Energy Tidbits

Vanguard To Keep Investing in Oil & Natural Gas as Their Duty is to Maximize Long-Term Total Returns to Clients

Produced by: Dan Tsubouchi

May 29, 2022

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https://venturegloballng.com/press/venture-global-announces-final-investment-decision-and-financial-close-for-plaquemines-lng/

VENTURE GLOBAL ANNOUNCES FINAL INVESTMENT DECISION AND FINANCIAL CLOSE FOR PLAQUEMINES LNG

May 25, 2022

- *$13.2 billion project financing formally sanctions the first domestic US LNG export project to reach financial close since Venture Global's Calcasieu Pass.*
- *Largest project financing transaction in the world closed in 2022.*

Arlington, Virginia– Today Venture Global LNG is announcing a final investment decision (FID) and successful closing of the $13.2 billion project financing for the initial phase (an upsized 13.33 MTPA) of the Plaquemines LNG facility and the associated Gator Express pipeline. This transaction represents the largest project financing in the world closed to date in 2022. The proceeds of the debt and equity financing fully fund the balance of construction and commissioning of the initial phase. This is the first LNG project located in the United States to reach financial close since Venture Global's Calcasieu Pass facility in August 2019.

"The Venture Global team is proud to announce FID on our second project, Plaquemines LNG, just months after exports began at Calcasieu Pass. I want to thank our team for their tireless efforts to support this remarkable achievement," said **Mike Sabel, CEO of Venture Global LNG**. "Plaquemines will build on the success of Calcasieu Pass, which broke global records for speed and execution. The project has attracted robust financial and commercial support which has enabled us to formally sanction this project at a critical moment for energy markets. Speed matters more than ever and Venture Global is uniquely positioned to quickly bring US LNG to the market to support global energy security and environmental progress. I would like to thank our customers, lenders, advisors, construction partners and local partners in Louisiana for their trust and support."

Plaquemines LNG has received all necessary permits, including FERC authorization and non-FTA export authorization from the U.S. Department of Energy. In addition, the company has executed 20-year Sales and Purchase Agreements (SPAs) for 80% of the full 20.0 MTPA project. Plaquemines LNG phase one customers include PGNiG, Sinopec, CNOOC, Shell and EDF; phase two customers announced to date include ExxonMobil, PETRONAS and New Fortress Energy. Marketing is actively underway for the company's third facility, CP2, and two SPAs with ExxonMobil and New Fortress Energy have already been executed for this project.

The lender group for the company's construction financing includes the world's leading banks, spanning multiple continents. The lenders who provided funding at closing are: Bank of America, N.A., Banco Santander, S.A., Bank of China, CaixaBank, S.A., Deutsche Bank AG, New York Branch, Goldman Sachs Bank USA, Industrial and Commercial Bank of China Limited, ING Capital LLC, JPMorgan Chase Bank, N.A., Landesbank Baden Württemberg, Mizuho Bank, Ltd., Morgan Stanley Senior Funding, Inc., MUFG Bank, Ltd., Natixis, Nomura Securities International, Inc., Royal Bank of Canada, Sumitomo Mitsui Banking Corporation, The Bank of Nova Scotia and Truist Bank.

Bank of America, Goldman Sachs, ING, JP Morgan, Mizuho, Morgan Stanley and RBC served as Lead Banks to Venture Global for the transaction. Latham & Watkins LLP served as counsel to Venture Global and Skadden, Arps, Slate, Meagher & Flom LLP served as counsel to the lenders.

About Venture Global LNG
Venture Global is a long-term, low-cost provider of U.S. LNG sourced from resource rich North American natural gas basins. Venture Global's first facility, Calcasieu Pass, commenced producing LNG in January 2022. The company is also constructing or developing an additional 60 MTPA of production capacity in Louisiana to provide clean, affordable energy to the world. The company is developing Carbon Capture and Sequestration (CCS) projects at each of its LNG facilities.

https://totalenergies.com/media/news/press-releases/south-korea-totalenergies-signs-lng-long-term-sale-contract-hanwha

South Korea: TotalEnergies Signs LNG Long-Term Sale Contract with Hanwha Corporation

05/24/2022

News

Daegu, May 24, 2022 – Against the backdrop of World Gas Conference 2022, TotalEnergies announces the signing of a Sale and Purchase Agreement (SPA) with the Korea's Hanwha Energy Corporation for the supply of 600,000 metric tons of liquefied natural gas (LNG) per year over 15 years, starting in 2024.

The LNG will be sourced from TotalEnergies' global LNG portfolio, delivered to the Tongyeong regasification terminal in South Korea, and then used to supply Hanwha & HDC's greenfield 1 GW power plant currently under construction next to the terminal.

"We are pleased to extend our long-standing cooperation with Hanwha, with whom we are already partnering on the Daesan petrochemical site, and in the United States for the development of 1.6 GW of renewables. With this new contract, TotalEnergies increases its natural gas shipments to South Korea, the world's third largest importer of LNG in 2021. Our Company is keen to support the country's switch away from coal for power generation, with both LNG supplies and renewables projects, such as our significant "Bada" 2 GW offshore wind project," said **Stéphane Michel, President Gas, Renewables & Power at TotalEnergies.**

"It is significant that we have secured business stability by signing a long-term contract with our long-lasting partner TotalEnergies, even though the volatility of the LNG market has increased more than ever due to the recent unstable international situation. It will serve as a great foundation for our Tongyeong project, and I think the success of the Tongyeong project will have a great impact on our future LNG businesses. Eventually in the long term, the company will grow steadily with a business portfolio of solar power, ESS, and LNG," said **Jung In Sub, Chief Executive Officer of Hanwha Energy Corporation.**

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TotalEnergies, The World's Third-Largest Low-Carbon LNG Company

TotalEnergies is the world's third-largest low-carbon LNG company, with a global market share of around 10% and a global portfolio of nearly 50 Mt/y by 2025 thanks to its interests in liquefaction plants in all geographies. The Company benefits from an integrated position across the LNG value chain, including production, transportation, trading, and LNG bunkering. TotalEnergies ambition is to increase the share of natural gas in its sales mix to 50% by 2030, reduce the gas value chain's carbon emissions, eliminate methane emissions, and work with local partners to promote the transition from coal to natural gas.

About TotalEnergies

TotalEnergies is a global multi-energy company that produces and markets energies: oil and biofuels, natural gas and green gases, renewables and electricity. Our more than 100,000 employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people.

https://semprainfrastructure.com/news-and-events/news-releases/sempra-infrastructure-and-rwe-sign-heads-of-agreement-for-u-s-lng-supply

Sempra Infrastructure and RWE Sign Heads of Agreement for U.S. LNG Supply

MAY 25, 2022

- **Contemplates terms for sale and purchase agreement for 2.25 Mtpa of LNG with a leading German energy company**
- **Advances goal of providing lower-carbon U.S. LNG to global partners**

DAVOS, Switzerland, May 25, 2022 – Sempra Infrastructure, a subsidiary of Sempra (NYSE: SRE) (BMV: SRE), today announced it has entered into a heads of agreement (HOA) with RWE Supply & Trading, a subsidiary of RWE (RWE: AG), for the purchase of approximately 2.25 million tonnes per annum (Mtpa) of liquefied natural gas (LNG). The LNG is to be supplied on a long-term, free-on-board basis from the Port Arthur LNG Phase 1 project under development in Jefferson County, Texas.

“Sempra Infrastructure’s LNG projects are uniquely positioned to help provide U.S. LNG to support the energy security of America’s allies in Europe, while also accelerating the transition to a lower carbon future. We are excited about the opportunity to work with one of Germany’s top power producers to achieve these dual goals,” said Justin Bird, CEO of Sempra Infrastructure. “We see opportunities to work together with RWE across the energy transition, including LNG, hydrogen and renewables. With today’s agreement, we make significant progress toward the development of our Port Arthur LNG project and remain committed to lowering greenhouse gas (GHG) emissions across the LNG value chain through the use of new technologies and the improvement of key processes.”

Andree Stracke, CEO of RWE Supply & Trading said, “As RWE, we are very pleased to join forces with Sempra Infrastructure. Our partnership can contribute largely to securing significant LNG volumes for the RWE portfolio on a long-term basis while building the basis for supplying low carbon gas in the future.”

The HOA contemplates the negotiation and finalization of a definitive 15-year LNG sale and purchase agreement for 2.25 Mtpa to be delivered from the Port Arthur LNG project. Additionally, Sempra Infrastructure and RWE have agreed to work toward a broad framework for the reduction, mitigation, and reporting of GHG emissions associated with deliveries of LNG from the Port Arthur LNG project, including addressing the use of responsibly sourced natural gas as part of the project’s feed gas supply and renewable energy as part of the project power mix.

Phase 1 of the Port Arthur LNG project is fully permitted and is expected to include two liquefaction trains and LNG storage tanks, as well as associated facilities capable of producing, under optimal conditions, up to approximately 13.5 Mtpa of LNG.

The referenced HOAs are preliminary, non-binding arrangements, and the development of the Port Arthur LNG project remains subject to a number of risks and uncertainties, including, among others, reaching definitive agreements, maintaining all necessary permits, finalizing engineering and construction arrangements, obtaining financing and incentives, and reaching a final investment decision.

Advancing Lower Carbon LNG with Global Partners

Sempra Infrastructure is one of the top renewable energy producers in Mexico and is currently exceeding its goal of operating its existing LNG infrastructure at a GHG emissions intensity that is 20% below its 2020 baseline, having achieved a 28% reduction in 2021. In addition to continuing to reduce emissions through operational excellence, Sempra Infrastructure is actively developing lower emissions technologies for existing and future infrastructure assets.

Sempra Infrastructure has entered into a memorandum of understanding with Entergy Louisiana, a subsidiary of Entergy Corporation (NYSE: ETR), to develop options to accelerate the deployment of cost-effective renewable energy to power its infrastructure located in vicinity of the Gulf Coast. Additionally, Sempra Infrastructure is developing Hackberry Carbon Sequestration, a proposed carbon sequestration facility located in Southwest Louisiana expected to have the potential to sequester up to 2 Mtpa of carbon dioxide from LNG and other industrial facilities in the region and is developing opportunities to co-locate low-carbon hydrogen production at or near existing Sempra Infrastructure facilities.

In addition to lowering emissions at its own facilities, Sempra Infrastructure is working with other companies to reduce GHG emissions across the U.S. natural gas value chain, consistent with Sempra's aim to have net-zero GHG emissions by 2050. Sempra is a founding member of Veritas, a GTI Energy Differentiated Gas Measurement and Verification Initiative, supporting Sempra Infrastructure and other customers' desires for responsibly sourced natural gas that is produced and transported using proven technologies that minimize GHG emissions. Sempra Infrastructure is also a sponsor of The Collaboratory to Advance Methane Science, a research collaboration to advance technological solutions to enable methane emission reductions.

About Sempra Infrastructure

Sempra Infrastructure delivers energy for a better world. Through the combined strength of its assets in North America, the company is dedicated to enabling the energy transition and beyond. With a continued focus on sustainability, innovation, world-class safety, championing people, resilient operations and social responsibility, its more than 2,000 employees develop, build and operate clean power, energy networks and LNG and net-zero solutions, that are expected to play a crucial role in the energy systems of the future. For more information about Sempra Infrastructure, please visit www.SempraInfrastructure.com and Twitter.

About RWE

RWE is leading the way to a green energy world. With an extensive investment and growth strategy, the company will expand its powerful, green generation capacity to 50 gigawatts internationally by 2030. RWE is investing €50 billion gross for this purpose in this decade. The portfolio is based on offshore and onshore wind, solar, hydrogen, batteries, biomass and gas.

RWE Supply & Trading provides tailored energy solutions for large customers. RWE has locations in the attractive markets of Europe, North America and the Asia-Pacific region. The company is responsibly phasing out nuclear energy and coal. Government-mandated phaseout roadmaps have been defined for both of these energy sources. RWE employs around 19,000 people worldwide and has a clear target: to get to net zero by 2040. On its way there, the company has set itself ambitious targets for all activities that cause greenhouse gas emissions. The Science Based Targets initiative has confirmed that these emission reduction targets are in line with the Paris Agreement. Very much in the spirit of the company’s purpose: Our energy for a sustainable life.

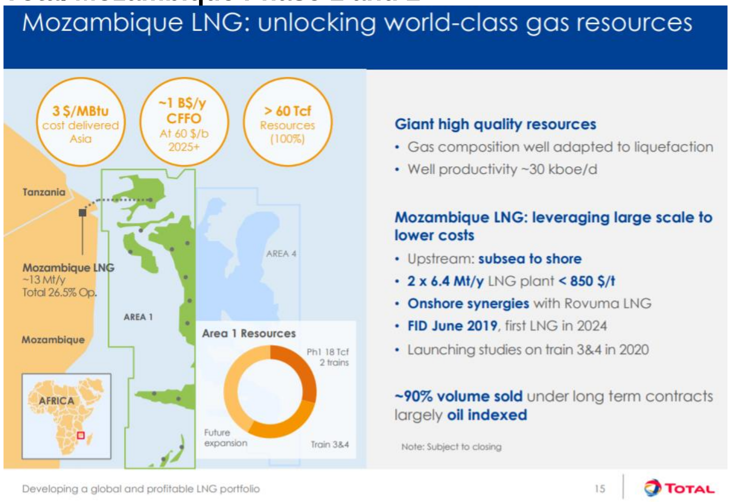
Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?

Posted Wednesday April 28, 2021. 9:00 MT

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

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

Total Mozambique Phase 1 and 2



Source: Total Investor Day September 24, 2019

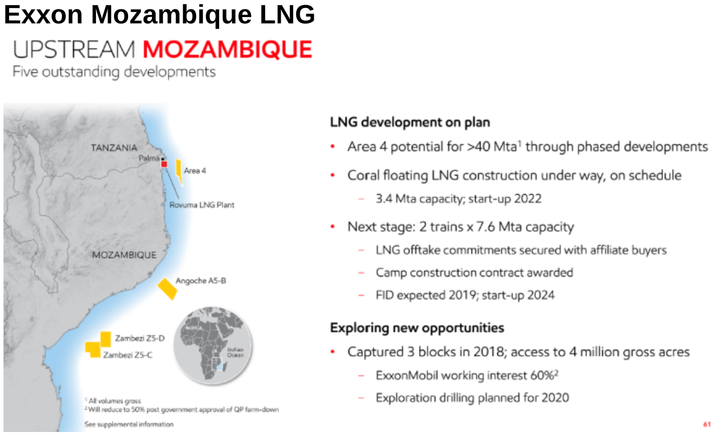
<u>Total's Mozambique force majeure is no surprise, especially the need to the restoration of security and stability "in a sustained manner"</u>. Yesterday, Total announced [LINK] "*Considering the evolution of the security".* No one should be surprised by the force majeure or the sustained manner caveat. 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".

<u>Does anyone really think Total will risk another quick 2-3 month restart or even in 2021?</u> 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.

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

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

Exxon Mozambique LNG



Source: Exxon Investor Day March 6, 2019

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

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

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

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

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

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

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

Source: IEA

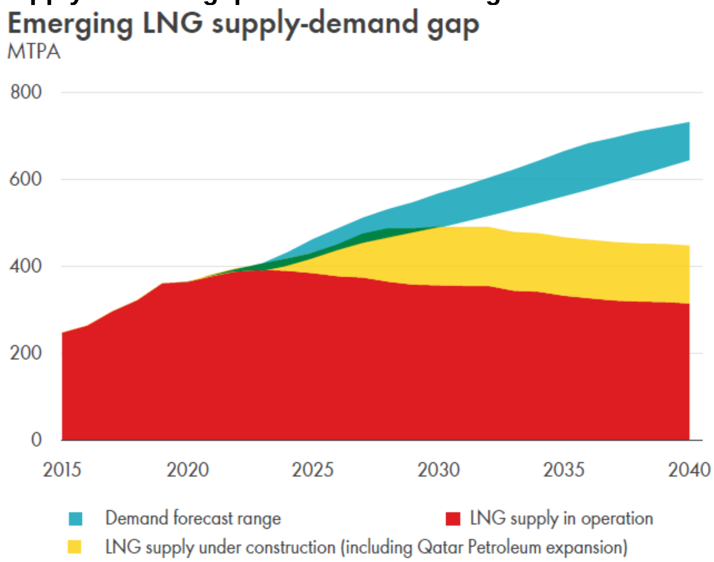
🟢 On Track 🟡 More Efforts Needed 🔴 Not on Track

Source: IEA Tracking Clean Energy Progress, June 2020

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

Shell's March 2021 long term outlook for LNG demand was basically unchanged vs 2020 and leads to a LNG supply gap in mid 2020s Shell does not provide the detailed numbers in their Feb 25, 2021 LNG forecast. We would assume they would have reflected some delay, perhaps 1 year, at Mozambique but would be surprised if they put a 2-3 year delay in for the 5 bcf/d from Total Phase 1 +2 and Exxon Rozuma Phase 1. Compared to their LNG Outlook 2020, it looks like there was no change for their estimate of global natural gas demand growth to 2040, which looked relatively unchanged at approx. 5,000 bcm/yr or 484 bcf/d. Similarly, long term LNG demand looked unchanged to 2040 of ~700 mm tonnes (92 bcf/d) vs 360 mm tonnes (47 bcf/d) in 2020. In the 2021 outlook, Shell highlighted that the pandemic delayed project construction timelines and that the "*lasting impact expected on LNG supply not demand"*. And that Shell sees a LNG "*supply-demand gap estimated to emerge in the middle of the current decade as demand rebounds*". Comparing to 2020, it looks like the supply-demand gap is sooner.

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



Source: Shell LNG Outlook 2021, Feb 25, 2021

<u>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..</u> 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.

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

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

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

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

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

Posted 11am on July 14, 2021

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

<u>Sea change in Asian LNG buyers is also the best validation of the LNG supply gap and big to LNG supply FIDs.</u> 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.

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

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

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

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

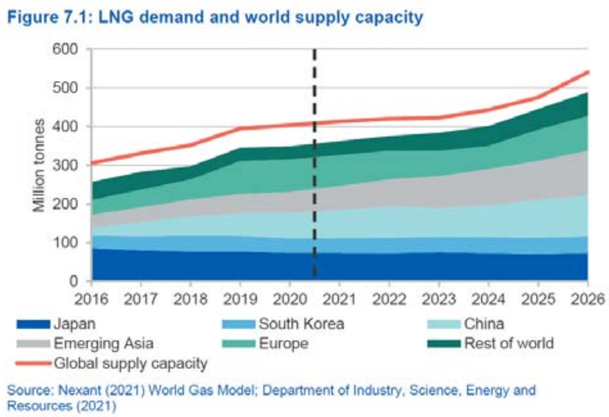
Common theme - new LNG supply is being delayed ie. [Total] Mozambique. Don't forget need capacity>demand due to normal maintenance, etc. Positive for LNG." (ii) Chevron's Gorgon. A big LNG story in H2/20 was the emergence of weld quality issues in the propane heat exchangers at Train 2, which required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

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

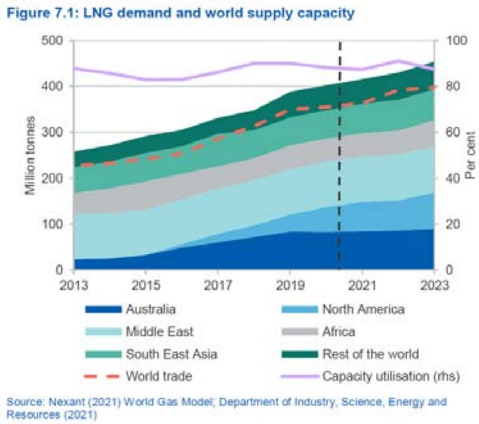
But we still see major LNG suppliers like Australia hinting but not outright saying that LNG supply gap is coming sooner. We have to believe Australia will be unveiling a sooner LNG supply gap in their September forecast. On June 28, we tweeted [LINK] on Australia's Resources and Energy Quarterly released on Monday [LINK] because there was a major change to their LNG outlook versus their March forecast. We tweeted "*#LNGSupplyGap. AU June fcast now sees #LNG mkt tighten post 2023 vs Mar fcast excess supply thru 2026. Why? $TOT Mozambique delays. See below SAF Apr 28 blog. Means brownfield LNG FID needed ie. like #LNGCanada Phase 2. #OOTT #NatGas"*. Australia no longer sees supply exceeding demand thru 2026. In their March forecast, Australia said "*Nonetheless, given the large scale expansion of global LNG capacity in recent years, demand is expected to remain short of total supply throughout the projection period."* Note this is thru 2026 ie. a LNG supply surplus thru 2026. But on June 28, Australia changed that LNG outlook and now says the LNG market may tighten beyond 2023. Interestingly, the June forecast only goes to 2023 and not to 2026 as in March. Hmmm! On Monday, they said "*Given the large scale expansion of global LNG capacity in recent years, import demand is expected to remain short of export capacity throughout the outlook period. Beyond 2023, the global LNG market may tighten, due to the April 2021 decision to indefinitely suspend the Mozambique LNG project, in response to rising security issues. This project has an annual nameplate capacity of 13 million tonnes, and was previously expected to start exporting LNG in 2024*." 13 million tonnes is 1.7 bcf/d so they are only referring to Total Mozambique LNG Phase 1. So no surprise the change is Mozambique LNG driven but we have to believe the reason why they cut their forecast off this time at 2023 is that they are looking at trying to figure out what to forecast beyond 2023 in addition to Total Phase 1. And, importantly, we believe they will be changing their LNG forecast for more than Mozambique ie. India demand that we highlight later in the blog. They didn't say anything else specific on Mozambique but, surely they have to also be delaying the follow on Total Phase 2 of 1.3 bcf/d and Exxon Rozuma Phase 1 of 2.0 bcf/d.

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

March 2021 LNG Outlook



June 2021 LNG Outlook

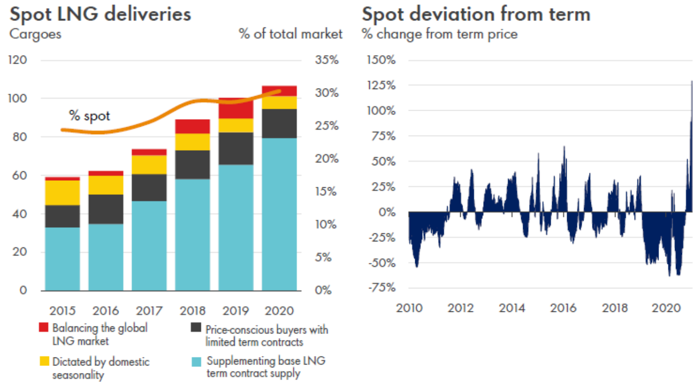


Source: Australia Resources and Energy Quarterly

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.

<u>BP/Guangzhou Gas, a 12-yr supply deal for 0.13 bcf/d</u>. 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.

<u>Qatar/Korea Gas is a 20-yr deal to supply 0.25 bcf/d.</u> 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.

<u>More Asian buyer long term LNG deals (ie. India) will be coming.</u> 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.

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

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

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

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

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

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

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

https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/052722-indias-long-term-lng-contracts-stage-rescue-amid-high-prices-petronet-lng-ceo

- 27 May 2022 | 14:43 UTC

India's long-term LNG contracts stage rescue amid high prices: Petronet LNG CEO

HIGHLIGHTS

Global LNG prices stabilizing after record highs

India boosting trunk line, gas pipeline infrastructure

Petronet LNG to expand regasification capacity

- Author Surabhi Sahu

India's huge reliance on long-term natural gas contracts has helped it mostly shrug off the impact of price volatility and ensure energy security at a time when geopolitical risks emanating largely from Russia's invasion of Ukraine have sent prices soaring globally, Petronet LNG CEO and Managing Director Akshay Kumar Singh said May 27.

"For India, there has been no default on its long-term contracts despite the market volatility. Everybody has honored the contracts and we hope that it will continue," Singh said during a panel discussion at the World Gas Conference 2022 in Daegu, South Korea.

Gas prices have exhibited unprecedented volatility. After ebbing to a record low of $1.70-$1.90/MMBtu in April 2020, the Asian LNG spot price jumped to as high as $84.80s/MMBtu on March 7, Singh said.

Now there is some easing and that is a good sign prices are stabilizing, Singh said.

The Platts JKM for July was assessed at $23.771/MMBtu May 27, S&P Global Commodity Insights data showed.

India's LNG imports stand at 24 million-25 million mt/year, with Petronet LNG handling almost two-thirds of the country's total LNG import volumes, Singh said.

Petronet LNG buys 8.5 million mt/year from RasGas via a long-term agreement and imports 1.44 million mt/year from ExxonMobil's Gorgon project in Australia under another term deal.

As far as long-term contracts were concerned, he said the company was taking steps to extend its RasGas contract for Dahej, Gujarat, but there was ample time to do so.

Natural gas key for net-zero pathway

Demand destruction to a certain extent will likely occur because elevated natural gas prices are prompting consumers to seek other alternatives, but gas will play a key role in satiating India's growing energy needs, Singh said.

India's continued plan to increase the share of gas in its overall primary energy sector is "very ambitious," Singh said, adding that the central government has decided to increase the target of natural gas' share in the energy mix to 15% by 2030 from the current level of around 6%. That translates to a roughly four-fold rise in the country's natural gas requirement, he said.

Currently, the country consumes about 45 million mt natural gas, of which 24 million mt is imported and the remainder is domestic gas, Singh said, adding that by 2030, the plan is for total demand to hit as high as 150 million-160 million mt.

To consume that quantity of gas, a lot of effort is being directed to strengthen the country's infrastructure -- both the trunk line and the pipeline network -- he said.

India has pledged to achieve net-zero emissions by 2070.

"So, natural gas will remain a primary energy fuel for at least three-four decades in the Indian context," Singh said.

Expansion plans

Petronet LNG, for its part, is advancing plans to expand its existing 17.5 million mt/year LNG import facility at Dahej to 22.5 million mt/year.

The company's Dahej terminal is the world's busiest even though capacity-wise, it is the seventh largest globally, Singh said, adding that there were plans for launching LNG facilities in the state of Odisha.

The company's Kochi terminal operated at 21% of its 5 million mt/year capacity January-March compared with 18% in the corresponding quarter a year ago, the company said in its latest quarterly results announced May 12.

It eventually hopes to ramp up the Kochi terminal's capacity utilization to 100%, Singh added.

India’s LNG Imports to Jump Near 5 Times by 2030: Petronet
2021-10-22 09:02:33.799 GMT

By Debjit Chakraborty and Rajesh Kumar Singh
(Bloomberg) -- India’s import of natural gas is expected to hit 120 million tons/year by 2030 as the nation targets an energy mix goal, Akshay Kumar Singh, CEO of Petronet LNG, said at the India Energy Forum by CERAWeek.
* NOTE: India aims to boost use to natural gas to 15% of primary energy mix from about 6% now
* India’s current annual LNG import is about 26 million tons
* The nation’s gas production by 2030 is expected to reach 40 million-50 million tons
* Current LNG import capacity is 42 million tons/year, while about 19 million tons/year capacity is under construction
* Another 9 million-10 million tons of capacity addition are at design stage
* Petronet is expanding its biggest terminal at Dahej to 22.5 million tons a year from 17.5 million currently
* India’s biggest LNG importer is also looking at building a new terminal on the east coast
* The current volatility in global gas prices is causing demand destruction
* Price volatility pushing consumers to long term LNG contracts
* Consumers are looking at a mix of oil, gas indexation for long LNG deals, which can work good for buyers

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https://blinks.bloomberg.com/news/stories/R1DE8CT0AFB4

https://tass.ru/ekonomika/14732629

MAY 26, 00:36

Novak: oil production in Russia by the end of 2022 may decrease to 480-500 million tons

The government expects a gradual recovery in production after its fall in April 2022 by about 1 million barrels per day

TEHRAN, 26 May. /TASS/. Oil production in Russia may decrease from 524 million tons in 2021 to 480-500 million tons in 2022. The government expects a gradual recovery in production after its fall in April 2022 by about 1 million barrels per day, Russian Deputy Prime Minister Alexander Novak told reporters.

"I think that there will be a much smaller decline. We had a decline of just over a million barrels per day for just one month, now it's already lower. Accordingly, I think that there will be a recovery further. Last year we had 524 million tons. this year it may be 480-500 million tons. But this is for today, everything can change depending on the situation," he stressed.

The average daily production of oil and gas condensate in Russia from May 1 to May 15, 2022 amounted to 1.398 million tons, an increase of 1.7% compared to April, when the average daily oil production was 1.374 million tons, a source familiar with official statistics told TASS for oil production.

In the first ten days of April, the decline in production compared to March was 6%, and by the end of the month it reached almost 9%. Since the spring of 2021, Russia has mostly smoothly increased oil production, but in March 2022, it faced comprehensive international sanctions due to the situation in Ukraine. Thus, the sanctions prohibit investments in the exploration, production and processing of crude oil in Russia. Russian Finance Minister Anton Siluanov said that Russia could lose up to 17% of oil production in 2022 due to sanctions.

https://tass.ru/ekonomika/14667125
EDUCATIONAL MARATHON "NEW HORIZONS"
MAY 19, 01:21Updated May 19, 03:08

Novak: Russia will ensure energy security under any circumstances

Deputy Prime Minister said that Russia is restoring oil exports

Deputy Prime Minister of the Russian Federation Alexander Novak

MOSCOW, May 19. /TASS/. In Russia, energy security will be ensured under any circumstances, the country produces enough energy, both for domestic consumption and for export. This was announced by Deputy Prime Minister of the Russian Federation Alexander Novak during the New Horizons marathon organized by the Knowledge society.

"The most important task for our energy industry is to provide, first of all, our domestic market with high-quality and affordable energy sources. Since we produce enough energy for domestic consumption, as well as for export, in terms of the energy security of our country, we will independently from any action are provided in full," he said.

At the same time, the energy crisis in Europe is just beginning, Novak believes. "What will happen by the end of the year, or next year - there are big uncertainties. In my opinion, it will be worse, because the prices are very high, because there are risks of short deliveries," the Deputy Prime Minister added.

Oil export

Russia is restoring oil exports and redirecting it to new markets, we cannot talk about a crisis in the industry, Novak said.

"We work in constant contact with our oil and gas companies, and we do not see any serious problems that would indicate that our industry is in some kind of crisis. Yes, we received some kind of shock that allowed us to find new points of balance and reach new export opportunities, redirecting, among other things, energy resources to new markets, creating new supply chains. We are additionally looking for new partners, respectively, we are solving financing issues - the problems that the industry has faced as a result of sanctions," he said during the marathon " New Horizons", organized by the society "Knowledge".

“Nevertheless, I believe that our companies have reformatted in two months, and today they feel quite confident. The domestic market (situation) does not, in principle, affect exports, we are practically restoring it today,” Novak added.

Increase in oil production in May

Russia increased oil production in May by 200-300 thousand barrels per day (b / d) after falling in April, in June, the recovery in production will continue, Novak said.

According to the forecast of the Ministry of Economic Development, in 2022, Russian oil exports will decrease by 1.2% - to 228.3 million tons after 231 million tons in 2021 and to 224.8 million tons in 2023. In 2024-2025, exports are expected to grow to 228.1 million tons and 229.5 million tons, respectively.

Russia increased oil production in May by 200-300 thousand barrels per day (b / d) after falling in April. Production recovery will continue in June, Novak said.

“Yes, somewhere in March-April, as a result of the shock, we received a slight decrease in production and oil refining. This was expressed in approximately 10-14% figures,” he said. production is increasing. If in April we reduced production by about 1 million barrels per day, in May we already increased by 200-300 thousand b / d. And we expect that further recovery will also take place in June."

Novak also noted that the situation in Russia with the extraction and export of energy resources is now stable.

Libya's Crude Output at 750,000 B/d, Its Oil Minister Says
2022-05-26 13:02:18.844 GMT

By Hatem Mohareb
(Bloomberg) -- Libyan crude production has risen to around 750,000 barrels a day, Oil Minister Mohamed Oun said Thursday.
* NOTE: Earlier this month, Oun said Libya's oil output was ~600,000 b/d
* The OPEC-member's crude production fell in April due to a blockade amid protests calling for Prime Minister Abdul Hamid Dbeibah to step down
** READ, April 17: Two Libyan Ports Stop Loading Oil Amid Political Standoff
* NOTE: The IEA estimates Libya's April crude output dropped by 200k b/d to 900k b/d due to political unrest
** OPEC's total April oil production rose by 50k b/d to 28.67m b/d, the IEA said in its latest monthly report, with higher flows from Saudi Arabia and Iraq offsetting a substantial drop in Libya
* READ, April 14: Libya Adopts Plan to Raise Oil Output to 1.4m B/D: Hakomitna

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Beijing Says Outbreak Under Control as City Eases Curbs (1)
2022-05-28 10:33:06.201 GMT

By Bloomberg News
(Bloomberg) -- China's capital Beijing will loosen mobility curbs in several districts from Sunday after authorities said its outbreak is under control, while total case numbers in the financial hub of Shanghai continued to decline.
Most public transportation services including buses, subways and taxis will resume in three districts including Chaoyang, according to Xu Hejian, a spokesman for the Beijing city government. Shopping centers outside of controlled areas in the city will also be allowed to reopen with capacity limits on the number of people. Chaoyang is home to Beijing's central business district, most foreign embassies and expatriates.
The number of new infections has fallen for six straight days in Beijing with no cases outside of quarantine reported on Friday, Xu said. "This round of outbreak has been effectively controlled," he said at a briefing Saturday.
Community spread is a key metric used by government officials to determine the severity of an outbreak and whether to ease restrictions. Other cities like Shanghai also began unraveling lockdown measures after reporting consecutive days of zero cases in the community.
Workers in some Beijing districts who were required to work from home previously will be allowed to return to their workplaces, and hotels and hostels in five districts on the city's outskirts will be permitted to reopen, Xu added.
China's Li Gives Dire Growth Warning in Unpublished Remarks
The city reported 12 new local cases for Saturday as of 3 p.m., compared with a peak of almost 100 earlier in the wave, as health authorities stamped out most clusters in their early stages. Still, officials in the capital warned of challenges in trying to eradicate the spread of virus, which has persisted for more than a month.
"Beijing is on a key stage of shifting from an emergency response to the virus outbreak to handling the situation on a more regular basis," Xu said. "The risk of a resurgence remains and we still need to consolidate the prevention work."
Schools and kindergartens will remain suspended in the city and university campuses will stay closed, with students urged to go home before the summer holidays, Xu said. Dining-in will still be banned at restaurants, he added.
Shanghai logged a total of 170 infections for Friday, one of which was found in the community through regular mass testing, health officials said in a statement. Its total daily case count has steadily trended down over the past week.
Persistent infections found among people not in quarantine underscore the challenge Shanghai faces in keeping the virus in check after more than a month of punishing lockdowns. Under China's Covid Zero strategy, authorities have taken drastic

measures to quarantine all those infected and isolate people
exposed to them -- in some cases all residents of an entire
apartment block -- to prevent the virus from spreading.
Why China Is Sticking With Its Covid Zero Strategy:
QuickTake
The city on May 17 reached its goal of no new Covid
infections in the broader community for three consecutive days,
a crucial milestone that authorities said would allow them to
start unwinding lockdowns. In the past week, however, isolated
cases have been reported, the most recent on May 25.
There were 264 local cases reported nationwide for Friday,
including 193 people with no symptoms, according to a statement
from the National Health Commission.

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Google Translate of https://www.shanghai.gov.cn/nw12344/20220529/c931ca8e68cd434293e122204c61ecc8.html

Notice of the Shanghai Municipal People's Government on Printing and Distributing the Action Plan for Accelerating Economic Recovery and Revitalization in Shanghai

Date of issuance: 2022-05-28 Date of release: 2022-05-29 Hu Fu Gui [2022] No. 5

Hu Fu Gui [2022] No. 5

The people's governments of all districts and the committees, offices and bureaus of the municipal government:

The "Shanghai Action Plan for Accelerating Economic Recovery and Revitalization" is hereby issued to you, please implement it carefully.

Shanghai Municipal People's Government

May 21, 2022

Shanghai's Action Plan for Accelerating Economic Recovery and Revitalization

In order to implement the State Council's package of policies and measures to stabilize the economy, efficiently coordinate epidemic prevention and control and economic and social development, and effectively and orderly promote the accelerated recovery and revitalization of the economy, this action plan is formulated.

1. Do everything possible to help all kinds of market entities

(1) Phased deferral of "five insurances and one housing fund" and taxes

1. For 5 extremely difficult industries, including catering, retail, tourism, civil aviation, and road, water, and railway transportation, the payment of social insurance premiums will be postponed in stages from April. Among them, the deferred payment period of pension and medical insurance premiums will be until the end of 2022, and the deferred payment period of unemployment and work-related injury insurance premiums will not exceed one year, and late payment fees will be waived during the deferred payment period. For other eligible industries in extreme poverty, as well as micro, small and medium-sized enterprises and individual industrial and commercial households that have been severely affected by the epidemic, the policy of deferred payment of social insurance premiums shall be implemented in accordance with national regulations. (Handling method: Apply for enjoyment. Responsible units: Municipal Human Resources and Social Security Bureau, Municipal Medical Insurance Bureau, Municipal Finance Bureau, Municipal Taxation Bureau)

2. Employers such as enterprises affected by the epidemic can apply for a deferral of housing provident fund payment according to regulations. The deferment period is from April to December 2022, and the payment will be made after the expiration. During the deferred payment period, the employees who have paid and deposited will normally withdraw and apply for housing provident fund loans, and will not be affected by the deferred payment. Depositors affected by the epidemic who cannot repay the housing provident fund loan normally will not be dealt with overdue and will not be included in the credit record. For employees who apply for the withdrawal of housing provident fund to pay rent for rental housing in the rental market, the maximum monthly withdrawal limit for each household (including single-person households) is adjusted from 2,500 yuan to 3,000 yuan. (Handling method: apply for enjoyment. Responsible unit: Municipal Housing and Urban-Rural Development Management Committee, Shanghai Headquarters of the People's Bank of China)

3. For taxpayers who file monthly and quarterly tax returns, the deadline for filing tax returns in April, May and June will be extended to June 30. For corporate income tax taxpayers, the 2021 corporate income tax final settlement and filing deadline will be extended to June 30. Affected by the epidemic, taxpayers who still have difficulty in filing and paying taxes within the prescribed time limit may apply to the tax authorities for an extension of filing declaration, or apply for a deferral of tax payment for a maximum period of 3 months. (Handling method: The extension of the declaration to June 30 is for the exemption of application, and the others are for the application. Responsible unit: Municipal Taxation Bureau)

(2) Expand the scope of housing rent reduction and exemption

4. Small and micro enterprises and individual industrial and commercial households that lease state-owned houses to engage in production and business activities are exempted from submitting documents to prove that they are affected by the epidemic, and the house rent will be exempted for 6 months in 2022. For private non-enterprise units that lease state-owned houses and have operational difficulties, the six-month rent exemption for small and micro enterprises and individual industrial and commercial households in 2022. Promote central enterprises in Shanghai and state-owned enterprises in Shanghai from other provinces and cities to reduce or exempt housing rents for small and micro enterprises and individual industrial and commercial households in accordance with the regulations of our city. If there is an indirect lease, the sublessee does not enjoy this reduction or exemption policy, and the relevant state-owned enterprises and institutions must ensure that the rent-free measures benefit the ultimate lessee. (Handling method: Apply for enjoyment. Responsible units: Municipal State-owned Assets Supervision and Administration Commission, Municipal Finance Bureau, Municipal Civil Affairs Bureau, Municipal Economic Information Commission, Municipal Housing and Urban-Rural Construction Management Committee, Municipal Local Financial Supervision Bureau, Municipal Government Cooperation and Exchange Office, and district governments)

5. Encourage and guide non-state-owned housing owners or management entities such as commercial complexes, commercial buildings, professional markets, industrial parks, and innovation bases to provide 6-month rental reductions to small and micro enterprises and individual industrial and commercial households that ultimately lease and operate. Eligible non-state-owned house owners or business management entities will be subsidized according to 30% of the total rent reduction and exemption, with a maximum of 3 million yuan, which will be implemented by the district governments, and the subsidy funds will be controlled by the total budget of the city and district. bear. For catering chain enterprises that have been seriously affected by the epidemic and registered in Shanghai, their branches or stores meet the requirements of small and micro enterprises and bear the rent expenses, and they can be regarded as small and micro enterprises enjoying rent reduction and exemption. (Handling method: Apply for enjoyment. Responsible units: each district government, Municipal Economic and Information Technology Commission, Municipal Commerce

Commission, Municipal Science and Technology Commission, Municipal Development and Reform Commission, Municipal Finance Bureau)

6. For state-owned and non-state-owned market entities that reduce or exempt housing rents, use non-contact handling and simple operation procedures to reduce or exempt the corresponding real estate tax and urban land use tax. Guide banks to provide preferential interest rate pledge loans and other support to lessors who reduce or exempt house rents as needed. (Handling method: Apply for enjoyment. Responsible units: Municipal Taxation Bureau, Municipal Local Financial Supervision Bureau, Shanghai Headquarters of the People's Bank of China, Shanghai Banking and Insurance Regulatory Bureau)

(3) Multi-channel reduction of fees and profits for enterprises

7. Reduce the cost of water, electricity, gas, and network, and provide non-resident users with a 10% financial subsidy for 3 months of water fees (including sewage treatment fees), electricity fees, and natural gas fees (excluding gas used by gas-fired power generation enterprises). For non-resident users who fail to pay in time during the period affected by the epidemic, no water, power, and gas will be stopped, and the default penalty for arrears will be waived. Non-resident users will be exempted from over-quota and progressive water charges in 2022. The average tariff of broadband and private lines for small and medium-sized enterprises will be reduced by another 10%. The unit domestic waste disposal fee is waived for 3 months, and the relevant funds for sanitation operation units are supported by the district finance. From April to December 2022, the administrative fees for special equipment inspection and testing will be reduced to 50% of the current standard. In the field of bidding, letters of guarantee (insurance) will be fully implemented in lieu of cash to pay deposits for bidding, contract performance, project quality, etc., and bidders are encouraged to waive bid guarantees for small, medium and micro enterprise bidders. (Handling method: Exemption and enjoyment. Responsible units: Municipal Development and Reform Commission, Municipal Finance Bureau, Municipal Water Affairs Bureau, Municipal Economic Information Commission, Municipal Housing and Urban-Rural Construction Management Committee, Municipal State-owned Assets Supervision and Administration Commission, Municipal Communications Administration, Municipal Greening City Appearance Bureau, Municipal Market Supervision Bureau, relevant enterprises, and district governments)

(4) Increase the intensity of tax rebates and tax reductions

8. Further intensify the policy of VAT credits and refunds. In the six industries that have been introduced, including manufacturing, scientific research and technical services, electricity, heat, gas and water production and supply, software and information technology services, ecological protection and environmental governance, transportation, warehousing and postal services. On the basis of full refund of the existing tax credits and full refund of incremental tax credits on a monthly basis, and in accordance with the requirements of national policies, the implementation of the full refund of the existing and incremental value-added tax credits in more industries. Refund the residual VAT credits of medium-sized enterprises and large enterprises in advance, and realize the “willingness to refund all the residual VAT credits” for all types of enterprises that meet the requirements before June 30, 2022. (Handling method: Apply for enjoyment. Responsible units: Municipal Taxation Bureau, Municipal Finance Bureau)

9. Due to the impact of the epidemic, taxpayers who have real difficulties in paying real estate tax and urban land use tax can apply for a reduction or exemption of real estate tax and urban land use tax for self-use real estate and land in the second and third quarters of 2022. Industries that are not encouraged to develop will not be exempted from tax

reductions. For enterprises whose houses and land are urgently requisitioned by the government, the corresponding real estate tax and urban land use tax can be reduced or exempted according to regulations. (Handling method: Apply for enjoyment. Responsible unit: Municipal Taxation Bureau)

(5) Distributing subsidies to aid enterprises to stabilize jobs

10. For difficult industries such as catering, retail, tourism, transportation, culture, sports and entertainment, accommodation, and exhibitions that are seriously affected by the epidemic, if there are no layoffs or fewer layoffs, the number of employees who paid social insurance premiums for urban employees in the previous month when the enterprise applied for it was calculated. A one-time post-stabilization subsidy of 600 yuan will be given to each person, with a maximum subsidy of 3 million yuan per enterprise, and enterprises will be encouraged to keep their posts stable. Employers who recruit and register unemployed for more than three months or graduates of colleges and universities in the city in 2022, who have signed labor contracts for more than one year and pay social insurance premiums as required, will be given a one-time employment subsidy of 2,000 yuan per person. (Handling method: Post stabilization subsidies are available for application, and employment subsidies are exempt from application. Responsible units: Municipal Human Resources and Social Security Bureau, Municipal Finance Bureau, and district governments)

2. Promoting the resumption of work and production in a comprehensive and orderly manner

(1) Strengthening support and services for the resumption of work and production by enterprises

11. Classified guidance, dynamic revision of the epidemic prevention and control guidelines for resumption of work and production in various industries, and cancellation of unreasonable restrictions on the resumption of work, production and resumption of the market by enterprises. The urban area is linked to strengthen the resumption of work and production services in terms of employee return to work, logistics support, and upstream and downstream connections, urge and guide enterprises to do a good job in epidemic prevention and disinfection, employee health management, etc., and support enterprises to establish an anti-epidemic emergency response system to ensure the resumption of work and production After the market resumes, epidemic prevention and control and safety production measures have been put in place. Expand the scope of corporate epidemic prevention and disinfection subsidies. On the basis of implementing existing subsidy policies for related enterprises such as retail, catering, airports and ports, and cold chain, in 2022, epidemic prevention and elimination of property services, postal express, accommodation, cultural tourism and other industries will be implemented. disinfect spending, and give subsidy in different grades. All districts are encouraged to provide subsidy to the epidemic prevention and control expenditure of enterprises that resume work, production and resumption of the market, according to the actual operation scale. (Responsible units: Municipal Commission of Commerce, Municipal Bureau of Culture and Tourism, Municipal Housing Administration, Municipal Postal Administration and other competent departments of various industries, Municipal Finance Bureau, and district governments)

12. Support automobile, integrated circuit, biopharmaceutical and other manufacturing enterprises to lead the chain from point to point, realize the coordinated resumption of work of upstream and downstream enterprises in the industrial chain and supply chain, and steadily improve the production rate of enterprises. Gradually promote the resumption of work and production in industries such as wholesale and retail, finance, transportation and logistics, real estate, and construction, seize the agricultural time to promote the resumption of work in various agricultural

production units, and orderly promote personnel gathering industries such as catering, residential services, cultural tourism exhibitions, etc. Back to work. Establish a mutual guarantee mechanism for the supply chain of the Yangtze River Delta industrial chain to jointly ensure a strong supply chain. (Responsible unit: competent departments of various industries)

(2) Smooth domestic and international logistics and transportation channels

13. Accelerate the promotion of the use of nationally recognized and mutually recognized passes, improve the operation efficiency of inter-provincial transport transfer stations, promote contactless logistics methods, and improve the efficiency of freight traffic. Strictly implement anti-epidemic production guarantee measures at ports and airports, optimize delivery methods and port quarantine procedures, and ensure the orderly operation of industrial chain supply chains and shipping logistics. Accelerate the implementation of the freight support policies issued by the state. From May 1, 2022 to the end of the year, the income from eligible express delivery services will be exempted from value-added tax, and the re-loan funds will be used to support the financing of transportation, logistics and warehousing industries. (Responsible units: Municipal Transportation Commission, Municipal Economic and Information Technology Commission, Shanghai Customs, Municipal Commerce Commission, Municipal Postal Administration, Municipal Taxation Bureau, Municipal Finance Bureau, Municipal Local Financial Supervision Bureau, Shanghai Headquarters of the People's Bank of China, Shanghai Banking and Insurance Regulatory Bureau)

3. Take multiple measures to stabilize foreign investment and foreign trade

(1) Supporting foreign-funded enterprises to resume production and operation

14. Establish a service mechanism for the resumption of work and production of key foreign-funded enterprises, and implement dedicated tracking services to help key foreign-funded enterprises solve outstanding problems such as resumption of work and production, logistics and transportation, and epidemic prevention materials, and effectively stabilize the development expectations of foreign-funded enterprises. (Responsible unit: Municipal Commission of Commerce)

15. To ensure the smooth progress of major foreign-funded projects, launch an online service system for major foreign-funded projects, link cities and districts, and coordinate online and offline to ensure that projects under negotiation, contract signing, and under construction resume operation as soon as possible, and implement dedicated tracking services. Actively strive for a batch of major projects to be implemented as soon as possible. Support multinational companies to set up regional headquarters and foreign R&D centers in Shanghai. (Responsible units: Municipal Development and Reform Commission, Municipal Commerce Commission, Municipal Economic Information Commission, and district governments)

(2) Practically help foreign trade enterprises to bail out

16. Accelerate the implementation of the foreign trade support policies promulgated by the state, and allow processing trade enterprises to transfer in and deduct the value-added tax input tax that has been transferred out in the previous period after implementing the same policy of tax rebate rate for export products for processing trade enterprises. For the export business for which the enterprise declares tax refund, if the export credit insurance indemnity is obtained due to the inability to collect foreign exchange, the export credit insurance indemnity shall be regarded as the collection of foreign exchange, and the export tax refund shall be processed. Encourage port enterprises to reduce or exempt cargo storage fees within a specific period, encourage shipping companies to reduce or exempt demurrage fees within a specific period, and advocate port and shipping related enterprises to reduce or exempt foreign trade import and export related logistics operation costs. (Responsible units: Municipal Taxation Bureau, Municipal Commerce Commission, Municipal State-owned Assets Supervision and Administration Commission, Municipal Transportation Commission, Shanghai Banking and Insurance Regulatory Bureau, China Export & Credit Insurance Corporation Shanghai Branch)

17. Strengthen policy financial support for foreign trade enterprises. Increase the support for export credit insurance, expand the coverage of small, medium and micro enterprises, optimize the conditions for underwriting and claim settlement, open an online loss reporting and claim channel in Shanghai's "single window", and establish a mechanism for deferred payment of premiums and a mechanism for quick claims first. Pay quickly. For small and medium-sized enterprises that meet the conditions of specialization, specialization, and innovation, on the basis of the original export credit insurance rate, a periodic fee reduction of not less than 10% will be implemented, and policy financing support will be increased. The Shanghai Branch of the Export-Import Bank of China shall be supported to set up special credit lines for import and export business, establish a rapid review channel, actively use policy-based preferential interest rate loans or seek other preferential interest rate policies from the head office to reduce corporate financing costs. (Responsible units: Municipal Commission of Commerce, Municipal Economic and Information Technology Commission, Municipal Local Financial Supervision Bureau, Shanghai Banking and Insurance Regulatory Bureau, China Export & Credit Insurance Corporation Shanghai Branch, China Export-Import Bank Shanghai Branch)

(3) Efforts should be made to stabilize the expectations and confidence of foreign-funded foreign trade enterprises

18. Strengthen face-to-face communication with executives of foreign-funded enterprises, take the initiative to introduce the situation and strategies of epidemic prevention and control in our city, and fully listen to the opinions and suggestions of foreign-funded enterprises through video conferences of executives of multinational companies and online roundtable meetings on communication between government and enterprises of foreign-funded enterprises. Establish a normalized mechanism for consultation and problem-solving, help foreign-funded enterprises to solve practical problems, increase the intensity of visits and communication with headquarters enterprises, and effectively restore and boost the confidence of foreign-funded enterprises. Assist foreign trade enterprises to fulfill orders, implement customs clearance facilitation measures, adopt the mode of exempting consignees and consignors from on-site inspection, support enterprises to handle customs clearance business online, establish a green channel for the clearance of key materials for key enterprises, and improve the efficiency of customs clearance and pick-up and departure of goods. The Municipal Council for the Promotion of International Trade will issue force majeure factual certificates related to the new crown pneumonia epidemic for eligible and needy enterprises affected by the epidemic for free. The Shanghai International Arbitration Center and other relevant dispute resolution institutions provide legal advice and assistance for foreign trade enterprises to safeguard their rights, and reduce or exempt, refund or postpone the payment of eligible arbitration fees. It provides convenience for foreign employees and their families stationed in Shanghai by foreign-funded enterprises, global executives and professional technicians carrying out important business activities, and important overseas customers of foreign-invested enterprises to handle invitation letters and entry-exit procedures in China. (Responsible units: Municipal Commission of Commerce, Shanghai Customs, Municipal Council for

the Promotion of International Trade, Municipal Foreign Affairs Office, Municipal Public Security Bureau, and district governments)

(4) Better play the guiding role of special funds for foreign trade and foreign investment

19. Coordinate the use of special funds for the development of national foreign trade and economic development and the high-quality business development of our city, adjust the use of funds, increase the scope and intensity of financial support, and focus on stabilizing foreign trade and foreign investment in 2022. The project provides financial support. Start the declaration of special funds for the development of regional headquarters of multinational companies in Shanghai in 2022 in advance, and strive to complete the allocation by the end of September. (Responsible units: Municipal Commission of Commerce, Municipal Finance Bureau, and district governments)

4. Vigorously promote the accelerated recovery of consumption

(1) Use bulk consumption as the starting point to drive consumption

20. Vigorously promote automobile consumption, increase the quota of 40,000 non-commercial passenger vehicle license plates during the year, and reduce the purchase tax of some passenger vehicles in stages according to the requirements of national policies. Before December 31, 2022, individual consumers who scrap or transfer out a passenger car registered in Shanghai and meet the relevant standards and purchase a pure electric vehicle will be given a financial subsidy of 10,000 yuan per vehicle. Support the development of car rental business. Improve the management regulations for the registration, filing, and vehicle transaction registration of used car market entities. (Responsible units: Municipal Development and Reform Commission, Municipal Transportation Commission, Municipal Public Security Bureau, Municipal Finance Bureau, Municipal Taxation Bureau, Municipal Economic Information Commission, Municipal Commerce Commission)

21. Implement the home appliance trade-in plan, provide appropriate subsidies for the consumption of green smart home appliances, green building materials, energy-saving products, etc. in accordance with regulations, and support large shopping malls, e-commerce platforms and other enterprises to carry out home appliance trade-in, green smart home appliances and electronic consumption by means of discounts, subsidies, etc. product promotions, etc. (Responsible units: Municipal Commerce Commission, Municipal Finance Bureau, Municipal Development and Reform Commission, and district governments)

(2) Improve the consumption supply guarantee system

22. Quickly plan and build a batch of suburban warehouse bases integrating warehousing, sorting, processing, packaging and other functions, promote the construction of emergency material reserve bases, and ensure timely dispatch of living materials nearby in case of emergency. Optimize the configuration of the community life and consumption service complex, support smart express boxes, smart food pickup cabinets and express service stations to enter the community, park (factory) area, and buildings, support the construction of cold chain logistics network and

front warehouse deployment, and strengthen end links and supporting facilities. (Responsible units: the district governments, the Municipal Commerce Commission, the Municipal Economic Information Commission, the Municipal Planning and Resources Bureau, the Municipal Grain and Material Reserve Bureau, and the Municipal Housing Administration)

(3) Use festivals as an opportunity to promote consumption

23. Optimize the "Shopping Festival" plan, launch themed shopping festival activities in a timely manner, encourage the development of the night economy, and boost consumer confidence. Support large-scale commercial and trade enterprises, e-commerce platforms and other enterprises to issue consumption coupons in various ways, support cultural and tourism enterprises to issue cultural tourism consumption coupons, and encourage cultural and tourism enterprises to promote free promotion on platforms such as "Leyou Shanghai" to drive the formation of consumption hotspots. Appropriate financial support will be given to enterprises that have market-leading innovative formats, models and creative activities, and that have made outstanding contributions to the growth of the consumer market. (Responsible units: Municipal Commission of Commerce, Municipal Bureau of Culture and Tourism, and district governments)

(4) Support the development of cultural and creative, tourism and sports industries

24. Make good use of special funds for the development of the film industry, cultural and creative industries, tourism development, and sports development, and increase support for performance venues, cinemas, physical bookstores, fitness venues, etc. by means of free funding, loan discounts, etc. Innovation parks, cultural and creative enterprises and cultural and sports tourism projects will help the cultural and creative industry, tourism industry and sports industry to resume development as soon as possible. For qualified travel agencies, the temporary refund ratio of the travel service quality deposit has been increased from 80% to 100%. (Responsible units: Municipal Party Committee Propaganda Department, Municipal Culture and Tourism Bureau, Municipal Sports Bureau, Municipal Press and Publication Bureau, Municipal Film Bureau, Municipal Culture Foundation, Municipal Finance Bureau)

25. Enterprises and social groups are encouraged to entrust travel agencies to carry out activities such as party building, public affairs, trade unions, and exhibitions, and travel agencies may issue invoices as reimbursement credentials as required. (Responsible units: Municipal Culture and Tourism Bureau, Municipal Federation of Trade Unions, Municipal Finance Bureau, Municipal Taxation Bureau)

V. Give full play to the key role of investment

(1) Actively expand effective investment

26. Make every effort to promote the resumption of work and production of projects under construction, guide construction sites to implement epidemic prevention measures, and ensure that projects under construction are "recovered as necessary" to ensure continuous construction of projects under construction. Strengthen the coordination

of newly started projects, optimize the approval procedures for government investment projects, and prepare project proposals, feasibility study reports and preliminary designs for approval of eligible government investment projects in a consolidated manner. and other measures to promote the construction of new projects. Actively take measures such as making up after the shortage, and speed up the construction of major industrial projects. (Responsible units: Municipal Housing and Urban-Rural Development Management Committee, Municipal Major Office, Municipal Development and Reform Commission, Municipal Transportation Commission, Municipal Economic Information Commission, Municipal Planning and Resources Bureau, and district governments)

27. Accelerate the preliminary work of the project, support the construction of key infrastructure projects such as major railway passages, rail transit networks, aviation hubs, ports, energy, inland waterways, water conservancy, and underground integrated pipe corridors to accelerate the construction, and promote integrated circuits, new energy vehicles and other infrastructure projects. Accelerate the implementation of a number of major industrial projects, and increase support in terms of project approval and factor guarantees. (Responsible units: Municipal Development and Reform Commission, Municipal Transportation Commission, Municipal Economic Information Commission, Municipal Housing and Urban-Rural Construction Management Commission, Municipal Water Affairs Bureau)

28. Strengthen the formulation of urban renewal planning, policy support and factor guarantee. During the year, the renovation of the old districts in the central city will be completed, the sporadic renovation of the old districts will be accelerated in an all-round way, and more than 8 urban village renovation projects will be newly launched during the year. The linkage policy for the renovation of old districts in the central city was extended to five new cities, and the policy for the renovation of villages in the city was optimized and improved. Actively expand financing channels and support the issuance of local government special bonds for urban renewal projects. Improve the housing rental system, and promote the financing and supply of affordable rental housing construction. Improve housing leasing regulations and policies, and strengthen housing leasing management and services. (Responsible units: Municipal Housing and Urban-Rural Construction Management Committee, Municipal Development and Reform Commission, Municipal Planning and Resources Bureau, Municipal Finance Bureau, Municipal Housing Administration, Civil Affairs Bureau, Municipal Public Security Bureau, and district governments)

29. Promote the healthy development of real estate development and investment, establish a green channel for the pre-approval of real estate projects, and launch a new batch of market-oriented new commercial housing projects in a timely manner to further shorten the entire process time of early development, land acquisition, construction, and sales. The payment of urban infrastructure supporting fees for newly started residential projects can be postponed for 3 months. Improve real estate policies to support rigid and improved housing demand. (Responsible units: Municipal Housing Administration, Municipal Planning and Resources Bureau, Municipal Finance Bureau)

(2) Strengthening investment project elements and policy support

30. Strengthen the “six votes” coordination of resource indicators, and pilot the water area, green space, forest land and other related indicators required for the implementation of major projects in the city to coordinate and balance across years. (Responsible units: Municipal Housing and Urban-Rural Development Management Committee, Municipal Major Office, Municipal Development and Reform Commission, Municipal Transportation Commission, Municipal Planning and Resources Bureau, Municipal Water Affairs Bureau, Municipal Greening and City Appearance Bureau)

31. Focus on major strategic tasks such as the Lingang New Area of the Pilot Free Trade Zone, the Hongqiao International Open Hub, the construction of five new cities, and the north-south transformation, and support districts in applying for local government special bonds. Appropriately expand the areas of local government special bond support, and include new infrastructure and other areas of support. Speed up the issuance and use of local government special bonds, and strive to basically complete the use by the end of August, so as to form a physical workload as soon as possible. (Responsible units: Municipal Finance Bureau, Municipal Development and Reform Commission, District Governments, Lingang New Area Management Committee, Hongqiao International Central Business District Management Committee)

32. Further play the role of infrastructure real estate investment trust funds (REITs), implement the "20 Shanghai REITs" support policies, promote more eligible existing infrastructure projects to issue REITs, select affordable rental housing projects, etc. to carry out REITs pilot projects, support Revitalize existing funds for new projects. (Responsible units: Municipal Development and Reform Commission, Municipal Local Financial Supervision Bureau, Shanghai Securities Regulatory Bureau)

(3) Fully guide and stimulate social investment

33. Deepen the reform of the record-keeping system for enterprise investment projects, and implement "one form application, one-stop acceptance, one-stop processing, time-limited completion, and one-time certificate issuance" in each approval stage such as project establishment, land use, planning, construction, and completion acceptance. Deepen the implementation of the pilot reform of the enterprise investment project commitment system in the Lingang New Area, and promote it to other qualified areas. Improve EIA and emission permit management services, increase EIA exemptions and notification commitments, expand the scope of "two certificates in one" for EIA and emission permits, and optimize the procedures for handling and changing emission permits. (Responsible units: Municipal Development and Reform Commission, Municipal Housing and Urban-Rural Construction Management Committee, Municipal Planning and Resources Bureau, Municipal Ecological Environment Bureau, Lingang New Area Management Committee, and district governments)

34. Further expand the field of private investment, encourage and attract more social capital to participate in a number of major projects such as urban railways and new infrastructure, encourage private investment to focus on urban infrastructure, etc., and participate in the construction of key projects through a comprehensive development model. Implement the reform of the "land use list system" for social investment projects, and support the expansion of the scale of corporate bond declaration and issuance. Strengthen bank-government linkage and bank-enterprise connection, encourage financial institutions to connect key projects, increase support for infrastructure construction and major projects, and provide preferential and convenient financing support. The urban area will work together to increase support for "specialized, specialized, and new" enterprises. (Responsible units: Municipal Development and Reform Commission, Municipal Housing and Urban-Rural Construction Management Commission, Municipal Planning and Resources Bureau, Municipal Transportation Commission, Municipal Local Financial Supervision Bureau, Shanghai Headquarters of the People's Bank of China, Shanghai Banking and Insurance Regulatory Bureau, and district governments)

6. Strengthen the guarantee of various resources and elements

(1) Increase the intensity of fiscal inter-cycle adjustment

35. Further increase fiscal support to stabilize growth, speed up the progress of fiscal expenditure, coordinate the use of various types of income and special funds, and adjust and optimize the expenditure structure. Accelerate the allocation and implementation of various types of enterprise-related special funds, so as to achieve early distribution, early use, and early results. Improve the use and evaluation methods of special funds, and use them as a whole to provide subsidies for rent, loan interest, guarantee fees, and stable employment to enterprises with operating difficulties. (Responsible units: Municipal Finance Bureau, relevant municipal units using special funds, Municipal State-owned Assets Supervision and Administration Commission, Municipal Planning and Resources Bureau, Municipal Human Resources and Social Security Bureau, Municipal Medical Insurance Bureau)

(2) Strengthen the function of financial aid for enterprises

36. Encourage financial institutions to implement deferred repayment of principal and interest for loans to small and medium-sized enterprises and individual industrial and commercial households, loans to truck drivers, and eligible individual housing and consumer loans affected by the epidemic. By the end of 2022, credit records will not be affected, and penalty interest will be waived. Promote pilot banks to expand seamless loan renewal services from small and micro enterprises to medium-sized enterprises. Actively develop online seamless loan renewal products, follow the guideline of "zero threshold application, zero fee processing, and zero cycle loan renewal", support small, medium and micro enterprises with financing turnover and seamless loan renewal, and strive to achieve 100 billion seamless loan renewal increments in 2022 Yuan. In accordance with the requirements of national policies, the acceptance period of commercial bills will be shortened from 1 year to 6 months, and the support for rediscounting will be increased. (Responsible units: Municipal Local Financial Supervision Bureau, Municipal State-owned Assets Supervision and Administration Commission, Shanghai Banking and Insurance Regulatory Bureau, Shanghai Headquarters of the People's Bank of China)

37. Banking financial institutions are encouraged to set up special loans for corporate bailouts, and banks in Shanghai will provide bailout loans with preferential interest rates to key epidemic prevention enterprises, enterprises in difficulty greatly affected by the epidemic, small, medium and micro enterprises and individual industrial and commercial households. Actively make good use of various national re-lending support policies and inclusive small and micro loan support tools, and increase credit issuance to key areas and difficult enterprises. Continue to promote the steady and moderate decline of real loan interest rates. In-depth implementation of the "Light of the Pujiang River" action, incubating and cultivating more high-quality technology-based enterprises, upgrading the enterprise database and policy database, and providing precise services for the listing of enterprises. Support financial institutions to issue financial bonds and provide financing support for enterprises in key areas. In accordance with national policy requirements, bond financing transaction fees for private enterprises can be exempted to further expand cross-border financing channels for enterprises. (Responsible units: Municipal Local Financial Supervision Bureau, Shanghai Headquarters of the People's Bank of China, Shanghai Banking and Insurance Regulatory Bureau, Shanghai Securities Regulatory Bureau, State Administration of Foreign Exchange Shanghai Branch)

38. Support financing guarantee institutions to further expand the scale of financing guarantee business for small, medium and micro enterprises. The municipal small and medium-sized enterprise policy financing guarantee fund charges guarantee fees at 0.5%, and guarantee fees are exempted for policy-based entrepreneurial guarantee projects. Policy-based agricultural guarantees The project will give discounts and discounts. The average guarantee rate of district-level government financing guarantee institutions will be reduced to less than 1% (inclusive). Relevant municipal

departments and districts are encouraged to implement the policy of discounting interest and fees for the bank loans secured by small, medium and micro enterprises through government financing guarantee institutions. (Responsible units: Municipal Finance Bureau, Municipal Economic Information Commission, Municipal Local Financial Supervision Bureau, and district governments)

39. Encourage small loan companies, pawn shops and other local financial organizations to appropriately reduce financing costs such as loan interest rates, guarantee rates, and pawn comprehensive rates for difficult industries, small and medium-sized enterprises, and individual industrial and commercial households, and renew loans through extension and no principal repayment. In order to reduce the repayment pressure of customers, the repayment date of the principal and interest of inclusive micro-loans due from March 1, 2022 to September 30, 2022 can be extended to December 31, 2022 at the longest and no penalty interest will be charged. The role of the bailout fund for listed companies shall be further brought into play, the scope of bailout shall be expanded, the bailout process shall be optimized, the operation efficiency of the bailout fund shall be improved, and the small and medium-sized listed enterprises shall be actively helped to relieve the pressure of capital liquidity. (Responsible units: Municipal Local Financial Supervision Bureau, Municipal State-owned Assets Supervision and Administration Commission)

40. Support more qualified asset management institutions to participate in the Qualified Foreign Limited Partnership (QFLP) pilot and the Qualified Domestic Limited Partnership (QDLP) pilot, and encourage pilot enterprises to set up global or Asia-Pacific investment management centers in Shanghai to facilitate their cross-border development Two-way investment business. (Responsible units: Municipal Local Financial Supervision Bureau, Shanghai Branch of State Administration of Foreign Exchange)

(3) Guarantee the supply of land elements

41. Speed up the establishment of an online trading mechanism for land parcels sold by public bidding, auction, and listing. Allow the transferee to apply for deferment or instalment payment of the land transfer price. Optimize land transfer conditions, reasonably determine the starting price of residential land, and reduce the proportion of self-owned commercial office space. (Responsible units: Municipal Planning and Resources Bureau, Municipal Housing and Urban-Rural Construction Management Committee, Municipal Commerce Commission, Municipal Housing Administration, and district governments)

42. Appropriately increase the 2022 construction land plan, increase the net increase in construction land indicators, and support and guarantee the land demand for key industrial projects in each district. In accordance with the task of reducing inefficient construction land in each district in 2022, the construction land indicators will be issued in advance, and the support for temporary borrowing of turnover indicators will be increased. For the districts where there is a gap in the construction land index, the municipal index can be solved by "direct supply". (Responsible units: Municipal Planning and Resources Bureau, various district governments)

7. Effectively strengthen people's livelihood security

(1) Stabilize and expand employment through multiple channels

43. Explore employment potential through multiple channels, encourage qualified state-owned enterprises to add new jobs, support public institutions with spare staff to moderately increase the number of recruits, and actively develop community public welfare jobs through government purchases. Increase the recruitment of community health and public health posts and community workers, encourage districts to recruit and reserve outstanding teachers in primary and secondary schools, and attract more college graduates for employment. (Responsible units: Municipal Human Resources and Social Security Bureau, Municipal State-owned Assets Supervision and Administration Commission, Municipal Education Commission, Municipal Health Commission, Civil Affairs Bureau, and district governments)

44. Increase training subsidies, and carry out various online vocational training related to the main business of the unit for all types of enterprises, social organizations and other employers affected by the epidemic, and for employees who are actually employed by the unit. The subsidy is 600 yuan, no more than 3 times in 2022. Workers who have obtained vocational qualification certificates for skilled personnel and vocational skill grade certificates can enjoy vocational skills improvement subsidies. Vocational colleges should be supported to record and establish vocational skill level evaluation institutions to provide services for students in the graduating school year. Graduates of 2022 colleges and universities can return to their original schools to participate in skill level recognition and enjoy vocational skills improvement subsidies before the end of the year. (Responsible units: Municipal Human Resources and Social Security Bureau, Municipal Education Commission)

45. Comprehensively strengthen employment services, establish a "one-to-one" working mechanism for relevant key enterprises, support the use of shared employment and other methods to solve short-term employment conflicts, and enterprises can negotiate with employees on a flexible working system to stabilize jobs. Increase the employment and entrepreneurship work of college graduates, encourage enterprises, grassroots, government agencies and institutions to absorb college graduates. For enterprises that recruit fresh graduates from colleges and universities in our city, if they meet the conditions, the actual number of recruits will be given to each person per year within 3 years. 7,800 yuan in tax reduction and exemption, and implement support policies such as taxation and subsidies for college graduates to start their own businesses, as well as trainee subsidies and one-time job-seeking and entrepreneurial subsidies. Relying on "one-stop service" to simplify the employment procedures for college graduates and improve the efficiency of employment services. Strengthen monitoring and services for flexible employment, and carry out pilot projects for occupational injury protection for employees in new employment forms. Do a good job in advance payment of arrears, simplify the procedure and improve the efficiency of advance payment. (Responsible units: Municipal Human Resources and Social Security Bureau, Municipal Education Commission, Municipal Finance Bureau, Municipal Taxation Bureau)

46. Fully implement various talent plans and policies, optimize the conditions for direct settlement, residence transfer, and house purchase for talents, increase overseas talent introduction, services and support, speed up the implementation of talent settlement projects, improve education, medical services and other services, and further promote Haijuyingcai's series of innovation and entrepreneurship activities further attract and retain all kinds of talents. (Responsible units: Municipal Organization Department, Municipal Human Resources and Social Security Bureau, Municipal Education Commission, Municipal Science and Technology Commission, Municipal Public Security Bureau, Municipal Development and Reform Commission, Municipal Housing Administration)

(2) Guarantee the basic livelihood of the masses

47. Further strengthen the price monitoring and market supervision of important livelihood commodities, and earnestly do a good job in ensuring the supply and price of living materials. On the basis of continuing to implement the linkage mechanism of linking social assistance and security standards with price increases, the livelihood of the people in need is guaranteed by issuing one-off subsidies, love gift packages and other forms. (Responsible units: Municipal Development and Reform Commission, Municipal Market Supervision Bureau, Municipal Civil Affairs Bureau, Municipal Finance Bureau, Municipal Human Resources and Social Security Bureau, Municipal Veterans Bureau, and district governments)

8. Ensure the safe and orderly operation of the city and optimize the business environment

(1) Ensuring the normal operation of urban core functions and urban security

48. Improve the coordination mechanism for important functional institutions and enterprise service guarantee classes to ensure the continuous and stable operation of the city's core functions such as finance, trade, shipping, and technological innovation. Ensure the safe supply of energy, increase the level of coal procurement and storage, enhance the ability to dispatch electricity and natural gas to ensure supply, increase the supply of incoming calls from outside the city, support the construction of key energy projects, and ensure economic recovery and peak summer electricity demand. Strengthen grain production and storage, issue agricultural subsidies in a timely manner, optimize grain planting subsidy policies, and appropriately raise the minimum grain purchase price. Strictly implement the responsibility for safe production, carry out in-depth safety inspections, comprehensively investigate and rectify potential safety hazards, and ensure the safety of urban operation. (Responsible units: Municipal Development and Reform Commission, Municipal Local Financial Supervision Bureau, Municipal Commerce Commission, Municipal Transportation Commission, Shanghai Kechuang, Municipal Economic Information Commission, Municipal Agriculture and Rural Affairs Commission, Municipal Emergency Bureau, Municipal Grain and Material Reserve Bureau, various district governments)

(2) Strengthening services for enterprises

49. Continue to carry out large-scale visits and investigations of leading cadres at all levels to "prevent the epidemic, stabilize the economy, and ensure safety", increase contact and visit enterprises, take the initiative to care for and serve enterprises, send policies to the door, and actively provide policy counseling and explain policies. Process and promote policies directly to help enterprises solve problems. Establish a service mechanism to quickly respond to corporate demands and solve problems, and launch service columns and work platforms in the "one-stop service", along with the application, and the Shanghai Enterprise Service Cloud, to promptly answer and deal with specific problems in the process of resuming work and production and resuming the market. Improve the city-level and district-level coordination mechanism for stabilizing and attracting investment services, make good use of the Shanghai foreign investment promotion service platform, establish a "problem ledger" and "service ledger", and focus on solving a number of bottlenecks that affect the development of enterprise investment, and stimulate the vitality of enterprise investment. . (Responsible units: Municipal Economic and Information Technology Commission, Municipal Commerce Commission, Municipal Development and Reform Commission, Municipal Big Data Center, and district governments)

50. Implement a special action plan for market entities to bail out and optimize the business environment, establish a business environment supervisor and "experience officer" system, and effectively improve the perception of enterprises.

Improve the whole-process online processing rate of "one-stop service", and promote the "precise push" of the policy of benefiting enterprises and the people through online approval, online services, online assistance, electronic license application, notification and commitment processing, automatic extension of the validity period of licenses, etc. "Exemption from application and enjoyment" provides convenience for enterprises and individuals to handle affairs during the epidemic. Actively assist enterprises and individuals to carry out credit repair work, and do not include untrustworthy behaviors such as overdue contracts, delayed delivery, and delayed loan repayments caused by the impact of the epidemic. Increase government procurement to support small and medium-sized enterprises, and increase the share of small and medium-sized enterprises in government procurement. Implement specific measures by the state to support the standardized and healthy development of the platform economy, stabilize the development expectations of platform enterprises and their symbiotic small, medium and micro enterprises, and encourage platform enterprises to accelerate technological research and development breakthroughs in key areas. Support the access and registration of investment enterprises, and implement more convenient workflow. Strengthen legal service guarantees, establish a public legal service hotline, and provide timely legal advice, legal aid, legal service guidance, and mediation services for disputes over contract breaches, order delays, and labor-management relations caused by enterprises affected by the epidemic. (Responsible units: Municipal Development and Reform Commission, General Office of Municipal Government, Municipal Finance Bureau, Municipal State-owned Assets Supervision and Administration Commission, Municipal Local Financial Supervision Bureau, Municipal Market Supervision Bureau, Municipal Justice Bureau, Municipal Big Data Center, Shanghai Headquarters of the People's Bank of China, and various district governments)

These policies and measures will be implemented from June 1, 2022, and will be valid until December 31, 2022 (if the specific measures have a clear implementation period, their provisions shall prevail). The municipal government's "21" policy of anti-epidemic assistance issued on March 28 continues to be effective. If the state has relevant regulations, such regulations shall prevail.

Related Manuscripts

Graphic: Quick overview of the main points of the "Shanghai Action Plan for Accelerating Economic Recovery and Revitalization"

SAF Group created transcript of excerpt of comments from IEA Executive Director Fatih Birol with Bloomberg's Francine Lacqua a the World Economic Forum in Davos on May 23, 2022
https://www.bloomberg.com/news/videos/2022-05-23/iea-s-birol-says-oil-prices-may-rise-further-video

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

At 2:30 min mark, Birol "… *and the world has to respond to that. it shouldn't left unpunished, this is one. And the second, if we reduce, Europe reduces the oil imports from Russia, it will not be easy for the global oil markets, for sure. There will be more volatility but it has to be done. it has to be done and our job is to minimize that volatility, to minimize those risks*"
Lacqua "*But Fatih*, *how much volatility could we see. Could we see $140, $150 very quickly*?"
Birol "*this summer, this summer will be difficult. This summer will be difficult because in summer as we know the oil demand normally goes up with the driving season and the production growth is set to come from US, Brazil, Canada is still on its way but it may not be ready by summer. The only issue that we have to keep our eye on is whether or not China demand will be still flat or be very weak as a result of the Chinese economic weakness."*
Lacqua "*I know you hate talking about prices, but I will press you on prices because you know this could tip us into a recession, how high could the price of oil go?"*
Birol "*I think it is already very high, I should say. And it is for everybody in the global energy markets, every player who says they are responsible players to make a positive contribution here. if you don't make a positive contribution here, we may see prices even going higher, be much more volatile and becoming a major risk for recession for the global economy".*

SAF Group created transcript of excerpt of comments from IEA Executive Director Fatih Birol at the World Economic Forum on May 23, 2022. [LINK]

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

At 17:15 min mark, Birol "…. I think we are in the middle of the first global energy crisis. In the 70s, It was oil crisis. And now we have a oil crisis, natural gas crisis, coal crisis, they are all price skyrocketing and energy security is a priority for many governments, if not all of them. it is why, it is very simple the reason, until the 24th of February, Russia was the number 1 oil exporter of the world, number 1 natural gas exporter of the world, major player in the global coal markets. And the international community, most of the countries, are pushing back now Russia's aggression and, as a result, we are seeing the global energy crisis here. And, of course, we are not living in a dream world, the world has to replace those oil and gas coming from Russia, with first from oil and gas and other technologies. I completely agree that the immediate response should include additional oil and gas, bring it to the markets.

But, I prefer that our immediate response does not lock in our energy infrastructure for fossil fuels for many years to come. So, how do we do that? First, we have to make the most out of the existing oil and gas fields, which are already there. Plus, shale oil and gas because it's quick to come to markets. Jason, we have huge amount of methane emissions escaping now. Fixing them in just a couple weeks of time, it's much easier, much more economic, much quicker to bring additional gas to the markets. LNG, Germany and other countries are building in a hurry LNG terminals. When you build them, I understand it, but when you build them, put 10, 15% more investments to make them ready in the future to use for ammonium or hydrogen imports. Plus, I really hope I hope, Mr. Minister [note Birol points to his left to India energy minister Hardeep Singh Puri], we also mention there is a significant amount of spare production capacity in several producing countries. I hope they are going to make a positive contribution at this stage to the global energy security.

But, in my view, the biggest part of the response comes from putting emphasis on clean energy, renewables, energy efficiency. And in my view, the countries where they have nuclear capacity, increasing nuclear production there. Belgium is a good example here. Now, what is my worry? My worry is the following. Some people may very use Russia's invasion of Ukraine as an excuse for large scale, a new wave of fossil fuel investments. Why I do worry about that, at least for two reasons. One, it will forever close the door to reach our climate targets, when I look at those projects. This is number 1 from a climate change point of view. But number 2, I think it is important to note it may not be as it seems now, a lucrative business and good investments. Because everybody talks here, the companies, advanced economies, energy producing countries, energy consuming countries about clean energy transition if they do what they say, even if they do 50% what they say, those fossil fuel investments may be idle in the future. So there is a business case as well. There is a climate case, there is a business case for large scale fossil fuel investments here, one should take it into consideration.

Because where you, today we talk about large new oil fields, I mean, how many years you need oil to come. From the exploration, minimal oil executives here, from exploration to first oil to come to markets, today you need, you talk about 2040s. so is this emergency situation continues to the 2040s. Or either we are saying, as we all say, we want clean energy transition. either we don't believe it or what we are doing is not in line with our business portfolio, interests. So we have to make a choice here. and in my view, Jason, we divert, does not need to choose between an energy crisis and the climate crisis, we can solve both of them with the right investment. I understand the current priority today is to fix the energy security problem. It's a big problem, especially in the developing energy importing developing countries,

But we shouldn't forget that one of the reasons we have such high prices and the security measures in developing countries is the heat wave, which is a result of the climate change. It is only the beginning So, No to large scale fossil fuel investments especially coal coming in big time in some countries but also others. And Yes for the quick responses to energy security challenges. All together as many colleagues have said but without forgetting the climate risk"

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

https://www.linkedin.com/pulse/what-does-current-global-energy-crisis-mean-investment-fatih-birol/?trackingId=TF5PQAkaTSOIzjSJghDWaA%3D%3D&utm_content=buffera8119&utm_medium=social&utm_source=twitter-ieabirol&utm_campaign=buffer

What does the current global energy crisis mean for energy investment?

Fatih Birol

Fatih Birol

Executive Director at International Energy Agency (IEA)

Published May 13, 2022

As well as causing a grave humanitarian crisis, Russia's unprovoked **invasion of Ukraine** has had far-reaching impacts on the global energy system, disrupting supply and demand patterns and fracturing long-standing trading relationships.

It has pushed up energy prices for many consumers and businesses around the world, hurting households, industries and entire economies – most severely in the developing world where people can least afford it. And it threatens to derail efforts to tackle the world's critical challenge of reducing global greenhouse emissions quickly enough to avoid catastrophic climate change. We cannot allow tackling climate change to become yet another victim of Russia's aggression.

The global energy crisis and market tumult set off by Russia's actions have significantly complicated the picture for governments, companies and investors as they try to determine what energy projects to encourage, develop or fund. As the leading global authority responsible for energy security and the clean energy transition, the IEA has been providing the data, analysis and policy advice to help decision-makers around the world – especially governments – make well-informed choices on energy investments that support secure and affordable energy supplies while driving down emissions.

We will publish a range of new insights next month in our **World Energy Investment 2022** report, which will take into account the rapid changes the global energy system has experienced since last year's edition, and the upheaval of the past few months in particular. These issues are at the heart of consequential deliberations taking place around the world today – in government ministries, parliamentary debates, company shareholder meetings and at international gatherings, including the World Economic Forum Annual Meeting in Davos later this month.

A world falling short on climate goals and reliable energy supplies

Even before Russia's invasion of Ukraine, the world was far off track from achieving its shared energy and climate goals. Global CO2 emissions **reached an all-time high** in 2021, and fuel markets were already **showing signs** of strain. At the same time, investment in clean energy technologies has remained far below the levels that are needed to bring emissions down to net zero by mid-century – a critical but formidable challenge that the world needs to overcome if it is to have any chance of limiting global warming to 1.5 C.

Positive steps were taken at the COP26 Climate Change Conference in Glasgow in November – and the amount of clean energy spending in governments economic recovery plans **is increasing** – but we are not yet seeing the massive level of policy and investment efforts worldwide that would be needed to move us onto a net zero pathway. Governments, companies and investors all need to do much more – and fast – in order to bring more affordable and clean energy into the system.

At the same time, Russia's invasion of Ukraine appears likely to lead to a substantial and prolonged reduction in Russian energy supplies, most notably to Europe. Russia was the world's largest oil and natural gas exporter in 2021. The disruption has thrown energy markets into turmoil and created major energy security and energy poverty risks worldwide today.

Investing to strengthen energy security and reach net zero

A key question is what today's energy crisis means for fossil fuel investments if we are still to achieve our collective climate goals. Are today's sky-high fossil fuel prices a signal to invest in additional supply or a further reason to invest in alternatives?

In the IEA's landmark **Roadmap to Net Zero Emission by 2050** published in May 2021, the analysis indicated that a massive surge in investment in renewables, energy efficiency and other clean energy technologies could drive declines in global demand for fossil fuels on a scale that would as a result require no investment in new oil and gas fields.

The need for this clean energy investment surge is greater than ever today. As the IEA has repeatedly stated, the key solution to today's energy crisis – and to get on track for net zero emissions – is a dramatic scaling up of energy efficiency and clean energy.

The supply disruptions triggered by Russia's war

Russia's invasion of Ukraine has brought major disruptions to the global energy system. Taking these into account, it is clear to us that any immediate shortfalls in fossil fuel production from Russia will need to be replaced by production elsewhere – even in a world working towards net zero emissions by 2050.

On the production side, the most suitable options for this are projects with short lead times and quick payback periods. This includes, for example, shale oil and gas (which can be brought to market quickly), extending production from existing fields, and making use of natural gas that is currently flared and vented.

Some new infrastructure may also be needed to facilitate the diversification of supply away from Russia. For example, many European countries are looking to install LNG import terminals and, with careful investment planning, there are opportunities for these to facilitate future imports of hydrogen or ammonia.

However, we must not lose sight of the fact that lasting solutions to today's crisis lie in reducing demand via the rapid deployment of renewables, energy efficiency and other low emissions technologies, as highlighted in the IEA's recent **10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas**. This includes making the most of nuclear power in countries around the world that see a role for it in their energy mix.

Nobody should imagine that Russia's invasion can justify a wave of new large-scale fossil fuel infrastructure in a world that wants to limit global warming to 1.5 C. We understand why some countries and companies are looking to move ahead with the exploration and approval of large longer-term supply projects. But it typically takes many years for such projects to start producing, so they are not a good match for our immediate energy security needs. Long-lived assets also carry a dual risk of locking in fossil fuel use that would prevent the world from meeting its climate goals – or of failing to recover their upfront development costs if the world is successful in bringing down fossil demand quickly enough to reach net zero by mid-century.

The repercussions of today's turmoil

The higher near-term emissions we are witnessing today have serious consequences for our efforts to meet our climate goals. They need to be compensated for through even greater emissions reductions in the coming decades to remain within the stringent emissions budgets required to reach net zero by 2050. Today's crisis risks passing an even larger environmental challenge to our younger and future generations – and it is imperative that we strive to make the additional burden as light as possible rather than adding to it.

The extraordinary financial windfall for the oil and gas sector from today's high prices could provide a major boost to clean energy investment. Global net income from oil and gas production in 2022 is anticipated to be nearly $2 trillion higher than in 2021 and two-and-a-half times the average of the past five years, according to new IEA analysis for our **World Energy Investment 2022** report that will be published in June. If the global oil and gas industry were to invest this additional income in low emissions fuels, such as hydrogen and biofuels, it would fund all of the investment needed in these fuels for the remainder of this decade in the Net Zero Emissions by 2050 Scenario. For oil and gas producing economies, this could be a once-in-a-generation opportunity to diversify their economic structures to adapt to the new global energy economy that is emerging.

There are many ways to respond to the immediate energy crisis that can pave the way to a cleaner and more secure future. I believe the world does not need to choose between solving the energy crisis and the climate crisis – and it cannot afford to ignore either of them.

SAF Group created transcript of comments by Gita Gopinath (IMF, First Deputy Managing Director) with Bloomberg's Tom Keene and Lisa Abramowicz on Bloomberg Surveillance on May 24, 2022

Items in "italics" are SAF Group created transcript

At 4:07am MT, Keene "…. *India has led the way with the first fear of blockage of exports, what is the IMF doing to give confidence to nations that are struggling with wheat and, heaven forbid, I would say rice?"*

Gopinath "*Tom, this is a major concern for us. It's not just India. If you look at food exports, since the start of the war around 20 countries have put restrictions on food exports, whether it be wheat or be it palm oil and many other such products. And fertilizers are also in severe shortage. So we worry a lot about what is going to happen with food prices. I think it's one of those prices which where there is more that is going to go up it the future than what we have seen. And it is a major concern"*.

Keene "*the history is here is the domestic government will come to the rescue, flatten prices like the cost of bread in Egypt that has been flat for decades and subsidize whatever the commodity is, until it breaks. how close in your study country to country are we close to a breaking point of that domestic subsidy to feed people*?"

Gopinath "*after two years of the pandemic, governments around the world, especially in countries like Egypt, do not have the fiscal space to provide widespread support. And this is something that we are tracking very closely, exactly this question of how many countries are now facing these rapid increase in food prices and therefore are likely to develop balance of payment problems. This is one of the trackers that we have and this is a major concern*"

Abramowicz "*how much of this is a failing, frankly, of the developed world from supporting Ukraine war, in other words, in actually providing more financial aid to get some of those supplies to the rest of the world?"*

Goipinath "*this is a very challenging issue on how to get Ukraine supplies out of Ukraine. The problem is the embargo on the Black Sea, you just can't get ships to take the wheat out. We are thinking of creative solutions in terms of putting them on trains and sending them out through that way. But that is going to take a lot more time. In addition to the war, we are also seeing the effect of climate change around the world. one of the reasons India has put its export restrictions on wheat is because of poor yields and bad weather. so that's another big negative. But we really do need to try hard at this point to try to get supply out as much as possible around the world'*

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

Oil price outlook – Snapshot: May 23, 2022

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

Category	Indicator	Signal	Comment
Fundamentals	**Refinery margins**		• Refinery margins fell significantly over the past week as middle distillate cracks weakened, although stronger gasoline cracks cushioned some of the impact.
	Crude stocks		• In the week ending May 13, land crude-oil storage levels in BloombergNEF's tracked regions (US, ARA, Japan) fell by 2.7% to 530.0 million barrels (m bbl). The stockpile **deficit** against the five-year average (2015-19) **widened from 76.9m bbl to 92.3m bbl**. • Including global floating crude stockpiles from the same week, total crude oil inventories decreased by 0.8% to 642.8m bbl, with the stockpile **deficit widening from 34.6m bbl to 38.8m bbl.** In the week to May 20, floating crude stockpiles dipped by 15.2% to reach the lowest level since April 1.
	Product stocks		• In the week ending May 13, gasoline and light distillate stockpiles in BNEF's tracked regions (US, ARA, Singapore, Japan and Fujairah) dropped by 3.0% week-on-week to 259.3m bbl, with the stockpile **deficit** against the three-year average (2017-19) **widening from 4.6m bbl to 14.7m bbl**. Gasoil and middle distillate stockpiles in BNEF's tracked regions rose by 1.3% to 136.2m bbl, with the stockpile **deficit** against the three-year average **narrowing from 36.2m bbl to 34.5m bbl**. • Total oil product stockpiles in tracked regions decreased by 0.2% to 885.1m bbl, with the stockpile **deficit** against the three-year seasonal average **widening from 67.9m bbl to 75.8m bbl**. Altogether, crude and product stockpiles fell by 0.4% to 1,527.9m bbl, with the stockpile **deficit widening from 102.5m bbl to 114.5m bbl.**
	Demand indicators		• In the week to May 17, global jet fuel demand from commercial passenger flights dropped by 12,600 barrels per day (or -0.3%) week-on-week to 4.86 million barrels per day. Jet fuel consumption by international passenger departures was up by 1,300 barrels per day (or +0.05%) week-on-week, while consumption by domestic passenger departures decreased by 14,000 barrels per day (or -0.6%). • The global mobility index weakened over the past week, according to BNEF's calculation based on Google data. The global mobility index fell by 0.8% in the week to May 19, as growth in Europe (+0.7%) was nullified by declines in Asia Pacific ex-China (-0.9%) and the Americas (-1.2%). Meanwhile, in the week to May 18, TomTom's peak congestion data showed growth in Asia Pacific ex-China (+17.0%) and North America (+1.0%), while congestion in Europe fizzled (-0.8%) following a strong surge the week before. Road congestion in China's key 15 cities was up by 0.9 percentage points to 103.5% of January 2021 levels in the week to May 18, according to BNEF's calculation based on Baidu data. • Daily average Covid-19 cases rose by 2.6% to 581,000 in the week to May 21. The Asia Pacific number dropped by 12% to 214,000 daily cases, with China falling by 37% to 4,900 daily cases. The Americas was up 28% to 150,000 daily cases, while Europe fell by 3% to 201,000 daily cases.
Financial	**Macro indicators**		• The dollar index averaged at 103.2 over the past week and was 0.7% lower than the week before.
	Hedge fund positioning		• In the week to May 17, Managed Money net positioning in the oil complex surged by 55.6m bbl (or +10.2%) week-on-week to 603.3m bbl, the highest level since the week to March 1, and rose to the 33rd percentile (versus the 23rd percentile last week) of the past five years.
	Options chains and volatility		• There was a notable increase in open interest for WTI calls. Brent and WTI 1M volatility skews rose over the past week.
Outlook	**Weekly call**		• BNEF is bullish on oil prices for the week ahead, with Brent Aug-22 trading at $110.88/bbl and WTI Jul-22 trading at $111.11/bbl at the time of writing. Oil demand remained steady over the past week despite higher fuel prices, with the global mobility index sitting near the highest level since March 2020. Meanwhile, jet fuel demand from commercial passenger flights fell slightly week-on-week and held onto much of its gains over the past several weeks. Flight departures in the Eurocontrol area stood at 86% of the equivalent week in 2019 (unchanged from last week), while passenger throughput in the US slipped to 89% of the equivalent week in 2019 (versus 90% last week). • Oil demand is expected to inch even higher over the coming months as China is set to ease Covid-19 restrictions in June, which could unleash some pent-up travel demand and tighten crude and oil product supplies further still. The world also faces a refinery capacity crunch outside of Russia and China. Chinese private refineries are hamstrung by their State Council tightening the first batch of oil product export quotas to just 41% of 2021's levels, causing actual oil product exports to fall 48% year-on-year in the first four months of the year. As of April, 80% of the oil export quotas have been used. Weekly gasoline inventories are seeing a dramatic decline over the past few weeks, and ahead of the summer peak travel season. Hedge funds grew considerably bullish over the past week, increasing their net positioning in the oil complex by the largest amount since the week to January 11, 2022.

BloombergNEF

Past outlooks

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

Date of report	Refinery margins	Crude stocks	Product stocks	Demand indicators	Commitment of traders	Options chain and volatility	BNEF week ahead call	Brent/WTI price at time of writing ($/bbl)	Web Link
May 16	↓	↑	↑	↔	↑	↑	↑	Brent-**Aug**: 110.88 WTI-Jul: 111.11	
May 16	↓	↓	↔	↑	↓	↓	↔	Brent-Jul: 112.22 WTI-Jul: 109.69	
May 9	↔	↓	↔	↑	↓	↔	↑	Brent-Jul: 109.93 WTI-Jun: 107.22	
May 2	↑	↔	↑	↑	↔	↔	↑	Brent-Jul: 103.87 WTI-Jun: 101.25	
April 25	↑	↑	↔	↓	↑	↔	↔	Brent-Jul: 101.31 WTI-Jun: 97.39	
April 18	↑	↓	↔	↑	↓	↓	↔	Brent-Jun: 111.97 WTI-Jun: 106.31	
April 11	↑	↓	↔	↓	↓	↓	↓	Brent-Jun: 98.34 WTI-May: 93.69	
April 4	↑	↑	↔	↑	↓	↓	↑	Brent-Jun: 104.71 WTI-May: 99.73	
March 28	↑	↔	↔	↔	↑	↓	↔	Brent-Jun: 109.53 WTI-May: 105.58	
March 21	↔	↔	↔	↓	↓	↔	↔	Brent-May: 112.35 WTI-May: 107.56	
March 14	↑	↑	↑	↔	↓	↓	↔	Brent-May: 108.66 WTI-Apr: 104.77	
February 28	↔	↔	↔	↑	↔	↔	↔	Brent-May: 99.00 WTI-Apr: 96.38	
February 21	↔	↔	↑	↑	↔	↔	↑	Brent-May: 91.50 WTI-Apr: 90.17	
February 14	↑	↔	↑	↑	↓	↔	↑	Brent-Apr: 93.75 WTI-Mar: 92.46	

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

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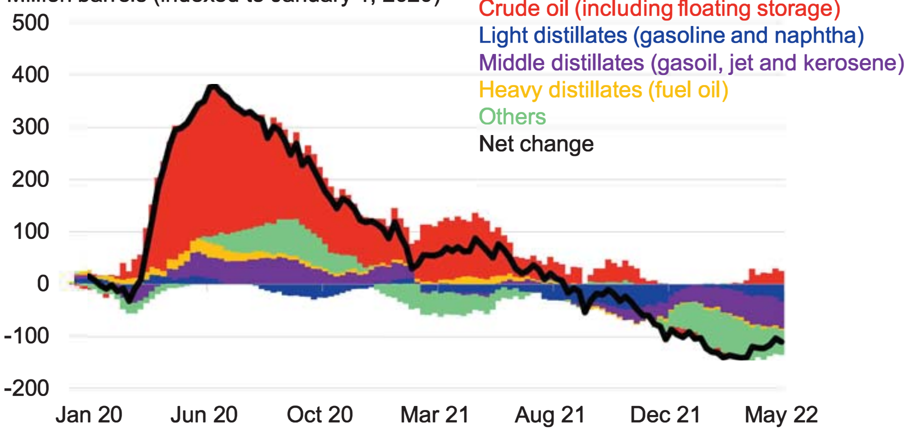
Fundamentals Financial

Weekly oil inventories

Gasoline stockpiles fell as middle distillate stockpiles saw a slight bounce back

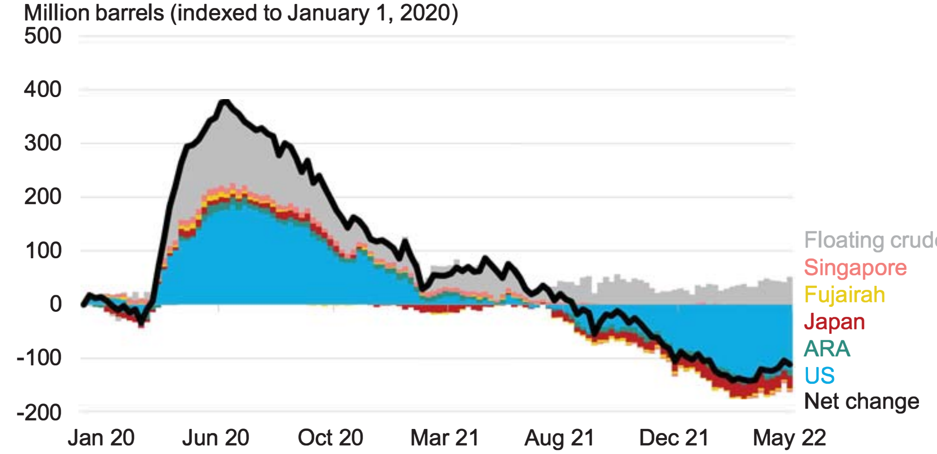
Weekly oil inventories by type

Million barrels (indexed to January 1, 2020)



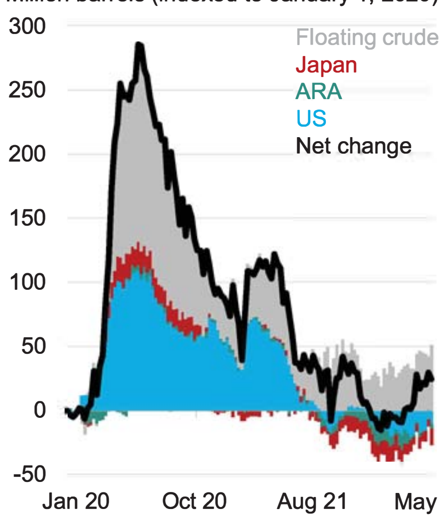
Weekly oil inventories by region

Million barrels (indexed to January 1, 2020)



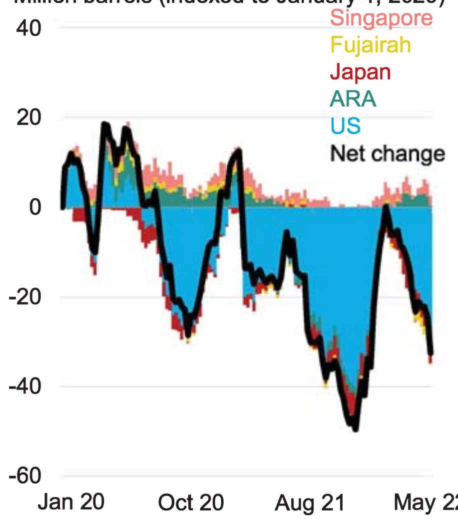
Crude inventories

Million barrels (indexed to January 1, 2020)



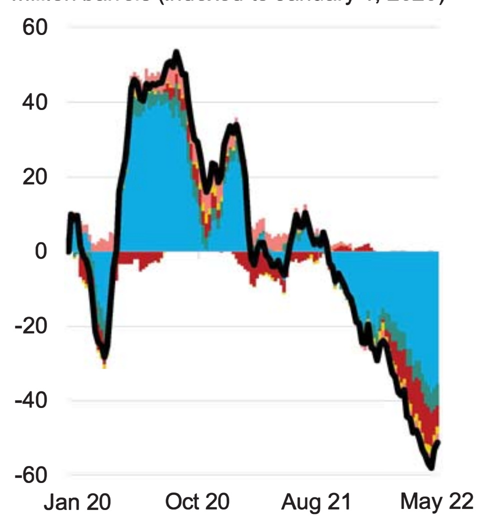
Light distillate inventories

Million barrels (indexed to January 1, 2020)



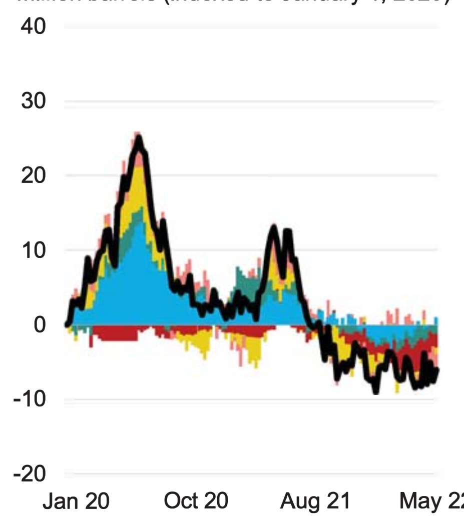
Middle distillate inventories

Million barrels (indexed to January 1, 2020)



Heavy distillate inventories

Million barrels (indexed to January 1, 2020)



*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ ,Vortexa, Genscape. As of the week ending **May 13, 2022**.*

Fundamentals Financial

Aggregated oil stockpiles

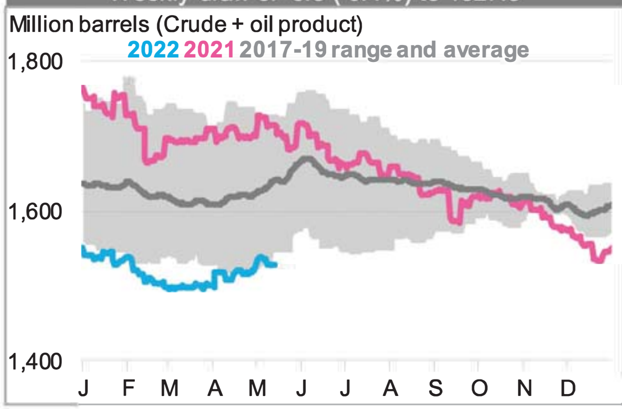
Note: We will continue to compare current inventory levels with the three-year (2017-19) seasonal average for the time being. Crude inventory data for Shandong teapots were excluded since January 10.

Bullish: Stockpiles deficit widened from 102.5m bbl to 114.5m bbl

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

Total oil and product stocks

Weekly draw of -6.8 (-0.4%) to 1527.9



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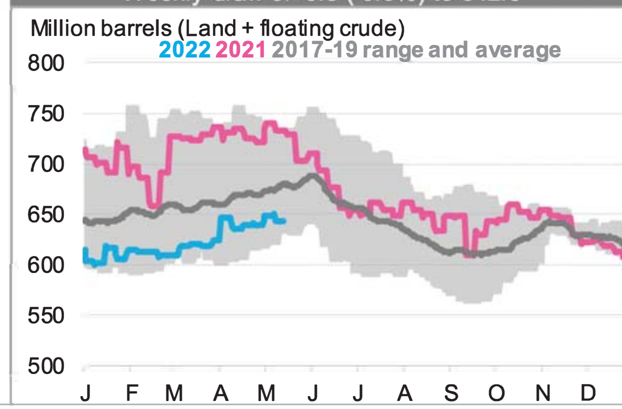
Total crude stocks (land + floating)

Weekly draw of -5.3 (-0.8%) to 642.8



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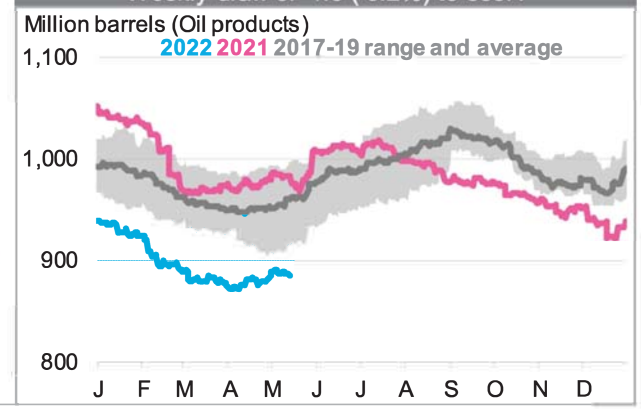
Total oil product stockpiles

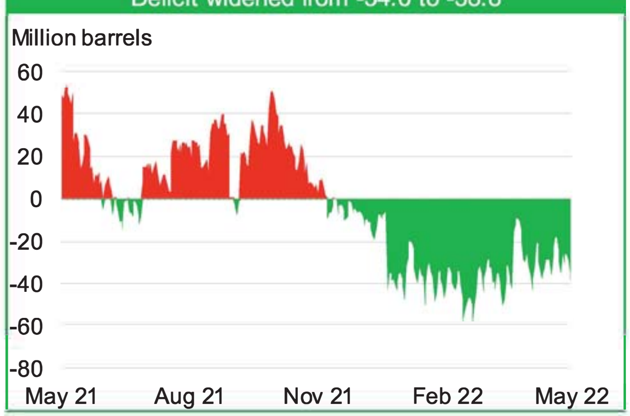
Weekly draw of -1.5 (-0.2%) to 885.1



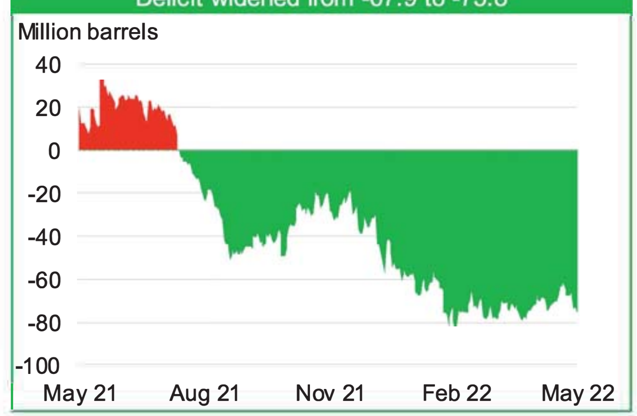
Charts below subtract current stockpiles by the 2017-19 (three-year) seasonal average

Deficit widened from -102.5 to -114.5

Deficit widened from -34.6 to -38.8



Deficit widened from -67.9 to -75.8



Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ ,Vortexa, Genscape, SCIG. As of the ***week ending May 13, 2022.***

Fundamentals Financial

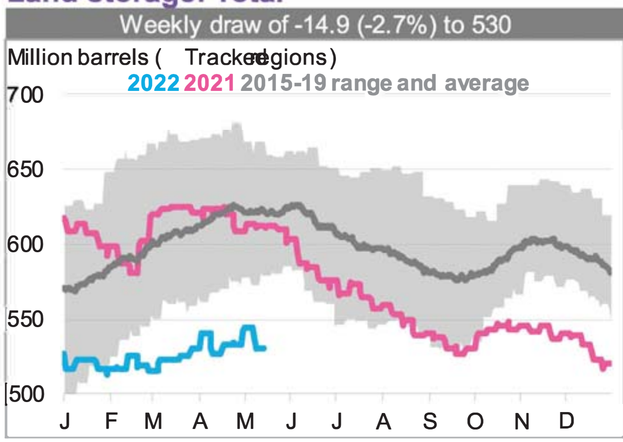
Crude stocks: Land

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

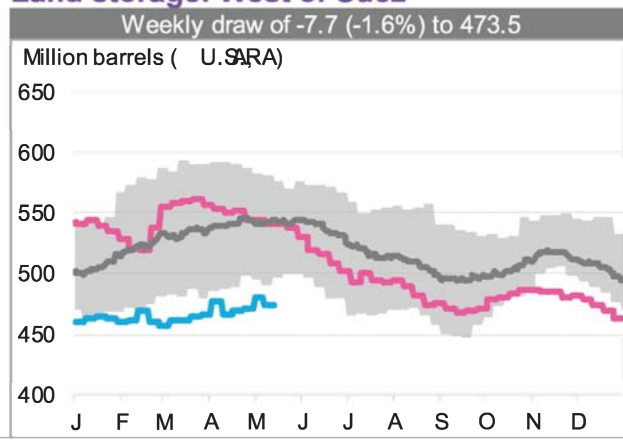
Bullish: Deficit narrowed from 76.9m bbl to 92.3m bbl against the seasonal average

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

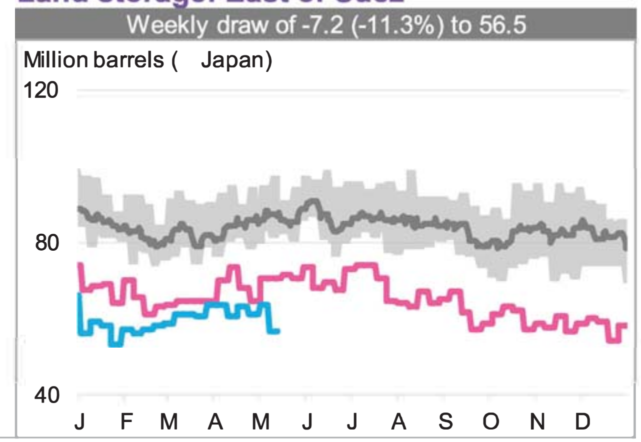
Land storage: Total



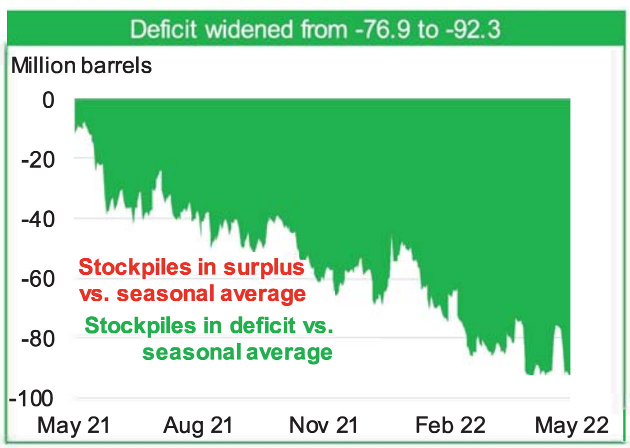
Land storage: West of Suez

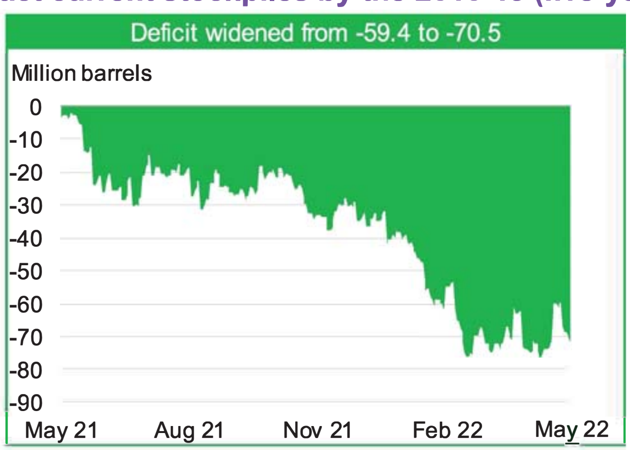


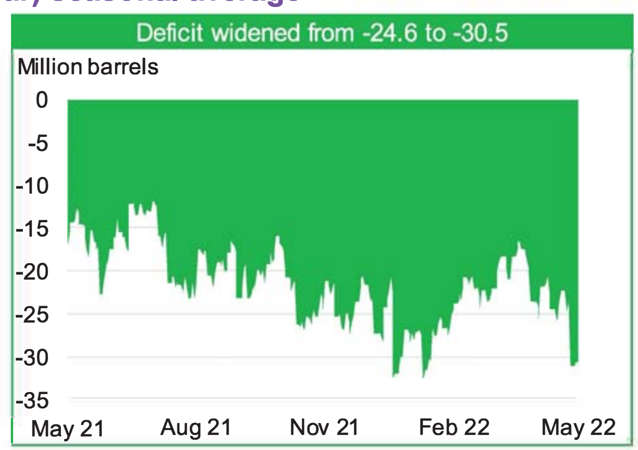
Land storage: East of Suez



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







*Source: BloombergNEF, US EIA, Genscape, PAJ, SCIG. Note: As of the **week ending May 13, 2022.***

Crude stocks: Floating

Bullish: Surplus narrowed significantly

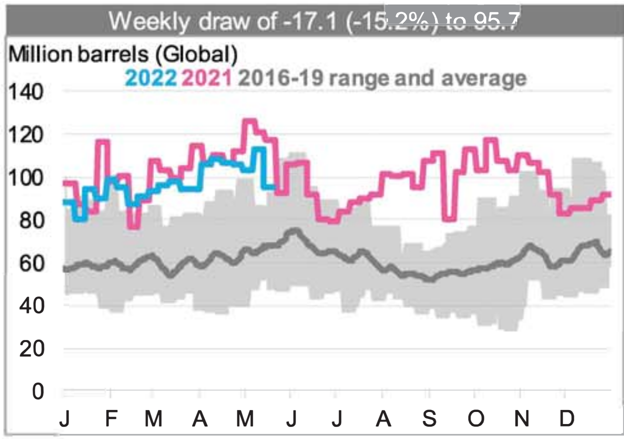
- Floating storage is only profitable if the strength of contango (future vs. prompt price) is greater than the tanker costs. Therefore, tankers become floating storage when the profit from a storage play exceeds the cost of the forward freight agreement (FFA).
- The floating storage data used in the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

Vortexa's revision to global floating crude inventories

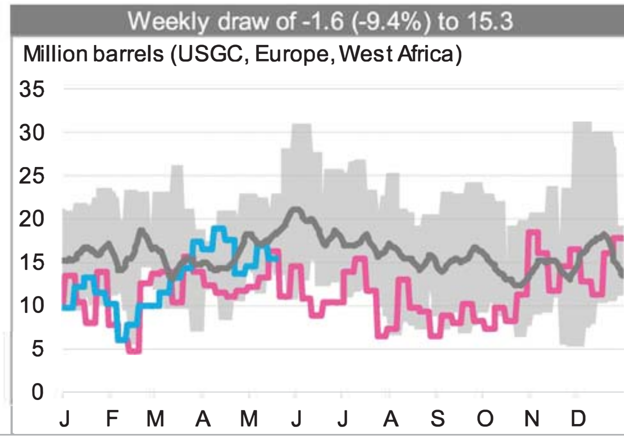
Million barrels	Previous report	Current report	Vortexa's revision
Inventories in week of May 13	111.7	**100.6***	+6.1
Inventories in week of May 6	100.6	**100.6***	+6.1

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

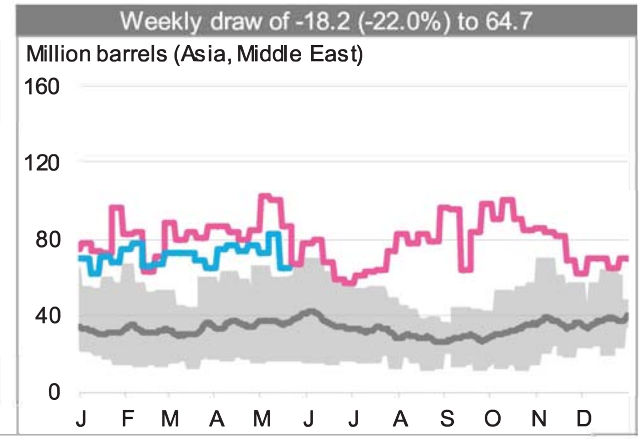
Floating storage: Total



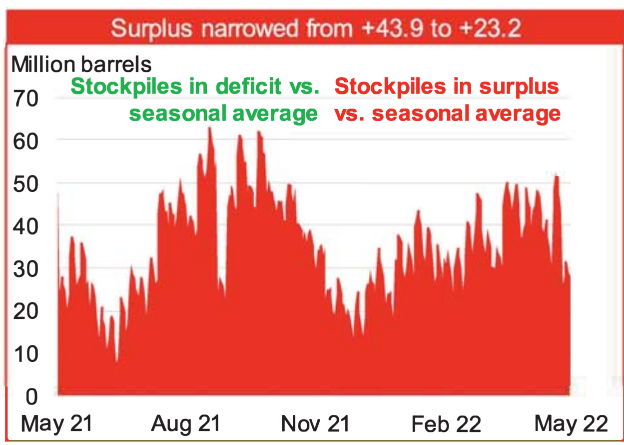
Floating storage: West of Suez

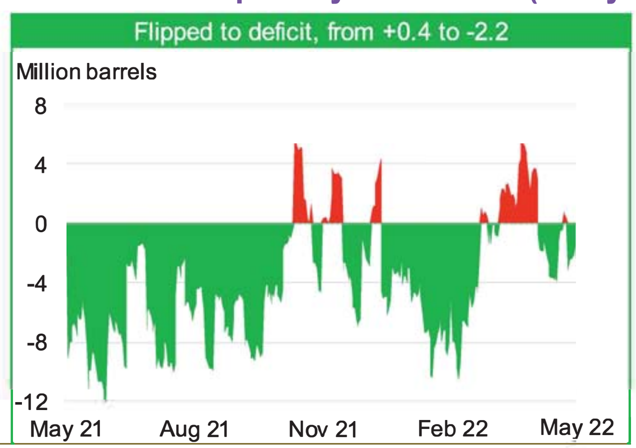


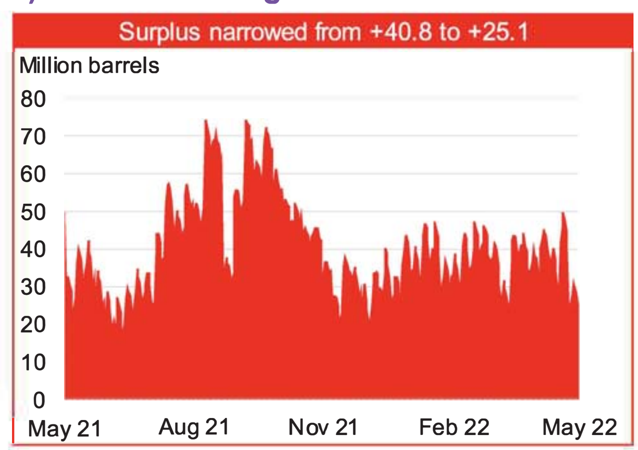
Floating storage: East of Suez



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





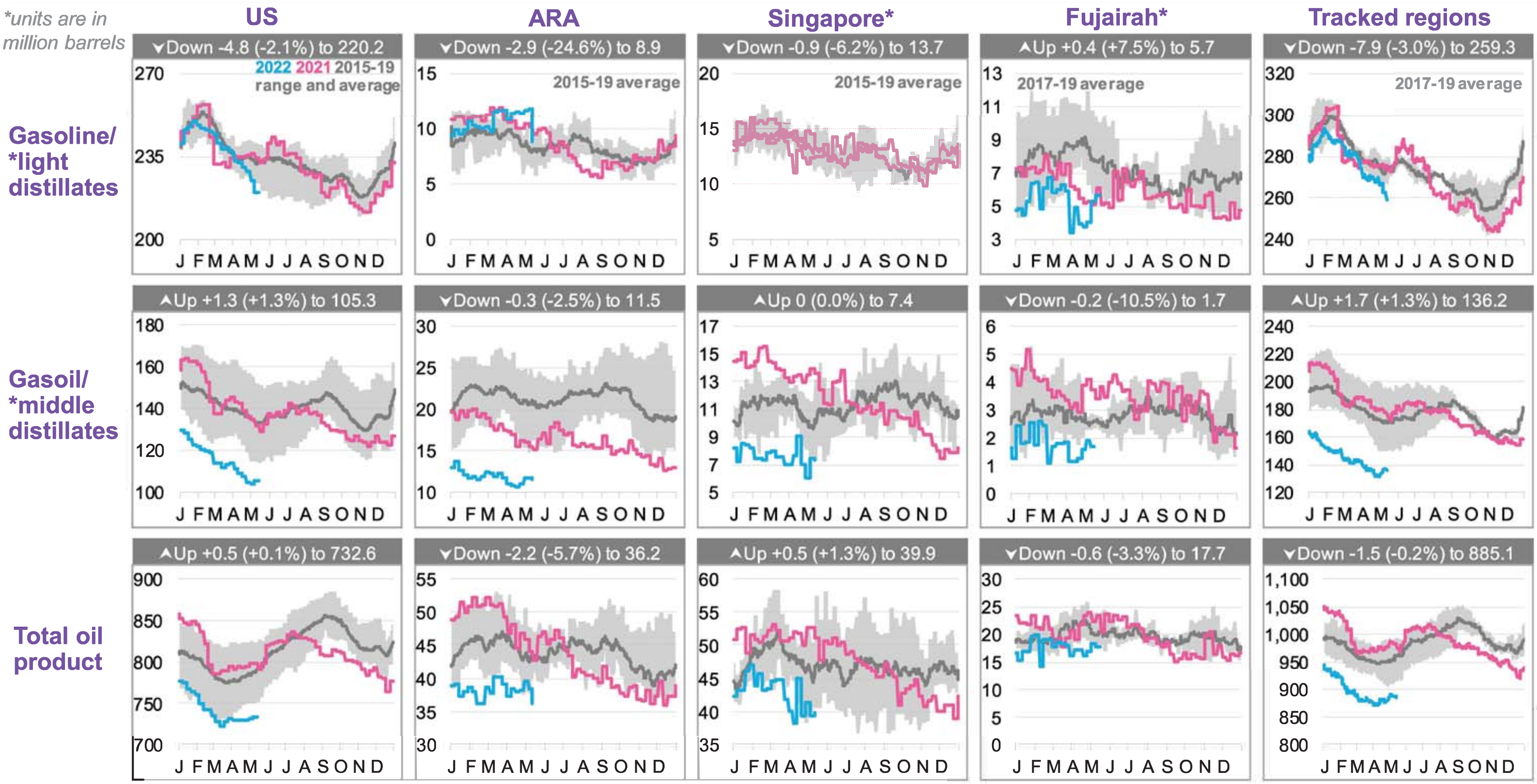


*Source: BloombergNEF, Vortexa. Note: As of the **week ending May 20, 2022**. ***Raw data from Vortexa are revised frequently, so the data in this report might change week-to-week.***

Product stocks: Current vs. seasonal average

Neutral: Oil product stockpiles in tracked regions fell by 0.2% week-on-week

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



Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the ***week ending May 13, 2022.***

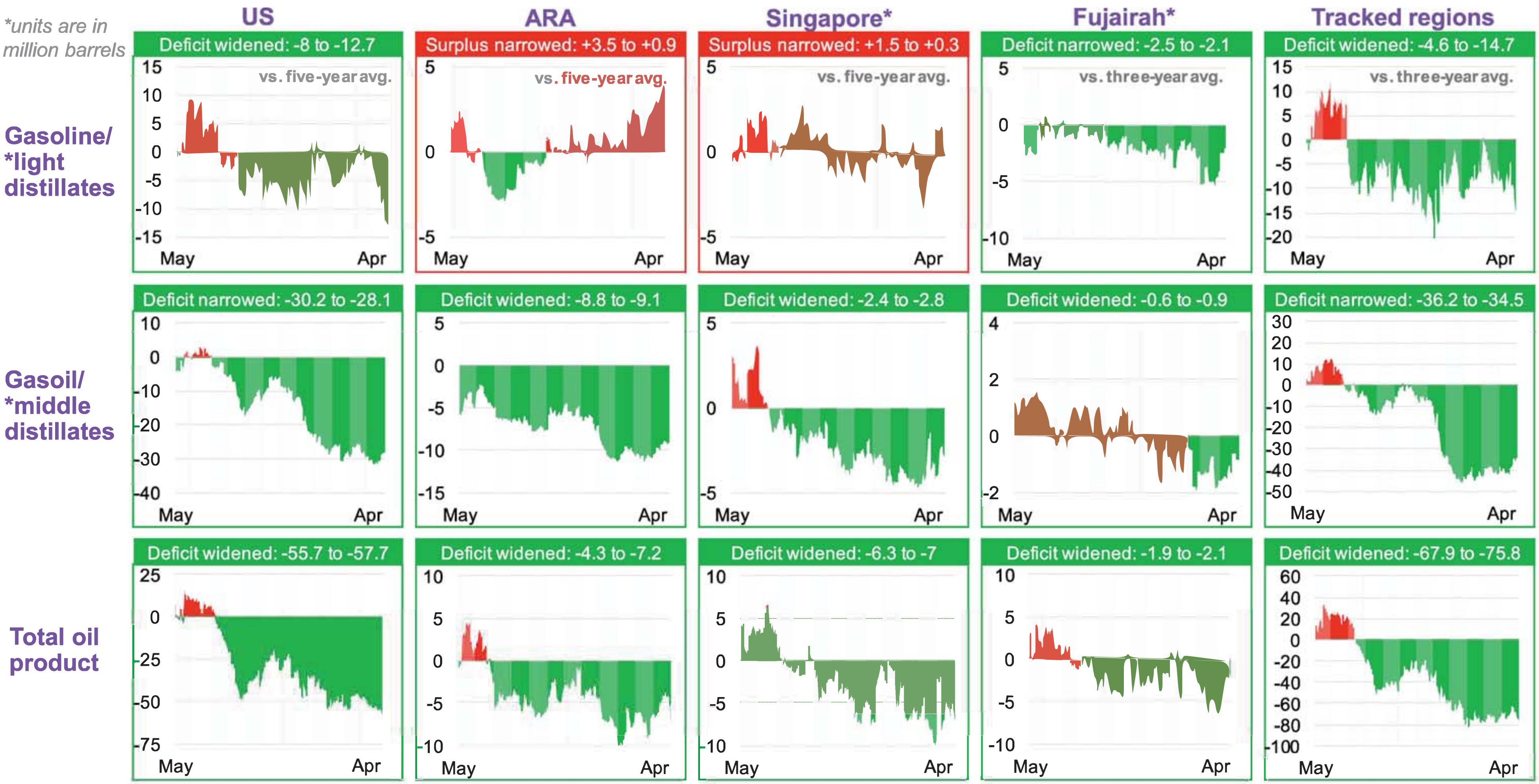
BloombergNEF

Fundamentals Financial

Product stocks: Current vs. seasonal average

Bullish: Oil product stockpile deficit against the seasonal average widened from 67.9m bbl to 75.8m bbl

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



*Source: BloombergNEF, US EIA, PJK, IE Singapore, FEDCom/Platts, PAJ. Note: As of the **week ending May 13, 2022.***

BloombergNEF

https://www.wsj.com/articles/biden-exploring-release-of-diesel-fuel-reserves-amid-high-prices-11653333243

Biden Exploring Release of Diesel Fuel Reserves Amid High Prices

White House says it is ready to act quickly if needed to address supply outages on East Coast

By *Timothy Puko* Follow
May 23, 2022 3:14 pm ET

WASHINGTON—The Biden administration is considering a release of diesel fuel from federal reserves to address skyrocketing prices and the threat of supply outages on the East Coast.

Officials have drafted an emergency declaration as prices have soared to record highs in recent weeks, White House spokeswoman Emilie Simons said on Twitter on Monday. Such a declaration would allow for the quick release of some of the 1 million barrels of diesel in the Northeast Home Heating Oil Reserve "if necessary," she said.

"We're closely monitoring challenges to diesel supply and prices as a result of Putin's invasion," she said, referring to the Russian war in Ukraine that has roiled global energy markets. "This would bridge short-term supply shortfalls."

President Biden said that he plans to release as much as 180 million barrels of oil from the U.S. Strategic Petroleum Reserve over the next six months to help tamp down near-record high fuel prices. Photo: Patrick Semansky/Associated Press

Diesel prices have been rising around the world as economies have rebounded from the Covid-19 pandemic, several refineries have closed and Western countries have attempted to curtail imports of Russian energy. Crude and gasoline prices have been on the rise, too, but diesel has outpaced them because of the refinery closings and because Russia was such a big supplier of refined fuels into Europe, causing ripple effects world-wide.

Supplies are particularly tight along the U.S. East Coast where inventories have dropped to their lowest level since at least 1990. U.S. average retail prices for ultra-low-sulfur diesel rose more than 37% in just 10 weeks after Russia's invasion of Ukraine, setting a new nominal record of $5.62 a gallon in the week ended May 9, according to the U.S. Energy Information Administration.

The Biden administration has been preparing for a release in case those soaring prices and shrinking inventories lead to local supply outages, according to a White House official. But diesel inventories in the Northeast have started to rise again and retail prices fell last week for the first time in a month, leaving administration officials optimistic for now that they might not need to intervene, the official said.

The administration has separately tapped the U.S. Strategic Petroleum Reserve several times since late last year as part of a coordinated effort with other countries to lower crude and gasoline prices. The results have been mixed, with oil prices retreating slightly from historic highs but gasoline prices still setting new records.

Boosting the supply of diesel on the market should lower prices for motorists and truckers, but there is no guarantee. Futures and wholesale markets are complex and prices move for many reasons.

The Northeast Home Heating Oil Reserve was created during the Clinton administration. It was designed primarily to help states that still disproportionately use distillates, including diesel, for home heating, according to the Energy Department.

It now holds 1 million barrels of ultra-low-sulfur diesel at storage sites around Boston, New York Harbor and southeastern Connecticut. It has been tapped only once, to address shortages in the aftermath of superstorm Sandy in 2012.

Write to Timothy Puko at tim.puko@wsj.com https://www.energy.gov/fecm/northeast-home-heating-oil-reserve-1

Northeast Home Heating Oil Reserve

1. Office of Fossil Energy and Carbon Management
2. Northeast Home Heating Oil Reserve

Releases

The Northeast Home Heating Oil Reserve (NEHHOR), a one million barrel supply of ultra low sulfur distillate (diesel), was created to build a buffer to allow commercial companies to compensate for interruptions in supply during severe winter weather, The first emergency use of NEHHOR was in 2012.

Emergency Loans after Hurricane Sandy

In late October 2012, Hurricane Sandy made landfall on the northeastern shore of the United States, causing widespread devastation to homes and businesses, as well as to the energy infrastructure, causing massive fuel shortages. The fuel shortages impacted not only individuals but the first responders and the emergency generators deployed to the impacted areas. The Department of Homeland Security sought help on acquiring additional fuel supplies from the Department of Defense. In response, the Defense Logistics Agency-Energy contacted the Department of Energy (DOE) to request emergency supplies from the Northeast Home Heating Oil Reserve.

President Obama declared on November 2 that Hurricane Sandy had created a severe energy supply interruption and directed the transfer of emergency fuel from the Northeast Home Heating Oil Reserve to the Department of Defense for use in emergency operations and support for those in the region affected by the storm. An agreement between the two federal agencies was put in place the same day.

On November 3, agents of the Defense Logistics Agency-Energy began loading trucks from the Reserve's stocks at the Hess Terminal in Groton, Connecticut. The fuel was distributed to state, local and federal responders in the New York/New Jersey area. DOE announced that additional supplies from the Reserve would be made available, as needed, to ensure continued response and recovery efforts. Two additional requests were received on November 7 after a major snowstorm hit the Northeast and compounded the fuel challenges there. Those requests were **promptly approved** and loading was accomplished on November 12 and 25, 2012. In total, over 120,000 barrels (more than 5 million gallons) of fuel were provided to support emergency relief efforts. The agreement between DOE and the Department of Defense required replenishment of an equal volume of ultra low sulfur diesel to the Northeast Home Heating Oil Reserve during December 2012, which was accomplished.

The Hurricane Sandy releases were the first emergency withdrawals from the Northeast Home Heating Oil Reserve.

May 25, 2022 07:35:36

OIL DEMAND MONITOR: China's Airlines Miss Out on Rising Mobility

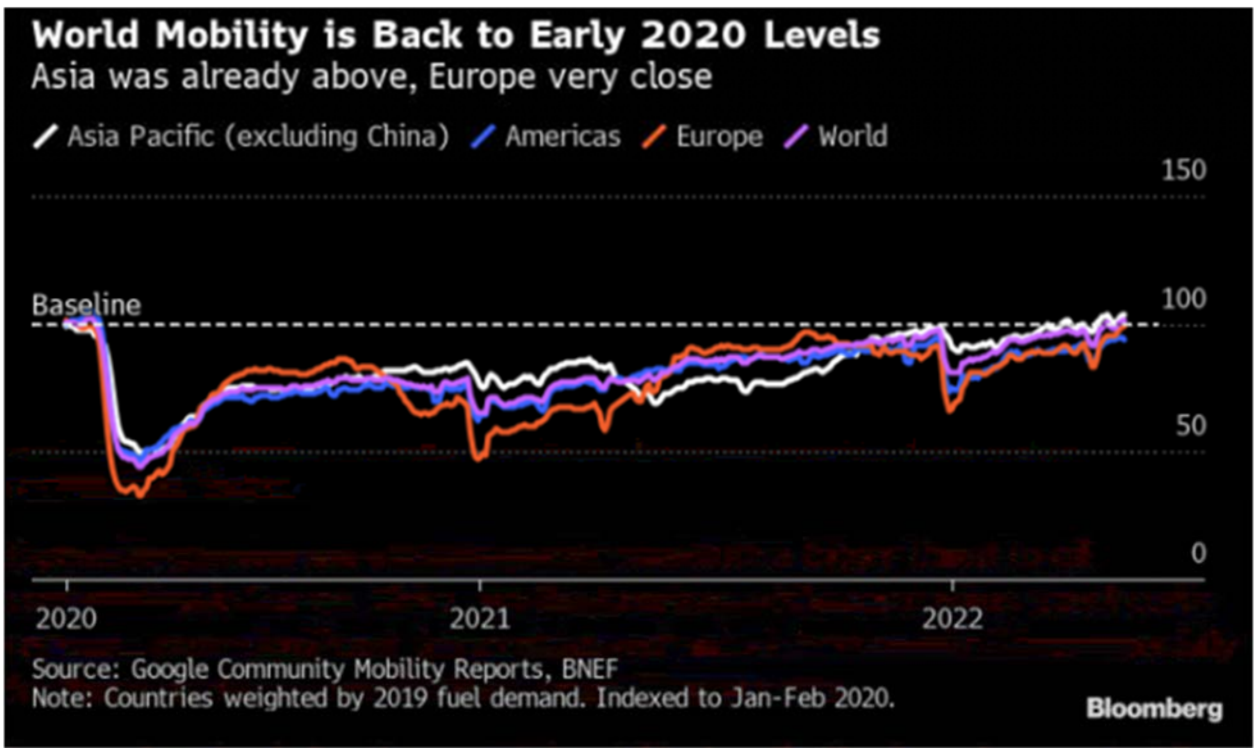
- Rome traffic 6% above 2019 levels on Monday morning: TomTom
- Congestion grows in Guangzhou while Beijing, Shanghai stay low

By Stephen Voss

(Bloomberg) -- Road fuel demand is almost back to normal as governments use subsidies to try to shield consumers from high prices, while global airlines offer four seats for every five they did before the pandemic as some travel restrictions linger.

Expensive gasoline and diesel arguably constitute a bigger threat to oil consumption in Europe, Africa and the Americas, while coronavirus travel curbs remain a more significant deterrent to road and air transport in China, especially for those stuck in some of the country's biggest cities.

A comprehensive index shows global mobility has finally risen above a starting point set in early 2020. The BloombergNEF calculation begins with Google community mobility reports, using data for retail, recreation, workspaces and transport hubs, and then applies a weighting by 2019 road fuel demand for each country, excluding Russia and China. The global reading rose to 101 as of May 14, compared with a baseline of 100 for January-February 2020. Europe was at 99 and the Americas 94.



Traffic congestion readings on Monday morning across a sample of 13 world cities showed that only Rome and London had levels higher than the 2019 average for that time of the week, with Jakarta level-pegging. The data from TomTom NV showed the other 10 cities lagged pre-Covid congestion levels. New York was down 8%.

Separate data covering Chinese city road congestion as of May 16 was mixed. Beijing's traffic levels have followed a downward trend seen in Shanghai with Covid restrictions keeping commuters at home, while roads got busier in other places, such as the megacity of Guangzhou. China's top official for pandemic control, Sun Chulan, appears to have shifted her attention to the nation's capital, after being based in Shanghai for the past month, potentially signaling harsher curbs to come for Beijing.

Overall congestion in 15 Chinese cities with the highest vehicle registrations rose back above a January 2021 baseline last week and is now back to levels last seen in early March, according to BloombergNEF calculations using Baidu congestion data.

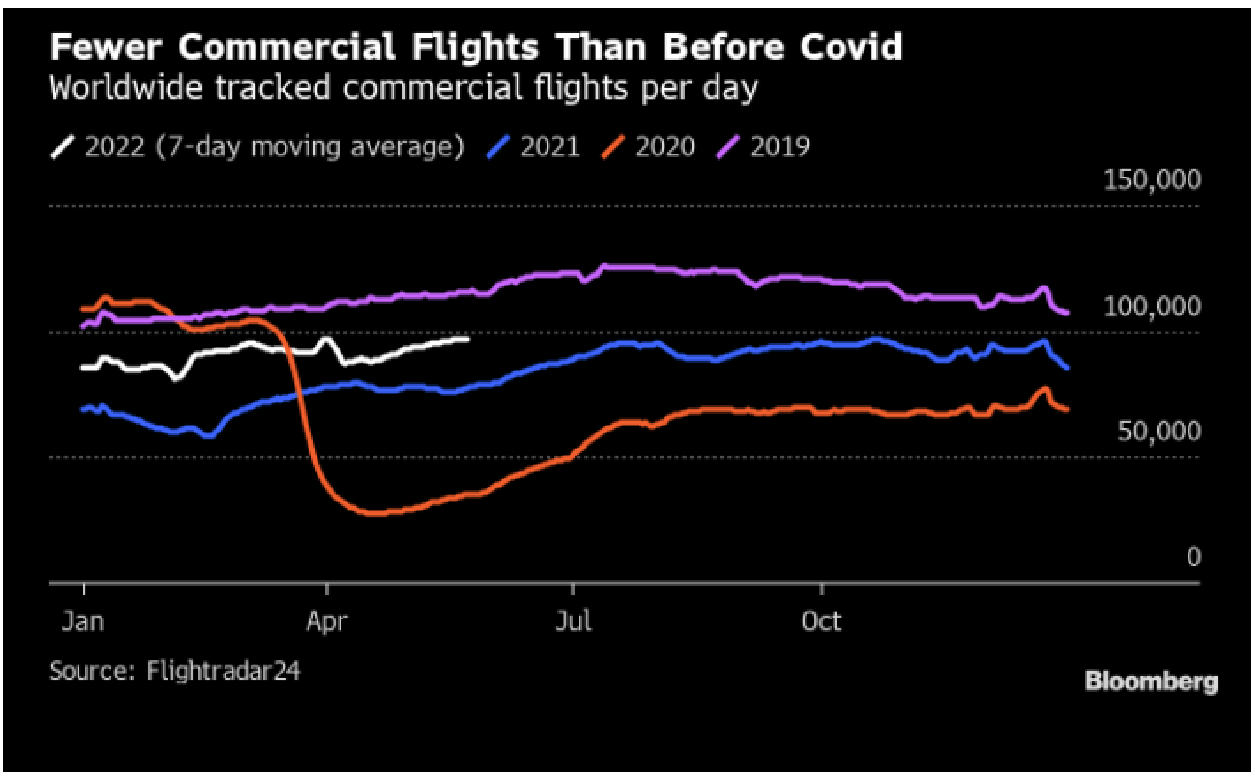
Air Travel

The number of seats offered by airlines on planes for the week ahead has dropped back below 90 million a week after hovering above that level for a fortnight, according to estimates by OAG Aviation. While European flight activity has improved steadily in recent weeks, especially in the U.K., the main drag on global activity is China, where coronavirus lockdowns continue to interfere with domestic travel after already decimating cross-border travel.

"This is a reduction of 1.7% in seats compared to last week and is largely attributable to the ongoing week-by-week reduction in airline capacity taking place in China," OAG said in a note on its website.

There was an 18% week-on-week reduction in North East Asia, which includes China, for domestic and international seats combined. That region lags 2019 levels by 45%, the largest reduction among 17 large geographical areas measured by OAG. The global estimate for seat capacity trails 2019 by about 20%, a slightly wider margin than the week before. This means airlines currently provide four seats for every five they offered pre-Covid.

Separately, tracking by Flightradar24 shows that the worldwide number of commercial flights is about 17% less than the equivalent pre-pandemic date in 2019. The latest tally was 96,415 flights on May 23, stuck halfway between 2021 and 2019 levels.



A closer look at OAG's seat capacity data shows that North America and Western Europe are down by 10% and 12%, respectively, versus 2019, while South Asia, which includes India, is just about level with pre-Covid times.

Etihad Airways said bookings for its India flights are edging higher as the nation loosens coronavirus curbs, adding to a surge in demand led by the Gulf carrier's destinations in Europe and North America.

"Everything that gets introduced gets very full very quickly" in India, Chief Executive Officer Tony Douglas said Tuesday in an interview in Abu Dhabi, where Etihad is based.

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

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

Demand Measure	Location	% y/y	% vs 2020	% vs 2019	% m/m	Freq	Latest Date	Latest Value	Source
Gasoline	US	-2.1	+33	-1.3	+1.8	w	May 13	9.03m b/d	EIA
Distillates	US	-6	+4	-6.8	-0.2	w	May 13	3.82m b/d	EIA
Jet fuel	US	+37	+156	-8	+6.6	w	May 13	1.63 b/d	EIA
Total oil products	US	+2	+19	+1.1	+3.3	w	May 13	19.7m b/d	EIA
All motor vehicle use index	UK	+3.1	+71	-1	+22	w	May 16	99	DfT
Car use	UK	+3.3	+77	-6	+11	w	May 16	94	DfT
Heavy goods vehicle use	UK	-1.8	+35	+7	+168	w	May 16	107	DfT
Gasoline (petrol) avg sales per filling station	UK	+6.3	+101	-7.9	-4	w	May 15	6,712 liters/d	BEIS
Diesel avg sales per station	UK	-2.9	+64	-11	+0.5	w	May 15	9,268 liters/d	BEIS

Total road fuels sales per station	UK	+0.8	+78	-9.9	-1.5	w	May 15	15,980 liters/d	BEIS
China 15 cities congestion	China				+8.3	d	May 16	103	Baidu / BNEF
Gasoline	India	+60		+16	+14	2/m	May 1-15	1.28m tons	Bberg
Diesel	India	+38		-1.5	+1.8	2/m	May 1-15	3.05m tons	Bberg
LPG	India	-5.4		+9.4	+2.8	2/m	May 1-15	1.06m tons	Bberg
Jet fuel	India	+84		-19	+7.7	2/m	May 1-15	251k tons	Bberg
Total Products	India	+12	+99	+1.6	-4	m	April	18.6m tons	PPAC
Toll roads volume	France	+62		-4.9		m	April	n/a	Atlantia
Toll roads volume	Italy	+42		-2.4		m	April	n/a	Atlantia
Toll roads volume	Spain	+64		-2.8		m	April	n/a	Atlantia
Toll roads volume	Brazil	+19		+7.9		m	April	n/a	Atlantia
Toll roads volume	Chile	+66		+11		m	April	n/a	Atlantia
Toll roads volume	Mexico	+14		+11		m	April	n/a	Atlantia

Gasoline	Spain	+31			+11	m	April	496 m3	Exolum
Diesel (and heating oil)	Spain	+17			+2.9	m	April	2273k m3	Exolum
Jet fuel	Spain	+239			+29	m	April	503k m3	Exolum
Road fuel sales	France	+16			-2.6	m	April	4.035m m3	UFIP
Gasoline	France	+33		+9.8		m	April	n/a	UFIP
Road diesel	France	+10		-11		m	April	n/a	UFIP
Jet fuel	France	+115		-25	+8.5	m	April	550k m3	UFIP
All petroleum products	France	+12		-10	-7.8	m	April	4.4m tons	UFIP
All vehicles traffic	Italy	+35			+4.5	m	April	n/a	Anas
Heavy vehicle traffic	Italy	-2.1			-12	m	April	n/a	Anas

Gasoline	Portugal	-4.4	+103	-22	-34	m	April	72k tons	ENSE
Diesel	Portugal	-14	+40	-23	-37	m	April	329k tons	ENSE
Jet fuel	Portugal	+273	+1395	-1	+28	m	April	124k tons	ENSE
Total fuel sales	Italy	+12		-3	-5.4	m	April	4.24m tons	Ministry
Gasoline	Italy	+27		+0.5	unch	m	April	619k tons	Ministry
Diesel /gasoil	Italy	+9.4		-2.3	-7.3	m	April	2.17m tons	Ministry
Jet fuel	Italy	+158		-25	+24	m	April	294k tons	Ministry

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

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

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

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

City congestion:

Measure	Location	% chg vs avg 2019	% chg m/m	May 23	May 16	May 9	May 2	Apr. 25	Apr. 18	Apr. 11	Apr. 4	Mar. 28
		(for May 23)		Congestion minutes added to 1 hr trip at 8am* local time								
Congestion	Tokyo	-11	+2	33	32	29	15	32	31	28	31	34
Congestion	Taipei	-66	-43	12	19	14	11	21	25	26	3	50
Congestion	Jakarta	unch	-2	39	zero	21	zero	40	40	33	31	37
Congestion	Mumbai	-60	-11	19	10	19	16	22	23	25	23	22
Congestion	New York	-8	+7	29	28	29	21	27	13	28	32	30
Congestion	Los Angeles	-22	-12	28	29	30	31	31	25	22	27	19
Congestion	London	+2	unch	38	42	43	2	38	1	18	23	36
Congestion	Rome	+6	n/a	52	50	50	46	zero	zero	42	37	33
Congestion	Madrid	-19	+9	29	1	30	zero	26	5	4	23	23
Congestion	Paris	-8	+94	41	43	43	14	21	1	38	39	37
Congestion	Berlin	-20	-2	27	29	37	29	28	1	19	30	26
Congestion	Mexico City	-22	-7	38	38	38	40	41	24	20	38	40
Congestion	Sao Paulo	-36	-12	28	30	29	34	31	30	34	33	32

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

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

NOTE: m/m comparisons are May 23 vs April 25. Jakarta had a public holiday on May 16, reducing city traffic that day. Madrid had a local saint's day holiday and fiesta on May 16 and May 2, respectively, while Rome celebrated Liberation Day on April 25. TomTom has been unable to provide Chinese data since April 2021. Taipei and Jakarta were added to the table in December 2021.

Chinese City Congestion:

Measure	Location	% chg vs Jan. 2021	% chg m/m	% chg w/w	May 16	May 9	May 2	Apr. 25	Apr. 18	Apr. 11	Apr. 4	Mar. 28	Mar. 21	Mar. 14	Mar. 7
		(comparisons for May 16)													
Congestion	Beijing	-24	-24	-1.1	76	77	84	105	101	92	104	95	98	108	112
Congestion	Guangzhou	+10	+37	+12	110	99	99	91	80	92	96	108	95	104	108
Congestion	Shanghai	-23	+1.7	+1.1	77	76	75	77	76	73	74	78	78	88	104
Congestion	China-15	+3	+8.3	+7.3	103	96	97	99	95	93	96	96	94	99	104

Source: BNEF calculations based on Baidu congestion data, showing a seven-day moving average indexed against a January 2021 baseline. China-15 is the weighted average of the 15 cities with the highest number of vehicle registrations. m/m comparisons are May 16 vs April 18.

Air Travel:

Measure	Location	y/y	vs 2 yrs ago	vs 2019	m/m	w/w	Freq.	Latest Date	Latest Value	Source
		changes shown as %								
Airline passenger throughput	US	+33	+583	+2.6	+6.7	+2.2	d	May 23	2.33m	TSA
Airline passenger throughput (7d avg)	US			-12	+3.9	+1.6	d	May 23	2.21m	TSA
Commercial flights	Worldwide	+24	+174	-17	+7.5	-0.3	d	May 23	96,415	Flightradar24
All flights	Worldwide	+20	+102	+5.4	+7	+0.2	d	May 23	201,713	Flightradar24
Air traffic (flights)	Europe			-15	+7.5	+1.3	d	May 23	28,163	Eurocontrol
Air traffic (flights)	UK			-17	+12	+2.9	d	May 23	5,572	Eurocontrol
Air traffic (flights)	Germany			-21	+2.6	-0.8	d	May 23	4,799	Eurocontrol
Seat capacity	Worldwide	+39	+156	-20	+0.5	-1.7	w	May 23-29	89.0m	OAG
Seat capacity	North America			-10		+0.2	w	May 23-29	n/a	OAG

Seat capacity	North East Asia			-45		-18	w	May 23-29	n/a	OAG
Seat capacity	South East Asia			-35		+1.1	w	May 23-29	n/a	OAG
Seat capacity	South Asia			-0.2		+0.6	w	May 23-29	n/a	OAG
Seat capacity	Western Europe			-12		+4.5	w	May 23-29	n/a	OAG
Seat capacity	Central America			+6.6		+0.4	w	May 23-29	n/a	OAG
Heathrow airport passengers	UK	+848	+2360	-25	+21		m	April 2022	5.08m	Heathrow

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

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	US	+5.4%	-4.4%	+1.4%	May 13	15.9m b/d	EIA
Apparent Oil Demand	China	-6.7%	+0.1%	-9.3	April 2022	12.09m b/d	NBS
Utilization	US	+5.5	+1.3	+0.8	May 13	91.8 %	EIA
Utilization	US Gulf	+7.2	+1.1	+0.5	May 13	95.2 %	EIA
Utilization	US East	+7.8	+10	+10	May 13	95 %	EIA
Utilization	US Midwest	+5	+2.5	+0.3	May 13	89.8 %	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.

https://www.qantasnewsroom.com.au/media-releases/qantas-group-industry-update/

QANTAS GROUP – INDUSTRY UPDATE

SYDNEY | PUBLISHED ON 26TH MAY 2022 AT 11:29

As travel continues to recover from COVID-19 and network adjustments continue to flow through, below is a summary of recent developments across Qantas and Jetstar's domestic and international services.

(All dates refer to 2022 unless otherwise indicated.)

Group Domestic

- Domestic travel continues to perform well with strong demand across all categories.
- Fuel prices have kept rising over the past month and require the Group to rebalance capacity and fares in response. The cuts to domestic flying levels for July and August are being deepened with capacity moving from 107 per cent of pre-COVID levels to 103 per cent. These additional reductions will progressively flow into industry booking and reservation systems in the coming days. The Group will continue to monitor market conditions and adjust capacity as needed.
- These adjustments are not expected to materially impact customers due to the large number of flights on most routes; those impacted will be contacted directly and offered different options. In practical terms, these changes will generally lead to a higher seat factor on flights across the Group.

Group International

- Group International continues to see strong demand, particularly as we move towards the northern summer peak and more countries relax restrictions.
- Group International capacity remains unchanged at just under 50 per cent of pre-COVID levels by the end of the fourth quarter of FY22 and rising to around 70 per cent by the end of the first quarter of FY23.
- Flights from Perth to London (QF9) resumed on 23 May, with one return flight per day operating through the Western Australian gateway after operating through Darwin since November last year. QF1 will reroute from Sydney-Darwin-London to operate Sydney-Singapore-London from 19 June and switch from a 787 back to an Airbus A380 service.
- Qantas will welcome a third A380 back from storage, which will return to service from 6 June on the Melbourne-Los Angeles route.
- Following recent relaxation of New Zealand border restrictions, Qantas and Jetstar's Tasman flying has ramped up significantly, including:
- Flights resumed from Australia to Queenstown and Wellington, and additional routes to Christchurch.
- Qantas has doubled frequency on flights to Auckland from Melbourne and Sydney and is operating some flights from Brisbane with A330s.
- Jetstar has restarted flights on all Australia to Auckland markets and will restart on remaining Christchurch, Queenstown and Wellington markets in the next few weeks.
- As Japan starts to relax its borders restrictions:

    - Jetstar will resume flights from Cairns-Tokyo (Narita) from 20 July and Cairns-Osaka from 26 July.
    - Qantas will resume Sydney-Tokyo (Haneda) services from 12 September, and from Melbourne and Brisbane to Tokyo (Haneda) from the end of October, using A330s.
- Strengthening demand for travel to Bali has seen Jetstar restart direct services from all seven Australian cities it flew from pre-COVID and will be close to pre-COVID levels of capacity on the majority of routes by the end of June 2022.
- Qantas will increase frequency between Sydney and Manila from five flights per week to six from 20 June increasing to daily from mid-September.
- Qantas will resume flights from Sydney to Santiago from 30 October, with four flights per week using its 787s.
- Qantas has pushed back the restart of flights between Sydney and San Francisco from 30 July to 30 October. Customers will be reaccommodated on flights via Los Angeles.
- As previously announced, the Qantas Group will start the following routes in coming months:
    - Qantas will start a seasonal Perth-Rome service from 22 June.
    - Qantas will start flights from Sydney to Bengaluru (Bangalore) from 14 September.
    - Jetstar will start a Sydney-Seoul service from 2 November and Qantas will start on the route on 10 December.
    - Qantas will start flights from Melbourne to Dallas Fort Worth from 2 December.

SAF Group created transcript of Ray Dalio (Founder, Co-Chief Investment Officer, and Member of the Bridgewater Board) on World Economic Forum panel "*An Economic Iron Curtain: Scenarios and Their Implications*" on May 25, 2022 https://twitter.com/wef/status/1529483914103779328

Items in "italics" are SAF Group created transcript

At 35:50 min mark, Dalio "….. *so when we are looking at the circumstances, we're now in a new era. We wish that there's coordination. We've lived in an era where we were global. And the way resources were allocated was where was it more cost efficient. So if it was cost efficient here, you would send the capital, you would build it there. And that would raise employment and so on. And that's what we've come to believe is a fair system.*

But that's only because we've gotten used to that. But if you go back and look at history, and today, many people would believe that's not a fair system. So here we are in the fragmented world that we're in. So the resource allocation system is no longer economic. The resource allocation is political and ideological. So when we ask ourselves and we wish for cooperation, it's understandable that we won't get cooperation because there is a risk there is conflicts. There's an internal conflict of civil war so how do we redistribute the wealth within our country so we will have that within the country. Well, there's a helluva fight over that. So there's the willingness to fight over that. The same is true internationally. So what is America first, what is that in terms of that.

And so I think we have to understand, we have to keep in mind that when we say we are going to cooperate or should, in a world where self-sufficiency, because we could go to war, becomes important. The efficiencies are no longer the most important things. Survival is the most important thing. The possibility of a war is an important thing.

And it changes behaviour in ways that are logical, but maybe undesirable for those of us who are in a perspective that we believe we should be in this together. And how do we work together. So I think it's all understandable. So that depreciates the value of money. We are going to have more conflict. We're going to have more inflation. Inflation causes domestic political conflict. So it will be a big issue in the 2022 elections and the 2024 elections, that's just how the machine works. In the meantime, we have, and the war in Ukraine and Russia. And, with China, is understandable in terms of the big powers conflict.

So we see the world, if you read history and you see this happen over and over again. You see the world is now breaking up into sides. It's like there are allied powers and there are axis powers, and there are neutral powers. And those ideologies become the dominant consideration. So it's entirely possible, for example that we could see in China and so on that it's no longer desirable, or politically acceptable to do business in China. It may not be. Now you think about how intertwined the world economy is. 22% of American manufactured goods import come from China. So now just imagine the implications for inflation and inefficiencies. That's just mechanistically what's going on. So as a mechanic, who is looking at next year and the year after and where we are in that thing, I'm just saying it's undesirable. And the unimaginable is becoming increasingly probable."

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

https://www.noaa.gov/news-release/noaa-predicts-above-normal-2022-atlantic-hurricane-season

NOAA predicts above-normal 2022 Atlantic Hurricane Season

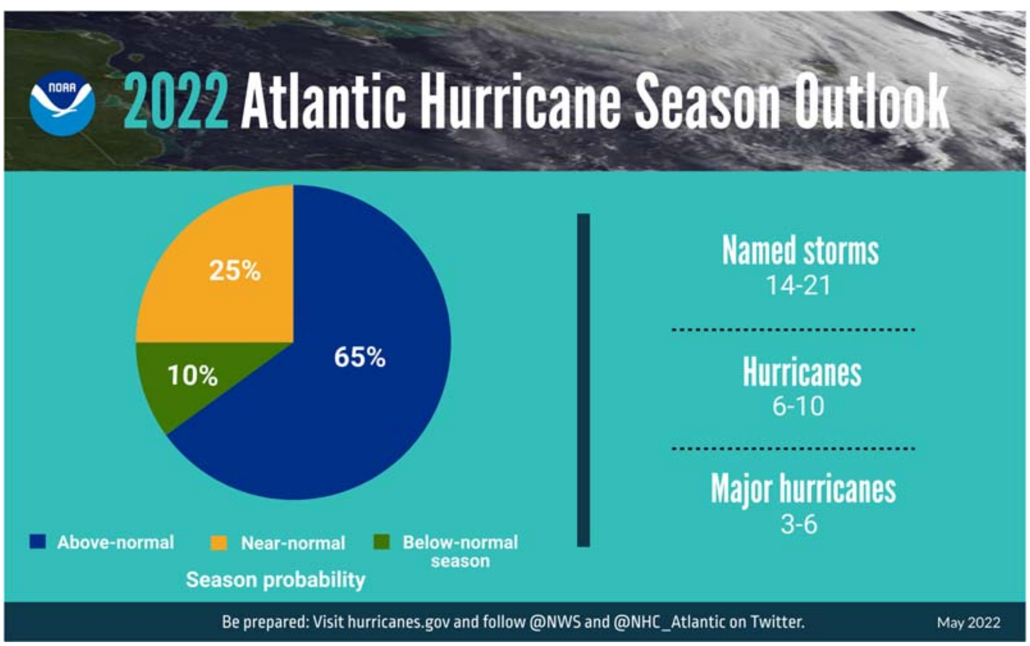
Ongoing La Niña, above-average Atlantic temperatures set the stage for busy season ahead

Share:

May 24, 2022

Forecasters at NOAA’s Climate Prediction Center, a division of the National Weather Service, are predicting above-average hurricane activity this year — which would make it the seventh consecutive above-average hurricane season. NOAA’s outlook for the 2022 Atlantic hurricane season, which extends from June 1 to November 30, predicts a 65% chance of an above-normal season, a 25% chance of a near-normal season and a 10% chance of a below-normal season.

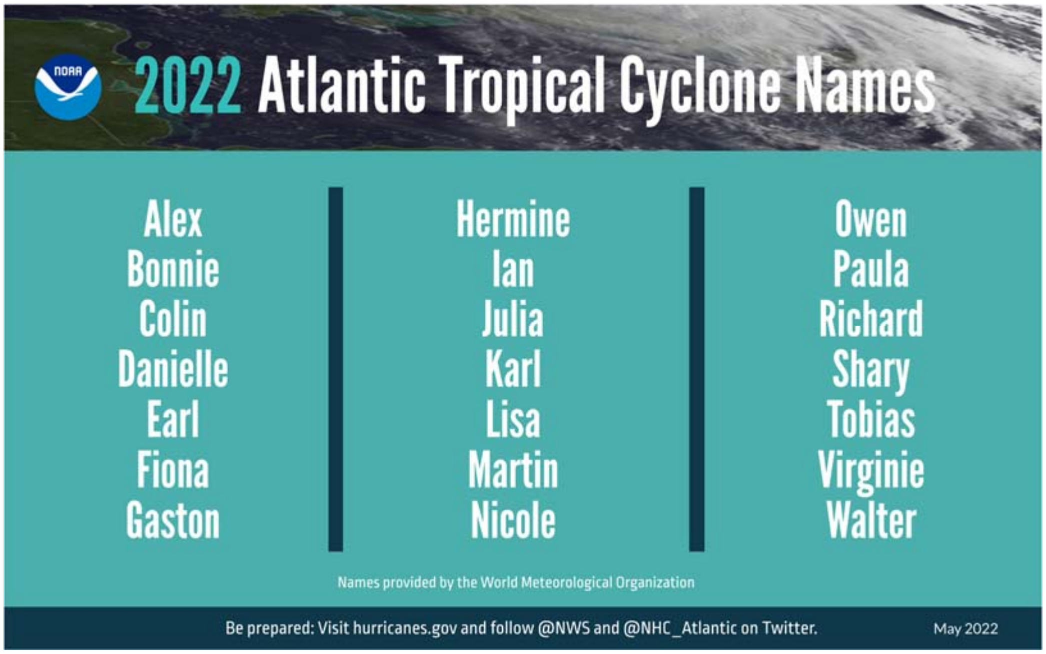
For the 2022 hurricane season, NOAA is forecasting a likely range of 14 to 21 named storms (winds of 39 mph or higher), of which 6 to 10 could become hurricanes (winds of 74 mph or higher), including 3 to 6 major hurricanes (category 3, 4 or 5; with winds of 111 mph or higher). NOAA provides these ranges with a 70% confidence.



A summary infographic showing hurricane season probability and numbers of named storms predicted from NOAA's 2022 Atlantic Hurricane Season Outlook. (NOAA)
Download Image

“Early preparation and understanding your risk is key to being hurricane resilient and climate-ready,” said Secretary of Commerce Gina M. Raimondo. “Throughout the hurricane season, NOAA experts will work around-the-clock to provide early and accurate forecasts and warnings that communities in the path of storms can depend on to stay informed."

The increased activity anticipated this hurricane season is attributed to several climate factors, including the ongoing La Niña that is likely to persist throughout the hurricane season, warmer-than-average sea surface temperatures in the Atlantic Ocean and Caribbean Sea, weaker tropical Atlantic trade winds and an enhanced west African monsoon. An enhanced west African monsoon supports stronger African Easterly Waves, which seed many of the strongest and longest lived hurricanes during most seasons. The way in which climate change impacts the strength and frequency of tropical cyclones is a continuous area of study for NOAA scientists.



A summary graphic showing an alphabetical list of the 2022 Atlantic tropical cyclone names as selected by the World Meteorological Organization. The official start of the Atlantic hurricane season is June 1 and runs through November 30. (NOAA)
Download Image

"As we reflect on another potentially busy hurricane season, past storms — such as Superstorm Sandy, which devastated the New York metro area ten years ago — remind us that the impact of one storm can be felt for years," said NOAA Administrator Rick Spinrad, Ph.D. "Since Sandy, NOAA's forecasting accuracy has continued to improve, allowing us to better predict the impacts of major hurricanes to lives and livelihoods."

Additionally, NOAA has enhanced the following products and services this hurricane season:

- To improve the understanding and prediction of how hurricanes intensify, NOAA's Atlantic Oceanographic and Meteorological Lab and Pacific Marine Environmental Lab will operate five Saildrone uncrewed surface vehicles during the peak of the 2022 hurricane season and coordinate for the first time with uncrewed ocean gliders, small aircraft drone systems, and NOAA Hurricane Hunter aircraft to measure the ocean, atmosphere and areas where they meet.
- The Hurricane Weather Research and Forecast Modeling System and Hurricanes in a Multi-scale Ocean-coupled Non-hydrostatic model, which have shown significant skill improvements in terms of storm track and intensity forecasts, have been successfully transitioned to the newest version of the Weather and Climate Operational Supercomputing System, allowing for uninterrupted operational forecasts.

- The Excessive Rainfall Outlook (ERO) has been experimentally extended from three to five days of lead time, giving more notice of rainfall-related flash flooding risks from tropical storms and hurricanes. The ERO forecasts and maps the probability of intense rainfall that could lead to flash flooding within 25 miles of a given point.
- In June, NOAA will enhance an experimental graphic that depicts the Peak Storm Surge Forecast when storm surge watches or warnings are in effect. Upgrades include an updated disclaimer and color coding that illustrates the peak storm surge inundation forecast at the coast. This tool is currently only available in the Atlantic basin.

“Hurricane Ida spanned nine states, demonstrating that anyone can be in the direct path of a hurricane and in danger from the remnants of a storm system,” said FEMA Administrator Deanne Criswell. “It’s important for everyone to understand their risk and take proactive steps to get ready now by visiting Ready.gov and Listo.gov for preparedness tips, and by downloading the FEMA App to make sure you are receiving emergency alerts in real-time.”

NOAA’s outlook is for overall seasonal activity and is not a landfall forecast. In addition to the Atlantic seasonal outlook, NOAA has also issued seasonal hurricane outlooks for the eastern Pacific and central Pacific hurricane basins. NOAA’s Climate Prediction Center will update the 2022 Atlantic seasonal outlook in early August, just prior to the historical peak of the season.

https://pipelineonline.ca/saskatchewan-oilman-of-the-year-grant-fagerheim/#/?playlistId=0&videoId=0

Saskatchewan Oilman of the Year Grant Fagerheim

Brian Zinchuk

Brian Zinchuk is editor and owner of Pipeline Online

For outstanding contributions to the petroleum industry in Saskatchewan and Canada, Grant Fagerheim is Saskatchewan's Oilman of the Year. You can attend the awards ceremony on June 1 at the Saskatchewan Oil and Gas Show. Tickets are available at oilshow.ca.

Five years ago, Estevan's Grant Fagerheim, of Whitecap Resources Inc., was inducted into the Saskatchewan Petroleum Industry Hall of Fame. Today he is Saskatchewan's Oilman of the Year.

Grant Fagerheim is president and chief executive officer of Whitecap Resources Inc. He has worked and served as a director in both the upstream and downstream segments of the energy industry over his 30+ year career in the energy sector. He was founder of Ketch Energy Ltd., Ketch Resources Ltd. and Kereco Energy Ltd. (Cadence).

Grant was born and raised in Estevan, where his father worked in the coal industry and his mother was a long-serving nurse. Grant left home in 1977 to pursue his passion for hockey. He attended, played hockey and graduated from the University of Calgary.

"Hockey has always been my passion and it's a passion I've carried forward into my approach to business. Whether in business or in sports, I've always focused on building teams. Each iteration of my ventures in the energy sector has focused on assembling strong teams, durable assets and a plan to create long-term value for shareholders." Grant says.

Grant had various roles in the energy sector up until April 2000 when he was recruited to take the reins as President and CEO of the first Ketch Energy growth company.

Grant founded Whitecap in the fall of 2009 with a capitalization of $46 million, initially producing around 850 barrels a day. Today, the company is worth over $6.5 billion and produces just over 130,000 barrels of oil equivalent per day, almost half of that in this province. Both the market capitalization and production numbers have doubled in the last four years. Whitecap is now one of the largest producers in Saskatchewan and in the Canadian energy sector. Whitecap, through its counter-cyclical foresight, has enjoyed success in spite of the downturn in the industry that lasted seven years.

“We have maintained a cautious level of debt which has served us well as when the downturn hit, we had the resources to pursue consolidation opportunities. You have to enjoy the thrill of the hunt in this game while ensuring strong returns to shareholders,” Grant commented.

Whitecap has been successful in that hunt. The company purchased the operating control of the Weyburn Unit from Cenovus. That has led to Whitecap becoming a net-zero oil producer, storing more CO_2 than its Scope 1 and Scope 2 emissions.

Since the start of 2020 the company purchased NAL Resources Limited, TORC Oil & Gas Ltd., Kicking Horse Oil & Gas Ltd., Highrock Resources Ltd., and TimberRock Energy Corp., as well as certain assets in the Kindersley and central Alberta areas.

Grant has been an outspoken advocate for the oil industry as well as energy transformation including greenhouse gas reduction initiatives, with his company putting its money where its mouth is.

The fall of 2021 saw Whitecap announce it was working with Federated Co-operatives Limited to develop the next major carbon dioxide initiative in this province – a carbon capture hub. When it goes ahead, CO_2 will soon be captured at the FCL refinery and ethanol plant; as well, plans are underway for CO_2 capture from several other large industrial emitters in the area. This captured CO_2 will be pipelined to the Weyburn Unit for enhanced oil recovery or into a saline aquifer for long-term storage. This could ultimately result in a larger hydrogen hub in the province in the not-too-distant future.

In his personal time, Grant enjoys playing oldtimer hockey and contributing to a variety of corporate and charitable boards. He has served as chairman of the Edge School for Athletes in Calgary. He has been a director of the Hockey Canada Foundation since January 2008, has served as chairman of the Foundation and was also a member of the Order of Hockey Canada executive committee. In recognition for his contributions to Canada he was awarded the Queen’s Diamond Jubilee Medal created in 2012 to honour the 60th anniversary of Her Majesty Queen Elizabeth II.

In 2017, Grant was inducted into the Saskatchewan Petroleum Industry Hall of Fame.

Grant and his wife Penny have two sons, Brandon and Brett. He keeps up active contact with his family and friends in Saskatchewan, especially with his sister and brother-in-law in Regina.

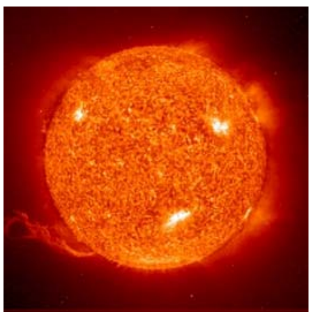
https://www.eia.gov/energyexplained/hydrogen/#:~:text=Hydrogen%20is%20an%20energy%20carrier&text=Hydrogen%2C%20like%20electricity%2C%20is%20an,source%20of%20energy%20or%20fuel.

Independent Statistics & Analysis
U.S. Energy Information Administration

Hydrogen explained
What is hydrogen?

Hydrogen is the simplest element. Each atom of hydrogen has only one proton. Hydrogen is also the most abundant element in the universe. Stars such as the sun consist mostly of hydrogen. The sun is essentially a giant ball of hydrogen and helium gases.

Hydrogen occurs naturally on earth only in compound form with other elements in liquids, gases, or solids. Hydrogen combined with oxygen is water (H_2O). Hydrogen combined with carbon forms different compounds—or hydrocarbons—found in natural gas, coal, and petroleum.



The sun is essentially a giant ball of hydrogen gas undergoing fusion into helium gas. This process causes the sun to produce vast amounts of energy.

Source: NASA (public domain)
?

Hydrogen is the lightest element. Hydrogen is a gas at normal temperature and pressure, but hydrogen condenses to a liquid at minus 423 degrees Fahrenheit (minus 253 degrees Celsius).

Hydrogen is an energy carrier

Energy carriers allow the transport of energy in a usable form from one place to another. Hydrogen, like electricity, is an energy carrier that must be produced from another substance. Hydrogen can be produced—separated—from a variety of sources including water, fossil fuels, or biomass and used as a source of energy or fuel. Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but it has the lowest energy content by volume (about four times less than gasoline).

It takes more energy to produce hydrogen (by separating it from other elements in molecules) than hydrogen provides when it is converted to useful energy. However, hydrogen is useful as an energy source/fuel because it has a high energy content per unit of weight, which is why it is used as a rocket fuel and in fuel cells to produce electricity on some spacecraft. Hydrogen is not widely used as a fuel now, but it has the potential for greater use in the future.

Last updated: January 20, 2022

https://www.ft.com/content/435a9384-8711-4b99-95a8-d55e962343c6

Vanguard refuses to end new fossil fuel investments

World's second-largest asset manager cites its duty to maximise returns for clients
Chris Flood
May 25, 2022

The world's second-largest asset manager Vanguard has refused to stop new investments in fossil fuel projects and end its support for coal, oil and gas production.
Chief executive Tim Buckley said the group, which manages $8.1tn for more than 30mn investors and is the largest investor in coal companies globally, was determined to safeguard its clients from climate risks but this would not require it to end new commitments to fossil fuel industries.

"Vanguard does not seek to direct company strategy. We engage with companies on climate change, ask them to set goals and to report how they are mitigating climate risks. That transparency will ensure that climate risks are priced appropriately by the market," Buckley said in an interview with the Financial Times.

Companies that have a large carbon footprint now could play a critical role in the transition to a low-carbon future, he added.

"Our duty is to maximise long-term total returns for clients. Climate change is a material risk but it is only one factor in an investment decision. There is already a pensions crisis and we have to make sure that climate concerns do not make that even worse," said Buckley.

The financial implications of climate change have hit the headlines recently after a senior HSBC executive accused central bankers and policymakers of overstating the risks of global warming. Buckley's comments were made ahead of the publication of Vanguard's first progress report towards the goal of reaching net zero carbon emissions across its investment portfolios by 2050.

Just $290bn, or 17 per cent, of Vanguard's $1.7tn in actively managed assets are aligned with net zero by 2050. It expects around half of the $290bn to be net zero aligned by 2030, the agreed interim target date set for members of the Net Zero Asset Managers initiative, a coalition of 235 large investors that together manage about $57.5tn.

But Vanguard has chosen not to attach interim net zero targets to the passive index-tracking funds that form the bulk of its assets. The company has said that this is because net zero targets were not built into the original objectives of these funds. US asset managers also have a fiduciary duty to maximise returns so adding other goals that are not in a fund's prospectus could expose them to legal challenges. Active managers have more leeway to decide what factors to use when deciding which companies to buy.

Vanguard also believes achieving a 50 per cent reduction in emissions in these passive funds by 2030 will be very difficult without substantial action by the companies themselves and much more clarity on how government policy might evolve.

"More than 70 per cent of Vanguard's index equity assets are invested in companies with publicly stated emission reduction goals. Over $1tn of those assets are invested in companies that have already committed to net zero targets," Buckley said. Environmental campaigners argue that none of the world's three largest asset managers — BlackRock, Vanguard and State Street — have policies that will achieve absolute reductions in carbon emissions by the end of the decade.

Vanguard ranked last of 25 large asset managers in a fossil fuel and climate change evaluation published by Reclaim Finance and Urgewald, two environmental campaign groups, in April.

“Asset managers need to send clearer signals to the fossil fuel industry. Any investor committed to achieving carbon neutrality by 2050 must immediately cease all investments in companies developing new oil and gas supply projects,” said Lara Cuvelier from Reclaim Finance.

2022 climate-related shareholder proposals more prescriptive than 2021

BlackRock.

Investment Stewardship

- **BlackRock Investment Stewardship (BIS) takes a case-by-case approach to shareholder proposals and, without exception, takes voting decisions on proposals as a fiduciary acting in clients' long-term economic interests.**
- **BIS continues to see voting on shareholder proposals playing an important role in stewardship.**
- **Having supported 47% of environmental and social shareholder proposals in 2021, BIS notes that many of the climate-related shareholder proposals coming to a vote in 2022 are more prescriptive or constraining on companies and may not promote long-term shareholder value.**

BlackRock Investment Stewardship

The assets we manage are owned by other people — our clients — who depend on BlackRock to help them achieve their investment goals. These clients include public and private pension plans, governments, insurance companies, endowments, universities, charities and, ultimately, individual investors, among others. Consistent with BlackRock's fiduciary duty as an asset manager, BIS' purpose is to support companies in which we invest for our clients in their efforts to create long-term durable financial performance.

BIS serves as an important link between our clients and the companies in which they invest, and the trust our clients place in us gives us a great responsibility to work on their behalf. That is why we are interested in hearing from companies about their strategies for navigating the challenges and capturing the opportunities they face. As we are long-term investors on behalf of our clients, the business and governance decisions that companies make will have a direct impact on our clients' investment outcomes and financial well-being. In all our stewardship work on behalf of our clients, the asset owners, we therefore focus on engagement and voting outcomes that support companies' long-term ability to maximize durable financial returns.

This paper frames our approach to shareholder proposals generally and, more specifically, our initial assessment of some of the climate-related themes that are emerging in the 2022 proxy season. We set out some preliminary considerations in relation to these proposals in the context of our fiduciary duty to act in the best interests of clients who have authorized us to vote their holdings on their behalf.

BIS approach to shareholder proposals

BIS takes a case-by-case approach to voting on shareholder proposals. Without exception, our decisions are guided by our role as a fiduciary to act in our clients' long-term economic interests. We continue to see voting on shareholder proposals playing an important role in our stewardship efforts around material risks and opportunities.

In 2021, we observed a shift in climate-related shareholder proposals with requests that addressed material business risks or that were anchored in reports providing information, which would be useful to investors in assessing a company's ability to generate durable long-term value. In 2021 BIS supported 47% of environmental and social shareholder proposals (81 of 172), as we determined these proposals to be consistent with long-term value creation and not unduly constraining on management in pursuing their strategies to create shareholder value.

BIS is more likely to support shareholder proposals that are consistent with our request to companies to deliver information that helps us to understand the material risks and opportunities they face, especially where this information is additive given the company's existing disclosures. As noted below, as relates to climate risk, this is principally climate action plans with clear explanations of how the energy transition will affect a company's long-term business model and financial performance, supported by quantitative information such as scope 1 and 2 greenhouse gas (GHG) emissions and short-, medium-, and long-term targets for emissions reductions. Similarly, we may support climate-related proposals that encourage companies to provide investors with comprehensive and accessible information on how their corporate political activities support their long-term strategy.

Conversely, we are not likely to support those that, in our assessment, implicitly are intended to micromanage companies. This includes those that are unduly prescriptive and constraining on the decision-making of the board or management, call for changes to a company's strategy or business model, or address matters that are not material to how a company delivers long-term shareholder value.[1]

BIS dialogue with companies regarding the energy transition

As BIS stated in our 2022 Global Principles and commentary on Climate Risk and the Global Energy Transition, we find it useful to our understanding of the long-term climate-related risks and opportunities companies face when they disclose to investors how climate risks and opportunities might impact their business, and how these factors are addressed in the context of a company's business model and sector. Specifically, investors have greater clarity— and ability to assess risk — when companies detail how their business model aligns to scenarios for the global economy that limit temperature rises to well below 2°C, moving toward net zero emissions by 2050.

We look to companies to help their investors understand how climate risks and opportunities are integrated into their governance, strategy, and risk management, to provide scope 1 and 2 GHG emissions disclosures, and meaningful short-, medium-, and long-term science-based reductions targets, where available for their sector.

We also welcome disclosures on how companies are considering scope 3 GHG emissions, the impacts of the energy transition on their stakeholders and operations, and how they will contribute to a reliable and affordable energy system over time. Many companies are already providing robust disclosures on scope 3 GHG emissions, which we recognize are provided on a good-faith basis as reporting methods develop. Over time, the development of a widely accepted approach to consistently measure and disclose scope 3 GHG emissions would both reduce the reporting burden on companies and improve the quality of information available to investors.

At BlackRock, we believe that climate risk is investment risk, and we see growing recognition that climate risk and the energy transition are already transforming both the real economy and how people invest in it. We have been encouraged by the progress many companies in key sectors have made in their energy transition planning and actions, as detailed in their enhanced disclosures. Market-level initiatives, such as the Net Zero Banking Alliance and Oil & Gas Methane Partnership 2.0, have helped companies take steps relevant to their business models and sectors. We have also seen enhanced disclosure by many companies on how they are engaging on policy matters, through their own corporate political activities and those of the trade associations of which they are active members. This has enabled us to be more supportive of management in our voting on these issues at the shareholder meetings held to date this year.

As we outlined in our commentary Climate Risk and the Global Energy Transition, BIS will, as in prior years, be unlikely to support the re-election of directors considered responsible for climate risk oversight when corporate disclosures do not sufficiently enable investors to assess risk through the TCFD framework — including in relation to governance, strategy, and risk management — or when companies have not provided scope 1 and 2 GHG emissions disclosures and meaningful short-medium-, and long-term targets.

BIS' observations on climate-related shareholder proposals in 2022

Ahead of the peak 2022 shareholder meeting season, BIS has had an opportunity to observe and assess some of the themes in focus in the climate-related shareholder proposals on which we will vote over the coming weeks and months.

At the same time, there are some unique dynamics playing out for the first time this shareholder meeting season.

- In the U.S., the Securities and Exchange Commission revised guidance[2] on shareholder proposals, and broadened the scope of permissible proposals that address "significant social policy issues". This has resulted in a marked increase[3] in environmental and social shareholder proposals of varying quality coming to a vote. Our early assessment is that many of the proposals coming to a vote are more prescriptive and constraining on management than those on which we voted in the past year.
- Importantly, in the context of voting on shareholder proposals regarding climate-related risk, companies face particular challenges in the near term, given under-investment in both traditional and renewable energy, exacerbated by current geo-political tensions. In recent research, BlackRock noted that reducing reliance on Russian energy in the wake of the invasion of Ukraine will impact the net zero transition that is already underway. Net exporters of energy are likely to be required to increase production, while net importers are expected to accelerate efforts to increase the proportion of renewables in their energy mix. This set of dynamics will — at least in the short- and medium-term — drive a need for companies that invest in both traditional and renewable sources of energy and we believe the companies that do that effectively will produce attractive returns for our clients.
- Companies, particularly in Europe, are increasingly choosing to introduce management proposals to approve a company's climate action plan or progress in realizing its objectives. These proposals are a tool for companies seeking investor feedback on climate risk and the energy transition. In those cases where both a climate-related management proposal and a similar shareholder proposal are on the ballot, we have observed that investors, including BlackRock, are increasingly inclined to support the management proposal, as the company is demonstrating commitment to act by setting out their business plan for how they intend to deliver long-term financial performance through the energy transition. BIS continues to monitor the development of proposals on climate action plans and progress in this context.

Consistent with BIS' approach to shareholder proposals as set out above, and mindful of the current geo-political context, energy market pressures, and the implications of both for inflation, we have observed several themes of shareholder proposals that warrant special attention. These themes include:

- Ceasing providing finance to traditional energy companies
- Decommissioning the assets of traditional energy companies
- Requiring alignment of bank and energy company business models solely to a specific 1.5ºC scenario
- Changing articles of association or corporate charters to mandate climate risk reporting or voting
- Setting absolute scope 3 GHG emissions reduction targets[4]
- Directing climate lobbying activities, policy positions or political spending

Although it is still early in the shareholder meeting season, we note that many of these more prescriptive climate-related proposals are attracting lower levels of investor support.[5] In such cases, we also note that global proxy advisors ISS and Glass Lewis have been recommending that shareholders not support overly prescriptive or constraining proposals.

In conclusion, BIS is focused on supporting companies as they address the material business challenges they face, including the decades-long transition to a low carbon economy. In our voting determinations it is crucial that we take into consideration the context in which companies are operating their businesses. As we engage companies in an active dialogue about the climate-related risks and opportunities in their business models, we advocate for steps aligned with our clients' interests as long-term shareholders. Our voting on our clients' behalf, where so authorized by them, signals our support for — or concerns about — a company's approach and will always be undertaken with the appropriate consideration of our clients' long-term economic interests as their fiduciary. The nature of certain shareholder proposals coming to a vote in 2022 means we are likely to support proportionately fewer this proxy season than in 2021, as we do not consider them to be consistent with our clients' long-term financial interests.

Endnotes

1. We recognize that some of our clients may take a different view, and more of our clients are interested in having a say in how their index holdings are voted. Beginning in 2022, BlackRock is taking the first in a series of steps to expand the opportunity for clients to participate in proxy voting decisions where legally and operationally viable. To do this, BlackRock developed new technology and worked to enable a significant expansion in proxy voting choices for more clients. For more information see: https://www.blackrock.com/corporate/about-us/investment-stewardship/proxy-voting-choice
2. Pensions & Investments: SEC guidance opens the door for more ESG proxy proposals, 29 November 2021: https://www.pionline.com/regulation/sec-guidance-opens-door-more-esg-proxy-proposals
3. Politico: SEC shift fuels surge in climate-linked proxy proposals, 4 April 2022: https://www.politico.com/news/2022/04/19/sec-investor-sustainability-agenda-00026200
4. This is not to minimize value chain, or scope 3, GHG emissions. They are a major global societal issue and, for companies where they are material, the prospect of future policy change could affect the economic viability of their business models. To effect change in scope 3 GHG emissions in a fair and balanced way, policy action by governments will be necessary. Companies cannot solve scope 3 on their own. As national and regional policy expectations around scope 3 evolve and crystallize, we will look to companies to align their disclosures and commitments accordingly.
5. Financial Times: Investors at top US banks refuse to back climate proposals, 26 April 2022: https://www.ft.com/content/740b55f8-fa2e-4b66-9398-9f84aedbe8d8

Want to know more?

blackrock.com/stewardship | contactstewardship@blackrock.com

BlackRock.

IFIC Monthly Investment Fund Statistics – April 2022

Mutual Fund and Exchange-Traded Fund Assets and Sales

May 24, 2022 (Toronto) – The Investment Funds Institute of Canada (IFIC) today announced investment fund net sales and net assets for April 2022.

Mutual fund assets totalled $1.914 trillion at the end of April 2022. Assets decreased by $87.5 billion or 4.4% compared to March 2022. Mutual funds recorded net redemptions of $4.9 billion in April 2022.

ETF assets totalled $310.0 billion at the end of April 2022. Assets decreased by $14.7 billion or 4.5% compared to March 2022. ETFs recorded net sales of $1.0 billion in April 2022.

Mutual Fund Net Sales/Net Redemptions ($ Millions)*

Asset Class	Apr. 2022	Mar. 2022	Apr. 2021	YTD 2022	YTD 2021
Long-term Funds					
Balanced	(2,055)	272	4,567	6,359	27,279
Equity	(697)	1,085	3,612	7,936	18,863
Bond	(1,754)	(503)	1,396	(2,046)	7,125
Specialty	(204)	177	439	849	2,463
Total Long-term Funds	(4,710)	1,031	10,014	13,099	55,731
Total Money Market Funds	(236)	102	(965)	156	-4,499
Total	(4,946)	1,133	9,049	13,255	51,232

Mutual Fund Net Assets ($ Billions)*

Asset Class	Apr. 2022	Mar. 2022	Apr. 2021	Dec. 2021
Long-term Funds				
Balanced	943.6	985.0	924.9	1,024.9
Equity	682.3	719.4	658.5	747.7
Bond	239.3	247.7	252.9	261.5
Specialty	22.2	22.6	17.5	22.2
Total Long-term Funds	1,887.3	1,974.7	1,853.9	2,056.3
Total Money Market Funds	26.8	27.0	29.2	26.4
Total	1,914.2	2,001.7	1,883.1	2,082.7

* Please see below for important information regarding this data.

ETF Net Sales/Net Redemptions ($ Millions)*

Asset Class	Apr. 2022	Mar. 2022	Apr. 2021	YTD 2022	YTD 2021
Long-term Funds					
Balanced	125	238	339	913	1,724
Equity	539	2,217	2,812	10,157	11,564
Bond	322	1,512	1,617	1,512	5,048
Specialty	(115)	498	1,444	780	3,193
Total Long-term Funds	871	4,465	6,213	13,363	21,529
Total Money Market Funds	91	116	(665)	779	(1,500)
Total	962	4,580	5,548	14,142	20,029

ETF Net Assets ($ Billions)*

Asset Class	Apr. 2022	Mar. 2022	Apr. 2021	Dec. 2021
Long-term Funds				
Balanced	11.9	12.4	9.3	12.1
Equity	202.1	213.0	182.3	225.2
Bond	75.8	78.2	82.0	89.6
Specialty	13.0	14.2	8.6	13.6
Total Long-term Funds	302.9	317.7	282.2	340.5
Total Money Market Funds	7.1	7.0	5.8	6.6
Total	310.0	324.7	288.0	347.1

* Please see below for important information regarding this data.

IFIC direct survey data (which accounts for approximately 91% of total mutual fund industry assets) is complemented by data from Investor Economics to provide comprehensive industry totals.

IFIC makes every effort to verify the accuracy, currency and completeness of the information; however, IFIC does not guarantee, warrant, represent or undertake that the information provided is correct, accurate or current.

*** Important Information Regarding Investment Fund Data:**

1. Mutual fund data is adjusted to remove double counting arising from mutual funds that invest in other mutual funds.
2. Starting with January 2022 data, ETF data is adjusted to remove double counting arising from Canadian-listed ETFs that invest in units of other Canadian-listed ETFs. Any references to IFIC ETF assets and sales figures prior to 2022 data should indicate that the data has not been adjusted for ETF of ETF double counting.
3. The Balanced Funds category includes funds that invest directly in a mix of stocks and bonds or obtain exposure through investing in other funds.
4. Mutual fund data reflects the investment activity of Canadian retail investors.
5. ETF data reflects the investment activity of Canadian retail and institutional investors.

About IFIC

The Investment Funds Institute of Canada is the voice of Canada's investment funds industry. IFIC brings together 150 organizations, including fund managers, distributors and industry service organizations, to foster a strong, stable investment sector where investors can realize their financial goals. By connecting Canada's savers to Canada's economy, our industry contributes significantly to Canadian economic growth and job creation. To learn more about IFIC, please visit www.ific.ca.

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Dan Tsubouchi @Energy_Tidbits · 2h

#Vortexa crude #Oil floating storage at 05/27 est 98.79 mmb, -1.16 mmb WoW vs revised up 99.95 mmb at 05/21. Below 100 mmb, but prior 2 mths mostly in 100-105 mmb range. ie. crude oil floating storage has moved to higher levels. Thx @Vortexa @TheTerminal #OOTT

Vortexa Crude Oil Floating Storage Estimated as of May 29 at 6am MT

Source: Bloomberg, Vortexa

Est as of May 29, 6am MT

FZWWFST VTXA Inde — 05/26/2019 - 05/27/2022

	Date	FZWWFST VT... Last Px
Fr	05/27/2022	98794
Fr	05/20/2022	99945
Fr	05/13/2022	107.943k
Fr	05/06/2022	96610
Fr	04/29/2022	101.589k
Fr	04/22/2022	102.899k
Fr	04/15/2022	106.256k
Fr	04/08/2022	102.156k
Fr	04/01/2022	91461
Fr	03/25/2022	91549
Fr	03/18/2022	95244

Est as of May 21, 1pm MT

FZWWFST VTXA Inde — 05/19/2019 - 05/20/2022

	Date	FZWWFST VT... Last Px
Fr	05/20/2022	93690
Fr	05/13/2022	111.179k
Fr	05/06/2022	101.029k
Fr	04/29/2022	104.849k
Fr	04/22/2022	106.645k
Fr	04/15/2022	108.614k
Fr	04/08/2022	105.863k
Fr	04/01/2022	93843
Fr	03/25/2022	94703
Fr	03/18/2022	97726
Fr	03/11/2022	95861

Est as of May 14, noon MT

FZWWFST VTXA Inde — 05/12/2019 - 05/13/2022

	Date	FZWWFST VT... Mid Px
Fr	05/13/2022	110.855k
Fr	05/06/2022	100.987k
Fr	04/29/2022	104.107k
Fr	04/22/2022	105.002k
Fr	04/15/2022	107.129k
Fr	04/08/2022	103.082k
Fr	04/01/2022	92019
Fr	03/25/2022	94393
Fr	03/18/2022	96587
Fr	03/11/2022	96533
Fr	03/04/2022	93377

Source: Bloomberg, Vortexa

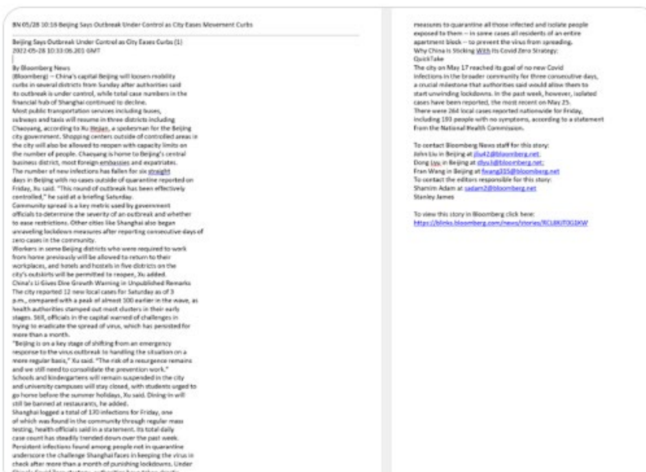
Dan Tsubouchi @Energy_Tidbits · 4h

Lots in Shanghai 50 pt "action plan for accelerating economic recovery & revitalization" #20 Vigorously promote automobile consumption, increase quota of 40,000 non-commercial car license plates, reduce the purchase tax of some cars in stages, etc. #OOTT

shanghai.gov.cn/nw12344/202205...

Dan Tsubouchi @Energy_Tidbits · May 28

"Beijing will loosen mobility curbs in several districts from Sunday", most public transportation to resume in 3 districts incl Chaoyang (central business district) report @business John Liu, Dong Lyu, Fran Wang. Far from reopening but seems a turn in direction. #OOTT



BN 05/28 10:16 Beijing Says Outbreak Under Control as City Eases Movement Curbs

Beijing Says Outbreak Under Control as City Eases Curbs (1)
2022-05-28 10:33:06.201 GMT

By Bloomberg News
(Bloomberg) -- China's capital Beijing will loosen mobility curbs in several districts from Sunday after authorities said its outbreak is under control, while total case numbers in the financial hub of Shanghai continued to decline.
Most public transportation services including buses, subways and taxis will resume in three districts including Chaoyang, according to Xu Hejian, a spokesman for the Beijing city government. Shopping centers outside of controlled areas in the city will also be allowed to reopen with capacity limits on the number of people. Chaoyang is home to Beijing's central business district, most foreign embassies and expatriates.
The number of new infections has fallen for six straight days in Beijing with no cases outside of quarantine reported on Friday, Xu said. "This round of outbreak has been effectively controlled," he said at a briefing Saturday.
Community spread is a key metric used by government officials to determine the severity of an outbreak and whether to ease restrictions. Other cities like Shanghai also began unraveling lockdown measures after reporting consecutive days of zero cases in the community.
Workers in some Beijing districts who were required to work from home previously will be allowed to return to their workplaces, and hotels and hostels in five districts on the city's outskirts will be permitted to reopen, Xu added.
China's Li Gives Dire Growth Warning in Unpublished Remarks
The city reported 12 new local cases for Saturday as of 3 p.m., compared with a peak of almost 100 earlier in the wave, as health authorities stamped out most clusters in their early stages. Still, officials in the capital warned of challenges in trying to eradicate the spread of virus, which has persisted for more than a month.
"Beijing is on a key stage of shifting from an emergency response to the virus outbreak to handling the situation on a more regular basis," Xu said. "The risk of a resurgence remains and we still need to consolidate the prevention work."
Schools and kindergartens will remain suspended in the city and university campuses will stay closed, with students urged to go home before the summer holidays, Xu said. Dining-in will still be banned at restaurants, he added.
Shanghai logged a total of 170 infections for Friday, one of which was found in the community through regular mass testing, health officials said in a statement. Its total daily case count has steadily trended down over the past week.
Persistent infections found among people not in quarantine underscore the challenge Shanghai faces in keeping the virus in check after more than a month of punishing lockdowns. Under China's Covid Zero strategy, authorities have taken drastic measures to quarantine all those infected and isolate people exposed to them -- in some cases all residents of an entire apartment block -- to prevent the virus from spreading.
Why China Is Sticking With Its Covid Zero Strategy: QuickTake
The city on May 17 reached its goal of no new Covid infections in the broader community for three consecutive days, a crucial milestone that authorities said would allow them to start unwinding lockdowns. In the past week, however, isolated cases have been reported, the most recent on May 25.
There were 264 local cases reported nationwide for Friday, including 193 people with no symptoms, according to a statement from the National Health Commission.

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https://blinks.bloomberg.com/news/stories/[illegible]

Dan Tsubouchi @Energy_Tidbits · May 27

Expect India #LNG growth to be strong but less than expected. #Petronet CEO India's plan to have #NatGas be 15% of energy mix by 2030 is "very ambitious", some demand destruction due to elevated prices. Thx @SPGlobal Srabhi Sahu. #OOTT
spglobal.com/commodityinsig...

> **Dan Tsubouchi** @Energy_Tidbits · Oct 22, 2021
>
> Bullish for #LNG #NatGas in 2020s. #Petronet CEO fcasts India LNG imports +12.4 bcfd to reach 15.8 bcfd (120 MTPA) in 2030. In line with his June est, see below SAF Group June 20 Energy Tidbits #Petronet sees LNG imports +13 bcfd to 2030. Thx @JournoDebjit @rajeshsing13 #OOTT

By Debjit Chakraborty and Rajesh Kumar Singh
(Bloomberg) -- India's import of natural gas is expected to hit 120 million tons/year by 2030 as the nation targets an energy mix goal, Akshay Kumar Singh, CEO of Petronet LNG, said at the India Energy Forum by CERAWeek.
* NOTE: India aims to boost use to natural gas to 15% of primary energy mix from about 6% now
* India's current annual LNG import is about 26 million tons
* The nation's gas production by 2030 is expected to reach 40 million-50 million tons
* Current LNG import capacity is 42 million tons/year, while about 19 million tons/year capacity is under construction
* Another 9 million-10 million tons of capacity addition are at design stage
* Petronet is expanding its biggest terminal at Dahej to 22.5 million tons a year from 17.5 million currently
* India's biggest LNG importer is also looking at building a new terminal on the east coast
* The current volatility in global gas prices is causing demand destruction
* Price volatility pushing consumers to long term LNG contracts
* Consumers are looking at a mix of oil, gas indexation for long LNG deals, which can work good for buyers

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Dan Tsubouchi @Energy_Tidbits · May 27

Latest major investor to keep investing in #Oil #NatGas. #Vanguard "duty is to maximize long term total returns" & "There is already a pensions crisis and we have to make sure that climate concerns do not make that even worse". Thx @chrisflood_FTfm #OOTT

ft.com
Vanguard refuses to end new fossil fuel investments
World's second-largest asset manager cites its duty to maximise returns for clients

Dan Tsubouchi @Energy_Tidbits · May 27

"we cannot rely on Beijing to change its trajectory. So we will shape the strategic environment around Beijing to advance our vision for an open, inclusive international system" @SecBlinken. does this not fit @RayDalio concerns 👇? #Oil #NatGas looks good for 2020s. #OOTT

> **Dan Tsubouchi** @Energy_Tidbits · May 25
>
> Great @RayDalio insights ie. "the resource allocation system is no longer economic. The resource allocation is political & ideological""those ideologies become the dominant consideration""the unimaginable is becoming increasingly probably". #Oil #NatGas look good for 2020s #OOTT

SAF Group created transcript of Ray Dalio (Founder, Co-Chief Investment Officer, and Member of the Bridgewater Board) on World Economic Forum panel "*An Economic Iron Curtain: Scenarios and Their Implications*" on May 25, 2022
https://twitter.com/wef/status/1529483914103779328

Items in "italics" are SAF Group created transcript

At 35:50 min mark, Dalio "*….. so when we are looking at the circumstances, we're now in a new era. We wish that there's coordination. We've lived in an era where we were global. And the way resources were allocated was where was it more cost efficient. So if it was cost efficient here, you would send the capital, you would build it there. And that would raise employment and so on. And that's what we've come to believe is a fair system.*

But that's only because we've gotten used to that. But if you go back and look at history, and today, many people would believe that's not a fair system. So here we are in the fragmented world that we're in. So the resource allocation system is no longer economic. The resource allocation is political and ideological. So when we ask ourselves and we wish for cooperation, it's understandable that we won't get cooperation because there is a risk there is conflicts. There's an internal conflict of civil war so how do we redistribute the wealth within our country so we will have that within the country. Well, there's a helluva fight over that. So there's the willingness to fight over that. The same is true internationally. So what is America first, what is that in terms of that.

And so I think we have to understand, we have to keep in mind that when we say we are going to cooperate or should, in a world where self-sufficiency, because we could go to war, becomes important. The efficiencies are no longer the most important things. Survival is the most important thing. The possibility of a war is an important thing.

And it changes behaviour in ways that are logical, but maybe undesirable for those of us who are in a perspective that we believe we should be in this together. And how do we work together. So I think it's all understandable. So that depreciates the value of money. We are going to have more conflict. We're going to have more inflation. Inflation causes domestic political conflict. So it will be a big issue in the 2022 elections and the 2024 elections, that's just how the machine works. In the meantime, we have, and the war in Ukraine and Russia. And, with China, is understandable in terms of the big powers conflict.

So we see the world, if you read history and you see this happen over and over again. You see the world is now breaking up into sides. It's like there are allied powers and there are axis powers, and there are neutral powers. And those ideologies become the dominant consideration. So it's entirely possible, for example that we could see in China and so on that it's no longer desirable, or politically acceptable to do business in China. It may not be. Now you think about how intertwined the world economy is. 22% of American manufactured goods import come from China. So now just imagine the implications for inflation and inefficiencies. That's just mechanistically what's going on. So as a mechanic, who is looking at next year and the year after and where we are in that thing, I'm just saying it's undesirable. And the unimaginable is becoming increasingly probable."

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

Dan Tsubouchi @Energy_Tidbits · May 27

JPN KOR being forced to find alternative to RUS ESPO crude. @iamsharoncho reports big ramp up in China tankers taking ESPO oil. ESPO pipeline ~1.6 mmb/d capacity. Can China take it all, not just pipeline connected portion? Great map from @IHSMarkit Carol Zu. #OOTT

China International United Petroleum & Chemical Co., better known as Unipec, has chartered at least 10 tankers so far this month to transport Russian ESPO crude that's loaded from Kozmino port, according to traders and a shipbroker. That would be a fivefold increase on the number of vessels booked for the trade a month earlier, data from shipping analytics firm Vortexa show. The hired vessels are mostly smaller aframax ships as well as two much larger supertankers, including the Yuan Qiu Hu, which was recently involved in a rare ship-to-ship transfer of ESPO off South Korea. The Russian grade can usually be transported to China on a direct, five-day journey, although its unclear if all the vessels booked by Unipec will deliver their cargoes to Chinese ports.

A Beijing-based spokesman for Sinopec, the parent of Unipec, said they didn't have information that could be publicly disclosed on the matter.

China has emerged as a willing buyer of Russian oil as others shun the OPEC+ producer's energy due to the war in Ukraine. While a resurgence of Covid-19 has sapped Chinese demand, Russian barrels are typically being sold at a discount, making them very attractive to some major consumers.

--With assistance from Sarah Chen.

To contact the reporter on this story:
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osted 01 April 2022 by Carol Zu, Director, IHS Energy Midstream As

SAF

Dan Tsubouchi @Energy_Tidbits · May 26

can #Biden and #Trudeau resist being one upped by boris? #OOTT

> **Rishi Sunak** @RishiSunak · May 26
>
> We are introducing a temporary, targeted Energy Profits Levy charged on profits of oil and gas companies at a rate of 25%.
>
> We're also building in a new investment allowance that doubles the relief for the energy companies that invest their profits in the UK.

SAF

Dan Tsubouchi @Energy_Tidbits · May 26

Positive for #Oil, Novak fcast shows very little recovery off 1 mmbd Apr hit. 's RUS 2021: 10.52 mmbd, fcast 9.64 - 10.04 mmbd. midpoint -0.68 mmbd YoY for full yr ave 2022, but -0.91 mmbd if allocated over Apr 1-Dec 31 vs Novak saying Apr hit 1 mmbd. #OOTT

https://tass.ru/ekonomika/14732629

MAY 26, 00:36

Novak: oil production in Russia by the end of 2022 may decrease to 480-500 million tons

The government expects a gradual recovery in production after its fall in April 2022 by about 1 million barrels per day

TEHRAN, 26 May. /TASS/. Oil production in Russia may decrease from 524 million tons in 2021 to 480-500 million tons in 2022. The government expects a gradual recovery in production after its fall in April 2022 by about 1 million barrels per day, Russian Deputy Prime Minister Alexander Novak told reporters.

"I think that there will be a much smaller decline. We had a decline of just over a million barrels per day for just one month, now it's already lower. Accordingly, I think that there will be a recovery further. Last year we had 524 million tons, this year it may be 480-500 million tons. But this is for today, everything can change depending on the situation," he stressed.

The average daily production of oil and gas condensate in Russia from May 1 to May 15, 2022 amounted to 1.398 million tons, an increase of 1.7% compared to April, when the average daily oil production was 1.374 million tons, a source familiar with official statistics told TASS for oil production.

In the first ten days of April, the decline in production compared to March was 6%, and by the end of the month it reached almost 9%. Since the spring of 2021, Russia has mostly smoothly increased oil production, but in March 2022, it faced comprehensive international sanctions due to the situation in Ukraine. Thus, the sanctions prohibit investments in the exploration, production and processing of crude oil in Russia. Russian Finance Minister Anton Siluanov said that Russia could lose up to 17% of oil production in 2022 due to sanctions.

SAF

Dan Tsubouchi @Energy_Tidbits · May 26

#JCPOA. looks like no change to Iran wanting IRGC terrorist designaton removed. At 29:05min "you claim you have good intentions, we are ready. give us economic guarantees and remove elements of the maximum pressure policy of Trump" @Amirabdolahian to @FareedZakaria. #OOTT

> **World Economic Forum** @wef · May 26
>
> A Conversation with @amirabdolahian, Minister of Foreign Affairs of Iran @IRIMFA_EN, @fareedzakaria @CNN #wef22 twitter.com/i/broadcasts/1...

Dan Tsubouchi @Energy_Tidbits · May 26

High #JetFuel price response. "Fuel prices have kept rising over the past month and require the Group to rebalance capacity and fares in response. The cuts to domestic flying levels for July and August are being deepened" & fares being raised. #OOTT

QANTAS

qantasnewsroom.com.au

QANTAS GROUP – INDUSTRY UPDATE

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Dan Tsubouchi @Energy_Tidbits · May 25

Great @RayDalio insights ie. "the resource allocation system is no longer economic. The resource allocation is political & ideological""those ideologies become the dominant consideration""the unimaginable is becoming increasingly probably". #Oil #NatGas look good for 2020s #OOTT

SAF Group created transcript of Ray Dalio (Founder, Co-Chief Investment Officer, and Member of the Bridgewater Board) on World Economic Forum panel "*An Economic Iron Curtain: Scenarios and Their Implications*" on May 25, 2022 https://twitter.com/wef/status/1529483914103779328

Items in "italics" are SAF Group created transcript

At 35:50 min mark, Dalio "*..... so when we are looking at the circumstances, we're now in a new era. We wish that there's coordination. We've lived in an era where we were global. And the way resources were allocated was where was it more cost efficient. So if it was cost efficient here, you would send the capital, you would build it there. And that would raise employment and so on. And that's what we've come to believe is a fair system.*

But that's only because we've gotten used to that. But if you go back and look at history, and today, many people would believe that's not a fair system. So here we are in the fragmented world that we're in. So the resource allocation system is no longer economic. The resource allocation is political and ideological. So when we ask ourselves and we wish for cooperation, it's understandable that we won't get cooperation because there is a risk there is conflicts. There's an internal conflict of civil war so how do we redistribute the wealth within our country so we will have that within the country. Well, there's a helluva fight over that. So there's the willingness to fight over that. The same is true internationally. So what is America first, what is that in terms of that.

And so I think we have to understand, we have to keep in mind that when we say we are going to cooperate or should, in a world where self-sufficiency, because we could go to war, becomes important. The efficiencies are no longer the most important things. Survival is the most important thing. The possibility of a war is an important thing.

And it changes behaviour in ways that are logical, but maybe undesirable for those of us who are in a perspective that we believe we should be in this together. And how do we work together. So I think it's all understandable. So that depreciates the value of money. We are going to have more conflict. We're going to have more inflation. Inflation causes domestic political conflict. So it will be a big issue in the 2022 elections and the 2024 elections, that's just how the machine works. In the meantime, we have, and the war in Ukraine and Russia. And, with China, is understandable in terms of the big powers conflict.

So we see the world, if you read history and you see this happen over and over again. You see the world is now breaking up into sides. It's like there are allied powers and there are axis powers, and there are neutral powers. And those ideologies become the dominant consideration. So it's entirely possible, for example that we could see in China and so on that it's no longer desirable, or politically acceptable to do business in China. It may not be. Now you think about how intertwined the world economy is. 22% of American manufactured goods import come from China. So now just imagine the implications for inflation and inefficiencies. That's just mechanistically what's going on. So as a mechanic, who is looking at next year and the year after and where we are in that thing, I'm just saying it's undesirable. And the unimaginable is becoming increasingly probable."

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

Dan Tsubouchi @Energy_Tidbits · May 25

oops. well prepared guest wasn't prepared for what seemed like a layup last question. too bad @AndrewBellBNN wasn't at #WEF2022. he could have closed an interview with @ClimateEnvoy with the question did you fly to #Davos on a commercial flight? #OOTT

Dan Tsubouchi @Energy_Tidbits · May 25

For those not near their laptop, @EIAgov weekly #Oil #Gasoline #Distillates inventory as of May 20 just out. prior to release. Compared vs @APIenergy yesterday and expectations. WTI was $110.90. #OOTT

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

nventory May 20: EIA, Bloomberg Survey Expectations, A

)	EIA	Expectations
	-1.02	-2.10
	-0.48	-1.64
	1.66	1.00
	0.16	-2.74

nmercial so builds in impact of 6.0 mmb draw from SPR for Ma
in the oil data, Cushing had a draw of 1.06 mmb for May 20 w
oomberg
AF Group https://safgroup.ca/news-insights/

Dan Tsubouchi @Energy_Tidbits · May 25

"grey #Hydrogen, very profitable already", blue hydrogen "competitive but complicated", "green hydrogen, today if you want to make that out of electricity, i think that's a bad idea' says @JoeKaeser to @flacqua. EnergyTransition will be expensive. #OOTT #NatGas

SAF Group created transcript of comments by Joe Kaeser (Siemens Energy Chairman) with Bloomberg's Francine Lacqua on Bloomberg Surveillance at World Economic Forum on May 25, 2022

Items in "italics" are SAF group created transcript

Lacqua *"there are huge question marks also about hydrogen, when will you make hydrogen profitable?"*

Kaeser "*It depends on which one. You have the so called grey hydrogen, very profitable already, Linde, Praxair, Proxair, others are very profitable, [xxx?] hydrogen. Then there is the blue hydrogen which basically takes the CO2 extraction and puts it back in the ground. Competitive, but complicated because whenever people want to put that into the ground through a well, what will happen, it comes back up. so environmentally complicated. Green hydrogen, today if you want to make that out of electricity, I think that's a bad idea. You need to first serve society with electricity. Once you are done with that, we should convert electricity into green hydrogen*".

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

Dan Tsubouchi @Energy_Tidbits · May 25

Straight talk on #Wind from @JoeKaeser "The issue currently on renewable and predominately in #Wind energy is that none of the big companies, Siemens Gamesa or our competitors are making any money. Great interview @flacqua. #EnergyTransition will be expensive. #OOTT #NatGas

SAF Group created transcript of comments by Joe Kaeser (Siemens Energy Chairman) with Bloomberg's Francine Lacqua on Bloomberg Surveillance at World Economic Forum on May 25, 2022

Items in "italics" are SAF group created transcript

At 3:40am MT, Lacqua "When you talk about renewables, there are a lot of people here in Europe who say this will save the future. Not everything is working. You are having trouble with some of your wind turbines, what's the problem with wind"

Kaeser *"The issue currently on renewable and predominately in wind energy is that none of the big companies, Siemens Gamesa or our competitors are making any money. So it means the profit pool of that industry is negative. So if the profit pool is negative and this is so attractive, how come?"*

Lacqua *"But why. Why is it so difficult, I know it's supply components, I know its delays"*

Kaeser *"The industry got caught flat first of all on the cost inflation of the raw materials. That's only temporary, one, two years. Second topic is the industry has got ahead of itself in terms of forward pricing. It was 7 cent or 5 cent, people say well if you want to build this, you need 3 cent. And people were jumping into that trying to understand time will tell, they're really going to find some saving along the way. And they didn't't'. The fact of the matter was and actually through the inflation of the raw material prices, it got the other way."*

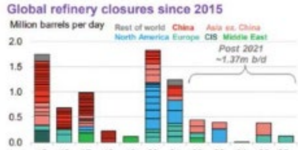
Prepared by SAF Group https://safgroup.ca/news-insights/

Dan Tsubouchi @Energy_Tidbits · May 24

Focus by #Biden @fbirol is on short term oil supply (want more #OPEC, shale), but don't have answer for big 2022 problem - refining capacity to produce #Diesel #Gasoline #JetFuel. 4.4 mmbd shut down since Jan 1/2020 driven by #ESG pressures. Thx @BloombergNEF Sisi Tang. #OOTT

Another 750k b/d capacity set to close by end 2023, despite sky-high refining margins

Global refinery closures since 2015



Source: BloombergNEF, CNPC ETRI, company announcements. Note: Includes plans to close, convert and mothball. See attached database for more details.

Refinery closures by future options since 2020

Source: BloombergNEF, company announcements. Note: Includes plans to close, convert and mothball. See attached database for more details.

- In the next few years, nearly 1.4 million barrels per day (b/d) of oil refining capacity has been earmarked for closure, of which over 750,000 b/d will occur in the next 18 months. This is in addition to the 3.1 million b/d of refinery closures in 2020 and 2021, when Covid-19 wreaked havoc on global oil demand.
- Closures in the past two years have contributed to the recent record-high refining margins. As oil demand rebounds to pre-pandemic levels in Europe and the US, supply has fallen short due to some permanent capacity closure in the downstream sector as well as disruption to oil and product flows from Russia.
- However, sky-high refining margins in the short term have not slowed down refiners in rationalizing their assets. The most recent example is LyondellBasell's 268,000 b/d Houston refinery in the US, which will cease operations by 2023. The decision comes after years of futile searching for a potential buyer, which has become increasingly difficult amid the recent global green push.
- More refining assets are up for sale as oil companies seek to optimize portfolios to achieve their net-zero targets. Shell and BP are now looking to sell their joint venture Sapref, South Africa's biggest refinery. Marathon Petroleum is also in discussions to sell its Kenai refinery in Alaska as the company shifts away from fossil fuels and focuses on renewable fuels.

1 May 24, 2022 BloombergNEF

Dan Tsubouchi @Energy_Tidbits · May 24

#Oil wildcard. how will increasing #FoodCrisis in poorer countries impact overalldemand."govts around the world, especially in countries like Egypt, do not have the fiscal space to provide widespread support" ie. bread subsidies @GitaGopinath to @tomkeene @lisaabramowicz1. #OOTT

SAF Group created transcript of comments by Gita Gopinath (IMF, First Deputy Managing Director) with Bloomberg's Tom Keene and Lisa Abramowicz on Bloomberg Surveillance on May 24, 2022

Items in "italics" are SAF Group created transcript

At 4:07am MT, Keene "…. *India has led the way with the first fear of blockage of exports, what is the IMF doing to give confidence to nations that are struggling with wheat and, heaven forbid, I would say rice?"*

Gopinath "*Tom, this is a major concern for us. It's not just India. If you look at food exports, since the start of the war around 20 countries have put restrictions on food exports, whether it be wheat or be it palm oil and many other such products. And fertilizers are also in severe shortage. So we worry a lot about what is going to happen with food prices. I think it's one of those prices which where there is more that is going to go up it the future than what we have seen. And it is a major concern*".

Keene "*the history is here is the domestic government will come to the rescue, flatten prices like the cost of bread in Egypt that has been flat for decades and subsidize whatever the commodity is, until it breaks. how close in your study country to country are we close to a breaking point of that domestic subsidy to feed people?*"

Gopinath "*after two years of the pandemic, governments around the world, especially in countries like Egypt, do not have the fiscal space to provide widespread support. And this is something that we are tracking very closely, exactly this question of how many countries are now facing these rapid increase in food prices and therefore are likely to develop balance of payment problems. This is one of the trackers that we have and this is a major concern*"

Abramowicz "*how much of this is a failing, frankly, of the developed world from supporting Ukraine war, in other words, in actually providing more financial aid to get some of those supplies to the rest of the world?*"

Goipinath "*this is a very challenging issue on how to get Ukraine supplies out of Ukraine. The problem is the embargo on the Black Sea, you just can't get ships to take the wheat out. We are thinking of creative solutions in terms of putting them on trains and sending them out through that way. But that is going to take a lot more time. In addition to the war, we are also seeing the effect of climate change around the world. one of the reasons India has put its export restrictions on wheat is because of poor yields and bad weather. so that's another big negative. But we really do need to try hard at this point to try to get supply out as much as possible around the world*'

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

Dan Tsubouchi @Energy_Tidbits · May 24

"beijing could be headed for a shanghai style lockdown, at least that's a possibility" @onlyyoontv to @BeckyQuick on @SquawkCNBC . #OOTT.

SAF

Dan Tsubouchi @Energy_Tidbits · May 23

"(NEHHOR), a one million barrel supply of ultra low sulfur distillate (diesel), was created to build a buffer to allow commercial companies to compensate for interruptions in supply DURING severe winter weather" says @ENERGY #OOTT energy.gov/fecm/northeast...

wsj.com

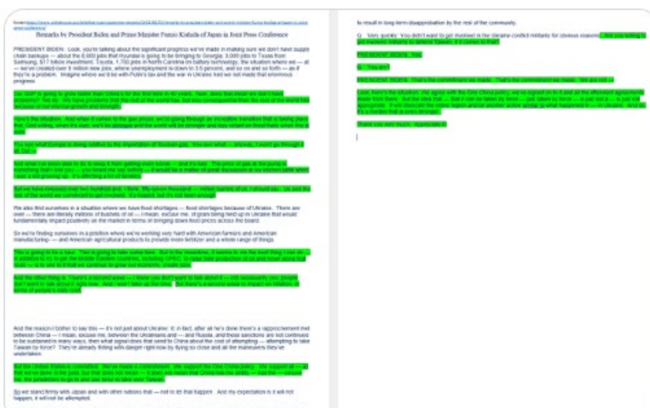
Biden Exploring Release of Diesel Fuel Reserves Amid High Prices

The White House says it is ready to act quickly if needed to address supply outages on the East Coast.

SAF

Dan Tsubouchi @Energy_Tidbits · May 23

High gasoline price here to stay? @POTUS"when it comes to the gas prices,we're going through an incredible transition that is taking place that, God willing, when it's over, we'll be stronger and the world will be stronger and less reliant on fossil fuels when this is over' #OOTT



Remarks by President Biden and Prime Minister Fumio Kishida of Japan in Joint Press Conference

Dan Tsubouchi @Energy_Tidbits · May 23

Support for high #Oil prices in mid/late 2020s. @fbirol at #WEF22, yes fix energy crisis but should only be short cycle projects, not large projects to add long term capacity ie. use all the bullets now. Yet @IEA WEO Oct fcast #PeakOilDemand after 2030 in stated policies. #OOTT

Table A.7: Oil production (mb/d)

	Historical			Stated Policies		Announced Pledges		Sustainable Development	
	2010	2019	2020	2030	2050	2030	2050	2030	2050
World supply	85.5	97.9	91.3	103.0	103.0	96.1	76.7	87.6	47.0
Processing gains	2.1	2.4	2.1	2.6	3.0	2.4	2.3	2.2	1.4
World production	83.4	95.5	89.2	100.4	99.9	93.7	74.4	85.4	45.6
Conventional crude oil	66.8	65.1	59.4	64.1	61.2	58.9	46.6	53.6	23.1
Tight oil	0.7	7.7	7.3	10.4	10.9	9.8	7.8	8.7	6.4
Natural gas liquids	12.7	18.1	18.1	20.4	21.4	19.3	17.2	18.5	11.7
Extra-heavy oil & bitumen	2.6	3.8	3.3	4.1	5.0	3.8	2.3	3.5	2.2
Other	0.6	0.8	0.9	1.2	1.4	0.9	0.5	1.0	0.2
Non-OPEC	50.1	60.5	58.3	63.8	56.2	59.1	39.1	53.6	25.9
OPEC	33.3	35.0	30.9	36.6	43.7	34.6	35.4	31.7	19.6
North America	14.2	24.7	23.8	27.7	23.2	25.2	15.6	23.7	13.3
Central and South America	7.4	6.3	5.9	7.9	10.9	7.5	6.2	6.7	3.4
Europe	4.4	3.6	3.8	3.2	1.6	2.9	0.7	2.6	0.7
European Union	0.7	0.5	0.5	0.4	0.3	0.3	0.1	0.3	0.1
Africa	10.2	8.5	7.0	6.9	7.3	6.5	4.1	6.0	3.4
Middle East	25.4	30.2	27.7	34.0	39.7	32.1	34.3	29.3	17.9
Eurasia	13.4	14.6	13.4	14.4	12.5	13.9	10.2	11.9	5.1
Asia Pacific	8.4	7.7	7.5	6.2	4.7	5.6	3.2	5.1	1.9
Southeast Asia	2.6	2.3	2.1	1.4	0.9	1.4	0.8	1.3	0.4

Table A.8: Oil demand (mb/d)

	Historical			Stated Policies		Announced Pledges		Sustainable Development	
	2010	2019	2020	2030	2050	2030	2050	2030	2050
World	86.7	96.6	87.9	103.0	103.0	96.1	76.7	87.6	47.0
North America	22.2	22.7	20.1	21.3	16.7	18.0	7.7	17.7	6.8
United States	17.8	18.4	16.4	17.4	13.4	14.7	5.4	14.8	5.4
Central and South America	5.5	5.5	5.0	5.4	6.0	4.8	4.0	4.5	2.4
Brazil	2.3	2.4	2.3	2.4	2.5	1.9	1.1	1.9	1.0
Europe	13.9	13.0	11.9	10.4	6.4	9.0	3.6	8.7	2.2
European Union	10.6	9.7	8.9	7.4	4.1	6.2	1.4	6.2	1.3
Africa	3.3	4.0	3.6	5.1	8.4	5.0	7.9	4.6	4.3
Middle East	6.6	7.4	6.7	8.2	10.2	8.2	10.2	7.2	6.1
Eurasia	3.2	3.8	3.7	4.4	4.5	4.4	4.3	4.0	2.6
Russia	2.6	3.1	3.0	3.5	3.1	3.5	3.1	3.2	2.0
Asia Pacific	25.0	32.0	30.8	38.5	38.8	37.8	30.1	33.0	17.2
China	8.8	13.1	13.3	15.7	13.4	15.7	6.4	13.6	5.9
India	3.3	4.8	4.4	7.2	9.2	7.2	9.2	6.2	4.1
Japan	4.2	3.4	3.1	2.8	1.8	2.4	0.8	2.4	0.8
Southeast Asia	4.0	5.1	4.7	6.6	7.7	6.6	7.6	5.6	3.2
International bunkers	7.0	8.3	6.1	9.6	11.9	8.9	8.8	7.9	5.4

Dan Tsubouchi @Energy_Tidbits · May 23

EU had pre-RUS #EnergyCrisis as didn't have energy security as a separate problem to solve. But now it is, DE Habeck: four interwoven crisis: inflation, energy, food poverty, climate. "we can't solve the problems if we are only concentrating on only one of crisis". #WEF22 #OOTT

SAF Group created transcript of comments from Germany Vice Chancellor Robert Habeck (also Green party leader) with Jason Bordoff (Co-Dean Columbia Climate School) at Davos World Economic Forum on May 23.
https://www.weforum.org/events/world-economic-forum-annual-meeting-2022/sessions/setting-the-agenda-for-the-energy-economy

Items in "italics" are SAF Group created transcript

At 6:00 min mark, Habeck "… caring about a new security of energy supply is not a contradiction to the greater goal of getting independent of fossil fuels at all. So we have a number of legislation acts now in the parliament that should carefully increase installation of renewables all over the place in Germany. And this is the link to the greater picture, I feel and I would like to share with you. I think we have at least four problems or crisis right now that are all interwoven. We have high inflation some of the countries, in Europe, the US and a lot of other countries. We have an energy crisis, you must call it this way. We have food poverty. And we have the climate crisis. We can't solve the problems if we are only concentrating on only one of crisis. But if none of the problems are solved, I'm really afraid that we are running into a global recession with a tremendous effect not only about, on climate protection, on climate action but of global stability at all. Imagine, imagine that part of the world is starving next year, it's not only about hunger, which is terrible enough, but this is about global stability."

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

Dan Tsubouchi @Energy_Tidbits · May 23

1/2. @fbirol #Oil may be going even higher & more volatile. Increasing demand in summer driving season, "the ONLY issue that we have to keep our eye on is whether or not China demand will be still flat or be very weak as a result of the Chinese economic weakness" #OOTT

2 4 1

Dan Tsubouchi @Energy_Tidbits · May 23

2/2. US, BRA, CAN #Oil supply takes time. If "responsible players" (dig at Saudi) "if you don't make a positive contribution here, we may see prices even going higher, be much more volatile and becoming a major risk for recession for the global economy". Thx @flacqua #OOTT

SAF Group created transcript of excerpt of comments from IEA Executive Director Fatih Birol with Bloomberg's Francine Lacqua a the World Economic Forum in Davos on May 23, 2022 https://www.bloomberg.com/news/videos/2022-05-23/iea-s-birol-says-oil-prices-may-rise-further-video

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

At 2:30 min mark, Birol "*... and the world has to respond to that. it shouldn't left unpunished, this is one. And the second, if we reduce, Europe reduces the oil imports from Russia, it will not be easy for the global oil markets, for sure. There will be more volatility but it has to be done. it has to be done and our job is to minimize that volatility, to minimize those risks*"

Lacqua "*But Fatih, how much volatility could we see. Could we see $140, $150 very quickly?*"

Birol "*this summer, this summer will be difficult. This summer will be difficult because in summer as we know the oil demand normally goes up with the driving season and the production growth is set to come from US, Brazil, Canada is still on its way but it may not be ready by summer. The only issue that we have to keep our eye on is whether or not China demand will be still flat or be very weak as a result of the Chinese economic weakness.*"

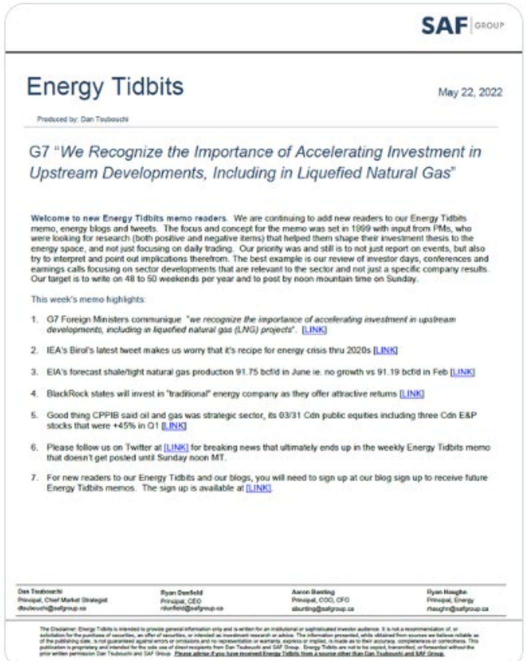
Lacqua "*I know you hate talking about prices, but I will press you on prices because you know this could tip us into a recession, how high could the price of oil go?*"

Birol "*I think it is already very high, I should say. And it is for everybody in the global energy markets, every player who says they are responsible players to make a positive contribution here. if you don't make a positive contribution here, we may see prices even going higher, be much more volatile and becoming a major risk for recession for the global economy*".

Prepared by SAF Group

Dan Tsubouchi @Energy_Tidbits · May 22

Our weekly SAF May 22, 2022 Energy Tidbits memo is posted on our SAF Group website. This 56-pg energy research memo expands upon & covers more items than tweeted this week. See news/insights section of SAF website #Oil #OOTT #LNG #NatGas #EnergyTransition safgroup.ca/news-insights/



SAF GROUP

Energy Tidbits

May 22, 2022

Produced by: Dan Tsubouchi

G7 "*We Recognize the Importance of Accelerating Investment in Upstream Developments, Including in Liquefied Natural Gas*"

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. Our priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector 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. G7 Foreign Ministers communique "*we recognize the importance of accelerating investment in upstream developments, including in liquefied natural gas (LNG) projects*". [LINK]
2. IEA's Birol's latest tweet makes us worry that it's recipe for energy crisis thru 2020s [LINK]
3. EIA's forecast shale/tight natural gas production 91.75 bcf/d in June ie. no growth vs 91.19 bcf/d in Feb [LINK]
4. BlackRock states will invest in "traditional" energy company as they offer attractive returns [LINK]
5. Good thing CPPIB said oil and gas was strategic sector, its 03/31 Cdn public equities including three Cdn E&P stocks that were +45% in Q1 [LINK]
6. Please follow us on Twitter at [LINK] for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
7. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK].

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