

Energy Tidbits

US Gives Chevron Go-Ahead to Restart Venezuela Oil Production and Import to Its Gulf Coast Refinery

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QATARENERGY AND SINOPEC SIGN A 27-YEAR 4 MILLION TONS PER ANNUM LNG SUPPLY AGREEMENT TO CHINA -

DOHA, Qatar • 21 November 2022 – QatarEnergy entered into a 27-year Sale and Purchase Agreement (SPA) with China Petroleum & Chemical Corporation (Sinopec) for the supply of 4 million tons per annum (MTPA) of LNG to the People's Republic of China.

Under the terms of the SPA, the contracted LNG volumes will be supplied from QatarEnergy's North Filed East (NFE) LNG expansion project and will be delivered to Sinopec's receiving terminals in China.

His Excellency Mr. Saad Sherida Al-Kaabi, the Minister of State for Energy Affairs, the President and CEO of QatarEnergy, and Dr. MA Yongsheng, the Chairman of Sinopec, signed the agreement today during a hybrid virtual / physical ceremony. Joining H.E. Minister Al-Kaabi at QatarEnergy's headquarters in Doha were senior executives from both companies, while Dr. MA and other high level Sinopec executives participated virtually from Beijing.

In his remarks at the signing ceremony, His Excellency Minister Al-Kaabi said: "We are pleased to enter into this agreement, which will further solidify the excellent bilateral relations between the People's Republic of China and the State of Qatar and help meet China's growing energy needs. In addition, it opens a new and exciting chapter in our relationship with Sinopec, one that is very special and spans a number of different areas, and which we are excited about further growing and expanding into the 2050s."

His Excellency Minister Al-Kaabi added: "This is the first long-term SPA from the NFE project to be announced, and marks the longest gas supply agreement in the history of the LNG industry." H.E. Minister Al-Kaabi concluded his remarks by expressing his thanks and appreciation to the working teams from Sinopec, QatarEnergy and Qatargas, for their dedication and sincere efforts to conclude the SPA, and gratitude to the leadership of His Highness the Amir Sheikh Tamim bin Hamad Al Thani, for his unwavering support to Qatar's energy sector.

On his part, Dr. MA Yongsheng, the Chairman of Sinopec, said: "The signing of the long-term LNG SPA with QatarEnergy is a milestone and an important part of the integrated cooperation between the two sides on the NFE project. Qatar is the world's largest LNG supplier, and China is the world's largest LNG importer. The two countries share inherent complementarities and a good foundation for energy cooperation. The friendly and close ties between the two countries have created a good environment for us to constantly deepen cooperation. Sinopec attaches great importance to the cooperation with QatarEnergy, who we regard as a strategic, long-term and all-round partner, and we are expecting more cooperation fruits to come. Sinopec has been always committed to the development of green and clean energy. Our integrated cooperation with QatarEnergy on the NFE project could not only meet the needs of the Chinese market, but also reflect Sinopec's commitment to a low-carbon, green, safe, responsible and sustainable development path."

The agreement is the second LNG SPA between QatarEnergy and Sinopec, following the 10-year SPA signed in March 2021 for the supply of 2 MTPA to China.

The SPA is also the first long term LNG offtake agreement from the NFE Expansion project, and comes on the heels of QatarEnergy's conclusion of the formation of eight international partnership

agreements for the North Field East and North Field South (NFS) projects, which are expected to come online in 2026 and 2027, respectively.

QatarEnergy has also concluded construction contracts and long-term time charter agreements for 60 LNG carriers as part of its historic LNG shipbuilding program in support of both the NFE and NFS expansion projects, with the number expected to grow to almost 100 in the future.

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

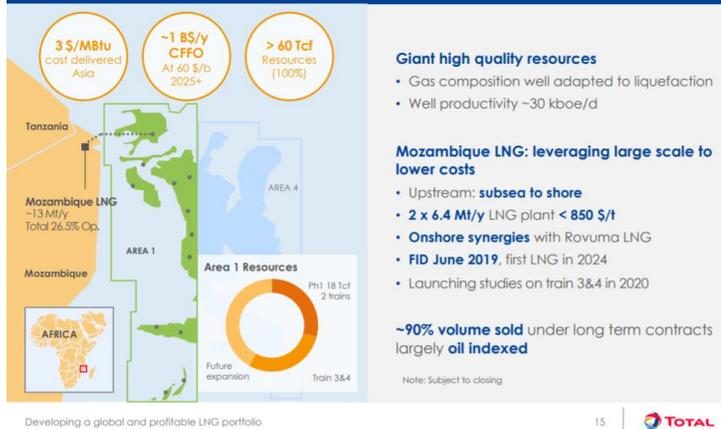
Posted Wednesday April 28, 2021. 9:00 MT

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

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

Total Mozambique Phase 1 and 2

Mozambique LNG: unlocking world-class gas resources



Source: Total Investor Day September 24, 2019

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

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

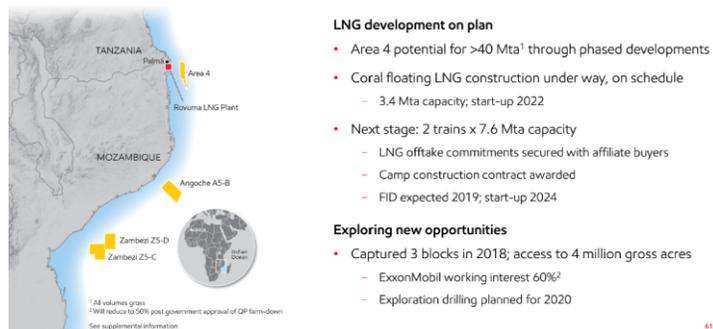
Mozambique's security issues pushes back 5.0 bcf/d of new LNG supply at least a couple years. The global LNG issue is that 5 bcf/d of new Mozambique LNG supply (apart from the Eni Coral FLNG of 0.45 bcf/d) won't start up in 2024 and

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

Exxon Mozambique LNG

UPSTREAM MOZAMBIQUE

Five outstanding developments



Source: Exxon Investor Day March 6, 2019

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

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

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

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

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

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



Source: IEA

● On Track ● More Efforts Needed ● Not on Track

Source: IEA Tracking Clean Energy Progress, June 2020

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

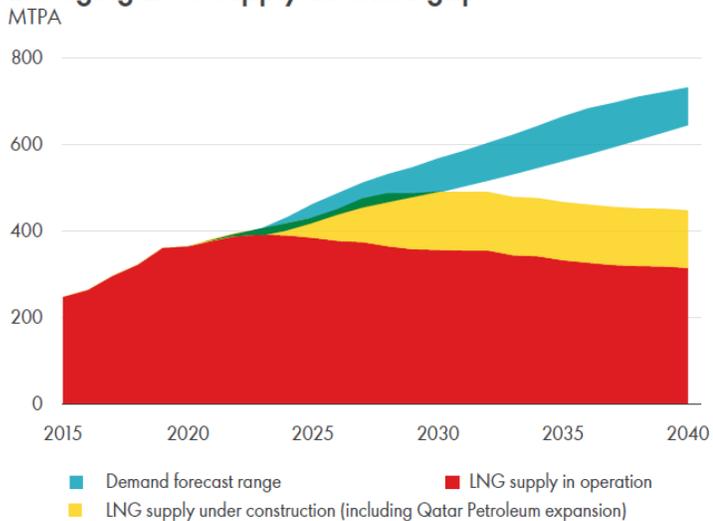
[Shell's March 2021 long term outlook for LNG demand was basically unchanged vs 2020 and leads to a LNG supply gap in mid 2020s](#). Shell does not provide the detailed numbers in their Feb 25, 2021 LNG forecast. We would assume they

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

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

Emerging LNG supply-demand gap



Source: Shell LNG Outlook 2021, Feb 25, 2021

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

And does this bigger, nearer supply gap force LNG players to look at what brownfield LNG projects they could advance?

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

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

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

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

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

Posted 11am on July 14, 2021

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

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

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

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

One of the reasons why it went under the radar is that major LNG suppliers played stupid on the Mozambique impact. It makes it harder for markets to see a big deal when the major LNG suppliers weren't making a big deal of Mozambique or playing stupid in the case of Cheniere in their May 4 Q1 call. In our May 9, 2021 Energy Tidbits memo, we said we had to chuckle when we saw Cheniere's response in the Q&A to its Q1 call on May 4 that they only know what we know from reading the Total releases on Mozambique and its impact on LNG markets. It's why we tweeted [\[LINK\]](#) "*Hmm! \$LNG says only know what we read on #LNG market impact from \$TOT \$XOM MZ LNG delays. Surely #TohokuElectric & other offtake buyers are reaching out to #Cheniere. MZ LNG delays is a game changer to LNG in 2020s, see SAF Group blog. Thx @olymp_e_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 facilities. So we take care of a lot of what the customer needs*".

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

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

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

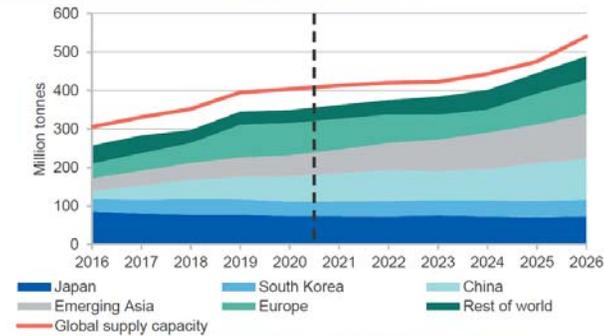
But we still see major LNG suppliers like Australia hinting but not outright saying that LNG supply gap is coming sooner. We have to believe Australia will be unveiling a sooner LNG supply gap in their September forecast. On June 28, we tweeted [\[LINK\]](#) on Australia's Resources and Energy Quarterly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

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

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

March 2021 LNG Outlook

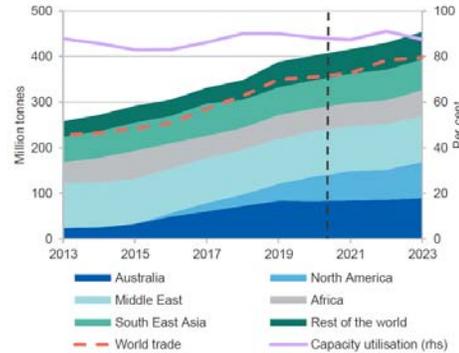
Figure 7.1: LNG demand and world supply capacity



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

June 2021 LNG Outlook

Figure 7.1: LNG demand and world supply capacity



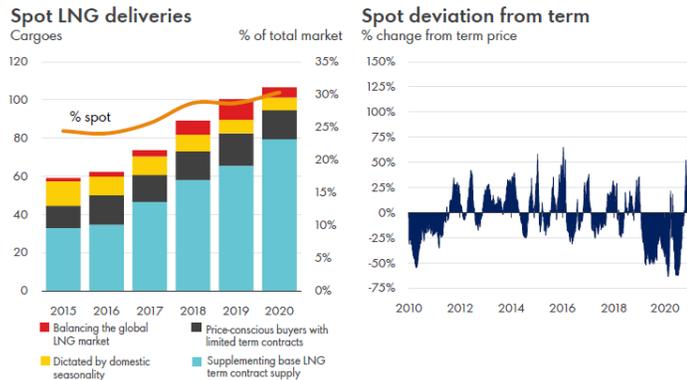
Source: Nexant (2021) World Gas Model; Department of Industry, Science, Energy and Resources (2021)

Source: Australia Resources and Energy Quarterly

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

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

Spot LNG deliveries and Spot deviation from term price



Source: Shell LNG Outlook 2021 on Feb 25, 2021

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

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

Petronas/CNOOC is 10 yr supply deal for 0.3 bcf/d. On July 7, we tweeted [\[LINK\]](#) on the confirmation of a big positive to Cdn natural gas with the Petronas announcement [\[LINK\]](#) of a new 10 year LNG supply deal for 0.3 bcf/d with China's CNOOC. The deal also has special significance to Canada. (i) Petronas said "This long-term supply agreement also includes supply from LNG Canada when the facility commences its operations by middle of the decade". This is a reminder of the big positive to Cdn natural gas in the next 3 to 4 years – the start up of LNG Canada Phase 1 is ~1.8 bcf/d capacity. This is natural gas that will no longer be moving south to the US or east to eastern Canada, instead it will be going to Asia. This will provide a benefit for all Western Canada natural gas. (ii) First ever AECO linked LNG deal. It's a pretty significant event for a long term Asia LNG deal to now have an AECO link. Petronas wrote "The deal is for 2.2 million tonnes per annum (MTPA) for a 10-year period, indexed to a combination of the Brent and Alberta Energy Company (AECO) indices. The term deal between PETRONAS and CNOOC is valued at approximately USD 7 billion over ten years." 2.2 MTPA is 0.3 bcf/d. (iii) Reminds of LNG Canada's competitive advantage for low greenhouse gas emissions. Petronas said "Once ready for operations, the LNG Canada project paves the way for PETRONAS to supply low greenhouse gas (GHG) emission LNG to the key demand markets in Asia."

Qatar Petroleum/CPC (Taiwan) is 15 yr supply deal for 0.16 bcf/d. Pre Covid, Qatar was getting pressured to renegotiate lower its long term LNG contract prices. Now, it's signing a 15 year deal. On July 9, they entered in a new small long term LNG sales deal [\[LINK\]](#), a 15-yr LNG Sale and Purchase Agreement with CPC Corporation in Taiwan to supply it ~0.60 bcf/d of LNG. LNG deliveries are set to begin in January 2022. H.E. Minister for Energy Affairs & CEO of Qatar Petroleum Al-Kaabi said "We are pleased to enter into this long term LNG SPA, which is another milestone in our relationship with CPC, which dates back to almost three decades. We look forward to commencing deliveries under this SPA and to continuing our supplies as a trusted and reliable global LNG provider." The pricing was reported to be vs a basket of crudes.

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

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

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

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

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

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

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

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

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

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

Global LNG Supplies Are 'Sold Out' for Years, Top Importer Warns
2022-11-21 04:27:36.319 GMT

By Shoko Oda

(Bloomberg) -- Japan warns that global competition for liquefied natural gas is set to intensify over the next three years due to an underinvestment in supply.

Long-term LNG contracts that start before 2026 are sold out, according to a survey of Japanese companies conducted by the trade ministry and released Monday. These types of contracts are essential for buyers, as they offer stable pricing and reliable supply for many years.

Countries around the world are scrambling to secure shipments of the power plant and heating fuel from major exporters like Qatar and the US, but there is little new supply coming online before 2026. Meanwhile, Europe is racing to replace Russian pipeline gas with LNG, further exacerbating the global shortage of fuel.

This means importers will be forced to depend more on the volatile and expensive spot market, which is currently trading nearly three times higher than long-term contracts. Roughly 30% of all LNG deliveries were via the spot market last year, according to the International Group of Liquefied Natural Gas Importers.

Japanese ministry officials and energy company executives met on the same day to discuss LNG procurement plans. Japan is poised to be the world's biggest LNG importer this year, and the fuel is the nation's top choice for power generation.

Related story: Europe's Energy Crunch Will Trigger Years of Shortages

A lack of investment in LNG export projects means that supply will be very tight for years, the trade ministry document said. If Russian pipeline gas to Europe is cut completely, the world could see a shortage of 7.6 million tons of LNG in January 2025, equivalent to one month's worth of imports to Japan, according to the document.

Japan has been taking steps to ramp up energy security by enabling the government to purchase LNG from the spot market in the event companies cannot.

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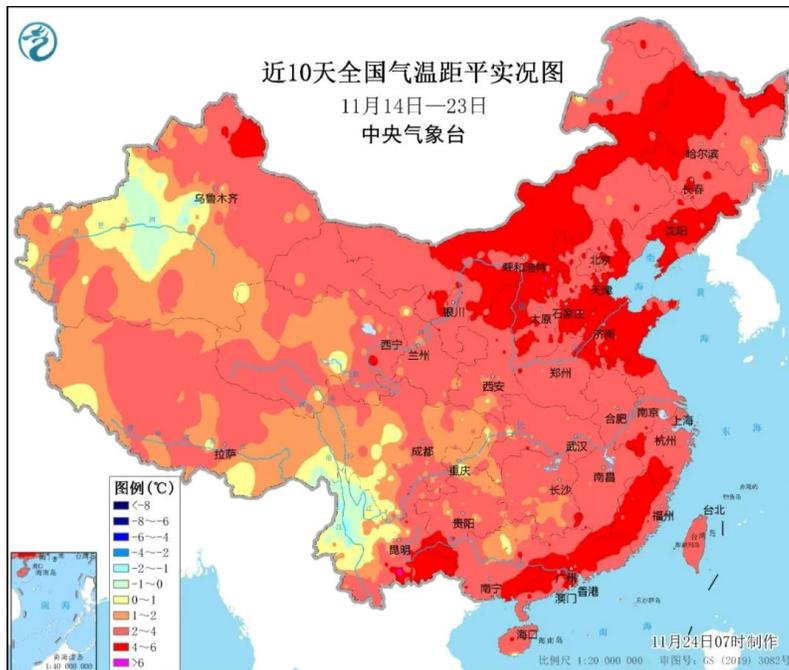
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Google Translate Link: [@Most of the Mideast The strongest cold wave weather this year has hit! \(qq.com\)](#)

@Most of the Mideast The strongest cold wave weather this year has hit!

[China Meteorological Administration](#) 2022-11-24 04:13 Posted on Beijing

Since mid-November, there has been no strong cold air affecting China, meteorological data monitoring shows that in the past 10 days, the temperature in most parts of the country is 2~4 °C higher than the same period of the year, and some areas are 4~6 °C higher.



It is expected that from the 26th to the 30th, the cold wave weather will sweep across China, the temperature in most areas will plummet, and the temperature in most areas will turn significantly lower than usual after the cold wave, and the weather will be cold. This cold wave will not only have a wide impact, severe cooling and strong wind, but also be accompanied by rain and snow, and the public needs to pay attention to weather changes in advance.

Cold snap progression

★

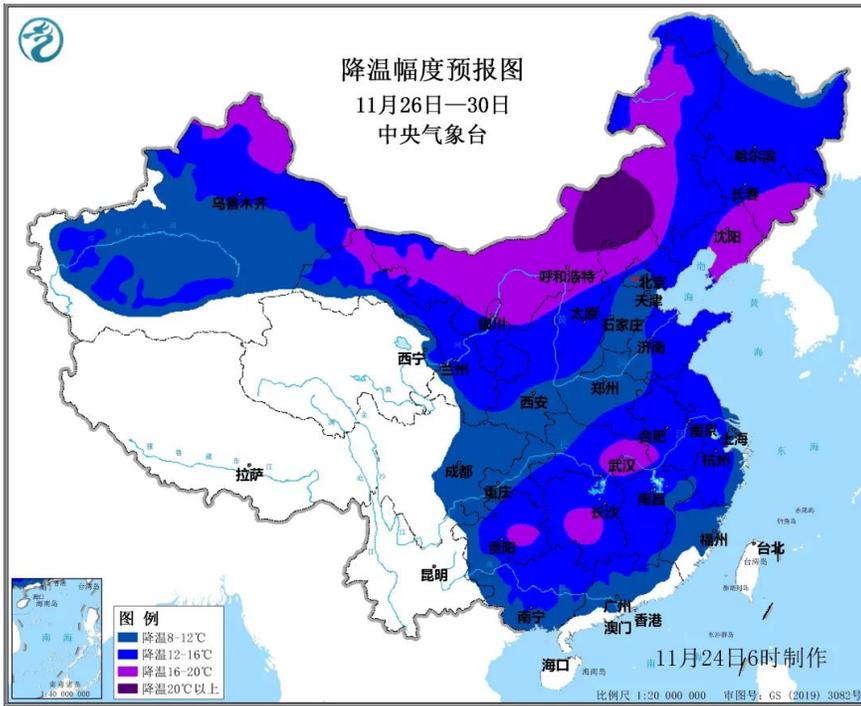
26-27

Cold wave weather will take the lead in affecting Xinjiang, western Gansu and western Inner Mongolia, most areas of the temperature will drop 10~18 °C, local drop of more than 20 °C, the above areas will have 6~8 northerly winds, gusts 9~11, Xinjiang mountain pass wind can reach 12~13, some areas will be accompanied by dust weather.

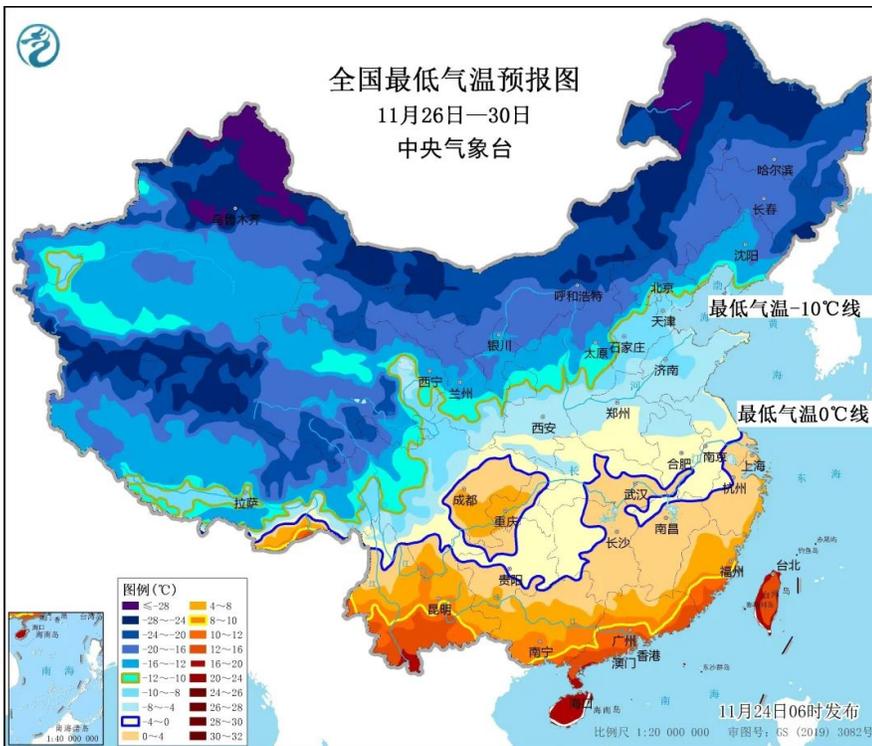
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28-30

The cold wave weather moves east to the south, continuing to affect the central and eastern regions of China, most of the temperature in the central and eastern parts will drop by 8~14 °C, the local cooling range can reach more than 16 °C, and most of the areas north of the middle and lower reaches of the Yangtze River will have 5~7 northerly winds, gusts of 8~10; The wind in the eastern sea area has 7~8 and gusts 9~11.



After the cold air front, the daily minimum temperature of 0°C will gradually press south to the middle and lower reaches of the Yangtze River to the southern part of Guizhou, and the daily minimum temperature of -10°C will be located in southern Liaoning, western Beijing to eastern Gansu.



Rain and snow forecast

It is expected that from the 25th to the 26th, there will be heavy to heavy snowfall in some parts of northern Xinjiang, and heavy snowstorm in local areas; From the 27th to the 30th, there was rain to sleet or snowfall in the eastern part of Northwest China, part of North China, Northeast China, Huanghuai, Jiangnan and Jianghuai, and moderate to heavy rain and local heavy rain in Hunan, eastern Hubei, north-central Jiangxi, southern Anhui, southern Jiangsu, Shanghai, Zhejiang and northern Fujian.

Weather experts remind

The cold wave weather is menacing, most areas are cooled violently, and the wind is strong, the public needs to add clothes in time, do a good job of warmth measures, pay attention to human health, and stay away from temporary structures when going out to prevent falling objects. In addition, the public also needs to guard against the adverse effects of rain and snow on traffic, especially in the northern region, the public needs to guard against the adverse effects of rain and snow, road snow, ice, low visibility, wet and slippery roads, etc.

Produced by the Publicity and Science Popularization Center of China Meteorological Administration (China Meteorological News).

Source: Central Meteorological Observatory **Editor:** Tingmang **Review:** Duan Haoshu

Source: Bloomberg

Europe's Proposed Gas-Price Cap Looks Unlikely To Be Used

November 23, 2022, 10:00 AM GMT

The [natural gas price cap](#) proposed by the European Commission to alleviate the continent's energy crisis will probably never be used because it has been set so high.

The "elevated threshold required to trigger it is unlikely to be met," analysts from Goldman Sachs Group Inc. said in a report. That's actually a positive component of the proposal, they said, because if a cap were ever to come into force it would further reduce market liquidity and lead to supply reductions.

Europe has spent months wrangling over how to prevent gas prices from skyrocketing again. Officials have had to tread a careful path between nations that wanted a firm cap on prices, those that opposed the measure, and warnings from the oil and gas industry about the consequences of meddling in energy markets.

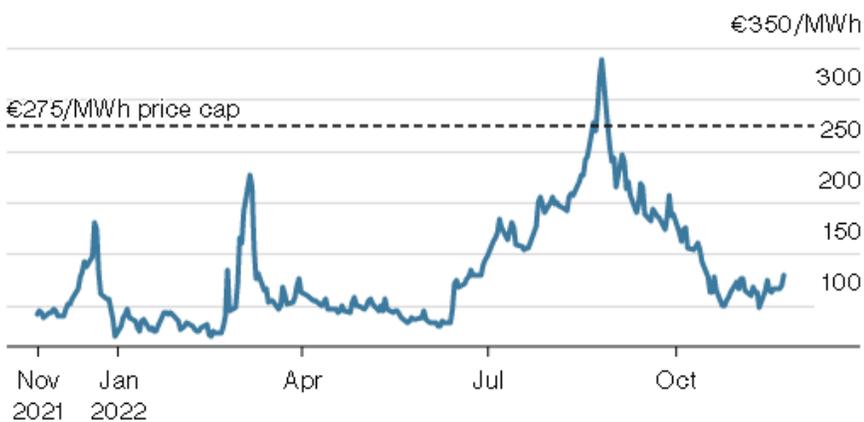
On Tuesday, the commission finally came up with a concrete proposal.

A cap on benchmark gas prices would be triggered if two conditions were met: The front-month contract on the Dutch Title Transfer Facility exceeds €275 per megawatt-hour for more than two weeks, and the gap between TTF and regional liquefied natural gas prices is greater than €58 per megawatt-hour for 10 trading days.

Gas Price Cap

The level set by the EU was breached for only six days in August

Front-month TTF gas futures



Source: ICE

Bloomberg

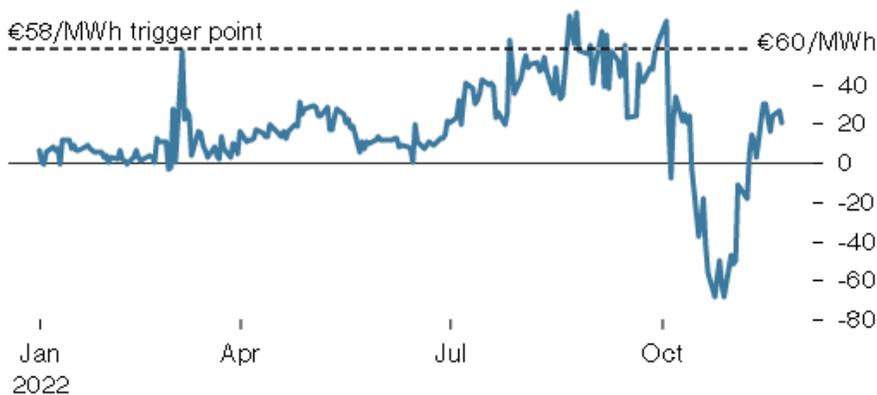
Even during the historic peak of European gas prices seen in August, those two conditions weren't met and the mechanism wouldn't have been triggered, a European Commission spokesperson said.

At the height of the crisis, the benchmark contract reached €340 per megawatt-hour, but never stayed above the level determined by the Commission for two weeks. The longest stretch of prices exceeding that level was six days, the data show.

The same is true for LNG prices, which only rose above the trigger point on a handful of occasions.

LNG Differential

Prices only breached the second condition in the price cap for a few days



Source: S&P Global Inc., EEX

Note: Chart shows the difference between the TTF European Gas Spot Index published by EEX and the average of the Daily Spot Mediterranean Market and the Daily Spot Northwest Europe Market, published by S&P Global Inc.

Bloomberg

Prices are now much lower than both thresholds, with benchmark TTF futures trading at around €130 per megawatt-hour and the LNG premium near €20.

“The gas price cap proposed by the European Commission is a price cap that will never be used,” Simone Tagliapietra, a senior fellow at Bruegel, said in an interview with Bloomberg TV. It would have been a “blunt instrument” that would “compromise Europe’s ability to secure gas supplies next year, and can also reduce the incentive to save energy.”

Norway’s Equinor ASA, Europe’s largest gas supplier that had [previously warned](#) against interference in energy markets, said the proposal was unlikely to discourage fuel exports to the region.

Colder-than-average winter weather or any meaningful supply disruption still has the potential to raise prices toward the threshold, according to Goldman Sachs.

Russia, which caused the summer price spikes by cutting natural gas exports to Europe, threatened on Tuesday to further reduce flows through Ukraine. However, Moscow’s latest moves aren’t seen as a meaningful supply risk, and Algerian pipeline exports and LNG imports are helping to offset any potential tightening of European markets.

The EU proposal will be discussed by energy ministers at an emergency meeting in Brussels on Thursday. National governments have the right to propose amendments to the regulation.

—[Vanessa Dezem](#), [Ewa Krukowska](#), [Anna Shiryaevskaya](#) and [James Herron](#)

1 minute read November 25, 2022 4:24 AM MST Last Updated a day ago

Enagas says LNG backlog at Spanish ports has eased

Reuters



A general view shows Enagas liquefied natural gas (LNG) terminal at Zona Franca in Barcelona, Spain, March 29, 2022. REUTERS/Albert Gea/File Photo

MADRID, Nov 25 (Reuters) - Spanish gas grid operator Enagas ([ENAG.MC](https://www.enag.mc)) said on Friday a backlog at its terminals that had forced it to warn it could reject deliveries of liquefied natural gas (LNG) had eased.

On Oct. 17, Enagas had issued a special situation notice due to unexpectedly full LNG tanks at its Spanish ports as mild weather hit demand for the fuel.

Although the system operator expected the situation to end in early November, the overcapacity has lasted almost four weeks longer and has led to delays in planned offloading, according to a person with direct knowledge of the matter.

"All firm operations contracted by users can now be carried out on their scheduled date and it is not necessary to prolong the exceptional measures," Enagas said.

For weeks, ships loaded with LNG have been waiting to unload at anchor in the Bay of Cadiz, dragging down prices in the Iberian market.

They were among the dozens of vessels carrying LNG that have been circling off European coasts, unable to secure slots.

Reporting by Belén Carreño Writing by Inti Landauro Editing by Andrei Khalip and Mark Potter

Progreso mensual de la demanda

Octubre-2022

D. Operación- Enagás GTS

Noviembre-2022



1. Demanda de gas natural

Sectores de Mercado

Unidad: TWh

Demanda	Acumulado mes		Acumulado año		Total Anual Móvil	
	1 al 31 octubre 2022	% Δ s/1 al 31 octubre 2021	1 enero al 31 octubre 2022	% Δ s/1 enero al 31 octubre 2021	TAM: 01 noviembre 2021 - 31 octubre 2022	% Δ s/ 2021
Convencional 	13,7	-34,1%	188,7	-18,8%	244,4	-15,2%
D/C + Pymes	1,7	-33,2%	40,3	-5,9%	57,9	-4,2%
Industrial	11,3	-34,5%	139,5	-21,5%	175,1	-17,9%
Cisternas	0,8	-30,1%	8,9	-25,4%	11,5	-20,9%
S. Eléctrico 	14,3	+61,6%	119,7	+77,8%	142,8	+58,0%
TOTAL Demanda	28,0	-5,5%	308,4	+2,9%	387,2	+2,3%

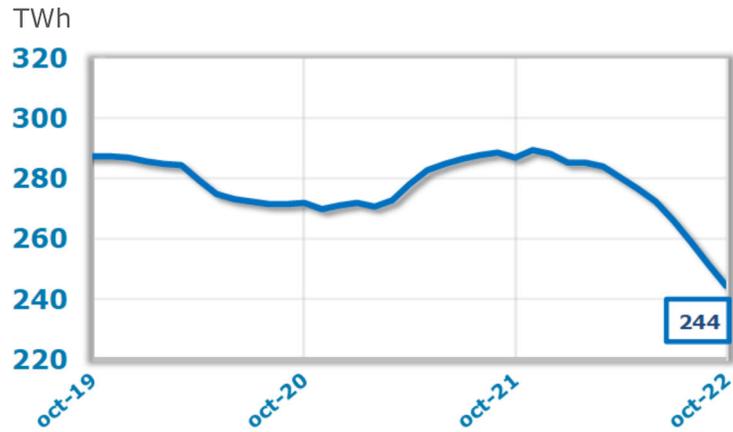
- ✓ **DC+PyMES:** -0,8 TWh respecto a la registrada en oct-21
- ✓ **Sector industrial:** -5,9 TWh respecto a la registrada en oct-21.

✓ **Demanda de gas para generación eléctrica:** ha aumentado un **+61,6% (+5,5 TWh)** debido a una menor generación con cogeneración y un saldo internacional exportador.

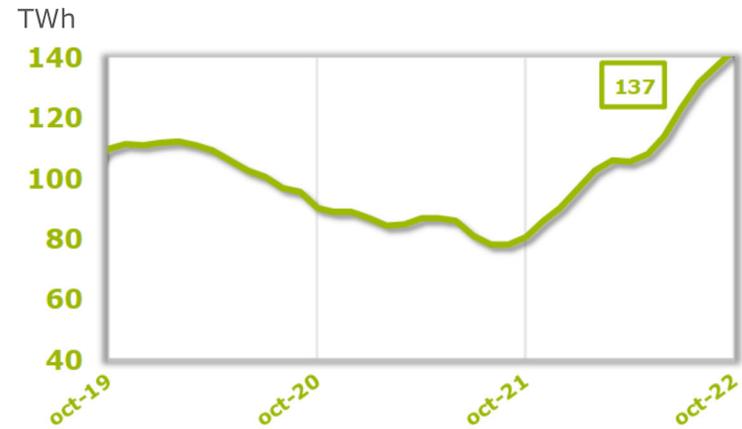
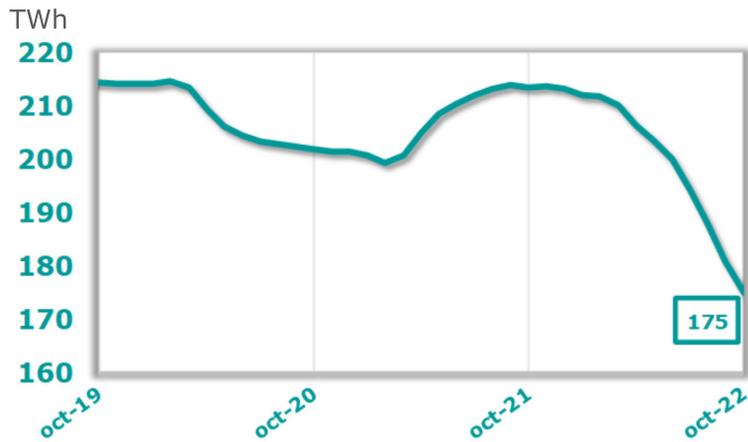
1. Demanda de gas natural

últimos 12 meses: TAM (noviembre-21 / octubre-22)

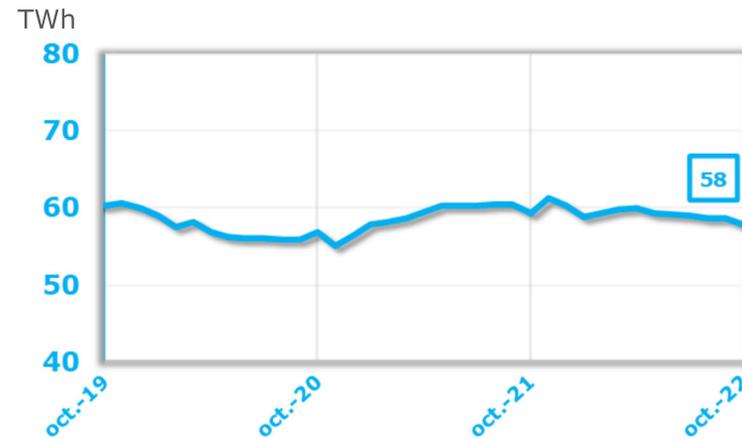
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DC/PYMES

BP Toledo Fire Repairs May Stop Normal Operations Until Late 1Q
2022-11-21 20:46:57.973 GMT

By Barbara Powell

(Bloomberg) -- BP's shuttered fire-damaged BP-Husky Toledo refinery in Ohio may not be able to restore normal operations until late 1Q 2023 or even later, people familiar with operations said.

* Workers are making mechanical repairs and a restart of several of the 150.8k b/d refinery's production units, including the smaller crude unit and a coker, may be attempted before year end

* The Sept. 20 fire broke out near the largest crude unit, sparked by a release of a flammable gas from a large tank used to remove liquids from vapors, the US Chemical Safety and Hazard Investigation Board says, according to a report from Bloomberg Law

** Fire killed two BP employees who were brothers

* Results from an investigation by the US Occupational Safety and Health Administration are due by mid-March

** Any startup, whether in full or partially, of the 103-year-old refinery would have to be approved by safety inspectors, and may be done in phases

* BP didn't immediately respond to a request for comment on the refinery in Oregon, Ohio

* BP is selling its 50% stake in the Ohio refinery to joint-venture partner Cenovus Energy

** Deal is expected to close by the end of 2022

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To view this story in Bloomberg click here:

<https://blinks.bloomberg.com/news/stories/RLPRBCDWLU68>

<https://www.wsj.com/articles/chevron-gets-new-u-s-license-to-pump-oil-in-venezuela-again-11669487483>

Chevron Gets New U.S. License to Pump Oil in Venezuela Again

New license from Treasury Department allows Chevron to return to Venezuela's oil fields after years of strict sanctions

Chevron is now allowed to return to its Venezuelan oil fields in joint ventures with Venezuela's national oil company. PHOTO: MARCO BELLO/REUTERS

By [Andrew Restuccia](#) and [Collin Eaton](#)

Updated Nov. 26, 2022 1:35 pm ET

WASHINGTON—The U.S. said it would allow Chevron Corp. to resume pumping oil from its Venezuelan oil fields after President Nicolás Maduro's government and an [opposition coalition](#) agreed to implement a humanitarian program and continue dialogue in Mexico City on efforts to hold free and fair elections.

Following the agreement, the Biden administration granted Chevron a license that would allow the California-based oil company to return to its Venezuelan oil fields in joint ventures with Venezuela's national oil company Petróleos de Venezuela SA. The new license, granted by the Treasury Department, would permit Chevron to pump Venezuelan oil for the first time in years.

Biden administration officials said the license prohibits PdVSA from receiving profits from Chevron's oil sales. The officials said the U.S. is prepared to revoke or amend the license, which will be in effect for six months, at any time if Venezuela doesn't negotiate in good faith.

"If Maduro again tries to use these negotiations to buy time to further consolidate his criminal dictatorship, the United States and our international partners must snap back the full force of our sanctions," said Sen. Robert Menendez (D., N.J.), the chairman of the Senate Foreign Relations Committee.

The U.S. policy shift could signal an opening for other oil companies to resume their business in Venezuela two years after the Trump administration clamped down on Chevron and other companies' activities there as part of a maximum pressure campaign meant to oust the Maduro government.

José de Córdoba and Patricia Garip contributed to this article.

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Write to Andrew Restuccia at andrew.restuccia@wsj.com and Collin Eaton at collin.eaton@wsj.com



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C.

OFFICE OF FOREIGN ASSETS CONTROL

**Venezuela Sanctions Regulations
31 CFR part 591**

GENERAL LICENSE NO. 41

**Authorizing Certain Transactions Related to Chevron Corporation's Joint Ventures in
Venezuela**

(a) Except as provided in paragraph (b) of this general license, all transactions ordinarily incident and necessary to the following activities for or related to the operation and management by Chevron Corporation or its subsidiaries ("Chevron") of Chevron's joint ventures in Venezuela (collectively, the "Chevron JVs") involving Petróleos de Venezuela, S.A. (PdVSA) or any entity in which PdVSA owns, directly or indirectly, a 50 percent or greater interest, that are prohibited by Executive Order (E.O.) 13850, as amended by E.O. 13857, or E.O. 13884, each as incorporated into the Venezuela Sanctions Regulations, 31 CFR part 591 (the VSR), are authorized:

(1) Production and lifting of petroleum or petroleum products produced by the Chevron JVs, and any related maintenance, repair, or servicing of the Chevron JVs;

(2) Sale to, exportation to, or importation into the United States of petroleum or petroleum products produced by the Chevron JVs, provided that the petroleum and petroleum products produced by the Chevron JVs are first sold to Chevron;

(3) Ensuring the health or safety of personnel or the integrity of operations or assets of the Chevron JVs in Venezuela; and

(4) Purchase and importation into Venezuela of goods or inputs related to the activities described in paragraphs (a)(1)–(3) of this general license, including diluents, condensates, petroleum, or natural gas products.

Note 1 to paragraph (a)(4). Except as authorized pursuant to the Iranian Transactions Sanctions Regulations, 31 CFR part 560, or otherwise exempt, U.S. persons, wherever located, remain prohibited from engaging in any transaction or dealing in or related to goods or services of Iranian origin, including the purchase or import of Iranian-origin diluents, condensates, petroleum, or natural gas.

(b) This general license does not authorize:

(1) The payment of any taxes or royalties to the Government of Venezuela;

(2) The payment of any dividends, including a dividend in kind, to PdVSA, or any entity in which PdVSA owns, directly or indirectly, a 50 percent or greater interest;

(3) The sale of petroleum or petroleum products produced by or through the Chevron JVs for the exportation to any jurisdiction other than the United States;

(4) Any transaction involving an entity located in Venezuela that is owned or controlled by an entity located in the Russian Federation;

(5) Any expansion of the Chevron JVs into new fields in Venezuela beyond what was in place on January 28, 2019; or

(6) Any transactions otherwise prohibited by the VSR, including transactions involving any person blocked pursuant to the VSR other than the blocked persons described in paragraph (a) of this general license, unless separately authorized.

(c) This authorization automatically renews on the first day of each month and is valid for a period of six months from the effective date of General License No. 41 or the date of any subsequent renewal of General License No. 41, whichever is later.

Note 2 to General License No. 41. Nothing in this general license relieves any person from compliance with the requirements of other Federal agencies, including the Department of Commerce's Bureau of Industry and Security.

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Andrea M. Gacki
Director
Office of Foreign Assets Control

Dated: November 26, 2022

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Chevron, Waiting It Out in Venezuela, Tells U.S. Now Is the Time to Pump Oil

An oil refinery in Venezuela, where the U.S. has banned American oil companies from operating since 2019. YURI CORTEZ/AFP/GETTY IMAGES

By [Christopher M. Matthews](#) and [José de Córdoba](#)

March 22, 2022 10:27 am ET

HOUSTON—For months, Biden administration officials snubbed top executives and lobbyists for [Chevron](#) Corp. who had pressed officials in Washington to ease sanctions so the company could boost production in Venezuela, where the U.S. has banned such activities since 2019.

Then [Vladimir Putin invaded Ukraine](#).

Now the Biden administration is listening closely to Chevron, say people familiar with the conversations, which says it can help double Venezuela's 800,000 barrels-a-day production within months. That could replace the loss of roughly 700,000 barrels a day the U.S. was importing from Russia before [it attacked Ukraine](#). And it could help lower gasoline prices—a major concern for the Biden administration in [a tough election year](#).

“Chevron came in November, they pitched it around, but got laughed out of town,” said Juan Cruz, a former National Security Council official in charge of the Western Hemisphere who has closely followed the Biden administration's policy toward Venezuela. “But what was really funny in November is a plan today.”

Since the Russians invaded on Feb. 24 and Mr. Biden [canceled Russian oil imports](#), Chevron Chief Executive Officer Mike Wirth has offered the company's help to Secretary of Energy Jennifer Granholm in shoring up U.S. energy supplies by ramping up production in Venezuela, according to people briefed on the talks. Chevron is the only major U.S. producer to retain assets in Venezuela following nationalizations by the Socialist government and, much later, U.S. sanctions.

Granting the San Ramon, California-based company and other U.S. producers permits to operate could boost Venezuelan production while keeping other sanctions in effect. Broadly easing sanctions on Venezuela faces stiff opposition in the U.S. over concerns it would prop up the country's autocratic regime. U.S. officials are divided over the issue, say people familiar with the situation.

Asked recently by CNN about the outreach to Venezuela and Saudi Arabia for more oil, Ms. Granholm, said, “I think Americans should see the administration calling right now for an increase in supply as something that helps them,” naming the benefit of reducing costs at the pump.

Shortly after Mr. Wirth talked to the energy secretary, three senior U.S. officials—Juan Gonzalez, the senior National Security Council official in charge of Latin America; James Story, the U.S. ambassador to Venezuela; and Roger D. Carstens, a special envoy—[flew to Caracas](#) on March 5 and met with President Nicolás Maduro and other top Venezuelan officials.

Another person who spoke with senior Venezuelan officials after the invasion was Ali Moshiri, a charismatic Iranian-American who had headed Chevron’s Latin America division and was considered a “dear friend” by the late Hugo Chávez, the founder of the political movement now led by Mr. Maduro, with whom Mr. Moshiri also has close a close relationship. Mr. Moshiri retired from Chevron in 2017 but now consults for the company in Venezuela, where he has deep ties with senior officials, say people familiar with the matter.

Many oil industry executives say that Mr. Moshiri was essential to Chevron’s controversial decision to [stay in the country](#) even as other Western oil companies exited after the Venezuelan government in 2007 [nationalized billions of dollars of assets](#) owned by [ConocoPhillips](#), [Exxon Mobil](#) Corp. and others. He has also lobbied Biden officials to loosen sanctions on Venezuela, where Chevron has operated for nearly a century.

“You cannot ignore Venezuela,” Mr. Moshiri said in an interview last week. “Venezuela will always be part of our energy security.”

The White House declined to comment about Chevron’s possible role or its own talks in Venezuela. The Energy Department declined to comment.

People briefed on the talks say Mr. Moshiri has argued to U.S. officials that the U.S. can’t cede influence of Venezuelan energy to rivals like China and Russia, which have increased their activities in the country in recent years. He has also spoken with Venezuelan officials for months to try to win the release of Americans imprisoned in Venezuela, these people said.

A Chevron spokesman said Mr. Moshiri isn’t representing the company in negotiations with the U.S. or with Venezuelan officials. Mr. Moshiri declined to provide details about his contract with Chevron. After leaving Chevron, he founded a firm, Amos Global Energy, which seeks investment opportunities in Venezuela, people familiar with the matter said.

A few days after the March 5 meeting in Caracas with U.S. officials, the Maduro government [freed two American captives](#), one of them an executive of Citgo, the U.S. refining subsidiary of state-run oil company Petróleos de Venezuela SA, or PdVSA. The government also agreed to restart negotiations in Mexico with representatives of Venezuela's opposition, who want officials to agree to free and fair presidential elections in 2024.

News of the meeting in Caracas, though, has [caused a political backlash](#) in Washington and in Florida, where exiled Venezuelans live and have forged links to the state's powerful and conservative Cuban American community.

"The democratic aspirations of the Venezuelan people, much like the resolve and courage of the people of Ukraine, are worth much more than a few thousand barrels of oil," New Jersey Sen. Robert Menendez, the Democratic chairman of the Senate Foreign Affairs Committee, wrote in a statement. Those sentiments were echoed by both Democratic and Republican lawmakers in Florida.

SHARE YOUR THOUGHTS

Should the U.S. ease sanctions on Venezuela to get more oil? Why or why not? Join the conversation below.

Venezuelan opposition leader Juan Guaidó, whom the U.S. recognizes as Venezuela's legitimate president, was told of the U.S.-Venezuela meeting after it had taken place. Mr. Guaidó wrote a letter to Mr. Biden, according to a person with knowledge of the matter, saying that lifting sanctions on Venezuela would do little to ease the world's crude supply shortages while rewarding Mr. Maduro, a Putin ally whose rule is blamed for leading six million Venezuelans to flee the country.

"Today, more than ever we should be firm and morally consistent," said Mr. Guaidó in a video press conference from Caracas last week. He said any lifting of sanctions on Venezuela or permission for Chevron to pump oil there should only come in exchange for democratic concessions by the regime.

Answering reporters' questions last week White House press secretary Jen Psaki said, "There is no dialogue between us and the regime." She said the administration would consider lifting sanctions on the basis of progress in talks between Mr. Maduro and the opposition.

Chevron officials still say the company could win a license permitting it, along with European oil companies such as [Eni Spa](#) and [Repsol SA](#), to operate in Venezuela.

A refinery of state-owned Petróleos de Venezuela in El Palito. Venezuelan oil production has plummeted since the 1990s due to mismanagement.

PHOTO: MANAURE QUINTERO/BLOOMBERG NEWS

Venezuela claims to have the world's largest proven oil reserves. But years of mismanagement, corruption and nationalization of oil ventures led production to fall from 3.2 million barrels a day in

the 1990s to a 10th of that in 2020. Since then, production has more than doubled as Venezuela turned to opaque foreign companies to boost production, say industry executives. Chevron's lobbyists assert that the recent production increases show that the U.S. sanctions aren't working as intended.

But though Chevron has told U.S. officials it could jack up production quickly, some oil analysts who closely track Venezuela [doubt the company could deliver](#). Even in good times, Venezuela had never increased production anywhere near the level of recent optimistic projections, according to Francisco Monaldi, director of the Latin America Energy Program at Rice University's Baker Institute.

Chevron's perseverance in Venezuela has come as the company has tried to get Venezuela to pay money owed under production-sharing agreements. The company wrote down all of its assets there in 2020, taking a charge of \$2.6 billion. Nonetheless, it stayed, receiving periodic licenses from the U.S. government to retain but not operate assets.

—*Timothy Puko in Washington contributed to this article.*

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Colombia signals rethink on pledge to curb oil and gas exploration

Finance minister says government will review existing contracts before deciding whether to halt new projects



José Antonio Ocampo says any energy transition that reduces Colombia's exports must be gradual © Nathalia Angarita/Bloomberg

Joe Parkin Daniels in Bogotá YESTERDAY

Colombia's leftist government has signalled it could row back on its pledge to halt new oil and gas exploration projects, saying it would first examine existing contracts as part of an overhaul of its fossil fuel industry.

Gustavo Petro, a former guerrilla fighter who took office as president in August, made the promise during his election campaign. But finance minister José Antonio Ocampo said in an interview that the government would analyse the 180 contracts before deciding whether to fulfil the pledge.

"Then we will see if new contracts are necessary," he said. Any energy transition that reduced exports "would have to be gradual" and prioritise gas self-sufficiency, Ocampo added.

Oil and coal together make up nearly half the country's export revenues.

Since Petro came to power, his government has faced economic headwinds, with the peso losing 20 per cent of its value against the dollar, outpacing most emerging market currencies.

Public finances in Colombia, Latin America's fourth-largest economy, have remained largely stable despite decades of guerrilla insurgencies, but the central bank now expects gross domestic product growth to slow to 0.5 per cent in 2023 from a predicted 7.9 per cent this year. Foreign investors sold close to \$1bn in government debt last month.

But Ocampo — a career economist who has taken a sabbatical from teaching at New York's Columbia University to serve in Petro's government — said the prognosis was not as bad as it appeared. He blamed the fall in foreign investment on opposition figures in the business community: "They generate panic and are then victims of that very panic."

The minister said the government was aiming to reduce the country's fiscal deficit from 7.1 per cent this year to 4.3 per cent in 2023, partly funded by a reduction in fuel subsidies. Such moves could help Colombia win back its investment-grade status after it was downgraded to BB+ by S&P Global and Fitch last year.

Ocampo also sought to allay fears over a looming balance of payments crisis. Colombia has a current account deficit of 5.7 per cent of GDP, and with a strong dollar and uncertainty in Colombia's energy sector, analysts have warned of the impact on debt repayments and foreign currency income.

"This country has a long tradition of servicing its debts and that will continue," Ocampo said. "Next year we are talking about bringing the current account deficit to 4 per cent [of GDP] or less."

Munir Jalil, chief economist for the Andean region at BTG Pactual, said: “The country needs to show fiscal responsibility in order to convince market participants and offshore investors to buy Colombian assets.”

Petro has urged wealthy nations to abandon fossil fuels. “Governments must put politics in charge to create a global plan to disconnect hydrocarbons immediately,” he said last week at the COP27 climate summit in Egypt.

Petro’s signature tax reform bill, which is expected to become law this month, aims to raise about \$4bn next year, mostly with duties on the oil and coal industries. The reforms include cancellation of a statute that allowed oil and coal companies to deduct royalty payments from their tax bills, and a windfall tax on profits.

Industry leaders say the measures risk deterring investors and leaving production hamstrung, while analysts argue the administration’s mixed messaging on fossil fuels has exacerbated the peso’s fall.

Ocampo has sought to temper the government’s stance. When Petro floated a tax on capital flight, Ocampo rebuffed it on social media. Colombia’s newspapers have referred to him as “the adult in the room”.

“Ocampo is a safe pair of hands and one of the most powerful finance ministers in years,” said Jorge Restrepo, professor of economics at Javeriana University in Bogotá. “But he cannot [maintain] the support of the entire cabinet when it is partly made up with people that come from activism.”

Asked how long he planned to remain in the post, Ocampo said: “I have a one-year licence of public service from Columbia, which can be extended for another year. I’m not discarding the possibility of staying on, but this job is exhausting and I’m not a young man.”

Cyprus, Greece, Malta argue against EU's Russia oil cap, no deal yet

By [Staff Reporter](#) November 24, 2022 [1 Comment](#) ²⁹⁴

European Union governments failed to reach a deal on Thursday over what level to cap Russian oil prices at to curb Moscow's ability to pay for its war in Ukraine without causing a global oil supply shock, with more talks possible on Friday if positions converge.

The EU states failed to reach a deal on the price level for Russian sea-borne oil because a Group of Seven nations (G7) proposal for a cap of \$65-70 per barrel was seen as far too high by some and too low by others.

Because the world's key shipping and insurance firms are based in G7 countries, the price cap would make it very difficult for Moscow to sell its oil – its biggest export item accounting for some 10 per cent of world supply – for a higher price.

Cyprus, Greece and Malta, countries with big shipping industries that stand to lose most if Russian oil cargoes are obstructed, argue the cap is too low and want compensation for the loss of business or more time to adjust, reports from Brussels said.

Cyprus is especially concerned about tankers sailing under its flag changing their registration to flag-of-convenience countries outside the EU like Panama or Liberia.

EU sources told CNA on Thursday that the concerns of the three countries were raised at the start of the discussion and include the need for clarity on how the risk of non-compliance would be avoided, as well as what compensatory measures would be put in place in relation to the deletion of ships from their registers after the implementation of the package.

The European Commission, the Czech EU presidency, the United States and G7 presidency Germany were all engaged in talks on Thursday to bridge differences and reach a deal before the price cap is due to come into force on December 5.

"There are a lot of bilateral talks going on now at very high levels. There will be a meeting of representatives of all EU countries once there is progress. There is no point in calling another meeting if there is no change," one EU diplomat said.

Diplomats said that six of the EU's 27 countries opposed the price cap level proposed by the G7.

Poland wants the cap to be set at \$30, arguing that with Russian production costs that some estimate at \$20 per barrel, the G7 proposal would allow Moscow too much profit. Lithuania and Estonia back Poland.

"In principle, Poland supports the price cap on the Russian oil but the proposed level is extremely too high," said Adrian Biernacki, a spokesman for the Polish representative to the EU.

"This level should refer to the production costs per barrel of crude oil, and not to current market price," he said.

Some 70-85 per cent of Russia's crude exports are carried by tankers rather than pipelines. The idea of the cap is to prohibit shipping, insurance and re-insurance companies from handling cargoes of Russian crude around the globe, unless it is sold for less than the price set by the G7 and its allies.

Russian Urals crude oil URL-E already trades within the discussed range at around \$68 per barrel.

"That means the proposed cap would either be the same as, or slightly higher than, the price Russian oil is fetching on the open market. It would be, in other words, another price cap that does not cap," the Eurointelligence think tank said in a note.

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Saudi Arabia Eyes OPEC+ Output Increase Ahead of Restrictions on Russian Oil

Raising oil production would partially reverse the group's contested decision to cut supplies in October

An oil-production increase of up to 500,000 barrels a day is now under discussion for OPEC+'s Dec. 4 meeting. PHOTO: SERGEI KARPUKHIN/REUTERS

By [Summer Said](#) and [Benoit Faucon](#)

Updated Nov. 21, 2022 9:38 am ET

Saudi Arabia and other OPEC oil producers are discussing an output increase, the group's delegates said, a move that could help heal a rift with the Biden administration and keep energy flowing amid new attempts to blunt Russia's oil industry over the Ukraine war.

A production increase of up to 500,000 barrels a day is now under discussion for OPEC+'s Dec. 4 meeting, delegates said. The move would come a day before the European Union is set to impose an embargo on Russian oil and the Group of Seven wealthy nations' plans to launch a [price cap on Russian crude sales](#), potentially taking Moscow's petroleum supplies off the market.

Any output increase would mark a partial reversal of a controversial decision last month [to cut production by 2 million barrels a day](#) at the most recent meeting of the Organization of the Petroleum Exporting Countries and their Russia-led allies, a group known collectively as OPEC+.

The [White House](#) said the [production cut](#) undermined global efforts to blunt Russia's war in Ukraine. It was also viewed as a political slap in the face to President Biden, coming before the congressional midterm elections at a time of high inflation. Saudi-U.S. relations have hit a low point over oil-production disagreements this year, though U.S. officials had said they were looking to the Dec. 4 OPEC+ meeting with some hope.

Talk of a production increase has emerged after the Biden administration told a federal court judge that Saudi Crown Prince Mohammed bin Salman [should have sovereign immunity](#) from a U.S. federal lawsuit related to the brutal killing of Saudi journalist Jamal Khashoggi. The immunity decision amounted to a concession to Prince Mohammed, bolstering his standing as the kingdom's de facto ruler after the Biden administration tried for months to isolate him.

It is an unusual time for OPEC+ to consider a production increase, with global oil prices falling more than 10% since the first week of November. Brent crude traded at about \$87 a barrel on Monday, while WTI, the U.S. benchmark, fell below \$80 a barrel for the first time since September. Production increases normally cause prices to fall, while cuts lead prices higher.

Ostensibly, delegates said, a production increase would be in response to expectations that oil consumption will rise in the winter, as it normally does. Oil demand is expected to increase by 1.69 million barrels a day to 101.3 million barrels a day in the first quarter next year, compared with the average level in 2022.

OPEC and its allies say they have been carefully studying the G-7 plans to impose a price cap on Russian oil, conceding privately that they see any such move by crude consumers to control the market as a threat. Russia has said it wouldn't sell oil to any country participating in the price cap, potentially resulting in another effective production cut from Moscow—one of the world's top three oil producers.

Saudi energy minister Abdulaziz bin Salman said last month that the kingdom would “supply oil to all who need it from us,” speaking in response to a question about looming Russian oil shortages. OPEC members have signaled to Western countries that they would step up if Russian output fell.

Talk of a production increase sets up a potential fight between OPEC+'s two heavyweight producers, Saudi Arabia and Russia. The countries have an oil-production alliance that industry officials in both nations have described as a marriage of convenience, and they have clashed before.

Saudi officials have been adamant that their decision to cut production last month wasn't designed to support Russian's war in Ukraine. Instead, they say, the cut was intended to get ahead of flagging demand for oil caused by a global economy showing signs of slowing down.

Raising oil production ahead of the price cap and EU embargo could give the Saudis another argument that they are acting in their own interests, and not Russia's.

Another factor driving discussion around raising output: Two big OPEC members, Iraq and the United Arab Emirates, want to pump more oil, OPEC delegates said. Both countries are pushing the oil-producing group to allow them a higher daily-production ceiling, delegates said, a change that, if granted, could account for more oil production.

Under OPEC's complex quota system, the U.A.E. is obligated to hold its crude production to no more than 3.018 million barrels a day. State-owned Abu Dhabi National Oil Co., which produces most of the U.A.E.'s output, has an output capacity of 4.45 million barrels a day and plans to accelerate its goal of reaching 5 million barrels of daily capacity by 2025. Abu Dhabi has long pushed for a higher OPEC quota, only to be rebuffed by the Saudis, OPEC delegates have said.

Last year, the country was the lone holdout on a deal to boost crude output in OPEC+, saying it would agree only if allowed to boost its own production much more than other members. The public standoff inside OPEC was the first sign that the U.A.E. has adopted a new strategy: Sell as much crude as possible before demand dries up.

Earlier this month, Iraqi Prime Minister Mohammed Shia' al-Sudani said that his country, which is the second-largest crude oil producer in OPEC, would [discuss a new quota with other members at its next meeting](#).

A discussion of OPEC production quotas has been on hold for months. The idea faces opposition from some OPEC nations because many can't meet their current targets and watching other countries run up their quotas could cause political problems domestically, delegates said.

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—*Michael Amon contributed to this article.*

<https://www.globaltimes.cn/page/202211/1279295.shtml>

China shortens quarantine period for intl arrivals, cancels 'circuit breaker' for inbound flights

By Global Times Published: Nov 11, 2022 01:56 PM

Chinese authorities on Friday released 20 optimized measures to further enhance scientific and precise work of epidemic prevention and control, one day after the Chinese leadership held a meeting to hear a report on the COVID-19 response, and discussed and arranged the 20 measures.

The newest steps include shortened quarantine period for international arrivals and close contacts of confirmed cases from 7+3 (seven days of centralized quarantine and three days of health observation at home) to 5+3.

The measures required timely screening of close contacts of confirmed cases, but required to stop screening close contacts of close contacts, or the secondary contacts.

Circuit breaker mechanism on inbound flights to China upon detecting positive cases on board has also been canceled. Passengers of inbound flights to China will only need to provide one negative nucleic acid testing result within past 48 hours instead of two, according to the latest measures.

Ct value of nucleic acid testing of international arrivals would have to be less than 35. Those showing Ct value of 35-40 have to accept evaluation on virus transmission risk, according to the measures.

Business people and athlete groups have to be transferred directly from where they arrived to closed-loop quarantine-exemption areas and should not leave the area. Chinese nationals have to accept booster shots before entering these closed-loop areas, the measures required.

Per the latest measures, places in China would only be identified as high risk and low risk in terms of epidemic transmission. The classification of medium-risk area would be canceled.

People coming from high-risk areas have to stay at home for seven days for health observation instead of seven days of centralized quarantine.

The latest measures also called for promotion of mass vaccination in China, especially the administration of booster shots among the elderly group.

The measures also urged accelerated research and development of broad spectrum vaccines and drugs.

The measures vowed to deal with excessive and one-size-fits-all measures seriously, banning unreasonable steps to lock down schools, suspend traffic or clinical service. Such violations would be punished seriously according to regulations and laws, read the measures.

Leader: Iran's main confrontation is with global hegemony, not a bunch of rioters

Saturday, 26 November 2022 9:17 AM [Last Update: Sunday, 27 November 2022 7:31 AM]



Leader of the Islamic Revolution Ayatollah Seyyed Ali Khamenei addresses a group of Basij members in Tehran, Nov. 26, 2022. (Photo by Leader.ir)

Leader of the Islamic Revolution Ayatollah Seyyed Ali Khamenei says Iran's battle is not with a bunch of rioters who have recently wreaked havoc in the country, adding that "the main confrontation is with the global hegemony".

"These few people are either oblivious, ignorant, or mercenaries," the Leader said in a meeting with members of the volunteer Basij force in Tehran on the occasion of Basij Week.

Ayatollah Khamenei said the recent riots are part of the West's pressure campaign against Iran to arm-twist it into compromising on its rights in the negotiations, which have deadlocked over Washington's lack of commitment.

"A group of people who claim to have political understanding, but whose analyses in newspapers and virtual space really sadden one, state that in order to end these riots, you should solve your problems with America and listen to the voice of the people," the Leader said.

Ayatollah Khamenei touched on Washington's bad faith in the 2015 nuclear deal known as the Joint Comprehensive Plan of Action (JCPOA) under which Iran agreed to curtail its nuclear energy program in return for relief from sanctions.

"First they say you stop 20% enrichment, then 5% enrichment, then they demand stop to the entire nuclear industry, then change to the constitution, then locking us up behind the borders and emptying Iran's hands and shutting down its defense industries," the Leader said.

Ayatollah Khamenei said the enemy's insistence on the second and third JCPOAs, which some people inside the country were also regurgitating probably out of negligence, can be explained.

"JCPOA 2 means that Iran completely abandons its regional presence, and JCPOA 3 means Iran commits not to produce any strategic and important weapons such as missiles and drones and becomes empty-handed in the face of aggression."

No zealous Iranian, even those who possibly do not like the Islamic Republic, will submit to paying such ransoms, Ayatollah Khamenei said.

"Therefore, negotiating with America will not solve any problem unless ransom is paid in all basic issues and all red lines are crossed."

The Leader also turned the tables on those who recommend that the Islamic Republic listen to the voice of the people.

“The thunderous voice of the nation was raised on November 4 this year; did you hear it? You should rather hear the voice of the nation,” he said, referring to the massive rallies held across Iran to mark the 1979 takeover of the US embassy in Tehran.

“That huge crowd of more than 10 million at the funeral of Martyr Soleimani was the voice of the nation. Today, the funeral of martyrs in different cities and people's slogans against terrorism and rioters are the voice of the nation. Do you not hear the voice of the nation?” the Leader said in reference to huge rallies held across Iran following the US assassination of Iran's legendary commander General Qassem Soleimani in January 2020 and recent processions held for those who lost their lives in the fight against rioters and terrorists.

Ayatollah Khamenei also touched on the colonial powers' attention to West Asia, especially Iran and the reasons behind their efforts to dominate the region.

“Western colonialism, which at first was represented by Europe and then by America, paid special attention to our region because the West Asian region is the main center of oil, energy and natural resources and the crossroads between East and West.

“That is why the fake and usurper Zionist regime was established in this region so that the West could have a base in the West Asia region to plunder resources and create war and division,” he said.

Meanwhile, the most important and sensitive point in the strategic West Asian region is Iran, the Leader stated.

“Hence, at first the British and then the Americans made a special investment, especially for raising mercenaries in Iran, in order to have complete domination,” Ayatollah Khamenei added.

The outbreak of the Islamic Revolution “at the focal point of the Western colonial rule in West Asia” in Iran in 1979 “suddenly broke the doze of the colonialists and dealt a fatal, dizzying and shocking blow to their colonial policies”, the Leader said.

The Islamic Revolution, he said, became a strong bulwark against the presence of America and the West in the region and created a new identity.

“The Islamic Revolution transformed the identity of the country's dependence into that of independence and strength and the spirit of standing on one's own feet and speaking from the position of power and not paying ransom. This thinking was naturally not limited to Iran and had an impact in the region.”

Ayatollah Khamenei touched on the plots of the Americans against the Islamic Republic, which according to revelations by “prominent figures” commenced with targeting Iran's allies.

“Their plan was to overthrow the six countries of Iraq, Syria, Lebanon, Libya, Sudan, and Somalia, so that ultimately Iran's strategic depth and extension in the region would be destroyed, and by weakening the country, the Islamic Republic of Iran itself would ultimately be overthrown.

“But the thinking and extension of the Islamic revolution in Iraq, Syria and Lebanon became effective and a great and important work was done, which was the defeat of America in these three countries,” the Leader said.

Ayatollah Khamenei said the volunteer Basij force is one of the best initiatives of the late founder of the Islamic Revolution, Imam Khomeini, describing the group as the school of love and spirituality.

“Basij should be present in all scenes and spheres. It is not merely a military force; it is a body to serve people without any expectations.”

Basij forces, the Leader said, have also been successful on the scientific front, and some of Iran's prominent nuclear scientists assassinated by the enemies were members of the force.

Basij forces sacrifice themselves to serve people, Ayatollah Khamenei said, citing the recent riots during which they fought vandals, lost their lives or sustained injuries.

The Leader finally called on state officials to keep a watchful eye on the unfolding developments, stressing that the enemies are trying to dominate the minds and influence the world public opinion through spreading lies and fake news.

China vows to ensure smooth operation of transportation network amid virus cases spike

By GT staff reporters Published: Nov 25, 2022 08:54 PM

The Chinese central government and various ministries **have vowed to step up efforts** to clear logistic hiccups and ensure the smooth operation of the transportation network in recent days, after the country saw daily new COVID-19 cases exceeding 30,000 for two days, which led to stringent anti-virus measures that could weigh on business activities.

The pledge represents a fresh sign that the world's second-largest economy is continuously striking a balance between active epidemic prevention and economic development, after China released 20 optimized measures to fight the COVID-19 epidemic in mid-November.

Though transport chokes remain in some regions hit hardest by the virus, such as in Southwest China's Chongqing Municipality, hopes are high that improvements are within sight, and the world's largest manufacturing powerhouse is set to leverage its rich experience to bolster domestic supply chain resilience and further demonstrate to the world its manufacturing chain strength, industry insiders and observers said.

Smoothing the supply chain

Shu Chi, a spokesperson of the Ministry of Transport, pointed out at a press briefing on Friday that **the work of ensuring smooth transportation services faces renewed pressure, as some regions "impose barriers at every level and excessively control the flow of trucks."**

The ministry mulled "five bans" on Friday, aiming to troubleshoot recently surfaced issues including a "one-size-fits-all" approach in restricting last-mile delivery services in regions under closed management, a complete ban on the entry and exit of trucks in cities under lockdown or strict COVID-19 restrictions, and restricting the passage of trucks using the excuse of waiting for drivers' nucleic acid test results.

The new measures come on the heels of a similarly themed conference chaired by Li Xiaopeng, the Minister of Transport and the commander-in-chief of the working group set up to ensure the smooth operation of logistics under the State Council, China's cabinet, on Thursday.

During the meeting, he stressed that the ministry should, based on the 20 optimized measures, efficiently coordinate work related to epidemic control and smoothen transportation, so as to provide maximum protection for people's life, safety and physical health, while minimizing the impact of the epidemic on social economic development. He also noted that it is important to ensure safe and open transportation in key necessities such as energy and grain.

The new guidance comes as **China reported more than 30,000 confirmed and asymptomatic COVID-19 cases for two consecutive days since Thursday, with major cities such as Guangzhou, South China's Guangdong Province, the capital Beijing and Chongqing being hit the hardest. It is the highest daily figure since the COVID-19 epidemic broke out in Wuhan, Central China's Hubei Province in early 2020.**

As the **epidemic situation becomes more complicated, highways, roads and ports in some regions have inevitably seen temporary closures amid an escalation of anti-virus measures, which led to supply chain blockages** and postponed deliveries of key parts that have undercut factory capacity to some extent.

It has been reported that since November, over 10,000 tons of vegetables grown in Central China's Henan's Province - the country's agricultural base - could not be shipped outside the province due to traffic blocks, thepaper.cn reported. The situation has gradually been improved with the launch of more local freight services.

Against this backdrop, observers said the stakes of ensuring an open and smooth transportation network are high, as it is important not just to providing key supplies, but also serves as the backbone of the fundamentals that keep the world's largest factory humming.

Zhou Zhicheng, director of the research department under the China Federation of Logistics and Purchasing, told the Global Times on Friday that the main sticking point at this current stage is the multiple anti-epidemic requirements in last-mile delivery, in particular at street and district levels, some of which remain confusing. But the congestion situation is not as perilous as it was in April, as there are virtually no traffic suspensions in highways and service stations.

"However, it's still worth addressing in advance, as coronavirus cases have suddenly surged in recent days. It is also a timely reminder to local authorities with regard to growing complaints about delayed deliveries for China's Double 11

shopping festival," Zhou said.

Gradual improvement

In China's manufacturing base Guangzhou, which is also home to one of China's busiest ports, local entrepreneurs and logistic firms said that supply chain hurdles that emerged in November have largely been removed, though it will certainly take some time - depending on how the epidemic develops - for factory capacity to bounce back.

Liang Jiaxian, a deputy branch manager of FS International, a Hong Kong-based international logistics company, told the Global Times on Friday that "currently, the import and export business is normal at sea and air ports in Guangzhou."

She noted that the epidemic mainly affected enterprises or employees in the blocked areas, who need to work at home, and express delivery services in certain areas. However, there has been no major impact on overall road transportation in the city or the shipment of bulk commodities.

Another manager of a Guangzhou-based manufacturer, surnamed Duan, told the Global Times that the country's exports are "shipped as usual now" without being interrupted by the new round of epidemic flare-ups.

The smoothening of logistics service in cities like Guangzhou also augurs well for other virus-hit regions still haunted by supply disruption risks. A manager of a robotics company based in Chongqing, who spoke on condition of anonymity, told the Global Times on Friday that the firm is unable to source parts from Beijing due to limited traffic allowed into areas under strict management, which has delayed its production and customer deliveries.

"Hopefully, we will be included on the transportation white-list soon," he said, while voicing hope that the optimized 20 measures would pave the way for a more precise solution to balancing anti-virus measures with production.

Zhou noted that cities in the Pearl River Delta region have built up policy experience in ensuring stable supply chains, such as opening green channels and granting traffic permits to eligible companies. Observers expect other cities to soon catch up in management.

In response to concerns raised by French businesses, China's Foreign Ministry spokesperson Mao Ning said at a press briefing on Friday that China attaches great importance to providing support for foreign companies, and will take targeted measures to help companies solve related problems.

"China will continue anti-epidemic efforts through studying, summarizing and adjusting based on the principle of being scientific and precise, so as to minimize the impact of the epidemic on social economic development," Mao said.

Earlier this month, China rolled out 20 optimized measures in its COVID-19 response, including shortened quarantine periods for international arrivals and cancelation of circuit breakers for inbound flights.

COVID-19 cases will continue to increase for a short period as many cities still haven't seen the tipping point, an expert from the Chinese Center for Disease Control and Prevention (CDC), who requested anonymity, told the Global Times. However, he predicted that the caseload will flatten if the governments respond swiftly and take scientific measures properly.

When asked about the measures' impact on the economy, the experts slammed foreign media hype, saying that if case numbers soar, many people, including factory workers, will be hit by the virus and not be able to work; moreover, the hospital system will become overwhelmed, which could cause social turmoil.

He cited the example of the US' labor shortage when the country eased COVID-19 restrictions prematurely.

On top of the quarter-million people of working age who have died from coronavirus, at least twice that number across all ages have permanently disappeared from the workforce, the analysis by the National Bureau of Economic Research, a US organization, said in September.

China oil markets monthly snapshot

	Indicator	Value	Change		Last update	Comment
Demand	Traffic		M-o-M	Y-o-Y		
	Road freight volume	602 bln ton-km	-5%	-2%	Oct 2022	<ul style="list-style-type: none"> New Covid-19 outbreaks and lockdown measures have hit China's oil demand. Road freight volume and air passenger traffic, indicators for China's diesel and jet fuel demand, both declined in October from a month earlier. The road congestion index in the 15 biggest Chinese cities edged lower to 101% on November 16. The subway traffic index that tracks subway ridership in China's 11 major cities plunged to 77% on November 18, 10 percentage points lower than a month ago. Flight schedules inched up by 4% for the week of November 15-21 but are still 23% lower than the level at the beginning of October. Domestic fuel demand, especially for gasoline and jet fuel, is unlikely to improve in the short term due to Covid-19 restrictions. For further details, see the demand section on page 3.
	Air passenger traffic	24 bln ppl-km	-20%	-58%	Oct 2022	
	Port cargo throughput	1.38 bln tons	+5%	+4%	Oct 2022	
	High frequency index		W-o-W	M-o-M		
	Road congestion index	101%	-2 ppt	-2 ppt	Nov 16, 2022	
	Subway traffic index	77%	+2 ppt	-10 ppt	Nov 18, 2022	
Flight schedules		Increase	Decrease	Nov 15- 21, 2022		
Refining	Refinery utilization		M-o-M	Y-o-Y		<ul style="list-style-type: none"> Refiners have scaled back their run rates due to the bleak domestic oil demand. Run rates for independent refiners decreased 3 percentage points for the week ending November 18 compared with a month earlier, falling below historical seasonal average levels. Refiners boosted their monthly diesel output by 10% to a record high of 18.8 million tons in October. This is due to relatively healthy margins when compared to other products, as lockdown measures have had a smaller impact on diesel demand. The release of additional export quotas and high arbitrage opportunities for diesel exports also supported the production increase. For further details, see the refining section on page 7.
	Country-wide throughput	13.86 m b/d	-0.1%	+0.4%	Oct 2022	
	Independent refineries	66%	-3 ppt	-5 ppt	Nov 18, 2022	
	Refinery output (monthly)					
	Gasoline	12.4m tons	+3%	-6%	Oct 2022	
	Diesel	18.8m tons	+10%	+30%	Oct 2022	
Jet kerosene	2.4m tons	-1%	-21%	Oct 2022		
Trade	Crude imports		M-o-M	Y-o-Y		<ul style="list-style-type: none"> Crude imports continued to recover from the nadir over June-July to 10.2 million b/d in October, up by 4% from September. Saudi Arabia and Russia remain the biggest sources of China's crude imports. Year-to-date imports are 3% below the same period in 2021, despite higher quota issuance so far this year. Refiners ramped up product exports in October due to weakening domestic demand as the central government handed out an additional batch of export quotas for 15 million tons. Notably, October gasoline exports surged to 1 million tons, a jump of 52% from September. For more details, see the trade section on page 10.
	National total	10.2m b/d	+4%	+14%	Oct 2022	
	Selected routes (BBG)	5.5m b/d	+3%	+6%	Oct 2022	
	Fuel exports					
	Quota usage*	65%	(*gasoline, diesel and kerosene only)		Jan-Oct 2022	
	Gasoline	1m tons	+52%	-0.5%	Oct 2022	
Diesel	1.1m tons	-38.8%	+90%	Oct 2022		

Oil demand

Gasoline and jet fuel demand hit by Covid-19 outbreaks

- New Covid-19 outbreaks and lockdown measures have hit China's oil demand. Road freight volume and air passenger traffic, indicators for China's diesel and jet fuel demand, both declined in October from a month earlier.
- Lockdown measures continue to curb mobility. The road congestion index in the 15 biggest Chinese cities edged lower to 101% on November 16. The subway traffic index that tracks subway ridership in China's 11 major cities plunged to 77% on November 18, 10 percentage points lower compared with a month ago.
- Flight schedules inched up by 4% for the week of November 15-21 but are still 23% lower than the level at the beginning of October.
- Domestic fuel demand, especially for gasoline and jet fuel, is unlikely to improve in the short term due to Covid-19 restrictions.

Monthly demand indicators

Air traffic volume fell further due to continued travel restrictions

Road freight volume

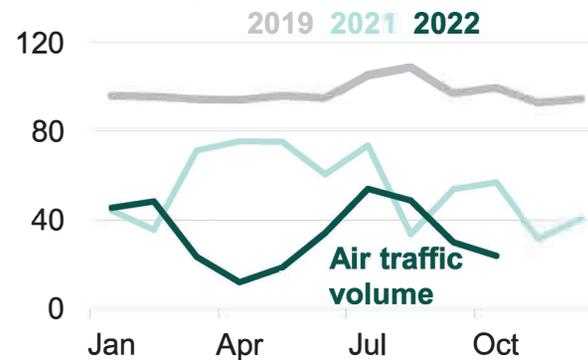
Billion ton-km



Source: National Bureau of Statistics of China, BloombergNEF

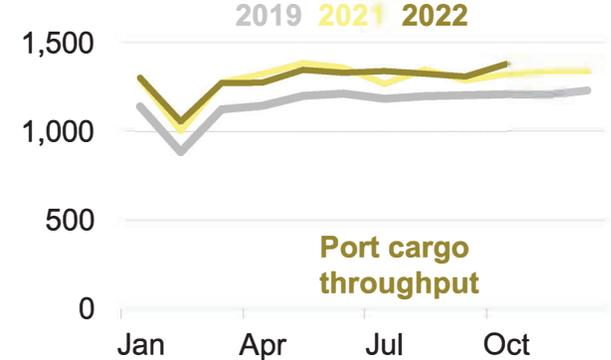
Air traffic volume

Billion passenger-km



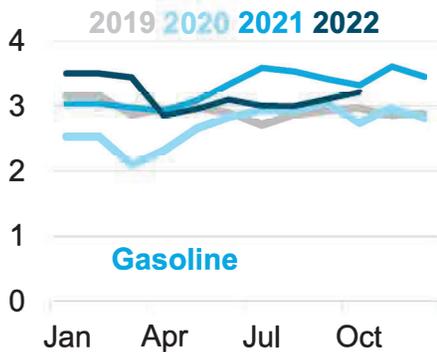
Port cargo volume

Million tons

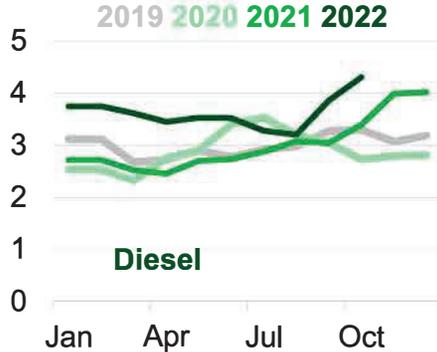


Apparent demand for transport fuels

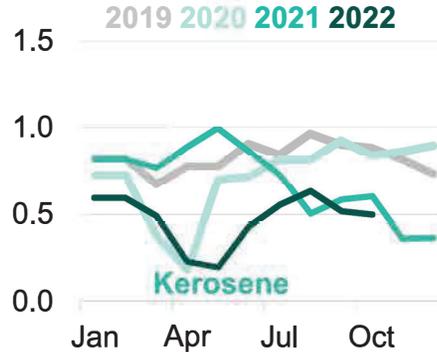
Million b/d



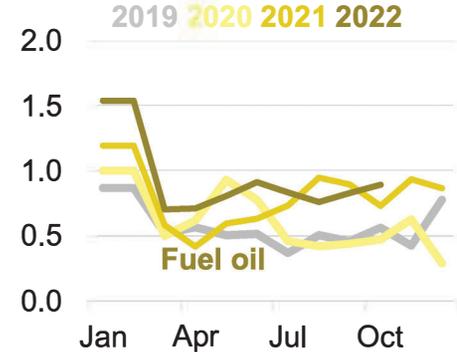
Million b/d



Million b/d



Million b/d



Source: Bloomberg Terminal, BloombergNEF. Note: Apparent demand is calculated by deducting net exports from production (apparent demand = production + import – export). China's National Bureau of Statistics reports a combined value for January and February. The charts represent this as an even split between the two months for illustrative purposes.

High frequency transport data

Subway rides plunged

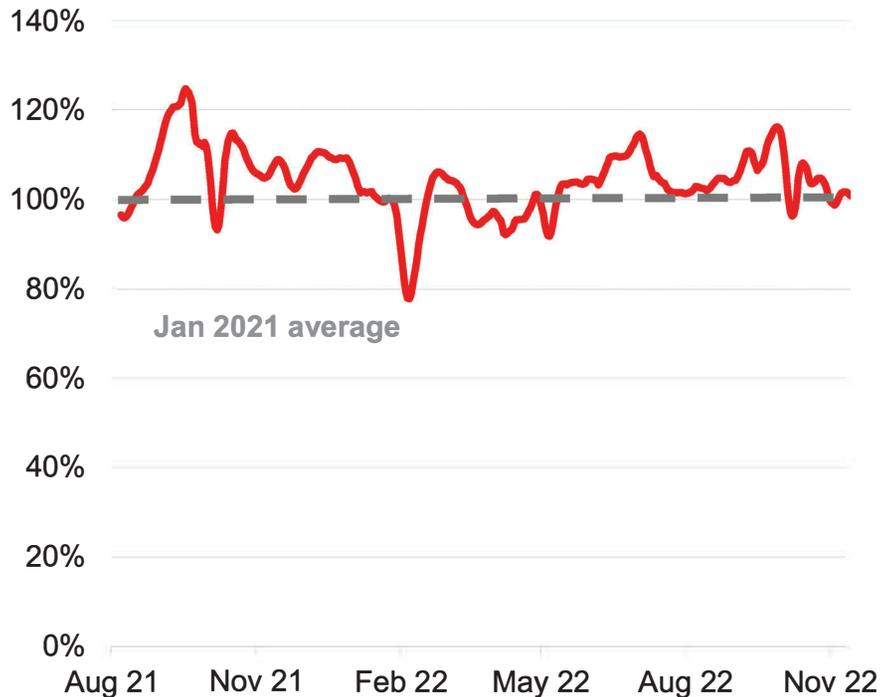
Our weekly **road traffic report** is available on the BNEF website  or the Bloomberg Terminal 

Our weekly **global aviation report** is available on the BNEF website  or the Bloomberg Terminal 

- BloombergNEF tracks road congestion data to gauge the impact of the Covid-19 outbreak on road fuel demand.
 - The China-15 congestion level is calculated by taking the weighted average of the congestion levels in the 15 cities and their vehicle registration numbers. The cities are the top 15 cities with the highest number of vehicle registrations. The peak congestion index is calculated based on average levels in January 2021 (Jan 2021 average = 100%).
- We track the daily subway rides of 11 major cities to measure overall usage of public transportation.

Road congestion

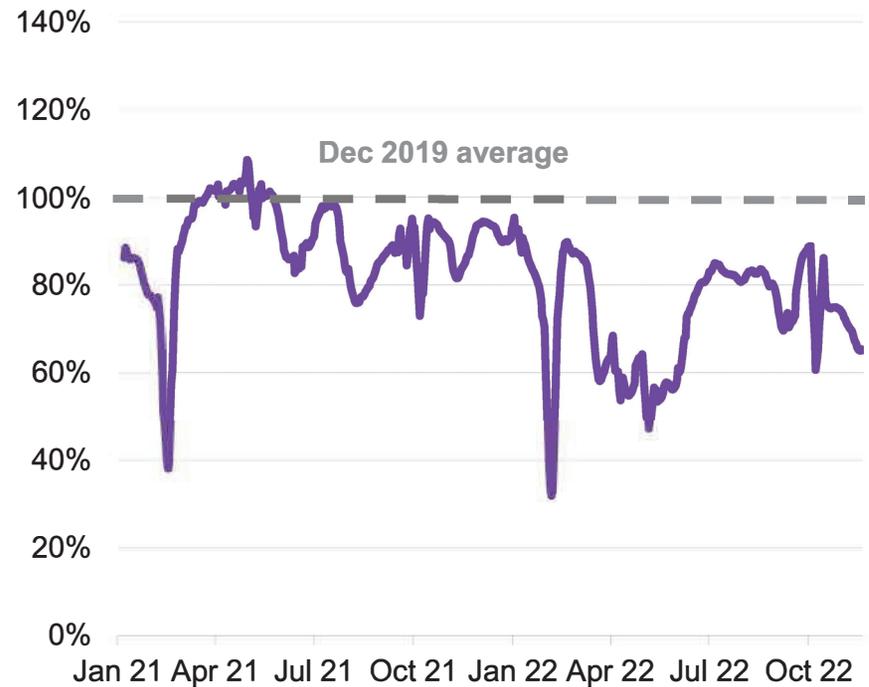
Peak congestion index



Source: Baidu, BloombergNEF. Note: The chart shows seven-day moving averages. Last updated on November 17, 2022.

Subway rides

Rebased Dec 2019 = 100%



Source: BloombergNEF, daily Weibo update from each city's metro company. Note: The chart shows seven-day moving averages. Last updated on November 20, 2022.

Flight schedules and jet fuel demand

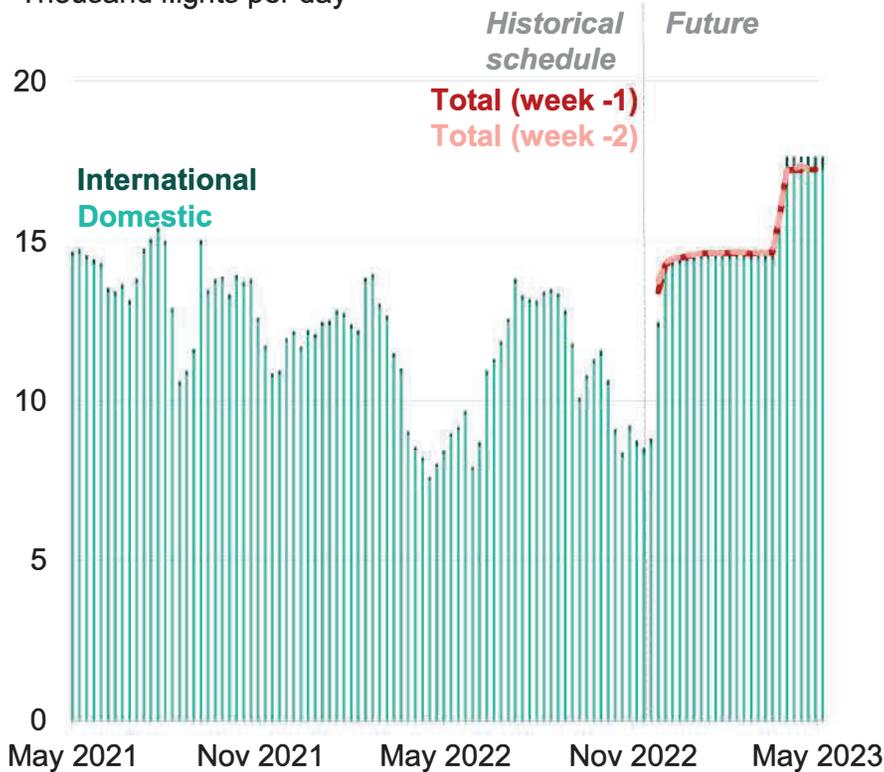
Flight plans suggest limited overseas travel until March 2023

Our weekly **global aviation report** is available on the BNEF website  or the Bloomberg Terminal 

- We track the flight schedules in major Chinese airports and estimate jet fuel consumption for the next six months based on data for planned routes and aircraft.
 - Schedules are based on the average daily scheduled passenger flight departures from Chinese airports.
 - Oil consumption is based on the aircraft type, distance between origin and destination and the average volume of fuel consumed by each aircraft type for a given distance.
- **NEW:** Bloomberg Terminal users can use our new **DSET FLY <GO>** tool to track jet fuel demand and flight schedules.

Chinese airport flight departure schedules

Thousand flights per day



Implied jet fuel demand

Thousand barrels per day



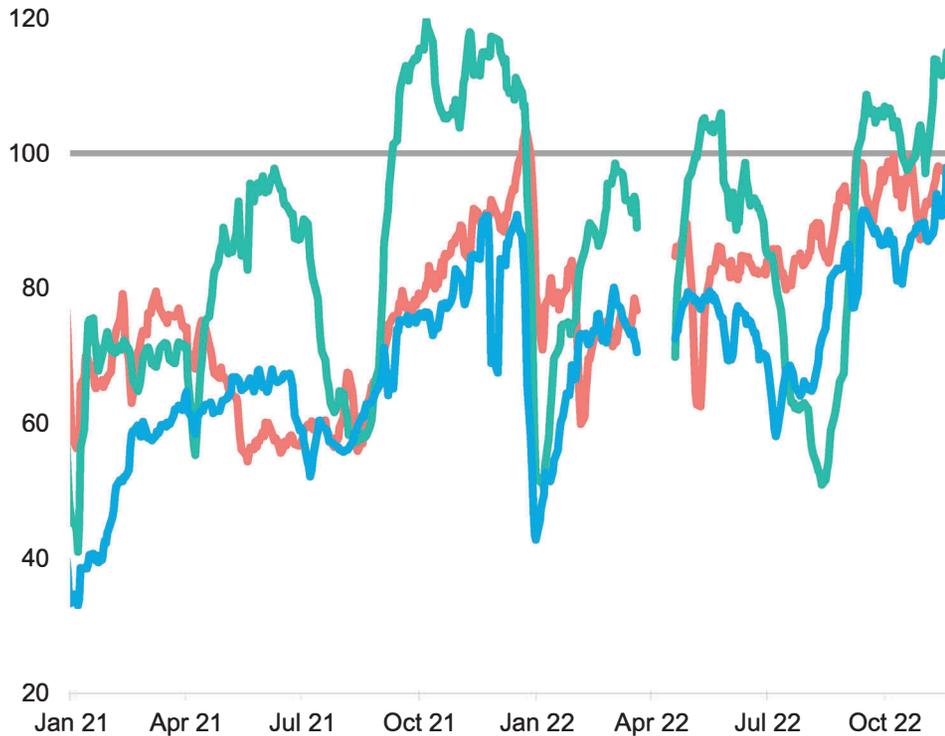
Source: BloombergNEF, Bloomberg Terminal FLY <GO>. Note: Last updated on November 21, 2022. Excludes cargo flights. The future flight schedule is subject to change. Terminal users can check DSET FLY <GO> for more details.

Comparing the two mobility indicators

Congestion levels drop across the board

TomTom congestion index

Indexed to the peak congestion of the average week in 2019 (five-day weekday moving average)



	Latest	Week Δ	Four-week Δ
Europe	112.2	-0.9 (-0.8%)	10.2 (+10.0%)
Asia Pacific	94.3	-3.6 (-3.6%)	4.3 (+4.8%)
North America	91.5	-2.0 (-2.1%)	2.4 (+2.7%)

Source: TomTom road congestion data, BloombergNEF. Note: **Asia Pacific excludes China**. Data updated to **November 23, 2022**. Δ = change.

China-15 (Baidu) congestion index

Daily peak congestion levels, indexed to January 2021 (seven-day moving average)



	Latest	Week Δ	Four-week Δ
China-15	98.29	-2.39 (-2.37%)	-7.82 (-7.37%)

Source: BloombergNEF, calculated from Baidu data. Note: Data updated to **November 23, 2022**. Δ = change.

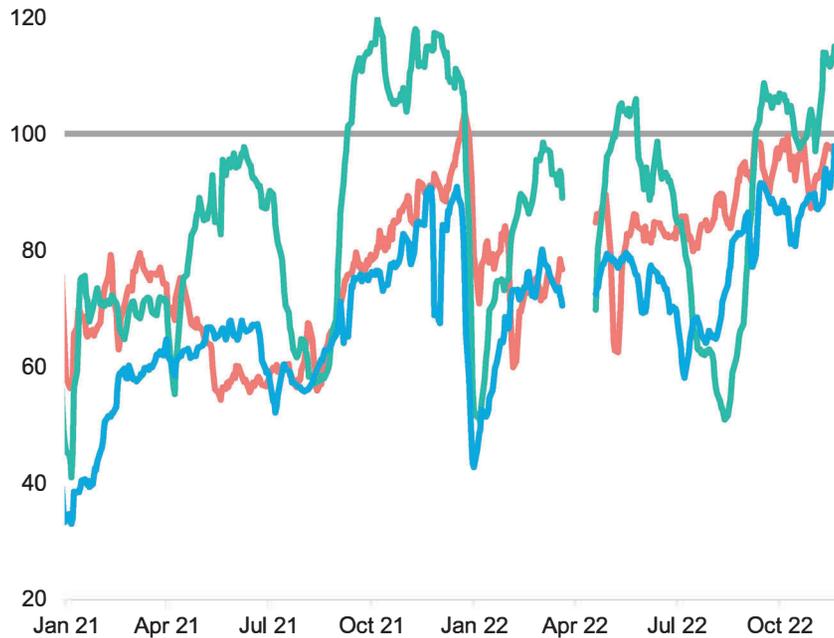
Apple Mobility reports were discontinued on April 14, 2022. We have resumed updating TomTom congestion data, which was previously updated to March 16.

TomTom congestion index

Weekly downturn follows month-on-month gains in all regions

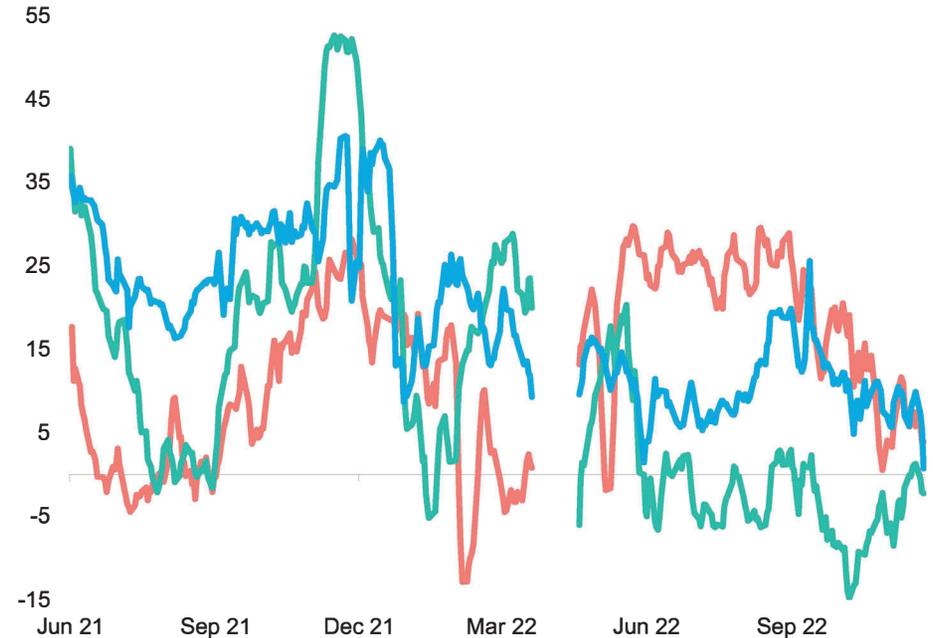
Regional road-congestion index

Indexed to the peak congestion of the average week in 2019 (five-day weekday moving average)



Index point change versus the previous year

Percentage point change vs the year before (seven-day moving average)



	Latest	Week Δ	Four-week Δ	Index point Δ vs year before	Index point Δ vs year before (last week)
Europe	112.2	-0.9 (-0.8%)	10.2 (+10.0%)	-0.46	-0.97
Asia Pacific	94.3	-3.6 (-3.6%)	4.3 (+4.8%)	5.44	7.57
North America	91.5	-2.0 (-2.1%)	2.4 (+2.7%)	6.49	7.72

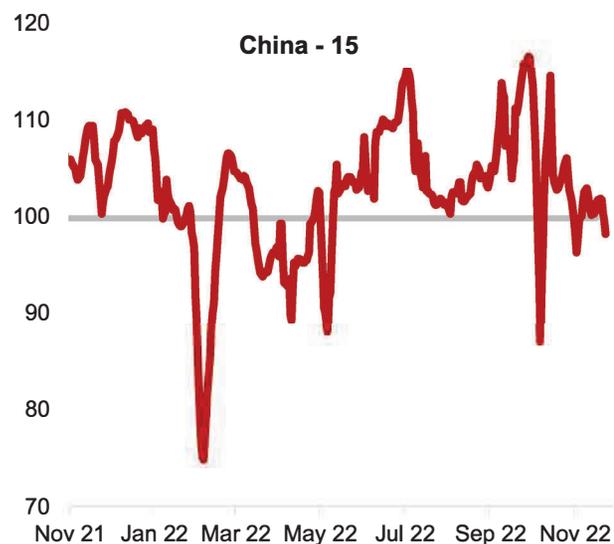
Source: TomTom Traffic Index, BloombergNEF. Note: **Asia Pacific excludes China. Data updated to November 23, 2022, with weekly addition from November 16, 2022. Index point change versus the previous year is obtained by averaging the latest weekly values. Δ = change.**

China (Baidu) congestion index

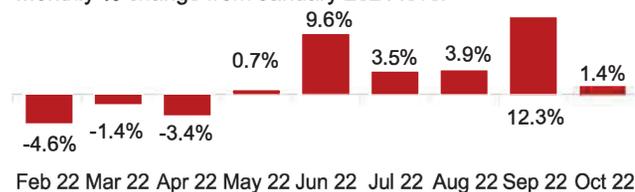
Traffic decline continues amid Covid surge

China congestion index (calculated from Baidu data)

Daily peak congestion levels, indexed to January 2021 (seven-day moving average)



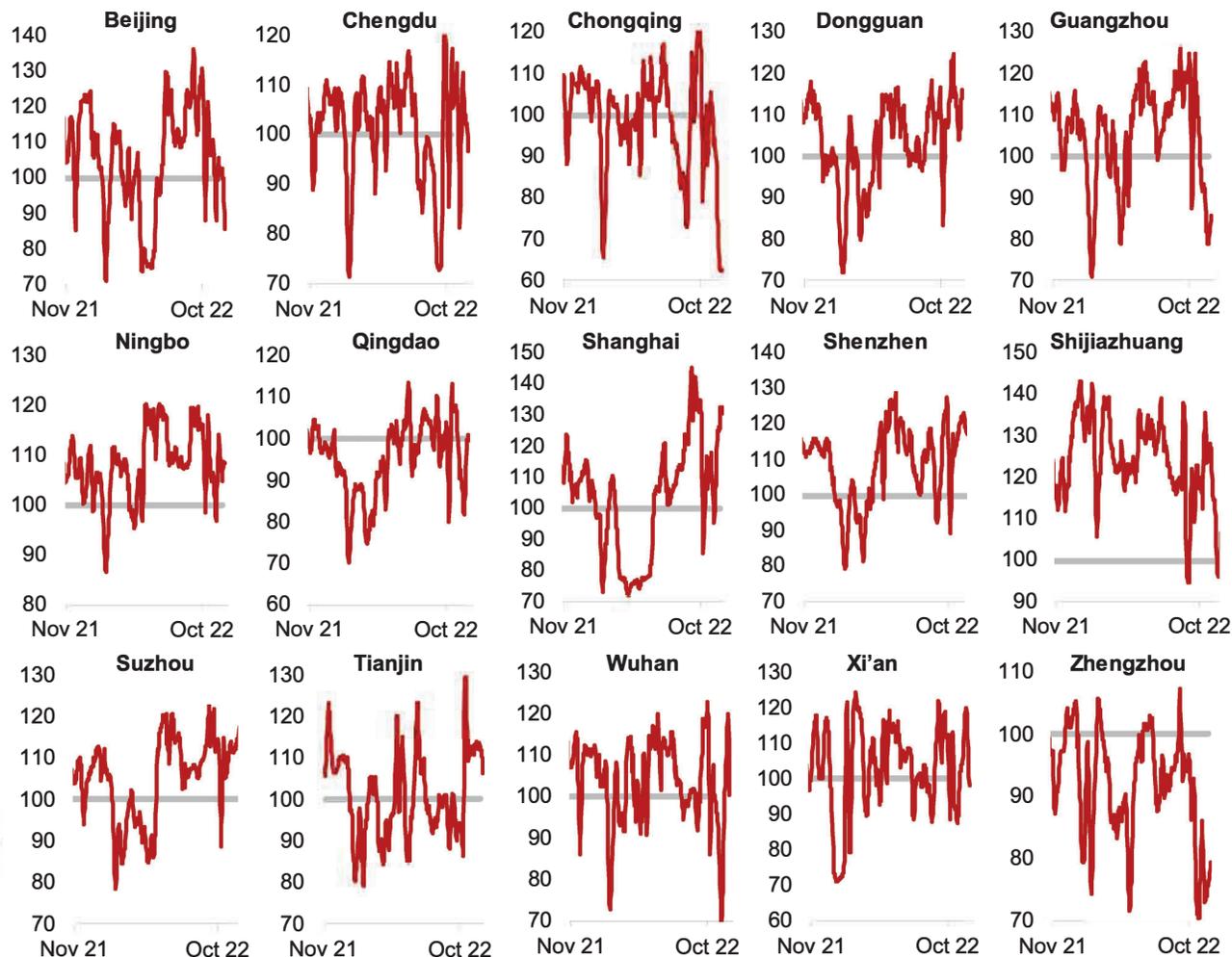
Monthly % change from January 2021 level



	Latest	Week Δ	Four-week Δ
China - 15	98.29	-2.39 (-2.37%)	-7.82 (-7.37%)

Road traffic in China in the week ending November 23 was down 2.39 percentage points to 98.29 of January 2021 levels.

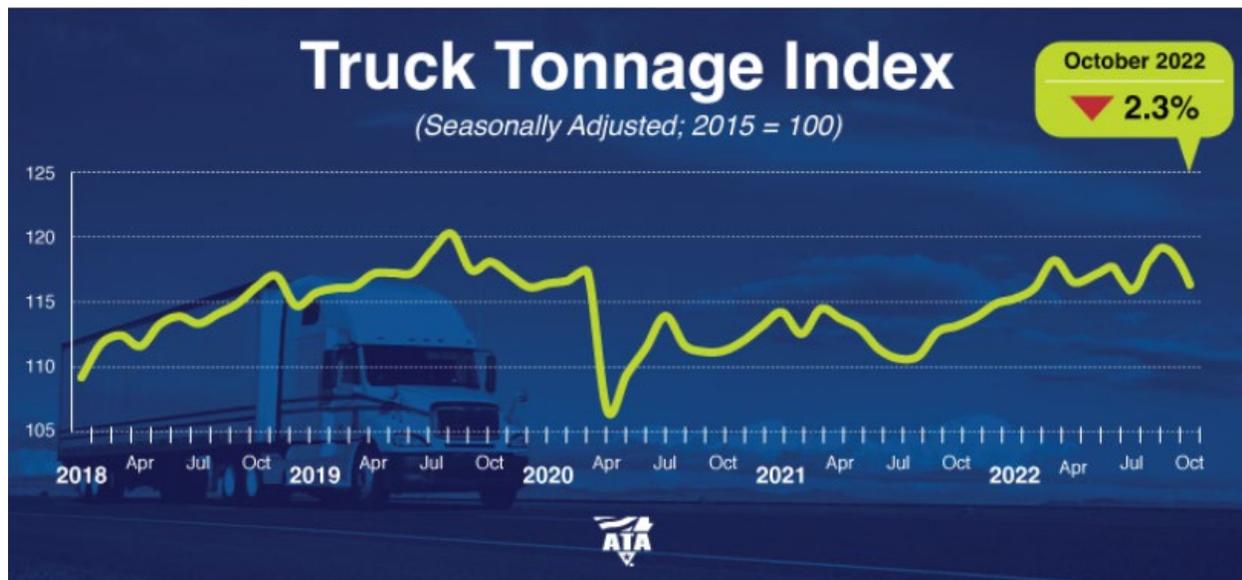
Daily peak congestion levels, indexed to January 2021 (seven-day moving average)



Source: BloombergNEF, calculated from Baidu's data. Note: **Data updated to November 23, 2022.** City-level charts display the 15 cities with the highest number of vehicle registrations (excluding two- and three-wheelers). The China-15 congestion level is calculated by taking the weighted average of the congestion levels in the 15 cities and their vehicle registration numbers. Δ = change.

<https://www.trucking.org/news-insights/ata-truck-tonnage-index-slipped-23-october>

Washington — American Trucking Associations’ advanced seasonally adjusted (SA) For-Hire Truck Tonnage Index decreased 2.3% in October after rising 0.8% in September. In October, the index equaled 116.3 (2015=100) versus 119.1 in September.



“For-hire truck tonnage saw the largest single monthly decrease in October since the start of the pandemic,” said ATA Chief Economist Bob Costello. “The decrease fits with the anecdotal reports of a muted fall freight season. It also coincides with a slowing economy. Housing is a weak spot in freight in addition to a slowing in personal consumption of goods. While factory related freight is holding up better than other areas, it is also decelerating.”

September’s increase was revised up slightly from our October 18 press release.

Compared with October 2021, the SA index increased 2.8%, which was the fourteenth straight year-over-year gain, but the smallest gain since April. In September, the index was up 5.7% from a year earlier. Year-to-date through October, compared with the same period in 2021, tonnage was up 3.9%.

The not seasonally adjusted index, which represents the change in tonnage actually hauled by fleets before any seasonal adjustment, equaled 118.9 in October, 0.4% below the September level (119.3). In calculating the index, 100 represents 2015. ATA’s For-Hire Truck Tonnage Index is dominated by contract freight as opposed to spot market freight.

Trucking serves as a barometer of the U.S. economy, representing 72.2% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 10.93 billion tons of freight in 2021. Motor carriers collected \$875.5 billion, or 80.8% of total revenue earned by all transport modes.

ATA calculates the tonnage index based on surveys from its membership and has been doing so since the 1970s. This is a preliminary figure and subject to change in the final report issued around the 5th day of each month. The report includes month-to-month and year-over-year results, relevant economic comparisons, and key financial indicators.

CAOEC ANNOUNCES THE RELEASE OF ITS Q4 2022 AND 2023 DRILLING FORECAST

For Immediate Release: November 23, 2022

CAOEC announces the release of its Q4 2022 and 2023 Drilling Forecast.

- **Projected 2023 wells drilled: 6,409 – an increase of 827 from 2022 (5,582*)**
- **Projected 2023 operating days: 70,495 – an increase of 9,091 from 2022 (61,404*)**
- **Total jobs expected: 42,350, an increase of 5,437 year-over-year**
***forecast + actual**

“The future of energy runs through our workforce. Our members have the technical innovation and skills to be the world’s most carbon-efficient energy services sector,” says CAOEC President & CEO Mark A. Scholz. “Canada is well known for our top-rated ESG standards, and countries around the world are asking for more Canadian energy. As noted in a recent CAOEC white paper ‘[Leading Collaboration Through the Energy Transition](#),’ our members and their employees will remain critical as development continues for oil, LNG, natural gas, geothermal, helium, carbon capture utilization and storage (CCUS), in-situ hydrogen, and mineral extraction from brines. In 2023, we expect to lead the industry forward as we embark on the energy transformation.”

“2022 was an exciting year for the Canadian energy services sector following a seven-year industry slowdown. Drilling activity for oil and natural gas remained steady throughout the year with high commodity prices and modest improvements in capital markets,” Scholz adds.

Canada’s energy services sector is an integral part of the global energy production supply chain as Russia’s war against Ukraine threatens energy security abroad. CAOEC is hopeful discipline from OPEC and civility with crude prices will help prevent the industry from potential recession impacts in 2023.

In 2023, tailwinds are expected with the completion of the Trans Mountain Expansion Project, a pipeline that will add 590,000 barrels per day to the market. Coastal GasLink is also anticipated to reach mechanical completion by the end of 2023, a project that will safely deliver natural gas to the first LNG export facility in Canada’s history, LNG Canada.

After years of lower activity levels, labour recruitment and retention remain a challenge to overcome in the energy industry. The Association fully accounts for this barrier in the forecast, and anticipates more people will join the industry as it proves to offer competitive career opportunities for young people, Indigenous communities, and newcomers from coast to coast to coast. “We are at the epicenter of Canada’s energy transformation. It is our people that will lead the way forward,” Scholz asserts in the white paper.

The forecast calls for an increase of 827 wells from 2022, for a total of 6,409. The forecast also foresees an increase of 5,437 jobs, up to a total of 42,350 direct and indirect jobs which will be key in Canada’s net-zero future.

About Us

The CAOEC represents 97 land drilling rig, directional drilling, offshore drilling, and service rig member companies (nearly 100% of the industry) on the front lines of energy security and transition. The membership operates a fleet of 456 land drilling rigs and 755 service rigs in northeast British Columbia, Alberta, Saskatchewan, and southwest Manitoba, and offshore drilling rigs operating in Atlantic Canada.

CAOEC's members are varied and diverse. Many of our members are small and medium-sized enterprises that have been leaders in creating opportunities for young people, Indigenous communities, and middle-class workers.

For more information, contact:

Caroline Kadri – Senior Communications Specialist

Canadian Association of Energy Contractors

Phone: (403) 264-4311 ext. 110

Email: ckadri@caoec.ca

Ceremony for launching nuclear-powered icebreaker Yakutia and flag-raising ceremony on nuclear-powered icebreaker Ural

The President attended, via videoconference, the ceremony to launch the Yakutia nuclear-powered icebreaker and to raise the flag of the Russian Federation on the Ural nuclear-powered icebreaker.

November 22, 2022 14:00 Novo-Ogaryovo, Moscow Region

During the ceremony for launching nuclear-powered icebreaker Yakutia and flag-raising ceremony on nuclear-powered icebreaker Ural.

5 of 8

During the ceremony for launching nuclear-powered icebreaker Yakutia and flag-raising ceremony on nuclear-powered icebreaker Ural.

The new nuclear-powered vessels were built at the Baltic Shipyard in St Petersburg to the order of the Rosatom State Corporation. They are part of Project 22220, under which the largest and most powerful icebreakers in the world are being built. Their main task is to ensure year-round navigation in the Arctic.

* * *

President of Russia Vladimir Putin: Friends, colleagues, good afternoon,

Today we have two interesting events important for Russian shipbuilding and our icebreaker fleet and actually for the entire country. It is the accomplishment of two very important, complex tasks, not just two complex tasks but two within one large project. **The Russian state flag will be raised on the new universal nuclear-powered icebreaker Ural. Another powerful, contemporary nuclear-powered icebreaker, the Yakutia, is ready for launch at the Baltic Shipyard in St Petersburg.** I heartily congratulate all of you on this event.

I want to sincerely thank our shipbuilders, nuclear engineers, designers, workers, engineers and all experts who are taking part in the creation of these technology-intensive, unique – without any exaggeration – vessels, for their extensive work, professionalism, and readiness to develop and reach the most ambitious goals.

Both icebreakers were built as part of a serial project and are included in our large-scale, system-wide work on reequipping and expanding the Russian icebreaker fleet, and on **strengthening Russia's status as a great Arctic power.**

I want to note that the first two icebreakers of this series, the Arktika and the Sibir, are already serving in the hardest parts and on complex routes where they have proved their reliability and efficiency, and their top characteristics.

According to the plans, the Ural icebreaker will start performing tasks as early as this December, and the Yakutia icebreaker must be transferred to the fleet at the end of 2024. The commissioning of another icebreaker of the same series – the Chukotka – is scheduled for 2026. In addition, the construction of the Rossiya super-powerful nuclear icebreaker should be completed in 2027 at the Zvezda Shipyard in the Far East: this is truly a super-powerful icebreaker, one of a kind in the world.

Let me stress that the deadlines and the pace of work must be strictly adhered to. I am sure that it will be so. I count on the coordination of all specialists, subcontractors, enterprises and research teams here.

Vessels of such a high ice class are of strategic importance to us. They are needed to study and explore the Arctic, ensure safe and sustainable navigation in this region, and increase traffic along the Northern Sea Route.

Let me repeat again: the development of this most important transport corridor will help Russia more fully unlock its export potential and establish efficient logistics routes, including to Southeast Asia. By the way, we are open to cooperation with our partners, with those who want to work with Russia.

I am confident that we will implement all the plans despite the current difficulties. In order to do so, we will increase the capabilities of our nuclear icebreaker fleet, and, what is essential, we must do this using Russian solutions and production capacities, as well as domestic equipment and components. This is how it actually happens.

I would like to wish great achievements to all of you, friends and colleagues, and further success in their work to the staff of the Baltic Shipyard, as well as fruitful service for the benefit of Russia to the crews of the new nuclear-powered ships.

Congratulations once again.

Please, let us proceed with the planned activities.

Mr Manturov, please.

Deputy Prime Minister – Minister of Industry and trade Denis Manturov: Mr President, colleagues,

Today we are celebrating two major events for Russian shipbuilders. I would like to congratulate them, especially the personnel at the Baltic Shipyard. This is a substantial contribution to increasing our icebreaker fleet and strengthening the status of Russia as the only power with so many icebreakers.

The start of the Ural icebreaker's year-round operation on the Northern Sea Route today and the launch of the icebreaker Yakutia, which is to be completed and will be commissioned in 2024, are evidence of the continuing build-up of the competencies we need to ensure the construction of our leading vessel, the 120 MW icebreaker Rossiya, which is being built at Zvezda Shipyard in the Primorye Territory.

Although our icebreaker fleet and vessels under construction are noted for an extremely high level of technological sovereignty, we have attracted the largest possible number of contractors and enterprises that produce shipboard equipment, as well as other shipyards under United Shipbuilding Corporation, to ensure the smooth and timely attainment of the tasks set to us by the President of Russia.

The construction of our icebreaker fleet and the addition of the fifth and sixth icebreakers in the group of 60 MW vessels was your decision, which we are implementing with your support. We will accomplish this without fail. This year, Rosatom will sign a contract with the Baltic Shipyard and a large group of related companies, which will ensure the uninterrupted construction of icebreakers.

Apart from the 60 MW nuclear-powered vessels and the 120 MW icebreaker, which is under construction, we are working with our potential clients – NOVATEK, Nornickel and Rosneft – to build diesel icebreakers, so that nuclear-powered vessels can be used for year-round navigation on the Northern Sea Route, while diesel icebreakers will be used in the Gulf of Ob.

Mr President, on behalf of our country's shipbuilders, I would like to thank you for your tireless support and attention to this industry without which plans for building and developing infrastructure along the sea routes would be impossible to implement.

Thank you for your attention.

With that, I turn it over to USC CEO Alexei Rakhmanov.

Thank you.

Vladimir Putin: Please go ahead, Mr Rakhmanov.

CEO of the United Shipbuilding Corporation Alexei Rakhmanov: Mr President,

The third serial-produced nuclear-powered icebreaker of the 22220 project, the Yakutia, was laid down at the Baltic Shipyard two and a half years ago right before the pandemic broke out. But the shipyard workers did a good job and reconfirmed their high professionalism. Thank you, colleagues for your good work.

Mr President, at your initiative, the USC and Rosatom are in the process of expanding our fleet of the world's most powerful icebreakers. This project has opened long-term prospects for the shipbuilding industry, helped us bring back to life unique technology and competencies and create new jobs.

The Baltic Shipyard had just 3,000 employees in 2012, and today this number is up to 6,000. This is a great accomplishment for the team.

The USC shipbuilders have built 20 icebreakers and icebreaker class vessels over that time, which are now operating in the Arctic and northern latitudes. This is a tangible result of your decision made 15 years ago, Mr President, to establish the United Shipbuilding Corporation. The Rosatom corporation was created at the same time, and today the two corporations jointly ensure Russia's technological sovereignty.

This icebreaker, which is about to be launched, has the nuclear reactors and most of the basic equipment already installed. The works to complete the icebreaker will be performed with the vessel afloat.

I wish USC workers every success in finishing their work and completing the order on schedule.

Mr President, according to shipbuilders' tradition, each ship has a "godmother" who gives it her blessing for good fortune before it is launched into the water. Deputy Prime Minister Viktoria Abramchenko has the honour of being the Yakutia nuclear icebreaker's godmother. Over to you.

Deputy Prime Minister Viktoria Abramchenko: Mr President, colleagues,

The nuclear icebreaker Yakutia is rising high before us. It is ready to be floated out. The construction will be completed in December 2024 as planned.

Russian nuclear icebreakers are unmatched in the world and are rightfully our national pride. Russian researchers, engineers and shipbuilders have used the best and the latest technical designs in this project.

Mr President, as the Deputy Prime Minister in charge of the environment, I'd be remiss if I don't mention the high environmental standards of the icebreakers in this series, the 22220 project. We operate ships of this class in the high latitudes, and the environment there needs to be handled with special care. The icebreakers in this series use waste-free technology meaning that the remote unit does not need to be replaced while the nuclear power unit remains operational.

Second, protection against ionising radiation is in place on the icebreaker, which blocks not only the radiation produced by the two reactors but solar radiation as well, meaning that the level of radiation inside the icebreaker is lower than natural background radiation.

Third, the volume of atmospheric emissions is critically important for the Arctic. The emissions from this series of icebreakers have been drastically reduced.

The Arctic is particularly sensitive to soot, or black carbon emissions of which the Yakutia emits only 500 grams per year. Compared to emissions from the typical coal-fired boiler house, these emissions are 100,000 times lower.

I would like to thank the engineers and shipbuilders who have made this formidable project possible.

I want to wish everyone good health and every success in your work, and the beautiful Yakutia speedy entry into service and seven feet under the keel.

Alexei Rakhmanov: Mr President,

The third serial-produced all-purpose nuclear icebreaker Yakutia, hull number 05709, Project 22220 is ready to be launched.

The act of acceptance has been signed. The launch team is in place. The trigger has been checked.

I need your permission to float the icebreaker.

Vladimir Putin: Permission granted. Go ahead.

Alexei Rakhmanov: Shipyard captain, check the water area.

Head of the slipway shop, check the trigger.

Cut the drag chain.

Mr President, the construction of Yakutia's elder brother – nuclear-powered icebreaker Ural has also been completed at the Baltic Shipyard.

Allow me to give the floor to Director General of the Rosatom State Corporation Alexei Likhachev.

Vladimir Putin: Mr Likhachev, go ahead please.

Director General of the State Atomic Energy Corporation Rosatom Alexei Likhachev: Mr President, we welcome you from the helicopter pad of the Ural icebreaker and would like to first thank you for the decisions made in the interests of developing the icebreaker fleet.

Literally in two years, the number of nuclear-powered icebreakers increased from four to seven. In addition to the future contracts about which Mr Manturov reported to you, we are to build over 70 ice-class vessels – both with icebreaking capabilities and cargo ships – for exports and domestic shipping.

Mr President, this year we expect total cargo shipped on the Northern Sea Route to reach 34 million tonnes. This is two million tonnes more than the planned target under the relevant federal project for the Northern Sea Route. As for Russian cargo shipping, Russian shippers, it is some 800,000 tonnes higher than last year's record total.

Following your instruction, the Government drafted and endorsed a plan for developing the Northern Sea Route until 2035. This is a strategic document that maps out the development of mega projects in the Arctic – projects of NOVATEK, Rosneft, Nornickel and the Baimskaya Ore Zone.

According to our estimates, by 2035, shipping along the Northern Sea Route will exceed 200 million tonnes; the aggregate macroeconomic effect will exceed 33 trillion rubles and tax revenues will be over 13 trillion rubles.

Mr President, upgrading the nuclear-powered icebreaking fleet is a key condition for the further development of the entire Arctic region.

Allow me to introduce to you some members of the crew from the new nuclear-powered icebreaker Ural.

Ivan Kurbatov – the youngest nuclear icebreaker captain, 40 years old. Last February, the nuclear-powered icebreaker Arktika on which he was chief mate, conducted a unique, extremely late pilotage of small ice-class ships via the entire Northern Sea Route in both directions. Ice thickness reached three metres and only his expertise ensured that the right decisions were made.

Rosatom and Atomflot recognised the achievements of Mr Kurbatov. I am sure that Ivan Kurbatov will display all his leadership qualities as the captain of the new nuclear-powered icebreaker Ural.

Yevgeny Khodus, senior mechanical engineer of the ship, one of the most experienced Atomflot employees.

I am pleased to introduce to you Yekaterina Yemelyanova, operating engineer in charge of the Ural icebreaker's nuclear power unit.

Mr President, the acceptance commission confirmed successful completion of sea trials by the new nuclear-powered icebreaker Ural. Rostekhnadzor approved the results and the crew has been formed.

I request your permission to raise the national flag of the Russian Federation on the new nuclear-powered icebreaker Ural.

Vladimir Putin: Permission granted.

Alexei Likhachev: Thank you very much.

Attention crew! Raise the national flag of the Russian Federation!

Vladimir Putin: Colleagues, friends,

What would I like to say in conclusion?

First, and this was just said by the head of Rosatom, together we made a timely decision to build a new icebreaker fleet to replace outgoing vessels and to reflect the growing importance and opportunities of the Northern Sea Route.

Smooth financing, restoration and upgrading of competences – scientific and engineering – in the sphere of special shipbuilding and nuclear power allow us to reaffirm Russia's high technological status, make full use of existing production capacities and create new shipyards in such a vital region as the Far East. I am referring to the creation of the new large shipyard Zvezda. It is particularly important that these features allow us to build up Russia's leadership along such important transport artery as the Northern Sea Route.

It was just said that in the near future the shipping volumes are expected to reach up to 200 million tonnes, and this is sure to happen considering the scale and growth of global trade. This is an enormous turnover.

In conclusion, I would like to again congratulate all those who are achieving such meaningful, tangible and vital results for our country. I am not even talking about the broader development of the Arctic or the fact that the future of our country largely depends on the progress in developing our northern regions. Just the development of this route is extremely important for our country at this moment, especially in view of the changing climate. In the near future, its importance will increase many times over. And so, I would like to thank all of you very much.

Of course, I would like to repeat again that we are ready for cooperation with all friendly nations, with all those who want to work with Russia. We know that there is great interest in taking part in this joint work.

Thank you for your work, for the results. I am sure that all plans will be fulfilled – the plans we mapped out with you before and the plans my colleagues have already spoken about today.

Congratulations!

Russia Sends Oil Thousands of Miles Through Arctic Circle Again

- Sanctions make route more appealing to Moscow: Kpler analyst
- Climate, shipping capacity, crude volume limit route's utility



The Vasily Dinkov ship.

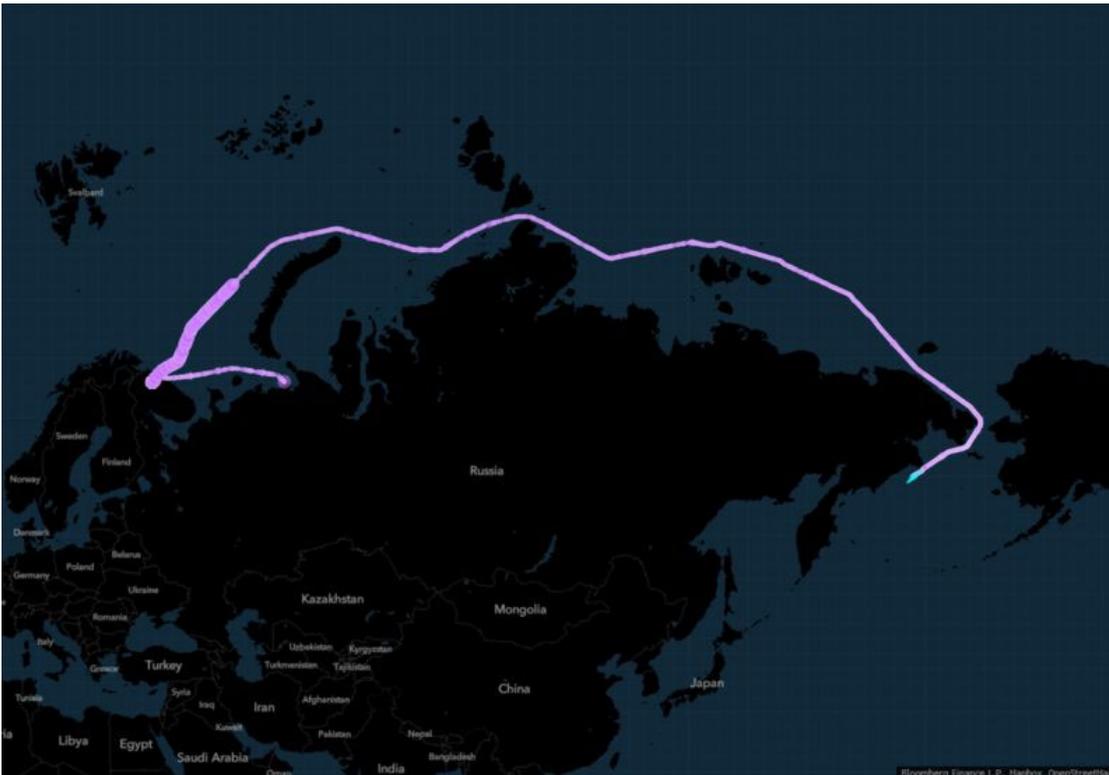
By [Elina Anya Ganatra](#) and [Julian Lee](#)

November 8, 2022 at 1:28 a.m. MST

Russia sent its second-ever crude oil shipment east through the Arctic Circle toward China, a route that could one day give the country a faster way to buyers in Asia.

The Vasily Dinkov, a specialized ice-breaking tanker, is traveling along the Northern Sea Route after loading crude late last month from a storage tanker moored at Murmansk, [vessel tracking data](#) compiled by Bloomberg show. The ship, hauling a relatively tiny cargo, crossed Russia's northern coast and passed through the Bering Strait, separating the country from Alaska, over the weekend. It's due to arrive at the Chinese port of Rizhao on Nov. 17.

The route includes a 3,300-mile voyage across the top of Russia and through some of the planet's harshest sailing conditions where icebergs and freezing conditions are common. The journey is the shortest passage between Europe and east Asia, taking half the time to reach China from Russia's Baltic ports than the conventional route through the Suez Canal.



The voyage of the Vasily Dinkov through the Northern Sea Route in November 2022

It's unclear how significant the logistics tweak will prove for Russia -- that will depend on how weather conditions develop. Until now, the vast majority of the nation's Arctic Sea production has been gathered on storage tankers at Murmansk from small shuttle tankers. It's then re-loaded onto bigger vessels to deliver mostly to Europe. That trade will essentially halt in the coming weeks because the European Union is banning most seaborne imports from Russia from Dec. 5.

The Vasily Dinkov is a "very advanced" ship with a specialized ice-breaking hull, but there are only eight that are able to make such trips, according to Richard Matthews, head of research at E.A. Gibson Shipbrokers Ltd. in London. As such, the route wouldn't be particularly viable before summer at the earliest.

"It looks unlikely that any significant volumes could be shipped along this route until summer," he said.

That the shipment is taking place is a reminder of how the world is getting warmer. World leaders are gathering in Egypt for the next two weeks to discuss ways to combat climate change.

Vital Prevalence

The ship is one of a fleet of three that was built specifically to shuttle crude from Lukoil PJSC's Varandey export terminal to Murmansk, a round-trip that usually takes about two weeks. Using the ship to move crude to China will take it off its normal duties for as long as eight weeks.

China has increased the amount of crude imported from Russia but the maritime logistics in response to Europe's ban will need careful planning. Delivering to Asia via the Suez Canal will mean far longer voyages than has been the case so far, driving up vessel demand.

Viktor Katona, lead crude analyst at Kpler, an oil analytics firm, said the Northern Sea Route will be of "vital prevalence" when summer comes.

“Europe is already sealed off,” he said. “If they’re not buying, why circumnavigate the entire universe if you can use the Northern Sea Route to get to China in 20 days?”

Further melting is steadily improving the region’s accessibility every year, opening it up more and more to merchant traffic and the accompanying environmental risks that poses.

The state-owned Russian energy-giant Rosneft could increase the volume of crude available to traverse the Northern Sea Route. Its Vostok Oil project consists of several oil fields on Russia’s far Northern peninsula, and is estimated to churn out 500,000 barrels a day by 2024. Construction of an oil terminal in the Sever Bay port is underway which will ensure the shipment of oil from the Vostok Oil fields along the route, said Rosneft in a press release, making it the largest oil-trading terminal in Russia.

Oil Tanker Stocks Defy Global Equity Gloom as Russian Risks Loom

The first oil shipment through the Northern Sea Route took place in 2019. There have been none since, according to Katona at Kpler.

While shorter journeys reduce emissions, the route raises environmental concerns that more traffic through the Arctic will add to pollution from tankers’ smokestacks. When the soot darkens the surface of the ice, it speeds up the warming process by absorbing more of the sun’s energy.

Accidents in the Arctic would also be more problematic than normal due to the remote location and lack of local spill response capabilities.

“I’m not sure how you would clean up an oil spill in that part of the world,” Matthews said.

— With assistance by Dina Khrennikova
Up Next



Independent Statistics and Analysis

**U.S. Energy Information
Administration**

Country Analysis Executive Summary:

India

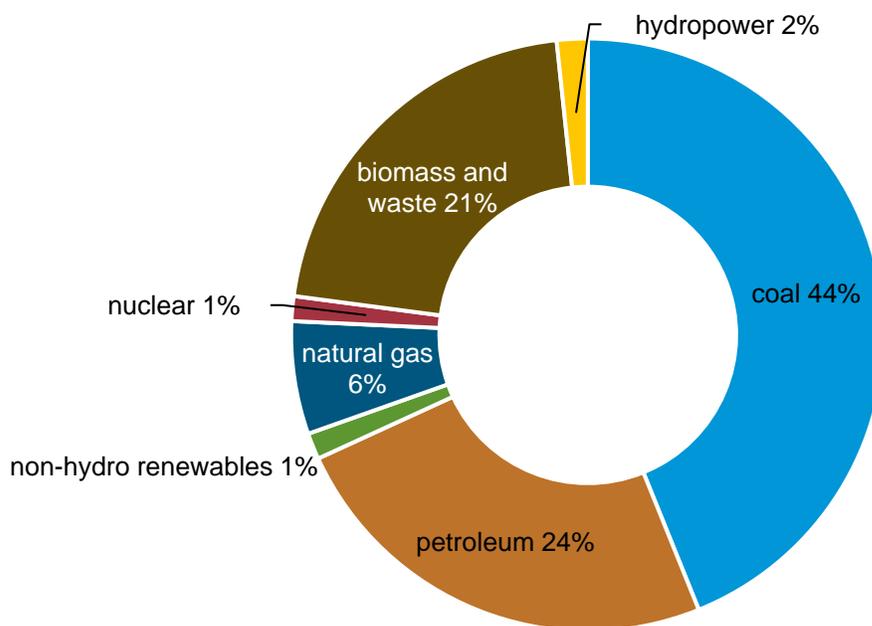
Last Updated: November 17, 2022

Overview

- India was the third-largest energy consumer in the world after China and the United States in 2021 (according to the *BP Statistical Review of World Energy 2022*) and the second-most populous country, with 1.4 billion people.¹ India's energy needs continue to grow as a result of population growth and modernization.²
- India's real gross domestic product (GDP) had a negative growth of 6.6% in 2020, the first time since 1979 that India's economy had negative growth.³ The outbreak of the COVID-19 pandemic in India that began at the start of 2020 led the economy to contract.⁴ In 2021, the economy returned to its usual activity levels, and GDP grew by 8.9%.⁵
- India's government continues to face several challenges to meet the country's growing energy demand, including securing affordable energy supplies and attracting investment for upstream projects and transmission infrastructure. The government has made considerable headway with energy reforms and continues to focus on greater energy security, infrastructure development, and market liberalization.

- Primary energy consumption in India decreased nearly 6% in 2020 but returned to average levels in 2021, growing by 10%.⁶ In 2020, coal continued to supply most (44%) of India’s total energy consumption. Petroleum and other liquids accounted for 24% of total energy consumption, and traditional biomass and waste accounted for 21%. Other renewable fuel sources made up a small but growing portion of primary energy consumption (1%), although the capacity potential is significant for several of these resources, such as solar, wind, and hydroelectricity.⁷ Use of traditional biomass and waste declined over the past several years as the availability of electricity connections has spread for the residential and commercial sectors. Although natural gas accounts for 6% of the country’s energy consumption, India plans to boost the natural gas market share to 15% by 2030 as part of the country’s plan to reduce air pollution and use cleaner-burning fuels⁸ (Figure 1).

Figure 1. Total primary energy consumption in India by fuel type, 2020



Data source: International Energy Agency, *World Energy Outlook 2021*
 Note: Total may not equal 100% because of independent rounding.

Petroleum and other liquids

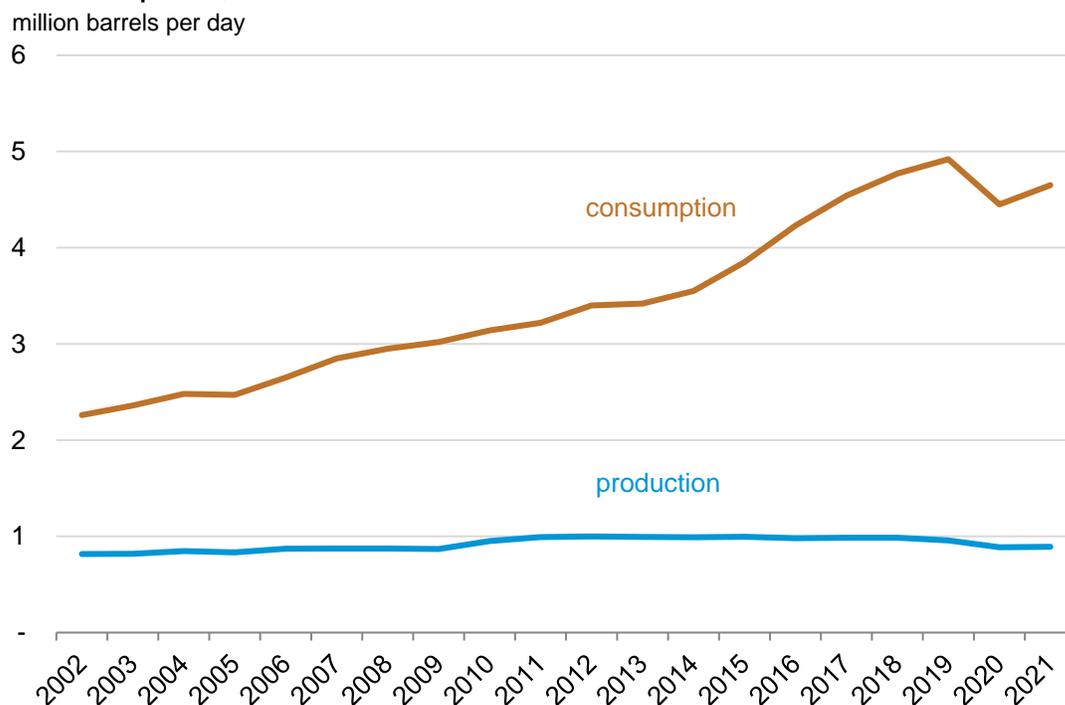
Exploration and production

- India’s total petroleum and other liquids production remained at about 1 million barrels per day (b/d) from 2010 to 2019. In 2020, production decreased to approximately 890,000 b/d and remained near that level in 2021 (Figure 2). More than two-thirds of India’s total liquid fuels production is from crude oil and condensate. Production of these two fuels fell slightly by 16,000 barrels per day (b/d) in 2021 to 611,000 b/d.⁹
- Almost half of India’s crude oil production is from offshore fields, although this share has dropped in the past several years as production from the large, aging Mumbai High field declined.¹⁰ The only

sizeable project expected to come online in the next few years is Oil and Natural Gas Corporation’s (ONGC) 44,000 b/d KG-D5 deepwater oil and natural gas development. Its start date for oil production was initially in 2020; however, after several delays, the date was pushed back to the second half of 2022. This project could offset some of the declines in mature fields.¹¹

- India’s government is trying to attract more investment and reduce India’s oil imports by improving the contract terms for private and foreign companies and prompting the national oil companies to invest more in upstream development. In 2021, India permitted 100% foreign direct investment in upstream projects. In addition, ONGC has announced it will invest \$4 billion in exploration from 2022 to 2025.¹²
- In 2022, the Ministry of Petroleum and Natural Gas announced it will increase the exploration area for oil and natural gas to approximately 310,000 square miles by 2025 and to 620,000 square miles by 2030.¹³

Figure 2. India's petroleum and other liquids production and consumption, 2002–2021



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, August 2022

Consumption

- Demand for crude oil in 2021 increased by 5% to 4.7 million b/d as India’s economy returned to pre-pandemic activity levels. Demand for crude oil in 2021 was 270,000 b/d less than the high reached in 2019¹⁴ (Figure 2).
- India was the third-largest consumer of petroleum products after the United States and China in 2021. For most petroleum products, growth in 2021 consumption only partially offset the 2020 declines resulting from the response to the COVID-19 pandemic. In 2020, demand for petroleum

products—primarily jet fuel (-48%), gasoline (-10%), and diesel (-14%)—decreased as an effect of the pandemic.¹⁵

- Diesel was the most-used oil product in India, accounting for 35% of petroleum product consumption in 2021, and it was used primarily for commercial transportation and, to a lesser degree, in the industrial and agricultural sectors. Gasoline consumption accounted for 16% of India’s total oil consumption.¹⁶

Refining

- As of 2021, India had 5.0 million b/d of nameplate refining capacity, making it the second-largest refiner in Asia after China (Table 1). The country’s refining capacity utilization was almost 90% in 2020.¹⁷ The two largest refineries by crude oil capacity, located in the Jamnagar complex in Gujarat, are world-class export facilities and are owned by Reliance Industries. The Jamnagar refineries account for 27% of India’s current capacity.¹⁸ Several refiners have incrementally increased their crude oil processing capacity through small expansions at existing facilities. Bringing new facilities online, however, has been slow over the past few years, and no new projects are slated to come online until the mid-2020s.¹⁹
- India’s state refiners are looking to invest \$27 billion to increase refining capacity by 20% by 2025. This goal would raise capacity by approximately 1 million b/d to 6 million b/d.²⁰

Table 1. Operating refineries in India

Refinery location	Name of company	Crude refining capacity (thousand barrels per day)
Public sector		
Barauni, Bihar	Indian Oil Corp. Ltd.	120
Bongaigaon, Assam	Indian Oil Corp. Ltd.	47
Digboi, Assam	Indian Oil Corp. Ltd.	13
Guwahati, Assam	Indian Oil Corp. Ltd.	20
Haldia, West Bengal	Indian Oil Corp. Ltd.	161
Koyali, Gujarat	Indian Oil Corp. Ltd.	275
Mathura, Uttar Pradesh	Indian Oil Corp. Ltd.	161
Panipat, Haryana	Indian Oil Corp. Ltd.	301
Paradip	Indian Oil Corp. Ltd.	301
Mahul, Mumbai	Hindustan Petroleum Corp. Ltd. (HPCL)	151
Visakhapatnam, Andhra Pradesh	Hindustan Petroleum Corp. Ltd. (HPCL)	167
Mahul, Mumbai	Bharat Petroleum Corp. Ltd.	241
Kochi, Kerala	Bharat Petroleum Corp. Ltd.	311
Manali, Tamil Nadu	Chennai Petroleum Corp. Ltd.	211
Nagapattinam, Tamil Nadu	Chennai Petroleum Corp. Ltd.	20

Numaligarh, Assam	Numaligarh Refinery Ltd.	60
Mangalore, Karnataka	Mangalore Refinery & Petrochemicals Ltd.	301
Tatipaka, Andhra Pradesh	Oil & Natural Gas Corp. Ltd. (ONGC)	1
Joint venture		
Bina, Madhya Pradesh	Bharat-Oman Refinery Ltd.	157
Bathinda, Punjab	HPCL-Mittal Energy Ltd.	227
Private sector		
Jamnagar	Reliance Industries Ltd.	663
SEZ, Jamnagar	Reliance Industries Ltd.	707
Vadinar, Gujarat	Nayara Energy (Rosneft affiliate)	402
Total		5,018

Data sources: India Ministry of Petroleum & Natural Gas

Note: SEZ = Special Economic Zone.

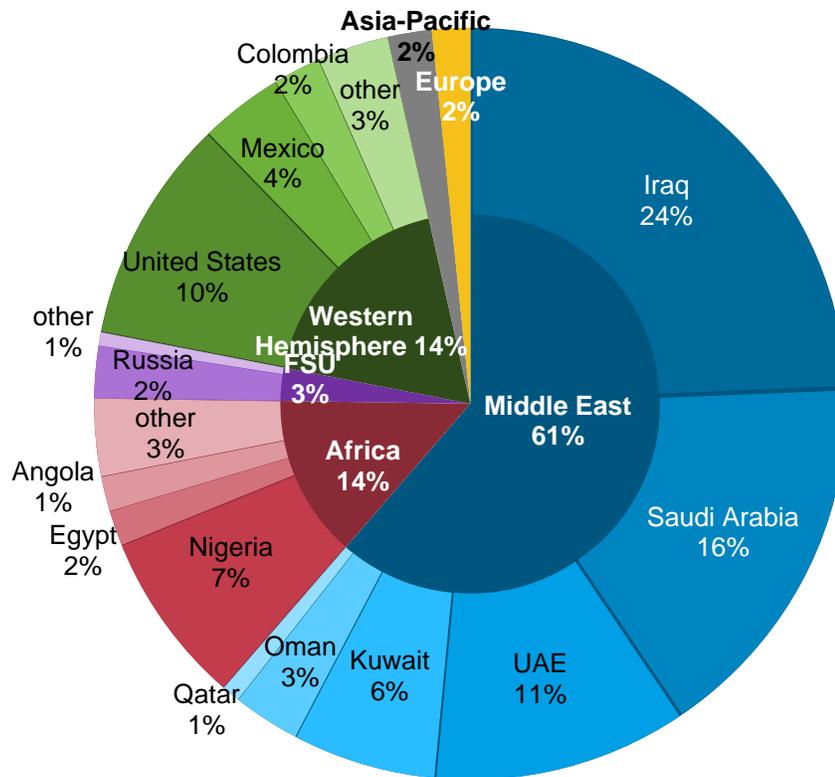
Petroleum and other liquids storage

- India imports most of the crude oil it consumes and has been building a strategic petroleum reserve (SPR) to protect against supply disruptions and to add commercial storage to allow for seamless refinery operations. India completed its first phase of SPR construction at the end of 2018, which consists of facilities at three locations (Visakhapatnam, Mangalore, and Padur) with a total capacity of 39 million barrels. The government approved a second SPR phase in June 2018 and plans to construct another 48 million barrels of capacity at two new locations (Chandikhol and another one at Padur).²¹ These plans have been delayed until land acquisitions to build the facilities are completed.²²
- At the end of 2021, India released 5 million barrels from its strategic petroleum reserve in a joint effort to decrease global oil prices.²³

Trade

- India's crude oil imports grew by almost 8% from 2020 to 4.2 million b/d in 2021. Iraq is India's largest oil supplier, providing 24% of India's crude oil imports. In total, approximately 61% of India's imported crude oil was from the Middle East, mostly from Saudi Arabia and Iraq (Figure 3). India increased its crude oil imports (including condensates) from Iran in 2016 when the United States' and Europe's sanctions on Iran's oil exports were lifted. In 2020 and 2021, India's imports from Iran were zero, after the U.S. government re-imposed sanctions on Iran's oil exports.²⁴
- Other significant sources of crude oil for India are from the Western Hemisphere (14%) and Africa (14%), mostly from the United States and Nigeria. U.S. exports to India nearly doubled between 2020 and 2021, accounting for about 5% of India's total crude oil imports in 2020 and almost 10% in 2021.²⁵
- India imported 94,000 b/d from Russia in 2021. India's imports of oil from Russia increased in 2022 because Russia discounted its oil to promote sales after its full-scale invasion of Ukraine. As a result of the lower cost, crude oil imports from Russia reached a high of 950,000 b/d in June of 2022.²⁶

Figure 3. India's crude oil imports by source, 2021



Data source: Global Trade Tracker
 Note: Total may not equal 100% because of independent rounding.

Natural gas

Exploration and production

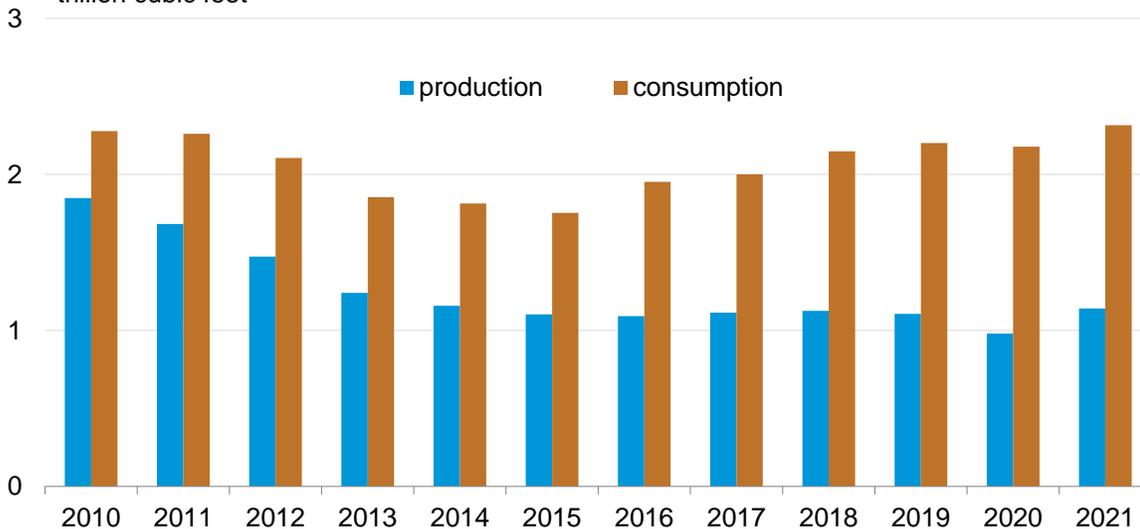
- After sharply declining from peak production in 2010, India's dry natural gas production remained flat at about 1.1 trillion cubic feet (Tcf) between 2015 and 2019²⁷ (Figure 4). Natural gas production dropped to just below 1 Tcf in 2020 because of national lockdowns in response to the COVID-19 pandemic before rising back to 1.1 Tcf in 2021.²⁸

- India’s government implemented upstream policy changes in 2016, which included giving companies more pricing freedom by allowing them to market natural gas at higher prices to all sectors. Companies can also explore and produce [unconventional](#) natural gas, such as coalbed methane and shale gas, from existing production contracts at [conventional](#) natural gas fields and can bid on all hydrocarbon blocks of interest without waiting for an official government bidding round. As a result of these changes, exploration and production companies have increased their investments for technically challenging natural gas fields (mainly unconventional and deepwater basins).
- These regulatory reforms have attracted some private investment in small, deepwater, and coalbed methane fields and curbed the steep production declines that began in 2010. Even with regulatory reforms intended to promote exploration, of the 225 significant discoveries that have been made in India, the majority (161) are only in the predevelopment phase.²⁹
- A notable project expected to come online in 2022 is Reliance Industries and BP’s MJ project in the KG-D6 block. It is the last of three projects in KG-D6. Combined, these three projects are expected to produce approximately 1 billion cubic feet per day once they reach peak production, according to Reliance.³⁰

Consumption

- India’s natural gas demand rose every year since 2015, except for a 1% decrease in 2020, to reach 2.3 Tcf in 2021³¹ (Figure 4). The fertilizer industry used the largest share of natural gas (30%) in 2020.³²
- India’s natural gas demand grew in 2021, despite pandemic-related disruptions and the effects of increased costs of liquefied natural gas (LNG). Much of this growth can be attributed to the extensive expansion of natural gas distribution infrastructure. The government plans to invest \$60 billion in its expansion and aims to connect 70% of the country’s population to the natural gas grid.³³

Figure 4. India's natural gas production and consumption, 2010–2021
trillion cubic feet

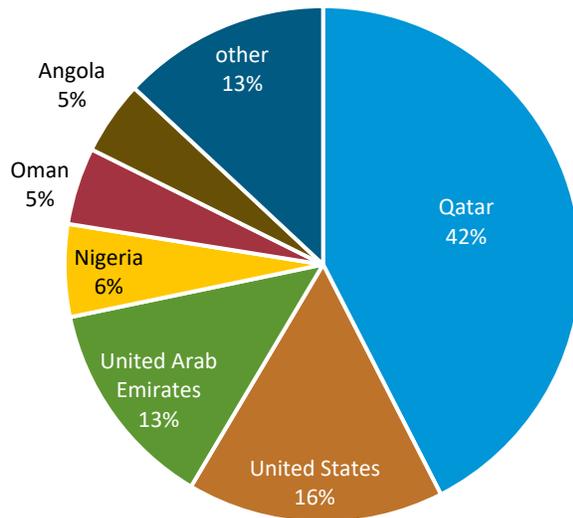


eia Data source: U.S. Energy Information Administration, *International Energy Statistics*

Liquefied natural gas and trade

- In 2021, India was the world's fourth-largest LNG importer, importing about 1.2 Tcf (7%) of global trade, a 10% decrease from the previous year (1.3 Tcf). Qatar was the primary source of India's LNG imports (42%), followed by the United States (16%) and the United Arab Emirates (13%) (Figure 5). The main drivers for the decrease in imports were high LNG spot prices and increased domestic natural gas production.³⁴
- In 2022, India's total regasification capacity was 1.9 Tcf with a 58% utilization rate. As of October 2022, another six projects are under construction (five new terminals and one expansion project) that will add an additional 1.4 Tcf by the end of 2022³⁵ (Table 2).

Figure 5. India's LNG imports by source, 2021



Data source: International Gas Union, 2022 World LNG Report

Table 2. India's existing and planned regasification terminals

Project name	Owners	Peak output (billion cubic feet per year)	Target start year
Existing LNG import terminals			
Dahej	Petronet (100%)	840	Operational
Ratnagiri (Dabhol)	GAIL (31.52%), NTPC (31.52%), MSEB Holding (16.68%), and other smaller companies (20.28%)	96	Operational
Hazira	Shell (100%)	240	Operational
Kochi	Petronet (100%)	240	Operational
Ennore	Indian Oil Company (95%) and Tamil Nadu Industrial Development Corporation (5%)	240	Operational
Mundra	Gujarat State Petroleum Corporation (50%) and Adani Group (50%)	240	Operational
Total		1,896	
Projects under construction			
Jaigarh ¹	H-Energy (100%)	288	2022
Jafrabad LNG Port ¹	Exmar (38%), Gujarat Government (26%), Swan Energy (26%), and Tata Group (10%)	240	2022
Dharma Port	Adani Group (51%), Indian Oil Corporation (39%), and GAIL (11%)	240	2022
Karaikal Port	Atlantic, Gulf and Pacific Company (100%)	48	2022
Ratnagiri (Dabhol)–Expansion	GAIL (31.52%), NTPC (31.52%), MSEB Holding (16.68%), and other smaller companies (20.28%)	384	2022
Chhara	Hindustan Petroleum Corp Ltd (50%) and Shapoorji Pallonji (50%)	240	2023
Total		1,440	

Data source: International Gas Union, 2022 *World LNG Report*

¹ Floating storage regasification unit that receives and converts the liquefied natural gas (LNG) offshore

Pipeline infrastructure

- India's government considers the development of natural gas infrastructure, including long-distance pipelines, regasification terminals, and distribution stations for using more compressed natural gas in the transportation sector, a priority. The government's goal is to increase natural gas consumption to a 15% share of the country's total energy consumption by 2030.³⁶
- Insufficient pipeline infrastructure and a lack of a nationally integrated system are key factors that constrain natural gas supply in India, although GAIL (India's state-owned pipeline transmission and distribution company) and other companies are investing in several pipeline projects. In India's 2021–2022 budget, the government formalized a plan to set up an independent natural gas transmission system operator. This step is integral to making natural gas more cost competitive; however, the plan does not have a start date.³⁷ The country's operational natural gas pipeline network was approximately 12,400 miles in 2021, and an additional 9,500 miles are under construction.³⁸

Coal

Consumption

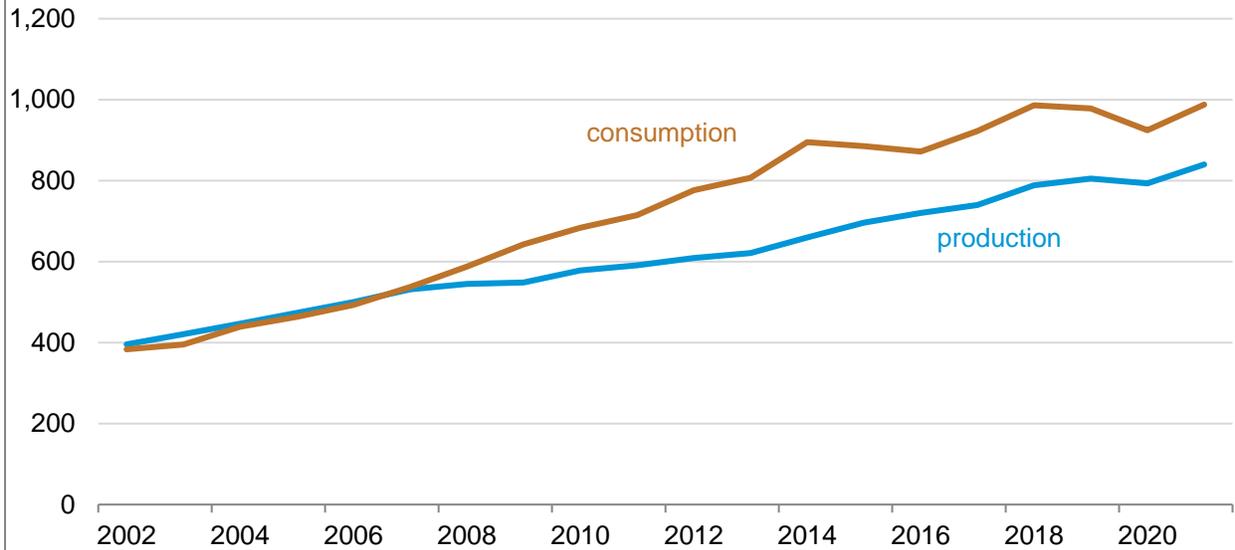
- In 2021, India's coal consumption increased for the first time since 2018. Coal consumption was up 7% in 2021 compared with 2020 to an estimated 988 million short tons³⁹ (Figure 6). India's coal consumption, the second-largest total in the world behind China, is driven primarily by the electric power sector and, to a lesser extent, the iron and steel industries. Greater connectivity to the electricity grid for the rural population and industrial growth is likely to contribute to continued coal consumption growth.⁴⁰
- India's government plans to invest \$55 billion in coal gasification and liquidation, increasing to 110 million short tons by 2030. The government also has a Methanol Economy program that includes six [methanol](#) plants, five of which are based on coal ash.⁴¹

Exploration and production

- India is the second-largest coal producer in the world on a volumetric basis. India's coal production increased 6% in 2021 compared with 2020 to 840 million short tons⁴² (Figure 6). Even with the rise in production, India still experienced coal shortages in 2021. Several factors caused the shortages, including increased demand after the pandemic, heavy monsoons that affected mining, and rising prices on imported coal.⁴³
- In response to the coal shortages and to reduce imports, India plans to increase coal production to 1.4 billion short tons by the 2024–2025 fiscal year.⁴⁴ According to the Ministry of Coal,⁴⁵ 55 greenfield projects and 193 brownfield projects are slated to begin production by 2024.
- Coal India Limited plans to open 15 coal mines. The company will complete contracts and tenders for all of those mines by the end 2022.⁴⁶

Figure 6. India's coal supply and demand, 2002–2021

million short tons

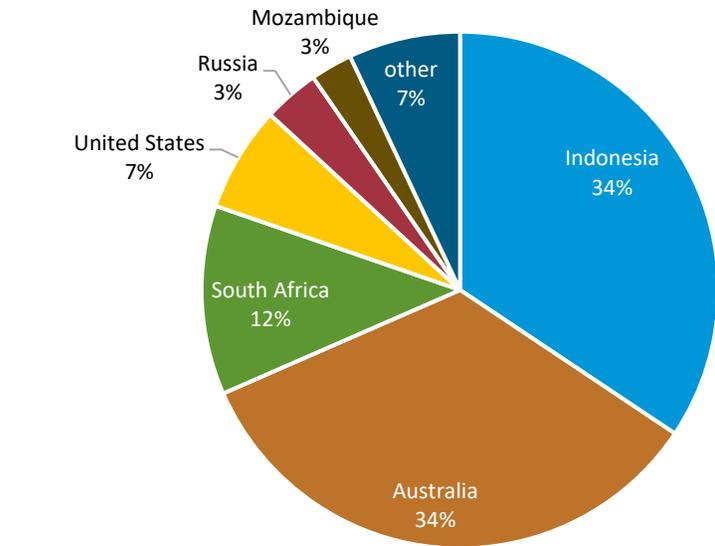


Data source: U.S. Energy Information Administration, *International Energy Statistics*

Trade

- India's coal imports decreased for the second year in a row in 2021, declining 12% from 2020 to 211 million short tons. It remains the second-largest coal importer in the world after China.⁴⁷ Many factors led to the decrease in imports, including increased domestic coal production, decreased power generation from coal power plants supplied by imports, and the significantly increased price of imported coal.⁴⁸
- Indonesia was the largest source of coal imports in 2021, accounting for over 34% of the total. Imports from Australia increased 55% from 2020 and were slightly less than Indonesia's share (34%), followed by South Africa (12%) and the United States (7%)⁴⁹ (Figure 7).
- As domestic coal production increases, India might offset the need for coal imports entirely by 2024, according to India's Ministry of Coal secretary.⁵⁰

Figure 7. India's coal imports by source, 2021



Data source: Global Trade Tracker

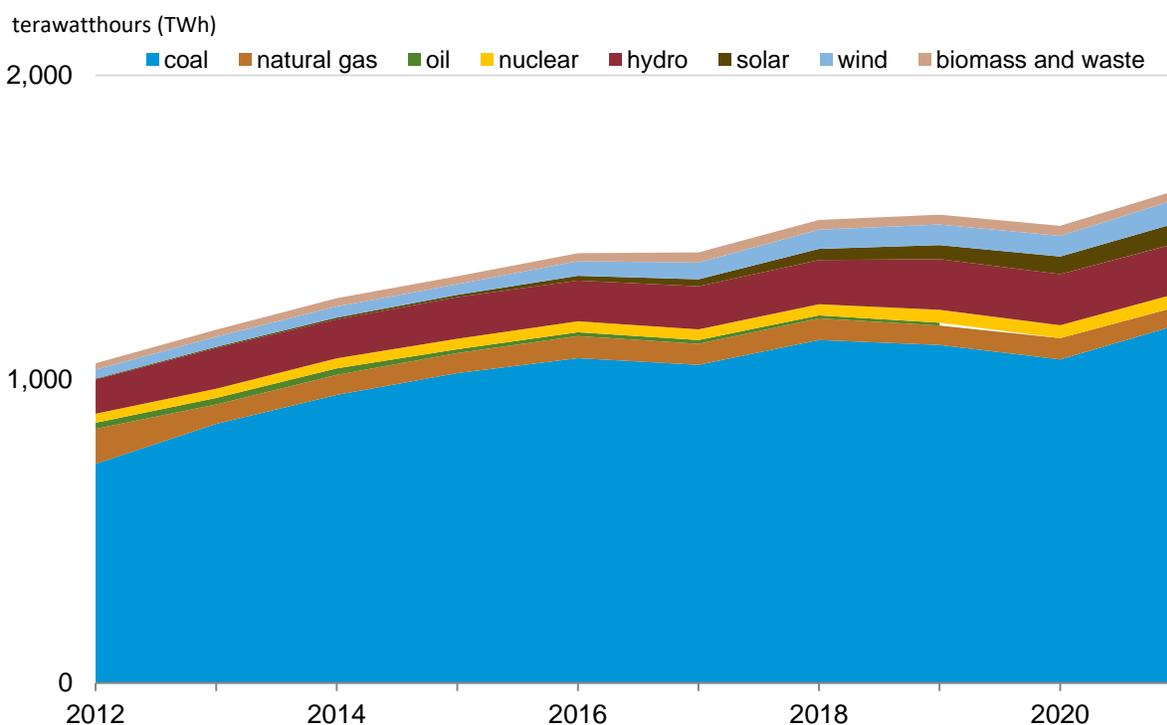
Electricity

- Because of insufficient fuel supply for power generation and constrained transmission capacity, India sometimes has electricity shortages, leading to rolling blackouts. Insufficient investment in the transmission and distribution infrastructure, market inefficiencies, technical problems moving electricity between various states, low electricity tariffs, and financial problems among distribution companies have impaired system reliability. Despite these challenges, India has made strides over the past few years to increase capacity, introduce more renewable energy generation, improve market efficiencies, and enhance electricity access and reliability.
- Although electrification rates in India vary by data source, based on definitional differences of electricity access, the World Bank estimates that 1% of India's population lacked basic access to electricity in 2020.⁵¹ In addition, approximately 40% of urban households and more than 60% of rural households experience power cuts at least once a day.⁵²

Generation

- India generated about 1,628 terawatt hours (TWh) of net electricity in 2021, an increase of 8% from 2020 (Figure 8). The increase came after demand dropped 2% in 2020 for the first time in at least 39 years, largely as a result of strict lockdowns in response to the COVID-19 pandemic.⁵³
- Fossil fuels accounted for 76% of India's electric generation in 2021. Coal represents the largest share of all energy sources, at 73% of total generation. Coal-fired plants generated 1,243 TWh, surpassing the previous high of 1,208 TWh reached in 2018. Natural gas, oil, and nuclear power together made up less than 7% of India's power supply.⁵⁴
- Renewable energy made up the second-largest share (21%) of power generation, including hydro power (10%), solar (4%), wind (5%), and biomass (2%).⁵⁵
- Solar energy generation increased 16% in 2021, after averaging a growth rate of 26% the prior two years. Generation from wind energy rose by 15% in 2021. Generation from biomass and waste decreased by 9% after remaining relatively flat from 2018 to 2020.⁵⁶

Figure 8. India's net electricity generation by fuel type, 2012–2021

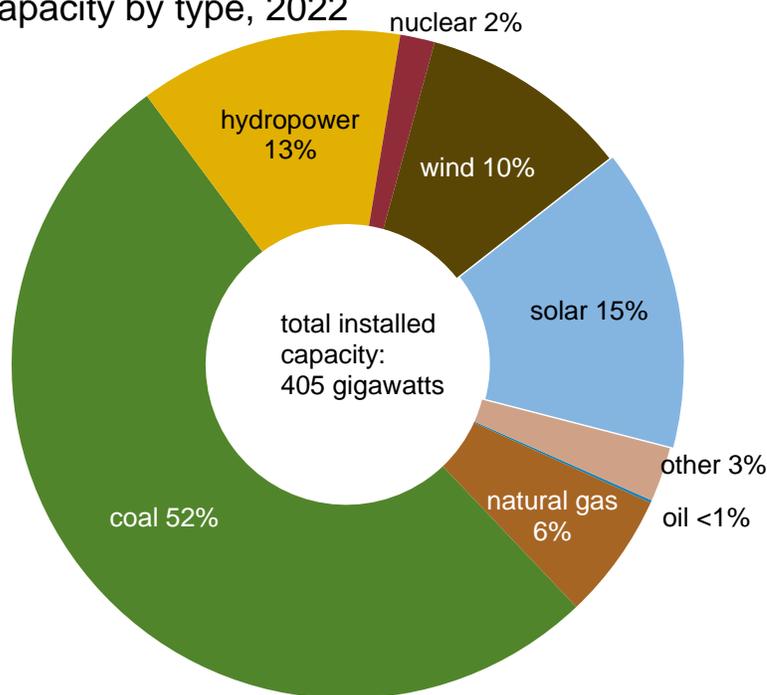


Data source: U.S. Energy Information Administration, *International Energy Statistics and Estimates*

Capacity

- India had more than 405 gigawatts (GW) of installed electric-generating capacity connected to the national network as of August 2022, according to India's Ministry of Power. Coal contributed the most capacity (52%). Renewable energy made up a sizeable share of India's electricity generating capacity (13% for hydropower projects and almost 25% for other renewables) and grew in share size over the past several years. Natural gas (6%), nuclear power (2%), and diesel fuel (less than 1%) accounted for much smaller shares⁵⁷ (Figure 9).
- As part of India's goal to reduce emissions, address acute problems of air pollution (particularly in urban areas), and offset the use of coal-fired power, the government set a target for 50% renewables capacity by 2030, replacing its previous target of 500 GW.⁵⁸
- India has seven nuclear power plants, with a net generation capacity of 6.8 GW, representing about 2% of total utility-based generation capacity. In 2022, eight reactors with a combined net installed capacity of 6.6 GW were either under construction or in the planning stages.⁵⁹

Figure 9. India's installed electricity generating capacity by type, 2022



Data source: India Ministry of Power

Note: Includes utility-based power facilities, not captive power plants.

Notes

- Data presented in the text are the most recent available as of October 5, 2022.
- Data are EIA estimates unless otherwise noted.

¹ BP Statistical Review of World Energy 2022; U.S. Energy Information Administration, *International Energy Statistics*.

² International Energy Agency, World Energy Outlook 2021, Annexes.

³ World Bank data, [GDP growth \(annual %\)](#) (accessed July 2022).

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⁵ Majumdar, Rumki. [“India Economic Outlook.”](#) *Deloitte Insights*, Deloitte, 12 July 2022.

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⁸ Verma, Nidhi. [“LNG’s Share of Indian Gas Demand to Rise to 70% by 2030- Petronet CEO.”](#) Reuters. Thomson Reuters, June 17, 2021; International Energy Agency, World Energy Outlook 2021.

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¹² [“Oil & Gas Industry in India.”](#) India Brand Equity Foundation. Accessed September 26, 2022.

¹³ [“Oil & Gas Industry in India.”](#) India Brand Equity Foundation. Accessed September 26, 2022.

¹⁴ U.S. Energy Information Administration, *Short-Term Energy Outlook*, August 2022.

¹⁵ FACTS Global Energy, Asia Pacific Databook 1 Demand, Spring 2022.

¹⁶ FACTS Global Energy, Asia Pacific Databook 1 Demand, Spring 2022.

¹⁷ Indian Strategic Petroleum Reserve Limited, Annual Report 2020-2021 § (2021), page 4.

¹⁸ India Ministry of Petroleum & Natural Gas, Economics and Statistics Division, *Indian Petroleum & Natural Gas Statistics 2022-21*, February 2022, page 39.

¹⁹ FACTS Global Energy, Databook 2: Asia Pacific: Refinery Configuration & Construction, Spring 2021, pages 28-29; International Energy Agency, Oil 2020, page 113.

²⁰ [“Indian Firms Plan to Invest \\$27 Bln to Boost Refining Capacity by 2025.”](#) Reuters. Thomson Reuters, August 4, 2021.

²¹ Indian Strategic Petroleum Reserve Limited, Annual Report 2020-2021 § (2021), pages 67-69.

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²³ [“Oil & Gas Industry in India.”](#) India Brand Equity Foundation. Accessed September 26, 2022.

²⁴ Global Trade Tracker (accessed August 2022).

²⁵ Global Trade Tracker (accessed August 2022).

²⁶ Global Trade Tracker (accessed August 2022); Verma, Nidhi. [“Russia’s Share of India’s June Oil Imports Surges to Record.”](#) Reuters. Thomson Reuters, July 11, 2022.

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²⁸ U.S. Energy Information Administration, *International Energy Statistics*

²⁹ Fitch Solutions, India Oil and Gas Report Q3 2022, page 32.

³⁰ [“Reliance, BP Approve MJ Development Offshore India.”](#) Offshore Energy, September 2, 2022.

³¹ U.S. Energy Information Administration, *International Energy Statistics*.

³² International Energy Agency, Gas Market Report Q3-2022, pages 29.

³³ International Energy Agency, Gas Market Report Q3-2022, pages 39; International Energy Agency, Gas Market Report Q3-2021, pages 27.

³⁴ International Gas Union, [2022 World LNG Report](#), page 21, [24-25](#).

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- ³⁵ International Gas Union, [2022 World LNG Report](#), pages 80-81.
- ³⁶ International Energy Agency, Gas Market Report 2019, page 31; Verma, Nidhi. "[India's Gail Sets 2040 Goal for Net Zero Carbon Emissions.](#)" Reuters. Thomson Reuters, August 26, 2022.
- ³⁷ International Energy Agency, Gas Market Report Q1 2021, page 21.
- ³⁸ India's Ministry of Petroleum and Natural Gas, [Indian Petroleum and Natural Gas Statistics 2020-21](#), page 51.
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- ⁴¹ "[Methanol Economy.](#)" NITI Aayog. Accessed September 6, 2022; International Energy Agency, Coal Report 2021, page 24.
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- ⁴⁸ Singh, Animesh. "[Coal Imports Fell, Output Rose in 2021-22, Yet States Faced Power Crisis.](#)" NDTV.com. NDTV Profit, March 23, 2022.
- ⁴⁹ Global Trade Tracker (accessed September 2022).
- ⁵⁰ "[India May Not Need to Import Coal for Generating Electricity by 2024: Union Coal Secretary Anilkumar Jain - ET EnergyWorld.](#)" ETEnergyworld.com, February 16, 2022.
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- ⁵⁵ U.S. Energy Information Administration, *International Energy Statistics*.
- ⁵⁶ U.S. Energy Information Administration, *International Energy Statistics*.
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Independent Statistics & Analysis

U.S. Energy Information
Administration

Eastern Mediterranean Energy

Last Updated: November 16, 2022

Eastern Mediterranean in Context

- Natural gas production grew significantly in the Eastern Mediterranean after major offshore discoveries in **Egypt** and **Israel** began commercial operations in the 2010s. **Cyprus's** natural gas finds are still in the development phase and could significantly increase regional growth once commercial production begins.
- Development of midstream infrastructure for natural gas in the Eastern Mediterranean is still emerging. As of October 2022, Egypt is the only country in the region with liquefied natural gas (LNG) export capacity, which Israel also uses to deliver natural gas outside the region. **Jordan** and **Lebanon** are considering developing infrastructure that would allow additional natural gas import flexibility. **Greece** and **Turkey** want to develop additional LNG import capacity, which would strengthen their role as transit countries by enabling the countries to import greater volumes of natural gas that could then be delivered via pipeline to other countries in Europe.

Exploration

- In 2021, **Egypt** completed a licensing round for 24 exploration blocks located in the Western Desert, the Gulf of Suez, the Nile Delta, and the Mediterranean Sea, areas that already have produced significant volumes of crude oil and natural gas. The government announced bid winners in January 2022; however, it only awarded eight blocks. Eni received exploration licenses to five blocks, and the other bid winners were BP, Apex International Energy, Energean Egypt, INA, Enap Sipetrol, and United Energy.¹
- **Israel** announced its third offshore bidding round (OBR3) on June 23, 2020, which offered one exploration block (Block 72) in the northern part of Israel's Exclusive Economic Zone (EEZ). The final date for bid submissions was on September 23, 2020, and according to Rystad Energy, the awarded bids are expected to be announced in the third quarter of 2022.² In May 2022, Israel announced plans to launch a fourth offshore bidding round for natural gas exploration, meant to help provide Europe with an alternative source of natural gas other than Russia. The fourth offshore bidding rounds would offer 25 exploration blocks in six clusters, and the official call for bids could close by the end of 2022.³
- **Jordan** launched a bidding round in 2021, offering nine concession areas for oil and natural gas exploration in an effort to revive its hydrocarbons sector and reduce high use of imports. According to Rystad Energy, submission for bids is expected to close in May 2023, and awards will be announced sometime in the third quarter of 2023.⁴

- **Lebanon** launched its second offshore bidding round for eight blocks (Blocks 1–3, 5–8, and 10) in November 2021 and set an initial deadline of June 2022 for bid submissions. The government later extended the deadline to submit bids to December 15, 2022, to allow more companies to participate and to ensure a competitive bidding process. According to Rystad Energy, the country plans to award bids for the blocks in the second quarter of 2023.⁵
- **Cyprus, Greece, and Turkey** do not have any bidding rounds currently underway or planned for the near future (Table 1).

Table 1. Ongoing or upcoming licensing rounds for exploration

Country	Licensing round	Status	Number of blocks offered	Location	Notes
Israel	Offshore bid round 3	Evaluating bids	1	Offshore	Expected award date by end-2022
	Offshore bid round 4	Planned	25	Offshore	Bids accepted up until December 2022. expected award date in Q2 2023
Jordan	2021 licensing round	Planned	9	Onshore	Closing date May 2023, expected award date Q3 2023
Lebanon	Second offshore licensing round	Call for bids	8	Offshore	Bids accepted up until December 2022. expected award date in Q2 2023

Data source: Rystad Energy, ministry websites, *Oil & Gas Journal*

Petroleum and Other Liquid Fuels

Reserves

- According to estimates as of January 1, 2022, by the *Oil & Gas Journal*, **Egypt** has the largest crude oil reserves in the Eastern Mediterranean, holding about 3.3 billion barrels in proved reserves. **Turkey** is the second largest, holding only 371 million barrels. **Greece, Israel, and Jordan** hold relatively small volumes of proved crude oil reserves by comparison. Data on proved crude oil reserves for **Cyprus** and **Lebanon** are not available (Table 2).⁶

Table 2. Oil reserves in selected countries in the Eastern Mediterranean, 2022

Country	Million barrels of oil reserves
Egypt	3,300
Greece	10
Israel	13
Jordan	1
Turkey	371

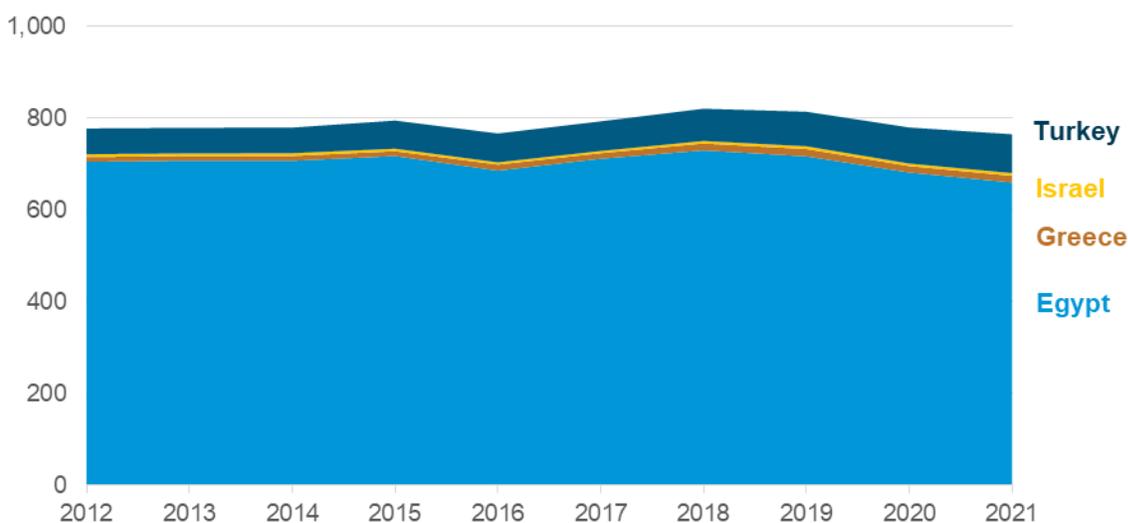
Data source: *Oil & Gas Journal*, "Worldwide Look at Reserves and Production"

Production

- **Egypt** is the largest liquid fuels producer in the Eastern Mediterranean, producing an average of about 702,000 barrels per day (b/d) from 2012 to 2021. Egypt’s total liquid fuels production increased slightly in the latter half of the 2010s, after the Zohr natural gas field came online. Egypt’s production began to decline by 2019, however, as a result of maturing fields and lack of any new significant discoveries.⁷
- **Turkey** produced an average of about 66,000 b/d in total liquid fuels between 2012 and 2021. **Greece** and **Israel** also both produce only small amounts of liquid fuels, averaging 13,000 b/d and 5,000 b/d, respectively, between 2012 and 2021.⁸
- **Cyprus, Jordan, and Lebanon** produced little, if any, liquid fuels between 2012 and 2021 (Figure 1).

Figure 1. Annual liquid fuels production, selected countries in the Eastern Mediterranean, 2012–2021

thousand barrels per day



Data source: U.S. Energy Information Administration, International Energy Statistics database

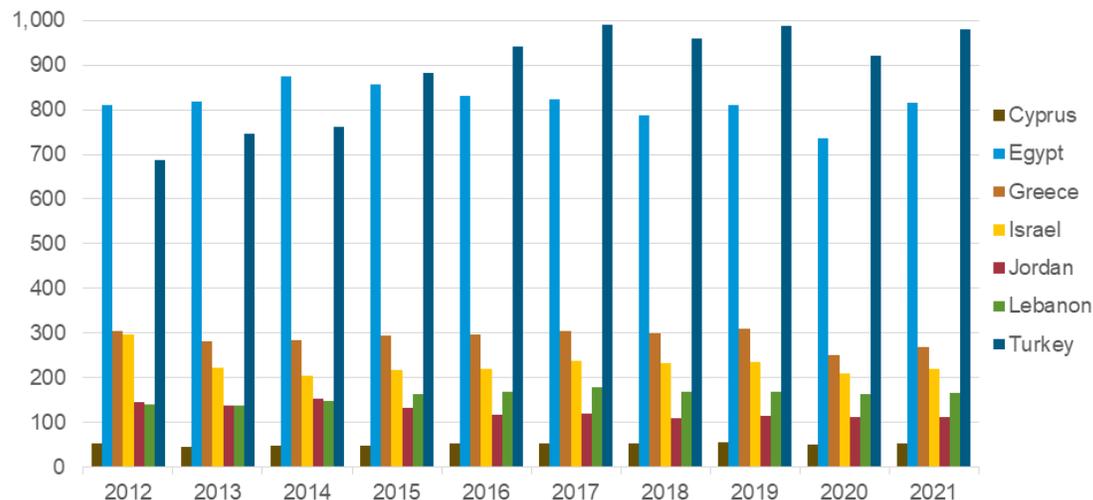
Consumption

- **Turkey** and **Egypt** are, respectively, the largest and second-largest liquid fuel consumers in the Eastern Mediterranean, in part, because of the larger size of their economies and populations, according to World Bank estimates.⁹ On average, Turkey consumed 886,000 b/d of liquid fuels, and Egypt consumed 816,000 b/d between 2012 and 2021.
- **Greece, Israel, Jordan, and Lebanon** are smaller countries in terms of population and consume relatively less liquid fuels compared with Egypt and Turkey. Greece consumed about 289,500 b/d of liquid fuels, and Israel consumed about 230,000 b/d between 2012 and 2021. During the same 10-year period, Lebanon’s liquid fuel consumption averaged about 160,000 b/d, and Jordan’s consumption averaged about 126,000 b/d. **Cyprus** is the smallest liquid fuels consumer

in the Eastern Mediterranean, consuming, on average, about 51,000 b/d between 2012 and 2021 (Figure 2).

Figure 2. Annual liquid fuels consumption, selected countries in the Eastern Mediterranean, 2012–2021

thousand barrels per day



Data source: U.S. Energy Information Administration, International Energy Statistics database
 Note: 2020 and 2021 data for Cyprus, Egypt, Jordan, and Lebanon are EIA estimates.

Natural Gas

Reserves

- According to estimates as of January 1, 2022, by the *Oil & Gas Journal*, **Egypt** had the largest natural gas reserves in the Eastern Mediterranean, and **Israel** had the second largest, albeit they are significantly smaller volumes than the proved reserves in Egypt. **Greece, Jordan, and Turkey all** hold below 1 trillion cubic feet (Tcf) of proved natural gas reserves. Data on **Cyprus's** and **Lebanon's** proved natural gas reserves are not available¹⁰ (Table 3).

Table 3. Natural gas reserves in selected countries in the Eastern Mediterranean, 2022

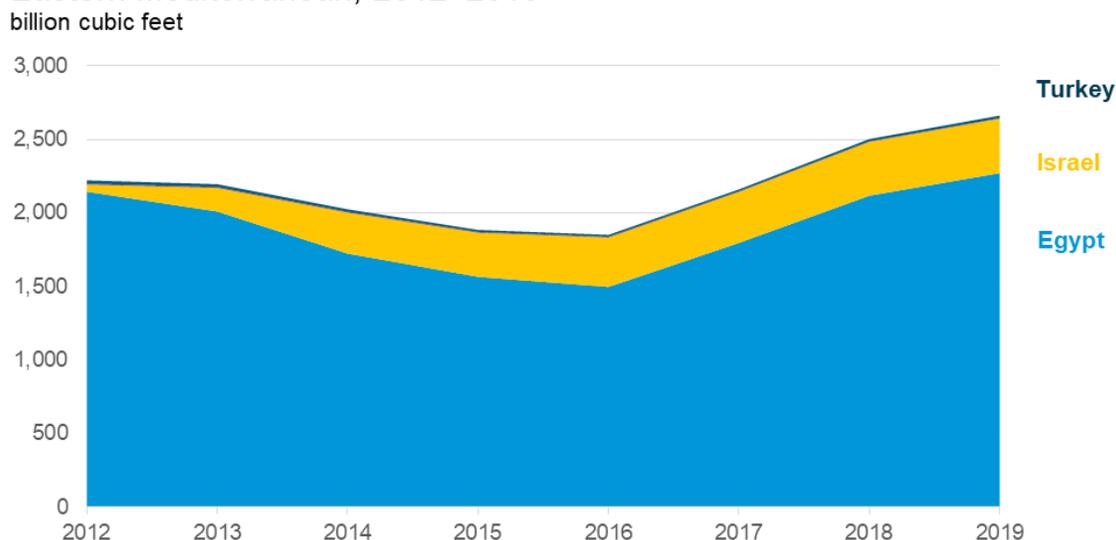
Country	Natural gas reserves in trillion cubic feet
Egypt	63.00
Greece	0.04
Israel	6.22
Jordan	0.21
Turkey	0.11

Data source: *Oil & Gas Journal*, "Worldwide Look at Reserves and Production"

Production

- **Egypt** is the largest natural gas producer in the Eastern Mediterranean, producing an average of about 1.9 Tcf per year between 2012 and 2019. Prior to commercialization of the Zohr field, Egypt's natural gas production declined between 2012 and 2017 because of a lack of new discoveries coming online and natural declines in its maturing fields. After the discovery of the Zohr field in 2015 and the subsequent fast-tracking of its development, the field came online in 2017 and provided a significant increase in Egypt's natural gas production. Egypt produced over 2.1 Tcf of dry natural gas in 2018, which was approximately 40% higher than in 2016, the year before the field came online.
- **Israel** is the second-largest natural gas producer in the Eastern Mediterranean, producing an average of 276 billion cubic feet (Bcf) per year between 2012 and 2019. Prior to 2012, Israel produced very little domestic natural gas, but natural gas production increased significantly after the first phase of Israel's recent natural gas discoveries, the Tamar field, came online in 2013. Other natural gas discoveries, such as the Leviathan, Karish, and Tanin fields, will continue to increase Israel's natural gas production once these fields begin commercial operations in the 2020s.
- **Turkey** and **Jordan** have very little domestic natural gas production; Turkey averaged about 16 Bcf per year of natural gas, and Jordan averaged 5 Bcf between 2012 and 2019. Jordan's only producing field is the Risha field in the northeast, and production from this field is used as feedstock for power generation.¹¹ Most of Turkey's domestic natural gas production comes from the Thrace region, which lies west of Istanbul, and from shallow offshore fields in the Black Sea region. Turkey currently has very limited production, but recent offshore natural gas discoveries in the Black Sea region provide significant potential for the country's future production.¹² **Cyprus, Greece, and Lebanon** have little if any domestic natural gas production (Figure 3).

Figure 3. Annual dry natural gas production, selected countries in the Eastern Mediterranean, 2012–2019



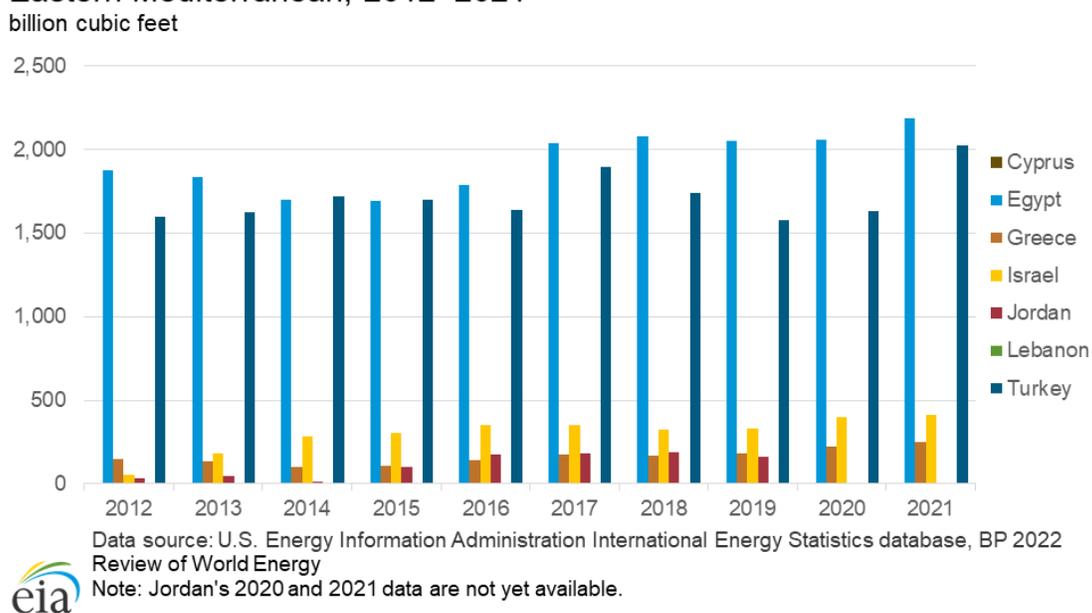
Data source: U.S. Energy Information Administration, International Energy Statistics database
Note: Jordan production data are too small to show in figure.



Consumption

- **Egypt** is the largest natural gas consumer in the Eastern Mediterranean region. Domestic natural gas consumption grew over the past decade, averaging about 1.94 Tcf per year between 2012 and 2021. Egypt’s natural gas production was inconsistent during this time period, making natural gas imports necessary to meet domestic demand for a few years before some of its significant natural gas finds began commercial production.¹³
- **Turkey** is the second-largest consumer of natural gas in the Eastern Mediterranean, consuming an average of about 1.71 Tcf per year between 2012 and 2021. Given its relatively small natural gas production, Turkey mostly uses imported LNG and piped natural gas from Iran, Azerbaijan, and Russia to meet its domestic natural gas needs. The recent Sakarya and Amasra offshore discoveries in the Black Sea region will enable Turkey to alleviate some of its natural gas import needs through domestic natural gas once the fields are brought online.¹⁴
- **Israel** also consumes a small amount of natural gas domestically relative to its neighbors Egypt and Turkey, but consumption has grown significantly since 2012. The country’s development of its own natural gas resources has enabled Israel to use more natural gas for power generation and industrial production rather than coal and petroleum products.¹⁵
- **Greece** and **Jordan** use relatively small amounts of natural gas for domestic consumption; Greece averaged 164 Bcf per year between 2012 and 2021 and Jordan averaged 115 Bcf per year between 2012 and 2019 (2020 and 2021 data are not yet available). **Cyprus** and **Lebanon** historically have not used natural gas and instead use other fuel sources (Figure 4).

Figure 4. Annual dry natural gas consumption, selected countries in the Eastern Mediterranean, 2012–2021



Recent natural gas discoveries

- **Cyprus** has made a string of natural gas discoveries recently that may enable the country to become a significant regional producer in the future. In August 2022, Eni announced Cyprus’s

latest discovery after drilling the Cronos-1 well in Block 6, located southwest offshore of the island. Eni is the operator of Block 6 and holds a 50% interest, and TotalEnergies holds the other half. Although the discovery has not yet been appraised, Eni’s preliminary estimates indicate that the discovery holds about 2.5 Tcf of natural gas in place.¹⁶ The Cronos-1 discovery follows other major finds in Cyprus, such as the Aphrodite discovery in 2011, the Calypso discovery in 2018, and the Glaucus discovery in 2019. Glaucus is the only discovery appraised so far, based on Rystad Energy reports. Appraisal and development of these natural gas discoveries are still in progress, and online dates remain uncertain, according to estimates provided by Rystad Energy.¹⁷

- **Egypt’s** Zohr field, located in the Shorouk concession, came online in 2017 and is the country’s largest natural gas discovery to date. Eni, the operator, announced the discovery in 2015, and development of the Zohr field was fast-tracked, enabling it to begin production about two years after the discovery was announced. Natural gas production at the Zohr field reportedly reached approximately 1.0 Tcf per year in February 2021, but unplanned outages in 2020 and 2021 have since constrained output. Eni plans to drill additional wells to increase capacity, but the outlook remains uncertain.¹⁸ Other fields, such as the Baltim Southwest field (a shallow water discovery located in the Baltim concession that began commercial production in September 2019) and the Bashrush discovery (a deepwater discovery announced in July 2020) could provide additional, albeit relatively smaller, volumes that will increase Egypt’s natural gas production.¹⁹
- The Athena discovery, which is located near the Karish and Tanin fields offshore of **Israel**, was confirmed in May 2022 by Energean, the operator of the commercial block. According to *Offshore Technology*, preliminary analysis of the Athena discovery’s recoverable resources are estimated to be 8 billion cubic meters (or about 283 Bcf) and may be developed as a tie-back to the Energean Power Floating Production Storage Offloading, which was built to develop the adjacent Karish and Tanin fields.²⁰ The Athena discovery is Israel’s most recent offshore natural gas discovery after the Leviathan, Tanin, and Tamar discoveries. Chevron will operate the Tamar and Leviathan discoveries, which will be developed in phases over the next decade.²¹ The Karish and Tanin discoveries are two other offshore discoveries, which Energean is currently developing and will likely begin commercial operations within the next six years, according to estimates provided by Rystad Energy.²²
- **Turkey** announced that it had made two significant natural gas discoveries in 2020. The Sakarya and Amasra natural gas discoveries are located in the Black Sea region outside of the Eastern Mediterranean and so are not included in this report.²³ **Greece, Jordan, and Lebanon** currently have not reported any significant recent natural gas discoveries in the Eastern Mediterranean (Table 4 and Figure 5).

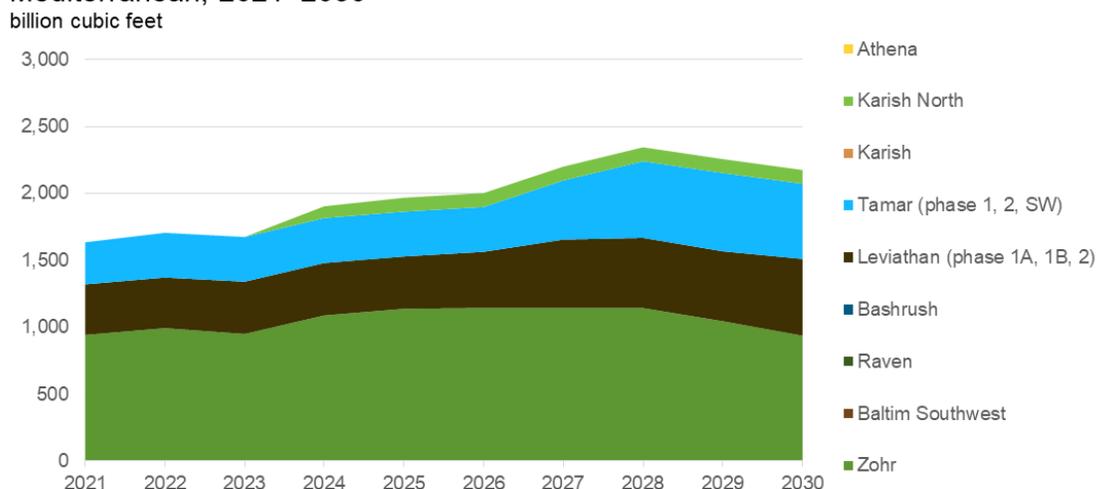
Table 4. Significant natural gas discoveries in the Eastern Mediterranean

Country name	Discovery name	Discovery date	Location	Operator	Estimated startup date	Estimated volume/peak prod'n level (billion cubic feet per year)
	Aphrodite	2011	Block 12, offshore deepwater	Noble Energy	2029	202
Cyprus	Calypso	2018	Block 6, offshore deepwater	Eni	2036	276
	Glaucus	2019	Offshore deepwater, Block 10	ExxonMobil	2038	276

	Cronos	2022	Block 6, offshore deepwater	Eni	Unknown	Unknown
	Zohr	2015	Offshore, Nile Delta basin	Eni	2017	1144
Egypt	Baltim Southwest	2016	Offshore shallow water, Baltim Block, Nile Delta Basin	Eni, Egyptian General Petroleum Corporation	2019	0.16
	Raven	2004	Offshore deepwater, North Alexandria Block	BP	2021	0.23
	Bashrush	2020	Offshore, shallow water	Eni	2025	0.05
	Leviathan	Phase 1A, 1B, 2: 2010	Offshore deepwater, Blocks I/14 and I/15	Chevron	Phase 1A: 2020, Phase 1B: 2026, Phase 2: 2030	779
	Tamar	Phase 1 and 2: 2009, Tamar SW: 2013	Offshore deepwater, Block I/12	Chevron	Phase 1: 2013, Tamar SW: 2019, Phase 2: 2027	585
Israel	Karish	2013	Offshore deepwater, Block Alon C	Energean	2022	0.22
	Karish North	2019	Offshore deepwater, Block I/17	Energean	2023	104
	Athena	2022	Offshore deepwater, Block 12	Energean	2027	0.05
	Tanin	2012	Offshore deepwater, Block Alon A	Energean	2028	0.11

Data source: Rystad Energy

Figure 5. Forecasted natural gas production from selected fields in the Eastern Mediterranean, 2021–2030



eia Data source: Rystad Energy

Trade

Liquefied natural gas (LNG) infrastructure

- **Cyprus** did not have any operating LNG infrastructure as of October 2022. A floating storage and regasification unit (FSRU) is under construction at the port of Vassiliko and is planned to begin operations in the summer of 2023.²⁴ The facility does not include export capabilities, but in April 2022, the governments of Israel, Greece, and Cyprus discussed the possibility of using a floating LNG vessel at the Vassiliko port to export natural gas to Europe.²⁵
- **Egypt** operates LNG export terminals at Damietta (SEGAS LNG) and Idku (Egyptian LNG) as well as an FSRU at SUMED port. The two export terminals enable Egypt to export LNG produced domestically and piped in from Israel to destinations such as Europe.²⁶ Cyprus also plans to use Egypt's LNG infrastructure to export its natural gas once its fields come online.²⁷
- **Greece** has one operating FSRU in the islet of Revithoussa. The Revithoussa FSRU began operations in 2000 and was expanded in 2007 and later again in 2018 to increase the terminal's storage capacity. Greece announced in April 2022 that it is seeking to further expand the terminal's capacity in response to the possibility that natural gas supply from Russia will be disrupted.²⁸ A final investment decision on constructing an FSRU at Alexandroupolis was reached in January 2022, and the developer, Gastrade, announced that operations would begin by the end of 2023. Once operational, the project aims to provide additional natural gas imports to Greece as well as the Balkan states via the Greece-Bulgaria Gas Interconnector and the Trans Adriatic Pipeline (TAP).²⁹ Greece plans to construct FSRUs in Corinth, Argo, and Thessaloniki that aim to begin operations in the next three years, but these projects have not reached a final investment decision.³⁰
- **Israel** currently has one FSRU (known as the Excelerate Excelsior FSRU), which began operations in 2013 to enable Israel to diversify its sources of energy supply.³¹ The FSRU operates at the port of Hadera near Sharon, but owner Excelerate Energy announced that the FSRU's charter would not be renewed after it expires in October 2022 and that the FSRU would be redeployed to Albania's Vlora LNG terminal in 2023.³²

- **Jordan** has an LNG terminal called the Sheikh Sabah Al Ahmad Al Jaber Al Sabah LNG Terminal that is located in the southwestern tip of the country at the port of Aqaba. One FSRU operates at the terminal, the Golar Eskimo, which was commissioned in 2015. The Jordanian government is reportedly exploring plans to replace the FSRU with a floating storage unit and an onshore regasification terminal that would allow Jordan to reduce costs and provide efficiency and flexibility for LNG imports and possible re-export via pipeline to other countries.³³
- **Lebanon** has no LNG infrastructure. In 2019, the Lebanese government announced a tender offer for private companies to provide FSRUs near Beddawi, Zahrani, and Selaata to import natural gas that would feed into either existing or proposed power plants near the respective sites, but the projects have either been put on hold or have not reached final investment decisions.³⁴
- **Turkey** has two LNG regasification terminals and two FSRUs operating in the country, but only one of the facilities, the Dörtyol FSRU, is located in the Eastern Mediterranean.³⁵ The Izmir Aliğa LNG regasification terminal and the Etki FSRU are located near Izmir in the Aegean Sea.³⁶ The Marmara LNG terminal is on the Sea of Marmara, which is located between the Aegean Sea and the Black Sea.³⁷ BOTAŞ, the state-owned oil and natural gas company, is building another FSRU at the Gulf of Saros, also located in the Aegean Sea, in northwestern Turkey. This FSRU will begin commercial operations later this year (Table 5).³⁸

Table 5. LNG infrastructure in the Eastern Mediterranean

Country	Facility name	Status	Facility type	Location	Operator	Start date	Nameplate capacity (billion cubic feet per year)
Cyprus	Vassiliko FSRU	Under construction	FSRU	Vassiliko Port	Unknown; owned by DEFA	2023	Import capacity: 29 Export capacity: 240
Egypt	SEGAS LNG	Operating	LNG export terminal	Damietta	SEGAS Services	2005	266
	Egyptian LNG	Operating	LNG export terminal	Idku	Egyptian LNG	2005	346
	SUMED BW, BW Singapore	Operating	FSRU	SUMED port (located at Ain Sukhna from 2015 to 2017)	BW	2015	274
Greece	Revithoussa FSRU	Operating	FSRU	Revithoussa	DESFA S.A.	2000	244
	Dioriga FSRU	Proposed	FSRU	Corinth	Unknown; owned by Dioriga Gas	2023	92
	Argo FSRU	Proposed	FSRU	Argo (Volos port)	Mediterranean Gas	2023	162
	Thessaloniki FSRU	Proposed	FSRU	Thessaloniki	Unknown; owned by Elpedison	2025	258
	Thrace FSRU	Proposed	FSRU	Thrace	Unknown; owned by Gastrade	Unknown	194
	Alexandroupolis FSRU	Under construction	FSRU	Alexandroupolis	Gastrade	2023	194
	Israel	Excelerate Excelsior FSRU	Operating	FSRU	Hadera	Excelerate Energy	2013

Jordan	Sheikh Sabah Al Ahmad Al Jaber Al Sabah LNG Terminal, Golar Eskimo	Operating	FSRU	Aqaba	Golar	2015	183
Lebanon	Beddawi FSRU	On hold	FSRU	Beddawi	Unknown	Unknown	Unknown
	Zahrani FSRU	Proposed	FSRU	Zahrani	Unknown	Unknown	Unknown
	Selaata FSRU	On hold	FSRU	Selaata	Unknown	Unknown	Unknown
Turkey	Marmara LNG terminal	Operating	Regasification terminal	Marmara Ereğlisi, Tekirdag	BOTAŞ	1994	221
	Izmir Aliğa LNG terminal	Operating	Regasification terminal	Izmir	EgeGaz	2006	514
	Etki FSRU, Turquoise P FSRU	Operating	FSRU	Izmir	Pardus Energy	2016	360
	Dörtyol LNG terminal, Ertuğrul Gazi FSRU	Operating	FSRU	Gulf of Iskenderun	BOTAŞ	2018	197
	Saros FSRU, Ertuğrul Gazi FSRU	Under construction	FSRU	Gulf of Saros	BOTAŞ	2022	361

Source: *Global Energy Monitor, International Group of Liquefied Natural Gas Importers (GIIGNL) 2022 Annual Report*

Note: FSRU=floating storage and regasification unit

Pipeline infrastructure

- Feasibility studies for developing the **East Mediterranean Gas (EastMed) pipeline**, a proposed natural gas pipeline that would deliver natural gas from Israel's and Cyprus's fields to Greece, and possibly other European countries via the Gas Interconnector Greece-Bulgaria and the Poseidon pipelines, is reportedly underway. Project developers are aiming for a final investment decision in 2022.³⁹ In January 2020, the governments of **Cyprus, Greece, and Israel** agreed to build a subsea pipeline that would provide Europe, which has largely used natural gas from Russia and Eurasia, with an alternative natural gas source.⁴⁰ European and U.S. support for the pipeline's development has reportedly waned, in part, because of technical difficulties as well as territorial disputes between Turkey and Cyprus over portions of the proposed route.⁴¹
- The **Arab Gas Pipeline (AGP)** is a trans-regional natural gas pipeline that enables **Egypt** to export natural gas to neighboring countries **Syria, Jordan, and Lebanon**, as well as to **Israel** via the Arish-Ashkelon pipeline.⁴² The pipeline faced a series of attacks in 2011 that led to a temporary shutdown of the pipeline, disrupting natural gas deliveries to Israel and Jordan. Although natural gas flows resumed in 2013, lower natural gas production in Egypt and lower export volumes led to lower deliveries to Jordan and a suspension of natural gas deliveries to Israel.⁴³ A June 2022 agreement between **Lebanon and Egypt** sought to provide 0.65 billion cubic meters per year (or 23 Bcf per year) of natural gas from Egypt to Lebanon via Syria and Jordan along the AGP by using the Jordan segment of the AGP. The plan requires approval and a sanctions waiver by the U.S. government for Egypt because the Syrian government remains subject to U.S. sanctions. Implementation of this agreement remains uncertain.⁴⁴
- The **Arish-Ashkelon pipeline**, also known as the Eastern Mediterranean Gas (EMG) pipeline and distinct from the proposed EastMed pipeline, is a subsea branch pipeline of the AGP. The Arish-Ashkelon pipeline was initially built in 2008 to deliver natural gas from **Egypt to Israel**. Egypt's domestic natural gas shortages and the previously mentioned attacks on the AGP in the 2010s

curtailed Egypt’s natural gas exports to Israel. In 2019, Egypt and Israel agreed to reverse pipeline flows, which would deliver natural gas from Israel’s offshore fields to Egypt.⁴⁵

- **Jordan** began importing natural gas via pipeline from Israel’s Leviathan field in 2019 following a 2016 agreement with Leviathan partners to deliver natural gas of up to 300 million cubic feet per day (or about 110 Bcf per year) over a 15-year period.⁴⁶ Jordan also imports natural gas via pipeline, albeit in small quantities, from Egypt. Jordan’s natural gas imports from Egypt began after the Arish-Aqaba section of the AGP was completed in 2003 but were suspended in 2015 amid frequent disruptions from terrorist attacks on the AGP that started in 2010 and natural gas supply shortages in Egypt. This constraint forced Jordan to use heavy fuel oil and diesel for most of its power generation until the commercial operation of the Golar floating storage and regasification unit (FSRU) in 2015. Egypt did not resume exports to Jordan until after 2019 when the Zohr field began operations and increased Egypt’s natural gas production.⁴⁷
- The government of **Cyprus** is planning to use Egypt’s LNG infrastructure to export its natural gas to Europe by developing a subsea pipeline that would connect to Egypt’s processing plants for liquefaction and transport via ship. The proposed subsea pipeline to transport natural gas from its Aphrodite field, once it is developed and brought online, directly to Egypt’s LNG facilities is expected online in 2024 or 2025.⁴⁸
- **Turkey** does not have any trans-regional pipeline infrastructure in the Eastern Mediterranean, but it has developed significant pipeline connections with Eurasia. The **Trans-Anatolian Pipeline project (TANAP)**, which is a natural gas pipeline that runs through Georgia, Turkey, and a natural gas field in Azerbaijan, began full commercial operations in 2019.⁴⁹ The **Trans Adriatic Pipeline (TAP)** began operations in November 2020, enabling natural gas sourced in Azerbaijan to be transported across Turkey via the TANAP to the TAP to **Greece** and Italy.⁵⁰ (Table 6)

Table 6. Major regional natural gas pipelines in selected Eastern Mediterranean countries

Pipeline name	Status	Length (miles)	Capacity (billion cubic feet per year)	Operators	Notes
Arish-Ashkelon Pipeline	Operating	56	147–247	East Mediterranean Gas Company, Merhav, Snam S.P.A., EMI-EGI LP, and Egyptian General Petroleum Corporation	Subsea pipeline that carries natural gas from Israel's offshore fields to Egypt
Arab Gas pipeline (AGP)	Operating	750	364	EGAS, ENPPI, PETROGET, GASCO, and SPC	Onshore pipeline that carries natural gas from Egypt to Jordan, Syria, and Lebanon
Eastern Mediterranean Pipeline (EMG)	Proposed	1,243	353	IGI Poseidon S.A.	Subsea pipeline that carries natural gas from Israel, Cyprus, and Crete to Europe. Capacity figure only includes Phase 1 planned capacity. Phase 2 expansion, if completed, would double Phase 1 capacity
Trans Adriatic Pipeline (TAP)	Operating	541	706	BP, SOCAR, Snam S.P.A., Fluxys, Enagás, and Axpo	Onshore and offshore pipeline that carries natural

gas from Turkey through Greece and Albania to Italy

Trans-Anatolian Pipeline (TANAP)	Operating	1,150	565	Southern Gas Corridor Closed Joint Stock Company (SGC), BOTAŞ, BP, and SOCAR	Onshore pipeline that carries natural gas across Turkey to the western border with Greece
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Data source: *Global Energy Monitor, Hydrocarbons Technology, NS Energy Business*, company websites

Notes

- Data presented in the text are the most recent available as of November 16, 2022.
- Data are EIA estimates unless otherwise noted.

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Exploring safe, small-scale nuclear technology

Alberta will enter into an agreement with three other provinces to explore emerging, small-scale nuclear technology that could lower emissions and help diversify the energy sector.

Premier Jason Kenney has signalled the intent for Alberta to enter into a memorandum of understanding with Ontario, Saskatchewan and New Brunswick to support the development of versatile and scalable small modular reactors (SMRs).

SMRs are smaller than traditional nuclear reactors and scalable to suit local needs, with lower upfront capital costs and enhanced safety features. This new and versatile technology could supply non-emitting, low-cost energy for on-grid and off-grid communities in Alberta, including remote and rural areas of the province, as well as industries with a significant need for steam, such as Alberta's oil sands.

“Our government is exploring all opportunities that could help diversify our economy and create jobs for Albertans. We are building on our track record of responsible and innovative energy production by exploring the potential for small modular reactors, which have the potential to generate reliable and affordable energy, while also strengthening our traditional resource sectors and reducing emissions. We are excited to collaborate with our provincial partners to stay ahead of the game in the development of this promising technology.”

Jason Kenney, Premier

“Alberta's rich uranium deposits, respected innovation and research sector, and technically skilled and educated workforce could make us an attractive destination to develop and deploy SMRs. By signing on to this agreement, our government is taking another step to attract investment and job creators to our province by ensuring we have the appropriate regulatory framework in place should private industry decide to pursue this emerging technology.”

Sonya Savage, Minister of Energy

Alberta's Recovery Plan is a bold, ambitious long-term strategy to build, diversify, and create tens of thousands of jobs now. By building schools, roads and other core infrastructure we are benefiting our communities. By diversifying our economy and attracting investment with Canada's most competitive tax environment, we are putting Alberta on a path for a generation of growth.

Alberta came together to save lives by flattening the curve and now we must do the same to save livelihoods, grow and thrive.

Quick facts

- SMRs are nuclear reactors that are smaller and more flexible than conventional nuclear reactors. SMRs would be small enough to be built in a factory and shipped by truck, rail or ship.
- A typical SMR would generate between two and 300 megawatts of electricity, which could provide power for a village or small city. In comparison, a conventional nuclear reactor can generate 600 to 1,000 megawatts, which can provide power for a large city.
- SMRs could operate independently or be linked to multiple units, depending on the required amount of power.
- In November 2018, the federal government released the Canadian Small Modular Reactor Roadmap that outlines recommendations for collaboration among federal, provincial and territorial governments, Indigenous communities and other stakeholders to support SMR development in Canada.
- In February 2020, the federal government announced plans for a fall 2020 launch of Canada's SMR Action Plan, which will outline progress and ongoing efforts across Canada.
- In December 2019, New Brunswick, Ontario and Saskatchewan signed a memorandum of understanding to work together to support the development and deployment of SMRs.
- Canada is the second largest uranium producer in the world, with about 15 per cent of total world production.
- The Athabasca Basin, which straddles the northern Alberta-Saskatchewan border, contains some of the greatest uranium resources in the world.

Multimedia

- [Video message: Premier Kenney and Minister Savage](#)



IFIC Monthly Investment Fund Statistics – October 2022

Mutual Fund and Exchange-Traded Fund Assets and Sales

November 22, 2022 (Toronto) – The Investment Funds Institute of Canada (IFIC) today announced investment fund net sales and net assets for October 2022.

Mutual fund assets totalled \$1.796 trillion at the end of October 2022. Assets increased by \$40.4 billion or 2.3% compared to September 2022. Mutual funds recorded net redemptions of \$8.0 billion in October 2022.

ETF assets totalled \$300.5 billion at the end of October 2022. Assets increased by \$12.9 billion or 4.5% compared to September 2022. ETFs recorded net sales of \$3.4 billion in October 2022.

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

Asset Class	Oct. 2022	Sep. 2022	Oct. 2021	YTD 2022	YTD 2021
Long-term Funds					
Balanced	(5,660)	(4,986)	3,340	(19,964)	57,316
Equity	(1,887)	(2,891)	1,881	(2,306)	34,116
Bond	(1,662)	(1,914)	384	(10,432)	15,151
Specialty	(2)	1	431	1,213	5,178
Total Long-term Funds	(9,210)	(9,790)	6,037	(31,489)	111,761
Total Money Market Funds	1,189	825	(408)	4,832	(7,096)
Total	(8,021)	(8,965)	5,629	(26,656)	104,664

Mutual Fund Net Assets (\$ Billions)*

Asset Class	Oct. 2022	Sep. 2022	Oct. 2021	Dec. 2021
Long-term Funds				
Balanced	876.5	863.0	998.9	1,024.9
Equity	643.9	615.6	729.5	747.6
Bond	221.9	224.8	259.7	261.4
Specialty	22.0	21.7	21.1	22.2
Total Long-term Funds	1,764.2	1,725.1	2,009.2	2,056.1
Total Money Market Funds	32.0	30.8	26.6	26.4
Total	1,796.3	1,755.9	2,035.8	2,082.5

* Please see below for important information regarding this data.

ETF Net Sales/Net Redemptions (\$ Millions)*

Asset Class	Oct. 2022	Sep. 2022	Oct. 2021	YTD 2022	YTD 2021
Long-term Funds					
Balanced	35	67	212	1,487	3,423
Equity	896	(390)	3,120	10,509	27,255
Bond	746	540	461	4,434	11,004
Specialty	173	(81)	472	1,252	7,131
Total Long-term Funds	1,850	136	4,265	17,682	48,813
Total Money Market Funds	1,501	1,712	134	6,537	(862)
Total	3,351	1,849	4,399	24,218	47,952

ETF Net Assets (\$ Billions)*

Asset Class	Oct. 2022	Sep. 2022	Oct. 2021	Dec. 2021
Long-term Funds				
Balanced	11.8	11.4	11.4	12.1
Equity	190.4	179.7	212.9	225.2
Bond	74.9	75.0	87.6	89.6
Specialty	10.5	10.1	13.7	13.6
Total Long-term Funds	287.6	276.2	325.5	340.5
Total Money Market Funds	12.9	11.4	6.4	6.6
Total	300.5	287.6	331.9	347.1

* Please see below for important information regarding this data.

IFIC direct survey data (which accounts for approximately 85% of total mutual fund industry assets and approximately 83% of total ETF industry assets) is complemented by estimated data 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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WELCOME TO THE 2023 WORLD'S BEST CITIES

Resonance Consultancy is building the most comprehensive city rankings on the planet. Here's why this matters now more than ever as the world adapts to a new post-pandemic reality.



As leading advisors in tourism, real estate and economic development for 15 years, our team at Resonance has conducted extensive research on the rise of cities, the key trends propelling their growth and the factors that shape our perception of urban centers as desirable places to live, visit and invest.

Of course the pandemic upended our cities as a whole and, for many of us, changed what we consider to be desirable in a place to live, work or play. Much has been written about the declining populations in some of the world's largest and most iconic cities. New York, San Francisco, Athens, Chicago and Rome have lost hundreds of thousands of residents since 2020. Is this the end of cities?

Far from it.

There's no question that the pandemic has altered every facet of our lives. According to LinkedIn, 1 out of every 6 jobs posted on the site today are "remote." Earlier forecasts by TheLadders.com—that 1 out of every 4 professional jobs will be remote by the end of 2022—have actually been exceeded in many countries. And with that newfound freedom, many people are choosing to move to smaller, or more affordable, or more interesting cities, taking their economic output and consumption with them. That's not necessarily a bad thing on the whole as economic growth and the benefits that come with it were becoming increasingly captured and concentrated in a handful of so-called "superstar" cities prior to the pandemic.

Whether it's domestic migration into entrepreneurial and more affordable secondary cities like Fukuoka in Japan, or international investment into now globally coveted centers like Lisbon or Auckland, the 2020 narrative about the death of cities has proven to be greatly exaggerated (if not forgotten entirely).

In fact, many global cities have utilized the pandemic pause to position themselves as ever more welcoming destinations—for tourism, for new, much-needed talent, and for risk-averse global capital looking for new opportunities in places that have done the work to build resilience for a changed world.

Places like Paris, where, as our report outlines, "returning visitors find a city that has codified pedestrianism and alfresco living." Or Madrid's Nuevo Norte Project, currently Europe's largest urban redevelopment initiative, that is transforming the "industrial wasteland of railway lands and brownfields north of the city into social housing, a transit hub and new office spaces." Don't even get us started on Dubai's torrent of city-building over the past 24 months.

Despite the pandemic's subsiding, urban populations are dealing with fresh crises, both economic and humanitarian. Russia's invasion of Ukraine has also scarred this year's rankings. In our view, no city can be a "Best City" that is part of a country that is taking unprovoked action against another and we have removed Moscow and St. Petersburg from this year's report, two cities that finished in the Top 20 last year. More importantly, we declared Kyiv our honorary World's Best City for 2023, and asked local journalist Anna Babinets to write a love letter to her hometown, sharing with us the hope, courage and resilience radiating from the Ukrainian capital, even in its darkest hour. You can read it on page 9.

As we emerge from the depths of the pandemic, there's never been a bigger opportunity for cities to act on their ambitions and to do right by their citizens—current and future. The data we collect to produce these rankings will continue to track and monitor this pivotal transformation every step of the way, identifying the Best Cities to live, work and visit now, and in the years to come.

A handwritten signature in black ink, appearing to read "Chris Fair". The signature is stylized and fluid, written over a white background.

Chris Fair, President & CEO
Resonance Consultancy
cfair@resonanceco.com

THE URBAN OPPORTUNITY

The world's best cities have seized the pause of the past two-plus years to build resilience and cover for an uncertain future. These are the destinations of tomorrow. And the World's Best Cities Report outlines their work to get there today.



In my little corner of New York City, I'm happy to report that things feel... normalish. The temperatures are brisk; the leaves have fallen. Broadway is back with a robust schedule; restaurants are full (even too noisy, a pre-pandemic complaint I'd all but forgotten!). Some locals have even reconsidered their pandemic move upstate—just look at how rent and sale prices have spiked in NYC. Meanwhile, families across the boroughs are well into the school year. And not a “pandemic school year”—just a school year. You can practically feel the sigh of relief as new friendships are struck and guards are let down.

Will things ever be “normal” again in the world's urban centers? No, not likely—though with luck and careful planning, they'll bounce back better than before. In the fall 2022 Urban Issue of AFAR magazine, contributor Azzurra Cox writes, “As dramatic as the pandemic pause has been, it proved something that urbanists have always known: that cities are highly responsive and adaptable.” In the absence of crowds, urban planners could evaluate the true durability and accessibility of their infrastructure and perhaps even pivot away from car culture to a greener, two-wheeled future.

In the absence of daily commutes, the conversation around the 15-minute city has been reinvigorated. Big-box businesses may have suffered, but neighborhoods doubled down on small businesses—on their actual neighbors—which resulted in a true sense of community at a time when isolation was the norm.

The cities on this year's list, as ranked by Resonance Consultancy and presented exclusively by AFAR, have used the “pandemic pause” to roll out 464 miles of bikeways (San Francisco), spend billions on hotels and waterfront development (Washington, D.C.), expand or open major museums and finally finish that LaGuardia airport renovation (NYC). One destination even changed its name—remember, it's now Istanbul, Türkiye. And common across so many of these top-tier cities is a commitment to diversity, accessibility and sustainability: no longer “forward thinking,” now just the norm of the biggest thinkers.

Travel well,

Laura Dannen Redman
Digital Content Director, AFAR

HOW WE CHOSE THE 2023 WORLD'S BEST CITIES: THE METHODOLOGY

Resonance Consultancy ranks global cities (principal cities of metropolitan areas with populations of more than one million) by using a combination of statistical performance and qualitative evaluations by locals and visitors in 24 areas grouped into six core categories. Principal cities are defined as the largest city in each metropolitan statistical area. This year, we disqualified Moscow and St. Petersburg from our list of cities due to Russia's invasion of Ukraine.

THE SIX CORE CATEGORIES

Pc PLACE

Pd PRODUCT

Pg PROGRAMMING

Po PEOPLE

Ps PROSPERITY

Pm PROMOTION



Pc PLACE

Our most layered category quantifies a city's physical sense of place. To score a city within our Place category, we evaluate the perceived quality of its natural and built environments. From how often the sun shines to the safety of the streets, several readily measurable, oft-cited factors influence our perceptions.

Weather Average number of sunny days (Weatherbase)

Safety Violent crime rate (United Nations Office on Drugs and Crime, UN-Habitat, Eurostat, FBI and national data sources)

Sights & Landmarks Number of quality points of interest, neighborhoods and landmarks recommended by locals and visitors (TripAdvisor.com)

Outdoors Number of quality parks and outdoor activities recommended by locals and visitors (TripAdvisor.com)



Pd PRODUCT

This is a ranking of the "hardware" of a city—often the most difficult metric for cities to get right. Our product category studies a city's key institutions, attractions and infrastructure. A city's infrastructure and institutions shape its identity via the quantity, quality and reputation of these "products." Expensive and difficult to develop and maintain, exceptional, recognizable products are often found only in large, cosmopolitan cities.

Airport Connectivity Number of direct destinations served by the city's airports (Google Flights, FlightConnections.com and FlightsFrom.com)

Attractions Number of quality attractions recommended by locals and visitors (TripAdvisor.com)

Museums Number of quality museums and arts institutions recommended by locals and visitors (TripAdvisor.com)

University Ranking Score of the top local university (U.S. News Best Global Universities Rankings)

Convention Center Size of the largest convention center (10Times.com and official convention center website)



Pg PROGRAMMING

This category measures the experiential pillars of a great visit: food, shows, shopping and nightlife. If our Product category is the “hardware” of cities and destinations, the mosaic of cultural programming and lifestyle experiences they offer is the “software” that makes them run—including the subcategories of Shopping, Culture, Restaurants and Nightlife. While such programming initiatives are individually insignificant, their sum fosters a community’s connection to place.

Culture Number of quality performing arts and cultural experiences recommended by locals and visitors (TripAdvisor.com)

Nightlife Number of quality nightlife experiences recommended by locals and visitors (TripAdvisor.com)

Restaurants Number of quality restaurants and culinary experiences recommended by locals and visitors (TripAdvisor.com)

Shopping Number of quality shopping experiences recommended by locals and visitors (TripAdvisor.com)



Po PEOPLE

The more diverse a city’s population, the more it produces global ideas... on a local scale. Human capital is often a city’s most valuable resource and, for many cities, is increasingly in short supply. To evaluate the relative strength of human capital from one city to the next, we look at both the educational attainment level of the city’s population and the percentage of people participating in the labor force.

Labor Force Participation The percentage of citizens participating in a city’s labor force (Organisation for Economic Co-operation and Development [OECD], World Bank, U.S. Census Bureau, and national data sources)

Educational Attainment Percentage of the population with a bachelor’s degree or higher (UNESCO Institute for Statistics, OECD, U.S. Census Bureau and national data sources)



Ps PROSPERITY

A well-paid, economically secure citizenry facilitates stewardship and innovation. In general, beliefs about the wealth and prosperity of a city are shaped by statistics such as the income of citizens, the standard of living and the presence or absence of large, recognizable corporations—despite the fact that start-ups and innovation increasingly drive a city’s development and economic growth.

Global 500 Number of Global Fortune 500 corporate headquarters (Fortune.com/global500)

GDP per Capita A City’s gross domestic product per Capita (McKinsey Urban World)

Employment Rate The most recent employment rate available as of July 2022 (OECD, World Bank, UN-Habitat, U.S. Census Bureau and national data sources)

Income Equality The city’s Gini index, a simple measure of the distribution of income across income percentiles in a population (OECD, International Monetary Fund, U.S. Bureau of Labor Statistics and national data sources)



Pm PROMOTION

A city’s ability to tell its story (and help others do the same) depends on how it incentivizes and rewards the sharing of experiences by locals and visitors. The number and frequency of media coverage, online articles, references and place-based recommendations influence our perception of cities, whether the news is good or bad. Today, residents, businesses and visitors promote a city to the world more than city marketers or chambers of commerce. Resonance ranks a city’s Promotion performance based on the number of stories, references and recommendations shared online about that city.

Facebook Check-ins Number of Facebook check-ins (Facebook.com)

Google Search Number of Google search results (Google.com)

TripAdvisor Reviews Number of TripAdvisor reviews (TripAdvisor.com)

Instagram Hashtags Number of Instagram hashtags (Instagram.com)

Google Trends Popularity on Google Trends in the past 12 months (Trends.Google.com)

World's

BEST CITIES PERFORMANCE BY CATEGORY



RANK	CITY	PROVINCE	PLACE	PRODUCT	PROGRAMMING	PEOPLE	PROSPERITY	PROMOTION
1	London	United Kingdom	16	1	1	1	9	1
2	Paris	France	8	2	4	9	7	3
3	New York	United States	40	4	3	76	6	2
4	Tokyo	Japan	5	3	2	59	4	35
5	Dubai	United Arab Emirates	1	54	39	16	35	4
6	Barcelona	Spain	6	5	7	53	154	12
7	Rome	Italy	3	10	5	150	107	6
8	Madrid	Spain	13	17	6	23	101	16
9	Singapore	Singapore	24	23	22	44	10	11
10	Amsterdam	Netherlands	55	8	15	10	18	27
11	Prague	Czech Republic	39	6	8	11	54	42
12	Los Angeles	United States	47	12	17	99	42	9
13	Chicago	United States	111	7	11	91	39	17
14	San Francisco	United States	42	32	20	34	16	32
15	Berlin	Germany	132	13	12	26	132	22
16	Hong Kong	China: Hong Kong SAR	7	26	28	182	32	10
17	Washington	United States	131	35	66	15	13	8
18	Beijing	China	12	11	40	197	2	134
19	Dublin	Ireland	9	43	27	46	24	60
20	Istanbul	Türkiye	38	9	13	181	180	5
21	Las Vegas	United States	41	29	14	147	135	13
22	Milan	Italy	11	24	25	149	120	23
23	Budapest	Hungary	32	25	26	18	117	62
24	Toronto	Canada	121	21	34	42	34	25
25	Sydney	Australia	33	45	36	55	56	24

RANK	CITY	PROVINCE	PLACE	PRODUCT	PROGRAMMING	PEOPLE	PROSPERITY	PROMOTION
26	Seoul	South Korea	57	19	18	102	21	63
27	Doha	Qatar	35	104	217	192	1	114
28	Abu Dhabi	United Arab Emirates	29	132	211	16	5	51
29	Osaka	Japan	10	82	23	78	44	70
30	Bangkok	Thailand	104	55	10	153	38	18
31	Vienna	Austria	36	28	33	48	100	56
32	San Diego	United States	26	42	44	68	46	36
33	São Paulo	Brazil	172	18	9	167	177	7
34	Melbourne	Australia	76	49	43	19	98	33
35	Zurich	Switzerland	73	50	106	8	11	122
36	Boston	United States	128	34	72	31	14	45
37	Lisbon	Portugal	19	52	32	49	206	48
38	Warsaw	Poland	120	40	73	4	79	78
39	Seattle	United States	174	44	42	39	19	49
40	Orlando	United States	153	15	45	87	85	29
41	Munich	Germany	156	22	69	57	17	55
42	Houston	United States	167	37	51	98	23	26
43	Austin	United States	102	71	53	36	47	54
44	Buenos Aires	Argentina	53	59	16	129	159	38
45	Naples	Italy	2	47	19	230	196	71
46	Copenhagen	Denmark	149	39	48	5	109	133
47	Dallas	United States	137	30	82	73	33	43
48	Helsinki	Finland	90	69	101	7	65	182
49	Frankfurt	Germany	168	16	71	70	26	90
50	Atlanta	United States	179	33	89	65	48	30

RANK	CITY	PROVINCE	PLACE	PRODUCT	PROGRAMMING	PEOPLE	PROSPERITY	PROMOTION
51	Stockholm	Sweden	233	36	118	3	64	88
52	Miami	United States	133	60	67	108	104	20
53	Athens	Greece	27	57	31	122	164	81
54	Rio de Janeiro	Brazil	50	53	21	208	213	15
55	Hamburg	Germany	130	76	50	41	61	57
56	Denver	United States	151	62	79	35	43	75
57	Montreal	Canada	135	46	41	69	102	64
58	Brussels	Belgium	238	31	47	12	114	94
59	Tel Aviv	Israel	75	51	55	43	124	161
60	Oslo	Norway	180	70	130	6	49	164
61	Taipei	Taiwan	129	78	30	112	25	84
62	Valencia	Spain	15	79	97	100	170	76
63	Minneapolis	United States	177	72	105	30	12	175
64	Philadelphia	United States	161	41	54	80	59	79
65	Calgary	Canada	141	89	112	22	37	102
66	Portland	United States	178	81	46	61	28	89
67	Nashville	United States	184	58	57	66	55	72
68	Auckland	New Zealand	78	85	83	33	123	138
69	Vancouver	Canada	163	68	63	47	115	67
70	Santiago	Chile	43	100	58	97	179	44
71	Mexico City	Mexico	99	48	52	128	168	37
72	Mumbai	India	60	14	49	236	162	14
73	Shanghai	China	62	20	29	194	93	119
74	San Jose	United States	115	199	192	24	8	178
75	Lyon	France	147	38	98	62	119	95

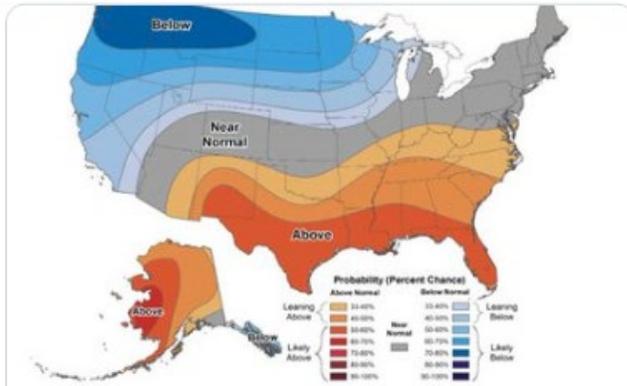
RANK	CITY	PROVINCE	PLACE	PRODUCT	PROGRAMMING	PEOPLE	PROSPERITY	PROMOTION
76	Bilbao	Spain	34	150	167	21	134	219
77	Liverpool	United Kingdom	118	103	68	32	142	104
78	New Orleans	United States	148	101	24	146	66	73
79	Brisbane	Australia	74	65	93	116	112	97
80	Manchester	United Kingdom	255	63	74	37	137	34
81	Fukuoka	Japan	18	161	88	110	122	144
82	Seville	Spain	31	129	56	106	182	87
83	Riyadh	Saudi Arabia	49	126	241	145	29	53
84	Jerusalem	Israel	4	141	115	169	161	179
85	Nanjing	China	89	91	226	197	3	252
86	Minsk	Belarus	235	145	180	2	131	130
87	Salt Lake City	United States	110	110	174	51	31	206
88	Phoenix	United States	81	74	140	121	106	86
89	Jakarta	Indonesia	72	98	94	184	130	21
90	Gothenburg	Sweden	80	113	228	29	126	225
91	Perth	Australia	105	124	179	54	90	101
92	Glasgow	United Kingdom	253	84	64	13	121	109
93	Nagoya	Japan	107	144	81	64	63	145
94	Baltimore	United States	195	73	109	63	57	140
95	Stuttgart	Germany	123	137	172	45	41	139
96	Ottawa	Canada	160	128	116	38	88	126
97	Hanoi	Vietnam	28	115	38	176	174	47
98	Sendai	Japan	17	178	164	103	108	228
99	Cologne	Germany	205	67	110	92	75	96
100	Marseille	France	113	86	107	84	136	107

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Dan Tsubouchi @Energy_Tidbits · 17h

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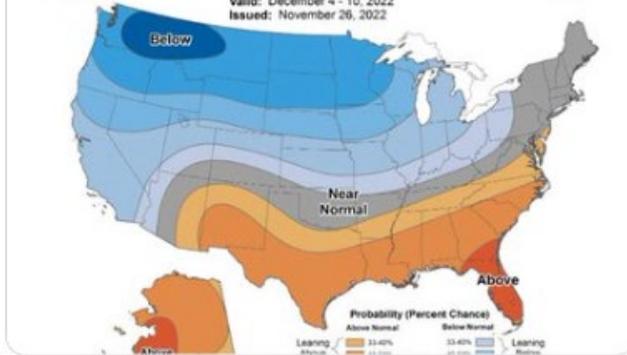
Looks like decent temperature outlook for #NatGas for first half of Dec. North half of Lower 48 expected to see normal to colder-than-normal temps. @NOAA's updated 6-10 day and 8-14 day outlook. #OOTT



<https://www.cpc.ncep.noaa.gov/products/predictions/814day/index.php>

8-14 Day Temperature Outlook

Valid: December 4 - 10, 2022
Issued: November 26, 2022



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Dan Tsubouchi @Energy_Tidbits · 20h

Here's why letting #Chevron restart in Ven puts Cdn #Oil differentials at risk in 2023. See linked 📌 03/22/22 tweet. CVX reportedly told Biden Admin could double VEN 800,000 b/d production "within months". Thx @cmatthews9 @Jose_deCordoba. #OOTT

twitter.com/Energy_Tidbits...

📄 Dan Tsubouchi @Energy_Tidbits · 20h

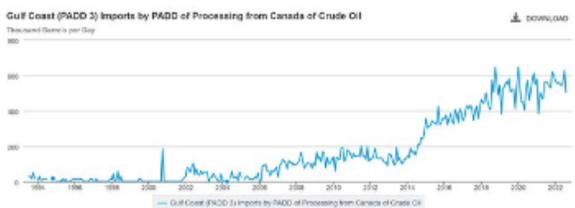
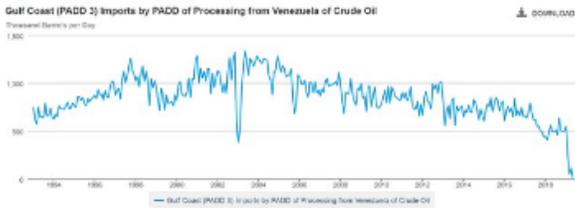
Negative to Cdn #Oil differentials, puts at risk Cdn oil to PADD 3

#Chevron can export needed diluent to blend w/ VEN heavy & import oil to CVX refineries, 350 kbd Pascagoula.

Automatically renews on 1st day of mth & valid for 6 mths therefrom.

#OOTT

[wsj.com/articles/chevr...](https://www.wsj.com/articles/chevr...)



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Dan Tsubouchi @Energy_Tidbits · 20h

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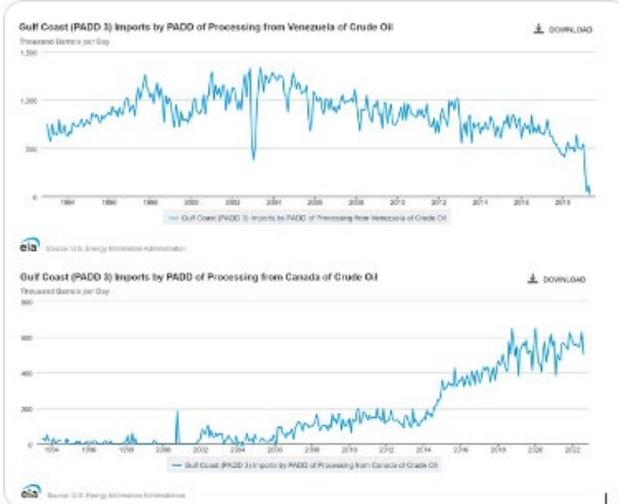
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#OOTT

[wsj.com/articles/chevr...](https://www.wsj.com/articles/chevr...)



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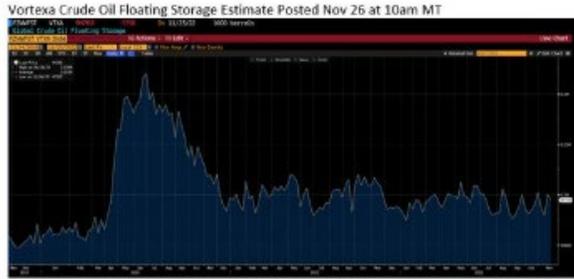
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SAF

Dan Tsubouchi @Energy_Tidbits · 22h
#Vortexa crude #Oil floating storage at 11/25 est 94.76 mmb, -5.60 mmb WoW vs big upwardly revised 11/18 of 100.36 mmb. Big +14.20 mmb revision to 11/18, originally est at 86.16 mmb. Unpredictable floating storage with a wide range in last month. Thx @Vortexa @business. #OOT



Source: Bloomberg, Vortexa

Posted Nov 26, 10am MT				Nov 19, 10am MT				Nov 12, 11am MT							
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Source: Bloomberg, Vortexa

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Dan Tsubouchi @Energy_Tidbits · Nov 26
always great to see th wildlife in #Canmore. just looked over my screen to see a lone deer 10 feet away. in the background @lewy_official just scored to give Poland 2-0 lead over Saudi. be a short Energy Tidbits memo tomorrow with world cup matches.

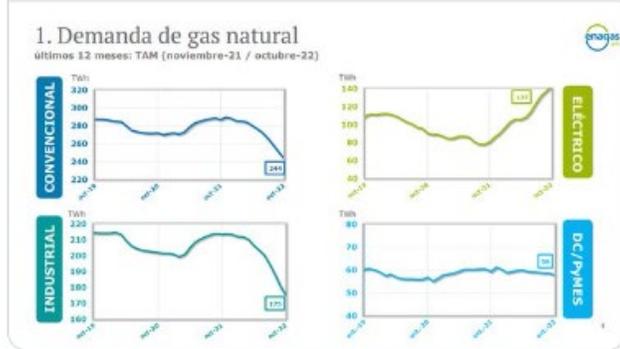
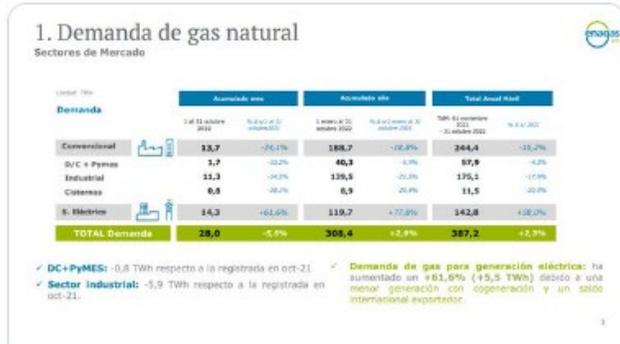


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Dan Tsubouchi @Energy_Tidbits · Nov 26

Dan Tsubouchi @Energy_Tidbits · Nov 26

No wonder there was a #LNG tanker backlog waiting to unload in Spain. @enagas Oct update had #NatGas demand -34.1% YoY including immaterial draw on storage. #OOTT



4 weeks longer than expected to clear up backlog at Spain's #LNG storage at ports. Finally, LNG tankers waiting offshore Spain can begin to unload. But key test for Europe #NatGas vulnerability not likely till Jan given high storage levels. Thx @bcarrebravo. #OOTT ...

Dan Tsubouchi @Energy_Tidbits · Nov 26

Don't expect quick uptake in China. Friday Communist party media. can't return smooth transportation as some regions "impose barriers at every level & excessively control the flow of trucks". Covid cases to increase as many cities still haven't seen tipping point. #OOTT

China's oil and gas imports

The Chinese oil and gas imports rose 1.2% in October, according to the latest data from the National Bureau of Statistics (NBS). The total value of imports was 1.2 billion US dollars, up from 1.1 billion US dollars in September.

The NBS said that the increase in imports was mainly due to a rise in oil imports, which were up 1.5% in October. Gas imports, however, fell 0.5%.

The NBS also said that the value of exports was 1.1 billion US dollars, down from 1.2 billion US dollars in September.

Energy demand

China's energy demand rose 0.5% in October, according to the latest data from the National Bureau of Statistics (NBS). The total value of energy demand was 1.1 billion US dollars, up from 1.0 billion US dollars in September.

The NBS said that the increase in energy demand was mainly due to a rise in electricity demand, which was up 1.0% in October. Gas demand, however, fell 0.5%.

The NBS also said that the value of energy exports was 0.5 billion US dollars, down from 0.6 billion US dollars in September.

SAF

Dan Tsubouchi @Energy_Tidbits · Nov 26

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4 weeks longer than expected to clear up backlog at Spain's #LNG storage at ports. Finally, LNG tankers waiting offshore Spain can begin to unload. But key test for Europe #NatGas vulnerability not likely till Jan given high storage levels. Thx @bcarrebravo. #OOTT #NatGas

<https://www.reuters.com/business/energy/enagas-says-lng-overcapacity-situation-spain-has-ended-2022-11-25/>

1 minute read November 25, 2022 24 AM 13:51 Updated a day ago

Enagas says LNG backlog at Spanish ports has eased
Reuters



A general view shows Enagas liquefied natural gas (LNG) terminal at Zona Franca in Barcelona, Spain, March 28, 2022. REUTERS/Albert Goya/FILE Photo

MADRID, Nov 25 (Reuters) - Spanish gas grid operator Enagas (ENAG.MC) said on Friday a backlog at its terminals that had forced it to warn it could reject deliveries of liquefied natural gas (LNG) had eased.

On Oct. 17, Enagas had issued a special situation notice due to unexpectedly full LNG tanks at its Spanish ports as mild weather hit demand for the fuel.

Although the system operator expected the situation to end in early November, the overcapacity had lasted almost four weeks longer and has led to delays in planned offloading, according to a person with direct knowledge of the matter.

All firm operations contracted by users can now be carried out on their scheduled date and it is not necessary to prolong into exceptional measures, Enagas said.

For weeks, ships loaded with LNG have been waiting to unload at anchor in the Bay of Cadiz, dragging down prices in the Iberian market.

They were among the dozens of vessels carrying LNG that have been circling off European coasts, unable to secure slots.

Reporting by Belén Carrero Writing by Inli Landauro Editing by Andrei Khalip and Mark Potter



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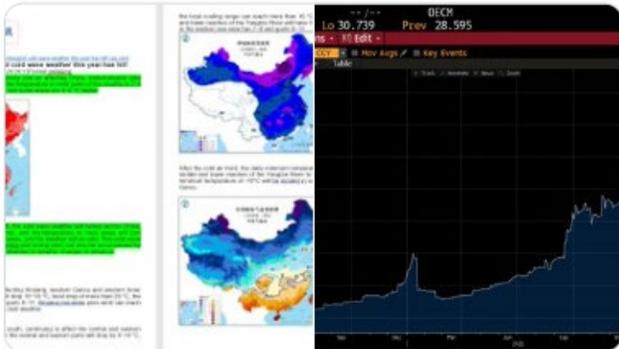


SAF

Dan Tsubouchi @Energy_Tidbits · Nov 25

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Finally, very hot temps in China should give way to cold temps. CMA update: past 10 days were 2-4C higher YoY, but cold wave coming in, expect to see key central/eastern regions of China drop 8-14C. Warm Asia and EU thru mid Nov was why JKM #LNG prices were "only" \$30ish. #OOTT



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SAF **Dan Tsubouchi** @Energy_Tidbits · Nov 25
She warned us 📍. Just now, @onlyyoontv - cases near 33k, more than when saw the "very brutal lockdown in Shanghai back in Apr", "leadership appears to be tolerating these higher numbers, officially. But unofficially, the lockdowns have been very fierce and inconsistent". #OOTT



📺 **Dan Tsubouchi** @Energy_Tidbits · Nov 21
 great report just now by @onlyyoontv doesn't feel covid policy has changed substantively, feels like it's getting tighter & more confusing, local govt wants to comply w/ new rules but is prioritizing zero covid, just leading to chaos. negative to #Oil. #OOTT

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SAF

Dan Tsubouchi @Energy_Tidbits · Nov 24

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Shouldn't expect any quick uptick in China given increasing China Covid restrictions. Communist party media. Vice Premier stresses containing outbreak ASAP. Beijing strengthens rein-in risks ie. gatherings of people, conducting large-scale nucleic acid testing, etc. #OOTT #Oil

人民日报 PEOPLE'S DAILY ONLINE

<http://en.people.cn/3/2022/11/25/90000-10176125.html>

Chinese vice premier stresses containing COVID-19 outbreak as quickly as possible

(Xinhua) 08:32, November 25, 2022

CHONGQING, Nov. 24 (Xinhua) — Chinese Vice Premier Sun Chunlan has asked local authorities of southwest China's Chongqing Municipality to try their best to contain the COVID-19 outbreak and return people's life and work to normal as quickly as possible.

Sun made the remarks in an inspection to Chongqing. She arrived in the municipality to guide local COVID-19 prevention and control work on Monday.

Sun stressed more effective transfer of patients and on-site epidemiological investigation, more resources and manpower to regions that reported serious outbreaks, and stricter health monitoring on key localities, such as nursing homes, colleges and prisons, as well as risky groups such as people working at mail and logistics services.

Sun also urged efforts to ensure people's basic life and medical needs are met.

Global Times

<https://www.globaltimes.cn/page/202211/1280382.shtml>

China's capital city keeps markets running during fight against COVID-19 outbreak

By Global Times 2022-11-24 09:54 PM Updated: Nov 24, 2022 09:25 PM

China's capital city, which is going all out to fight the virus, will strengthen the operation of markets related to people's daily lives. The city's shopping malls and supermarkets have had to reopen after being closed for just one day, Beijing officials said at Thursday's press briefing.

The authorities said they have been making efforts to ensure the city's daily supply of meat, eggs, vegetables and other daily necessities.

Beijing is facing the most complicated and severe anti-epidemic situation since the outbreak of COVID-19, with more than 10,000 cases reported in the latest outbreak from November 1 to 24. More than 1,000 new infections have been reported in the city every day for three consecutive days since November 21.

On Wednesday alone, Beijing reported 509 new confirmed cases and 1,139 asymptomatic infections, 328 of whom were found through social screening, according to local health authorities.

Local officials said that the number of new infections in Beijing continues to rise and affect a wide area of the city, and epidemic control remains on high alert as the capital is at a critical stage in dealing with the situation.

"The number of cases detected among communities continues to increase, and the risk of hidden transmission among communities is high," said an official from Chaoyang district, the hardest-hit area.

Starting from Thursday, residents in Beijing must present a 48-hour negative nucleic acid test before entering enterprises, commercial buildings, shopping malls, hotels, restaurants, scenic spots and other public places, or when taking public transportation, according to the authorities.

At the same time, accelerating the detection and management of infections is considered a top priority to contain the rate of the spread and the rise of the epidemic in the city. Prioritizing regional nucleic acid testing and minimizing the time to report test results are considered important means to detect potential infection risks.

Other measures to rein in risks have also been strengthened, including restricting gatherings of people, conducting large-scale nucleic acid testing, implementing closed-loop management in key places such as nursing homes and enhancing disinfection in public venues.

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SAF **Dan Tsubouchi** @Energy_Tidbits · Nov 24 ...
No EU Russia oil price cap deal yet. Good @cyprusmail report notes disagreement is not just on how or low for the price cap \$/b, it is also big tanker shipping countries, Cyprus, Greece & Malta, want a higher price but also comp for loss of business or more time to adjust. #OOTT

Cyprus Mail @cyprusmail · Nov 24
Cyprus, Greece, Malta argue against EU's Russia oil cap, no deal yet | Cyprus Mail cyprus-mail.com/2022/11/24/cyp...



🗨️ 2 ❤️ 7 ↗️

SAF **Dan Tsubouchi** @Energy_Tidbits · Nov 24 ...
the sunset in #Calgary 15 minutes ago was even better than the sunrise. the geese are still floating on the Elbow River.



Dan Tsubouchi @Energy_Tidbits · Nov 24
 great sunrise in #Calgary reflecting onto the geese in the Elbow River

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SAF

Dan Tsubouchi @Energy_Tidbits · Nov 24

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Caged dog risk? 4 min mark @DanialRahmat12 "every province of Iran is now engaged in those protests & seemingly, Iranian establishment has somehow failed to control that", "very very high rates of inflation", prices +300% since oct/20 & JCPOA return unlikely. @sean_evers. #OOTT



Gulf Intelligence @gulf_intel · Nov 24

PODCAST: Daily Energy Markets - Nov. 24

bit.ly/3tXT1fk

#OPEC #energy #oilmarkets #analytic

@ADNOCGroup @FOIZ_UAE @CCED_Oman



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Dan Tsubouchi @Energy_Tidbits · Nov 24

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great sunrise in #Calgary reflecting onto the geese in the Elbow River



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Dan Tsubouchi @Energy_Tidbits · Nov 24

China key #Oil demand indicators reflecting new record China Covid. @BloombergNEF China Oil Markets Monthly - subway rides plunged, road congestion down, chinese airport flight department schedules almost down to April 2022 low when last peak Covid hit. Thx BNEF Sisi Tang. #OOTT



Dan Tsubouchi @Energy_Tidbits · Nov 23



Near term #Oil sentiment will continue to be weak with China hitting new daily record for #Covid and increased restrictions/lockdowns in multiple cities. See @markets Asia chart. #OOTT

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SAF

Dan Tsubouchi @Energy_Tidbits · Nov 24

Breaking: @mariatad just reported from #EU energy meet

#NatGas price cap "nothing is agreed until everything is agreed so they've decided to reconvene on Dec 13"

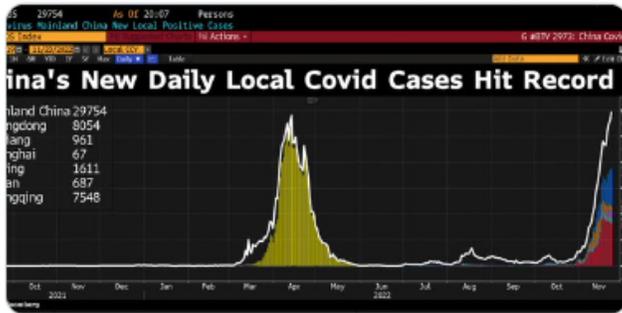
EU Price cap on RUS #Oil "we are being told that a deal is within reach & potentially coming today".

#OOTT

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Dan Tsubouchi Retweeted

SAF Dan Tsubouchi @Energy_Tidbits · Nov 23
 Near term #Oil sentiment will continue to be weak with China hitting new daily record for #Covid and increased restrictions/lockdowns in multiple cities. See @markets Asia chart. #OOTT



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SAF Dan Tsubouchi @Energy_Tidbits · Nov 23
 For those not near their laptop, @EIAgov just released #Oil #Gasoline #Distillates inventory as of Nov 4. Table below compares EIA data vs @business expectations posted as of 5am MT, and vs @APIenergy yesterday. Prior to release, WTI was \$77.50. #OOTT

[ir.eia.gov/wpsr/overview...](https://www.eia.gov/wpsr/overview...)

Oil Inventory Nov 18: EIA, Bloomberg Survey Expectations, API

Category (mmbbls)	EIA	Expectations
Crude Oil	-3.69	-2.61
Gasoline	3.06	1.15
Distillates	1.72	0.65
Total	1.09	-0.81

commercial so builds in impact of 1.6 mmb draw from SPR for Nov 18. As reported in the oil data, Cushing had a draw of 0.88 mmb for Nov 18. For more on this, Bloomberg
 by SAF Group <https://safgroup.ca/news-insights/>

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Dan Tsubouchi @Energy_Tidbits · Nov 23

See 📊 good with graphs why EU's proposed #NatGas price cap unlikely to kick in. Only triggered IF two conditions are met, and it will take very very big TTF #NatGas and #LNG prices to happen. Thx @vanessadezem @E_Krukowska @a_shiryaevskaya. #OOTT

The screenshot shows a tweet with two line graphs and several paragraphs of text. The top graph is titled 'EU Energy Price Cap' and shows a price cap line that is mostly flat at zero, with a small spike. The bottom graph is also titled 'EU Energy Price Cap' and shows a similar pattern. The text between the graphs explains that the price cap is only triggered if two conditions are met: a very high TTF price and a very high LNG price. The text also mentions that the price cap is unlikely to be used because of the high energy prices.

Vanessa Dezem @vanessadezem · Nov 23

The natural gas price cap proposed by the European Commission to alleviate the continent's energy crisis will probably never be used. #naturalgas #energy #gasmarkets #commodities With @E_Krukowska @a_shiryaevskaya bloomberg.com/graphics/europ...

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Dan Tsubouchi @Energy_Tidbits · Nov 22

China lockdowns to increase as @onlyyontv 📊 11/21 tweet warned.

11/23 local. @RishaadTV @YvonneMantTV graph Covid cases nearing record

11/23 local. National Health Commission "called for more resolute & decisive measures to bring the recent spread" under control ASAP.

#OOTT

The screenshot shows a tweet with a line graph on the left and a news article snippet on the right. The graph is titled 'Daily Local Covid Case' and shows a sharp peak in late April/early May 2022. The news article snippet is from 'PEOPLE'S DAILY ONLINE' and discusses China's COVID-19 response, mentioning that the National Health Commission has called for more resolute and decisive measures to bring the recent spread under control.

Dan Tsubouchi @Energy_Tidbits · Nov 21

great report just now by @onlyyontv doesn't feel covid policy has changed substantially, feels like it's getting tighter & more confusing, local govt wants to comply w/ new rules but is prioritizing zero covid, just leading to chaos. negative to #Oil. #OOTT

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Dan Tsubouchi @Energy_Tidbits · Nov 22

Sent congrats to @ericnuttall watching @StreetSignsCNBC. Didn't know 4 min mark "as the manager of the 3rd largest energy fund [active not passive] in the world". @MorningstarInc - BlackRock World Energy Fund \$4.7b, Fidelity Select Energy \$3.4b, Ninepoint Energy Fund \$2.0b. #OOTT

CNBC's Street Signs @StreetSignsCNBC · Nov 21

Official

Eric Nuttall @ericnuttall believes that the oil market is already undersupplied before potential Russian production cuts. Watch to find out where he sees \$WTI at, as he forecasts a bull market for #oil over the next 5-6 years #energy #opec @WillKoulouris @TanvirGill2



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Dan Tsubouchi @Energy_Tidbits · Nov 22

Iraq joins Kuwait, UAE, Saudi Arabia in saying OPEC+ has not discussed increasing #Oil production. Significant group that may be the only #OPEC+ countries that have any real near-term spare capacity. #OOTT



reuters.com

Iraq's SOMO says an OPEC+ oil output increase has not been discuss...
The head of Iraq's state oil marketer SOMO told Reuters on Tuesday there have been no discussions about OPEC+ deciding on a productio...



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Dan Tsubouchi @Energy_Tidbits · Nov 22

China slowdown. CN vice premier "urged immediate, resolute & decisive measures to cut off the transmission chain and contain the virus spread more quickly so as to shield economic & social development.." report communist party media. Fits what @onlyoontv said 📍 on Beijing. #OOTT



Chinese vice premier stresses immediate measures to contain COVID-19 outbreak

JIANGQING, Nov. 21 (Xinhua) -- Chinese Vice Premier Sun Chunlan has stressed the importance of taking immediate action to contain the current COVID-19 epidemic without delay. In made the remarks on Monday in an inspection of southwest China's Chongqing Municipality to guide local COVID-19 prevention and control work. "Speed in diagnosis, treatment and decisive measures to cut off the transmission chain and contain the virus spread more quickly as well as strengthen medical management and people's well-being during the pandemic is the greatest possible option." The COVID-19 situation in Chongqing remains complex and grave as infections are still on the rise. Sun ordered a science-based and precise COVID-19 response, which she said is key to better prevention and control work. She also stressed the need for precise measures in terms of on-site epidemiological investigation and risk-area categorization, and urged efforts to ensure people's basic life and medical needs are met, intensify health monitoring and the management of key locations, and guarantee smooth traffic and stable industrial and supply chains.

(Web editor: Cai Haimo, Liang Jun)

Dan Tsubouchi @Energy_Tidbits · Nov 21



great report just now by @onlyoontv doesn't feel covid policy has changed substantively, feels like it's getting tighter & more confusing, local govt wants to comply w/ new rules but is prioritizing zero covid, just leading to chaos. negative to #Oil. #OOTT

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Dan Tsubouchi @Energy_Tidbits · Nov 21

Continued pressure on Cdn #Oil differentials from longer shut-down of #BP 160,000 b/d Toledo refinery that runs Cdn crude. "may not be able to restore normal operations until late 1Q 2023 or even later people familiar with operations said" reports @barbarajpowell8. #OOTT

By Barbara Powell (Bloomberg) -- BP's shuttered fire-damaged BP-Husky Toledo refinery in Ohio may not be able to restore normal operations until late 1Q 2023 or even later, people familiar with operations said. * Workers are making mechanical repairs and a restart of several of the 150.8k b/d refinery's production units, including the smaller crude unit and a coker, may be attempted before year end * The Sept. 20 fire broke out near the largest crude unit, sparked by a release of a flammable gas from a large tank used to remove liquids from vapors, the US Chemical Safety and Hazard Investigation Board says, according to a report from Bloomberg Law ** Fire killed two BP employees who were brothers * Results from an investigation by the US Occupational Safety and Health Administration are due by mid-March ** Any startup, whether in full or partially, of the 103-year-old refinery would have to be approved by safety inspectors, and may be done in phases * BP didn't immediately respond to a request for comment on the refinery in Oregon, Ohio * BP is selling its 50% stake in the Ohio refinery to joint-venture partner Cenovus Energy ** Deal is expected to close by the end of 2022

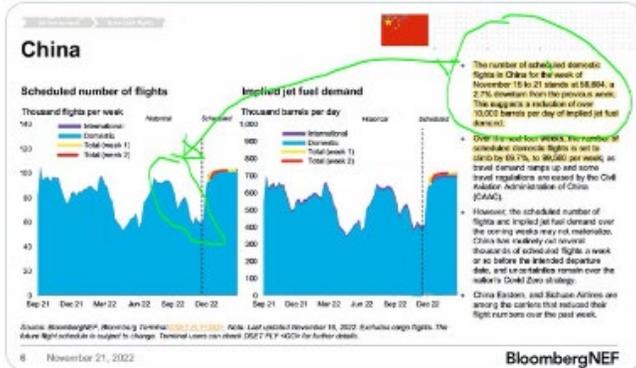
To contact the reporter on this story: Barbara Powell in Houston at bpowell4@bloomberg.net To contact the editors responsible for this story: Catherine Traywick at cstraywick@bloomberg.net

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SAF

Dan Tsubouchi @Energy_Tidbits · Nov 21

Another sign China is slowing and not reopening. 2nd consecutive week of declining China scheduled domestic air flights: -2.7% WoW to 58,684 flights for Nov 15-21, followed -5.3% WoW to 60,331 flights for Nov 8-14. Thx @BloombergNEF Claudio Lubis. #OOTT



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Dan Tsubouchi @Energy_Tidbits · Nov 21

great report just now by @onlyyoontv doesn't feel covid policy has changed substantively, feels like it's getting tighter & more confusing, local govt wants to comply w/ new rules but is prioritizing zero covid, just leading to chaos. negative to #Oil. #OOTT

COVID IN CHINA

REACTING TO NEW COVID DEATHS

- Beijing puts major district in shutdown
- Guangzhou imposes 5-day lockdown for most populous area
- Shijiazhuang orders mass testing

BEIJING IN EFFECTIVE SHUTDOWN AS CITY REPORTS COVID DEATHS

0:50 517 views

UnitedHealth (UNH) 520.47 +3.53 ITAU Uniba
Alphabet C

NASDAQ 11,035.23
CHANGE -110.78
% CHANGE -0.99%

DOW 33,647.28
-98.41
-0.29%

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Dan Tsubouchi @Energy_Tidbits · Nov 21

Longest #LNG supply deal in decades. @qatarenergy 27-yr deal for 0.53 bcf/d to China's Sinopec.

If Germany really wants to do a deal with Qatar, they will have to commit to long term ie. 15 yrs or so min?

#NatGas will be needed for decades.

#OOTT

QatarEnergy @qatarenergy · Nov 21

QatarEnergy and Sinopec sign a 27-year 4 million tons per annum LNG supply agreement to China

#QatarEnergy #YourEnergyTransitionPartner #Qatar

The infographic features the logos of Sinopec (中国石化) and QatarEnergy (قطر للطاقة) at the top. Below the logos are the national flags of China and Qatar. The central part of the infographic is divided into four columns, each with an icon and text: a large '27' with 'years' below it, a handshake icon with '1st long term agreement from North Field East', an LNG processing plant icon with '4 MTPA', and the year '2026' with 'Start of supply'. At the bottom, a bold statement reads: 'The longest LNG supply agreement in the history of the LNG industry'.



