Golden Pass to procure gas from US market; export-oriented LNG project to start production by end-2024: Al-Kaabi



aramco, athens, athensenergydialogues, baroudi, carbon, climate, cli change, climateaction, climatechange, Closure Nuclear, Power, Plants, CO2, cyprus, decarbonising, decarbonization, democracy,doha,eastmed,egypt,embargo,emissions,ENERGY,Energy Market, energy, peace, energy industry, europe, European Fuels, Russian Gas, Oil Gas, Natural And Gas, GAS, gazprom, greece, greenenergy, international, Maritime, disp utes, LEBANON, Liquefied Natural Gas, maritime boundaries, east, mediterranean, Maritime disputes, offshore, OIL, opec, pollution, poverty, alleviation, Putin ,QATAR,Renewable Energy,Rosneft,roudi,russia,Russia In The European Energy Sector, Russian Sanctions, saudi, solar, solar power, Straddling, hydrocarbons, reserves, sustainability, total, tr

QatarEnergy in talks with Asian buyers for "small equity participation" in North Field expansion: Minister



#### Doha

QatarEnergy is in talks with several Asian buyers for "small equity participation" in the North Field expansion, HE the Minister of State for Energy Affairs Saad bin Sherida al-Kaabi said Sunday.

"That discussion is still ongoing with several Asian buyers, who will come in as buyers to have small equity participation (in the project). We call them value-added partners," HE al-

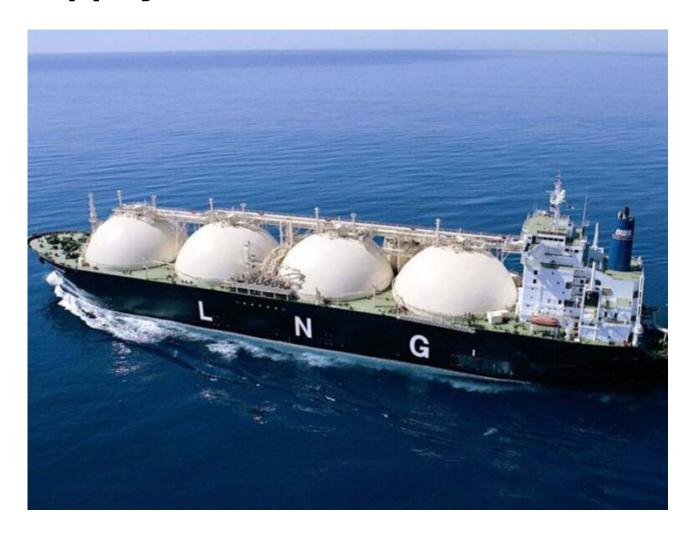
Kaabi told reporters here yesterday.

"One of those will be hopefully signed shortly," al-Kaabi noted.

He said: "The final signature today is relating to international oil companies (IOCs) participation in the North Field South (NFS) expansion project, which comprises two LNG mega trains with a combined capacity of 16mn tonnes per year (MTPY).

"Today marks the closure of IOCs participation in the North Field expansion project," he added.

# Under-investment spurs imbalance in global gas supply-demand



Under-investment spurs imbalance in global gas supply-demand The supply-demand imbalance in the global gas market has been caused mainly by under-investment in the industry since 2015 on the back of very low gas prices and misguided calls to stop investing in natural gas projects.

This has only been exacerbated by geopolitical tensions and as Europe became the preferred destination for LNG cargoes to compensate for reduced pipeline flows.

Industry experts say market tightness is expected to continue in the medium-term, as the majority of new projects will come on stream only after 2025.

At a recent media event in Doha, HE the Minister of Energy Affairs Saad bin Sherida al-Kaabi told Gulf Times: "Higher gas prices are caused by many factors. One of these is the Ukraine issue, which has made it a much bigger problem.

"If you go back a little bit, it was due to everybody pushing for green and demonising oil and gas companies and there were not enough investments (in the sector). And that caused higher price, which started before the Ukraine issue. The Ukraine issue has just made it a much bigger problem.

"You cannot take a short-term view of what's happening today. Gas prices, which you see in Europe today are due to circumstances there."

Due to the impact of geopolitical challenges, global energy supplies have been disrupted, energy prices impacted, and created concerns over energy security as well as accessibility.

Inflationary pressures are impacting the oil and gas industry through rising production costs, delays in investment decisions, and increased policy uncertainty, al-Kaabi had earlier said at the Asia Green Growth Partnership Ministerial Meeting.

Such developments caused a setback in the kind of serious energy transition the world needs in order to address the immediate challenges of climate change.

"This has caused a serious erosion in public support for reducing carbon emissions in many countries, which had earlier

campaigned for greener energy and a carbon-free future — thus negating years of environmental achievements," al-Kaabi said.

As the cleanest hydrocarbon fuel, natural gas is seen as the perfect solution that strikes the right balance, and will continue to play a key role in the future energy mix.

According to the 'Global gas outlook' by the Gas Exporting Countries Forum, natural gas share in the energy mix will increase from 23% today to 26% in 2050, underpinned by population growth, doubling of world GDP, improved standards of living, and policies and technology aimed at improving air quality and mitigating climate change.

Natural gas will continue to play a pivotal role in sustainable development and in a just and inclusive energy transition. It constitutes a key lever to meet the UN Sustainable Development Goals (SDG) and the Paris Agreement's long-term objectives.

But the security of demand and supply, as well as open, transparent, unhindered, and non-discriminatory gas markets can be achieved only through continuous producer-consumer dialogues.

Clearly, huge investments are required to satisfy the growing world energy demand. Therefore, the importance of timely investments for market stability, and the crucial need for unhindered flow of financial resources and access to technology in a non-discriminatory manner cannot be overlooked.

## QatarEnergy Trading to offtake, market 70% of LNG

## produced by Golden Pass project in US



Doha

Affiliates of QatarEnergy and ExxonMobil have agreed to independently offtake and market their respective proportionate equity shares of LNG produced by the Golden Pass LNG Export Project located in Sabine Pass, Texas, the US.

Pursuant to the agreement, QatarEnergy Trading, a wholly owned subsidiary of QatarEnergy, will offtake, transport, and trade 70% of the LNG produced by Golden Pass LNG.

The construction of Golden Pass, which has a total production capacity in excess of 18mn tonnes of LNG per year, is well underway with first LNG production expected by the end of 2024.

Commenting on this development, HE the Minister of State for Energy Affairs, Saad bin Sherida al-Kaabi, also the President and CEO of QatarEnergy said, "The energy market is highly dynamic and undergoing a period of transformation, and LNG will continue to play a key role in meeting global energy demand and ensuring security of supply. This agreement is an important addition to our efforts to meet demand for cleaner energy and to support the economic and environmental

requirements for a practical, equitable and realistic energy transition."

Al-Kaabi added: "QatarEnergy is the global leader in LNG, the cleanest of all fossil fuels, and it is only natural for us to increase focus on LNG trading and portfolio optimisation to deliver innovative LNG solutions that meet the needs of our customers across the globe. I am proud of what QatarEnergy Trading has achieved in the very short time since its inception and with this new addition to its portfolio, I am confident that QatarEnergy Trading will accelerate its efforts to deliver on our aspiration of becoming a world leader in LNG trading in the near future."

As a result of this arrangement, Ocean LNG Limited, a joint venture established in 2016 between affiliates of QatarEnergy and ExxonMobil for offtaking and marketing the entire production of Golden Pass LNG, has ceased operations, and will be wound down.

فوائــد اتفـاق الترسـيم الاقتصاديـة… 3 خـبراء يتحـدثون "لـ"النهار



بعد أن أعلن رئيس الجمهورية ميشال عون موافقة لبنان على #اتفاق ترسيم الحدود البحرية، ات خذ الاتفاق صفته الرسمية، ولو أنه لم يو ُق ع بعد. لكن الاستفادة من الثرواتلا تزال موضع تشكيك من قبل خبراء، سواء أكانٍ من ناحية تأكيد وجود الموارد المشار إليها في حقل قانا تحديدا ، أو من ناحية إدارة الحوكمة والاصلاح الاقتصادي. وفي الوقت الذي يعو ل الكثيرون على الثروات الكامنة تحت البحر لانتشال لبنان من أزمته، لا بد من السؤال عن الفائدة الاقتصادية الم ُقد من هذا الاتفاق، وعن العوامل والظروف إن كانت مهي الله أم لا للاستفادة من هذه العوائد.

رودي ِبارودي… "من 400 إلى 600 مليار دولار تقديريا ً"

طردا لفكرة التشكيك في وجود النفط والغاز، يورد الخبير النفطي الدولي، وأمين سر بعثة لبنان إلى مجلس الطاقة العالمية، رودي بارودي، في حديث لـ"النهار"، أنه بَعدَ المسح الذي أُجري في المنطقة ككل من العام 2002 حتى العام 2006، من جنوب سوريا وصولا إلى قبرص وجنوب إسرائيل، تبين أن جميع هذه البقعة تحتوي على موارد نفطية. وفي العام 2009- 2010، عندما بدأ المسح في قبرص وإسرائيل وجدوا هذه الموارد.

جميع هذه المكامن والصخور التي لدينا في قعر البحر، يمكن أن نقول عنها إنها إيجابية، وتحتوي على هذه الموارد، ممّا يمكّنها من إعطائنا دعما اقتصاديا هائلاً. لكن لا يـُمكننا معرفة الكميّة الموجودة حتى نبحث ونستكشف. وإذا نجح الاستكشاف، يمكننا حينها استقدام منصّات للاستخراج، فنعرف حجم الآبار الموجودة؛ جميع البـُقع المحيطة بلبنان تتمتّع بثروة نفطية تحت الماء، "فلماذا التشكيك

بوجود النفط في المياه البحرية اللبنانية إذن؟"، يتساءل بارودي. لذلك فإن ّاحتمال ألا ّيكون لدينا نفط وغاز ضئيل جدا ً.

إلى ذلك، لا جهة تعلم حجم الثروة في مكمن قانا قبل بدء عمليات التنقيب، بالرغم من وجود التقديرات، التي لن تكون دقيقة — بطبيعة الحال -، ولن يمكننا تحديد أرقام مؤكّ دة قبل وصول الشركة المنقّبة وإطلاق العملية"، وفق بارودي، الذي يرُضيف أن "تقديرات حقل كاريش فقط ترُشير إلى وجود عائدات تقدّر بــ16 مليار دولار، وقد يزيد المبلغ في حال و جدت كميّات إضافية شمال، جنوب، شرق أو غرب المكمن، أثناء عمليات التنقيب".

واقتصادياً، بحسب بارودي، "علينا أن نكون سعيدين جداً، على أن يترافق مسار استخراج النفط مع إنجاز الإصلاحات المطلوبة والمُلَرِحَّة، فمهما بلغت كميَّة الموارد المستخرَجة، إن لم تترافق مع إصلاحات اقتصادية وقانونية ومالية، فلن يستفيد الشعب منها".

والتقديرات التي استخلصتها إحدى المسوحات في العام 2010 في كلّ من قبرص وإسرائيل، "كانت صحيحة نسبياً. لذلك، في ما يتعلق بتقديرات الجهة نفسها حول كمية الغاز والنفط الموجودة في لبنان، وإذا ما احتسبناها على سعر الغاز والنفط الراهن، فإنها تُقَدّ رَبعا يقرب من 400 إلى 600 مليار دولار تقديريا ، إضافة إلى وجود كمية من النفط والغاز لا يُستهان بها في البر ايضا "، وفق بارودي.

وفيما تحدّ الرئيس ميشال عون عن وجوب تخصيص صندوق سيادي لعائدات النفط والغاز، يؤكّد بارودي أنّ "إنجاز الإصلاحات يمهّد الطريق إلى اعتماد الصندوق السيادي". فإذا ما سارت عائدات النفط والغاز بالشكل السليم، فإن القطاع التربويّ والصحيّ وغيرهما من القطاعات سيستفيد منها.

في الأثناء، ركزت آراء على أن "اتفاق الترسيم لم يحل القضايا الاقتصادية الرئيسية المتعلقة بتقاسم أرباح الموارد المحتملة، لكنه أرجأ البت بها إلى موعد لاحق. تعليقا ، يقول بارودي إن "الاتفاقية النهائية المسر "بة لم تذكر تقاسم أرباح بين لبنان وإسرائيل من الموارد المحتم َلة، وهي اتفاقية جيدة جدا ! وكل ما ي حكى في السياسة والإعلام لا يلتقي مع ما ذ كر في الاتفاقية، وما قد ي ي في البنان، ولا يدخل ي في إليه اتفاق "توتال" وإسرائيل لاحقا لا يعني لبنان، ولا يدخل في خزينته، ولا علاقة للبنان به لا من قريب ولا من بعيد، وشركة

"توتال" أكدّت ذلك. وكلّ ما يُحكى عن تقاسم أرباح هو أمر غير صحيح وغير موجود أساساً في الاتفاق".

كذلك، ترد "د حديث عن أن " "قدرة لبنان على استكشاف آفاق حقل قانا وتطويره يعتمدان في نهاية المطاف على موافقات إسرائيلية وعلى الترتيب المالي المستقبلي "بين توتال وإسرائيل". في هذا الإطار، يلفت بارودي إلى أن "الكلام عن موافقة إسرائيلية على الاستكشاف والتنقيب في حقل قانا عار من الصحة، فخط الحدود البحري أصبح خطا معترفا به، والاتفاق الذي وق هه الجانبان أرسل إلى ما يُسمى بالـ division of ocean affairs at the united nations ي أنه يمكننا ممارسة السباحة في هذه المياه وصيد السمك. وبعد كلام الرئيس عون أمس واعترافه بالخط الحدودي البحري، وإعلان موافقة لبنان على اتفاق ترسيم الحدود، فانه إقرار رسمي "بهذه الحدود، وكأنانا وق عنا على الاتفاقية أمس، وبذلك يحق لنا التنقيب من دون الرجوع إلى أحد".

#### مارك أيوب… رفع "الفيتو"

الباحث في مجال الطاقة في معهد عصام فارس في الجامعة الأميركية في بيروت، مارك أيوب، وفي حديثه لـ"النهار"، يرى أنه "ليس هناك عوائد اقتصادية مباشرة لا في المدى المتوسط ولا القصير". فاتفاق الترسيم رفع الفيتو، وأعاد فتح المنطقة الاقتصادية في البلوكات البحرية أمام الشركات الأجنبية للاستثمار. وفيما استحصلت شركة "توتال" على رخصة لأعمال البلوك رقم 9، إلا أنها لم تأت، ولم تباشر بأعمال الاستكشاف، بالرغم من أنها وقعت على هذه الأعمال لأسباب سياسية ولمغوط مورست عليها لمنعها من الحفر والاستكشاف، بينما اليوم، ليس هناك أي ذريعة جيوسياسية تعيق توافد الشركات الأجنبية للتنقيب في البحر اللبناني إذ أ زيلت جميع العوائق. وغلى الصعيد الاقتصادي بالتحديد، اتفاق ترسيم الحدود البحرية، وفق أيوب، هو خطوة على مسار كون لبنان دولة نفطية. لكنة حتى الساعة أيوب، هو خطوة على مسار كون لبنان دولة نفطياً، ولا يمكن المقارنة بين العائدات التي سيحصل عليها كل من الجانبين لعدم معرفة كمية النفط والغاز الموجودين في حقول لبنان.

لكن الأكيد هو أن العوائد الاقتصادية لإسرائيل ستكون سريعة لأن الجانب الإسرائيلي سيبدأ بالإنتاج من حقل كاريش الأسبوع المقبل، وفق أيوب، الذي يؤكد أن ليس هناك من تقاسم للأرباح بين الجانبين في هذا الاتفاق. وما تم حله في اتفاق الترسيم وربطه تحت الإدارة الأميركية والإسرائيلية هو حقل قانا. صحيح أن هذا الحقل هو بكامله للبنان، لكن إسرائيل تبرم اتفاقا ماليا بينها وبين شركة

"توتال"، وبالتالي هناك فقرة في اتفاق الترسيم تنص على رهن بالاتفاق المالي بين إسرائيل و"توتال"، ويتساءل أيوب: "ماذا لو لم يحصل هذا الاتفاق؟ حينها كل ما هو جنوب الخط 23 يكون معر ما للمشاركة، لذلك، فإن هذا الاتفاق أجل التنقيب البري إلى وقت لاحق، وتأجل بذلك كل اكتشاف جديد يمكن أن يحصل في المستقبل بعد هذا الاتفاق، على طول الخط 23، إذ سي عرقل أي اكتشاف جديد وسيتم اللجوء إلى الأميركي للتوسط ولن يلتزم الإسرائيلي حينها".

### هوكشتاين: لبنان وإسرائيل لم يحصلا على ما يريدانه من إتفاق الترسيم البحري



أكد الوسيط الأميركي لترسيم الحدود البحرية بين لبنان وإسرائيل آمـوس هوكشتـاين، أن "الاتفـاق البحـري بيـن الجـانبين مفيـد لأمـن وأضاف في تصريحات لقناة 13 الإسرائيلية، نقلتها "روسيا اليوم"، "لم تحصل إسرائيل على كل ما تريده، ولم يحصل لبنان على كل ما يريده، هكذا تجري المفاوضات عادة"، متابعا ً "كانت مفاوضات استمرت لما يقرب من 11 عاما ً، وقررت تغيير المعادلة، غيرنا المحادثة حتى ."يخرج الجميع منتصرين

وأشار إلى أن "إسرائيل تريد حصتها الاقتصادية بالطبع، لكنها تريد حقا استقرارا في البحر الأبيض المتوسط، وهيمنة إسرائيل على البحر هي نتيجة لنجاحها الهائل في تطوير مثل هذه⊡الأبيض المتوسط ."الكمية الكبيرة من الغاز الطبيعي

وتابع "خط الحماية لم يكن الحدود الرسمية بين إسرائيل ولبنان، والآن وافق لبنان على الاعتراف به كوضع قائم بينه وبين إسرائيل، وهذا يتيح لإسرائيل القيام بدوريات على طول هذا الخط وإمكانية "الإشراف عليه، هذا أمر عظيم بالنسبة لإسرائيل

وعن تأثير تهديدات حزب الله على المفاوضات البحرية، قال هوكشتاين، "أوضحت لي إسرائيل أنه لن تكون هناك مفاوضات تحت "التهديد

وفي إشارته إلى انتقاد إسرائيل لتوقيت الاتفاق قبل الانتخابات مباشرة، علق هوكشتاين قائلاً، "كانت لدينا فترة زمنية حرجة، لو انتظرنا لما تم الاتفاق".

# Turkey-Libya preliminary deal prompts Greece, Egypt to push back



TRIPOLI, Oct 3 (Reuters) — Libya's Tripoli government signed a preliminary deal on energy exploration on Monday, prompting Greece and Egypt to say they would oppose any activity in disputed areas of the eastern Mediterranean.

Libya's eastern-based parliament, which backs an alternative administration, also rejected the deal.

Speaking at a ceremony in Tripoli, Turkish Foreign Minister Mevlut Cavusoglu and Libyan Foreign Minister Najla Mangoush said the deal was one of several in a memorandum of understanding on economic issues aimed at benefiting both countries.

It was not immediately clear whether any concrete projects to emerge would include exploration in the "exclusive economic zone" which Turkey and a previous Tripoli government agreed in 2019, angering other eastern Mediterranean states.

That zone envisaged the two countries sharing a maritime

border but was attacked by Greece and Cyprus and criticised by Egypt and Israel.

"It does not matter what they think," said Cavusoglu when asked if other countries might object to the new memorandum of understanding.

"Third countries do not have the right to interfere," he added.

Greece's foreign ministry said on Monday that Greece had sovereign rights in the area which it intended to defend "with all legal means, in full respect of the international law of the sea."

It cited a 2020 pact between Athens and Egypt, designating their own exclusive economic zone in the eastern Mediterranean, which Greek diplomats have said effectively nullified the 2019 accord between Turkey and Libya.

"Any mention or action enforcing the said 'memorandum' will be de facto illegitimate and depending on its weight, there will be a reaction at a bilateral level and in the European Union and NATO," the Greek foreign ministry said in a statement.

An Egyptian foreign ministry's statement said on Monday that Foreign Minister Sameh Shoukry received a phone call from his Greek counterpart, Nikos Dendias, where they discussed the developments in Libya.

They both stressed that "the outgoing 'government of unity' in Tripoli does not have the authority to conclude any international agreements or memoranda of understanding," the Egyptian foreign ministry's statement added.

Dendias posted on Twitter about his phone call with Shoukry, saying both sides challenged the "legitimacy of the Libyan Government of National Unity to sign the said MoU," and that he will visit Cairo for consultations on Sunday.

Turkey has been a significant supporter of the Tripoli-based Government of National Unity (GNU) under Abdulhamid al-Dbeibah, whose legitimacy is rejected by the Libyan parliament.

Parliament Speaker Aguila Saleh, seen as an ally of Egypt, said the memorandum of understanding was illegal because it was signed by a government that had no mandate.

The political stalemate over control of government has thwarted efforts to hold national elections in Libya and threatens to plunge the country back into conflict.

### 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.

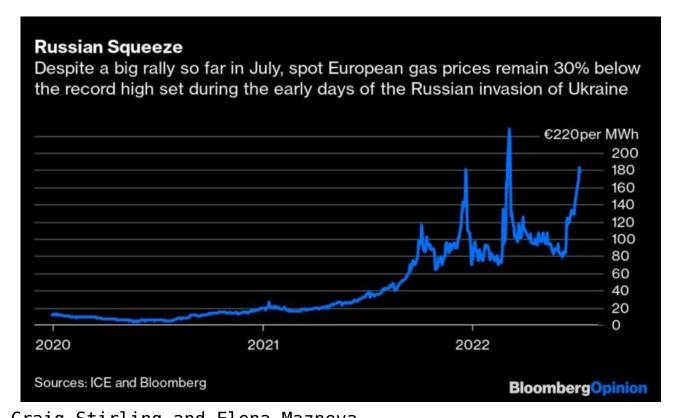
In August, QatarEnergy's affiliates, QatarEnergy Renewable Solutions (QRS) and Qatar Fertiliser Company (Qafco) signed the agreements for the construction of the Ammonia-7 project, the industry's first world-scale as well as the largest blue ammonia train, which is expected to come into operation by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

#### 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-ofliving 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.