

# Morocco considers onshore, offshore options for LNG import facility



RABAT, April 15 (Reuters) – Morocco is studying options at several ports to build a floating or land-based facility to import liquefied natural gas (LNG), Energy Minister Leila Benali said on Friday.

Morocco relied for much of its gas needs – about 1 billion cubic metres (bcm) annually – on a pipeline that used to channel Algerian gas to Spain, until it was halted last October by Algiers, against the backdrop of worsening relations between the Maghreb’s most populous countries.

Whether floating or onshore, studies are underway to choose the “most immediate solution”, Benali told reporters.

The country tendered in January for a study on the upgrade of Mohammedia port near Casablanca to host an LNG floating storage and regasification unit (FSRU).

Mohammedia and the Mediterranean port of Nador appear to be best equipped to host regasification terminals, she said.

“But we can prepare four ports at least,” she said, citing Kenitra and Jorf Lasfar ports.

“It is important for Morocco’s energy sovereignty to have regasification capacity on our territory and in our maritime space,” she said.

Morocco will enter the international LNG market “in the upcoming days,” making use of unused capacity at Spanish terminals, she said, without giving further details.

Though she said: “We are not importing Spanish or European LNG.”

“Transit issues have been settled,” she said.

In addition to Spain, Morocco discussed in November with Portugal and France about tapping into the under-used regasification capacity.

“They have regasification terminals that are under-used, and we have a pipeline that has to be used,” Benali said.

The pipeline is key to feeding two small power plants that supply Morocco’s northwest and northeast, which currently rely on the national grid.

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**Draghi is betting on Africa for Italy’s exit from Russian**

# gas



Italian Prime Minister Mario Draghi is chasing a raft of natural gas deals in Africa as he seeks to cut energy ties with Russia.

Draghi will travel to central and southern Africa this week in pursuit of further supplies after Italy struck agreements for Algerian and Egyptian gas.

His tour may ruffle some feathers as European partners vie to displace Russian energy following Moscow's invasion of Ukraine.

Potential deals in the Republic of Congo and Angola could bring Italy an additional 5bn cubic metres and 1.5bn cubic metres a year, respectively, people familiar with the matter said, asking not to be identified discussing private information.

Together with the extra volume it secured from Algeria, which would replace more than half the amount it gets from Russia as early as next year.

Talks are ongoing and details of any accords may change, the people said.

Italy currently gets about 40% of its gas from Russia, and

Draghi – together with local energy giant Eni SpA – has sought alternative sources since President Vladimir Putin launched an invasion of Ukraine in February.

With Eni already present in more than a dozen countries in Africa, the continent is an attractive option. Yet the former central banker's energy diplomacy is causing some anxiety among European Union allies.

The Algeria deal stoked concerns in Spain that its own access to the country's gas could be affected, prompting talks between Rome and Madrid.

It's also unclear how Italy's plans square with a push to centralize gas-purchase negotiations at the EU level.

"It's really important that the EU sticks together at the moment, that's essential," said Oliver Sartor, senior industry adviser at think tank Agora Energiewende. "There are some countries that are more exposed than others, so it's normal that they would look to protect themselves. But there's a higher priority here."

Draghi's discussions in Congo and Angola this week will focus – among other things – on boosting deliveries of liquefied natural gas, the people said.

That trip could be followed by travel to Mozambique, though plans haven't yet been confirmed, they said.

Gas discoveries off Mozambique have attracted international operators, including Eni, to its waters.

While work in the country is risky – with attacks by an insurgency group threatening onshore developments – Eni's Coral Sul offshore LNG plant is expected to start production in the second half of 2022.

The company's deal with Algeria's Sonatrach Group, signed during Draghi's first official visit to Algiers, sees Italy buying an extra 9bn cubic metres of gas annually by 2023-2024.

On Wednesday, the firm struck an agreement with Egypt to increase flows of LNG to Italy. It has also said it's ready to invest billions of euros across the Mediterranean Sea in Libya, where it has been present for decades.

Draghi isn't the only EU leader to court gas-rich countries in

a bid to ease dependence on Moscow.

Germany, which relies on Russia for 40% of its gas imports, is creating its own LNG infrastructure.

Others from France to Croatia plan to build or expand import terminals, while the US has also agreed to boost shipments to the bloc.

“Everyone is moving very fast,” said Simone Tagliapietra, a senior fellow at the Bruegel think tank in Brussels. “It makes sense for Draghi to act now, and he is doing it very well.”

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## **Iraq may make decision on Halliburton gas deal in May**



(Bloomberg) – Iraq’s cabinet may reactivate a deal with Halliburton Co. to drill wells in a western gas field in Akkas next month, Oil Minister Ihsan Abdul Jabbar told local media.

An agreement with Halliburton would enable the oil ministry to get clear data on the production capacity of the Akkas field

and it may reach a decision after the Islamic holy month of Ramadan, which ends in early May, the minister said.

If the government decides to develop the field, which has been idle since Baghdad retook it from Islamic State militants in late 2017, it would have to pick a production company for the project.

Officials have been in talks with Chevron Corp. and Saudi Aramco about investment in the region. That “will depend on the data we get from the exploration and well-drilling operations,” Abdul Jabbar said in an interview on Al-Forat channel.

### **Kurdistan Talks**

Abdul Jabbar said 80% of the contracts that the Kurdistan Regional Government signed with oil companies are correct and the rest need to be reviewed. The KRG has no problem with half the solutions the federal government offered to resolve the oil issues in Kurdistan.

The Kurdish region exports 430,000 barrels of oil per day, Abdul Jabbar said.

Baghdad has long sought to bring Kurdish production under its control in exchange for funds from the national budget. A February ruling in Iraq’s top court asserted the central government’s right to the semi-autonomous region’s hydrocarbons. The KRG has said its rights to control the region’s oil and gas are enshrined in the Iraqi constitution.

### **High Oil Prices**

Iraq will probably sell its oil for an average of \$106-\$107 a barrel this month if prices remain at current levels, the minister added.

The oil ministry is providing 30 million liters of gasoline a day for local consumption, which Abdul Jabbar called a “big”

number. Work on a new refinery in Karbala has been delayed by Covid-19 but the facility is expected to enter service in the first quarter of 2023, he added. The country will continue to import gasoline until 2024.

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## **Qatar, Iran and Saudi Arabia 'bright spots' for Middle Eastern gas output until 2050: GECF**



# GECF

Pratap John

Qatar, Iran and Saudi Arabia are the “bright spots” for Middle Eastern gas output over the next three decades, the Gas Exporting Countries Forum (GECF) has said in a report.

In its Global Gas Outlook 2050, GECF said between 2020 and 2050, the natural gas supply is set to climb by an annual average growth rate of 2.4% in Iran, 2.2% in Qatar and 1.2% in

Saudi Arabia.

It said Qatar aims to maintain its status as the top LNG producer and exporter in the world. The planned expansion of production from the North Field and other fields will increase Qatar's total gas production by an overall of 91%, from about 175 bcm last year to 330 bcm in 2050.

National oil companies in the Middle East are focusing on developing their gas fields. As most of the countries in the Middle East are also crude oil producers, the majority of natural gas production in the region is associated gas.

With almost 17% of global gas production, the Middle East is the third-largest gas-producing region worldwide after North America and Eurasia. The region is a net exporter of gas, and supply has been growing rapidly by an annual average growth rate of 6.3%, from about 190 bcm in 2000 to around 650 bcm in 2020.

According to GECF, associated-dissolved natural gas (gas obtained from crude oil reservoirs) has always been accounted for as a share of total gas production. This gas can be found as free gas (associated) or in solution with crude oil, referred to as dissolved gas.

Like the impact that Covid-19 had on non-associated gas production, the demand for oil also declined in 2020, resulting in a lower level of associated gas production in that year.

According to the EIA, associated gas production in the US fell in 2020 by 1.5% reaching a level of around 140 bcm, following three years of growth. For the first time since 2016, the share of associated gas production in the US was reduced to almost 37.7%.

The GECF report forecasts that the demand for oil will stabilise through to 2050 and the level of global oil production will peak at slightly more than 100 mboe/d in around 2035 and will steady at around 90 mboe/d by 2050.

This lower level of crude oil production will consequently affect the level of associated gas production. Furthermore, the need for EOR measures by the injection of associated gas



into oil wells will be magnified by the ageing oil reservoirs. "So a lower level of associated gas will reach the market, and the total volume of production from this category in the future is forecast to be lower than current levels," GECF said.

Currently, it is estimated that slightly less than 500 bcm of marketed natural gas is sourced from oil wells, and this level excludes the volume of the gas obtained from unconventional crude oil production.

The total level of associated gas production is even higher than this, as injection and recirculation do not count in marketed production, GECF noted.

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## **Sanctioning a nuclear foe is a studied endeavour**



By Ana Palacio/ Madrid

**Western governments must be clear about what sanctions can and**

## **cannot achieve – and how much sacrifice is acceptable**

The grim scenes left behind after Russia's withdrawal from Bucha, where Ukraine accuses Russian troops of torturing and slaughtering civilians, have intensified pressure on the West to provide more offensive weapons to Ukraine and for Europe to ban Russian energy imports. But beyond the legitimate question of Europe's willingness to pay such a high price on Ukraine's behalf lies the stark reality that sanctions are hardly a silver bullet.

Calls for sanctions began well before the invasion. When Russia was massing troops near Ukraine's border, the Ukrainian government – and some American lawmakers – urged the United States and Europe to impose preemptive sanctions and offer Ukraine stronger security guarantees. But Western leaders demurred, arguing that sanctions would impede their ability to reach a diplomatic solution.

Of course, in geopolitics, as in life, hindsight is 20/20: we now know that those diplomatic efforts were in vain. What we do not know is whether preemptive sanctions would have motivated Russian President Vladimir Putin to rethink his plans, especially given that preemptive sanctions most likely would not have been as severe as the package of measures imposed after the Kremlin launched the invasion.

That package, after all, is the most comprehensive and co-ordinated punitive action taken against a major power since World War II. Overcoming initial reservations, the European Union joined the US in cutting off Russian banks from the arteries of global finance in a matter of days. The West also froze much of the Russian central bank's foreign-exchange reserves – an unprecedented step that surely triggered a red alert in China, with its \$3.25tn in official reserves.

At first, the sanctions seemed to be having the intended effect. Within a week, the rouble had fallen by a third against the US dollar. Tumbling share prices forced the authorities to suspend trading on the Moscow stock exchange for nearly a month. Russia's GDP is expected to contract by

10-15% this year.

But, even as the sanctions vise continues to tighten, Russian markets appear to be stabilising. Thanks to robust intervention by the authorities, the rouble is now trading close to its pre-war levels, and the stock market has recovered some losses. With the violence showing no sign of abating, Western governments must be clear about what sanctions can and cannot achieve – and how much sacrifice is acceptable.

Sanctions, first used in the Peloponnesian wars, have been an instrument of foreign policy for some 2,500 years. While their sophistication and complexity have increased over time, the basic mechanism has remained the same: inflict enough economic pain to force the target to change its behaviour.

But the most comprehensive analysis of sanctions use, conducted by researchers at Drexel University, found that the goals of sanctions were completely met in only 35% of cases. Where sanctions have had an impact, such as in South Africa during apartheid, they have been combined with other measures to advance a specific foreign-policy objective.

Moreover, even well-targeted sanctions and asset freezes have limited efficacy against autocracies. From North Korea to Iran, regimes shield themselves from economic pain through convoluted schemes to evade sanctions. Putin's regime – including his cronies – has proved adept at ensuring that sanctions do not affect them.

Instead, it is ordinary Russians who will pay the price for today's sanctions. And, contrary to the hopes of some in the West, this is unlikely to lead to Putin's fall from power. Dictators are not particularly vulnerable to shifts in public opinion. And a revolution does not seem forthcoming, not least because of the work of the Kremlin's increasing repression and powerful propaganda machine.

By "cancelling" Russian culture and mounting "unprovoked" attacks on the country's economy, the Kremlin narrative goes, the West is trying to destroy Russia – just as Putin had long warned. Anyone in Russia who opposes the "special military

operation" in Ukraine is a "traitor" or a "gnat," ready to "sell their souls."

With no independent media left to refute these narratives, Russians seem to be largely convinced. A recent poll by the Levada Center indicates that 83% of Russians approve of Putin's actions in Ukraine, compared to 69% in January – a relevant statistic, notwithstanding the complex realities in Russia.

While Putin's regime insulated itself from the pain of sanctions, Europe is facing high costs of its own. In today's economically interdependent world, sanctions often imply hefty costs for both sides. Though Western economies are not particularly dependent on Russia overall, Europe relies on it for a large share of its energy. So, while the US Congress votes to ban all Russian energy imports, EU leaders have targeted only Russian coal, not oil or gas.

A comprehensive ban on Russian energy imports to Europe would undoubtedly increase the pressure on the Kremlin. But such a decision must be approached with care. As German Chancellor Olaf Scholz recently warned, the economic and social costs of a sudden embargo would be massive. It will take time to wean Europe off Russian natural gas while also maintaining European social and economic stability.

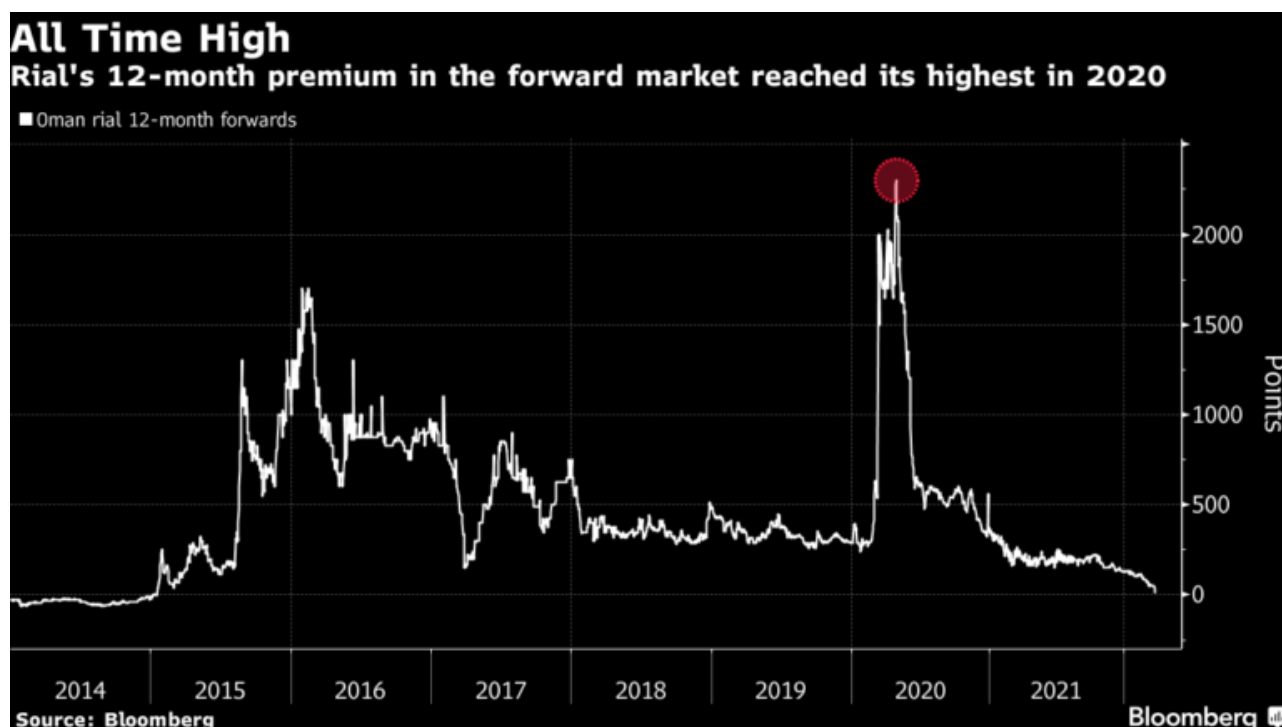
Equally important, sanctions are an integral part of a broader negotiating strategy. Once the West has launched all its biggest economic weapons, it will have no remaining leverage. There must be room to escalate in response to Putin's actions, particularly the deployment of chemical or tactical nuclear weapons.

The West's arsenal in Ukraine is clearly limited. Sanctions are an important and powerful weapon, and they are putting some pressure on the Kremlin. But given their limitations – and the costs that must be borne by both the West and ordinary Russians – they must be used judiciously. Otherwise, Putin, who appears to believe his paranoid propaganda and oversees the world's largest nuclear arsenal, may conclude that he has nothing to lose. – Project Syndicate

• Ana Palacio, a former foreign minister of Spain and former senior vice president and general counsel of the World Bank Group, is a visiting lecturer at Georgetown University.

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## Why Gulf Dollar Pegs Survive Through Wars, Oil Shocks



Gulf Arab nations have pegged their currencies to the dollar for decades. There's a reason for that: they reduce foreign-exchange risk for states in the region because so much of their revenue comes from oil, which is priced internationally in the U.S. currency. Periodically the mechanisms are tested, as they were in 2020 when a price war sent crude plummeting below \$20 a barrel. With oil back around \$100 in 2022, they appear to be in good shape, despite questions about the dollar's role in the global economy.

1. Who has currency pegs and why?

The six members of the Gulf Cooperation Council – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates – have been running currency pegs or managed foreign-exchange regimes since the 1970s and 1980s. Kuwait's dinar tracks the value of a basket of currencies believed to be dominated by the dollar, while others are linked solely to the greenback. The pegs have helped to shield the region's economies from the volatility of energy markets and allowed central banks to accumulate reserves in the good times. Those reserves, along with foreign assets held by the region's sovereign wealth funds, are used in turn to defend the pegs.

## 2. What could put the pegs under stress?

Fixed exchange-rate regimes in Asia were swept away during the currency crisis of the late 1990s, when speculators forced the likes of Thailand and South Korea to abandon their links with the dollar. They're now largely confined to the major oil producers in the Middle East along with Hong Kong, whose dollar has been pegged to the U.S. currency since 1983. The Gulf pegs mean local central banks often take a cue on monetary policy from the U.S. Federal Reserve, which creates the risk of policy misalignment when business cycles are out of step. Today, the Gulf region is grappling with heightened inflation and the prospect of global interest-rate increases led by the Fed. There is disquiet about global dollar dominance, and the U.S.'s willingness to use the dollar as a weapon in sanctions to punish Russia for its invasion of Ukraine.

## 3. What might the Gulf states do next?

None of the region's governments have suggested they might abandon the pegs and let markets decide the value of their currencies. However, Saudi Arabia, the biggest economy in the region, is said to be considering accepting yuan payments for its oil exports to China. If the kingdom does take that step, the petrodollar system would be tested, especially if

neighbors follow suit, with China accounting for over 20% of the bloc's total oil shipments. Currency strategists said Saudi Arabia appeared to be sending a political message to the U.S. with the yuan reports, amid strained relations with Washington, and played down the likelihood of any immediate action.

4. What stresses have there been in the past?

The system has survived stern tests, including successive years of low oil prices in the 1990s, a period of dollar weakness before the financial crisis in 2008 and an oil-price crash in 2014. Speculators jumped in at that point in a failed effort to challenge the Saudi peg, boosting the price of 12-month forward contracts used by investors to bet on the peg breaking or to hedge in case it does.

5. How did Saudi Arabia react?

Instead of choosing to devalue the riyal, the kingdom cut spending and subsidies and turned to debt markets to fund its budget deficit. Its neighbors have adopted similar strategies. The Saudi forward contract jumped again in 2020 amid the double-hit of weaker crude prices and the pandemic. Oman's rial forwards reached a record high that year, before edging lower.

6. What happens to Gulf economies if the U.S. hikes rates?

The risk is that, to maintain their pegs, the region's governments are forced to follow the Fed with a succession of interest rate rises that end up hammering their own economies. If they do, there's still a way for them to avoid recessions: Oil prices are riding high, leaving them with plenty of ready cash to boost state spending and support growth.

7. Which pegs appear most vulnerable to speculators?

The weakest economies in the region have for long been Oman

and Bahrain, with the latter being the only nation in the region needing oil above \$100 a barrel to balance its budget, according to the International Monetary Fund. The two countries have fared better recently, with S&P Global Ratings raising Oman's credit ratings in April. The oil rally has eased concerns about the sultanate's ability to keep the rial pegged, prompting traders to slash bets on a devaluation. Saudi Arabia, the UAE, Kuwait and Qatar have for the most part always had firepower in the form of sizable currency reserves to defend their pegs.

#### 8. What if dollar pegs were abandoned?

While the pegs give the region's governments less freedom to pursue policy goals like reviving growth or creating jobs, they provide more predictability for investors and foreign residents. The dollar's status as a global reserve currency would be undermined if GCC countries dismantled the pegs. Middle East countries account for between 10% and 15% of global foreign exchange reserves outside of China, according to Goldman Sachs. Saudi Arabia alone makes up around 5%. If Saudi Arabia accepted yuan for oil, it would accumulate big yuan reserves that it would then need to allocate, Goldman pointed out in a research note in March. This could pose challenges of its own, given the size of China's bond market.

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# Germany faces \$240bn hit if



# Russian energy cut off

Bloomberg / Berlin

Germany was warned it could face a €220bn (\$240bn) hit to output over the next two years in the event of an immediate interruption in Russian energy supplies over the war in Ukraine.

Economic institutes advising the government in Berlin said on Wednesday in a joint forecast that a full halt in Russian natural gas imports would result in a “sharp recession.”

“The decision to become independent from Russian supplies of raw materials is likely to remain valid even when the military and political situation calms down again,” the report said. “That means part of the energy supply and energy-intensive industry must realign itself.”

While the €220bn estimate is the equivalent of 6.5% of annual output, it’s nowhere near the almost €890bn in borrowing Germany carried out in 2020 and 2021 to shield the economy from the fallout of the pandemic.

Amid mounting casualties and reports of brutal atrocities, Germany has been under increasing pressure to justify its resistance to an embargo on Russian gas – widely seen as the ultimate leverage against President Vladimir Putin.

Ukraine snubbed a request by Frank-Walter Steinmeier, Germany’s president, to visit Kyiv this week following criticism for his past support for the Nord Stream 2 gas pipeline from Russia to Germany and for his role when foreign minister in encouraging reconciliation and dialogue with the Kremlin.

Finance Minister Christian Lindner highlighted the huge challenges facing Germany as it tries to wean itself off Russian energy as quickly as possible while also pursuing a goal of climate neutrality by 2045.

“Our world will not be the same again as it once was,” Lindner, who’s chairman of the pro-business Free Democrats,

wrote in a guest article for the Handelsblatt newspaper published on Wednesday.

“We need new business models, new ideas, new supply chains and new trade relationships,” he said. “We have to reduce one-sided dependencies, be it when it comes to importing energy from Russia or exporting to China.”

Berlin-based DIW, one of the institutes involved in the estimate, said on Friday that Germany could be in position to survive without Russian gas, which currently accounts for two-fifths of its gas deliveries. The group said a combination of high storage, bolstering other energy supplies and implementing programmes to lower demand could offset Russia as soon as this winter.

That’s not a view that’s generally shared by the business community, with industry leaders including Deutsche Bank AG Chief Executive Officer Christian Sewing warning of dire economic consequences if Russian supplies are severed.

Even absent a cutoff, Wednesday’s report pared the outlook for Germany’s economy, predicting growth this year of 2.7% and 3.1% in 2023. Those numbers compare with previous projections for expansion of 4.8% and 1.9%. Inflation will average 6.1% in 2022 – the most in 40 years.

“The shock waves from the war in Ukraine are weighing on economic activity on both the supply side and the demand side,” said Stefan Kooths, vice president of the Kiel Institute for the World Economy. “Increasing prices of critical energy commodities following the Russian invasion further fuel the upward pressure on prices.”

Germany’s industry-heavy economy faces considerable hurdles after the war sent energy prices higher while disrupting supply chains that had already been suffering from pandemic-related snarls. Inflation reached 7.6% in the first full month of the war – the highest level since records began after reunification in the early 1990s.

Companies are seen as particularly vulnerable because of Germany’s reliance on Russian gas. The ruling coalition last week agreed on an aid package for suffering businesses that

includes loans, loan guarantees and capital injections, and is meant to help energy firms in particular.

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## **IEA cuts oil demand forecast as China reimposes lockdowns**



Bloomberg / London

The International Energy Agency cut its forecast for global oil demand this year after China reimposed lockdowns to contain the spread of a resurgent coronavirus.

With the weaker demand outlook and the massive release of emergency oil reserves by IEA members, the agency now sees global markets in balance for much of the year. Crude prices have already lost most of their gains since Russia's attack on Ukraine, to trade near \$100 a barrel in New York on Wednesday.

"We're seeing now that economic forecasters are continuing to downgrade their outlook for the world economy, and obviously this will have an impact on oil demand," Toril Bosoni, head of

the IEA's markets and industry division, said in a Bloomberg Television interview. "The market does look more balanced."

The Paris-based agency, which advises most major economies, lowered projections for world fuel consumption this year by 260,000 barrels a day, with a particularly steep reduction of 925,000 a day for China in April. Still, global demand remains on track to increase this year.

The IEA also dialled back estimates for the loss of Russian supplies from an international boycott over its military aggression. Production in April may be 1.5mn barrels a day lower than the prior month – roughly half the drop that was previously expected. Those losses may still double in May, the IEA said.

Oil surged well above \$100 a barrel following Russia's attack on its neighbour. While prices have eased, they are still high enough to stoke inflationary pressures and exacerbate a cost-of-living crisis for millions of consumers. To counter this, IEA members announced last week that they will deploy 240mn barrels from emergency reserves, the biggest stockpile release in the agency's history.

"Prices are now back to near pre-invasion levels, but remain troublingly high and are a serious threat for the global economic outlook," the IEA said.

World oil consumption will expand by 1.9mn barrels a day to average 99.4mn a day this year, according to the IEA.

"Oil demand is still recovering from Covid," said Bosoni. "The aviation sector is recovering, there's pent-up demand, so we are expecting growth. But obviously downside risk if the economic outlook deteriorates."

China's fierce zero-Covid policy has diminished demand growth, as millions are locked down in their homes, imports drop and business activity slows in the world's second-biggest economy. The IEA noted that Saudi Arabia and other members of the Organization of Petroleum Exporting Countries have refused to open the taps faster, partly from a belief that markets didn't face a genuine shortage, and partly to preserve the Opec+ coalition they lead with Russia.

Opec+ members managed to provide just 10% of the supply increase scheduled for March, according to the IEA. The 19 coalition members, which have been engaged in a pact to stabilise markets since the start of the pandemic, added a mere 40,000 barrels a day as diminished investment erodes production capacity across the group.

The clash over policy between Opec+ and the IEA – which has openly expressed disappointment with the group's inaction – came to a head last month with Opec abandoning the agency as one of its data sources.

## Russia's invasion supercharges the push to make a new green fuel



Europe's push to ditch Russian natural gas is generating

billions of dollars in new commitments to build a low-carbon hydrogen market.

A nearly 450% rise in gasoline prices in Europe last year made the green fuel of the future cost-competitive about a decade ahead of schedule, according to BloombergNEF. Now investment funds are joining governments and utilities in ambitious plans to make hydrogen a viable substitute for fossil fuels in manufacturing, transportation and heating.

“It’s kind of a tipping point,” said Phil Caldwell, chief executive of Ceres Power Holdings PLC, a UK-based hydrogen technology company. “You’re going to see that capital coming in on a massive scale now. There is no going back.”

Russia is ostracized on the world stage for invading Ukraine, but some of its harshest critics still need its oil and gas to keep their economies running. Europe is accelerating efforts to break that addiction, with Fortescue Metals Group Ltd. planning a \$50 billion hydrogen supply chain project with German energy giant E.ON SE; Norway’s Scatec ASA building a \$5 billion production facility; and the investment fund Hy24 that allocates \$1,600 million for infrastructure.

The case for hydrogen was already growing, mainly because of its climate benefits, but the war broadened investor interest by highlighting the need for energy security, Fortescue billionaire founder Andrew Forrest said in an interview.

“It has accelerated money flows,” Forrest said in London. “After the tanks crossed the border, there is none of that awareness in people’s minds. It is a physical, fiscal necessity.”

Some 93% of hydrogen producers, users and investors who attended a BNEF roundtable last month said they hoped the war would boost the development of the green hydrogen industry. Support for domestic production and imports from reliable sources will be key, participants said.

Green hydrogen has long been more expensive to produce than the traditional kind, which is made from natural gas in a process that releases carbon dioxide into the atmosphere.

That is starting to change. BNEF analysts found that green hydrogen, made by machines called electrolyzers powered by the wind and sun, would be cost-competitive today with the fossil-fuel-based product.

A liquefied natural gas (LNG) facility in Porto Venere, Italy, February. The countries of the European Union have agreed to jointly buy and store gas, hydrogen and liquefied natural gas to meet the challenge of reducing energy dependence on Russia and protecting Europeans from spiraling energy costs. | CLARA VANUCCI / NEW YORK TIME

“Without a doubt, the case for renewable hydrogen has improved significantly,” said Martin Neubert, chief commercial officer at Orsted A/S, which plans to produce green hydrogen for shipping giant AP Moller-Maersk A/S. Orsted is the largest developer of offshore wind farms.

Previously, that cost parity wasn’t expected until around 2030 through a combination of cheaper electrolyzers and massive growth in turbine and solar panel deployment, making production cheaper.

But rising gasoline prices changed the calculus, meaning green hydrogen costs don’t need to fall that much to be competitive. Simply replacing current demand for hydrogen with the green kind in industries such as oil refining and fertilizer production could reduce the European Union’s demand for gas by 12%, according to BNEF.

At the same time, the bloc’s carbon price has nearly doubled in the last year, making emission-free gas more attractive.

“The economy is moving in favor of green hydrogen,” said Ivan Pavlovic, chief executive of French bank Natixis CIB, which is working on financing the fuel’s production. “The projects

we're looking at now seem more bankable from a financial perspective."

However, the costs only cover part of the way. Gasoline prices could drop, returning the economy to where it was before. However, the war bolstered the political support essential to expanding the industry.

The European Union doubled its green hydrogen capacity target to 80 gigawatts by 2030, compared with less than 1 gigawatt today. The UK has just set a target of producing at least 5 gigawatts of hydrogen from electrolysers by 2030, the first time it has been so specific.

In the US, US President Joe Biden's administration has said the infrastructure needed to increase natural gas shipments to Europe will be ready for conversion to handle hydrogen.

These projects will take years to materialize and will require a huge increase in renewable sources, but government support still gives private money the confidence to move. Under management, and FiveT Hydrogen, the world's first investor to focus exclusively on clean hydrogen.

"It's a growth issue, it's an ESG issue and it's renewables at scale in countries that need it," said Hy24 CEO Pierre-Etienne Franc. "Because of that, and because of greater certainty about the future, people are happy to make compromises."

Danish fund manager Copenhagen Infrastructure Partners K/S initially raised €800 million (\$880 million) for its first Energy Transition Fund, with plans to increase it to €2.3 billion. It recently acquired a stake in German electrolyser maker Sunfire GmbH and has agreed to buy 640 megawatts of the company's machines for its own green hydrogen projects.

The London-listed L&G Hydrogen Economy UCITS ETF has exposure to companies with a minimum market capitalization of \$200 million, including electrolyser manufacturers and hydrogen



producers.

HH2E is seeking €2.7 billion to build 4 gigawatts of green hydrogen and green heat production capacity by 2030. Co-founder Andreas Schierenbeck, a former chief executive of German utility Uniper, said he is in talks with three financial investors to fundraising.

“There is a lot of money in the market,” Schierenbeck said. “Private equity firms want to invest now with early start-ups.”

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## **Rising food costs push Arab world's vulnerable to breaking point**



Seated around the dining table, the family of four stares blankly at pictures of food sketched on the tablecloth.

“Tonight,” the father says, “we’re coloring for dinner.”

The scene in a cartoon in a Moroccan newspaper speaks to the predicament facing the kingdom’s 37 million people and their peers across North Africa as the Muslim world marks Ramadan. Normally characterized by abstention broken by plentiful sunset feasts, the holy month for many this year is a confrontation with painful economic reality.

Global food costs are up more than 50% from mid-2020 and households worldwide are trying to cope with the strains on their budgets. In North Africa, the challenge is more acute because of a legacy of economic mismanagement, drought and social unrest that’s forcing governments to walk a political tightrope at a precarious time.

The Middle East and North Africa region’s net food and energy importers are especially vulnerable to shocks to commodity markets and supply chains resulting from Russia’s war on Ukraine, according to the International Monetary Fund. That’s in countries where the rising cost of living helped trigger the Arab Spring uprisings a little over a decade ago.

“Just how much more do we have to take?” asked Ahmed Moustafa, a 35-year-old driver and father of three in Cairo. He already had to sell some appliances to keep food on the table and cover other expenses, he said. “We keep being asked to cut and cut and cut, but there’s not much left to cut from.”

Home to large, mainly urban populations and lacking oil wealth, governments in Egypt, Morocco and Tunisia are struggling to maintain subsidies for food and fuel that have helped keep a lid on discontent.

The World Food Programme has warned that people’s resilience is at “breaking point,” while the United Arab Emirates moved to help ally Egypt, the world’s largest buyer of wheat, to shore up its food security and ward off potential instability. Egypt is also seeking IMF help.

Egyptian President Abdel-Fattah El-Sisi has tried to push ahead with reforms to revive the economy since coming to power in 2014 without fueling popular frustration. He sought last month to unite the nation behind inevitable sacrifices.

That includes shunning old habits of over-consuming – especially during Ramadan, which started on April 2. “People think that my dining table looks different,” El-Sisi said at March 23 event, urging the country of over 100 million to scale back during the Iftar meal that breaks the day-long Ramadan fast. But, “I am responsible before God,” he said.

Just weeks ago, Egyptian officials were quick to take pride in the fact that the economy of the Arab world’s most populous nation had weathered the pandemic and posted solid growth. Inflation, too, was under control.

That changed after Russia’s invasion of Ukraine on Feb. 24. Investors pulled billions of dollars from the country’s debt market and the currency sank 15%. Egypt banned exports of key foodstuffs including flour, lentils and wheat.

By early March, the war had pushed up wheat-flour prices by 19% and vegetable oils by 10%, the government said. That’s in a country where the average family income is about 5,000 pounds (\$272) a month – roughly 31% of which is spent on sustenance, according to the state-run statistics agency.

Hilal El-Dandarawy, a retired state employee in the southern city of Aswan, said he’s now bracing for a surge in fuel prices and a tsunami of other increases. “We are living in a price crisis in goods and services, electricity, water and gas,” he said.

A worse situation is playing out in Tunisia, the nation that gave birth to the Arab Spring revolts and which has been mired in political turmoil ever since. The pounding the economy took as a result of that infighting among officials is now amplified thanks to COVID-19 and Russia’s war on Ukraine.

The central bank has warned that strong measures must be taken to reform the economy, but such efforts have been repeatedly blocked by the powerful UGTT labor union. Tunisia, too, is turning to the IMF amid warnings about the risk of default on its debt.

The dilemma for Ahmed Masoud, a 40-year-old merchant in the old city in the capital Tunis, brings those broader issues into sharper focus. He complained that the dearth of tourists, which had begun due to the pandemic, is now exacerbated by the Ukraine conflict.

Government assistance to offset the drop in business has barely made a dent and he can barely cover utility bills. "I think I'll close my shop and look for another job," Masoud said, with a resigned shrug.

Back in neighboring Morocco, things aren't any better. While it managed to avoid the political upheavals of the Arab Spring in 2011, it hasn't been spared on the economic front. Growth is expected to grind down to 0.7% this year, around a tenth its level in 2021. The central bank predicts inflation, meanwhile, will hit 4.7%, relatively modest compared with even parts of Europe, though still the highest since the 2008 financial crisis.

Managing the "exogenous shock" of the war may force Morocco to seek a precautionary liquidity line from the IMF, Governor Abdellatif Jouahri said. Morocco is facing "an unprecedented situation," he added. The war in Ukraine is threatening to stoke public anger over prices and send the state's financing needs to historic highs.

Grains merchant Mohamed Bellamine, whose shop in Rabat's Rahba market would normally be heaving with shoppers in the days before Ramadan, sees the impact clearly. He gestures to the empty street with a sigh: "Usually you wouldn't even be able to find a place to park."