Crunch time for the power sector

Many of us take electricity for granted. We flip a switch and expect the light to turn on. But the capacity and resilience of power systems – generation, transmission, and distribution – are not guaranteed, and if these systems fail, it's lights out for the entire economy.

I recently participated in a meeting of the Power and Energy Society (PES), which operates under the aegis of the Institute of Electric and Electronic Engineers. The mood at the event – attended by more than 13,000 industry professionals from around the world, plus hundreds of companies exhibiting advanced equipment and systems – was upbeat and energetic.

But, despite the prevailing "can-do spirit," everyone at that meeting knew that the power sector is confronting tremendous challenges, beginning with the growing frequency of extreme weather events. Firms are now working to devise innovative ways to restore power more quickly after outages, and are

investing in infrastructure that will increase resilience to shocks. This includes efforts to minimise the risk that the system itself will cause or exacerbate a shock, such as a forest fire.

Compounding the challenge, the power sector must make progress on the green transition. That means reducing its greenhouse-gas emissions, while maintaining a stable power supply for the economy. Since renewables work differently from fossil fuels, this implies a transformation not only of power generation, but also of transmission and distribution, including storage.

Meanwhile, demand for electricity is set to surge, owing to factors like electric-vehicle adoption and the rapid growth of data centres and cloud-computing systems. The power needs of artificial-intelligence systems, in particular, are expected to grow exponentially in the coming years. According to one estimate, the AI sector will be consuming 85-135 terawatt hours per year – about as much as the Netherlands – by 2027.

To meet these challenges, all three components of the power system need to be integrated in so-called smart grids, which are managed by digital systems and, increasingly, AI. But developing smart grids is no small feat. For one thing, they require a host of devices and systems, such as residential smart meters and distributed energy resource management systems (DERMS), which are needed to manage multiple flexible and fluctuating energy sources and integrate them into power networks. And, because they are built on digital foundations, effective cybersecurity systems are essential to support stability and resilience.

None of this will come cheap. The International Energy Agency estimates that, if the world economy is to reach net-zero emissions by 2050, annual investment in smart grids will need to double – from $300bn to $600bn – globally through 2030. This represents a significant share of the estimated $4-6tn that will be needed annually to finance the overall energy transition. But, so far, the required investment has not been forthcoming. Even in advanced economies, the smart-grid funding gap exceeds $100bn.

Meeting all these challenges will require coordinated action across what are often highly complex systems. The US is a case in point. America's roughly 3,000 electric utilities operate in various combinations of generation, transmission, and distribution, as well as playing a market-making role as intermediaries between generation and distribution. Each US state has its own regulators, and local distribution can be regulated at the municipal level. America's nuclear infrastructure is managed at the federal level, by the Department of Energy, which also funds research and, under the 2022 Inflation Reduction Act, finances investment in the power sector. And the US Environmental Protection Agency plays a major role in setting the direction and pace of the energy transition.

Other entities oversee the country's three major grid regions and the interconnections among them. For example, the not-for-profit North American Electric Reliability Corp is responsible for six regional entities that together cover all the interconnected power systems of Canada and the contiguous US, as well as a portion of Mexico.

Achieving the necessary transformation of power systems will require us to figure out how to finance the relevant investments, who will ultimately pay for them, and how a complex, technologically sophisticated, and rapidly evolving smart-grid system can be co-ordinated.

It is difficult to imagine how investment could be mobilized at the scale necessary without the financing power of national governments. This is especially true in the US, where there is no shared carbon price to level the playing field. It is thus good news that, last month, President Joe Biden's administration announced a range initiatives and investments designed to support and accelerate structural change in the power sector.

As for who should pay, the answer is complicated. In principle, investments that reduce costs or augment service quality and stability should be reflected in tariffs. The problem is that the investments that improve service quality

must be spread across multiple entities that own different assets in the grid. Highly decentralised regulatory structures would make coordinating all these tariff changes and transfers unwieldy, at best.

When it comes to investments that advance the green energy transition – including the global public good of emissions reduction – we know who should not pay: local communities. In fact, the implementation of local-level charges to finance such investments is bound to lead to inefficiencies and underinvestment. It would also be unfair: there is no good reason why consumers in areas with problematic legacy systems should pay more. If they are asked to, they are likely to resist.

A better approach would be to use an expanded federal industrial policy not only to help finance and especially to co-ordinate long-term investments in the power sector, but also to guide the development of a complex, interconnected smart-grid system. This system needs a banker and an architect working with firms, regulators, investors, researchers, and industry organisations like the PES to carry out a complex, fair, and efficient structural transformation. National governments need to be involved in filling both roles. – Project Syndicate

- *Michael Spence, a Nobel laureate in economics, is Emeritus Professor of Economics and a former dean of the Graduate School of Business at Stanford University and a co-author (with Mohamed A El-Erian, Gordon Brown, and Reid Lidow) of* Permacrisis: A Plan to Fix a Fractured World *(Simon & Schuster, 2023).*

Only public-private co-operation can accelerate decarbonisation

As countries around the world experienced record temperatures last year, UN Secretary-General Antonio Guterres declared: “We must turn a year of burning heat into a year of burning ambition.” But to move away from fossil fuels and unlock the green transition’s economic benefits, such as job creation and universal access to clean energy, industry leaders and policymakers must work together to translate the commitments made at the UN Climate Change Conference in Dubai (COP28) into actual renewable gigawatts.

COP28 marked a historic turning point in the battle against climate change. Rallying around the UAE Consensus, world leaders pledged to move away from fossil fuels, agreeing to triple renewable power capacity to at least 11,000 gigawatts

and double energy efficiency by 2030.

But ambition alone is not enough to achieve these targets and limit global warming to 1.5C. Governments must invest in mature, cost-competitive renewable technologies that can be rapidly deployed at scale. When integrated with long-duration energy storage, green hydrogen, and system optimisation, these technologies represent the most reliable and flexible way to accelerate the energy transition.

Renewables will undoubtedly shape the global energy landscape in the coming years. Both solar and wind power are expected to grow significantly, with hydropower serving as the backbone of grid flexibility. Consequently, renewables are poised to become the twenty-first century's dominant source of global electricity.

But as a joint report released by the International Renewable Energy Agency (IRENA) and the Global Renewables Alliance (GRA) ahead of COP28 noted, tripling renewable capacity will require cooperation between the private and public sectors. Partnerships should focus on initiatives that deliver immediate results, such as mobilising low-cost financing, accelerating permitting processes, clearing grid connection backlogs, reforming government auction mechanisms for renewable-energy projects, and diversifying global supply chains. A strong commitment to inclusivity and the active participation of developing economies must be at the heart of these efforts. IRENA and GRA are demonstrating this commitment by collaborating on the annual reports commissioned by the COP28 Presidency to monitor progress toward the global tripling target and facilitate the energy transition.

We must, however, move faster, especially if we aim to ensure that progress is equitably distributed around the world. While renewable power capacity rose by 473 gigawatts in 2023, the economic benefits of the energy transition did not reach every country. Remarkably, 83% of these increases were concentrated in China, the European Union, and the US, leaving many countries in the Global South behind.

In fact, the shift to renewables is alarmingly slow in many

parts of the world. Opportunities to address development and access challenges in Sub-Saharan Africa, where more than 500mn people still lack access to electricity, are being squandered. This sluggish transition can be attributed largely to the lack of affordable financing, adequate planning, and the policy and market frameworks needed to support the adoption of renewable energy. Tellingly, public fossil-fuel subsidies reached $1.3tn in 2022 – roughly the annual investment needed to triple renewable capacity by 2030.

A critical first step toward fostering greater public-private co-operation in pursuit of COP28's ambitious targets is to reform the global financial architecture. Africa, for example, accounts for 17% of the world's population but has received less than 2% of global investments in renewable energy over the past two decades, underscoring the need to reduce capital costs and attract private investors. Developing industrial clusters and initiating grant programs could also help foster environments conducive to innovation and private-public partnerships.

Recent commitments by world leaders offer glimmers of hope. African leaders at the September 2023 Africa Climate Summit in Nairobi, for example, pledged to increase the continent's renewable capacity to at least 300 gigawatts by 2030. This effort aims to reduce energy poverty and boost the global supply of cost-effective clean energy suitable for industrial use.

Kenyan President William Ruto, a key advocate of the Nairobi agreement, established the Accelerated Partnership for Renewables in Africa, an African-led international alliance of governments and stakeholders that aims to accelerate renewable-energy deployment, increase access, promote green industrialisation, and strengthen economic and societal resilience.

Governments and business leaders should harness the current political momentum to foster co-operation between policymakers and private investors. As governments develop appropriate policy and market frameworks to facilitate the transition to

renewables, the private sector – historically responsible for 86% of global investments in renewable energy – is poised to lead the charge. Together, we can achieve a clean, secure, and just energy future. But to realise this vision, we must act fast. – Project Syndicate

- *Francesco La Camera is Director-General of the International Renewable Energy Agency. Bruce Douglas is CEO of the Global Renewables Alliance.*

The Psychologist Who Convinced Economists that to Err Is Human

Daniel Kahneman, who passed away in March at the age of 90, received the Nobel Prize in Economics despite having never taken an economics course. Nevertheless, his scholarship reshaped and upended the discipline's fundamental assumptions, laying the groundwork for the emergence of behavioral

economics.

CAMBRIDGE – The recent passing of psychologist and Nobel laureate Daniel Kahneman is an apt moment to reflect on his invaluable contribution to the field of behavioral economics. While Alexander Pope's famous assertion that "to err is human" dates back to 1711, it was the pioneering work of Kahneman and his late co-author and friend Amos Tversky in the 1970s and early 1980s that finally persuaded economists to recognize that people often make mistakes.

When I received a fellowship at Stanford University's Center for Advanced Study in the Behavioral Sciences (CASBS) four years ago, it was this fundamental breakthrough that motivated me to choose the office – or "study" (to use CASBS terminology) – that Kahneman occupied during his year at the Center in 1977-78. It seemed like the ideal setting to explore Kahneman's three major economic contributions, which challenged economic theory's apocryphal "rational actor" by introducing an element of psychological realism into the discipline.

Kahneman's first major contribution was his and Tversky's groundbreaking 1974 study on judgment and uncertainty, which introduced the idea that "biases" and "heuristics," or rules of thumb, influence our decision-making. Instead of thoroughly analyzing each decision, they found, people tend to rely on mental shortcuts. For example, we may rely on stereotypes (known as the "representativeness heuristic"), be overly influenced by recent experiences (the "availability heuristic"), or use the first piece of information we receive as a reference point (the "anchor effect").

Second, Kahneman and Tversky's work on "prospect theory," which they published in 1979, critiqued expected utility theory as a model of decision-making under risk. Drawing on the "certainty effect," Kahneman and Tversky argued that humans are psychologically more affected by losses than gains.

The perceived loss from misplacing a $20 note, for example, would outweigh the perceived gain from finding a $20 note on the sidewalk, leading to “loss aversion.”

This insight is also at the core of the “framing effect.” The theory, developed while Kahneman was a fellow at CASBS and Tversky was a visiting professor at Stanford, posits that the way information is presented – whether as a loss or a gain – significantly influences the decision-making process, even when what is framed as a loss or gain has the same value.

Lastly, there is Kahneman’s popular masterpiece, the bestselling *Thinking, Fast and Slow*. Published in 2011 and offering a lifetime’s worth of insights, the book introduced the general public to two stylized modes of human decision-making: the “quick,” instinctive, emotional mode that Kahneman called System 1, and the “slower,” deliberative, or logical mode, which he called System 2. Humans, he showed, are prone to abandoning logic in favor of emotional impulses.

Kahneman received the Nobel Prize in Economics in 2002, despite, as he jokingly remarked, having never taken a single economics course. Nevertheless, his scholarship laid the groundwork for an entirely new field of economic research – and it had all begun in Study 6.

In particular, Kahneman’s work had a profound impact on University of Chicago economist Richard Thaler, who went on to become a Nobel laureate himself. As an assistant professor, Thaler managed to “finagle” a visiting appointment at the National Bureau of Economic Research, whose offices were located down the hill from CASBS, enabling him to connect with Kahneman and Tversky.

In 1998, Thaler co-authored a seminal paper with Cass Sunstein and Christine Jolls, introducing the concept of “bounds” on reason, willpower, and self-interest, and highlighting human limitations that rational-actor models had overlooked. By the

time he received the Nobel Prize in 2017, Thaler had systematically documented “anomalies” in human behavior that conventional economics struggled to explain and conducted highly influential research (with Sunstein) on “choice architectures,” popularizing the idea that subtle design changes (“nudges”) can influence human behavior.

But as I gazed at the sweeping views of Palo Alto and the San Francisco Peninsula from the office window at CASBS, the birthplace of behavioral economics, I could not help but wonder whether Kahneman, despite his famously gentle nature, had perhaps been too critical of human decision-making. Are all deviations from “pure” economic logic necessarily “irrational”? Is our inability to align with the idealized model of economic analysis, coupled with our inevitable — albeit predictable — irrationality, really an inherent weakness? And is our tendency to rely on emotions rather than reason a fatal flaw, and if so, could our susceptibility to instinct ultimately lead to our downfall?

I wish I could ask Kahneman these questions. During my time there in 2020-21, Kahneman, affectionately known as “Danny” to all, was not just what CASBS called a “ghost” of the “study” — a former occupant who had been a major influence on my work — but also, happily, a vibrant, living legend who had enthusiastically invited me to discuss these very issues in person. Looking back, I regret my “planning fallacy” in not taking him up on his offer to deepen our conversation sooner — a sentiment shared by both my System 1 and System 2 modes. If “to err is human,” Danny taught me a poignant final lesson in human error.

QatarEnergy to acquire two new exploration blocks offshore Egypt

QatarEnergy has signed a farm-in agreement with ExxonMobil to acquire a 40% participating interest in two exploration blocks offshore Egypt.

Under the terms of the agreement, which is subject to customary approvals by the government of Egypt, QatarEnergy will acquire a 40% working interest in each of the “Cairo” and

“Masry” Offshore Concession Agreements, while ExxonMobil (the Operator) will retain the remaining 60% working interest.

Commenting on the signing of this agreement, HE Minister of State for Energy Affairs, the President and CEO of QatarEnergy Eng. Saad bin Sherida Al Kaabi said: “I am pleased with our entry into the Cairo and Masry offshore exploration blocks as they expand QatarEnergys presence in the Arab Republic of Egypt and extend our ambitious exploration program in-country.”

“We look forward to working with our valued long-term strategic partner ExxonMobil, as well as with the Egyptian Natural Gas Holding Company (EGAS) and the Egyptian Ministry of Petroleum and Mineral Resources, in this promising and prospective region. I would like to take this opportunity to thank the Egyptian authorities and our partners for their valuable support and cooperation,” His Excellency added.

The Cairo and Masry offshore exploration blocks were awarded to ExxonMobil in January 2023, and cover an area of approximately 11,400 square kilometers in water depths of 2,000 to 3,000 meters.

In the dock: Pivotal climate change testimonies in US

From Mexicans left homeless by rising seas to Colombians affected by coral bleaching, hundreds of people are telling the top human rights court in the Americas what climate change means to them in an historic case that could shape international law.

Environmental lawyers also hope the hearings at the Inter-American Court of Human Rights (IACHR), which were requested by Colombia and Chile, will define the duties of states to confront the climate crisis and stop it infringing on human rights.

As well as receiving submissions from climate victims, the Costa Rica-based court, which started its inquiry in Barbados in April, will hear from UN agencies, legal experts, grassroots environmental campaign groups, and youth groups.

The next sessions are due to be held in Brasilia and then Manaus, Brazil at the end of May, and an advisory opinion is expected by May 2025.

“We’re hoping that the court’s legal opinion is a guide and reference for Mexico, and other states, to develop public policies from a climate justice perspective,” said Nora Cabrera, a lawyer and head of Our Future, a Mexico-based youth climate justice campaign group.

“And that it includes loss and damage compensation for

affected communities, and adaptation policies for those not yet directly affected by climate change," said Cabrera, who will be speaking at the next hearing in Manaus.

In January, Colombia and Chile asked the IACHR to issue the advisory opinion, saying that they were experiencing the "daily challenge of dealing with the consequences of the climate emergency," including fires, landslides, droughts and floods.

"These events reveal the need for an urgent response based on the principles of equity, justice, co-operation and sustainability, with a human rights-based approach," they said in their petition.

"There is a close relationship between the climate emergency and the violation of human rights," they added.

It is this link between climate change and human rights that the IACHR will seek to define, while also examining how climate change affects migration and looking at the disproportionate effect on children, women and Indigenous people.

Chile and Colombia also asked the court for clarification on a state's duties to protect environmental activists.

Latin America is the most dangerous place in the world for environmental and land defenders, according to advocacy group Global Witness. Around 90% of the 177 killings of environmental activists recorded in 2022 took place in the region.

"The hearing aims to ask for clarity about human rights obligations and the climate crisis," said Jacob Kopas, senior attorney at the Earthjustice environmental group, one of a group of lawyers who spoke at the Barbados hearing on April 26.

"It will help to create a more concise framework to guide state behaviour and policy to confront the climate crisis and protect human rights," said Kopas.

Among those submitting testimonies will be the residents of the El Bosque fishing community in Tabasco, Mexico, where rising sea levels caused by climate change have swept away

about 200 meters of coastline.
Since 2019, the school and more than 50 homes have been destroyed, forcing about 200 people to leave.
El Bosque community leader, Guadalupe Cobos, said she and 10 neighbours will probably have to leave within a year and resettle in an area about 12km away, where new homes are being built by the government.
“We depend on the sea but coastal erosion has affected our way of life. It’s important for the court to know that we’re living climate change now and that this isn’t something that will happen in the future in 20 or 50 years’ time,” said Cobos.
“We want the court to hear our experiences and to know that our rights have been violated, that we have been forced to migrate,” Cobos told the Thomson Reuters Foundation.
The court’s advisory opinion could have important implications for climate litigation across Latin America and the Caribbean and make it easier for communities living with the effects of global warming to take legal action.
The opinion will apply to all signatories of the American Convention on Human Rights, most of whom are members of the Organization of American States. The United States and Canada have not ratified the treaty however.
The advisory opinion will help shape the region’s legal systems as many countries incorporate its jurisprudence into their laws and constitutions.
“We’re hoping that the court makes the link between the climate crisis and human rights violations and that it recognises climate displacement,” said Cabrera, whose organisation has been supporting the El Bosque community.
The IACHR is known for its progressive stance on climate justice and human rights.
In March, it recognised that citizens in Peru have the right to a healthy environment when it ruled in favor of people living in the Andean mining town of La Oroya, who had suffered from decades of environmental pollution.
Other courts are also breaking new ground in this sphere.

In Colombia in April, in response to a lawsuit filed by a farming couple who were driven out of their home by flooding caused by heavy rains, the country's constitutional court recognised the links between environmental disasters and climate change and people being forcibly displaced.

Across the world, other top courts are also examining the connection between human rights and climate change. On April 9, the European Court of Human Rights (ECHR) ruled that the Swiss government had violated the human rights of its citizens by failing to do enough to combat climate change.

Two other courts – the International Court of Justice (ICJ) and the International Tribunal for the Law of the Seas (ITLOS) – are also expected to give advisory opinions on international legal obligations of states regarding climate change.

Kopas said the IACHR ruling could lead the way by delivering a "forward-reaching and progressive" advisory opinion.

"It's historic because of the climate crisis we are in. This is the crisis of our lifetime and of all future generations." – Thomson Reuters Foundation

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Asia continues to be 'principal market' for Qatar LNG; accounts for 72% of total supplies in 2022, says GECF

Principal market for Qatari LNG continues to be Asia, accounting for 72% of its total supplies in 2022, Doha-based Gas Exporting Countries Forum (GECF) said in a report.

Qatar accounted for 16% of European LNG imports in 2022, GECF said in its 'Global Gas Outlook 2050'.

In 2022, net gas exports from the Middle East amounted to 139 bcm. Projections indicate a significant surge in overall net exports to 292 bcm by 2050.

In 2022, the Middle East contributed 96mn tonnes to global LNG exports, representing 25% of the total global LNG exports.

Qatar secured the top position as the leading global LNG exporter, shipping 79mn tonnes, while Oman and the UAE exported 11mn tonnes and 5.5mn tonnes respectively.

"Notably, Qatar supplied 16% of European LNG imports. However, Europe only represented 24% of Qatar's overall LNG exports, while the principal market for Qatari LNG continued to be Asia, accounting for 72% of the total," GECF said.

According to the forum, the "primary force propelling natural gas exports" from the Middle East is set to be growth in LNG supplies, notably led by Qatar.

The upward trajectory of Qatar's position as a leading global LNG exporter in 2022 indicates a growing momentum towards additional expansions or advancements post-2030s and 2040s following the North Field expansion projects.

With ambitions to increase its current capacity of 77mn tonnes per year by 64%, Qatar aims to reach 126mn tonnes per year through the North Field expansion by 2028.

By 2050, LNG exports from the Middle East will reach 205mn tonnes, largely due to the expansion efforts in Qatar. Anticipated long-term LNG imports are predicted to reach 16mn tonnes by 2050.

Consequently, the long-term outlook suggests an expansion of LNG net exports to reach 189mn tonnes. Primary destination for Middle Eastern LNG is expected to continue being Asia, with that region set to have an even more significant role in the long run.

By 2050, GECF noted, the Asia Pacific region is poised to receive 186mn tonnes of LNG sourced from the Middle East, constituting over 90% of all LNG exported from that region.

The region possesses 101mn tonnes per year of liquefaction capacity, primarily dominated by Qatar's 77mn tonnes per year. Plans are in progress from 2022 to 2050 to add approximately 130mn tonnes per year of extra LNG liquefaction capacity to the region, with Qatar leading expansion efforts.

The utilisation rate of this increased LNG liquefaction capacity is projected to be high, surpassing 90% by 2050, GECF said.

The Case for a European

Public-Goods Fund

Mar 4, 2024AGE BAKKER, ROEL BEETSMA, and MARCO BUTI
With the European Union's pandemic recovery fund set to end in 2026, there is an urgent need for more durable financial mechanisms to support its long-term objectives. Fortunately, a new investment fund could both enhance the EU's growth potential and ensure compliance with its new fiscal rules and shared values.

AMSTERDAM – Following weeks of intense negotiations, the European Union has agreed to revise its fiscal rules. The new rulebook will replace the Stability and Growth Pact (SGP) – which has been suspended since the start of the COVID-19 pandemic – and modernize the bloc's 25-year-old fiscal framework.

While the SGP featured a one-size-fits-all model that ultimately undermined its credibility, the updated fiscal rules allow for a differentiated approach. The goal is to maintain the existing deficit and public debt limits while still encouraging member states to invest in green and digital technologies. Member states will be granted extended adjustment periods of up to seven years to reduce their debts to sustainable levels, provided they commit to reforms and

investments that support this double (green/digital) transition.

But while the EU's efforts to strike a balance between fiscal discipline and growth incentives are commendable, national budgets alone will not be enough to finance the EU's ambitious double transition. The European Commission estimates that an annual investment of roughly €650 billion ($700 billion) is needed to meet the 2030 targets of producing at least 42.5% of the bloc's energy from renewable sources and reducing greenhouse-gas emissions by 55%.

Under the new fiscal rules, funding for digital and green investments can be sourced from the €800 billion NextGenerationEU fund, which was established in 2020 to help European economies recover from the COVID-19 shock. But since the NGEU is scheduled to end in 2026, there is an urgent need for more durable financial mechanisms to support the EU's long-term objectives.

As matters stand, the NGEU's focus on national investments has left transnational projects such as high-speed railways and hydrogen infrastructure severely underfunded. Moreover, the US Inflation Reduction Act has widened the investment gap between Europe and the United States. To restore its strategic autonomy, European leaders should build on the success of the NGEU.

In a forthcoming paper, we propose the establishment of a $750 billion EU public-goods fund aimed at bridging funding gaps in crucial areas like renewable energy and digital infrastructure. The primary focus of this fund would be to catalyze cross-border investments and support projects that struggle to secure funding without EU-level financial support. By making access to this fund contingent on compliance with the new fiscal rules, the EU could maintain fiscal discipline among member states.

The public-goods fund, which would cover the 2026-30 period, is intended to align seamlessly with the EU's climate goals. Building on the successful precedents established by previous EU borrowing initiatives, it would be financed by issuing EU bonds, backed by pooled national guarantees, the EU's budget (bolstered by sufficient revenue streams), or both. Its proposed size represents roughly one-fifth of the bloc's total investment needs through 2030, and the remaining investments would be financed through contributions from member states and the private sector.

By focusing on cross-border investments, the fund would underscore the EU's unified approach to tackling European challenges. At the same time, the requirement to comply with the new fiscal rules would broaden the conditional framework established by the NGEU program, which linked fund access to the rule of law in recipient countries.

Similarly, the proposed conditionality regime would tie access to the new fund to domestic fiscal discipline, thus aligning with the EU's revised fiscal guidelines. Rather than facing penalties for non-compliance, as was the case under the previous SGP, countries would be incentivized to demonstrate fiscal responsibility.

Thus, the conditionality regime would simultaneously boost the EU's growth potential, uphold the integrity of the new fiscal rulebook, and encourage fiscal sustainability among member states. Moreover, increased debt issuance at the European level could be offset by reduced debt issuance at the national level.

Once the fund is established, countries would be encouraged to submit comprehensive investment proposals for transnational projects. The European Investment Bank would determine whether they are eligible to access the fund's resources based on their alignment with the EU's double-transition targets and the potential for positive cross-border spillovers. Meanwhile,

the European Commission would ascertain that the countries proposing these projects comply with fiscal rules.

The fund’s proposed design aligns with the trend of using EU funds to achieve broader policy objectives. By relying on the successful model of the pandemic recovery fund and the bloc’s current conditionality regime, it would empower the EU to meet crucial climate targets while upholding its shared values.

Climate Leadership from the Global South

Mar 14, 2024OMAR ANDRÉS CAMACHO and SOIPAN TUYA
With vast solar, wind, hydro, and geothermal resources, Africa and Latin America have a central role to play in the clean-energy transition. But while countries like Colombia and Kenya have made impressive progress, additional financing – and thus reforms to the international financial system – is sorely needed.

BOGOTÁ/NAIROBI – Last month, the International Energy Agency’s ministerial gathering took place in Paris, while the African Union, which recently joined the G20, held its annual summit in Addis Ababa. Both fora recognized the urgent need to fulfill the commitments made at last December’s United Nations Climate Change Conference (COP28) in Dubai, not least

to triple installed renewable-energy capacity by 2030. But the challenges ahead are substantial.

COP28 identified many actions that are crucial to achieving net-zero emissions by 2050. Beyond the sharp increase in renewable-energy capacity, these include doubling the rate of energy-efficiency improvements by 2030, phasing down the “unabated” use of fossil fuels, and providing financial support to developing countries as they work to expand energy access and advance economic development.

Africa and Latin America have a central role to play in fulfilling the world’s net-zero ambitions. Both regions boast abundant renewable-energy potential, thanks to vast solar, wind, hydro, and geothermal resources. By leveraging these, Africa and Latin America can make rapid progress in reducing their carbon emissions, enhancing energy access, and stimulating sustainable economic growth.

Our countries, Colombia and Kenya, are already making significant strides toward a cleaner energy mix. Though Colombia has massive oil and gas reserves, hydropower generation accounts for nearly 70% of its electricity production. And the government is committed to increasing the share of renewables in the energy mix further by 2030. By harnessing wind, solar, biomass, and geothermal, Colombia can diversify its renewable-energy portfolio and further reduce its reliance on fossil fuels.

Colombia is also taking direct action to accelerate the phaseout of fossil fuels. The government recently announced a ban on the issuance of new licenses for oil and gas exploration, and has signaled its intention to address the negative effects of fossil-fuel extraction. These measures will not only curb carbon emissions, but also help protect the country’s vulnerable ecosystems and rich biodiversity.

As for Kenya, it is emerging as a renewable-energy success

story in Africa. Using its vast geothermal, wind, solar, and hydroelectric resources, Kenya has raised the share of renewables in its electricity generation to a whopping 94%. Its geothermal sector has achieved remarkable growth, making it Africa's leading producer of geothermal power. And now, Kenya is helping its neighbors, Ethiopia and Djibouti, to harness their own geothermal resources as well.

Underpinning Kenya's progress are government efforts to implement supportive policies and create an enabling environment for private investment. The Kenyan government's forward-thinking approach has not only resulted in expanded energy access for its people; it has also created jobs and local industries, thereby advancing economic development and opening up opportunities to collaborate with others. Kenya is a founding member of Accelerated Partnerships for Renewables in Africa, an initiative that aims to bolster the energy transition in African countries, with support from Denmark, Germany, and the United Arab Emirates.

Colombia and Kenya's achievements should be highlighted and celebrated to motivate and guide other countries in their own clean-energy transitions. Those with fossil-fuel resources, for example, must follow Colombia's example in limiting oil and gas exploration.

But Colombia and Kenya are not only passive models for others to follow; they are also active global leaders. If their clean-energy transitions didn't already make their commitments apparent, their recent decision to join the Beyond Oil & Gas Alliance – an international coalition of governments and partners working to facilitate the fossil-fuel phaseout – should make them so.

Still, financing is key if the world is to realize its clean-energy ambitions. Low investment in Africa is a major challenge. A recent BloombergNEF report shows that in 2021, just 0.6% ($2.6 billion) of the $434 billion invested in

renewable-energy projects went to African countries. A sharp increase in funding flows from rich countries to clean-energy sectors in both Africa and Latin America is urgently needed.

Beyond direct financial support from rich countries, the global financial system – including the International Monetary Fund and multilateral development banks – must urgently be reformed, so that it is fairer and more efficient. Only then can this system deliver enough financing to meet the growing needs of developing economies. Coordinated action to ease the debt burdens on developing economies is also vital.

At COP28, the Global South demonstrated solidarity and a commitment to cooperation. By sharing knowledge and best practices, developing economies can drastically accelerate the clean-energy transition. But, if the world is to succeed at combating climate change and safeguarding our collective future, bold action to ensure adequate financing is essential.

What’s next after new Energean gas discovery in Israel’s Karish North Field? Expert underlines need for Lebanon to lay groundwork for maritime boundary deals with

Cyprus and Syria

DOHA/BEIRUT – By Myriam Balaa: Israel's latest undersea gas find further demonstrates that Lebanon should be doing everything it can to pave the way for its own offshore oil and gas industry, specifically by settling its maritime boundaries with Cyprus and Syria, one of the region's foremost authorities on energy development says.

In an interview following Greek/Israeli-owned Energean's announcement of a second discovery in the Karish North Field adjacent to Lebanese waters, energy consultant Roudi Baroudi

said the news was actually good for Lebanon.

“It’s no surprise that they found more. It just underscores what we’ve known for several years: we haven’t located all the resources tucked away beneath the seabed of the East Med, including deposits awaiting discovery off Lebanon’s coast,” said Baroudi, who has more than four decades of experience in the energy business. “The problem is that Lebanon’s ongoing political quagmire has caused significant delays in the development of the country’s nascent offshore hydrocarbon sector.”

Baroudi, who currently serves as CEO of Energy and Environment Holding, an independent consultancy based in Doha, Qatar, confirmed that the new find seemed to be located very close to the maritime boundary line (MBL) agreed to by Lebanon and Israel in October 2022. That agreement, reached after years-long mediation by the United States, was a “necessary step”, he explained, but “it alone has not been sufficient to fully activate Lebanon’s oil and gas industry.”

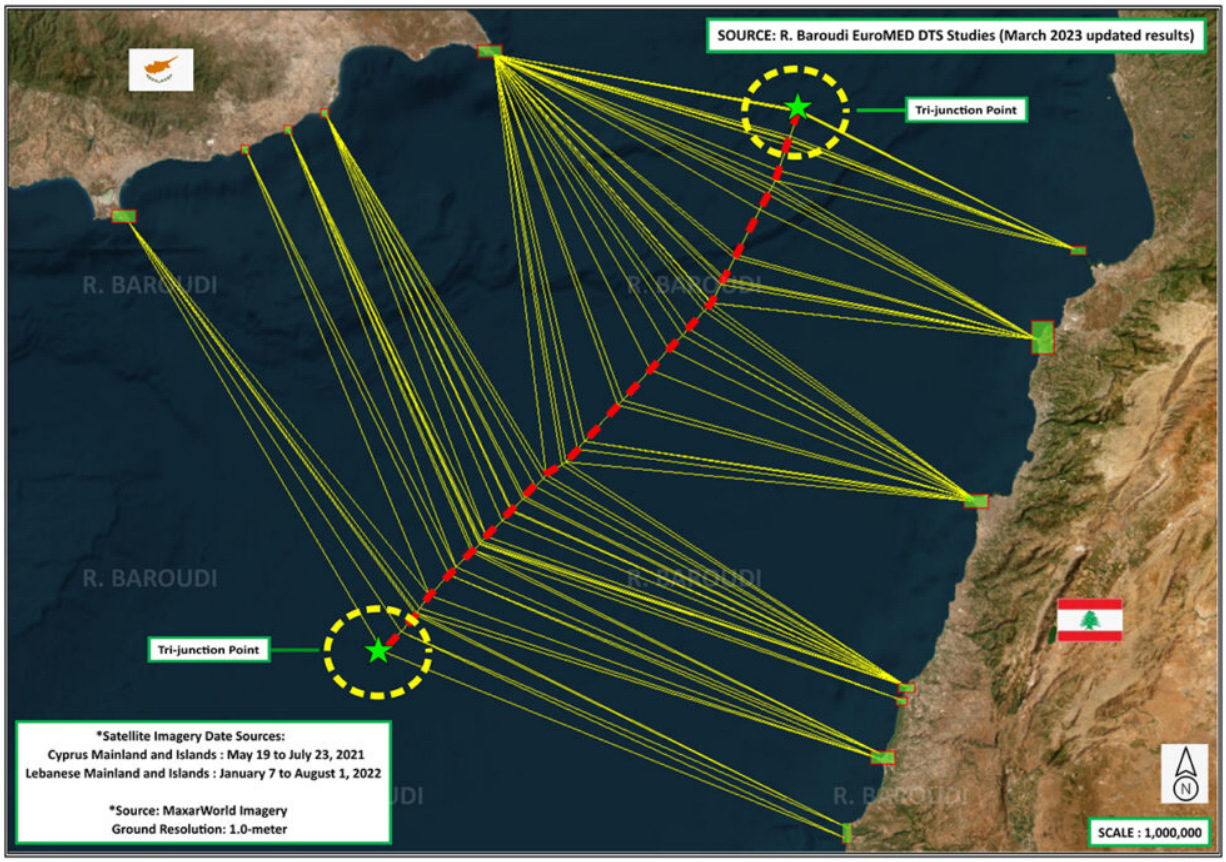
Asked how Beirut should proceed at this juncture, he stressed the importance of moving ahead with efforts to finalize Lebanon’s MBLs with Cyprus and Syria, “which would achieve full international recognition of Lebanon’s Excusive Economic Zone, thereby reducing the risk for the big energy companies whose assistance we need in order to fully explore and exploit our offshore resources.”

“We’ve already negotiated the different equidistance points for a completed MBL agreement with Cyprus, we just haven’t ratified it,” Baroudi explained. “That means we just have to adjust a few coordinates in order to set a trijunction point where the Lebanese, Cypriot, and Israeli MBLs intersect at sea. And setting that trijunction in the south will automatically simplify the process of setting another in the north for Lebanon-Cyprus-Syria”.

CYPRUS - LEBANON MBL

Cyprus vs. Lebanon *Strict Equidistance Maritime Boundary Line (MBL)

100% *Full Effect Line (red dashed line), using all relevant Cyprus coastlines and offshore Islands (see close-up inset example), plus also all relevant Lebanese mainland coastlines and all offshore Islands (see closeup inset example). This MBL begins at the northern computed Cyprus-Syria-Lebanon Trijunction point (TRJ ~ green star) and terminates at the southern modified computed Cyprus-Lebanon-Israel Trijunction point (TRJ ~ green star). See the report for specific details on the Trijunction Points and MBL Line Latitude and Longitude geographic coordinates, along with methodology on how the Trijunction Points and this MBL was produced.



He also played down claims in some circles that a significant gap exists between the Lebanon-Cyprus line and the Cyprus-Israel line, making it more difficult to set a trijunction.

“There is a gap, of course, but it’s really quite small,” Baroudi told the reporters “The proof of this is in the delineation of the offshore blocks issued by both Lebanon and Cyprus about a decade ago. On all the international blocks maps of the area, even including the ones issued by the oil and gas companies, which focus on accurate portrayals of acreage, there is no overlap. In fact, virtually all of the line between Lebanese and Cypriot blocks precisely tracks almost a MBL line agreed which Nicosia and Beirut agreed to in the unratified agreement. The difference at the southern end of the trijunction point is very, very small.”

The smaller the gap, he explained, the easier it should be to finish defining Lebanon’s EEZ.

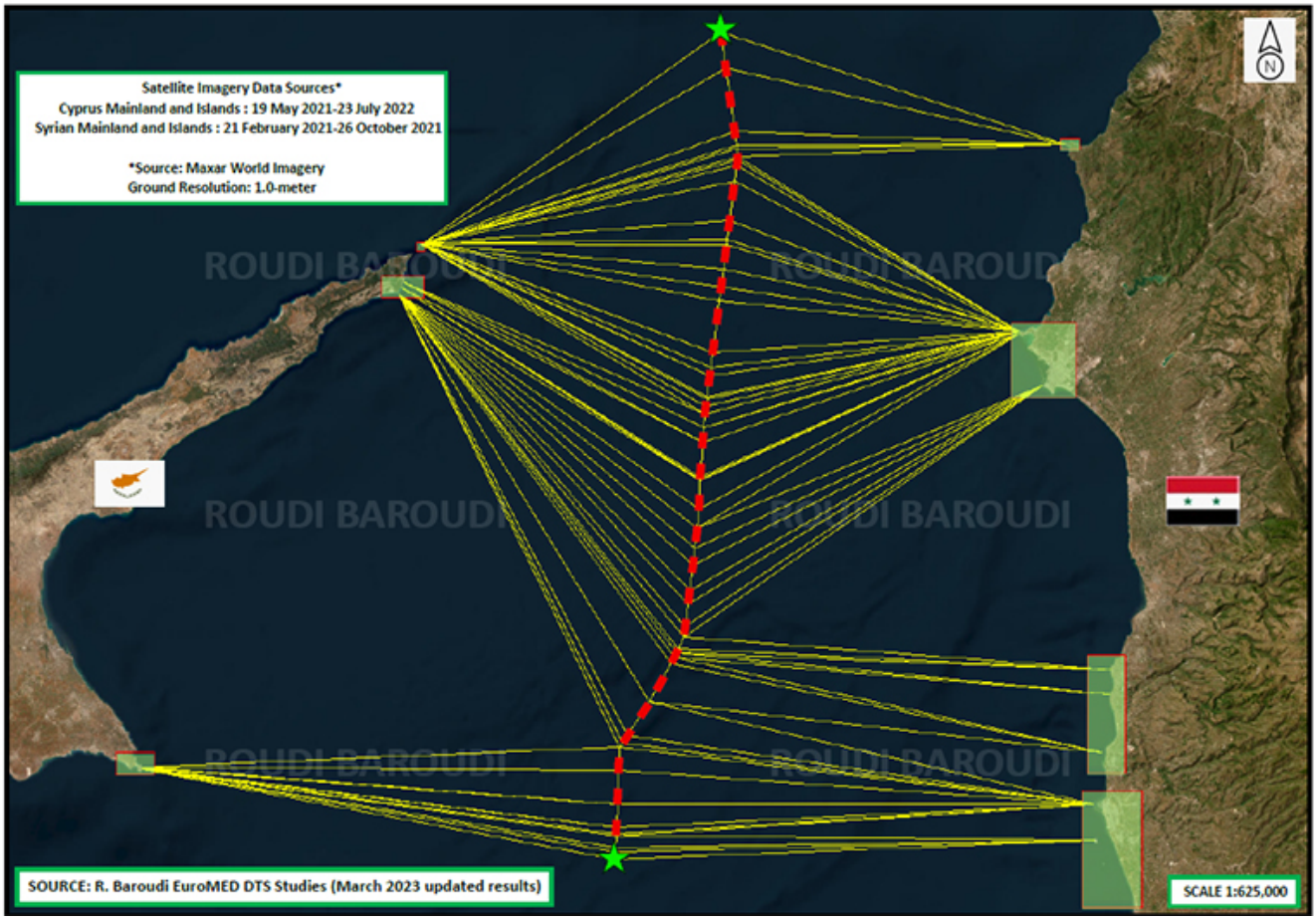
“Since the lines are so close, setting a trijunction – the point where the Lebanese, Cypriot, and Israeli boundaries intersect – should be relatively easy,” he said. “In addition, agreeing that trijunction in the south would automatically simplify the process of setting one in the north for Lebanon-Cyprus-Syria. And keep in mind: Lebanon has strong & friendly relations with both Cyprus and Syria, so these negotiations will be a lot friendlier than the ones with Israel, which had to be pursued indirectly via American mediation.”

When asked about how any new diplomatic efforts might be affected by the long-running political paralysis in Beirut, where the presidency has been vacant since late 2022 because rival parties in Parliament can’t agree on a successor to former President Michel Aoun, Baroudi said the quagmire only accentuated the need for action.

CYPRUS-SYRIA MARITIME BOUNDARY LINE

Cyprus vs. Syria Strict Equidistance MBL*

***100% Full Effect Line (red dashed line), using all relevant Cypriot coastlines and offshore islands (see close-up inset example), plus all relevant Syrian mainland coastlines and offshore islands (see close-up inset example). This MBL begins at the northern computed Cyprus-Türkiye-Syria Trijunction Point (upper green star) and terminates at the southern computed Cyprus-Syria-Lebanon Trijunction Point (lower green star). See the report for specific details on the geographic (longitude and latitude) coordinates of the MBL and Trijunctions, along with an explanation of the methodology used to produce the MBL and Trijunctions.**



“Right now, Lebanon can’t officially ratify into a new MBL agreement with either Cyprus or Syria because it requires a presidential signature, but that doesn’t stop us from carrying out the necessary talks,” he said. “In fact, we should be rushing to get all of this settled now so that when we finally fill the vacancy at Baabda Palace, we’ll have everything ready for the new president’s signature.”

In addition to settling its maritime boundaries, Baroudi said Lebanon also had another reason to re-engage with neighboring countries.

“It’s been almost ten years since Cyprus proposed a

unitization agreement (joint development agreement) with Lebanon for joint production from any deposits that straddle their shared MBL," he recalled, "and the Lebanese paralysis has kept it from happening. We need to revive this process and get a deal in place. That way, again, once we have a president in office, we'll be ready to hit the ground running, with no further delays, and start collecting the badly needed gas revenues".

US gas pipeline accidents posebig, unreported climate threat

Last October, an Idaho farmer using a backhoe punched a hole into a 22-inch pipeline buried under a field, sending more

than 51mn cubic feet of natural gas hissing into the air.
While the incident on Williams Companies' Northwest Pipeline was big, it was no anomaly along the roughly 3mn miles of natural gas pipelines crisscrossing the US.
Accidental pipeline leaks – caused by things like punctures, corrosion, severe weather and faulty equipment – happen routinely and are a climate menace that is not currently counted in the official US tally of greenhouse gas emissions, according to a Reuters examination of public data and regulatory documents.
Pipeline mishaps unintentionally released nearly 9.7bn cubic feet of gas into the atmosphere between 2019 and late 2023, according to a Reuters examination of incident report data maintained by the US Pipeline and Hazardous Materials Safety Administration (PHMSA).
That is the climate equivalent of running four average-sized coal-fired power plants for a year, according to an Environmental Defence Fund (EDF) online calculator.
Those emissions are currently not included in the nation's official greenhouse gas count because federal rules exempt large, unexpected leaks, and mainly only capture emissions from regular operations, according to the US Environmental Protection Agency (EPA).
The Biden administration aims to change that as early as next year under a set of rules proposed by the EPA to crack down on methane emissions from the oil and gas sector, and which would punish emitters with fees of $900 to $1,500 per metric tonne when they exceed a certain threshold.
Reuters relied on PHMSA data and interviews with researchers, company officials and regulators to provide new detail on the scale of greenhouse gas emissions from accidental pipeline leaks that could soon be added to the official greenhouse gas tally, as well as the potential cost to companies under the looming fees.
"I don't think the public or regulators have realised just how much methane has been lost from pipeline infrastructure," said Kenneth Clarkson, a spokesperson for the Pipeline Safety

Trust, a non-profit watchdog. “Newer studies have come closer to capturing the true amount of emissions and this has started catching the attention of policymakers.”

Accidental leaks reported from PHMSA by the five biggest US pipelines between 2018 and 2022 showed that those incidents could have significantly increased the facilities’ overall reported emissions, potentially resulting in fees of up to $40mn under the proposal.

The operators of the five biggest pipelines include Berkshire Hathaway, TC Energy and Kinder Morgan.

Berkshire Hathaway’s 14,000-mile Northern Natural Gas pipeline, for instance, reported unintended releases of natural gas to PHMSA during the five year period that were the equivalent of about 30% of the methane the facility reported to EPA during the period.

Williams, the owner of the pipeline that leaked in Idaho in October, reported unintended gas releases that amounted to about 15% of the methane it reported to EPA.

Berkshire Hathaway and Williams did not respond to requests for comment on Reuters’ analysis or the EPA proposal.

TC Energy said reducing its methane emissions was a critical part of its business, but did not comment directly on the EPA proposal or Reuters’ analysis.

Kinder Morgan said it does not exclude unintended emissions from its reports to EPA, even though it is not required to include them.

The Biden administration unveiled its batch of final rules aimed at cracking down on US oil and gas industry releases of methane at the United Nations COP28 climate change conference in Dubai in December, part of international efforts to curb releases of the gas.

Piped natural gas is typically around 90% methane, a greenhouse gas which is several times more potent in warming the planet than carbon dioxide during the relatively short time it remains in the atmosphere.

The new policies would ban routine flaring of natural gas produced by newly drilled oil wells, require oil companies to

monitor for leaks from well sites and compressor stations and establishes a program to use third party remote sensing to detect large methane releases.

The new reporting requirements for large leaks, meanwhile, are likely to be finalised later this year and take effect in 2025, the EPA told Reuters.

Under the proposal, companies will be required to report abnormal leaks of about 500,000 cubic feet of pipeline gas or more starting next year, a threshold significantly lower than what PHMSA requires.

The new reporting rules would also apply to big, unplanned emissions from other parts of the oil and gas industry, such as drilling operations, EPA said.

The fact that some large methane leaks have never been accounted for in US greenhouse gas inventories underscore concerns among environmental groups and scientific researchers that emissions from the fossil fuel sector have been vastly understated.

An Environmental Defense Fund analysis last year, for instance, estimated US pipelines leak between 1.2mn and 2.6mn tons of methane per year, or 3.75 to 8 times more than EPA estimates.

The EDF figure includes not just large mishaps but also pervasive smaller leaks on tiny distribution lines.

“The failure of EPA to account for these large events is a big driver of that discrepancy,” Edwin LaMair, an EDF attorney who focuses on oil and gas regulations, said in an interview.

The Interstate Natural Gas Association of America, a pipeline industry trade group, said most incidents reported to PHMSA relate to safety systems operating as intended.

The group also pointed to an EPA analysis showing that most transmission and storage facilities may not meet the 25,000 metric tonnes of carbon dioxide equivalent per year emissions threshold required to pay the methane fee.

The EPA analysis said, however, that it was not yet possible to accurately estimate “the magnitude of emissions that will be reported and which facilities will report those emissions.”

The pipeline industry has also said in public comments to the EPA about the new reporting rules that they could lead to double-counting of some emissions. – Reuters