil prices? Muller "It will. And yes you're right to say it looks like much of the western hemisphere Russian export program other than that down the pipelines is still up in the air. And as is the case with the normal stock markets cycle not yet placed from April onwards. But there is a huge question mark over it as you're talking about close to 3 million barrels a day. I think the flow into both the Druzhba pipeline and into Europe 700,000, 800,000 barrels a day. and then of course very large flows out of the Baltic and to a lesser extent out of the Black Sea. The world does not have enough spare capacity. I don't know if I misheard Christof there, but the world does not have enough crude either. Never mind the little wobble in Libya recently. Unless we get Iranian oil back, the supply demand balance is, with full Russian oil in the picture, we're not enough. And we were concerned about where the oil is going to come from. whether the Permian Basin could catch up quickly enough. And We were talking about the possible need for SPR releases just to address high oil price with nonsense like the mid term elections in mind to appease the electorate in North America. Now with millions of barrels a day of Russian oil probably likely to be backed in. some of it perhaps making the long way around thru [??]around the bottom end of Africa to eastern Asian markets. The impact is going to be very profound. If you have to build a artificially long maritime pipeline to transport the oil to the other hemisphere, that does away with a month's worth of demand as that oil is in transit. It's like line fill on a pipeline. And even if all goes there, there's still going to be a shortage of sweet barrels for the western hemisphere refining system. so the market is telling you that because it's showing you a \$5, \$6 per barrel backwardation, which we have not seen since the very first Gulf War in 1991 just before Desert Storm. This is unprecedented stuff. And the market is just telling you there's not enough oil in prompt end. The law of high prices is going to have to weed out the weaker demand and destroy it."

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

<https://www.spa.gov.sa/viewfullstory.php?lang=en&newsid=2336518#2336518>

An Official Spokesman at the Ministry of Energy Condemns Terrorist Drone Attack and Sabotage on Riyadh Refinery, Targeting the Security of Energy Supply

Friday 1443/8/8 - 2022/03/11

Riyadh, Mar. 11, 2022, SPA -- An official spokesman at the Ministry of Energy stated that at around 04:40 AM of yesterday, the Riyadh oil refinery was attacked by a drone, resulting in a small fire that has been brought under control. The attack did not result in any injury or death nor was the supply of oil or its derivatives affected.

In his statement, the spokesman stressed that the Kingdom strongly condemns this cowardly attack. The Kingdom asserts that such acts of sabotage and terrorism, repeatedly committed against vital installations and civilian facilities, do not target the Kingdom alone, but more broadly the security and stability of energy supply to the world, and thus negatively affecting the global economy.

The spokesman renewed the Kingdom's call to all nations and organizations of the world to stand together against such acts of sabotage and terrorism, and to stop all groups carrying out or supporting these attacks.

— SPA

01:42 LOCAL TIME 22:42 GMT

Note: Riyadh Saudi Arabia is 3 hours ahead of Greenwich Mean Time ie. **3:47 GMT is 6:47 Riyadh time**

OIL TENDER: Aramco Seeks Diesel for Saudi Arabia in Rare Move
2022-03-10 **03:47:32.152 GMT**

By Elizabeth Low and Sharon Cho
(Bloomberg) -- Aramco Trading is seeking an unusually large volume of diesel for prompt delivery to Saudi Arabia in a rare move for the country, which is usually an exporter of the fuel, according to traders who asked not to be identified.

- * Co. sought ~1.2m-4.6m barrels of 10ppm sulfur gasoil for delivery to Ras Tanura, Jizan, Jeddah and Duba via a tender
- * Delivery period from mid-March to mid-April
- * Offers due March 10, valid until next day

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<https://blinks.bloomberg.com/news/stories/R8IE5XDWLU6C>

<https://www.spa.gov.sa/viewfullstory.php?lang=en&newsid=2336518#2336518>

An Official Spokesman at the Ministry of Energy Condemns Terrorist Drone Attack and Sabotage on Riyadh Refinery, Targeting the Security of Energy Supply

Friday 1443/8/8 - 2022/03/11

Riyadh, Mar. 11, 2022, SPA -- An official spokesman at the Ministry of Energy stated that at **around 04:40 AM of yesterday**, the Riyadh oil refinery was attacked by a drone, resulting in a small fire that has been brought under control. The attack did not result in any injury or death nor was the supply of oil or its derivatives affected.

In his statement, the spokesman stressed that the Kingdom strongly condemns this cowardly attack. The Kingdom asserts that such acts of sabotage and terrorism, repeatedly committed against vital installations and civilian facilities, do not target the Kingdom alone, but more broadly the security and stability of energy supply to the world, and thus negatively affecting the global economy.

The spokesman renewed the Kingdom's call to all nations and organizations of the world to stand together against such acts of sabotage and terrorism, and to stop all groups carrying out or supporting these attacks.

— SPA

01:42 LOCAL TIME 22:42 GMT

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- WSJ NEWS EXCLUSIVE
- [MIDDLE EAST](#)

Saudi, Emirati Leaders Decline Calls With Biden During Ukraine Crisis

Persian Gulf monarchies have signaled they won't help ease surging oil prices unless Washington supports them in Yemen, elsewhere

The rift between President Biden and Saudi Arabia's crown prince stretches back to the 2020 campaign, when Mr. Biden criticized the kingdom over the murder of journalist Jamal Khashoggi.

PHOTO: OLIVER CONTRERAS/ZUMA PRESS

By [Dion Nissenbaum](#) Follow

, [Stephen Kalin](#) Follow

and David S. Cloud

Updated March 8, 2022 7:48 pm ET

The White House unsuccessfully tried to arrange calls between President Biden and the de facto leaders of Saudi Arabia and the United Arab Emirates as the U.S. was working to build international support for [Ukraine](#) and contain [a surge in oil prices](#), said Middle East and U.S. officials.

Saudi Crown Prince Mohammed bin Salman and the U.A.E.'s Sheikh Mohammed bin Zayed al Nahyan both declined U.S. requests to speak to Mr. Biden in recent weeks, the officials said, as Saudi and Emirati officials have become more vocal in recent weeks in their criticism of American policy in the Gulf.

“There was some expectation of a phone call, but it didn't happen,” said a U.S. official of the planned discussion between the Saudi Prince Mohammed and Mr. Biden. “It was part of turning on the spigot [of Saudi oil].”

Mr. Biden did speak with Prince Mohammed's 86-year-old father, King Salman, on Feb. 9, when the two men reiterated their countries' longstanding partnership. The U.A.E.'s Ministry of Foreign Affairs said the call between Mr. Biden and Sheikh Mohammed would be rescheduled.

The Saudis have signaled that their relationship with Washington has deteriorated under the Biden administration, and they want more support for their intervention in Yemen's civil war, help with their own civilian nuclear program as Iran's moves ahead, and legal immunity for

Prince Mohammed in the U.S., Saudi officials said. The crown prince faces multiple lawsuits in the U.S., including over [the killing of journalist Jamal Khashoggi](#) in 2018.

The Emiratis share Saudi concerns about the restrained U.S. response to recent missile strikes by Iran-backed Houthi militants in Yemen against the U.A.E. and Saudi Arabia, officials said. Both governments are also concerned about [the revival of the Iran nuclear deal](#), which doesn't address other security concerns of theirs and has entered the final stages of negotiations in recent weeks.

The White House has worked to repair relations with two key Middle Eastern countries it needs on its side as oil prices push over \$130 a barrel for the first time in almost 14 years. Saudi Arabia and the U.A.E. are the only two major oil producers that can pump millions of more barrels of more oil—a capacity that, if used, could help calm the crude market at a time when American gasoline prices are at high levels.

Brett McGurk, the National Security Council's Middle East coordinator, and Amos Hochstein, the State Department's energy envoy, both traveled to Riyadh late last month to try to mend fences with Saudi officials. Mr. McGurk also met with Sheikh Mohammed in Abu Dhabi in a bid to address Emirati frustrations over the U.S. response to the Houthi attacks.

The call with Sheikh Mohammed in early February was expected to focus on ways the two countries could counter Houthi attacks from Yemen.

One U.S. official said the Biden administration has worked diligently to strengthen Saudi and Emirati missile defenses, and that America would be doing more in the coming months to help the two Gulf nations protect themselves. It may not be all the two countries want, the official said, but the U.S. is trying to address their security concerns.

But the Saudis and Emiratis have declined to pump more oil, saying they are sticking to a production plan approved between their group, the Organization of the Petroleum Exporting Countries, and a group of other producers led by Russia. The energy alliance with Russia, one of the world's top oil producers, has enhanced OPEC's power while also bringing the Saudis and Emiratis closer to Moscow.

Both Prince Mohammed and Sheikh Mohammed took phone calls from Russian President [Vladimir Putin](#) last week, after declining to speak with Mr. Biden. They both later spoke

with Ukraine's president, and a Saudi official said the U.S. had requested that Prince Mohammed mediate in the conflict, which he said the kingdom is embarking on.

White House spokeswoman Jen Psaki said earlier this week that there were no plans to talk to Prince Mohammed anytime soon about oil, and that there were no plans for Mr. Biden to travel to Saudi Arabia.

Saudi Arabia and the U.A.E. forged deep ties with former President [Donald Trump](#), who sided with them in a regional dispute with Qatar, pulled the U.S. out of the Iran nuclear deal that they had opposed, made his first trip abroad to Riyadh in 2017 and stood by Prince Mohammed after the killing of Mr. Khashoggi. But Mr. Trump's decision not to respond to an Iranian drone and missile attack on major Saudi oil sites in 2019 rattled Gulf partners who have relied for decades on the promise of U.S. security protection. Iran denied involvement in the oil facility attacks. The rift between Mr. Biden and Saudi Arabia's crown prince stretches back to the 2020 presidential election, when the Democratic candidate vowed to treat the kingdom as a "pariah" state after a Saudi hit team killed Mr. Khashoggi in 2018 in Istanbul.

There is "very little social redeeming value in the present government in Saudi Arabia," Mr. Biden said during a presidential debate in 2019.

After taking office, Mr. Biden released a U.S. intelligence report that concluded that Prince Mohammed had approved the plan to capture or kill Mr. Khashoggi, who had been an outspoken critic of the young Saudi ruler.

Prince Mohammed has denied knowing anything about the plot, even though people close to the crown prince were convicted by a Saudi court of taking part in murdering the journalist.

Mr. Biden also publicly castigated Saudi Arabia over its protracted war in Yemen and cut off the flow of some weapons Riyadh could use to target Houthis. The president also reversed a move by his predecessor that put the Houthis on America's official list of global terrorist groups, a move that Saudi leaders said had emboldened the Yemeni force and thwarted efforts to broker a cease-fire.

On Monday, Ms. Psaki said the president stood by his view that Saudi Arabia should be treated like a "pariah" state and that the leadership had little redeeming social value.

When asked in an interview with the Atlantic magazine released last week if Mr. Biden misunderstood the Saudi leader, Prince Mohammed responded: “Simply, I do not care.”

Prince Mohammed said alienating the Saudi leaders would hurt the U.S. president. “It’s up to him to think about the interests of America,” he said. “Go for it.”

One U.S. official acknowledged that Prince Mohammed is the key Saudi decision maker, and that the Biden administration will have to find ways to work with the crown prince on everything from energy policy to normalizing relations with Israel.

Along with Saudi Arabia, the U.A.E. has urged the U.S. to put the Houthis on its list of terrorist groups and to send more military aid to help defend the country from more attacks. But the U.S. hasn’t moved to address those Emirati concerns, according to Gulf officials.

Last month, Gen. Frank McKenzie, the head of U.S. Central Command, flew to Abu Dhabi for a series of meetings with Emirati leaders to discuss ways to beef up security in the wake of the Houthi missile strikes. Gen. McKenzie wanted to meet with Sheikh Mohammed, but was unable to get time with the Emirati leader, according to a Middle East official.

Last week, Yousef Al Otaiba, the U.A.E. ambassador to the U.S., said that relations between the two countries were strained.

“It is like any relationship,” he said in Abu Dhabi. “It has strong days where the relationship is very healthy and days where the relationship is under question. Today, we’re going through a stress test, but I am confident that we will get out of it and get to a better place.”

—*Benoit Faucon, Timothy Puko and Summer Said contributed to this article.*

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Appeared in the March 9, 2022, print edition as 'Saudi, U.A.E. Leaders Spurn Biden's Calls.'

France, Germany, U.K. Say Iran Deal Should Be Concluded Urgently
2022-03-12 10:52:07.98 GMT

By Deana Kjuka

(Bloomberg) -- France, Germany and the U.K. noted they're disappointed that the Iran nuclear talks were suspended, adding that "a fair and comprehensive deal is on the table ready for conclusion," according to an emailed press release on Saturday.

"It is our understanding that Iran and the U.S. have worked hard to resolve final bilateral issues and so we are ready to conclude this deal now," the statement said.

European Union foreign policy chief Josep Borrell said on Friday that a pause in the Vienna talks was required due to "external factors, without elaborating. Borrell said the sides had come very close to an agreement but didn't say when -- or if -- the negotiations would resume.

Read More: Iran Nuclear Talks Suspended as Window Closes on Key Deal

"Nobody should seek to exploit Joint Comprehensive Plan of Action (JCPOA) negotiations to obtain assurances that are separate to the JCPOA," the statement says, concluding that the the "deal on the table can and should be concluded with the utmost urgency."

The talks were suspended amid tensions between the White House and the Kremlin, with Moscow insisting on U.S. guarantees that the sanctions imposed over Russia's invasion of Ukraine would not affect its planned partnership with Iran.

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To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/R8MN6XT0G1KW>

Excerpt <https://www.whitehouse.gov/briefing-room/press-briefings/2022/03/09/press-briefing-by-press-secretary-jen-psaki-march-9-2022/>

Press Briefing by Press Secretary Jen Psaki, March 10, 2022

MARCH 09, 2022 • [PRESS BRIEFINGS](#)

James S. Brady Press Briefing Room

12:54 P.M. EST

Q Completely separate topic: France said today that the window on an Iran deal is closing. Does the U.S. share that view? Is the sense here that Iran is trying to run out the clock?

MS. PSAKI: Well, our view is that we are close. We have been close for some time now, and we also — for the last several weeks, as we've been talking about. We also all know, from having been through these negotiations before, that the end of negotiations is always when the difficult and challenging parts of the conversation typically take place. So, I wouldn't make that assessment or echo that from here. We are continuing to have these diplomatic talks. It is in all of our interests to stay at the negotiating table. And that's what our plan is to do from here. Go ahead.

Excerpt <https://www.whitehouse.gov/briefing-room/press-briefings/2022/02/23/press-briefing-by-press-secretary-jen-psaki-february-23-2022/>

Press Briefing by Press Secretary Jen Psaki, February 23, 2022

FEBRUARY 23, 2022 • [PRESS BRIEFINGS](#)

James S. Brady Press Briefing Room

3:33 P.M. EST

Q There have been reports that the U.S., Iran is reaching, closing in on some sort of deal. Would you all confirm that that is an accurate assessment — that you are inching towards a potential deal this week?

MS. PSAKI: Well, what we're seeing is there is significant progress being made, and we are close to a possible deal. But there are a number of very difficult issues that remain unresolved. **And there's very little time remaining to reach a deal given the pace of Iran's nuclear advances.**

Also, I would note that typically the most difficult components — the last mile — is where it — where there is the most difficult conversations and negotiations.

So, yes, significant progress and we are close. But there's a lot that still needs to be worked out.

It is true that Iran — we believe if Iran shows seriousness, we can and should reach an understanding on mutual return to full implementation of the JCPOA within — potentially within days. But there is still more work that needs to be done.

Q So you all are optimistic or — I mean, that's a mixed (inaudible)?

MS. PSAKI: We are — we are encouraged by the significant progress, but, having been through a few of these, I would note that, often, the most difficult negotiations happen in the — in the last portion.

<https://twitter.com/HESuhail/status/1501683226884321283>



سهيل المزروعى
@HESuhail



The UAE believes in the value OPEC+ brings to the oil market.
The UAE is committed to the OPEC+ agreement and its existing monthly production adjustment mechanism.

3:15 PM · Mar 9, 2022 · Twitter for iPhone

251 Retweets 79 Quote Tweets 383 Likes

<https://www.uae-embassy.org/news/statement-ambassador-yousef-al-otaiba>

[Press Releases](#)

Statement from Ambassador Yousef Al Otaiba

March 9, 2022

WASHINGTON, DC (8 March 2022) – Ambassador Al Otaiba: “We favor production increases and will be encouraging OPEC to consider higher production levels.”

“The UAE has been a reliable and responsible supplier of energy to global markets for more than 50 years and believes that stability in energy markets is critical to the global economy.”

IEA confirms individual contributions to collective action to release oil stocks in response to Russia's invasion of Ukraine

4 March 2022

IEA Member Countries [unanimously agreed on 1 March to an initial emergency response plan](#) to alleviate the increasing tightness in oil markets resulting from Russia's invasion of Ukraine. IEA Member Countries agreed to make 60 million barrels of their emergency oil stocks available to the market. In the last few days since the decision, each IEA Member Country has been considering how much it could contribute to the announced response plan, given its domestic circumstances. The commitments submitted by Members actually surpassed 60 million barrels, demonstrating great solidarity.

“The decision taken to release emergency stocks – for only the 4th time in the IEA's history – has sent a strong message that IEA Members are unified in support of Ukraine and will do all they can to provide stability to the market during these difficult days,” said IEA Executive Director Fatih Birol. “Events in Ukraine remain deeply distressing and the impacts on energy markets are becoming more pronounced. We continue to monitor the situation closely. If necessary, we are ready to recommend additional steps to build on this initial release.”

IEA Member Countries hold 1.5 billion barrels in public reserves and about 575 million barrels under obligations with industry. Therefore, this initial response of 61.7 million barrels represents just 3% of total emergency reserves.

Emergency oil stocks in IEA member countries are either in the form of public stocks (government-owned or by specialised agencies), or stocks held by industry under an obligation of the government. In the case of public stocks, these can be released via tenders or loans to the market, which will be launched and released over the coming weeks depending on the specific stockholding system in each country. In the case of obligated industry stocks, obligations will be lowered, via legislative decrees or administrative mandates, to make the volumes available for consumption. This can take a matter of days.

The following table shows the breakdown of the oil to be made available by each of the participating countries. More details will be made available in due course on the breakdown of the pledged barrels in crude and products, and public and obligated industry stocks.

Following the announcement of an emergency release of oil stocks by IEA Member Countries on Tuesday, the IEA Governing Board confirmed today that the total amount committed to date stands at 61.7 million barrels, making it the largest stock release in IEA history
Contribution to IEA collective stock draw

	kb
Australia	1 692
Austria	387
Belgium	258
Estonia	36
Finland	377
France	1 500
Germany	3 215
Greece	303
Hungary	266
Ireland	222
Italy	2 041
Japan	7 500
Korea	4 420
Lithuania	115
Luxembourg	109
Netherlands	823
New Zealand	384
Norway	409
Poland	1 052
Spain	2 000
Sweden	551
Switzerland	350
Turkey	1 500
United Kingdom	2 200
United States	30 000
Total IEA	61 710

[Download image](#)

An update on Member Countries' Contributions to IEA Collective Stock Draw

9 March 2022

Following the unanimous decision on 1 March to make 60 million barrels available from emergency stocks, nearly 62.7 million barrels of emergency oil stocks are being made available collectively by IEA Member Countries.

As shown in the table below, over two-thirds of this is coming from public stocks (government or specialized agency-held stocks) and nearly one-third is from the lowering of stockholding obligations set on industry. The vast majority of the public stocks are in the form of crude oil, while the bulk of the oil available from lowering stockholding obligations is refined product.

Emergency oil stocks made available from IEA collective action

(thousand barrels)

	Total	Public	Industry	Crude oil	Refined products
United States	30 000	30 000	0	30 000	0
Total IEA N. America	30 000	30 000	0	30 000	0
Australia	1 692	1 692	0	1 692	0
Japan	7 500	0	7 500	3 147 *	4 353 *
Korea	4 420	4 420	0	4 420	0
New Zealand	369	369	0	369	0
Total IEA Pacific	13 981	6 481	7 500	9 628	4 353
Austria	387	387	0	387	0
Belgium	253	253	0	0	253
Estonia	37	37	0	0	37
Finland	377	377	0	377	0
France	1 833	1 833	0	0	1 833
Germany	3 199	3 199	0	2 130	1 069
Greece	303	0	303	0	303
Hungary	265	265	0	265	0
Ireland	222	222	0	0	222
Italy	2 044	0	2 044	1 177	867
Lithuania	115	0	115	58 *	58 *
Luxembourg	109	0	109	109	0
Netherlands	823	0	823	411 *	411 *
Norway	400	0	400	0	400
Poland	1 709	0	1 709	737	972
Spain	2 000	0	2 000	0	2 000
Sweden	551	0	551	0	551
Switzerland	350	0	350	0	350
Turkey	1 505	0	1 505	0	1 505
United Kingdom	2 200	0	2 200	446	1 754
Total IEA Europe	18 682	6 573	12 109	6 097	12 585
Total IEA**	62 662	43 054	19 609	45 724	16 938

* The breakdown in crude and product has been estimated; overall stockholding obligations on industry, which include both crude and refined products, have been lowered in these countries.

** The total stock release of 62.7 mb is greater than the originally announced 61.7 mb as both France and Poland contributed larger volumes than initially pledged.

<https://www.meti.go.jp/press/2021/03/20220310005/20220310005.html>

Reduced private stockpiling obligations as a coordinated action by the International Energy Agency (IEA) member countries to release oil stockpiling

March 10, 2022

On Thursday, March 10, the Ministry of Economy, Trade and Industry reduced the amount of private stockpiling obligations by four days as a coordinated action by the member countries of the International Energy Agency (IEA) to release oil stockpiling.

At the IEA extraordinary ministerial meeting held on Tuesday, March 1, the IEA agreed to coordinate the release of 60 million barrels of oil in order to stabilize the energy market in light of the impact of Russia's invasion of Ukraine on the oil market. In response to this, the Ministry of Economy, Trade and Industry decided to release 7.5 million barrels from private stockpiles, and for 30 days from March 10 to April 8, the amount of private stockpiling obligations based on the Act on Securing Oil Stockpiling, etc. Was reduced from 70 days to 66 days by 4 days.

responsible person

Agency for Natural Resources and Energy Resources and Fuel Department

Oil Refining and Stockpiling Section Manager Hosokawa

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Mar 09, 2022 06:58:03

OIL DEMAND MONITOR: High Prices Not Destroying Demand, Vet

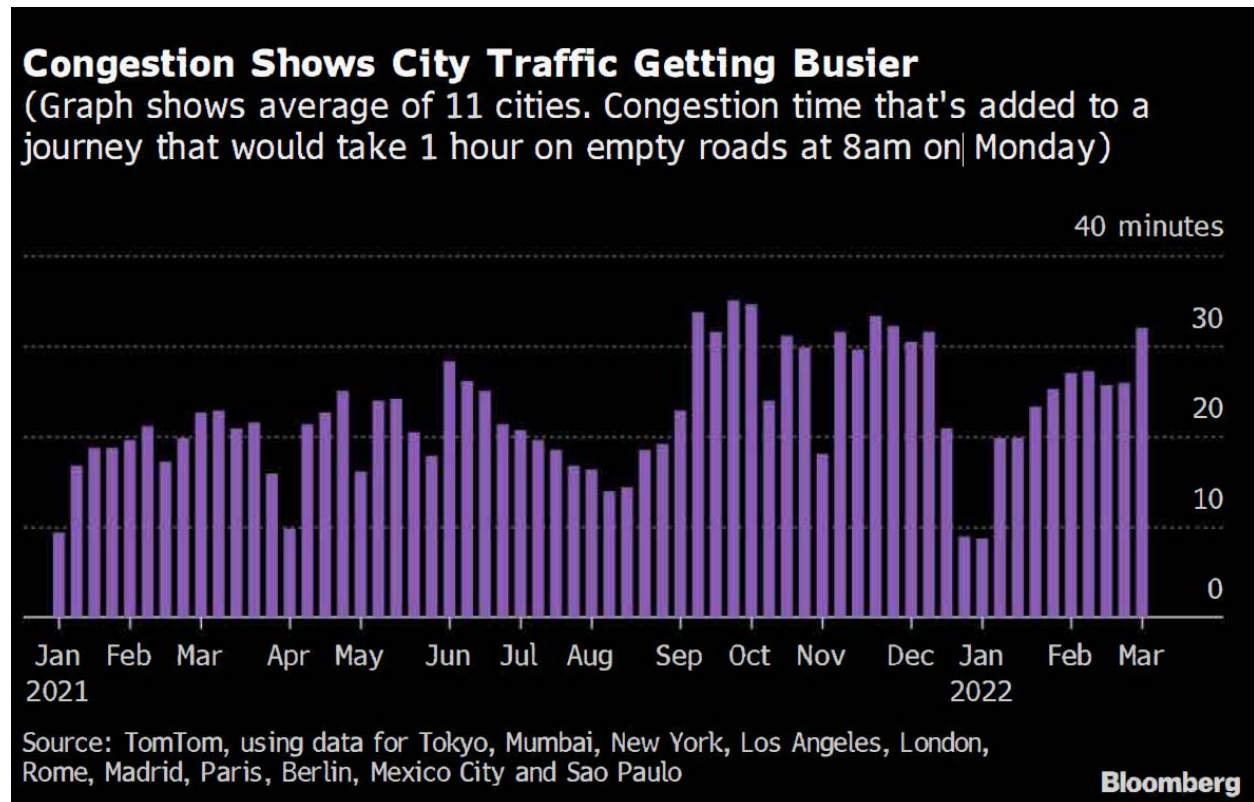
- U.K. road fuel demand surged in last week of February
- Inner city traffic congestion keeps growing, TomTom data show

By Stephen Voss

(Bloomberg) -- High oil prices aren't yet showing significant signs of curbing demand for road fuels in major consuming countries, according to high-frequency data monitored by Bloomberg.

The number of vehicle miles driven on U.S. interstate highways was only 0.6% below 2019 levels for the week ended Feb. 27, even with average nationwide prices for regular gasoline rocketing to \$3.60 a gallon that day. They've since risen further to record levels above \$4, according to auto club AAA.

Inner-city driving data collected by TomTom NV show a similar trend. Out of 13 major cities around the world regularly tracked in this monitor, Taipei, London and Madrid all had congestion on Monday morning that was above typical 2019 levels for that time of the week. That's the first time since Dec. 13 that as many as three cities passed that threshold.



Contrary to expectations of demand destruction with prices so high, the underlying concern about supply in the wake of Russia's invasion of Ukraine has led to a temporary increase in some places, such as Poland.

Russia's energy sector is too big to be easily compensated for, UBS strategist Giovanni Staunovo said in a report. The bank said oil prices will need to go higher still to trigger demand destruction, and suggested \$125 a barrel as a possible "soft cap" for Brent crude, though prices could go higher. Brent futures briefly exceeded \$139 during Monday's session and were near \$124 Wednesday morning.

Fuel Sales Soar in the U.K.

U.K. demand for petrol, or gasoline, and diesel soared at the end of February to levels not seen since a brief bout of panic buying in September. Average daily petrol sales per service station exceeded 10,000 liters a day on Feb. 25, and diesel topped 13,000 liters the same day, according to data collected from about 4,500 fueling stations by the Department for Business, Energy and Industrial Strategy.

That week saw sales increase in all parts of the U.K. "due to heightened consumer concern associated with a global rise in fuel prices and the conflict in Ukraine," the government department said.

"Deliveries increased in response in the latter part of the week, and average stocks fell to just below the normal range."

A seven-day moving average shows the trend more clearly, including troughs in consumption in January this year and last.

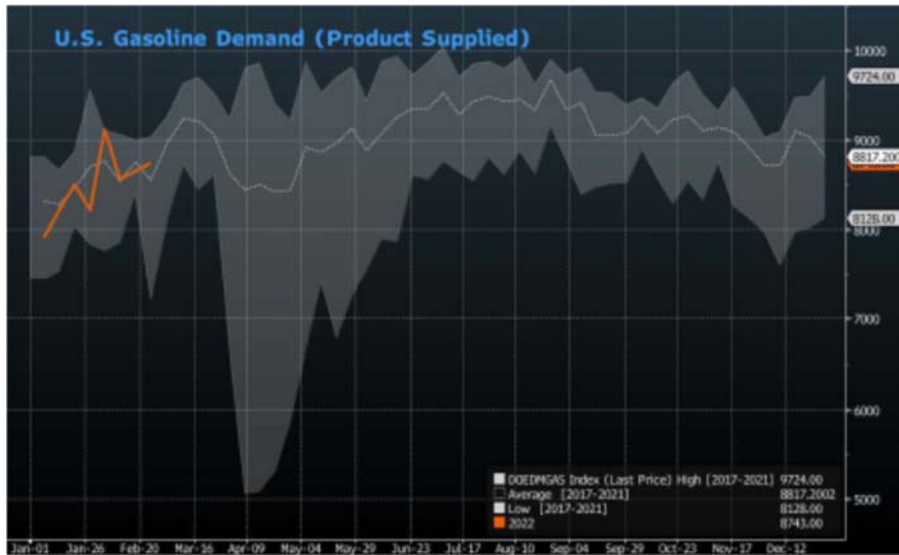


Combined U.K. stockpiles of gasoline and diesel were 34% full on Feb. 27, down from a normal level of 45% a week earlier. At the peak of September's buying spree, stockpiles dipped as low as 16% full and recovered to 35% two weeks later.

Lobby group Fair Fuel UK expects motorists will pare back recreational driving this year to save money.

High prices aren't currently affecting the number of trucks trundling along German highways to any noticeable degree, daily government data shows. Trucking has shown more resilience than passenger car use throughout the epidemic, even during lockdowns. Still, there are signs of unrest elsewhere. Moroccan truck drivers belonging to the SNPTR union are observing a three-day strike over surging fuel costs, Agence-France Press reported Tuesday.

Estimated gasoline demand in the U.S. was comfortably close to the 5-year average in the week ended Feb. 25, according to the Energy Information Administration. Data for the week ended March 4 will be published later Wednesday. The EIA's assessment estimates the amount of product being supplied by refineries and wholesalers rather than a direct measurement of end-consumer use.



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 two tables shows fuel demand and mobility, the next shows air travel globally and the fourth is refinery activity:

Demand Measure	Location	% y/y	% vs 2020	% vs 2019	% m/m	Freq	Latest Date	Latest Value	Source
Gasoline	U.S.	+7.3	-4.8	-2.7	+6.3	w	Feb. 25	8.74m b/d	EIA
Distillates	U.S.	+17	+14	+9.2	-4.7	w	Feb. 25	4.45m b/d	EIA
Jet fuel	U.S.	+14	-14	-24	+0.3	w	Feb. 25	1.47m b/d	EIA
Total oil products	U.S.	+11	-2	-3.1	-2.7	w	Feb. 25	20.8m b/d	EIA
All vehicles miles traveled	U.S.			-0.6		w	Feb. 27	14.1b miles	DoT
Passenger car VMT	U.S.			-3.2		w	Feb. 27	n/a	DoT
Truck VMT	U.S.			+9		w	Feb. 27	n/a	DoT
All motor vehicle use index	U.K.	+30		-5	+3.3	w	Feb. 28	95	DfT
Car use	U.K.	+36		-10	+3.4	w	Feb. 28	90	DfT
Heavy goods vehicle use	U.K.	+1.9		+6	+1	w	Feb. 28	106	DfT
Gasoline (petrol) avg sales per filling station	U.K.	+64		+5.7	+19	w	Feb. 27	7,703 liters/d	BEIS

Diesel avg sales per station	U.K.	+32		unch	+14	w	Feb. 27	10,456 liters/d	BEIS
Total road fuels sales per station	U.K.	+44		+2.4	+16	w	Feb. 27	18,159 liters/d	BEIS
Gasoline	India	+3.3	+7.1		+24	2/m	Feb. 1-28	2.29m tons	Bberg
Diesel	India	-0.9	-4.8		+21	2/m	Feb. 1-28	5.77m tons	Bberg
LPG	India	+7.7	+18		+3.6	2/m	Feb. 1-28	2.44m tons	Bberg
Jet fuel	India	-3	-38		+4.4	2/m	Feb. 1-28	395k tons	Bberg
Total Products	India	-0.2	-6	-4.9	-3.7	m	January	17.6m tons	PPAC
Toll roads volume	France	+16		-2.9		m	January	n/a	Atlantia
Toll roads volume	Italy	+43		-12		m	January	n/a	Atlantia
Toll roads volume	Spain	+53		-10		m	January	n/a	Atlantia
Toll roads volume	Brazil	+1.1		-3.4		m	January	n/a	Atlantia
Toll roads volume	Chile	+40		+12		m	January	n/a	Atlantia
Toll roads volume	Mexico	+15		+12		m	January	n/a	Atlantia
Gasoline	Spain	+43			+6.8	m	February	425k m3	Exolum
Diesel (and heating oil)	Spain	+20			+3.9	m	February	2283k m3	Exolum
Jet fuel	Spain	+171			-6.8	m	February	307k m3	Exolum
Road fuel sales	France	+7.1	-9.5		-15	m	January	3.63m m3	UFIP
Jet fuel	France	+53	-35		-14	m	January	437k m3	UFIP
Gasoline	France	+18	-3.8			m	January	n/a	UFIP
Road diesel	France	+3.9	-11			m	January	n/a	UFIP
All petroleum products	France	+6.1	-12		-12	m	January	4.23m tons	UFIP
Total fuel sales	Italy	+6.9	-12		-18	m	January	3.68m tons	Ministry
Gasoline	Italy	+27	-14		-22	m	January	502k tons	Ministry
Diesel /gasoil	Italy	+11	-13		-23	m	January	1.84m tons	Ministry
Jet fuel	Italy	+139	-40		-9.7	m	January	196k tons	Ministry
All vehicles traffic	Italy	+30			-12	m	January	n/a	Anas
Heavy vehicle traffic	Italy	unch			-11	m	January	n/a	Anas

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 fuel demand for Feb. 2022 vs Feb. 2020.

In DfT U.K. 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 U.K. 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.

City congestion:

Measure	Location	% chg vs avg 2019	% chg m/m	March 7	Feb. 28	Feb. 21	Feb. 14	Feb. 7	Jan. 31	Jan. 24	Jan. 17	Jan. 10
		(March 7)		Congestion minutes added to 1 hr trip at 8am* local time								
Congestion	Tokyo	-6	+14	35	34	35	25	31	28	32	35	5
Congestion	Taipei	+37	+113	49	3	44	47	23	2	32	33	32
Congestion	Jakarta	-40	+26	23	zero	12	11	19	14	31	37	32
Congestion	Mumbai	-58	+143	20	18	19	17	8	13	9	7	7
Congestion	New York	-6	-11	29	31	5	28	33	36	26	4	19
Congestion	Los Angeles	-12	-2	31	32	6	29	32	26	26	8	13
Congestion	London	+11	-7	42	43	47	21	45	43	41	41	37
Congestion	Rome	-25	+5	37	35	35	34	35	25	25	22	28
Congestion	Madrid	+20	+137	43	8	24	25	18	14	16	12	12
Congestion	Paris	-3	+1	43	24	29	46	43	35	34	35	36
Congestion	Berlin	-66	-54	11	28	29	26	25	16	25	29	29
Congestion	Mexico City	-24	n/a	37	35	32	29	zero	22	18	15	20
Congestion	Sao Paulo	-11	+7	35	10	29	28	33	28	14	16	19

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

* Mumbai and Sao Paulo use 9am statistics rather than 8am.

NOTE: m/m comparisons are March 7 vs Feb. 7. TomTom has been unable to provide Chinese data since April 2021. Taipei and Jakarta were added to the table in December 2021.

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	U.S.	+80	+5.7	-5.9	+27	+1.9	d	March 7	2.02m	TSA
Commercial flights	Worldwide	+31	-9.4	-13	+11	-2.5	d	March 8	94,097	FlightRadar24
Air traffic (flights)	Europe			-25	+16	-0.1	d	March 8	18,992	Eurocontrol
Seat capacity	Worldwide	+41	-14	-23	+3.9	-0.1	w	March 7-13	82.0m	OAG
Seat capacity	North America			-14		+1.1	w	March 7-13	n/a	OAG
Seat capacity	North East Asia			-25		-4.5	w	March 7-13	n/a	OAG
Seat capacity	South East Asia			-47		-0.4	w	March 7-13	n/a	OAG
Seat capacity	South Asia			-3.2		+2	w	March 7-13	n/a	OAG
Seat capacity	Western Europe			-29		+0.9	w	March 7-13	n/a	OAG

NOTE: Comparisons versus 2019 or versus the early weeks of 2020 are a better measure of a return to normal for most nations, rather than y/y comparisons.

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

Refineries:

Measure	Location/area	y/y	chg vs 2019	m/m chg	Latest as of Date	Latest Value	Source
Changes are in ppt unless noted							
Crude intake	U.S.	+55%	-3.1%	+1%	Feb. 25	15.4m b/d	EIA
Apparent Oil Demand	China	+2.5%		-3.8%	December 2021	13.65m b/d	NBS
Utilization	U.S.	+32	+0.6	+1	Feb. 25	87.7 %	EIA
Utilization	U.S. Gulf	+47	-1.6	+1.5	Feb. 25	87.5 %	EIA
Utilization	U.S. East	+15	+26	-1.6	Feb. 25	85.8 %	EIA
Utilization	U.S. Midwest	+23	+6.8	+2.1	Feb. 25	94.0 %	EIA

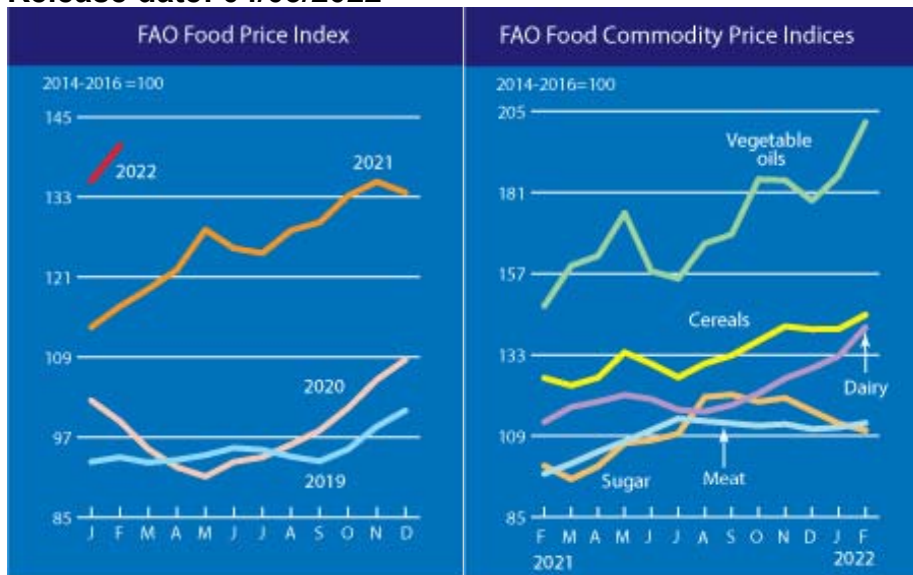
NOTE: All of the refinery data is weekly, except NBS apparent demand, which is usually monthly. Changes are shown in percentages for the rows on crude intake and Chinese apparent oil demand, while refinery utilization changes are shown in percentage points. SCI99 data on Chinese refinery run rates was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

FAO Food Price Index

The FAO Food Price Index (FFPI) is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices weighted by the average export shares of each of the groups over 2014-2016. [A feature article](#) published in the June 2020 edition of the Food Outlook presents the revision of the base period for the calculation of the FFPI and the expansion of its price coverage, to be introduced from July 2020. [A November 2013 article](#) contains technical background on the previous construction of the FFPI.

The FAO Food Price Index rises to a new all-time high in February

Release date: 04/03/2022



» The **FAO Food Price Index*** (FFPI) averaged 140.7 points in February 2022, up 5.3 points (3.9 percent) from January and as much as 24.1 points (20.7 percent) above its level a year ago. This represents a new all-time high, exceeding the previous top of February 2011 by 3.1 points. The February rise was led by large increases in vegetable oil and dairy price sub-indices. Cereals and meat prices were also up, while the sugar price sub-index fell for the third consecutive month.

» The **FAO Cereal Price Index** averaged 144.8 points in February, up 4.2 points (3.0 percent) from January and 18.7 points (14.8 percent) from one year ago. In February, prices of all major cereals increased from their respective values last month. World wheat prices increased by 2.1 percent, largely reflecting new global supply uncertainties amidst disruptions in the Black Sea region that could potentially hinder exports from Ukraine and the Russian Federation, two major wheat exporters. Coarse grain export prices also rose by 4.7 percent. World maize prices increased by 5.1 percent month-on-month, underpinned by a combination of continued crop condition concerns in Argentina and Brazil, rising wheat prices, and uncertainty regarding maize exports from Ukraine, a major exporter. Among other coarse grains, both sorghum and barley export prices firmed month-on-month as well, gaining 5.9 and 2.7 percent, respectively. International rice prices increased by 1.1 percent in February, primarily sustained by the appreciation of currencies of some exporters against the US dollar and strong demand for fragrant rice from Near East Asian buyers.

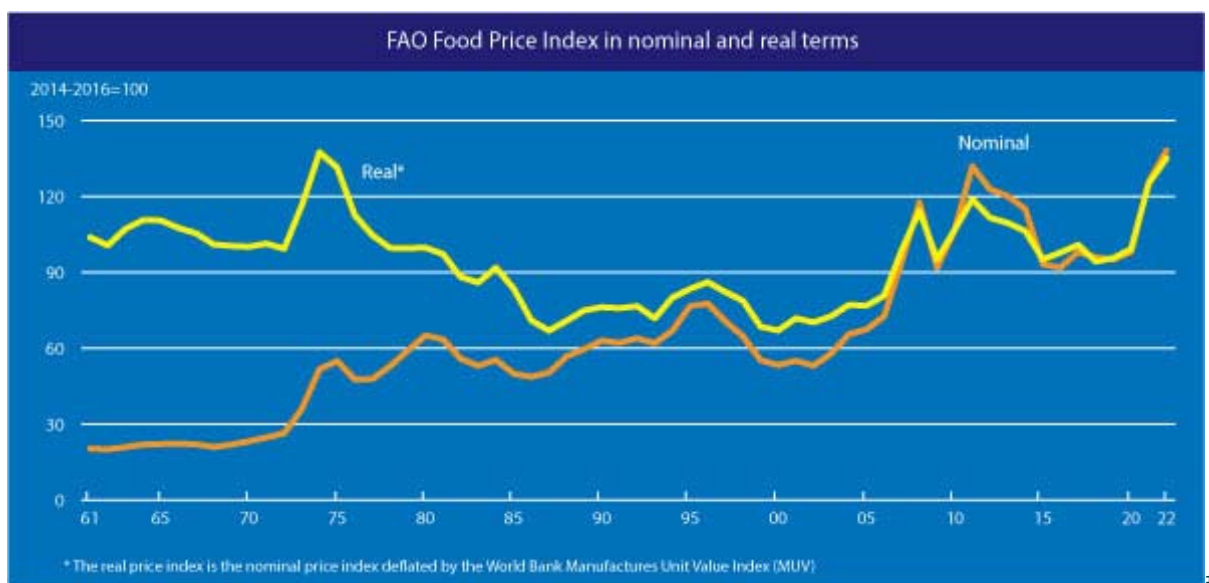
» The **FAO Vegetable Oil Price Index** averaged 201.7 points in February, up 15.8 points (8.5 percent) month-on-month and marking a new record high. The continued price strength mostly stemmed from rising palm, soy, and sunflower oil prices. In February, international palm oil prices increased for the second consecutive month due to the sustained global import demand that coincided with reduced export availabilities from Indonesia, the world's leading palm oil exporter. In the meantime, world soybean values continued to rise on deteriorating soybean production prospects in South America. International sunflower oil prices also increased markedly, underpinned by concerns over the disruptions in the Black Sea region, which could potentially lower exports. Surging crude oil prices also lent support to the vegetable oil complex.

» The **FAO Dairy Price Index** averaged 141.1 points in February, up 8.5 points (6.4 percent) from January, marking the sixth successive monthly increase and placing the index 28.0 points (24.8 percent) above its value in the corresponding month last year. In February, international quotations for all dairy products represented in the index firmed, underpinned by the continued tightening of global markets on the back of lower than expected milk supplies in Western Europe and Oceania. Besides tight global supplies, persistent import demand, especially from North Asia and the Middle East, led to steep increases in whole milk powder and cheese price quotations. International skim milk powder prices rose significantly as well, reflecting a lower volume of milk deliveries for drying plants in Western Europe, while butter prices received a boost from high demand for spot supplies.

» The **FAO Meat Price Index*** averaged 112.8 points in February, up 1.2 points (1.1 percent) month-on-month and 15.0 points (15.3 percent) from its level a year ago. In February, international bovine meat quotations reached a new record high, driven by strong global import demand amidst tight supplies of slaughter-ready cattle in Brazil and high demand for herd rebuilding in Australia. Pig meat prices also edged up, reflecting increased internal demand and scaled-back hog supplies in the European Union and the United States of America. Quotations for ovine meat weakened for the fourth consecutive month due to high exportable supplies in Oceania. Meanwhile, poultry meat prices fell slightly due to reduced imports by China following the end of the Spring Festival and lower domestic demand in Brazil.

» The **FAO Sugar Price Index** averaged 110.6 points in February, down 2.1 points (1.9 percent) from January, marking the third consecutive monthly decline and reaching its lowest level since last July. Favourable production prospects in major exporting countries, notably India and Thailand, coupled with improved growing conditions in Brazil continued to weigh on world sugar prices. Ethanol prices in Brazil declined for the third successive month in February on the back of reduced domestic demand, exerting further downward pressure on world sugar prices. However, the strengthening of the Brazilian Real against the US Dollar, which tends to restrain shipments from Brazil, the world's largest sugar exporter, prevented more substantial sugar price declines.

* Unlike for other commodity groups, most prices utilized in the calculation of the FAO Meat Price Index are not available when the FAO Food Price Index is computed and published; therefore, the value of the Meat Price Index for the most recent months is derived from a mixture of projected and observed prices. This can, at times, require significant revisions in the final value of the FAO Meat Price Index which could in turn influence the value of the FAO Food Price Index.



FAO food price index

	Food Price Index ¹	Meat ²	Dairy ³	Cereals ⁴	Vegetables Oils ⁵	Sugar ⁶	
2004	65.6	67.6	69.8	64.0	69.6	44.3	
2005	67.4	71.8	77.2	60.8	64.4	61.2	
2006	72.6	70.5	73.1	71.2	70.5	91.4	
2007	94.3	76.9	122.4	100.9	107.3	62.4	
2008	117.5	90.2	132.3	137.6	141.1	79.2	
2009	91.7	81.2	91.4	97.2	94.4	112.2	
2010	106.7	91.0	111.9	107.5	122.0	131.7	
2011	131.9	105.3	129.9	142.2	156.5	160.9	
2012	122.8	105.0	111.7	137.4	138.3	133.3	
2013	120.1	106.2	140.9	129.1	119.5	109.5	
2014	115.0	112.2	130.2	115.8	110.6	105.2	
2015	93.0	96.7	87.1	95.9	89.9	83.2	
2016	91.9	91.0	82.6	88.3	99.4	111.6	
2017	98.0	97.7	108.0	91.0	101.9	99.1	
2018	95.9	94.9	107.3	100.8	87.8	77.4	
2019	95.1	100.0	102.8	96.6	83.2	78.6	
2020	98.1	95.5	101.8	103.1	99.4	79.5	
2021	125.7	107.7	119.1	131.2	164.9	109.3	
2021	February	116.6	97.8	113.1	126.1	147.5	100.2
	March	119.2	100.8	117.5	123.9	159.3	96.2
	April	122.1	104.3	119.1	126.2	162.2	100.0
	May	128.1	107.4	121.1	133.7	174.9	106.8
	June	125.3	110.7	119.9	130.3	157.7	107.7
	July	124.6	114.1	116.7	126.3	155.5	109.6
	August	128.0	113.4	116.2	130.4	165.9	120.5
	September	129.2	112.7	118.1	132.8	168.6	121.2
	October	133.2	112.0	121.5	137.1	184.8	119.1
	November	135.3	112.5	126.0	141.4	184.6	120.2
	December	133.7	111.0	129.0	140.5	178.5	116.4
2022	January	135.4	111.5	132.6	140.6	185.9	112.7
	February	140.7	112.8	141.1	144.8	201.7	110.6

1 Food Price Index: Consists of the average of 5 commodity group price indices mentioned above, weighted with the average export shares of each of the groups for 2014-2016; in total 95 price quotations considered by FAO commodity specialists as representing the international prices of the food commodities are included in the overall index. Each sub-index is a weighted average of the price relatives of the commodities included in the group, with the base period price consisting of the averages for the years 2014-2016.

2 Meat Price Index: Based on 35 average export unit values/market prices of four meat types (bovine, pig, poultry and ovine) from 10 representative markets. Within each meat type, export unit values/prices are weighted by the trade shares of their respective markets, while the meat types are weighted by their average global export trade shares for 2014-2016. Quotations for the two most recent months may consist of estimates and be subject to revision.

3 Dairy Price Index: Computed using 8 price quotations of four dairy products (butter, cheese, SMP and WMP) from two representative markets. Within each dairy product, prices are weighted by the trade shares of their respective markets, while the dairy products are weighted by their average export shares for 2014-2016.

4 Cereals Price Index: Compiled using the International Grains Council (IGC) wheat price index (an average of 10 different wheat price quotations), the IGC maize price index (an average of 4 different maize price quotations), the IGC barley price index (an average of 5 different barley price quotations), 1 sorghum export quotation and the FAO All Rice Price Index. The FAO All Rice Price Index is based on 21 rice export quotations, combined into four groups consisting of Indica, Aromatic, Japonica and Glutinous rice varieties. Within each varietal group, a simple average of the relative prices of appropriate quotations is calculated; then the average relative prices of each of the four rice varieties are combined by weighting them with their (fixed) trade shares for 2014-2016. The Cereal Price Index combines the relative prices of sorghum, the IGC wheat, maize and barley price indices (re-based to 2014-2016) and the FAO All Rice Price Index by weighing each commodity with its average export trade share for 2014-2016.

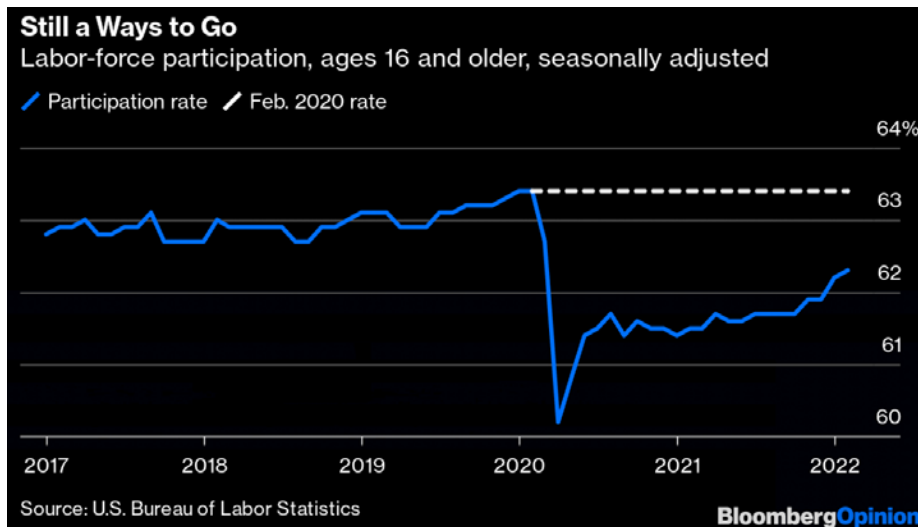
5 Vegetable Oil Price Index: Consists of an average of 10 different oils weighted with average export trade shares of each oil product for 2014-2016.

6 Sugar Price Index: Index form of the International Sugar Agreement prices with 2014-2016 as base.

#

By Justin Fox

(Bloomberg Opinion) -- Despite spectacular job growth over the past 22 months, the U.S. labor-force participation rate is still 1.1 percentage points — which amounts to about 1.8 million people — short of where it was on the eve of the pandemic in February 2020.



The labor-force participation rate is the number of Americans 16 and older who either have jobs or are actively looking for them, divided by the population 16 and older. (Uniformed military personnel and those confined in prisons and other institutions are excluded from both sides of the equation.) The fact that participation is still so much lower, even as the unemployment rate moves close to pre-pandemic levels — it was 3.8% in February, versus 3.5% in early 2020 — is both an explanation for some of the strange things going on in the labor market these days and a phenomenon that itself calls out for explanation.

Part of what's going on is just that Americans are getting old, with the eldest members of the giant Baby Boom cohort turning 76 this year. By the estimate of economists Jason Furman and Wilson Powell III, 0.3 percentage point of the decline in labor force participation since February 2020 can be chalked up to the aging of the population since then.

That still leaves a 0.8-percentage-point gap, though, and there are some interesting shifts within age groups that may help explain it. Because the Bureau of Labor Statistics doesn't adjust all of its age-group numbers for seasonal factors, comparisons that mix months can be misleading, so the February jobs numbers released last week provide a good occasion to look back at what's changed since just before the pandemic in February 2020.

The Pandemic Labor-Force Participation Decline, By Age

Labor-force participation, not seasonally adjusted

Age group	Participation rate, Feb. 2020	Participation rate, Feb. 2022	Change, in percentage points
16-24	55.3%	53.9%	-1.4
25-34	83.8	82.9	-0.9
35-44	83.5	83.3	-0.2
45-54	81.8	80.7	-1.1
55-64	65.5	65.5	0.0
65-74	28.4	26.5	-1.9
75+	9.7	8.5	-1.2

Source: U.S. Bureau of Labor Statistics

BloombergOpinion

The general pattern is smaller losses among those in their prime career years and larger ones for those nearer the beginning and the end. The 45-to-54-year-olds are a big exception, and I'll admit straight away that I don't know what's going on there. The group's labor-force-participation decline has been concentrated among those 45 through 49, has affected men and women similarly and does not seem to be connected to population adjustments that the Bureau of Labor Statistics made in January to incorporate the results of the 2020 U.S. Census (that is, there was no big drop from December to January). Maybe it's a fluke, maybe it's not.

The participation declines among those 65 and older aren't a fluke, and a lot has been written about them already. A pandemic that was most dangerous for the elderly, coupled with an asset-price boom that was kind to those with retirement savings and home equity, led a lot of Americans 65 and older who were still working to retire.

65-Plusers Leaving the Workforce

Labor force participation, not seasonally adjusted

Age group	Participation rate, Feb. 2020	Participation rate, Feb. 2022	Change, in percentage points
55-59	73.1%	73.5%	0.4
60-64	57.7	57.6	-0.1
65-69	34.3	32.6	-1.7
70-74	21.1	19.2	-1.9
75+	9.7	8.5	-1.2

Source: U.S. Bureau of Labor Statistics

BloombergOpinion

Some of these people will unretire if the Covid-19 threat continues to recede and the job market continues to boom, but the hit to labor-force participation among those 65 through 74

has been so big that it's hard to see the gap being closed quickly. Those in their late 50s and early 60s have been the least likely to drop out of the labor force of any age group, so the best hope may simply be to wait until they (or should I say we, since that's my cohort) move into their late 60s and early 70s.

Which leaves the young folks.

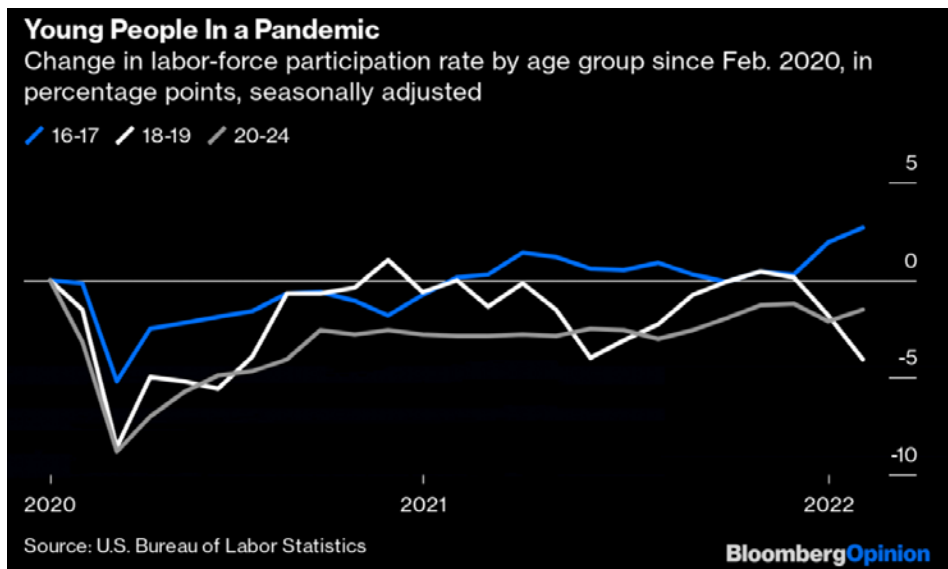
Some Young Adults Are Missing

Labor-force participation, not seasonally adjusted

Age group	Participation rate, Feb. 2020	Participation rate, Feb. 2022	Change, in percentage points
16-17	22.6%	25.3%	2.7
18-19	46.8	42.9	-3.9
20-24	72.1	70.7	-1.4
25-29	83.5	82.5	-1.0
30-34	84.2	83.3	-0.9
35-39	83.8	83.5	-0.3

Source: U.S. Bureau of Labor Statistics BloombergOpinion

The big increase in labor-force participation among 16- and-17-year-olds comes after decades of declines, and fits well with anecdotal evidence of desperate employers taking chances on unexperienced teenagers and those teens being (rationally) less worried than adults about catching Covid on the job. The sharp decline among 18- and 19-year-olds is weird, and doesn't really fit with other evidence such as enrollment declines at two-year colleges. The BLS does seasonally adjust the participation rates for both those groups, as well as for 20-to-24-year-olds, so it's possible to view their trajectories over the course of the pandemic. The 18-19 line has certainly jumped around a lot, so I wouldn't read too much into the recent decline.



Labor-force participation among those 20 through 24 has followed a steadier line. It's been rising, but is still well short of the pre-pandemic rate. Explaining this, and the smaller but still significant participation declines among those in their late 20s and early 30s, has become something of a cottage industry over the past year.

Much of the talk has centered around a supposed attitude shift toward work described variously as the "Great Resignation" or "Lying Flat," but hard evidence for this has been mostly wanting. (Goldman Sachs economist Joseph Briggs simply offered up a chart showing rising activity on the r/Antiwork subreddit, for example.) And while there is ample evidence that struggles with child-care during the pandemic have kept lots of women out of the labor force, women in their early 20s are a lot less likely to have kids than they used to be.

My own based-on-little-evidence theory is that the pandemic, and especially the total shutdown of spring and summer 2020, was so disruptive for young people finishing their educations and entering the job market that it's taking a long time for them to catch up. Figuring out one's initial path into a career isn't easy in normal times, and having that path completely blocked for many months has got to have an impact. I tried this explanation out on a couple of economists at companies in the job-search space, and met with some agreement. "It was a forced gap year, essentially," said Nick Bunker, director of economic research at the Indeed Hiring Lab. "Things were so uncertain. There was mass unemployment in jobs that didn't require a college degree." Daniel Zhao, senior economist at Glassdoor Economic Research, pointed to sharply rising median wages for 16-to-24-year olds (10.6% over the 12 months ending in January, according to the Atlanta Fed Wage Growth Tracker) as an indication both of shortages of younger workers and, more positively, "some scarring effects from the Covid recession being avoided for new young workers in the labor force." Graduating in the midst of past recessions has brought negative effects on earnings that persist for as much as a decade. The rebound from the Covid-19 recession has been so rapid that perhaps that long-term scarring can be avoided — but it's still a risk for hundreds of thousands of young Americans who have yet to find a way into the labor market.

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SAF Dan Tsubouchi @Energy_Tidbits · 3h ...
In case you thought @SecGranholm 03/09 was a changed Biden approach to reach out in partnership to #Oil #Gas sector and not just crafty drafting, it didn't last long, #Biden's 03/11 reverts to use the same old language. Any US #Oil growth will be because of industry. #OOTT

Excerpt from <https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/03/11/remarks-by-president-biden-at-the-house-democratic-caucus-issues-conference/>

Remarks by President Biden at the House Democratic Caucus Issues Conference

MARCH 11, 2022 **SPEECHES AND REMARKS**
Hilton Philadelphia at Penn's Landing
Philadelphia, Pennsylvania

2:41 P.M. EST

But guess what? They have over 7,000 permits to dig oil if they want. Why aren't they out pumping it? Why aren't they out pumping oil? Because they've said and they're very clear — Wall Street bankers have made it very clear — not a joke, check it out. And I recommend these two articles to you, just as a little bit of a primer. You probably already know it. What's happened? Well, the oil companies and executives, they don't want to pump more oil, though they have every capacity to do so. Nothing is slowing them up from doing it if they want to. Why? Rather than spend the profits on the increased price of gasoline, they would rather take those profits and buy back stock — buy back their own stock, rather than take that money and invest it in pumping new oil. Not a joke. Not a joke.

SAF Dan Tsubouchi @Energy_Tidbits · Mar 11



2/2. But note the end of the sentence that got all the headlines "I'm here to tell you that the Department of Energy, and the entire Biden administration, is ready to work with you to seize the opportunity of clean energy." plus there was other crafty drafting. #OOTT

[Show this thread](#)



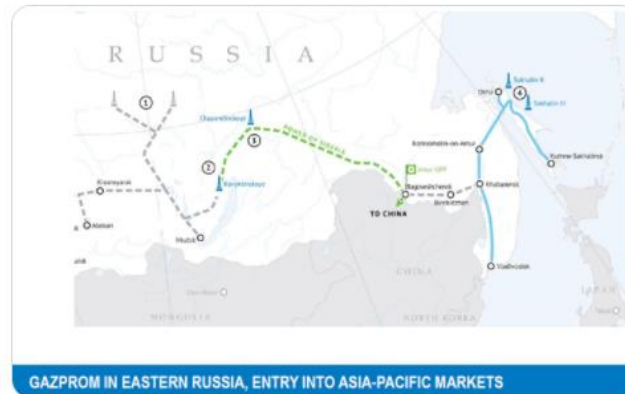
3

3



SAF Dan Tsubouchi @Energy_Tidbits · 4h ...
No surprise, Japan to stay in #Gazprom Sakhalin-2 LNG project. Japan takes ~60% of the 1.3 bcf/d #LNG supply, with shipping time only a few days. #OOTT

asia.nikkei.com/Business/Energ...



1

4



SAF Dan Tsubouchi @Energy_Tidbits · 12h
 1/2. @ClimateEnvoy Kerry says #EnergyTransition is \$ trillions short of being self funding. "fully funding this transition we have to make in our economies globally is going to require mobilising not just \$100 billion but trillions of dollars #OOTT

3 5 5

SAF Dan Tsubouchi @Energy_Tidbits · 12h
 2/2. ... No single government, no group of governments can meet the \$2.5 to \$4.6 trillion deficit we face in order to make this transition." What took so long to admit #EnergyTransition is not self funding ie. energy costs are going up big time. #OOTT



youtube.com
 John Kerry stresses need to work together on clim...
 US Special Climate Envoy John Kerry spoke an
 informal UN Security Council meeting attended by...

1 1

SAF Dan Tsubouchi @Energy_Tidbits · 19h
 Was there a scramble for floating oil cargos to avoid Russian crude? Would seem so unless there is a big revision to #Vortexa crude #Oil floating storage for 03/11 est 79.21 mmb, which is down 17.1 mmb WoW vs revised up 96.29. Thx @Vortexa @TheTerminal #OOTT



Source: Bloomberg, Vortexa

Est as of Mar 12, 1pm MT					Est as of Mar 5, 3pm MT					Est as of Feb 28, 4am MT				
ID	3D	1M	6M	YTD	ID	3D	1M	6M	YTD	ID	3D	1M	6M	YTD
1548831	104.323k	104.323k	104.323k	104.323k	103.747	103.747	103.747	103.747	103.747	102.252	102.252	102.252	102.252	102.252
03/11/2022	96290	96290	96290	96290	02/25/2022	95594	95594	95594	95594	02/18/2022	91273	91273	91273	91273
03/04/2022	96668	96668	96668	96668	02/18/2022	90582	90582	90582	90582	02/11/2022	105.439k	105.439k	105.439k	105.439k
02/25/2022	88504	88504	88504	88504	02/11/2022	106.896k	106.896k	106.896k	106.896k	02/04/2022	106.303k	106.303k	106.303k	106.303k
02/18/2022	104.323k	104.323k	104.323k	104.323k	02/04/2022	108.301k	108.301k	108.301k	108.301k	01/28/2022	100.26k	100.26k	100.26k	100.26k
02/11/2022	105.319k	105.319k	105.319k	105.319k	01/28/2022	97268	97268	97268	97268	01/21/2022	100.67k	100.67k	100.67k	100.67k
02/04/2022	96377	96377	96377	96377	01/21/2022	100.968k	100.968k	100.968k	100.968k	01/14/2022	84345	84345	84345	84345
01/28/2022	98631	98631	98631	98631	01/14/2022	85494	85494	85494	85494	01/07/2022	92945	92945	92945	92945
01/21/2022	83624	83624	83624	83624	01/07/2022	93164	93164	93164	93164	12/31/2021	95983	95983	95983	95983
01/14/2022	92340	92340	92340	92340	12/31/2021	96699	96699	96699	96699	12/24/2021	97736	97736	97736	97736
01/07/2022	93862	93862	93862	93862	12/24/2021	95972	95972	95972	95972	12/17/2021	96391	96391	96391	96391
12/31/2021					12/24/2021					12/17/2021				

Source: Bloomberg, Vortexa

1 6 6

SAF


Dan Tsubouchi @Energy_Tidbits · Mar 12

Buckle up. What if UAE doesn't bend & #Biden can't convince KSA to increase #Oil supply ASAP. Oil demand is always seasonally low in Q1 & then ramps up. He is running out of near term supply help If RUS keeps delaying #JCPOA & return of Iran #Oil incl from floating storage. #OOTT

IEA, OMR				
Q2/21	Q3/21	Q4/21	Q1/22	Q2/22
96.2	98.2	99.7	99.7	100.0
96.2	98.7	100.2	98.9	100.0
95.4	97.4	99.8	99.1	99.5

MR Feb 2022, OPEC MOMR Feb 2022, Bloomberg
<https://safgroup.ca/news-insights/>

SAF Dan Tsubouchi @Energy_Tidbits · Mar 8



#Oil insights from @Amena__Bakr. Iran wants to crank up ASAO once #JCPOA, current 2.5 mmbd & could reach 4 mmbd in 3 mths (She thinks a bit optimistic). Also 60 mmb floating storage but need to find buyers & training for logistics. Thx @VandanaHar. See SAF ...

3 7

SAF

Dan Tsubouchi @Energy_Tidbits · Mar 12

#JCPOA, the FR, DE, UK comments also confirm the chatter that the deal was ready to go until RUS threw in the roadblock on trying to backdoor some relief to US sanctions re Ukraine. #OOTT

SAF Dan Tsubouchi @Energy_Tidbits · Mar 12

No doubt RUS holding up #JCPOA. @Deana_Kjuka @business reports FR, UK, DE "it is our understanding that Iran & the US have worked hard to resolve final bilateral issues & so we are ready to conclude this deal now". But who knows how long RUS backdoor attempt holds up deal. #OOTT twitter.com/Energy_Tidbits...

BN 03/12 10:13 *FRANCE,GERMANY,U.K.: JCPOA DEAL SHOULD BE CONCLUDED W/ URGENCY
 France, Germany, U.K. Say Iran Deal Should Be Concluded Urgently
 2022-03-12 10:52:07.98 GMT

By Deana Kjuka
 — France, Germany and the U.K. noted they're **pleased** that the Iran nuclear talks were suspended, adding that "a fair and comprehensive deal is on the table ready for conclusion," according to an emailed press release on Saturday.

It is our understanding that Iran and the U.S. have worked hard to resolve final bilateral issues and so we are ready to conclude this deal now", the statement says.

European Union foreign policy chief Josep Borrell said on Friday that a pause in the Vienna talks was required due to "external factors, without elaborating. Borrell said the sides had come very close to an agreement but didn't say when — or if — the negotiations would resume.

Read More: Iran Nuclear Talks Suspended as Window Closes on Key Deal

Nobody should seek to exploit Joint Comprehensive Plan of Action (JCPOA) negotiations to obtain assurances that Iran & the US have worked hard to resolve final bilateral issues and so we are ready to conclude this deal now", the statement says, concluding that the "deal on the table can and should be concluded with the utmost urgency."

The talks were suspended amid tensions between the White House and the Kremlin, with Moscow insisting on U.S. guarantees that the sanctions imposed over Russia's invasion of Ukraine would not affect its planned partnership with Iran.

To contact the reporter on this story:
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To view this story in Bloomberg click here:
<https://blinks.bloomberg.com/news/stories/BSBMN6KTOG1KW>

2 3

SAF Dan Tsubouchi @Energy_Tidbits · Mar 11
1/2. Worth reading @SecGranholm #CERAWeek speech, Yes she tells #Oil sector needs to produce more. "And that means you producing more right now, where and if you can" "So yes, right now, we need oil and gas production to rise to meet current demand" #OOTT

1 4 3

SAF Dan Tsubouchi @Energy_Tidbits · Mar 11
2/2. But note the end of the sentence that got all the headlines "I'm here to tell you that the Department of Energy, and the entire Biden administration, is ready to work with you to seize the opportunity of clean energy." plus there was other crafty drafting. #OOTT



2 3 3

SAF Dan Tsubouchi @Energy_Tidbits · Mar 11
Recognize "supply" isn't impacted but have to wonder if #Aramco refinery "operations" were impacted by the drone. Or it was just coincidence that an unusually large amount of diesel but also for immediate delivery just after the drone attack. #OOTT

--- Dan Tsubouchi @Energy_Tidbits · Mar 11
Did drone hit Riyadh refinery production capability, even if no impact to "supply" of oil or its derivatives? Drone hit Thurs at 4:40 Riyadh time or 1:40 GMT. Note @lamsharoncho @elizabethlow Thurs 3:47 GMT report #Aramco seeks unusually large amount of diesel in rare move. #OOTT twitter.com/Energy_Tidbits...

Note: Riyadh Saudi Arabia is 3 hours ahead of Greenwich Mean Time so: [REDACTED]

OIL TENDER: Aramco Seeks Diesel for Saudi Arabia in Rare Move
2022-03-10 [REDACTED]

By Elizabeth Low and Sharon Cho (Bloomberg) — Aramco Trading is seeking an unusually large volume of diesel for prompt delivery to Saudi Arabia in a rare move for the country, which is usually an exporter of the fuel, according to traders who asked not to be identified.
• Co. sought "1.2m-1.6m barrels of 30ppm sulfur gasoil for delivery to Ras Tanura, Jazan, Jeddah and Doha via a tender"
• Delivery period from mid-March to mid-April
• Offers due March 10, valid until next day

To contact the reporters on this story:
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Dan Murtaugh

To view this story in Bloomberg click here:
<https://blinks.bloomberg.com/news/stories/2022-03-10-oil-tender>

<https://www.saa.gov.sa/news/fullstory.php?lang=en&newsid=2336518&2336518>
An Official Spokesman at the Ministry of Energy Condemns Terrorist Drone Attack and Sabotage on Riyadh Refinery, Targeting the Security of Energy Supply
Friday 1443/8/6 : 0922593/1
Riyadh, Mar. 11, 2022, SPA — An official spokesman at the Ministry of Energy stated that at [REDACTED] [REDACTED], the Riyadh oil refinery was attacked by a drone, resulting in a small fire that has been brought under control. The attack did not result in any injury or death nor was the supply of oil or its derivatives affected.
In his statement, the spokesman stressed that the Kingdom strongly condemns this cowardly attack. The Kingdom asserts that such acts of sabotage and terrorism, repeatedly committed against vital installations and civilian facilities, do not target the Kingdom alone, but more broadly the security and stability of energy supply to the world, and thus negatively affecting the global economy.
The spokesman renewed the Kingdom's call to all nations and organizations of the world to stand together against such acts of sabotage and terrorism, and to stop all groups carrying out or supporting these attacks.
— SPA
01:42 LOCAL TIME 22:42 GMT
0001

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SAF

Dan Tsubouchi @Energy_Tidbits · Mar 11

Here's a recommendation if Canada follows US in banning Russian vodka. @dan_aykroyd @crystal_head vodka. And you can leave it handy in your office.



1

SAF

Dan Tsubouchi @Energy_Tidbits · Mar 11

#Diesel #OOTT #Aramco

--- Dan Tsubouchi @Energy_Tidbits · Mar 11

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To contact the reporters on this story: Elizabeth Low in Singapore at elow37@bloomberg.net; Sharon Cho in Singapore at sco20@bloomberg.net To contact the editors responsible for this story: Serene Cheong at schein20@bloomberg.net Dan Murtagh

To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/2022-03-10-oil-tender-aramco-speaks-diesel-for-saudi-arabia-in-rare-move

https://www.spa.gov.sa/pressfullstory.php?lang=en&newsid=2336518#2336518 An Official Spokesman at the Ministry of Energy Condemns Terrorist Drone Attack and Sabotage on Riyadh Refinery, Targeting the Security of Energy Supply Friday 1443/08 - 2022/03/11

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SAF

Dan Tsubouchi @Energy_Tidbits · Mar 11

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https://www.spa.gov.sa/view_fullstory.php?lang=en&newsid=223651892336518
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SPA
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Dan Tsubouchi @Energy_Tidbits · Mar 10



KSA confirms drone hits Riyadh refinery. No 3rd party reports on impact. But @Spa_Eng says small fire, brought under control, no injury/deaths, supply of #Oil or #PetroleumProducts no affected. Didn't say #Houthis, but if Riyadh is hit, any @aramco facility is ...

1 2 1

SAF

Dan Tsubouchi @Energy_Tidbits · Mar 10

Looks like #Biden really wants & not going to give up on return to #JCPOA. @PressSec asked today if window closing for deal? Here is what she didn't say today vs Feb 23 saying "And there's very little time remaining to reach a deal given the pace of Iran's nuclear advances" #OOTT

Excerpt <https://www.whitehouse.gov/briefing-room/press-briefings/2022/03/09/press-briefing-by-press-secretary-jen-psaki-march-9-2022/>

Press Briefing by Press Secretary Jen Psaki, March 10, 2022

MARCH 09, 2022 [en-us](#) [en-us](#)
12:54 P.M. EST

Q Completely separate topic: France said today that the window on an Iran deal is closing. Does the U.S. share that view? Is the sense here that Iran is trying to run out the clock?

MS. PSAKI: Well, our view is that we are close. We have been close for some time now, and we also — for the last several weeks, as we've been talking about. We also all know, from having been through these negotiations before, that the end of negotiations is always when the difficult and challenging parts of the conversation typically take place. So, I wouldn't make that assessment or echo that from here. We are continuing to have these diplomatic talks. It is in all of our interests to stay at the negotiating table. And that's what our plan is to do from here.

Excerpt <https://www.whitehouse.gov/briefing-room/press-briefings/2022/02/23/press-briefing-by-press-secretary-jen-psaki-february-23-2022/>

Press Briefing by Press Secretary Jen Psaki, February 23, 2022

FEBRUARY 23, 2022 [en-us](#) [en-us](#)
1:33 P.M. EST

Q There have been reports that the U.S., Iran is reaching, closing in on some sort of deal. Would you all confirm that that is an accurate assessment — that you are inching towards a potential deal this week?

MS. PSAKI: Well, what we're seeing is there is significant progress being made and we are close to a possible deal. But there are a number of very difficult issues that remain unresolved. [And there's very little time remaining to reach a deal given the pace of Iran's nuclear advances.](#)

Also, I would note that typically the most difficult components — the last mile — is where it — where there is the most difficult conversations and negotiations.

So, yes, significant progress and we are close. But there's a lot that still needs to be worked out. It is true that Iran — we believe if Iran shows seriousness, we can and should reach an understanding on mutual returns to full implementation of the JCPOA within — potentially within days. But there is still more work that needs to be done.

Q So you all are optimistic or — I mean, that's a mixed (inadable)?

MS. PSAKI: We are — we are encouraged by the significant progress, but, having been through a few of these, I would note that, often, the most difficult negotiations happen in the — in the last portion.

1 3 4

SAF Dan Tsubouchi @Energy_Tidbits · Mar 10
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1 20 23

SAF Dan Tsubouchi @Energy_Tidbits · Mar 10
#Calgary gasoline prices at the same #Husky station up 10 cents WoW for 91 octane to \$1.899 per litre.



1

SAF

Dan Tsubouchi @Energy_Tidbits · Mar 12

No doubt RUS holding up #JCPOA. @Deana_Kjuka @business reports FR, UK, DE "It is our understanding that Iran & the US have worked hard to resolve final bilateral issues & so we are ready to conclude this deal now". But who knows how long RUS backdoor attempt holds up deal. #OOTT

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By Deana Kjuka

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It is our understanding that Iran and the U.S. have worked hard to resolve final bilateral issues and so we are ready to conclude this deal now. — @DeanaKjuka

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Read More: Iran Nuclear Talks Suspended as Window Closes on Key Deal

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The talks were suspended amid tensions between the White House and the Kremlin, with Moscow insisting on U.S. guarantees that the sanctions imposed over Russia's invasion of Ukraine would not affect its planned partnership with Iran.

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Andrew Davis

To view this story in Bloomberg click here:
<https://bit.ly/3b1nks.bloomberg.com/news/stories/FRMN6XTOG1KW>

— Dan Tsubouchi @Energy_Tidbits · Mar 6



Our weekly SAF Mar 6, 2022 Energy Tidbits memo is posted on our SAF Group website. This 50-pg energy research memo expands upon & covers more items than tweeted this week. See news/insights section of SAF website #Oil #OOTT #LNG #NatGas ...



SAF

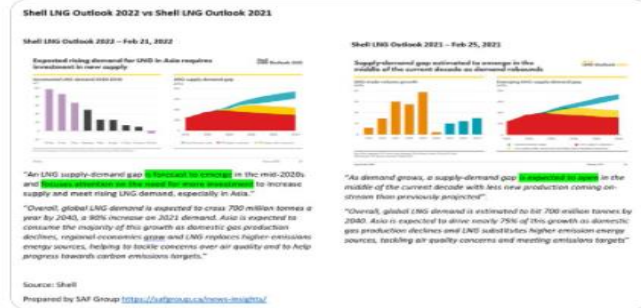
Dan Tsubouchi @Energy_Tidbits · Mar 10

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SAF

Dan Tsubouchi @Energy_Tidbits · Mar 10
Prior to this, #Shell fcast #LNGSupplyGap in mid-2020s. EU wants +4.9 bcf this yr, so more in 2023. Approx equal to KOR #LNG imports, approaching @qatar_energy massive 6.4 bcf/d expansion. As @SStapczynski notes, a global #NatGas fight, EU will have to go long term deals. #OOTT



Stephen Stapczynski @SStapczynski · Mar 9
Europe's plan to quit Russian natural gas is setting up a global fight for LNG 🇪🇺 🇷🇺

The EU aims to boost LNG imports by as much as 37 million tons this year (!), far outstripping supply...
[Show this thread](#)

2 1

SAF

Dan Tsubouchi @Energy_Tidbits · Mar 10
Forgot to mention UK's tackling climate change & #NetZero plans weren't working before #Putin hence #EnergyCrisis in 2021. Note his closing "in the meantime, we need more investment in North Sea oil & gas production". #Oil #NatGas will be stronger thru 2020s. #OOTT



Kwasi Kwarteng @KwasiKwarteng · Mar 10
This is no longer about tackling climate change or reaching Net Zero targets.
Ensuring the UK's clean energy independence is a matter of national security.
Putin can set the price of gas, but he can't directly control the price of renewables and nuclear we generate in the UK.



2:12 22.7K views 1 2

SAF Dan Tsubouchi @Energy_Tidbits · Mar 9
ICYMI. UAE energy minister @HESuhail clarifies UAE position "The UAE believes in the value OPEC+ brings to the oil market. The UAE is committed to the OPEC+ agreement and its existing monthly production adjustment mechanism." #OOTT
[twitter.com/HESuhail/statu...](https://twitter.com/HESuhail/status...)

— Dan Tsubouchi @Energy_Tidbits · Mar 9
"We favor production increases & will be encouraging OPEC to consider higher production levels. UAE has been a reliable and responsible supplier of energy to global markets for more than 50 years & believes that stability in energy markets is critical to the global economy" #OOTT

[ment-ambassador-yousef-al-otaiba](#)

mbassador Yousef Al Otaiba

Ambassador Al Otaiba: "We favor production increases and will be encouraging OPEC to
possible supplier of energy to global markets for more than 50 years and believes that st

3 3

SAF Dan Tsubouchi @Energy_Tidbits · Mar 9
Amazing people of 🇷🇺 and @PolandMOI to welcome 1.3 mm Ukrainians. A country of ~38mm welcoming 1.3 mm and still increasing.

Chancellery of the Prime Minister of Poland @Premie... · Mar 9
1,330,000 people fleeing #Ukraine have entered Poland since the beginning of Russia's aggression against this country.

125,800 people were cleared by Polish Border Guard officers yesterday.

#PolandFirstToHelp #solidarityWithUkraine
twitter.com/Straz_Graniczn...

1 1

SAF Dan Tsubouchi @Energy_Tidbits · Mar 9
EU #NatGasDemandDestruction. @yara curtails #Ammonia #Urea production due to high #NatGas price. #EU new target to cut 2/3 of RUS #NatGas imports by 12/31/22. EU imported 15 bcf/d so need to cut 10 bcf/d by more demand destruction, conservation, or new #LNG/#Pipeline supply. #OOTT

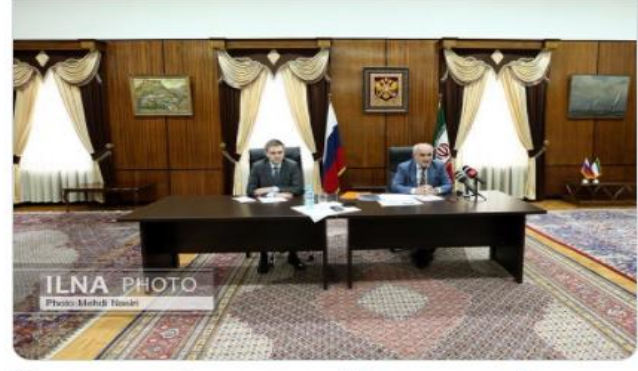
<https://www.yara.com/corporate-communications/yara-curtails-production-due-to-increased-natural-gas-prices/>
Yara curtails production due to increased natural gas prices
2022: As a consequence of record high natural gas prices in Europe, Yara is temporarily curtailing production at its Ferrara (Italy) and Le Havre (France) plants. Yara's European ammonia and urea production is expected to be operating at approximately 45% of capacity by the end of this week. Yara will continue to monitor the situation and to the extent possible use its global production system to keep supplying customers and secure continuity in filling production where necessary due to challenging market conditions.
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arn@yara.com
Corporate Communications
15 559
rde@yara.com

SAF Dan Tsubouchi @Energy_Tidbits · Mar 8
1/3. Buckle up, setting the stage for volatile & high EU energy prices for 2020s. EU releases plan "this can reduce EU demand for Russian gas by two thirds before the end of the year" and is opportunity to "accelerate the clean energy transition". #OOTT #NatGas #LNG
[Show this thread](#)

1 3

SAF Dan Tsubouchi @Energy_Tidbits · Mar 9
#JCPOA. certainly. not pointing to an imminent deal as was the case prior to saturday. #OOTT

Russian Embassy, IRI @RusEmbran · Mar 9
It was emphasized that the negotiations on the "nuclear deal" with Iran should take into account the legitimate interests of Russia in the implementation of comprehensive cooperation with Iran
[Show this thread](#)



1 2

SAF Dan Tsubouchi @Energy_Tidbits · Mar 9
"We favor production increases & will be encouraging OPEC to consider higher production levels. UAE has been a reliable and responsible supplier of energy to global markets for more than 50 years & believes that stability in energy markets is critical to the global economy" #OOTT



1 1

SAF Dan Tsubouchi @Energy_Tidbits · Mar 9
#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

[soundcloud.com/user-846530307...](https://www.scribd.com/document/514444444/ment-ambassador-yousef-al-otaiba)

--- Dan Tsubouchi @Energy_Tidbits · Mar 8
"there's still going to be a shortage of sweet barrels for the western hemisphere refining system" @michaelwmuller to @sean_evers. Thx @SPGlobalPlatts for great maps showing RUS Urals crude is sour vs its Far East is sweet. Brent 37.5 API 0.4% H2S. #Oil #OOTT
[twitter.com/Energy_Tidbits...](https://twitter.com/Energy_Tidbits)

Excerpt Platts "Specifications Guide Europe and Africa Crude Oil" February 2022
https://www.platts.com/commodities/energy/oil/analysis/industry_insights/industry_insights/our-methodology/methodology-specifications/emea-crude-methodology.pdf

A map of Europe and Africa with various regions highlighted in different colors (yellow, red, green) to indicate different crude oil specifications. The map includes labels for various countries and regions.

Excerpt Platts "Specifications Guide Asia Pacific and Middle East Crude Oil" January 2022
https://www.platts.com/commodities/energy/oil/analysis/industry_insights/industry_insights/our-methodology/methodology-specifications/apac-crude-methodology.pdf

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1 1

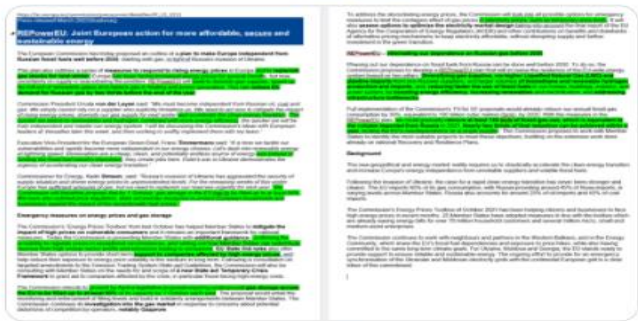
Dan Tsubouchi @Energy_Tidbits · Mar 8

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1 3 4

Dan Tsubouchi @Energy_Tidbits · Mar 8

2/3. Note overlooked para 2 "Europe has been facing increased energy prices for several months, but now uncertainty on supply is exacerbating the problem." Pre RUS, EU had #EnergyCrisis in 2021 & key EU leaders were starting to warn on a bumpy #EnergyTransition . #OOTT #NatGas



1 3

Dan Tsubouchi @Energy_Tidbits · Mar 8

3/3. On Oct 31, Macron warned on higher fossil fuels prices for 2020s. But "never let a good crisis go to waste", EU moves to accelerate clean energy transition and don't deal with what caused 2021 #EnergyCrisis. Positive for #LNG #NatGas for 2020s #OOTT



Dan Tsubouchi @Energy_Tidbits · Oct 30, 2021

Oops, #Macron on #EnergyTransition "ironic, because we are building a system where in the medium & long term fossil energy will cost more & more, that's what we want to [to fight climate change]". 2020s will be very good for #Oil #NatGas prices. Great report ...

2 2 5

SAF

Dan Tsubouchi @Energy_Tidbits · Mar 8

"there's still going to be a shortage of sweet barrels for the western hemisphere refining system" @michaelwmuller to @sean_evers. Thx @SPGlobalPlatts for great maps showing RUS Urals crude is sour vs its Far East is sweet. Brent 37.5 API 0.4% H2S. #Oil #OOTT

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https://www.spglobal.com/commodity-insights/plattscontents/_assets/_files/en/en-methodology/methodology-specifications/europe-africa-crude-oil-2022.pdf



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https://www.spglobal.com/commodity-insights/plattscontents/_assets/_files/en/en-methodology/methodology-specifications/apac-crude-oil-2022.pdf



Dan Tsubouchi @Energy_Tidbits · Mar 6

2/2. @michaelwmuller closer "And the market is just telling you there's not enough oil in prompt end. The law of high prices is going to have to weed out the weaker demand and destroy it" Much more in the podcast. thx @sean_evers. #OOTT Bullish for #Oil [Show this thread](#)



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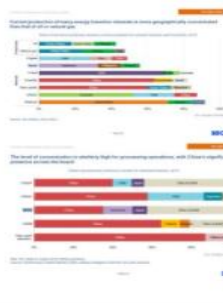


SAF

Dan Tsubouchi @Energy_Tidbits · Mar 8

Once #LME reopens post rumored massive #Nickel short squeeze, there is a reminder that shortage of #CriticalMinerals, incl Nickel, will lead to delayed & more expensive #EnergyTransition. @IEA had a great 05/05/21 report. #Oil #NatGas #LNG will be needed for a lot longer. #OOTT

Excerpt IEA "The Role of Critical Minerals in Clean Energy Transitions" May 5, 2021



Dan Tsubouchi @Energy_Tidbits · May 5, 2021



Path to #EnergyTransition is clear, but demise of #Oil #NatGas won't be as quick as aspirations. Another @fbirol warning not on track to meet #NetZero aspirations. this time critical minerals raising risk of delayed or more expensive #EnergyTransition. Great ...



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Dan Tsubouchi @Energy_Tidbits · Mar 8

"will lead to reduced throughput at some of our refineries", #Shell immediately stop buying RUS crude, phased withdraw from (& positive) all RUS #Oil, #NatGas, #LNG, #PetroleumProducts. up to govts to ultimately decide tradeoff vs energy security. #OOTT

<https://www.shell.com/media/news-and-media-releases/2022/shell-announces-intent-to-withdraw-from-russian-oil-and-gas.html>

Shell announces intent to withdraw from Russian oil and gas

Mar 8, 2022

Shell plc (Shell) today announced its intent to withdraw from its involvement in Russian hydrocarbons, including crude oil, petroleum products, gas and liquefied natural gas (LNG). The decision marks a phased withdrawal from all of its operations in Russia. As a result, Shell will shut down its operations in Russia, including its service stations, aviation fuels and lubricants operations in Russia.

"We are acutely aware that our decision last week to purchase a cargo of Russian crude oil to be refined into products like petrol and diesel – despite being made with security of supplies at the forefront of our thinking – has led to a loss of confidence in our ability to supply our customers. As we have already said, we will convert profits from the limited, remaining amounts of Russian oil we will process to a dedicated fund. We will work with aid partners and humanitarian agencies over the coming days and weeks to determine where the monies from this fund are best placed to alleviate the terrible consequences that this war is having on the people of Ukraine," said Shell Chief Executive Officer, Ben van Beurden.

"Our actions to date have been guided by our primary responsibility to governments around the world to ensure that Europe further illustrates the difficult choices and potential consequences we face as we try to do this. Following government statements this week, I want to set out our position clearly. In these exceptional circumstances, we will:

- immediately announce the withdrawal of our operations in Russia, and the withdrawal of our products from the market. At the same time, in close consultation with governments, we are changing our crude oil supply chain to ensure that we do not purchase any Russian oil. This decision to end all purchases, and the gradual reduction and eventual cessation of our operations in Russia, will be implemented over the next few weeks.
- We will shut our service stations, aviation fuels and lubricants operations in Russia. We will consider very carefully the safest way to do this, but the process will start immediately.
- We will continue to support the global energy system and ensure continued action by governments to address the challenges of the energy transition and ensure a better future for all.

"These societal challenges highlight the dilemma between putting pressure on the Russian government over its atrocities in Ukraine and ensuring stable, secure energy supplies across Europe," said van Beurden. "We will continue to work with them to ensure the global energy system remains secure, and we will continue to support the global energy system and ensure a better future for all."

Notes to Editors

1 3 3

Dan Tsubouchi Deactivated

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Dan Tsubouchi @Energy_Tidbits · Mar 7

Not on @NOC_Libya but on NOC Facebook, NOC advised lifted force majeure at Sharara. But adjacent El Feel field still down due to sabotage/removal of equipment. No splits, but assume most (maybe 280,000 of 330,000 b/d) is back on. #OOTT

Oil Corporation Facebook posting
[ya/](#)

and the resumption of production in the El Sharara fields. Raising the state of force majeure from that on today, March 8, 2022, at 00:30 am, the valves located in the Al-Rayyan area on the Al-Sharara field.

the morning.
due to sabotage and removal of some equipment from the valves.
tags the valves, which led to the intervention of the Akkus maintenance teams to repair and change the damaged by standards necessary in particular.
orporation extends its thanks and gratitude to all the benefactors who contributed to the opening of the valves and the Western Region" and commanded by Major General "Osama Al-Juwali", who answered the nation's call and war

Dan Tsubouchi @Energy_Tidbits · Mar 6

Looks like more #Libya #Oil risk near term. Production down to 920,000 b/d from 1.2 mmb/d on Wed says Oil Minister Oun reports @S_Elwardany hmohareb@bloomberg.net. Fields being shut down by groups, parallel govts being set up, #OOTT
blinks.bloomberg.com/news/stories/R...

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SAF Dan Tsubouchi @Energy_Tidbits · Mar 7
Also #TotalEnergies @PPouyanne "had discussions obviously with the highest authority in my country and there is no push from them for us to exit Russia", not enough #LNG regas terminals to replace RUS pipeline #NatGas. Thx @ronbouso1. #OOTT

Ron Bouso @ronbouso1 · Mar 7
Russia's invasion of #Ukraine is a "big wake up call" for European governments hoping to balance the need for fossil fuels with environmental concerns. @TotalEnergies CEO @PPouyanne said at #CERAWeek2022 #OOTT
reuters.com/business/energ...



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SAF Dan Tsubouchi @Energy_Tidbits · Mar 7
"i misspoke" says #Cheniere CEO to @SullyCNBC on headline \$LNG is sold out until 2040. The sold out referred to existing 9 trains, which is why they are moving on Corpus Christi expansion to add 1.3 bcf/d LNG in 2025. Bet expansion sells out quickly! #OOTT #NatGas

created transcript of CNBC Brian Sullivan interview with Cheniere Energy CEO Jack
2022 <https://www.cnbc.com/video/2022/03/07/cheniere-energy-ceo-joins-brian-sullivan-interview.html>

transcripts are SAF Group created transcript

In the interview, Sullivan "there was a headline today that said you said that Cheniere was sold out until 2040. So I looked at that and I thought, well, there's no growth there, that headline is misleading". Fusco "yeah and I apologize for that, I misspoke. So on a nine train platform, we are sold out, which is why the expansion is so important to us. So with the expansion, we are getting the breathing room for us to continue to sell more long term LNG".

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

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Dan Tsubouchi @Energy_Tidbits · Mar 7

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#Novak, RUS has right to impose an embargo on #NatGas thru existing 5.3 bcf/d Nord Stream 1 "but so we are not making this decision". Good thing for Europe winter is effectively over. Winter #NatGas demand is 2x summer demand. #OOTT tass.ru/ekonomika/1399...

Novak: Russia has the right to impose an embargo on gas shipments through Nord Stream 1

MOSCOW, 7 March. TASS: Russia, in connection with unfounded accusations regarding the energy crisis in Europe and the imposition of a ban on Nord Stream 2, has every right to make a "retros" decision and impose an embargo on gas transportation through Nord Stream 1, which is 100% loaded. Deputy Prime Minister of the Russian Federation Alexander Novak told reporters about this.

Novak: Russia has the right to impose an embargo on gas shipments through Nord Stream 1

According to the Deputy Prime Minister, Russia has nothing to do with the rise in oil and gas prices on the world market, this was the result of irresponsible statements by European politicians.

He drew attention to statements by European politicians on energy issues, in particular to calls to get rid of Russian oil and gas. According to him, European officials are once again trying to shift the problems and failures of their own energy policy in recent years onto Russia. "As a result, we are seeing a sharp rise in prices for energy resources. I responsibly declare that Russia has nothing to do with the current rise in prices and volatility in the market," he said.

Novak recalled that Russia provides 40% of European countries' gas consumption and has always been a reliable partner, while Gazprom fully fulfills its contractual obligations for gas supplies. In addition, according to him, gas supplies through the territory of Ukraine were increased to 109 million cubic meters, m per day, which is equivalent to about 40 billion cubic meters, m per year. "This is transit through Ukraine, and it is 100% fulfilled today. Also, deliveries are made through Nord Stream 1, Yamal - Europe, Turkish Stream, Blue Stream," the Deputy Prime Minister noted.

SAF Dan Tsubouchi @Energy_Tidbits · Mar 2



reminder Europe #NatGas demand is less than 1/2 winter demand. a huge supply issue to figure out before winter 22/23. will be urgency to fill storage this spring providing support for #NatGas #LNG prices in normally weak shoulder season. Thx @ENTSOG for ...



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Dan Tsubouchi @Energy_Tidbits · Mar 7

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Will #Biden's rising poll numbers allow him to hold firm in the inevitable last squeeze from Iran? either way, sounds like we are finally getting the end of the game. #JCPOA #OOTT

Enrique Mora @enriquemora_ · Mar 7

Just to clarify. There are no longer "expert level talks". Nor "formal meetings". It is time, in the next few days, for political decisions to end the #ViennaTalks . The rest is noise. twitter.com/AbasAslani/sta...





Dan Tsubouchi @Energy_Tidbits · Mar 7

"The Times has been told that Johnson wants the West, particularly the US and Canada, to ramp up its own production of gas to help remove the "massive leverage" Russia has over EU countries". Will EU join Asia in signing long term #LNG contracts? Thx @Steven_Swinford #OOT



Blog Summary

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

Posted Wednesday, July 14, 2021 at 10:00 MT

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 their LNG long term deals lower and moving away from long term deals to shorter term sales. Why? We think they did the same math we did in our April 28 blog "Multiple Brownfield LNG FIDs Now Headed To FEED LNG Supply Gap From Mozambique Chieft? 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 4.2 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 1.5 bcf/d brownfield LNG Canada Phase 2? LNG Canada Phase 1 at 1.5 bcf/d capacity is already a material positive for Cdn natural gas producers. A FID on LNG Canada Phase 2 would be huge, meaning 3.5 bcf/d of Cdn natural gas will be fed 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.

For Details, Please See The 8 Page Blog <http://www.safgroup.com/research/trends-in-the-market/>



Steven Swinford @Steven_Swinford · Mar 7

Exclusive:

Boris Johnson believes West should be given 'climate change pass' so it can ramp up production of gas as it tries to wean EU off Russian supplies...

[Show this thread](#)



Dan Tsubouchi @Energy_Tidbits · Mar 7

worth watching if markets see this as the start to seeing an offramp?

#OOT



Patrick Reeve @Reevellp · Mar 7

The Kremlin has announced its demands for ending the war in Ukraine:

- Ukraine must change its constitution to guarantee it won't join any "blocs", i.e. NATO + EU.
- Must recognise Crimea as part of Russia.
- Must recognise the eastern separatist regions as independent.

[Show this thread](#)



SAF

Dan Tsubouchi @Energy_Tidbits · Mar 7

below are the @SecBlinken quotes on banning Russia oil imports from Sunday cable news. #OOTT

— Dan Tsubouchi @Energy_Tidbits · Mar 6

Positive for #Oil. @SecBlinken wanted to make sure his message got out that speaking with European partners and allies for a coordinated way to ban Russian oil imports. Gave same message on @jaketapper @CNNSotu & @chucktodd @MeetThePress. #OOTT #RussiaUkraine

ain, as we speak, in coordination with our allies

o oil, Russian oil, I was on the phone yesterday

nd allies to look in a coordinated way at the pro

. That's a very active discussion as we speak."



SAF

Dan Tsubouchi @Energy_Tidbits · Mar 6

"the market is just telling you there's not enough oil in the prompt end" is what @michaelwmuller said early today before @SecBlinken said working with allies to ban RUS #Oil imports & reduce near term global oil supply. No wonder oil is +\$7-\$8 tonight. See transcript below #OOTT

— Dan Tsubouchi @Energy_Tidbits · Mar 6

2/2. @michaelwmuller closer "And the market is just telling you there's not enough oil in prompt end. The law of high prices is going to have to weed out the weaker demand and destroy it" Much more in the ppodcast. thx @sean_evers. #OOTT Bullish for #Oil

[Show this thread](#)

SAF Group created transcript of excerpts of comments made by Mike Muller (Head, Vital Asia) to Sean Evers (Founder & Managing Partner, Gulf Intelligence) on their "PODCAST: Daily Energy Markets - March 6th"
<https://soundcloud.com/user-848530307/podcast-daily-energy-markets-march-6th-1>

Items in "italics" are SAF Group created transcript

At 19:45 min mark, Evers asks if it will make any difference if US etc sanction oil as it's already disrupting itself and hence already built into the oil prices? Muller "It will. And yes you're right to say it looks like much of the western hemisphere Russian export program other than that down the pipelines is still up in the air. And as is the case with the normal stock markets cycle not yet placed from April onwards. But there is a huge question mark over it as you're talking about close to 3 million barrels a day. I think the flow into both the Druzhba pipeline and into Europe 200,000, 300,000 barrels a day, and then of course very large flows out of the Baltic and to a lesser extent out of the Black Sea. The world does not have enough spare capacity. I don't know if I misheard Christof there, but the world does not have enough crude either. Never mind the little wobble in Libya recently. Unless we get Iranian oil back, the supply demand balance is, with full Russian oil in the picture, we're not enough. And we were concerned about where the oil is going to come from, whether the Permian Basin could catch up quickly enough. And we were talking about the possible need for SPR releases just to address high oil price with nonsense like the mid term elections in mind to appease the electorate in North America. Now with millions of barrels a day of Russian oil probably likely to be backed in, some of it perhaps making the long way around *the [??] around the bottom end of Africa to eastern Asian markets. The impact is going to be very profound. If you have to build a artificially long maritime pipeline to transport the oil to the other hemisphere, that does away with a month's worth of demand as that oil is in transit. It's like line fill on a pipeline. And even if all goes there, there's still going to be a shortage of sweet barrels for the western hemisphere refining system. so the market is telling you that because it's showing you a \$5, \$6 per barrel backwordation, which we have not seen since the very first Gulf War in 1991 just before Desert Storm. This is unprecedented stuff. And the market is just telling you there's not enough oil in prompt end. The law of high prices is going to have to weed out the weaker demand and destroy it."*

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



SAF

Dan Tsubouchi @Energy_Tidbits · Mar 6

Good reminder last week from \$DEVN CEO it takes take to see sustained increase in #Permian #Oil production - it doesn't happen overnight. #OOTT

re Dan Tsubouchi @Energy_Tidbits · Feb 28

"quite honestly if you were to add a rig today, you would be 9 to 12 months before you really started seeing the impact" says #Devon CEO on impact of tight labor, sand, etc to @GuyJohnsonTV @kaileyleinz #OOTT

SAF Group created transcript of excerpts from Bloomberg TV (Kailey Leinz, Guy Johnson) with Devon CEO Rick Muncrief on Feb 28, 2022 <https://www.bloomberg.com/news/videos/2022-02-28/biden-should-wait-on-spr-release-devon-ceo-says-video>

Items in "italics" are SAF Group created transcript

At 0:40 min mark, Johnson asks "even if you wanted to pump more oil, how restricted are you in terms of labor, in terms of all the other stuff that goes into producing a barrel of oil. how easy is to come by, how production restricted are you right now?" Muncrief "I can tell you that labor is tight ... the Permian Basin is probably where you are going to see most of the sustained growth. that's not to say the other basins couldn't have some growth. sustained growth is going to be the Permian... the market is tight, let's be patient, let's be disciplined ... things are tight. We've seen tightness in things like steel, things like sand and other things."

At 3:00 min mark, Muncrief "at what point could you see additional barrels put into the market. quite honestly if you were to add a rig today, you would be 9 to 12 months before you really started seeing the impact. Most of the development that we are doing here in the US today is a multi-well pads so you are drilling 4 to 6 wells on a pad. So you have to drill 4 wells. You have to complete those, set facilities. So if you could drop a flag today, you say roughly 12 months out. And that's where you start thinking about the impact of inflation with the additional activity, labor issues, things like that."

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

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Dan Tsubouchi @Energy_Tidbits · Mar 6

Buckle up. #Oil opens up big tonight. Brent \$129, WTI \$126. #OOTT

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Dan Tsubouchi @Energy_Tidbits · Mar 6

here is what @vitolnews @michaelwmuller actually said on the law of high #Oil prices. #OOTT

re Dan Tsubouchi @Energy_Tidbits · Mar 6

2/2. @michaelwmuller closer "And the market is just telling you there's not enough oil in prompt end. The law of high prices is going to have to weed out the weaker demand and destroy it" Much more in the podcast. thx @sean_evers. #OOTT Bulish for #Oil [Show this thread](#)

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

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Dan Tsubouchi @Energy_Tidbits · Mar 6

SAF

Positive for #Oil. @SecBlinken wanted to make sure his message got out that speaking with European partners and allies for a coordinated way to ban Russian oil imports. Gave same message on @jaketapper @CNNSotu & @chucktodd @MeetThePress. #OOTT #RussiaUkraine

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and allies to look in a coordinated way at the pro
That's a very active discussion as we speak."

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Dan Tsubouchi @Energy_Tidbits · Mar 6

SAF

annoying @NBCSports coverage of @APInv and @PGA golf in general a they they never give 🇺🇸 golfers any real coverage unless they have to. been watching for 70 min and the only one on the leaderboard to not be shown is @coreconn



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Dan Tsubouchi @Energy_Tidbits · Mar 6

Our weekly SAF Mar 6, 2022 Energy Tidbits memo is posted on our SAF Group website. This 50-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/



Energy Tidbits

March 6, 2022

Prepared by: Dan Tsubouchi

Will Russia's Attempt to Backdoor Some US Ukraine Sanctions Delay a Return To JCPOA?

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 this 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 and not just a specific company results. Our target is to write on 48 to 50 weekends per year and to post by noon mountain time on Sunday.

This week's memo highlights:

1. Will Russia's attempt to backdoor some US Ukraine sanctions delay a return to JCPOA by a couple weeks? [Click Here](#)
2. Excellent oil insights from Ytof's Mike Muller this morning should be topical for oil markets tonight. [Click Here](#)
3. Shell's to get out Cadornem ventures including Sakhalin LNG projects has to move LNG Canada Phase 2 FID up the priority list. [Click Here](#)
4. Russia's oil and petroleum products exports increasingly hit, a moving target and going higher. [Click Here](#)
5. Potential CP rail strike/lockout could be as soon as March 16. [Click Here](#)
6. Please follow us on Twitter at [@ENRG](#) 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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