Multi-billion dollar North Field development enters key phase



Pratap JohnThe multi-billion dollar North Field development, the largest ever LNG project in the world, has reached a crucial phase with QatarEnergy beginning to announce partners for NFS project that will further increase Qatar's liquefied natural gas production capacity from 110mn tonnes per year to 126 mtpy by 2026 or 2027.

The North Field South (NFS) has many unique features, the foremost of which is its advanced environmental characteristics. This includes significant carbon capture and sequestration technologies and capacity.

NFS comprises two mega LNG trains with a combined capacity of 16mn tonnes per year.

QatarEnergy's first partner in the NFS project is TotalEnergies, which will have an effective net participating interest of 9.375% out of a total 25% interest available for international partners.

QatarEnergy will hold a 75% stake in the NFS project, HE the

Minister of State for Energy Affairs Saad bin Sherida al-Kaabi said at a media event in Doha recently.

"The other partners in this project will be announced in due course," HE al-Kaabi said.

The minister noted: "We are committing big investments to lower the carbon intensity of our energy products, which constitute a key pillar of QatarEnergy's sustainability and energy transition strategy."

QatarEnergy targets more than 11 mtpy of carbon capture and storage (CCS) and the production of 5GW of solar power by 2035, HE al-Kaabi said, highlighting Qatar's commitment to CCS and renewable energy production.

"QatarEnergy is moving forward to help meet the growing global demand for cleaner energy, of which LNG is the backbone for a serious and realistic energy transition," he said.

Recently, QatarEnergy announced the Ammonia-7 Project, the industry's first world-scale and largest blue ammonia project with a capacity of 1.2 mtpy."

Blue ammonia is produced when the carbon dioxide generated during conventional ammonia production is captured and stored. It can be transported using conventional ships and then be used in power stations to produce low-carbon electricity.

The new plant, which is estimated to cost \$1.156bn, will be located in the Mesaieed Industrial City (MIC) and will be operated by Qafco as part of its integrated facilities.

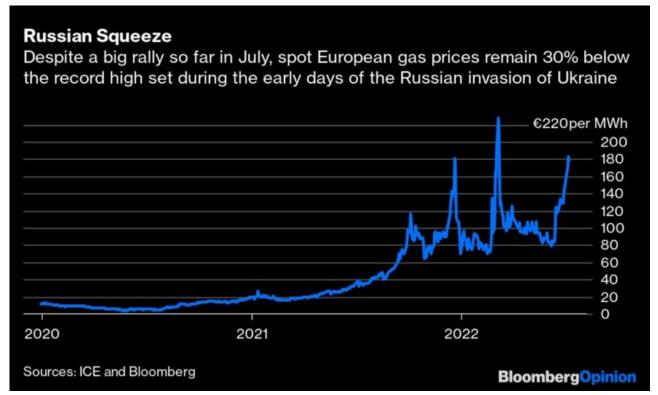
In August, QatarEnergy's affiliates, QatarEnergy Renewable Solutions (QRS) and Qatar Fertiliser Company (Qafco) signed the agreements for the construction of the Ammonia-7 project, the industry's first world-scale as well as the largest blue ammonia train, which is expected to come into operation by the first quarter of 2026.

The North Field Expansion Project, comprising NFS and the North Field East (NFE) expansion projects, is the industry's largest ever LNG project.

It will start production in 2026 and will add more than 48 mtpy to the world's LNG supplies. Five partnership agreements have been signed in June and July this year covering the NFE project, which comprises four mega LNG trains with a combined capacity of 32 mtpy.

"Most project contracts have been awarded, while the onshore EPC contract is expected to be awarded in early 2023," HE al-

Europe gas crisis is bigger than its mega rescue plan



Craig Stirling and Elena Mazneva

(Bloomberg) — The economic damage from the shutdown of Russian gas flows is piling up fast in Europe and risks eventually eclipsing the impact of the global financial crisis.

With a continent-wide recession now seemingly inevitable, a harsh winter is coming for chemical producers, steel plants and car manufacturers starved of essential raw materials who've joined households in sounding the alarm over rocketing energy bills. The suspected sabotage of Germany's main pipeline for gas from Russia underlined that Europe will have to survive without any significant Russian flows.

Building on a model of the European energy market and economy,

the Bloomberg Economics base case is now a 1% drop in gross domestic product, with the downturn starting in the fourth quarter. If the coming months turn especially icy and the 27 members of the European Union fail to efficiently share scarce fuel supplies, the contraction could be as much as 5%.

That's about as deep as the recession of 2009. And even if that fate is avoided, the euro-area economy is still on track to spend 2023 suffering its third biggest contraction since World War II — with Germany among those suffering the most.

"Europe is very clearly heading into what could be a fairly deep recession," said Maurice Obstfeld, a former chief economist at the IMF who's now a senior fellow at the Peterson Institute for International Economics in Washington.

The bleak outlook already means that, seven months on from the outbreak of war in Ukraine, governments are shoveling hundreds of billions of euros to families at the same time as they bail out companies and talk of curbs on energy-usage. And those rescue efforts may still fall short.

Adding to the pressure on companies and consumers, the European Central Bank is also squeezing the economy as its new laser-like focus on surging inflation drives the fastest hiking of interest rates in its history. ECB President Christine Lagarde said Monday that she expects policy makers to lift borrowing costs at the next several meetings. Traders are already pricing in a jumbo 75 basis-point hike at the next monetary policy meeting on Oct. 27.

"The outlook is darkening," Lagarde told EU lawmakers in Brussels. "We expect activity to slow substantially in the coming quarters."

Some energy-industry watchers warn of a lasting crisis that potentially proves bigger than the oil-supply crunches of the 1970s. Indeed, the final impact of the shortages could be even worse than economic models can capture, Jamie Rush, Bloomberg's chief European economist, said.

In an energy crunch, the industrial supply chain can break down in dramatic and unpredictable ways. Individual businesses have a breaking point above which high energy costs simply mean they stop operating. Whole sectors can face shortages of energy-intensive inputs such as fertilizer or steel. In the power system, once a blackout starts, it can quickly get out of control, cascading across the grid.

"Our analysis is a sensible starting point for thinking about the channels through which the European energy markets affects the economy," Rush said. "But it cannot tell us the impact of system failures."

As a witness to the pain, consider the experience of Evonik Industries AG, one of the world's largest specialty chemical manufacturers, based in western Germany's industrial Ruhr valley. In a statement to Bloomberg, the company warned of the potential long-term harm from persistently high costs.

"The basic condition for the prosperity of the German economy, and in particular of the industry, is the permanent availability of energy, also from fossil sources, at reasonable prices," the company said.

It's not alone. Volkswagen AG, Europe's biggest carmaker, is exploring ways to help its broad supplier network in Europe counter a shortage in natural gas, including making more parts locally and shifting manufacturing capacity. Domo Chemicals Holding NV, which jointly operates Germany's second-biggest chemical plant, is cutting production in Europe, while Italian truckmaker Iveco Group NV has said it's holding talks with suppliers about their struggles with energy prices.

Data released just last week showed private-sector activity in the euro zone contracted for a third month in September, with an index of purchasing managers compiled by S&P Global slumping to its lowest level since 2013. Meanwhile the crisis has also driven consumer confidence to a record low.

The problem began to take root last year when energy prices started to soar as demand recovered from the Covid-19 pandemic, and Russian President Vladimir Putin began to quietly restrict gas supplies to Europe.

His invasion of Ukraine in February plunged the economy into further chaos amid ballooning inflation, a deepening cost-of-living crisis, and cuts to industrial production. By early September, the limited gas that had still been running through the Nord Stream 1 pipeline from Russia to western Europe had stopped indefinitely.

The pipeline suffered a sharp drop in pressure this week and a German security official said the evidence points to deliberate sabotage rather than a technical issue. Gas leaks from three pipelines appeared almost simultaneously in the Baltic Sea, prompting Denmark to say it was stepping up security around its own energy assets.

To put that in context, a year earlier such gas supplies, including LNG, covered around 40% of Europe's total demand. So while gas and power prices have slipped from August records, they are still more than six times higher than normal in some areas. At that price, thousands of companies simply aren't viable in the long term without government support.

For Bloomberg Economics, the baseline scenario — estimated using a suite of models that combine energy supply, prices, and growth — is now one where Russian flows hold at around 10% of those seen in 2021. That's already pretty dire, according to economists Maeva Cousin and Rush.

"Even after government support, the real income squeeze is big enough to trigger a recession," they said.

Their "bad luck" scenario features even less gas, a winter as cold as 2010, and low production from renewable energy.

"If consumer behavior proves sticky and unity between EU

countries begins to break down, gas prices could spike above 400 euros, inflation could approach 8% next year and the economy might contract by almost 5% this winter," they said.

Politicians already opened the fiscal floodgates to avert an economic catastrophe during the pandemic and kept up support as the energy crisis took hold. Now they have to choose whether to further strain public finances with more aid or answer to voters for allowing the crisis to spiral out of control.

"Governments are under enormous pressure to intervene," said Dario Perkins, an economist at TS Lombard in London. "Price caps, liquidity support and big fiscal transfers seem inevitable. The authorities must support households and businesses or suffer a recession similar to the one they dodged during the pandemic."

- The European Commission proposed measures to help reduce the impact on consumers, including raising 140 billion euros from energy companies' earnings, mandatory curbs on peak power demand, and boosting energy-sector liquidity
- Germany injected 8 billion euros into utility Uniper SE in a government rescue whose cost will likely run into the tens of billions of euros
- France will budget 16 billion euros to limit power and gas price increases to 15% for households and small companies next year
- Italy's cabinet approved a 14 billion-euro aid plan to help companies squeezed by rising costs in Mario Draghi's final act before the Sept. 25 election
- The Netherlands unveiled a 17.2 billion-euro support package for households, including a hike in the minimum wage and higher taxes on corporate profits

Totting up all the red ink, the Bruegel think-tank estimates that as of the middle of September, EU governments had

earmarked 314 billion euros to cushion the crunch's impact on consumers and businesses.

That will take its toll on the region's public finances, and Simone Tagliapietra, a researcher at Bruegel, described the bill as "clearly not sustainable from a fiscal perspective."

The lingering fear of the energy industry is that the pain of coming months may only be the start. Christyan Malek, JPMorgan Chase & Co's global head of energy strategy, told Bloomberg TV this month that once Beijing eases Covid restrictions Chinese demand for LNG will increase, leading to more competition and more price pressures for Europe.

"This is not just a three-month problem," said Anouk Honore, senior research fellow at Oxford Institute for Energy Studies. "This is potentially a two-year problem."

(Updates with details of Nord Stream incident in second and 17th paragraphs. An earlier version of this story corrected a reference to Volkswagen disruption.)

Qatari Minister: No 'Quick Fix' to EU Gas Crisis



There is not much Qatar can do to alleviate Europe's gas crisis in the short term due to contractual commitments, Qatari Energy Minister Saad al-Kaabi tells Energy Intelligence but further out, in five to seven years, new Qatari LNG exports to Europe should be significant. In an exclusive interview, al-Kaabi said production from the Golden Pass LNG project in the US, where QatarEnergy partners with Exxon Mobil, is due on stream in 2024 and is "already earmarked for Europe." Up to half of new output from Qatar's 48 million ton per year North Field mega-expansion could also go West of Suez when it starts up from 2026. Al-Kaabi also serves as head of state-owned QatarEnergy, which is in active discussions with customers for the new supplies. Significantly, targeted contract durations are shorter than the 20-year deals seen in Qatar's original LNG expansion, reflecting European reluctance to lock into gas supplies long-term. "I think 10-15-year deals are probably what are most acceptable to both sides. But for us, the long-term deal, it's not just about duration, it's about price," he said. Even with such supplies, al-Kaabi expressed skepticism about Europe's ability to completely wean itself off Russian gas. Europe will find it "very difficult"

to completely forgo Russian pipeline gas for more than two winters. Despite storage, fuel switching and active efforts to expand LNG imports, "a quick fix" to the EU's dependency on Russian gas does not exist.

Qatar's North Field expansion is attracting enormous interest from foreign investors, with TotalEnergies tipped to become the first of the Phase-2 partners to be selected later this month. But investors in existing Qatari projects face a rocky ride when contracts on current joint ventures expire, as Exxon and Total discovered when their prized Qatargas-1 contract was not renewed last year. Al-Kaabi revealed that QatarEnergy came close to going it alone on the North Field expansion, too. Qatar, which is generating around 1 million barrels of oil equivalent per day of net output for Exxon, Total and Shell alone, is critical for the majors. However, "if there is no value, there is no partnership, very plain and simple," al-Kaabi said. Even if joint ventures are maintained after expiry, terms will be tougher. For Exxon, which has stakes in nine of Qatar's 14 trains, these contract renewals are especially strategic. Qatar knows the value of its LNG will likely drive a hard bargain. "An investment in Qatar is really an important downside-risk revenue maker" for partners, al-Kaabi said.

LNG is only part of a multifront, international investment drive now under way at QatarEnergy. Downstream, petrochemicals is a priority, with al-Kaabi touting QatarEnergy's planned US project with Chevron Phillips Chemical as "the largest polyethylene plant." It recently awarded construction contracts for a 1.2 million ton/yr blue ammonia project, also tipped to be the biggest of its kind. But its global upstream drive is most significant. There were doubters when the strategy launched, but QatarEnergy has been vindicated over the past year by major exploration success in Namibia. QatarEnergy, by virtue of sizable stakes in both Total and Shell discoveries, is poised to be the largest reserves holder

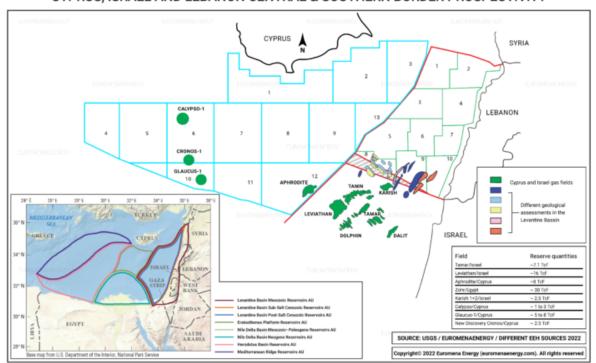
in a significant new oil province — Total's Venus discovery is described as the largest deepwater find ever. There have also been offshore gas discoveries in Cyprus and South Africa. And in Brazil, output at QatarEnergy's offshore Sepia field is set to more than double to 400,000 barrels per day in the next couple of years.

Despite confidence in long-term gas demand, QatarEnergy is taking steps to ensure its place in the energy transition. It is investing heavily in greenhouse gas emission mitigation technology at projects. Over \$250 million is being spent on such measures at the LNG expansion alone — principally carbon capture and storage (CCS) and solar power. Some 11 million tons/yr of CCS is planned by 2035. "From an overall value chain, Qatari LNG will be the least carbon footprint LNG you can get," al-Kaabi said. "We think that our buyers, and our investors that have joined us in [North Field East expansion], see this as the Rolls-Royce of projects." Transition pressures are feeding into the urgency for developing projects. "I am a believer that you need to monetize what you can because the market conditions change, and there is a competitive advantage to go ahead of others," al-Kaabi stated.

خرائط تؤكد توفُّر الغاز في مياه لبنان الإقليمية

LEVANTINE BASIN

CYPRUS, ISRAEL AND LEBANON CENTRAL & SOUTHERN BORDER PROSPECTIVITY





مع وصول مفاوضات ترسيم الحدود البحرية إلى خواتيمها على الرغم من ضبابية الجواب الإسرائيلي الذي سيحمله آموس هوكشتاين إلى الدولة اللبنانية، يؤكد الخبير الدولي في شؤون الطاقة رودي بارودي لموقع "القوات اللبنانية" الإلكتروني، أن "منطقة حوض شرقي المتوسط التي هي بقعة مثيرة ومعقدة للغاية لأسباب جيو _ "Levantine basin" سياسية، تحتوي على آفاق إمكانية وجود كميات كبيرة من البترول والغاز لم يتم اكتشافها واستغلالها بعد، خصوصا أن المنطقة تحتوي . "على الكثير من الاحتياطي النفطي الممكن الاستفادة منه منه المحتوي على الكثير من الاحتياطي النفطي الممكن الاستفادة منه المحتوي على الكثير من الاحتياطي النفطي الممكن الاستفادة منه

ويُضيف أن ما يؤكد هذا الأمر، هو نتائج مسح أكثر من 60 ألف كم من الخطوط الزلزالية الثنائية والثلاثية الأبعاد في منطقة حوض شرقي وتحديدا ً في لبنان، قبرص، إسرائيل "Levantine basin" المتوسط فقط حتى حدود مصر البحرية، وهي البلدان الموجودة حولٍ حوض بلاد الشام، 2016 (More than) ،وذلك بين الأعوام 2002/2008 وأيضاً في العام 2016 approximately 60,000km of 2D and 3D seismic lines)، والتبيي ، 150 احتمالاً لوجود مكامن بترولية داخل أظهرت أن هناك أكثر من 150 احتمالاً لوجود مكامن بترولية داخل.

PGS وفي هذا الاطار، أثبتت الدراسات التي أجرتها شركات TGS وNEOS ولا يزال يتعيّن إثباتها في NEOS وTGS انجاحها في مناطق معيّنة ولا يزال يتعيّن إثباتها في NEOS أحواض أخرى. ففي العامين 2008/2009، تم اكتشاف كميات من الغاز في المياه الإسرائيلية في حقلي تمار وليفياثان وأيضا في حقل أفروديت القبرصي كما في حقل زهر في مصر العام 2015؛ علما أن دراسات مركز المسح الجيولوجي الأميركي والتي أجريت في العام 2016 & 2010 خلصت إلى أن الإمكانات غير المكتشفة تبلغ ضعف إجمالي ما تم (USGS)

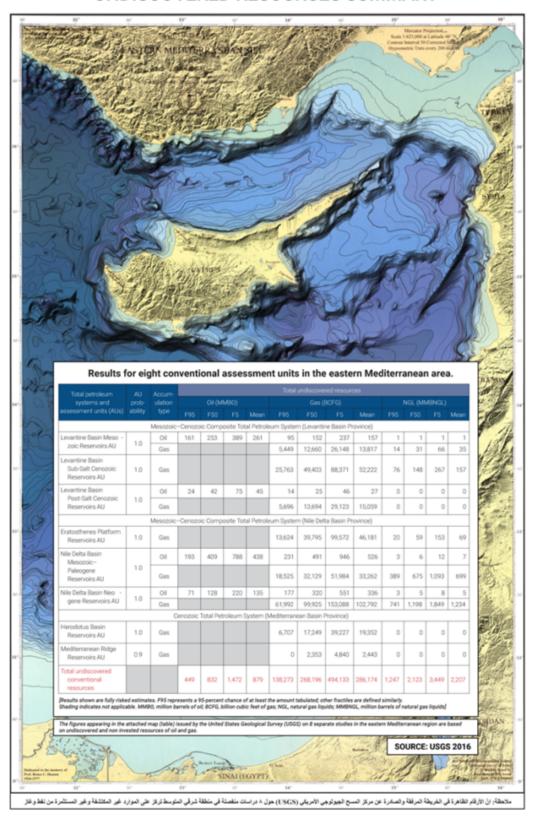
ويتابع، مع كل الاكتشافات الحديثة بما في ذلك الاكتشاف الذي أعلن عنه في حقل "كرونوس" في قبرص الأسبوع الماضي، يمكن ان نتحدث عن تقدير للكميات بأكثر من 52 تريليون قدم مكعب. كل هذه الاكتشافات التي تحيط بلبنان تؤكد أن هناك احتمالية عالية لاستخراج كميات تجارية من الغاز، وهذا ما تشير إليه وبشكل واضح العديد من التيولوجية التي أجرتها أهم الشركات العالمية في هذه الصناعة

ويؤكد بارودي أنه "بناءً على العديد من النماذج المستقاة من الدراسات الجيولوجية الهيدروكربونية، كما على تحليل طبيعة باطن الأرض الصخرية، يمكن الجزم أنه يوجد ما يكفي من الموارد الطبيعية وبكميات كبيرة في شرقي المتوسط لا تزال غير مكتشفة وغير مستثمرة، لا سيما في المياه اللبنانية

ويعتبر أن "الأهم في الموضوع أنه بعد 20 عاماً تقريباً توحدّت القيادة اللبنانية حول كيفية التعامل مع ملف يمكنه إنقاذ لبنان من المعاناة الاقتصادية والمالية التي يمر "بها وأعني بذلك موقفهم الموحد حول ترسيم الحدود البحرية مع إسرائيل". ويشدد في السياق، على أن "لبنان يحتاج في أسرع وقت ممكن إلى إجراء العديد من الإصلاحات المطلوبة لإعادة إنتاج نظامه المالي والقضائي والاقتصادي، وفي حال ترافق الإصلاحات مع إبعاد ملف النفط عن المناكفات السياسية، سيعرف لبنان نهضة اقتصادية ومالية أكيدة ما يساعد على تطوير البنى التحتية التي هو في أمس "الحاجة إليها ويرُعيد الأمل

إلى الشعب اللبناني وتزدهر قطاعات عدة ومنها القطاع المصرفي والتعليمي والاستشفائي."والتعليمي والاستشفائي

LEVANTINE BASIN UNDISCOVERED RESOURCES SUMMARY



ويضيف، إذ إن كل هذه التطورات، ولا سيما التوصل مع إسرائيل إلى ترسيم واضح للحدود البحرية يحافظ على المصالح اللبنانية، يمكنه أن يساهم في معاودة شركات النفط التنقيب في البحر اللبناني، كما يساعد على تشجيع الشركات العالمية على التقدم إلى عمليات الاستكشاف النفطي سواء في البحر أو البر"، ما يساعد في خلق جو" البنان مريح يحتاجه لبنان

ويقول في هذا الإطار، لا بد من شكر الجهود الحثيثة التي تقوم بها الإدارة الأميركية من أجل إيجاد حل عادل للنزاع الحدودي البحري مع اسرائيل.

ويتابع بارودي، على لبنان وفور الانتهاء من المفاوضات غير المباشرة مع إسرائيل، أن يعد لل إحداثيات المرسوم 6433 ويودعها كي ،DOALOS لدى الأمم المتحدة ـ قسم شؤون المحيطات وقانون البحار . يحافظ على حقوقه المكتسبة كما على إسرائيل أن تفغل الشيء نفسه

أما بخصوص انسحاب الشركة الروسية "نوفاتيك" من تحالف شركات "إيني" و"توتال"، فيؤكد أنه "أمر طبيعي مع وجود العقوبات الأميركية على الشركة الروسية، إذ لا تستطيع الأخيرة أن تستقبل أو ."أن تحو "ل أموالا ً طالما أن نظام العقوبات يطاولها

How Europe Became So Dependent on Putin for Its Gas

Russian gas is attractive to Europe because it's usually cheap, easy to transport and almost always available. Some European Union countries depend on it because they are shutting coal plants, and Germany is even planning for the end

of nuclear power. Russia's dominance has been enhanced by the depletion of North Sea fields controlled by the U.K. and the Netherlands. Gazprom PJSC supplies about a third of all gas consumed in Europe and, before the Russian invasion of Ukraine, was on track to become even more important as the continent shrinks its own production. In March, however, Russia threatened to cut supplies, and the European Union began mapping out a path to reduce its dependence.

1. How did Russia become so significant?

With its vast Siberian fields, Russia has the world's largest reserves of natural gas. It began exporting to Poland in the 1940s and laid pipelines in the 1960s to deliver fuel to and through satellite states of what was then the Soviet Union. Even at the height of the Cold War, deliveries were steady. But since the Soviet Union broke up, Russia and Ukraine have quarreled over pipelines through Ukrainian territory, prompting Russian authorities to find other routes.

2. How vulnerable is Europe?

A supply crunch in late 2021 provided a vivid insight into Europe's reliance on gas flows from Russia. Storage tanks in the EU fell to their lowest seasonal level in more than a decade after longer-than-usual maintenance at Norwegian fields and Russia rebuilding its own inventories. Benchmark gas prices more than tripled. The EU vowed a decade ago to reduce its dependence on Russian energy, and continuing purchases by member nations have been a contentious issue within the economic bloc and caused rifts with the U.S.

3. What role does Ukraine play?

About a third of Russian gas flowing to Europe passes through Ukraine. Even as the crisis in the region escalated into war, analysts said Russia, with a history of supply disruptions over price disputes, probably would strive to be seen as a reliable supplier. Gazprom's shipments to Europe and Turkey

were about 177 billion cubic meters in 2021, according to calculations by Bloomberg News and BCS Global Markets based on the company's data. When Ukraine and Russia reached a fiveyear gas transit deal in December 2019, assuring supplies until 2024, Ukrainian President Volodymyr Zelenskiy said the nation would earn at least \$7 billion from transit fees.

4. How has Russia disrupted the market before?

In 2006 and 2009, disputes with Ukraine over pricing and siphoning of gas led to cutoffs of Russian supplies transiting through the country. The second shutdown lasted almost two weeks in the dead of winter. Slovakia and some Balkan countries had to ration gas, shut factories and cut power supplies. Since then, the most vulnerable countries have raced to lay pipelines, connect grids and build terminals to import liquefied natural gas, a supercooled form of the fuel that can be shipped from as far as Qatar and the U.S.

5. What supply networks are there?

Outside supplies, mostly from Russia, Norway and Algeria, account for about 80% of the gas the EU consumes. Some of the biggest economies are among the most exposed, with Germany importing 90% of its needs — much of it via a pipeline under the Baltic Sea called Nord Stream, which has been fully operational since 2012. (This was the supply line Russia on March 7 suggested could be cut as part of its response to sanctions imposed over the invasion of Ukraine.) Belgium, Spain and Portugal face the problem of low storage capacity, as does the U.K., which no longer is part of the bloc and closed its only big gas storage site. The continent has a mass of pipelines, including Yamal-Europe, which runs from Russia through Belarus and Poland before reaching Germany, and TAG, which takes Russian gas to Austria and Italy. Many cross several borders, creating plenty of possible choke points.

6. What about the Nord Stream 2 pipeline?

It was against this background that Nord Stream 2, a new Russian pipeline alongside the first, was completed in late 2021. But it has become entangled in politics and a lengthy regulatory process. There was strong opposition from the U.S., which imposed sanctions that delayed construction. Following the eruption of the war in Ukraine, Germany suspended its certification process for Nord Stream 2, and the EU's executive arm readied a revised energy strategy for the bloc to "substantially reduce our dependency on Russian gas this year."

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Russia cuts gas flows further as Europe makes savings plea



Reuters/Berlin/Frankfurt

Russia delivered less gas to Europe yesterday in a further escalation of an energy stand-off between Moscow and the European Union that will make it harder, and costlier, for the bloc to fill up storage ahead of the winter heating season.

The cut in supplies, flagged by Gazprom earlier this week, has reduced the capacity of Nord Stream 1 pipeline — the major delivery route to Europe for Russian gas — to a mere fifth of its total capacity.

Nord Stream 1 accounts for around a third of all Russian gas exports to Europe.

On Tuesday, EU countries approved a weakened emergency plan to curb gas demand after striking compromise deals to limit cuts for some countries, hoping lower consumption will ease the impact in case Moscow stops supplies altogether.

The plan highlights fears that countries will be unable to meet goals to refill storage and keep their citizens warm during the winter months and that Europe's fragile economic growth may take another hit if gas will have to be rationed.

Royal Bank of Canada analysts said the plan could help Europe get through the winter provided gas flows from Russia are at 20-50% capacity, but warned against "complacency in the market European politicians have now solved the issue of Russian gas dependence."

While Moscow has blamed various technical problems for the supply cuts, Brussels has accused Russia of using energy as a weapon to blackmail the bloc and retaliate for Western sanctions over its invasion of Ukraine.

Kremlin spokesman Dmitry Peskov said Gazprom was supplying as much gas to Europe as possible, adding that sanctions-driven technical issues with equipment were preventing it from exporting more.

Yesterday, physical flows via Nord Stream 1 tumbled to 14.4mn kilowatt hours per hour (kWh/h) between 1000-1100 GMT from around 28mn kWh/h a day earlier, already just 40% of normal capacity.

The drop comes less than a week after the pipeline restarted following a scheduled 10-day maintenance period.

European politicians have repeatedly warned Russia could stop gas flows completely this winter, which would thrust Germany into recession and send prices for consumers and industry soaring even further.

The Dutch wholesale gas price for August, the European benchmark, jumped 9% to 205 euros per megawatt hour yesterday, up around 412% from a year ago.

German finance minister Christian Lindner said he was open to the use of nuclear power to avoid an electricity shortage.

Germany has said it could extend the life of its three remaining nuclear power plants, accounting for 6% of the country's overall power mix, in the face of a possible cut-off of Russian gas.

Klaus Mueller, head of Germany's network regulator, said the country could still avoid a gas shortage that would prompt its rationing. Germany, Europe's top economy and its largest importer of Russian gas, has been particularly hit by supply cuts since mid-June, with its gas importer Uniper requiring a 15bn euro (\$15.21bn) state bailout as a result. Uniper and Italy's Eni both said they received less gas from Gazprom than in recent days.

Mueller issued another plea to households and industry to save gas and avoid rationing.

"The crucial thing is to save gas," Mueller said. "I would like to hear less complaints but reports (from industries saying) we as a sector are contributing to this," he told broadcaster Deutschlandfunk.

German industry groups, however, warned companies may have no choice but cut production to achieve bigger savings, pointing to slow approval for replacing natural gas with other, more polluting fuels.

Mercedes-Benz chief executive Ola Kaellenius said a mixture of efficiency measures, increased electricity consumption, lowering temperatures in production facilities and switching to oil could lower gas use by up to 50% within the year, if necessary.

Germany is currently at Phase 2 of a three-stage emergency gas

plan, with the final phase to kick in once rationing can no longer be avoided.

Natural gas soars in Europe, becoming driving force in the new cold war



One morning in early June, a fire broke out at an obscure facility in Texas that takes natural gas from US shale basins, chills it into a liquid and ships it overseas. It was extinguished in 40 minutes or so. No one was injured.

It sounds like a story for the local press, at most — except

that more than three weeks later, financial and political shockwaves are still reverberating across Europe, Asia and beyond.

That's because natural gas is the hottest commodity in the world right now. It's a key driver of global inflation, posting price jumps that are extreme even by the standards of today's turbulent markets — some 700% in Europe since the start of last year, pushing the continent to the brink of recession. It's at the heart of a dawning era of confrontation between the great powers, one so intense that in capitals across the West, plans to fight climate change are getting relegated to the back-burner.

In short, natural gas now rivals oil as the fuel that shapes geopolitics. And there isn't enough of it to go around.

It's the war in Ukraine that catalyzed the gas crisis to a new level, by taking out a crucial chunk of supply. Russia is cutting back on pipeline deliveries to Europe — which says it wants to stop buying from Moscow anyway, if not quite yet. The scramble to fill that gap is turning into a worldwide stampede, as countries race to secure scarce cargoes of liquefied natural gas ahead of the northern-hemisphere winter.

The New Oil?

Germany says gas shortfalls could trigger a Lehman Brothers-like collapse, as Europe's economic powerhouse faces the unprecedented prospect of businesses and consumers running out of power. The main Nord Stream pipeline that carries Russian gas to Germany is due to shut down on July 11 for ten days of maintenance, and there's growing fear that Moscow may not reopen it. Group of Seven leaders are seeking ways to curb Russia's gas earnings, which help finance the invasion of Ukraine — and backing new LNG investments. And poorer countries that built energy systems around cheap gas are now struggling to afford it.

"This is the 1970s for natural gas," says Kevin Book, managing director at ClearView Energy Partners LLC, a Washington-based research firm. "The world is now thinking about gas as it once thought about oil, and the essential role that gas plays in modern economies and the need for secure and diverse supply have become very visible."

Natural gas used to be a sleepy commodity that changed hands in fragmented regional markets. Now, even though globalization appears to be in retreat across much of the world economy, the gas trade is headed in the opposite direction. It's globalizing fast — but maybe not fast enough.

Many countries have turned to natural gas as part of a transition to cleaner energy, as they seek to phase out use of dirtier fossil fuels like coal and in some cases nuclear power too. Major producers — like the US, which has quickly risen up the ranks of LNG exporters to rival Qatar as the world's biggest — are seeing surging demand for their output. Fortyfour countries imported LNG last year, almost twice as many as a decade ago. But the fuel is much harder to shift around the planet than oil, because it has to be liquefied at places like the Freeport plant in Texas.

And that's why a minor explosion at a facility seen as nothing special by industry insiders — it's not the biggest or most sophisticated of the seven terminals that send LNG from American shores — had such an outsized impact.

'The Current Crisis'

Gas prices in Europe and Asia surged more than 60% in the weeks since Freeport was forced to temporarily shut down, a period that's also seen further supply cuts by Russia. In the US, by contrast, prices for the fuel plunged almost 40% — because the outage means more of the gas will remain available for domestic use.

There were already plenty of signs of extreme tightness in the

market. War and Covid may be roiling every commodity from wheat to aluminum and zinc, but little compares to the stomach-churning volatility of global gas prices. In Asia, the fuel is now about three times as expensive as a year ago. In Europe, it's one of the main reasons why inflation just hit a fresh record.

Natural gas remains cheaper in the US — but even there, futures had more than doubled this year before the Freeport shutdown. With key political allies from Germany to Ukraine desperate to buy American gas, US manufacturers warn that more sales abroad will mean higher costs at home. The market reaction to the Freeport fire illustrates a "clear connection between LNG exports and the inflationary impacts to domestic prices for natural gas and electricity," says Paul Cicio, president of the Industrial Energy Consumers of America.

To meet all the new demand will require a massive wave of investment in supply. That's already under way, and it got a boost at last week's meeting of the Western world's biggest economies, where G-7 leaders vowed to back public investments in gas projects — saying they're "necessary in response to the current crisis."

Among the urgent infrastructure needs:

Export facilities: The rush for LNG is accelerating projects in North America and beyond. Last month, Cheniere Energy Inc. greenlighted a terminal expansion in Texas. In April, a Canadian LNG project backed by Indonesian tycoon Sukanto Tanoto got the go-ahead to begin construction. In Qatar, Exxon Mobil Corp. and Shell Plc are among energy giants with stakes in a \$29 billion project to boost LNG exports.

"You have global gas prices so high that they incentivize the signing of new long-term contracts," says Samantha Dart, head of natural gas research at Goldman Sachs. "We are seeing those

announcements coming left and right, with a lot of US proposed liquefaction facilities."

Import terminals: In Europe, plans for about 20 terminals have been announced or sped up since the Ukraine war began. Germany, which has no LNG terminals, has allocated about \$3 billion to charter four floating ones and connect them to the country's network. The first one is supposed to go online around the end of this year. Emphasizing the need for speed, Vice-Chancellor Robert Habeck pointed out that Tesla Inc. managed to build a factory near Berlin in just two years, and said it's time to cut through German red tape. "First, dig the trench where the pipe is to go in," he said. "Then, the permit comes."

China, the world's top LNG buyer last year, is in the midst of one of the largest buildouts the industry has ever witnessed. Ten new import terminals are slated to come online in 2023 alone, and capacity will roughly double in the five years through 2025, according to BloombergNEF.

Pipelines: Even with more capacity to receive shipments of LNG and turn it back into gas form — a process known as regasification — Europe lacks infrastructure to move it where it might be needed. Spain, for example, has Europe's biggest regasification facilities — but it only has two pipeline connections to France via the Pyrenees, capable of carrying little more than one-tenth of those volumes, according to Bloomberg Intelligence.

Tankers: Shipyards in South Korea, where most of the world's LNG tankers are built, are seeing a surge in orders that's leaving them short of skilled labor. They've been forced to look outside the country to places like Thailand for welders, electricians and painters, raising their quotas for migrant workers.

In some cases all of this means a U-turn away from policies

aimed at combating climate change -- especially in Europe. Government-backed lenders like the European Investment Bank and the European Bank for Reconstruction and Development, which had been focused on financing renewable energy, have signaled a shift and said they're now more willing to back gas projects.

But Europe's breakneck efforts won't be enough, according to Bloomberg Intelligence, which calculates that LNG imports could meet 40% of the region's gas needs by 2026 — double last year's figure, but still far short of the volumes that Russia has been supplying.

'Never More Evident'

That's why warnings of a gas-driven slump in Europe's economies are escalating.

Last week, Germany's government said it's in talks to bail out utility Uniper SE, which is losing some 30 million euros (\$31 million) a day because it has to cover the missing Russian gas at soaring spot-market prices. Companies like chemicals giant BASF SE say they may have to cut output. Deutsche Bank cited growing risks of an "imminent German recession on the back of energy rationing," and pointed to soaring power prices in Italy and France too. Morgan Stanley predicted the whole euro area will be in a downturn by year-end.

For some emerging economies — which increasingly have to compete with rich countries like Germany in bidding for LNG cargoes, as gas goes global — the consequences have already been disastrous.

In Pakistan, which built its energy system on cheap LNG, planned blackouts are plunging regions into darkness during the sweltering summer months. Shopping malls and factories in major cities have been ordered to shut early, and government officials are working shorter hours.

Thailand is curbing LNG imports due to surging prices, potentially putting the country at risk of fuel shortages. Myanmar, which is grappling with political instability, stopped all LNG purchases late last year when prices started to rally. India and China have also cut back imports.

"Where once natural gas markets were largely regionally siloed, we now have a globalized spot market that has connected the world's exposure to the fuel that has become critical to many economies," said James Whistler, Singapore-based managing director at Vanir Global Markets, an energy and environmental brokerage. "This has never been more evident than in the past few months."

Absorbing energy transition shock



The challenge for politicians is to devise fair policies that protect people from the inevitable shocks

Russia's war on Ukraine has sent shockwaves around the world. Oil prices have skyrocketed and food prices have soared, causing political instability. The last time food prices were this volatile, riots erupted across the Arab world and from Burkina Faso to Bangladesh. This time, the energy and food shock is happening against the backdrop of the Covid-19 pandemic. When will the shocks end?

They won't. So, we can choose either resignation and despair, or a policy agenda to build social and political resilience against future shocks. Those are our options, and we had better start taking them seriously, because the shocks are likely to get worse. On top of geopolitical crises, the climate emergency will bring even greater disruptions, including ferocious floods, mega-droughts, and possibly even a simultaneous crop failure in key grain-producing regions worldwide. It is worth noting that India, the world's second-largest wheat producer, recently banned exports as part of its response to a devastating heatwave this spring.

But here's the thing: reducing vulnerability to shocks, for example, by embarking on energy and food revolutions, will also be disruptive. The energy system is the foundation of industrialised economies, and it needs to be overhauled to phase out fossil fuels within a few decades. Huge industries like coal and oil will have to contract, and then disappear. And agriculture, transportation, and other sectors will need to change radically to become more sustainable and resilient. The challenge for politicians, then, is clear: to devise fair policies that protect people from the inevitable shocks.

One idea with significant potential is a Citizen's Fund, which would follow a straightforward fee-and-dividend equation. Companies that emit greenhouse-gas emissions or extract natural resources would pay fees into the fund, which would

then distribute equal payments to all citizens, creating an economic cushion during a period of transformation and beyond. This is not just an idea. In 1976, the Republican governor of Alaska, Jay Hammond, established the Alaska Permanent Fund, which charges companies a fee to extract oil and then disburses the proceeds equally to all the state's citizens. In 2021, each eligible Alaskan received \$1,114 — not as a "welfare payment" but as a dividend from a state commons (in this case, a finite supply of oil). The largest dividend ever paid was during Republican Sarah Palin's governorship in 2008, when every Alaskan enjoyed a windfall of \$3,269.

In 2017, James Baker and George Shultz, two former Republican secretaries of state, proposed a similar plan for the whole United States, estimating that fees on carbon emissions would yield a dividend of \$2,000 per year to every US household. With backing from 3,500 economists, their scheme has broad appeal not just among companies and environmental-advocacy groups but also (and more incredibly) across the political aisle.

The economics is simple. A fee on carbon drives down emissions by driving up the price of polluting. And though companies would pass on these costs to consumers, the wealthiest would be the hardest hit, because they are by far the biggest, fastest-growing source of emissions. The poorest, meanwhile, would gain the most from the dividend, because \$2,000 means a lot more to a low-income household than it does to a high-income household. In the end, most people would come out ahead.

But given that food- and energy-price shocks tend to hit lowincome cohorts the hardest, why make the dividend universal? The reason is that a policy of this scale needs both broadbased and lasting support, and people are far more likely to support a programme or policy if there is at least something in it for them.

Moreover, a Citizen's Fund is not just a way to drive down emissions and provide an economic safety net for the cleanenergy transition. It would also foster innovation and creativity, by providing a floor of support for the entrepreneurs and risk-takers we will need to transform our energy and food systems.

A Citizen's Fund could also be expanded to include other global commons, including mining and other extractive industries, plastics, the ocean's resources, and even knowledge, data, and networks. All involve shared commons — owned by all — that are exploited by businesses that should be required to pay for the negative externalities they create.

Of course, a universal basic dividend is not a panacea. It must be part of larger plan to build societies that are more resilient to shocks, including through greater efforts to redistribute wealth by means of progressive taxation and empowerment of workers. To that end, Earth4All, an initiative I co-lead, is developing a suite of novel proposals that we see as the most promising pathways to build cohesive societies that are better able to make long-term decisions for the benefit of the majority.

Our most important finding is perhaps the most obvious, but it is also easy to overlook. Whether we do the bare minimum to address the grand challenges or everything we can to build resilient societies, disruption and shocks are part of our future. Embracing disruption is thus the only option and a Citizen's Fund becomes an obvious shock absorber. — Project Syndicate

• Owen Gaffney is an analyst at the Stockholm Resilience Centre and the Potsdam Institute for Climate Impact Research.

علىي خـط الترسـيم.. mtv 500

مليار دولار ثروات لبنان النفطية



على وقع إشتداد المعارك العسكرية في اوكرانيا والعقوبات الدولية بحق روسيا التي تهدد صادرتها من النفط والغاز، ما يؤجج المخاوف حيال شتاء قارس في اوروبا، دخلت الدول الاوروبية معركة عنوانها "تأمين البدائل عن الطاقة الروسية" من مصادر أخرى وفي صلبها دول شرق المتوسط، فهل يمكن للبنان أن يشكل يوما ما مصدرا للغاز والنفط نحو القارة الاوروبية؟

فقد نظمت إدارة الــwtv لقاء ً حواريا ً بين الخبير الدولي في شؤون النفط والغاز د. رودي بارودي وعدد من الاعلاميين والمراسلين في المحطة تركز حول ثروات المتوسط وترسيم الحدود والامكانات المتاحة امام لب

https://euromenaenergy.com/wp-content/uploads/2022/07/2022-07-15_10-48-21_1.mp4

نان على وقع إستمرار المفاوضات لترسيم الحدود.

North Field expansion to see world's 'most responsibly produced LNG,' says Shell CEO



The North Field expansion that will include carbon capture and storage is expected to see the "most responsibly produced LNG" in the world, noted Shell CEO Ben van Beurden.

Speaking in Doha Tuesday, van Beurden said, "This expansion is good news for Qatar... for the world... and for Shell.

"Because this responsibly produced gas is consistent with Qatar's energy sustainability strategy, and also for Shell's strategy to become a net zero emission energy business by 2050."

He said "natural gas plays a role an important role in world wide transition to net zero emissions energy system."

"If we switch from coal to gas for production of iron or steel, that can result in a reduction of CO2 equivalent, saving 38%. And that is very significant."

van Beurden said, "I thank His Highness for taking the decision to end the moratorium of the development of NF in 2017. It was a crucial step forward towards realising Qatar's National Vision for 2030."

"I am honoured that Shell has been selected by QatarEnergy as a partner in the NFE project. Through its pioneering integration with carbon capture and storage, this landmark project will help provide LNG the world urgently needs at a lower carbon footprint. This agreement deepens our strategic partnership with QatarEnergy which includes multiple international partnerships such as the world-class Pearl GTL asset."

"We are committed to maximise the value of the LNG expansion for the State of Qatar and continue to be a trusted, reliable and long-term partner in Qatar's continued progress," van Beurden noted.

QatarEnergy Tuesday announced the selection of Shell as partner in the North Field East (NFE) expansion project, the single largest project in the history of the LNG industry.

The partnership agreement was signed at a ceremony in QatarEnergy's headquarters by HE the Minister of State for Energy Affairs Saad Sherida al-Kaabi, also the President and CEO of QatarEnergy, and Ben van Beurden, in the presence of senior executives from both companies.

Pursuant to the agreement, QatarEnergy and Shell will become partners in a new joint venture company (JV), in which QatarEnergy will hold a 75% interest while Shell will hold the remaining 25% interest.

In turn, the JV will own 25% of the entire NFE project, which includes 4 mega LNG trains with a combined nameplate LNG capacity of 32mn tonnes per year.