

# كميات الغاز في حقل قانا غير معروفة... بارودي لـ "النهار"؛ 36 شهرا تفصلنا عن استخراج الغاز



وصلت مفاوضات #ترسيم الحدود إلى خواتيمها على ما يبدو، وما هي إلا أمتار قليلة تفصل #لبنان و#إسرائيل عن توقيع الاتفاق الذي أرسل المبعوث الأميركي آموس هوكشتاين صيغته النهائية إلى الطرفين، في حال لم يطرأ جديدٌ على صعيد تل أبيب في ظلّ المعارضة التي يلقاها الاتفاق من قبل المعارضة التي يتزعمها بنيامين نتنياهو. وفي سياق الاتفاق، فإنّ حقل قانا سيكون من حصّة لبنان، فيما سيذهب حقل كاريش إلى إسرائيل.

## حقل قانا جاف؟

إلا أنّ الصحافة الإسرائيلية ذكرت معلومات خطيرة عن حقل قانا، مفادها عدم وجود كميات كبيرة من الثروات #الغازية فيه. وفي التفاصيل، نقلت صحيفة "تايمس أوف إسرائيل" أنّ مدير وزارة الطاقة الإسرائيلية أعلم الوزراء في اجتماع مجلس الوزراء الأمني (الكابينيت) يوم الخميس أنّ "التقديرات المتعلقة بكمية الغاز الطبيعي التي يمكن استخراجها من هذا الحقل كانت أقلّ بكثير مما كان يُعتقد في البداية".

ولفت المدير العام، ليئور شيلات، إلى أنّ "تقديرات مكتبه وشركة النفط Total Energies، التي تمتلك امتياز التنقيب عن الغاز في حقل قانا، تُشير إلى أنّ الربح المحتمل من المنطقة المعنية يبلغ

ثلاثة مليارات دولار فقط"، حسبما أفاد موقع "والا" الإخباري نقلاً عن أربعة مسؤولين حضروا اجتماع مجلس الوزراء. وبحسب القناة 13، قال شيلات للوزراء، "من المحتمل أيضاً أن يكون قانا جافاً تماماً".

### تقاسم أرباح الحقل بين لبنان وإسرائيل

ويذكر أن الرقم المعروض أقل بكثير من التقديرات الأخرى المنشورة في وسائل الإعلام. فقد قدّر موقع The Marker الأرباح المحتملة عند نحو 20 مليار دولار. وإذا تمّ العثور على الغاز في الحقل، فسيتمّ تقسيم الأرباح بين إسرائيل ولبنان وتوتال إنرجي. وأوضح شيلات أن "إسرائيل لن تتمكن من معرفة الأرقام الدقيقة حتى يبدأ الحفر في الموقع"، وفق ما نقلت الصحيفة العبرية نفسها.

كما قال وزيران حاضران في اجتماع مجلس الوزراء لـ "والا" إن تقدير الأرباح المحتملة كان أقل مما وافقت إسرائيل على تلقيه في الجولات السابقة، فيما أشار أحد الوزراء إلى أن الحديث يجري حول أرباح قد لا تراها لمدة خمس سنوات.

وقد تكون هذه التقديرات السبب في تراجع إسرائيل عن مطالبته بالحقل.

### ما حقيقة التقديرات الإسرائيلية؟

الخبير النفطي الدولي وأمين سر بعثة لبنان إلى مجلس الطاقة العالمية رودّي بارودي يّشير إلى أن "لا جهة تعلم حجم الثروة في مكن قانا قبل بدء عمليات التنقيب، ورغم وجود التقديرات، إلا أنّها ليست دقيقة، ولا يمكن تحديد أرقام مؤكّدة قبل وصول الشركة المنقّبة وإطلاق العملية"، نافياً قدرة أيّ طرف على تأكيد الكمية من خلال التقديرات.

وفي حديث لجريدة "النهار"، يلفت بارودي إلى أن "تقديرات حقل كاريش فقط تُشير إلى وجود عائدات تقدّر بـ16 مليار دولار، وقد يزيد المبلغ في حال وُجدت كميات إضافية شمال، جنوب، شرق أو غرب المكن، أثناء عمليات التنقيب".

أمّا وعن العملية وموعد بدء الاستفادة من الثروة، يقول بارودي إن "الشركات المنقّبة تستقدم آلياتها وحفّاراتها بعد الانتهاء من عملية ترسيم الحدود والاتفاق على الخطوط، وتحتاج عملية الاستكشاف والحفر إلى ما بين شهر وستّة أشهر، وفي حال وُجدت الكميات التجارية، فحينها تستقدم الشركات منصّات الاستخراج".

وفي هذا السياق، يّضيف بارودي، "بتقديري، سيكون لبنان قادراً على استخراج الغاز في فترة تمتدّ حتى الـ36 شهراً، وفي حال وُجدت الكميات المطلوبة وأصدرت الشركة المنقّبة بياناً أعلنت فيه الكمية الموجودة، فذلك يعني وكأنّ هذه الكميات تُرجمت لأموال في حسابات الدولة مباشرةً، إلا أنّ الوصول إلى تلك المرحلة، يستدعي قيام الدولة بالإصلاحات، لأنّ الشركات تتخوّف من التعامل مع دول ينخرها الفساد".

وشدّد على أنّ "الإصلاحات يجب أن تشمل مختلف القطاعات، لاسيّما

قطاعات القضاء، المالية والطاقة والغاز، كما أنّ من المفترض أن تؤمّن الدول كافة مستلزماتها، لأنّ الشركة التي ستنقّب ستتعامل مع عدد من الوزارات، ولا يجوز أن تفتقد هذه المرافق العامة الضروريات”.

## رغبة قطرية في الدخول إلى التحالف للتنقيب عن النفط في البلوكين 4 و9



عقد رئيس الحكومة نجيب ميقاتي اجتماعا مع وزير الطاقة والمياه وليد فياض و أعضاء هيئة ادارة قطاع البترول التي تضم وسام شباط، وسام الذهبي، غابي دعبول و وليد نصر .  
وأعلن الوزير فياض بعد الاجتماع: عقدنا لقاء اليوم مع دولة الرئيس ميقاتي بمعية أعضاء هيئة إدارة البترول، بعد زيارة قمت بها لفخامة رئيس الجمهورية لتهنئته بإنجاز التاريخي بشأن ترسيم الحدود وترسيخ حق لبنان بالمباشرة منذ الآن، بأعمال الاستكشاف في حقل قانا وسائر البلوكات في مياه البحر عندنا .  
وكشف الوزير فياض عن رغبة قطرية في الدخول إلى التحالف للتنقيب عن النفط في البلوكين 4 و9. وقال: " لقد وردت الرغبة القطرية عبر

رسالة من معالي وزير النفط القطري سعد الكعبي أعلن فيها نوايا دولة قطر الشقيقة بمشاركة لبنان بالدخول الى التحالف الذي سينقب في البلوكين 4 و 9 لتصبح قطر الشريك الثالث لشركتي " توتال " وأيني" في هذين الحقلين، وهذا أمر مهم جدا، لأننا نعرف قدرة قطر الاستثمارية ورغبتها التي أعلنت عنها عبر زيارات مختلفة لسفيرها للوزارة للاستثمار في النهوض الاقتصادي للبنان في قطاع النفط والغاز ، في التنقيب و انتاج الطاقة .

وقال: لقد ارسلوا الى الوزارة المدراء العامين للشركة المملوكة من الدولة القطرية، وهي مهتمة بالاستثمار في قطاع الطاقة و انتاج الطاقة في شكل عام. ونحن نشكر دولة قطر على رغبتها في مشاركة لبنان باستثمار موارده والاستثمار في بناء الاقتصاد اللبناني. لقد عهدنا دائما و قوف قطر الى جانب الشعب اللبناني.

اضاف: أما الموضوع الثاني فهو ضرورة دعم هيئة إدارة البترول بالكادر البشري لمواكبة هذه المرحلة وادارتها وخصوصا العلاقة مع الشركاء، اي العلاقة التحالفية وإدارة العقد الذي يسمح بإدارة أعمال الاستخراج والاستكشاف التي ستبدأ قريبا ان شاء الله، ووضع الجدول الزمني المحدد للانجازات المتوقعة بالنسبة إلى الأمور اللوجستية وأمور الحفر والمنصة التي ستنشأ لإنتاج الغاز والنفط.ومن الضروري أن يكون لدى الهيئة الموارد اللازمة والكادر البشري المناسب لإدارة هذه المرحلة، وكان دولة الرئيس متجاوبا في هذا الشأن.

### إجتماع تربوي

ورأس الرئيس ميقاتي اجتماعا شارك فيه وزير التربية والتعليم العالي القاضي عباس الحلبي، الوزير المفوض في سفارة العراق في لبنان أمين النصراوي، المستشارة الثقافية بان الموسوي، القنصل الأول مهند يحيى، مدير عام وزارة التربية في لبنان الدكتور عماد الاشقر، ومدير عام التعليم العالي الدكتور مازن الخطيب، ورئيسة دائرة المعادلات والامتحانات الرسمية أمل شعبان. وتم خلال الاجتماع بحث شؤون الطلبة العراقيين في لبنان.

### الوزير الحلبي

بعد الاجتماع قال وزير التربية: عرضنا الموضوع المتعلق بالمعادلات الذي تقدم به الطلاب العراقيون الذين يتابعون دراستهم في بعض الجامعات في لبنان، والمشاكل التي انعكست سلبا على سير المعاملات، وتم الاتفاق على وضع آليات محددة تسهل على هؤلاء الطلاب من جهة مراعاة القوانين العراقية المطبقة، وكذلك القوانين اللبنانية المطبقة على موضوع المصادقات والمعادلات، واتفقنا على متابعة

البحث في اجتماعات متتالية كل أسبوعين مرة بيننا وبين فريق السفارة لوضع حد لاي إشكالات قد تصيب أوضاع هؤلاء الطلاب في لبنان. نحن نعمل على تسهيل الموضوع مع مراعاة القوانين المطبقة، وعلى الجامعات المعنية التي سببت هذه المشكلة ان تساعدنا على ضبط الأعداد التي توافدت إليها من الطلاب العراقيين، لان هناك أخطاء ارتكبتها بعض هذه الجامعات كما ان هناك أخطاء ارتكبتها بعض الطلاب، ولا نريد ان يتم دفع الثمن من قبل وزارة التربية التي تقوم بما عليها في تسهيل مهمة هؤلاء الطلاب. هذا الاتفاق سيسري في الأيام القليلة المقبلة ونأمل ان نتوصل الى حل هذه الإشكالات.

النصراوي

بدوره قال الوزير المفوض في سفارة العراق في لبنان أمين النصراوي بعد الاجتماع: "التقينا دولة رئيس الوزراء ميقاتي بحضور وزير التربية اللبناني والوفد الفني المرافق له، تحدثنا في كثير من الأمور التي تخص الطلبة العراقيين في لبنان، ونقلنا له تحيات دولة رئيس الوزراء مصطفى الكاظمي، وتوجيهاته بشأن ضرورة تسهيل أمور الطلبة الدارسين في لبنان. تطرقنا الى بعض المواضيع الفنية التي تواجه الأخوان الطلبة في بيروت، وتم الإتفاق على وضع آلية جديدة، وعلى تحديد اجتماعات دورية بين السفارة والملحقية الثقافية في بيروت ووزارة التربية لتذليل أي عقبة او مشكلة تواجه الطلبة العراقيين في لبنان.

أضاف: تداولنا مع الرئيس ميقاتي في بعض القضايا المتعلقة بالساحة اللبنانية واستمعنا الى رأيه في الكثير من المواضيع التي تدور حالياً، وكانت فرصة للإضاءة على العلاقة المميزة بين العراق ولبنان.

وإجتمع رئيس الحكومة مع وزير الدفاع الوطني موريس سليم، ثم مع وزير السياحة وليد نصار .

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# No security without climate security



By Anne-Marie Slaughter/ Washington, DC

In July, CIA Director William Burns gave a 45-minute interview at the Aspen Security Forum. Only at the very end, following questions about the Russia-Ukraine war, China, Taiwan, Iran, and Afghanistan, was Burns asked what the CIA can do to identify where climate change is most likely to cause conflicts to erupt.

Burns's answer was unequivocal. First, he noted that climate change is "an important priority for the CIA and the US intelligence community." He then said that while he considers China "the biggest geopolitical challenge that our country faces in the 21st century," he also views climate change as the "biggest existential threat" to the United States.

Existential risk, as the Stanford Existential Risks Initiative defines it, is a risk that "could cause the collapse of human civilisation or even the extinction of the human species." Burns probably had something less extreme in mind – perhaps a catastrophic event that would wreak irreparable harm and change life as we know it. But still, in this week-long forum dedicated to national and international security discussions, no panel focused specifically and entirely on climate change. That's not unusual. As Burns pointed out, climate change does

not fit the traditional definition of a national-security threat. As such, it falls within the jurisdiction of other government departments.

Yet if climate change poses an existential threat to the US, then the US defence apparatus must participate in the fight against it. Under Burns's leadership, the CIA has established a mission focused on helping "policymakers in the US government understand the consequences of climate change in already fragile societies." The National Security Council, the State Department, and the Pentagon all have units that focus on climate-change-related conflicts abroad. Still, what about the direct impact of climate change on the US? Generals, after all, do not stop fighting wars when the fighting spreads from foreign to American soil.

Science-fiction writers have no trouble bringing the future home to the present. For example, Omar El Akkad's 2017 novel *American War* opens with a map of the US in 2075: Florida, New Orleans, New York City, Long Island, and Los Angeles are all underwater. Kim Stanley Robinson's 2020 novel *The Ministry for the Future* begins with a heatwave in India that overwhelms the power grid and kills 20mn people.

In the scenario Robinson imagines, temperatures in Uttar Pradesh reach a "wet bulb temperature of 42 degrees centigrade." An extreme scenario? Consider that in California's recent heatwave, temperatures in the Bay area and Sacramento Valley reached 46.6C (115.9F) and that California prepared for brownouts and blackouts. As the thermometer breaks records, the prospect of hundreds of thousands of Americans dying in a heatwave does not seem far-fetched.

Perhaps the problem is that an existential "risk" is not yet an existential "threat," whereas the war in Ukraine, Chinese militarism, and Iranian nuclear aspirations demand immediate attention. But tell that to the hurricane, fire, and flood victims who have suffered the consequences of catastrophic weather over the past decade. The Colorado River, Lake Mead, and the Great Salt Lake are disappearing now. Sea-level rise is already making itself felt in Norfolk and Miami. The

future, as scientists keep telling us, is already here. To be fair, Congress and President Joe Biden have done more than any previous administration. With the Inflation Reduction Act, Biden has secured a historic legislative victory that will enable the US to meet its international obligations to reduce carbon dioxide emissions. At the most recent United Nations climate change conference, Special Presidential Envoy John Kerry negotiated a crucial deal with the Chinese to allow the world to move forward with its climate commitments. Moreover, US national-security officials have their hands full. The risk that Russia will use a nuclear weapon in Ukraine is real and rising, and violating the nuclear taboo could draw Nato countries into a nuclear great-power war that could wipe out all of humanity. A nuclear conflict with China would be equally deadly, and Iran's acquisition of nuclear weapons would also lead to nuclear proliferation across the Middle East, effectively gutting the Nuclear Non-Proliferation Treaty and significantly increasing the risk of nuclear war and nuclear terrorism.

Still, the real measure of how much importance the American government attaches to a particular threat is the amount of time and money it invests in addressing it, and I doubt that Biden and his advisers spend more than 10% of their time on preparing for the impact of climate change. The issue is one of perspective: national-security officials operate in a world of geopolitics, competition, and co-operation among countries. They are trained to deter, prevent, and fight wars or to negotiate peace with other governments, not to deal with global threats that transcend national borders. As the adage goes, when all you have is a hammer, every problem looks like a nail.

Bill Burns got it right. Climate change is an existential threat, and the Biden administration and the US national-security establishment must treat it like one. Doing so would require reallocating substantial funds from the military to government agencies that focus on building domestic resilience and civil protection. It would also require creating new



security agencies whose mandate would be to address global threats.

Minimising the risk of climate change will not be easy, but we have no choice. To paraphrase Game of Thrones, a long and deadly summer is coming. If we do not rise to the challenge, many Americans will not survive. – Project Syndicate

• *Anne-Marie Slaughter, a former director of policy planning in the US State Department, is CEO of the think tank New America, Professor Emerita of Politics and International Affairs at Princeton University, and the author of Renewal: From Crisis to Transformation in Our Lives, Work, and Politics (Princeton University Press, 2021).*

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## The high stakes of climate-risk accounting



By Gernot Wagner And Tom Brookes/ New York

Economists are supposed to be good at understanding risk. Decision-making in the face of uncertainty, after all, is the discipline's bread and butter. Yet at a time when real-world risks – geopolitical, macroeconomic, financial, public-health, and environmental – are piling up, many economists seem to be at a loss.

Although businesses and investors stand to make a lot of money if they can properly assess and navigate the current risk environment, no one seems to have a good explanation for why we are where we are. This is especially true in the case of climate change: It is now clear that the risks have been systematically underestimated, and thus mispriced, all along.

One explanation for this is that market participants have failed to understand the size and the probability of the risk, because they have been thinking about the issue in the wrong way. The climate system is not like a casino with well-defined outcomes and probabilities. As a 1987 comment in *Nature* put it, changes within our planet's systems may bring all kinds of "unpleasant surprises." It is as if we were playing with decks of cards that include some unknown number of jokers. Moreover, one also must account for the inherent conservatism of the science. Climate researchers, especially, tend to err on the side of caution.

A classic case is the quantification of sea-level rise. Broadly speaking, sea levels rise for three reasons: melting polar ice caps, melting inland glaciers, and the fact that warmer water takes up more space. But in the Intergovernmental Panel on Climate Change's reports in the early 2000s, the headline figures fully accounted only for melting glaciers and thermal expansion. Scientists of course knew that global warming would melt polar ice, and that this effect might be the most consequential of the three. But because the estimates for how much faster the poles would melt differed by so much at the time, they were excluded from the headline figures.

That omission has long since been corrected. But it is now economists who are lagging behind in quantifying the economic damages associated with rising seas and the many other

interlinked risks and uncertainties accompanying climate change. Quantifying climate-related damage is painstaking work; and in an academic environment that prizes new ideas over what might seem like a mere “accounting” exercise, it is not the kind of work that brings much reward or recognition. Nonetheless, economists going back to Simon Kuznets, the “father” of the gross domestic product, have been some of the leading critics of economic metrics that purport to represent overall well-being. GDP is central to macroeconomic analysis, but it leaves out many other important indicators, such as those measuring human and planetary health. Standing forests and clean air and water have no value in national-income accounting unless they enter the economy directly as factors of production.

Fortunately, an initiative by US President Joe Biden’s administration aims to correct this shortcoming by developing a new set of “statistics for environmental-economic decisions.” While this effort is not the first of its kind in the world, it is among the most ambitious. The goal is to supplement GDP with a far more comprehensive set of accounts, and then to use this new metric to guide policy decisions.

Such a change is long overdue. Climate change might not have grown into the problem that it has become if its damages had been incorporated into national accounts all along.

This points to a second, equally important reason why climate and other risks have been mispriced. It is one thing for scientists, economists, and informed members of the public to recognise that many risks and uncertainties are not priced; it is quite another to adopt policies that discourage businesses from pushing those risks onto society.

For business leaders, the top climate risk, according to a recent Federal Reserve Bank of San Francisco survey, is that climate change will influence “rules and regulations related to our business.” Executives correctly anticipate that policymakers will want them to pay for greenhouse-gas emissions and other negative externalities instead of being permitted to socialise those costs.

Such measures inevitably will fall into the realm of politics, but economists must not confuse their political preferences with sound policy. Those who are ideologically inclined to look to the “free” market as a guiding principle for organising society must recognise that a market can function well only when no externality is left unaccounted and unpaid for.

Another Biden administration accounting initiative could help here. The US Securities and Exchange Commission’s proposed rules for climate-related disclosures would compel companies to standardise and report both the impact of their operations on the climate and the risks that climate change poses to those operations. The SEC’s effort stops short of asking all polluters to pay for their own pollution; instead, it leaves it up to investors to decide what to do with the new information.

Economists must defend the pivotal role their advice plays in policymaking. The political forces and special interests that bear on this issue will skew their advice and skewer the advisers. But that must not become an excuse for inaction. Intellectual honesty demands that economists and policymakers grapple with how new risks and uncertainties can and will affect outcomes.

Tallying what’s known is hard enough. Accounting for hard-to-price risks and uncertainties like climatic tipping points is harder still. But recognising those risks and uncertainties makes clear that political action must come sooner rather than later. – Project Syndicate

• *Gernot Wagner, a climate economist at Columbia Business School, is the author, most recently, of Geoengineering: The Gamble (Polity, 2021). Tom Brookes is Executive Director of Strategic Communications at the European Climate Foundation.*

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# 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.

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## **Multi-billion dollar North Field development enters key phase**



Pratap John The 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.

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# 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.)

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**European goodbye to negative rates – or is it just ‘au revoir’?**



By Mark John And Dhara Ranasinghe/ London

Europe's decade-long experiment with negative interest rates, which ended on Thursday with the Swiss National Bank's return to positive territory, showed one thing: they can exist beyond the realms of economic science fiction.

Launched to revive economies after the 2007/08 financial crisis, the policy flipped standard money wisdom on its head: banks had to pay a fee to park cash with their central banks; some home-owners found mortgages that paid them interest; and rewards for the act of saving all but vanished.

With the exercise now abandoned in the face of galloping inflation brought on by pandemic and the Ukraine war, doubts linger over its effectiveness and under what circumstances it will ever be used again.

"I think that probably the bar is going to be higher in the future," said Claudio Borio, head of the Monetary and Economic Department of the Basel-based Bank of International Settlements which acts as bank to the world's central banks.

Rarely does monetary policy generate as much sound and fury as did the recourse in the early 2010s to negative rates by four European central banks and the Bank of Japan – now the only monetary authority still sticking with them.



With interest rates back then already close to zero, they had run out of conventional ammunition to ward off the threat of outright deflation they feared would choke off the economic recovery. The only way out, they decided, was to go below zero.

Bank chiefs fumed as the European Central Bank, Swedish Riksbank, Swiss National Bank (SNB) and Denmark's Nationalbank went negative in moves they said undermined the whole banking business model of being able to make a profit out of lending.

Local media joined in the criticism, with Swiss newspapers in 2015 calling the moment "Frankenshock" and Germany's Bild labelling the then ECB chief Mario Draghi "Count Draghila" for "sucking our accounts dry".

For sure, those who relied on the return from cash savings clearly suffered during Europe's period of ultra-low to negative rates – even if they could at least take solace from the fact that low inflation was protecting their initial savings.

Other side-effects are harder to pick apart.

Fears of negative rates leading to money-hoarding proved largely unfounded: in Switzerland, for example, the number of 1,000-franc notes in circulation remained the same, suggesting customers were not withdrawing cash to store in a safe at home.

As one Danish bank vaunted the world's first negative rate mortgage, it is likely that cheap borrowing added steam to house price spikes across the region. But prices were often being squeezed higher by local factors including tight supply. While many other elements have been at play, euro area bank stocks have fallen some 45% since 2014 – despite ECB moves to shield them with exemptions from charges on some deposits and access to ultra-cheap borrowing.

Yet a report to European Parliament by the Bruegel think tank last year concluded that overall bank sector profits had not been significantly harmed by negative rates, noting that the downside was being offset by gains in asset investments.

"In the end, they worked the same as normal rate cuts," said

report co-author Gregory Claeys, while acknowledging the impact may have been greater had the experiment gone on for longer.

### **No future?**

The question of whether negative rates actually achieve their goals is harder to answer given the modest extent of the trial – no-one ever went lower than minus 0.75% – and the fact that they have been swept aside by the turmoil of the last two years.

ECB policy-makers point to data showing that lending in the euro zone was shrinking year after year in the 2010s until negative rates helped turn that into growth by 2016 – even though that growth has never attained its pre-2009 heights.

Others point to the fact that the negative rate period coincided with the vast quantitative easing with which the ECB and other central banks around the world also boosted demand with trillions of dollars of asset purchases.

“That was a much bigger deal – much more impactful,” said Brian Coulton, chief economist at Fitch Ratings. “Using your balance sheet aggressively – that is a powerful weapon.”

Some economists argue negative rates create perverse incentives that ultimately do a disservice to the economy – for example by keeping alive “zombie companies” that by rights should fold, or by removing the impetus for governments to push tough reforms.

“What is lacking, in Europe, is the focus on structural reforms. Why didn’t they happen in the last 10 years, why didn’t we strengthen productivity growth?” said Societe Generale senior European economist Anatoli Annenkov.

Burkhard Varnholt, Chief Investment Officer Switzerland, Credit Suisse Switzerland, goes further, saying the message they send about investing in the future was even akin to the nihilism of the No Future refrain of the 1977 Sex Pistols’ punk rock track God Save the Queen.

“It’s the central bankers who have taken interest rates to a level where we attach no value to the future,” he said.

“Today’s punks wear white shirts, grey suits and a blue tie.”  
As the negative rate era closes, the global pool of assets with negative yield has shrunk to less than \$2tn from a 2020 peak of some \$18tn.

Despite the misgivings, others say the experiment has at least shown policy-makers that rates can go below zero and so is an option for them: witness the fact the Bank of England for a while considered that path as Covid-19 was ravaging the economy.

Even if the current inflationary bout means it could be a while before Europe’s central bankers need to use negative rates again, it is unlikely they will want to rule them out.

“They will always be spoken of as something that remains in the toolkit,” said Rohan Khanna, strategist at UBS in London. “I am very doubtful anyone here is ready to say never again for negative rates.” – Reuters

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## **The EU’s carbon border tax could hurt developing nations**



By Miriam Gonzalez Durantez And Calli Obern/ Stanford

In July 2021, the European Commission did something that no other major governing body had ever attempted: It tied trade policy to climate policy. Reaching the European Union's goal of cutting net greenhouse-gas emissions by 55% by 2030 will require the EU to reduce emissions both at home and beyond its borders. To this end, the Commission's Fit for 55 initiative, a package of proposals aimed at meeting the bloc's emissions-reduction target, includes a carbon border adjustment mechanism (CBAM) – an import tax designed to corral other countries into tackling climate change.

The CBAM would tax imported goods sold in EU markets on the basis of their carbon content (the emissions required to produce them), which depends on their material and energy inputs. The proposed levy is intended to address so-called carbon leakage, which occurs when businesses in the EU move production to non-member countries with less stringent emissions rules.

In other words, Europe would no longer ignore the climate effects of foreign goods. But while the measure could help to reduce emissions and level the competitive playing field for EU-based firms, the trade protectionism that it entails risks

hurting developing countries.

The CBAM will initially apply to the highest-emitting industries most at risk of leakage – iron and steel, cement, fertilisers, aluminium, and electricity generation – and will likely be expanded to other sectors in the coming years. Currently, EU-made products in these industries are taxed under the domestic carbon price, but those from outside the bloc are not. If a country already has a domestic carbon price, the border tax will be lowered or waived; this is meant to encourage countries to tax carbon in their own markets. Those that cannot or will not institute a carbon tax will have to pay the full levy.

The EU tax will be phased in over the next four years. By 2023, importers will be required to report emissions embedded in the goods they import, though the tax on those emissions will not be imposed until 2026. The €1bn (\$1.1bn) of annual revenue expected from the CBAM, as well as the €9bn in annual revenue expected from the EU Emissions Trading System from 2023-2030 and taxes on multinational corporations, will support the Union's €750bn Covid-19 pandemic recovery fund. These new sources of revenue will embed EU priorities – including the green transition – in the bloc's budget for the first time.

Though not yet approved, the proposed tax is already influencing the decisions of policymakers and companies in the EU's trading partners. For example, Turkey and Indonesia plan to introduce carbon taxes to mitigate the CBAM's effects on their economies. Turkey is highly exposed, because the EU accounts for 41% of its exports. Indonesia exports billions of euros' worth of palm oil and chemicals to the EU – goods that could fall under a broader border tax. Adopting a domestic carbon price will allow them to avoid some or all of the CBAM and keep the tax revenues instead of transferring them to the EU.

Meanwhile, some EU-based companies in industries such as computer hardware are looking to reshore manufacturing operations ahead of the CBAM's introduction. Their main motive

does not reflect the cost of the tax so much as the likely complexity, bureaucracy, and unpredictability of the system. It is easier and cheaper for companies to relocate production to the EU and avoid the administrative hurdles that the CBAM could create.

Such shifts will be a win for the EU's economy and the environment. And Russia's invasion of Ukraine could accelerate the EU's efforts to achieve greater economic self-sufficiency, not least by reducing its dependence on energy-intensive imports of Russian iron and steel.

But developing economies, which often depend on manufactured products, will likely experience an outflow of activity as firms relocate to the EU. Rather than addressing only carbon leakage and leaving developing countries to adapt as best they can, the EU should allocate part of the revenue from the proposed CBAM to help foster a just green transition for poorer countries.

It is not easy or cheap to decarbonise energy-intensive goods like cement and steel. But the EU could prevent negative knock-on effects for developing economies – not only by waiting for lower-income countries to introduce their own carbon taxes (which will be a challenge given their limited administrative capability in the field), but also by supporting those that need the most help to reduce their emissions.

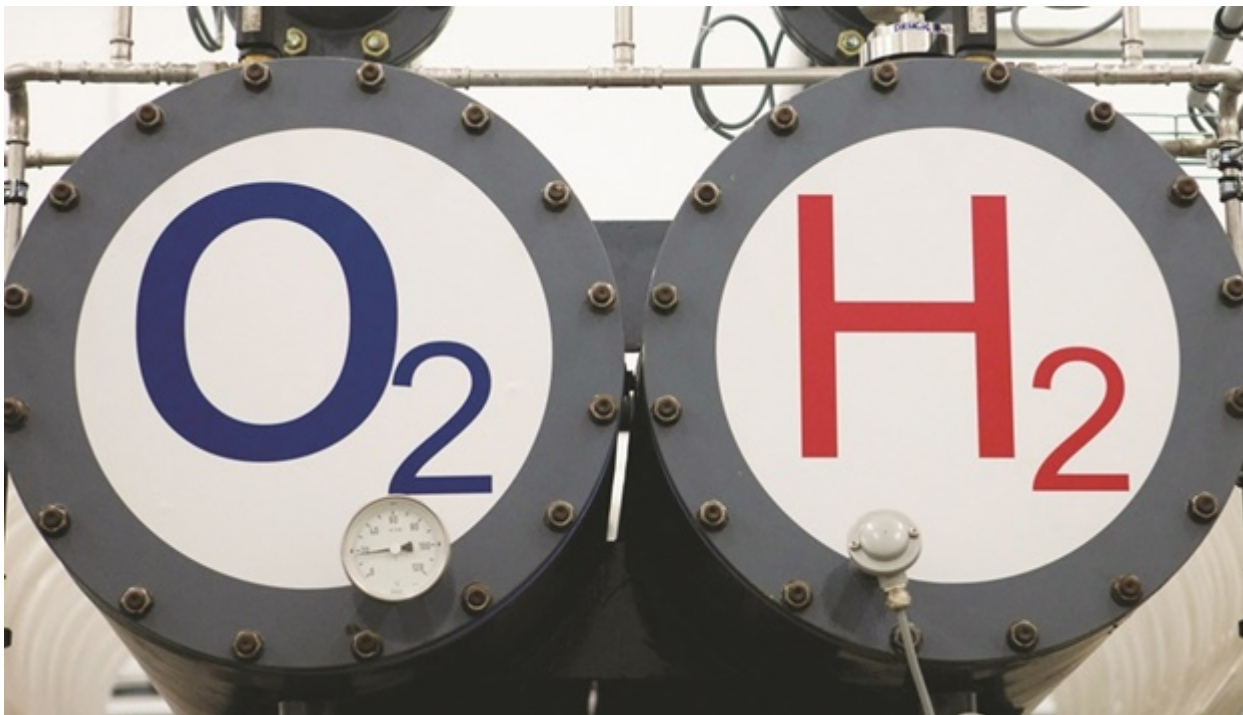
Such support could be provided by dedicating resources and technology to improve the efficiency of industrial processes, financing renewable energy projects, and exempting the poorest countries from the CBAM where necessary. The EU should also dedicate part of the CBAM revenue to help developing countries adopt cleaner technologies – to produce greener cement in Vietnam or chemicals in Indonesia, for example – and thus reduce emissions in the long run.

Europe sees itself as a global leader in the race to net-zero emissions. By helping to finance the developing world's green transition, the EU could mitigate the protectionist threat in its own climate agenda. – Project Syndicate

• *Miriam Gonzalez Durantez is an international trade lawyer and guest lecturer at Stanford University. Calli Obern, a master's candidate in international policy at Stanford University, is a research fellow at Ecospherics, an advisory firm focusing on environmental and national-security issues.*

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# The coming green hydrogen revolution



By Jean Baderschneider/ Washington, DC

Human-induced climate change is causing dangerous and widespread environmental disruption and affecting the lives of billions of people around the world. According to the Intergovernmental Panel on Climate Change, the world faces unavoidable climate hazards over the next two decades. But, with average annual global greenhouse-gas emissions reaching their highest levels in human history between 2010 and 2019, we are simply not doing enough to limit global warming to

1.5C.

The IPCC report released in April recommended that the world rapidly reduce fossil-fuel supply and demand between now and 2050: by 95% in the case of coal, 60% for oil, and 45% for natural gas. But how can we possibly achieve such ambitious targets?

The answer is by switching to green hydrogen, which can be produced from all forms of renewable energy, including solar, wind, hydro, and geothermal. Green hydrogen is a zero-emissions fuel; when produced through electrolysis, the only "emission" is water. It is a practical and implementable solution that, by democratising energy, decarbonising heavy industry, and creating jobs globally, would help revolutionise the way we power our planet.

A rapid acceleration of the green-energy transition can also fundamentally alter the geopolitical landscape, since countries will no longer be powerful simply because of the fossil fuels they produce. In 2021, Russia provided 34% of Germany's crude oil and 53% of the hard coal used by German power generators and steelmakers. Russian-piped natural gas was Germany's largest source of gas imports in December 2021, accounting for 32% of supply. Since Russian President Vladimir Putin launched his horrific, unjust war in Ukraine in February, fossil-fuel exports to Europe have been earning Russia roughly \$1bn a day.

But since the start of the invasion in February, European Union countries in particular have moved quickly to reduce their energy dependence on Russia, recently agreeing to ban all seaborne imports of Russian oil. These new sanctions against Putin's war machine could cut the amount of oil the EU buys from Russia by 90% this year. The United States has declared a complete ban on Russian oil, gas, and coal imports, while the United Kingdom is phasing out imports of Russian oil by the end of 2022.

These policies have sent fuel prices soaring. But sharply higher prices have also highlighted the opportunity to drive down energy costs by investing in renewables and the



production of green hydrogen.

New research suggests that green hydrogen will be competitive with fossil fuels over the next decade. The cost of green hydrogen is expected to decline significantly by 2025 and to fall to \$1 per kilogram by 2030 in favourable locations such as Australia. For comparison, grey hydrogen, which is made using polluting liquefied natural gas, currently costs around \$2 per kilogram.

Some advocate using LNG to “solve” the current energy-security crisis, but “natural gas” contains methane, and the IPCC says that we must reduce use of natural gas by almost 45% by 2050; adding more to the energy mix now would be a catastrophic mistake.

So, there is now a global race for green energy, and specifically for green hydrogen. Dozens of countries that have abundant renewable-energy sources can develop energy independence by producing green hydrogen at scale. And energy importers will not have to rely only on the few countries (such as Russia) that have a natural endowment of fossil fuels.

In a recent report, the International Renewable Energy Agency said that (green) hydrogen can bolster energy security in three main ways: by reducing import dependence, mitigating price volatility, and boosting energy systems’ flexibility and resilience through diversification. As technologies improve, the cost of green hydrogen will fall. We must do everything we can to accelerate this process.

Companies like Fortescue, where I am a board director, are investing significantly in green hydrogen and will help to replace Russian fossil fuels with green energy. Fortescue recently announced an agreement with Germany’s largest energy distributor, E.ON, to supply Europe with 5mn tonnes of green hydrogen a year by 2030 – the equivalent of one-third of the calorific value of the energy that Germany currently imports from Russia.

But while rapid changes in the energy and geopolitical landscape present a clear opportunity to address the energy

and climate crises simultaneously by investing in green energy, there is a clear perception of unfairness when developed countries claim that relatively low-emitting developing economies need to shut down fossil-fuel use. Why should they risk slowing their development to address a problem they played no part in causing?

It's a valid question. Policymakers will need to account for developing countries' interests during the green transition and enhance funding and incentives for them to move to clean energy as the basis of industrialisation.

The world is clearly at a fork in the road. We can remain locked into a costly, polluting future that is hideously inefficient and empowers only a handful of fossil-fuel-rich countries. Alternatively, we can choose a green revolution of low-cost energy for all that keeps our future secure from pollution, global warming, and dictators. Given that green energy has the power to democratise global supply as more countries achieve energy independence, the choice is not difficult. – Project Syndicate

- *Jean Baderschneider is a non-executive director of Fortescue Metals Group.*